

SURVEY CONTROL DATA

SEE SURVEY DATA SHEETS



STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED STATE HIGHWAY FEDERAL AID PROJECT NO. STP-269C(054)PM GRADE, DRAIN, AND SURFACING PLANS STATE HIGHWAY NO. 29

STEPHENS COUNTY

STATE JOB NO. 24412(09)
CONTROL SECTION NO. 29-69-12

FOR INDEX OF SHEETS & STANDARDS, REFER TO SHEET NO. 0002

DESIGN DATA

ADT 2018	- 2435
ADT 2038	- 3410
DHV (ONE WAY)	- 547
K (DHV/ADT)	- 11%
D	- 56%
T(% OF DHV)	- 15%
T(% OF AADT)	- 18%
T3(% OF AADT)	- 13%
V	- 65 MPH
(20)FLEX ESAL'S	- 4.70M

SCALES

PLAN	1:50
PROFILE HOR.	1:50
VER.	1:5
LAYOUT MAP	1"=5280'

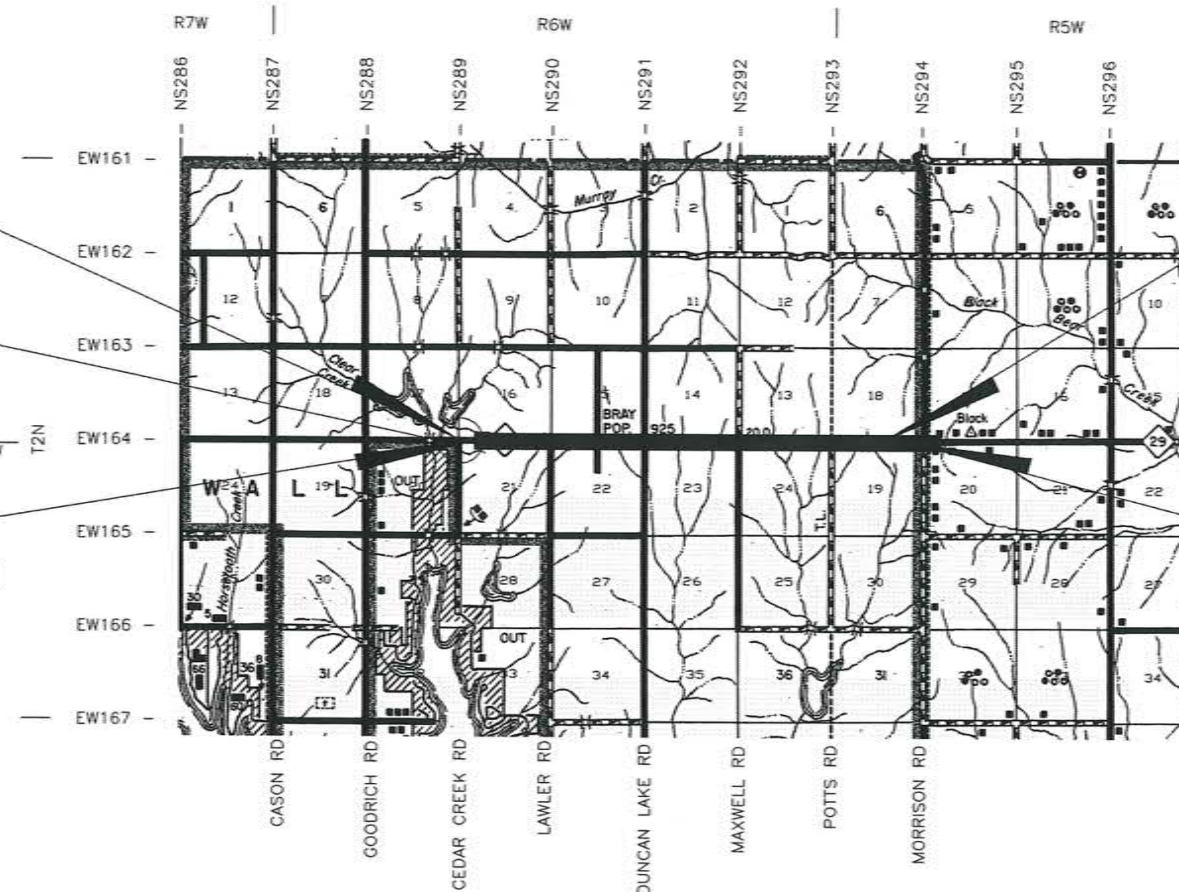
CONVENTIONAL SYMBOLS

---	PROPOSED ROADS
---	SECTION LINES
---	QUARTER SECTION LINES
-X-X-	FENCES
---	EXISTING GRADE
---	EXISTING ROADS
---	BASE LINE
---	PROPOSED GRADE
-TUG--TUG-	COMMUNICATION LINES (EXISTING)
---	POWER LINES (EXISTING)
-G--G-	GAS LINE (EXISTING)
-SS--SS-	SANITARY SEWER LINES (EXISTING)
-W--W-	WATER LINES (EXISTING)
---	COMMUNICATION LINES (PROPOSED)
---	POWER LINES (PROPOSED)
---	GAS LINE (PROPOSED)
---	SANITARY SEWER LINES (PROPOSED)
---	WATER LINES (PROPOSED)
	BUILDINGS
---	DRAINAGE STRUCTURES (EXISTING)
---	DRAINAGE STRUCTURES (PROPOSED)
---	RIGHT-OF-WAY LINES (EXISTING)
---	RIGHT-OF-WAY LINES (PROPOSED)
---	RIGHT-OF-WAY FENCE
---	FLOWLINE (EXISTING)
---	FLOWLINE (PROPOSED)
---	TOE OF SLOPE (EXISTING)
---	TOE OF SLOPE (PROPOSED)
---	CITY LIMITS
	LANDSCAPE
=====	RAILROAD

STA. 340+00.00
BEGIN INCIDENTAL
CONSTRUCTION

CONTROL SUBSECTION
NO. 24.86

STA. 346+00.00
END INCIDENTAL CONST.
BEGIN PROJECT J/P 24412(09)



STA. 590+59.89
END PROJECT J/P 24412(09)
BEGIN INCIDENTAL CONST.

STA. 591+59.89
END INCIDENTAL
CONSTRUCTION

PROJECT LENGTH BASED ON CRL

ROADWAY LENGTH	24,459.89 FT	4.632 MI
BRIDGE LENGTH	0.00	0.000 MI
TOTAL PROJECT LENGTH		4.632 MI
EXCEPTIONS	NONE	
EQUATIONS	NONE	

PREPARED BY: CEC CORPORATION CA32 6/30/20 OKLAHOMA CITY, OKLAHOMA 	
	Eric R. Atkinson OKLA. REG. NO. 21688 DATE: 01/04/19
OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED: _____ BY: _____ CHIEF ENGINEER	DATE APPROVED: _____ BY: _____ DIVISION ADMINISTRATOR
SWO 4762(1) F.A. PROJ. NO. STP-269C(054)PM	
SHEET NO. 0001	

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-ENGLISH GOVERN,
APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY
ADMINISTRATION. JANUARY 04, 2010

INDEX OF SHEETS

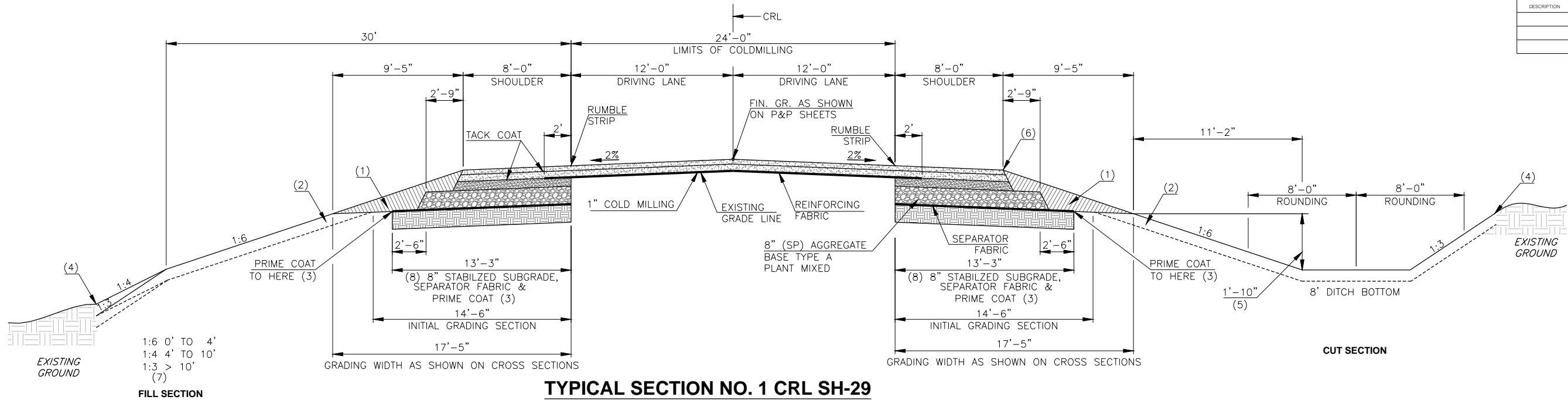
SHEET NO.	DESCRIPTION
0001.	TITLE SHEET
0002.	INDEX OF SHEETS & STANDARDS
0003.-0007.	TYPICAL SECTIONS
AR01.	ROADWAY - PAY ITEMS & NOTES
AR02.	ROADWAY - NOTES
AT01.	TRAFFIC - PAY ITEMS & NOTES
AX01.-AX04.	SUMMARY SHEETS
AX05.-AX07.	SUMMARY OF DRAINAGE STRUCTURES
R001.	STRUCTURE NO. 7 DETAILS
R002.	STRUCTURE NO. 38 BARREL EXTENSION DETAILS
R003.	STRUCTURE NO. 48 DETAILS
R004.	STRUCTURE NO. 25 SPECIAL DETAILS
R005.	TEMPORARY DRAINAGE INLET DETAIL
R006.	STR. NO. 38 GRADING PLAN
R007.	DRAINAGE STRUCTURE DESIGN RECORD
R008.-R009.	DRAINAGE AREA MAP
R010.	STORMWATER MANAGEMENT PLAN
R011.	SECTION 404 PERMIT COMPLIANCE
R012.-R020.	GEOMETRIC SHEETS
R021.-R047.	TEMPORARY EROSION CONTROL PLANS
R048.-R052.	MASS HAUL DIAGRAM
R053.-R069.	PLAN & PROFILE SHEETS (SH-29)
S001-S020	SURVEY DATA SHEETS (J/P 24412(09))
S021-S027	SURVEY DATA SHEETS (SUPPLEMENTAL FROM J/P 24412(04))
T001.	TRAFFIC SUMMARY SHEET
T002.-T010.	SIGNING AND STRIPING SHEETS
T011.	SUGGESTED CONSTRUCTION SEQUENCING
T012.-T017.	CONSTRUCTION PHASING TYPICALS
T018.-T020.	PLAN & PROFILE SHEETS (DETOUR 1)
T021.-T023.	PLAN & PROFILE SHEETS (DETOUR 2)
T024.	PLAN & PROFILE SHEETS (DETOUR 3)
T025.	TRAFFIC CONTROL PLANS-ADVANCED SIGNING
T026.	TRAFFIC CONTROL PLANS-SPECIAL SIGN DETAIL
T027.-T053.	TRAFFIC CONTROL PLANS-PHASES 1 THROUGH 3
X001-X104	CRL CROSS SECTIONS
X105-X108	STR. NO. 38 CHANNEL CROSS SECTIONS

THE FOLLOWING ODOT STANDARDS ARE
REQUIRED FOR THIS PROJECT:

ROADWAY	BRIDGE	TRAFFIC
SSS-1-1	RCB-C1-3&4&5(2-20)-01E	RS1-2-00
TSC2-3-2	RCB-C1-6(2-14)-01E	RS2-2-00
TSD-2-0	RCB-C1-8(14-20)-01E	PM1-1-02
TRFD-1-2	RCB-C1-10(14-20)-01E	PM3-1-02
PSE-1-0	RCB-E1-H2-0-1-01E	PM4-1-01
CET4S-3-2	RCB-E1-H2-0-2-01E	PM6-1-00
PCES-4-1	RCB-E1-H3-0-1-01E	DU1-1-00
CDIB-1-0	RCB-E1-H3-0-2-01E	DU2-1-00
CDIP-1-1	RCB-E1-H4-0-1-01E	RSD1-1-00
SMD-3-1	RCB-E1-H4-0-2-01E	RSD2-1-00
MFC-4-1	RCB-E1-H5-0-1-01E	WSD1-1-00
SPI-4-1	RCB-E1-H5-0-2-01E	WSD2-1-00
SPB-1-4	RCB-E1-H8-0-1-01E	WSD3-1-00
FHTMPP-1-0	RCB-E1-H8-0-2-01E	SZSD1-1-00
FHTCP-3-1	RCB-E1-H10-0-1-01E	SBS1-1-00
SBI-4-2	RCB-E1-H10-0-2-01E	SBS2-1-00
PUD-3-2	RCB-CW1-D4-0-01E	GMS1-1-00
MI-3-0		GMS2-1-00
RDI-3-1		SSP1-1-02
DC-3-2		SSA1-1-00
PDT-1-3		TCS1-1-01
RWF2-2-1		TCS2-1-00
SUEL1-3-2		TCS3-1-01
SUEL4-3-2		TCS4-1-01
		TCS5-1-00
		TCS6-1-02
		TCS7-1-02
		TCS8-1-00
		TCS9-1-01
		TCS10-1-00
		TCS11-1-01
		TCS13-1-00
		TCS14-1-00
		TCS15-1-00
		TCS16-1-00
		TCS18-1-01
		TCS19-1-01
		TCS20-1-00
		TCS21-1-02
		TCS22-1-00

INDEX OF SHEETS &
STANDARDS

DESCRIPTION	REVISIONS	DATE



TYPICAL SECTION NO. 1 CRL SH-29

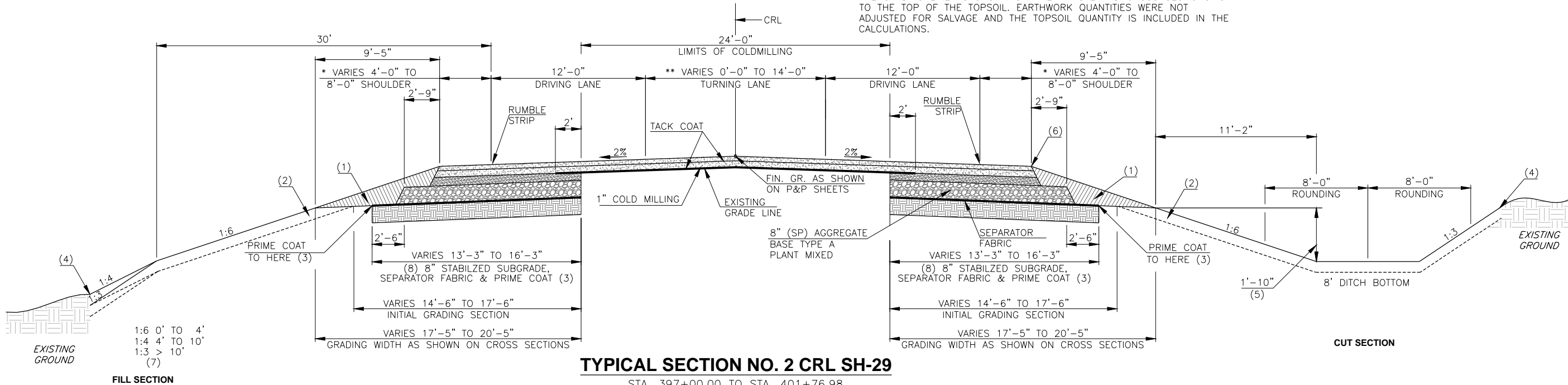
STA. 346+00.00 TO STA. 363+75.00
STA. 401+76.98 TO STA. 414+30.87

SEE PLAN & PROFILE AND CROSS SECTIONS
FOR SUPERELEVATION

- (1) BACK FILL NOTE:
THIS AREA TO BE BACKFILLED AND COMPACTED AS A PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E AT A RATE OF 0.2681 TON/LF/SHLDR.
- (2) TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATION. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATION SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

- (3) PRIME COAT TO BE APPLIED TO THE TOP OF THE AGGREGATE BASE AND STABILIZED SUBGRADE.
- (4) SEE ROUNDING DETAIL SHEET NO. 0007.
- (5) UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS.
- (6) SEE STANDARD PSE-1-0.
- (7) DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.
- (8) A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT.

THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE CALCULATIONS.



TYPICAL SECTION NO. 2 CRL SH-29

STA. 397+00.00 TO STA. 401+76.98
STA. 414+30.87 TO STA. 425+20.00

* SHOULDER VARIES FROM:
STA. 397+21.98 TO STA. 401+76.98
STA. 414+30.87 TO STA. 417+45.97
STA. 423+70.92 TO STA. 425+20.00

** LEFT TURN LANE VARIES FROM:
STA. 397+21.98 TO STA. 401+76.98
STA. 414+30.87 TO STA. 417+45.97
STA. 423+70.92 TO STA. 425+20.00

PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" TO 19'-0" DRIVING LANES	4'-0" TO 8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

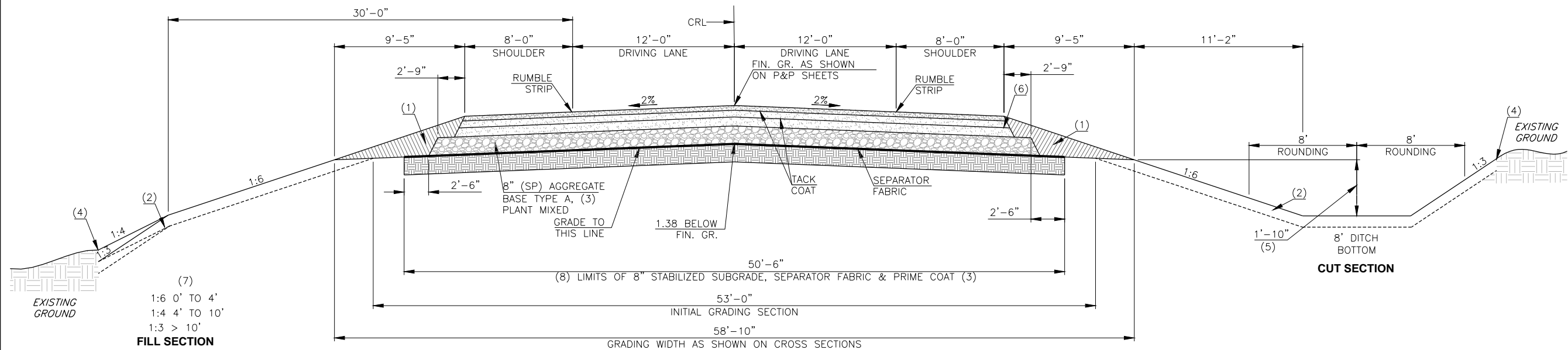
SH 29

STEPHENS COUNTY

**TYPICAL SECTIONS
SHEET 1 OF 5**

JOB PIECE NO. 24412(09) SHEET NO. 0003

DESCRIPTION	REVISIONS	DATE

**TYPICAL SECTION NO. 3 CRL SH-29**

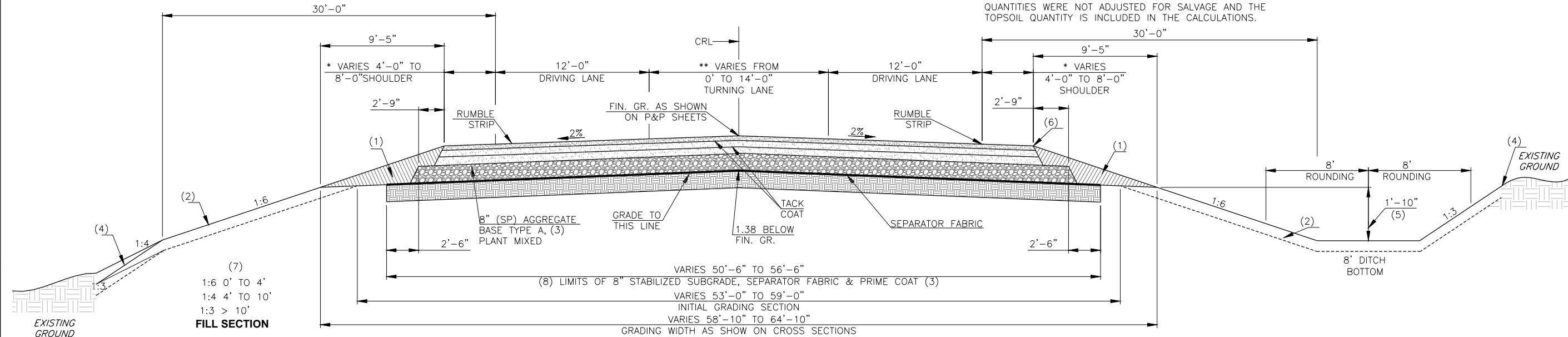
STA. 363+75.00 TO STA. 385+66.20
STA. 426+55.92 TO STA. 438+62.59
STA. 454+70.12 TO STA. 573+00.00

PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" DRIVING LANES	8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

SEE PLAN & PROFILE AND CROSS SECTIONS FOR SUPERELEVATION

- (1) BACK FILL NOTE:
THIS AREA TO BE BACKFILLED AND COMPACTED AS A PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E AT A RATE OF 0.2681 TON/LF/SHLDR.
- (2) TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATION. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATION SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.
- (3) PRIME COAT TO BE APPLIED TO THE TOP OF THE AGGREGATE BASE AND STABILIZED SUBGRADE.
- (4) SEE ROUNDING DETAIL SHEET NO. 0007.
- (5) UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS.
- (6) SEE STANDARD PSE-1-0.
- (7) DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.
- (8) A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT

THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE CALCULATIONS.

**TYPICAL SECTION NO. 4 CRL SH-29**

STA. 385+66.20 TO STA. 397+00.00
STA. 425+20.00 TO STA. 426+55.92
STA. 438+62.65 TO STA. 454+70.12
* SHOULDER VARIES FROM:
STA. 385+66.20 TO STA. 390+20.94
STA. 425+20.00 TO STA. 426+55.92
STA. 438+62.65 TO STA. 443+17.61
STA. 450+15.11 TO STA. 454+70.12
** LEFT TURN LANE VARIES FROM:
STA. 385+66.20 TO STA. 390+20.94
STA. 425+20.00 TO STA. 426+55.92
STA. 438+62.65 TO STA. 443+17.61
STA. 450+15.11 TO STA. 454+70.12

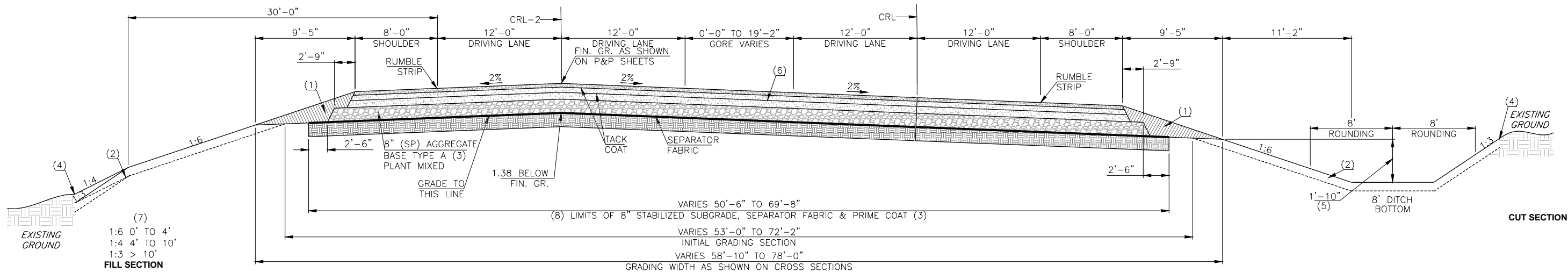
PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" TO 19'-0" DRIVING LANES	4'-0" TO 8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

SH 29

STEPHENS COUNTY

**TYPICAL SECTIONS
SHEET 2 OF 5**

JOB PIECE NO. 24412(09) SHEET NO. 0004

**TYPICAL SECTION NO. 5 CRL SH-29**

STA. 573+00.00 TO STA. 584+00.00

*GORE WIDTH VARIES FROM 0' TO 19'-2"

SEE PLAN & PROFILE AND CROSS SECTIONS FOR SUPERELEVATION

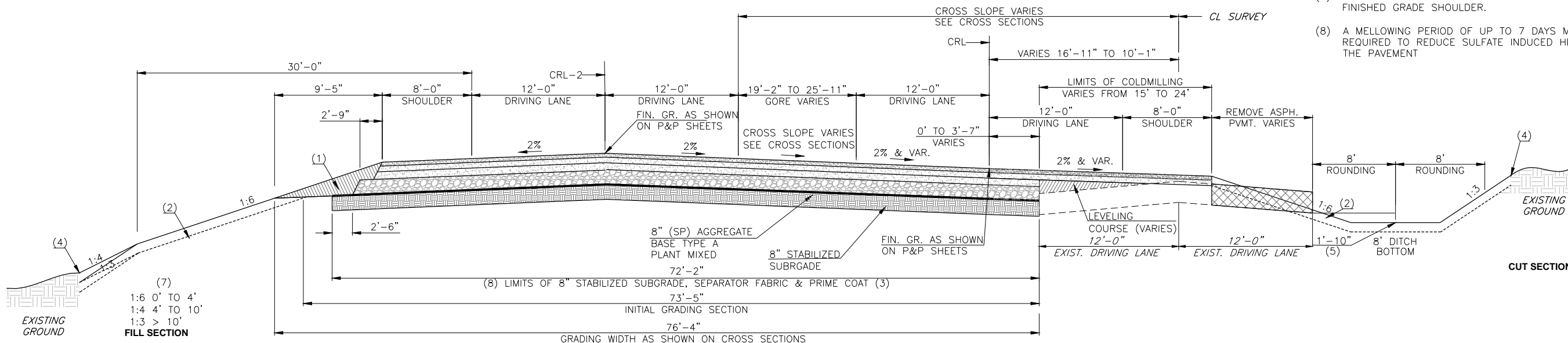
PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" DRIVING LANES AND GORE	8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

- (1) BACK FILL NOTE:
THIS AREA TO BE BACKFILLED AND COMPACTED AS A PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E AT A RATE OF 0.2681 TON/LF/SHLDR.
- (2) TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATION. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATION

SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE CALCULATIONS.

- (3) PRIME COAT TO BE APPLIED TO THE TOP OF THE AGGREGATE BASE AND STABILIZED SUBGRADE.
- (4) SEE ROUNDING DETAIL SHEET NO. 0007.
- (5) UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS.
- (6) SEE STANDARD PSE-1-0.
- (7) DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.
- (8) A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT

**TYPICAL SECTION NO. 6 CRL SH-29**

STA. 584+00.00 TO STA. 585+50.44

PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" DRIVING LANES AND GORE	8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

SH 29

STEPHENS COUNTY

**TYPICAL SECTIONS
SHEET 3 OF 5**

JOB PIECE NO. 24412(09) SHEET NO. 0005



- (1) BACK FILL NOTE:
THIS AREA TO BE BACKFILLED AND COMPACTED AS A PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E AT A RATE OF 0.2681 TON/LF/SHLDR.
- (2) TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATION. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATION SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

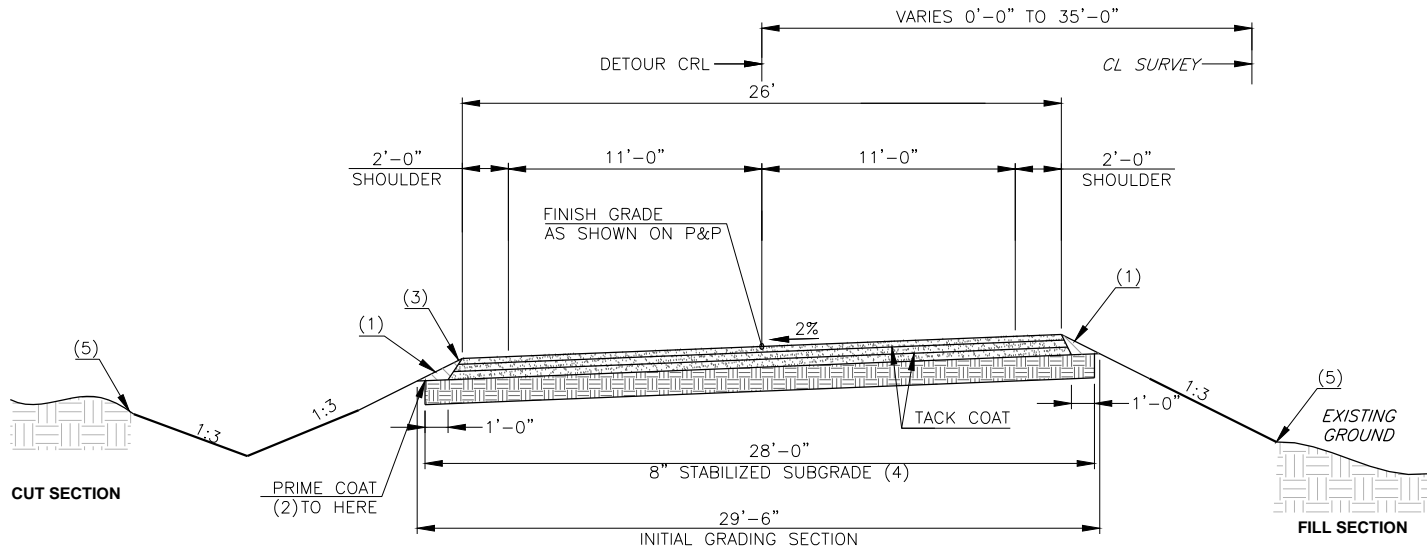
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- (3) PRIME COAT TO BE APPLIED TO THE TOP OF THE AGGREGATE BASE AND STABILIZED SUBGRADE.
- (4) SEE ROUNDING DETAIL SHEET NO. 0007.
- (5) UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS.
- (6) SEE STANDARD PSE-1-0.
- (7) DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.
- (8) A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT

STA. 585+50.44 TO STA. 590+59.89

PAVEMENT REQUIREMENT		
8.5" PAVT. STRUCTURE	12'-0" DRIVING LANES	8'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 70-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 70-28 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	SUPERPAVE TYPE S4 (PG 70-28 OK) (LEVELING COURSE)	3.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

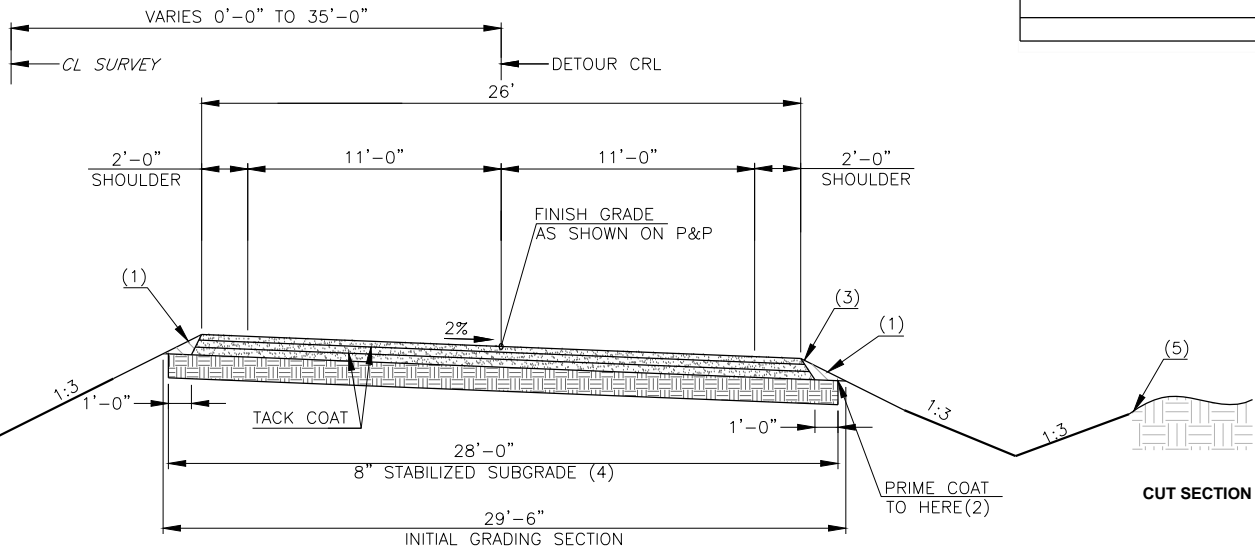
DESCRIPTION	REVISIONS	DATE



TYPICAL SECTION NO. 8
DETOUR 3

STA. 427+45.27 TO STA. 431+48.76 (CL SURVEY SH-29 STA. 427+45.27 TO STA. 431+43.42)

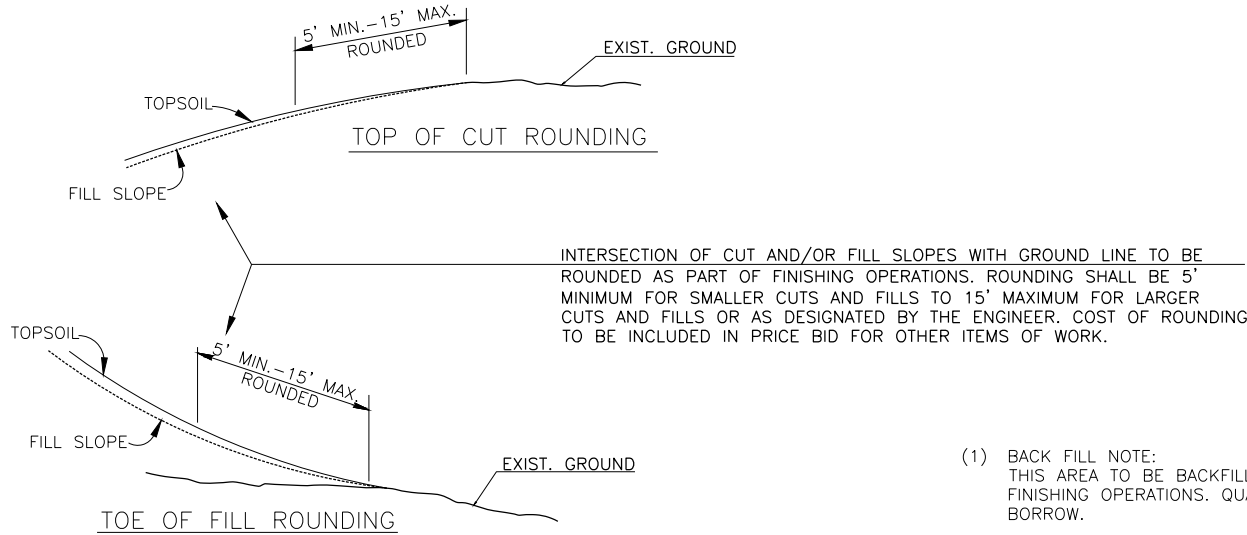
PAVEMENT REQUIREMENT		
7" PAVT. STRUCTURE	11'-0" DRIVING LANES	2'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)



TYPICAL SECTION NO. 9
DETOUR 1 & 2

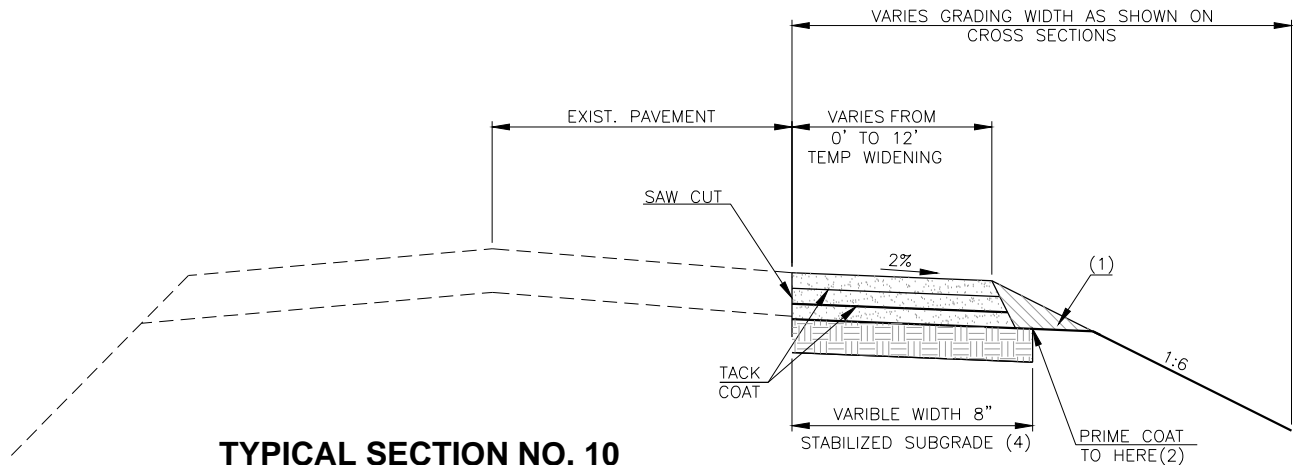
STA. 363+50.00 TO STA. 400+03.97 (CL SURVEY SH-29 STA. 363+50.00 TO STA. 400+02.01)
STA. 426+82.50 TO STA. 462+08.05 (CL SURVEY SH-29 STA. 426+82.50 TO STA. 462+03.15)

PAVEMENT REQUIREMENT		
7" PAVT. STRUCTURE	11'-0" DRIVING LANES	2'-0" PAVED SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)



ROUNDING DETAIL

- (1) BACK FILL NOTE:
THIS AREA TO BE BACKFILLED AND COMPACTED AS A PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN UNCLASSIFIED BORROW.
- (2) PRIME COAT TO BE APPLIED TO THE TOP OF THE AGGREGATE BASE AND STABILIZED SUBGRADE.
- (3) SEE STANDARD PSE-1-0.
- (4) A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT.
- (5) SEE ROUNDING DETAIL THIS SHEET.



TYPICAL SECTION NO. 10
TEMP WIDENING

STA. 343+00.00 TO 360+50.00 RT.
STA. 400+02.01 TO 426+82.50 RT.
STA. 423+97.60 TO STA. 427+45.27 LT. (CL SURVEY)

PAVEMENT REQUIREMENT	
7" PAVT. STRUCTURE	DRIVING LANES (VARIES)
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.5" SUPERPAVE TYPE S3 (PG 64-22 OK)

SH 29 STEPHENS COUNTY

TYPICAL SECTIONS
SHEET 5 OF 5

JOB PIECE NO. 24412(09) SHEET NO. 0007

24412(09) 0100				
PAY QUANTITIES				
ROADWAY				
ITEM		DESCRIPTION	UNIT	QUANTITY
201(A)	0102	CLEARING AND GRUBBING (9)	L.SUM	1.00
202(A)	0183	UNCLASSIFIED EXCAVATION (1)(2)(3)(R-1)	C.Y.	286,202.00
202(D)	0184	UNCLASSIFIED BORROW (26) (27) (R-4)	C.Y.	1,500.00
205(A)	4229	TYPE A-SALVAGED TOPSOIL (R-5)	L.SUM	1.00
221(C)	2801	TEMPORARY SILT FENCE (4)(24)	L.F.	22,295.00
221(D)	2803	TEMPORARY SEDIMENT FILTER (4)	EA.	21.00
221(F)	0100	TEMPORARY SILT DIKE (4)	L.F.	4,740.00
221(G)	0150	TEMPORARY ROCK FILTER DAM TYPE 1 (4)	C.Y.	27.65
230(A)	2806	SOLID SLAB SODDING (R-7)	S.Y.	387,807.00
230(F)	2812	WATERING (R-9)	KGAL.	31,025.00
233(A)	2817	VEGETATIVE MULCHING (R-11)	AC.	119.61
241	2832	MOWING (R-16)(5)	AC.	158.42
242	0400	(PL) STABILIZED CONSTRUCTION EXIT	EA.	2.00
303(A)	2200	(SP) AGGREGATE BASE TYPE A, PLANT MIXED	C.Y.	25,909.00
307(K)	4300	STABILIZED SUBGRADE (6)(R-1)	S.Y.	159,690.00
325	5271	SEPARATOR FABRIC	S.Y.	139,489.00
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E (7)(R-25)	TON	16,300.00
407(B)	0250	TACK COAT (8)	GAL.	21,667.00
408	5774	PRIME COAT (R-28)	GAL.	90,157.00
409(A)	4242	FABRIC REINFORCEMENT	S.Y.	4,584.00
411(B)	5940	SUPERPAVE, TYPE S3 (PG 70-28 OK) (R-32)	TON	12,305.00
411(B)	5945	SUPERPAVE, TYPE S3 (PG 64-22 OK) (22)(R-32)	TON	36,400.00
411(C)	5955	SUPERPAVE, TYPE S4 (PG 70-28 OK) (R-32)	TON	8,270.00
411(C)	5960	SUPERPAVE, TYPE S4 (PG 64-22 OK) (23)(R-32)	TON	8,304.00
411(H)	6210	SUPERPAVE, TYPE S3 (PATCH)(PG 64-22 OK) (1)(R-32)	TON	1,000.00
412	5267	COLD MILLING PAVEMENT (10)(R-34)	S.Y.	14,206.00
501(A)	0313	STRUCTURAL EXCAVATION UNCLASSIFIED	C.Y.	413.00
501(G)	6315	CLSM BACKFILL (29)	C.Y.	15.00
509(A)	0319	CLASS AA CONCRETE (R-1)	C.Y.	1,414.60
509(D)	0325	CLASS C CONCRETE (11)(R-41)	C.Y.	470.40
511(A)	0332	REINFORCING STEEL (R-1)	LB.	235,538.00
520(A)	6058	PREPARATION OF CRACKS, ABOVE WATER (30)(31)	L.F.	20.00
520(C)	6060	EPOXY RESIN, ABOVE WATER (30)(31)	GAL.	2.00
601(B)	0536	TYPE I-A PLAIN RIPRAP (12)	TON	554.00
601(C)	0538	TYPE I-A FILTER BLANKET (12)	TON	132.00
611(A)	2657	MANHOLE (4' DIAMETER)	EA.	1.00
611(B)	2680	ADD'L. DEPTH IN MANHOLE (4' DIAMETER)	VF.	4.66
611(G)	5390	INLET CDI RCB DES. 4	EA.	1.00
611(G)	5392	INLET CDI RCB DES. 6	EA.	1.00
611(G)	5394	INLET CDI RCB DES. 8	EA.	2.00
611(G)	5395	INLET CDI RCB DES. 9	EA.	1.00
611(G)	5396	INLET CDI RCB DES. 10	EA.	1.00
611(G)	5706	INLET CDI RCP DES. 3	EA.	1.00
611(G)	6002	INLET (SMD – TYPE 2)	EA.	2.00
611(G)	6006	INLET (SMD – TYPE 2B)	EA.	7.00
611(H)	5539	ADD'L DEPTH IN INLET CDI RCB DES. 4	VF.	0.36
611(H)	5543	ADD'L DEPTH IN INLET CDI RCB DES. 8	VF.	1.71
611(H)	5544	ADD'L DEPTH IN INLET CDI RCB DES. 9	VF.	3.12
613(A)	0491	18" R.C. PIPE CLASS III (14)	L.F.	286.00
613(A)	0492	24" R.C. PIPE CLASS III (14)	L.F.	284.00
613(A)	0493	30" R.C. PIPE CLASS III (14)	L.F.	244.00
613(A)	0494	36" R.C.PIPE CLASS III (14)	L.F.	1,064.00
613(A)	4498	43" X 26" R.C. PIPE ARCH CLASS A-III (14)	L.F.	95.00
613(B)	0688	12" CORR. GALV. STEEL PIPE (R-46)	L.F.	10.00
613(B)	0689	18" CORR. GALV. STEEL PIPE (25) (R-46)	L.F.	2,945.00
613(B)	0690	24" CORR. GALV. STEEL PIPE (25) (R-46)	L.F.	440.00
613(B)	0691	30" CORR. GALV. STEEL PIPE (25) (R-46)	L.F.	38.00
613(B)	4529	35" X 24" CORR. GALV. STEEL PIPE ARCH (25) (R-46)	L.F.	138.00
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND (13)	L.F.	1,800.00
613(I)	1096	6" NON-PERF. PIPE UNDERDRAIN RND (13)	L.F.	600.00
613(L)	4531	43" X 26" PREFAB. CULVERT END SECTION, ARCH	EA.	1.00
613(L)	5726	18" PREFAB. CULVERT END SECTION, ROUND	EA.	1.00
613(L)	5730	24" PREFAB. CULVERT END SECTION, ROUND	EA.	3.00
613(L)	5732	30" PREFAB. CULVERT END SECTION, ROUND	EA.	7.00
613(M)	7186	TYPE A4 CULVERT END TREATMENT	EA.	56.00
613(M)	7187	TYPE B4 CULVERT END TREATMENT	EA.	10.00
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS (15)(R-48)(R-49)	L.SUM	1.00
619(B)	4728	REMOVAL OF ASPHALT PAVEMENT (17)(R-49)(R-50)	S.Y.	81,497.00
624(C)	4459	FENCE-STYLE SWF (5 BARBED WIRE) (18)(R-52)(R-53)	L.F.	16,828.00
629(A)	4958	MAILBOX INSTALLATION - SINGLE	EA.	15.00
629(C)	4960	MAILBOX	EA.	15.00
629(D)	4961	REMOVAL OF MAILBOX INSTALLATION	EA.	15.00

24412(09)					
0600					
PAY QUANTITIES					
STAKING					
ITEM		DESCRIPTION		UNIT	QUANTITY
642(B)	0096	CONSTRUCTION STAKING LEVEL II (28)		L.SUM	1.00

24412(09)
0640

PAY QUANTITIES

CONSTRUCTION

ITEM		DESCRIPTION	UNIT	QUANTITY
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	(16) L.SUM	1.00
640(A)	1426	FIELD OFFICE	(19) EA.	1.00
641	1552	MOBILIZATION	L.SUM	1.00

PAY QUANTITY NOTES:

- (R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.
- (R-4) INCLUDES 1500 CU. YDS. FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS EARTHWORK.
- (R-5) AN ESTIMATED QUANTITY OF 39,212 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5” ON COMPLETED FORESLOPES, DITCHES, AND BACKSLOPES. THIS QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE. ANY ADDITIONAL EXCAVATION REQUIRED IN CUT SECTIONS TO ALLOW FOR PLACEMENT OF TOPSOIL TO FINAL GRADE, SHALL BE INCLUDED IN THE PRICE BID.
- (R-7) FOR SOLID SLAB SODDING PRICE BID TO INCLUDE COST OF 10–20–10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1000 SQUARE YARDS.
- (R-9) ESTIMATED AT 80 GALLONS PER SQ. YD. OF SODDING AND/OR SPRIGGING.
- (R-11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 128.06 ACRES.
- (R-16) QUANTITY BASED ON TWO APPLICATIONS.
- (R-25) ESTIMATED AT 120 LBS. PER CU. FT.
- (R-28) PRIME COAT SHALL BE APPLIED AT AN ESTIMATED RATE OF 0.35 GAL. PER SQ. YD. WHEN APPLIED TO SUBGRADE, AND 0.25 GAL. PER SQ. YD. WHEN APPLIED TO AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR, AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.
- (R-32) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1” THICK.
- (R-34) PRICE BID TO INCLUDE COST OF FOG SEAL, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.
- (R-41) QUANTITY INCLUDES AN ESTIMATED 50 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.
- (R-46) ANY DRAINAGE STRUCTURE DESCRIBED AS TEMPORARY, SHALL AFTER COMPLETION OF THE PROJECT, BE REMOVED BY AND BECOME PROPERTY OF THE CONTRACTOR.
- (R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURE, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.
- (R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-50) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.
- (R-52) INCLUDES 2% FOR GROUND MEASUREMENT.
- (R-53) ALL GATES AND GATE END POSTS FOR STANDARD WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (1) INCLUDES 1,000 TONS FOR MISC. AREAS NOT SHOWN ON THE PLANS AND AS DIRECTED BY ENGINEER.
- (2) PRICE BID INCLUDES EARTHWORK COSTS ASSOCIATED WITH REMOVAL OF SHO0–FLY DETOURS AND TEMPORARY WIDENING AFTER COMPLETION OF MAINLINE CONSTRUCTION AS DIRECTED BY THE ENGINEER.
- (3) INCLUDES 1,000 C.Y. FOR MISC. EARTHWORK WHERE NO QUANTITY IS SHOWN ON P&P SHEETS.
- (4) ESTIMATED QUANTITY FOR TEMPORARY EROSION AND SEDIMENT CONTROL TO BE USED IN A MANNER APPROVED BY THE ENGINEER. PRICE BID TO INCLUDE THE COST OF NECESSARY MAINTENANCE, MAINTAINING IN AN UPRIGHT POSITION, REMOVAL OF CONTROL, AND SEDIMENT REMOVAL.
- (5) INCLUDES LITTER PICK UP BEFORE AND AFTER MOWING.
- (6) "STABILIZED SUBGRADE" SHALL INCLUDE THE COST OF THE CHEMICAL ADDITIVE TO ACHIEVE THE RATE SPECIFIED FOR THE APPROPRIATE SOIL CLASSIFICATION AS SPECIFIED IN THE MOST CURRENT ODOT MATERIALS DIVISION OHD L-50.
- (7) QUANTITY INCLUDES 1,500 TONS FOR TEMPORARY ACCESS TO DRIVEWAYS TO BE DETERMINED BY THE ENGINEER.
- (8) ESTIMATED AT 0.075 GAL. PER S.Q. YD. PRIOR TO DILUTION.
- (9) ALL TREE REMOVAL TO BE INCLUDED IN PRICE BID FOR CLEARING AND GRUBBING EVEN WHEN TREES ARE NOT SHOWN ON THE PLANS. SEE ENGINEER BEFORE REMOVING ANY TREES.

- CEC // TRANSPORTATION

DESCRIPTION	REVISIONS	DATE
- (10) EXCESS MILLINGS TO BECOME PROPERTY OF ODOT, DIVISION 7. CONTRACTOR TO DELIVER MILLINGS TO LOCATION SPECIFIED BY THE ENGINEER, NO FARTHER THAN 8 MILES FROM PROJECT LOCATION.
- (11) PAVED DITCH NOTE: TYPE AND SIZE OF PAVED DITCHES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- (12) ESTIMATED AT 110 LBS./CU. FT. FOR RIP-RAP (18” DIAMETER) AND 105 LBS./CU. FT. FOR FILTER BLANKET (6” THICK)
- (13) PIPE UNDERDRAIN COVER MATERIAL, ITEM NO. 613(R), AND TRENCH EXCAVATION,ITEM 613(V), SHALL BE INCLUDED IN PRICE BID FOR 6” ROUND PERF. PIPE UNDERDRAIN AND 6” ROUND NON-PERF. PIPE UNDERDRAIN.
- (14) PRICE BID INCLUDES TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL QUANTITIES SHOWN ON THE SUMMARY OF DRAINAGE STRUCTURES.
- (15) INCLUDES COST OF REMOVAL OF PIPES, RCB’S, FENCES, GUARD RAIL, PAVED CONC. DITCHES EXISTING STRUCTURES, FOOTINGS, T.B.S.C. AND OTHER ITEMS DEEMED NECESSARY BY THE ENGINEER TO CLEAR THE RIGHT-OF-WAY. SEE SUMMARY OF REMOVALS, SHEET NO. AX03.
- (16) THE CONTRACTOR SHALL SUBMIT A STORM WATER POLLUTION PREVENTION PLAN BEFORE THE PRE-WORK MEETING. THE PLAN CONFIRMED IN THE PRE-WORK MEETING WILL BE MADE AVAILABLE ON THE JOB SITE ALONG WITHH COPIES OF THE NOTICE OF INTENT.
- (17) PRICE BID INCLUDES SAW CUTTING WHERE CALLED FOR ON PLANS OR AS NECESSARY FOR NEAT EDGE.
- (18) CORNER, STRETCHER, AND END POSTS SHALL BE CONSTRUCTED OF SCH.40 STEEL PIPE USING DIMENSIONS SPECIFIED IN STANDARD RWF 1–2. PIPE WILL BE WELDED AND TENSION WIRES OMITTED. THE CORNER AND STRETCHER POST WILL BE PAINTED WITH A ZINC RICH PAINT AFTER WELDING. GALVANIZED POSTS ARE NOT REQUIRED.
- (19) FIELD OFFICE TO BE EQUIPPED WITH TWO TELECOMMUNICATION PHONE LINE FOR AN OPERATIONAL TELEPHONE. IN ADDITION, THE FIELD OFFICE IS TO BE EQUIPPED WITH A HARDWIRED INTERNET LINE FOR USE IN THE FIELD OFFICE. 1 MIFI FOR USE OUTSIDE THE FIELD OFFICE (NEEDS TO WORK AT PROJECT LOCATION), AND SHALL PROVIDE POTABLE DRINKING WATER FOR INSPECTORS. ALL COSTS ASSOCIATED WITH THESE ITEMS, INCLUDING MONTHLY EXPENSES, SHALL BE INCLUDED IN THE PRICE BID FOR FIELD OFFICE.
- (20) QUANTITY SHOWN TO BE USED AS DIRECTED BY THE ENGINEER.
- (21) PRICE BID INCLUDES ALL COSTS ASSOCIATED TO INSTALL PIPE.
- (22) INCLUDES 50 TONS FOR POSSIBLE NEW DRIVES NOT SHOWN ON THE PLANS AND MISC. AREAS DETERMINED BY THE ENGINEER.
- (23) INCLUDES 30 TONS FOR POSSIBLE NEW DRIVES NOT SHOWN ON THE PLANS AND MISC. AREAS DETERMINED BY THE ENGINEER.
- (24) INCLUDES 1,500 L.F. TO BE PROVIDED AROUND STOCKPILED TOPSOIL AND MISCELLANEOUS AREAS AS DIRECTED BY THE ENGINEER.
- (25) ALL TEMPORARY DRAINAGE STRUCTURES SHALL HAVE PIPE ENDS CUT A 1:4 SAFETY SLOPE WHEN LOCATED WITHIN CLEAR ZONE. ALL COSTS TO BE INCLUDED IN PRICE BID FOR PIPE.
- (26) AN EMBANKMENT STUDY WAS PERFORMED AT THE FOLLOWING LOCATIONS: STA. 517+10, STA. 543+75, AND STA. 544+65. THE GEOTECHNICAL REPORT IS AVAILABLE AT ODOT’S WEBSITE. IT IS RECOMMENDED THAT THE SETTLEMENT BE CONTINUOUSLY MONITORED DURING CONSTRUCTION OF THE PROPOSED EMBANKMENTS FOR A MINIMUM OF 30 DAYS TO CONFIRM THE ESTIMATED SETTLEMENT AMOUNT. TOTAL SETTLEMENTS RANGE FROM 1.6 INCHES TO 3.9 INCHES. SEE SHEET ARO2 FOR THE INSTALLATION OF SETTLEMENT MONITORING DEVICES.
- (27) SETTLEMENT MONITORING DEVICES (SETTLEMENT PLATES AND HOOK GAUGES) SHALL BE INSTALLED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER, AND MONITORED BY ODOT ASSIGNED GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL FURNISH UP TO 8 MONITORING DEVICES WITH THE COST TO BE INCLUDED IN OTHER ITEMS OF WORK.
- (28) IN ADDITION TO SECTION 642.04(B), THE CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING: SURVEY CONTROL POINTS, REFERENCE POINTS AND BENCHMARKS NOTED ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND REFRESHING THE CENTERLINE OF PERMANENT CONSTRUCTION, AND SETTING ALL OTHER CONTROL POINTS AND REFERENCE POINTS REQUIRED FOR CONSTRUCTION AND INSPECTION TO INCLUDE BRIDGE CURVES, CONSTRUCTION REFERENCE LINES (CRL), AND RIGHT-OF-WAY. THE SURVEYOR WILL PROVIDE THE RESIDENT ENGINEER WITH A COMPUTERIZED DISK OF SURVEY DATA. THE SURVEYOR WILL IDENTIFY AND VERIFY BENCHMARKS SET AND MAINTAIN ADDITIONAL BENCHMARKS WITHIN THE PROJECT UNITS AT A MINIMUM OF 500’ AS REQUIRED TO INSURE CONSTRUCTION OF A SMOOTH PROFILE OF MAINLINE TO INSURE SMOOTH TRANSITIONS A THE BOP, EOP, AND BRIDGES AS REQUIRED IN SECTIONS 642.04(C). THE SURVEYOR WILL PROVIDE A COPY OF CHECKED BENCHMARKS TO THE RESIDENT ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO BEGINNING ANY EARTHWORK PAY ITEMS. THE CONTRACTOR SHALL PROVIDE FOR THE RESIDENT ENGINEERS USE A ROVING CABLE FREE INTEGRATED GPS&RTK SYSTEM WITH FIELD CONTROLLER. THIS SYSTEM SHALL BE COMPATIBLE WITH THE SURVEY BASE STATION USED BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN THE BASE STATION DURING WORK HOURS FROM THE BEGINNING OF EARTHWORK ACTIVITIES UNTIL SUBSTANTIAL COMPLETION IS ACHIEVED. THE CONTRACTOR SHALL PROVIDE A ONE WEEK TRAINING COURSE FOR THIS EQUIPMENT FOR UP TO FOUR ODOT INSPECTORS. THIS TRAINING WILL BE CONDUCTED PRIOR TO COMMENCING EARTHWORK ACTIVITIES. THIS TRAINING SHALL INCLUDE ANY TECHNICAL SUPPORT REQUIRED BY THE INSPECTORS DURING CONSTRUCTION OF THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE OF EQUIPMENT. ALL COST OF THE SYSTEM TO BE INCLUDED IN THE STAKING PAY ITEM.
- (29) QUANTITY INCLUDES AN ESTIMATED 10 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.
- (30) PREPARE SURFACE AND REBOND CRACKS AND DELAMINATIONS WITH EPOXY RESIN AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. LOCATIONS AND EXTENTS ARE APPROXIMATE AND NOT LIMITED TO THE AREAS SHOWN. THE ACTUAL LOCATIONS AND EXTENTS OF REPAIRS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. INCLUDE COSTS FOR LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE OF "PREPARATION OF CRACKS ABOVE WATER".
- (31) PROVIDE EPOXY RESIN AT LOCATIONS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. QUANTITY SHOWN IS APPROXIMATE AND SUBJECT TO THE ACTUAL LOCATIONS AND EXTENTS OF REPAIRS DETERMINED IN THE FIELD BY THE ENGINEER. INCLUDE ALL COSTS OF THE EPOXY RESIN MATERIAL IN THE CONTRACT UNIT PRICE OF "EPOXY RESIN ABOVE WATER". EPOXY RESIN QUANTITY ESTIMATED AT 0.080 GALLONS PER FOOT OF CRACK REPAIR.
- SH 29STEPHENS COUNTY
- ROADWAY- PAY ITEMS & NOTES
- JOB PIECE NO. 24412(09)SHEET NO. ARO1

GENERAL CONSTRUCTION NOTES:

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE PAVEMENT DROP-OFF TREATMENT STANDARD PDT-1 (LATEST REVISION) SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.

ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED, AND PERMANENT RIGHT-OF-WAY FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

PRIME COAT SHALL BE APPLIED TO THE SUBGRADE IMMEDIATELY AFTER FINAL COMPACTION AND SHAPING TO RETAIN MOISTURE FOR PROPER CHEMICAL REACTION OF THE SOIL ADDITIVE.

THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

VEGETATIVE MULCHING: THE VEGETATIVE MULCH SHALL BE ANCHORED IN ACCORDANCE WITH THE "ADHESIVE SPRAY METHOD", AS SPECIFIED IN 233.04B(1) OF THE STANDARD SPECIFICATIONS.

AREAS ON WHICH SALVAGED TOPSOIL IS TO BE REPLACED SHALL HAVE 18-46-0 FERTILIZER APPLIED, AT THE RATE OF 150 POUNDS PER ACRE, JUST PRIOR TO THE REPLACEMENT OF SALVAGED TOPSOIL.

AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED, OR SPRIGGED.

PIPE UNDERDRAIN QUANTITIES ESTIMATED ONLY. LOCATION, IF AND WHERE REQUIRED, TO BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL REMOVE AND RESET MAILBOXES AS NECESSARY. MAILBOXES ARE TO BE MAINTAINED IN AN UPRIGHT POSITION AND ACCESSIBLE TO MAIL CARRIER'S CAR DURING CONSTRUCTION. ANY DAMAGE TO BOXES OR SUPPORTS SHALL BE REPAIRED BY THE CONTRACTOR. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.

T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

GENERAL CONSTRUCTION NOTES: CONTINUED

PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.

EXCESS ASPHALT AT JOINTS AND CRACKS IN EXISTING PAVEMENT SHALL BE REMOVED FLUSH TO TOP OF PAVING IN A MANNER APPROVED BY THE ENGINEER.

IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. *CALL OKIE* 1-800-522-6543 OR 811.

NOTE:
A MELLOWING PERIOD OF UP TO 7 DAYS MAY BE REQUIRED TO REDUCE SULFATE INDUCED HEAVE IN THE PAVEMENT. SEE BELOW:

PLAN NOTES FOR ADDRESSING CHEMICAL TREATMENT OF SULFATE BEARING SOILS TO REDUCE SULFATE INDUCED HEAVE IN PAVEMENTS.

AFTER GRADING IS COMPLETE, THE RESIDENT ENGINEER SHALL TEST THE IN-PLACE EMBANKMENT SOILS WITHIN THE LIMITS OF THE GRADING SECTION. THE CONTRACTOR SHALL NOTIFY THE RESIDENT IN WRITING 2 WEEKS PRIOR TO THE COMPLETION OF THE GRADING AND ALLOW A REASONABLE TIME IN THE SEQUENCE OF OPERATIONS FOR THIS TESTING TO OCCUR. THE FOLLOWING ARE GENERAL RECOMMENDATIONS INTENDED FOR USE IN CHEMICALLY TREATING SULFATE BEARING CLAY SOILS. THE INTENT IS TO ALLOW THE FORMATION OF ANY DELETERIOUS MINERALS TO FORM IN THE MIXING PROCESS. THERE WILL BE AN ACCOMPANYING MELLOWING PERIOD DURING WHICH THESE MINERALS ARE ALLOWED TO FORM PRIOR TO PLACEMENT AND COMPACTION. THE LENGTH OF THE MELLOWING PERIOD IS DEPENDENT UPON THE LEVEL OF SOLUBLE SULFATES IN THE SOIL. IT MUST BE EMPHASIZED THAT GOOD MIXING DESIGN AND CONSTRUCTION PRACTICES SHOULD BE FOLLOWED.

- I. SULFATE LEVELS OF 3000 PARTS PER MILLION (PPM) OR LESS:

LOW POTENTIAL FOR HARMFUL REACTION. IF SOLUBLE SULFATES ARE DETECTED AND LIME IS USED, USE LIME SLURRY IN LIEU OF DRY LIME. FOR ALL CHEMICALS, USE ENOUGH MIXING WATER TO ASSURE AT LEAST 3% ABOVE OPTIMUM MOISTURE CONTENT FOR COMPACTION.
- II. SULFATE LEVELS BETWEEN 3000 PPM AND 5000 PPM:

MODERATE POTENTIAL FOR HARMFUL REACTION. IF SOLUBLE SULFATES ARE DETECTED AND LIME IS USED, USE LIME SLURRY IN LIEU OF DRY LIME. FOR ALL CHEMICALS, USE ENOUGH MIXING WATER TO ASSURE AT LEAST 3% TO 5% ABOVE OPTIMUM MOISTURE CONTENT FOR COMPACTION. ALLOW FOR A MELLOWING PERIOD OF AT LEAST 72 HOURS OR UNTIL SULFATE CONCENTRATION LEVELS HAVE BEEN REDUCED TO AN ACCEPTABLE LEVEL OF 3000 PPM OR LESS.
- III. SULFATE LEVELS BETWEEN 5000 PPM AND 8000 PPM:

MODERATE TO HIGH RISK DAMAGE. BEFORE TREATING THESE SOILS, LABORATORY TESTING IS RECOMMENDED TO DETERMINE THE SWELL POTENTIAL. THIS WILL ESTABLISH THE AMOUNT OF SWELL AS WELL AS REQUIRED MELLOWING PERIOD NEEDED. IF LIME IS USED, USE LIME SLURRY IN LIEU OF DRY LIME. FOR ALL CHEMICALS, USE ENOUGH MIXING WATER TO ASSURE AT LEAST 3% TO 5% ABOVE OPTIMUM MOISTURE CONTENT FOR COMPACTION. ALLOW FOR A MELLOWING PERIOD OF AT LEAST 72 HOURS OR UNTIL SULFATE CONCENTRATION LEVELS HAVE BEEN REDUCED TO AN ACCEPTABLE LEVEL OF 3000 PPM OR LESS.
- IV. SULFATE LEVELS GREATER THAN 8000 PPM:

UNACCEPTABLE RISK OF DAMAGE FOR USE WITH LIME. EXTENSIVE LABORATORY TESTING REQUIRED TO DETERMINE THE SUCCESS POTENTIAL FOR USE OF OTHER CHEMICALS IN SUBGRADE TREATMENT.

INSTALLATION OF SETTLEMENT MONITORING DEVICES

THE CONTRACTOR SHALL REFER TO THE EMBANKMENT CONSTRUCTION NOTES ON SHEET AR01 FOR EMBANKMENT INFORMATION. AN ESTIMATED 8 SETTLEMENT MONITORING DEVICES (SETTLEMENT PLATES, OR HOOK GAUGES) SHALL BE INSTALLED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER, AND MONITORED BY THE ODOT ASSIGNED GEOTECHNICAL ENGINEER. MONITORING DEVICES WILL BE FURNISHED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN OTHER ITEMS OF WORK. THE EXACT LOCATION OF THE MONITORING DEVICES TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE BASE PLATFORM IS TYPICALLY MADE OF PLYWOOD, BUT MAY ALSO BE A STEEL PLATE OR CONCRETE PAD. THE 1 INCH DIAMETER STEEL REFERENCE ROD (RISER PIPE) WITH THREADED END CONNECTIONS IS ATTACHED TO THE PLATFORM, AND AS FILL IS PLACED OVER THE SETTLEMENT PLATE, ADDITIONAL SEGMENTS OF PIPE SHOULD BE ADDED. THE INSTALLATION OF PVC PIPE AROUND THE REFERENCE ROD FOR ADDED PROTECTION IS RECOMMENDED. IF COUPLERS ARE USED TO CONNECT THE STEEL REFERENCE ROD SEGMENTS, THEN THE PVC PIPE SHOULD BE ABLE TO ACCOMMODATE THIS ADDITIONAL THICKNESS.

SETTLEMENT PLATES SHOULD BE INSTALLED ON THE EXISTING GROUND SURFACE PRIOR TO THE CONSTRUCTION OF THE EMBANKMENT FILL. SETTLEMENT SHOULD BE DETERMINED PERIODICALLY BY MEASURING THE ELEVATION AT THE TOP OF THE REFERENCE ROD. ELEVATION OF THE BASE PLATFORM SHOULD BE MEASURED PRIOR TO ANY EMBANKMENT FILL PLACEMENT. SUBSEQUENT READINGS SHOULD BE TAKEN AT THE TOP OF THE RISER PIPE PERIODICALLY DURING CONSTRUCTION AND WHENEVER ADDITIONAL RISER PIPES ARE ATTACHED. IT IS IMPORTANT TO KEEP TRACK OF THE AMOUNT OF RISER PIPES THAT HAVE BEEN ADDED SO THAT THE AMOUNT OF SETTLEMENT CAN BE DETERMINED WHILE THE CONSTRUCTION OF THE EMBANKMENT IS TAKING PLACE. AFTER THE EMBANKMENT CONSTRUCTION IS COMPLETED, THE SETTLEMENT OF THE EMBANKMENTS SHOULD CONTINUE TO BE MONITORED WEEKLY AT A MINIMUM.

STABLE BENCHMARKS SHOULD BE USED FOR A REFERENCE ELEVATION DATUM AND SHOULD BE LOCATED AWAY FROM ALL POSSIBLE DISTURBANCE.

PLATE INSTALLATIONS AND RISER PIPES SHOULD BE CLEARLY AND ADEQUATELY MARKED TO PROTECT THEM FROM DAMAGE DURING FILL PLACEMENT, GRADING, AND OTHER CONSTRUCTION ACTIVITIES. ADDITIONALLY, EACH PLATE SHALL BE CLEARLY NAMED/NUMBERED TO ENSURE THAT THERE IS NO CONFUSION DURING THE SETTLEMENT READINGS/DATA COLLECTION TIMES.

CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE
REV. NOTES		03-22-19

ENVIRONMENTAL MITIGATION NOTES:

TEMPORARY FENCING WILL BE PLACED ALONG THE PROPOSED RIGHT-OF-WAY OF THE COTTON GIN PROPERTY BETWEEN STATIONS 409+50 LT. AND 413+70 LT. TO PROTECT THE BUILDINGS AND ITS IMMEDIATE AREA. NO EQUIPMENT STAGING OR ANY OTHER PROJECT RELATED FACILITIES SHALL OCCUR AT THE COTTON GIN PROPERTY.

MIGRATORY BIRD NOTE
MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST MIGRATORY BIRD SPECIES EXTENDS FROM MARCH 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE RCB STRUCTURES (LOCATED AT STA. 428+88.85 AND 516+89.77) WAS OBSERVED. PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING CULVERTS SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND FEBRUARY 28, THE CULVERTS SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

ALTHOUGH NO NESTS WERE OBSERVED ON ALL OTHER STRUCTURES, THE BIRDS MAY OCCUPY THE STRUCTURES IN THE FUTURE. THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-210-3671 IF ANY BIRD USE OF THESE STRUCTURES IS OBSERVED. IF BIRDS ARE OBSERVED THEN PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING CULVERTS SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28 (WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED).

STATIONS	OCC FACILITY NO./OCC CASE NO.	FACILITY
420+00 TO 423+00 LT 25 FT.	6905253/064-3740	BRAY'S STORE

PETROLEUM CONTAMINATION MAY EXIST AT OR NEAR THE REFERENCED LEAKING UNDERGROUND STORAGE TANK (UST) SITE. BASED ON THE AVAILABLE INFORMATION, CONTAMINATION IS NOT EXPECTED TO AFFECT CONSTRUCTION ACTIVITIES, BUT IS STILL POSSIBLE. IN THE EVENT CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR SHALL ADHERE TO ODOT'S HAZARDOUS MATERIALS SPECIFICATION 107.15 AND NOTIFY THE RESIDENT ENGINEER, WHO MAY THEN CONTACT THE ENVIRONMENTAL PROGRAMS DIVISION AT (405) 521-3050 FOR ASSISTANCE.

TWO MONITOR WELLS ON THIS PROPERTY ARE WITHIN THE RIGHT OF WAY (MW-6, MW-10). THESE WELLS ARE EXPECTED TO BE PLUGGED BY OTHERS PRIOR TO CONSTRUCTION, BUT MAY STILL BE PRESENT. THEREFORE, THE AREA AROUND THESE WELLS IS TO BE PRESERVED AND AVOIDED FOR BORROW REMOVAL, EQUIPMENT STAGING, OR ANY OTHER CONSTRUCTION ACTIVITIES UNTIL THE PLUGGING IS CONFIRMED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND THOMAS R. (BOB) FELDER OF CLEARWATER ENVIRONMENTAL SERVICES, INC. (405) 364-8298, AT LEAST FOUR WEEKS IN ADVANCE OF WORKING IN THIS AREA.

Table 5 - Foundation Soil Settlement

Boring	Station	Section	Traditional One-Dimensional Methods				SAF-1			
			S _{total} (inches)	Days Required to Reach Settlement			S _{total} (inches)	Days Required to Reach Settlement		
				≤ 1"	95%	85%		≤ 1"	95%	85%
E-18	517+10	5	1.4	11	250	150	1.6	50	280	175
E-20	543+75	6	1	2	295	180	0.3	—	310	200
E-21	544+65	6	3.9	100	295	180	2.8	70	310	200

ROADWAY NOTES

24412(09)
0300

PAY QUANTITIES

TRAFFIC TEMPORARY

ITEM	DESCRIPTION		UNIT	QUANTITY	
857(A)	8839	CONSTRUCTION TRAFFIC STRIPE (PAINT) (4" WIDE)	{TC-13}{TC-17}{TC-20}{TC-70}{TC-75}	L.F.	49,300
857(E)	8887	(PL) CONSTRUCTION ZONE PAVEMENT MARKERS(FLEX TAB)TYPE 2-1	{TC-21}{TC-61}{TC-70}{TC-73}{TC-75}	EA.	3,000
857(F)	8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	{TC-22}{TC-70}{TC-75}	L.F.	1,500
880(B)	8818	CONSTRUCTION SIGNS 0.00 TO 6.25 S.F.	{TC-24}{TC-26}{TC-28}{TC-33}{TC-84}	S.D.	18,679
880(B)	8821	CONSTRUCTION SIGNS 6.26 TO 15.99 S.F.	{TC-24}{TC-26}{TC-29}{TC-33}{TC-84}	S.D.	47,045
880(B)	8824	CONSTRUCTION SIGNS 16.00 TO 32.99 S.F.	{TC-24}{TC-26}{TC-30}{TC-33}{TC-84}	S.D.	14,641
880(C)	8842	CONSTRUCTION BARRICADES (TYPE III)	{TC-26}{TC-84}	S.D.	30,600
880(C)	8848	WING BARRICADES	{TC-26}{TC-84}	S.D.	1,800
880(E)	8860	WARNING LIGHTS (TYPE A)	{TC-26}{TC-84}	S.D.	75,240
880(F)	8878	DRUMS	{6}{TC-26}{TC-84}	S.D.	21,060
880(G)	8890	CHANNELIZER CONES	{TC-26}{TC-84}	S.D.	77,625
880(I)	8902	FLAGGER	{2}	S.D.	7
882(A)	8306	PORT. CHANGEABLE MESSAGE SIGN	{1}{TC-52}{TC-84}{TC-85}	S.D.	900

24412(09)
0301

PAY QUANTITIES

TRAFFIC PERMANENT

ITEM	DESCRIPTION	UNIT	QUANTITY
413(A)	4870 RUMBLE STRIP-CENTERLINE HMA-CON	(2)(3) L.F.	27,648
413(B)	4863 RUMBLE STRIP-METHOD HMA-CYC	(2)(3) L.F.	48,341
805(A)	8724 (PL) REMOVAL OF EXISTING SIGNS	(TS-39)(TS-41) EA.	29
805(D)	8756 (PL) REMOVE & RESET EXISTING SIGNS	(4)(TS-39) EA.	7
836	8425 REGULATORY OR WARNING SIGN ASSEMBLY	EA.	2
850(A)	8110 SHEET ALUMINUM SIGNS	(5)(TS-34) S.F.	171.44
851(C)	8324 2" SQUARE TUBE POST	(TS-33) L.F.	319
855(A)	8812 TRAFFIC STRIPE (PLASTIC) (4" WIDE)	(TC-13)(TC-14)(TS-19) L.F.	107,620
855(A)	8814 TRAFFIC STRIPE (PLASTIC) (8" WIDE)	(TC-14)(TS-21) L.F.	930
855(A)	8818 TRAFFIC STRIPE (PLASTIC) (12" WIDE)	(TC-14)(TS-22) L.F.	2,530
855(A)	8825 TRAFFIC STRIPE (PLASTIC) (24" WIDE)	(TC-14)(TS-23) L.F.	115
855(B)	8818 TRAFFIC STRIPE (PLASTIC) (ARROWS)	(TC-14) EA.	15
880(C)	8845 BARRICADES (TYPE III)	EA.	6

TRAFFIC OPERATIONS GENERAL
CONSTRUCTION NOTES:

ANY SIGNS AND/OR DELINEATORS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA DESIGNATED BY THE RESIDENT ENGINEER, UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.

EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, AND SIGNING WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS. CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL PROVIDE A PERSON TO BE ON 24 HOUR CALL AS NEEDED AS DETERMINED BY THE ENGINEER. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES".

TRAFFIC SIGNING GENERAL
CONSTRUCTION NOTES:

REMOVED MATERIAL TO BECOME PROPERTY OF CONTRACTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956--(LATEST REVISION) FOR TYPE III SHEETING.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW SHEETING. THE FLUORESCENT YELLOW SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956--(LATEST REVISION) REQUIREMENTS FOR TYPE VIII SHEETING.

ALL GREEN AND BLUE SIGNS ON CONVENTIONAL HIGHWAYS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956--(LATEST REVISION) FOR TYPE III SHEETING.

TRAFFIC SIGNING GENERAL CONSTRUCTION
NOTES CONT.:

ALL PANEL AND OVERHEAD SIGNS SHALL HAVE TYPE III HIGH INTENSITY BACKGROUND WITH TYPE VIII LEGENDS AND BORDERS. THE TYPE III BACKGROUND AND THE TYPE VIII LEGENDS AND BORDERS SHALL MEET THE REQUIREMENTS OF ASTM D4956--(LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE 'A' CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.

ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTINGS SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

ALL ANCHOR BOLTS SHALL BE GRADE A--36 STEEL.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

THE COST OF REPLACEMENT OF MISSING OR DAMAGED EDGE STRIP ON EXISTING SIGNS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.

ALL REMOVED SIGNS, SIGN POSTS, BOLTS, MISCELLANEOUS HARDWARE, AND DELINEATORS SHALL REMAIN THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL NEATLY STACK SUCH REMOVED MATERIAL AT A LOCATION ON THE JOB SITE AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

TRAFFIC SIGNING PAY QUANTITY NOTES:

- (TS--19) QUANTITY SHOWN INCLUDES 53,570 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 54,050 L.F. TRAFFIC STRIPE(PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.
- (TS--21) QUANTITY SHOWN INCLUDES 930 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 0 L.F. TRAFFIC STRIPE(PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF EIGHT INCH (8") WIDE TRAFFIC STRIPE.
- (TS--22) QUANTITY SHOWN INCLUDES 800 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 1730 L.F. TRAFFIC STRIPE(PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWELVE INCH (12") WIDE TRAFFIC STRIPE.
- (TS--23) QUANTITY SHOWN INCLUDES 115 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY--FOUR INCH (24") WIDE TRAFFIC STRIPE.
- (TS--33) INCLUDED IN THIS PAY ITEM IS ALL HARDWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1--1 AND SSP1--1--(LATEST REVISION).
- (TS--34) INCLUDED IN THIS PAY ITEM IS THE REMOVAL OF ANY EXISTING SIGNS TO BE REPLACED BY NEW ASSEMBLIES AND THE REMOVAL OF ANY EXISTING SIGNS THAT WILL BE IN CONFLICT WITH THE NEW ROADWAY OR NEW SIGNAGE.
- (TS--39) OVERHEAD SIGN STRUCTURES AND SIGNS THAT ARE TO BE REMOVED, RESET, AND/OR RELOCATED SHALL BE CAREFULLY REMOVED BY THE CONTRACTOR AND STORED AT A SITE SELECTED BY THE ENGINEER. ANY DAMAGE TO THE STRUCTURES OR SIGNS DURING THE REMOVAL, TRANSPORTATION, STORAGE, RESETTNG, AND/OR RELOCATION OF THE STRUCTURE OR SIGN SHALL BE REPAIRED BY, AND AT THE EXPENSE OF THE CONTRACTOR.
- (TS--41) "REMOVAL OF EXISTING SIGNS" SHALL INCLUDE THE REMOVAL OF A COMPLETE SIGN ASSEMBLY WHICH MAY INCLUDE MULTIPLE SIGNS, POSTS, FOOTINGS, AND ANY FOOTINGS ADJACENT TO THE SIGN ASSEMBLY. WHEN APPROVED BY THE ENGINEER, FOOTINGS MAY BE OBLITERATED TO A POINT BELOW GROUND LEVEL IN LIEU OF BEING COMPLETELY REMOVED. SEE GENERAL CONSTRUCTION NOTES FOR DISPOSAL OF OLD CONCRETE FOOTING MATERIAL.
- (2) RUMBLE STRIP SHALL EXTEND PAST DRIVES BUT NOT PAST SECTION LINE ROADS. SEE STANDARD DRAWING RS1--1--(LATEST REVISION) FOR LOCATIONS.
- (3) MILLED SHOULDER RUMBLE STRIPS, WHEN INSTALLED IN ASPHALT SURFACES, SHALL BE FOG SEALED A NOMINAL ONE INCH OUTSIDE THE MILLED LENGTH AND WIDTH AT A RATE OF 0.1 GAL/SQ.YD. IN ACCORDANCE WITH SECTION 407 OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. FOG SEAL SHALL NOT COME INTO CONTACT WITH EXISTING STRIPING DURING FOG SEAL OPERATIONS. IF THE FOG SEAL DOES COME INTO CONTACT WITH EXISTING STRIPING, THE CONTRACTOR SHALL REMOVE AND RESTRIPE AT THE CONTRACTOR'S EXPENSE IN A TIMELY MANNER TO THE SATISFACTION OF THE ENGINEER.
- (4) CONTRACTOR SHALL REMOVE AND RESET ALL CONTROL SECTION AND SECTION LINE ROAD SIGNS.
- (5) ANY SECTION LINE SIGNS ATTACHED TO EXISTING STOP SIGNS SHALL BE RELOCATED TO NEW STOP SIGNS. PRICE IS INCLUDED IN COST OF SIGN.
- (6) WARNING LIGHTS (TYPE C) ARE NOT REQUIRED.

TRAFFIC CONSTRUCTION PAY QUANTITY NOTES:

- (TC--13) A PART, OR ALL, OF THIS ITEM IS INTENDED FOR REPLACEMENT OF REMOVED EXISTING CONFLICTING STRIPING.
- (TC--14) SEE STANDARD DRAWING PM1--1, PM2--1, PM3--1, PM4--1, PM5--1, PM6--1, PM7--1, PM8--1 (LATEST REVISION). A PART, OR ALL, OF THE QUANTITY SHOWN IS TO BE USED AS FINAL PAVEMENT MARKING.
- (TC--17) INCLUDES AN ESTIMATED 22,800 L.F. (PAINT) (4" WIDE) WHITE 26,500 L.F. (PAINT)(4" WIDE) YELLOW STRIPE.
- (TC--20) ALL STRIPING TO BE PLACED ON TEMPORARY SURFACES OR ON SURFACES SCHEDULED TO BE REMOVED SHALL BE DONE WITH PAINT UNLESS OTHERWISE NOTED ON THE PLANS OR STANDARD DRAWINGS. TEMPORARY PAVEMENT MARKINGS PLACED ON FINISHED PAVEMENT OR EXISTING PAVEMENT TO REMAIN IN PLACE SHALL USE ONE OF THE FOLLOWING METHODS:
• REMOVABLE PAVEMENT MARKING TAPE
• CLASS A PAVEMENT MARKERS

TRAFFIC CONSTRUCTION PAY QUANTITY NOTES CONT.:

- (TC--21) INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE, AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY. (TC--22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT
- (TC--24) QUANTITIES SHOWN FOR CONSTRUCTION SIGNING AND STRIPING HAVE BEEN INCREASED TO ALLOW FOR TRAFFIC CONTROL ON CROSS STREETS NOT SHOWN ON THE PLANS.
- (TC--26) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES REQUIRED FOR COMPLETION OF THE PROJECT.
- ALL SIGNS AND BARRICADES WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON--DAYLIGHT HOURS.
- (TC--28) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 0.00 S.F. AND 6.25 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC--29) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 6.26 S.F. AND 15.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC--30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING) SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLATION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC--33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION)
- THE MANUFACTURER SHALL FURNISH A TYPE 'D' CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION) SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.
- (TC--52) ANY USED CHANGEABLE MESSAGE SIGN TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.
- (TC--61) ANY DAMAGE TO A FINISHED OR EXISTING SURFACE RESULTING FROM THE CONTRACTORS NEGLIGENCE IN THE REMOVAL OF CONSTRUCTION ZONE PAVEMENT MARKERS OR CHANNELIZING DEVICES AND THE BITUMINOUS ADHESIVE USED IN THEIR INSTALLATION, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND THE SATISFACTION OF THE ENGINEER.
- (TC--70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.
- (TC--73) QUANTITY SHOWN INCLUDES 1,500 EA. (WHITE) AND 1,500 EA. (YELLOW) CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS). THESE CONSTRUCTION ZONE PAVEMENT MARKERS SHALL BE EITHER "DAVIDSON PLASTICS: MODEL TOM", OR AN APPROVED EQUAL. PRICE BID FOR THIS ITEM SHALL INCLUDE THE INITIAL PLACEMENT, SUBSEQUENT REPLACEMENT, AND REMOVAL. THE CONSTRUCTION ZONE PAVEMENT MARKERS (FLEX TABS) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON STANDARD DRAWING TCS21--1--(LATEST REVISION).
- (TC--75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.
- (TC--84) 450 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.
- (TC--85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT:
<http://www.okladot.state.ok.us/traffic/gpi/index.php>
- (1) QUANTITY PROVIDES FOR TWO (2) PORTABLE CHANGEABLE MESSAGE BOARDS TO BE IN USE FOR THE DURATION OF THE PROJECT. ONE (1) BOARD IS TO BE PLACED AT EACH END OF THE PROJECT IN A LOCATION DETERMINED BY THE ENGINEER.
- (2) FLAGGER TO BE USED DURING CONSTRUCTION OPERATIONS AT PAVEMENT TRANSISTIONS IN ORDER TO MAINTAIN TRAFFIC. TO BE USED AT THE DISCRETION OF THE ENGINEER.

NOTES: THE CONTRACTOR MAY SUBMIT A WRITTEN ALTERNATE SEQUENCE OF CONSTRUCTION OPERATION TO THE ENGINEER FOR APPROVAL. ALL CONSTRUCTION SIGNING AND STRIPING IN ADVANCE OF, AND THOUGHT THE PROJECT LIMITS WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH THE MUTCD (LATEST EDITION), AND APPLICABLE O.D.O.T. STANDARDS.

SH--29 STEPHENS COUNTY

TRAFFIC - PAY ITEMS AND NOTES

JOB PIECE NO. 24412(09) SHEET NO. ATO1

SUMMARY OF SURFACING															
P&P SHEET NO.	STATION TO STATION	(SP) AGGREGATE BASE TYPE A PLANT MIXED	8" STABILIZED SUBGRADE	SEPARATOR FABRIC	TRAFFIC BOUND SURFACE COURSE TYPE E	TACK COAT	PRIME COAT	FABRIC REINFORCEMENT	SUPERPAVE, TYPE S3 (PG 70-28 OK)	SUPERPAVE, TYPE S3 (PG 64-22 OK)	SUPERPAVE, TYPE S4 (PG 70-28 OK)	SUPERPAVE, TYPE S4 (PG 64-22 OK)	COLD MILLING PAVEMENT	RUMBLE STRIP CENTERLINE	RUMBLE STRIP
		303(A)	307(K)	325	402(E)	407(B)	408	409(A)	411(B)	411(S)	411(C)	411(C)	412	413(A)	413(B)
		CY	SY	SY	TON	GAL	GAL	SY	TON	TON	TON	TON	SY	LF	LF
SH-29															
R053	346+00 TO 355+00	493	2,650	3,170	483	609	1,465	800	404	618	269	182	2,400	900	1,800
R054	355+00 TO 370+00	1,192	6,084	6,948	805	1,015	3,441	778	672	1,353	448	302	2,334	1,500	3,000
R055	370+00 TO 385+00	1,710	8,417	9,689	805	1,015	5,054		672	1,811	448	302		1,500	3,000
R056	385+00 TO 400+00	1,691	8,333	9,462	805	1,113	4,899	424	954	1,638	634	196	800	2,582	2,929
R057	400+00 TO 415+00	840	4,504	4,412	805	1,013	2,088	1,115	705	1,028	470	290	4,000	1,746	3,000
R058	415+00 TO 430+00	1,238	6,295	7,418	805	1,008	3,692	968	905	1,268	604	214	2,720	2,254	2,858
R059	430+00 TO 445+00	1,771	8,690	6,390	805	1,056	5,006		782	1,804	520	261		2,165	3,000
R060	445+00 TO 460+00	1,821	8,912	10,384	805	1,089	5,139		867	1,790	578	228		2,090	2,853
R061	460+00 TO 475+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,500	3,000
R062	475+00 TO 490+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,500	3,000
R063	490+00 TO 505+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,424	2,854
R064	505+00 TO 520+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,500	3,000
R065	520+00 TO 535+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,500	3,000
R066	535+00 TO 550+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,500	3,000
R067	550+00 TO 565+00	1,711	8,417	9,278	805	1,015	4,842		672	1,810	448	302		1,428	2,928
R068	565+00 TO 580+00	1,843	8,908	9,785	805	1,089	5,138		755	1,905	503	318		1,500	3,000
R069	580+00 TO 590+58.89	1,333	6,316	6,886	569	1,043	3,657	500	840	1,371	630	217	1,685	1,059	2,119
R069	590+58.89 TO 591+59.89					40			45		30		267		
DETOUR 1															
TC18- T020	363+50 TO 400+03.97		12,472			1,711	4,365			3,218		1,344			
DETOUR 2															
TC21- T023	425+82.50 TO 462+08.05		10,896			1,481	3,814			2,786		1,089			
DETOUR 3															
T024	427+45.27 TO 431+48.76		876			114	307			215		83			
TEMPORARY WIDENING RT.															
-	343+00 TO 360+50		2,804			283	982			720		282			
-	400+02.01 TO 426+82.50		4,198			571	1,470			1,075		421			
TEMPORARY WIDENING LT.															
T021- T023	423+97.60 TO 427+45.27		415			55	146			104		40			
TOTALS		25,909	159,690	139,469	13,127	21,400	84,557	4,584	12,303	35,374	8,270	7,883	14,206	27,648	48,341

* INCLUDES 70 TONS FOR THE ASPHALT LEVELING COURSE AS SHOWN ON THE TYPICAL SECTIONS.

