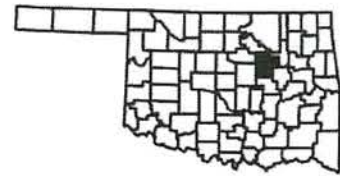


Sub: June 8, 2016

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PAGE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	OKLA.	28858(04)			
DESCRIPTION	REVISION	DATE			



LOCATION MAP

FOR SURVEY CONTROL DATA, SEE SURVEY DATA SHEETS

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED
STATE HIGHWAY
FEDERAL AID PROJECT NO. ACSTP-219C(050)SS
BRIDGE AND APPROACHES
STATE HIGHWAY 16
CREEK COUNTY

CONTROL SECTION NO. 16-19-10

STATE JOB NO. 28858(04)

BRIDGE "A" LOCATION NO. 1910 0812 X

EXISTING NBIS NO. 12390 ; NEW NBI NO. 31001

BRIDGE "B" LOCATION NO. 1910 0837 X

EXISTING NBIS NO. 04353 ; NEW NBI NO. 31002

INDEX OF SHEETS

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THE FOLLOWING ODOT STANDARDS WILL BE REQUIRED ON THIS PROJECT:

ROADWAY	TRAFFIC	BRIDGE
SSS-1-1	PM3-I-2	TCS5-I-0
TSC2-3-2	DUI-I-0	TCS6-I-2
TSD-2-0	DU2-I-0	TCS7-I-2
ASCD-5-2	RSDI-I-0	TCS8-I-0
PSE-1-0	WSDI-I-0	TCS9-I-1
CET6S-3-2	SBSI-I-0	TCS10-I-0
CET6D-3-2	SBS2-I-0	TCS11-I-1
PCES-4-1	SBS3-I-0	TCS13-I-0
SPI-4-1	SBS5-I-0	TCS14-I-0
SPB-1-4	GMSI-I-0	TCS16-I-0
FHTMPP-1-0	SSPI-I-2	TCS20-I-0
FHTCP-3-1	SSAI-I-0	TCS21-I-2
SBI-4-2	RSI-I-0	TCS22-I-0
CLB-1-2	TCSI-I-1	TCS23-I-0
M1-3-0	TCS2-I-0	TCS24-I-2
RD1-3-1	TCS3-I-1	TCS25-I-0
DC-3-2	TCS4-I-1	
PDT-1-3		
RWF2-2-1		
SUEL1-3-2		
SUEL4-3-2		
RCB-C1-3&4&5(2-20)-01E		
RCB-E1-H3-0-1-01E		
RCB-E1-H3-0-2-01E		

DESIGN DATA

ADT 2013	= 1,800
ADT 2033	= 2,600
DHV (2-WAY)	= 286
K (DHV/ADT)	= 11%
D	= 57%
T (% DHV)	= 15%
T (% ADT)	= 17%
T (% ADT)	= 10%
V	= 70MPH
20yr FLEX ESALS	= 4.00M

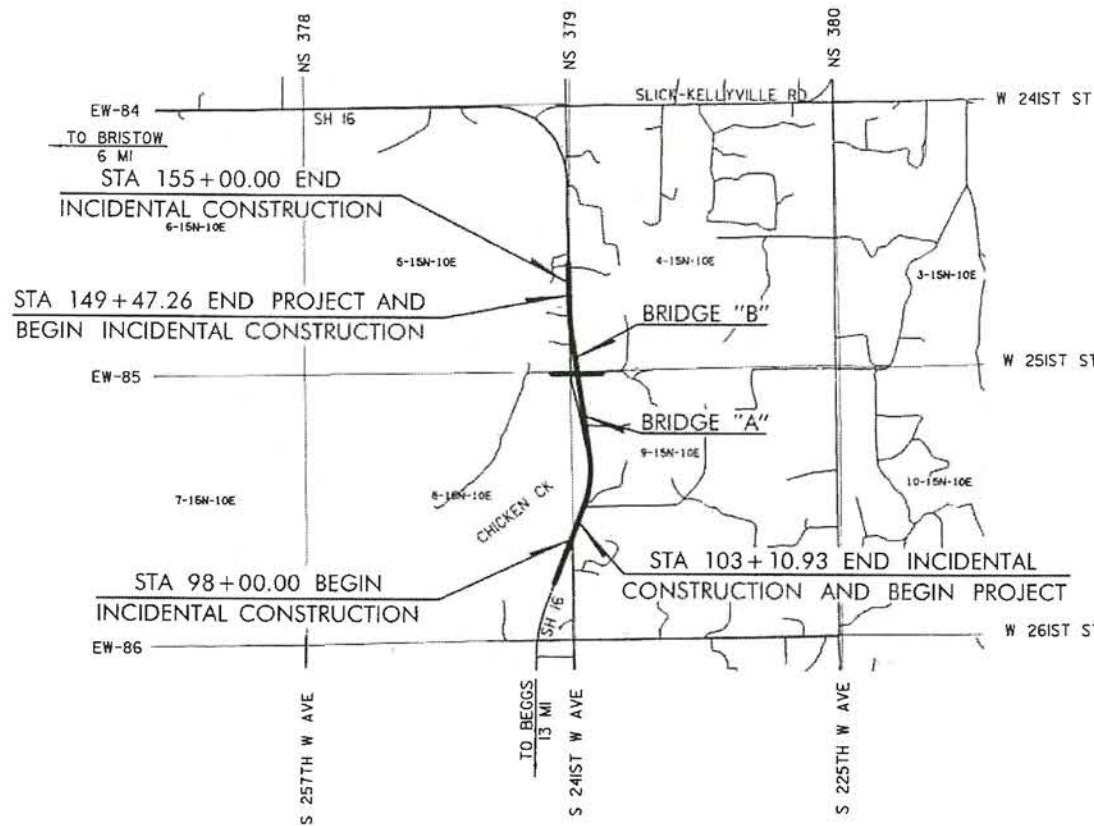
SCALES

PLAN	1" = 100'
PROFILE HOR	1" = 100'
VER	1" = 10'
LAYOUT MAP	1" = 5,280'

CONVENTIONAL SYMBOLS

	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP
	SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OILWELL
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE

BR "B"	STA 136+97.20
	BR LENGTH = 40.61
	STA 136+56.59
BR "A"	STA 124+86.50
	BR LENGTH = 23.00'
	STA 124+63.50



ROADWAY LENGTH ----- 4,572.72 FT. 0.866 MI.
BRIDGE LENGTH ----- 63.61 FT. 0.012 MI.
PROJECT LENGTH ----- 0.878 MI.

EQUATIONS : NONE
EXCEPTIONS : NONE

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION-ENGLISH GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4, 2010.

PREPARED BY:
SCHEMMER
ARCHITECTS | ENGINEERS | PLANNERS
4516 NW 36TH STREET,
SUITE 101
OKLAHOMA CITY, OK 73122
405-259-2000

TODD A. COCHRAN, P.E.
OKLA. REG. NO. 24856
RESPONSIBLE FOR SHEETS:
1-4, 6-45, 52, XI-X43

STEPHEN D. KATHOL, P.E.
OKLA. REG. NO. 24623
RESPONSIBLE FOR SHEETS:
5, 46-51

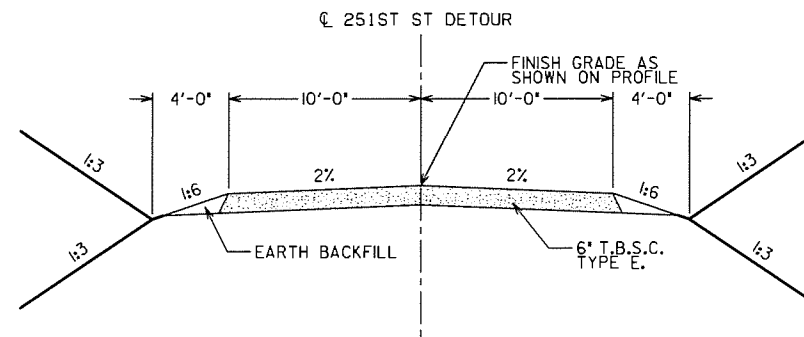
CERTIFICATE OF AUTHORIZATION NO. 5964 P.E. RENEWAL DATE: 6-30-2017

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR
SWD 4848(1)	PROJECT NO. ACSTP-219C(050)SS
	SHEET NO. 1

P.E. NO. : 28858(01)

6/7/2016

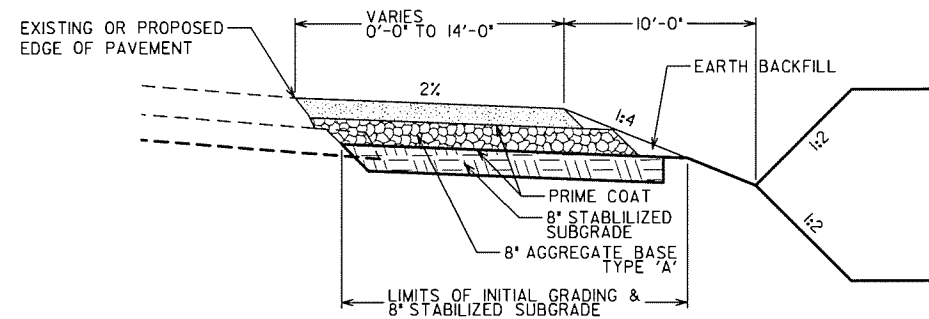
CREEK COUNTY SH-16



TYPICAL DETOUR SECTION

251st STREET

CL DETOUR STA 205+38.28 TO 212+34.11

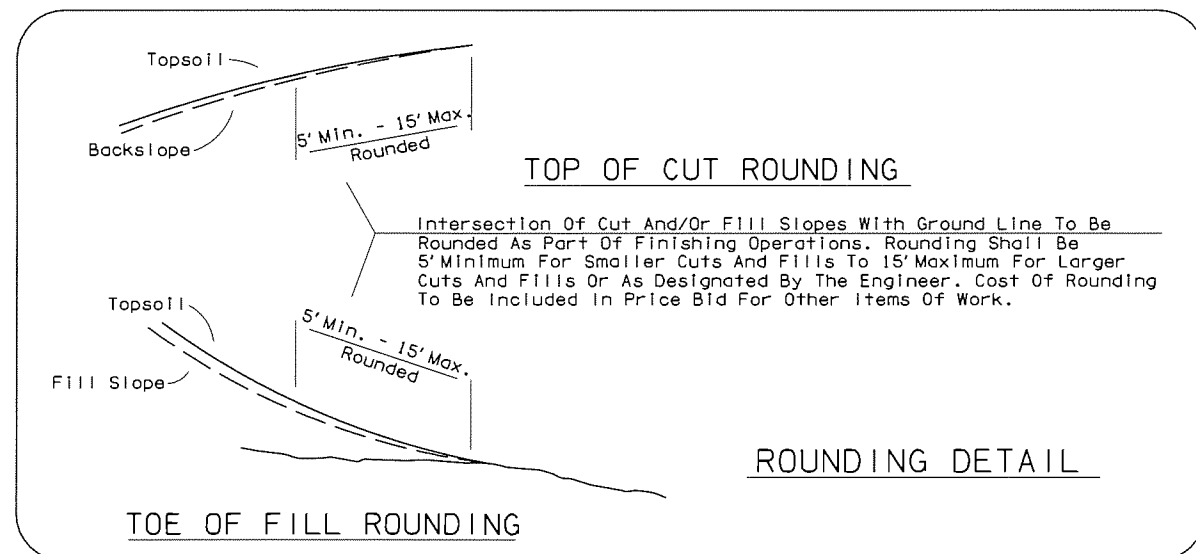


TEMPORARY WIDENING SECTION

CL SURVEY STATIONS (LT)
 100+60.89 TO 117+19.00
 140+64.62 TO 152+07.23

CRL A STATIONS (RT)
 99+05.94 TO 122+60.43
 137+55.69 TO 153+52.33

ASPHALT CONCRETE REQUIREMENT - TEMPORARY WIDENING	
5" PAVT. STRUCTURE	0'-0" TO 14'-0" TEMPORARY DRIVING LANES
SURFACE COURSE	2" SUPERPAVE TYPE S4 PG (64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 PG (64-22 OK)



DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

TYPICAL SECTIONS

STATE JOB NO. 28858(04) SHEET NO. 3
 CREEK COUNTY SH-16

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.

MAINTENANCE OF THROUGH TRAFFIC INCLUDES THE MAINTENANCE OF THE EXISTING ROAD IN CLOSE PROXIMITY TO THE NEW CONSTRUCTION AS SHOWN ON THE PLANS.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING SECTION LINE ROADS 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 REVISIONS) 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 OF TEMPORARY FENCING SHALL 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 KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

WHEN BOTH A WARM AND COOL SEASON SEED MIX IS SPECIFIED, EITHER MIX (IN THE PROPER SEASON) MAY BE USED, BUT BOTH SHALL NOT BE PLANTED ON THE SAME AREA. KINDS OF SEED TO BE FURNISHED QUANTITY PER ACRE.
CRIMSON CLOVER (TRIFOLIUM INCARNATUM) 12 LBS. OF SEED PER ACRE
PERENNIAL RYEGRASS (LOLIUM PERENNE) 20 LBS. OF SEED PER ACRE

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.

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.

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.

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 1659 CUBIC YARDS FOR DRIVEWAYS, RETURNS, DIKES, AND MISCELLANEOUS.

(R-5) AN ESTIMATED QUANTITY OF 5583 C.Y. TOPSOIL TO BE RESERVED FOR REPLACEMENT OF APPROXIMATELY 5' ON COMPLETED FORE SLOPES, DITCHES, AND BACK SLOPES. 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 ITEM 205(A) PRICE BID TO INCLUDE COST OF 18-46-0 FERTILIZER AT 150 POUNDS PER ACRE. FOR ITEM 230(A) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER AT 200 POUNDS PER 1000 SQUARE YARDS. FOR ITEM 232(B) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER AT 300 POUNDS PER ACRE.

(R-8) FOR ITEM 230(A) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 40 GALLONS PER SQUARE YARD.

FOR ITEM 232(B) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 40 GALLONS PER SQUARE YARD.

(R-11) THE QUANTITIES ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 8.33 ACRES.

(R-16) QUANTITY BASED ON TWO APPLICATIONS.

(R-25) ESTIMATED AT 120 LBS. PER CU. FT.

(R-30) PRICE BID TO INCLUDE COST OF 3,352 GALLONS OF TACK COAT, MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.

(R-31) PRICE BID TO INCLUDE COST OF 23,318 GALLONS OF PRIME COAT, MEETING THE REQUIREMENTS OF SECTION 408 OF THE STANDARD SPECIFICATIONS, AND ESTIMATED AT 0.35 GAL. PER SQ. YD. ON TOP OF COMPLETED SUBGRADE, AND 0.25 GAL. PER SQ. YD. ON TOP OF AGGREGATE BASE. THE ACTUAL EMULSIFIED 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 20 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 THE PROPERTY OF THE CONTRACTOR.