SUMMARY OF MAILBOXES						
SHEET NO.	STATION	629(A) MAILBOX INSTALLATION SINGLE		629(C) MAILBOX	629(D) REMOVAL OF MAILBOX INSTALLATION	
		LT	RT	EA	EA	EA
R056	391+30		X	1	1	1
R058	433+10		X	1	1	1
R059	439+40		X	1	1	1
R058	462+40		X	1	1	1
R055	506+80		X	1	1	1
R055	506+80	X		1	1	1
R055	506+90		X	1	1	1
R055	533+96		X	1	1	1
R056	535+10		X	1	1	1
R056	535+45		X	1	1	1
R056	539+95		X	1	1	1
R056	548+90		X	1	1	1
R057	559+50		X	1	1	1
R058	579+25		X	1	1	1
R059	585+45		X	1	1	1
TOTAL				15	15	15

SUMMARY OF FENCING						
P&P SHT. NO.	ALIGNMENT	PERM.	STATION TO STATION	LT.	RT.	FENCE-STYLE SWF (5 BARBED WIRE) 624 (C)
						L.F.
R053-R054	CRL	PERM.	346+00 TO 363+68		X	1,768
R053-R055	CRL	PERM.	346+00 TO 383+31	X		3,731
R054-R056	CRL	PERM.	363+97 TO 393+51		X	2,954
R058-R059	CRL	PERM.	427+99 TO 433+43		X	558
R058	CRL	PERM.	428+30 TO 429+96	X		170
R059-R060	CRL	PERM.	440+02 TO 446+11	X		630
R060	CRL	PERM.	447+06 TO 459+80	X		1,305
R064-R066	CRL	PERM.	505+91 TO 539+09	X		3,367
R064	CRL	PERM.	513+88 TO 517+87		X	450
R066	CRL	PERM.	535+80 TO 538+60		X	283
R066-R067	CRL	PERM.	543+41 TO 552+35	X		810
R066	CRL	PERM.	541+73 TO 545+95		X	472
TOTAL						16,498

NOTE: 2% WILL BE ADDED TO TOTAL FOR GROUND MEASUREMENT

SUMMARY OF DRIVEWAYS

P&P SHEET NO.	ALIGNMENT	STATION		TYPE	RADIUS	LEAVE	SURFACE WIDTH	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411 (R)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411 (C)	TACK COAT 407	PRIME COAT 408	3" TRAFFIC BOUND SURFACE COURSE TYPE "E" 403 (L)
					FT.	FT.	FT.	TONS	TONS	GAL.	GAL.	TON
R054	CRL	363+83	RT.	PRIVATE TEMP ACCESS	15/15	70	20	12	5	3	58	17
				TEMP ACCESS		18	20			18	46	7
R054	CRL	367+33	LT.	PRIVATE TEMP ACCESS	15/15	55	12	0	3	2	29	12
				TEMP ACCESS		50	12				31	8
R055	CRL	384+56	LT.	HILLD LNT. TEMP ACCESS	15/15	60	12	9	3	2	32	17
				TEMP ACCESS		54	12				31	9
R056	CRL	387+46	LT.	FIELD ENT. TEMP ACCESS	15/15	66	12	0	3	2	34	12
				TEMP ACCESS		58	12				31	8
R056	CRL	391+12	LT.	PRIVATE TEMP ACCESS	15/15	61	12	0	3	2	32	17
				TEMP ACCESS		60	12				37	10
R056	CRL	393+71	LT.	COMMERCIAL TEMP ACCESS	25/25	57	26	49	19	13	61	40
				TEMP ACCESS		92	26				103	30
R056	CRL	393+72	RT.	SEC. LINE RFT. TEMP ACCESS	50/50	87	21	87	35	23	107	6
				TEMP ACCESS		45	39				78	10
R057	CRL	407+96	LT.	HILLD LNT. TEMP ACCESS	15/15	50	12	9	3	2	27	10
				TEMP ACCESS		50	12				27	10
R057	CRL	410+64	RT.	PRIVATE TEMP ACCESS	15/15	55	16	10	4	3	38	10
				TEMP ACCESS		38	16				27	13
R058	CRL	416+60	LT.	PRIVATE TEMP ACCESS	15/15	30	12	8	3	2	17	3
				TEMP ACCESS		47	12				25	10
R058	CRL	418+88	LT.	PRIVATE TEMP ACCESS	15/15	27	12	9	3	8	41	2
				TEMP ACCESS		47	12				26	10
R058	CRL	420+25	LT.	STREET RTN TEMP ACCESS	25/25	27	20	29	11	8	36	23
				TEMP ACCESS		50	20				60	21
R058	CRL	420+40	RT.	STREET RTN TEMP ACCESS	25/25	27	22	25	10	7	32	21
				TEMP ACCESS		50	22				54	6
R058	CRL	421+50	LT.	COMMERCIAL TEMP ACCESS	15/15	27	36	20	8	5	42	28
				TEMP ACCESS		50	36				74	6
R058	CRL	422+80	LT.	COMMERCIAL TEMP ACCESS	15/15	27	36	20	8	5	42	28
				TEMP ACCESS		50	36				74	16
R058	CRL	423+30	LT.	COMMERCIAL TEMP ACCESS	15/15	28	36				43	17
				TEMP ACCESS		18	36				30	12
R058	CRL	425+06	LT.	PRIVATE TEMP ACCESS	15/15	50	36				74	28
				TEMP ACCESS		29	12	9	3	2	17	3
R058	CRL	425+85	LT.	PRIVATE TEMP ACCESS	15/15	18	12				12	5
				TEMP ACCESS		44	12				24	9
R059	CRL	433+23	LT.	PRIVATE TEMP ACCESS	15/15	45	22	27	11	7	49	6
				TEMP ACCESS		59	22				61	23
R059	CRL	433+34	RT.	FIELD ENT. TEMP ACCESS	15/15	65	12	0	3	2	34	9
				TEMP ACCESS		33	12				19	7
R059	CRL	439+71	LT.	PRIVATE TEMP ACCESS	15/15	60	12	15	6	4	36	4
				TEMP ACCESS		62	12				37	7
R060	CRL	446+62	LT.	SEC. LINE RFT. TEMP ACCESS	50/50	62	25	57	23	15	71	77
				TEMP ACCESS		60	25				60	10
R060	CRL	446+62	RT.	SEC. LINE RFT. TEMP ACCESS	50/50	68	25	41	17	11	52	27
				TEMP ACCESS		18	27				57	20
R061	CRL	462+77	LT.	PRIVATE TEMP ACCESS	15/15	83	12	9	3	2	42	12
				TEMP ACCESS		143	12				72	28
R061	CRL	464+93	LT.	PRIVATE TEMP ACCESS	15/15	76	12	0	3	2	39	11
				TEMP ACCESS		90	12	9	4	2	46	13
R061	CRL	472+92	RT.	HILLD LNT. TEMP ACCESS	15/15	98	12				50	19
				TEMP ACCESS		60	20	71	28	19	88	39
R063	CRL	499+40	LT.	SEC. LINE RET. TEMP ACCESS	50/50	75	20				100	130
				TEMP ACCESS		89	26	104	42	28	138	53
R063	CRL	499+40	RT.	SEC. LINE RET. TEMP ACCESS	50/50	97	26				138	16
				TEMP ACCESS		90	15	13	5	4	57	24
R064	CRL	510+68	LT.	FIELD ENT. TEMP ACCESS	15/15	60	12	12	5	3	34	7
				TEMP ACCESS		85	12				42	8
R065	CRL	525+58	LT.	PRIVATE TEMP ACCESS	15/15	60	12	9	3	2	32	8
				TEMP ACCESS		129	12				64	25
R065	CRL	525+73	LT.	PRIVATE TEMP ACCESS	15/15	90	14	10	4	3	52	16
				TEMP ACCESS		98	14				57	22
R065	CRL	526+03	RT.	PRIVATE TEMP ACCESS	15/15	90	14	10	4	3	53	16
				TEMP ACCESS		98	14				57	22
R065	CRL	534+21	LT.	PRIVATE TEMP ACCESS	15/15	65	12	13	5	3	38	9
				TEMP ACCESS		85	12				56	21
R066	CRL	535+35	RT.	PRIVATE TEMP ACCESS	15/15	90	12	0	3	2	46	13
				TEMP ACCESS		98	12				49	19
R066	CRL	538+17	LT.	HILLD LNT. TEMP ACCESS	15/15	71	12	9	3	2	37	10
				TEMP ACCESS		75	12				39	15
R066	CRL	538+52	LT.	PRIVATE TEMP ACCESS	15/15	75	12	9	3	2	38	11
				TEMP ACCESS		75	12				39	15

SUMMARY OF DRIVEWAYS (CONT.)

P&P SHEET NO.	ALIGNMENT	STATION		TYPE	RADIUS	LENGTH	SURFACE WIDTH	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411 (S)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411 (C)	TACK COAT 407	PRIME COAT 408	3" TRAFFIC BOUND SURFACE COURSE TYPE "E" 403 (E)
					FT.	FT.	FT.	TONS	TONS	GAL.	GAL.	TON
R066	CRL	539+25	RT.	COMMERCIAL TEMP ACCESS	25/25	92	25	25	11	7	98	24
				TEMP ACCESS		98	25				102	39
R066	CRL	540+06	LT.	PRIVATE TEMP ACCESS	15/15	193	16	10	4	3	123	42
				TEMP ACCESS		82	16				55	21
R066	CRL	542+10	RT.	COMMERCIAL TEMP ACCESS	25/25	92	25	25	11	7	98	24
				TEMP ACCESS		98	25				102	39
R066	CRL	543+17	LT.	PRIVATE TEMP ACCESS	15/15	95	12	9	3	2	48	14
				TEMP ACCESS		85	12				43	17
R066	CRL	547+29	RT.	PRIVATE TEMP ACCESS	15/15	92	34	19	8	5	123	38
				TEMP ACCESS		98	34				133	51
R067	CRL	552+39	RT.	PRIVATE TEMP ACCESS	15/15	92	22	68	27	18	119	13
				TEMP ACCESS		92	22				118	46
R067	CRL	552+48	LT.	SEC. LINE RET. TEMP ACCESS	50/50	65	12	9	3	2	34	9
				TEMP ACCESS		82	12				34	13
R067	CRL	559+27	RT.	PRIVATE TEMP ACCESS	15/15	92	12	5	3	2	46	14
				TEMP ACCESS		98	12				49	19
R068	CRL	578+18	RT.	PRIVATE TEMP ACCESS	15/15	82	14	10	4	3	48	14
				TEMP ACCESS		82	14				47	19
R068	CRL	578+63	RT.	FIELD ENT. TEMP ACCESS	15/15	78	12	9	4	2	41	12
				TEMP ACCESS		78	12				40	16
R068	CRL	579+40	LT.	PRIVATE TEMP ACCESS	15/15	72	12	9	3	2	36	10
				TEMP ACCESS		75	12				39	15
R069	CRL	585+66	RT.	PRIVATE TEMP ACCESS	15/15	42	14	10	4	3	26	6
				TEMP ACCESS		42	14				34	13
TOTALS								976	391	267	5,600	1,673

SH 29

STEPHENS COUNTY

SUMMARY SHEET
SHEET 2 OF 4

JOB PIECE NO. 24412(09) SHEET NO. AX02

DESCRIPTION	REVISIONS	DATE

SUMMARY OF REMOVALS						
P&P SHEET NO.	DESCRIPTION	REMOVAL OF	*	*	*	*
		ASPHALT PAVEMENT 619(B)	REMOVAL OF DROP INLET	REMOVAL OF HDWL	REMOVAL OF EXISTING PIPE	REMOVAL OF EXISTING FENCE
		S.Y.	EA	EA	EA	L.F.
SH-29						
R053-R054	STA. 341+26 75' LT. TO STA. 367+13 75' LT. OF 2,641 L.F. 5 STRAND BW FENCE					30,179
R054	STA. 355+00 TO STA. 370+00	1,659				
R054	STA. 363+17 DROP INLET 21' RT. & HDWL 31' LT.		1	1		
R054	STA. 363+81 18" CGMP 31' RT.				1	
R054-R056	STA. 363+98 90' RT. TO STA. 390+16 51' RT. OF 2,719 L.F. 5 STRAND BW FENCE					2,719
R054	STA. 367+33 18" CGMP 29' LT.				1	
R054	STA. 367+36 24" CGMP 33' LT.				1	
R054-R055	STA. 367+45 75' RL.T. TO STA. 383+31 80' LT OF 1,597 L.F. 5 STRAND BW FENCE					1,597
R055	STA. 370+00 TO STA. 385+00	4,115				
R055	STA. 377+03 HDWL 17' RT. & 22' LT.			2		
R055	STA. 383+29 53' LT. TO STA. 383+31 80' LT. OF 28 L.F. 3 STRAND BW FENCE					
R055	STA. 384+55 18" CGMP 31' LT.				1	
R056	STA. 385+00 TO STA. 400+00	3,532				
R056	STA. 387+17 100' RT. TO STA. 387+39 51' RT. OF 54 L.F. HOT WIRE FENCE					54
R056	STA. 389+27 HDWL 32' RT. & 36' LT.			2		
R056	STA. 390+13 130' RT. TO STA. 390+16 51' RT. OF 79 L.F. 3 STRAND BW FENCE					
R056	STA. 390+16 51' RT. TO STA. 393+51' 105' RT. OF 387 L.F. 6 STRAND BW FENCE					387
R056	STA. 391+12 24" CGMP 35' LT.				1	
R056	STA. 391+40 105' RT. TO STA. 391+72 105' RT. OF 108 L.F. 1" SQUARE TUBING FENCE					108
R056	STA. 393+70 18" CGMP 30' RT.				1	
R056	STA. 393+72 18" CGMP 28' LT.				1	
R056	STA. 394+01 100' RT. TO STA. 416+90 75' RT. OF 2,359 L.F. 5 STRAND BW FENCE					2,359
R056-R057	STA. 395+80 75' LT. TO STA. 400+82 70' LT. OF 413 L.F. 5 STRAND BW FENCE					413
R057	STA. 400+83 50' LT TO STA. 415+77 60' LT. OF 1,481 L.F. 6 STRAND BW FENCE					1,481
R057	STA. 403+89 HDWL 25' RT. & 23' LT.			2		
R058-R059	STA. 415+00 TO STA. 430+00	2,348				
R059	STA. 416+73 24" CGMP 36' LT.				1	
R059	STA. 418+88 WOOD DRG. STR. 38' LT.				1	
R059	STA. 419+98 HDWL 20' RT. & 31' LT.			2		
R059	STA. 427+88 100' RT. TO STA. 428+00 160' RT. OF 61 L.F. 4 STRAND BW FENCE					61
R059	STA. 428+34 84' LT. TO STA. 423+00 76' LT. OF 167 L.F. OF 2 STRAND BW FENCE					167
R058-R059	STA. 429+02 67' RT. TO STA. 433+43 85' RT. OF 473 5 STRAND BW FENCE					473
R058	STA. 429+95 134' LT. TO STA. 430+00 76' LT. OF 58 L.F. 5 STRAND BW FENCE					58
R058	STA. 428+89 10' X 10' RCB				1	
R058	STA. 428+89 HDWL 46' RT. & 45' LT.			2		
R058	STA. 429+20 18" CGMP 55' RT.				1	
R059	STA. 430+00 TO STA. 445+00	4,169				
R059	STA. 433+21 18" CGMP 35' LT.				1	
R059	STA. 433+30 24" CGMP 27' RT.				1	
R059	STA. 440+03 80' LT TO STA. 442+82 52' LT. OF 305 L.F. 5 STRAND BW FENCE					305
R059	STA. 444+78 HDWL 20' RT. & 23' LT.			2		
R060	STA. 445+00 TO STA. 460+00	4,923				
R060	STA. 446+36 18" CGMP				1	
R060	STA. 446+11 109' LT. TO STA. 446+22 72' LT. OF 42 L.F. 5 STRAND BW FENCE					42
R060	STA. 446+37 14" CGMP 107' LT.				1	
R060-R061	STA. 447+06 142' LT. TO STA. 464+37 7' RT. OF 1,867 5 STRAND BW FENCE					1,867
R060	STA. 447+24 2-5' X 2' RCB				1	
R060	STA. 447+24 HDWL 20' RT. & 24' LT.			2		
R060	STA. 459+81 21' LT. TO STA. 459+85 75' RT. OF 54 L.F. 4 STRAND BW FENCE					
R060	STA. 459+81 21' LT. TO STA. 459+87 74' LT. OF 54 L.F. 5 STRAND BW FENCE					
R061	STA. 460+00 TO STA. 475+00	4,186				
R061	STA. 461+28 DROP INLET 7' RT.		1			
R061-R062	STA. 464+37 7' RT. TO STA. 486+11 11' LT. OF 2,174 L.F. OF 6 STRAND BW FENCE					2,174
R061	STA. 465+16 8' RT. TO STA. 465+31 95' LT. OF 104 L.F. 5 STRAND BW FENCE					104

SUMMARY OF REMOVALS						
P&P SHEET NO.	DESCRIPTION	REMOVAL OF ASPHALT PAVEMENT 619(B)	*	*	*	*
		S.Y.	EA	EA	EA	L.F.
R063	STA. 490+00 TO STA. 505+00	4,735				
R063	STA. 499+39 18" CGMP 88' RT.				1	
R063	STA. 499+40 18" CGMP 32' RT.				1	
R063	STA. 503+55 30' RCP 60' RT.				1	
R063	STA. 503+55 HDWL 41' RT. & 81' RT.			2		
R064	STA. 505+00 TO STA. 520+00	4,101				
R064-R065	STA. 505+94 90' LT TO STA. 525+78 9' RT. OF 2,002 L.F. 5 STRAND BW FENCE					2,002
R064	STA. 511+08 18" RCP 28' RT.				1	
R064	STA. 516+92 HDWL 18' RT.			1		
R064	STA. 517+86 18" CGMP				1	
R064	STA. 517+56 18" CGMP 115' RT.				1	
R065	STA. 520+00 TO STA. 535+00	4,160				
R065	STA. 525+78 9' RT. TO STA. 527+34 9' RT. OF 339 L.F. CHAIN LINK FENCE					339
R065	STA. 527+34 9' RT. TO STA. 532+40 9' RT. OF 506 L.F. 4 STRAND BW FENCE					506
R065	STA. 529+34 30" RCP 63' RT.				1	
R065	STA. 529+34 HDWL 35' RT. & 90' RT.			2		
R065	STA. 532+40 9' RT. TO STA. 534+52 7' RT. OF 431 L.F. HOT WIRE FENCE					431
R065-R066	STA. 534+52 7' RT. TO STA. 539+09 100' LT. OF 496 L.F. 5 STRAND BW FENCE					496
R066	STA. 539+00 TO STA. 550+00	4,129				
R066	STA. 537+19 24" RCP 62' RT.				1	
R066	STA. 537+19 HDWL 25' RT. & 100' RT.			2		
R066	STA. 539+25 18" CGMP 88' RT.				1	
R066	STA. 540+06 18" CGMP 34' RT.				1	
R066	STA. 542+10 18" CGMP 90' RT.				1	
R066-R067	STA. 543+25 20' LT. TO STA. 552+78 5' LT. OF 1,046 L.F. 5 STRAND BW FENCE					1,046
R066	STA. 543+34 18" CGMP 12' RT.				1	
R066	STA. 543+45 18" CGMP 120' RT.				1	
R066	STA. 544+09 HDWL 21' RT.			1		
R066	STA. 547+24 24" CGMP 91' RT.				1	
R067	STA. 550+00 TO STA. 565+00	4,358				
R067	STA. 552+40 18" RCP 32' RT.				1	
R067	STA. 552+40 18" RCP 88' RT.				1	
R068	STA. 565+00 TO STA. 580+00	4,132				
R068	STA. 571+62 85' LT. TO STA. 571+65 10' RT. OF 95 L.F. 4 STRAND BW FENCE					95
R068	STA. 573+72 6' X 2' RCB 60' RT.				1	
R068	STA. 573+72 81' RT. & 39' RT.			2		
R068	STA. 577+98 90' LT. TO STA. 578+95 90' LT. OF 291 L.F. 5 RUNG WOOD FENCE					291
R069	STA. 580+00 TO STA. 595+00	2,796				
DETOUR 1						
T018-T020	STA. 363+50 TO STA. 400+03.97	11,186				
DETOUR 2						
T021-T023	STA. 426+82.80 TO STA. 462+08.05	9,656				
DETOUR 3						
T024	STA. 427+45.27 TO STA. 431+48.76	734				
TEMPORARY WIDENING RT.						
	STA. 343+00 TO STA. 360+50	2,497				
	STA. 400+02.01 TO STA. 426+82.50	3,727				
TEMPORARY WIDENING LT.						
T021-T023	STA. 423+97.60 TO STA. 427+45.27	354				
TOTALS		81,497	2	25	33	49,754

* REMOVAL OF THE SIGN ITEMS TO BE INCLUDED IN THE PAY ITEM FOR REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

DESCRIPTION	REVISIONS	DATE

SUMMARY OF DITCH TREATMENT

P&P SHEET NO.	STATION TO STATION		LOCATION	DESIGN NO.	LENGTH	BOTTOM WIDTH	CURTAIN WALLS	CLASS 'C' CONCRETE 509(D)
					FT.	FT.	EA.	C.Y.
R054	367+00	TO 370+00	LT.	1	300	4	4	23.4
R056	387+00	TO 388+00	RT.	1	100	4	2	7.9
R056	389+27	TO 390+00	RT.	1	73	4	2	5.8
R058	415+00	TO 418+60	LT.	1	360	4	5	28.1
R058	415+00	TO 420+00	RT.	1	500	4	6	38.9
R058-R059	429+75	TO 431+00	LT.	1	125	4	3	9.9
R059	430+00	TO 432+00	RT.	1	200	4	4	15.7
R059	440+00	TO 444+78	RT.	1	478	4	6	37.3
R061	460+00	TO 460+85	RT.	1	85	4	2	6.7
R061	465+28		RT.	1	45	4	2	3.6
R064	509+00	TO 511+00	RT.	1	200	4	3	15.6
R064	509+00	TO 516+85	LT.	1	785	4	9	61.1
R066	535+00	TO 537+19	RT.	1	219	4	3	17.1
R066	543+00	TO 544+02	LT.	1	102	4	2	8.0
R066-R067	544+85	TO 555+00	LT.	1	1015	4	12	79.1
R066-R067	548+00	TO 556+00	RT.	1	800	4	9	62.3
TOTALS								420.4

SUMMARY OF RIP RAP

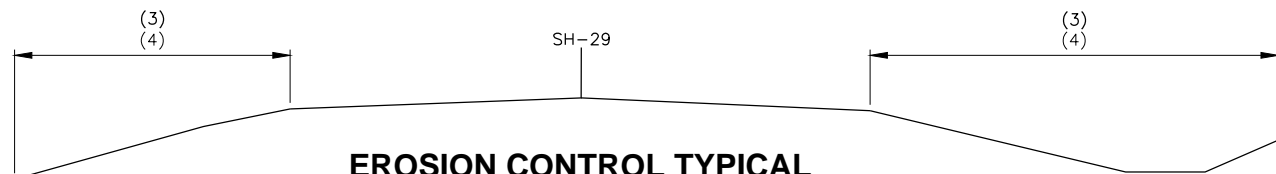
P&P SHEET NO.	STATION AND OFFSET	CLSM BACKFILL	TYPE 1-A PLAIN RIPRAP	TYPE 1-A FILTER BLANKET
		501(G) CY	601(B) TON	601(C) TON
R061	385+15 110' RT		177	42
R063	428+89 140' RT		129	31
R065	447+23 55' RT		128	26
R069	518+90 130' RT	5	49	12
R071	544+08 125' RT		91	22
TOTALS		5	554	132

(5) CONTRACTOR TO FILL THE VOID UNDER THE APRON ON THE SOUTH-
END OF THE EXISTING STR. NO. 38 TO THE SATISFACTION OF THE

SUMMARY OF EROSION CONTROL

SUMMARY OF EROSION CONTROL									
SHT. NO.	DESCRIPTION			TEMPORARY SILT FENCE	TEMPORARY ROCK FILTER DAM (TYPE 1)	TEMPORARY SEDIMENT FILTER	TEMPORARY SILT DIKE	(1) SOLID SLAB SODDING	(2) VEGETATIVE MULCHING
				221 (C)	221(G)	221 (D)	221(F)	230(A)	233(A)
				L.F.	CY		L.F.	S.Y.	AC.
Phase 1									
R021	340+00	TO	360+00	514	0.00	0.00	35.00		0.82
R022	360+00	TO	390+00	715	0.00	2.00	168.00		3.17
R023	390+00	TO	420+00	597	0.00	0.00	105.00		1.82
R024	420+00	TO	450+00	3,113	4.12	2.00	126.00		2.04
R025	450+00	TO	480+00	1,535	3.94	1.00	273.00		5.33
R026	480+00	TO	510+00	525	0.00	1.00	392.00		9.03
R027	510+00	TO	540+00	1,464	5.46	2.00	245.00		9.25
R028	540+00	TO	570+00	677	4.91	0.00	434.00		7.80
R029	570+00	TO	590+59.89	431	0.00	1.00	140.00		4.04
Phase 2									
R030	340+00	TO	360+00	542	0.00	0.00	56.00		1.66
R031	360+00	TO	390+00	770	3.66	2.00	329.00		6.11
R032	390+00	TO	420+00	661	0.00	2.00	210.00		4.82
R033	420+00	TO	450+00	2,641	5.56	7.00	224.00		5.01
R034	450+00	TO	480+00	1,684	0.00	1.00	141.00		3.35
R035	480+00	TO	510+00	0	0.00	0.00	0.00		0.00
R036	510+00	TO	540+00	0	0.00	0.00	0.00		0.00
R037	540+00	TO	570+00	0	0.00	0.00	0.00		0.00
R038	570+00	TO	590+59.89	1,145	0.00	0.00	14.00		1.04
Phase 3									
R039	340+00	TO	360+00	0	0.00	0.00	98.00	25,555.83	2.54
R040	360+00	TO	390+00	212	0.00	0.00	294.00	43,389.55	6.29
R041	390+00	TO	420+00	0	0.00	0.00	266.00	35,006.15	4.84
R042	420+00	TO	450+00	1,013	0.00	0.00	224.00	38,737.52	5.15
R043	450+00	TO	480+00	142	0.00	0.00	280.00	51,447.53	5.50
R044	480+00	TO	510+00	269	0.00	0.00	224.00	51,226.42	7.78
R045	510+00	TO	540+00	1,002	0.00	0.00	126.00	56,502.84	7.94
R046	540+00	TO	570+00	397	0.00	0.00	252.00	52,501.95	9.78
R047	570+00	TO	590+59.89	746	0.00	0.00	84.00	33,438.82	4.50
TOTALS				20,795	27.65	21	4,740	387,807	119.61

(1) TO BE USED AS PERMANENT EROSION CONTROL
(2) QUANTITY INCLUDES TWO APPLICATIONS



EROSION CONTROL TYPICAL

(3) PLACE SOLID SLAB SODDING
(4) PLACE VEGETATIVE MULCHING

VEGETATIVE MULCH SHALL BE USED AS
TEMPORARY EROSION CONTROL

SH 29

STEPHENS COUNTY

SUMMARY SHEET
SHEET 4 OF 4

JOB PIECE NO. 24412(09) SHEET NO. AX04

DESCRIPTION	REVISIONS	DATE

SUMMARY OF DRAINAGE STRUCTURES																																						
SHT. NO.	SHT. NO.	ALIGNMENT	STATION	DESCRIPTION	DESIGN	AVG. FILL HT.	UNCLASSIFIED EXCAVATION 502(A)	STRUCTURAL EXCAVATION 501(A)	CLASS AA CONCRETE 508(A)	REINFORCING STEEL 511(A)	TRENCH EXCAVATION	STD. BEDDING MATERIAL	MANHOLE (4" DIA. MIN.) 511(A)	ADDITIONAL IN MANHOLE (4" DIA.) 511(B)	SMD 611(G)		INLET CO. 611(G)		ADDITIONAL INLET CO.			RC PIPE CLASS III 612(A)					CORR. GALV. STL PIPE 512(B)			CET 512(M)		PREFAB. CULVERT END SEC 512(L)						
															TYPL 2	TYPL 2U	RCB (DES 4)	RCB (DES 6)	RCU (DES 8)	RCR (DES 9)	RCB (DES 10)	RCP (DES 3)	RCB (DES 4)	RCU (DES 8)	RCB (DES 9)	18" RCP	24" RCP	30" RCP	36" RCP	42"X28" RCPA	12" CGSP	18" CGSP	24" CGSP	TYPE A4	TYPL 11A	42"X26" PCES (ARCH)	18" PCLG (ROUND)	24" PCES (ROUND)
R054	1	CRL	363-16.84	EXTEND EXIST. 3'X3' RCB 22' LG. RT. & 26' LG. LT.	SEE BRIDGE STD. SB-4	2.5	218	8	37.6	5,684																												
R054	2	CRL	363-83	CONST. 18'X72' LG. CGSP SD 45' RT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																						72		2								
R054	3	CRL	367-33	CONST. 24'X36' LG. CGSP SD 42' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																								36		2						
R055	4	CRL	371-03.25	EXTEND EXIST. 30" RCP 42' LG. RT. & 22' LG. LT. W/ PCES BOTH ENDS	PCES-4, FHTCP-3, SPH4, SPB-1	2.0					26	30															60							2				
R055	5	CRL	384-55	CONST. 18'X38' LG. CGSP SD 42' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	2.5																							38		2							
R056	6	CRL	387-45	CONST. 18'X34' LG. CGSP SD 42' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																							34		2							
R056	7	CRL	389-27.25	EXTEND EXIST. 4'X3' RCB 52' LG. RT. & 31' LG. LT. W/ DROP INLET 68' LT.	SEE BRIDGE STD. COB-1, SB-4	10.0	347	18	43.0	5,357											0.36																	
R056	8	CRL	391-12	CONST. 24'X34' LG. CGSP SD 44' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	6.2			4.8	900																				34		2						
R056	9	CRL	393-71	CONST. 18'X64' LG. RCP SD 45' RT. W/ OET BOTH ENDS	CET4S-3, FHTCP-3	6.7																	64								2							
R056	10	CRL	393-71	CONST. 18'X64' LG. RCP SD 45' LT. W/ OET BOTH ENDS	CET4S-3, FHTCP-3	1.7																	64								2							
R057	11	CRL	403-89.11	EXTEND EXIST. 30" RCP 19' LG. RT. & 23' LG. LT. W/ PCES BOTH ENDS	PCES-4, FHTCP-3, SPH4, SPB-1	1.5					9	19															36							2				
R057	12	CRL	407-96	CONST. 18'X38' LG. CGSP SD 42' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.5																								38		2						
R058	12A	CRL	416-70	CONST. 24'X38' LG. CGSP SD 39' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																									38		2					
R058	13	CRL	418-60	CONST. TYPE 2 SMD 39' LT. W/ 24'X136' LG. RCP, STUBBED INTO STR. NO. 14	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					87	53			1										136													
R058	14	CRL	419-58	CONST. TYPE 2 SMD 43' LT. W/ 36'X116' LG. RCP, STUBBED INTO STR. NO. 15	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					166	99			1																							
R058	14A	CRL	419-58	CONST. 12'X10' LG. CGSP SD 49' LT. STUBBED INTO STR. NO. 14	SVD-3, FHTMPP-1, SPH4, SPB-2	1.5																											10					
R058	15	CRL	421-20	CONST. TYPE 2B SVD 39.5' LT. W/ 36'X129' LG. RCP, STUBBED INTO STR. NO. 17	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					194	95			1																							
R058	16	CRL	419-90	EXTEND EXIST. 6'X2' RCB 19' LG. WEST W/ DROP INLET	SEE BRIDGE STD. COB-1, SB-4	2.0	32	2	13.4	2,022																												
R058	17	CRL	422-50	CONST. TYPE 2B SVD 39.5' LT. W/ 36'X111' LG. RCP, STUBBED INTO STR. NO. 18	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					168	84			1																							
R058	18	CRL	423-65	CONST. TYPE 2B SVD 40' LT. W/ 36'X113' LG. RCP, STUBBED INTO STR. NO. 19	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					125	85			1																							
R058	19	CRL	424-78	CONST. TYPE 2B SVD 37.5' LT. W/ 36'X230' LG. RCP, STUBBED INTO STR. NO. 20	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					207	173			1																							
R058	19A	CRL	428-00	CONST. TYPE 2B SVD 62' RT. W/ 36'X78' LG. RCP, STUBBED INTO STR. NO. 21	SMD-3, FHTCP-3, SPH4, SPB-1	1.0					77	59			1																							
R058	20	CRL	427-08	CONST. TYPE 2B SVD 36' LT. W/ 36'X127' LG. RCP, STUBBED INTO STR. NO. 20A	SMD-3, FHTCP-3, SPH4, SPB-1	1.5					198	95			1																							
R058	20A	CRL	428-30	CONST. 4" MANHOLE 54' LT. W/ 36'X56' LG. RCP, STUBBED INTO STR. NO. 21	SMD-3, FHTCP-3, SPH4, SPB-1, VUB-3						119	42	1	4.96																				56				
R058	21	CRL	428-89	CONST. 18'X10' RCB 10' LG. RT. & 98' LG. LT.	SEE BRIDGE STD. SB-4	18.5	2,936	128	477.5	62,615																												
R058	21A	CRL	430-00	CONST. TYPE 2B SVD 54' LT. W/ 36'X135' LG. RCP, STUBBED INTO STR. NO. 21	SMD-3, FHTCP-3, SPH4, SPB-1	6.0					104	79			1																							
R059	22	CRL	433-23	CONST. 18'X40' LG. CGSP SD 43' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	6.7																								40		2						
R059	23	CRL	433-34	CONST. 24'X30' LG. CGSP SD 42' RT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	2.7																									30		2					
R059	24	CRL	444-78.18	EXTEND EXIST. 4'X3' RCB 24' LG. RT. & 29' LG. LT. W/ DROP INLET 44' LT.	SEE BRIDGE STD. SB-4	3.0	202	12	33.5	3,999																												
R060	24A	CRL	446-38	CONST. 24'X34' LG. RCP 42' LG. RT. & 42' LG. LT.	PCES-4, FHTCP-3, SPH4, SPB-1	1.2					45	32															84							2				
R060	25	CRL	447-23.42	EXTEND EXIST. 2.5'X2' RCB 24' LG. RT. & 20' LG. LT.	SEE DETAIL SHT. ABC-6A(1) SBH4	2.0	206	19	39.8	3,534																												
R061	26	CRL	451-26.80	EXTEND EXIST. 5'X5' RCB 52' LG. LT. W/ DROP INLET 54' LT.	SEE BRIDGE STD. COB-1, SB-4	10.5	924	16	38.5	6,020								1																				
R061	27	CRL	462-77	CONST. 18'X36' LG. CGSP SD 48' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	2.5																									36		2					
R061	28	CRL	464-96	CONST. 18'X36' LG. CGSP SD 48' LT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	2.5																										36		2				
R061	29	CRL	486-51.24	EXTEND EXIST. 6'X4' RCB 54' LG. LT. W/ DROP INLET 67' LT.	SEE BRIDGE STD. COB-1, SB-4	13.0	457	19	44.5	7,602								1																				
R061	30	CRL	472-90	CONST. 18'X32' LG. CGSP SD 42' RT. W/ OET BOTH ENDS	CET4S-3, FHTMPP-1	1.1																										32		2				
R062	31	CRL	486-58.14	EXTEND EXIST. 6'X4' RCB 80' LG. LT. W/ DROP INLET 54' LT.	SEE BRIDGE STD. COB-1, SB-4	6.5	414	19	42.4	7,240								1																				
SUB-TOTAL:							6,438	241	772.3	124,896	1,524	935	1	4.96	2	7	1	1	2	1	0	0	0.36	1.7	3	129	220	96	1,064	0	10	326	138	20	8	0	2	4

SUMMARY OF DRAINAGE STRUCTURES

SUMMARY OF DRAINAGE STRUCTURES (CONTINUED)																																										
SHT. NO.	STR. NO.	ALIGNMENT	STATION	DESCRIPTION	DESIGN	AVG FILL HT	UNCLASSIFIED EXCAVATION 202(A)	STRUCTURAL EXCAVATION 501(A)	CLASS AA CONCRETE 509(A)	REINFORCING STEEL 511(A)	TRENCH EXCAVATION	STD. BEDDING MATERIAL	MANHOLE (4' DIAMETER) 611(A)	ADD'L. DEPTH IN MANHOLE (4' DIA.) 611(B)	SMD 611(G)		INLET CDI 611(G)						ADD'L. DEPTH IN INLET CDI			R.C. PIPE (CLASS III) 613(A)					CORR. GALV. STL PIPE 613(B)			CET 613(M)		PREFAB. CULVERT END SEC 613(L)						
															TYPE 2	TYPE 2B	RCB (DES 4)	RCB (DES 6)	RCB (DES 8)	RCB (DES 9)	RCB (DES 10)	RCB (DES 3)	RCB (DES 4)	RCB (DES 8)	RCB (DES 9)	18" RCP	24" RCP	30" RCP	36" RCP	43"x26" RCPA	12" CGSP	18" CGSP	24" CGSP	TYPE A4	TYPE B4	43"x26" PCES (ARCH)	18" PCES (ROUND)	24" PCES (ROUND)	30" PCES (ROUND)			
						FT.	C.Y.	C.Y.	C.Y.	LB.	C.Y.	C.Y.	EA.	V.F.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	V.F.	V.F.	V.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.	EA.	EA.	EA.				
R063	32	CRL	499+39	CONST. 18"x64' LG. RCP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTCP-3	1.1																			64								2									
R063	33	CRL	499+39	CONST. 18"x48' LG. RCP SD 42' RT. W/ CET BOTH ENDS	CET4S-3, FHTCP-3	1.5																			48								2									
R063	34	CRL	503+53	CONST. 30"x84' LG. RCP 42' LG. RT. & 42' LG. LT. W/ PCES BOTH ENDS	PCES-4, FHTCP-3, SPI-4	2.0																					80										2					
R064	35	CRL	505+10	CONST. 18"x42' LG. CGSP SD 46' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																										42		2								
R064	36	CRL	510+68	CONST. 24"x42' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																											42		2							
R064	37	CRL	516+86	CONST. 24"x64' LG. RCP SD 98' LT. W/ PCES & STUBBED INTO STR. NO. 38	PCES-4, FHTCP-3, SPI-4, SPB-1	2.0																				64												1				
R064	38	CRL	516+89.77	EXTEND EXIST. 10'X10' RCB SKWD 30° LT. FWD. 169' LG. LT.	RCB-E1-H10-0-1 RCB-E1-H10-0-2 SBI-4 SEE SHT R002	24.0	480	94	110.3	14,650																																
R064									279.2	58,900																																
R064	39	CRL	518+19	DELETED																																						
R065	40	CRL	525+87	CONST. 18"x90' LG. CGSP SD 42' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.5																										90		2								
R065	40A	CRL	525+59	CONST. 18"x42' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.5																										42		2								
R065	41	CRL	529+32.62	CONST. 30" RCP 84' LG. RCP 42' LG. RT. & 42' LG. LT. W/ DROP INLET 44' LT.	PCES-4, FHTCP-3, CDIP-1, SPI-4	2.0					60	40										1						68											1			
R065	42	CRL	534+23	CONST. 18"x36' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																											36		2							
R066	42A	CRL	535+35	CONST. 18"x42' LG. CGSP SD 44' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.5																											42		2							
R066	43	CRL	537+02	CONST. 43"x26"x95' LG. RCPA SKWD 30° RT. FWD. 48' LG. LT. & 47' LG. RT. W/ DROP INLET 47' LT. & PCES RT.	PCES-4, FHTCP-3, CDIP-1, SPI-4	2.0					104	67																				95				1						
R066	44	CRL	538+35	CONST. 18"x82' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.1																											82		2							
R066	44A	CRL	539+25	CONST. 18"x52' LG. CGSP SD 42' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																											52		2							
R066	45	CRL	540+06	CONST. 18"x50' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																												50		2						
R066	45A	CRL	542+10	CONST. 18"x52' LG. CGSP SD 42' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																												52		2						
R066	46	CRL	543+20	CONST. 18"x58' LG. CGSP SD 51' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	3.5																												58		2						
R066	47	CRL	544+02	CONST. 18"x46' LG. RCP SD 71' LT. W/ PCES & STUBBED INTO STR. NO. 48	PCES-4, FHTCP-3, SPI-4, SPB-1	2.0																				46													1			
R066	48	CRL	544+07.50	EXTEND EXIST. 8'X8' RCB SKWD. 30° LT. FWD. 95' LG. LT.	SEE BRIDGE STD. SBI-4 SEE SHT R003	14.0	657	50	170.5 15.6	23,983 4,160																																
R066	49	CRL	547+25	CONST. 24"x68' LG. CGSP SD 58' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.3																												68	2							
R067	50	CRL	552+40	CONST. 18"x64' LG RCP SD 55' RT W/ CET BOTH ENDS	CET4S-3, FHTCP-3	1.0																											64		2							
R067	51	CRL	552+38	CONST. 18"x42' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.5																												42		2						
R068	52	CRL	573+69.59	CONST. 6'X3'X98' LG. RCB 50' LG. RT. & 48' LG. LT. W/ DROP INLET 50' LT.	SEE BRIDGE STD, CDIB-1, SBI-4	4.5	398	28	66.7	8,959												1																				
R068	53	CRL	578+40	CONST. 18"x106' LG. CGSP SD 56' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	3.5																												106		2						
R068	54	CRL	579+40	CONST. 18"x36' LG. CGSP SD 42' LT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.2																												36		2						
R069	55	CRL	585+68	CONST. 18"x40' LG. CGSP SD 36' RT. W/ CET BOTH ENDS	CET4S-3, FHTMPP-1	1.0																													40		2					
						SUBTOTAL:	1,535	172	642.3	110,652	164	107	0	0.00	0	0	0	0	0	0	0	1	1	0.00	0.00	0.00	158	64	148	0	95	0	834	110	36	2	1	1	1	3		
						TOTAL:	7,973	413	1,414.6	235,538	1,688	1,042	1	4.66	2	7	1	1	2	1	1	1	0.36	1.71	3.12	286	284	244	1,064	95	10	1,160	248	56	10	1	1	3	7			

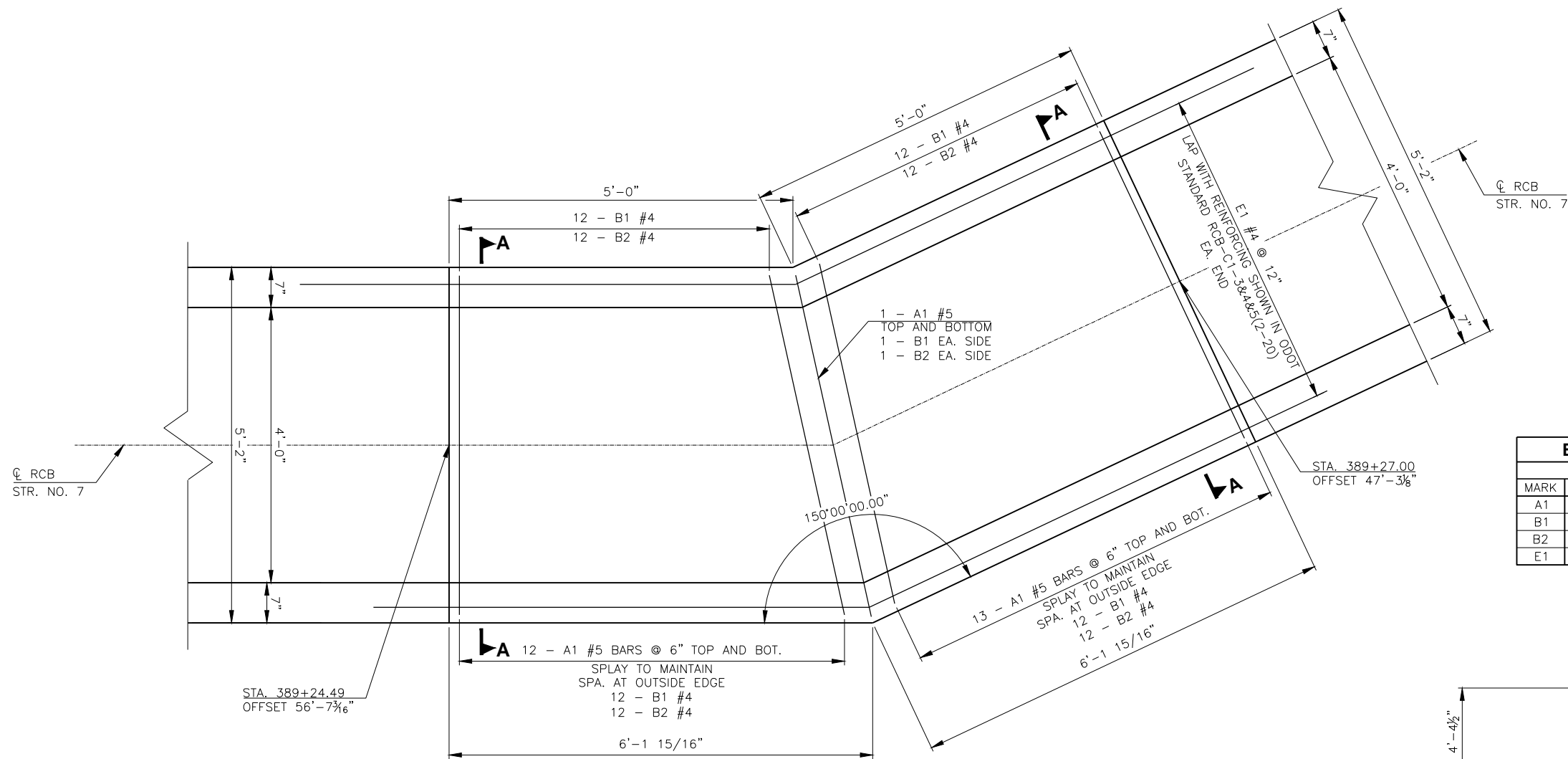
DESCRIPTION	REVISIONS	DATE

SUMMARY OF TEMPORARY DRAINAGE STRUCTURES									
	SHT NO.	STR NO.	ALIGNMENT	STATION	DESCRIPTION	(2) CORR. GALV. STL PIPE 613(H)			
						18" CGSP	24" CGSP	30" CGSP	35"X24" CGSPA
						L.F.	L.F.	L.F.	L.F.
(1)	T028	T1	CRL	363+17	CONST. 30"X30' LG. CGSP			38	
	T028	T2	CRL	363+31	CONST. STEEL PIPE DROP INLET W/ 18"X14' LG. CGSP SD 17' RT. STUBBED INTO EXIST. STR 1	14			
	T028	T3	CRL	363+83	CONST. 18"X72' LG. CGSP SD 54' RT.	72			
	T037	T4	CRL	387+33	CONST. 18"X48' LG. CGSP SD 17' RT.	46			
	T028	T5	CRL	377+04	CONST. 24"X48' LG. CGSP		46		
	T037	T6	CRL	384+56	CONST. 18"X30' LG. CGSP SD 17' RT.	50			
(1)	T037	T7	CRL	387+48	CONST. 18"X48' LG. CGSP SD 17' RT.	48			
	T028	T8	CRL	388+50	CONST. STEEL PIPE DROP INLET W/ 18"X84' LG. CGSP 18' RT.	64			
	T038	T9	CRL	391+12	CONST. 18"X42' LG. CGSP SD 17' RT.	42			
	T029	T10	CRL	393+77	CONST. 18"X42' LG. CGSP SD 54' RT.	54			
	T038	T11	CRL	393+72	CONST. 18"X90' LG. CGSP SD 17' RT.	90			
	T029	T12	CRL	410+64	CONST. 18"X28' LG. CGSP SD 32' RT.	28			
	T029	T13	CRL	418+88	CONST. 18"X18' LG. CGSP 21' RT.	18			
		T14	CRL		DELETED				
	T039	T15	CRL	433+23	CONST. 18"X66' LG. CGSP SD 20' RT.	66			
	T030	T16	CRL	433+34	CONST. 24"X32' LG. CGSP SD 54' RT.		32		
(1)	T039	T17	CRL	439+71	CONST. 18"X87' LG. CGSP SD 18' RT.	86			
	T030	T18	CRL	444+78	CONST. 35"X24"X42' LG. CGSPA 22' RT.				42
	T030	T19	CRL	446+36	CONST. 18"X26' LG. CGSP 38' RT.	26			
	T030	T19A	CRL	446+63	CONST. 18"X98' LG. CGSP 18' RT.	98			
	T030	T20	CRL	447+17	CONST. 2-35"X24"X48' LG. CGSPA 22' RT.				96
	T030	T21	CRL	447+45	CONST. STEEL PIPE DROP INLET W/ 18"X18' LG. CGSP 18' RT. STUBBED INTO EXIST. STR NO T20	15			
		T22	CRL		DELETED				
	T031	T23	CRL	466+44	CONST. STEEL PIPE DROP INLET W/ 18"X18' LG. CGSP SD 33' RT. STUBBED INTO EXIST. STR 29	15			
	T049	T24	CRL	472+91	CONST. 18"X32' LG. CGSP SD 20' RT.	32			
	T032	T25	CRL	486+90	CONST. STEEL PIPE DROP INLET W/ 18"X15' LG. CGSP SD 31' RT. STUBBED INTO EXIST. STR NO 31	15			
(1)	T032	T26	CRL	499+40	CONST. 18"X100' LG. CGSP SD 20' RT.	100			
	T050	T27	CRL	505+11	CONST. 18"X30' LG. CGSP SD 20' RT.	30			
	T033	T28	CRL	511+09	CONST. 18"X42' LG. CGSP SD 30' RT.	42			
	T033	T29	CRL	518+01	CONST. 24"X114' LG. CGSP		114		
	T033	T30	CRL	525+87	CONST. 18"X90' LG. CGSP SD 20' RT.	90			
	T033	T31	CRL	534+42	CONST. 18"X40' LG. CGSP SD 20' RT.	40			
	T051	T32	CRL	535+36	CONST. 18"X24' LG. CGSP SD 20' RT.	24			
	T033	T33	CRL	538+35	CONST. 18"X60' LG. CGSP SD 20' RT.	60			
	T051	T34	CRL	539+25	CONST. 18"X60' LG. CGSP SD 20' RT.	60			
	T033	T35	CRL	540+07	CONST. 18"X34' LG. CGSP SD 20' RT.	34			
	T052	T36	CRL	542+10	CONST. 18"X54' LG. CGSP SD 20' RT.	54			
	T034	T37	CRL	543+21	CONST. 18"X66' LG. CGSP SD 25' RT.	66			
	T043	T38	CRL	543+81	CONST. 18"X76' LG. CGSP	76			
	T052	T39	CRL	547+29	CONST. 18"X46' LG. CGSP SD 34' RT.	46			
T043	T40	CRL	552+36	CONST. 18"X84' LG. CGSP SD 20' RT.	84				

SUMMARY OF TEMPORARY DRAINAGE STRUCTURES (CONTINUED)								
SHT. NO.	STR. NO.	ALIGNMENT	STATION	DESCRIPTION	(2) CORR. GALV. STL PIPE 613(B)			
					18" CGSP	24" CGSP	30" CGSP	35"X24" CGSPA
					L.F.	L.F.	L.F.	L.F.
T052	T41	CRL	559+26	CONST. 18"X24' LG. CGSP SD 20' RT.	24			
T053	T42	CRL	578+18	CONST. 18"X36' LG. CGSP SD 20' RT.	36			
T053	T43	CRL	578+64	CONST. 18"X36' LG. CGSP SD 20' RT.	36			
T044	T44	CRL	579+09	CONST. 18"X34' LG. CGSP SD 20' RT.	34			
TOTALS					1,785	192	38	138

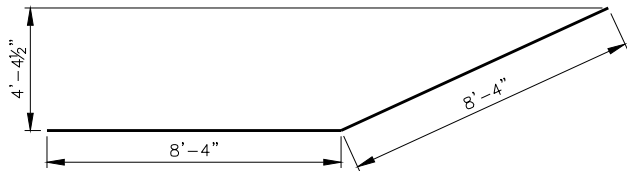
NOTE:
(1) COST OF STEEL PIPE DROP INLET AND ALL ASSOCIATED HARDWARE TO COMPLETE INSTALLATION TO BE INCLUDED IN THE COST OF THE PIPE.
(2) ALL TEMPORARY DRAINAGE STRUCTURES SHALL HAVE PIPE ENDS CUT AT A 1:4 SAFETY SLOPE WHEN LOCATED WITHIN CLEAR ZONE.

DESCRIPTION	REVISIONS	DATE

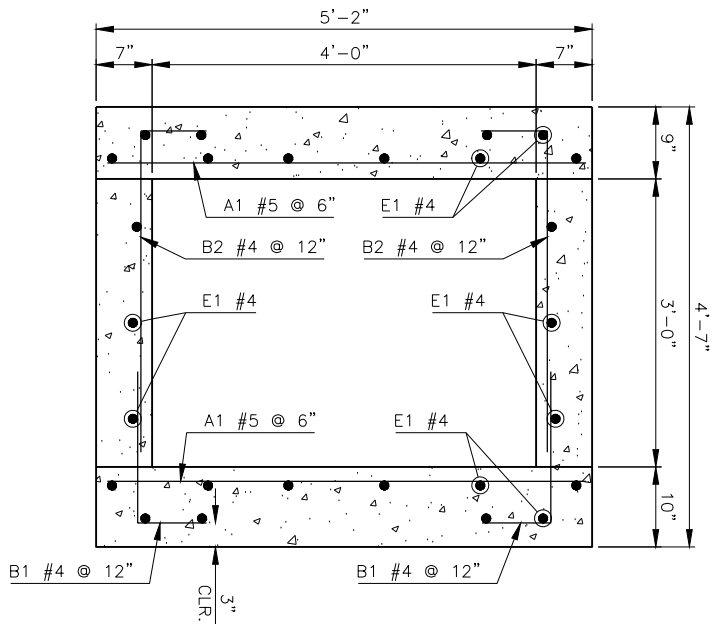


NOTE:
FOR ADDITIONAL NOTES AND DETAIL
OF RCB BEND CONSTRUCTION, SEE
STD. RCB-C1-3&4&5(2-20).

BARREL BEND BAR LIST				
REINFORCING STEEL				
MARK	SIZE	NO.	FORM	LENGTH
A1	#5	50	STR.	4'-10"
B1	#4	50	BNT.	2'-7"
B2	#4	50	BNT.	4'-3"
E1	#4	26	BNT.	16'-8"

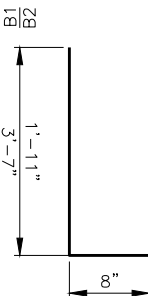


PLAN



SECTION A-A

E1 #4 X 16'-8"



B1 #4 X 2'-7"
B2 #4 X 4'-3"

BARREL BEND QUANTITIES		
ITEM	UNIT	TOTAL
CLASS AA CONCRETE	C.Y.	4.8
REINFORCING STEEL	LB.	800

STRUCTURE NO. 7
DETAILS

GENERAL NOTES

SPECIFICATIONS -

COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

CONCRETE -

ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1½" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER. ALL CONCRETE SHALL BE PLACED IN THE DRY.

REINFORCING -

UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.

ALL REINFORCING STEEL SHALL HAVE A 2" MINIMUM CLEAR COVER UNLESS OTHERWISE NOTED.

STRUCTURE NO. 38 BARREL BAR LIST

PLAIN REINFORCING					
MARK	SIZE	NO.	FORM	LENGTH	LENGTH VARIATION
A1	#7	562	STR.	11'-8"	
A2	#6	562	STR.	11'-8"	
A3	#7	64	STR.	11'-10" AVG.	11'-8" TO 12'-0"
A4	#6	64	STR.	11'-10" AVG.	11'-8" TO 12'-0"
A5	#7	2	STR.	12'-1"	
A6	#6	2	STR.	12'-1"	
B1	#6	616	BNT.	7'-0"	
B2	#6	616	BNT.	14'-6"	
C1	#4	312	STR.	3'-0"	
C2	#4	312	STR.	11'-0"	
E1	#4	56	STR.	140'-0"	
E2	#4	40	STR.	140'-0"	
E3	#4	56	BNT.	16'-11" AVG.	15'-3" TO 18'-7"
E4	#4	20	BNT.	18'-7"	
E5	#4	20	BNT.	15'-3"	

①
①

① THE QUANTITY FOR REINFORCING STEEL DOES NOT INCLUDE LAP SPLICES OF E1 BARS OR E2 BARS IN THE LENGTH OF THE BARREL OR AT TRANSVERSE CONSTRUCTION JOINTS. THE SPLICE LENGTH FOR E BARS SHALL BE 24" MINIMUM. THE NUMBER OF SPLICES USED IS TO BE APPROVED BY THE ENGINEER. REINFORCING STEEL FOR SPLICES SHALL NOT BE MEASURED FOR PAYMENT, AND ALL COSTS WILL BE INCLUDED IN THE UNIT BID PRICE FOR REINFORCING STEEL.

STRUCTURE NO. 38 BARREL QUANTITIES

ITEM	UNIT	TOTAL
CLASS AA CONCRETE	C.Y.	279.2
REINFORCING STEEL	L.B.	58,900
① PREPARATION OF CRACKS, ABOVE WATER	L.F.	20
① EPOXY RESIN, ABOVE WATER	GAL.	2

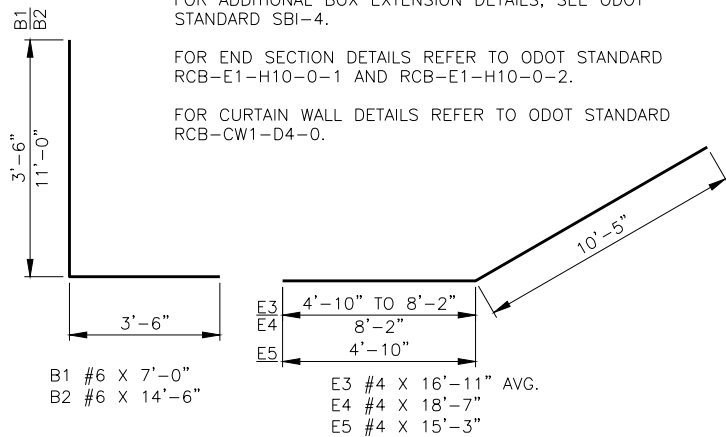
① QUANTITY ESTIMATED. ACTUAL QUANTITY TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

NOTES:

FOR ADDITIONAL BOX EXTENSION DETAILS, SEE ODOT STANDARD SBI-4.

FOR END SECTION DETAILS REFER TO ODOT STANDARD RCB-E1-H10-0-1 AND RCB-E1-H10-0-2.

FOR CURTAIN WALL DETAILS REFER TO ODOT STANDARD RCB-CW1-D4-0.



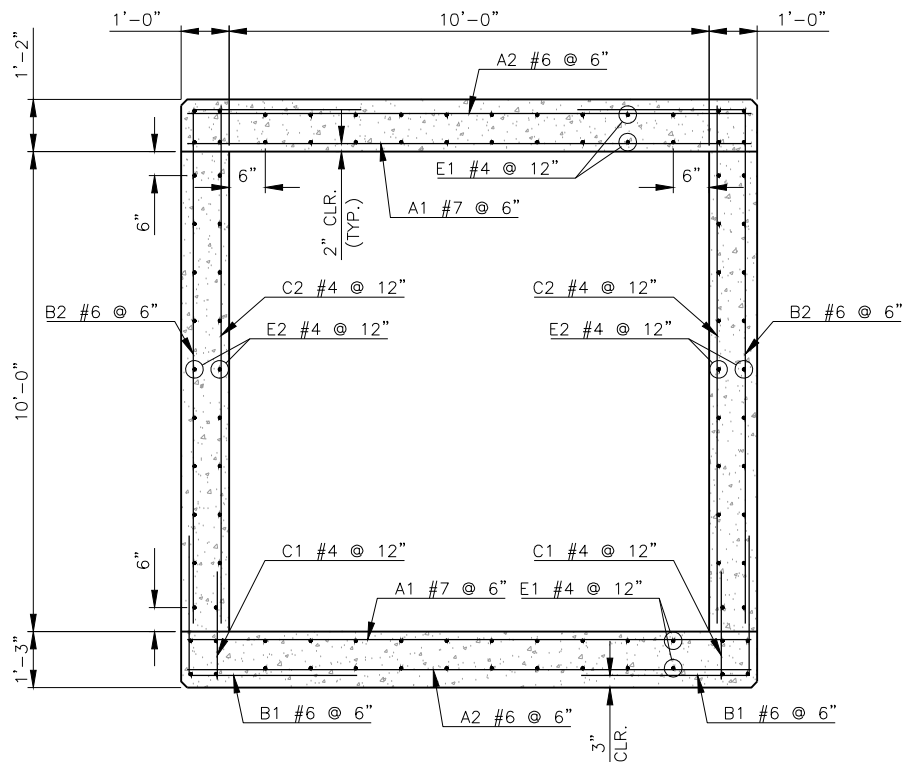
B1 #6 X 7'-0"
B2 #6 X 14'-6"

E3 #4 X 16'-11" AVG.
E4 #4 X 18'-7"
E5 #4 X 15'-3"

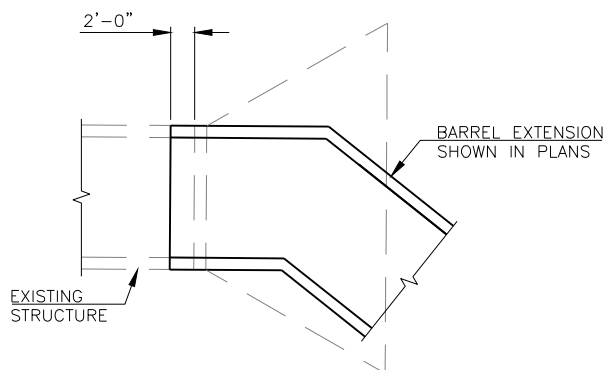
DESIGN	J.W.H./Z.M.B.	SH 29	STEPHENS COUNTY
DRAWN	J.F.R.		
CHECKED	Z.M.B.		
APPROV.	J.W.H.		
SQUAD	CEC		

STRUCTURE NO. 38
BARREL EXTENSION DETAILS

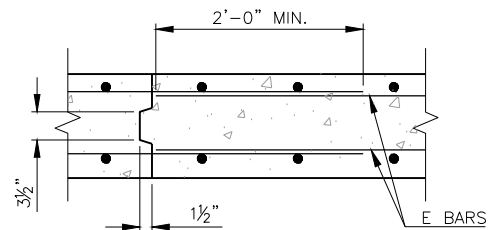
JOB PIECE NO. 24412(09) SHEET NO. R002



TYPICAL BARREL SECTION

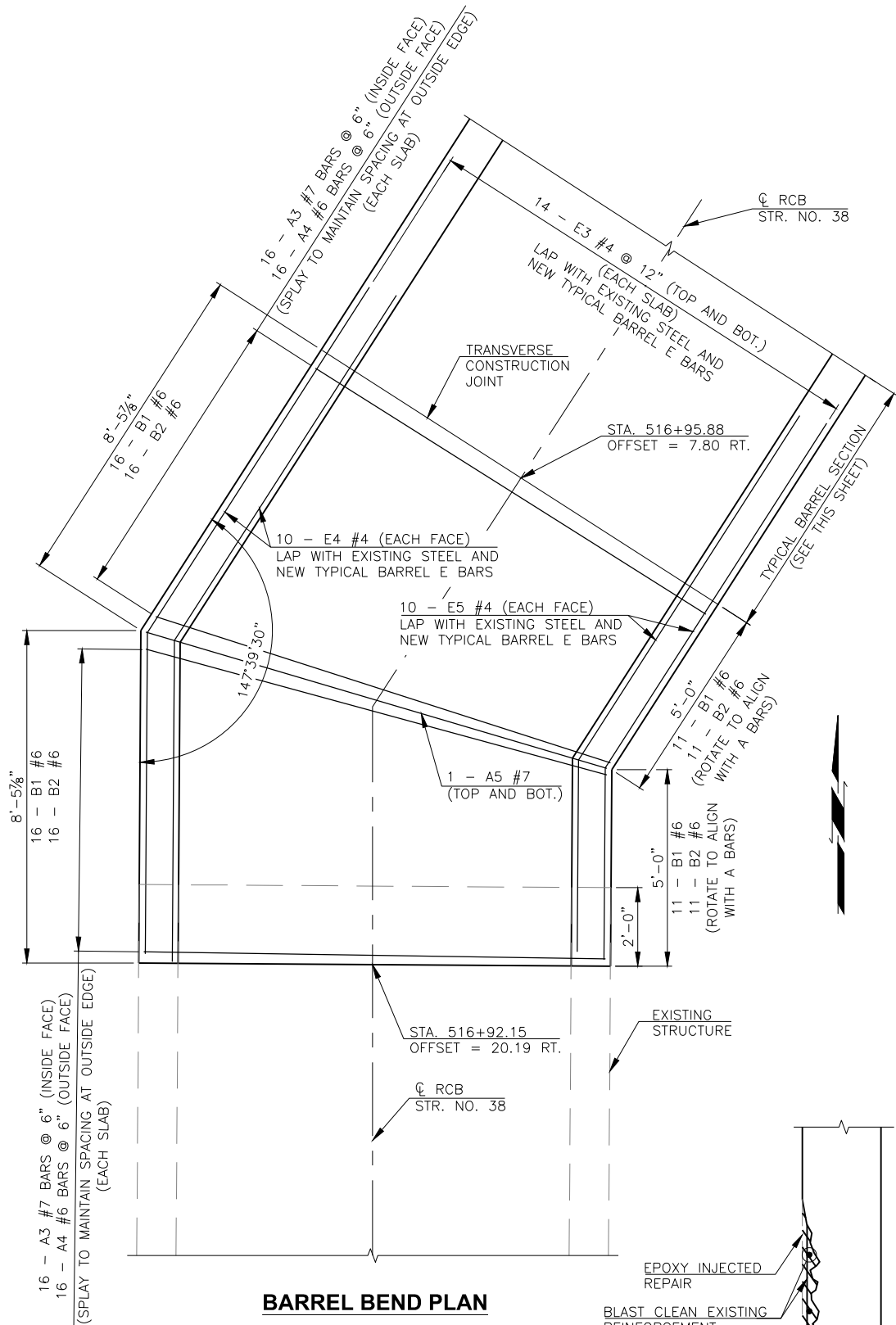


BOX EXTENSION DETAIL



TRANSVERSE CONSTRUCTION JOINT

NOTE:
TRANSVERSE CONSTRUCTION JOINTS SHALL BE SPACED AT 60 FT. MAX. REINFORCING STEEL SHALL BE CONTINUOUS THROUGH THE TRANSVERSE CONSTRUCTION JOINT AND EXTEND A MIN. OF 2'-0" INTO THE ADJACENT SECTION. THE NUMBER AND LOCATION OF TRANSVERSE CONSTRUCTION JOINTS IS TO BE APPROVED BY THE ENGINEER.



BARREL BEND PLAN

① THE CONSTRUCTION JOINT ON THE SOUTH END OF THE EXISTING STRUCTURE HAS SPALLED AND HAS A CRACK AROUND THE PERIMETER. CONTRACTOR TO SOUND EXISTING CONCRETE AROUND THE JOINT TO DETERMINE EXTENTS OF REPAIR TO THE SATISFACTION OF THE ENGINEER. CONTRACTOR TO FILL SPALLED AREA WITH ODOT APPROVED PATCH MATERIAL. ALL COST FOR REPAIRING THE JOINT, INCLUDING EPOXY PATCH MATERIAL, LABOR, SOUNDING, EQUIPMENT AND INCIDENTALS, TO BE INCLUDED IN THE UNIT PRICE BID FOR "EPOXY RESIN, ABOVE WATER".

① REMOVE UNSOUND CONCRETE AS DIRECTED BY THE ENGINEER

EPOXY INJECTED REPAIR
BLAST CLEAN EXISTING REINFORCEMENT

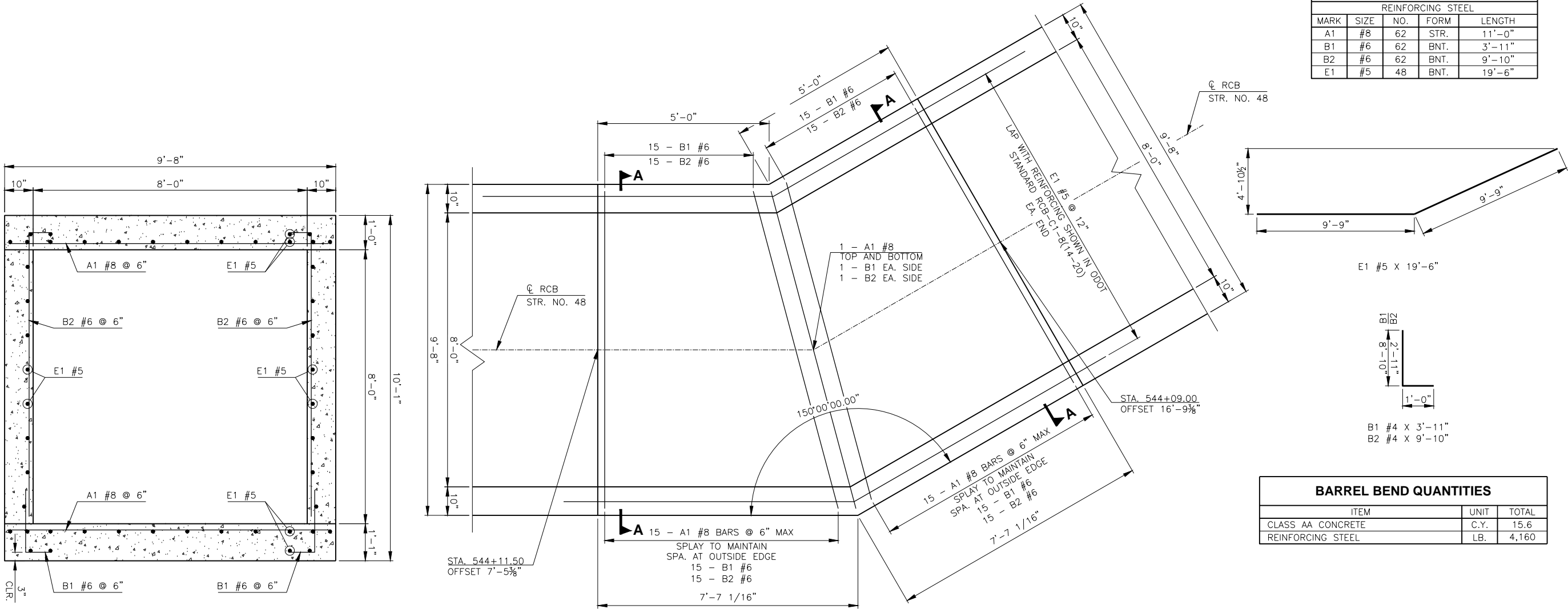
WALL REPAIR DETAIL

NOTE:
FOR ADDITIONAL GUIDANCE REFER TO ODOT STANDARD SPECIFICATION, SECTION 520.

NOTE:
FOR ADDITIONAL NOTES AND DETAIL OF
RCB BEND CONSTRUCTION, SEE STD.
RCB-C1-8(14-20).

BARREL BEND BAR LIST

REINFORCING STEEL				
MARK	SIZE	NO.	FORM	LENGTH
A1	#8	62	STR.	11'-0"
B1	#6	62	BNT.	3'-11"
B2	#6	62	BNT.	9'-10"
E1	#5	48	BNT.	19'-6"



SECTION A-A

PLAN

BARREL BEND QUANTITIES

ITEM	UNIT	TOTAL
CLASS AA CONCRETE	C.Y.	15.6
REINFORCING STEEL	LB.	4,160



GENERAL NOTES

All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars as follows:

Bar Size	Weight per ft.	Area, sq. in.
#4	0.6583	.40
#5	.8333	.61
#6	1.043	.87
#7	1.21	1.04
#8	1.36	1.28
#9	1.52	1.55
#10	1.67	1.81
#11	1.81	2.01
#12	1.98	2.25
#14	2.23	2.84
#16	2.59	3.41
#18	3.00	4.01
#20	3.40	4.61
#22	3.75	5.07
#24	4.18	5.61
#26	4.62	6.15
#28	5.05	6.72
#30	5.49	7.29

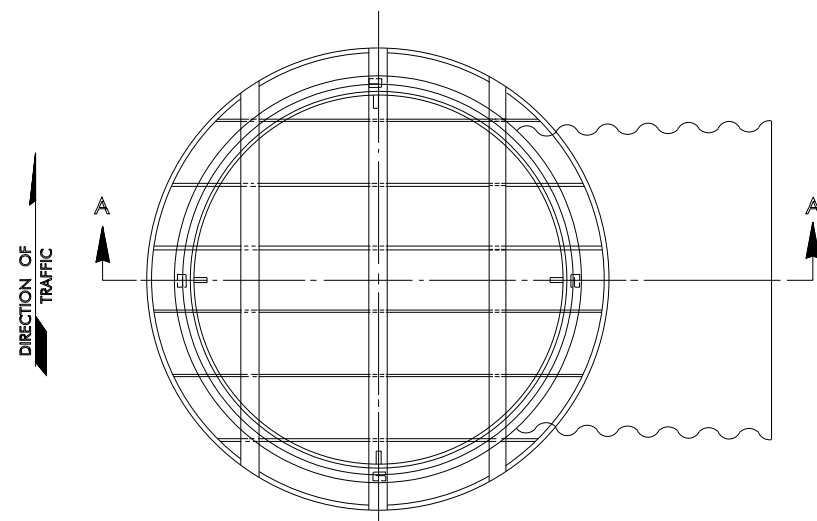
In other sizes, if used, they shall be provided there are spaced so as to give as much net sectional area per foot width of slab. Plans showing such changed sizes and spacing must be approved.

All exposed surfaces to have a carborundum finish, and this shall be included in the price bid per Cu.Yd. for Concrete.

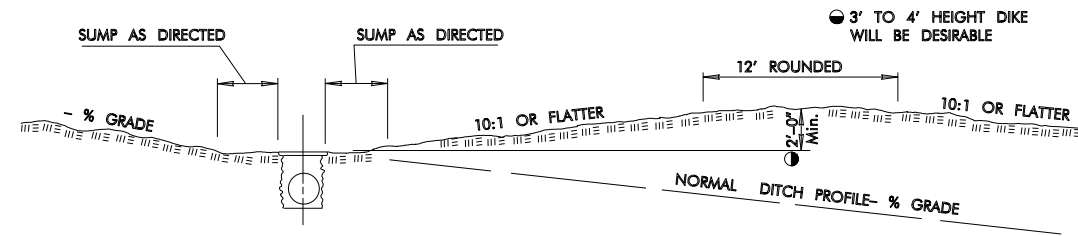
All exposed edges shall have 94° chamfer.

Dead Load _____ 1000 #
Live Load _____ None
Impact _____ None

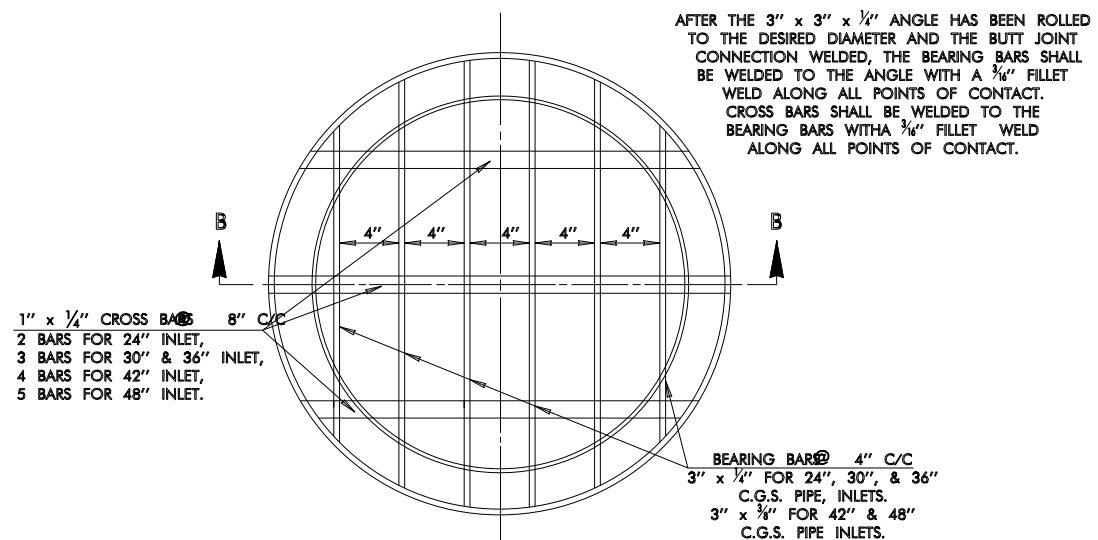
Quantities shown for reinforcing steel shall be reduced by 1-1/2% (0.015) to comply with approved C.R.S.I. weights per foot for reinforcing bars.



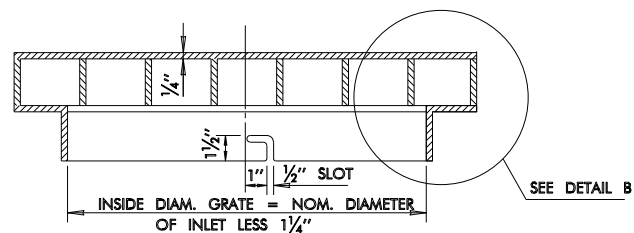
PLAN



TYPICAL DIKE IN DITCH

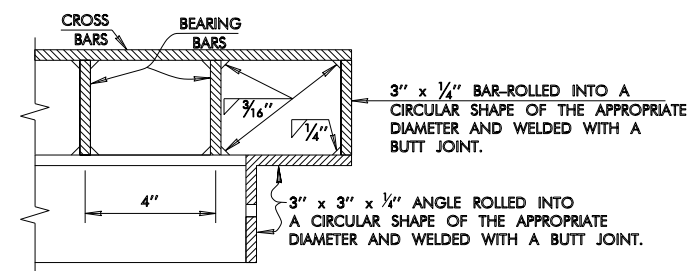


DETAIL "A"

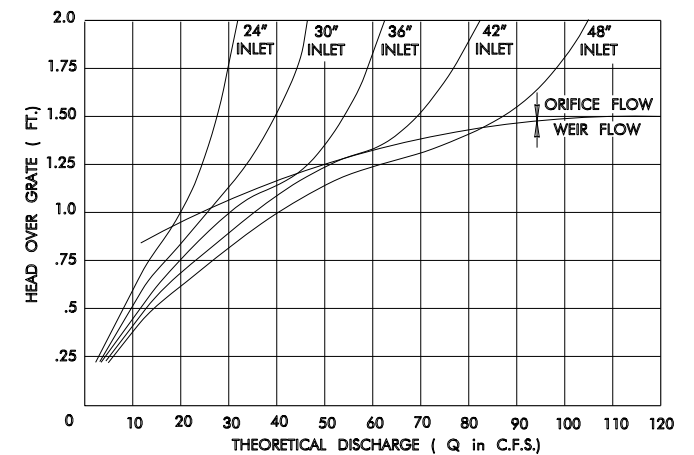


SECTION B - B

NOTE: THE 3" x 3" x 1/4" ANGLE PORTION OF THE GRATE SHALL HAVE 4 SLOTS LOCATED 90° APART



DETAIL "B"

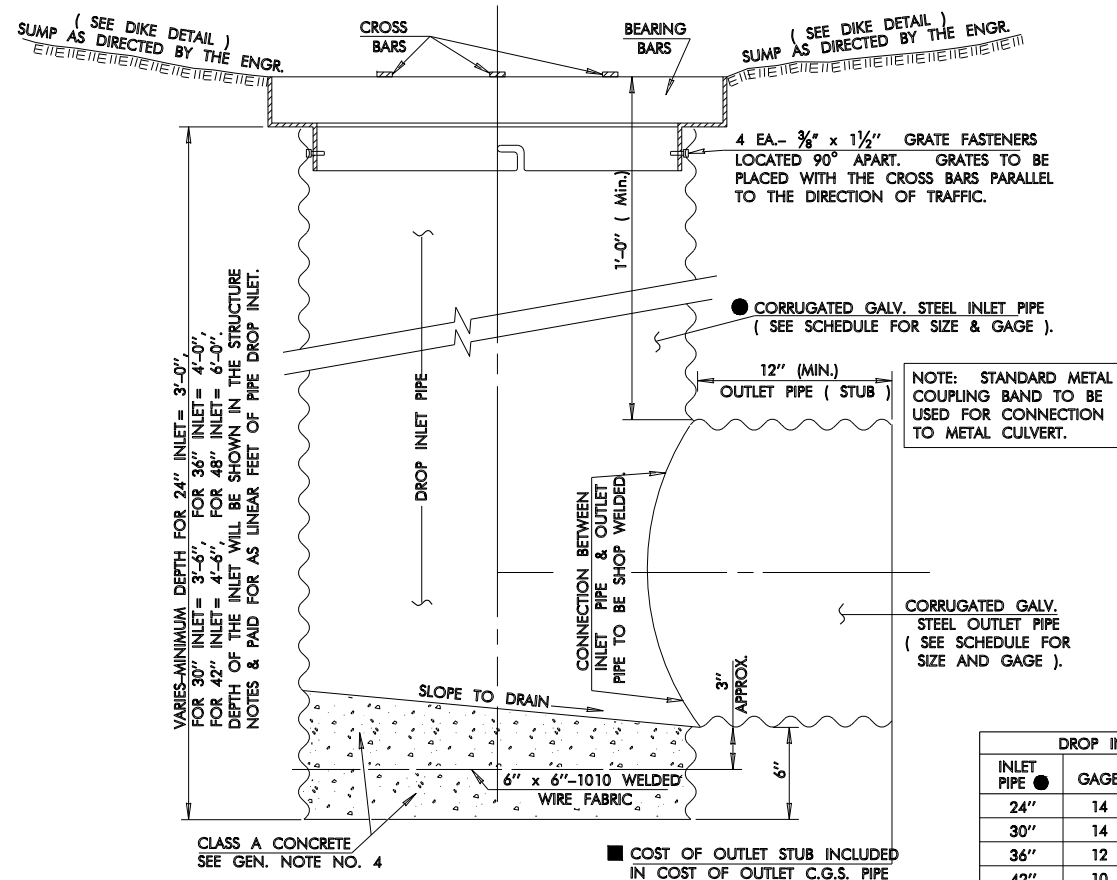


HYDRAULIC PERFORMANCE CHART

TO ALLOW FOR CLOGGING 60% THEORETICAL DISCHARGE IS THE RECOMMENDED FACTOR TO USE IN AREAS SUBJECT TO DEBRIS.

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 1999 ENGLISH STANDARD SPECIFICATIONS.
- FLAT BARS AND STRUCTURAL ANGLE SHALL CONFORM TO AASHTO M-183 SPECIFICATIONS OR OTHER APPROVED STEELS OF EQUAL QUALITY.
- GRATES TO BE SHOP WELDED TO CONFORM TO AWS STRUCTURAL WELDING CODE. FINISHED GRATE TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M-111 SPECIFICATIONS.
- COST OF PLACING CLASS A CONCRETE, WIRE FABRIC, INLET GRATE AND ALL MATERIALS TO BE INCLUDED IN PRICE BID FOR DROP INLET GRATE.
- COST OF SHOP WELDING 12" CONNECTING OUTLET PIPE STUB TO VERTICAL INLET PIPE TO BE INCLUDED IN PRICE BID OF OTHER ITEMS OF WORK.



SECTION A - A

DROP INLET SCHEDULE			
INLET PIPE ●	GAGE	OUTLET PIPE ■	GAGE
24"	14	18"	16
30"	14	24"	14
36"	12	30"	14
42"	10	36"	12
48"	10	42"	12

0 25 50 100

SH-29

STEPHENS COUNTY

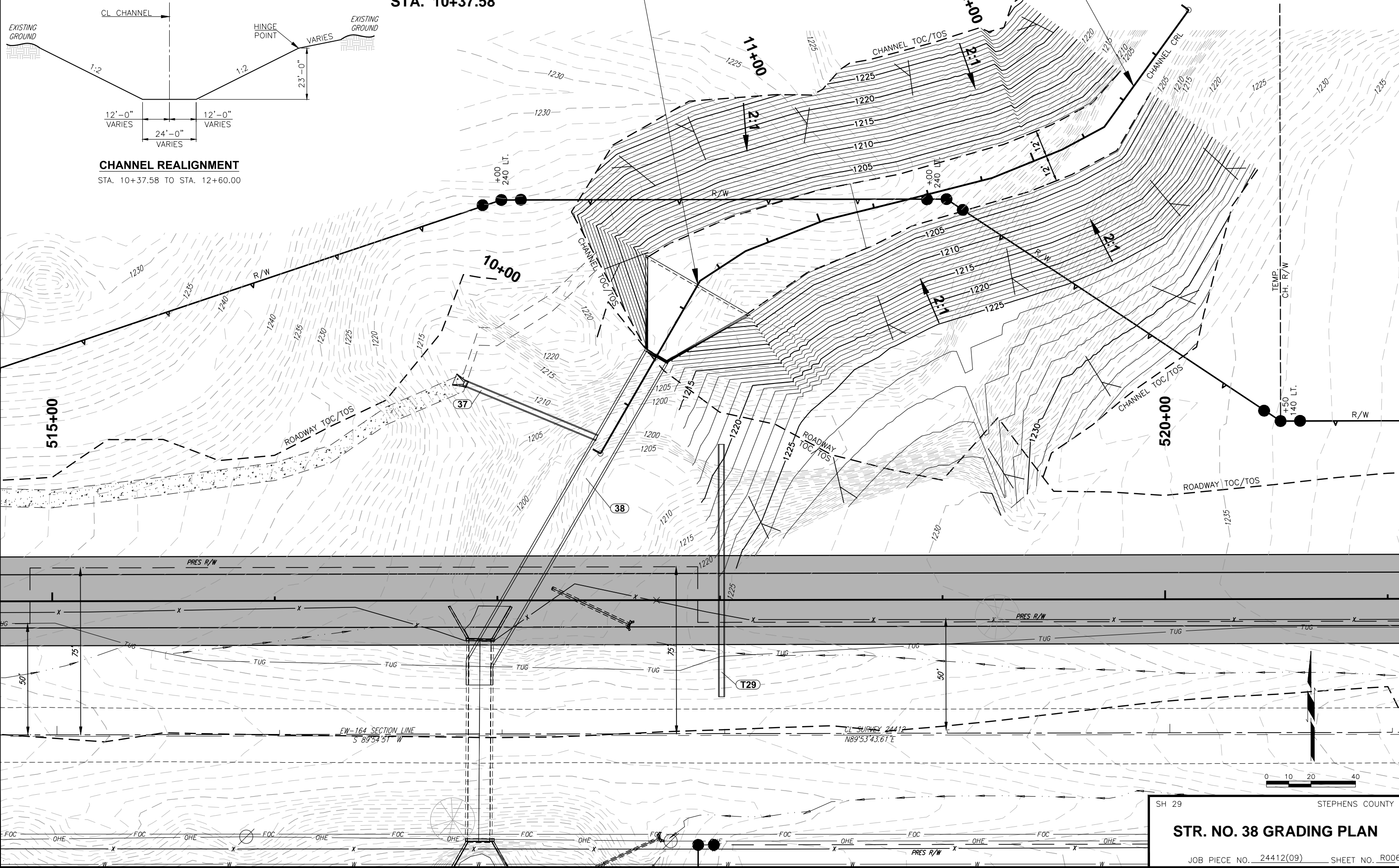
TEMPORARY DRAINAGE
INLET DETAIL

JOB PIECE NO. 24412(09) SHEET NO. R005

DESCRIPTION	REVISIONS	DATE

STA. 517+90.30, 141.77' LT. CRL.
BEGIN CHANNEL REALIGNMENT
STA. 10+37.58

STA. 519+88.00, 232.39' LT. CRL.
END CHANNEL REALIGNMENT
STA. 12+60.00

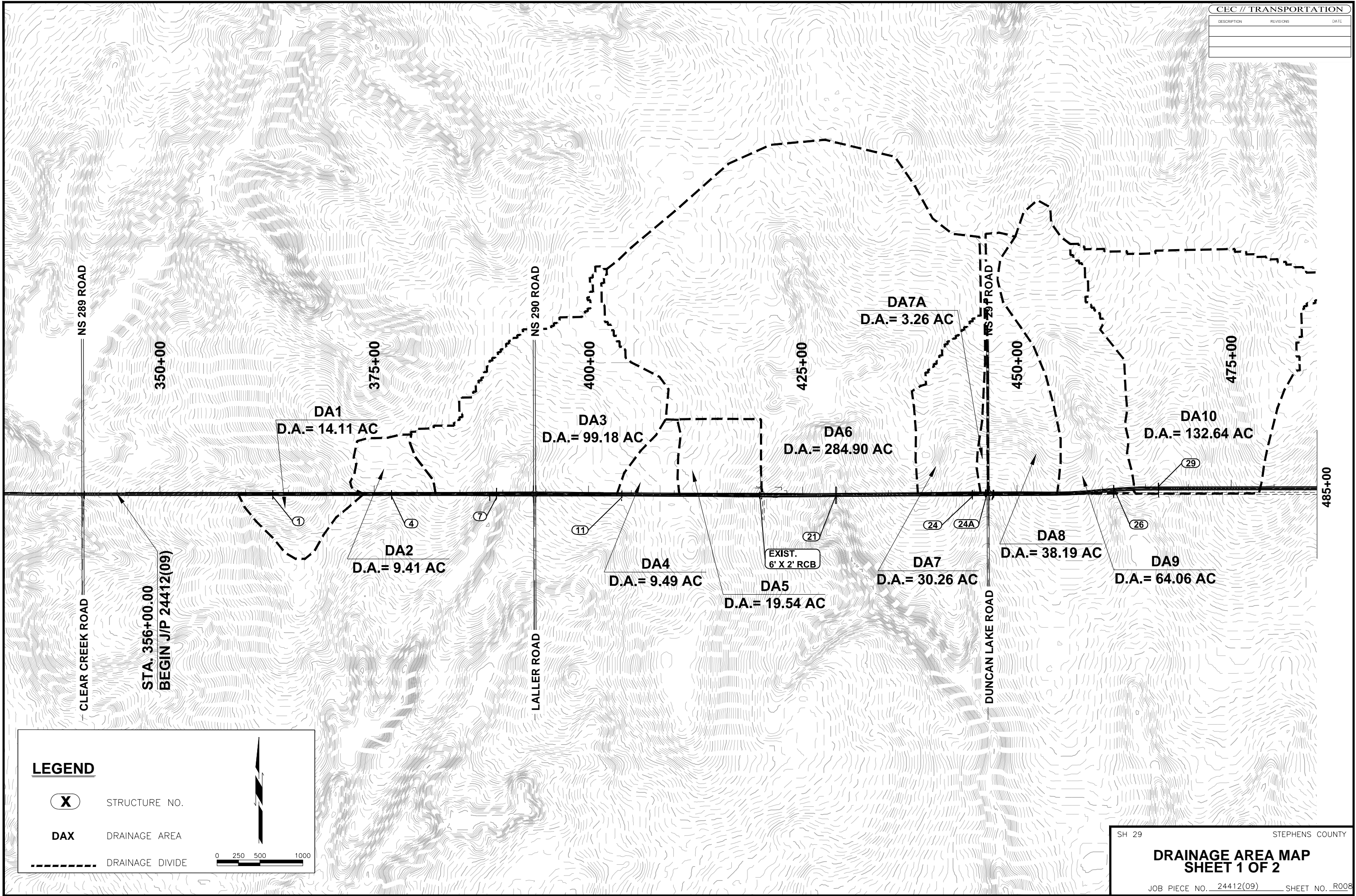


CHANNEL REALIGNMENT
STA. 10+37.58 TO STA. 12+60.00

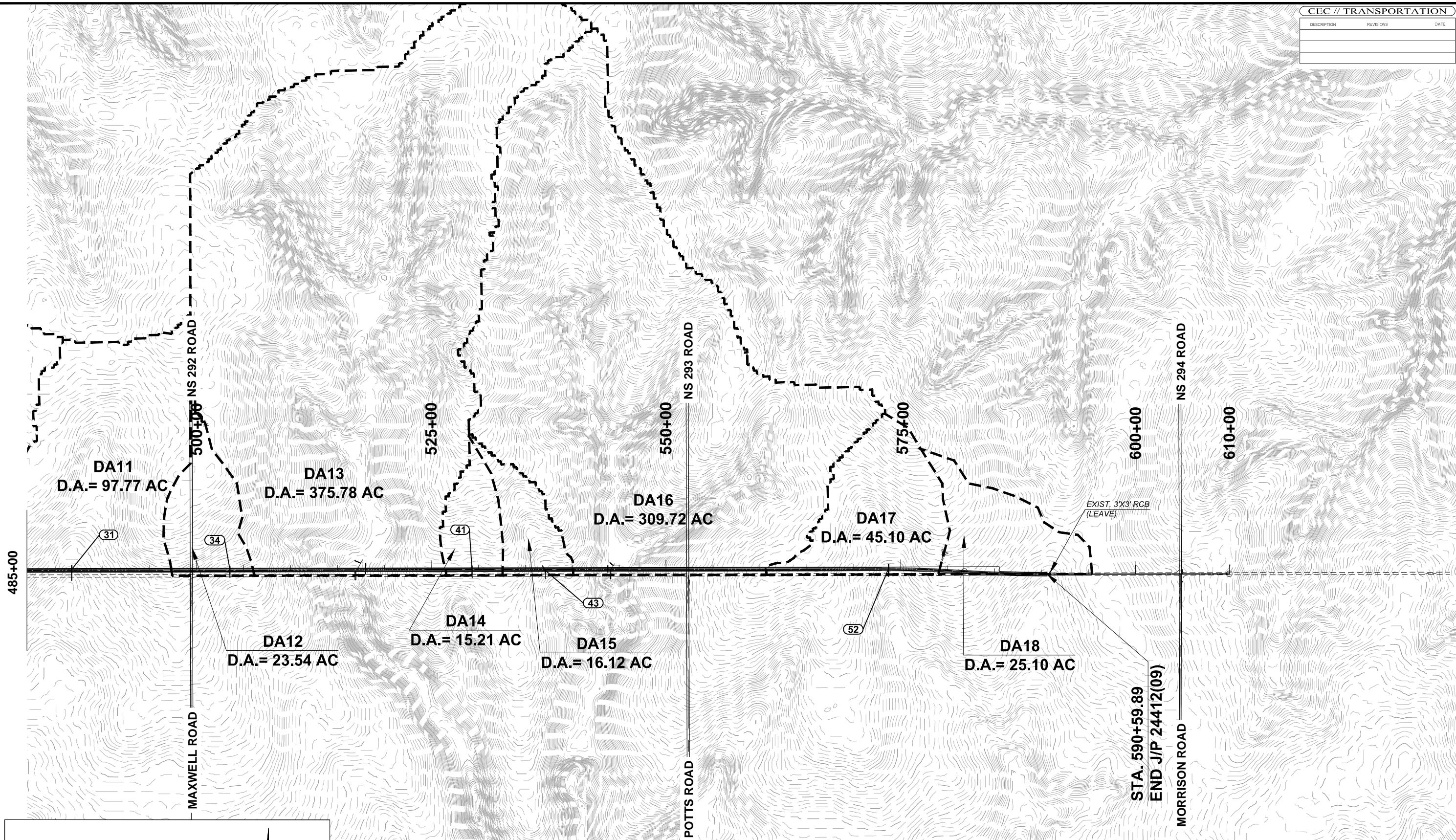
SH 29 STEPHENS COUNTY
STR. NO. 38 GRADING PLAN
JOB PIECE NO. 24412(09) SHEET NO. R006

DRAINAGE STRUCTURE DESIGN RECORD																																													
STR. NO.	DRAINAGE AREA	C.R.L.	STATION	AREA (ac)	ANTICIPATED LAND USE	WEIGHTED RUNOFF COEFFICIENT	AVG. SLOPE OF WATERSHED	LENGTH OF OVERLAND FLOW	SLOPE OF OVERLAND FLOW	LENGTH OF CHANNEL FLOW	SLOPE OF CHANNEL FLOW	TIME OF CONCENTRATION	DESIGN YEAR	INTENSITY OF DESIGN YEAR RAINFALL					DISCHARGE OF DESIGN YEAR RAINFALL					OVERTOPPING CAPACITY	ALLOWABLE HEADWATER	DESIGN YEAR HEADWATER	HYDRAULIC CONTROL	DESIGN OUTLET VELOCITY	T.G. ELEVATION	FLOWLINE INLET ELEVATION	FLOWLINE OUTLET ELEVATION	SLOPE	STRUCTURE DESCRIPTION	REMARKS											
														INCHES PER HOUR					CUBIC FEET PER SECOND																CFS	ELEV	ELEV		FPS	ELEV			FT/FT		
														I(5)	I(10)	I(25)	I(50)	I(100)	Q(5)	Q(10)	Q(25)	Q(50)	Q(100)																						
	1	SH-29	363+16.84	14.11	PASTURE	0.29	2.48	300.00	1.65	1028.00	2.72	27.98	50	3.55	4.05	4.69	5.33	5.92	14.53	16.57	21.11	26.17	30.28	78.20	1242.93	1240.26	INLET	10.56		1237.60	1234.79	0.0323	EXTEND EXIST. 3'X3' RCB 22' LG. RT. & 26' LG. LT.												
4	2	SH-29	377+03.25	9.41	GRASSED/CULTIVATED	0.42	1.65	300.00	1.00	510.00	2.04	21.61	50	4.04	4.60	5.33	6.06	6.73	15.97	18.18	23.17	28.74	33.25	31.15	1266.24	1264.54	INLET	7.42		1262.73	1261.94	0.0086	EXTEND EXIST. 30" RCP 42' LG. RT. & 22' LG. LT.												
7	3	SH-29	389+27.28	99.18	GRASSED/CULTIVATED	0.39	1.17	300.00	0.93	5000.00	1.18	56.51	50	2.36	2.69	3.12	3.55	3.94	91.29	104.05	132.75	164.78	190.50	202.70	1263.46	1259.20	OUTLET	13.86	1253.81	1248.95	1247.63	0.0080	EXTEND EXIST. 4'X3' RCB 52' LG. RT. & 31' LG. LT. W/ DROP INLET 68' LT.	RIP RAP OUTLET											
11	4	SH-29	403+89.11	9.49	GRASSED	0.36	0.77	300.00	0.37	669.00	0.95	33.00	50	3.25	3.71	4.29	4.88	5.42	11.10	12.67	16.12	20.01	23.15	25.20	1282.65	1281.34	INLET	2.42		1279.70	1278.74	0.0013	EXTEND EXIST. 30" RCP 19' LG. RT. & 20' LG. LT.												
	5	SH-29	419+98.89	19.54	GRASSED	0.37	2.82	300.00	2.38	939.00	2.96	24.11	50	3.83	4.37	5.06	5.75	6.39	27.69	31.59	40.24	49.89	57.75	99.99	1262.64	1260.48	INLET	8.61		1258.24	1257.96	0.0084	EXIST. 6'X2'X56' LG. RCB	PLUG											
21	6	SH-29	428+89	284.91	GRASSED	0.35	4.05	500.00	1.53	2800.00	4.50	36.85	50	3.06	3.48	4.04	4.59	5.10	305.14	347.02	443.15	549.25	635.71	2190.99	1245.17	1221.65	INLET	4.26		1218.00	1215.00	0.0155	CONST. 10'X10' RCB 101' LG. RT. & 93' LG. LT.	RIP RAP OUTLET											
24	7	SH-29	444+78.18	30.26	GRASSED	0.34	2.47	500.00	2.17	1025.00	2.61	28.84	50	3.50	3.98	4.62	5.25	5.83	36.01	40.95	52.29	64.82	74.98	123.09	1253.15	1244.93	OUTLET	4.93	1251.07	1246.57	1246.48	0.0011	EXTEND EXIST. 4'X3' RCB 24' LG. RT & 20' LG. LT. W/ DROP INLET 44' LT.												
24A	7A	SH-29	446+36	3.26	PASTURE	0.36	2.94	100.00	2.00	750.00	3.07	17.70	50	4.42	5.04	5.84	6.63	7.37	5.19	5.91	7.54	9.34	10.81	14.97	1251.00	1250.38	INLET	6.02		1248.75	1248.25	0.0060	CONST. 24"X84' LG. RCP 42' LG. RT. & 42' LG. LT.	REPLACE EXIST. 18" CGSP											
25	8	SH-29	447+23.42	38.19	GRASSED	0.39	1.82	500.00	1.92	3000.00	1.80	43.49	50	2.78	3.16	3.66	4.17	4.63	41.41	47.07	59.96	74.53	86.20	142.28	1250.62	1248.30	INLET	3.66		1247.03	1246.05	0.0072	EXTEND EXIST. 2-5'X2' RCB 24' LG. RT. & 20' LG. LT.	RIP RAP OUTLET											
26	9	SH-29	461+26.80	64.06	GRASSED/WOODED	0.31	1.81	500.00	1.90	1345.00	1.77	33.11	50	3.25	3.70	4.28	4.87	5.41	64.54	73.48	93.49	116.05	134.29	396.04	1253.80	1242.49	INLET	16.14	1249.43	1239.81	1237.20	0.0343	EXTEND EXIST. 5'X5' RCB 62' LG. LT. W/ DROP INLET 54' LT.	RIP RAP OUTLET											
29	10	SH-29	466+51.24	132.64	GRASSED	0.34	2.70	500.00	1.27	1175.00	3.31	31.25	50	3.35	3.82	4.42	5.03	5.59	151.08	172.27	219.26	272.21	315.12	359.23	1250.18	1244.10	OUTLET	13.66	1240.65	1233.44	1233.14	0.0057	EXTEND EXIST. 5'X4' RCB 84' LG. LT. W/ DROP INLET 67' LT.	RIP RAP OUTLET											
31	11	SH-29	486+68.14	97.77	GRASSED	0.35	2.00	500.00	1.51	1600.00	2.16	34.82	50	3.16	3.60	4.17	4.74	5.26	108.13	123.19	156.96	194.64	224.99	285.42	1264.92	1258.15	INLET	15.02	1260.13	1254.54	1254.33	0.0211	EXTEND EXIST. 5'X4' RCB 80' LG. LT. W/ DROP INLET 55' LT.												
34	12	SH-29	503+53	23.54	GRASSED	0.38	2.87	300.00	1.88	700.00	3.29	23.10	50	3.91	4.46	5.16	5.87	6.52	34.98	39.90	50.77	63.01	72.90	40.24	1270.47	1270.56	OUTLET	9.11		1266.06	1265.89	0.0020	CONST. 30'X84' LG. RCP 42' LG. LT. & 42' LG. RT.												
38	13	SH-29	516+89.77	375.78	GRASSED/WOODED	0.29	0.99	500.00	2.20	8150.00	0.92	83.85	50	1.83	2.08	2.41	2.74	3.04	199.43	226.67	288.90	358.31	414.11	2614.98	1234.94	1205.04	INLET	14.99		1201.50	1198.57	0.0147	EXTEND EXIST. 10'X10' RCB SKWD 30° LT. FWD. 158' LG. LT.	RIP RAP OUTLET											
41	14	SH-29	529+32.62	15.21	GRASSED	0.36	2.29	500.00	2.40	900.00	2.22	28.11	50	3.55	4.04	4.68	5.32	5.91	19.44	22.12	28.19	34.96	40.45	39.41	1246.06	1245.34	INLET	9.58	1244.29	1241.25	1240.46	0.0094	CONST. 30'X84' LG. RCP 42' LG. RT. & 42' LG. LT. W/ DROP INLET 44' LT.	REMOVE EXIST. 30" RCP											
43	15	SH-29	536+85.00	16.12	GRASSED	0.37	2.62	475.00	2.63	1455.00	2.61	30.38	50	3.40	3.88	4.49	5.10	5.67	20.28	23.14	29.46	36.50	42.27	51.18	1236.91	1235.88	INLET	8.40	1236.91	1233.32	1232.79	0.0067	CONST. 43'X26'X95' LG. RCPA SKWD 30° RT. FWD. 47' LG. RT. & 48' LG. LT. W/ DROP INLET 47' LT.	REMOVE EXIST. 24" RCP											
48	16	SH-29	544+07.50	309.72	GRASSED/WOODED	0.28	1.65	500.00	3.72	6635.00	1.49	63.27	50	2.20	2.51	2.90	3.30	3.67	190.79	217.67	276.64	343.42	397.84	1360.47	1227.31	1208.70	INLET	15.56		1204.82	1202.25	0.0143	EXTEND EXIST. 8'X8' RCB SKWD. 30° LT. FWD. 95' LG. LT.	RIP RAP OUTLET											
52	17	SH-29	573+69.59	45.10	GRASSED	0.36	1.99	500.00	1.97	1300.00	2.00	32.09	50	3.30	3.76	4.36	4.96	5.51	53.58	61.05	77.87	96.64	111.83	197.45	1255.69	1250.27	INLET	3.55	1252.50	1248.51	1247.32	0.0125	CONST. 6'X3'X98' LG. RCB 50' LG. RT. & 48' LG. LT. W/ DROP INLET 50' LT.	REMOVE EXIST. 6'X2' RCB											

DESCRIPTION	REVISIONS	DATE



DESCRIPTION	REVISIONS	DATE



LEGEND

STRUCTURE NO.

DAX DRAINAGE AREA

DRAINAGE DIVIDE

STORM WATER MANAGEMENT PLAN

CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE

SITE DESCRIPTION

PROJECT LIMITS: SH-29 BEGINNING APPROX. 6.8 MILES EAST OF
US-81 IN MARLOW AND EXTENDING 4.55 MILES EAST TO APPROX. 0.25 MILE
WEST OF MORRISON RD. IN STEPHENS CO., OKLAHOMA.

PROJECT DESCRIPTION: GRADE, DRAIN AND SURFACE APPROX. 4.6 MILES OF SH-29.

- SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:** _____
1. VEGETATIVE STRIPPING
 2. UNDERCUT & STOCKPILE EXISTING TOPSOIL
 3. INSTALL PERIMETER EROSION CONTROL MEASURES
 4. ROADWAY EXCAVATION AND EMBANKMENT
 5. CULVERT TRENCHING AND CONSTRUCTION
 6. INSTALL TEMP. SEDIMENT FILTERS, SOD DITCHES, & VEGETATIVE MULCH
 7. CONST. FINISHED ROADWAY PAVING
 8. SPREAD TOPSOIL
 9. INSTALL SOLID SLAB SOD

SOIL TYPE: SANDY CLAY LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 104.06 AC.

ESTIMATED AREA TO BE DISTURBED: 59.81 AC.

OFFSITE AREA TO BE DISTURBED: _____
(FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 15.08 AC.

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 24.85 AC.

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.48 AC.

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 34°38'16" N, 97°48'00" W

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: CLEAR CREEK LAKE/DRY CREEK/BLUFF CREEK

SENSITIVE WATERS OR WATERSHEDS: YES ☐ NO ☒

303(d) IMPAIRED WATERS: YES ☐ NO ☒

IF YES, LIST IMPAIRMENT: _____

LOCATED IN A TMDL: YES ☐ NO ☒

LAKE THUNDERBIRD TMDL: YES ☐ NO ☒

MS4 ENTITY YES ☐ NO ☒

IF YES, LOCATION: _____

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- _____ TEMPORARY SEEDING
 X PERMANENT SODDING, SPRIGGING OR SEEDING
 X VEGETATIVE MULCHING
_____ SOIL RETENTION BLANKET
_____ PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- X STABILIZED CONSTRUCTION EXIT
 X TEMPORARY SILT FENCE
 X TEMPORARY SILT DIKES
_____ TEMPORARY FIBER LOG
_____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
_____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
 X ROCK FILTER DAMS
_____ TEMPORARY SLOPE DRAIN
 X PAVED DITCH W/ DITCH LINER PROTECTION
_____ TEMPORARY DIVERSION CHANNELS
_____ TEMPORARY SEDIMENT BASINS
_____ TEMPORARY SEDIMENT TRAPS
 X TEMPORARY SEDIMENT FILTERS
_____ TEMPORARY SEDIMENT REMOVAL
 X RIP RAP
_____ INLET SEDIMENT FILTER
_____ TEMPORARY BRUSH SEDIMENT BARRIERS
_____ SANDBAG BERMS
_____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- X HAUL ROADS DAMPENED FOR DUST CONTROL
 X LOADED HAUL TRUCKS TO BE COVERED WITH TARPAILIN
 X EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
 - 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
 - 221 TEMPORARY SEDIMENT CONTROL

IN ADDITION:

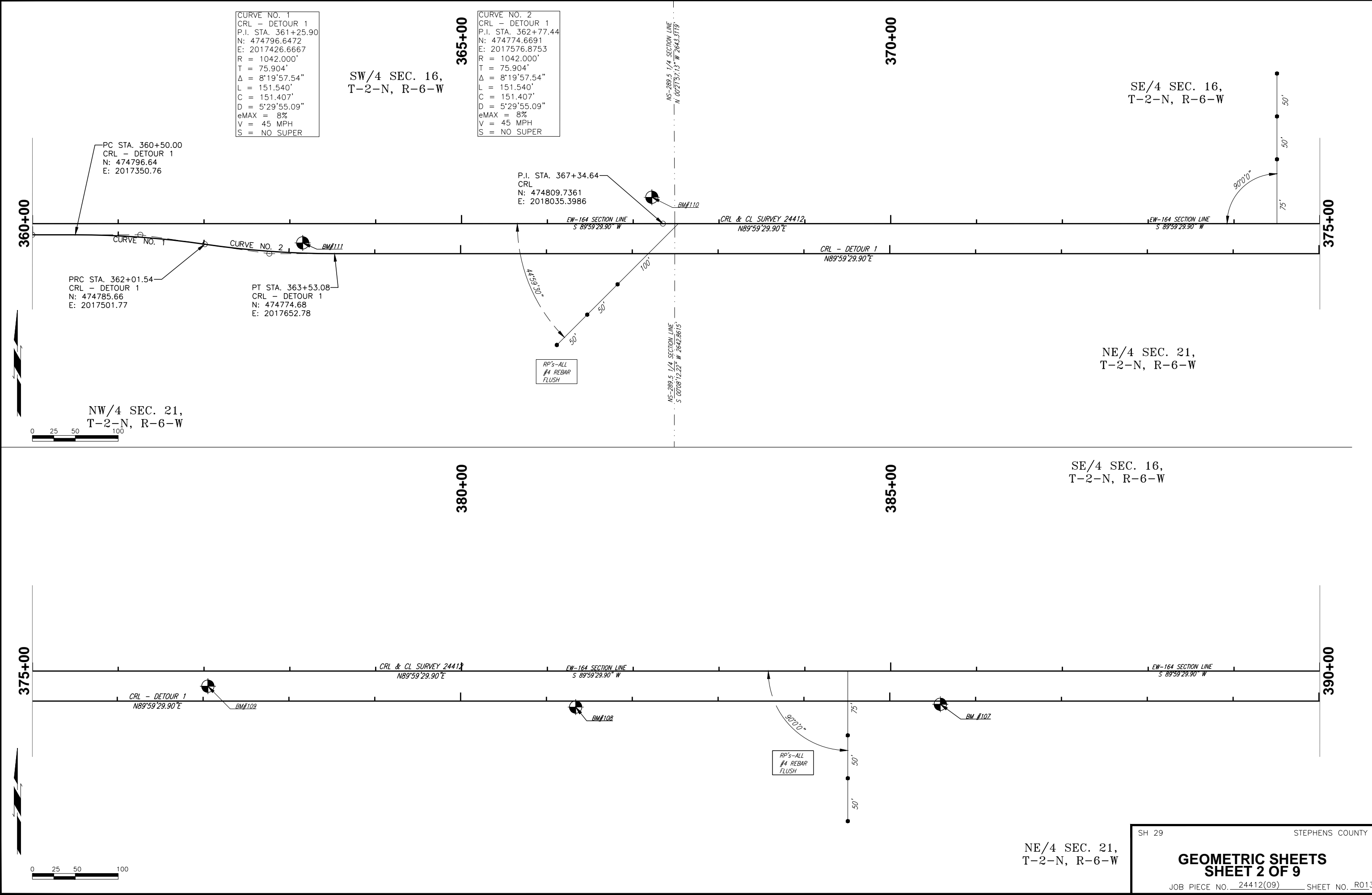
"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

SH 29 STEPHENS COUNTY

STORM WATER MANAGEMENT PLAN

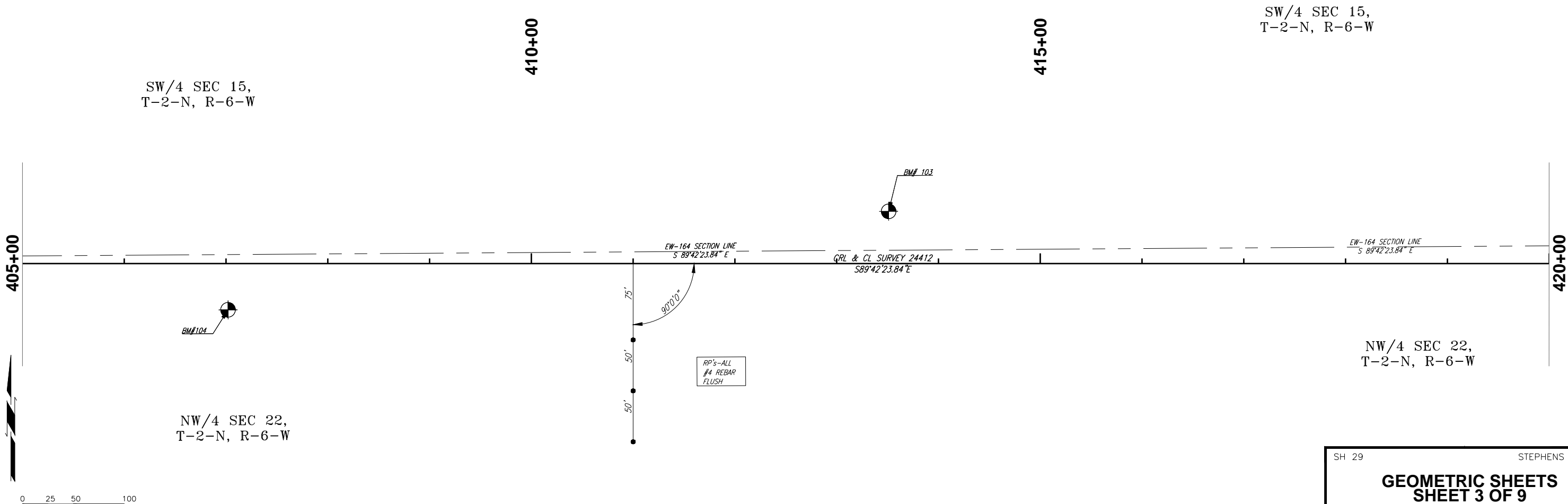
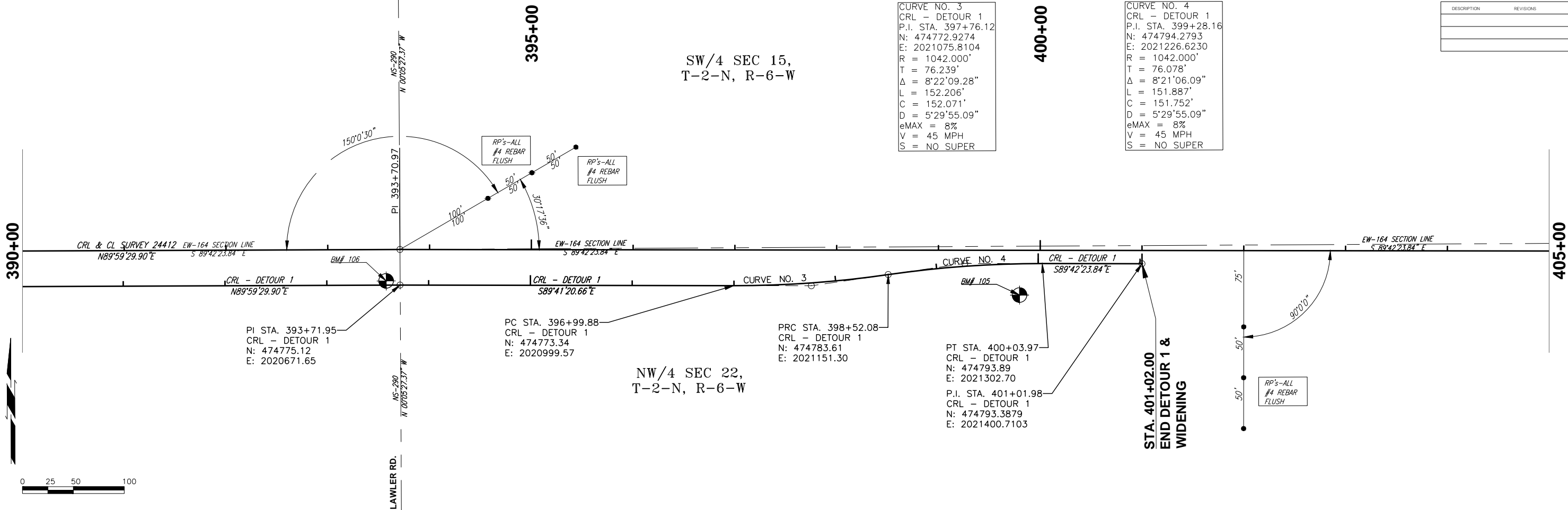
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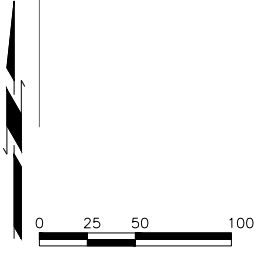
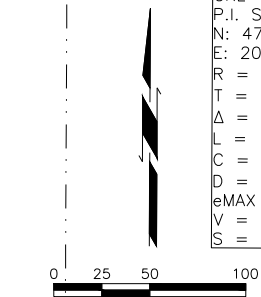
U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT CONDITIONS		<table><tr><th colspan="3">CEC // TRANSPORTATION</th></tr><tr><td>DESCRIPTION</td><td>REVISIONS</td><td>DATE</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>	CEC // TRANSPORTATION			DESCRIPTION	REVISIONS	DATE									
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404 PERMIT INFORMATION	PERMIT GENERAL CONDITIONS	PERMIT GENERAL CONDITIONS															
<div><div>NATIONWIDE PERMIT NO. _____</div><div>TO BE PROVIDED AT A LATER DATE</div><div>SECTION 404 OF THE CLEAN WATER ACT REQUIRES PRIOR AUTHORIZATION FROM SECRETARY OF THE ARMY (CORPS) FOR THE DISCHARGE OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES.</div><div><div><input type="checkbox"/> NO PRE-CONSTRUCTION NOTIFICATION REQUIRED: PROJECT DOES NOT REQUIRE NOTIFICATION TO THE US ARMY CORPS OF ENGINEERS (USACE) IN ORDER TO COMMENCE.</div><div><input type="checkbox"/> PRE-CONSTRUCTION NOTIFICATION REQUIRED: RESIDENT ENGINEER MUST NOTIFY THE USACE WITHIN 30 DAYS OF THE START OF CONSTRUCTION AND 30 DAYS PRIOR TO COMPLETION OF CONSTRUCTION, FORMS LOCATED IN THE CONTRACT.</div><div><input type="checkbox"/> INDIVIDUAL PERMIT: WILL BE MONITORED CLOSELY BY THE USACE.</div><div><input type="checkbox"/> GENERAL PERMIT: PROJECT WITHIN A DESIGNATED CRITICAL RESOURCE WATER AND WILL REQUIRE PRE-CONSTRUCTION NOTIFICATION SEE ABOVE FOR EXPLANATION OF PRE-CONSTRUCTION NOTIFICATION.</div><div><input type="checkbox"/> NO PERMIT REQUIRED</div></div><div>SWT TRACKING NO. _____</div></div>	<div><div>THE CONTRACTOR SHALL BE RESPONSIBLE BUT NOT LIMITED TO THE FOLLOWING HIGHLIGHTS OF THE 404 PERMIT (SEE CONTRACT FOR COMPLETE LIST):</div><div>TEMPORARY FILLS:<div>APPROPRIATE MEASURES MUST BE TAKEN TO MAINTAIN NORMAL DOWNSTREAM FLOWS AND MINIMIZE FLOODING TO THE MAXIMUM EXTENT PRACTICABLE, WHEN TEMPORARY STRUCTURES (WORK ROADS, WORKPADS, ETC..) WORK, AND DISCHARGES, INCLUDING COFFERDAMS, ARE NECESSARY FOR CONSTRUCTION ACTIVITIES, ACCESS FILLS, OR DEWATERING OF CONSTRUCTION SITES. TEMPORARY FILLS MUST CONSIST OF MATERIALS, AND BE PLACED IN A MANNER, THAT WILL NOT BE ERODED BY EXPECTED HIGH FLOWS.TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS. THE AREAS AFFECTED BY TEMPORARY FILLS MUST BE RE VEGETATED, AS APPROPRIATE.</div></div><div>NAVIGATION:<div>NO ACTIVITY MAY CAUSE MORE THAN A MINIMAL ADVERSE EFFECT ON NAVIGATION WITHIN A NAVIGABLE WATER OF THE U.S. IF THIS PROJECT IS LOCATED WITHIN A NAVIGABLE WATER OF THE U.S., IT WILL BE IDENTIFIED IN THE SPECIAL CONDITIONS.</div></div><div>AQUATIC LIFE MOVEMENTS & ADVERSE EFFECTS FROM IMPOUNDMENTS:<div>NO ACTIVITY MAY LARGELY DISRUPT THE NECESSARY LIFE CYCLE MOVEMENTS OF THOSE SPECIES INDIGENOUS TO THE BODY OF WATER, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. CULVERTS WILL BE DESIGNED TO PROVIDE SUFFICIENT PASSAGE FOR AQUATIC LIFE AND INSTALLED TO MAINTAIN LOW FLOW. RATE OF FLOW CANNOT BE MADE HIGHER THAN WHAT WAS PRIOR TO THE START OF CONSTRUCTION. EROSION CONTROL MEASURES SHOULD BE UTILIZED AROUND THE PERIMETER OF NEW STRUCTURES TO AVOID SILT BUILD UP. CAUTION SHOULD BE TAKEN TO MINIMIZE HARM IF CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN A STREAM OR RIVER CHANNEL AND CREATE A CONFINED BODY OF WATER, CAUSE ADVERSE EFFECTS TO THE AQUATIC SYSTEM IN ANY WAY, AND/OR RESTRICTING ITS FLOW.</div></div><div>MANAGEMENT OF WATER FLOWS:<div>CONSTRUCTION ACTIVITIES MAY NOT IMPEDE THE PASSAGE OF NORMAL OR HIGH FLOWS. TO THE GREATEST EXTENT POSSIBLE, THE PRE- CONSTRUCTION COURSE, CONDITIONS, CAPACITY AND LOCATION OF OPEN WATERS MUST BE MAINTAINED. THIS INCLUDES STREAM CHANNELIZATION AND STORM WATER MANAGEMENT.</div></div><div>SUITABLE MATERIAL:<div>NO ACTIVITY MAY USE UNSUITABLE MATERIAL (E.G., TRASH, DEBRIS, CAR BODIES, ASPHALT, ETC.). MATERIALS USED FOR CONSTRUCTION OR DISCHARGED MUST BE FREE FROM TOXIC POLLUTANTS IN TOXIC AMOUNTS (SEE SECTION 307 OF CLEAN WATER ACT).</div></div><div>PROPER MAINTENANCE<div>ANY AUTHORIZED STRUCTURE OR FILL SHALL BE PROPERLY MAINTAINED, INCLUDING MAINTENANCE TO ENSURE PUBLIC SAFETY AND COMPLIANCE WITH APPLICABLE NATION WIDE PERMIT GENERAL CONDITIONS, AS WELL AS ANY ACTIVITY- SPECIFIC CONDITIONS ADDED BY THE DISTRICT ENGINEER TO AN NATIONWIDE PERMIT AUTHORIZATION</div></div><div>HAZARDOUS MATERIALS:<div>HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS AND OTHER SUCH SUBSTANCES SHOULD BE STORED AWAY FROM ANY STREAM OR RIVER CHANNEL (SEE SECTION 307 OF CLEAN WATER ACT)</div></div><div>EQUIPMENT:<div>HEAVY EQUIPMENT WORKING IN WETLANDS OR MUDFLATS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE; FOR EXAMPLE IF WETLANDS ARE PRESENT WITHIN THE CONSTRUCTION, THE FOOTPRINT WILL BE SHOWN ON THE PLANS. MEASURES SHOULD BE TAKEN TO PREVENT DISCHARGE INTO ANY WATERS OF THE STATE (e.g. CONCRETE WASHOUT).</div></div><div>SOIL EROSION AND SEDIMENT CONTROLS:<div>APPROPRIATE SOIL EROSION AND SEDIMENT CONTROLS MUST BE USED AND MAINTAINED IN EFFECTIVE OPERATING CONDITION DURING CONSTRUCTION, AND ALL EXPOSED SOILS AND OTHER FILLS, AS WELL AS ANY WORK WITHIN STREAM OR RIVER CHANNELS OR BANKS, MUST BE PERMANENTLY STABILIZED AS SOON AS POSSIBLE.</div></div><div>404 COMPLIANCE:<div>IN ORDER TO REMAIN COMPLIANT WITH THE 404 PERMIT, THE PROJECT MUST COMPLY WITH ALL FEDERAL ENVIRONMENTAL PROTECTION LAWS ASSOCIATED AND, THE ENVIRONMENTAL COMMITMENTS AS SHOWN ON THE PLANS. THIS INCLUDES BUT IS NOT LIMITED TO COMPLIANCE WITH ALL ENVIRONMENTAL NOTES IN THE PLANS, INCLUDING CULTURAL RESOURCES, HAZARDOUS WASTE, BIOLOGICAL FOR PROTECTED SPECIES, AND DEQ STORM WATER REGULATIONS AS THEY PERTAIN TO THE SWMP SHEET WITHIN THE PLANS. ALL OF THE 404 PERMIT GENERAL AND SPECIFIC CONDITIONS MUST BE ADHERED TO. A COPY OF THESE CONDITIONS CAN BE FOUND IN THE CONTRACT WITH THE 404 PERMIT.</div></div><div>SHEET NUMBERS: _____</div></div>	<div><div>FUELING:<div>ALL FUELING AND SERVICING OF VEHICLES AND EQUIPMENT SHALL BE DONE ABOVE THE ORDINARY HIGH WATER MARK (OHWM).</div></div><div>MATERIAL STORAGE:<div>STORE MATERIAL AND FUEL OUTSIDE OF THE ORDINARY HIGH WATER MARK OR ANY AREA LIKELY TO FLOOD.</div></div><div>DEBRIS STORAGE:<div>THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MATERIALS, DEBRIS, OR REFUSE WHICH HAS FALLEN INTO ANY STREAM OR RIVER CHANNELS RESULTING FROM THE EXECUTION OF THE PROJECT AS SOON AS POSSIBLE</div></div><div>SEE NATIONWIDE PERMIT 14 IN THE CONTRACT</div></div> <div>401 CERTIFICATION CONDITIONS</div> <div><div>THE CONTRACTOR SHALL BE RESPONSIBLE BUT NOT LIMITED TO THE FOLLOWING HIGHLIGHTS OF THE 401 CERTIFICATION (SEE CONTRACT FOR COMPLETE LIST):</div><div><div><input type="checkbox"/> ALL SPILLS OF FUEL OR POLLUTANTS IN EXCESS OF FIVE GALLONS SHALL BE REPORTEDTO ODEQ WITHIN 24 HRS AND REPORTED TO POLLUTION PREVENTION HOTLINE (1-800-522-0206)</div><div><input type="checkbox"/> ALL FUELING AND SERVICING OF VEHICLES AND EQUIPMENT SHALL BE DONE OUTSIDE THE ORDINARY HIGH WATER MARK</div><div><input type="checkbox"/> THE PERMITTEE SHALL PROVIDE ACCESS TO THE PROPERTY TO ODEQ FOR INSPECTIONS.</div><div><input type="checkbox"/> ANY STOCKPILE SHALL BE ABOVE ORDINARY HIGH WATER MARK AND REMOVED FROM LIKELY FLOOD ZONE</div><div><input type="checkbox"/> BEST MANAGEMENT PRACTICES SHOULD BE USED TO CONTROL SOIL EROSION AND MAINTAIN COMPLIANCE WITH WATER QUALITY STANDARDS.</div><div><input type="checkbox"/> FOR ANY PROJECT THAT INVOLVES BANK STABILIZATION, THE PERMITTEE SHALL CONSIDER INSTALLING BIOENGINEERING PRACTICES IN PLACE OF STRUCTURAL PRACTICES (RIPRAP) TO MINIMIZE IMPACTS TO AQUATIC RESOURCES</div></div></div>															
		<div><div>SH 29STEPHENS COUNTY</div><div>SECTION 404 PERMIT COMPLIANCE</div><div>JOB PIECE NO. 24412(09)SHEET NO. R011</div></div>															



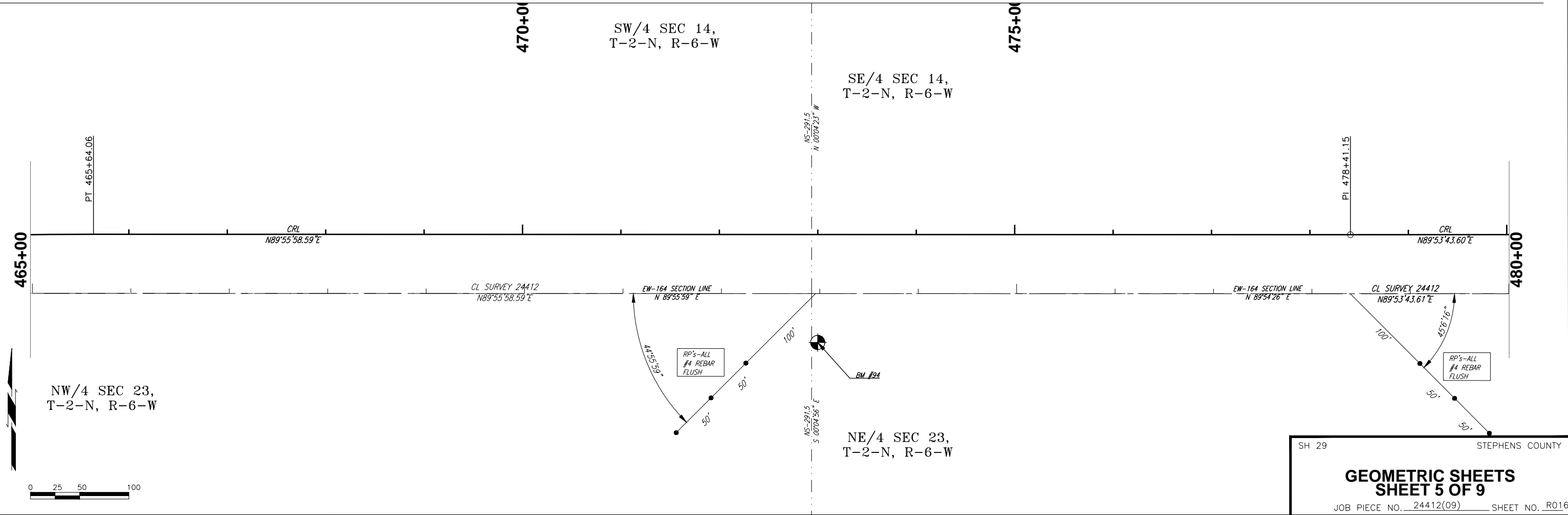
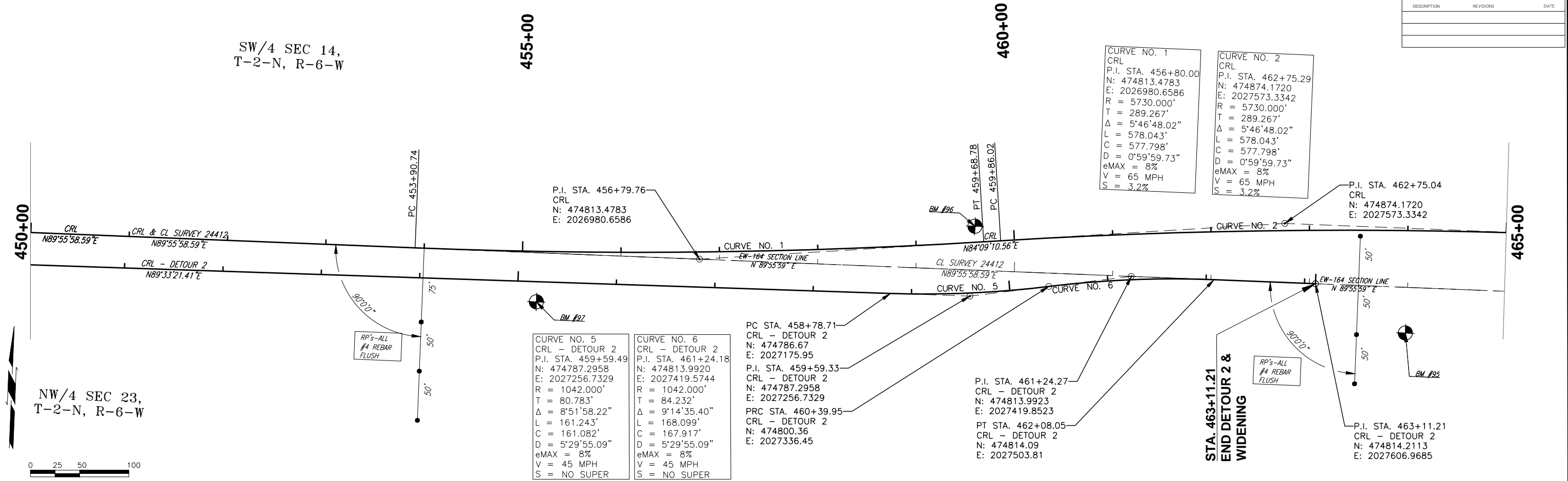
CURVE NO. 3
CRL - DETOUR 1
P.I. STA. 397+76.12
N: 474772.9274
E: 2021075.8104
R = 1042.000'
T = 76.239'
Δ = 8°22'09.28"
L = 152.206'
C = 152.071'
D = 5°29'55.09"
eMAX = 8%
V = 45 MPH
S = NO SUPER

CURVE NO. 4
CRL - DETOUR 1
P.I. STA. 399+28.16
N: 474794.2793
E: 2021226.6230
R = 1042.000'
T = 76.078'
Δ = 8°21'06.09"
L = 151.887'
C = 151.752'
D = 5°29'55.09"
eMAX = 8%
V = 45 MPH
S = NO SUPER





DESCRIPTION	REVISIONS	DATE



SH 29 STEPHENS COUNTY

GEOMETRIC SHEETS
SHEET 5 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R016

DESCRIPTION	REVISIONS	DATE

SE/4 SEC 14,
T-2-N, R-6-W

485+00

490+00

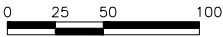
SE/4 SEC 14,
T-2-N, R-6-W

495+00

480+00



NE/4 SEC 23,
T-2-N, R-6-W

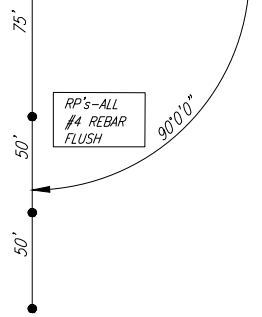
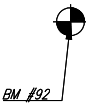
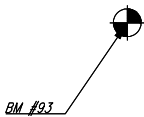


CRL
N89°53'43.60" E

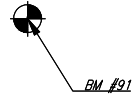
CL SURVEY 24412
N89°53'43.61" E

EW-164 SECTION LINE
N 89°54'26" E

EW-164 SECTION LINE
N 89°54'26" E



RP'S-ALL
#4 REBAR
FLUSH



NE/4 SEC 23,
T-2-N, R-6-W

SW/4 SEC 13,
T-2-N, R-6-W

500+00

505+00

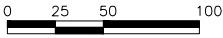
SW/4 SEC 13,
T-2-N, R-6-W

510+00

495+00



NW/4 SEC 24,
T-2-N, R-6-W



RP'S-ALL
#4 REBAR
FLUSH

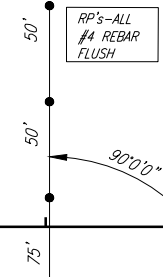
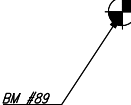
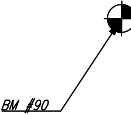
MAXWELL RD.
NS-292
N 00°07'54" W

CRL
N89°53'43.60" E

EW-164 SECTION LINE
N 89°54'26" E

CL SURVEY 24412
N89°53'43.61" E

EW-164 SECTION LINE
S 89°54'51" W



RP'S-ALL
#4 REBAR
FLUSH

SH 29

STEPHENS COUNTY

GEOMETRIC SHEETS
SHEET 6 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R017

515+00

520+00

SW/4 SEC 13,
T-2-N, R-6-W

510+00

525+00

RP'S-ALL
#4 REBAR
FLUSH

RP'S-ALL
#4 REBAR
FLUSH

CRL
N89°53'43.60"E

EW-164 SECTION LINE
S 89°54'51" W

CL SURVEY 24412
N89°53'43.61"E

EW-164 SECTION LINE
S 89°51'49" W

BM #88

BM #87

NW/4 SEC 24,
T-2-N, R-6-W

NW/4 SEC 24,
T-2-N, R-6-W

530+00

SE/4 SEC 13,
T-2-N, R-6-W

535+00

525+00

540+00

CRL
N89°53'43.60"E

CRL
N89°53'43.60"E

CL SURVEY 24412
N89°53'43.61"E

EW-164 SECTION LINE
S 89°51'49" W

EW-164 SECTION LINE
S 89°51'49" W

BM #86

BM #85

BM #84

NE/4 SEC 24,
T-2-N, R-6-W

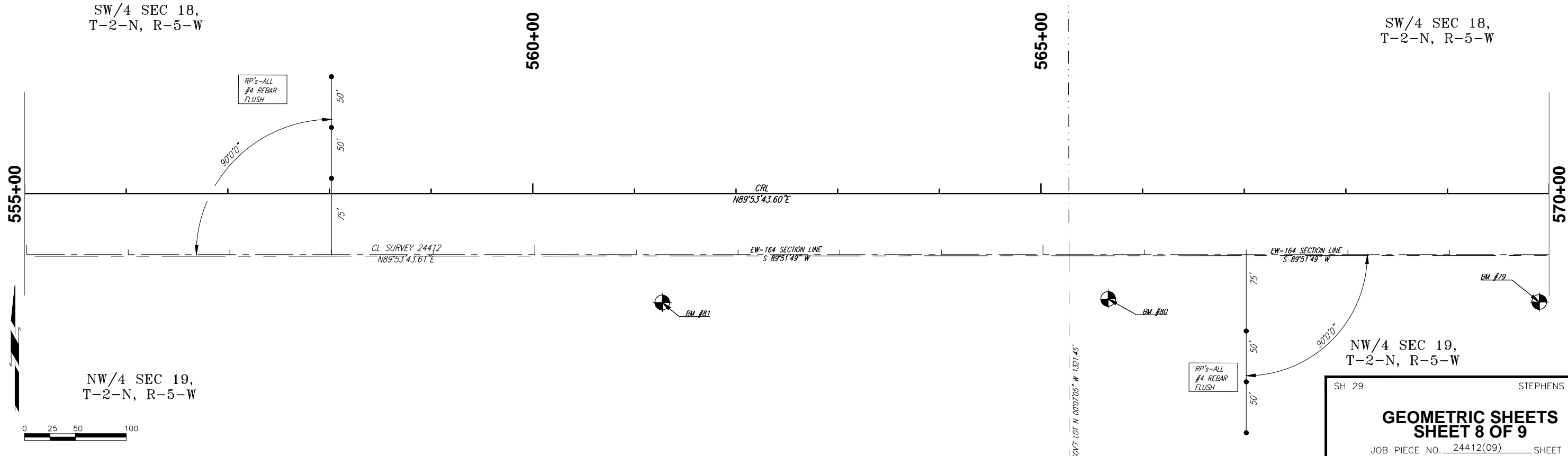
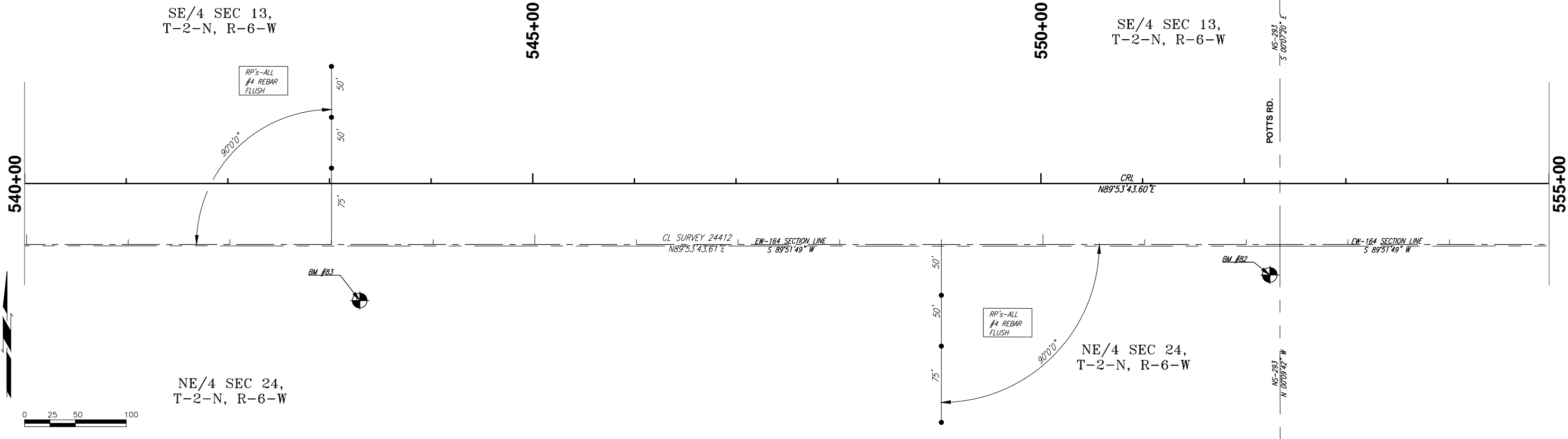
SH 29

STEPHENS COUNTY

GEOMETRIC SHEETS
SHEET 7 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R018

DESCRIPTION	REVISIONS	DATE



SE/4 SEC 18,
T-2-N, R-5-W

580+00

CURVE NO. 3
CRL
P.I. STA. 577+40.14
N: 474894.0691
E: 2039038.6613
R = 12900.000'
T = 440.142'
 Δ = 3°54'29.87"
L = 879.943'
C = 879.773'
D = 0°26'38.95"
eMAX = 8%
V = 65 MPH
S = N.C.

RP'S-ALL
#4 REBAR
FLUSH

NE/4 SEC 19,
T-2-N, R-5-W

585+00

575+00

STA. 573+00.00
BEGIN CRL-2

573+00

CRL
N89°53'43.60"E

CURVE NO. 3

CRL 2
N89°53'43.60"E

CL SURVEY 24412
N89°53'43.61"E

EW-164 SECTION LINE
S 89°51'49" W

EW-164 SECTION
S 89°54'43" W

BM #78

NS-281.5 1/4 SECTION LINE
S 00°07'38" E

NS-281.5 1/4 SECTION LINE
N 00°12'43" W

SE/4 SEC 18,
T-2-N, R-5-W

595+00

CURVE NO. 4
CRL
P.I. STA. 586+20.09
N: 474835.6718
E: 2039917.0068
R = 12900.000'
T = 440.142'
 Δ = 3°54'29.87"
L = 879.943'
C = 879.773'
D = 0°26'38.95"
eMAX = 8%
V = 65 MPH
S = N.C.

RP'S-ALL
#4 REBAR
FLUSH

P.I. STA. 598+03.38
CRL
N: 474837.8317
E: 2041100.6372

CRL-2 STA. 585+50, 49.93' LT.
CRL STA. 585+49.26, 0.00' LT.

CRL 2
N89°53'43.60"E

CURVE NO. 4
EW-164 SECTION
S 89°54'43" W

BM #77

BM #76

BM #75

NE/4 SEC 19,
T-2-N, R-5-W

600+00

STA. 590+89.89
END CRL CONSTRUCTION

SH 29

STEPHENS COUNTY

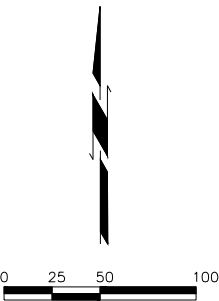
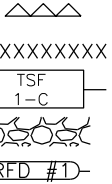
GEOMETRIC SHEETS
SHEET 9 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R020

DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



335+00

340+00

345+00

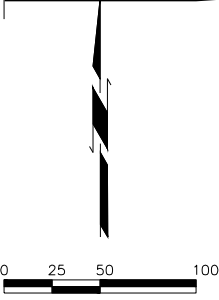
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	1	1.21 A.C.
TOTAL		1.21 A.C.

350+00

355+00

360+00

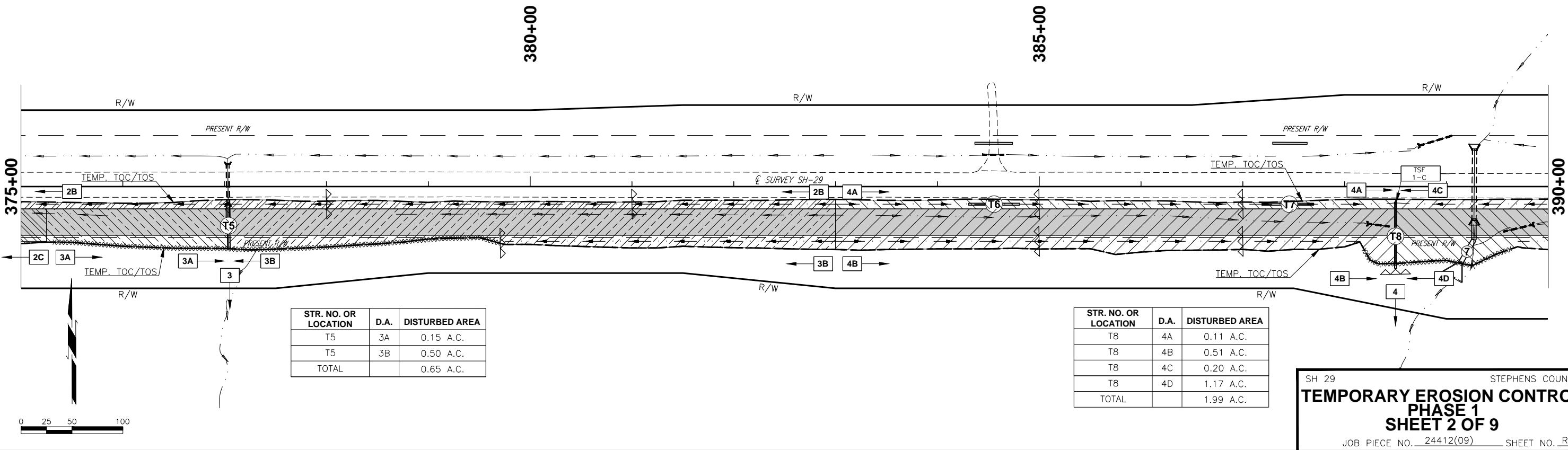
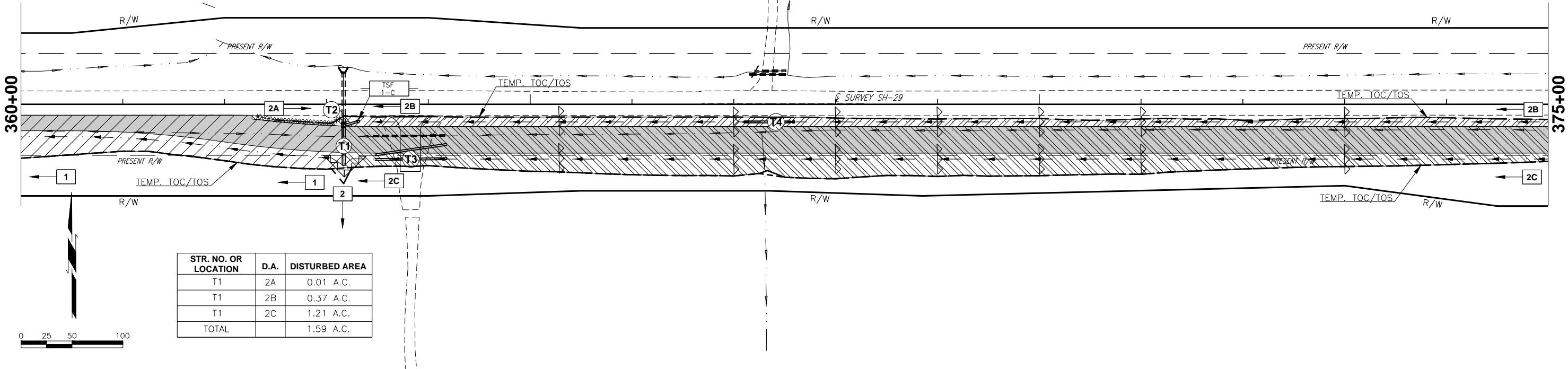
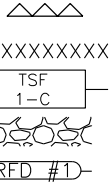
345+00



DESCRIPTION	REVISIONS	DATE

LEGEND

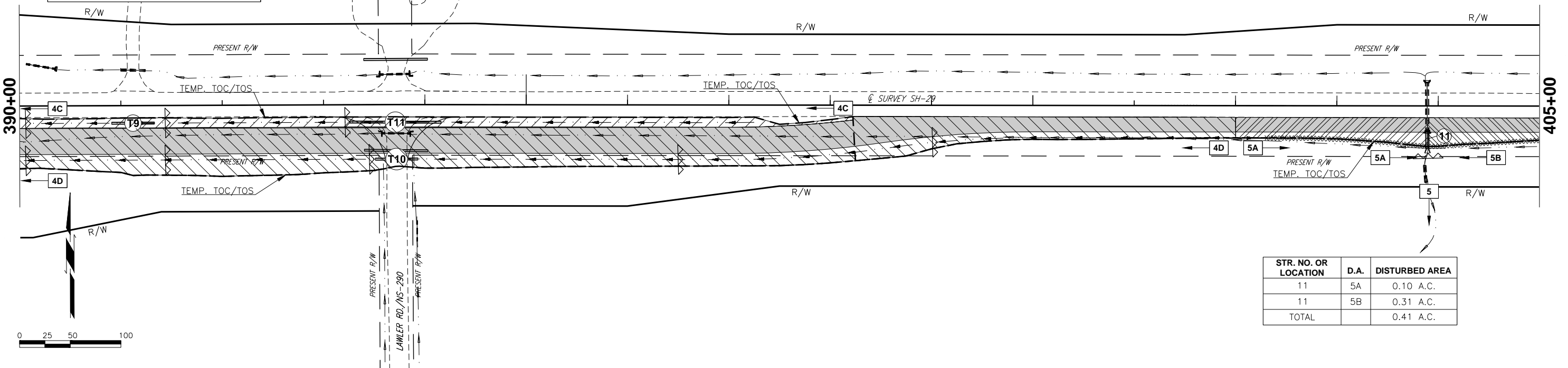
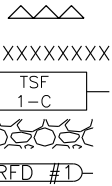
- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



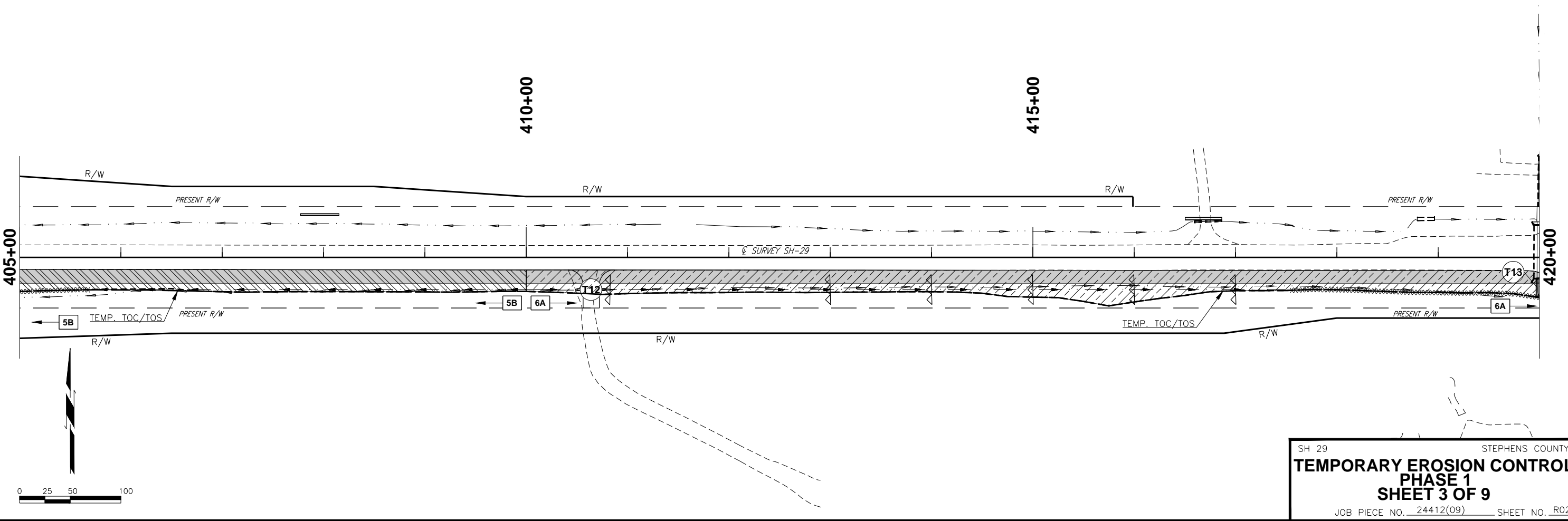
DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



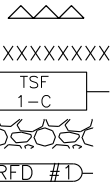
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
11	5A	0.10 A.C.
11	5B	0.31 A.C.
TOTAL		0.41 A.C.



SH 29 STEPHENS COUNTY
TEMPORARY EROSION CONTROL
PHASE 1
SHEET 3 OF 9
JOB PIECE NO. 24412(09) SHEET NO. R023

LEGEND

- TEMPORARY SILT DIKE
TEMPORARY SILT FENCE
SEDIMENT FILTER
RIP RAP
ROCK FILTER DAM



420+00

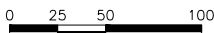
425+00

430+00

435+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT 6A		0.54 A.C.
OFF PROJECT 6B		0.02 A.C.
TOTAL		0.56 A.C.

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
21 7A		0.46 A.C.
21 7B		0.12 A.C.
21 7C		0.08 A.C.
21 7D		0.86 A.C.
TOTAL		1.52 A.C.



435+00

440+00

445+00

450+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
T18 9A		0.59 A.C.
T18 9B		0.15 A.C.
TOTAL		0.74 A.C.

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
T20 8A		0.06 A.C.
T20 8B		0.05 A.C.
T20 8C		0.07 A.C.
T20 8D		0.56 A.C.
TOTAL		0.74 A.C.



SH 29 STEPHENS COUNTY

TEMPORARY EROSION CONTROL
PHASE 1
SHEET 4 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R024

DESCRIPTION	REVISIONS	DATE

LEGEND

TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	

450+00

455+00

460+00

465+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	10	0.59 A.C.
TOTAL		0.59 A.C.

0 25 50 100

465+00

470+00

475+00

480+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
29	11A	0.43 A.C.
29	11B	0.16 A.C.
29	11C	1.85 A.C.
29	11D	0.82 A.C.
TOTAL		3.26 A.C.

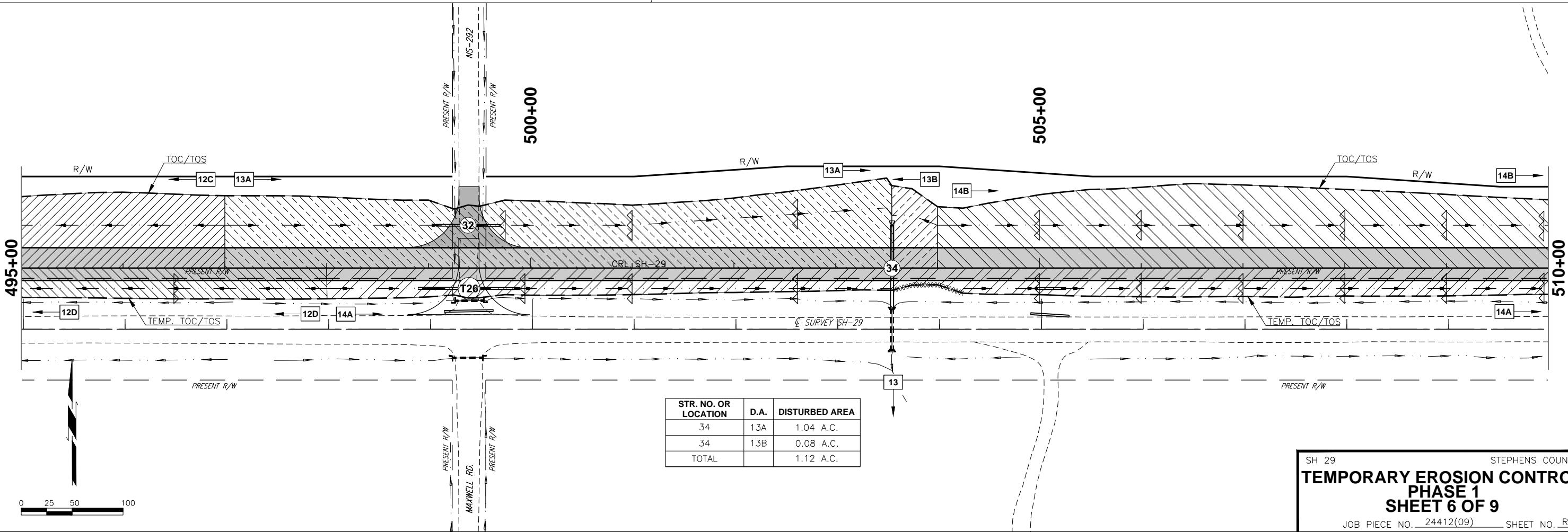
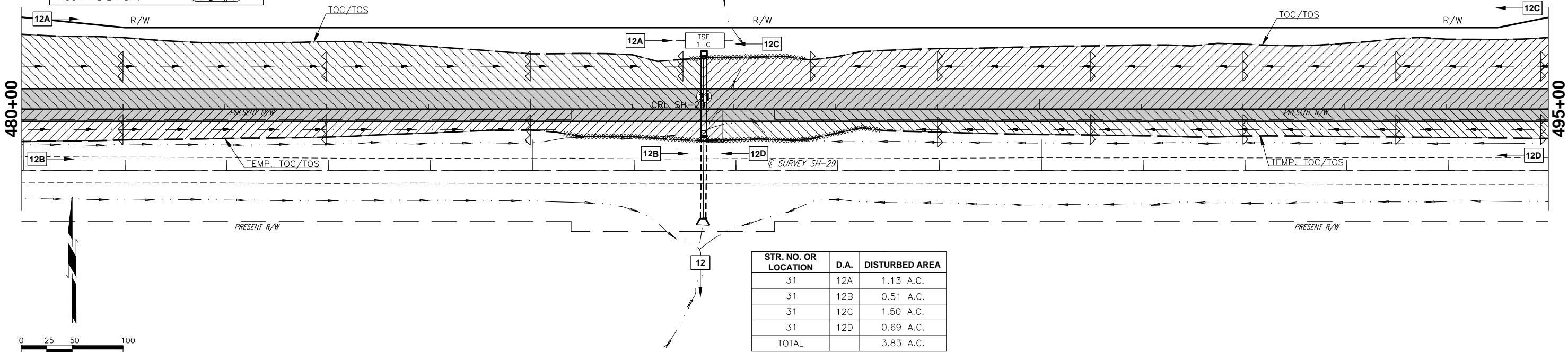
0 25 50 100

SH 29 STEPHENS COUNTY
TEMPORARY EROSION CONTROL
PHASE 1
SHEET 5 OF 9
JOB PIECE NO. 24412(09) SHEET NO. R025

DESCRIPTION	REVISIONS	DATE

LEGEND

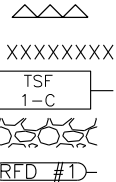
- TEMPORARY SILT DIKE
- XXXXXXX
- TEMPORARY SILT FENCE
- TSF
1-C
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM
- RED #1



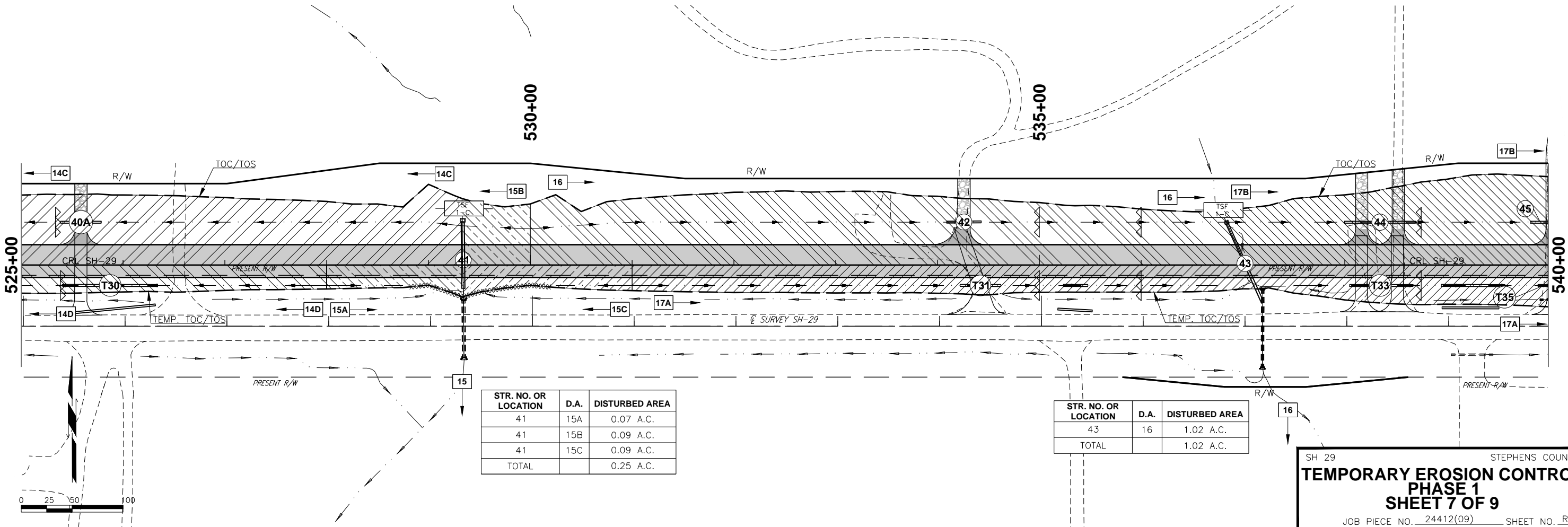
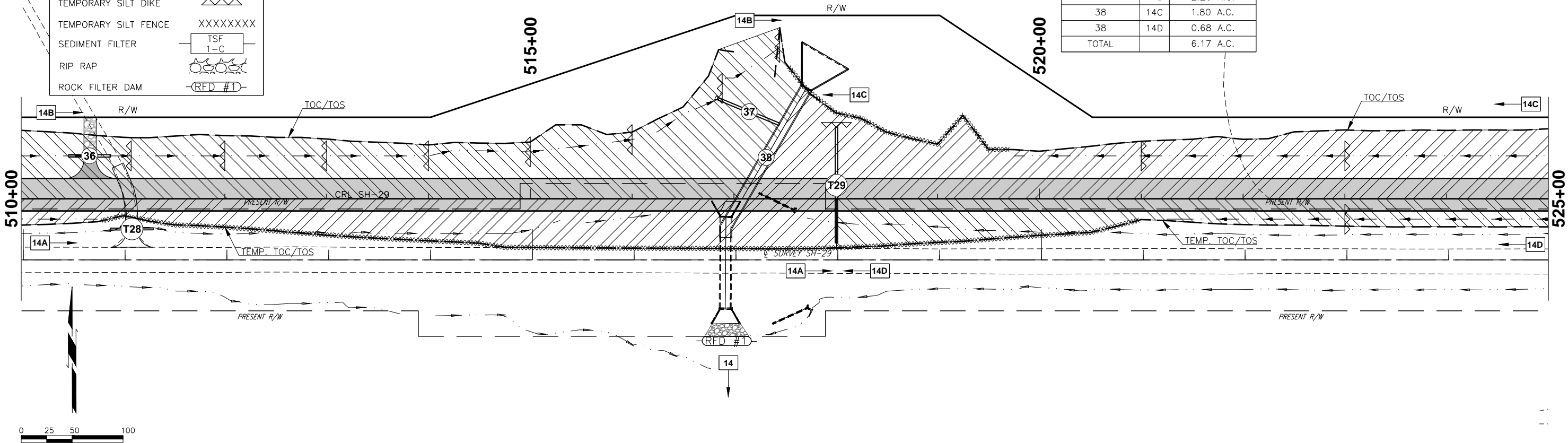
DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



STR. NO. OR LOCATION	D.A.	DISTURBED AREA
38	14A	1.43 A.C.
38	14B	2.26 A.C.
38	14C	1.80 A.C.
38	14D	0.68 A.C.
TOTAL		6.17 A.C.



STR. NO. OR LOCATION	D.A.	DISTURBED AREA
41	15A	0.07 A.C.
41	15B	0.09 A.C.
41	15C	0.09 A.C.
TOTAL		0.25 A.C.

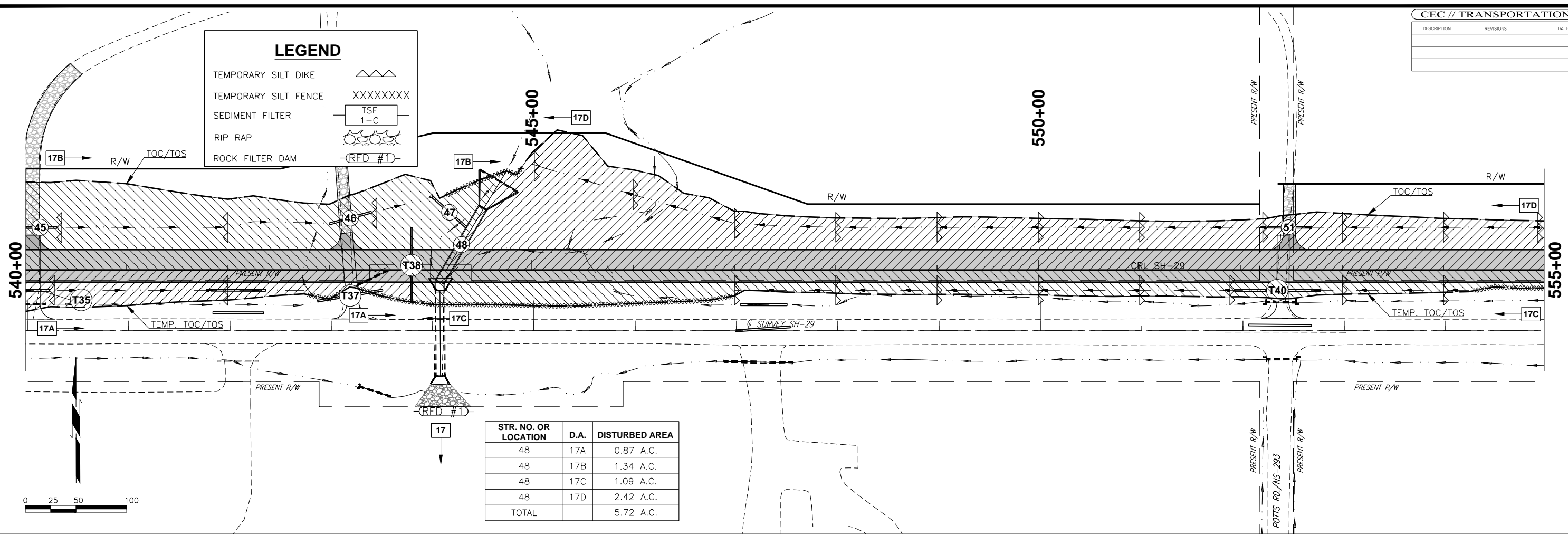
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
43	16	1.02 A.C.
TOTAL		1.02 A.C.

SH 29 STEPHENS COUNTY
TEMPORARY EROSION CONTROL
PHASE 1
SHEET 7 OF 9
JOB PIECE NO. 24412(09) SHEET NO. R027

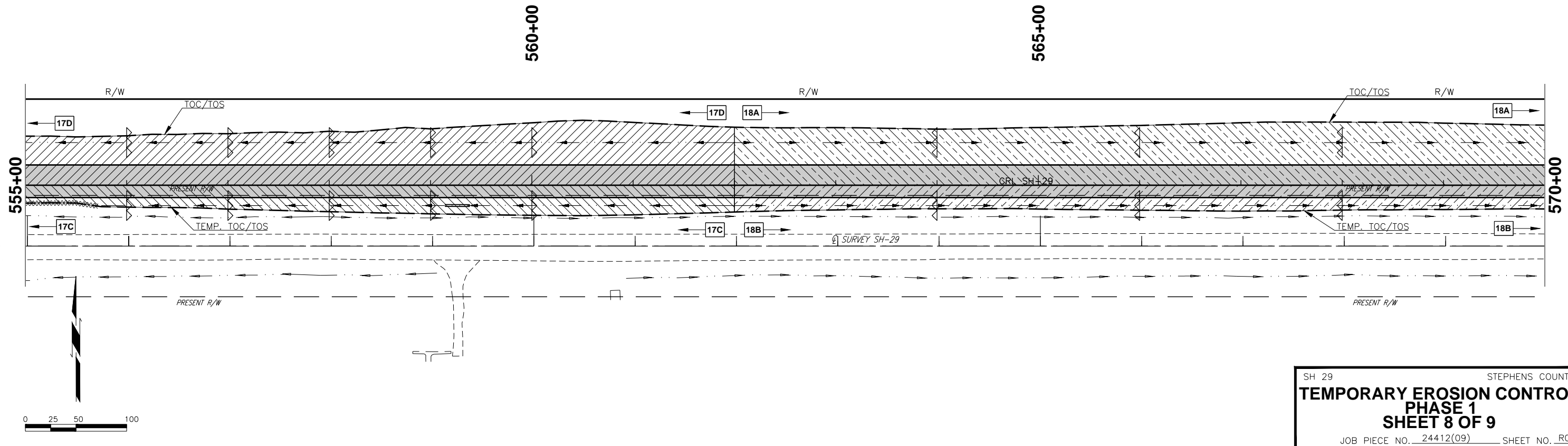
DESCRIPTION	REVISIONS	DATE

LEGEND

TEMPORARY SILT DIKE	XXXXXXX
TEMPORARY SILT FENCE	XXXXXXX
SEDIMENT FILTER	TSF 1-C
RIP RAP	XXXXXXX
ROCK FILTER DAM	RED #1



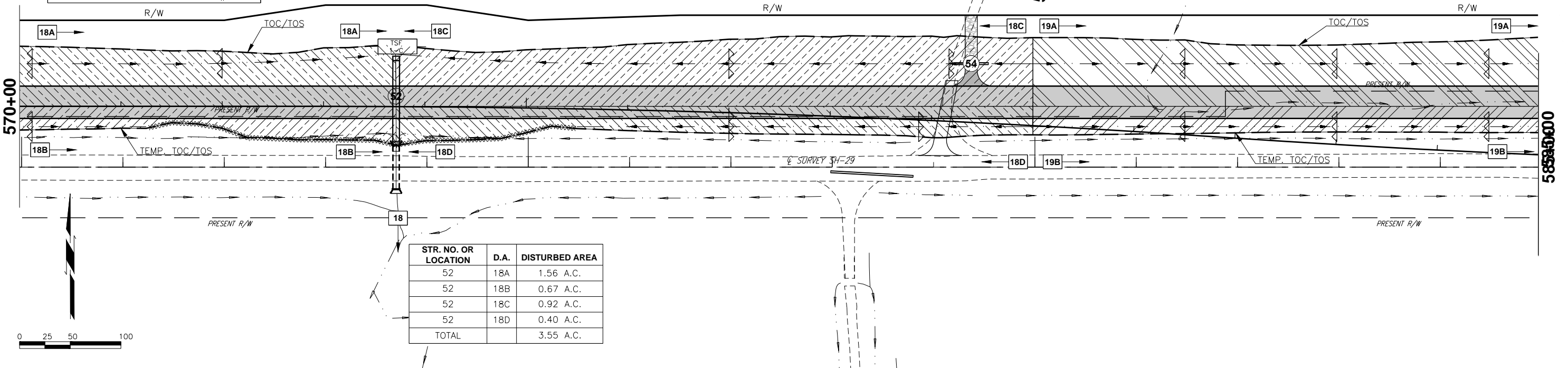
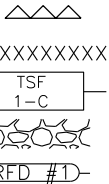
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
48 17A		0.87 A.C.
48 17B		1.34 A.C.
48 17C		1.09 A.C.
48 17D		2.42 A.C.
TOTAL		5.72 A.C.



DESCRIPTION	REVISIONS	DATE

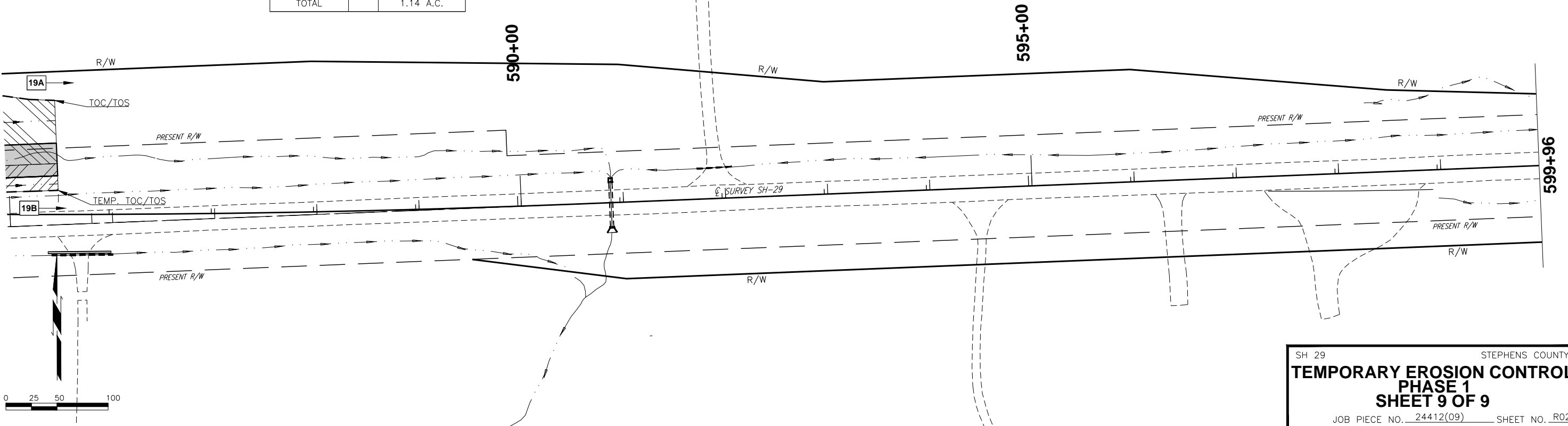
LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



STR. NO. OR LOCATION	D.A.	DISTURBED AREA
52	18A	1.56 A.C.
52	18B	0.67 A.C.
52	18C	0.92 A.C.
52	18D	0.40 A.C.
TOTAL		3.55 A.C.

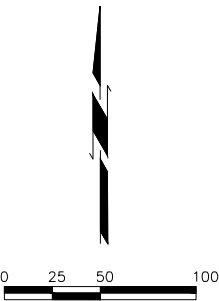
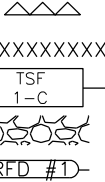
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	19A	0.81 A.C.
OFF PROJECT	19B	0.33 A.C.
TOTAL		1.14 A.C.



DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



335+00

340+00

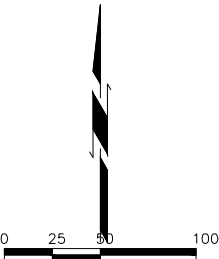
345+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	1	1.47 A.C.
TOTAL		1.47 A.C.