(R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, 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 STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- (1) INCLUDES 237 CUBIC YARDS FOR DRAINAGE STRUCTURES, SEE SHEET 9.
- (2) INCLUDES 70 TONS FOR TEMPDRARY DRIVEWAYS.
- (3) SEE SUMMARY OF STRUCTURES AND OBSTRUCTIONS ON SHEET 7, SUMMARY SHEET (ROADWAY). CUT WELLS TO ELEVATION OF NATURAL GROUND SURFACE FOR REMOVAL. SEE ENVIRONMENTAL MITIGATION NOTES, THIS SHEET.
- (4) ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED CONDITION.
- (5) INCLUDES REMOVAL OF EXISTING AGGREGATE BASE MATERIAL FROM ABANDONED ROADWAY, STATION 126+25 TO STATION 138+25

PAY QUANTITIES

JP 28858(04)

ROADWAY		0100		UNIT	QUANTITY
ITEM NO.	CODE NO.	DESCRIPTION			
201(A)	0102	CLEARING AND GRUBBING		LSUM	1
202(A)	0183	UNCLASSIFIED EXCAVATION	(1,R-1)	CY	48313
202(D)	0184	UNCLASSIFIED BORROW	(R-1,R-4)	CY	46325
205(A)	4229	TYPE A-SALVAGED TOPSOIL	(R-5,R-7)	LSUM	1
221(C)	2801	TEMPORARY SILT FENCE		LF	1968
221(F)	0100	TEMPORARY SILT DIKE		LF	1330
229	4318	DITCH LINER PROTECTION		LF	627
230(A)	2806	SOLID SLAB SODDING	(R-7,8)	SY	54675
232(B)	2814	SEEDING METHOD B	(R-7)	AC	22.63
233(A)	2817	VEGETATIVE MULCHING	(R-11)	AC	11.33
241	2832	MOWING	(R-16)	AC	22.63
303(A)	2100	AGGREGATE BASE TYPE A		CY	8032
307(K)	4300	STABILIZED SUBGRADE		SY	39696
325	5271	SEPARATOR FABRIC		SY	26126
402(E)	0225	TRAFFIC BOUND SURFACE COURSE TYPE E	(2,R-25)	TON	3131
411(B)	5945	SUPERPAVE, TYPE S3(PG 64-22 OK)	(R-31,32)	TON	9001
411(C)	5960	SUPERPAVE, TYPE S4(PG 64-22 OK)	(R-30,32)	TON	3577
501(A)	0313	STRUCTURAL EXCAVATION UNCLASSIFIED	(R-50)	CY	29
509(A)	0319	CLASS AA CONCRETE		CY	43
509(D)	0325	CLASS C CONCRETE	(R-41)	CY	114
511(A)	0332	REINFORCING STEEL		LB	7623
601(A)	0297	TYPE 1 PLAIN RIPRAP		TON	1231
601(I)	6312	FILTER FABRIC (RIPRAP)		SY	1881
613(A)	0491	18" R.C.PIPE CLASS III		LF	217
613(A)	0496	48" R.C.PIPE CLASS III		LF	144
613(A)	4495	22" x 13" R.C.PIPE ARCH CLASS A-III		LF	112
613(B)	0689	18" CORR. GALV. STEEL PIPE	(R-46)	LF	334
613(B)	0691	30" CORR. GALV. STEEL PIPE	(R-46)	LF	26
613(L)	5726	18" PREFAB. CULVERT END SECTION, ROUND		EA	5
613(M)	7196	TYPE A6 CULVERT END TREATMENT		EA	9
613(M)	7205	TYPE E66 CULVERT END TREATMENT		EA	2
619(A)	0920	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(3,4,R-48,49,50)	LSUM	1
619(B)	0291	REMOVAL OF HEADWALL	(R-49,50)	EA	2
619(B)	4725	REMOVAL OF FENCE	(R-49)	LF	7617
619(B)	4728	REMOVAL OF ASPHALT PAVEMENT	(5)(R-49,50)	SY	21957
619(B)	4780	REMOVAL OF GUARDRAIL	(R-49)	LF	538
619(B)	8610	REMOVE AND RESET CATTLE GUARD		EA	1
619(C)	0924	SAWING PAVEMENT		LF	5060
624(C)	4459	FENCE - STYLE SWF (5 BARBED WIRE)	(R-52,53)	LF	9134
624(C)	7181	FENCE - STYLE SWF (6 BARBED WIRE)	(R-52,53)	LF	815
624(D)	4470	GATE, GALVANIZED STEEL		EA	5
629(A)	4958	MAILBOX INSTALLATION - SINGLE		EA	2
629(B)	4959	MAILBOX INSTALLATION - MULTIPLE		EA	2

ENVIRONMENTAL MITIGATION NOTES

MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. THESE BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR THE BIRDS RUNS FROM APRIL 1 TO AUGUST 31. ANY ACTIVITIES WHICH WOULD DESTROY ACTIVE NESTS OR HARM EGGS OR BIRDS WOULD VIOLATE THE MIGRATORY BIRD TREATY ACT. MIGRATORY BIRD USE OF ALL BRIDGES AND CULVERTS HAS BEEN OBSERVED DURING THE INITIAL SURVEY CONDUCTED AS PART OF THE BIOLOGICAL STUDIES IN 2013. THE RESIDENT ENGINEER WILL EVALUATE THE CONTRACTOR'S PROPOSED WORK METHODS AND CONCLUDE WHETHER THE PROPOSED WORK WOULD POSE DISRUPTION TO ANY NESTING BIRDS BEFORE WORK NEAR THE STRUCTURE IS AUTHORIZED. IF THE PROPOSED WORK WILL HARM ANY NESTING BIRDS, THE BRIDGE MAY BE NETTED PRIOR TO APRIL 1 OR THE WORK DELAYED UNTIL THE NESTING SEASON IS COMPLETE. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

THE AMERICAN BURYING BEETLE IS A LARGE CARRION BURYING BEETLE THAT IS LISTED AS ENDANGERED UNDER THE ENDANGERED SPECIES ACT. IN ORDER TO AVOID ADVERSE IMPACTS, NO ARTIFICIAL LIGHTING SHALL BE USED DURING CONSTRUCTION. CARCASSES AND ALL FOOD TRASH SHALL BE REMOVED FROM THE PERMANENT AND TEMPORARY RIGHT-OF-WAY THROUGHOUT PROJECT ACTIVITIES.

THIS PROJECT IS IN CLOSE PROXIMITY TO AREAS THAT HAVE HISTORICALLY BEEN USED FOR THE EXPLORATION AND EXTRACTION OF CRUDE OIL. AS A RESULT, THERE IS A POTENTIAL TO ENCOUNTER CRUDE OIL PRODUCTS AND RELATED WASTES. IF SUCH MATERIALS ARE FOUND, THE RESIDENT ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.

IN ADDITION, THERE IS A POTENTIAL TO ENCOUNTER GATHERING LINES AND OTHER PIPING, AND ABANDONED OIL, GAS OR SALTWATER DISPOSAL WELLS. ANY WELLS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES MUST BE PLUGGED, BY PROPERLY LICENSED PERSONNEL, IN ACCORDANCE WITH ALL APPLICABLE OKLAHOMA CORPORATION COMMISSION RULES AND REGULATIONS.

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

GENERAL NOTES & SUMMARY
OF PAY QUANTITIES (ROADWAY)

STATE JOB NO. 28858(04) SHEET NO. 4
CREEK COUNTY SH-16

GENERAL CONSTRUCTION NOTES

- (1) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF 2-10'X7' RCB AT C.R.L. STA. 124+67.19.
- THE REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 619.04(B)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. THE STRUCTURE AND MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.
- (2) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF CONCRETE DECK & STEEL BEAM BRIDGE APPROXIMATELY 91.75' LONG WITH APPROXIMATELY 25.62' CLEAR ROADWAY AT C.R.L. STA. 136+78.33.
- THE REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 619.04(B)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER. PROTECT AND SALVAGE STEEL BEAMS AND DELIVER TO THE LOCATION SPECIFIED BY THE ENGINEER.
- (3) THE BRIDGE BEAMS SHALL BECOME THE PROPERTY OF CREEK COUNTY. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE BEAMS AND WILL STORE THE BEAMS ON THE PROJECT FOR THE COUNTY TO PICK UP. ONCE THE BEAMS ARE STORED THE CONTRACTOR SHALL GIVE WRITTEN NOTIFICATION TO THE COUNTY TO REMOVE THE BEAMS FROM THE PROJECT. THE COUNTY WILL BE RESPONSIBLE FOR LOADING AND TRANSPORTING THE BEAMS.
- THE COUNTY WILL HAVE THIRTY (30) DAYS FROM THE TIME WRITTEN NOTIFICATION IS GIVEN TO REMOVE THE BEAMS. AFTER 30 DAYS, ANY BEAMS NOT REMOVED FROM THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR.
- THE BEARINGS SHALL REMAIN THE PROPERTY OF ODOT AND WILL BE STOCKPILED WITHIN THE R/W AS DIRECTED BY THE ENGINEER. AFTER 30 DAYS ANY BEARINGS NOT REMOVED FROM THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR.
- ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO ODOT OR THE COUNTY. ALL OTHER MATERIALS OTHER THAN THE BEAMS AND BEARINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.
- (4) PROVIDE ALL EXPOSED CONCRETE EDGES WITH A 3/4" CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. USE SIZED LUMBER FOR ALL CHAMFER STRIPS.

BRIDGE NOTES

BR-1 PAYMENT FOR THIS ITEM WILL BE BASED ON THE PLAN QUANTITIES ONLY. SEE SECTION 109.01(b) OF THE STANDARD SPECIFICATIONS.

DESCRIPTION OF WORK

THE WORK TO BE PERFORMED SHALL CONSIST OF CONSTRUCTING BRIDGE "A" UNDER NEW ALIGNMENT AND PHASED CONDITIONS. DRAINAGE SHALL BE MAINTAINED DURING ALL PHASES. UPON TRAFFIC SWITCH TO NEW ALIGNMENT, THE EXISTING BOX CULVERT NEAR BRIDGE "A" IS TO BE REMOVED. AFTER EXISTING BOX CULVERT REMOVAL, THE REMAINING SEGMENT AND END SECTION FOR BRIDGE "A" SHALL BE COMPLETED AND RIP RAP PLACED.

BRIDGE "B" SHALL BE CONSTRUCTED UNDER NEW ALIGNMENT AND PHASED CONDITIONS. DRAINAGE SHALL BE MAINTAINED DURING ALL PHASES. UPON TRAFFIC SWITCH TO NEW ALIGNMENT, THE EXISTING BRIDGE NEAR BRIDGE "B" IS TO BE REMOVED. AFTER THE EXISTING BRIDGE IS REMOVED, THE REMAINING SEGMENT AND END SECTION FOR BRIDGE "B" SHALL BE COMPLETED AND RIP RAP PLACED.

NBI NO. 31001		PAY QUANTITIES			JP 28858(04)
BRIDGE 'A'		0200 2-10'x10'x120' CL RDY RCB			
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
202(A)	1301	UNCLASSIFIED EXCAVATION (BR-1)	CY	4548	
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED (BR-1)	CY	412	
509(A)	1326	CLASS AA CONCRETE (BR-1)	CY	570	
511(A)	1332	REINFORCING STEEL (BR-1)	LB	78446	
525(A)	0100	(SP) NEST PREVENTION - NETTING	LSUM	1	
601(A)	1351	TYPE 1 PLAIN RIPRAP	TON	2243	
601(I)	6312	FILTER FABRIC (RIPRAP)	SY	2556	
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE (1)(3)	LSUM	1	

NBI NO. 31002		PAY QUANTITIES			JP 28858(04)
BRIDGE 'B'		0201 2-16'x15'x100'-0" CL RDY RCB (30° SKEW)			
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
202(A)	1301	UNCLASSIFIED EXCAVATION (BR-1)	CY	6023	
501(A)	1306	STRUCTURAL EXCAVATION UNCLASSIFIED (BR-1)	CY	883	
509(A)	1326	CLASS AA CONCRETE (BR-1)	CY	1368	
511(A)	1332	REINFORCING STEEL (BR-1)	LB	214123	
525(A)	0100	(SP) NEST PREVENTION - NETTING	LSUM	1	
601(B)	1353	TYPE 1-A PLAIN RIPRAP	TON	4300	
601(C)	1355	TYPE 1-A FILTER BLANKET	TON	1040	
601(I)	6312	FILTER FABRIC (RIPRAP)	SY	3675	
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE (2)	LSUM	1	

STAKING		PAY QUANTITIES			JP 28858(04)
0600		CONSTRUCTION STAKING LEVEL II			
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
642(B)	0096	CONSTRUCTION STAKING LEVEL II	LSUM	1	

CONSTRUCTION		PAY QUANTITIES			JP 28858(04)
0640		SWPPP DOCUMENTATION AND MANAGEMENT			
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY	
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1	
641	1399	MOBILIZATION	LSUM	1	

RIP RAP TREATMENT QUANTITIES									
C.R.L. STATION TO STATION	SIDE	DIMENSIONS			TYPE 1 PLAIN RIPRAP	TYPE 1-A PLAIN RIPRAP	TYPE 1-A FILTER BLANKET		FILTER FABRIC (RIPRAP)
		AREA	THICKNESS	SIZE	601(A)	601(B)	THICKNESS	601(C) 0538	601(I)
		SF	LF	FT	TON	TON	FT	TON	SY
124+75.00	LT	14307	1.5	0.8	1395.0	-	-	-	1590.0
124+75.00	RT	8694	1.5	0.8	848.0	-	-	-	966.0
136+77.00	LT	12915	2.0	1.2	-	410.0	0.5	410.0	1435.0
136+77.00	RT	20159	2.0	1.2	-	630.0	0.5	630.0	2240.0
TOTALS:					2243.0	1040.0		1040.0	6231.0

DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

GENERAL NOTES & SUMMARY OF PAY QUANTITIES (BRIDGE)

STATE JOB NO. 28858(04) SHEET NO. 5
CREEK COUNTY SH-16

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GENERAL CONSTRUCTION NOTES

- (C-2) 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 DONE ACCORDING TO STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND AS SHOWN ON TCS STANDARD DRAWINGS.
- (C-57) 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.
- (C-60) 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.
- (C-61) POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.
- (C-65) 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.
- (C-68) AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE ENGINEER.

TRAFFIC SIGNING PAY QUANTITY NOTES

- (TS-24) QUANTITY SHOWN INCLUDES 10,434 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 4,417 L.F. TRAFFIC STRIPE(MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") 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-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.

TRAFFIC CONSTRUCTION PAY QUANTITY NOTES

- (TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDINAL BARRIER.
- (TC-2) QUANTITY INCLUDES SUFFICIENT LENGTH OF PORTABLE LONGITUDINAL BARRIER TO PROVIDE FOR THE LONGEST SECTION SHOWN ON THE PLANS. THIS SAME BARRIER WILL BE USED ON OTHER DETOUR PHASES.
- (TC-13) A PART, OR ALL, OF THIS ITEM IS INTENDED FOR REPLACEMENT OF REMOVED EXISTING CONFLICTING STRIPING.
- (TC-17) INCLUDES AN ESTIMATED 18,521 L.F. (PAINT)(4"WIDE) WHITE AND 18,520 L.F. (PAINT)(4"WIDE) YELLOW STRIPE.
- (TC-19) THIS ITEM INCLUDES AND ESTIMATED 2,458 L.F. (4" WIDE) WHITE AND 2,458 L.F. (4" WIDE) YELLOW STRIPE. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN O.D.O.T. APPROVED REMOVABLE PAVEMENT MARKING TAPE. COST FOR REMOVAL OF THIS TAPE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NON-REMOVABLE MARKING TAPE (FOIL BACK) SHALL NOT BE CONSIDERED AN APPROVED EQUAL FOR THIS ITEM.
- (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
- (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 MARKING REMOVAL SHALL INCLUDE THE COST OF REMOVING STRIPE, ARROWS, WORDS AND SYMBOLS, AS SHOWN IN THE PLANS. THESE ITEMS MAY CONSIST OF PLASTIC, PAINT OR NON-REMOVABLE MARKING TAPE.
- (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 16.0 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-44) PRICE BID FOR THIS ITEM SHALL INCLUDE ATTENUATOR MODULES, SAND, WOODEN PALLETS (IF REQUIRED), RELOCATION, AND MAINTENANCE.
- (TC-52) ANY USED SAND FILLED IMPACT ATTENUATORS 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-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) 250 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/traffic/qpl/Index.php>
- (1) FLAGGERS AS APPROVED BY THE ENGINEER

DESCRIPTION	REVISIONS	DATE
REV. TRAFFIC NOTE & QUANTITIES		8/19/2016

PAY QUANTITIES				JP 28858(04)
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY
TRAFFIC 300 PERMANENT				
413(B)	4863	RUMBLE STRIP-METHOD HMA-CYC	LF	9114
805(A)	8724	(PL)REMOVAL OF EXISTING SIGNS	(TS-41) EA	5
850(A)	8110	SHEET ALUMINUM SIGNS	SF	77
851(C)	8327	2 1/4" SQUARE TUBE POST	(TS-33) LF	2
851(C)	8330	2 1/2" SQUARE TUBE POST	(TS-33) LF	91
856(A)	8530	TRAFFIC STRIPE(MULTI-POLYMER)(4" WIDE)	(TS-11) LF	14551
856(A)	8555	TRAFFIC STRIPE(MULTI-POLYMER)(24" WIDE)	LF	28

PAY QUANTITIES				JP 28858(04)
ITEM NO.	CODE NO.	DESCRIPTION	UNIT	QUANTITY
TRAFFIC 301 TEMPORARY				
857(A)	8839	CONSTRUCTION TRAFFIC STRIPE(PAINT)(4" WIDE)	(TC-13,17,20,21,61,75) LF	37041
857(C)	8851	REMOVABLE PAVEMENT MARKING TAPE(4" WIDE)	(TC-19,21,75) LF	4916
857(F)	8006	PAVEMENT MARKING REMOVAL(TRAFFIC STRIPE)	(TC-22) LF	15047
871(B)	8705	(SP)CONST.ZONE IMPACT ATTEN.	(TC-52,44,84) SD	520
877(B)	8484	DELIVER PORTABLE LONGITUDINAL BARRIER	(TC-1,2) LF	2799
877(C)	8486	RELOCATION OF PORTABLE LONGITUDINAL BARRIER	(TC-1,2) LF	1400
880(B)	8818	CONSTRUCTION SIGNS 0 TO 6.25 SF	(TC-28,33,84) SD	7580
880(B)	8821	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	(TC-29,33,84) SD	250
880(B)	8824	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	(TC-30,33,84) SD	4000
880(C)	8842	CONSTRUCTION BARRICADES(TYPE III)	(TC-84) SD	2920
880(C)	8848	WING BARRICADES	(TC-84) SD	1000
880(E)	8860	WARNING LIGHTS(TYPE A)	(TC-84) SD	2500
880(F)	8878	DRUMS	(TC-33,84) SD	27450
880(I)	8902	FLAGGER	(1) SD	100
882(A)	8306	PORT.CHANGEABLE MESSAGE SIGN	(TC-52,85) SD	250