350+00

355+00

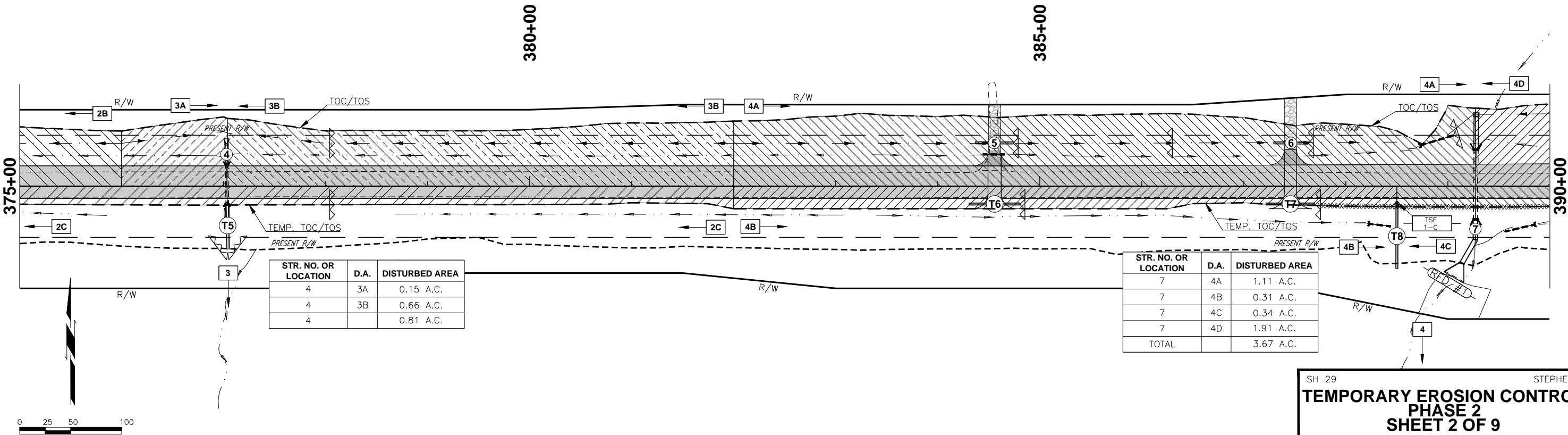
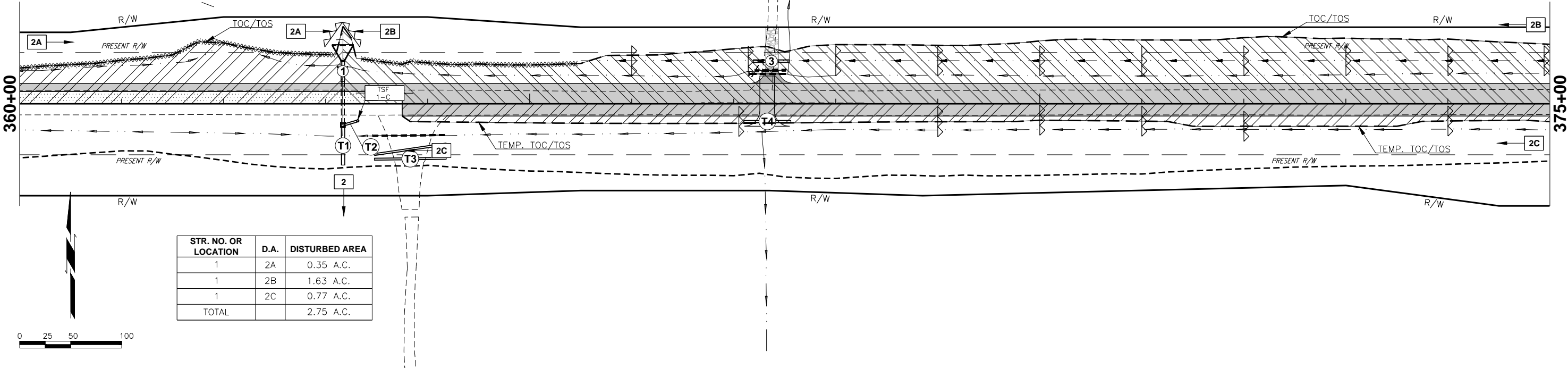
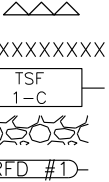
360+00



DESCRIPTION	REVISIONS	DATE

LEGEND

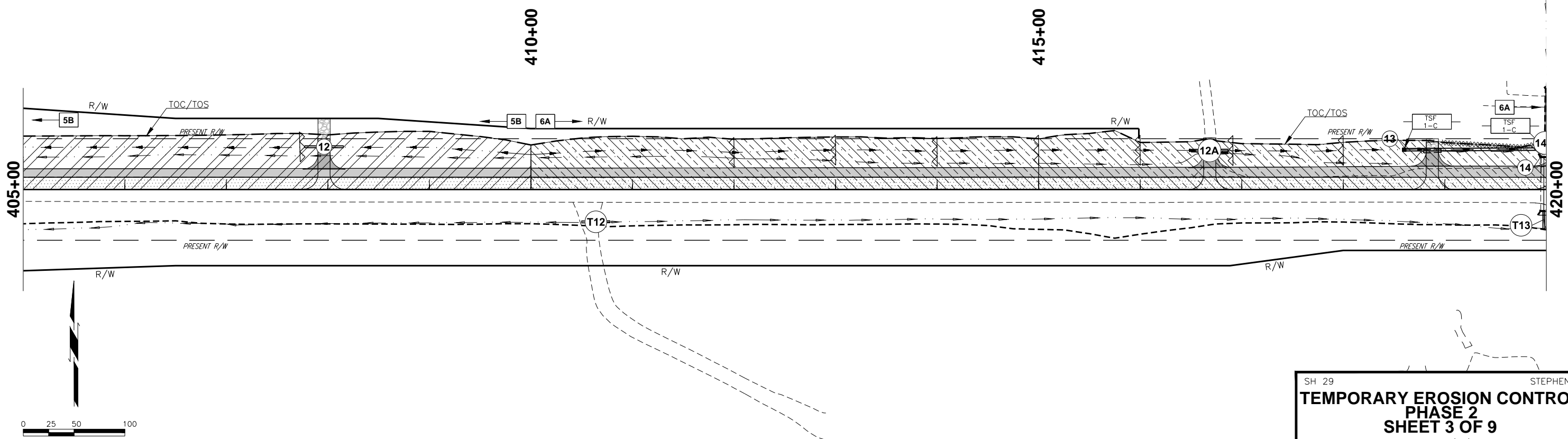
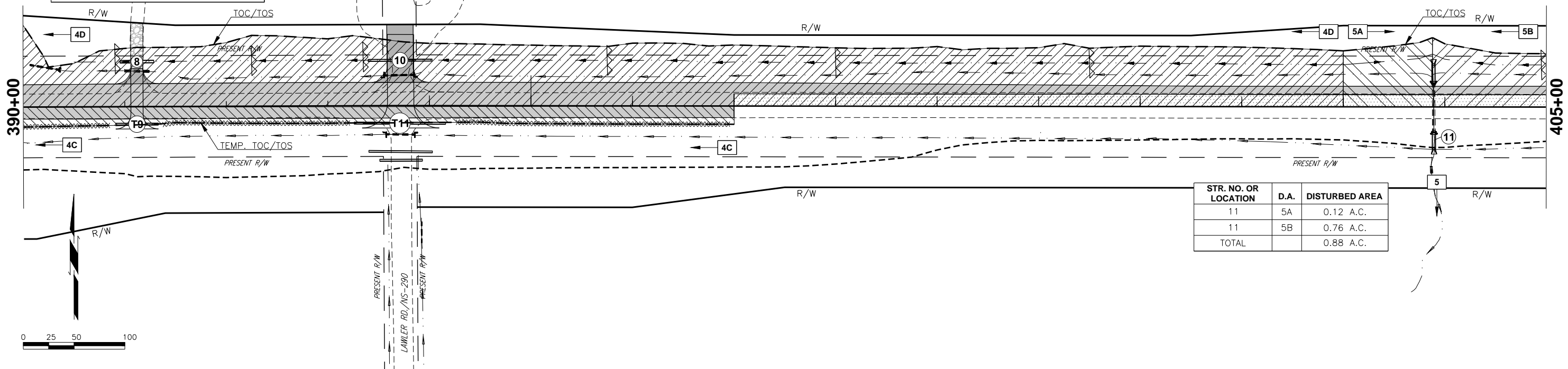
- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



DESCRIPTION	REVISIONS	DATE

LEGEND

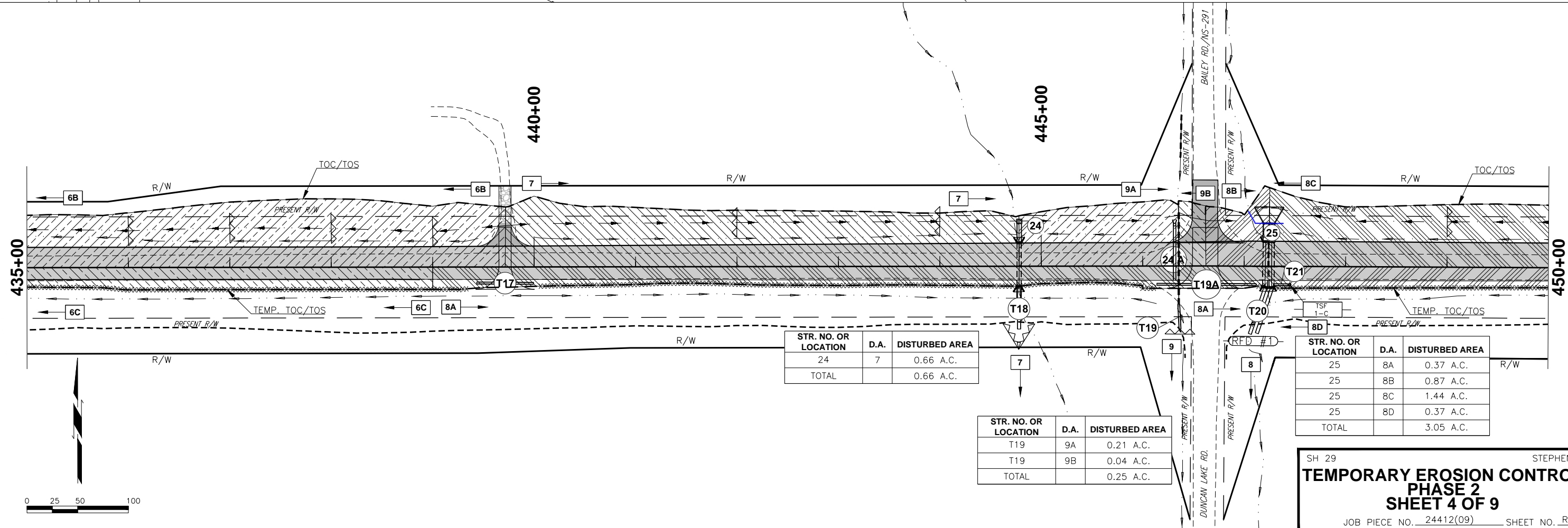
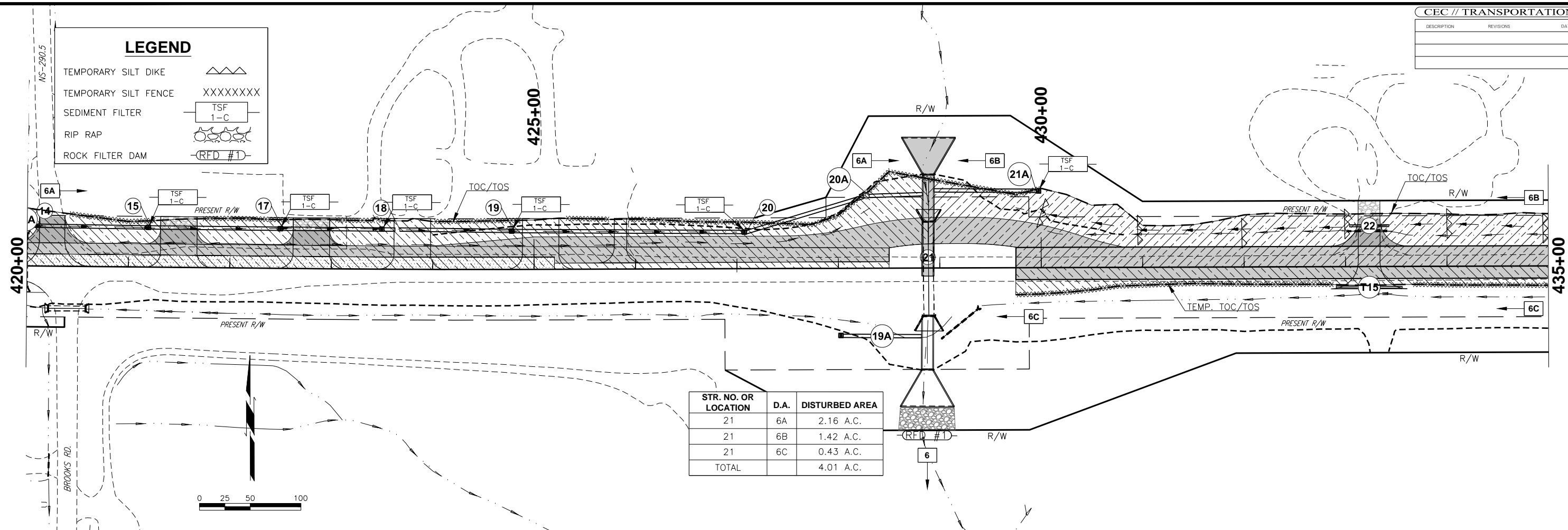
TEMPORARY SILT DIKE	XXXXXXX
TEMPORARY SILT FENCE	XXXXXXX
SEDIMENT FILTER	TSF 1-C
RIP RAP	XXXXXXX
ROCK FILTER DAM	RFD #1

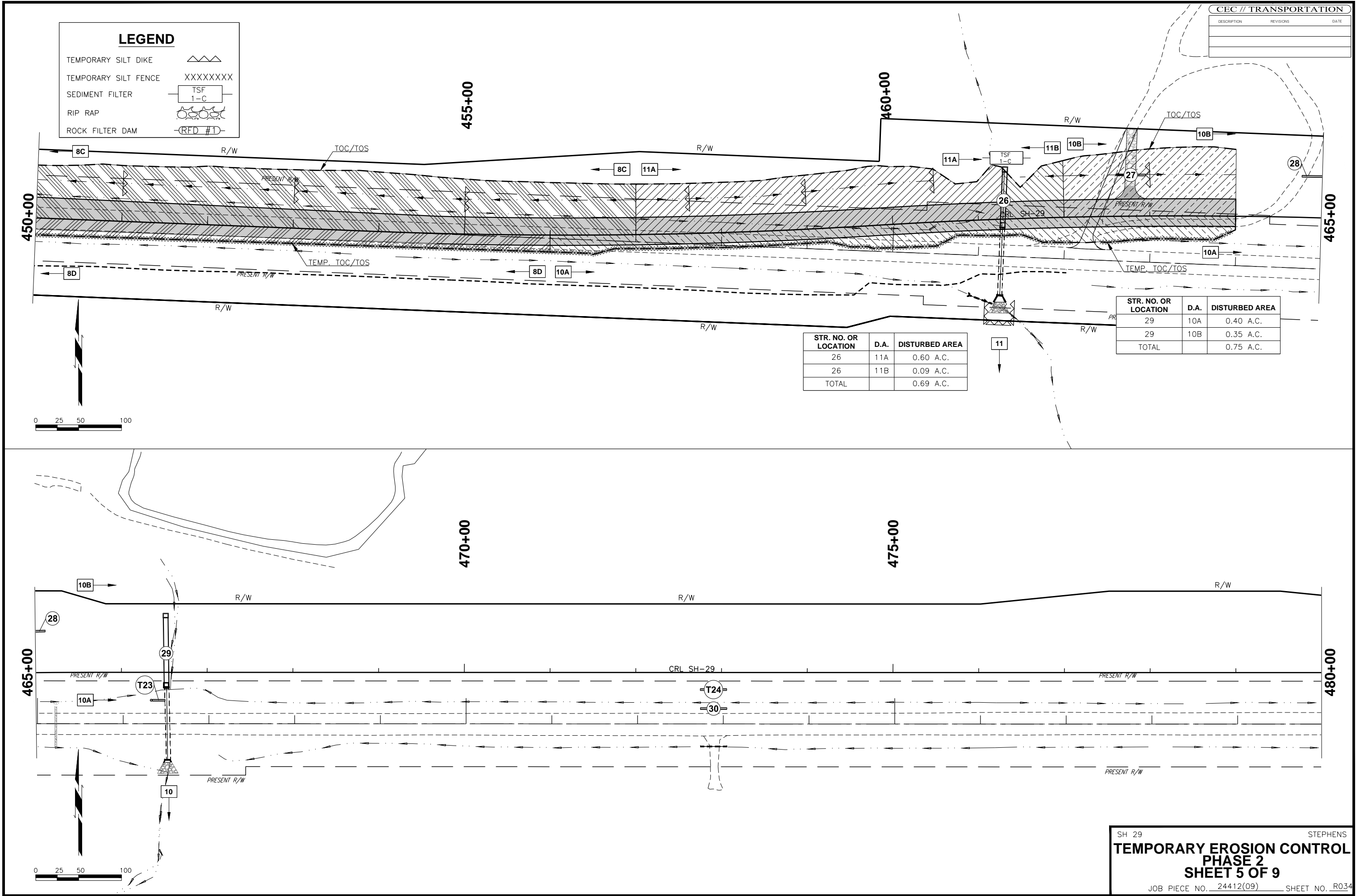


DESCRIPTION	REVISIONS	DATE

LEGEND

TEMPORARY SILT DIKE	XXXXXXX
TEMPORARY SILT FENCE	XXXXXXX
SEDIMENT FILTER	TSF 1-C
RIP RAP	XXXXXXX
ROCK FILTER DAM	RFD #1





CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE

LEGEND	
TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
26	11A	0.60 A.C.
26	11B	0.09 A.C.
TOTAL		0.69 A.C.

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
29	10A	0.40 A.C.
29	10B	0.35 A.C.
TOTAL		0.75 A.C.

SH 29STEPHENS

TEMPORARY EROSION CONTROL
PHASE 2
SHEET 5 OF 9

JOB PIECE NO. 24412(09)SHEET NO. R034

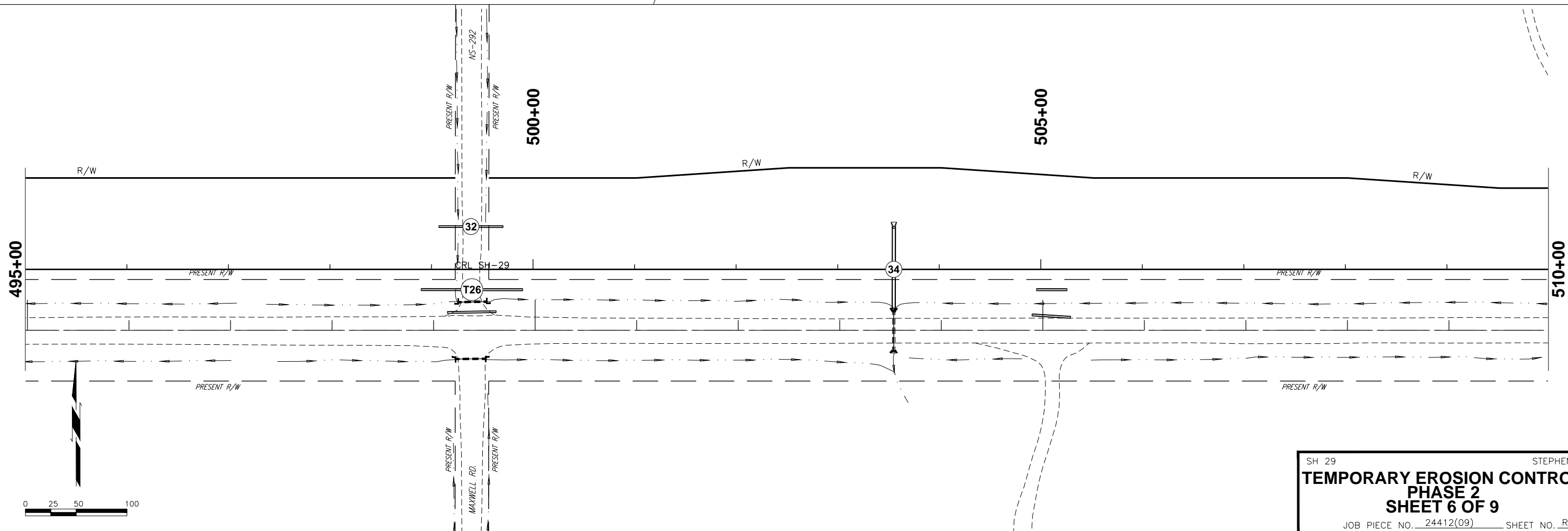
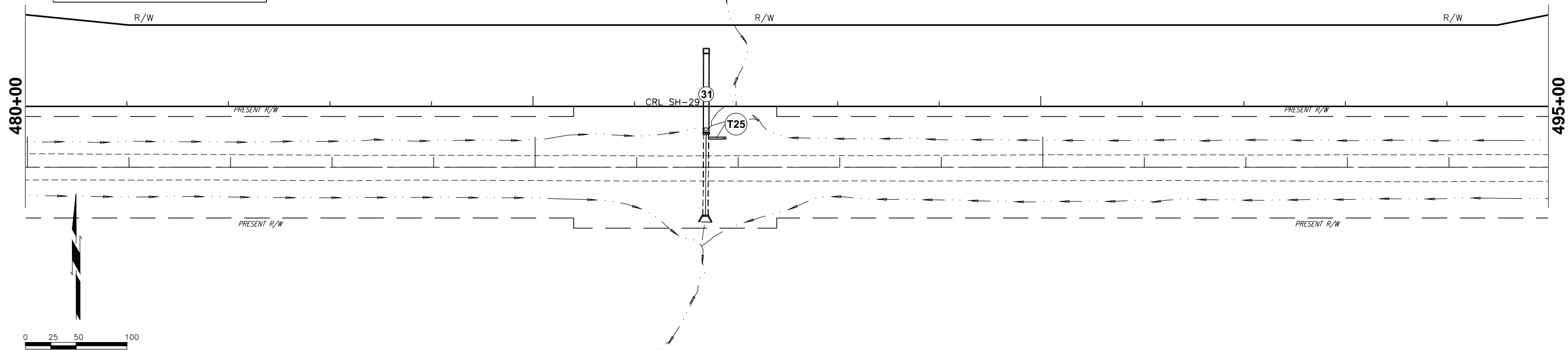
DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM
- XXXXXXX


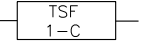

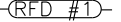
TSF
1-C

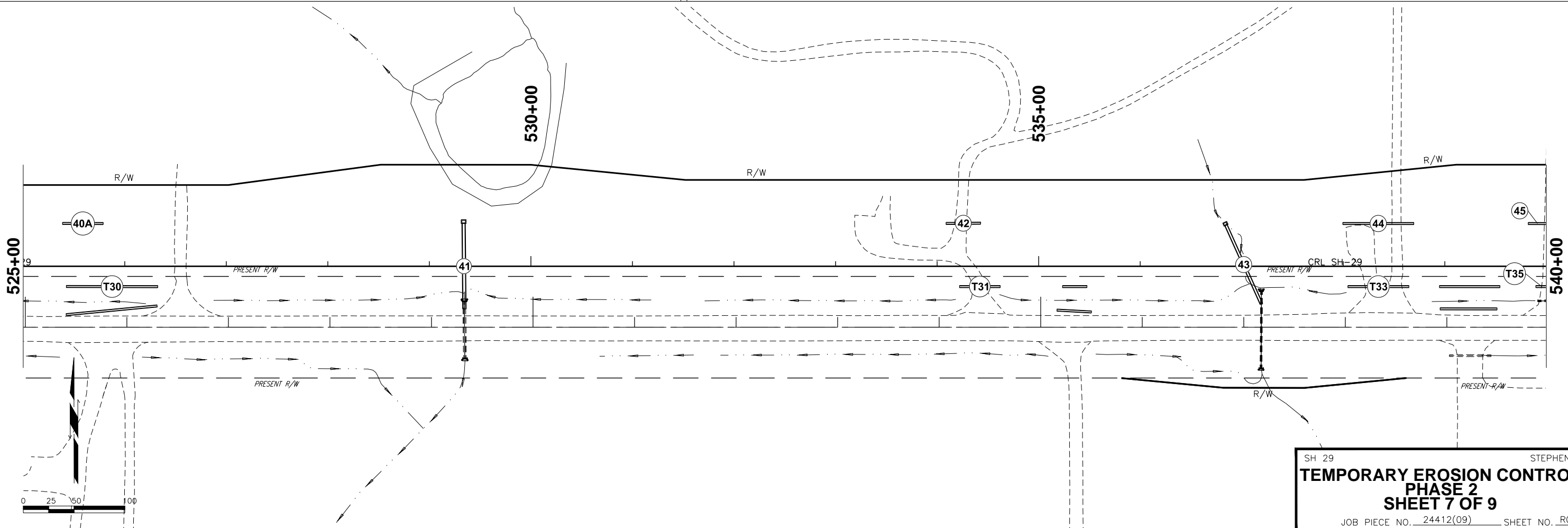
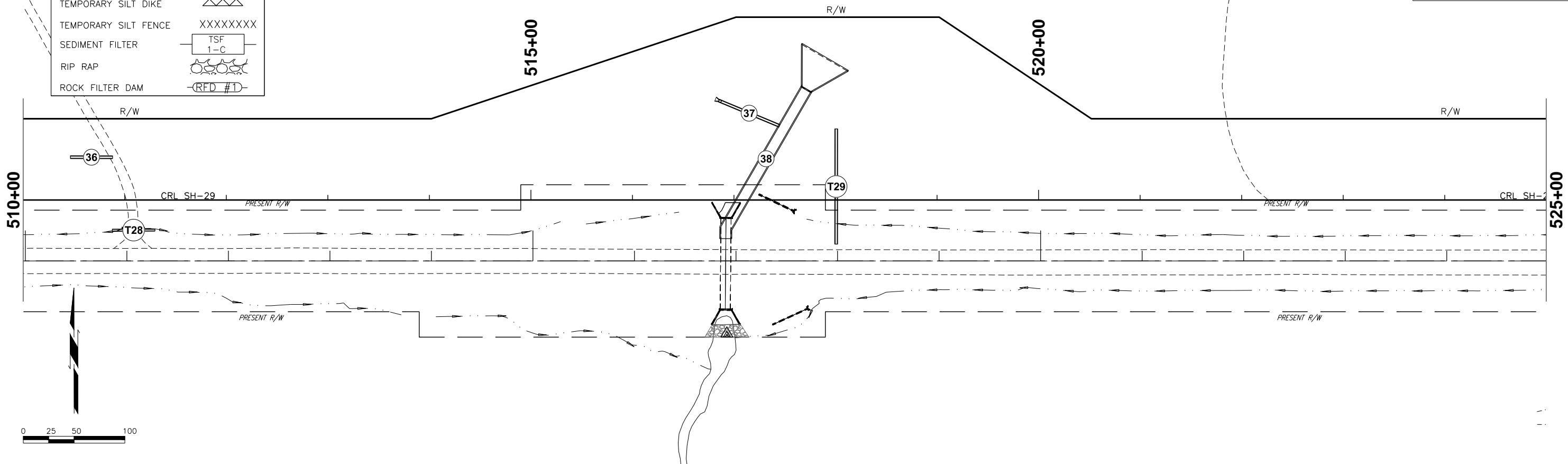
RFD #1



DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
 - TEMPORARY SILT FENCE
 - SEDIMENT FILTER
 - RIP RAP
 - ROCK FILTER DAM
- 
 - XXXXXXX
 - 
 - 
 - 

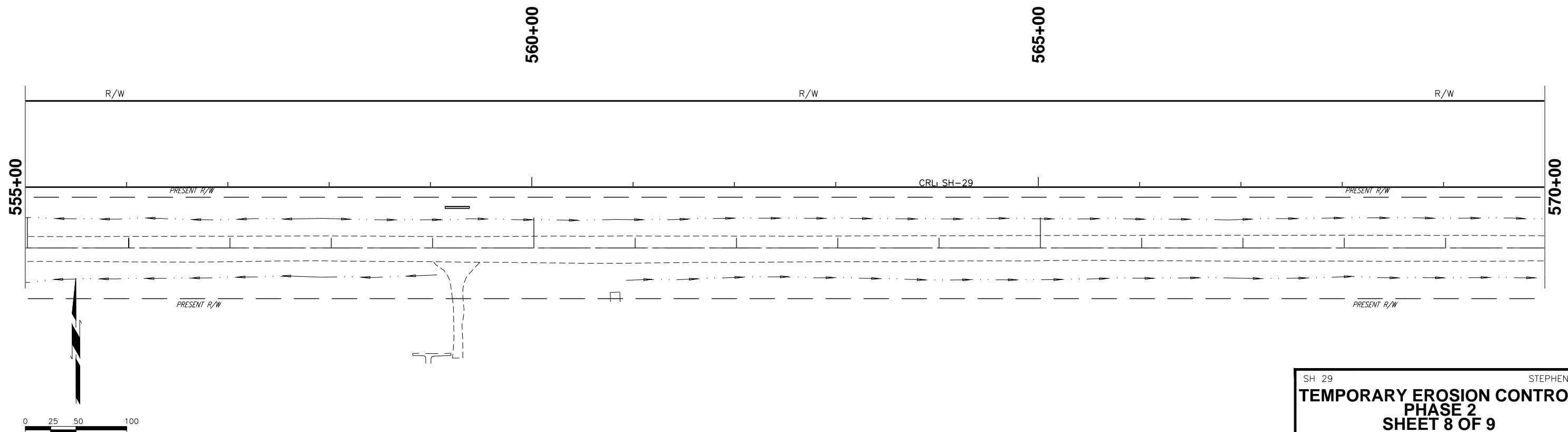
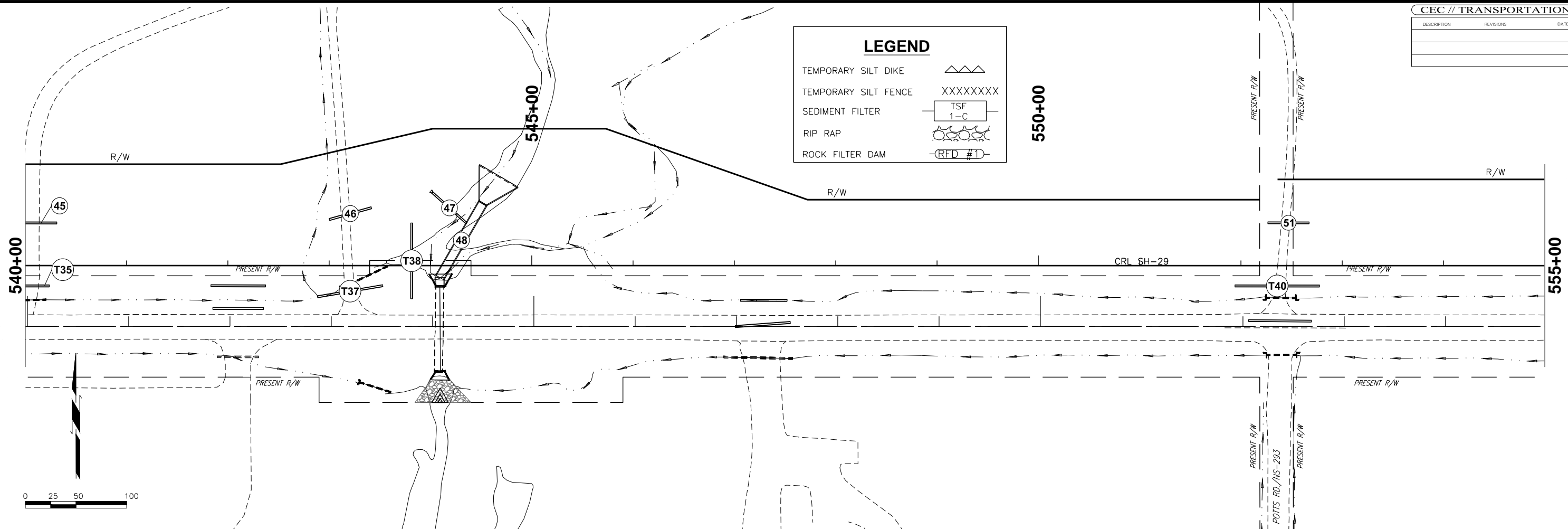


SH 29 STEPHENS
**TEMPORARY EROSION CONTROL
PHASE 2
SHEET 7 OF 9**
JOB PIECE NO. 24412(09) SHEET NO. R036

DESCRIPTION	REVISIONS	DATE

LEGEND

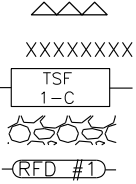
TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	



DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



570+00

575+00

580+00

585+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
52	12A	0.02 A.C.
52	12B	0.39 A.C.
TOTAL		0.41 A.C.

0 25 50 100

585+00

590+00

595+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	13	0.75 A.C.

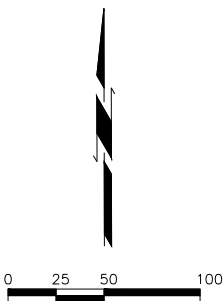
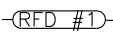
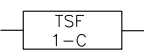
0 25 50 100

LEGEND

- TEMPORARY SILT DIKE
TEMPORARY SILT FENCE
SEDIMENT FILTER
RIP RAP
ROCK FILTER DAM



XXXXXXXXXX



335+00

340+00

345+00

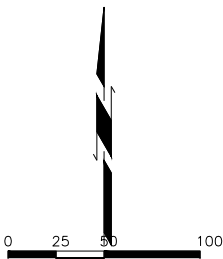
350+00

355+00

360+00

345+00

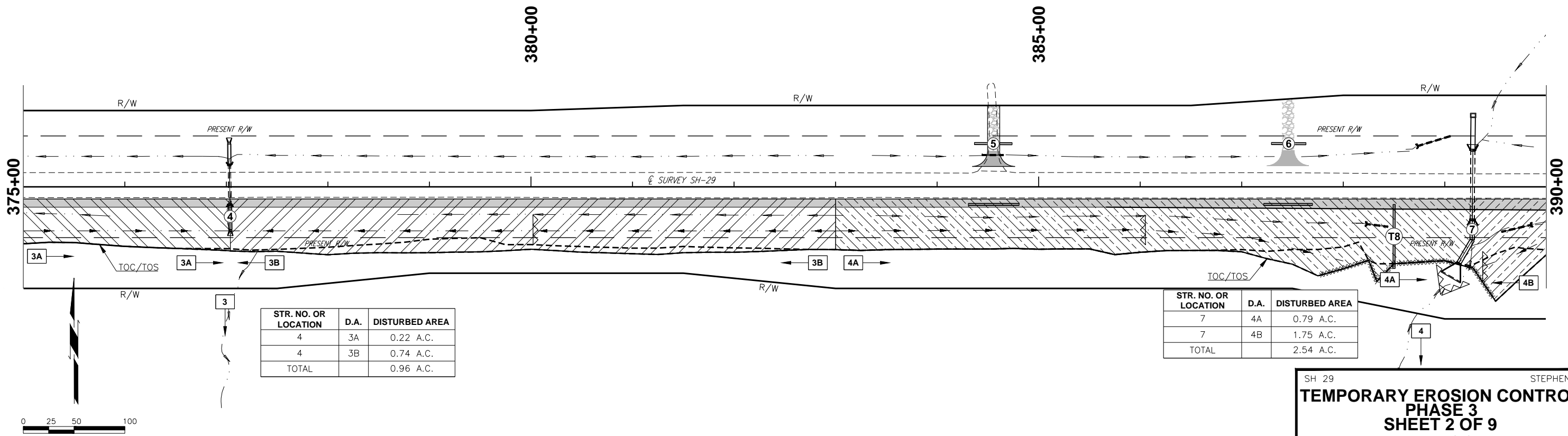
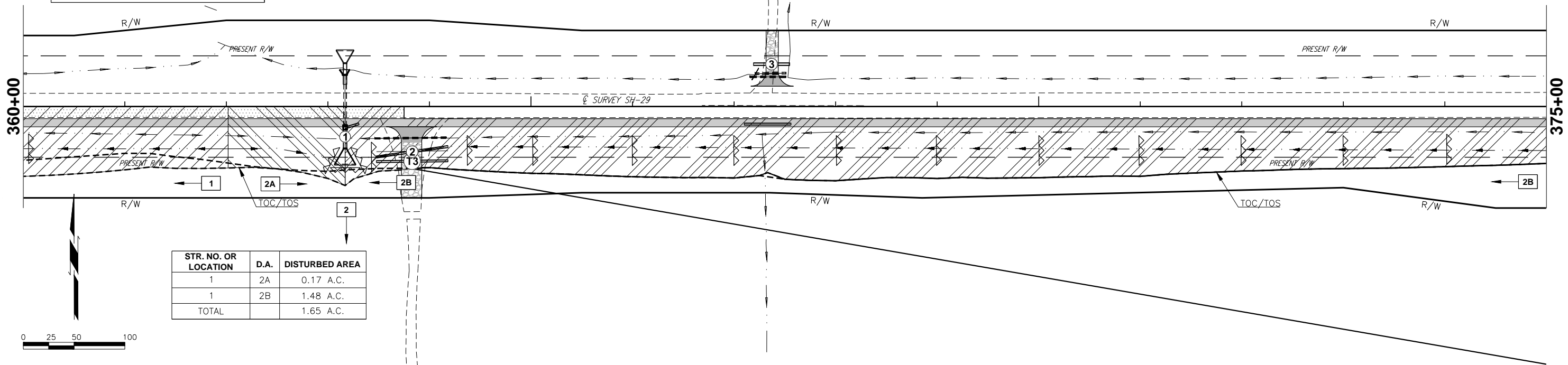
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
341+17	1	2.20 A.C.
TOTAL		2.20 A.C.



DESCRIPTION	REVISIONS	DATE

LEGEND

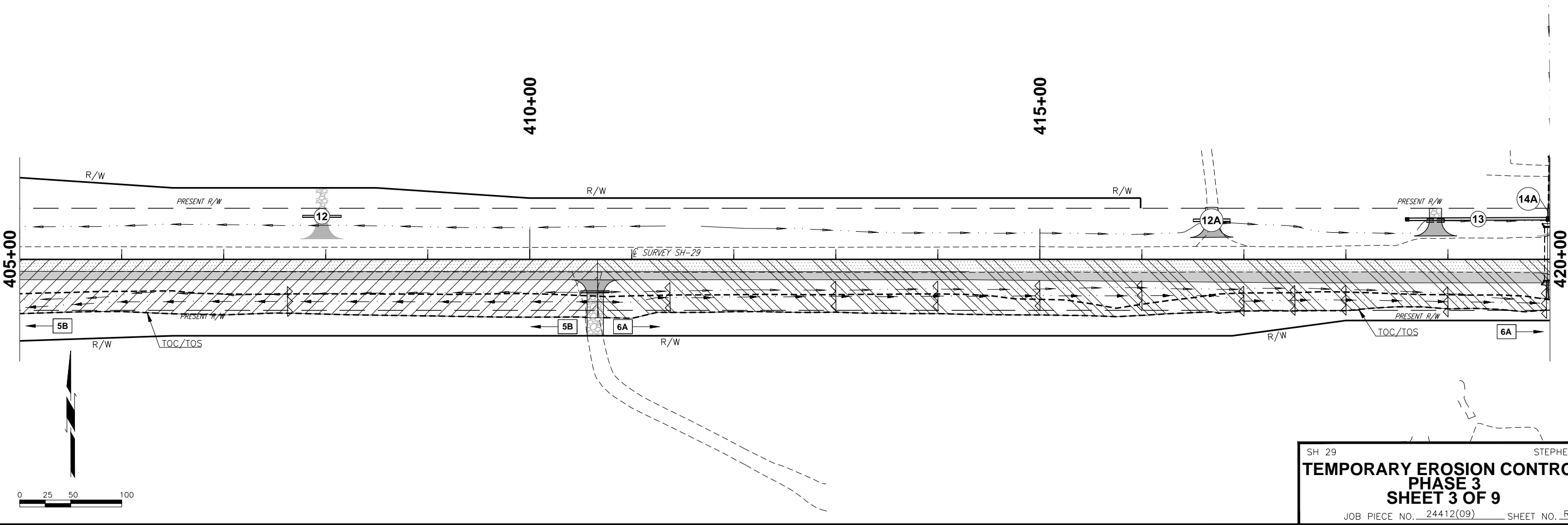
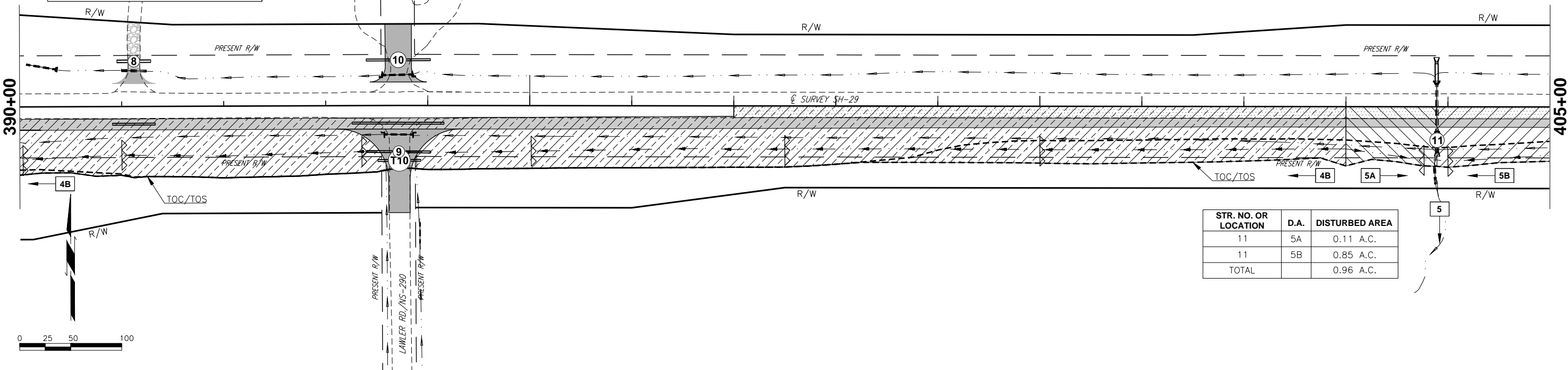
- TEMPORARY SILT DIKE
TEMPORARY SILT FENCE
SEDIMENT FILTER
RIP RAP
ROCK FILTER DAM
- XXXXXXX
TSF
1-C
RIP RAP
ROCK FILTER DAM



DESCRIPTION	REVISIONS	DATE



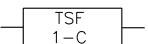

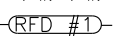
LEGEND

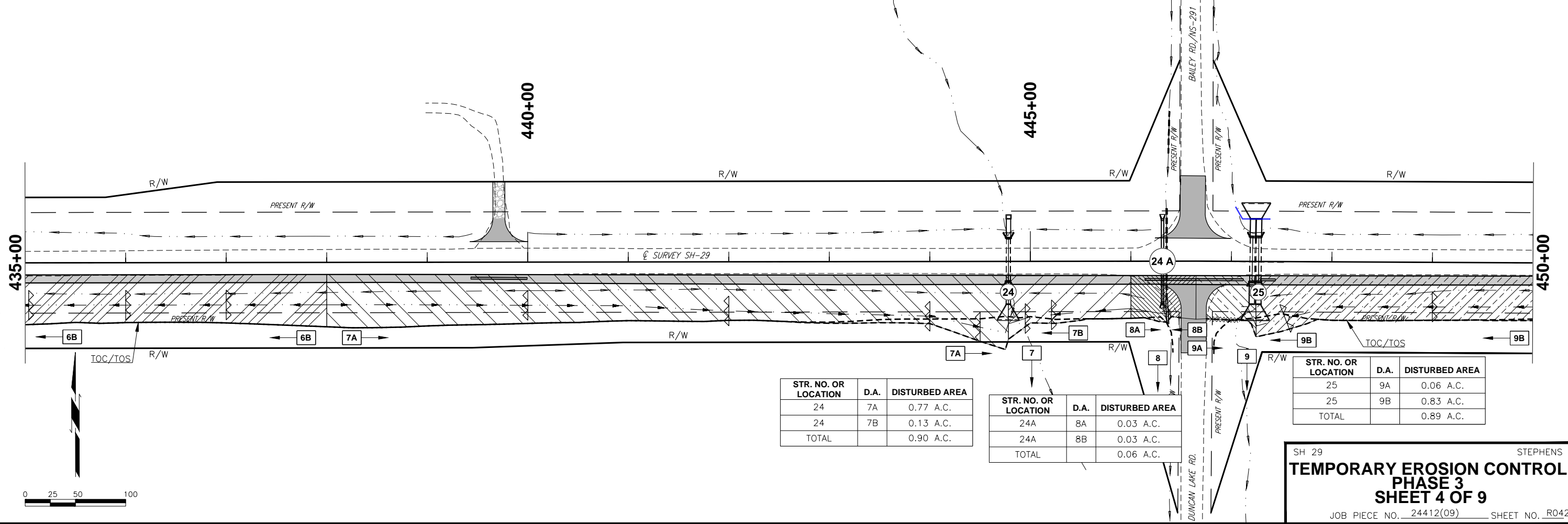
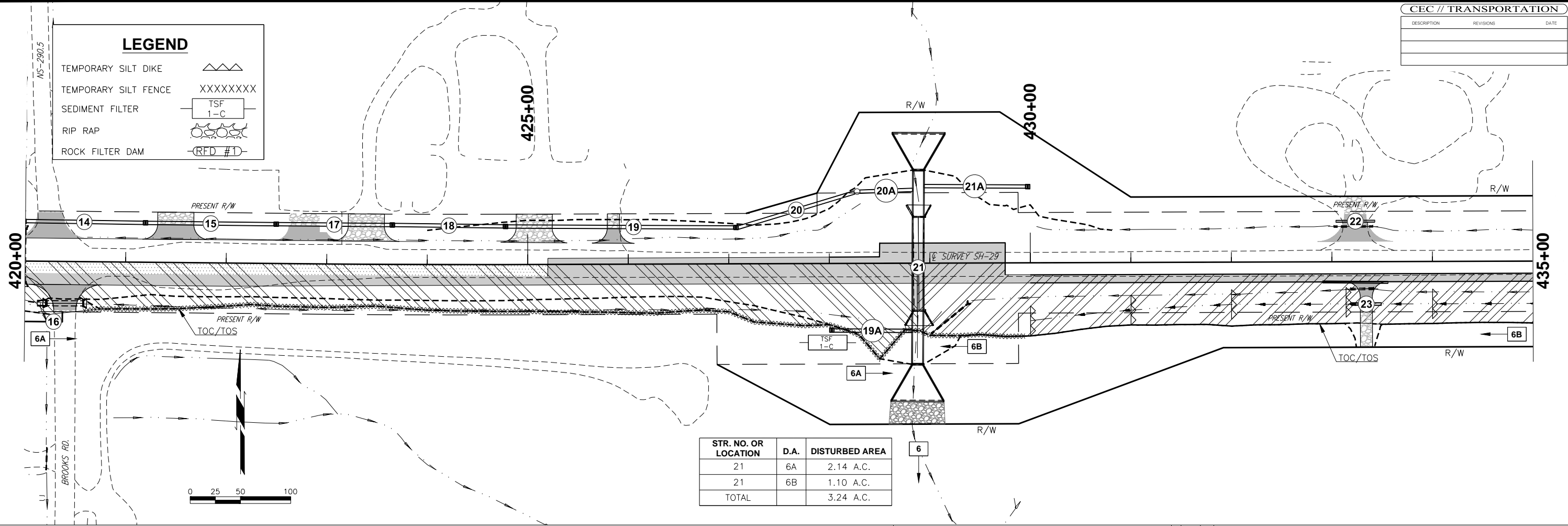
- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM
- XXXXXXX
- TSF
1-C
- RED #1



DESCRIPTION	REVISIONS	DATE

LEGEND

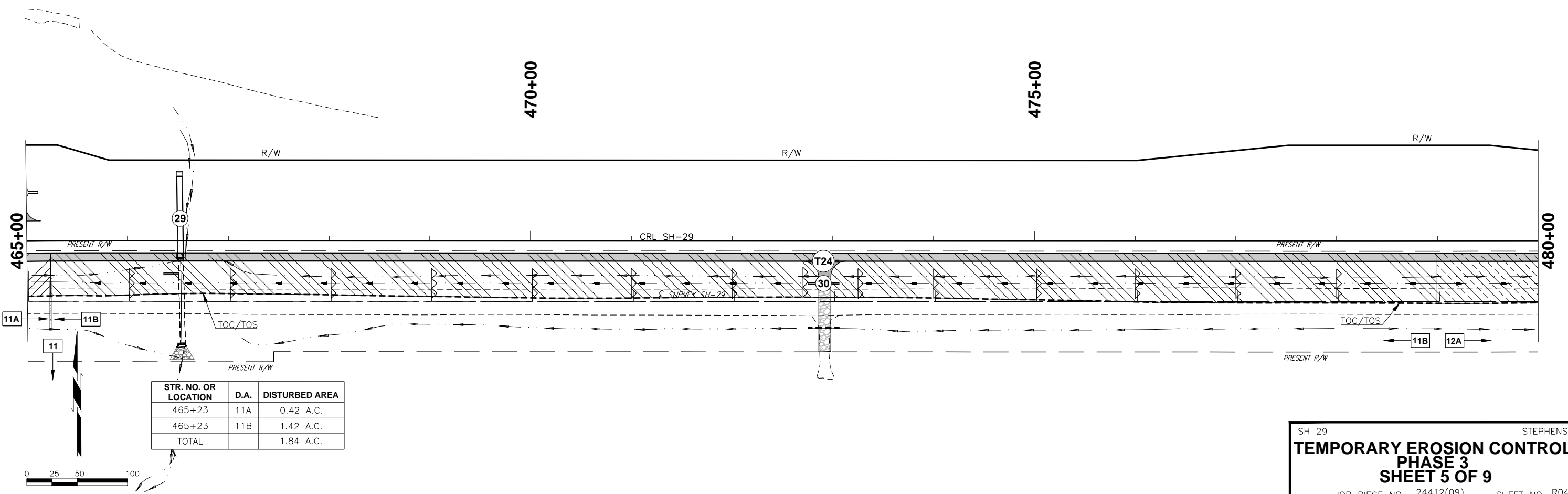
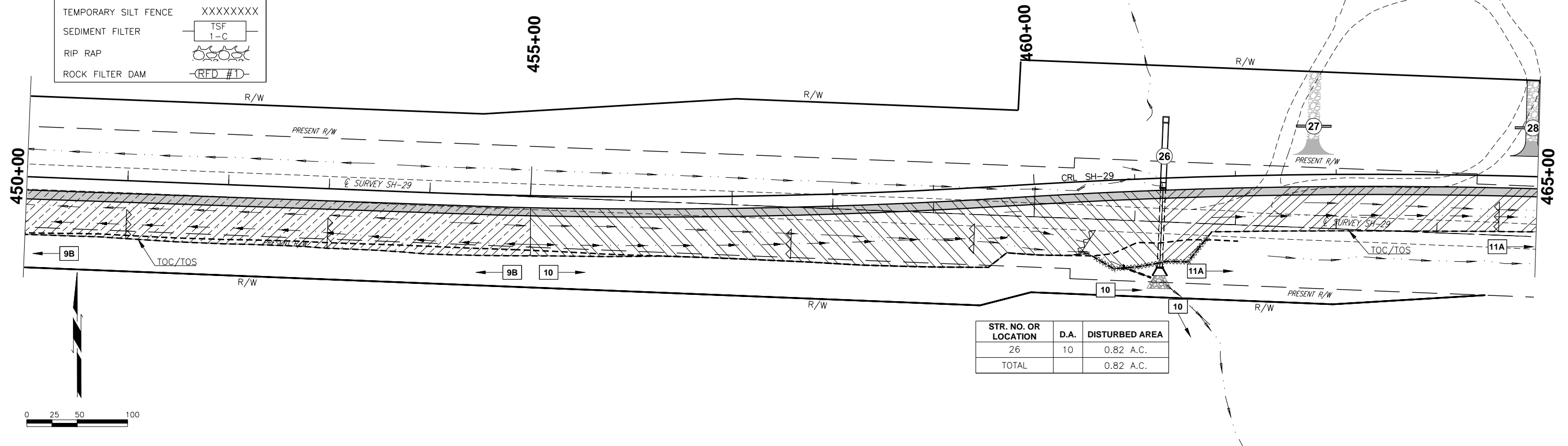
- TEMPORARY SILT DIKE 
- TEMPORARY SILT FENCE 
- SEDIMENT FILTER 
- RIP RAP 
- ROCK FILTER DAM 



DESCRIPTION	REVISIONS	DATE

LEGEND

TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	



SH 29 STEPHENS
**TEMPORARY EROSION CONTROL
PHASE 3
SHEET 5 OF 9**
JOB PIECE NO. 24412(09) SHEET NO. R043

DESCRIPTION	REVISIONS	DATE

LEGEND

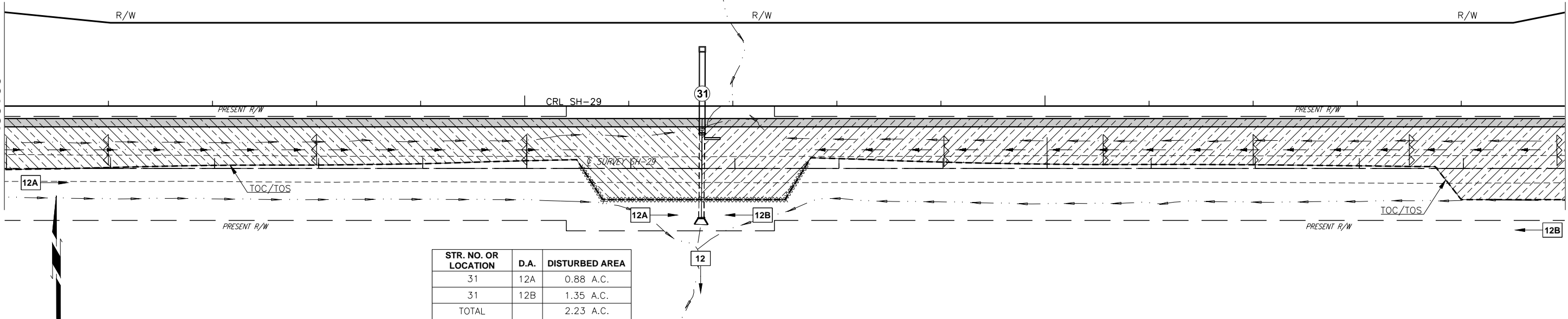
TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	

480+00

485+00

490+00

495+00



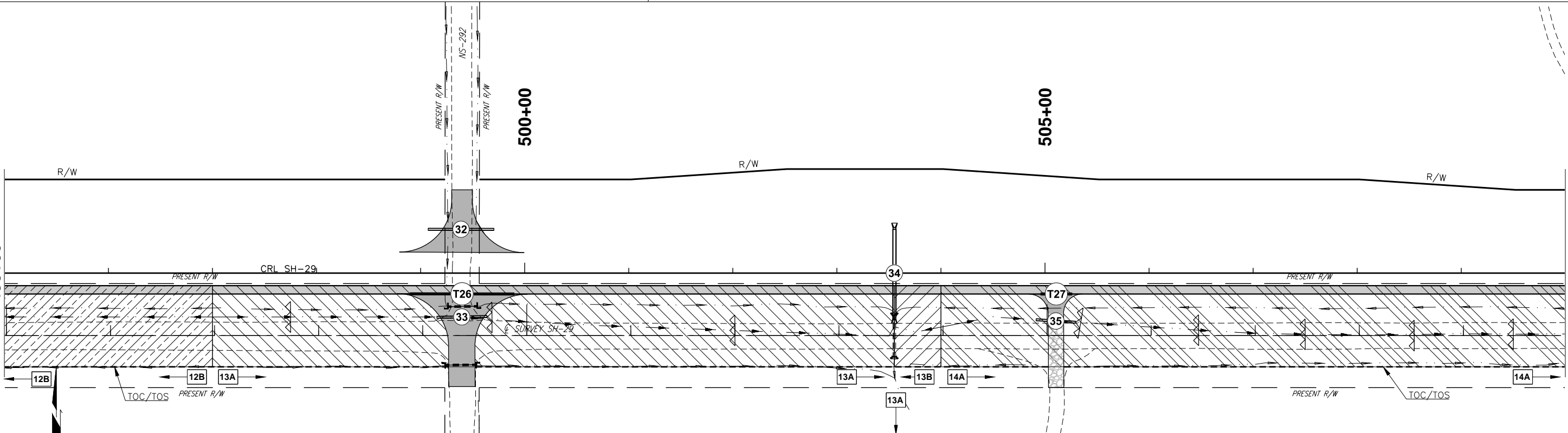
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
31	12A	0.88 A.C.
31	12B	1.35 A.C.
TOTAL		2.23 A.C.

495+00

500+00

505+00

510+00



STR. NO. OR LOCATION	D.A.	DISTURBED AREA
34	13A	1.73 A.C.
34	13B	0.08 A.C.
TOTAL		1.81 A.C.

SH 29 STEPHENS

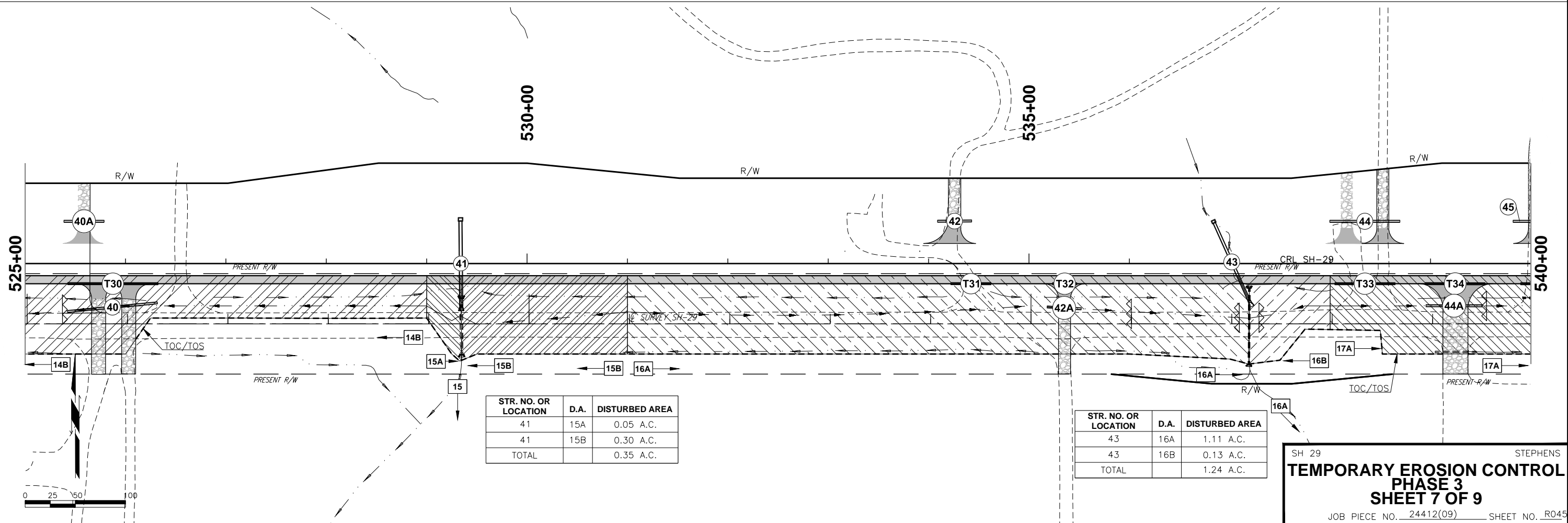
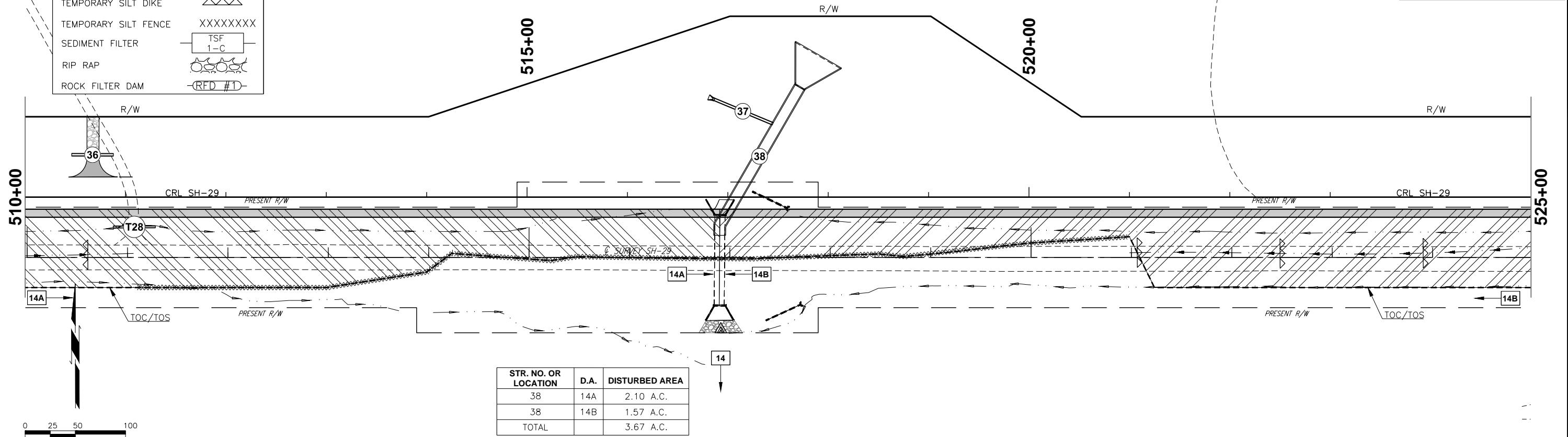
TEMPORARY EROSION CONTROL
PHASE 3
SHEET 6 OF 9

JOB PIECE NO. 24412(09) SHEET NO. R044

DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
TEMPORARY SILT FENCE
SEDIMENT FILTER
RIP RAP
ROCK FILTER DAM
- XXXXXXX
TSF
1-C
RFD #1



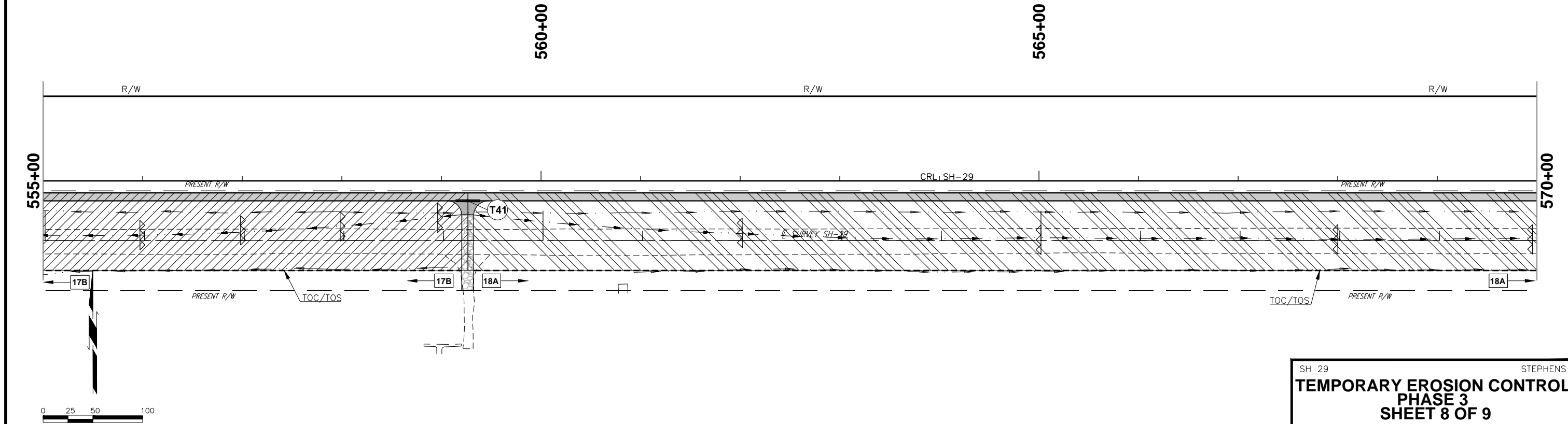
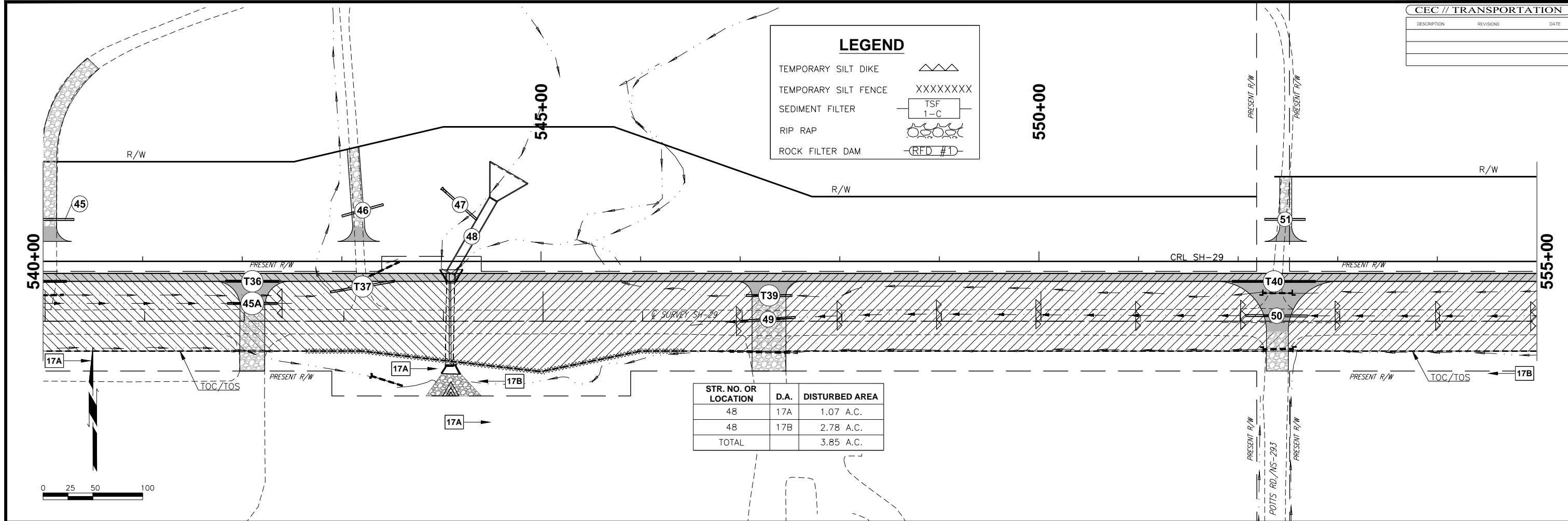
SH 29 STEPHENS
**TEMPORARY EROSION CONTROL
PHASE 3
SHEET 7 OF 9**
JOB PIECE NO. 24412(09) SHEET NO. R045

DESCRIPTION	REVISIONS	DATE

LEGEND

TEMPORARY SILT DIKE	
TEMPORARY SILT FENCE	XXXXXXXXXX
SEDIMENT FILTER	
RIP RAP	
ROCK FILTER DAM	

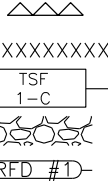
STR. NO. OR LOCATION	D.A.	DISTURBED AREA
48	17A	1.07 A.C.
48	17B	2.78 A.C.
TOTAL		3.85 A.C.



DESCRIPTION	REVISIONS	DATE

LEGEND

- TEMPORARY SILT DIKE
- TEMPORARY SILT FENCE
- SEDIMENT FILTER
- RIP RAP
- ROCK FILTER DAM



570+00

575+00

580+00

585+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
52	18A	2.57 A.C.
52	18B	1.01 A.C.
TOTAL		3.58 A.C.

0 25 50 100

585+00

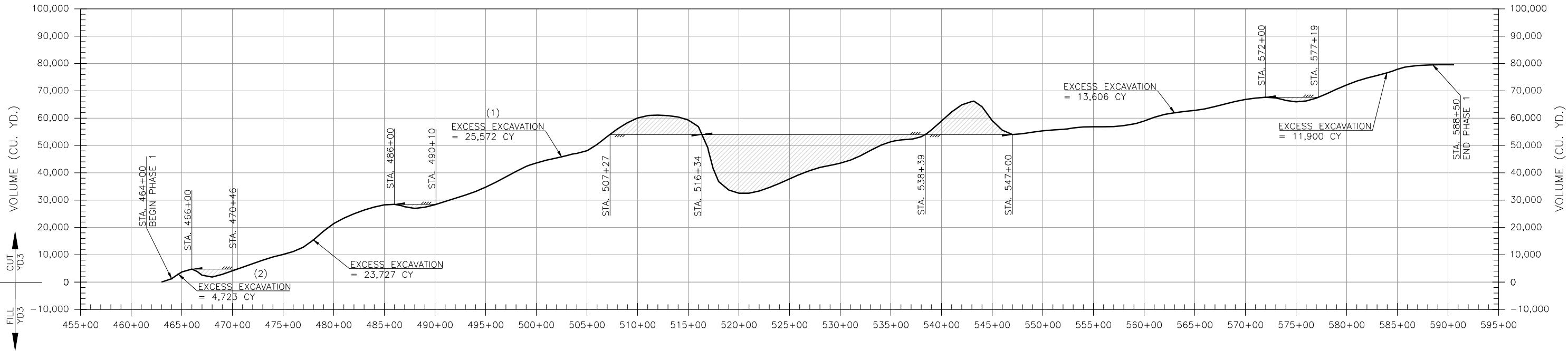
590+00

595+00

STR. NO. OR LOCATION	D.A.	DISTURBED AREA
OFF PROJECT	19	0.90 A.C.

0 25 50 100

DESCRIPTION	REVISIONS	DATE



SH-29 - PHASE 1

SUMMARY OF EARTHWORK						
PHASE 1						
STATION TO STATION			UNCLASSIFIED EXCAVATION	EMBANKMENT +15%	UNCLASSIFIED BORROW	EXCESS EXCAVATION
			202(A) C.Y.	C.Y.	202(D) C.Y.	C.Y.
464+00	TO	466+00	4,898	175	0	4,723 (2)
466+00	TO	470+46	3,299	3,299	0	1,685
470+46	TO	486+00	23,878	151	0	23,727
486+00	TO	490+10	1,674	1,674	0	0
490+10	TO	507+27	25,611	39	0	25,572 (1)
507+27	TO	516+34	7,902	7,902	0	21,886
516+34	TO	538+39	22,228	22,228	0	0
538+39	TO	547+00	13,489	13,489	0	0
547+00	TO	572+00	13,777	171	0	13,606
572+00	TO	577+19	2,502	2,502	0	0
577+19	TO	588+50	11,900	0	0	11,900
Str. No. 38 Channel						
10+37.58	TO	12+60.00	8,112	11,798	3,686 (1)	0
TOTALS			139,270	63,428	0	72,804

- (1) UNCLASSIFIED BORROW FROM STR. NO. 38 CHANNEL TO BE REDUCED TO 0 C.Y. WITH EXCESS EXCAVATION FROM SH-29 PHASE 1 FROM STA. 490+10 TO STA. 507+08.
- (2) UNCLASSIFIED BORROW FROM DETOUR 2 TO BE REDUCED TO 0 C.Y. (SHEET R049) WITH EXCESS EXCAVATION FROM SH-29 PHASE 1 FROM STA. 484+00 TO STA. 466+00 (SHEET R048).

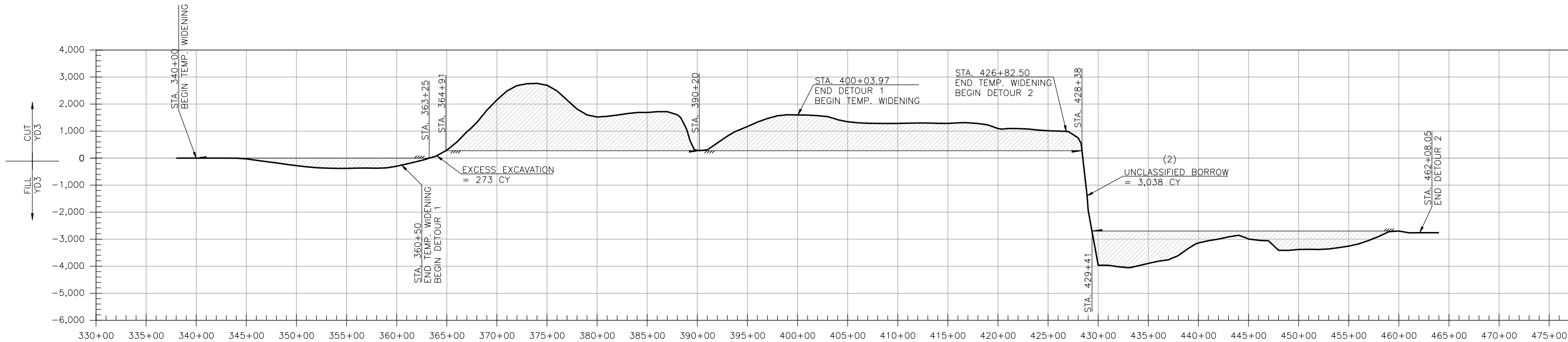
MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

SH 29 STEPHENS COUNTY

MASS HAUL DIAGRAM
SHEET 1 OF 5

JOB PIECE NO. 24412(09) SHEET NO. R048

DESCRIPTION	REVISIONS	DATE



TEMP. WIDENING, DETOUR 1 AND DETOUR 2

SUMMARY OF EARTHWORK						
TEMP. WIDENING / DETOUR 1 / DETOUR 2						
STATION TO STATION		UNCLASSIFIED EXCAVATION		EMBANKMENT +15%	UNCLASSIFIED BORROW	EXCESS EXCAVATION
		202(A)		202(D)		
		C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
340+00	TO 363+25	777	777	0	0	0
363+25	TO 364+91	317	44	0	0	273
364+91	TO 390+20	3,836	3,836	0	0	0
390+20	TO 428+38	2,102	2,102	0	0	0
428+38	TO 429+41	41	3,079	3,038 (2)	0	0
429+41	TO 462+08.05	3,267	3,267	0	0	0
TOTALS		10,349	13,105	0	0	273

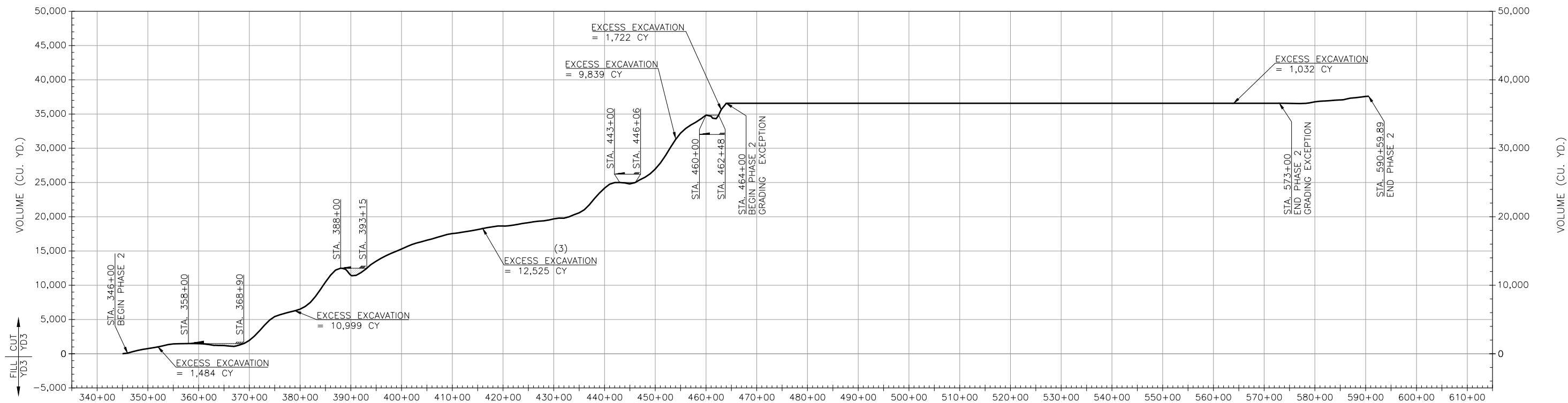
(2) UNCLASSIFIED BORROW FROM DETOUR 2 TO BE REDUCED TO 0 C.Y. (SHEET R049) WITH EXCESS EXCAVATION FROM PHASE 1 FROM STA. 464+00 TO STA. 466+00 (SHEET R046).

- Temporary Widening from Sta. 343+00 to Sta. 360+50
- Detour 1 from Sta. 360+50.00 to Sta. 400+02.01
- Temporary Widening from Sta. 400+02.01 to Sta. 426+82.50
- Detour 2 from Sta. 426+82.50 to Sta. 462+03.15

MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

MASS HAUL DIAGRAM
SHEET 2 OF 5

DESCRIPTION	REVISIONS	DATE



SH-29- PHASE 2

SUMMARY OF EARTHWORK					
PHASE 2					
STATION TO STATION		UNCLASSIFIED EXCAVATION		UNCLASSIFIED BORROW	EXCESS EXCAVATION
		202(A)	202(B)	202(C)	202(D)
		C.Y.	C.Y.	C.Y.	C.Y.
346+00	TO 358+00	1,674	190	0	1,484
358+00	TO 368+90	889	889	0	0
368+90	TO 388+00	11,282	283	0	10,999
388+00	TO 393+15	1,289	1,289	0	0
393+15	TO 443+00	13,392	867	0	12,525 (3)
443+00	TO 446+06	349	349	0	0
446+06	TO 460+00	10,099	260	0	9,839
460+00	TO 462+48	1,121	1,121	0	0
462+48	TO 464+00	1,722	0	0	1,722
464+00	TO 590+59.89	1,231	169	0	1,032
TOTALS		43,818	5,417	0	33,312

(3) UNCLASSIFIED BORROW FROM DETOUR 3 TO BE REDUCED TO 0 C.Y. (SHEET R051) WITH EXCESS EXCAVATION FROM SH-29 PHASE 2 FROM STA. 393+15 TO STA. 443+00 (SHEET R050).

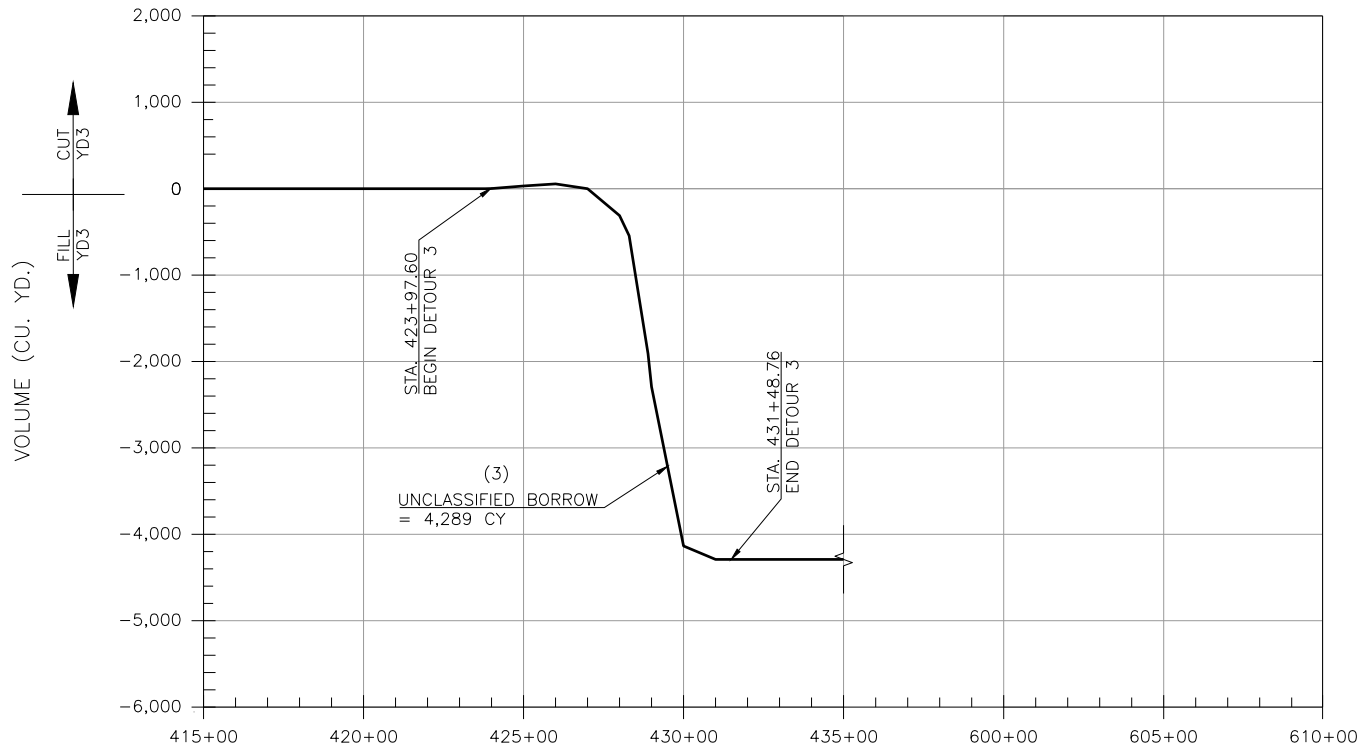
MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

SH 29 STEPHENS COUNTY

MASS HAUL DIAGRAM
SHEET 3 OF 5

JOB PIECE NO. 24412(09) SHEET NO. R050

DESCRIPTION	REVISIONS	DATE



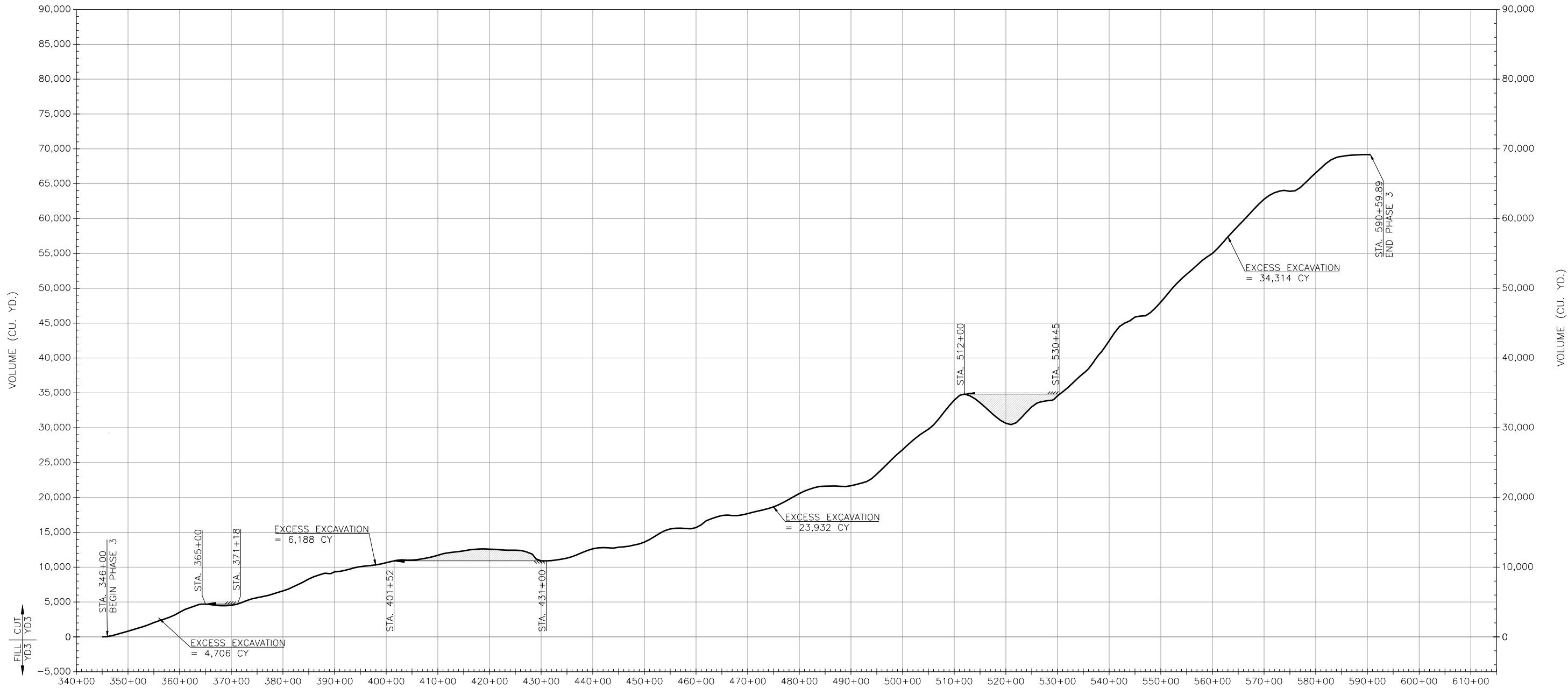
DETOUR 3 & TEMP. WIDENING

SUMMARY OF EARTHWORK				
DETOUR 3				
STATION TO STATION	UNCLASSIFIED EXCAVATION	EMBANKMENT +15%	UNCLASSIFIED BORROW	EXCESS EXCAVATION
	202(A) C.Y.	C.Y.	202(D) C.Y.	C.Y.
Detour 3				
423+97.60 TO 431+48.76	492	4,781	4,289 (3)	0
TOTALS	492	4,781	0	0

(3) UNCLASSIFIED BORROW FROM DETOUR 3 TO BE REDUCED TO 0 C.Y. (SHEET R051) WITH EXCESS EXCAVATION FROM SH-29 PHASE 2 FROM STA. 393+15 TO STA. 443+00 (SHEET R050).

MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

DESCRIPTION	REVISIONS	DATE



SH-29- PHASE 3

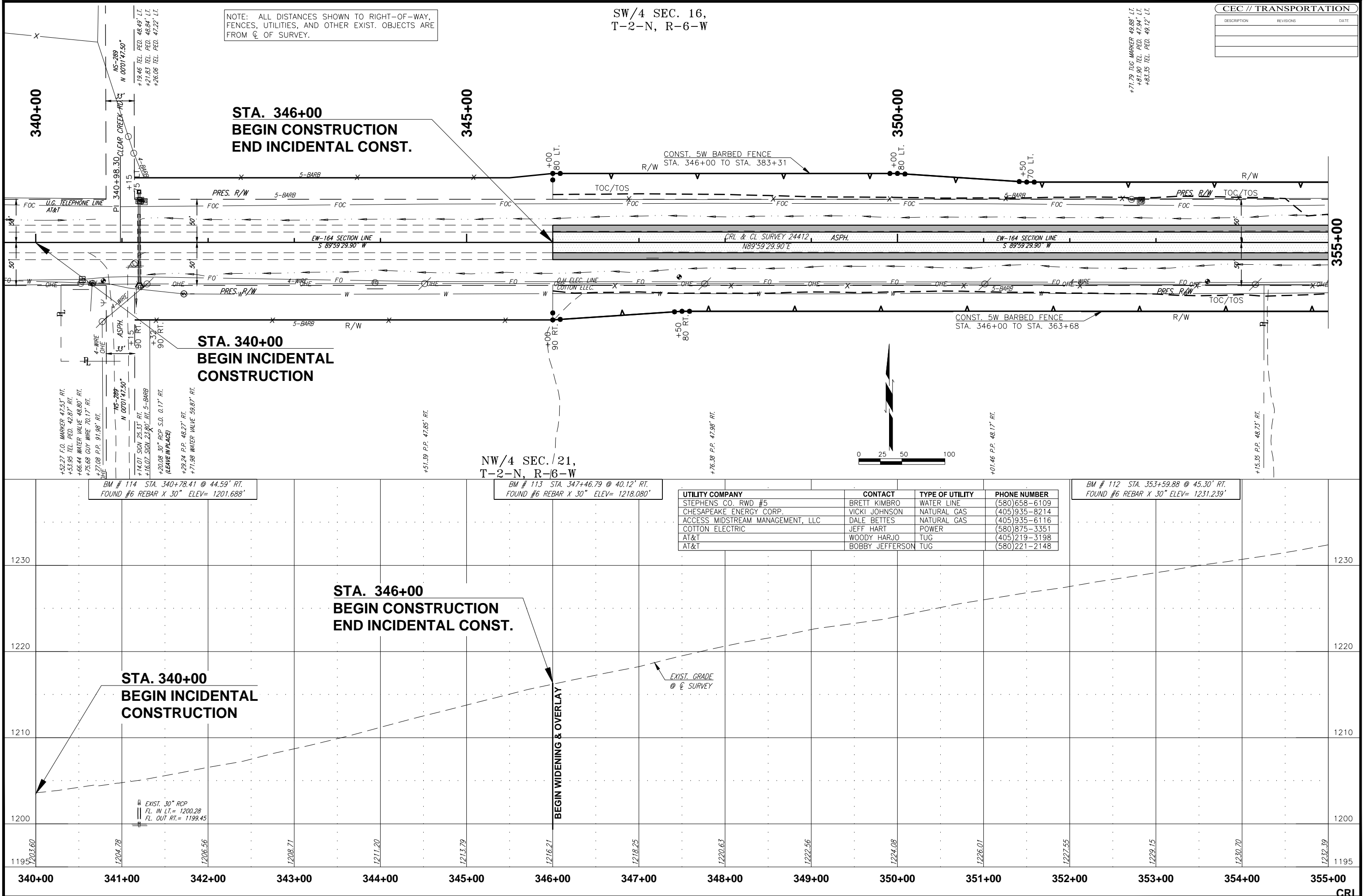
SUMMARY OF EARTHWORK						
PHASE 3						
STATION TO STATION			UNCLASSIFIED EXCAVATION	EMBANKMENT +15%	UNCLASSIFIED BORROW	EXCESS EXCAVATION
			202(A) C.Y.	C.Y.	202(D) C.Y.	C.Y.
346+00	TO	365+00	4,788	82	0	4,706
365+00	TO	371+18	570	570	0	0
371+18	TO	401+52	6,812	624	0	6,188
401+52	TO	431+00	2,382	2,382	0	0
431+00	TO	512+00	26,649	2,717	0	23,932
512+00	TO	530+45	4,796	4,796	0	0
530+45	TO	590+59.89	37,112	2,798	0	34,314
TOTALS			83,109	13,969	0	69,140

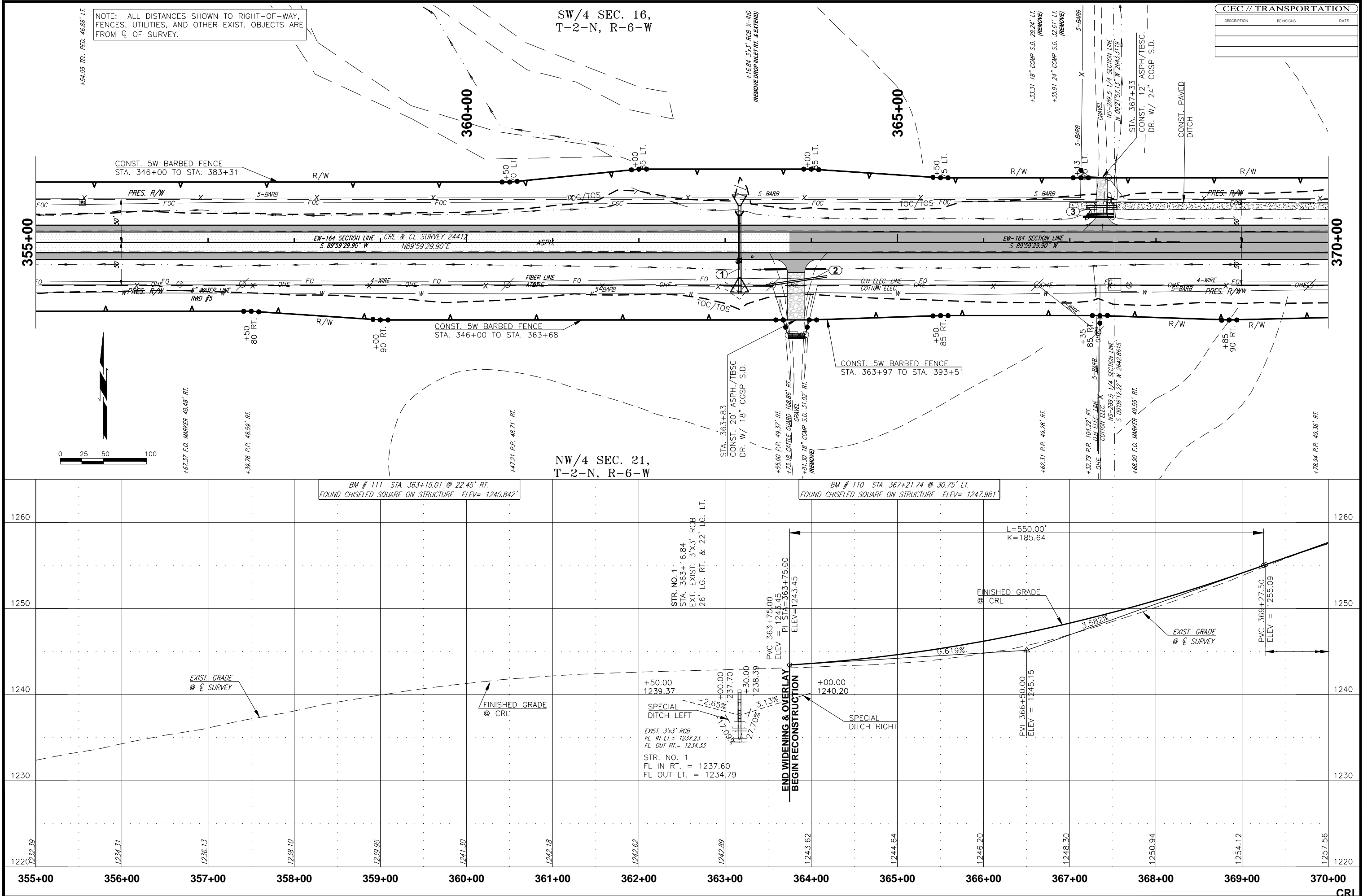
MASS DIAGRAM PROVIDED FOR BIDDING PURPOSES ONLY. ACTUAL BALANCE POINTS TO BE DETERMINED BY CONTRACTOR AND VOLUME OF MATERIAL ENCOUNTERED DURING GRADING OPERATIONS. WHENEVER POSSIBLE, THE CONTRACTOR SHALL SEQUENCE EARTHWORK OPERATIONS IN ORDER TO OBTAIN THE MATERIAL FROM THE CUT SECTION FOR USE AS FILL RATHER THAN OBTAINING UNCLASSIFIED BORROW. MATERIAL DEPICTED AS WASTE SHALL ONLY BE CONSIDERED WASTE ONCE ALL EARTHWORK OPERATIONS HAVE BEEN COMPLETED. THIS MATERIAL SHALL BE USED TO REDUCE THE NEED FOR UNCLASSIFIED BORROW AT ANY LOCATION AND TIME THROUGH THE DURATION OF THE PROJECT.

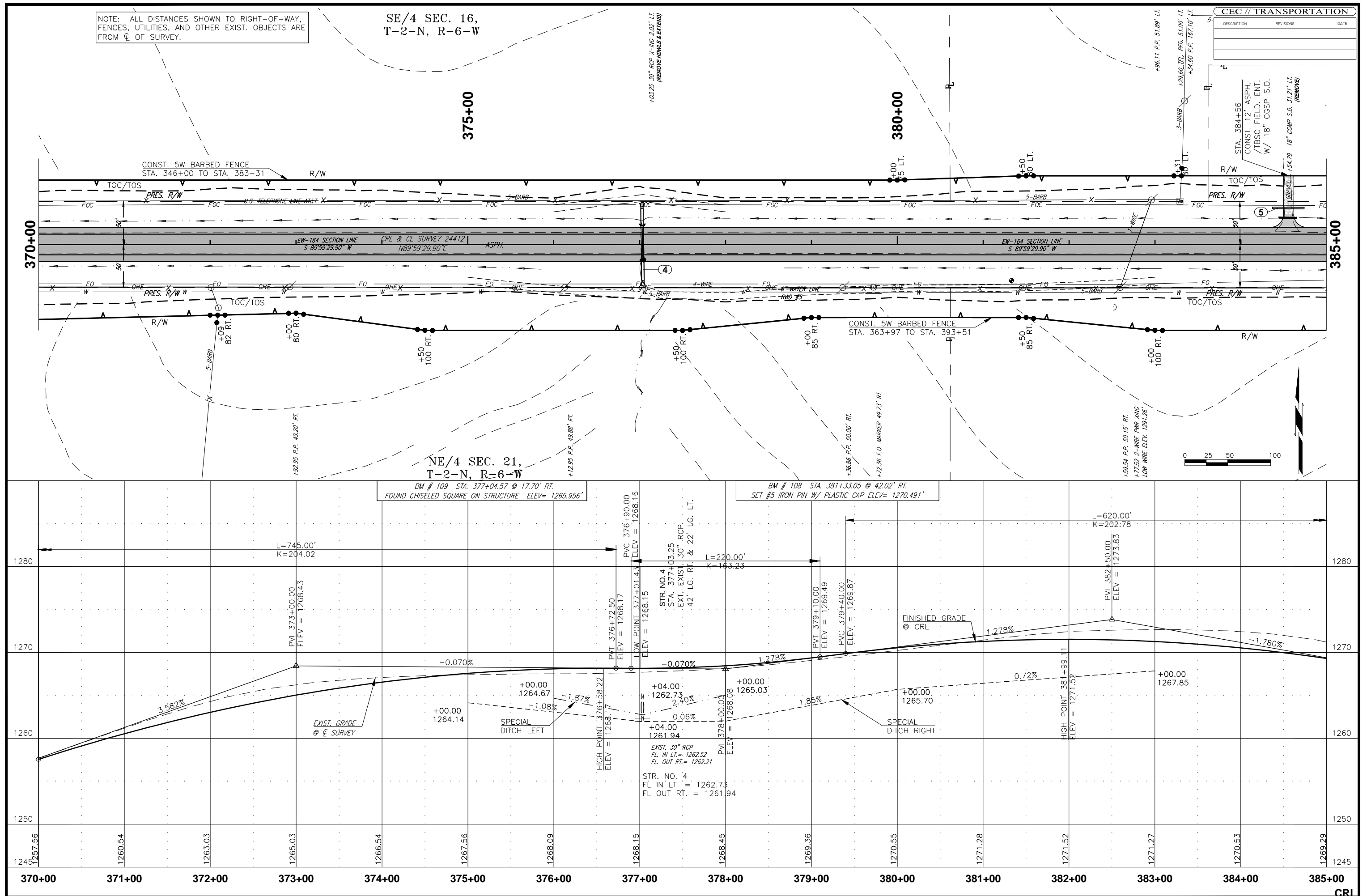
SH 29 STEPHENS COUNTY

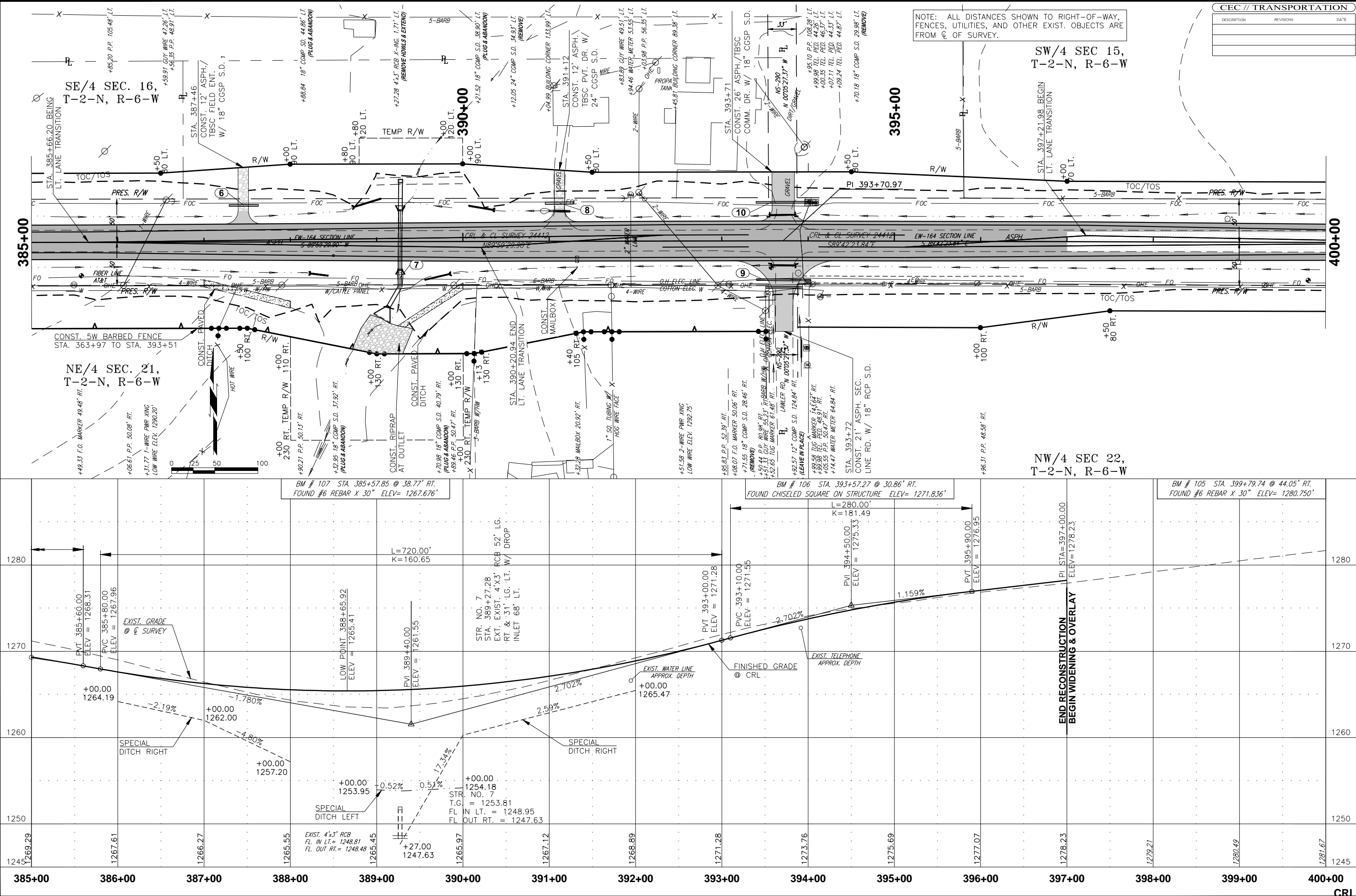
MASS HAUL DIAGRAM
SHEET 5 OF 5

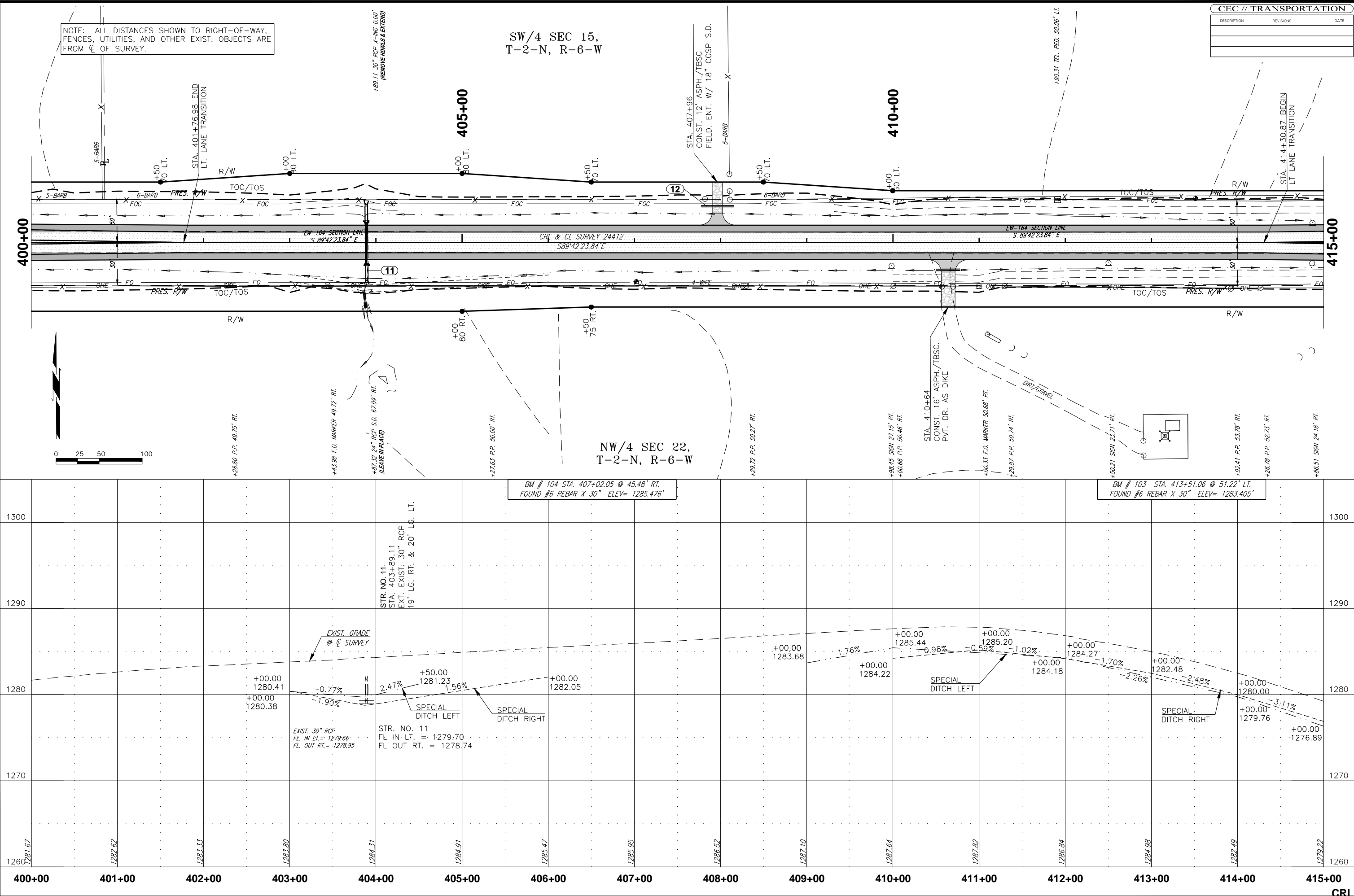
JOB PIECE NO. 24412(09) SHEET NO. R052

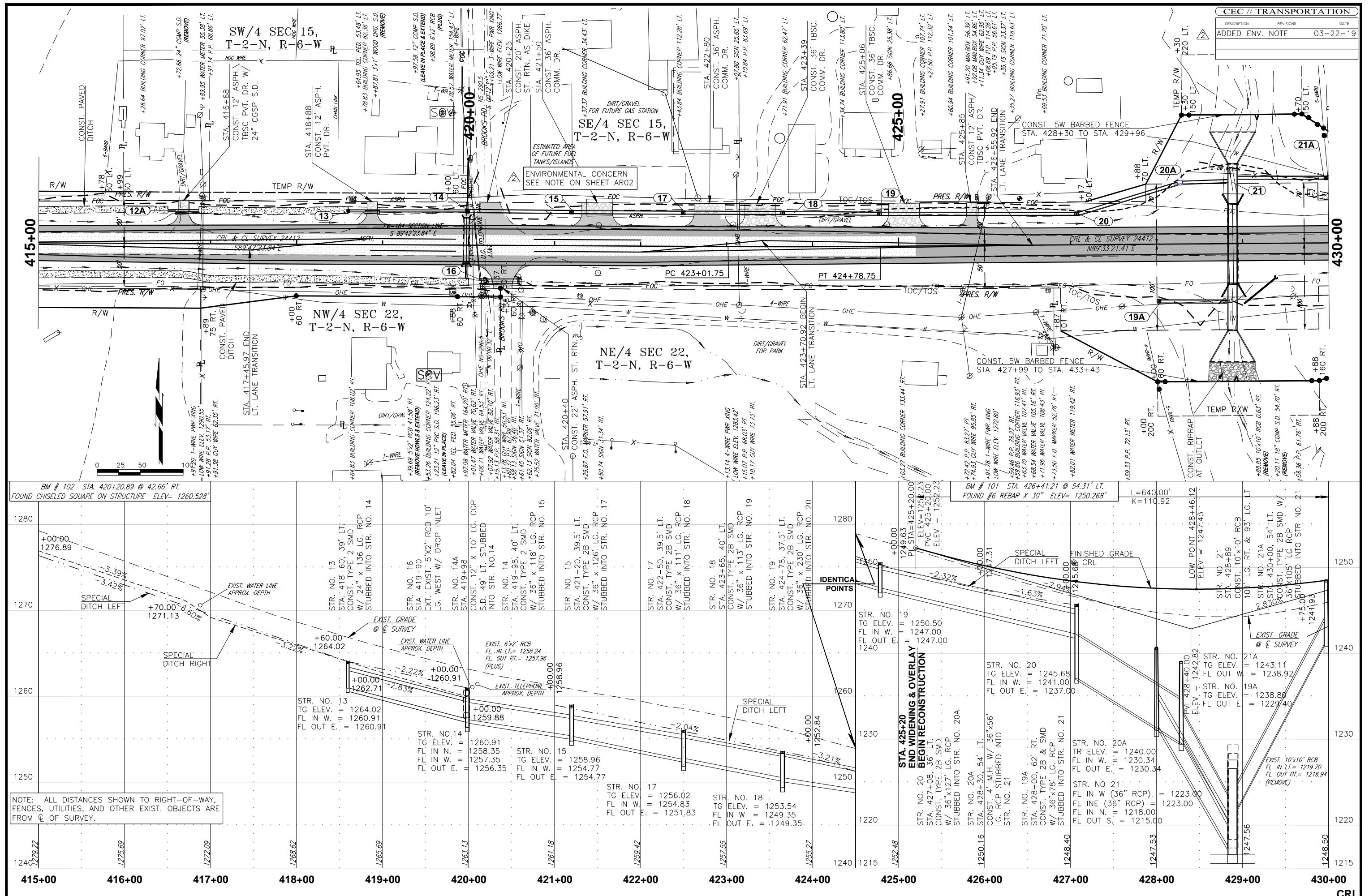


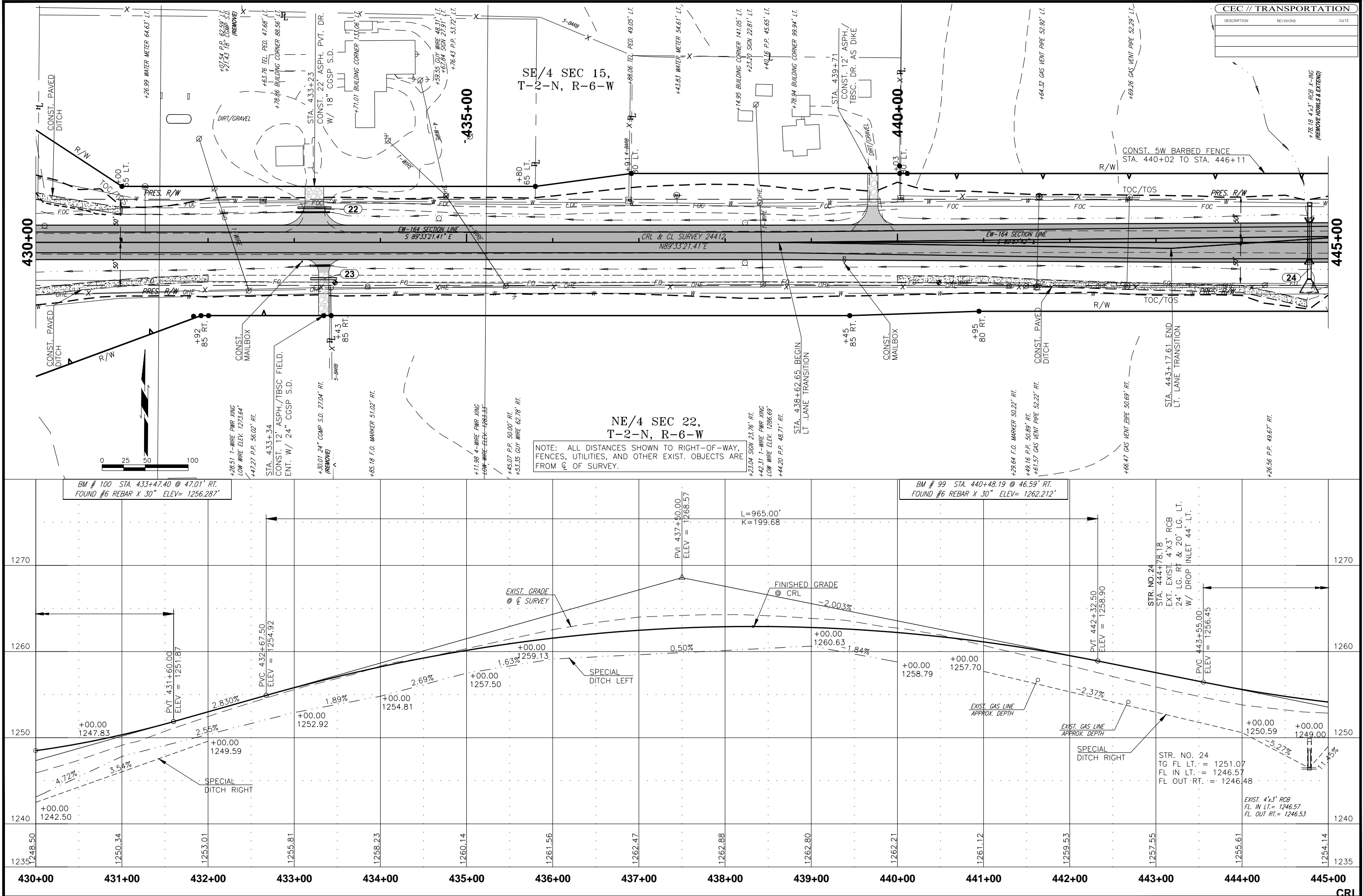


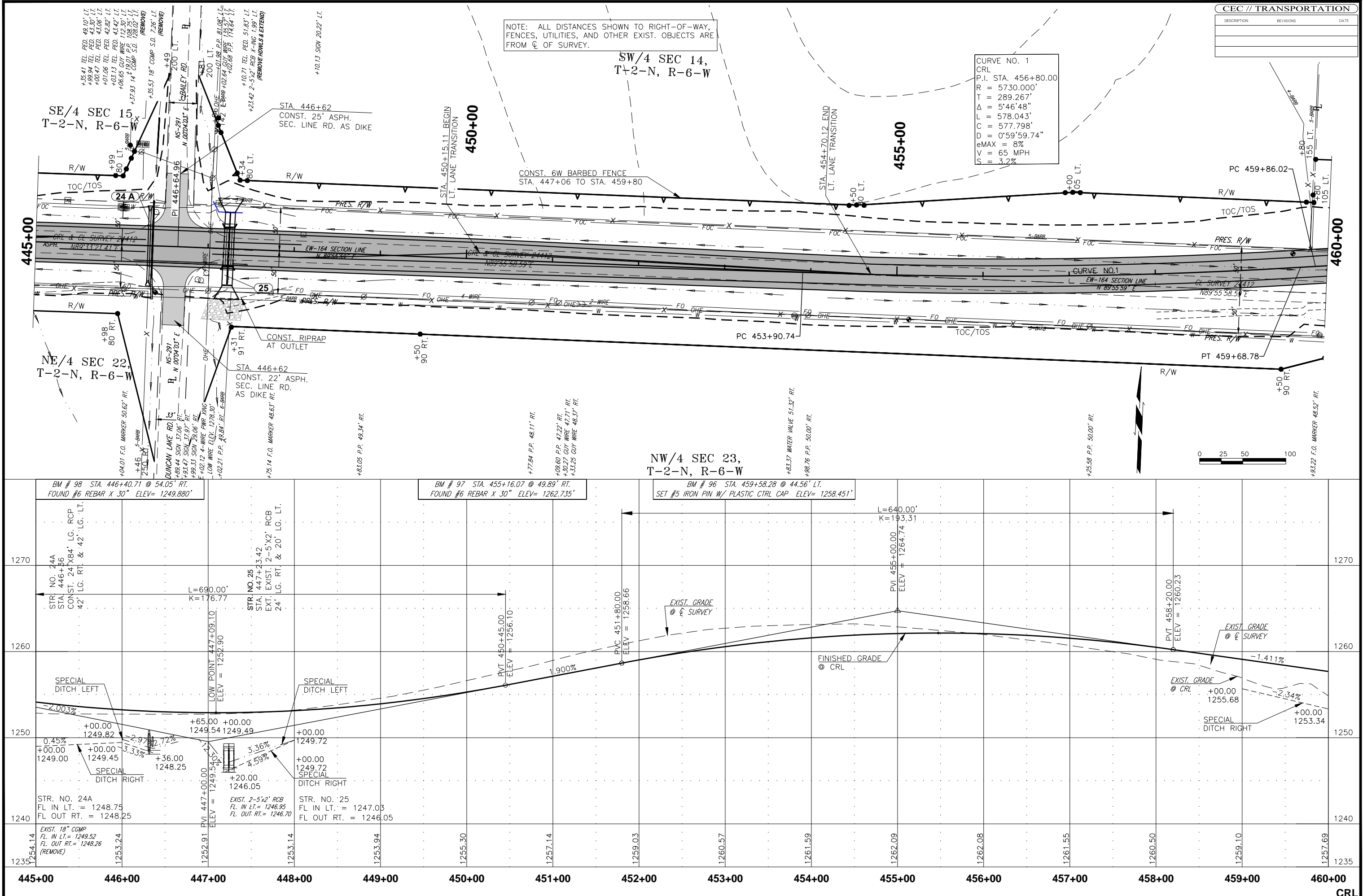




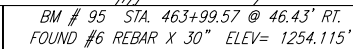
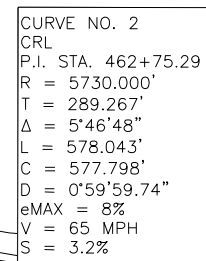






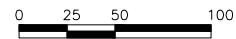


SE/4 SEC 14,
T-2-N, R-6-W

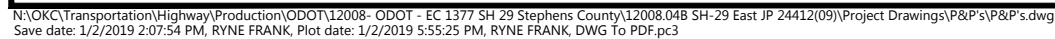


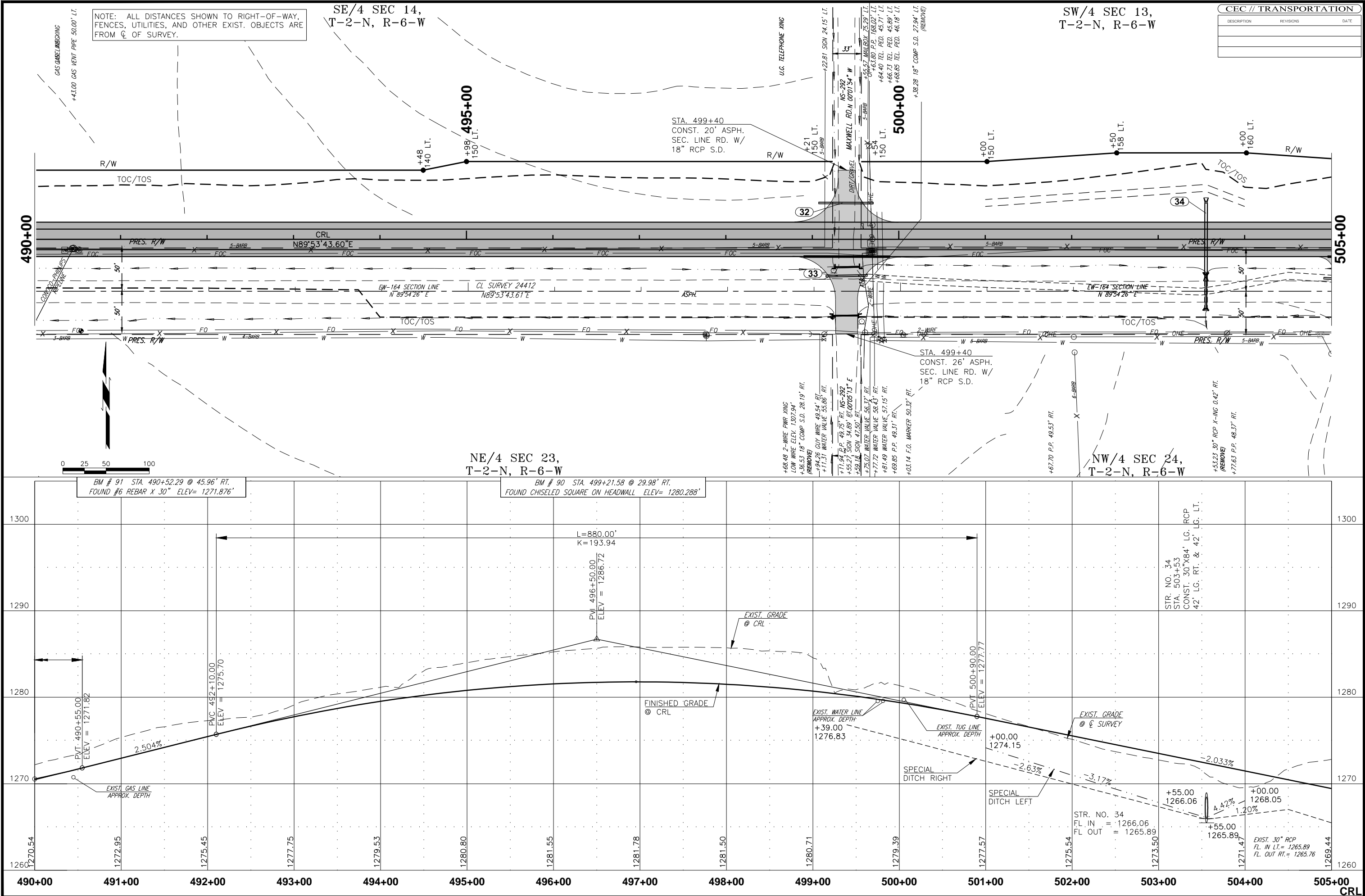
BM # 94 STA. 472+97.91 @ 49.61' RT.
FND TOP OF CONCRETE ROW MARKER ELEV= 1268.613'

SE/4 SEC 14,
T-2-N, R-6-W

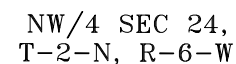


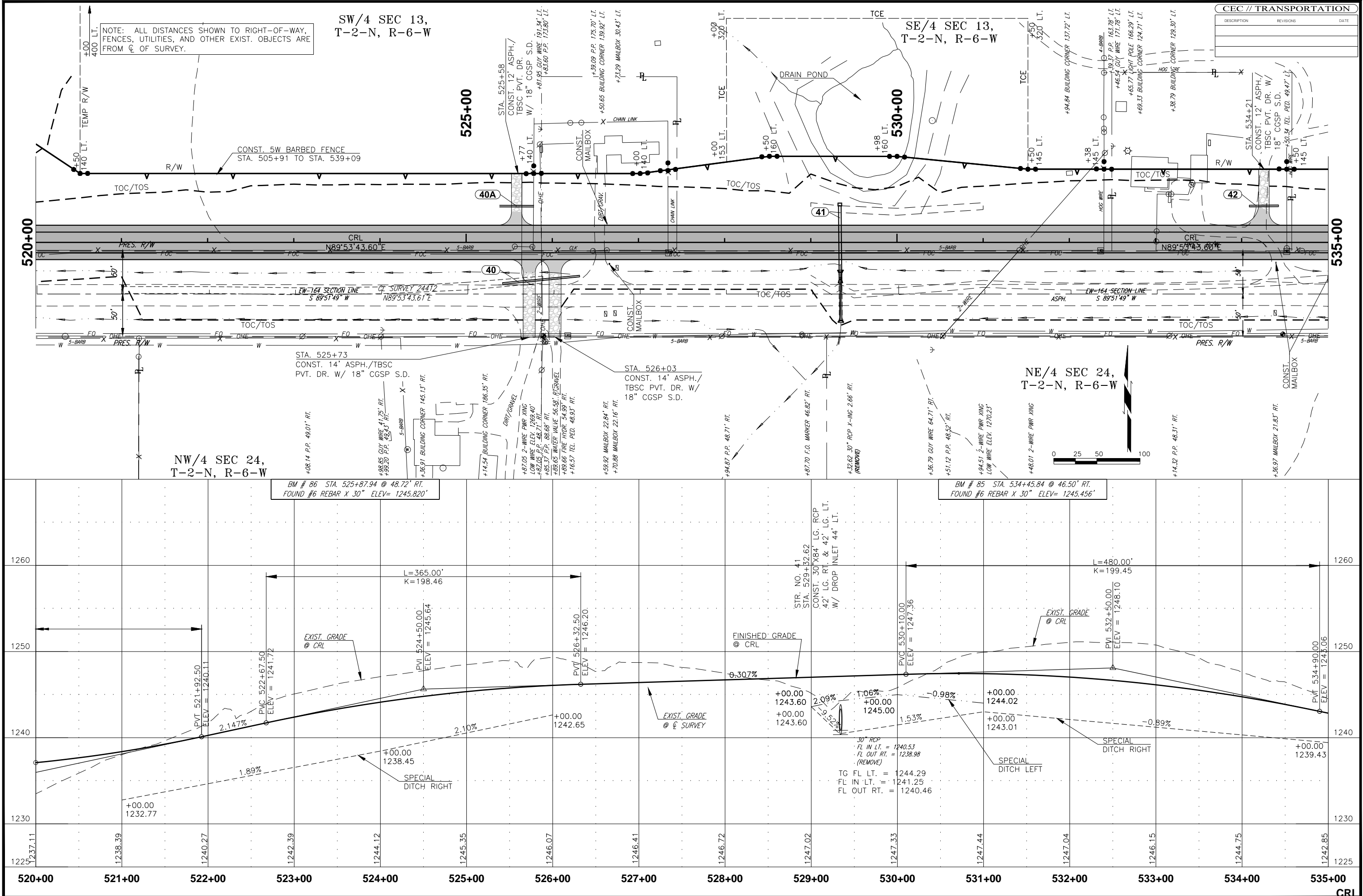
NE/4 SEC 23,
T-2-N, R-6-W



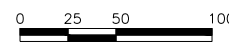


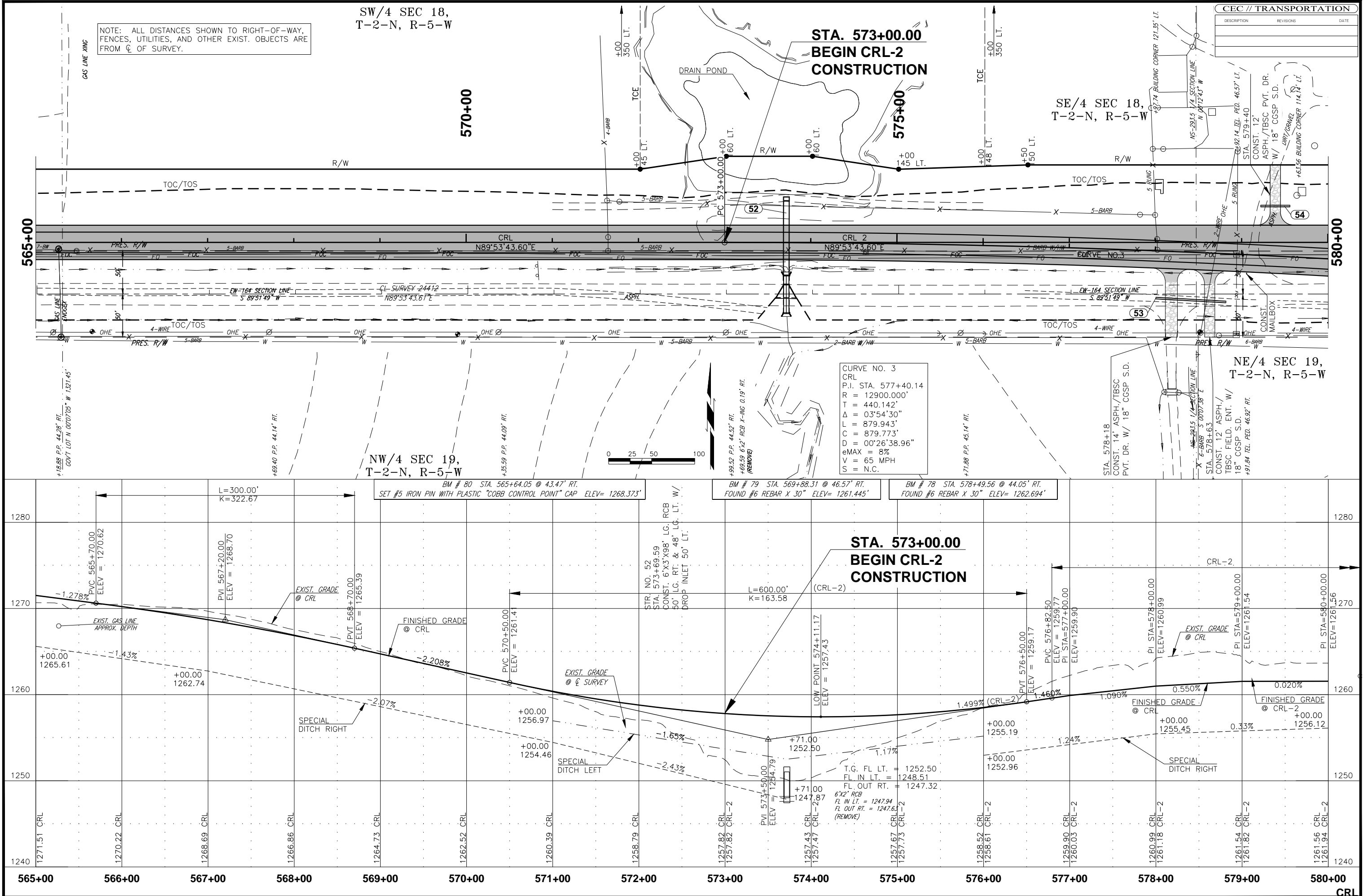
SW/4 SEC 13,
T-2-N, R-6-W





SE/4 SEC 13,
T-2-N, R-6-W





CEC // TRANSPORTATION		
DESCRIPTION	REVISIONS	DATE

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SURVEY OF
STATE HIGHWAY 29
S.H. 29, FROM 7.48 MILES EAST OF U.S. 81
AT MARLOW, EAST 4.0 MILES

SWO 4762(1)
STATE JOB NO. 24412(09),
STEPHENS COUNTY

R-06-W
R-05-W

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION
SWO 4703(1) J/P 24412(04) ; S.H. 29 CO. Stephens

HORIZONTAL CONTROL:
() Oklahoma Coordinate System of 1927 Zone.
(x) Oklahoma Coordinate System of 1983 (93) South Zone.
() Oklahoma Dept. of Transportation Plane Coordinate System of 1927 Zone.
() Oklahoma Dept. of Transportation Plane Coordinate System of 1983 Zone.
() Arbitrary Coordinate System

HORIZONTAL PLANE DATUM DEFINITION:
Oklahoma Department of Transportation coordinates were derived by multiplying the Oklahoma Coordinate Systems of 1927 or 1983 by the combined adjustment factor of 1.00010. The ODOT Coordinate System is 2350 feet above sea level.

1. SWO 4703(1) adjusted to COR's Sta. "OKAO", "OKAD", and "OKDN" (B) Order
Stations
A) Closure before adjustment X ; Y ; Angles
Trav. Length ; No. Angles ; 1;
B) ; is () Order before adjustment.
C) Method of Distance Measurement: () Triangulation () Chained
() Electronic (x) GPS () Triangulation () Chained
D) Instrument used for angles Leica SR530 Dual Freq. GPS Receiver
2. adjusted to (B) Order
Stations
A) Closure before adjustment X ; Y ; Angles
B) ; is () Order, Tied to
C) Method of Distance Measurement: () Electronic () GPS () Triangulation () Chained
D) Instrument used for angles

VERTICAL CONTROL IS (3rd) der. Level Line taken from NGS BM M211
(2nd) order and tied to NGS BM Q211 (3rd) order. () NGVD 29 datum
(x) NAVD 88 datum

ACCURACY DEFINITION:
(1) HORIZONTAL: (3rd Order = Class I = 1 : 10,000')
(3rd Order = Class II = 1 : 5,000')
(2) VERTICAL: (1st Order = 0.017 FL x sqrt. of Mi.) (2nd Order = 0.035 FL x sqrt. of Mi.)
(3rd Order = 0.050 FL x sqrt. of Mi.)

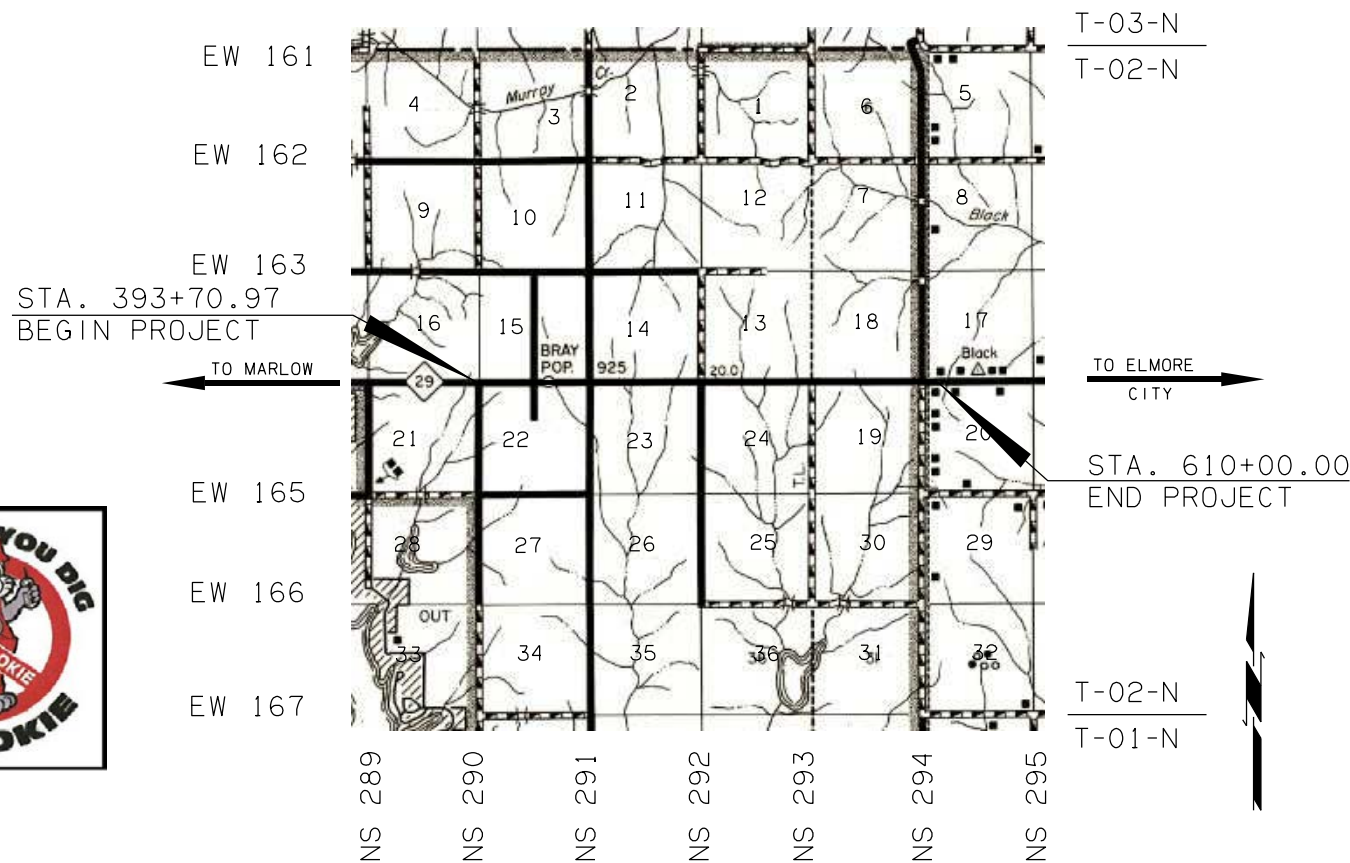
Distribution:
Copy w/survey reports
Copy in each Alignment
and level book

Danny R. Dees
Professional Land Surveyor
October 6, 2011
Date
(FORM SD #20)
Rev. 11/03

UTILITY OWNERS CONTACT INFORMATION

OWNER	ADDRESS	PHONE
STEPHENS COUNTY RURAL WATER DISTRICT #5	P.O. BOX 52 MARLOW, OK 73055	(580) 658-6109
ONEOK NGL PIPELINE L.P.	P.O. BOX 29 MEDFORD, OK 73759	(405) 850-6277
PLAINS ALL AMERICAN PIPELINE L.P.	333 CLAY STREET SUITE 1600 HOUSTON, TX. 77002	(432) 413-8093
PHILLIPS 66 PIPELINE, LLC	P.O. BOX 4428 HOUSTON, TX 77210	(405) 670-0804
ENOGEX	515 CENTRAL PARK DR. #110 OKC, OK 73105	(405) 530-7419
ATLAS PIPELINE	P.O. BOX 610 VELMA, OK 73491	(580) 444-3118
COTTON ELECTRIC CO-OP	226 N. BROADWAY ST. WALTERS, OK. 73572	(580) 875-3351
AT&T	7001 N.W. 23RD ST. 3RD FLOOR BETHANY, OK. 73008	(405) 291-3198

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS
FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE
OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL
ENGINEERS AND LAND SURVEYORS, MAY 11, 2007.



PROJECT LENGTH: 21,629' 4.10 MILES

EQUATIONS: BOP STA. 393+70.97
EOP STA. 610+00.00

EXCEPTIONS: NONE

Electronic File Transfer Disclaimer:

These Files, Drawings and/or Notes are provided for information only. Cobb Engineering Company and the Owner cannot be held responsible for the content or accuracy of these Files, Drawings and/or Notes due to conversions, software translations, or any other manipulation of said Files, Drawings and/or Notes. Cobb Engineering Company expressly disclaims any responsibility arising from any use of these Files, Drawings and/or Notes. To the full extent permitted by applicable law, the recipient of these Files, Drawings and/or Notes hereby agrees to defend, indemnify, and hold harmless Cobb Engineering Company and the Owner from and against any and all claims, suits, actions, damages, loss, liability or costs of every nature or description (including reasonable attorney's fees) arising from, or in any way attributable to or connected with any of these Files, Drawings and/or Notes.

FILE NO.	STATE	PROJ. NO.	FILE NO.	SHEET NO.	SHEETS
REVISIONS					DATE
DESCRIPTION					

SDS 1. TITLE SHEET	INDEX OF SHEETS
SDS 2. HISTORICAL LETTER	SURVEY BEGAN: MAY 16, 2012
SDS 3. HISTORICAL LETTER & ALIGNMENT REPORT	SURVEY COMPLETED: DECEMBER 04, 2012
SDS 4-5. LEVEL WORKSHEETS	
SDS 6. COGO LIST	
SDS 7. CONTROL MAP	
SDS 8-15. SURVEY DATA SHEETS	
SDS 16-20. LAND TIES	
PERSONNEL:	EQUIPMENT:
DARREN SMITH, P.L.S. DIVISION MANAGER 4	TOPCON GR3 GPS
ADAM HINDS, P.L.S. SURVEY MANAGER 1	TOPCON HIPER II GPS
JOE FARMER, P.L.S. TECHNICIAN MANAGER 2	TOPCON IS 3" IMAGING ROBOTIC TOTAL STATION
TANNER WENTWORTH, L.S.I. SURVEY INTERN 1	TOPCON FC-2500 DATA COLLECTORS
BRIAN BIRD, L.S.I. SURVEY INTERN 1	GPT-9005A 5" ROBOTIC TOTAL STATION
COREY SIMMONS, TECHNICIAN 1	TOPCON GPT 3000W TOTAL STATION
SAM MCGEE, TECHNICIAN 1	TOPCON GPT 3005W TOTAL STATION
ERIC MENTZER, TECHNICIAN 3	TOPCON GTS 3000 TOTAL STATION
ERIC OLDHAM, TECHNICIAN 1	TOPCON GTS 313 TOTAL STATION
MATHEW OVERALL, TECHNICIAN 1	TRIMBLE TSC 1 DATA COLLECTORS
REBECCA ROBICHAUX, TECHNICIAN 1	TRIMBLE TSC 2 DATA COLLECTORS
PARKER KUGLER, TECHNICIAN 1	TRIMBLE 5700 GPS
BILL PETREE, TECHNICIAN 1	TRIMBLE 5800 GPS
WILLIAM BILES, SENIOR PARTY CHIEF	SOKKIA SDL 30 DIGITAL LEVEL
	EAGLE POINT AND INROADS WORKING IN AUTOCAD PLATFORMS

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION
SWO 4762(1) JOB NO. 24412(09) ENGINE CONTRACT NO. 1377
LAND SURVEYORS CERTIFICATION

I hereby certify that all land and property sub-division distances, angles, corners and monumentation made or used in connection with this survey and depicted or recorded herein or hereon were recovered, established or re-established in substantial conformity with:

- applicable instructions contained in the U.S. Government Bureau of Land Management publication "Manual of Surveying Instructions";
- its supplement, "Restoration of Lost or Obliterated Corners and Subdivision of Sections";
- "Oklahoma Minimum Standards for the Practice of Land Surveying" as adopted by the State Board of Registration for Professional Engineers and Land Surveyors; and
- sound land surveying practices.

including a thorough search, study, analysis and consideration of all existing records and field evidence.

I further certify that all survey monuments depicted exist and that all land survey work was done by me or under my direct supervision and that it is true, accurate and correct to the best of my knowledge and belief.

Dated this 28th day of January, 2013.



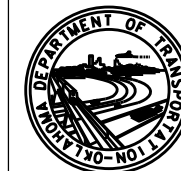
Land Surveyor Darren M. Smith
Signature

Darren M. Smith
Printed Name

Oklahoma Registered Land Surveyor No. 1552

Certificate of Authorization No. 32 Exp. Date June 30, 2014

DATE APPROVED _____
BY _____
CHIEF OF SURVEYS



PREPARED BY:
DARREN M. SMITH, PLS
COBB ENGINEERING COMPANY

PREPARED FOR:
OKLAHOMA DEPARTMENT OF TRANSPORTATION

SURVEY DIVISION JP 24412(09) SHEET NO. S001



OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION (405) 521-2621 FAX (405) 522-0364

01/29/2013

To: Mr. Larry Reser, Chief of Surveys
From: Darren M. Smith, Professional Land Surveyor
Subject: Re: SWO 4762(1), J/P 24412(09) survey of S.H. 29, from 7.48 miles East of U.S. 81 at Marlow, East 4.0 miles, Stephens County, Oklahoma

Historical Letter and Written Report

1. GENERAL

- A. Survey began May 16, 2012
Survey completed December 4, 2012
B. The measurement unit for this project will be the U.S. Survey Foot.

2. SURVEY ASSIGNMENT

The above described survey was assigned to me by Mr. Larry Reser, Chief of Surveys, and completed by my crew at Cobb Engineering.

3. PURPOSE OF THIS SURVEY

The purpose of this survey is to develop plans to reconstruct S.H. 29, on present alignment, east of Marlow. The Survey includes the Alignment, Topographic/Planimetric data, Surface Features/DTM data, Land Ties, Utilities, Drainage, and all other pertinent information needed to aid in the design.

4. SURVEY LIMITS

This Survey began at P.I. Sta. 393+70.97 (NS-290 Section Line) = (P.O.T. Sta. 393+83.00) as established under SWO 789 survey and shown on SAP No. 920-A & B plans and extends east to P.I. Sta. 610+00.00 = (P.O.T. Sta. 610+00.00) as established under SWO 789 survey and shown on SAP No. 920-A & B plans (approximate centerline length = 4.10 miles).

5. ALIGNMENTS

The centerline of survey for this project is along and identical to the centerline of present S.H. 29 as established under SWO 789 survey and shown on SAP No. 920-A & B plans.

6. STATIONING

Stationing for this survey was taken from SWO 789 survey and SAP No. 920-A & B plans.

7. HORIZONTAL CONTROL

A. Horizontal Control for this survey is the NGS Oklahoma State Plane Coordinate System, NAD83 (CORS96), (Oklahoma South Zone 3502). Coordinates were derived from Static GPS observations on COR's Stations "OKAO", "OKAD", "OKDN" and adjusted using Leica Geo Office Program on BM 151, Aerial Target 10, CP 7401, and Aerial Target 66. These points were checked using OPUS, compared to field coordinates utilizing RTK, fit data submitted by Aerial Data Services and were used on this survey.

B. BM's and Targets were checked from the above static positions utilizing RTK and fit data submitted by Aerial Data Services and were used on this survey.

8. VERTICAL CONTROL

A. Level datum for this survey is NGS, NAVD 88, (Computed using Geoid 09). Direct Differential Leveling, Double Loop. Taken from NGS BM M 211 and ran thru extents of survey and tied to NGS BM Q 211. These elevations match the elevations on BM's and Targets shown on Aerial Data Services Survey.

B. A complete line of Check Levels (1 set) is shown for the entire length of this survey utilizing the LEICA DNA 10 Digital Level and then compared with elevations given by Aerial Data Services. The adjusted levels and vertical differences between bench marks are shown in the following file: SWO4762_1_V1.dgn (SDS 4 & 5) and SWO4762_1_V1_Level Worksheet.pdf

C. Accuracy - 3rd order or better before adjustment.

9. TOPOGRAPHY

Topography on this survey was obtained through aerial photogrammetric methods provided by Wilson & Company (1:3000 aerial photography- flight height of 1500') and supplemented with conventional field survey methods utilizing Topcon GNSS RTK receivers, Trimble GPS RTK receivers, and Topcon Total Stations with Topcon FC-2500, Trimble TSC1, and Trimble TSC2 data collectors for field instruments. Bridge details, drainage structures, finish floor elevations, utility/fence locations and obscured dm data were obtain by conventional field survey methods to provide supportive information to Wilson & Company photogrammetric methods. The supportive information pertaining to the surface features are available in the files "SWO 4762_1_V1_SFF.dgn" and "SWO 4762_1_V1_TOPO.dgn".

10. DTM / CROSS SECTIONS

Cross sections on this survey were provided by Wilson & Company utilizing aerial photogrammetric methods (1:3000 aerial photography- flight height of 1500') with obscure areas supplemented by conventional field survey methods and are available in the files "SWO 4762_1_V1_SFF.dgn" and "SWO 4762_1_V1_TRI.dgn".

11. LAND TIES

Land ties for this survey were established for the following:

T-02-N, R-05-W, I.M. - Sections 17, 18, 19, & 20
T-02-N, R-06-W, I.M. - Sections 13, 14, 15, 22, 23, & 24

A search was made for any trace of the original monuments and/or accessories. All field certified corners received from the Oklahoma Department of Libraries were researched and noted. The original survey and survey notes were used from the following surveys.

Fred Watts Jr. 05/04/1899
George Nick 05/04/1899
Sledge Tatum 05/04/1899

A complete detailed account of each corner set or used follows:

NORTHEAST CORNER OF SECTION 16, O.D.O.T. MONUMENT S-69-568, T-02-N, R-06-W I.M. SET 5/8" IRON PIN WITH CA32 CAP AT LOCATION OF MAG NAIL. MONUMENT FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 09-25-95.

EAST QUARTER CORNER OF SECTION 16, O.D.O.T. MONUMENT S-69-569, T-02-N, R-06-W I.M. SET 5/8" IRON PIN WITH CA32 CAP. MONUMENT IS SET USING SINGLE PROPORTION METHOD USING SECTION CORNERS 0.5 MILE NORTH AND 0.5 MILE SOUTH. MONUMENT FALLS IN NORTH & SOUTH FENCE LINE.

NORTHEAST CORNER OF SECTION 21, O.D.O.T. MONUMENT S-69-570, T-02-N, R-06-W I.M. FOUND MAG NAIL. MONUMENT MATCHES DESCRIPTION AND 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JACOB CARROLL, LS 1522, DATED 12-08-03. THE 2 REMAINING REFERENCE POINTS ARE CORNERS OF HEADWALL AND WERE CHIPPED, NEW REFERENCES WERE SET.

EAST QUARTER CORNER OF SECTION 21, O.D.O.T. MONUMENT S-69-571, T-02-N, R-06-W I.M. FOUND MAG NAIL. MONUMENT MATCHES DESCRIPTION AND 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 11-07-11.

REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 02-04-92.

SOUTH QUARTER CORNER OF SECTION 19, O.D.O.T. MONUMENT S-69-601, T-2-N, R-5-W I.M. SET 5/8" IRON PIN WITH CA 32 CAP. MONUMENT WAS SET USING SINGLE PROPORTION METHOD USING SECTION CORNERS 0.5 MILE EAST AND 0.5 MILE WEST.

NORTH QUARTER CORNER OF SECTION 19, O.D.O.T. MONUMENT S-69-602, T-2-N, R-6-W I.M. FOUND MAG NAIL. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JACOB CARROLL, LS 1522, DATED 12-20-02.

CENTER OF SECTION 18, O.D.O.T. MONUMENT S-69-603, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN WITH CARROLL 1522 CAP. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JACOB CARROLL, LS 1522, DATED 12-20-12.

NORTH QUARTER CORNER OF SECTION 18, O.D.O.T. MONUMENT S-69-604, T-02-N, R-05-W I.M. FOUND 1/2" IRON PIN. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JACOB CARROLL, LS 1522, DATED 12-20-02.

NORTHEAST CORNER OF SECTION 18, O.D.O.T. MONUMENT S-69-605, T-02-N, R-06-W I.M. FOUND 3/8" IRON PIN. MONUMENT MATCHES DESCRIPTION ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 12-27-90.

EAST QUARTER CORNER OF SECTION 18, O.D.O.T. MONUMENT S-69-606, T-2-N, R-5-W I.M. FOUND RAILROAD SPIKE. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 10-18-99.

NORTHEAST CORNER OF SECTION 19, O.D.O.T. MONUMENT S-69-607, T-2-N, R-6-W I.M. FOUND CST NAIL. MONUMENT FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY ALBERT MCDONALD, LS 615, DATED 06-07-95.

EAST QUARTER CORNER OF SECTION 19, O.D.O.T. MONUMENT S-69-608, T-2-N, R-5-W I.M. FOUND 60D NAIL. MONUMENT FITS 1 REFERENCE POINT TO THE NORTHEAST AND TO THE NEWER 6" STEEL CORNER POST TO THE WEST AS CALLED OUT ON OCCR FILED BY ALBERT MCDONALD, LS 615, DATED 06-07-95. FENCE TO THE WEST FITS WITHIN 0.5'.

SOUTHEAST CORNER OF SECTION 19, O.D.O.T. MONUMENT S-69-609, T-2-N, R-5-W I.M. FOUND PK NAIL UNDER ASPHALT OVERLAY. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 01-14-02.

SOUTHEAST CORNER OF SECTION 21, O.D.O.T. MONUMENT S-69-572, T-02-N, R-06-W I.M. FOUND 3/8" IRON PIN. MONUMENT MATCHES DESCRIPTION AND 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 01-22-92.

SOUTH QUARTER CORNER OF SECTION 22, O.D.O.T. MONUMENT S-69-575, T-02-N, R-06-W I.M. FOUND 1/2" IRON PIN WITH ILLEGIBLE CAP. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 05-26-00.

NORTH QUARTER CORNER OF SECTION 22, O.D.O.T. MONUMENT S-69-576, T-02-N, R-06-W I.M. FOUND PK NAIL WITH 3 MAG NAILS SURROUNDING. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JACOB CARROLL, RPLS 1522, DATED 12-01-03.

CENTER OF SECTION 15, O.D.O.T. MONUMENT S-69-577, T-02-N, R-06-W I.M. FOUND 1/2" IRON PIN. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 09-10-99.

NORTH QUARTER CORNER OF SECTION 15, O.D.O.T. MONUMENT S-69-578, T-02-N, R-06-W I.M. FOUND 1/2" IRON PIN BENT. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 06-24-99.

NORTHEAST CORNER OF SECTION 15, O.D.O.T. MONUMENT S-69-579, T-02-N, R-06-W I.M. FOUND 1/2" IRON PIN. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 09-10-99.

EAST QUARTER CORNER OF SECTION 15, O.D.O.T. MONUMENT S-69-580, T-02-N, R-06-W I.M. FOUND 1/2" IRON PIN FLUSH WITH ASPHALT. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 06-24-99.

NORTHEAST CORNER OF SECTION 22, O.D.O.T. MONUMENT S-69-581, T-02-N, R-06-W I.M. FOUND MAG NAIL. MONUMENT FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 12-08-96.

EAST QUARTER CORNER OF SECTION 22, O.D.O.T. MONUMENT S-69-582, T-02-N, R-06-W I.M. FOUND 5/8" IRON PIN WITH RED ILLEGIBLE CAP. MONUMENT MATCHES DESCRIPTION AND FITS 1 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 12-08-96.

SOUTH QUARTER CORNER OF SECTION 20, O.D.O.T. MONUMENT S-69-610, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN WITH ILLEGIBLE CAP. MONUMENT FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY ALBERT MCDONALD, LS 615, DATED 05-03-04.

NORTH QUARTER CORNER OF SECTION 20, O.D.O.T. MONUMENT S-69-611, T-2-N, R-5-W I.M. FOUND MAG NAIL. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 03-31-08.

CENTER OF SECTION 17, O.D.O.T. MONUMENT S-69-612, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN FOR WITNESS CORNER OF SECTION 17. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 05-18-12. CALCULATED CENTER OF SECTION POSITION 100' EAST OF FOUND WITNESS CORNER.

NORTH QUARTER CORNER OF SECTION 17, O.D.O.T. MONUMENT S-69-613, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN WITH MLA CAP. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 04-09-08.

NORTHEAST CORNER OF SECTION 17, O.D.O.T. MONUMENT S-69-614, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN WITH MLA 1326 CAP. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 10-18-99.

EAST QUARTER CORNER OF SECTION 17, O.D.O.T. MONUMENT S-69-615, T-2-N, R-5-W I.M. FOUND 1/2" IRON PIN WITH MLA 1326 CAP. MONUMENT MATCHES DESCRIPTION AS CALLED OUT ON OCCR FILED BY BUDDY HOKIT, LS 1326, DATED 10-18-99. NO REFERENCES WERE FOUND. MONUMENT FITS WITHIN 0.15' TO SINGLE PROPORTION METHOD USING SECTION CORNERS 0.5 MILE NORTH AND 0.5 MILE SOUTH.

NORTHEAST CORNER OF SECTION 20, O.D.O.T. MONUMENT S-69-616, T-2-N, R-5-W I.M. FOUND PK NAIL. MONUMENT MATCHES DESCRIPTION AND FITS 2 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY JESSE CARROLL, LS 1071, DATED 04-22-93.

EAST QUARTER CORNER OF SECTION 20, O.D.O.T. MONUMENT S-69-617, T-2-N, R-5-W I.M. FOUND ORIGINAL STONE 8"x4" WITH 3/8" IRON PIN ON EAST EDGE. MONUMENT MATCHES DESCRIPTION OF 1899 GLO SURVEY. MONUMENT ALSO MATCHES DESCRIPTION AND FITS 3 OF 3 REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY DAN ROGERS, LS 1200, DATED 05-25-12.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013	HISTORICAL LETTER & WRITTEN REPORT & ALIGNMENT CERT.	
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.			
			SWO NO. <u>4762(1)</u>	J/P NO. <u>24412(09)</u> SHEET NO. <u>S002</u>

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

SOUTHEAST CORNER OF SECTION 20, O.D.O.T. MONUMENT S-69-618, T-2-N, R-5-W
1/4 M. FOUND 1/2" IRON PIN. MONUMENT MATCHES DESCRIPTION AND FITS 3 OF 3
REFERENCE POINTS AS CALLED OUT ON OCCR FILED BY ROBERT RINALDI, LS
1306, DATED 05-04-93.

12. EXISTING RIGHT-OF-WAY

Existing right of way as shown on this survey is based off of SAP No. 920-A & B Plans.

13. UTILITIES

- A. All utility companies servicing this survey project were contacted through "CALL
OKIE"
- B. Multiple attempts were made to locate and acquire atlases from all respective owners of
utility lines in the project area. All underground utilities were located by the owning
company with the exception of Questar Exploration & Production.
- Questar Exploration & Production – Alaina Szlavay (918) 488-1704 mentioned that she
would "work on providing a map of Questar lines in the project area" as per the
consultants request. There were no Questar utility markers in the project area and no
lines marked by the utility locate company suggesting that Questar owns any lines in the
immediate vicinity of the project area. However, no confirmation of line locations in the
form of utility maps or atlases was provided by Questar.
- C. Information regarding type, size, ownerships, location, depth, etc. is placed in computer
file SWO 4762_1_V1_SD-7.pdf

14. ENVIRONMENTAL CONCERNS

No possible hazardous waste sites were encountered.

15. DRAINAGE INFORMATION

Drainage areas were determined from USGS Stream Stats and USGS Quad Maps in the
project area and data taken from the USGS Basin Characteristics Report and placed in
computer file SWO 4762_1_V1_DRA.dgn and SWO 4762_1_V1_USGS Drainage.pdf

16. SURVEY DATA SHEETS

Survey Data Sheets were submitted in the form of a Microstation Design File archived on
the O.D.O.T. Mainframe Computer, as per O.D.O.T. Survey Division Standards. These
will be incorporated into the set of design drawings and will be in substantial conformity
with the O.D.O.T. Survey Division Standards for Survey Data Sheets, as maintained on
O.D.O.T.(s) Intranet.

17. SUBMISSION OF SURVEY DATA

- A. Historical Letter & Written Report.
B. Centeline of Survey Alignment report
C. Form SD-1, Transmittal Letter
D. Form SD-7, Utilities List
E. Form SD-11, Position & Description of Survey Monuments (2)
F. Form SD-20, Survey Control Data
G. Form SD-41, Surveyors Certification
H. Benchmarks & Check Levels list
I. Oklahoma Dept. of Libraries Certified Corner Record Forms (49)
J. Cogo List
K. USGS Calculation
L. Survey Data Sheets

18. EQUIPMENT USED

Topcon GR3 GPS
Topcon Hiper II GPS
Topcon IS 3" Imaging Robotic Total Station
Topcon FC-2500 Data Collectors
GPT-9005A 5" robotic Total Station
Topcon GTP 3000W Total Station
Topcon GPT 3005W Total Station
Topcon GTS 3000 Total Station
Topcon GTS 315 Total Station
Trimble TSC 1 Data Collectors
Trimble TSC 2 Data Collectors
Trimble 5700 GPS
Trimble 5800 GPS
Sokkia SDL 30 Digital Level
Eagle Point and Inroads working in AutoCad environments

19. Personnel

Darren Smith, P.L.S. Division Manager 4
Adam Hinds, P.L.S. Survey Manager 1
Joe Farmer, P.L.S. Technician Manager 2
Tanner Westworth, L.S.I. Survey Intern 1
Brian Bird, L.S.I. Survey Intern 1
Corey Simmons, Technician 1
Sam McGee, Technician 1
Eric Mentzer, Technician 3
Eric Oldham, Technician 1
Mathew Overall, Technician 1
Rebecca Robichaux, Technician 1
Parker Kugler, Technician 1
Bill Petree, Technician 1
William Biles, Senior Party Chief

Project Name: SWO4762_1_V1_Alignment Report
Description: SWO4762(11)
Horizontal Alignment Name: SWO4762_1_V1_Alignment
Description: SWO4762_1_V1_Alignment
Style: Default

	STATION	EASTING	NORTHING
Element: Linear			
PCB (10533)	393+70.97	2020671.7347	474810.1207
PC (10021)	423+01.75	2023602.4719	474795.1141
Tangent Direction:	S 89°42'23.84" E		
Tangent Length:	2930.78		
Element: Circular			
PC (10021)	423+01.75	2023602.4719	474795.1141
PI (10024)	423+90.25	2023690.9708	474794.6609
CC (10023)	2023672.9876	488547.0240	
PT (10022)	424+78.74	2023779.4681	474795.3468
Radius:	13752.09		
Delta:	0°44'14.75" Left		
Degree of Curvature (Arc):	0°24'59.98"		
Length:	177.00		
Tangent:	88.50		
Chord:	177.00		
Middle Ordinate:	0.28		
External:	0.28		
Tangent Direction:	S 89°42'23.84" E		
Radial Direction:	S 0°17'36.16" W		
Chord Direction:	N 89°55'29.78" E		
Radial Direction:	S 0°26'38.59" E		
Tangent Direction:	N 89°33'21.41" E		
Element: Linear			
PT (10022)	424+78.74	2023779.4681	474795.3468
PI (10540)	446+64.96	2025965.6171	474812.2903
Tangent Direction:	N 89°33'21.41" E		
Tangent Length:	2186.21		
Element: Linear			
PI (10540)	446+64.96	2025965.6171	474812.2903
PI (10544)	478+39.10	2029139.7594	474816.0053
Tangent Direction:	N 89°58'58.59" E		
Tangent Length:	3174.14		
Element: Linear			
PI (10544)	478+39.10	2029139.7594	474816.0053
POE (10567)	610+00.00	2042300.6352	474840.0215
Tangent Direction:	N 89°53'43.61" E		
Tangent Length:	13160.90		

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013	HISTORICAL LETTER & WRITTEN REPORT & ALGINMENT CERT.	
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>4762(11)</u>	J/P NO. <u>244(209)</u> SHEET NO. <u>S003</u>

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES							
CHECK LEVELS		SWO# 4762(1)		J/P 24412(09)		BENCHMARKS LIST	
						NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET
BM 154						1251.330	FOUND #6 REBAR X 30", APPROX. 38' WEST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 153' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 154 ELEV. = 1251.33
to	2.495	2.497	2.4960	2.496			
AT 7002					1253.8260	1253.826	FOUND MAG NAIL WITH SHINER APPROX. 5' WEST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 50' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES TARGET 2 ELEV. = 1253.82
to	15.826	15.830	15.8290	15.829			
BM 153					1269.6550	1269.655	FOUND #6 REBAR X 30", APPROX. 665' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 99' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 153 ELEV. = 1269.63
to	23.677	23.681	23.6790	23.679			
BM 152					1293.3340	1293.334	FOUND #6 REBAR X 30", APPROX. 1323' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 81' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 152 ELEV. = 1293.33
to	-2.599	-2.600	-2.5995	-2.600			
AT 7004					1290.7345	1290.735	FOUND MAG NAIL WITH SHINER APPROX. 1359' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 16' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES TARGET 4 ELEV. = 1290.73
to	14.524	14.526	14.5250	14.525			
BM 151					1305.2595	1305.260	FOUND #6 REBAR X 30", APPROX. 1905' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 80' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 151 ELEV. = 1305.26
to	-6.427	-6.428	-6.4265	-6.427			
BM 150					1298.8330	1298.833	FOUND #6 REBAR X 30", APPROX. 2504' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 76' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 150 ELEV. = 1298.82
to	-11.675	-11.668	-11.6715	-11.672			
BM 149					1287.1615	1287.162	FOUND #6 REBAR X 30", APPROX. 3303' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 60' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 149 ELEV. = 1287.16
to	-10.869	-10.866	-10.8675	-10.868			
AT 7007					1276.2940	1276.294	FOUND MAG NAIL WITH SHINER, APPROX. 4001' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 17' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES TARGET 7 ELEV. = 1276.29
to	0.482	0.482	0.4820	0.482			
BM 148					1276.7760	1276.776	FOUND #6 REBAR X 30", APPROX. 4005' EAST OF N/S 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 80' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). - AERIAL DATA SERVICES BM 148 ELEV. = 1276.77
to	-10.074	-10.073	-10.0735	-10.074			
BM 147					1266.7025	1266.703	FOUND #6 REBAR X 30" (S.H. 29 CL) STA. 123+35.04 81.92' RT. - AERIAL DATA SERVICES BM 147 ELEV. = 1266.69
to	-26.739	-26.745	-26.7420	-26.742			
BM 146					1239.9605	1239.961	FOUND CHISELED SQUARE ON STRUCTURE STA. 129+30.10 31.71' RT. - AERIAL DATA SERVICES BM 146 ELEV. = 1239.98
to	27.589	27.596	27.5925	27.593			

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S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES							
CHECK LEVELS		SWO# 4762(1)		J/P 24412(09)		BENCHMARKS LIST	
						NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET
BM 145					1267.5530	1267.553	FOUND #6 REBAR X 30" 135+99.38 36.68' RT. - AERIAL DATA SERVICES BM 145 ELEV. = 1267.55
to	-3.539	-3.533	-3.5360	-3.536			
AT 7010					1264.0170	1264.017	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 142+95.99 28.35' RT. - AERIAL DATA SERVICES TARGET 10 ELEV. = 1264.01
to	1.765	1.767	1.7660	1.766			
BM 144					1265.7830	1265.783	FOUND #6 REBAR X 30" STA. 143+00.12 40.41' RT. - AERIAL DATA SERVICES BM 144 ELEV. = 1265.75
to	-29.486	-29.494	-29.4900	-29.490			
BM 143					1236.2930	1236.293	FOUND #6 REBAR X 30" STA. 149+65.65 43.63' RT. - AERIAL DATA SERVICES BM 143 ELEV. = 1236.33
to	-25.294	-25.294	-25.2940	-25.294			
BM 142					1210.9990	1210.999	FOUND #6 REBAR X 30" STA. 156+89.65 78.87' RT. - AERIAL DATA SERVICES BM 142 ELEV. = 1211.05
to	21.066	21.062	21.0640	21.064			
BM 141					1232.0630	1232.063	FOUND #6 REBAR X 30" STA. 162+73.99 64.67' LT. - AERIAL DATA SERVICES BM 141 ELEV. = 1232.10
to	7.275	7.293	7.2840	7.284			
BM 140					1239.3470	1239.347	FOUND CHISELED SQUARE ON STRUCTURE STA. 169+30.39 18.71' RT. - AERIAL DATA SERVICES BM 140 ELEV. = 1239.38
to	2.140	2.141	2.1405	2.141			
AT 7013					1241.4875	1241.488	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 169+90.79 25.40' LT. - AERIAL DATA SERVICES TARGET 13 ELEV. = 1241.52
to	20.378	20.374	20.3760	20.376			
BM 139					1261.8635	1261.864	FOUND CHISELED SQUARE ON STRUCTURE STA. 176+26.35 59.16' LT. - AERIAL DATA SERVICES BM 139 ELEV. = 1261.89
to	0.795	0.790	0.7925	0.793			
BM 138					1262.6560	1262.656	FOUND CHISELED SQUARE ON STRUCTURE STA. 182+26.59 30.97' RT. - AERIAL DATA SERVICES BM 138 ELEV. = 1262.68
to	10.593	10.593	10.5930	10.593			
BM 137					1273.2490	1273.249	FOUND #6 REBAR X 30" STA. 188+69.10 57.91' LT. - AERIAL DATA SERVICES BM 137 ELEV. = 1273.27
to	9.576	9.576	9.5760	9.576			
AT 7016					1282.8250	1282.825	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 195+86.38 44.15' RT. - AERIAL DATA SERVICES TARGET 16 ELEV. = 1282.85
to	0.025	0.027	0.0260	0.026			
BM 136					1282.8510	1282.851	FOUND #6 REBAR X 30" STA. 195+91.06 48.40' RT. - AERIAL DATA SERVICES BM 136 ELEV. = 1282.86
to	9.681	9.678	9.6795	9.680			
BM 135					1292.5305	1292.531	FOUND #6 REBAR X 30" STA. 204+03.05 47.87' RT. - AERIAL DATA SERVICES BM 135 ELEV. = 1292.56
to	5.570	5.569	5.5695	5.570			
BM 134					1298.1000	1298.100	FOUND #6 REBAR X 30" STA. 209.85.43 46.27' RT. - AERIAL DATA SERVICES BM 134 ELEV. = 1298.12
to	3.852	3.850	3.8510	3.851			
BM 133					1301.9510	1301.951	FOUND #6 REBAR X 30" STA. 218+79.38 44.33' RT. - AERIAL DATA SERVICES BM 133 ELEV. = 1301.97

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S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES							
CHECK LEVELS		SWO# 4762(1)		J/P 24412(09)		BENCHMARKS LIST	
						NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET
to	-5.427	-5.433	-5.4300	-5.430			
AT 7019					1296.5210	1296.521	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 222+35.63 29.27' RT. - AERIAL DATA SERVICES TARGET 19 ELEV. = 1296.54
to	-2.058	-2.058	-2.0580	-2.058			
BM 132					1294.4630	1294.463	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 224+95.33 41.70' RT.
to	-0.625	-0.624	-0.6245	-0.625			
BM 131					1293.8385	1293.839	FOUND #6 REBAR X 30" STA. 227+88.60 45.75' RT. - AERIAL DATA SERVICES BM 131 ELEV. = 1293.86
to	-6.624	-6.640	-6.6320	-6.632			
BM 130					1287.2065	1287.207	FOUND CHISELED SQUARE ON STRUCTURE STA. 235+54.52 33.73' RT. - AERIAL DATA SERVICES BM 130 ELEV. = 1287.22
to	-8.678	-8.686	-8.6820	-8.682			
BM 129					1278.5245	1278.525	FOUND CHISELED SQUARE ON STRUCTURE STA. 241+06.11 24.72' RT. - AERIAL DATA SERVICES BM 129 ELEV. = 1278.55
to	-6.253	-6.259	-6.2560	-6.256			
AT 7022					1272.2685	1272.269	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 247+88.36 34.13' RT. - AERIAL DATA SERVICES TARGET 22 ELEV. = 1272.49
to	-0.090	-0.090	-0.0900	-0.090			
BM 128					1272.1785	1272.179	FOUND CHISELED SQUARE ON STRUCTURE STA. 248+48.57 26.51' RT. - AERIAL DATA SERVICES BM 128 ELEV. = 1272.21
to	-0.506	-0.505	-0.5055	-0.506			
BM 127					1271.6730	1271.673	FOUND #6 REBAR X 30" STA. 255+09.08 46.99' RT. - AERIAL DATA SERVICES BM 127 ELEV. = 1271.71
to	-8.896	-8.894	-8.8950	-8.895			
BM 126					1262.7780	1262.778	FOUND #6 REBAR X 30" STA. 261+89.54 46.82' RT. - AERIAL DATA SERVICES BM 126 ELEV. = 1262.80
to	-17.146	-17.144	-17.1450	-17.145			
BM 125					1245.6330	1245.633	FOUND #6 REBAR X 30" STA. 270+80.32 44.58' RT. - AERIAL DATA SERVICES BM 125 ELEV. = 1245.71
to	-1.850	-1.842	-1.8460	-1.846			
BM 124					1243.7870	1243.787	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 274+54.34 39.73' RT.
to	-0.173	-0.176	-0.1745	-0.175			
AT 7025					1243.6125	1243.613	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 274+69.61 30.38' RT. - AERIAL DATA SERVICES TARGET 25 ELEV. = 1243.67
to	-2.370	-2.372	-2.3710	-2.371			
BM 123					1241.2415	1241.242	FOUND CHISELED SQUARE ON STRUCTURE STA. 278+29.60 19.49' RT. - AERIAL DATA SERVICES BM 123 ELEV. = 1241.30
to	2.833	2.837	2.8350	2.835			
BM 122					1244.0765	1244.077	FOUND #6 REBAR X 30" STA. 287+66.12 43.82' RT. - AERIAL DATA SERVICES BM 122 ELEV. = 1244.12
to	-0.002	-0.004	-0.0030	-0.003			
BM 121					1244.0735	1244.074	FOUND #6 REBAR X 30" STA. 296+26.33 43.90' RT. - AERIAL DATA SERVICES BM 121 ELEV. = 1244.13
to	-6.907	-6.907	-6.9070	-6.907			

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CHECK LEVELS			SWO# 4762(1)		J/P 24412(09)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET			
BM 120					1237.1665	1237.167	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 300+37.84 40.73' RT.			
to	-0.613	-0.618	-0.6155	-0.616						
AT 7028					1236.5510	1236.551	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 301+20.16 29.63' RT. -AERIAL DATA SERVICES TARGET 28 ELEV. = 1236.62			
to	-3.838	-3.838	-3.8380	-3.838						
BM 119					1232.7130	1232.713	FOUND #6 REBAR X 30" STA. 304+51.18 28.91' RT. - AERIAL DATA SERVICES BM 119 ELEV. = 1232.77			
to	-14.512	-14.502	-14.5070	-14.507						
BM 118					1218.2060	1218.206	FOUND 800 NAIL IN TREE STA. 312+80.77 30.91' LT. -AERIAL DATA SERVICES BM 118 ELEV. = 1218.27			
to	-37.850	-37.854	-37.8520	-37.852						
BM 117					1180.3540	1180.354	FOUND #6 REBAR X 30" STA. 319+43.29 27.32' RT. - AERIAL DATA SERVICES BM 117 ELEV. = 1180.44			
to	-0.438	-0.441	-0.4395	-0.440						
BM 116					1179.9145	1179.915	FOUND 800 NAIL IN TREE STA. 326+39.17 44.99' LT. -AERIAL DATA SERVICES BM 116 ELEV. = 1180.00			
to	1.688	1.689	1.6885	1.689						
AT 7031					1181.6030	1181.603	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 327+09.14 21.94' RT. -AERIAL DATA SERVICES TARGET 31 ELEV. = 1181.69			
to	9.505	9.501	9.5030	9.503						
BM 115					1191.1060	1191.106	FOUND 800 NAIL IN TREE STA. 335+13.94 48.22' RT. -AERIAL DATA SERVICES BM 115 ELEV. = 1191.18			
to	10.582	10.582	10.5820	10.582						
BM 114					1201.6880	1201.688	FOUND #6 REBAR X 30" STA. 340+78.41 44.59' RT. - AERIAL DATA SERVICES BM 114 ELEV. = 1201.77			
to	16.389	16.395	16.3920	16.392						
BM 113					1218.0800	1218.080	FOUND #6 REBAR X 30" STA. 347+48.79 40.12' RT. - AERIAL DATA SERVICES BM 113 ELEV. = 1218.13			
to	11.509	11.510	11.5095	11.510						
AT 7034					1229.5895	1229.590	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 353+49.82 36.81' RT. -AERIAL DATA SERVICES TARGET 34 ELEV. = 1229.65			
to	1.648	1.650	1.6490	1.649						
BM 112					1231.2385	1231.239	FOUND #6 REBAR X 30" STA. 353+59.88 45.30' RT. - AERIAL DATA SERVICES BM 112 ELEV. = 1231.29			
to	9.605	9.602	9.6035	9.604						
BM 111					1240.8420	1240.842	FOUND CHISELED SQUARE ON STRUCTURE STA. 363+15.01 22.45' RT. -AERIAL DATA SERVICES BM 111 ELEV. = 1240.92			
to	7.144	7.134	7.1390	7.139						
BM 110					1247.9810	1247.981	FOUND CHISELED SQUARE ON STRUCTURE STA. 367+21.74 30.75' LT. -AERIAL DATA SERVICES BM 110 ELEV. = 1248.05			
to	17.973	17.976	17.9745	17.975						
BM 109					1265.9555	1265.956	FOUND CHISELED SQUARE ON STRUCTURE STA. 377+04.57 17.70' RT. -AERIAL DATA SERVICES BM 109 ELEV. = 1265.02			
to	4.182	4.182	4.1820	4.182						
AT 7037					1270.1375	1270.138	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 381+20.64 37.67' RT. -AERIAL DATA SERVICES TARGET 37 ELEV. = 1270.19			

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE

CHECK LEVELS			SWO# 4762(1) J/P 24412(09)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET	
to	0.354	0.353	0.3535	0.354				
BM 108					1270.4910	1270.491	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 381+33.05 42.02' RT.	
to	-2.814	-2.816	-2.8150	-2.815			FOUND #6 REBAR X 30" STA. 385+57.85 38.77' RT. - AERIAL DATA SERVICES BM 107 ELEV. = 1267.73	
BM 107					1267.6760	1267.676		
to	4.161	4.159	4.1600	4.160			FOUND CHISELED SQUARE ON STRUCTURE STA. 393+57.27 30.86' RT. -AERIAL DATA SERVICES BM 106 ELEV. = 1271.89	
BM 106					1271.8360	1271.836		
to	8.916	8.911	8.9135	8.914			FOUND #6 REBAR X 30" STA. 399+79.74 44.05' RT. - AERIAL DATA SERVICES BM 105 ELEV. = 1280.79	
BM 105					1280.7495	1280.750		
to	3.407	3.409	3.4080	3.408			FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 407+09.66 35.32' RT. -AERIAL DATA SERVICES TARGET 40 ELEV. = 1284.16	
AT 7040					1284.1575	1284.158		
to	1.318	1.318	1.3180	1.318			FOUND #6 REBAR X 30", STA. 407+02.05 45.48' RT. - AERIAL DATA SERVICES BM 104 ELEV. = 1285.47	
BM 104					1285.4755	1285.476		
to	-2.070	-2.072	-2.0710	-2.071			FOUND #6 REBAR X 30" STA. 413+51.06 51.22' LT. - AERIAL DATA SERVICES BM 103 ELEV. = 1283.45	
BM 103					1283.4045	1283.405		
to	-22.868	-22.886	-22.8770	-22.877			FOUND CHISELED SQUARE ON STRUCTURE, STA. 420+20.89 42.66' RT. - AERIAL DATA SERVICES BM 102 ELEV. = 1260.60	
BM 102					1260.5275	1260.528		
to	-10.254	-10.266	-10.2600	-10.260			FOUND #6 REBAR X 30", STA. 426+41.21 54.31' LT. - AERIAL DATA SERVICES BM 101 ELEV. = 1250.34	
BM 101					1250.2675	1250.268		
to	5.474	5.471	5.4725	5.473			FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 433+41.84 39.25' RT. -AERIAL DATA SERVICES TARGET 43 ELEV. = 1255.79	
AT 7043					1255.7400	1255.740		
to	0.547	0.547	0.5470	0.547			FOUND #6 REBAR X 30", STA. 433+47.40 47.01' RT. - AERIAL DATA SERVICES BM 100 ELEV. = 1256.34	
BM 100					1256.2870	1256.287		
to	5.924	5.926	5.9250	5.925			FOUND #6 REBAR X 30", STA. 440+48.19 46.59' RT. - AERIAL DATA SERVICES BM 99 ELEV. = 1262.26	
BM 99					1262.2120	1262.212		
to	-12.329	-12.335	-12.3320	-12.332			FOUND #6 REBAR X 30", STA. 445+40.71 54.05' RT. - AERIAL DATA SERVICES BM 98 ELEV. = 1249.95	
BM 98					1249.8800	1249.880		
to	12.852	12.857	12.8545	12.855			FOUND #6 REBAR X 30" STA. 455+16.07 49.89' RT. - AERIAL DATA SERVICES BM 97 ELEV. = 1262.75	
BM 97					1262.7345	1262.735		
to	-4.282	-4.285	-4.2835	-4.284			SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 459+58.28 44.56' LT.	
BM 96					1258.4510	1258.451		
to	-0.813	-0.814	-0.8135	-0.814				

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CHECK LEVELS			SWO# 4762(1) J/P 24412(09)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET	
AT 7046					1257.6375	1257.638	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 459+78.56 40.41' LT. -AERIAL DATA SERVICES TARGET 46 ELEV. = 1257.67	
to	-3.523	-3.522	-3.5225	-3.523				
BM 95					1254.1150	1254.115	FOUND #6 REBAR X 30" STA. 463+99.57 46.43' RT. - AERIAL DATA SERVICES BM 95 ELEV. = 1254.18	
to	14.497	14.498	14.4975	14.498				
BM 94					1268.6125	1268.613	FOUND TOP OF CONCRETE ROW MARKER, STA. 472+97.91 49.61' RT. -AERIAL DATA SERVICES BM 94 ELEV. = 1268.64	
to	3.253	3.259	3.2560	3.256				
BM 93					1271.8685	1271.869	FOUND #6 REBAR X 30", STA. 482+27.22 48.04' RT. - AERIAL DATA SERVICES BM 93 ELEV. = 1271.87	
to	-9.078	-9.074	-9.0760	-9.076				
AT 7049					1262.7925	1262.793	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 485+91.07 36.50' -AERIAL DATA SERVICES TARGET 49 ELEV. = 1262.81	
to	-2.546	-2.545	-2.5455	-2.546				
BM 92					1260.2470	1260.247	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 487+07.51 36.56' RT.	
to	11.628	11.629	11.6285	11.629				
BM 91					1271.8755	1271.876	FOUND #6 REBAR X 30", STA. 490+52.29 45.96' RT. - AERIAL DATA SERVICES BM 91 ELEV. = 1271.89	
to	8.414	8.410	8.4120	8.412				
BM 90					1280.2875	1280.288	FOUND CHISELED SQUARE ON HEADWALL, STA. 499+21.58 29.98' -AERIAL DATA SERVICES BM 90 ELEV. = 1280.32	
to	-15.039	-15.057	-15.0480	-15.048				
BM 89					1265.2395	1265.240	FOUND #6 REBAR X 30", STA. 507+88.58 48.86' - AERIAL DATA SERVICES BM 89 ELEV. = 1265.27	
to	-22.415	-22.415	-22.4150	-22.415				
AT 7052					1242.8245	1242.825	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 512+21.07 25.82' RT. - AERIAL DATA SERVICES TARGET 52 ELEV. = 1242.89	
to	-5.809	-5.809	-5.8090	-5.809				
BM 88					1237.0155	1237.0155	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 512+99.47 38.99' RT.	
to	-13.166	-13.163	-13.1645	-13.165				
BM 87					1223.8510	1223.851	FOUND #6 REBAR X 30", STA. 516+96.23 25.44' RT. - AERIAL DATA SERVICES BM 87 ELEV. = 1223.91	
to	21.973	21.964	21.9685	21.969				
BM 86					1245.8195	1245.820	FOUND #6 REBAR X 30", STA. 525+87.94 48.72' RT. - AERIAL DATA SERVICES BM 86 ELEV. = 1245.84	
to	-0.359	-0.368	-0.3635	-0.364				
BM 85					1245.4560	1245.456	FOUND #6 REBAR X 30", STA. 534+45.84 46.50' RT. - AERIAL DATA SERVICES BM 85 ELEV. = 1245.48	
to	-8.797	-8.792	-8.7945	-8.795				
BM 84					1236.6615	1236.6615	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP. STA. 538+78.46 45.64' RT.	
to	1.858	1.853	1.8555	1.856				