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DESIGN	KMW	1-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHENNER	

S.H.-16 OVER CHICKEN CREEK

GENERAL NOTES & SUMMARY
OF PAY QUANTITIES (TRAFFIC)

STATE JOB NO. 28858(04) SHEET NO. 6
CREEK COUNTY SH-16

SUMMARY OF SURFACING QUANTITIES									
P&P SHEET NO.	STATION TO STATION	AGGREGATE BASE 303(A)	SEPARATOR FABRIC 325	STABILIZED SUBGRADE 307(K)	TBSC TYPE E 402(E)	TACK COAT* 407(B)	PRIME COAT* 408	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)
		CY	SY	SY	TON	GAL	GAL	TON	TON
MAINLINE									
1	90+00.00 TO 105+00.00	214.6	1094.2	1094.2	105.5	134.3	624.7	288.3	94.6
2	105+00.00 TO 120+00.00	1711.0	8429.4	8429.4	836.8	1020.7	4877.1	2300.2	754.3
3	120+00.00 TO 135+00.00	1712.1	8434.5	8434.5	836.5	1021.4	4880.2	2302.0	754.9
4	135+00.00 TO 150+00.00	1658.5	8167.6	8167.6	807.1	997.1	4726.4	2231.0	731.7
5	150+00.00 TO 155+85.00	-	-	-	-	-	-	-	-
251ST									
6	8+01.54 TO SH-16	154.1	-	769.6	45.5	44.9	442.9	100.4	67.0
6	SH-16 TO 12+46.26	177.9	-	890.9	52.5	51.6	512.3	115.5	77.0
TOTALS:		5628.2	26125.7	27786.2	2683.9	3270.0	16063.6	7337.4	2479.5

* FOR CONTRACTORS INFORMATION, COST TO BE INCLUDED IN PRICE BID FOR ASPHALT

RIP RAP TREATMENT QUANTITIES						
C.R.L. STATION TO STATION	SIDE	DIMENSIONS			TYPE 1 PLAIN RIPRAP	FILTER FABRIC (RIPRAP)
		AREA SF	THICKNESS LF	SIZE FT	601(A) TON	601(I) SY
113+25.00 TO 114+05.00	LT	1213	1.0	0.5	79.0	135.0
114+47.00	LT	1119	1.5	0.8	110.0	125.0
114+47.00	RT	2850	1.5	0.8	278.0	317.0
122+89.00 TO 123+65.00	LT	1218	1.0	0.5	80.0	136.0
122+90.00 TO 124+26.00	RT	2348	1.0	0.5	153.0	261.0
125+70.00 TO 126+57.00	LT	1276	1.0	0.5	83.0	142.0
125+76.00 TO 126+70.00	RT	1444	1.0	0.5	94.0	161.0
134+30.00 TO 136+30.00	LT	2952	1.0	0.5	193.0	330.0
133+85.00 TO 134+85.00	RT	1448	1.0	0.5	95.0	161.0
137+68.00 TO 138+36.00	RT	1010	1.0	0.5	66.0	113.0
TOTALS:					1231.0	1881.0

MAILBOX SUMMARY		
C.R.L. STATION	SIDE	DESCRIPTION
106+99.40	RT	DOUBLE MAILBOX
131+48.19	LT	SINGLE MAILBOX
135+49.19	RT	SINGLE MAILBOX
138+75.00	LT	DOUBLE MAILBOX

SUMMARY OF TEMPORARY PAVING							
P&P SHEET NO.	STATION TO STATION	AGGREGATE BASE 303(A)	STABILIZED SUBGRADE 307(K)	TBSC TYPE E 402(E)	PRIME COAT* 408	SUPERPAVE, TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE, TYPE S4 (PG 64-22 OK) 411(C)
		CY	SY	TON	GAL	TON	TON
WIDENING							
1	90+00.00 TO 105+00.00	352.0	1744.4	-	1007.0	211.0	139.0
2	105+00.00 TO 120+00.00	1050.4	5204.6	-	3004.5	650.7	428.7
3	120+00.00 TO 135+00.00	66.1	327.4	-	189.0	35.8	23.6
4	135+00.00 TO 150+00.00	831.5	4120.1	-	2378.4	505.3	332.9
5	150+00.00 TO 155+85.00	103.6	513.1	-	296.2	78.6	51.8
251ST DETOUR							
6	8+01.54 TO 12+46.26	-	-	376.9	-	-	-
TOTALS:		2403.6	11909.6	376.9	6875.1	1481.5	975.9

* FOR CONTRACTORS INFORMATION, COST TO BE INCLUDED IN PRICE BID FOR ASPHALT

SUMMARY OF DITCH TREATMENT								
P&P SHEET NO.	C.R.L. STATION AND DIRECTION	LENGTH	CONCRETE LINER				DES. NO.	
			BOTTOM WIDTH LF	CURTAIN WALLS EA	DITCH LINER PROTECTION 229 LF	CLASS C CONCRETE 509(D) CY		
4	144+00.00 TO 148+75.00	LT	399	4	5	399	51.8	2A
4	147+72.00 TO 150+00.00	RT	228	8	4	228	41.3	2A
TOTALS:			9	627	94			

SUMMARY OF EARTHWORK QUANTITIES							
SHEET ESTIMATE	ALIGNMENT	STATION TO STATION	UNCLASSIFIED EXCAVATION 202 (A)	EMBANKMENT 15%*	EXCESS EXCAVATION*	UNCLASSIFIED BORROW 202(D)	WASTE*
			C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
1	SH-16	100+00.00 TO 155+00.00	13137	47763	-	34626	-
2	251ST	7+00.00 TO 13+00.00	279	6666	-	6387	-
3	SH-16	100+00.00 TO 155+00.00	5271	8924	-	3653	-
4	SH-16	100+00.00 TO 155+00.00	28069	1612	26457	-	26457
5	251ST	7+00.00 TO 13+00.00	1320	-	1320	-	1320
TOTAL:			48076	64965	27777	44666	27777

* FOR CONTRACTORS INFORMATION ONLY

SUMMARY OF DRIVEWAYS									
C.R.L. STATION	RT/LT	TYPE	WIDTH	LENGTH	RADIUS	TACK COAT* 407(B)	PRIME COAT* 408	SUPERPAVE, TYPE S3 (PG 64-22 OK)	SUPERPAVE, TYPE S4 (PG 64-22 OK)
			FT	FT	FT	GAL	GAL	TON	TON
105+05.44	LT	ASPH.	15	30	15	4.4	20.5	9.8	6.6
106+14.53	LT	ASPH.	15	30	15	4.4	20.5	9.8	6.6
106+60.74	RT	ASPH.	14	65	25	9.1	42.1	20.2	13.5
107+47.06	RT	ASPH.	12	63	15	7.1	32.8	15.7	10.5
107+60.16	LT	ASPH.	12	50	15	5.7	26.4	12.7	8.5
122+62.30	RT	ASPH.	12	70	25	9.1	42.1	20.2	13.5
139+18.67	LT	ASPH.	16	153	15	21.1	98.1	47.1	31.4
144+64.52	RT	ASPH.	12	67	15	7.4	34.3	16.4	11.0
145+75.00	LT	ASPH.	20	76	15	13.4	62.2	29.8	19.9
TOTALS:			81.7	379.0	181.63	121.5			

* FOR CONTRACTORS INFORMATION, COST TO BE INCLUDED IN PRICE BID FOR ASPHALT

REMOVAL OF STRUCTURES & OBSTRUCTIONS	
SURVEY C. L. STATION	DESCRIPTION
102+73, RT	4'x4'x1' 1/2" CONCRETE STRUCTURE, POSSIBLE ABANDONED WATER WELL*
106+27, LT	24 LF, 18" RCP
106+62, RT	26.5 LF, 18" RCP
107+41, RT	23.5 LF, 18" RCP
107+66, LT	19.0 LF, 12" CGMP
114+47 LT	CONCRETE END SECTION
114+47 RT	CONCRETE END SECTION
122+63, RT	2' DIA. x5' STEEL POST IN CONCRETE
122+70, LT	62.0 LF, 24" RCP
131+35, RT	ABANDONED OIL WELL 2' x 3' HAGL
136+67, RT	1.5'x2.5' GRATE DROP INLET W/22 LF, 16" CGMP
136+70, LT	1.5'x2.5' GRATE DROP INLET W/20 LF, 16" CGMP
137+78, RT	1.5'x2.5' GRATE DROP INLET W/21 LF, 16" CGMP
137+81, LT	1.5'x2.5' GRATE DROP INLET W/25 LF, 16" CGMP
138+08, RT	40.3', 30" CGMP W/NORTH CONCRETE HEADWALL
139+37, RT	APPROX 225 SF (15'x15') CONCRETE PAD FOUNDATION WITH (2) 1 1/2"x3'x1 1/2" HAGL CONCRETE BASE AND 1' HAGL STEEL PIPES THROUGHOUT (OLD OIL/GAS FOUNDATION SETUP)
144+80	6'x4'x20.2' RCP W/ HEADWALLS

*PLUGGING ABANDONED WATER WELLS WILL BE HANDLED IN ACCORDANCE WITH CURRENT REGULATIONS ESTABLISHED BY THE OKLAHOMA WATER RESOURCES BOARD BY A LICENSED WELL-DRILLER.

SUMMARY OF FENCE				
P&P SHT. NO.	CL SURVEY STATION TO STATION	RT/LT	FENCE STYLE SWF (6-BW) 624(C)	FENCE STYLE SWF (6-BW) 624(C)
			LF	LF
1	98+82 TO 105+00	RT		633
2	105+00 TO 106+61	RT		166
2	106+93 TO 107+45	RT	57	
2	107+59 TO 114+39	RT	752	
2	114+61 TO 120+00	RT	589	
2	107+89 TO 114+34	LT	647	
2	114+57 TO 120+00	LT	559	
3	120+00 TO 122+50	RT	255	
3	122+66 TO 124+64	RT	276	
3	125+50 TO 134+50	RT	995	
3	120+00 TO 124+43	LT	459	
3	125+07 TO 133+48	LT	878	
3	13+50 TO 135+43	RT	434	
3	136+70 TO 144+57	RT	911	
3	144+72 TO 150+53	RT	595	
3	134+23 TO 136+88	LT	407	
3	138+15 TO 139+18	LT	240	
3	139+36 TO 144+73	LT	566	
3	144+87 TO 150+06	LT	335	
TOTALS:			8955	799

SUMMARY OF REMOVALS				
SHEET. NO.	C.R.L. STATION TO STATION	REMOVAL OF ASPHALT PAVEMENT 619(B)	REMOVAL OF GUARDRAIL 619(B)	SAVING PAVEMENT 619(C)
		SY	LF	LF
MAINLINE				
1	103+10.93 TO 105+00.00	556	-	704
2	105+00.00 TO 120+00.00	4,406	-	2114
3	120+00.00 TO 135+00.00	4,336	-	-
4	135+00.00 TO 136+80.38	511	538	1692
4	137+71.34 TO 149+47.26	3,431	-	550
DETOUR				
1 (PH 1)	100+60.89 TO 105+00.00	451	-	-
1 (PH 2)	99+05.94 TO 105+00.00	792	-	-
2 (PH 1)	105+00.00 TO 117+22.03	1,513	-	-
2 (PH 2)	105+00.00 TO 120+00.00	2,315	-	-
3 (PH 2)	120+00.00 TO 122+40.29	210	-	-
4 (PH 1)	140+59.72 TO 150+00.00	1,203	-	-
4 (PH 2)	137+55.69 TO 150+00.00	1,769	-	-
5 (PH 1)	150+00.00 TO 151+97.18	114	-	-
5 (PH 2)	150+00.00 TO 153+52.33	350	-	-
TOTALS:		21957	538	5060

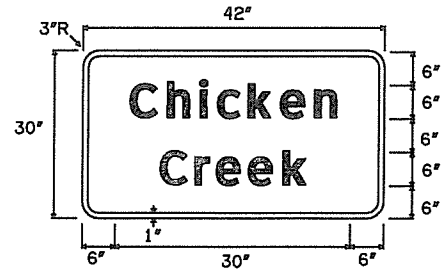
SUMMARY OF EROSION CONTROL										
C.R.L. STATION TO STATION	TEMPORARY						PERMANENT			
	SILT FENCE 221(C)	SILT DIKE 231(F)	SEEDING METHOD B 232(B)	VEGETATIVE MULCHING 233(A)	* FERTILIZING (10-20-10)	* FERTILIZING (0-46-0)	SOLID SLAB SODDING 230(A)	* FERTILIZING (10-20-10)	* WATERING	
MAINLINE										
90+00.00 TO 105+00.00	145	84	1.34	0.67	0.20	0.10	3220	0.33	128.8	
105+00.00 TO 120+00.00	1035	511	5.24	2.62	0.79	0.40	12662	1.27	506.5	
120+00.00 TO 135+00.00	383	273	9.41	4.71	1.42	0.71	22755	2.28	910.2	
135+00.00 TO 150+00.00	405	441	6.13	3.07	0.92	0.46	14824	1.49	593.0	
150+00.00 TO 155+85.00	-	21	0.51	0.26	0.08	0.04	1214	0.13	48.6	
TOTALS:										
	1968	1330	22.63	11.33	3.41	1.71	54675	5.50	2187.1	

* FOR CONTRACTORS INFORMATION ONLY, COST TO BE INCLUDED IN THE PRICE BID FOR OTHER WORK.

DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

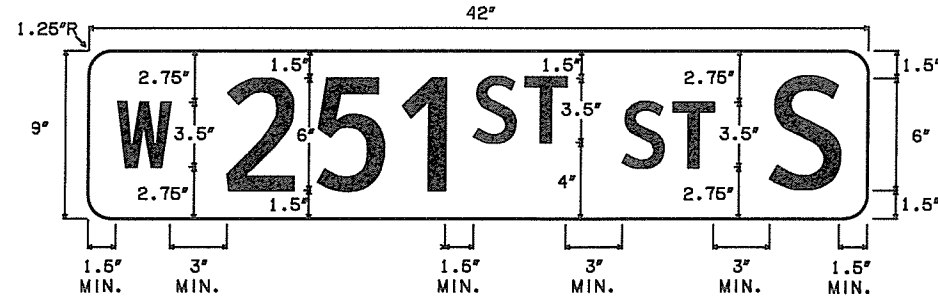
SUMMARY SHEET (ROADWAY)

STATE JOB NO. 28858(04) SHEET NO. 7
CREEK COUNTY SH-16

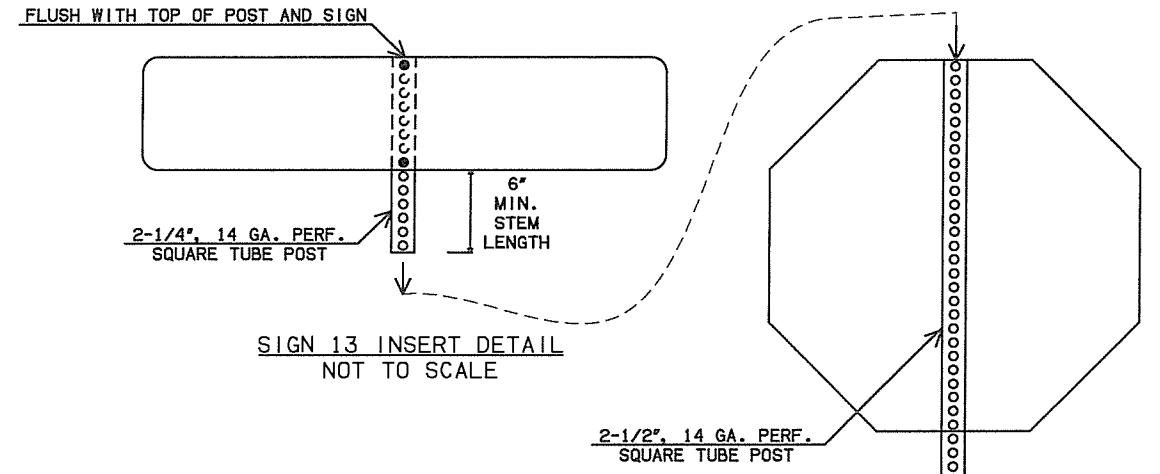


SIGNS 6 & 7 DETAIL
NOT TO SCALE

NOTE: USE "ClearviewHwy-4-W" FONT FOR SIGNS 6 & 7.