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CHECK LEVELS			SWO# 4762(1)		VP 24412(09)	BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET		
AT 7055					1238.5170	1238.517	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 538+88.74 18.40' LT. -AERIAL DATA SERVICES TARGET 55 ELEV. = 1238.55		
to	-14.796	-14.793	-14.7945	-14.795					
BM 83					1223.7225	1223.723	FOUND CHISELED SQUARE ON HEADWALL, STA. 543+27.81 55.24' RT. -AERIAL DATA SERVICES BM 83 ELEV. = 1223.75		
to	27.499	27.494	27.4965	27.497					
BM 82					1251.2190	1251.219	FOUND CHISELED SQUARE ON HEADWALL, STA. 552+23.18 30.06' RT. -AERIAL DATA SERVICES BM 82 ELEV. = 1251.25		
to	23.360	23.361	23.3605	23.361					
CP 7401					1274.5795	1274.580	2" BRASS CAP WITH FENO SPIKE, STA. 560+86.92 36.60' LT. -AERIAL DATA SERVICES CP 7401 ELEV. = 1274.60		
to	0.773	0.774	0.7735	0.774					
BM 81					1275.3530	1275.353	FOUND #6 REBAR X 30", STA. 561+25.46 47.11' RT. - AERIAL DATA SERVICES BM 81 ELEV. = 1275.37		
to	-6.980	-6.980	-6.9800	-6.980					
BM 80					1268.3730	1268.373	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 565+64.06 43.47' RT.		
to	-0.729	-0.730	-0.7295	-0.730					
AT 7058					1267.6435	1267.644	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 566+12.21 37.43' RT. -AERIAL DATA SERVICES TARGET 58 ELEV. = 1267.67		
to	-6.201	-6.196	-6.1985	-6.199					
BM 79					1261.4450	1261.445	FOUND #6 REBAR X 30", STA. 569+88.31 46.57' RT. - AERIAL DATA SERVICES BM 79 ELEV. = 1261.48		
to	1.255	1.242	1.2485	1.249					
BM 78					1262.6935	1262.694	FOUND #6 REBAR X 30", STA. 578+49.56 44.06' RT. - AERIAL DATA SERVICES BM 78 ELEV. = 1262.71		
to	-13.603	-13.611	-13.6070	-13.607					
BM 77					1249.0865	1249.087	FOUND #6 REBAR X 30", STA. 586+88.21 47.56' RT. - AERIAL DATA SERVICES BM 77 ELEV. = 1249.11		
to	-4.305	-4.305	-4.3050	-4.305					
BM 76					1244.7815	1244.7815	CHISELED "X" ON HEADWALL STA. 590+87.50 24.21' RT.		
to	1.505	1.508	1.5065	1.507					
AT 7061					1246.2880	1246.288	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 591+57.28 20.09' LT. -AERIAL DATA SERVICES TARGET 61 ELEV. = 1246.33		
to	7.041	7.041	7.0410	7.041					
BM 75					1253.3290	1253.329	FOUND #6 REBAR X 30", STA. 595+77.46 50.52' RT. - AERIAL DATA SERVICES BM 75 ELEV. = 1253.37		
to	-16.490	-16.497	-16.4935	-16.494					
BM 74					1236.8355	1236.836	FOUND CHISELED SQUARE ON HEADWALL, STA. 604+65.48 32.36' RT. -AERIAL DATA SERVICES BM 74 ELEV. = 1236.90		
to	-23.159	-23.161	-23.1550	-23.155					
BM 73					1213.6805	1213.6805	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 613+39.23 47.13' RT.		
to	-6.138	-6.135	-6.1365	-6.137					

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CHECK LEVELS			SWO# 4762(1) J/P 24412(09)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFFSET	
BM 72					1207.5440	1207.544	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP STA. 617+69.61 48.65' RT.	
to	1.137	1.137	1.1370	1.137			FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 618+29.33 18.60' LT. -AERIAL DATA SERVICES TARGET 64 ELEV. = 1208.74	
AT 7064					1208.6810	1208.681		
to	16.624	16.625	16.6245	16.625				
BM 71					1225.3055	1225.306	FOUND #6 REBAR X 30", STA. 622+19.80 48.34' RT. DATA SERVICES BM 71 ELEV. = 1225.35 -AERIAL	
to	12.575	12.581	12.5780	12.578				
AT 7066					1237.8835	1237.884	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP. STA. 631+29.36 38.34' RT. DATA SERVICES TARGET 66 ELEV. = 1237.98 -AERIAL	
to	1.840	1.839	1.8395	1.840				
BM 70					1239.7230	1239.723	FOUND #6 REBAR X 30", STA. 631+18.89 50.89' RT. - AERIAL DATA SERVICES BM 70 ELEV. = 1239.76	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

SWO4762(1) STATE JOB NO. 24412(09)
S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES

NODE ID	NORTHING	EASTING	NODE ID	NORTHING	EASTING
70	474792.9988054	2044419.61701703	5224	480073.55742302	2023300.60831970
71	474793.91038055	2043520.51741704	5225	480085.55273552	2025927.35246456
72	474792.77862000	2043070.33553000	5226	480085.65044558	2025960.35234126
73	474793.50941000	2042639.95361000	5227	480087.42569305	2027266.38071030
74	474806.68248053	2041766.17381705	5228	480089.22336240	2028589.62337758
75	474786.90678054	2040878.18611705	5229	480092.72167199	2031219.08978108
76	474812.28401000	2040388.22587000	5230	480092.75324942	2031252.08976900
77	474788.24198054	2039988.93621705	5231	480094.28500553	2033879.24848030
78	474790.21708054	2039150.28111705	5232	480095.94066167	2036505.92691165
79	474786.13278052	2038289.03351706	5233	480095.99477177	2036538.92687170
80	474788.45508000	2037864.77941000	5234	480099.35533631	2037808.00680450
81	474784.02238053	2037426.19221706	5235	480102.84679820	2039126.51866715
82	474799.42208052	2036523.88031706	5236	480109.76360511	2041747.04303700
83	474772.60648051	2035628.55951706	5237	480109.83184227	2041780.04299186
84	474781.38884000	2035179.19429000	5238	480113.76396197	2044405.78346504
85	474779.73818052	2034746.56991707	5239	480117.86650552	2047031.74143860
86	474775.95468052	2033888.67801708	5240	477491.56658970	2047047.93091203
87	474797.60638051	2032996.93161708	5241	474898.71402193	2047064.10013401
88	474783.32630000	2032600.18789000	5242	474788.41612420	2047064.32493408
89	474772.52268051	2032089.31911708	5243	474893.90847245	2044430.65794430
90	474789.82868051	2031222.28451709	5244	474892.69965745	2043768.22705133
91	474772.26048051	2030353.03261708	5245	474891.49084222	2043105.79603377
92	474781.03484000	2030008.23709000	5246	474891.29877436	2043000.54280228
93	474768.67758051	2029527.96771709	5247	474916.29873198	2043000.49771893
94	474765.75838049	2028598.62481709	5248	474916.11625057	2042900.49734842
95	474767.89088051	2027700.27901709	5249	474891.11629298	2042900.54296878
96	474858.36109000	2027258.89115000	5250	474889.10332054	2041797.43461499
97	474763.39198050	2026816.78471709	5251	476161.80225547	2041793.15582105
98	474758.05488049	2025941.78601710	5252	477483.25235594	2041788.71415508
99	474760.91868049	2025349.23191710	5253	477483.18631630	2041755.71420113
100	474755.07168049	2024648.46351710	5254	476161.73516701	2041760.15586014
101	474850.91518048	2023941.50821711	5255	474889.04310432	2041764.43369959
102	474753.89268049	2023321.39901711	5256	474886.66868401	2040463.40569039
103	474851.20288048	2022652.05871711	5257	474886.34982478	2040288.51731774
104	474757.82718048	2022002.56041711	5258	474911.34978150	2040288.47169739
105	474762.95168049	2021280.26480171	5259	474910.44394476	2039792.07305031

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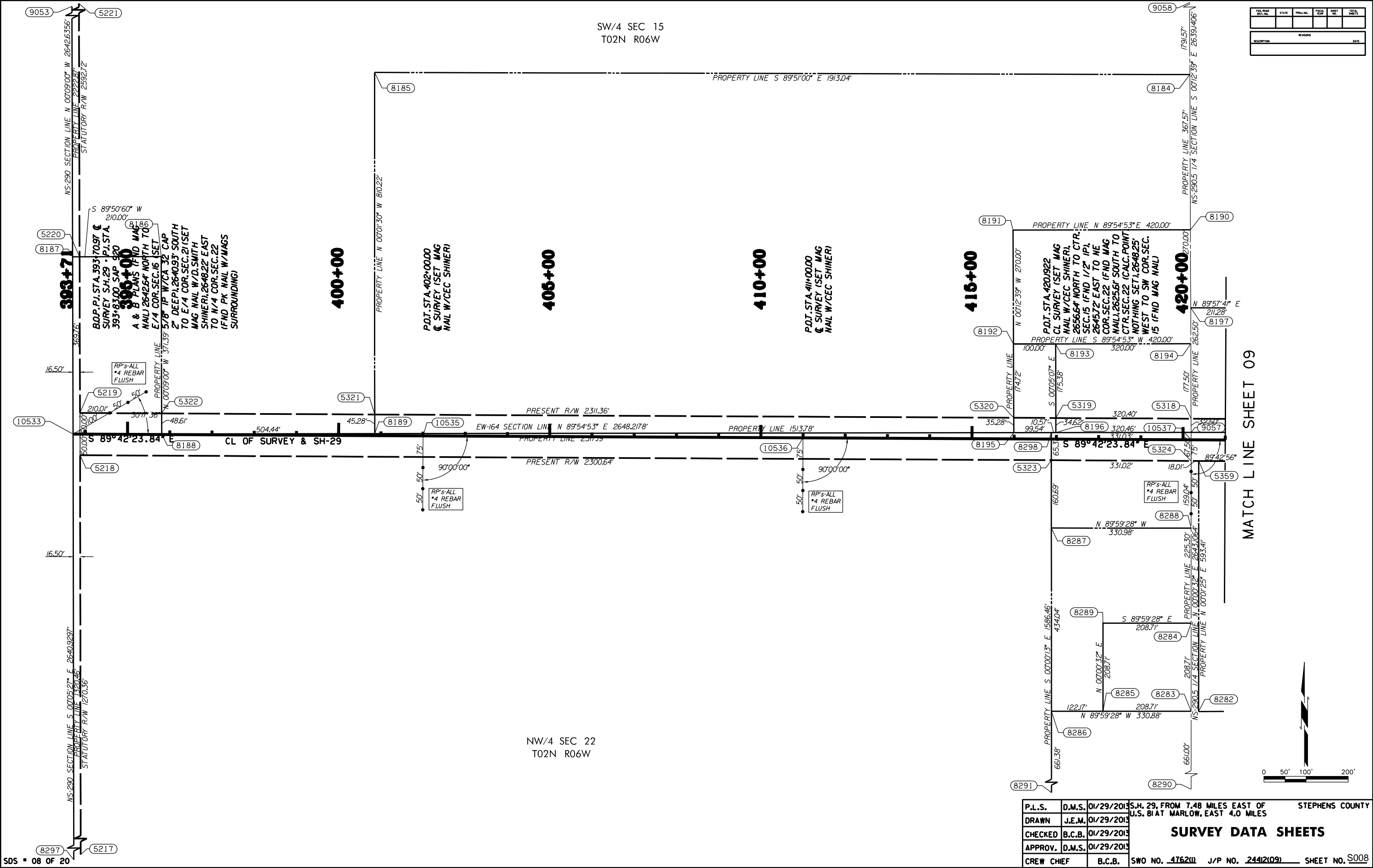
SWO4762(1) STATE JOB NO. 24412(09)
S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES

NODE ID	NORTHING	EASTING	NODE ID	NORTHING	EASTING
5270	474879.46771166	2036517.11778094	5316	474845.34532210	2023779.08058759
5271	474878.28995610	2035871.70746595	5317	474845.06048053	2023613.97038894
5272	474878.04692231	2035738.52489338	5318	474846.56199419	2023319.83004268
5273	474893.04689543	2035738.49752117	5319	474848.20253755	2022999.43854263
5274	474892.86441404	2035638.49768767	5320	474848.71262608	2022899.82030706
5275	474877.86444093	2035638.52505987	5321	474856.46326393	2021386.15196310
5276	474877.08209096	2035209.79709887	5322	474859.04675176	2020881.60720547
5277	474876.25519542	2034756.65815413	5323	474756.25505140	2022988.92677882
5278	474875.87422568	2034547.88665305	5324	474746.56012500	2023319.93907449
5279	474874.95294846	2034043.02652790	5325	474745.11474537	2023602.21589366
5280	474874.66636026	2033885.97612851	5326	474745.34832537	2023779.85506028
5281	474873.21116592	2033088.52930555	5327	474746.96986008	2023989.07617566
5282	474898.21112025	2033088.48368521	5328	474696.97136171	2023989.46368200
5283	474897.66367604	2032788.48418470	5329	474699.29639979	2024289.45467220
5284	474872.66372180	2032788.52980504	5330	474749.29489815	2024289.06716585
5285	474871.04287200	2031900.30374721	5331	474762.16042617	2021599.05825745
5286	474869.86515173	2031254.91277707	5332	472172.70272460	2025946.01142930
5287	475480.89621794	2031254.57513628	5333	472172.73693974	2025979.01147175
5288	474764.55963811	2031253.47899633	5334	474762.30947370	2025982.05832574
5289	474764.51845994	2031120.47903203	5335	474763.89728459	2027338.68687916
5290	476142.07105632	2031221.20978224	5336	474753.89729144	2027338.69857508
5291	474869.80493283	2031221.91280531	5337	474754.72242955	2028043.69809629
5292	474867.64548404	2030038.53438373	5338	474764.72242270	2028043.68639220
5293	474877.64546537	2030038.51613560	5339	474765.36959964	2028596.43050438
5294	474877.28050260	2029839.51646859	5340	474766.00534423	2029139.81690304
5295	474867.28052130	2029838.53471672	5341	474767.28070828	2029838.71719799
5296	474866.00527574	2029139.69986217	5342	474757.28072698	2029838.73544611
5297	474865.36926943	2028596.29490365	5343	474757.64568943	2030038.73511312
5298	474864.36537957	2027738.56956024	5344	474767.64567076	2030038.71686500
5299	474874.36537272	2027738.55785615	5345	474769.80497361	2031222.01617053
5300	474879.87209255	2027738.55813012	5346	473499.87393043	2031223.94398191
5301	474863.89721610	2027338.56983421	5347	474863.89721610	2031225.94742032
5302	474863.82966358	2027800.85382499	5348	472180.16134420	2031258.94740190
5303	474862.30963788	2025981.90839557	5349	474769.86519242	2031255.01611713
5304	474757.17952314	2025971.12571061	5350	474772.48142363	2032688.71245285
5305	474757.13166378	2025938.12562702	5351	474747.48146943	2032688.75807311
5306	475473.50889854	2025946.36910560	5352	474748.21139426	2033088.75740712
5307	474862.16227833	2025948.90972188	5353	474773.21134860	2033088.71178683
5308	474857.16415794	2025304.02089111	5354	474773.81463757	2033419.31451985
5309	474854.73951513	2024991.17827381	5355	474774.66646469	2033886.11631224
5310	474853.87766195	2024879.97657225	5356	474775.27026447	2034216.99898665
5311	474849.40413014	2024302.77344962	5357	474776.67536952	2034986.99741184
5312	474849.29189488	2024288.29215316	5358	474777.08230302	2035209.99727542
5313	474869.29129423	2024288.13715062	5359	474746.46790340	2023337.94958301
5314	474867.74126885	2024088.14315716	5360	474845.11343445	2023602.72793028
5315	474847.74186950	2024088.29815970	5361	474746.9089476	2023981.33907372

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SWO4762(1) STATE JOB NO. 24412(09)
S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES

NODE ID	NORTHING	EASTING	NODE ID	NORTHING	EASTING
5362	474752.03601033	2024642.74264573	5408	472197.58409719	2041769.31505053
5363	474777.77373960	2023588.70762440	5409	472197.66159190	2041802.31496127
5364	474752.77342444	2023588.75324469	5410	469560.34989036	2041808.37495434
5365	474753.32086807	2023888.75274520	5411	469560.29191326	2041775.37500044
5366	474778.32082333	2023588.70712491	5412	470884.36028420	2047066.31956115
5367	474778.50450502	2023989.36480636	5413	474795.67884375	2045400.91313796
5368	474779.46800650	20236517.36422149	5414	474795.03825394	2045049.86952143
5369	474427.70333635	20236518.35607833	5415	474792.70004732	2043768.53083937
5370	473506.21768606	20236520.95435475	5416	474766.23840303	2042967.57124694
5371	472184.73319426	20236524.68049199	5417	474790.83429200	2042746.09575783
5372	474779.52822534	20236550.36418288	5418	469556.64387244	2036561.28583854
5373	474790.93398141	2042800.72561657			
5374	474765.93402386	2042800.77123687	7040	474767.94848049	2022010.22581711
5375	474766.51978853	2043121.77070242	7043	474762.91688049	2024642.84591711
5376	474791.51974619	2043121.72508212	7046	474854.24208049	2027279.17261709
5377	474793.90889138	2044430.97813553	7049	474853.87968051	2029891.66211708
5378	474796.05074978	2046700.71912320	7052	474796.35518051	2032521.77071708
5379	474788.05076745	2046700.73737132	7055	474845.44268051	2035189.35111707
5380	469575.77248056	2047071.89223896	7058	474794.58138052	2037912.91751706
5381	469567.75904069	2044440.15430703	7061	474856.75268053	2040457.87921705
5382	469556.63326804	2036528.28582204	7064	474860.13318055	2043129.92671704
5383	469556.78113996	2033895.53718748	7066(S-69-574)	474805.56448054	2044430.06141704
5384	469556.92904940	2031262.81022727	7401(S-69-573)	474867.66088052	2037387.49931706
5385	469556.90051054	2031229.81023352			
5386	469552.21408802	2028603.91080435	8180	479434.71713875	2020659.62379550
5387	469547.64620549	2025978.27983614	8181	479432.77797425	2021981.29772662
5388	469547.60680120	2025945.27982388	8182	478772.84040400	2021983.73480075
5389	469545.90820411	2023319.12966500	8183	478771.62030150	2023305.39566750
5390	474769.4796703	2047060.67661788	8184	475661.62809822	2023316.83248368
5391	471523.62730492	20236558.58747539	8185	475666.68354508	2021385.79843778
5392	470862.46616179	2023659.49447483	8186	475230.43171782	2020880.63461882
5393	469557.53904966	2039147.94092059	8187	475229.88139197	2020670.63473264
5394	469558.46051661	2037951.78767083	8188	474801.63756803	2020881.73451524
5395	471624.78945181	2026552.68067936	8189	474811.18362652	2021867.71700707
5396	471626.27161307	2026552.68067936	8190	475294.05737292	2023318.18429570
5397	471617.02131554	2026551.90124193	8191	475293.42348025	2022898.18467630
5398	47181.86414529	2027830.44977118	8192	475023.43403616	2022899.17773731
5399	474784.26510232	2041764.137572182	8193	475023.58307942	2022999.17762304
5400	474787.20375563	2040756.55965507	8194	475024.05915384	2023319.17726891
5401	474788.06809742	2041230.21947068	8195	474843.3527632	2022899.95004808
5402	474789.04304578	2041764.68899434	8196	474843.58136100	2022999.49004613
5403	474789.10362549	2041768.68899394	8197	475109.06381639	202318.86465655
5404	474742.36395467	2041797.77237511	8198	475108.91998852	2023530.14692780
5405	474758.25400644	2041880.09730242	8199	475103.51998650	2023530.15027347
5406	473518.93405767	2041766.95625849	8200	475113.86378116	2023614.15025467
5407	473519.0543426	2041769.95633807	8201	475113.75939611	2023770.15021974



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. BIAT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. 4762(1) J/P NO. 2441(109)	SHEET NO. S008

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

REVISIONS	
DESCRIPTION	DATE

SE/4 SEC 15
T02N R06W

SW/4 SEC 14
T02N R06W

P.O.I. STA.446+64.96
 Q SURVEY (FND MAG
 NAIL), 2644.89 NORTH TO
 E/4 COR.SEC.15 (FND
 1/12" IP FLUSH, 263074"
 EAST TO N/4 COR.SEC.
 23) (SET MAG NAIL W/D.
 SMITH SHINER), 263958"
 SOUTH TO E/4 COR.SEC.
 22 (FND 5/8" IP
 W/W/RED, OBLITERATED
460+00
 CAP), 264567" WEST TO
 S/4 COR.SEC.15 (FND
 PK NAIL W/MAGS
 SURROUNDING)

MATCH LINE SHEET 10

NW/4 SEC 23
T02N R06W

NE/4 SEC 22
T02N R06W

MATCH LINE SHEET 08

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013	SURVEY DATA SHEETS	
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.	SWO NO. <u>476200</u>	J/P NO. <u>24412(09)</u>	SHEET NO. <u>5009</u>

SDS ■ 09 OF 20

MATCH LINE SHEET 10

MATCH LINE SHEET 12

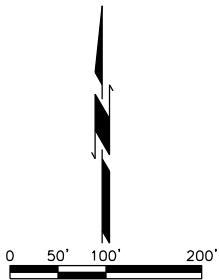
SE/4 SEC 14
T02N R06W

SW/4 SEC 13
T02N R06W

NE/4 SEC 23
T02N R06W

NW/4 SEC 24
T02N R06W

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013	SURVEY DATA SHEETS	
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>47620</u>	J/P NO. <u>244209</u> SHEET NO. <u>S011</u>

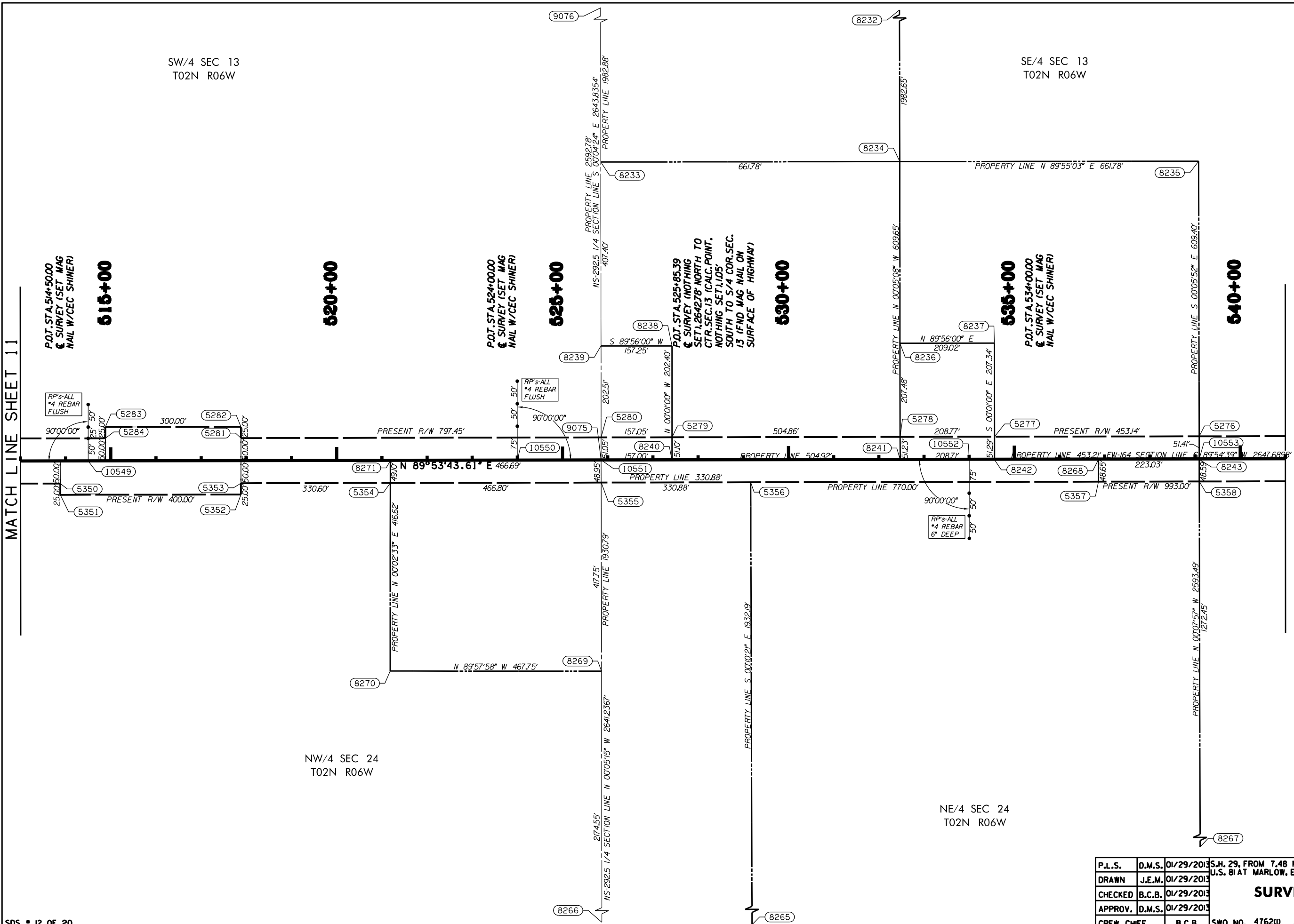
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE

SW/4 SEC 13
T02N R06W

SE/4 SEC 13
T02N R06W

MATCH LINE SHEET 11

MATCH LINE SHEET 13



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>476211</u> J/P NO. <u>24412109</u>	SHEET NO. <u>S012</u>

SURVEY DATA SHEETS

MATCH LINE SHEET 12

NE/4 SEC 24
T02N R06W

SE/4 SEC 13
T02N R06W

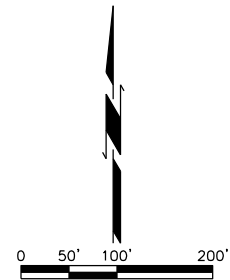
GOV'T LOT 4
SEC 18
T02N R05W

GOV'T LOT 1
SEC 19
T02N R05W

SW/4 SEC 18
T02N R05W

NW/4 SEC 19
T02N R05W

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					



MATCH LINE SHEET 14

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>476211</u> J/P NO. <u>24412109</u>	SHEET NO. <u>S013</u>

SURVEY DATA SHEETS

MATCH LINE SHEET 13

SW/4 SEC 18
T02N R05W

575+00

P.O.T. STA. 578+45.42
C SURVEY (NOTHING
SET). SEC. 18 NORTH TO
CTR. SEC. 18 (END 1/2" IP
W/CARROLL 1922 CAP,
0.32" SOUTH TO S/4
COR. SEC. 18 (END MAG
NAIL AT SURFACE)

580+00

P.O.T. STA. 580+90.00
C SURVEY (SET MAG
NAIL W/CEC SHINER)

585+00

590+00

P.O.T. STA. 590+00.00
C SURVEY (SET MAG
NAIL W/CEC SHINER)

595+00

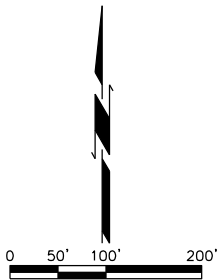
P.O.T. STA. 595+00.00
C SURVEY (SET MAG
NAIL W/CEC SHINER)

600+00

MATCH LINE SHEET 15

NW/4 SEC 19
T02N R05W

NE/4 SEC 19
T02N R05W



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE
DESCRIPTION					

P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013	SURVEY DATA SHEETS	
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.			
SWO NO. 4762(1)			J/P NO. 244(2)(9)	SHEET NO. S014

MATCH LINE SHEET 14

SE/4 SEC 18
T02N R05W

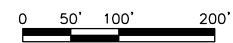
SW/4 SEC 17
T02N R05W

NE/4 SEC 19
T02N R05W

NW/4 SEC 20
T02N R05W

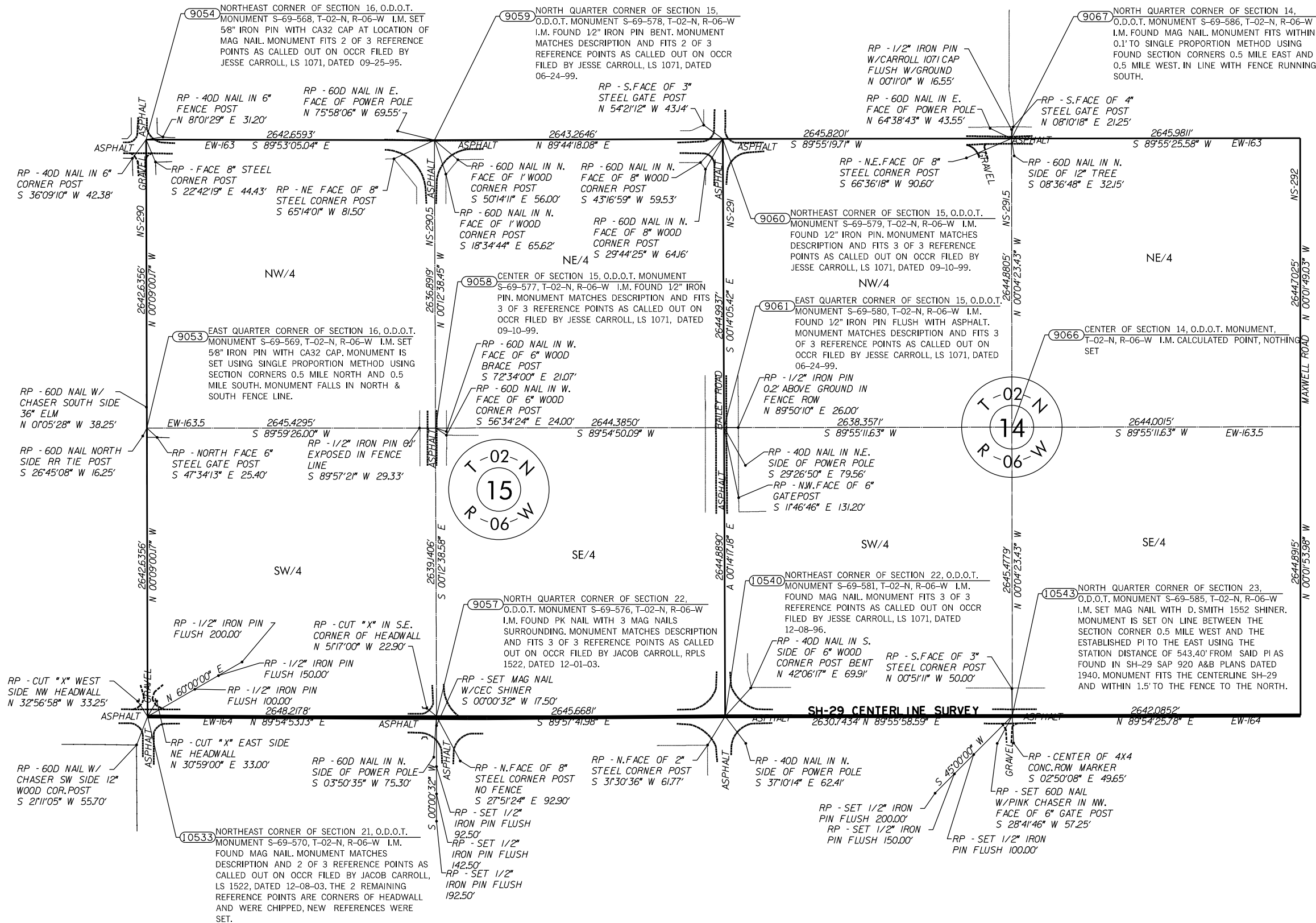
SE/4 SEC 17
T02N R05W

NE/4 SEC 20
T02N R05W



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013	SURVEY DATA SHEETS	
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>4762(0)</u>	J/P NO. <u>24412(09)</u> SHEET NO. <u>S015</u>

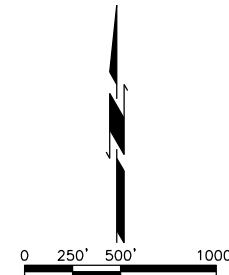
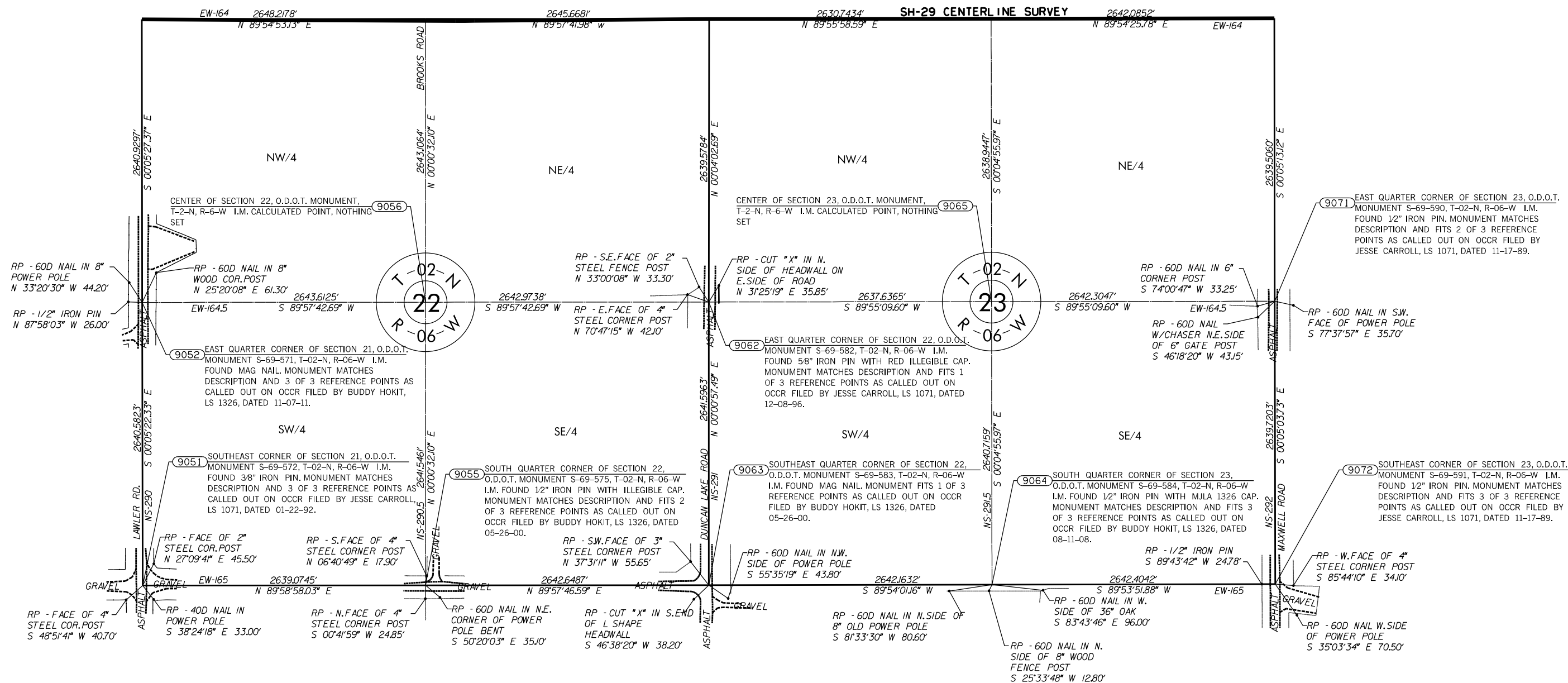
FILED FOR	STATE	PROJ. NO.	FEES	SHEET	TOTAL
RECORD				16	16
REVISIONS					DATE



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. 476200 J/P NO. 24412109	SHEET NO. S016

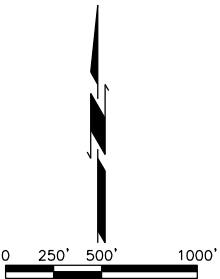
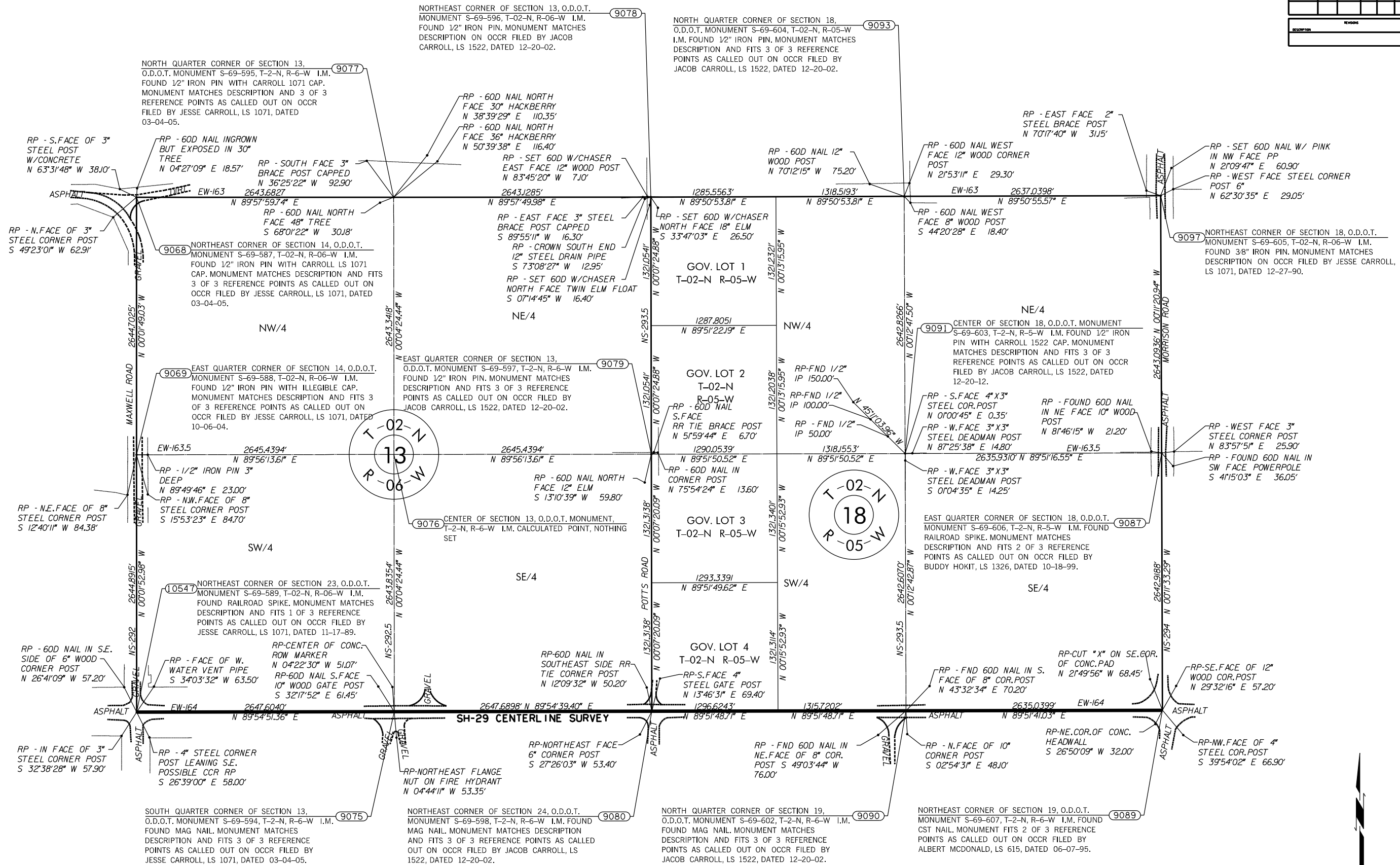
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

REVISIONS	
DESCRIPTION	DATE



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013	LAND TIE SHEET	
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>476200</u>	J/P NO. <u>2441209</u> SHEET NO. <u>S017</u>

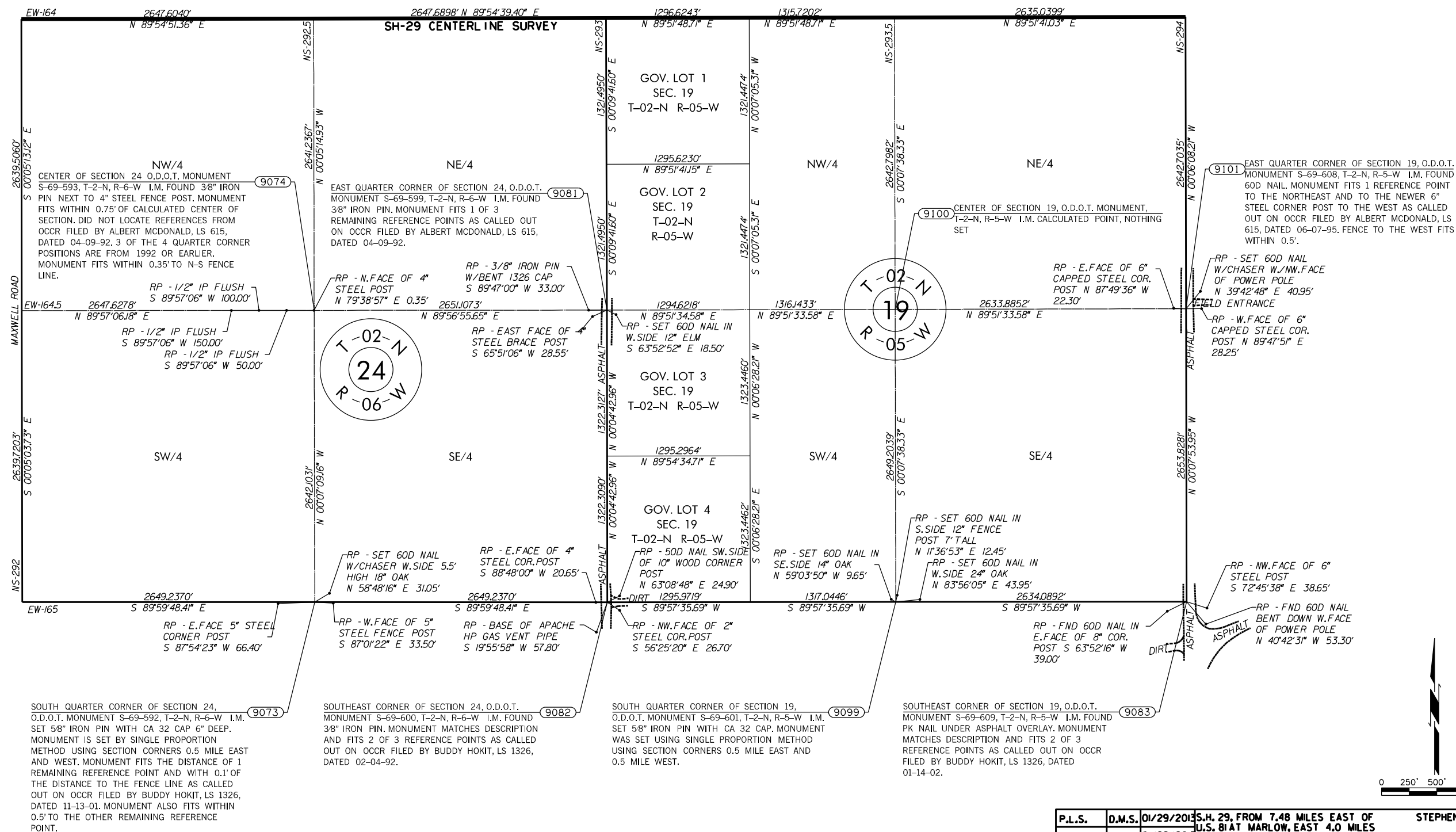
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. 476200 J/P NO. 24412109	SHEET NO. S018

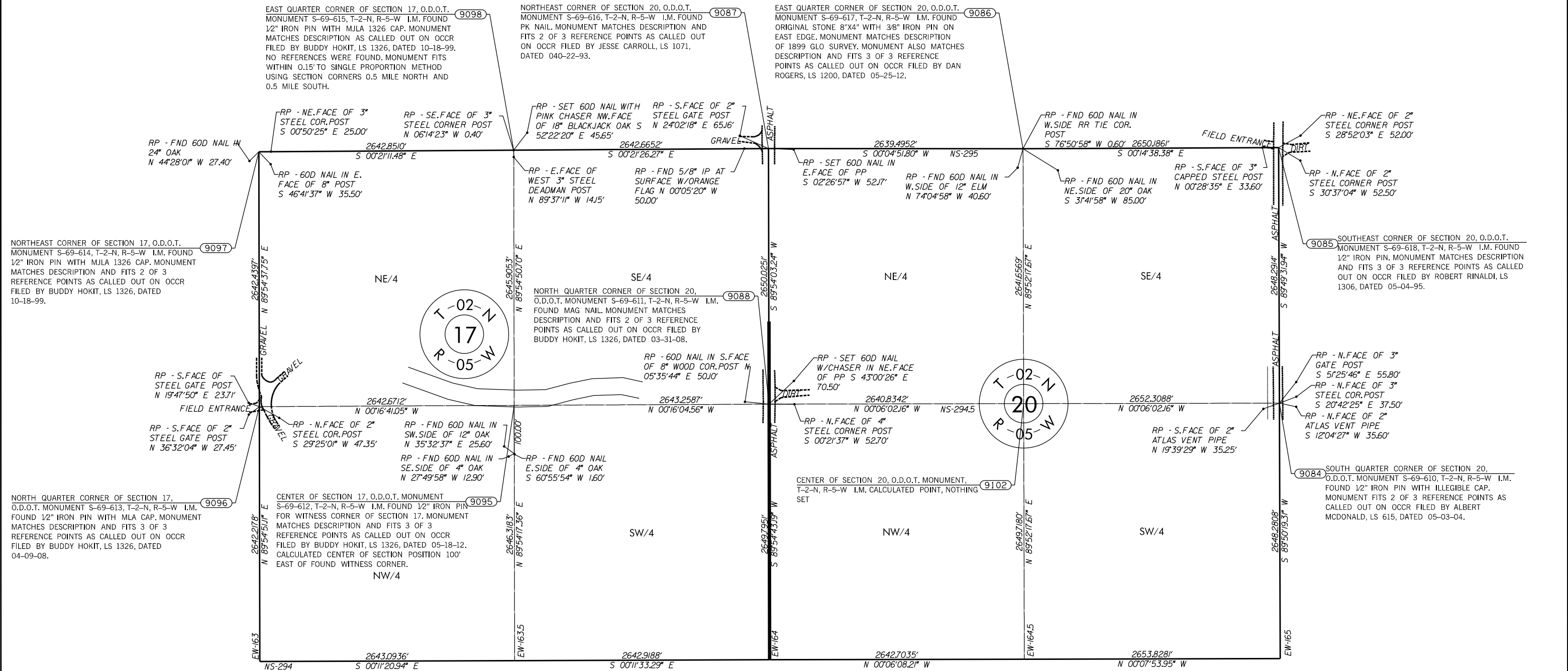
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS

REVISIONS	
DESCRIPTION	DATE



P.L.S.	D.M.S.	01/29/2013	S.H. 29. FROM 7.48 MILES EAST OF	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013	U.S. 81 AT MARLOW, EAST 4.0 MILES	
CHECKED	B.C.B.	01/29/2013	<h2 style="text-align: center;">LAND TIE SHEET</h2>	
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>4762(1)</u>	J/P NO. <u>24412(09)</u> SHEET NO. <u>S019</u>

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE



P.L.S.	D.M.S.	01/29/2013	S.H. 29, FROM 7.48 MILES EAST OF U.S. 81 AT MARLOW, EAST 4.0 MILES	STEPHENS COUNTY
DRAWN	J.E.M.	01/29/2013		
CHECKED	B.C.B.	01/29/2013		
APPROV.	D.M.S.	01/29/2013		
CREW CHIEF	B.C.B.		SWO NO. <u>4762(1)</u> J/P NO. <u>244(2)(9)</u> SHEET NO. <u>S020</u>	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE

CHECK LEVELS							S.H. 29, FROM 2.59 MILES EAST OF U.S. 91 AT MARLOW, EAST TO NS-290 (INCLUDES BRIDGE OVER CLEAR CREEK)		BENCHMARK LIST		NAVO 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.		ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION		BM DESCRIPTION, STA/OFFSET			
BM 154			2.495	2.497	2.496	2.496	1251.330	FOUND RE REBAR X 30", APPROX. 30' WEST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 15' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 154 ELEV. = 1251.33				
AT 7002			15.828	15.830	15.829	15.829	1253.826	1253.826	FOUND MAG NAIL WITH SHINER APPROX. 9' WEST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 50' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES TARGET 2 ELEV. = 1253.82			
BM 153			23.677	23.681	23.679	23.679	1269.655	1269.655	FOUND RE REBAR X 30", APPROX. 665' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 99' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 153 ELEV. = 1269.63			
BM 152			-2.599	-2.600	-2.599	-2.600	1293.334	1293.334	FOUND RE REBAR X 30", APPROX. 1303' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 81' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 152 ELEV. = 1293.33			
AT 7004			14.524	14.526	14.525	14.525	1290.7345	1290.735	FOUND MAG NAIL WITH SHINER APPROX. 1359' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 18' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES TARGET 4 ELEV. = 1290.73			
BM 151			-4.427	-4.429	-4.426	-4.427	1305.2595	1305.260	FOUND RE REBAR X 30", APPROX. 1905' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 80' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 151 ELEV. = 1305.25			
BM 150			-11.678	-11.668	-11.671	-11.672	1299.8330	1299.833	FOUND RE REBAR X 30", APPROX. 2054' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 79' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 150 ELEV. = 1299.82			
BM 149			-18.869	-18.866	-18.867	-18.868	1287.1615	1287.162	FOUND RE REBAR X 30", APPROX. 3303' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 80' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 149 ELEV. = 1287.16			
AT 7007			0.482	0.483	0.482	0.483	1276.2940	1276.294	FOUND MAG NAIL WITH SHINER APPROX. 4057' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 17' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES TARGET 7 ELEV. = 1276.29			
BM 148			-10.074	-10.073	-10.0735	-10.074	1276.7760	1276.776	FOUND RE REBAR X 30", APPROX. 4059' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 80' SOUTH FROM CENTER OF PAVEMENT (S.H. 29) - AERIAL DATA SERVICES BM 148 ELEV. = 1276.77			
BM 147			-26.730	-26.745	-26.7420	-26.742	1266.7025	1266.703	FOUND RE REBAR X 30" (S.H. 29) C.I. STA. 123+35.04 81.92 RT. - AERIAL DATA SERVICES BM 147 ELEV. = 1266.69			
BM 146			27.589	27.596	27.5925	27.593	1239.9605	1239.961	FOUND CHISELED SQUARE ON STRUCTURE STA. 124+30.10 51.77 RT. - AERIAL DATA SERVICES BM 146 ELEV. = 1239.96			

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CHECK LEVELS			SWO# 4703(1)		J/P 2441204(07)		BENCHMARKS LIST		NAVO 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION		BM DESCRIPTION, STA/OFF SET		
BM 145						1267.553	1267.553	FOUND RE REBAR X 30" 135+99.38 38.68 RT. - AERIAL DATA SERVICES BM 145 ELEV. = 1267.55		
AT 7010						1264.017	1264.017	FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 142+96.99 28.35 RT. - AERIAL DATA SERVICES TARGET 10 ELEV. = 1264.01		
BM 144						1266.783	1266.783	FOUND RE REBAR X 30" STA. 143+60.12 40.41 RT. - AERIAL DATA SERVICES BM 144 ELEV. = 1266.75		
BM 143						1236.293	1236.293	FOUND RE REBAR X 30" STA. 189+26.95 43.63 RT. - AERIAL DATA SERVICES BM 143 ELEV. = 1236.33		
BM 142						1210.999	1210.999	FOUND RE REBAR X 30" STA. 196+89.85 71.87 RT. - AERIAL DATA SERVICES BM 142 ELEV. = 1211.05		
BM 141						1232.063	1232.063	FOUND RE REBAR X 30" STA. 182+73.56 34.67 LT. - AERIAL DATA SERVICES BM 141 ELEV. = 1232.10		
BM 140						1239.347	1239.347	FOUND CHISELED SQUARE ON STRUCTURE STA. 169+30.39 18.71 RT. - AERIAL DATA SERVICES BM 140 ELEV. = 1239.38		
AT 7013						1241.485	1241.488	FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 189+90.79 25.40 LT. - AERIAL DATA SERVICES TARGET 13 ELEV. = 1241.52		
BM 139						1261.864	1261.864	FOUND CHISELED SQUARE ON STRUCTURE STA. 176+26.35 59.16 LT. - AERIAL DATA SERVICES BM 139 ELEV. = 1261.89		
BM 138						1262.656	1262.656	FOUND CHISELED SQUARE ON STRUCTURE STA. 182+28.59 30.97 RT. - AERIAL DATA SERVICES BM 138 ELEV. = 1262.68		
BM 137						1273.249	1273.249	FOUND RE REBAR X 30" STA. 184+69.10 57.91 LT. - AERIAL DATA SERVICES BM 137 ELEV. = 1273.27		
AT 7016						1282.826	1282.825	FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 195+86.38 44.15 RT. - AERIAL DATA SERVICES TARGET 16 ELEV. = 1282.85		
BM 136						1262.851	1262.851	FOUND RE REBAR X 30" STA. 185+91.96 44.40 RT. - AERIAL DATA SERVICES BM 136 ELEV. = 1262.86		
BM 135						1292.530	1292.531	FOUND RE REBAR X 30" STA. 204+03.86 27.87 RT. - AERIAL DATA SERVICES BM 135 ELEV. = 1292.56		
BM 134						1298.100	1298.100	FOUND RE REBAR X 30" STA. 209+55.43 48.27 RT. - AERIAL DATA SERVICES BM 134 ELEV. = 1298.12		
BM 133						1301.951	1301.951	FOUND RE REBAR X 30" STA. 218+79.38 44.33 RT. - AERIAL DATA SERVICES BM 133 ELEV. = 1301.97		

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CHECK LEVELS						SWO# 4703(1)		J/P 2441204(07)		BENCHMARKS LIST		NAVO 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STA/OFF SET						
BM 129	-5.427	-5.433	-5.430	-5.430			FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 222+35.63 29.27 RT. -AERIAL DATA SERVICES TARGET 19 ELEV. = 1296.54						
					1296.5210	1296.521							
AT 7019	-2.058	-2.058	-2.058	-2.058			SET RE IRON PIN WITH PLASTIC 'COBB CONTROL POINT' CAP STA. 224+95.33 41.70 RT.						
					1294.4630	1294.463							
BM 132	-6.625	-6.624	-6.6245	-6.625			FOUND RE REBAR X 30" STA. 227+88.60 45.75 RT. - AERIAL DATA SERVICES BM 131 ELEV. = 1293.86						
					1293.8385	1293.839							
BM 131	-6.604	-6.640	-6.6300	-6.634			FOUND CHISELED SQUARE ON STRUCTURE STA. 235+54.52 33.73 RT. - AERIAL DATA SERVICES BM 130 ELEV. = 1287.20						
					1287.2065	1287.207							
BM 130	-6.670	-6.666	-6.6620	-6.662			FOUND CHISELED SQUARE ON STRUCTURE STA. 241+56.11 24.72 RT. -AERIAL DATA SERVICES BM 129 ELEV. = 1278.55						
					1278.5245	1278.525							
BM 129	-6.253	-6.259	-6.2560	-6.256			FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 247+88.36 34.13 RT. -AERIAL DATA SERVICES TARGET 22 ELEV. = 1272.49						
					1272.2685	1272.269							
AT 7022	-0.090	-0.090	-0.0900	-0.090			FOUND CHISELED SQUARE ON STRUCTURE STA. 248+48.57 26.57 RT. -AERIAL DATA SERVICES BM 128 ELEV. = 1272.21						
					1272.1785	1272.179							
BM 128	-0.506	-0.505	-0.5055	-0.506			FOUND RE REBAR X 30" STA. 255+09.06 46.99 RT. -AERIAL DATA SERVICES BM 127 ELEV. = 1271.71						
					1271.6730	1271.673							
BM 127	-8.096	-8.094	-8.0950	-8.095			FOUND RE REBAR X 30" STA. 261+69.54 46.82 RT. - AERIAL DATA SERVICES BM 126 ELEV. = 1262.80						
					1262.7780	1262.778							
BM 126	-17.146	-17.144	-17.1450	-17.146			FOUND RE REBAR X 30" STA. 270+40.32 44.58 RT. -AERIAL DATA SERVICES BM 125 ELEV. = 1245.71						
					1245.6330	1245.633							
BM 125	-1.650	-1.642	-1.6460	-1.646			SET RE IRON PIN WITH PLASTIC 'COBB CONTROL POINT' CAP STA. 274+54.34 39.73 RT.						
					1243.7870	1243.787							
BM 124	-6.173	-6.178	-6.1745	-6.173			FOUND RE IRON PIN WITH 1-1/2" ALUM. CAP STA. 274+55.51 30.38 RT. -AERIAL DATA SERVICES TARGET 25 ELEV. = 1243.67						
					1243.6125	1243.613							
AT 7025	-3.370	-3.372	-3.3710	-3.371			FOUND CHISELED SQUARE ON STRUCTURE STA. 278+29.60 19.49 RT. -AERIAL DATA SERVICES BM 123 ELEV. = 1241.30						
					1241.2415	1241.242							
BM 123	2.633	2.632	2.6300	2.633			FOUND RE REBAR X 30" STA. 287+66.12 43.82 RT. - AERIAL DATA SERVICES BM 122 ELEV. = 1244.12						
					1244.0765	1244.077							
BM 122	-0.002	-0.004	-0.0030	-0.003			FOUND RE REBAR X 30" STA. 296+26.33 43.90 RT. - AERIAL DATA SERVICES BM 121 ELEV. = 1244.13						
					1244.0735	1244.074							
BM 121	-5.907	-5.907	-5.9070	-5.907									

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CHECK LEVELS						SWO# 4703(1) JIP 2441204(07)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION		BM DESCRIPTION, STA/OFF SET			
BM 120						1237.1665	1237.167	SET #5 IRON PIN WITH PLASTIC COORS CONTROL POINT CAP STA. 300+30.84 40.73 RT.			
BM 120	-0.613	-0.618	-0.6155	-0.616				FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 301+20.16 29.63 RT. - AERIAL DATA SERVICES TARGET 37 ELEV. = 1236.62			
AD T020	-3.838	-3.838	-3.838	-3.838		1236.5510	1236.551	FOUND #6 REBAR X 3/0" STA. 304+51.18 39.91 RT. - AERIAL DATA SERVICES BM 115 ELEV. = 1232.77			
BM 119	-14.512	-14.503	-14.5075	-14.507		1232.7130	1232.713	FOUND 800 NAIL IN TREE STA. 312+80.77 30.91 LT. - AERIAL DATA SERVICES BM 115 ELEV. = 1218.27			
BM 118	-37.850	-37.854	-37.8520	-37.853		1218.2060	1218.206	FOUND #6 REBAR X 3/0" STA. 319+43.29 27.37 RT. - AERIAL DATA SERVICES BM 117 ELEV. = 1180.44			
BM 117	-0.438	-0.441	-0.4395	-0.440		1180.3548	1180.354	FOUND 800 NAIL IN TREE STA. 326+78.17 44.99 LT. - AERIAL DATA SERVICES BM 115 ELEV. = 1180.03			
BM 116	1.688	1.689	1.6885	1.689		1179.9145	1179.915	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 327+09.14 21.94 RT. - AERIAL DATA SERVICES TARGET 38 ELEV. = 1181.69			
AD T031	9.5059	9.501	9.5030	9.503		1191.6303	1191.633	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 335+13.54 48.22 RT. - AERIAL DATA SERVICES BM 115 ELEV. = 1191.18			
BM 115	10.582	10.582	10.5820	10.582		1191.1060	1191.106	FOUND #6 REBAR X 3/0" STA. 340+78.41 44.99 RT. - AERIAL DATA SERVICES BM 114 ELEV. = 1201.77			
BM 114	16.399	16.399	16.3920	16.392		1201.6880	1201.688	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 353+48.82 36.91 RT. - AERIAL DATA SERVICES TARGET 38 ELEV. = 1229.65			
BM 113	11.509	11.510	11.5095	11.510		1218.0000	1218.000	FOUND #6 REBAR X 3/0" STA. 353+59.88 45.30 RT. - AERIAL DATA SERVICES BM 112 ELEV. = 1231.29			
AD T034	1.648	1.650	1.6490	1.649		1229.5895	1229.590	FOUND CHISELED SQUARE ON STRUCTURE STA. 363+15.01 22.45 RT. - AERIAL DATA SERVICES BM 111 ELEV. = 1240.92			
BM 112	9.609	9.602	9.6035	9.604		1231.2385	1231.239	FOUND CHISELED SQUARE ON STRUCTURE STA. 367+21.74 30.75 LT. - AERIAL DATA SERVICES BM 110 ELEV. = 1248.05			
BM 111	7.144	7.134	7.1390	7.139		1247.9810	1247.981	FOUND CHISELED SQUARE ON STRUCTURE STA. 374+57.43 17.70 RT. - AERIAL DATA SERVICES BM 109 ELEV. = 1265.92			
BM 110	17.973	17.978	17.9745	17.975		1265.9555	1265.956	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP STA. 381+20.54 27.87 RT. - AERIAL DATA SERVICES TARGET 37 ELEV. = 1270.19			
BM 109	4.182	4.182	4.1820	4.182		1270.1375	1270.138				
AD T037											

CHECK LEVELS		SWO# 4703(1)		J/P 2441204(07)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STAFF/SET		
BM 70	22.415	22.415	22.4150	22.415			BM DESCRIPTION, STAFF/SET		
AT 7052	-5.809	-5.809	-5.8090	-5.809	1242.8245	1242.825	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP, APPROX. 43.531' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 28' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES TARGET 55 ELEV. = 1242.85		
BM 88					1237.0155	1237.0155	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP APPROX. 43.607' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 39' SOUTH FROM CENTER OF PAVEMENT (S.H. 29)		
BM 87	-13.166	-13.163	-13.1645	-13.165	1223.8510	1223.851	FOUND #6 REBAR X 30", APPROX. 44.009' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 25' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 87 ELEV. = 1223.91		
BM 86	21.973	21.964	21.9685	21.969	1245.8195	1245.820	FOUND #6 REBAR X 30", APPROX. 44.096' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 46' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 86 ELEV. = 1245.84		
BM 85	-0.359	-0.366	-0.3635	-0.364	1245.4560	1245.456	FOUND #6 REBAR X 30", APPROX. 45.755' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 45' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 85 ELEV. = 1245.48		
BM 84	-8.797	-8.792	-8.7945	-8.795	1236.6615	1236.6615	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP APPROX. 46.186' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 43' SOUTH FROM CENTER OF PAVEMENT (S.H. 29)		
AT 7055	-14.796	-14.793	-14.7945	-14.796	1238.5170	1238.517	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP APPROX. 46.196' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 20' NORTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES TARGET 55 ELEV. = 1238.55		
BM 83	27.499	27.494	27.4965	27.497	1223.7225	1223.723	FOUND CHISELED SQUARE ON HEADWALL, APPROX. 46.537' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 54' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 83 ELEV. = 1223.76		
BM 82	23.360	23.361	23.3605	23.361	1251.2190	1251.219	FOUND CHISELED SQUARE ON HEADWALL, APPROX. 47.533' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 29' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 82 ELEV. = 1251.25		
CP 7401	0.773	0.774	0.7735	0.774	1274.5795	1274.580	2" BRASS CAP WITH FENO SPIKE, APPROX. 48.412' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 30' NORTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES CP 7401 ELEV. = 1274.60		
BM 81	-6.980	-6.980	-6.9800	-6.980	1275.3530	1275.353	FOUND #6 REBAR X 30" APPROX. 48.435' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 45' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 81 ELEV. = 1275.37		

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CHECK LEVELS			SWO# 4703(1)		J/P 2441204(07)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION	BM DESCRIPTION, STAFF/SET			
BM 70	22.415	22.415	22.4150	22.415						
AT 7052	-5.809	-5.809	-5.8090	-5.809	1242.8245	1242.825	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP, APPROX. 43.531' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 28' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES TARGET 55 ELEV. = 1242.85			
BM 88	-13.166	-13.163	-13.1645	-13.165	1237.0155	1237.0155	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP APPROX. 43.607' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 39' SOUTH FROM CENTER OF PAVEMENT (S.H. 29)			
BM 87	21.973	21.964	21.9685	21.969	1223.8510	1223.851	FOUND #6 REBAR X 30", APPROX. 44.009' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 25' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 87 ELEV. = 1223.91			
BM 86	-0.359	-0.366	-0.3635	-0.364	1245.8195	1245.820	FOUND #6 REBAR X 30", APPROX. 44.096' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 46' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 86 ELEV. = 1245.84			
BM 85	-8.797	-8.792	-8.7945	-8.795	1245.4560	1245.456	FOUND #6 REBAR X 30", APPROX. 45.755' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 45' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 85 ELEV. = 1245.48			
BM 84	1.858	1.853	1.8555	1.856	1236.6615	1236.6615	SET #5 IRON PIN WITH PLASTIC "COBB CONTROL POINT" CAP APPROX. 46.186' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 43' SOUTH FROM CENTER OF PAVEMENT (S.H. 29)			
AT 7055	-14.796	-14.793	-14.7945	-14.795	1238.5170	1238.517	FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP APPROX. 46.196' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 20' NORTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES TARGET 55 ELEV. = 1238.55			
BM 83	27.499	27.494	27.4965	27.497	1223.7225	1223.723	FOUND CHISELED SQUARE ON HEADWALL, APPROX. 46.537' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 54' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 83 ELEV. = 1223.76			
BM 82	23.360	23.361	23.3605	23.361	1251.2190	1251.219	FOUND CHISELED SQUARE ON HEADWALL, APPROX. 47.533' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 29' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 82 ELEV. = 1251.25			
CP 7401	0.773	0.774	0.7735	0.774	1274.5795	1274.580	2" BRASS CAP WITH FENO SPIKE, APPROX. 48.412' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 30' NORTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES CP 7401 ELEV. = 1274.60			
BM 81	-6.980	-6.980	-6.9800	-6.980	1275.3530	1275.353	FOUND #6 REBAR X 30" APPROX. 48.435' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 45' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 81 ELEV. = 1275.37			

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CHECK LEVELS					SWO# 4703(1)		J/P 2441204(07)		BENCHMARKS LIST		NAVD 88 DATUM	
BM NO.	RUN 1	RUN 2	MEAN DIFF.	ADJ. DIFF.	ADJ. ELEV.	PUBLISHED ELEVATION						
BM 71	16.620	16.625	16.6245	16.625		BM DESCRIPTION, STAFF/SET						
						FOUND #6 REBAR X 30", APPROX. 54.529' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 51' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 71 ELEV. = 1225.35						
BM 71	12.675	12.585	12.5780	12.578	1225.305	1225.306						
						FOUND #5 IRON PIN WITH 1-1/2" ALUM. CAP, APPROX. 50.439' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 30' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES TARGET 56 ELEV. = 1237.95						
AT 7056	1.840	1.839	1.8395	1.840	1237.8835	1237.884						
						FOUND #6 REBAR X 30", APPROX. 55.406' EAST OF NS 284 SEC. LINE (PLAINSMAN RD.) AND APPROX. 52' SOUTH FROM CENTER OF PAVEMENT (S.H. 29). * AERIAL DATA SERVICES BM 70 ELEV. = 1239.76						
BM 70					1239.7230	1239.723						

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SWO 4703(1) STATE JOB NO. 12008(01)
S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290

Node ID	Northing	Easting	Node ID	Northing	Easting
106	474779.25958047	2020658.03381711	5008	469518.67182322	1994311.22595464
107	474771.23368047	2019858.61331712	5009	472141.86649368	1994272.97808967
108	474767.51752000	2019433.81668000	5010	472141.82765562	1994305.97823621
109	474792.18058047	2019005.33351712	5011	473051.76908151	1994304.13359160
110	474840.48618046	2018022.50091712	5012	473260.46908151	1994303.71051235
111	474787.23018047	2017615.77811713	5013	472618.52442053	1994268.76936765
112	474764.24058048	2016660.64841713	5014	477438.35980184	1994269.94647820
113	474769.32808047	2016047.55881713	5015	477438.34930620	1994302.94653759
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115	474763.40108046	2014813.88551713	5017	480061.44313625	1994298.73506617
116	474871.81098045	2013940.86411714	5018	480063.98176020	1991635.26167120
117	474793.84978047	2013244.68301713	5019	480060.87633218	1996940.31667794
118	474842.20198045	2012581.36951714	5020	469525.44539019	1996935.41070512
119	474777.89848045	2011752.27571714	5021	469531.34455961	1995994.38248384
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122	474762.31338046	2010067.19891715	5024	472158.64125985	1999586.48764357
123	474786.81988045	2009130.68191715	5025	473480.44624541	2009310.68191715
124	474766.66177000	2008755.41696000	5026	477439.32150236	1999593.50653241
125	474761.87728045	2008381.40121715	5027	477439.24025411	1998560.50563588
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127	474759.78058043	2006810.16191716	5029	480060.56255223	1999606.26591776
128	474780.39378042	2006149.64841716	5030	480076.66798443	2002232.59662542
129	474782.33728045	2005407.19321715	5031	469544.01428865	2002219.79399504
130	474773.42548045	2004855.63601716	5032	469556.59882920	2004877.94091491
131	474760.71218045	2004089.73211715	5033	469556.59757883	2004844.94084178
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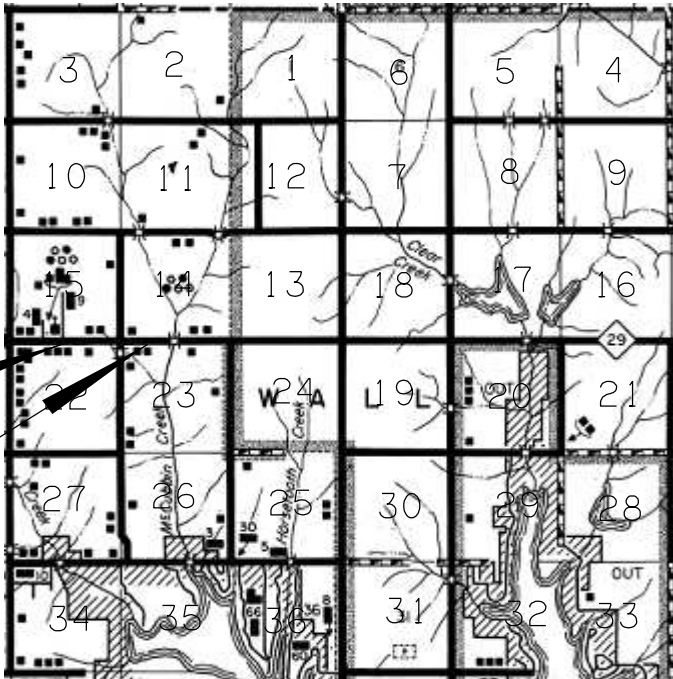
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10523 474807.02666562 2012295.40777008
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10525 474817.07614800 2014500.83128400
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10527 474809.35137152 2015399.06249615
10528 474809.48292300 2016300.75793000
10529 474809.62154200 2017250.75792000
10530 474809.73866600 2018053.30789400
10531 474809.84041600 2018750.76478500
10532 474809.98633100 2019750.76477500
10533 474810.12073419 2020671.73474764
10534 474814.41544810 2012791.37717873

CONTROL MAP



(CP #1)
BM #151
S-69-526

(CP #2)
AT #10
S-69-527

STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS
SURVEY DIVISION

S.D. FORM NO. 11
REVISED 3/10/75

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY STEPHENS STATION NUMBER S-69-526 S.W. 470311 DATE 10/06/11

TYPE OF MONUMENT 3/4" REBAR 30" MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERSE, OTHER (SPECIFY) _____

COORDINATES WERE DERIVED FROM STATIC GPS OBSERVATIONS AND ADJUSTED USING LEICA GEO OFFICE ON BM 151 &

TARGET 1 ELEVATIONS TAKEN FROM NGS BM W 211 AND RAN THRU EXTENTS OF SURVEY AND TIED TO NGS BM Q 211

HEIGHT OF INSTRUMENT ABOVE MONUMENT: _____ FEET, TYPE OF WITNESS POST _____

WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 1902' EAST OF NS-284 (PLAINSMAN RD) AND APPROXIMATELY 60' SOUTH OF THE SOUTH EDGE OF ROADWAY OF STATE HIGHWAY 29.

ESTABLISHED BY: DARREN M. SMITH, RPLS

COORDINATE SYSTEM:	<input type="checkbox"/> USCGS,	<input type="checkbox"/> OHD,	<input checked="" type="checkbox"/> OTHER (SPECIFY) _____	OK STATE PLANE (NAD 83)
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE	POINTS OBSERVED
SOUTH ZONE	X <u>199095.8411</u>	NORTH	60'	RP 1 - S. EDGE OF SH. 29
ACCURACY:	Y <u>474716.9029</u>	SOUTH	6'	RP 2 - N. EDGE OF FENCELINE
SRO ORDER		WEST	92'	RP 3 - E. EDGE OF DRIVE
GEODETIC DATA:	POSITION	ELEVATION		
ANGLE OF VARIANCE (B)	LATITUDE <u>N34°38'59.2930046"</u> NORTH	<u>1305.26'</u>	SOURCE: <u>NAD88</u>	
<u>0702°32'43.5648"</u>	LONGITUDE <u>W97°53'31.964265"</u> WEST	ACCURACY: <u>SRO</u>		

GENERAL VICINITY: SEC. 22 R. 07 W. T. 02 N. 02

DETAIL SKETCH: STATE HIGHWAY 29, GRAVEL DRIVE, BARB WIRE FENCE, RP #1, RP #2, RP #3

△ = CONTROL MONUMENT
○ = LAND CORNER
□ = OTHER

STATE OF OKLAHOMA
DEPARTMENT OF HIGHWAYS
SURVEY DIVISION

S.D. FORM NO. 11
REVISED 3/10/75

POSITION AND DESCRIPTION OF SURVEY MONUMENTS

COUNTY STEPHENS STATION NUMBER S-69-527 S.W. 470311 DATE 10/06/11

TYPE OF MONUMENT 5/8" IRON PIN W/ 1 1/2" ALUM. CAP MONUMENT SET FOR GPS CONTROL

METHOD ESTABLISHED: TRILATERATION, TRIANGULATION, TRAVERSE, OTHER (SPECIFY) _____

COORDINATES WERE DERIVED FROM STATIC GPS OBSERVATIONS AND ADJUSTED USING LEICA GEO OFFICE ON BM 151 &

TARGET 1 ELEVATIONS TAKEN FROM NGS BM W 211 AND RAN THRU EXTENTS OF SURVEY AND TIED TO NGS BM Q 211

HEIGHT OF INSTRUMENT ABOVE MONUMENT: _____ FEET, TYPE OF WITNESS POST _____

WRITTEN DESCRIPTION OF LOCATION: APPROXIMATELY 1.313' EAST OF NS-285 (SCOTT RD) AND APPROXIMATELY 17' SOUTH OF SOUTH EDGE OF ROADWAY OF STATE HIGHWAY 29.

ESTABLISHED BY: DARREN M. SMITH, RPLS

COORDINATE SYSTEM:	<input type="checkbox"/> USCGS,	<input type="checkbox"/> OHD,	<input checked="" type="checkbox"/> OTHER (SPECIFY) _____	OK STATE PLANE (NAD 83)
GRID DATA:	COORDINATES (FEET)	GRID BEARING	DISTANCE	POINTS OBSERVED
SOUTH ZONE	X <u>1995597.001</u>	NORTH	17'	RP 1 - S. EDGE OF SH. 29
ACCURACY:	Y <u>474711.2420</u>	SOUTHEAST	20'	RP 2 - 4" STEEL CORNER POST
SRO ORDER		SOUTH	21'	RP 3 - POWER POLE
GEODETIC DATA:	POSITION	ELEVATION		
ANGLE OF VARIANCE (B)	LATITUDE <u>N34°38'46.43629652"</u> NORTH	<u>1265.78'</u>	SOURCE: <u>NAD88</u>	
<u>0703°04'08.0826"</u>	LONGITUDE <u>W97°54'35.694726"</u> WEST	ACCURACY: <u>SRO</u>		

GENERAL VICINITY: SEC. 23 R. 07 W. T. 02 N. 02

DETAIL SKETCH: STATE HIGHWAY 29, BARB WIRE FENCE, POWER POLE, RP #1, RP #2, RP #3

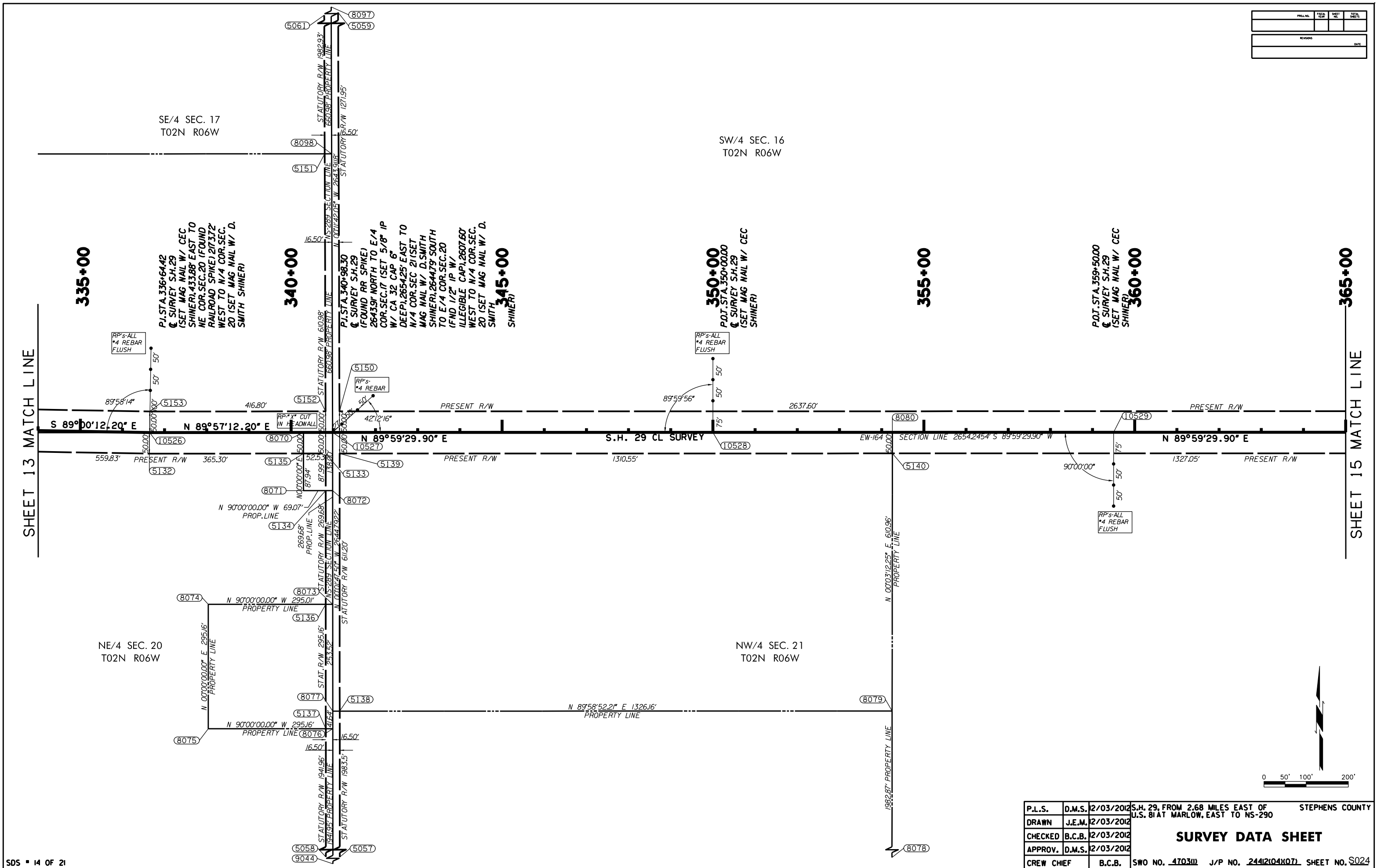
△ = CONTROL MONUMENT
○ = LAND CORNER
□ = OTHER

P.L.S.	D.M.S.	2/03/2012	S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290	STEPHENS COUNTY
DRAWN	J.E.M.	2/03/2012		
CHECKED	B.C.B.	2/03/2012		
APPROV.	D.M.S.	2/03/2012		
CREW CHIEF	B.C.B.			

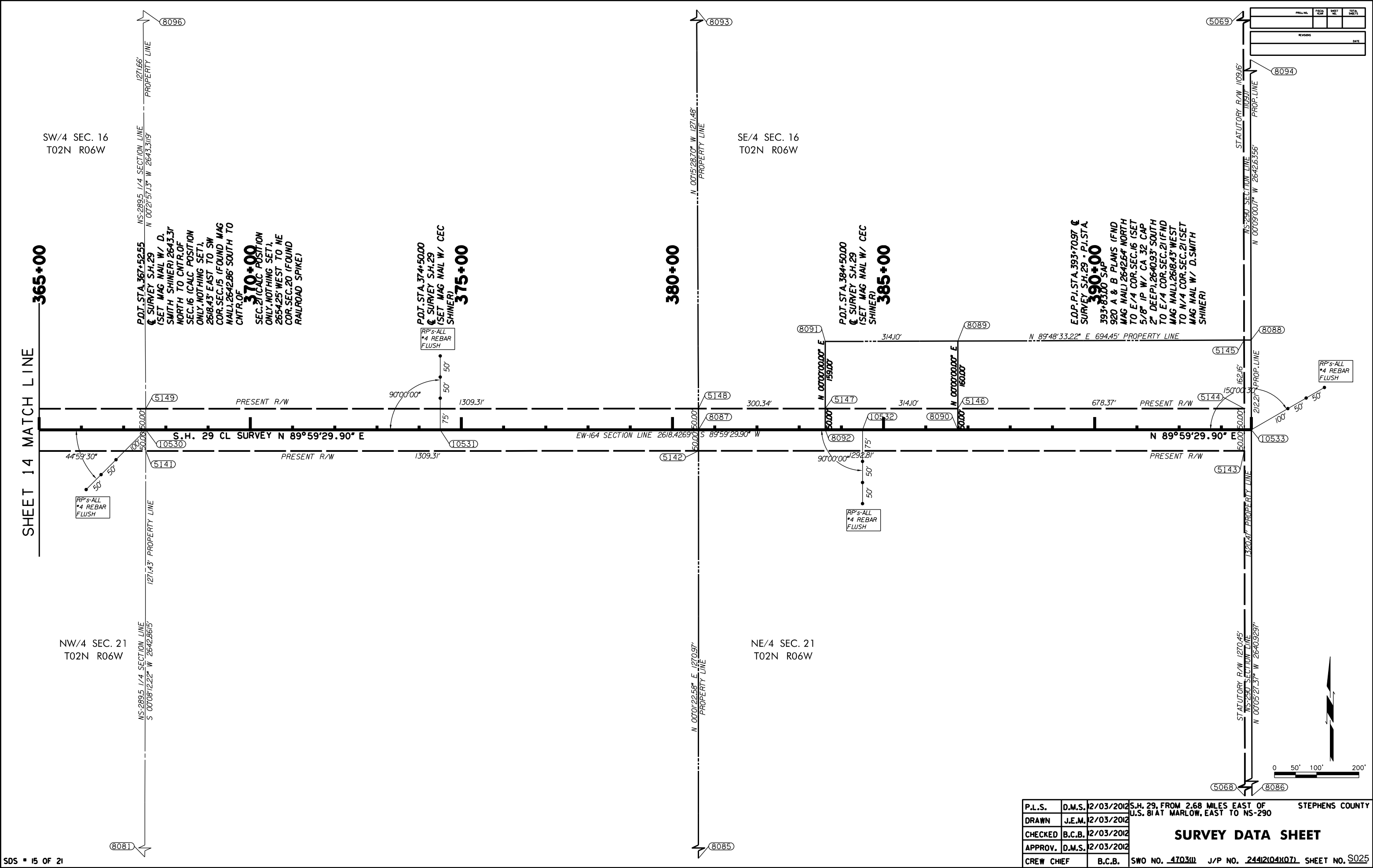
COGO POINTS, CONTROL MAP & INFORMATION

S.W. NO. 470311 J/P NO. 244121041071 SHEET NO. S023

PROJ. NO.	FEED. YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS			DATE

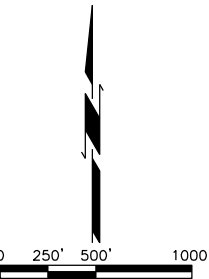
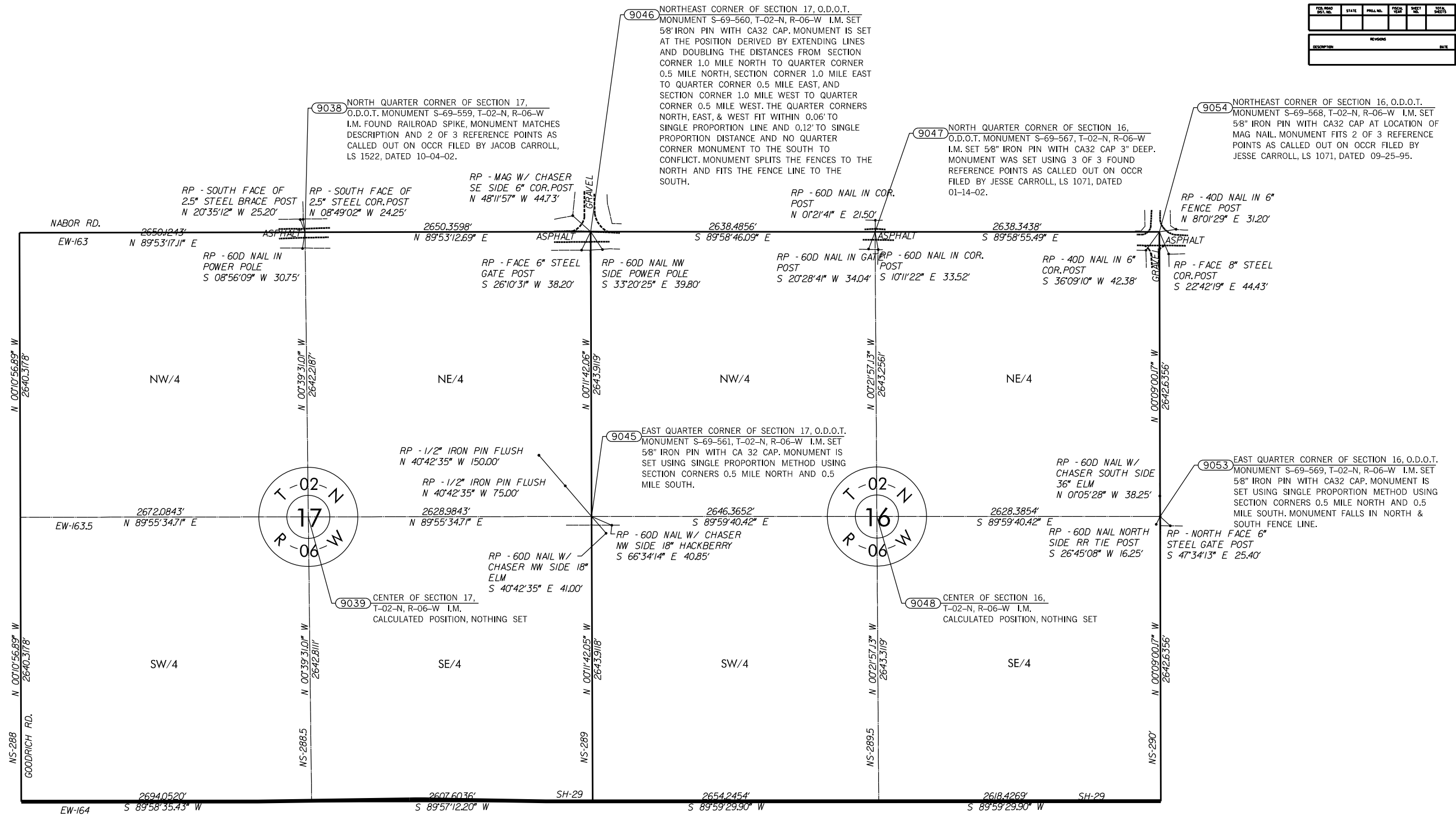


P.L.S.	D.M.S.	2/03/2012	S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290	STEPHENS COUNTY
DRAWN	J.E.M.	2/03/2012		
CHECKED	B.C.B.	2/03/2012		
APPROV.	D.M.S.	2/03/2012		
CREW CHIEF	B.C.B.		SWO NO. <u>470311</u>	J/P NO. <u>244121041071</u> SHEET NO. <u>S024</u>



P.L.S.	D.M.S.	2/03/2012	S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290	STEPHENS COUNTY
DRAWN	J.E.M.	2/03/2012		
CHECKED	B.C.B.	2/03/2012		
APPROV.	D.M.S.	2/03/2012		
CREW CHIEF	B.C.B.		SWO NO. 470311	J/P NO. 244121041071 SHEET NO. S025

PER. ROAD DIST. NO.	STATE	PROJ. NO.	PROJ. YEAR	SHEET NO.	TOTAL SHEETS
REVISIONS					DATE



P.L.S.	D.M.S.	2/03/2012	S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290	STEPHENS COUNTY
DRAWN	J.E.M.	2/03/2012	LAND TIE SHEET	
CHECKED	B.C.B.	2/03/2012		
APPROV.	D.M.S.	2/03/2012		
CREW CHIEF	B.C.B.		SWO NO. 4703(1)	J/P NO. 24412(104)(07) SHEET NO. S026

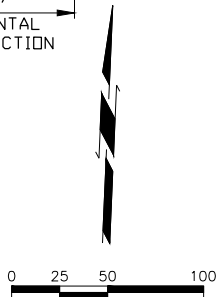
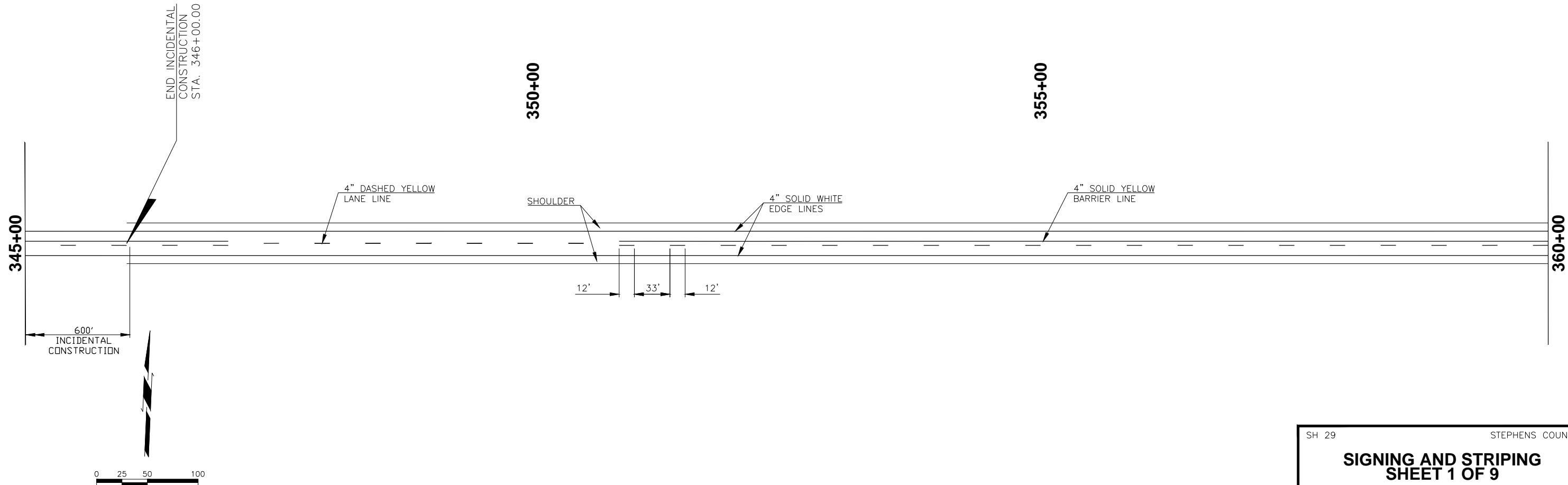
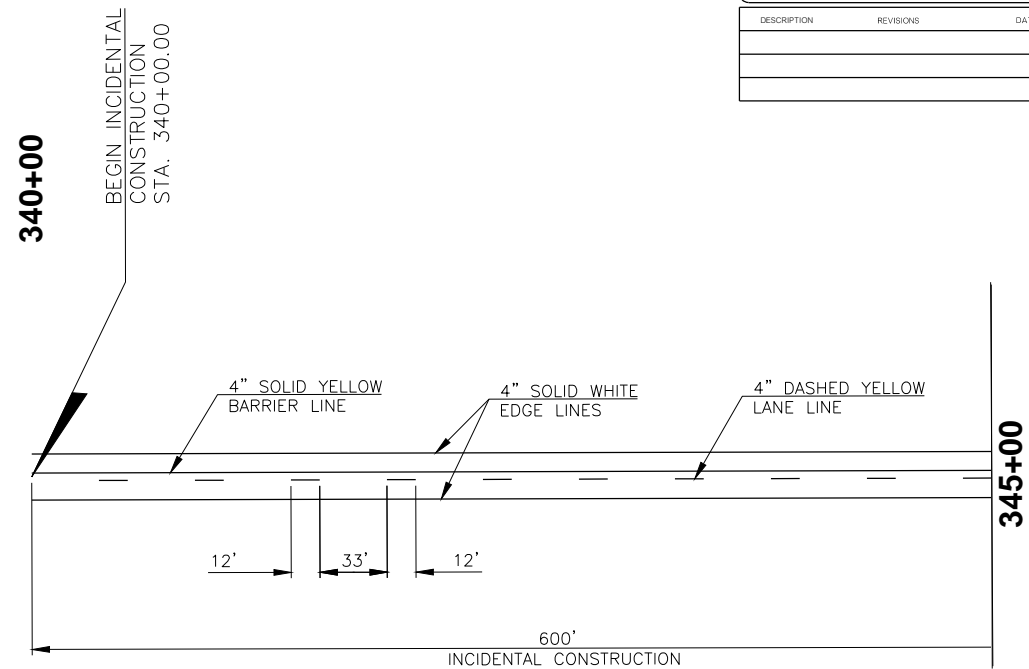
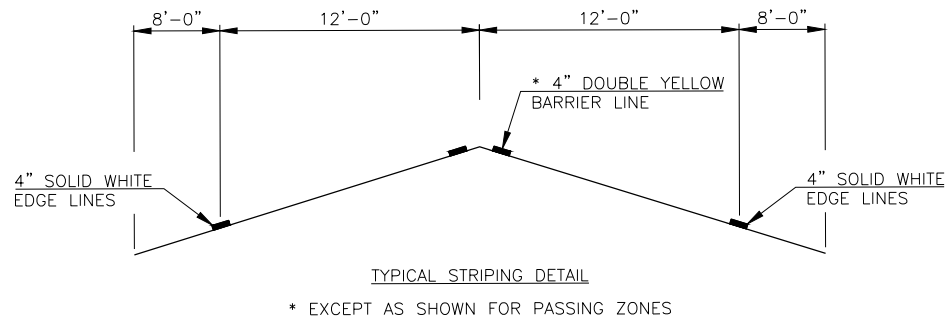
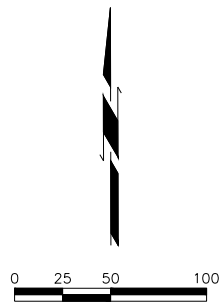
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P.L.S.	D.M.S.	2/03/2012	S.H. 29, FROM 2.68 MILES EAST OF U.S. 81 AT MARLOW, EAST TO NS-290	STEPHENS COUNTY
DRAWN	J.E.M.	2/03/2012		
CHECKED	B.C.B.	2/03/2012	LAND TIE SHEET	
APPROV.	D.M.S.	2/03/2012		
CREW CHIEF	B.C.B.	SWO NO. <u>4703(II)</u>	J/P NO. <u>244I(2I04K07)</u>	SHEET NO. <u>S027</u>

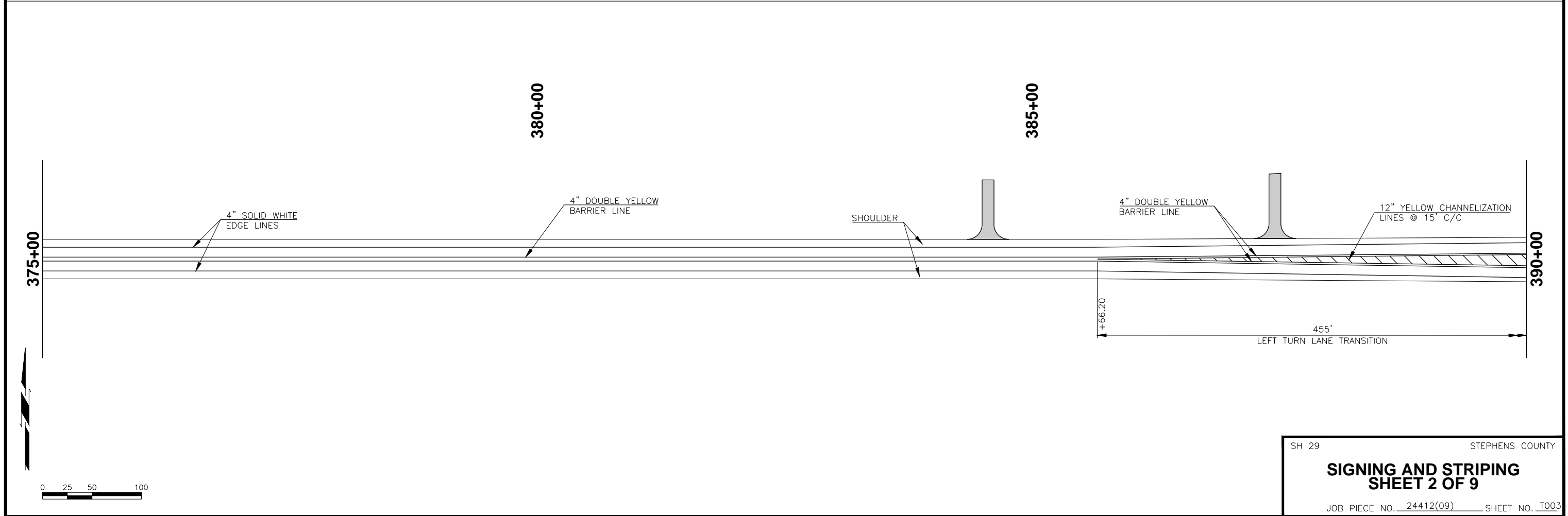
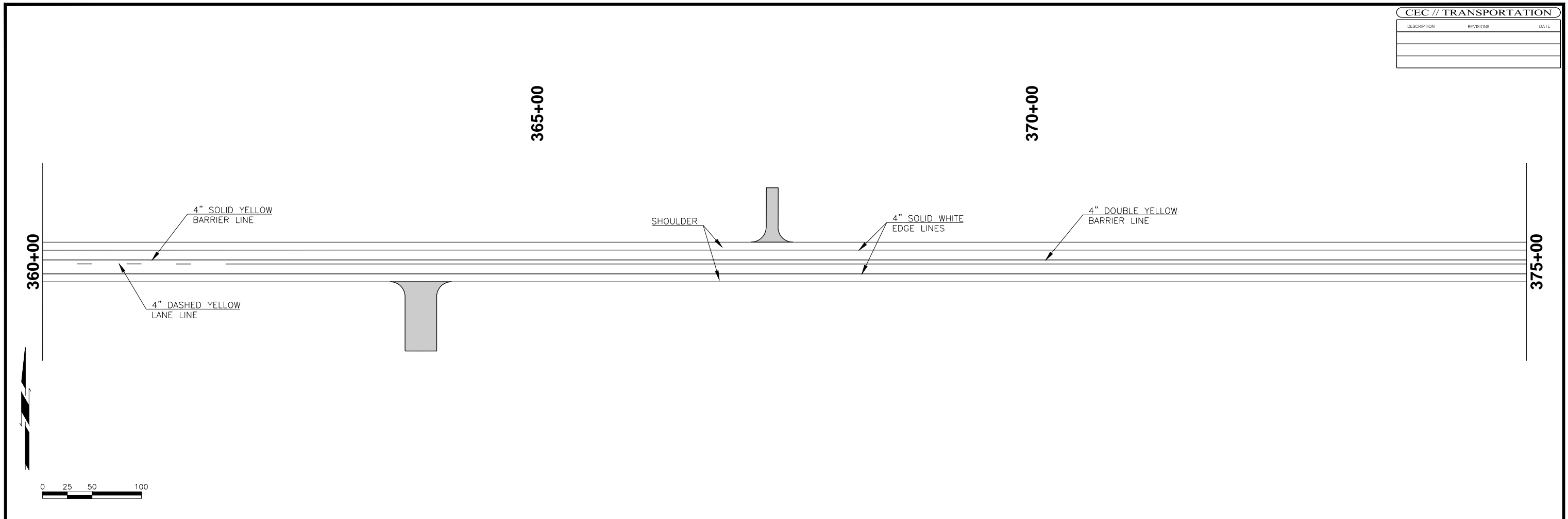
SUMMARY OF PAVEMENT MARKING								
SHT. NO.	STATION TO STATION			TRAFFIC STRIPE (PLASTIC) (4" WIDE) 855(A)	TRAFFIC STRIPE (PLASTIC) (4" WIDE) 855(A)	TRAFFIC STRIPE (PLASTIC) (8" WIDE) 855(A)	TRAFFIC STRIPE (PLASTIC) (12" WIDE) 855(A)	TRAFFIC STRIPE (PLASTIC) (12" WIDE) 855(A)
				WHITE	YELLOW	WHITE	WHITE	YELLOW
				L.F.	L.F.	L.F.	L.F.	L.F.
T002	340+00	TO	360+00	4,000	2,149			0
T003	360+00	TO	390+00	6,000	6,733			239
T004	390+00	TO	420+00	6,112	8,107			608
T005	420+00	TO	450+00	5,987	7,190			594
T006	450+00	TO	480+00	6,000	5,054			252
T007	480+00	TO	510+00	5,756	5,089			0
T008	510+00	TO	540+00	6,000	6,000			0
T009	540+00	TO	570+00	5,745	5,745			0
T010	570+00	TO	591+60	3,864	4,320	912	785	0
			TOTAL	49,464	50,387	912	785	1,693

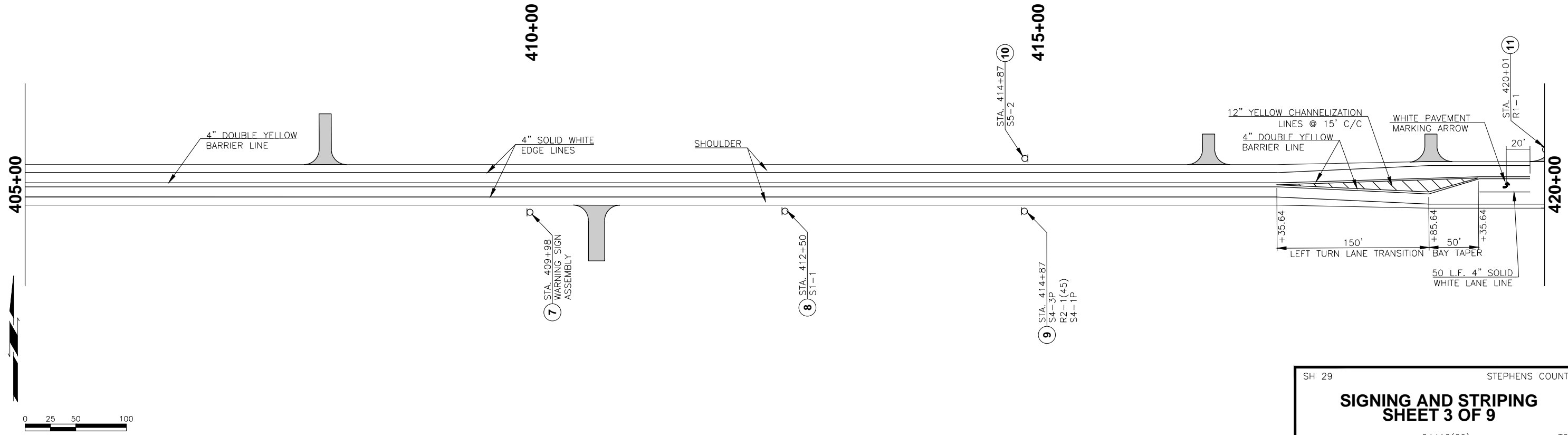
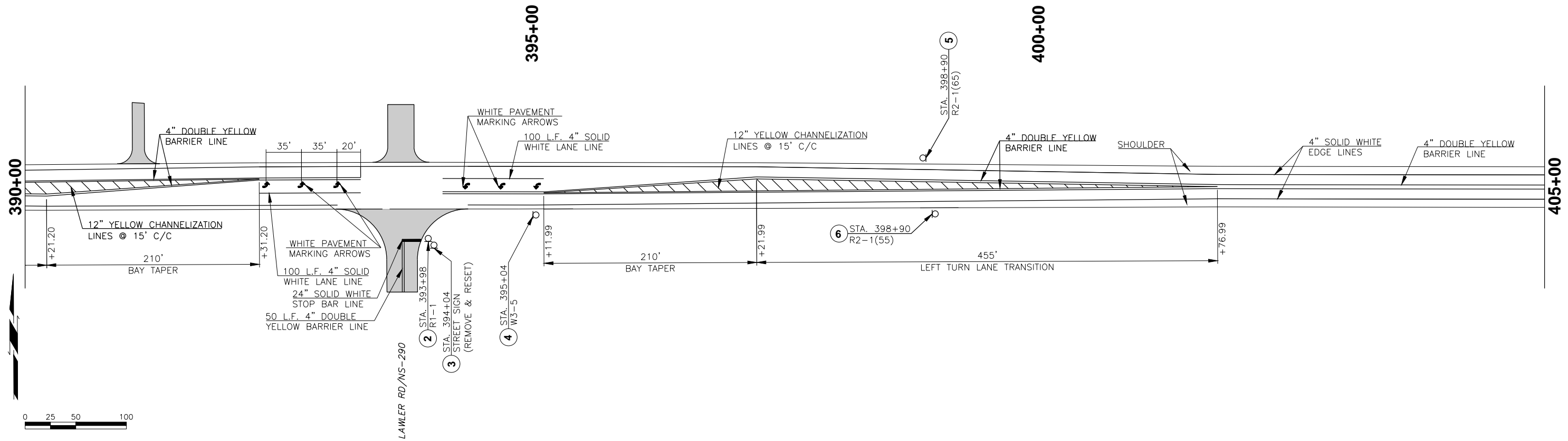
SUMMARY OF SIGNS												
SHEET NO.	APPROX STATION LOCATION	SIGN NO.	TYPE OF SIGN	DESCRIPTION	SIGN AREA 850(A)	BASE LENGTHS			REMOVAL OF EXISTING SIGNS 805(A)	REMOVE & RESET EXISTING SIGNS 805(D)	REGULATORY OR WARNING SIGN ASSEMBLY 836	BARRICADES (TYPE III) 880(C)
						2" SQ. TUBE		POST SPACE				
						A	B					
					S.F.	FT.	FT.	FT.	EA.	EA.	EA.	EA.
T004	393+45	1		DELETED								
T004	393+98, 52' RT.	2	R1-1	STOP SIGN	5.18	12			1			
T004	394+04, 59' RT.	3		STREET SIGN						1		
T004	395+04, 28' RT.	4	W3-5(55)	SPEED REDUCTION	9.00	13			1			
T004	398+86, 28' LT.	5	R2-1(65)	SPEED LIMIT 65 MPH	5.00	13			1			
T004	398+90, 28' RT.	6	R2-1(55)	SPEED LIMIT 55 MPH	5.00	13			1			
T004	409+98, 28' RT.	7	W2-1 W13-1P(45)	WARNING SIGN ASSEMBLY (CROSS ROAD W/ 45 MPH ADVISORY SPEED)					1		1	
T004	412+50, 28' RT.	8	S1-1	SCHOOL CROSSING	6.75	13			1			
T004	414+87, 28' RT.	9	S4-3P R2-1(45) S4-1P	SCHOOL SPEED LIMIT SCHOOL ZONE TIME	1.33 5.00 1.67	14			1			
T004	414+87, 28' RT.	10	S5-2	END SCHOOL ZONE	5.00	13			1			
T005	420+01, 35' LT.	11	R1-1	STOP SIGN	5.18	12			1			
T005	420+58, 36' RT.	12	R1-1	STOP SIGN	5.18	12			1			
T005	420+61, 51' RT.	13		STREET SIGN						1		
T005	421+51, 31' RT.	14		NO PARKING ON RIGHT OF WAY					1			
T005	421+52, 24' LT.	15		NO PARKING ON RIGHT OF WAY					1			
T005	423+08, 26' LT.	16		NO PARKING ON RIGHT OF WAY					1			
T005	424+87, 25' LT.	17		NO PARKING ON RIGHT OF WAY					1			
T005	426+35, 28' LT.	18	S4-3P R2-1(45) S4-1P	SCHOOL SPEED LIMIT SCHOOL ZONE TIME	1.33 5.00 1.67	14			1			
T005	430+10, 28' LT.	19	S1-1	SCHOOL CROSSING	6.75	13			1			
T005	434+68, 28' LT.	20	W2-1 W13-1P(45)	WARNING SIGN ASSEMBLY (CROSS ROAD W/ 45 MPH ADVISORY SPEED)					1		1	
T005	438+23, 28' RT.	21	R2-1(65)	SPEED LIMIT 65 MPH	5.00	13			1			
T005	438+23, 28' LT.	22	R2-1(55)	SPEED LIMIT 55 MPH	5.00	13			1			
T005	446+37, 51' LT.	23	R1-1	STOP SIGN	5.18	12			1			
T005	446+92, 49' RT.	24	R1-1	STOP SIGN	5.18	12			1			
T005	446+96, 50' RT.	25		STREET SIGN						1		
T005	446+98, 45' LT.	26		STREET SIGN						1		
T005	447+02, 41' RT.	27		DUNCAN LAKE						1		
T006	450+15, 31' LT.	28	W3-5(55)	ADVISORY SPEED 55 MPH	9.00	13			1			
T007	489+35, 28' RT.	29	W2-1	CROSS ROAD	6.25	13			1			
T007	499+18, 49' LT.	30	R1-1	STOP SIGN	5.18	12			1			
T007	499+63, 46' RT.	31	R1-1	STOP SIGN	5.18	12			1			
T007	499+67, 59' RT.	32		STREET SIGN						1		
T007	509+67, 28' LT.	33	W2-1	CROSS ROAD	6.25	13			1			
T009	552+66, 44' RT.	34	R1-1	STOP SIGN	5.18	12			1			
T009	552+71, 56' RT.	35		STREET SIGN						1		
T010	570+10, 28' RT.	36	W1-4(R)	RIGHT REVERSE CURVE	6.25	13						
T010	570+73, 28' LT.	37	S3-1	SCHOOL BUS STOP AHEAD	6.25	13			1			
T010	575+74, 28' RT.	38	S3-1	SCHOOL BUS STOP AHEAD	6.25	13			1			
T010	581+25, 30' LT.	40	R11-2	TYPE III BARRICADES W/ ROAD CLOSED SIGN	10.00							3
T010	581+25, 52' LT.	41	R11-2	TYPE III BARRICADES W/ ROAD CLOSED SIGN	10.00							3
T010	593+50, 28' LT.	39	W1-4(R)	RIGHT REVERSE CURVE	6.25	13						
	</											

DESCRIPTION	REVISIONS	DATE

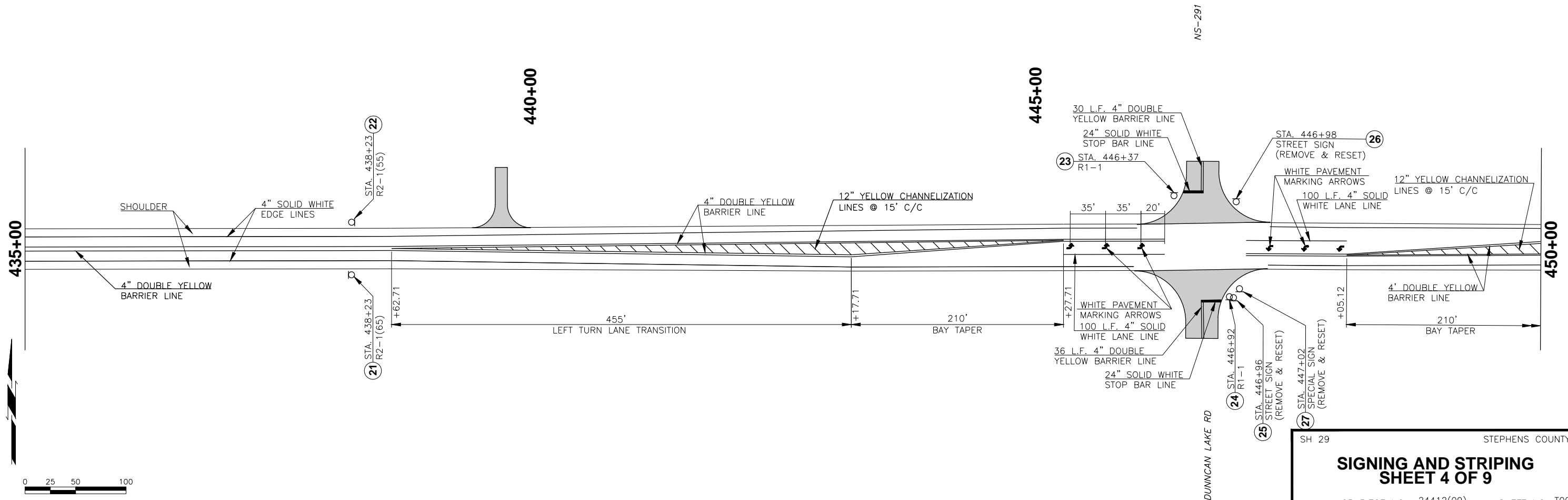
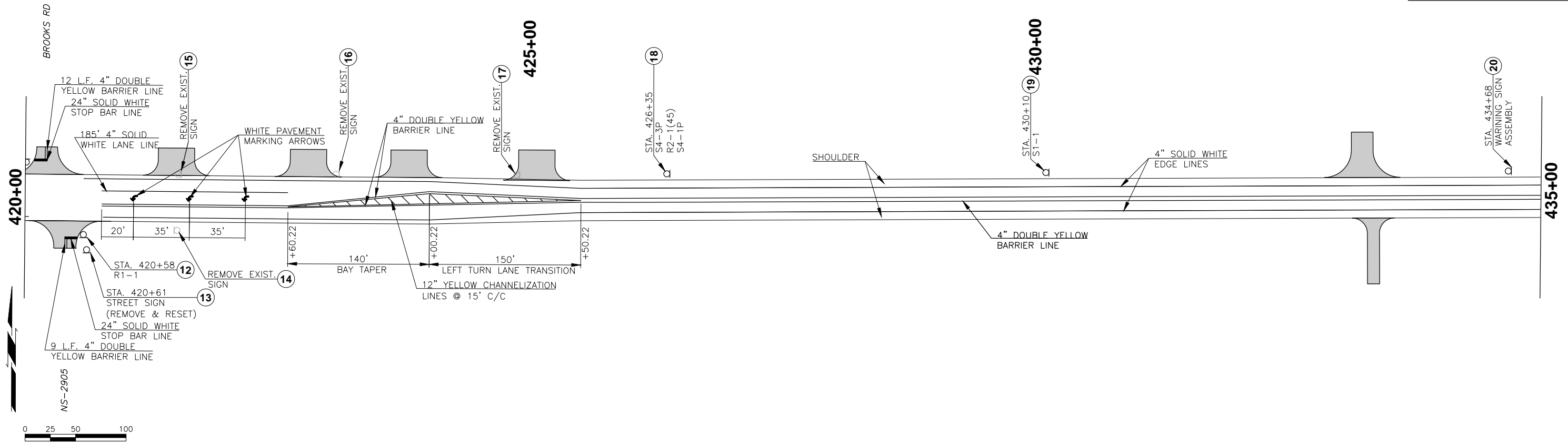


DESCRIPTION	REVISIONS	DATE

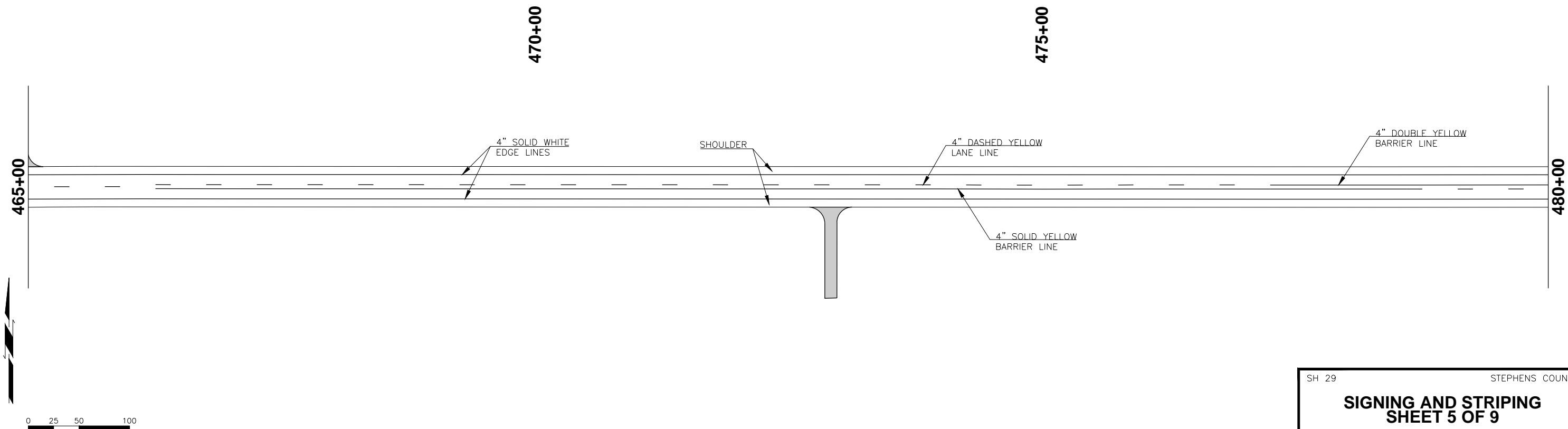
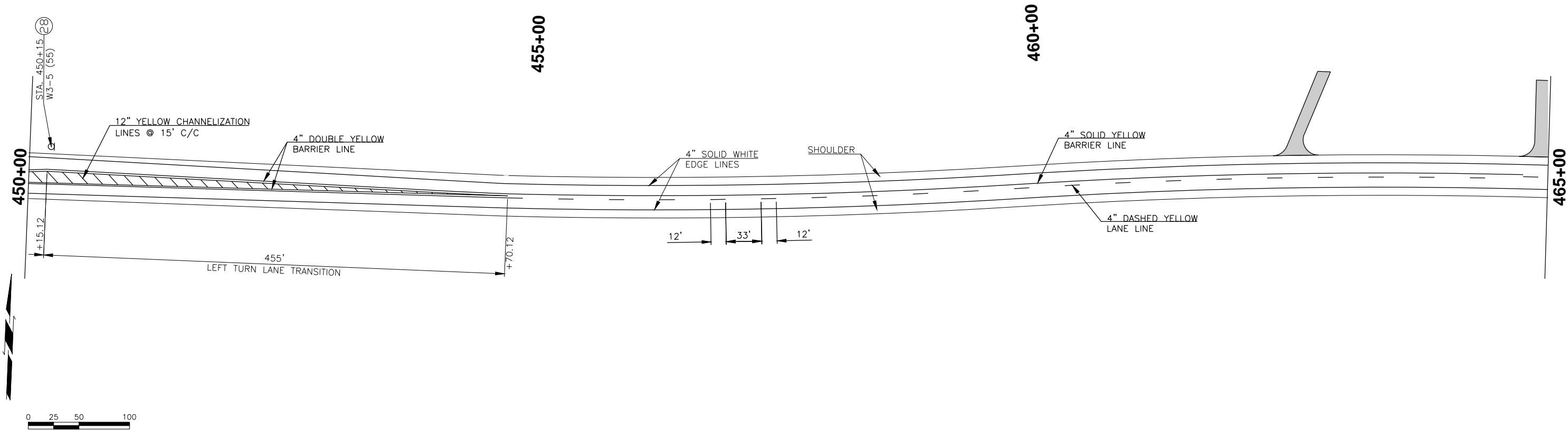




DESCRIPTION	REVISIONS	DATE



DESCRIPTION	REVISIONS	DATE



SH 29 STEPHENS COUNTY

**SIGNING AND STRIPING
SHEET 5 OF 9**

JOB PIECE NO. 24412(09) SHEET NO. T006

485+00

490+00

480+00

495+00

4" SOLID YELLOW
BARRIER LINE

4" SOLID WHITE
EDGE LINES

SHOULDER

4" DASHED YELLOW
LANE LINE

4" DOUBLE YELLOW
BARRIER LINE

29 STA. 489+35
W2-1

0 25 50 100

NS-292

500+00

505+00

495+00

510+00

24" SOLID WHITE
STOP BAR LINE
30 STA. 499+18
R1-1

28 L.F. 4" DOUBLE
YELLOW BARRIER LINE

4" DASHED YELLOW
LANE LINE

SHOULDER

4" DOUBLE YELLOW
BARRIER LINE

4" SOLID WHITE
EDGE LINES

33 STA. 509+67
W2-1

4" SOLID YELLOW
BARRIER LINE

24" SOLID WHITE
STOP BAR LINE
66 L.F. 4" DOUBLE
YELLOW BARRIER LINE

STA. 499+63
R1-1 31

STA. 499+67
STREET SIGN
(REMOVE & RESET) 32

MAXWELL RD

0 25 50 100

SH 29

STEPHENS COUNTY

SIGNING AND STRIPING
SHEET 6 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T007

DESCRIPTION	REVISIONS	DATE

515+00

520+00

510+00

525+00

4" SOLID WHITE
EDGE LINES

SHOULDER

4" DOUBLE YELLOW
BARRIER LINE

0 25 50 100

530+00

535+00

525+00

540+00

4" SOLID WHITE
EDGE LINES

SHOULDER

4" DOUBLE YELLOW
BARRIER LINE

0 25 50 100

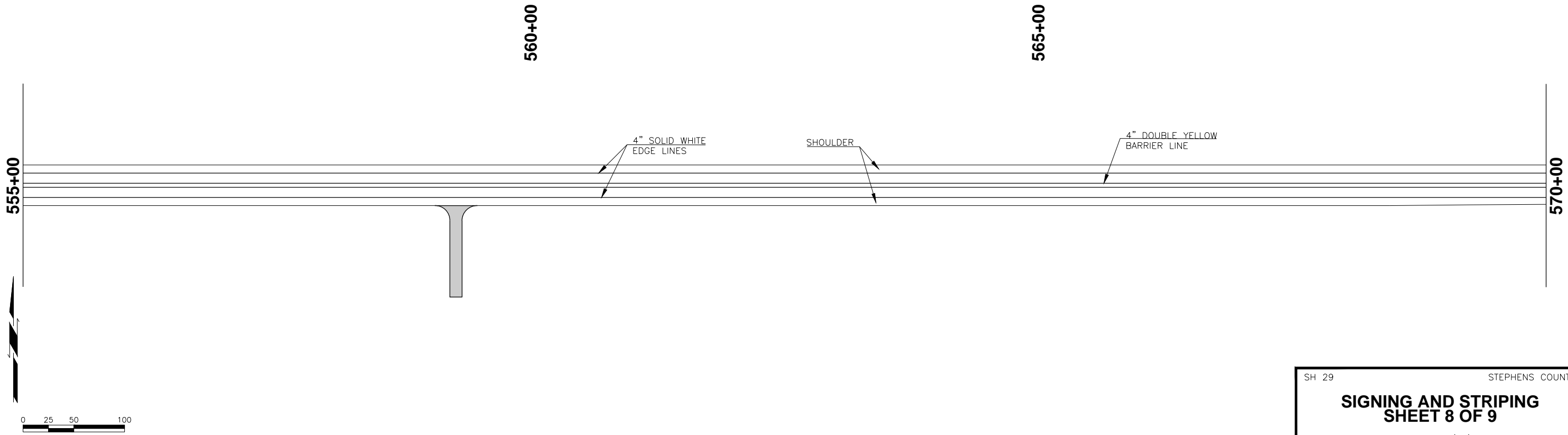
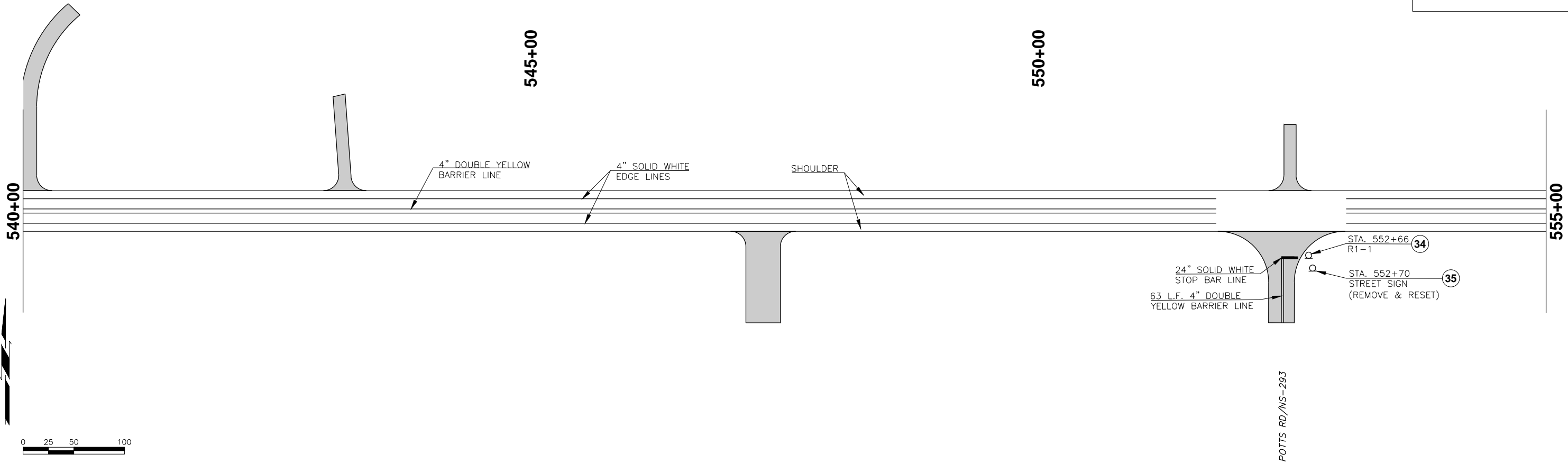
SH 29

STEPHENS COUNTY

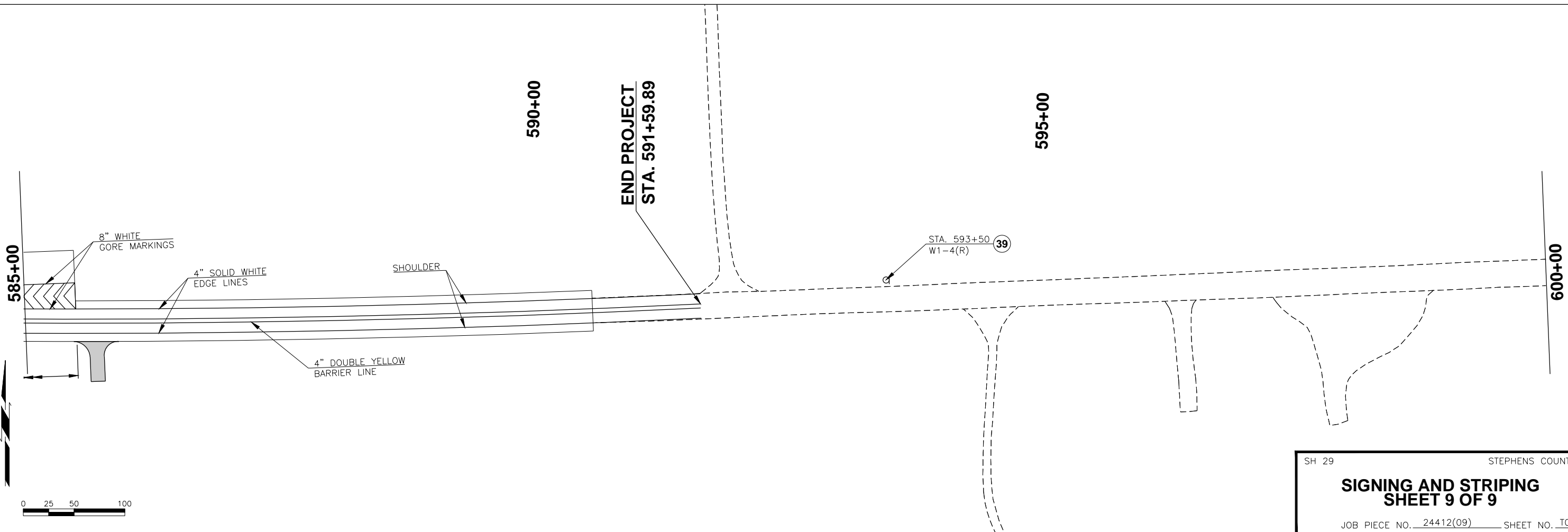
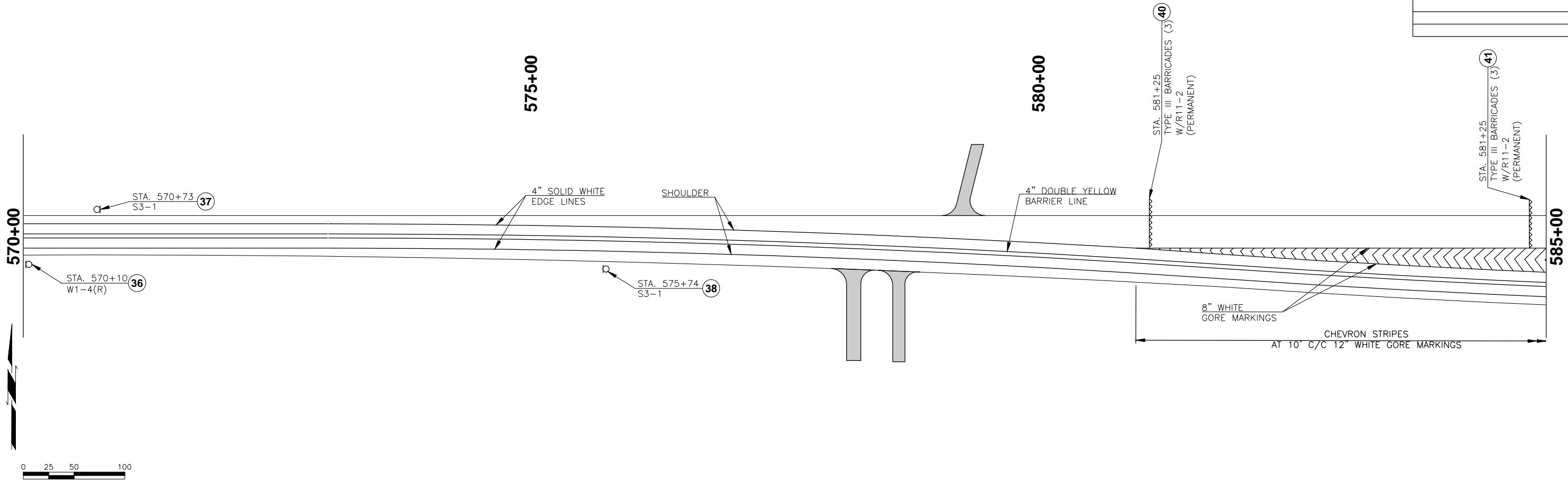
SIGNING AND STRIPING
SHEET 7 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T008

DESCRIPTION	REVISIONS	DATE



DESCRIPTION	REVISIONS	DATE



DESCRIPTION	REVISIONS	DATE

SUGGESTED SEQUENCE OF CONSTRUCTION SH-29

NOTE: CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVES AND RETURNS DURING ALL PHASES OF CONSTRUCTION.

PHASE I:

NOTE: CONTRACTOR SHALL CONSTRUCT ALL ACCESSIBLE PORTIONS OF SH-29 CRL BEFORE DETOURING EXISTING SH-29 TRAFFIC.

STEP 1: CONSTRUCT SH-29 EAST AND WEST BOUND DRIVING LANES AND WEST BOUND SHOULDER FROM APPROXIMATELY CRL STA. 464+00 TO APPROXIMATELY CRL STA. 585+50, INCLUDING PERMANENT AND TEMPORARY STRUCTURES AND DRIVE CONNECTIONS.

CONSTRUCT TEMPORARY WIDENING AND DETOURS 1 AND 2 FROM  SURVEY STA. 340+00 TO CRL STA. 462+08.05 , INCLUDING REQUIRED PERMANENT AND TEMPORARY STRUCTURES, TEMPORARY SECTION LINE RETURNS AND DRIVE CONNECTIONS.

NOTE: STR. 21, CONSTRUCT APPROXIMATELY 53 L.F. OF SOUTH END FROM EXISTING 10’x10’ RCB TO OUTLET.

PHASE II:

STEP 1: ROUTE SH-29 EAST BOUND TRAFFIC ONTO TEMPORARY WIDENING AND DETOURS 1 AND 2. ROUTE SH-29 WEST BOUND TRAFFIC ONTO EXISTING SH-29 EAST BOUND LANE AND DETOURS 1 AND 2.

STEP 2: CONSTRUCT SH-29 WEST BOUND SHOULDER FROM  SURVEY STA. 346+00 TO  SURVEY STA. 363+75.

CONSTRUCT SH-29 EAST AND WEST BOUND DRIVING LANES AND WEST BOUND SHOULDER FROM  SURVEY STA. 363+75 TO  SURVEY STA. 397+00, INCLUDING PERMANENT AND TEMPORARY STRUCTURES AND DRIVE CONNECTIONS.

CONSTRUCT SH-29 WEST BOUND SHOULDER FROM  SURVEY STA. 397+00 TO  SURVEY STA. 425+20.

NOTE: STR. 21, CONSTRUCT FROM APPROXIMATELY 4’ RT. OF SH-29 CL SURVEY, 99 L.F. OF NORTH END FROM EXISTING 10’ X 10’ RCB TO INLET.

CONSTRUCT SH-29 WEST BOUND SHOULDER AND OUTSIDE 6’ OF DRIVING LANE FROM  SURVEY STA. 425+20 TO APPROXIMATELY  SURVEY STA. 428+50.

CONSTRUCT EAST AND WEST BOUND DRIVING LANES AND WEST BOUND SHOULDER FROM APPROXIMATELY  SURVEY STA. 429+75 TO APPROXIMATELY CRL STA. 464+00, INCLUDING PERMANENT STRUCTURES AND DRIVE CONNECTIONS.

CONSTRUCT TEMPORARY WIDENING AND DETOUR 3 FROM  SURVEY STA. 424+00 TO CRL STA. 431+48.76.

STEP 3: CONSTRUCT SH-29 TRANSITION FROM STA. 573+00 TO STA. 590+59.89 INCLUDING DRIVING LANES, PAVED GORE AND WEST BOUND SHOULDER, INCLUDING PERMANENT STRUCTURES AND DRIVE CONNECTIONS.

STEP 4: PERFORM WIDENING AND OVERLAY OPERATIONS AT THE TRANSITION AND TIE POINT TO EXISTING SH-29. INCIDENTAL CONSTRUCTION AT THE TIE IN LOCATION MAY REQUIRE SHORT DURATION 1-LANE TRAFFIC FLAGGING OPERATIONS.

PHASE III:

STEP 1: ROUTE SH-29 WEST BOUND TRAFFIC ONTO WEST BOUND OUTER 12’ OF PAVEMENT, DETOUR 3 AND TEMPORARY WIDENING. ROUTE SH-29 EAST BOUND TRAFFIC ONTO INNER 12’ OF PAVEMENT AND DETOUR 3.

NOTE: STR. 21, REMOVE REMAINING PORTION OF OLD 10’x10’ RCB, COMPLETE THE CONSTRUCTION OF THE NEW 10’x10’ RCB.

STEP 2: REMOVE EAST BOUND TEMPORARY WIDENING AND DETOURS 1 AND 2.

CONSTRUCT SH-29 EAST BOUND SHOULDER FROM  SURVEY STA. 346+00 TO  SURVEY STA. 425+20 AND STA. 582+00 TO STA. 584+00, INCLUDING PERMANENT STRUCTURES AND DRIVE CONNECTIONS.

CONSTRUCT SH-29 EAST BOUND SHOULDER AND DRIVING LANE FROM  SURVEY STA. 425+20 TO  SURVEY STA. 429+75.

CONSTRUCT REMAINING INSIDE 6’ OF SH-29 WEST BOUND DRIVING LANE FROM  SURVEY STA. 425+20 TO  SURVEY STA. 428+50, AND WEST BOUND DRIVING LANE AND SHOULDER FROM  SURVEY STA. 428+50 TO  SURVEY STA. 429+75.

CONSTRUCT SH-29 EAST BOUND SHOULDER FROM  SURVEY STA. 429+75 TO  SURVEY STA. 584+00 AND FROM STA. 585+95.29 TO STA. 590+59.89, INCLUDING PERMANENT STRUCTURES AND DRIVE CONNECTIONS.

PHASE IV:

STEP 1: ROUTE DETOUR SH-29 TRAFFIC TO COMPLETED PORTION OF SH-29.

STEP 2: REMOVE TEMPORARY WIDENING AND DETOUR 3.

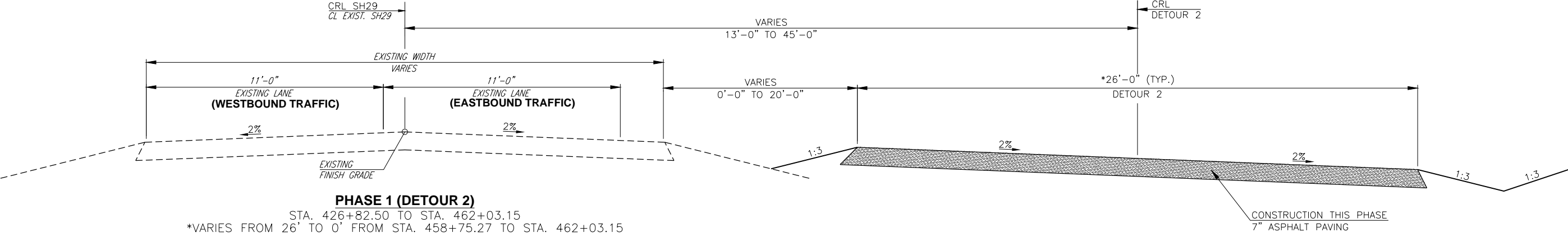
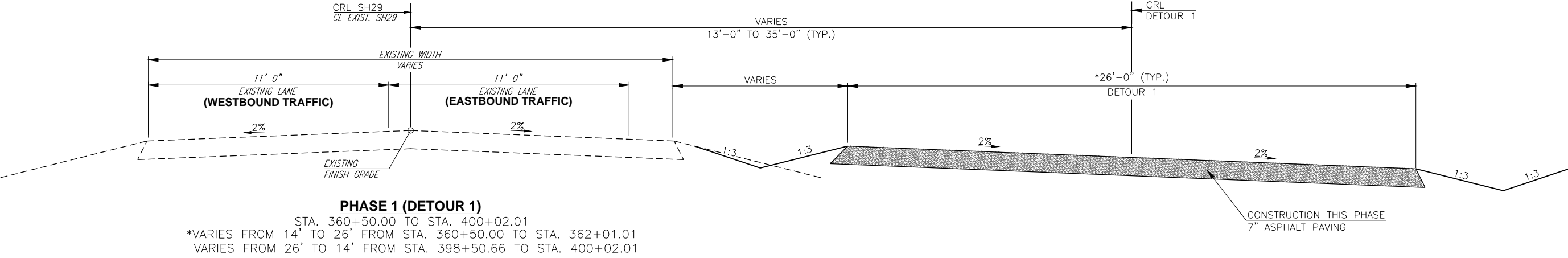
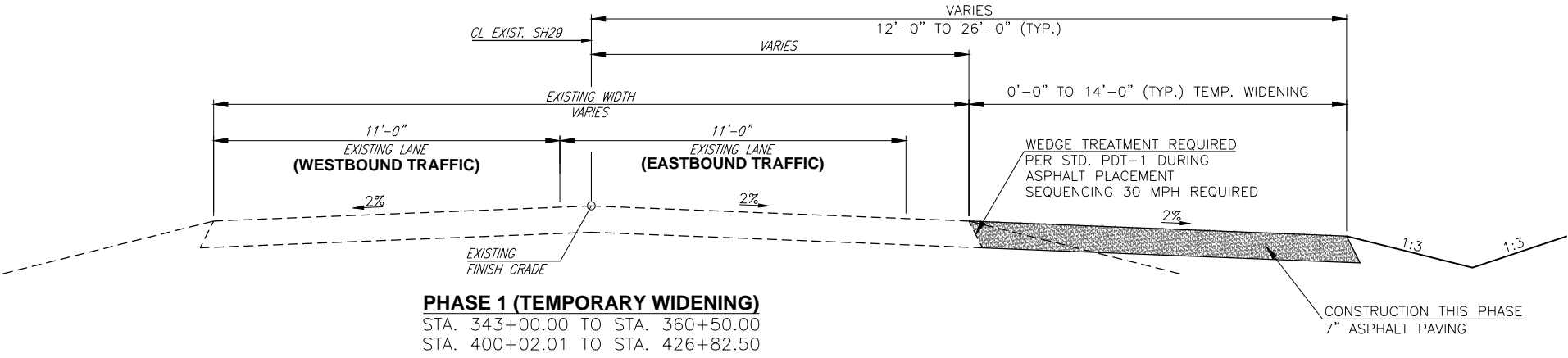
COMPLETE ANY MISCELLANEOUS CONSTRUCTION OPERATIONS.

SH-29 STEPHENS COUNTY

SUGGESTED CONSTRUCTION SEQUENCING SHEET

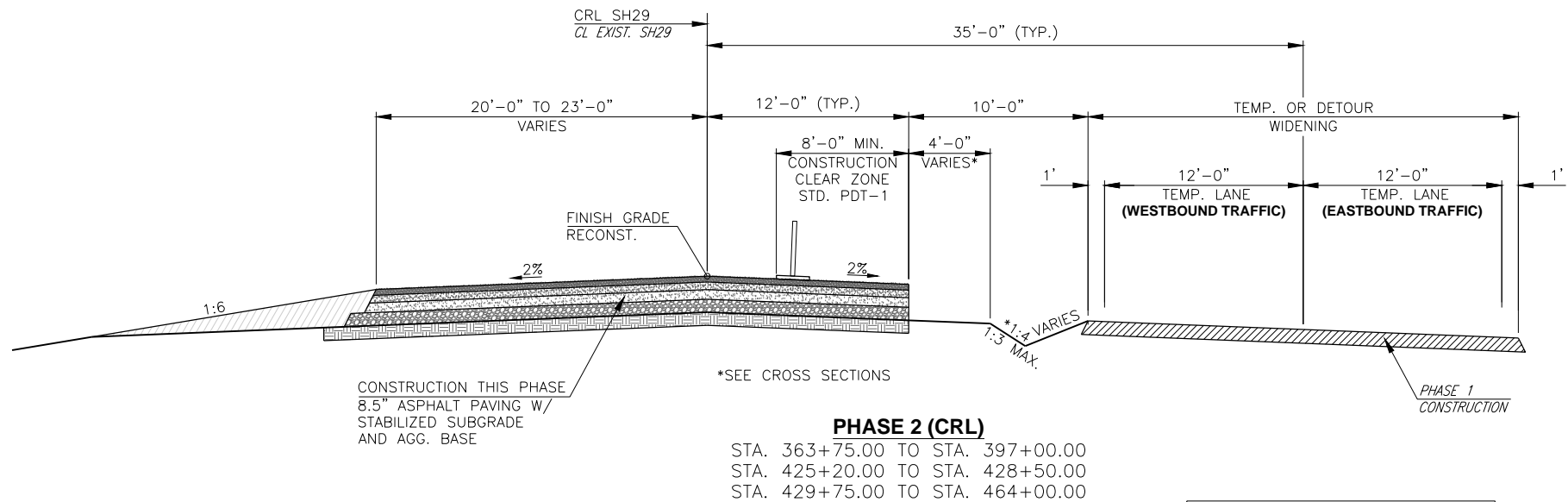
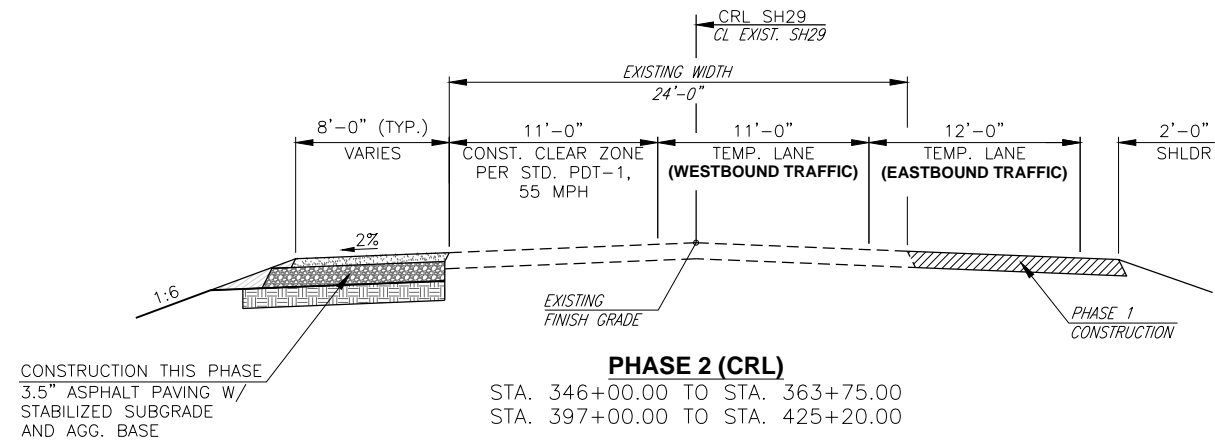
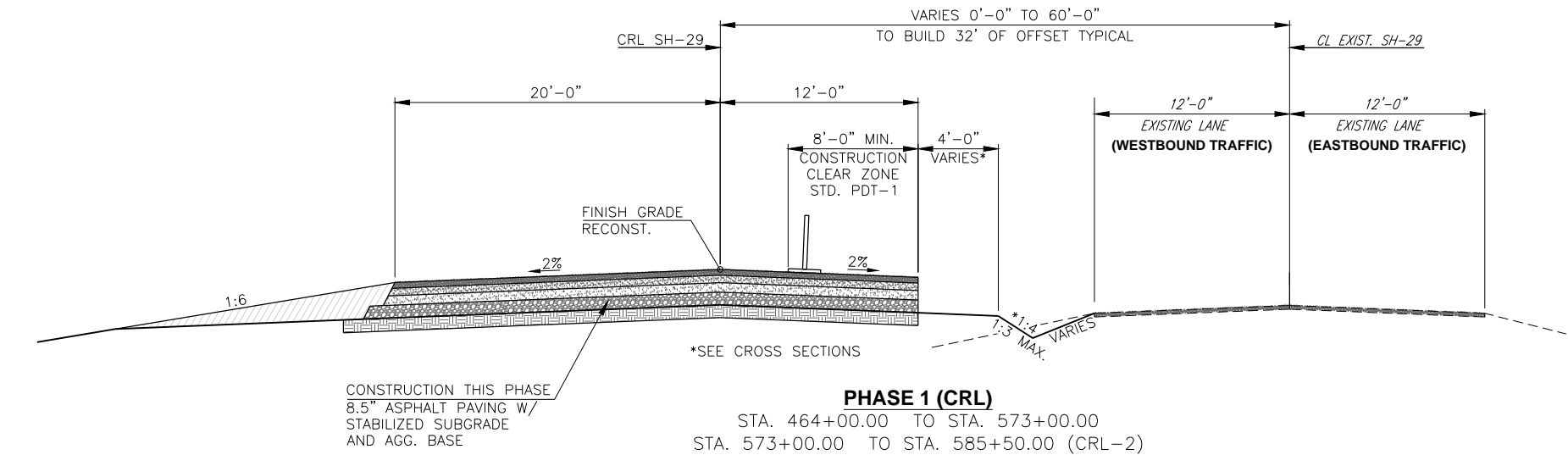
JOB PIECE NO. 24412(09) SHEET NO. T011

DESCRIPTION	REVISIONS	DATE



NOTE:
SEE DETOUR AND CONSTRUCTION
SEQUENCING/TRAFFIC CONTROL SHEETS
FOR ADDITIONAL INFORMATION.

NOT TO SCALE



NOTE:
SEE DETOUR AND CONSTRUCTION
SEQUENCING/TRAFFIC CONTROL SHEETS
FOR ADDITIONAL INFORMATION.

NOT TO SCALE

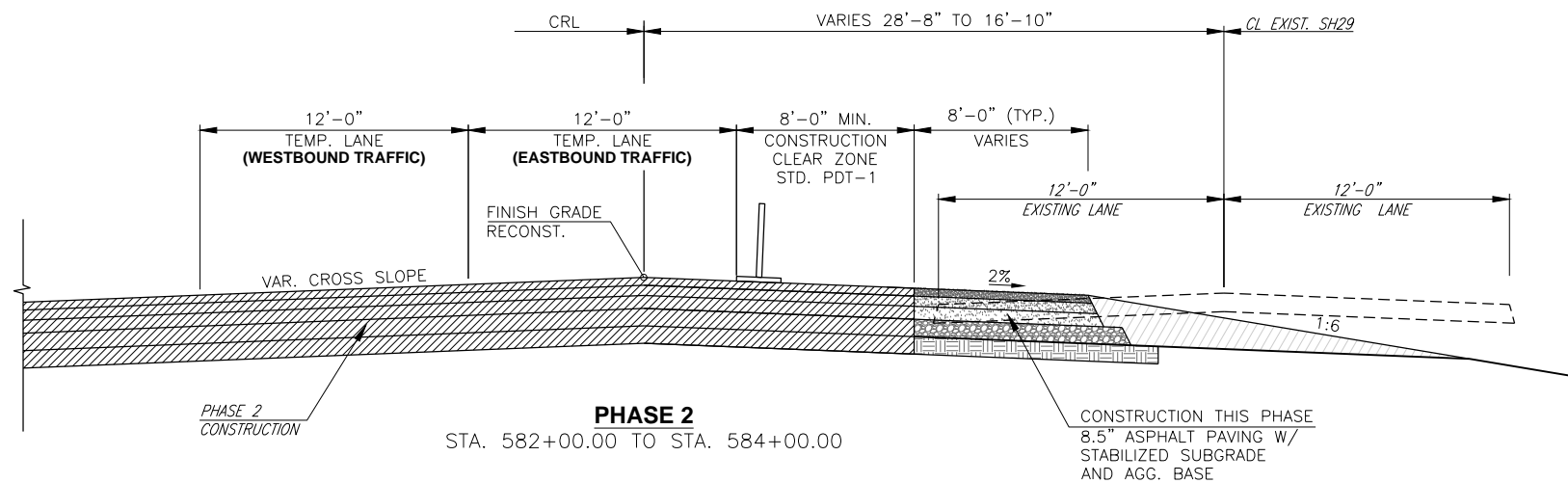
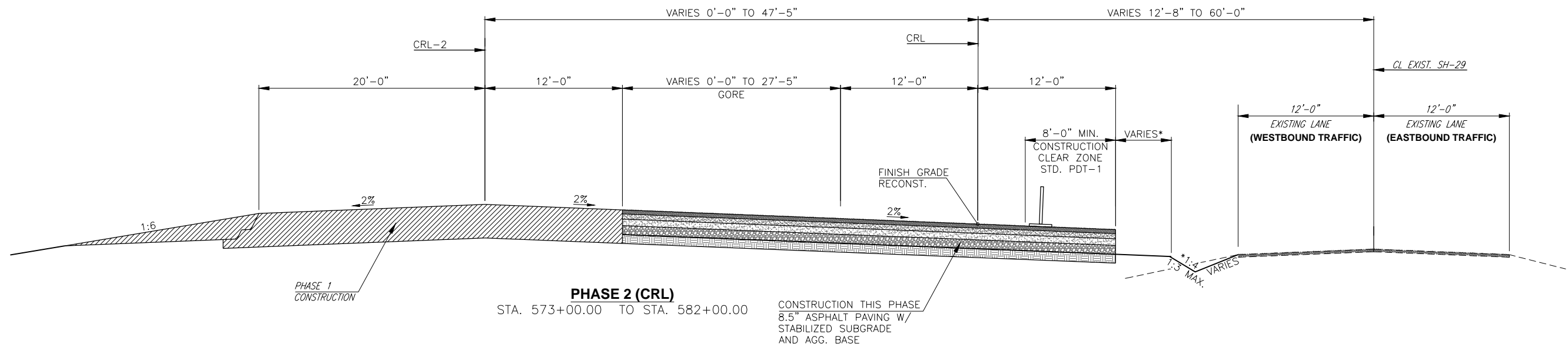
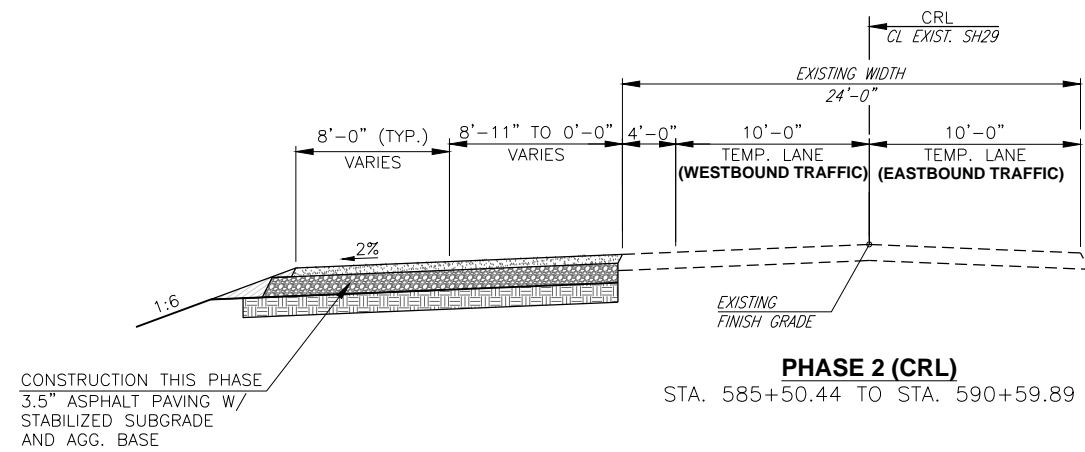
SH 29

STEPHENS COUNTY

**CONSTRUCTION
PHASING TYPICALS
SHEET 2 OF 6**

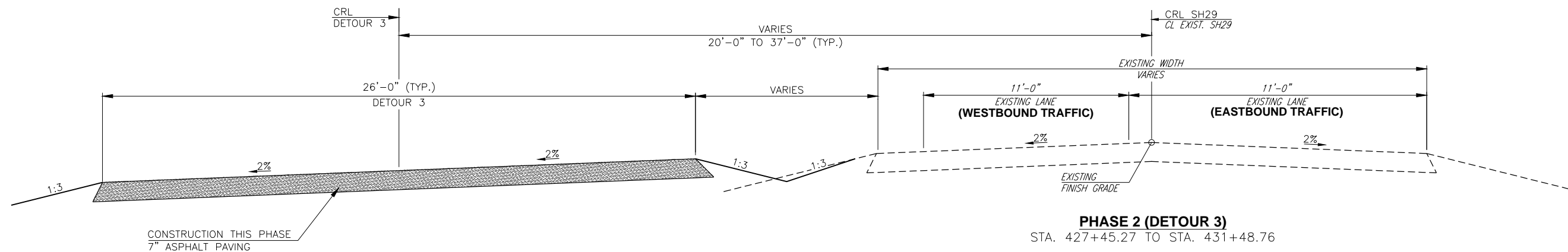
JOB PIECE NO. 24412(09) SHEET NO. T013

DESCRIPTION	REVISIONS	DATE



NOTE:
SEE DETOUR AND CONSTRUCTION
SEQUENCING/TRAFFIC CONTROL SHEETS
FOR ADDITIONAL INFORMATION.

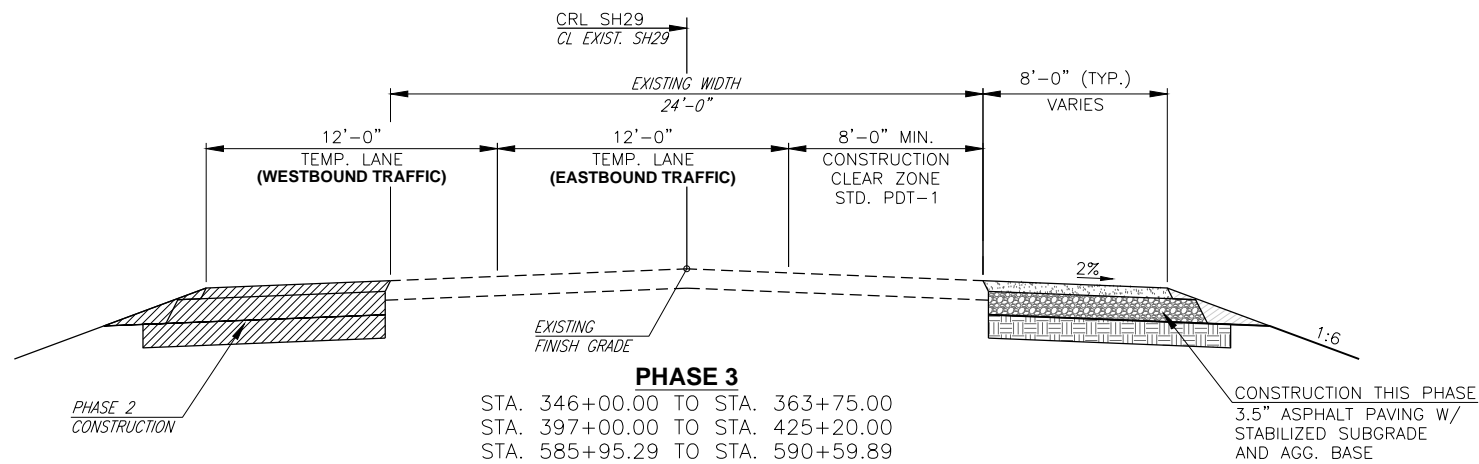
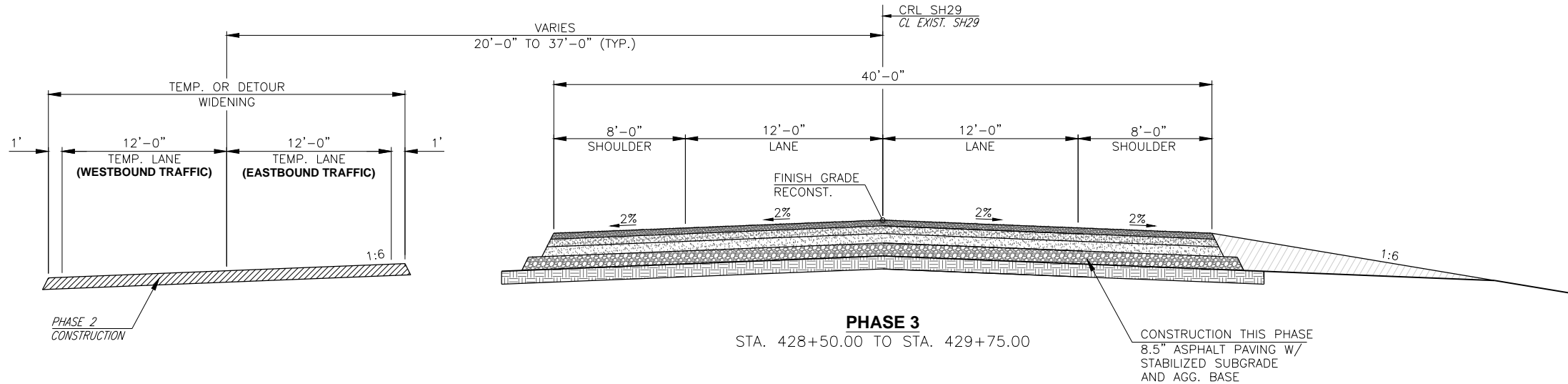
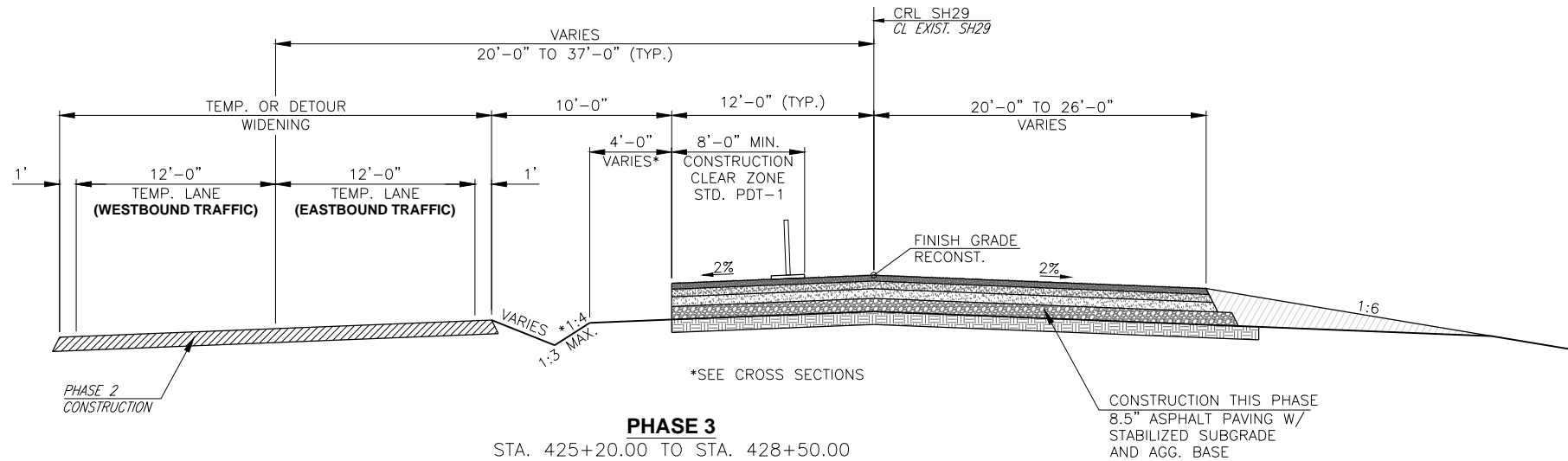
NOT TO SCALE



SH 29 STEPHENS COUNTY

**CONSTRUCTION
PHASING TYPICALS
SHEET 4 OF 6**

JOB PIECE NO. 24412(09) SHEET NO. TO15



NOTE:
SEE DETOUR AND CONSTRUCTION
SEQUENCING/TRAFFIC CONTROL SHEETS
FOR ADDITIONAL INFORMATION.

NOT TO SCALE

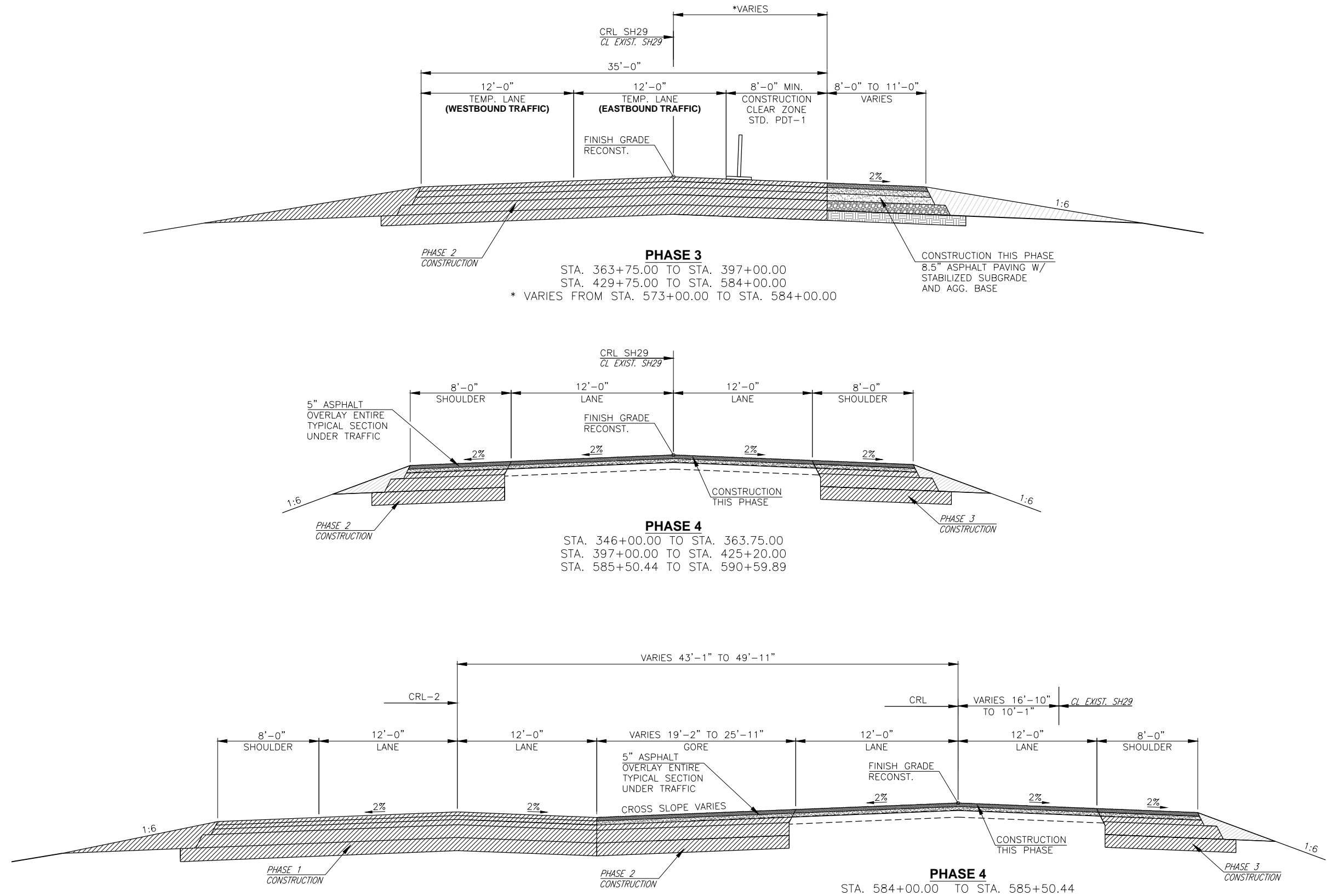
SH 29

STEPHENS COUNTY

**CONSTRUCTION
PHASING TYPICALS
SHEET 5 OF 6**

JOB PIECE NO. 24412(09) SHEET NO. T016

DESCRIPTION	REVISIONS	DATE



NOTE:
SEE DETOUR AND CONSTRUCTION
SEQUENCING/TRAFFIC CONTROL SHEETS
FOR ADDITIONAL INFORMATION.

NOT TO SCALE

SH 29 STEPHENS COUNTY

**CONSTRUCTION
PHASING TYPICALS
SHEET 6 OF 6**

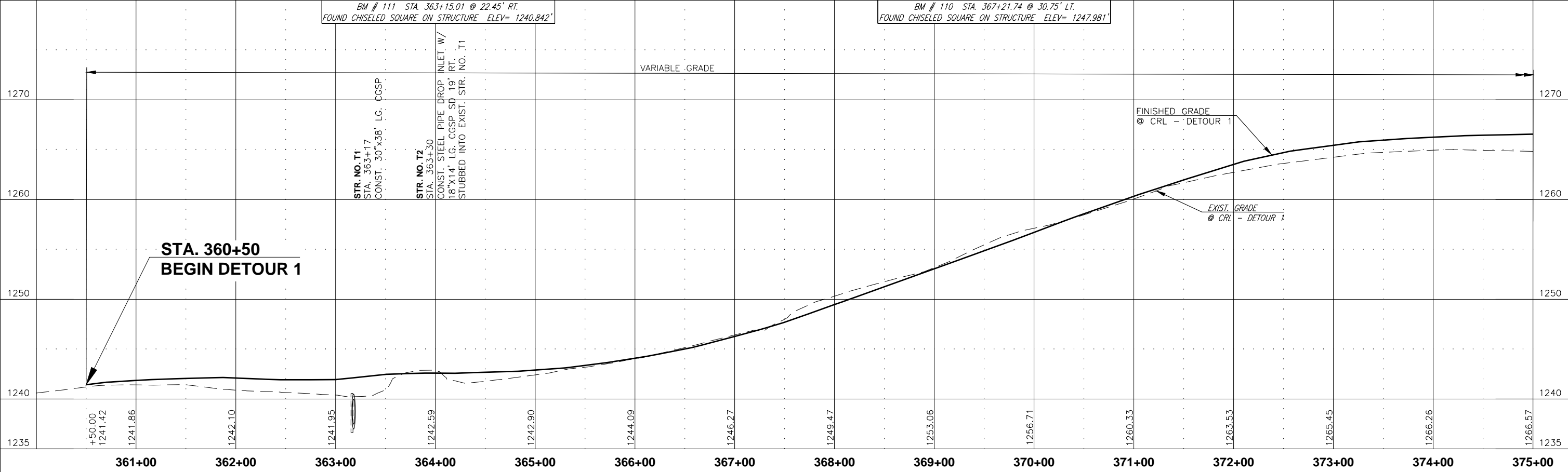
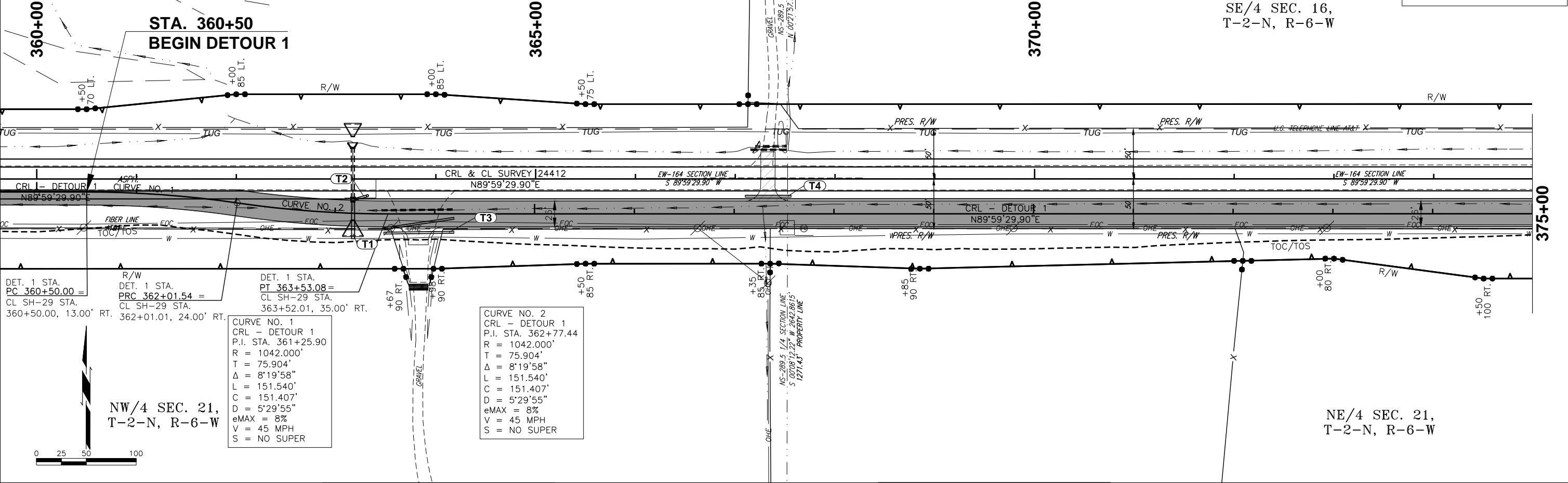
JOB PIECE NO. 24412(09) SHEET NO. T017

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM C. OF SURVEY.

SW/4 SEC. 16,
T-2-N, R-6-W

CEC // TRANSPORTATION

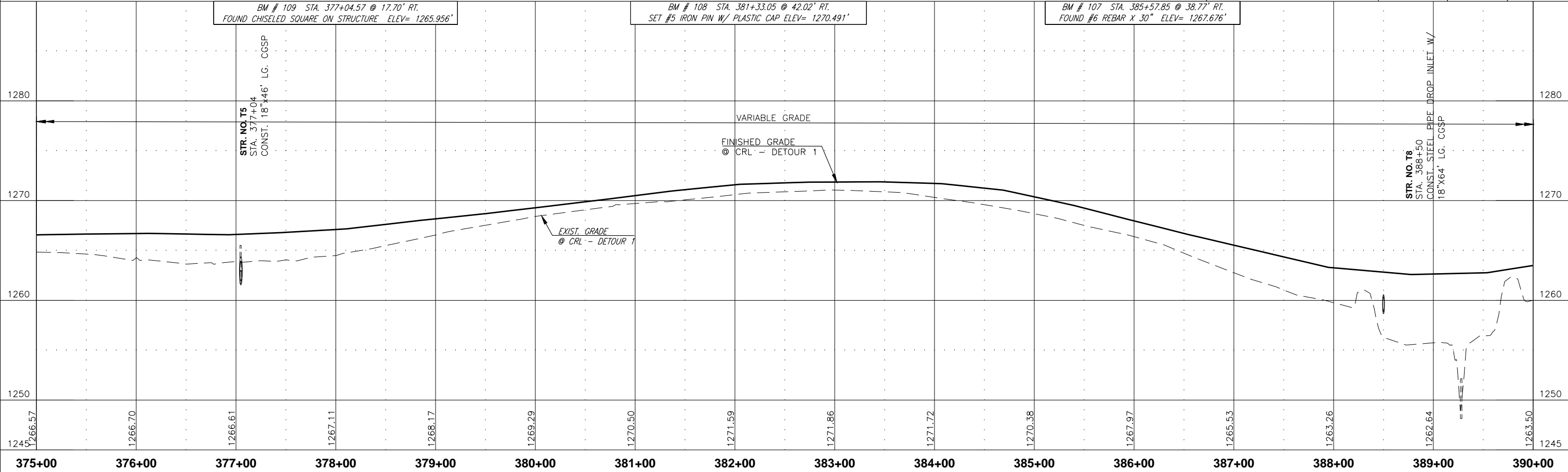
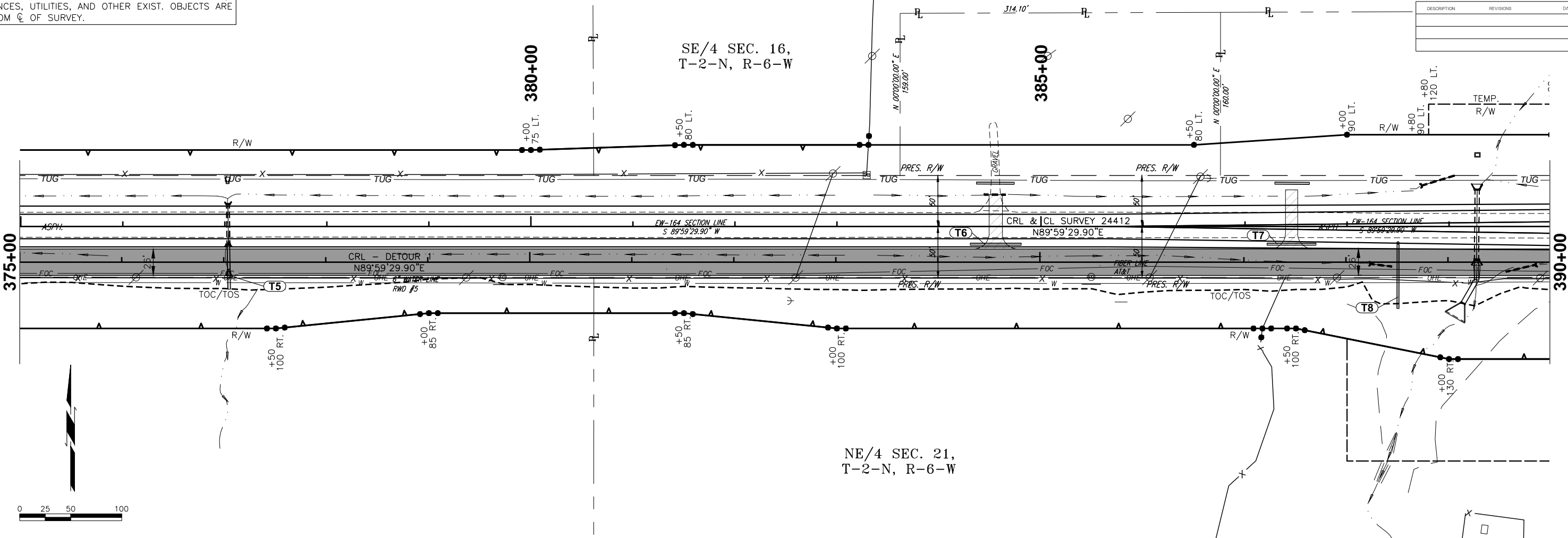
DESCRIPTION	REVISIONS	DATE



NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ϕ OF SURVEY.

CEC // TRANSPORTATION

DESCRIPTION	REVISIONS	DATE

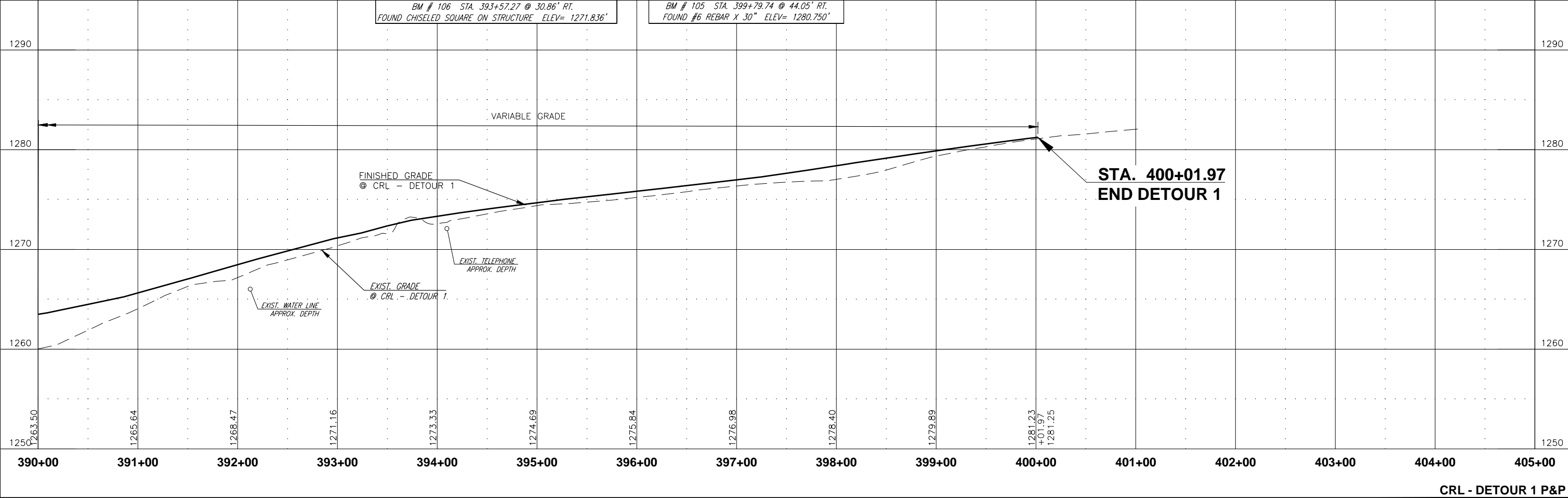
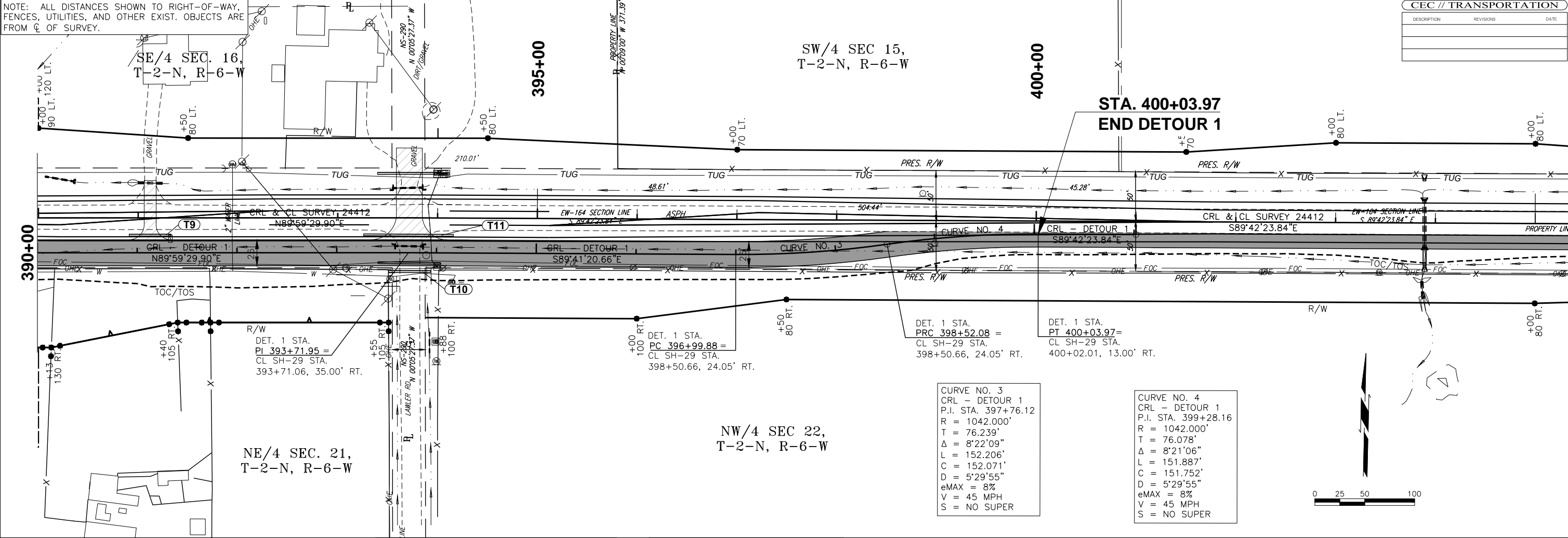


CRL - DETOUR 1 P&P

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM ϕ OF SURVEY.