SIGN 13 DETAIL
NOT TO SCALE



SIGN 13 INSERT DETAIL
NOT TO SCALE

NOTE: 1) D3-1 SIGNS SHALL NOT BE ATTACHED DIRECTLY TO 2-1/2" POST.
2) HAMMER BEND ALL BOLTS AFTER INSTALLATION TO PREVENT UNAUTHORIZED REMOVAL OF SIGNS AND INSERT.

SIGN SUMMARY

SIGN NO.	ALIGNMENT	APPROXIMATE C.R.L. STATION LOCATION	SIGN TYPE	SIGN THICKNESS			POSTS		(PL) REMOVAL OF EXISTING SIGNS	REMARKS	
				0.063"	0.080"	0.100"	14 GA.				
				SHEET ALUMINUM SIGNS			2-1/4" SQUARE TUBE POST	2-1/2" SQUARE TUBE POST			
				850(A)	851(C)		805(A)				
				(S.F.)	(S.F.)	(S.F.)	(L.F.)	(L.F.)	(EA.)		
1	PROP. SH-16	STA 133+30	R W1-2R	-	6.25	-	-	13	-	INSTALL NEW SIGN (CURVE RIGHT)	
2	EX SH-16	STA 121+30	R W1-2R	-	6.25	-	-	-	1	REMOVE (CURVE RIGHT)	
3	PROP. SH-16	STA 125+00	L W1-2R	-	6.25	-	-	13	-	INSTALL NEW SIGN (CURVE RIGHT)	
4	EX SH-16	STA 124+10	L W1-2R	-	6.25	-	-	-	1	REMOVE (CURVE RIGHT)	
5	EX SH-16	STA 127+00	R W8-13	-	-	9	-	-	1	REMOVE (BRIDGE ICES BEFORE ROAD)	
6	PROP. SH-16	STA 136+10	R Special Sign	-	3.75	-	-	13	-	SIGN RELOCATED FROM EX SH-16 STA 136+50 (CHICKEN CREEK)	
7	PROP. SH-16	STA 137+45	L Special Sign	-	3.75	-	-	13	-	SIGN RELOCATED FROM EX SH-16 STA 138+00 (CHICKEN CREEK)	
8	PROP. SH-16	STA 154+20	L W1-2L	-	6.25	-	-	13	-	INSTALL NEW SIGN (CURVE LEFT)	
9	EX SH-16	STA 140+50	L W1-2L	-	6.25	-	-	-	1	REMOVE (CURVE LEFT)	
10	EX SH-16	STA 145+50	L W8-13	-	6.25	-	-	-	1	REMOVE (BRIDGE ICES BEFORE ROAD)	
11	PROP. 251st ST	STA 09+87	R R1-1	-	6.25	-	-	13	-	INSTALL NEW SIGN (STOP)	
12	PROP. 251st ST	STA 09+87	R B-1224	-	2.00	-	-	-	-	INSTALL NEW SIGN (SECTION LINE INFO) ON STOP SIGN POLE	
13	PROP. 251st ST	STA 09+87	R D3-1	-	2.63	-	-	-	-	INSTALL NEW SIGN (251ST ST S)	
14	PROP. 251st ST	STA 10+31	L R1-1	-	6.25	-	1.25	13	-	INSTALL NEW SIGN (STOP)	
SUB TOTALS:				-	68.38	9	-	91	5		
TOTALS:				-	77.00		2.00	91.00	5		

SUMMARY OF STRIPING

STATION TO STATION	LENGTH	DASH/SOLID	SIDE	TRAFFIC STRIPE (MULTI-POLY.)		DESCRIPTION
				(24" WIDE) 856(A)	(4" WIDE) 856(A)	
MAINLINE						
99+00.00 TO 108+00.00	900	SOLID	RT	-	900.00	4" YELLOW MULTI-POLY.
99+00.00 TO 108+00.00	900	DASH	LT	-	252.00	4" YELLOW MULTI-POLY.
108+00.00 TO 110+00.00	200	DASH	-	-	60.00	4" YELLOW MULTI-POLY.
110+00.00 TO 120+00.00	1000	DASH	RT	-	276.00	4" YELLOW MULTI-POLY.
110+00.00 TO 120+00.00	1000	SOLID	LT	-	1000.00	4" YELLOW MULTI-POLY.
120+00.00 TO 153+50.00	3350	DASH	-	-	900.00	4" YELLOW MULTI-POLY.
133+12.50 TO 133+87.50	75	BREAK	ALL	-	-	NO STRIPE
99+06.00 TO 153+53.00	5447	SOLID	RT	-	5372.00	4" WHITE MULTI-POLY.
100+61.00 TO 151+98.00	5137	SOLID	LT	-	5062.00	4" WHITE MULTI-POLY.
251ST						
8+00.00 TO 9+70.00	170	DOUBLE	-	-	340.00	4" YELLOW MULTI-POLY.
10+52.50 TO 12+47.00	194.5	DOUBLE	-	-	389.00	4" YELLOW MULTI-POLY.
9+75.00 TO -	14	SOLID	RT	14.00	-	24" WHITE MULTI-POLY.
10+55.00 TO -	14	SOLID	LT	14.00	-	24" WHITE MULTI-POLY.
TOTALS:				28.00	14551.00	

SUMMARY OF TEMPORARY TRAFFIC QUANTITIES

ITEM NO.	CODE NO.	DESCRIPTION	UNIT	PHASE 1	PHASE 2	PHASE 3	TOTAL
				(30 DAYS)	(60 DAYS)	(60 DAYS)	(250 DAYS)
857(A)	8839	CONSTRUCTION TRAFF. STR.(PAINT)(4" WIDE)	LF	8044	10706	18290	37041
857(C)	8851	REMOVABLE PAVEMENT MARKING TAPE(4" WIDE)	LF	2442	1150	1324	4916
857(F)	8006	PAVEMENT MRKNG.REMOVAL(TRAF.STRP)	LF	7098	7098	850	15047
871(B)	8705	(SP)CONST.ZONE IMPACT ATTEN.	SD	520	-	-	520
877(B)	8484	DELIVER PORTABLE LONGITUDINAL BARRIER	LF	2799	-	-	2799
877(C)	8486	RELOCATION OF PORTABLE LONGITUDINAL BARRIER	LF	1400	-	-	1400
880(B)	8818	CONSTRUCTION SIGNS 0 TO 6.25 SF	SD	3380	2040	2160	7580
880(B)	8821	CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF	SD	130	60	60	250
880(B)	8824	CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF	SD	2080	960	960	4000
880(C)	8842	CONSTRUCTION BARRICADES(TYPE III)	SD	1300	720	900	2920
880(C)	8848	WING BARRICADES	SD	520	240	240	1000
880(E)	8860	WARNING LIGHTS(TYPE A)	SD	1300	600	600	2500
880(F)	8878	DRUMS	SD	6630	8220	12600	27450
880(I)	8902	FLAGGER	SD	50	25	25	100
882(A)	8306	PORT.CHANGEABLE MESSAGE SIGN	SD	130	60	60	250

DESIGN	KMW	I-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHMIDT	

S.H.-16 OVER CHICKEN CREEK

SUMMARY SHEET
(TRAFFIC)

STATE JOB NO. 28858(04) SHEET NO. 8
CREEK COUNTY SH-16

SUMMARY OF DRAINAGE STRUCTURES

STR. NO.	SHEET NO.	ALIGNMENT	C.R.L. STATION	DESCRIPTION	DESIGN	STRUCTURAL										PIPES				END TREATMENT			INSTALL		STR. NO.	REMARKS			
						UNCLASSIFIED EXCAVATION	STRUCTURAL EXCAVATION UNCLASSIFIED	CLASS AA CONCRETE	REINFORCING STEEL	18" R.C.P. PIPE CLASS III	48" RCP	22" X 13" R.C.P. PIPE ARCH CLASS A-II	18" CORR. GALV. STEEL PIPE	30" CORR. GALV. STEEL PIPE	18" PREFAB. CULVERT END SEC., ROUND	TYPE A6 CULVERT END TREATMENT	TYPE E66 CULVERT END TREATMENT	STANDARD BEDDING MATERIAL, CLASS B*	TRENCH EXCAVATION*										
						202(A) CY	501(A) CY	509(A) CY	511(A) LB	613(A) LF	613(A) LF	613(A) LF	613(B) LF	613(B) LF	613(L) EA	613(M) EA	613(M) EA	613(S) C.Y.	613(V) CY										
1	34-35	SH-16	105+04.52	LT	ARCH SIDE DRAIN	22" X 13" 54 LF.	-	IN	RCAP	W	CET	GR	CET6S-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	2	-	-	15	24	1			
2	35	SH-16	106+14.53	LT	ARCH SIDE DRAIN	22" X 13" 58 LF.	-	IN	RCAP	W	CET	GR	CET6S-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	2	-	-	16	26	2			
3	35	SH-16	106+63.62	RT	SIDE DRAIN	- - - 59 LF.	18	IN	RCP	W	CET	GR	CET6S-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	2	-	-	16	20	3			
4	35	SH-16	107+47.16	RT	SIDE DRAIN	- - - 64 LF.	18	IN	RCP	W	CET	GR	CET6S-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	2	-	-	18	40	4			
5	35	SH-16	107+60.12	LT	SIDE DRAIN	- - - 45 LF.	18	IN	RCP	W	CET & PCES	GR	CET6S-3, PCES-4, SPB-1, FHTCP-3	-	-	-	-	-	-	1	1	-	12	28	5	PCES W/ GRATE			
6	36	SH-16	122+62.05	RT	SIDE DRAIN	- - - 35 LF.	18	IN	RCP	W	PCES	-	PCES-4, SPB-1, FHTCP-3	-	-	-	-	-	-	2	-	-	10	12	6				
7	36	SH-16	144+64.52	RT	SIDE DRAIN	- - - 32 LF.	18	IN	RCP	W	PCES	-	PCES-4, SPB-1, FHTCP-3	-	-	-	-	-	-	2	-	-	9	11	7				
8	37	SH-16	145+75.00	LT	SIDE DRAIN	- - - 72 LF.	48	IN	RCP	W	CET	GR	CET6D-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	-	-	1	-	-	8	CET W/ GRATE		
		SH-16	145+75.00	LT	SIDE DRAIN	- - - 72 LF.	48	IN	RCP	W	CET	GR	CET6D-3, SPB-1, FHTCP-3	-	-	-	-	-	-	-	-	-	1	122	104	8	CET W/ GRATE		
XD1	35	SH-16	114+47.59	LT	RCB EXTENSION	5' X 3' 10 LF.	-	-	RCB	-	-	-	SBI-4, RCB-C1-3&4&5(2-20) RCB-E1-H3-0-1 RCB-E1-H3-0-2	46	9	14	2415	-	-	-	-	-	-	-	1	-	XD1	RIPRAP OUTLET	
XD2	35	SH-16	114+47.59	RT	RCB EXTENSION	5' X 3' 43 LF.	-	-	RCB	-	-	-	SBI-4, RCB-C1-3&4&5(2-20) RCB-E1-H3-0-1 RCB-E1-H3-0-2	191	20	29	5208	-	-	-	-	-	-	-	2	-	XD2	RIPRAP OUTLET	
T1	41	SH-16	106+29.76	LT	SIDE DRAIN (TEMPORARY)	- - - 42 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	14	T1			
T2	41	SH-16	107+63.48	LT	SIDE DRAIN (TEMPORARY)	- - - 42 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	14	T2			
T3	42	SH-16	122+75.00	LT	SIDE DRAIN (TEMPORARY)	- - - 42 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	14	T3			
T4	45	DETOUR	206+40.00	-	CROSS DRAIN (TEMPORARY)	- - - 83 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	28	T4	TEMPORARY		
T5	45	DETOUR	207+65.00	-	CROSS DRAIN (TEMPORARY)	- - - 67 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	22	T5	TEMPORARY		
T6	45	DETOUR	209+33.00	-	CROSS DRAIN (TEMPORARY)	- - - 58 LF.	18	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	19	T6	TEMPORARY		
T7	41	SH-16	114+47.59	LT	EXTENSION (TEMPORARY)	- - - 26 LF.	30	IN	CGSP	-	-	-	SPB-1, FHTMPP-1	-	-	-	-	-	-	-	-	-	-	-	17	T7	TEMPORARY		
TOTALS:														237	29	43	7623	217	144	112	334	26	5	9	2	221	392	TOTALS	

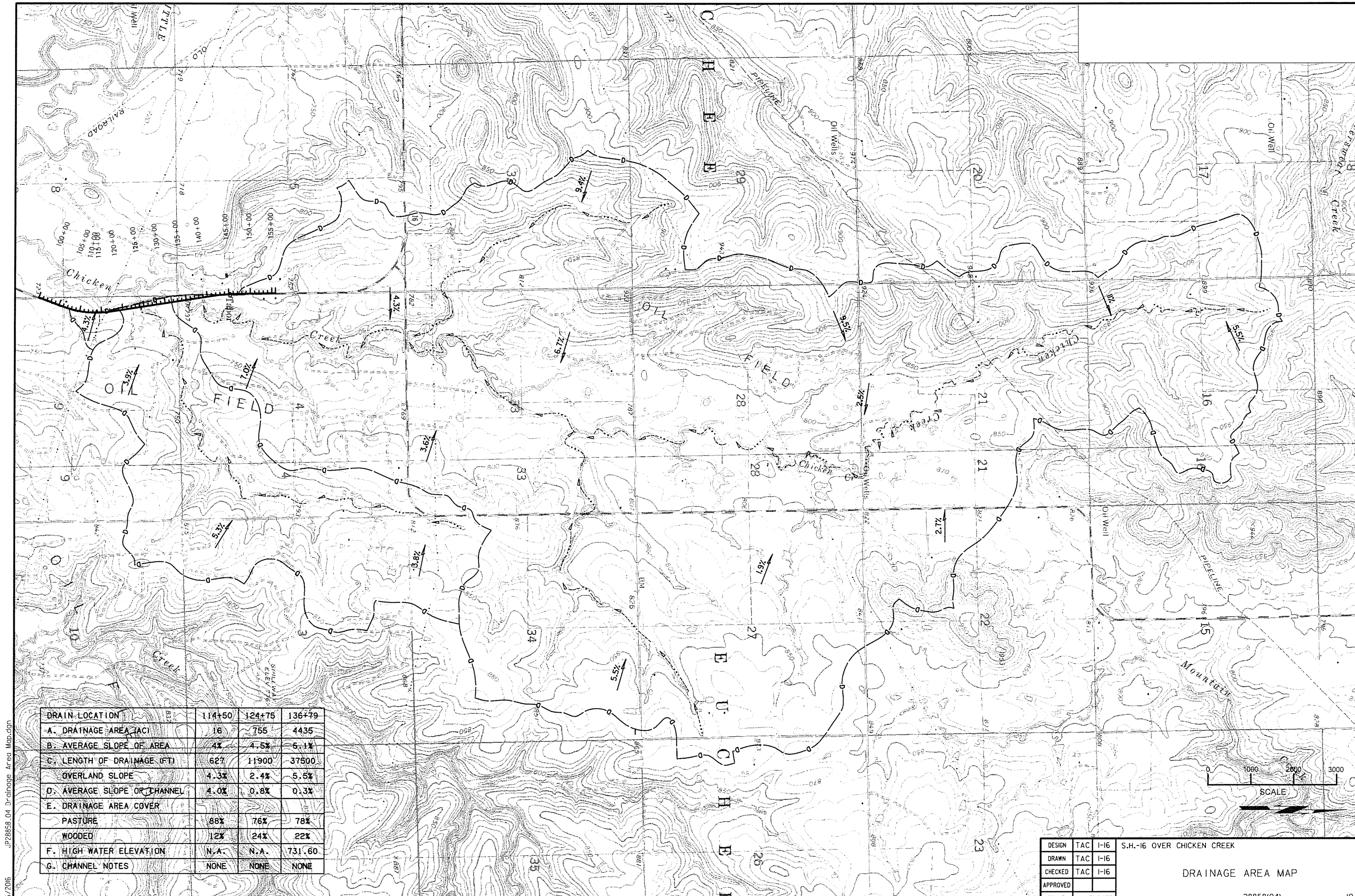
* FOR CONTRACTORS INFORMATION, COST TO BE INCLUDED IN PRICE BID FOR CULVERT(S)

6/16/2016 JP28858_045.rvt

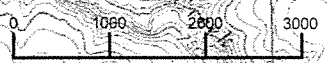
DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

SUMMARY SHEET (DRAINAGE)

STATE JOB NO. 28858(04) SHEET NO. 9
CREEK COUNTY SH-16



DRAIN LOCATION	114+50	124+75	136+79
A. DRAINAGE AREA (AC)	16	755	4435
B. AVERAGE SLOPE OF AREA	4%	4.5%	5.1%
C. LENGTH OF DRAINAGE (FT)	627	11900	37500
OVERLAND SLOPE	4.3%	2.4%	5.5%
D. AVERAGE SLOPE OF CHANNEL	4.0%	0.8%	0.3%
E. DRAINAGE AREA COVER			
PASTURE	88%	76%	78%
WOODED	12%	24%	22%
F. HIGH WATER ELEVATION	N.A.	N.A.	731.60
G. CHANNEL NOTES	NONE	NONE	NONE

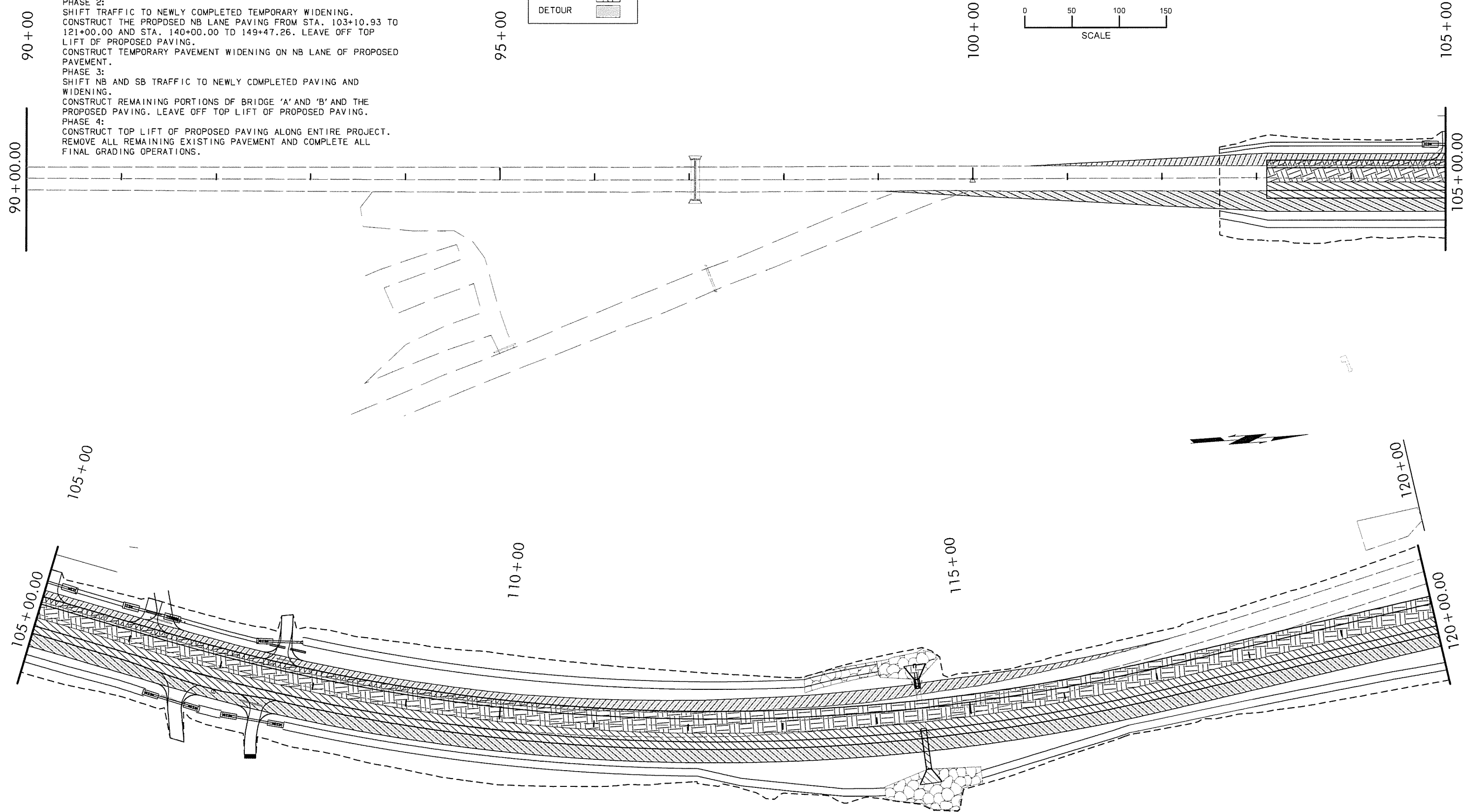
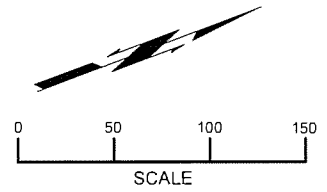
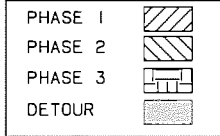


DESIGN	TAC	I-16
DRAWN	TAC	I-16
CHECKED	TAC	I-16
APPROVED		
SQUAD	SCHEMMER	

S.H.-16 OVER CHICKEN CREEK
DRAINAGE AREA MAP
 STATE JOB NO. 28858(04) SHEET NO. 10
 CREEK COUNTY SH-16

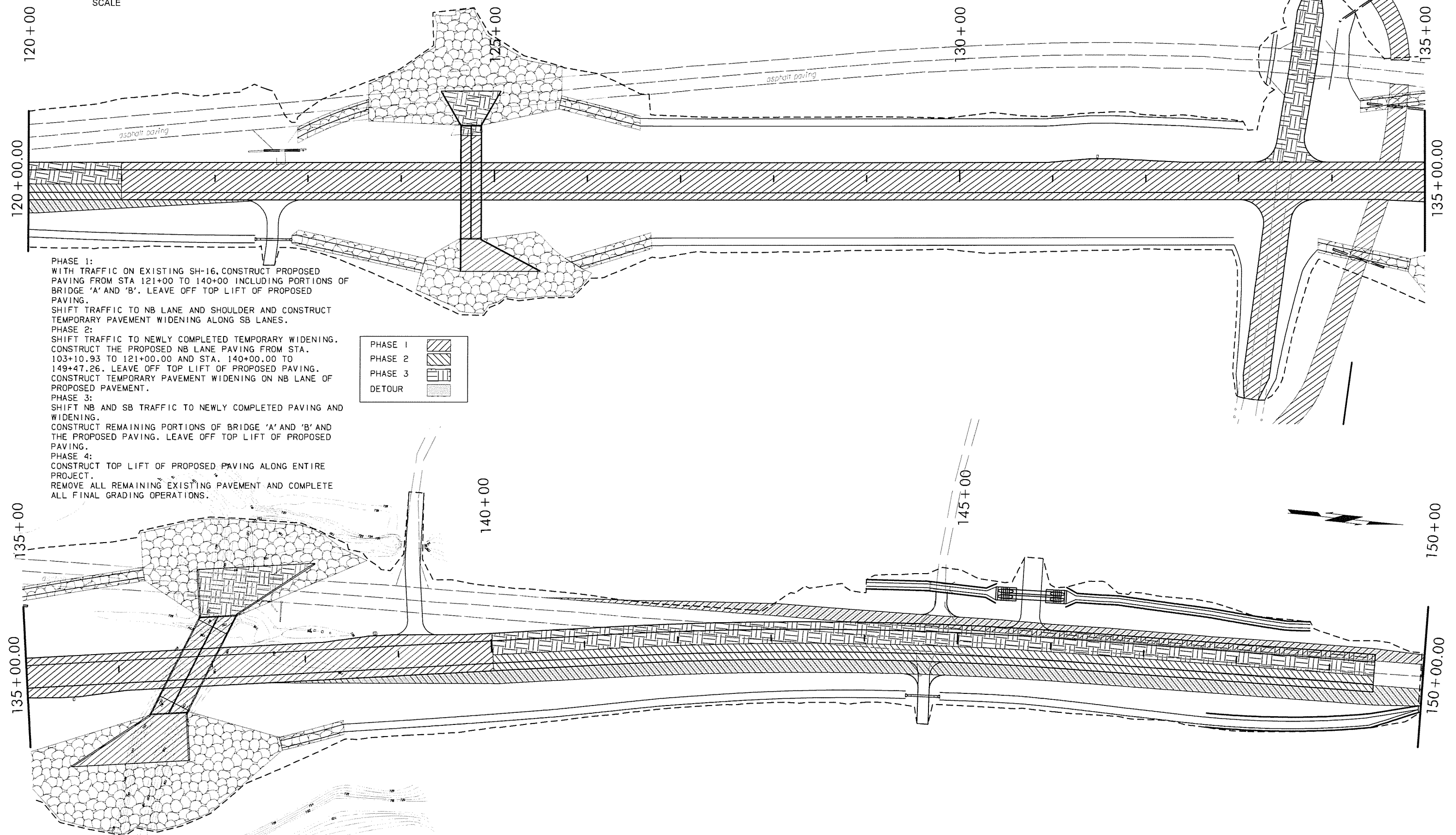
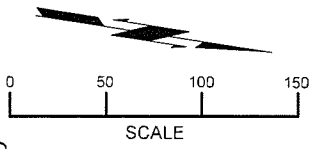
6/6/2016 JP28858_04 Drainage Area Map.dgn

PHASE 1:
 WITH TRAFFIC ON EXISTING SH-16, CONSTRUCT PROPOSED PAVING FROM STA 121+00 TO 140+00 INCLUDING PORTIONS OF BRIDGE 'A' AND 'B'. LEAVE OFF TOP LIFT OF PROPOSED PAVING. SHIFT TRAFFIC TO NB LANE AND SHOULDER AND CONSTRUCT TEMPORARY PAVEMENT WIDENING ALONG SB LANES.
 PHASE 2:
 SHIFT TRAFFIC TO NEWLY COMPLETED TEMPORARY WIDENING. CONSTRUCT THE PROPOSED NB LANE PAVING FROM STA. 103+10.93 TO 121+00.00 AND STA. 140+00.00 TO 149+47.26. LEAVE OFF TOP LIFT OF PROPOSED PAVING. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON NB LANE OF PROPOSED PAVEMENT.
 PHASE 3:
 SHIFT NB AND SB TRAFFIC TO NEWLY COMPLETED PAVING AND WIDENING. CONSTRUCT REMAINING PORTIONS OF BRIDGE 'A' AND 'B' AND THE PROPOSED PAVING. LEAVE OFF TOP LIFT OF PROPOSED PAVING.
 PHASE 4:
 CONSTRUCT TOP LIFT OF PROPOSED PAVING ALONG ENTIRE PROJECT. REMOVE ALL REMAINING EXISTING PAVEMENT AND COMPLETE ALL FINAL GRADING OPERATIONS.



6/6/2016 JP28858_04 Const Seq 01.dgn

DESIGN	KMW	I-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE OVERVIEW (SHEET 1 OF 3)
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		STATE JOB NO. 28858(04) SHEET NO. 11



PHASE 1:
 WITH TRAFFIC ON EXISTING SH-16, CONSTRUCT PROPOSED PAVING FROM STA 121+00 TO 140+00 INCLUDING PORTIONS OF BRIDGE 'A' AND 'B'. LEAVE OFF TOP LIFT OF PROPOSED PAVING.
 SHIFT TRAFFIC TO NB LANE AND SHOULDER AND CONSTRUCT TEMPORARY PAVEMENT WIDENING ALONG SB LANES.

PHASE 2:
 SHIFT TRAFFIC TO NEWLY COMPLETED TEMPORARY WIDENING. CONSTRUCT THE PROPOSED NB LANE PAVING FROM STA. 103+10.93 TO 121+00.00 AND STA. 140+00.00 TO 149+47.26. LEAVE OFF TOP LIFT OF PROPOSED PAVING. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON NB LANE OF PROPOSED PAVEMENT.

PHASE 3:
 SHIFT NB AND SB TRAFFIC TO NEWLY COMPLETED PAVING AND WIDENING. CONSTRUCT REMAINING PORTIONS OF BRIDGE 'A' AND 'B' AND THE PROPOSED PAVING. LEAVE OFF TOP LIFT OF PROPOSED PAVING.

PHASE 4:
 CONSTRUCT TOP LIFT OF PROPOSED PAVING ALONG ENTIRE PROJECT. REMOVE ALL REMAINING EXISTING PAVEMENT AND COMPLETE ALL FINAL GRADING OPERATIONS.

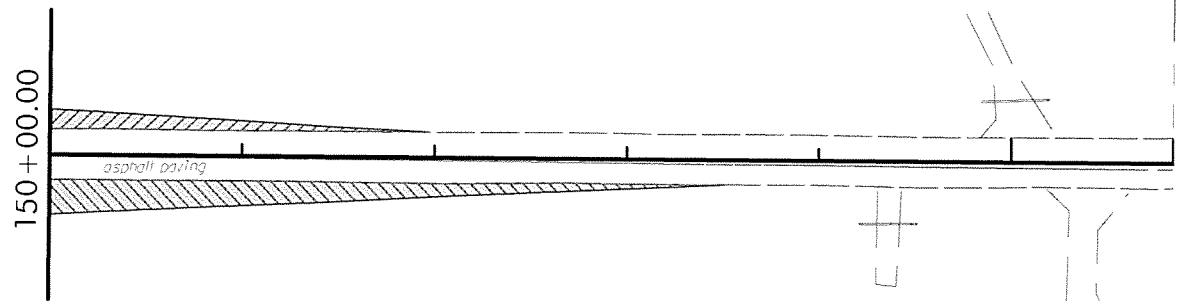
PHASE 1	
PHASE 2	
PHASE 3	
DETOUR	

6/6/2016 J:\28858_04 Const Seq_02.dgn

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE OVERVIEW (SHEET 2 OF 3)
CHECKED	TAC	5-16	STATE JOB NO. 28858(04) SHEET NO. 12
APPROVED			CREEK COUNTY SH-16
SQUAD	SCHEMMER		

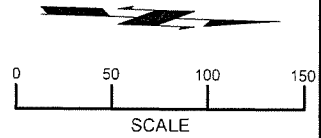
150+00

150+00.00



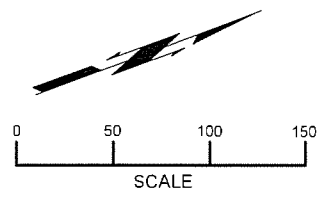
PHASE 1:
 WITH TRAFFIC ON EXISTING SH-16, CONSTRUCT PROPOSED PAVING FROM STA 121+00 TO 140+00 INCLUDING PORTIONS OF BRIDGE 'A' AND 'B'. LEAVE OFF TOP LIFT OF PROPOSED PAVING.
 SHIFT TRAFFIC TO NB LANE AND SHOULDER AND CONSTRUCT TEMPORARY PAVEMENT WIDENING ALONG SB LANES.
 PHASE 2:
 SHIFT TRAFFIC TO NEWLY COMPLETED TEMPORARY WIDENING. CONSTRUCT THE PROPOSED NB LANE PAVING FROM STA. 103+10.93 TO 121+00.00 AND STA. 140+00.00 TO 149+47.26. LEAVE OFF TOP LIFT OF PROPOSED PAVING. CONSTRUCT TEMPORARY PAVEMENT WIDENING ON NB LANE OF PROPOSED PAVEMENT.
 PHASE 3:
 SHIFT NB AND SB TRAFFIC TO NEWLY COMPLETED PAVING AND WIDENING.
 CONSTRUCT REMAINING PORTIONS OF BRIDGE 'A' AND 'B' AND THE PROPOSED PAVING. LEAVE OFF TOP LIFT OF PROPOSED PAVING.
 PHASE 4:
 CONSTRUCT TOP LIFT OF PROPOSED PAVING ALONG ENTIRE PROJECT.
 REMOVE ALL REMAINING EXISTING PAVEMENT AND COMPLETE ALL FINAL GRADING OPERATIONS.