CEC // TRANSPORTATION

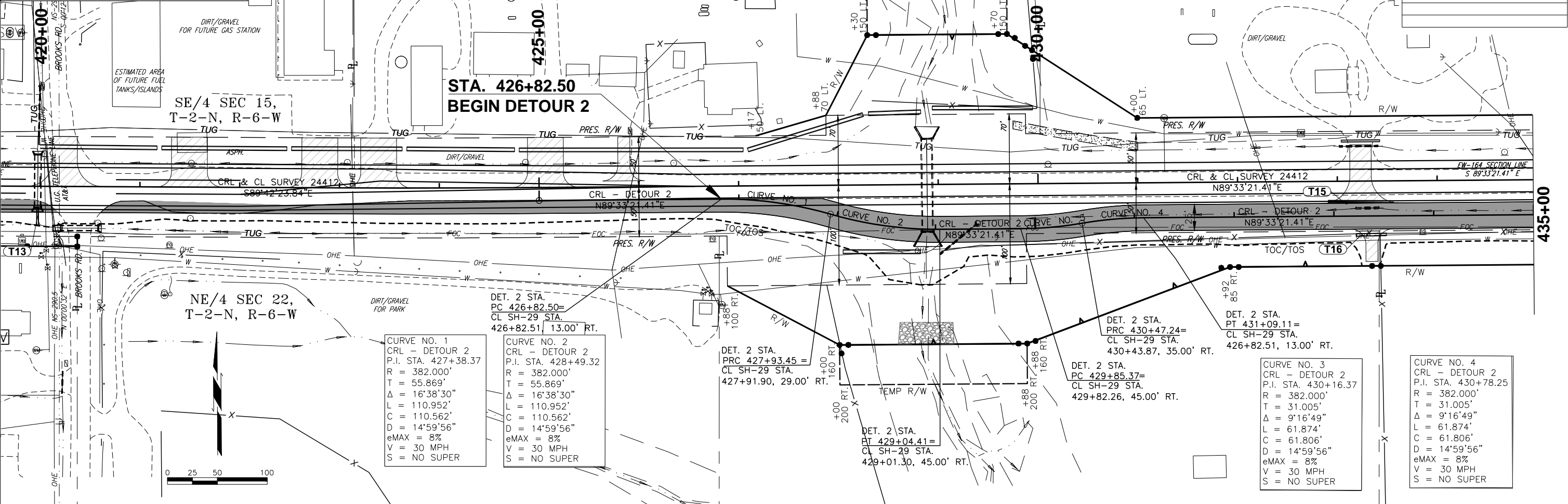
DESCRIPTION	REVISIONS	DATE



NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM C OF SURVEY.

CEC // TRANSPORTATION

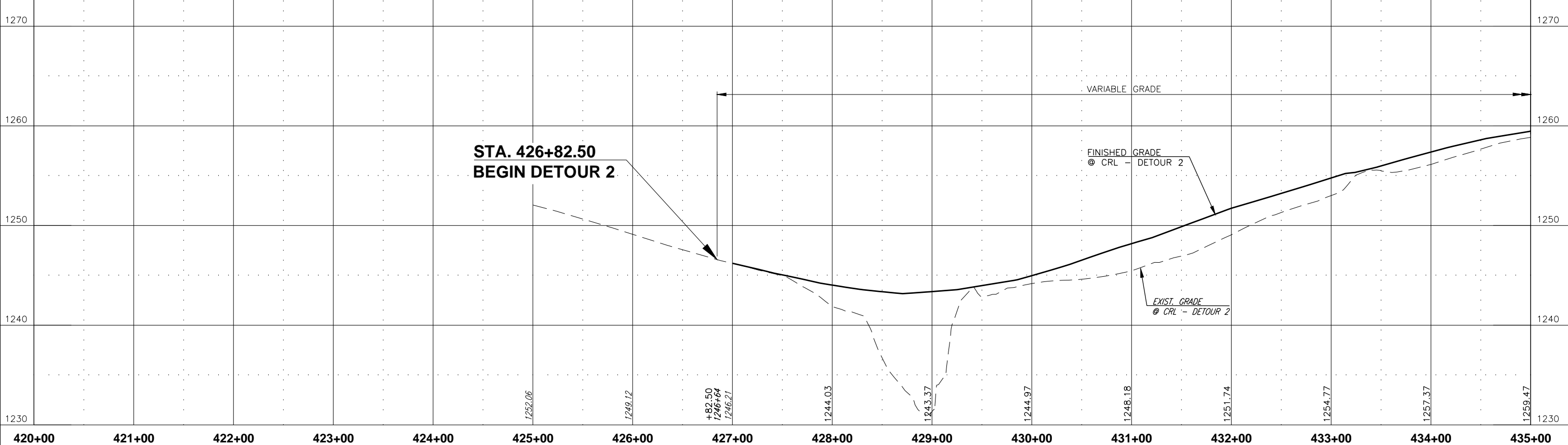
DESCRIPTION	REVISIONS	DATE



BM # 102 STA. 420+20.89 @ 42.66' RT.
FOUND CHISELED SQUARE ON STRUCTURE ELEV= 1260.528'

BM # 101 STA. 426+41.21 @ 54.31' LT.
FOUND #6 REBAR X 30\" ELEV= 1250.268'

BM # 100 STA. 433+47.40 @ 47.01' RT.
FOUND #6 REBAR X 30\" ELEV= 1256.287'



420+00 421+00 422+00 423+00 424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00 432+00 433+00 434+00 435+00

CRL - DETOUR 2 P&P

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM C/L OF SURVEY.

CEC // TRANSPORTATION

DESCRIPTION	REVISIONS	DATE

SE/4 SEC 15,
T-2-N, R-6-W

445+00

435+00

450+00

NE/4 SEC 22,
T-2-N, R-6-W



0 25 50 100

BM # 99 STA. 440+48.19 @ 46.59' RT.
FOUND #6 REBAR X 30" ELEV= 1262.212'

BM # 98 STA. 446+40.71 @ 54.05' RT.
FOUND #6 REBAR X 30" ELEV= 1249.880'

VARIABLE GRADE

FINISHED GRADE
@ CRL - DETOUR 2

EXIST. GAS LINE
APPROX. DEPTH

EXIST. GAS LINE
APPROX. DEPTH

EXIST. GRADE
@ CRL - DETOUR 2

STR. NO. T18
STA. 444+78
CONST. 35"x24"x42' LG. CGSPA

STR. NO. T20
STA. 447+17
CONST. 2-35"x24"x48' LG. CGSPA

STR. NO. T21
STA. 447+45
CONST. STEEL PIPE DROP INLET W/
18"x15' LG. CGSP SD 18' RT.
STUBBED INTO EXIST. STR. NO. T20

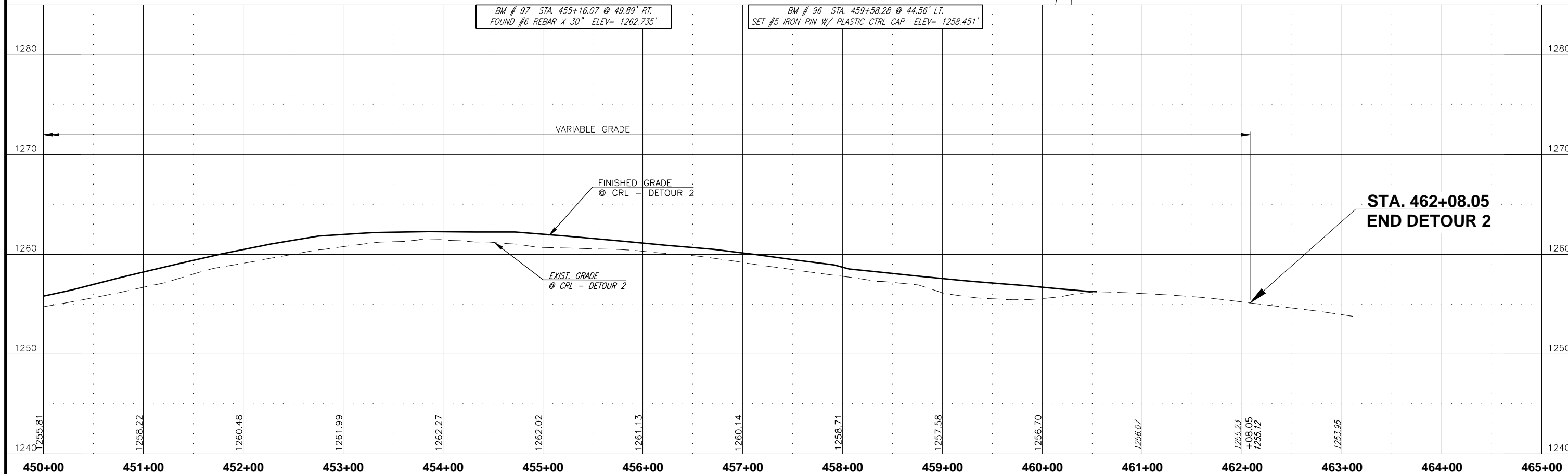
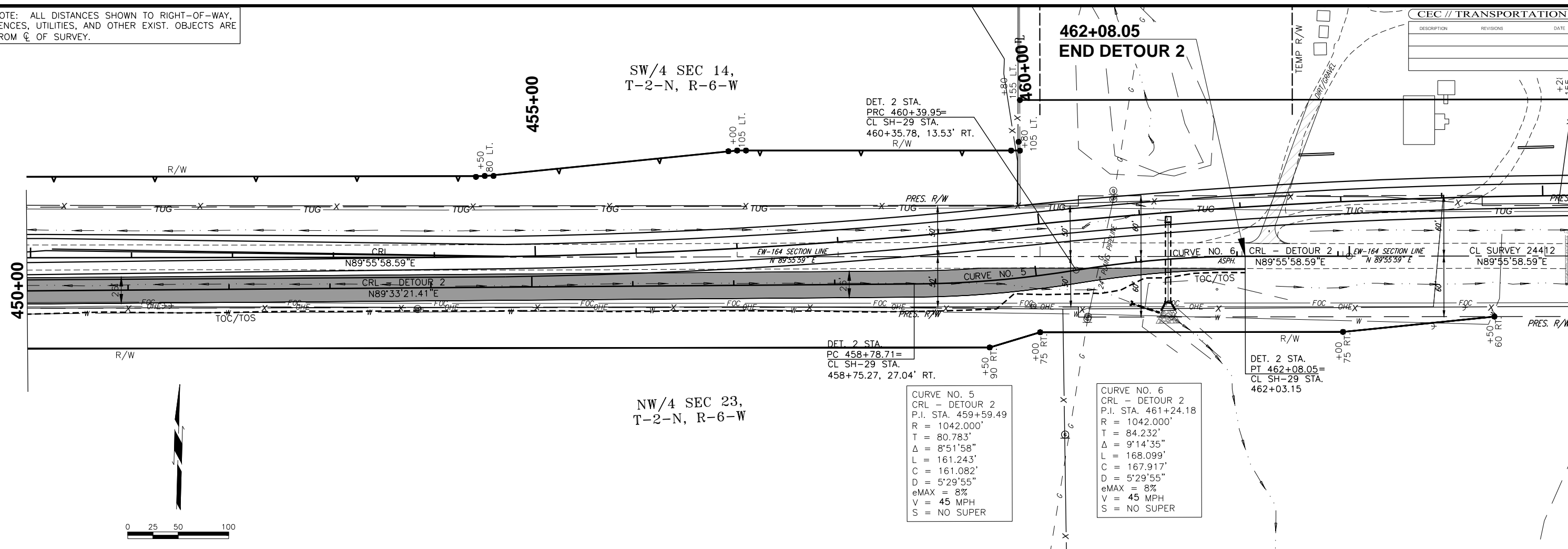
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435+00	436+00	437+00	438+00	439+00	440+00	441+00	442+00	443+00	444+00	445+00	446+00	447+00	448+00	449+00	450+00

CRL - DETOUR 2 P&P

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY,
FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE
FROM C OF SURVEY.

CEC // TRANSPORTATION

DESCRIPTION	REVISIONS	DATE



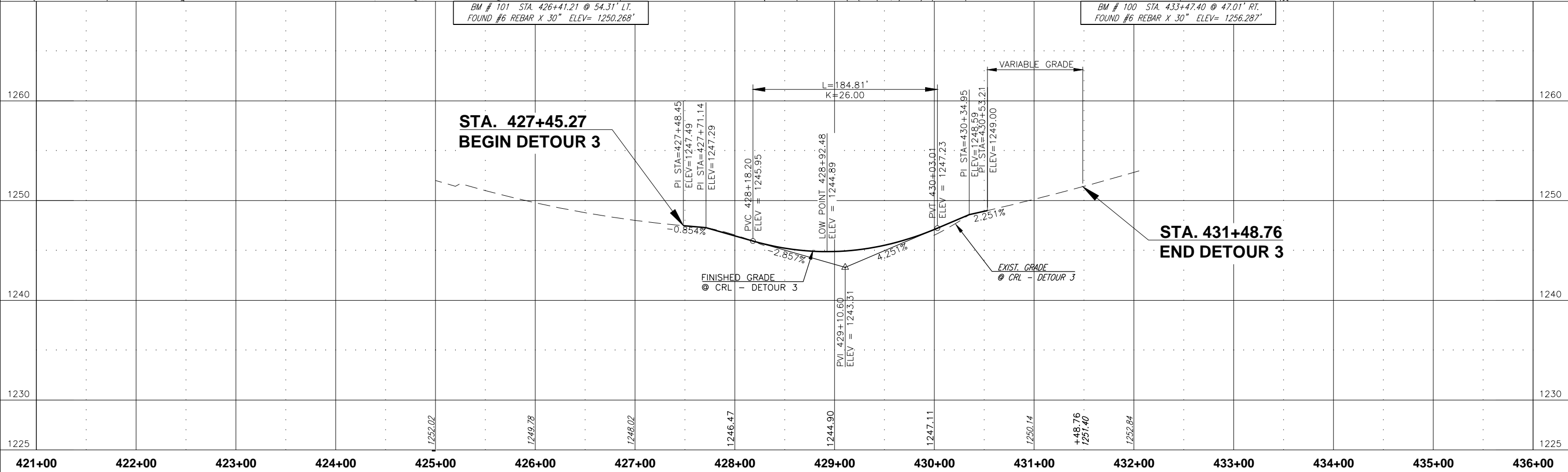
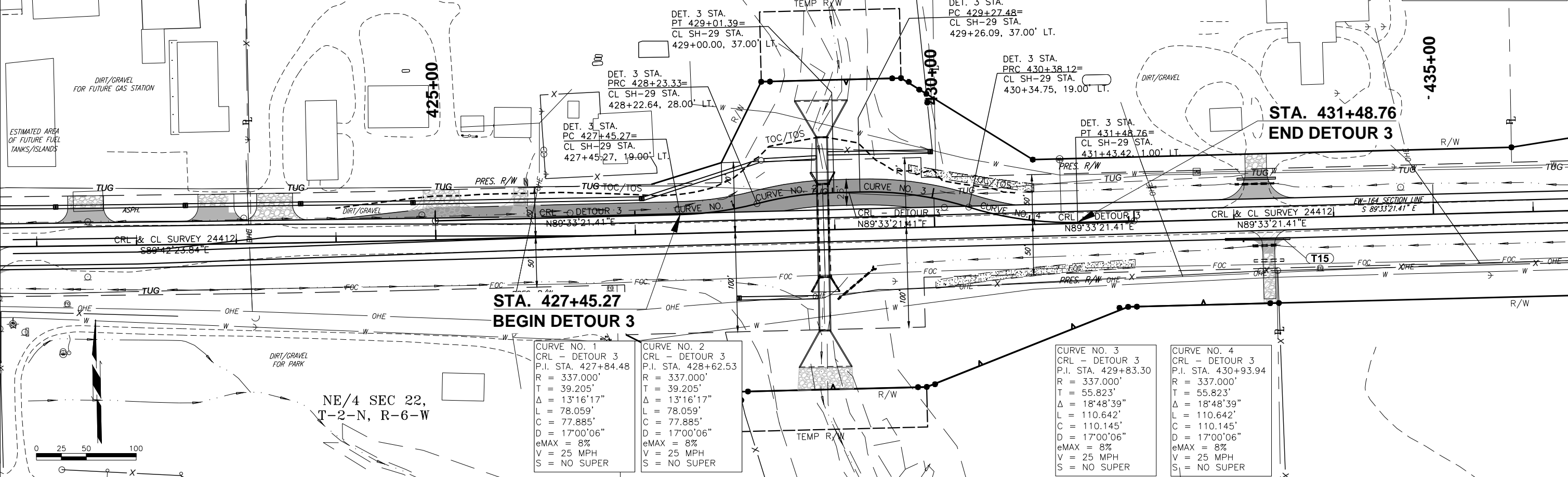
CRL - DETOUR 2 P&I

NOTE: ALL DISTANCES SHOWN TO RIGHT-OF-WAY, FENCES, UTILITIES, AND OTHER EXIST. OBJECTS ARE FROM C/L OF SURVEY.

SE/4 SEC 15,
T-2-N, R-6-W

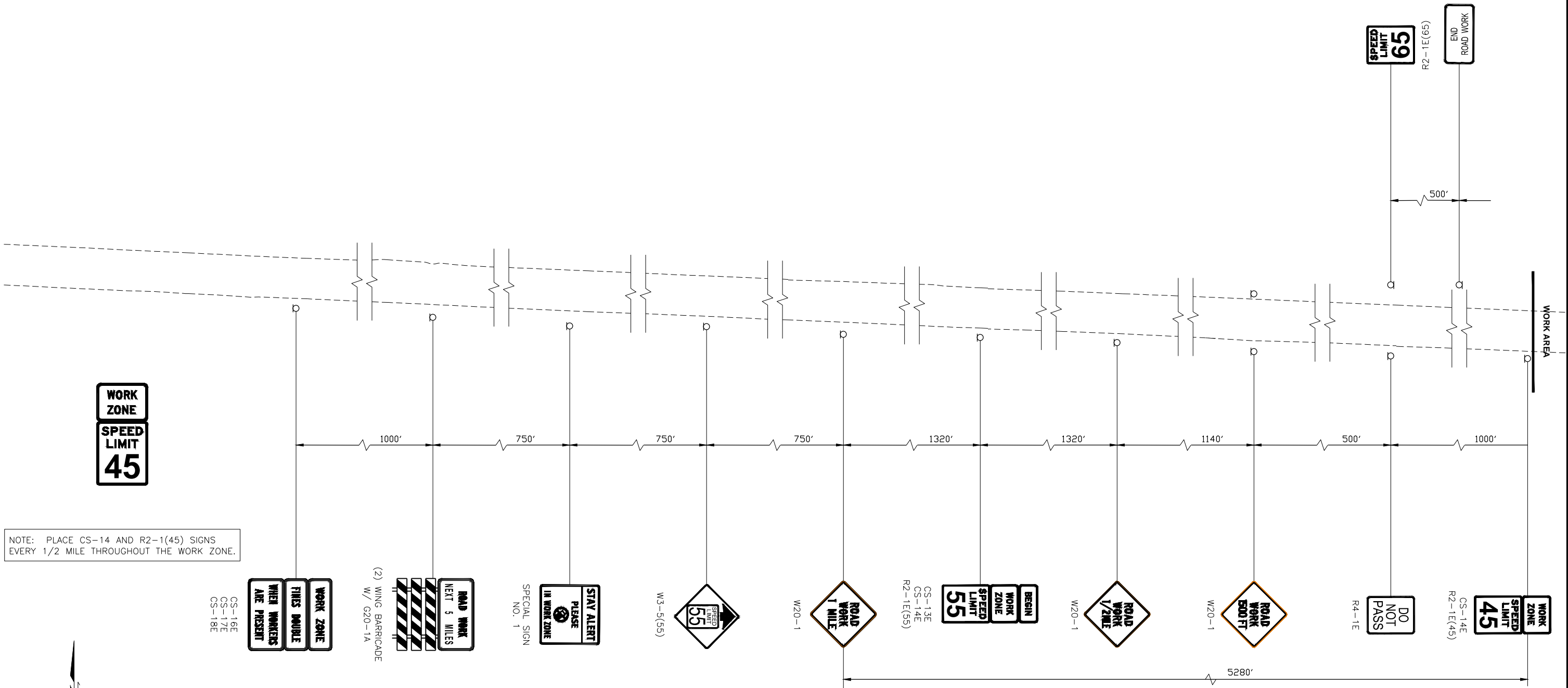
CEC // TRANSPORTATION

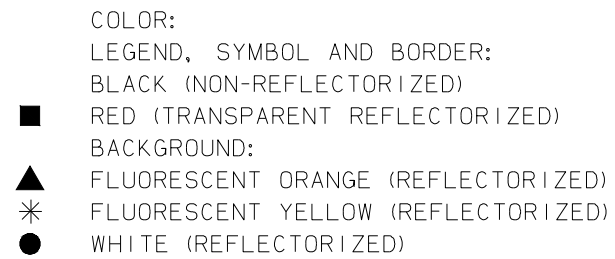
DESCRIPTION	REVISIONS	DATE



1/2/2019 4:00:44 PM N:\OVC\TRANSPORTATION\HIGHWAY\PRODUCTION\000\12008-000T - EG 1377 SH 29 STEPHENS COUNTY\12008.04B SH-29 EAST-IP 24412(09)\PROJECT DRAWINGS\TEMP TRAFFIC\ADVANCED SIGNAGE.DWG

NOTE: ADVANCED WARNING SIGNAGE SHALL BE INSTALLED AT THE BEGINNING AND END OF THE PROJECT. SEE ODOT STD. TCS7-1 (LATEST REVISION)





SIGN NUMBER	
WIDTH x HGHT.	4'-0" x 4'-0"
BORDER WIDTH	1.50"
CORNER RADIUS	2.25"
MOUNTING	Metal Post

[illegible]

Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

[illegible]

TRAFFIC CONTROL PLANS SPECIAL SIGN DETAIL

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▨ PREV. CONST. PHASE

▨ PERM. OVERLAY

335+00

340+00

345+00

℄ SURVEY SH-29

STA. 343+00
BEGIN TEMP. WIDENING, 20' RT.

90'
TYP.

CS-13E
CS-14E
R2-1E(45)

BEGIN
WORK
ZONE
SPEED
LIMIT
45

0 25 50 100

350+00

355+00

360+00

℄ SURVEY SH-29

STA. 346+00
TEMP. WIDENING, 26' RT.

90'
TYP.

TEMP. WIDENING

0 25 50 100

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 1
SHEET 1 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T027

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

≡ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

▩ PERM. OVERLAY

360+00

STA. 362+27
BEGIN FULL WIDTH
DETOUR 1 PAVEMENT, 11' RT.

STA. 360+50
END TEMP. WIDENING, 26' RT.
BEGIN DETOUR 1, 13' RT.

STA. 363+83
CONST. TEMP. TBSC DR.

365+00

370+00

375+00

0 25 50 100

CS-14E
R2-1E(45)

WORK
ZONE
SPEED
LIMIT
45

CS-14E
R2-1E(45)

WORK
ZONE
SPEED
LIMIT
45

380+00

385+00

375+00

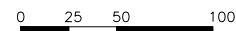
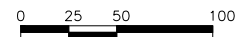
390+00

0 25 50 100

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 1
SHEET 2 OF 9

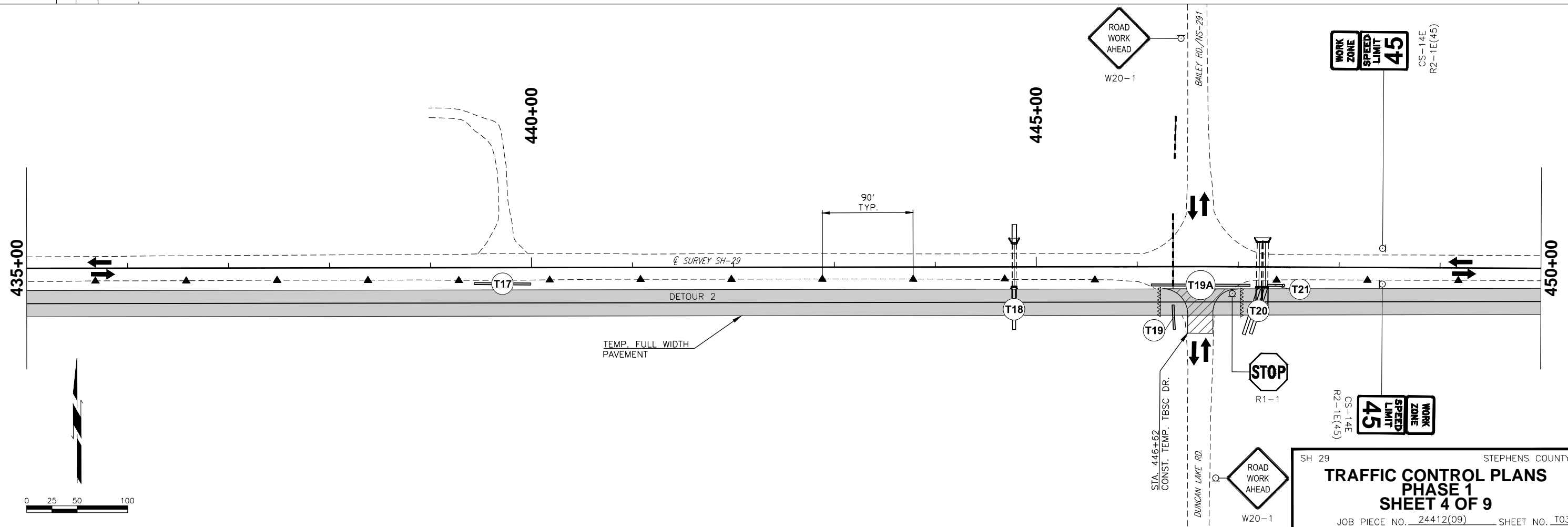
JOB PIECE NO. 24412(09) SHEET NO. T028



SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 1
SHEET 3 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T029



DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

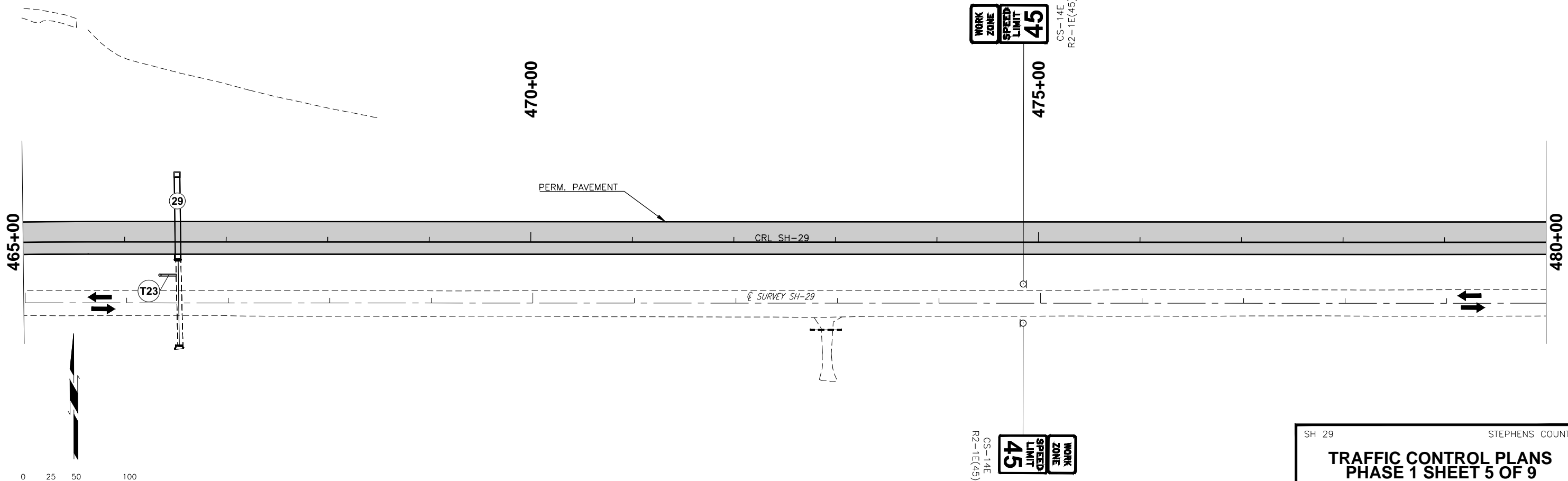
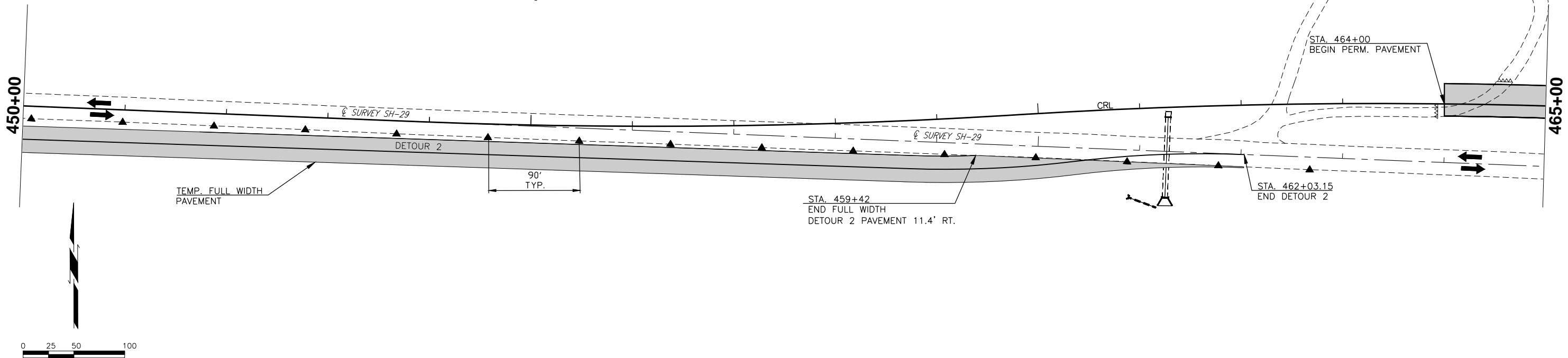
○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▨ PREV. CONST. PHASE

▨ PERM. OVERLAY



SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 1 SHEET 5 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T031

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

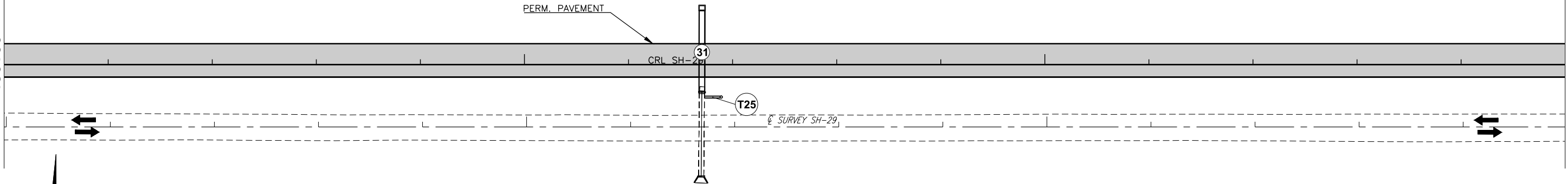
▤ PERM. OVERLAY

480+00

485+00

490+00

495+00

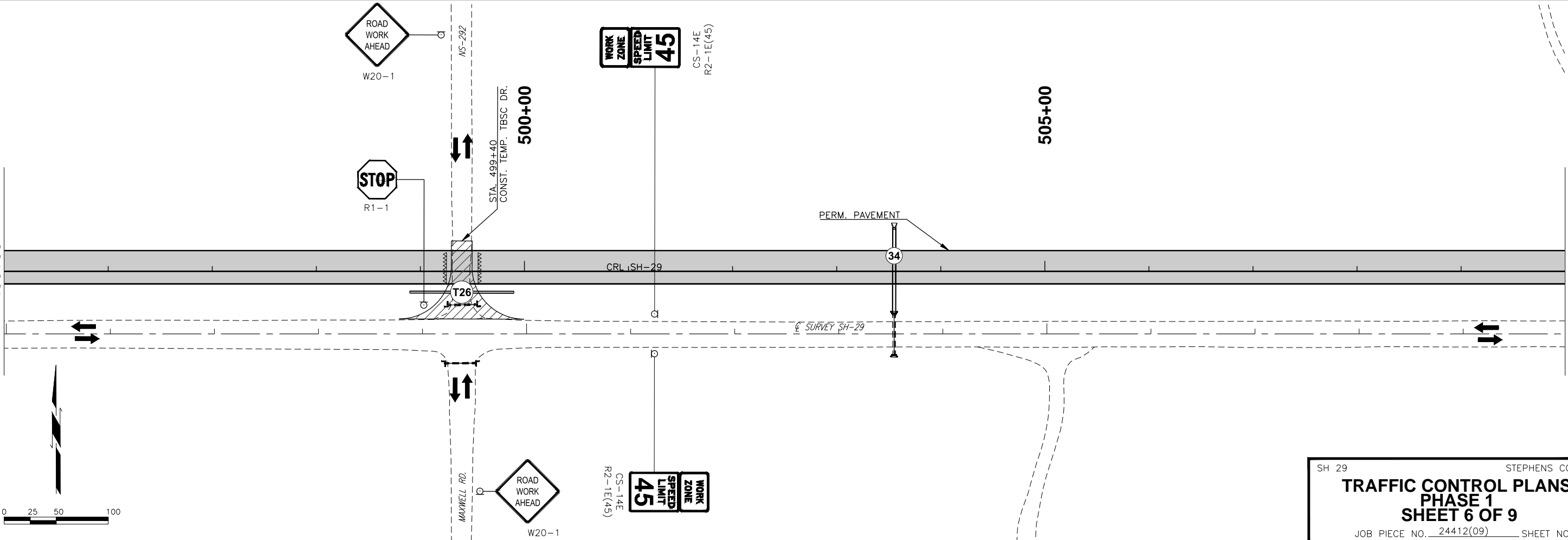


495+00

500+00

505+00

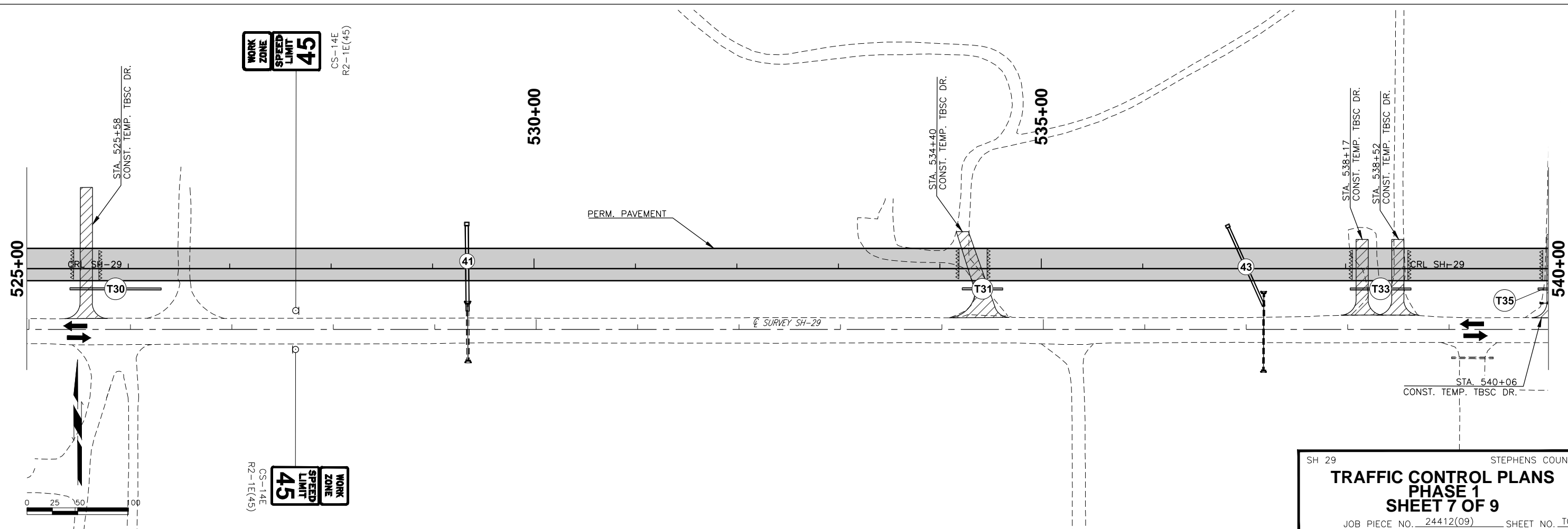
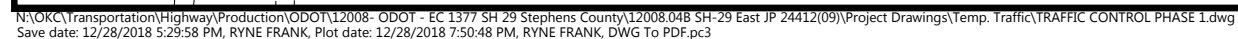
510+00

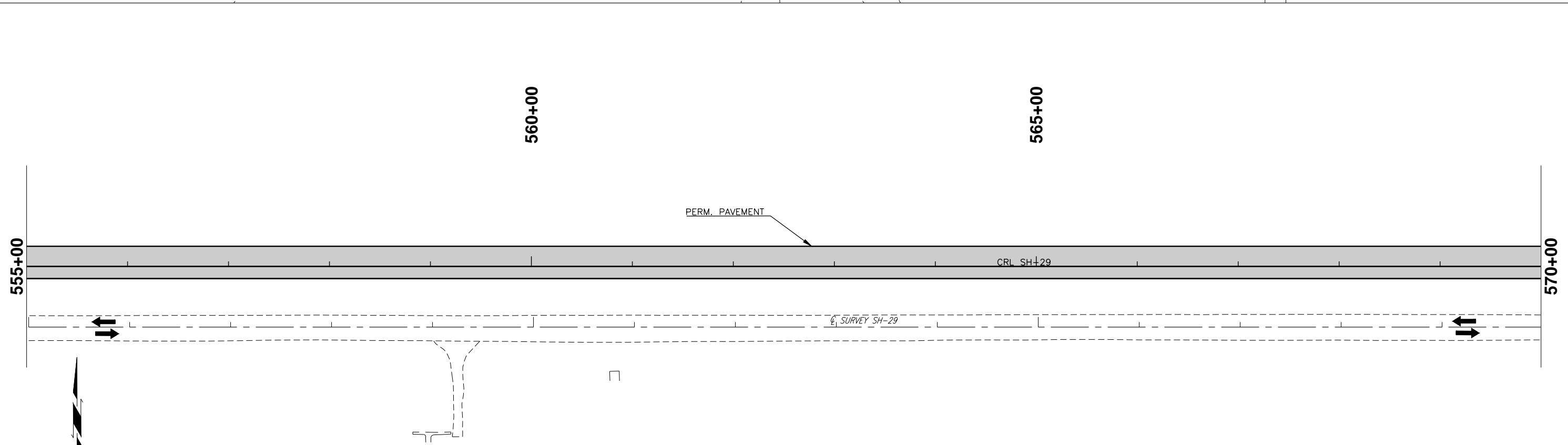


SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 1
SHEET 6 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T032





DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

▤ PERM. OVERLAY

570+00

575+00

580+00

585+00

590+00

595+00

0 25 50 100

0 25 50 100

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

▤ PERM. OVERLAY

335+00

340+00

345+00

350+00

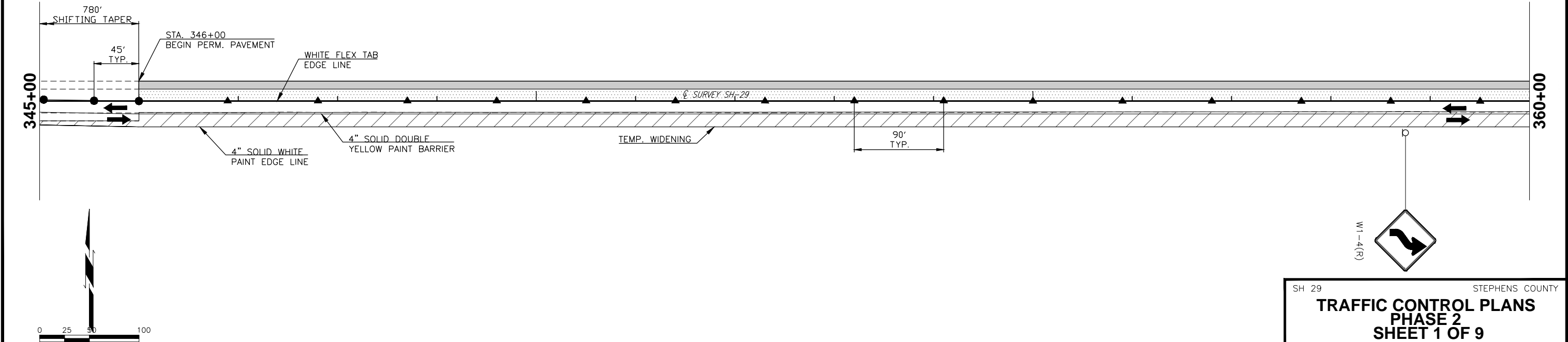
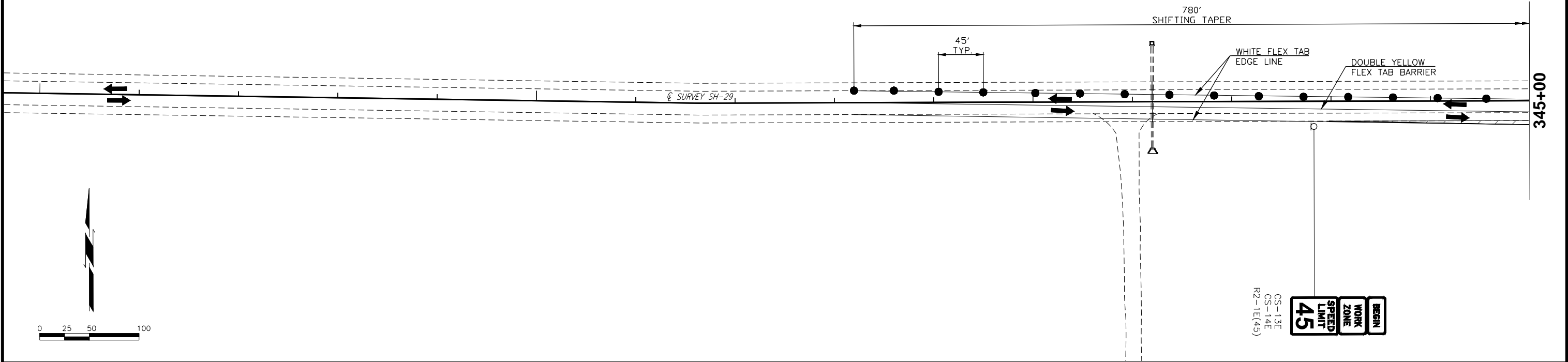
355+00

360+00

CS-13E
CS-14E
R2-1E(45)
45
SPEED
LIMIT
WORK
ZONE
BEGIN



SH 29 STEPHENS COUNTY
**TRAFFIC CONTROL PLANS
PHASE 2
SHEET 1 OF 9**
JOB PIECE NO. 24412(09) SHEET NO. T036



DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE
- DRUMS
- △ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- ▨ CONST. THIS PHASE
- ▨ PREV. CONST. PHASE
- ▨ PERM. OVERLAY

360+00

WHITE FLEX TAB
EDGE LINE

4" SOLID WHITE
PAINT EDGE LINE

45' TYP.

PERM. PAVEMENT

℄ SURVEY SH-29

90' TYP.

TEMP. FULL WIDTH
PAVEMENT

DETOUR 1

4" SOLID DOUBLE
YELLOW PAINT BARRIER

4" SOLID WHITE
PAINT EDGE LINE

365+00

W1-4(R)

STA. 367+33
CONST. TEMP. TBSC DR.

CS-14E
R2-1E(45)

WORK
ZONE
SPEED
LIMIT
45

CS-14E
R2-1E(45)

370+00

375+00

4" SOLID WHITE
PAINT EDGE LINE

4" SOLID DOUBLE
YELLOW PAINT BARRIER

TEMP. FULL WIDTH
PAVEMENT

DETOUR 1

385+00

STA. 384+56
CONST. TEMP. TBSC DR.

T6

STA. 387+46
CONST. TEMP. TBSC DR.

T8

390+00

0 25 50 100

SH 29 STEPHENS COUNTY

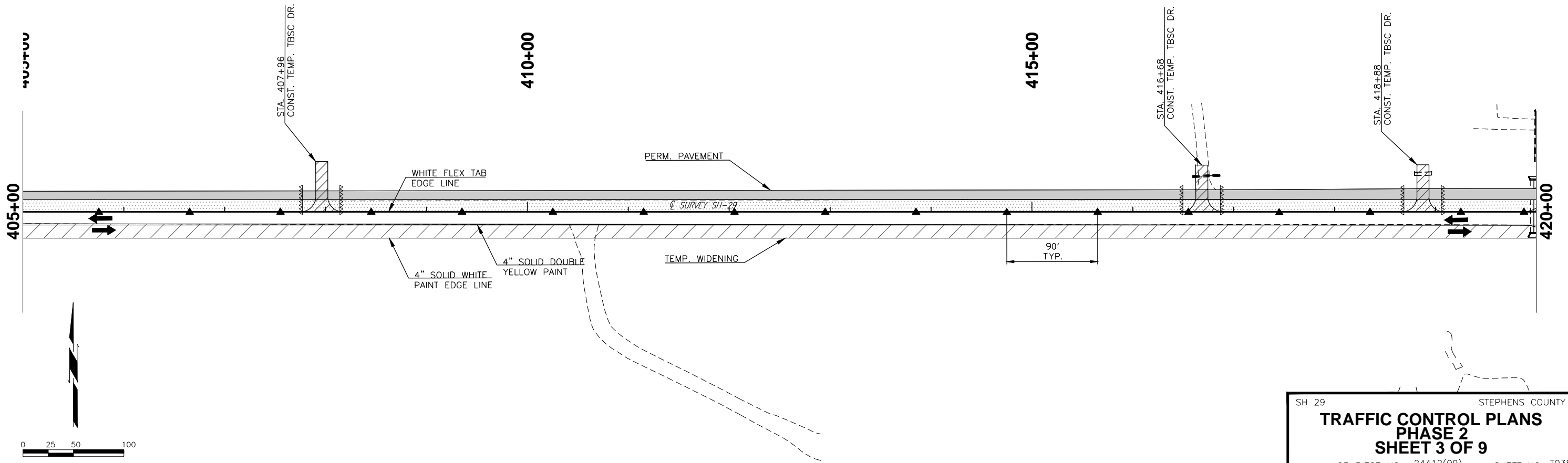
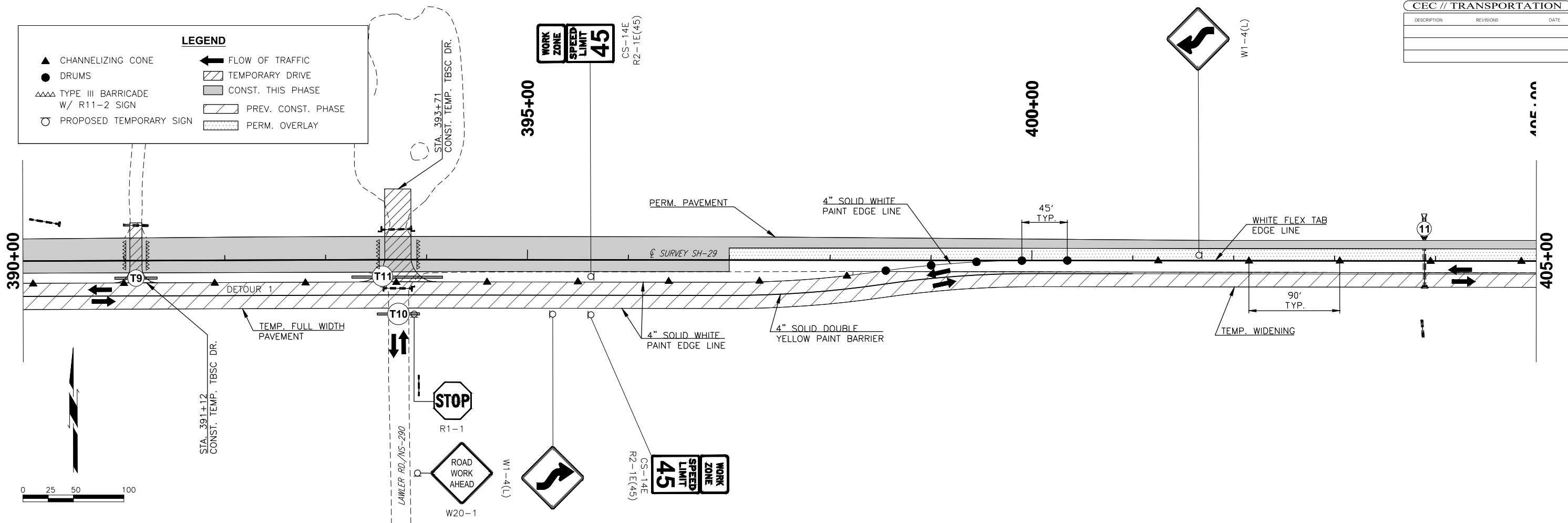
TRAFFIC CONTROL SHEETS
PHASE 2
SHEET 2 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T037

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE
- DRUMS
- △△△ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- ▨ CONST. THIS PHASE
- ▨ PREV. CONST. PHASE
- ▨ PERM. OVERLAY



SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 2
SHEET 3 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T038

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

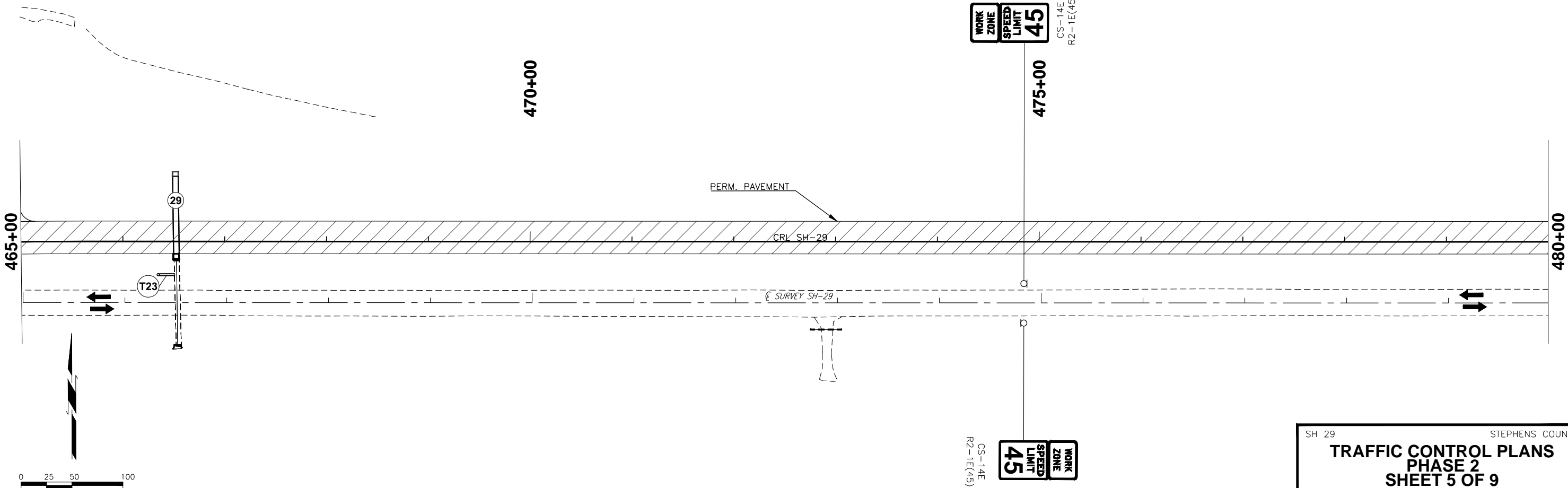
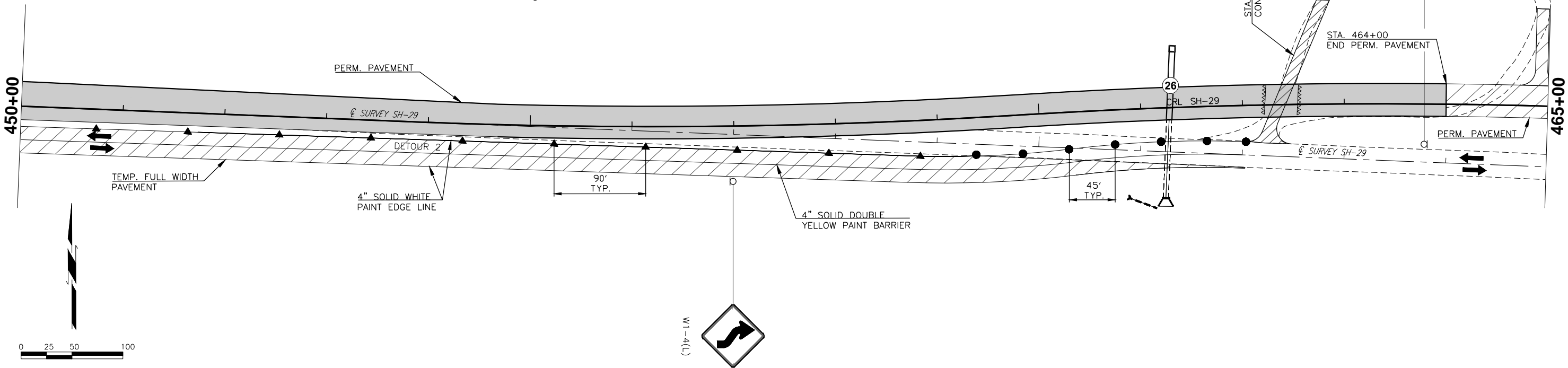
○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

▤ PERM. OVERLAY



DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▨ PREV. CONST. PHASE

▨ PERM. OVERLAY

480+00

485+00

490+00

495+00

0 25 50 100

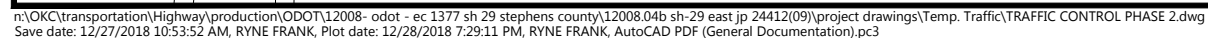
495+00

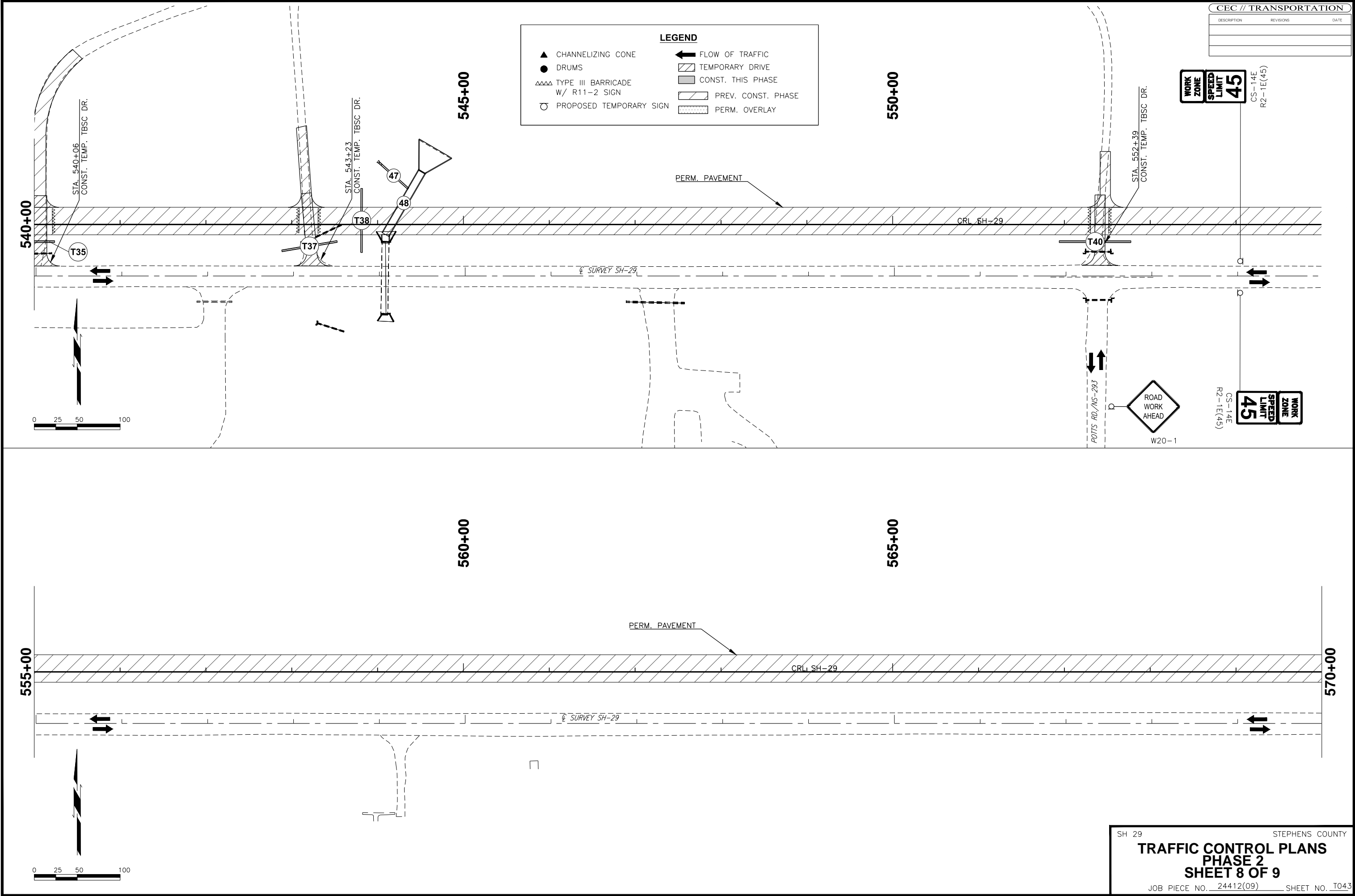
500+00

505+00

510+00

0 25 50 100





DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△△△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

■ CONST. THIS PHASE

▤ PREV. CONST. PHASE

▤ PERM. OVERLAY

570+00

575+00

580+00

585+00

STA. 573+00
BEGIN PERM. PAVEMENT
PHASE 2

PERM. PAVEMENT

STA. 579+08
CONST. TEMP. TBSC DR.

CRL 2

CRL

STA. 582+00

CS-14E
R2-1E(45)

590+00

595+00

590+00

STA. 590+59.89
END PERM. PAVEMENT
PHASE 2

45'
TYP.

CL SURVEY SH-29

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 2
SHEET 9 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T044

LEGEND

▲ CHANNELIZING CONE

← FLOW OF TRAFFIC

● DRUMS

▨ TEMPORARY DRIVE

△△△ TYPE III BARRICADE

■ CONST. THIS PHASE

W/ R11-2 SIGN

▨ PREV. CONST. PHASE

○ PROPOSED TEMPORARY SIGN

▨ PERM. OVERLAY

335+00

340+00

345+00

350+00

355+00

360+00

CL SURVEY SH-29

520'
SHIFTING TAPER

WHITE FLEX TAB
EDGE LINE

DOUBLE YELLOW
FLEX TAB BARRIER

45'
TYP.

CS-13E
CS-14E
R2-1E(45)

BEGIN
WORK
ZONE
SPEED
LIMIT
45

0 25 50 100

WHITE FLEX TAB
EDGE LINE

DOUBLE YELLOW
FLEX TAB BARRIER

90'
TYP.

345+00

STA. 346+00
BEGIN PERM. PAVEMENT

520'
SHIFTING TAPER

45'
TYP.

0 25 50 100

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 3
SHEET 1 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T045

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE

● DRUMS

△ TYPE III BARRICADE
W/ R11-2 SIGN

○ PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC

▨ TEMPORARY DRIVE

▨ CONST. THIS PHASE

▨ PREV. CONST. PHASE

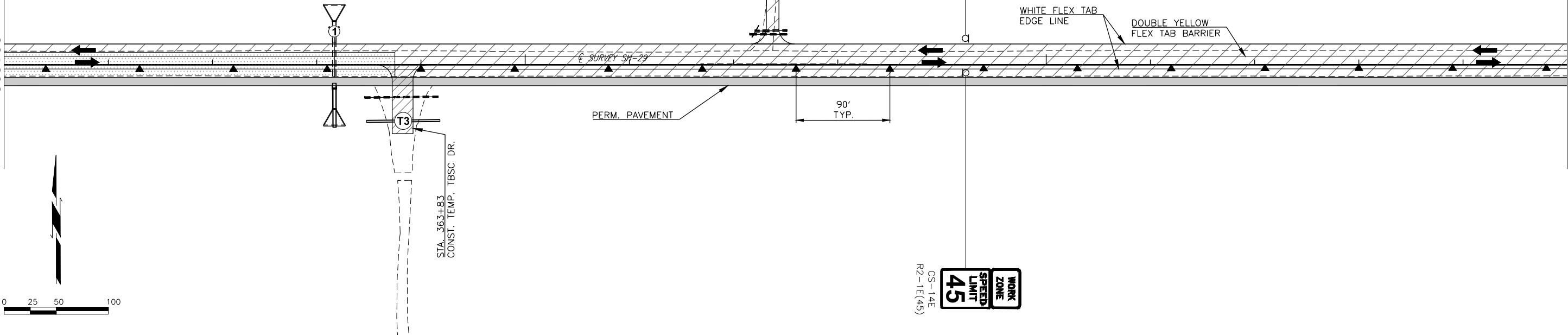
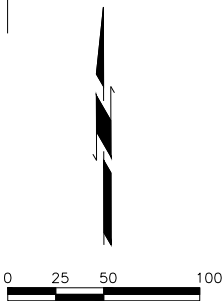
▨ PERM. OVERLAY

360+00

365+00

370+00

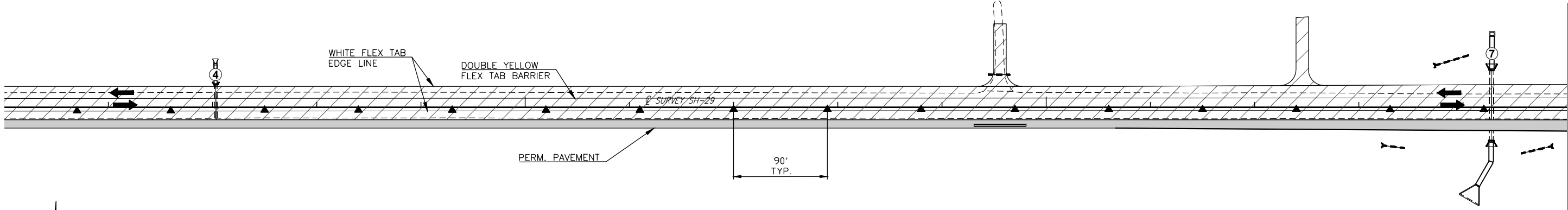
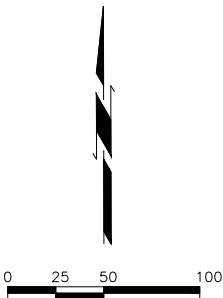
375+00



380+00

385+00

390+00



SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 3 SHEET 2 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T046

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE
- DRUMS
- △△△ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- ▨ CONST. THIS PHASE
- ▨ PREV. CONST. PHASE
- ▨ PERM. OVERLAY

390+00

395+00

400+00

WHITE FLEX TAB
EDGE LINE

DOUBLE YELLOW
FLEX TAB BARRIER

PERM. PAVEMENT

90'
TYP.

STA. 393+71
CONST. TEMP. TBSC DR.

LAWLER RD./NS-290



R1-1



CS-14E
R2-1E(45)



11



405+00

410+00

415+00

WHITE FLEX TAB
EDGE LINE

DOUBLE YELLOW
FLEX TAB BARRIER

90'
TYP.

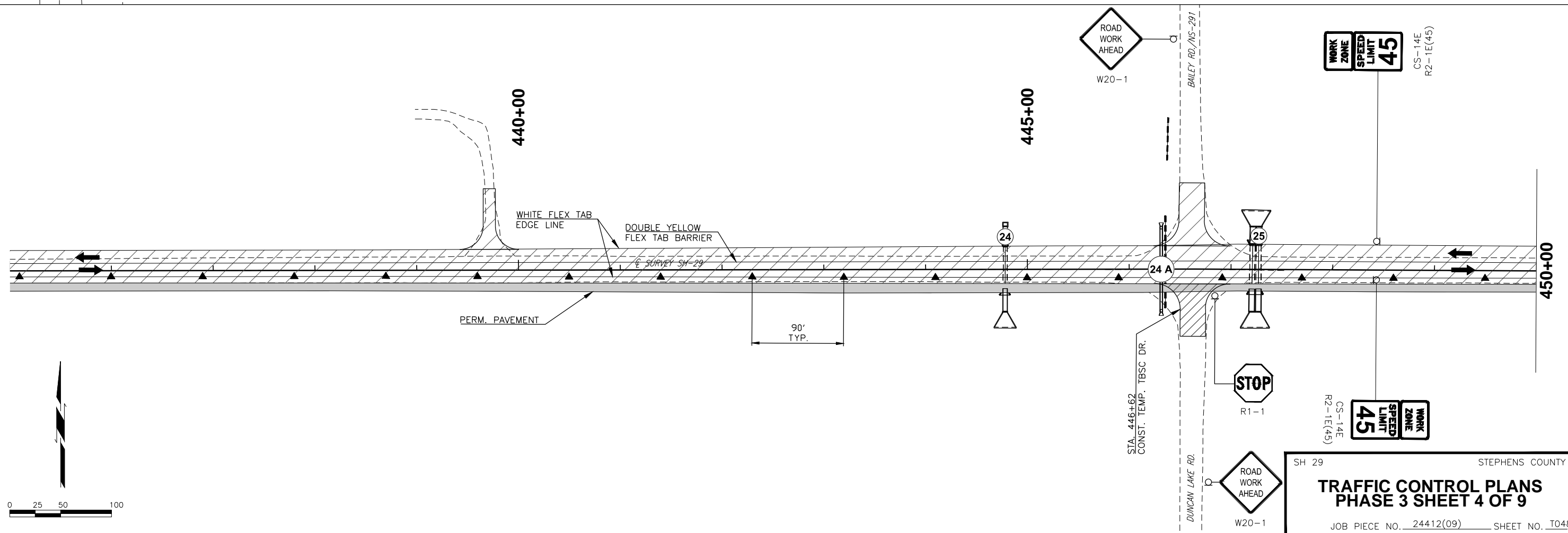
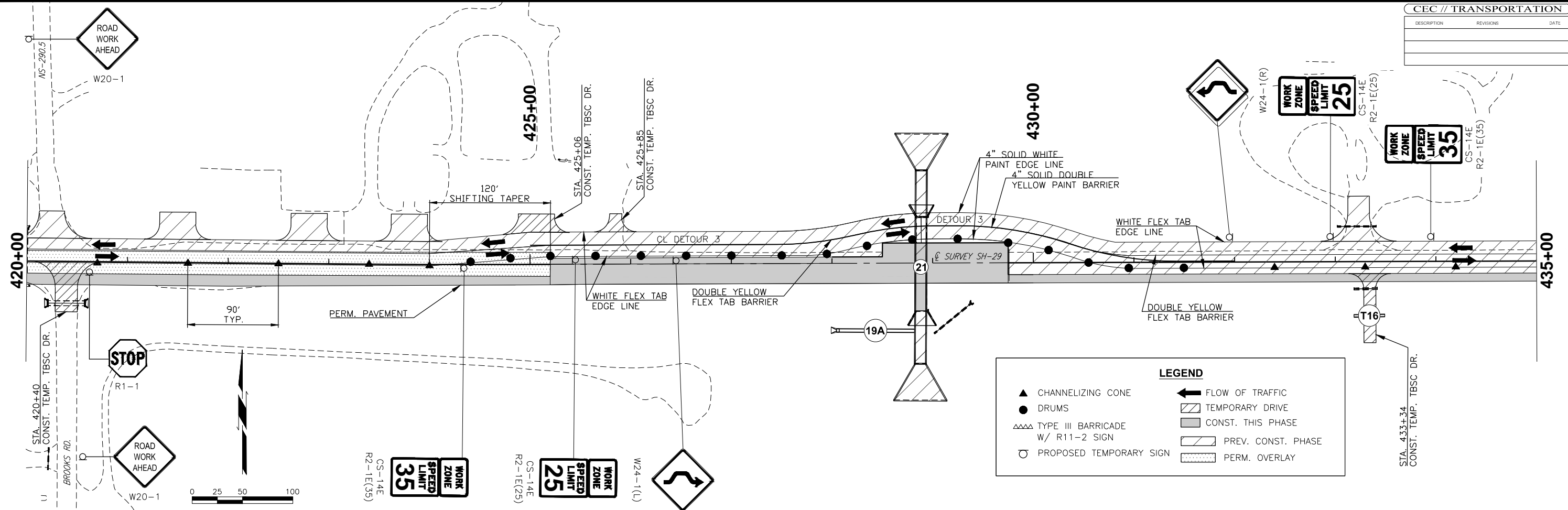
STA. 410+64
CONST. TEMP. TBSC DR.

420+00

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 3 SHEET 3 OF 9

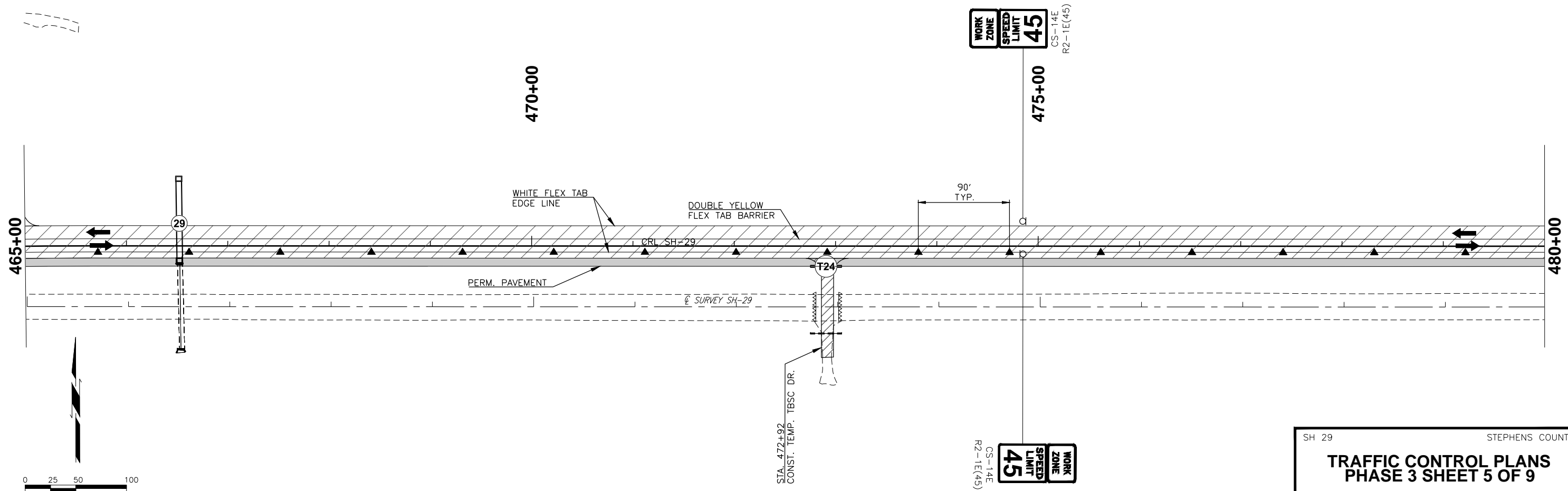
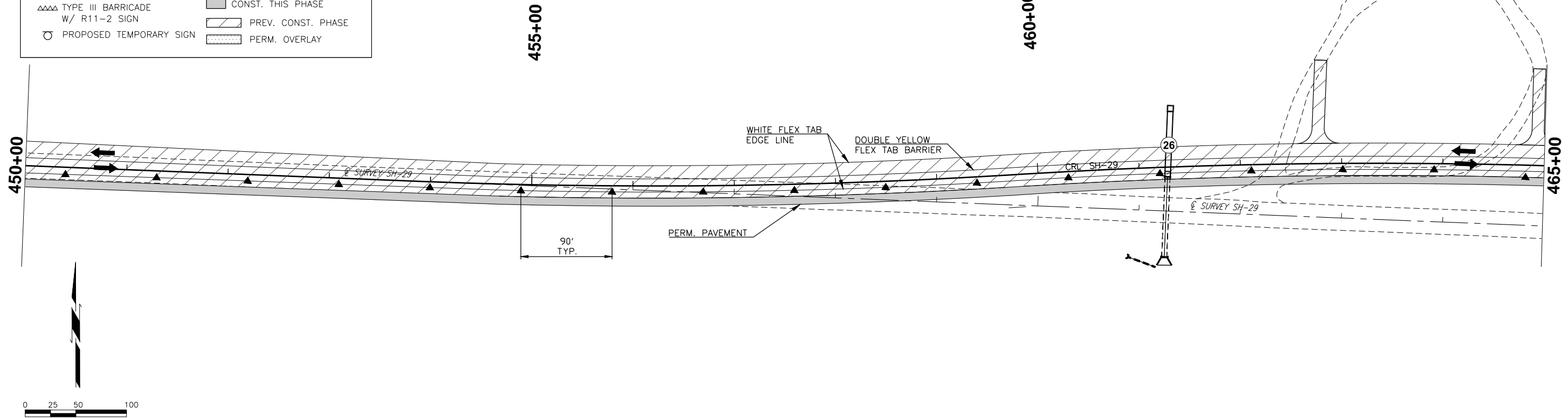
JOB PIECE NO. 24412(09) SHEET NO. T047



DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE
- DRUMS
- △△△ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- ▩ CONST. THIS PHASE
- ▨ PREV. CONST. PHASE
- ▨ PERM. OVERLAY



SH 29 STEPHENS COUNTY

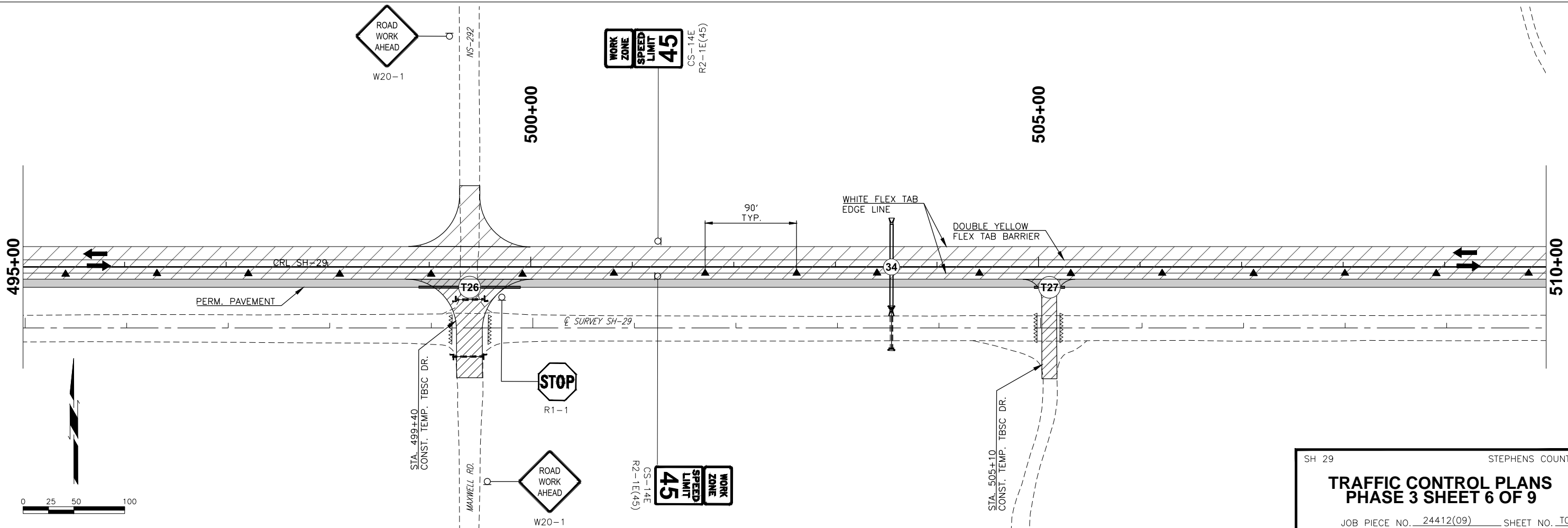
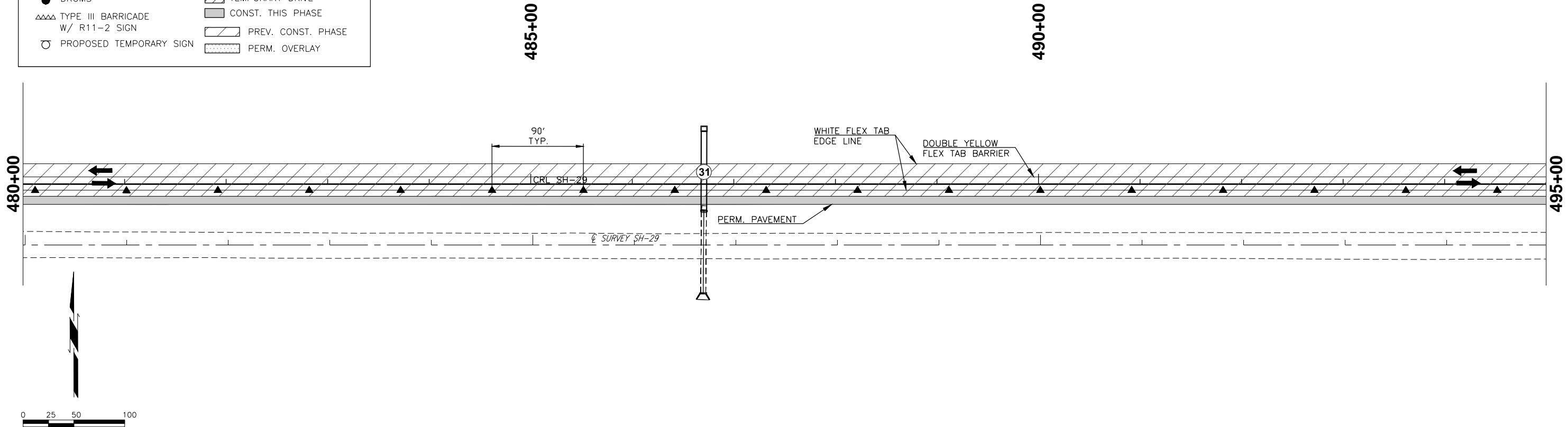
TRAFFIC CONTROL PLANS
PHASE 3 SHEET 5 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T049

DESCRIPTION	REVISIONS	DATE

LEGEND

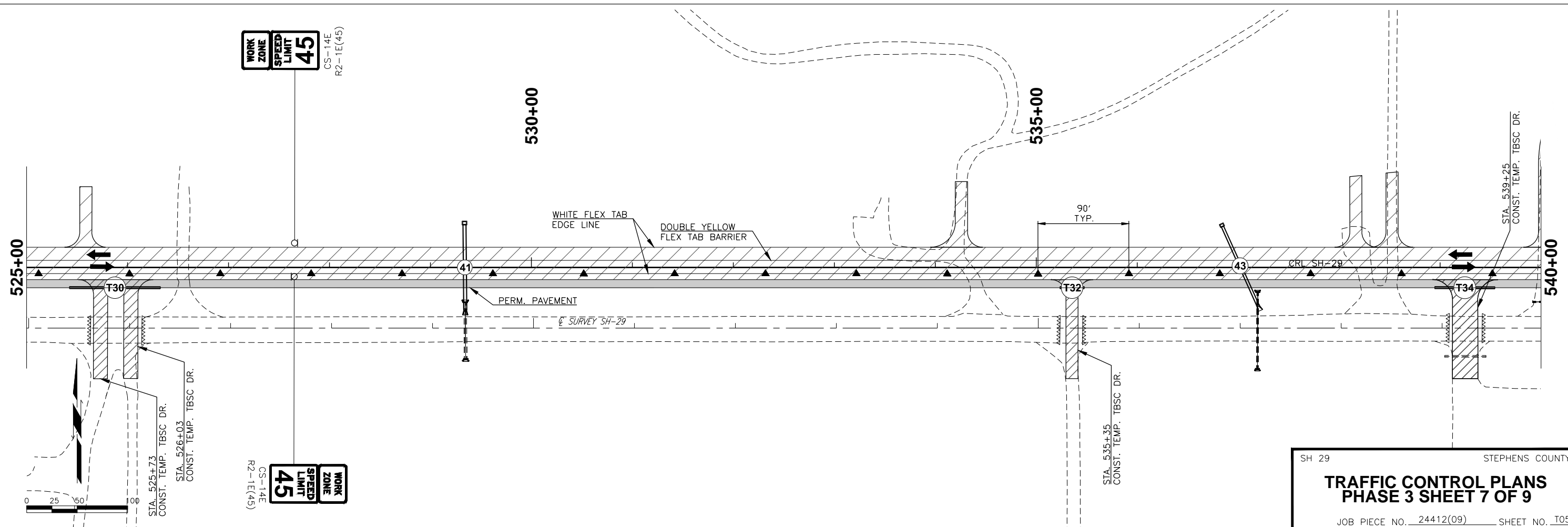
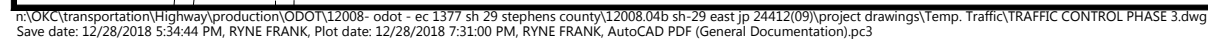
- ▲ CHANNELIZING CONE
- DRUMS
- △△△ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- CONST. THIS PHASE
- ▤ PREV. CONST. PHASE
- ▤ PERM. OVERLAY



SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 3 SHEET 6 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T050



DESCRIPTION	REVISIONS	DATE

LEGEND

▲

 CHANNELIZING CONE

●

 DRUMS

△△△

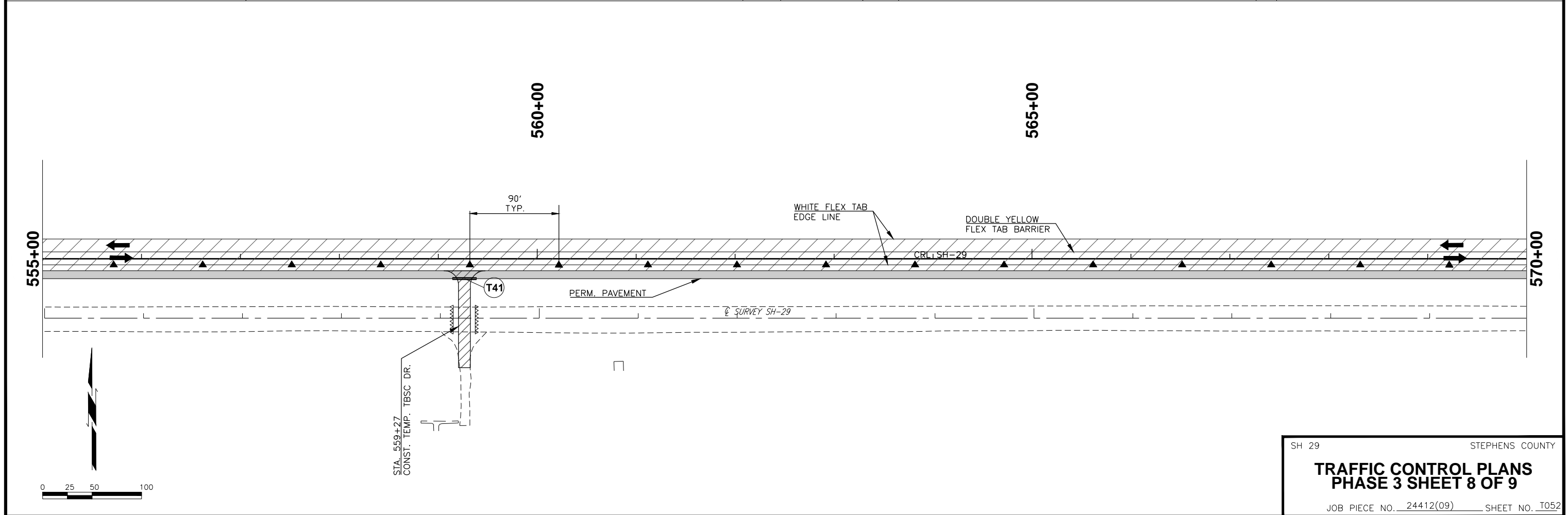
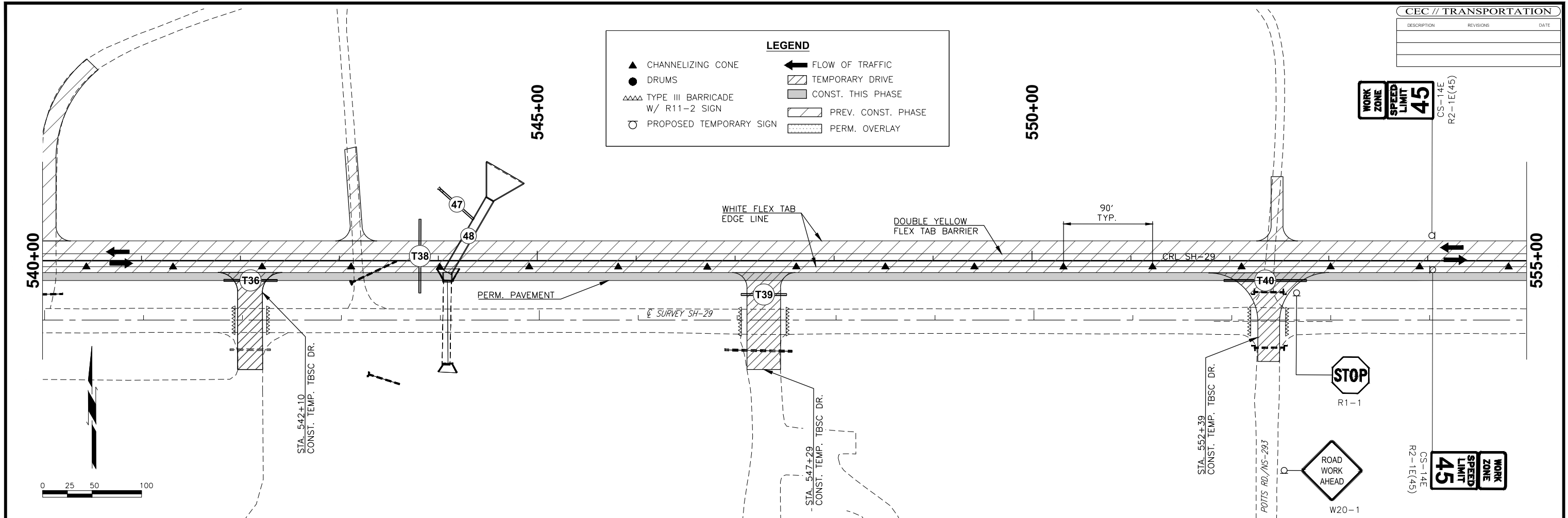
 TYPE III BARRICADE
W/ R11-2 SIGN

○

 PROPOSED TEMPORARY SIGN

←

 FLOW OF TRAFFIC

 TEMPORARY DRIVE

DESCRIPTION	REVISIONS	DATE

LEGEND

- ▲ CHANNELIZING CONE
- DRUMS
- △△△ TYPE III BARRICADE W/ R11-2 SIGN
- PROPOSED TEMPORARY SIGN
- ← FLOW OF TRAFFIC
- ▨ TEMPORARY DRIVE
- ▨ CONST. THIS PHASE
- ▨ PREV. CONST. PHASE
- ▨ PERM. OVERLAY

WORK
ZONE
SPEED
LIMIT
45
CS-14E
R2-1E(45)

575+00

580+00

585+00

570+00

STA. 573+00
END PERM
PAVEMENT

PERM. PAVEMENT

CL SURVEY SH-29

DOUBLE YELLOW
FLEX TAB BARRIER

WHITE FLEX TAB
EDGE LINE

STA. 584+00

0 25 50 100

CS-14E
R2-1E(45)

WORK
ZONE
SPEED
LIMIT
45

W1-4(R)

590+00

595+00

585+00

510' TAPER

STA. 585+95.29

WHITE FLEX TAB
EDGE LINE

DOUBLE YELLOW
FLEX TAB BARRIER

STA. 590+59.89
END PROJECT

PERM. PAVEMENT

CL SURVEY SH-29

W1-4(R)

WORK
ZONE
SPEED
LIMIT
40
CS-14E
R2-1E(40)

0 25 50 100

SH 29 STEPHENS COUNTY

TRAFFIC CONTROL PLANS
PHASE 3 SHEET 9 OF 9

JOB PIECE NO. 24412(09) SHEET NO. T053