PHASE 1	
PHASE 2	
PHASE 3	
DETOUR	



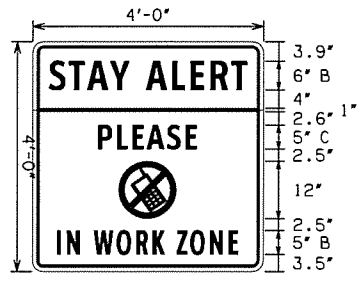
6/16/2016 JP28858_04 Const Seq 03.dgn

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE OVERVIEW (SHEET 3 OF 3)
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		STATE JOB NO. 28858(04) SHEET NO. 13

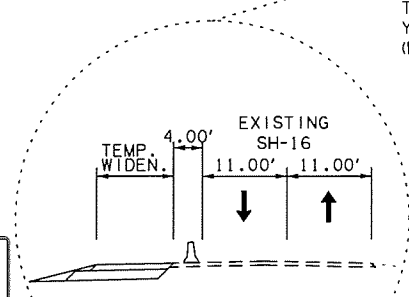
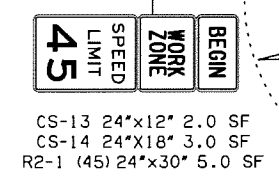
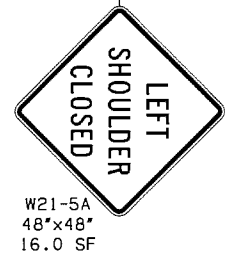
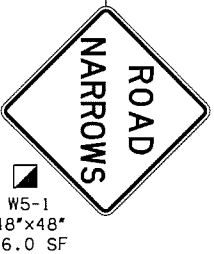
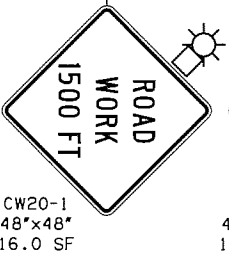
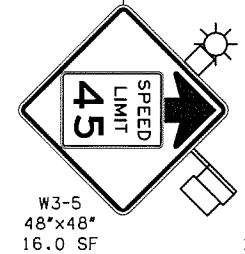
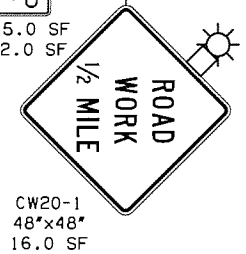
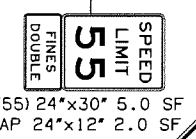
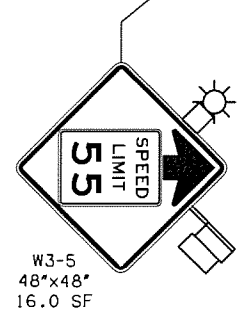
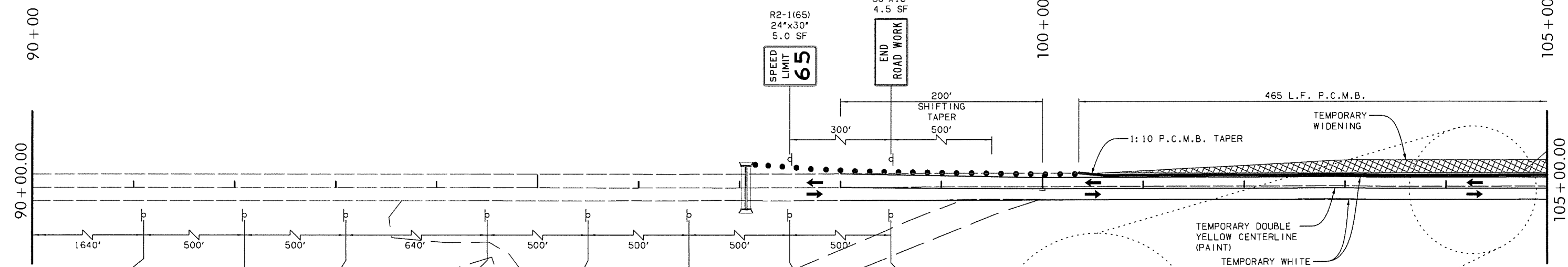
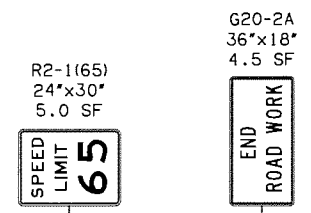
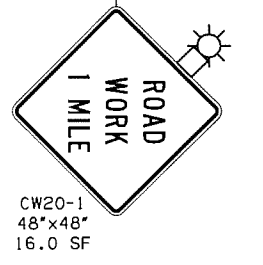
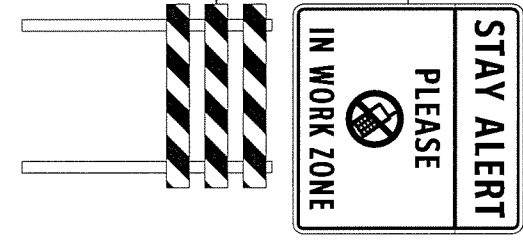
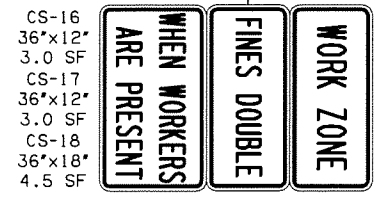


NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION



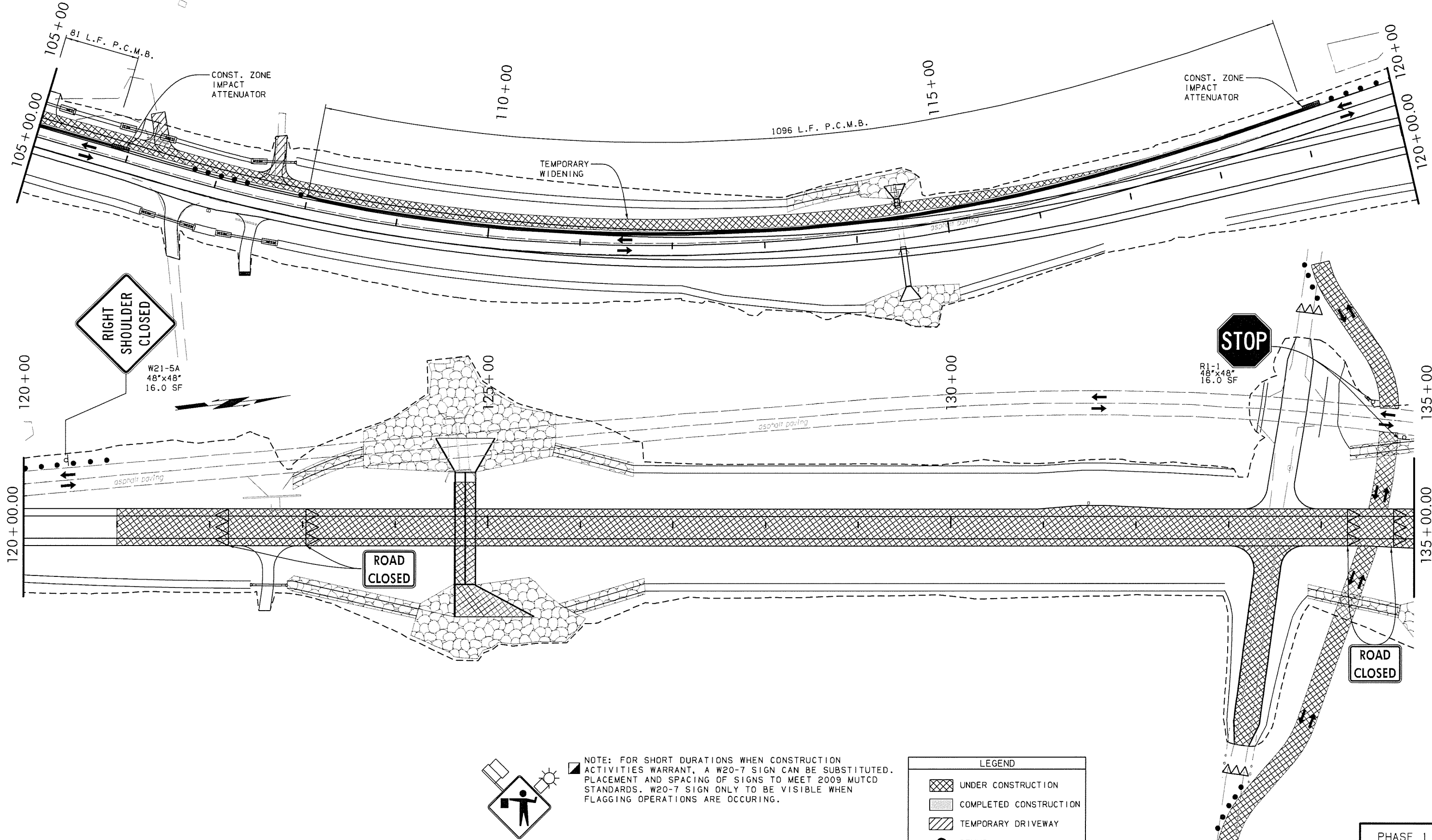
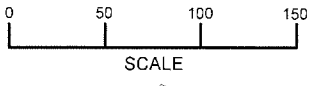
BORDER
R=1.5"
TH=0.75"
IN=0.75"
20.0 SF



DESIGN	KMW	1-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

PHASE I
S.H.-16 OVER CHICKEN CREEK
SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 1 OF 9)
STATE JOB NO. 28858(04) SHEET NO. 14
CREEK COUNTY SH-16

6/16/2016 JP28858_04 Traffic Control.dgn



NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

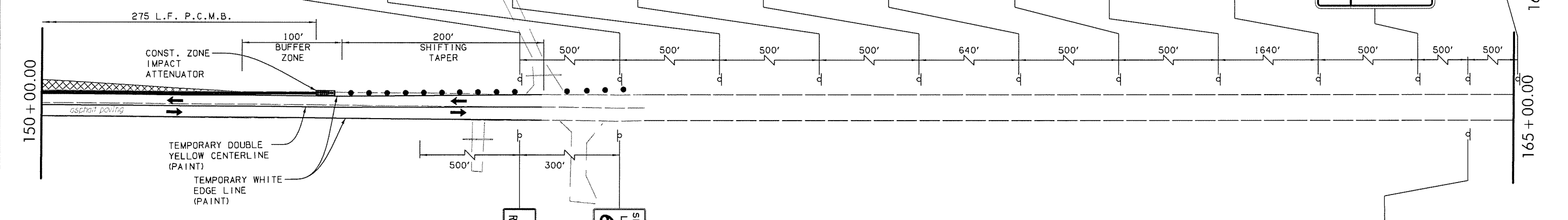
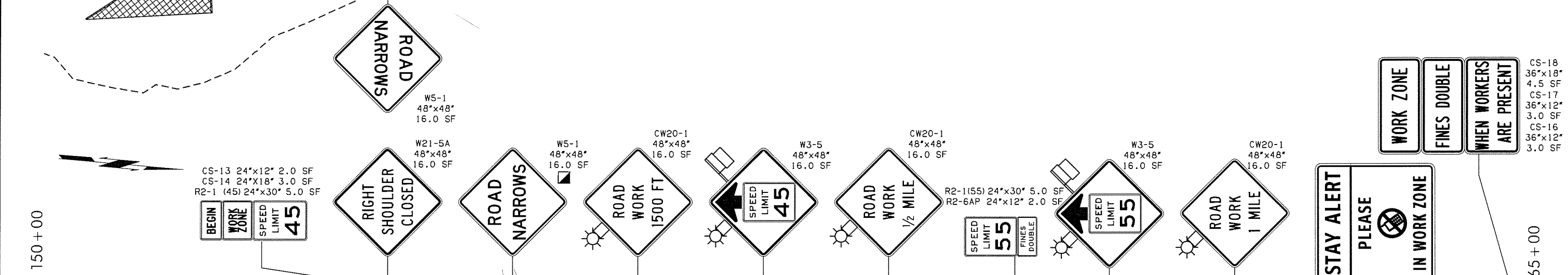
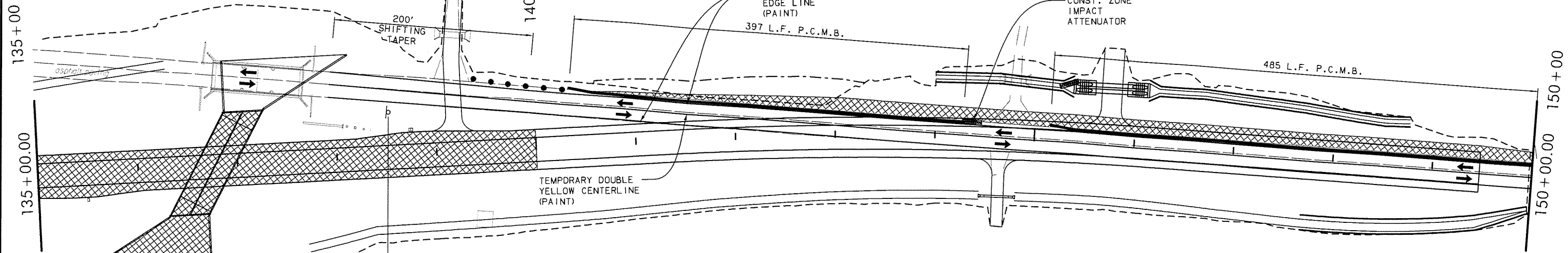
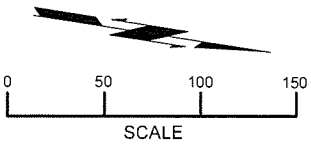


LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 2 OF 9) STATE JOB NO. 28858(04) SHEET NO. 15 CREEK COUNTY SH-16
DRAWN	KMW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

PHASE 1

6/6/2016 .\P28858_04_Traffic Control\02.dgn



CS-13 24"x12" 2.0 SF
 CS-14 24"x18" 3.0 SF
 R2-1 (45) 24"x30" 5.0 SF

W5-1
 48"x48"
 16.0 SF

W21-5A
 48"x48"
 16.0 SF

W5-1
 48"x48"
 16.0 SF

CW20-1
 48"x48"
 16.0 SF

W3-5
 48"x48"
 16.0 SF

CW20-1
 48"x48"
 16.0 SF

W3-5
 48"x48"
 16.0 SF

CW20-1
 48"x48"
 16.0 SF

R2-1(55) 24"x30" 5.0 SF
 R2-6AP 24"x12" 2.0 SF

END
 ROAD WORK
 G20-2A
 36"x18"
 4.5 SF

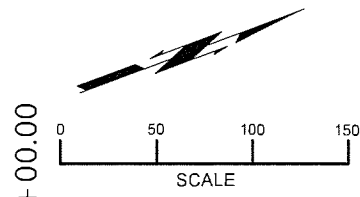
SPEED
 LIMIT
 65
 R2-1(65)
 24"x30"
 5.0 SF

NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION

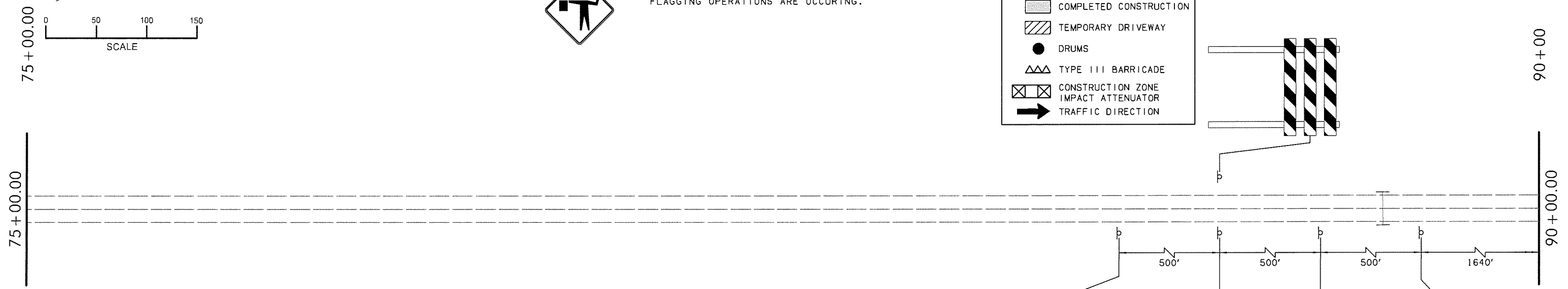
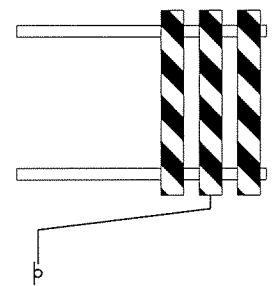
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DRAWN	KMW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

6/16/2016 JP28858_04 Traffic Control03.dgn

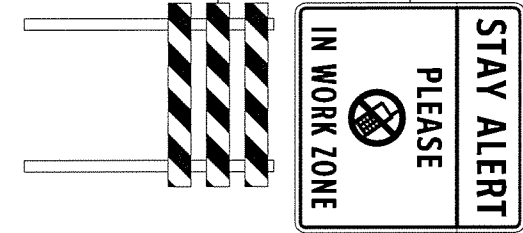
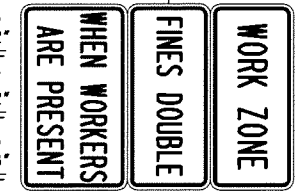


NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

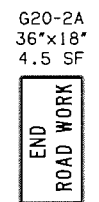
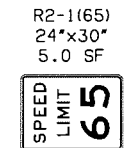
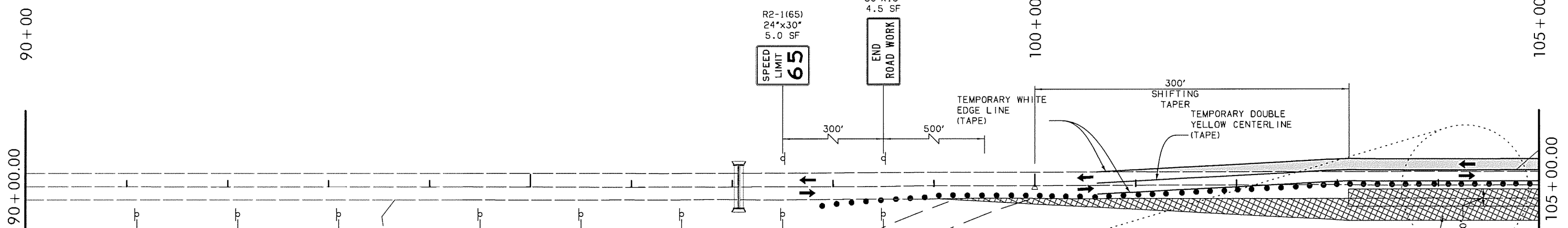
LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION



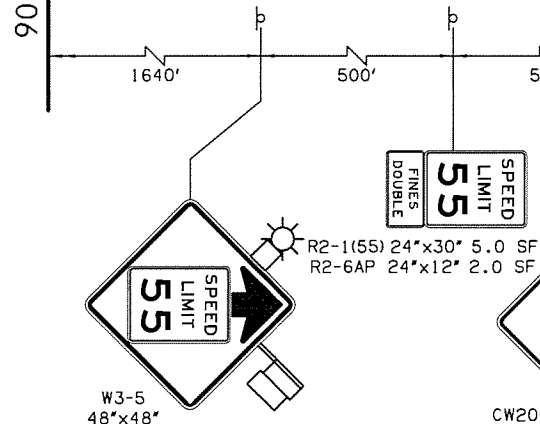
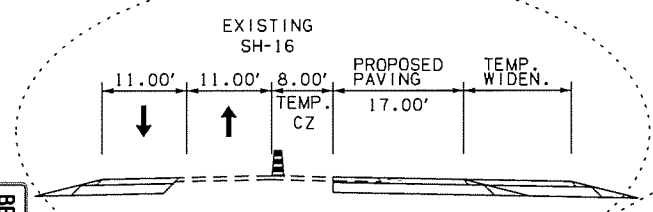
CS-16
36"x12"
3.0 SF
CS-17
36"x12"
3.0 SF
CS-18
36"x18"
4.5 SF



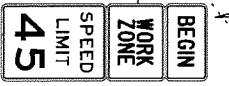
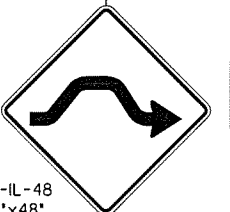
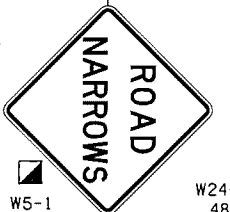
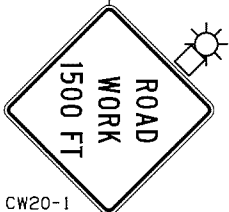
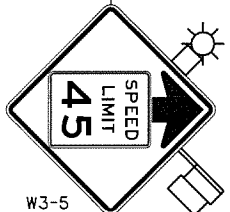
CW20-1
48"x48"
16.0 SF



300' SHIFTING TAPER
TEMPORARY DOUBLE YELLOW CENTERLINE (TAPE)



R2-1(55) 24"x30" 5.0 SF
R2-6AP 24"x12" 2.0 SF

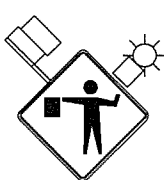
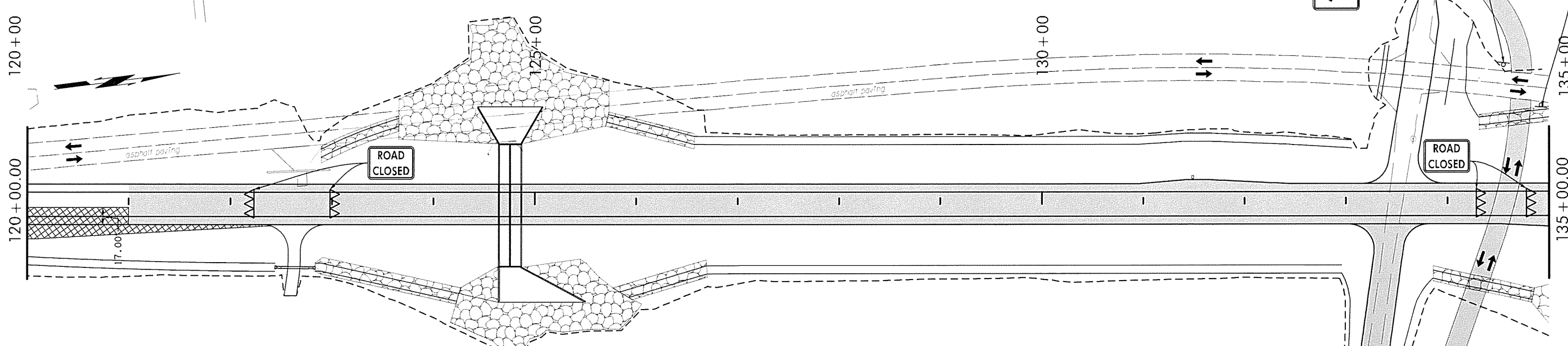
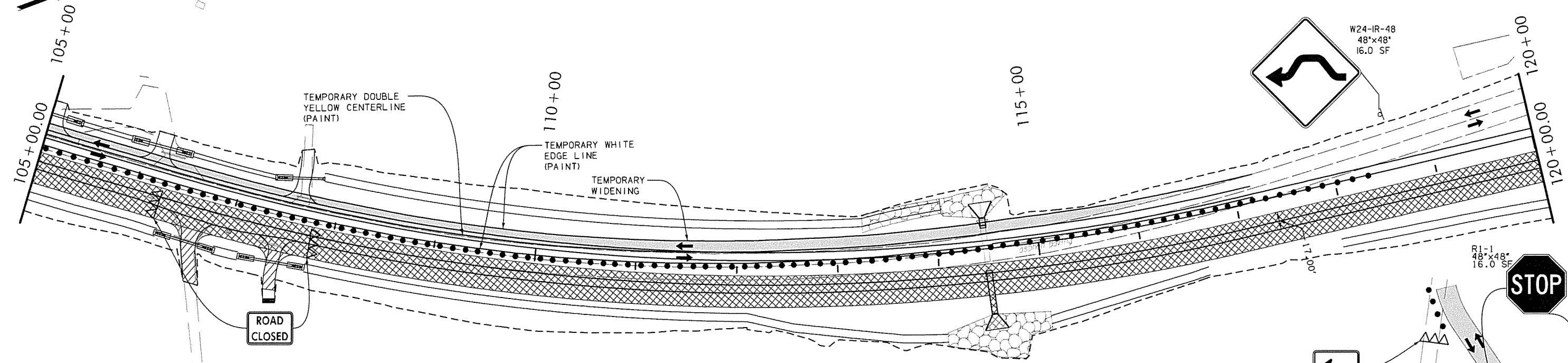
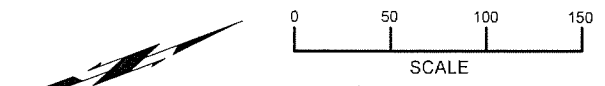


CS-13 24"x12" 2.0 SF
CS-14 24"x18" 3.0 SF
R2-1 (45) 24"x30" 5.0 SF

PHASE 2

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 4 OF 9)
CHECKED	TAC	5-16	STATE JOB NO. 28858(04) SHEET NO. 17
APPROVED			CREEK COUNTY
SQUAD	SCHEMMER		

6/6/2016 JP28858_04 Traffic Control04.dgn



NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

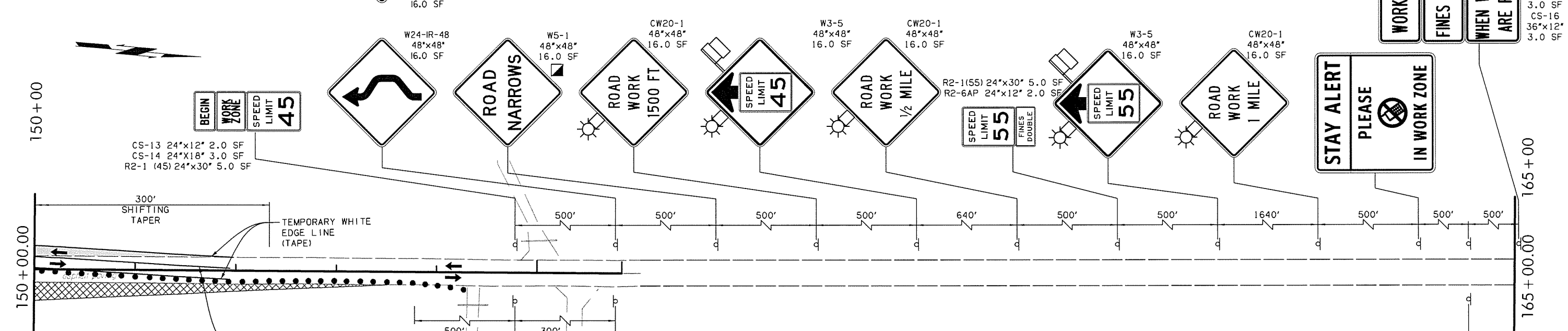
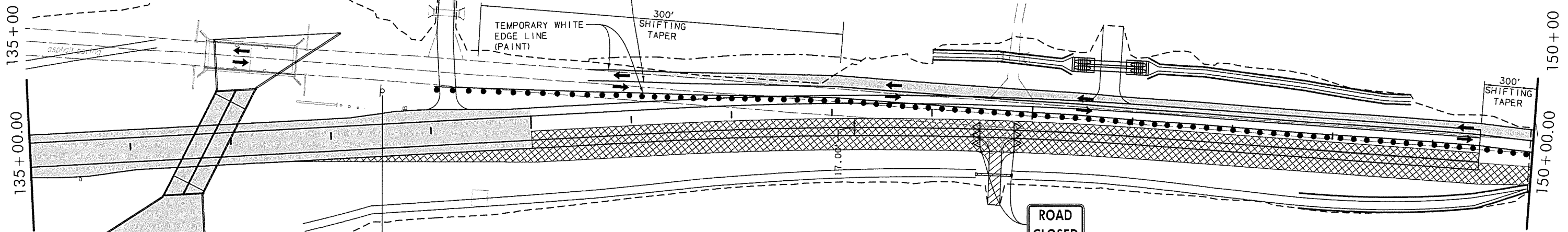
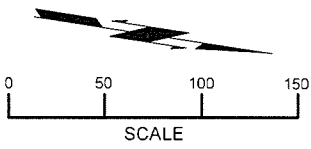
LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION

DESIGN	KMW	1-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

S.H.-16 OVER CHICKEN CREEK
 SUGGESTED CONSTRUCTION SEQUENCE
 AND TRAFFIC CONTROL
 (SHEET 5 OF 9)
 STATE JOB NO. 28858(04) SHEET NO. 18
 CREEK COUNTY SH-16

PHASE 2

6/6/2016 JP28858_04 Traffic Control05.dgn



NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURING.

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION

DESIGN	KMW	1-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

PHASE 2

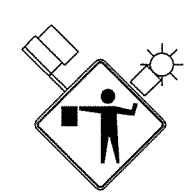
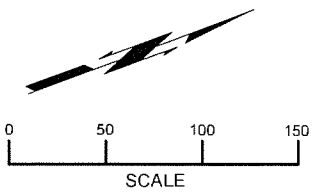
S.H.-16 OVER CHICKEN CREEK

SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 6 OF 9)

STATE JOB NO. 28858(04) SHEET NO. 19

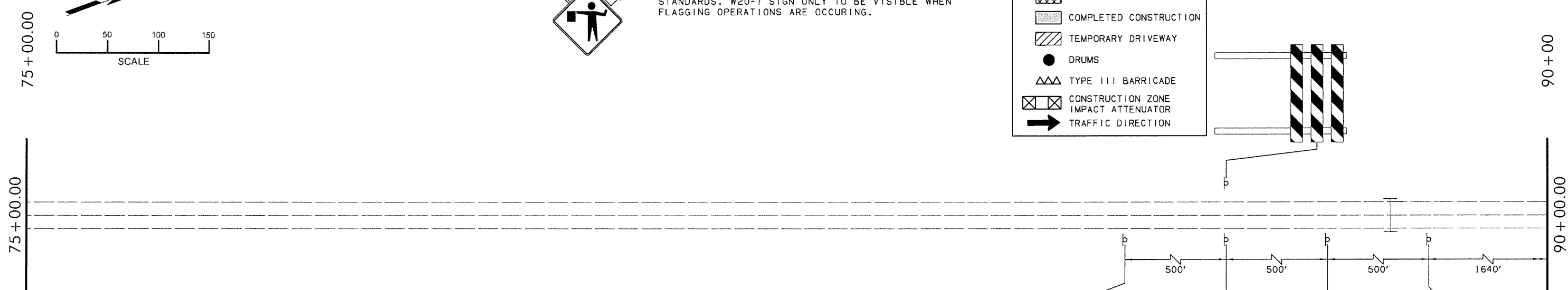
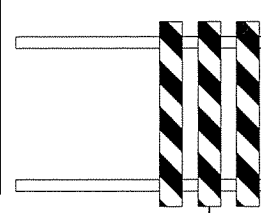
CREEK COUNTY SH-16

6/6/2016 JP28858_04 Traffic Control06.dgn



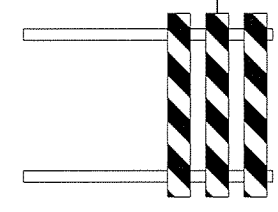
NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION



CS-16
36"x12"
3.0 SF
CS-17
36"x12"
3.0 SF
CS-18
36"x18"
4.5 SF

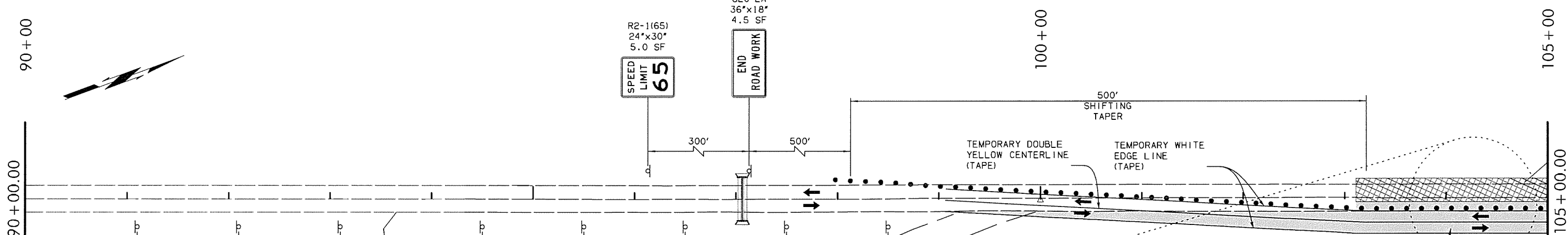
WHEN WORKERS ARE PRESENT
FINES DOUBLE
WORK ZONE



STAY ALERT PLEASE
IN WORK ZONE

ROAD WORK 1 MILE

CW20-1
48"x48"
16.0 SF



R2-1(65)
24"x30"
5.0 SF
SPEED LIMIT 65

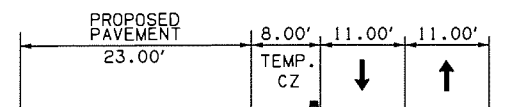
G20-2A
36"x18"
4.5 SF
END ROAD WORK

00+001

500' SHIFTING TAPER

TEMPORARY DOUBLE YELLOW CENTERLINE (TAPE)
TEMPORARY WHITE EDGE LINE (TAPE)

TEMPORARY WIDENING



W3-5
48"x48"
16.0 SF
SPEED LIMIT 55

R2-1(55) 24"x30" 5.0 SF
R2-6AP 24"x12" 2.0 SF

SPEED LIMIT 55
FINES DOUBLE

ROAD WORK 1/2 MILE
CW20-1
48"x48"
16.0 SF

W3-5
48"x48"
16.0 SF
SPEED LIMIT 45

ROAD WORK 1500 FT
CW20-1
48"x48"
16.0 SF

ROAD NARROWS
W5-1
48"x48"
16.0 SF

W24-IR-48
48"x48"
16.0 SF

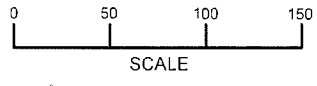
45
SPEED LIMIT
WORK ZONE BEGIN
CS-13 24"x12" 2.0 SF
CS-14 24"x18" 3.0 SF
R2-1 (45) 24"x30" 5.0 SF

PHASE 3

DESIGN	KMW	1-16
DRAWN	KMW	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

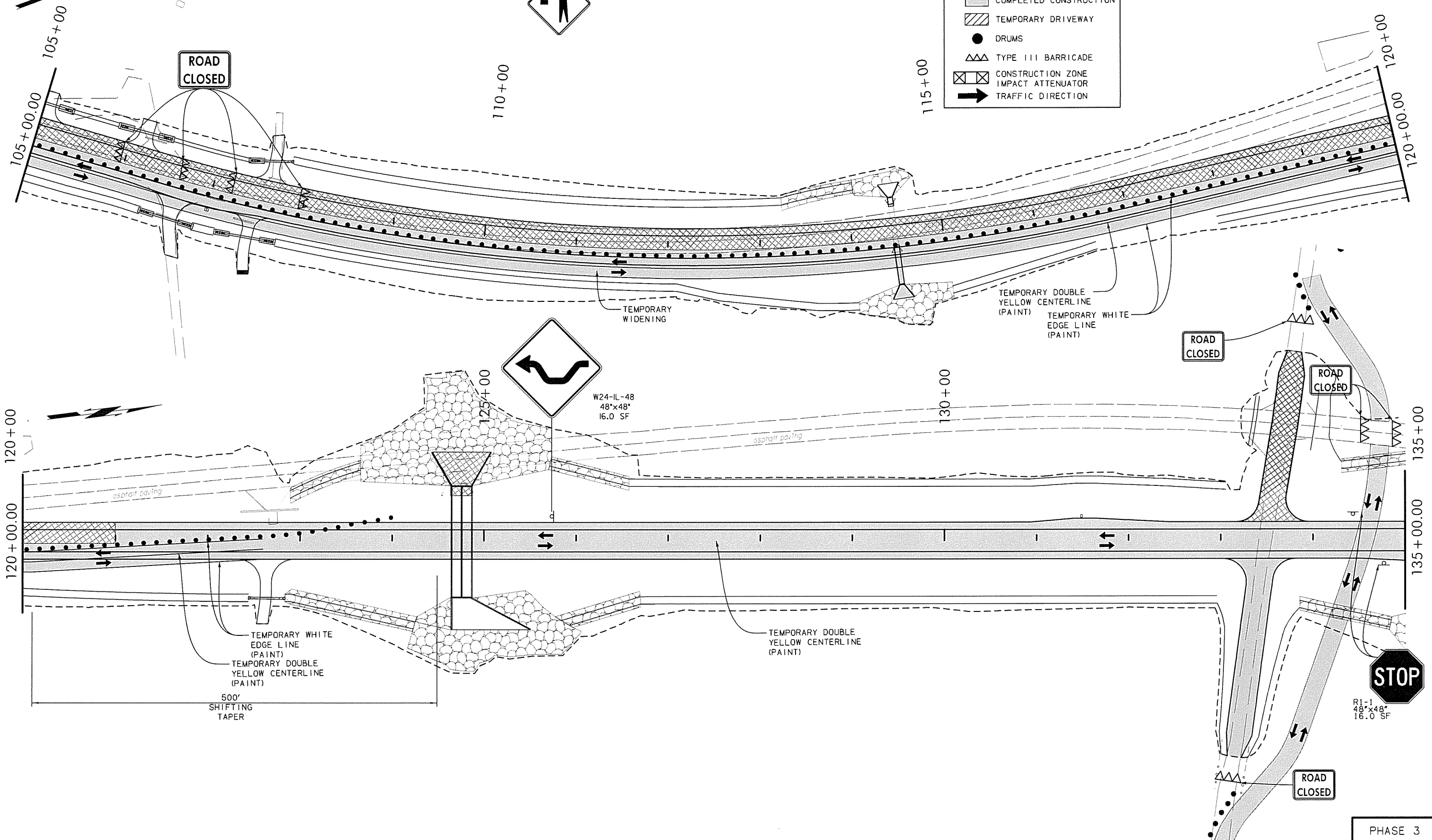
S.H.-16 OVER CHICKEN CREEK
SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 7 OF 9)
STATE JOB NO. 28858(04) SHEET NO. 20
CREEK COUNTY SH-16

6/16/2016 JP28858_04 Traffic Control07.dgn



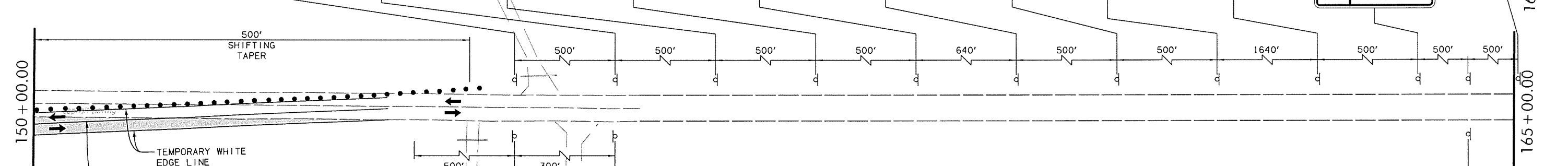
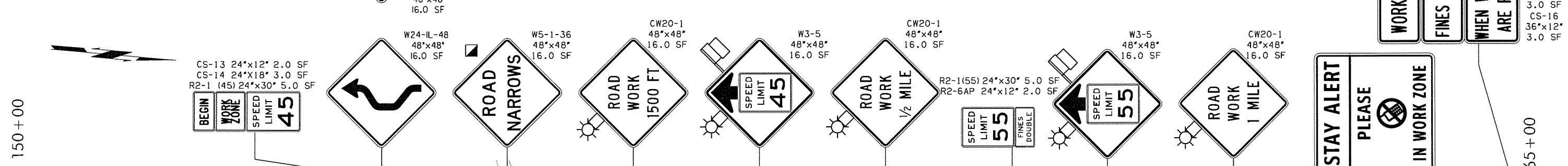
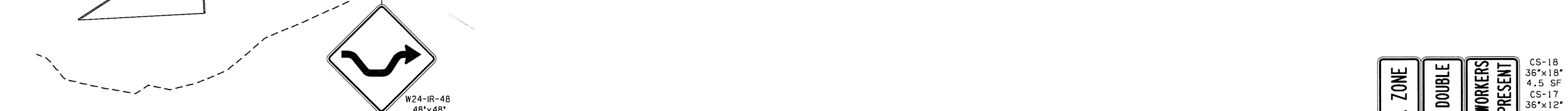
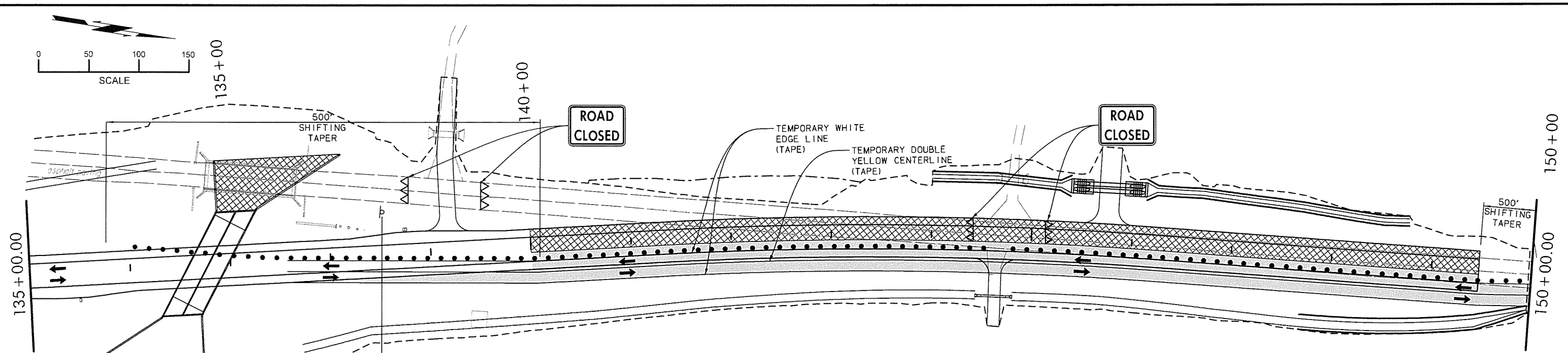
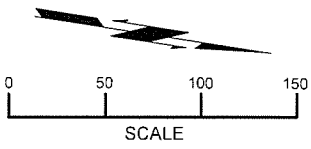
NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	TEMPORARY DRIVEWAY
	DRUMS
	TYPE III BARRICADE
	CONSTRUCTION ZONE IMPACT ATTENUATOR
	TRAFFIC DIRECTION



6/6/2016 JP28858_04.Traffic Control.08.dgn

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL (SHEET 8 OF 9)
CHECKED	TAC	5-16	STATE JOB NO. 28858(04) SHEET NO. 21
APPROVED			CREEK COUNTY SH-16
SQUAD	SCHEMMER		



LEGEND

- UNDER CONSTRUCTION
- COMPLETED CONSTRUCTION
- TEMPORARY DRIVEWAY
- DRUMS
- TYPE III BARRICADE
- CONSTRUCTION ZONE IMPACT ATTENUATOR
- TRAFFIC DIRECTION

PHASE 3

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	KMW	4-16	SUGGESTED CONSTRUCTION SEQUENCE AND TRAFFIC CONTROL
CHECKED	TAC	5-16	(SHEET 9 OF 9)
APPROVED			
SQUAD	SCHEMMER		STATE JOB NO. 28858(04) SHEET NO. 22

CREEK COUNTY SH-16

NOTE: FOR SHORT DURATIONS WHEN CONSTRUCTION ACTIVITIES WARRANT, A W20-7 SIGN CAN BE SUBSTITUTED. PLACEMENT AND SPACING OF SIGNS TO MEET 2009 MUTCD STANDARDS. W20-7 SIGN ONLY TO BE VISIBLE WHEN FLAGGING OPERATIONS ARE OCCURRING.

6/6/2016 JP28858_04 Traffic Control09.dgn

STORM WATER MANAGEMENT PLAN

SITE DESCRIPTION

PROJECT LIMITS: STATE HIGHWAY 16 OVER CHICKEN CREEK

PROJECT DESCRIPTION: CONSTRUCTION OF APPROXIMATELY 0.88 MILES OF SH-16 ROADWAY CONSTRUCTION OF NEW DOUBLE

10'x10' BOX BRIDGE OVER TRIBUTARY TO CHICKEN CREEK, CONSTRUCTION OF NEW DOUBLE 16'x15' BOX BRIDGE OVER CHICKEN CREEK, EXTENSIONS TO EXISTING 5'x3' R.C.B., AND REMOVAL OF EXISTING BRIDGE STRUCTURES.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: 1. PLACE TEMPORARY SEDIMENT CONTROL DEVICES AT DRAINAGE LOCATIONS PRIOR TO STRUCTURE MODIFICATION AND CLEARING OPERATIONS.
2. PERFORM CLEARING AND GRUBBING, PRESERVING ANY VEGETATION NOT IMPEDING CONSTRUCTION.
3. REMOVE AND STOCKPILE TOPSOIL. PROVIDE EROSION CONTROL DEVICES AS NEEDED TO PREVENT EROSION.
4. PROVIDE ANY ADDITIONAL TEMPORARY SEDIMENT CONTROL DEVICES AND MAINTAIN OR MOVE AS NEEDED FOR GRADING CONTRACTOR OPERATIONS.
5. AS GRADING IS COMPLETED, PLACE TEMPORARY MULCHING AND/OR SEEDING.
6. AS PERMANENT VEGETATION IS ESTABLISHED (70% COVER), TEMPORARY SEDIMENT DEVICES MAY BE REMOVED.
7. AS CONDITIONS WARRANT, THE CONTRACTOR AT THE DISCRETION OF THE ENGINEER MAY MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIC PRACTICE OR CONTROLS TO IMPROVE THEIR EFFECTIVENESS.

SOIL TYPE: PORT FINE SANDY LOAM

AREA TO BE DISTURBED: 9.91 ACRES

OFFSITE AREA TO BE DISTURBED: (FOR CONTRACTOR USE)

MAXIMUM ACRES TO BE DISTURBED AT ANY ONE TIME: (FOR CONTRACTOR USE)

LATITUDE & LONGITUDE OF CENTER OF PROJECT: N 35° 47' 47" W 96° 15' 47"

NAME OF RECEIVING WATERS: CHICKEN CREEK & UNNAMED TRIBUTARIES TO CHICKEN CREEK

SENSITIVE WATERS OR WATERSHEDS: YES NO

303(d) IMPAIRED WATERS: YES NO

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
- PERMANENT SODDING, SPRIGGING OR SEEDING
- 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:

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

OFFSITE VEHICLE TRACKING:

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

NOTES:

SILT SHALL BE REMOVED FROM TEMPORARY EROSION CONTROL DEVICES WHEN HALF FULL. COST TO BE INCLUDED IN THE PRICE BID FOR EROSION CONTROL DEVICE.

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:

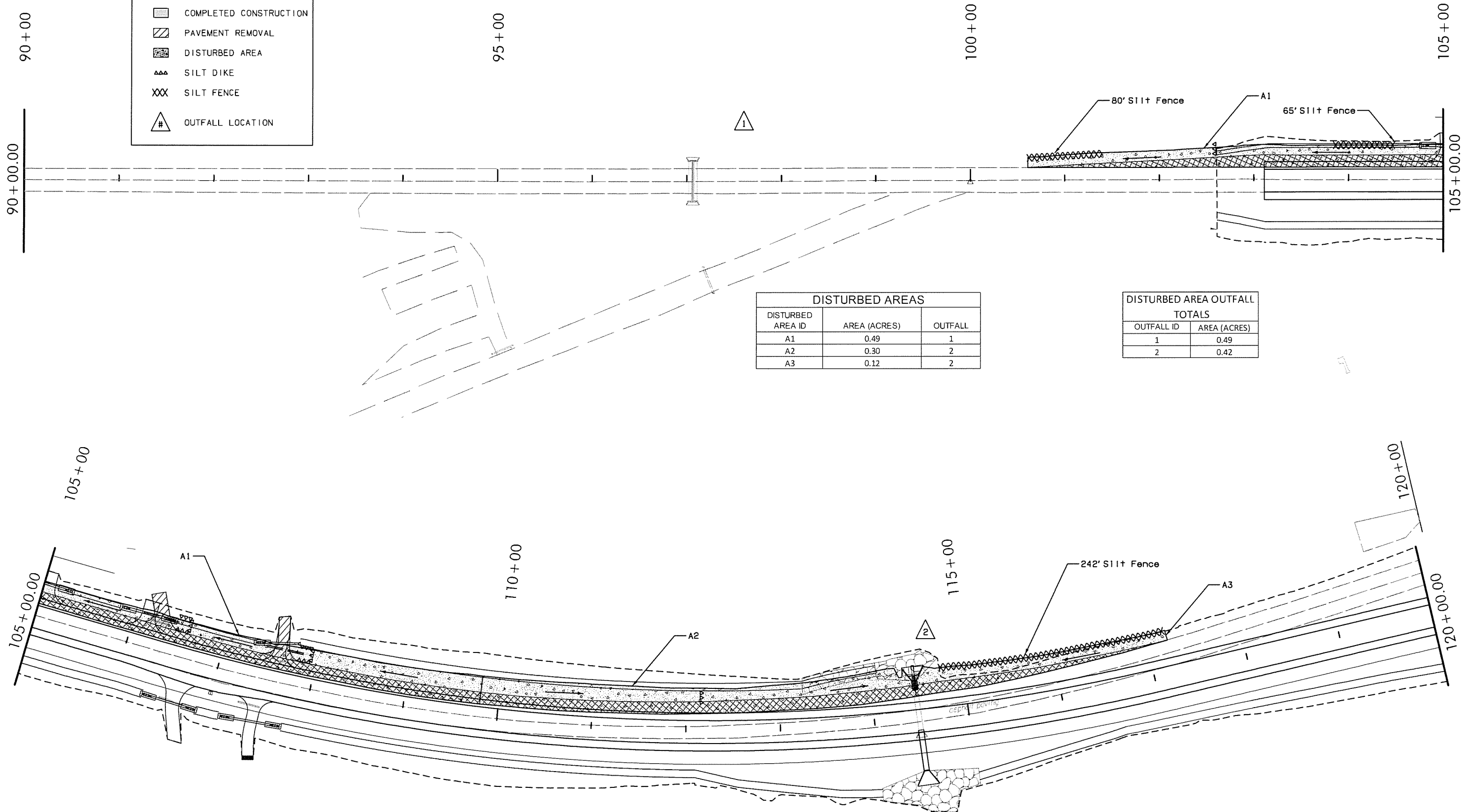
- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION 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, 2012.

DESIGN	KMW	1-16	S.H.-16 OVER CHICKEN CREEK STORMWATER MANAGEMENT PLAN STATE JOB NO. <u>28858(04)</u> SHEET NO. <u>23</u> CREEK COUNTY SH-16
DRAWN	KMW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	PAVEMENT REMOVAL
	DISTURBED AREA
	SILT DIKE
	SILT FENCE
	OUTFALL LOCATION



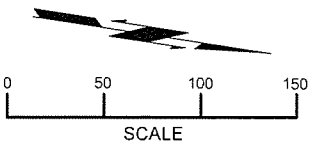
DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A1	0.49	1
A2	0.30	2
A3	0.12	2

DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	0.49
2	0.42

6/16/2016 JP28858_04 Erosion Control01.dgn

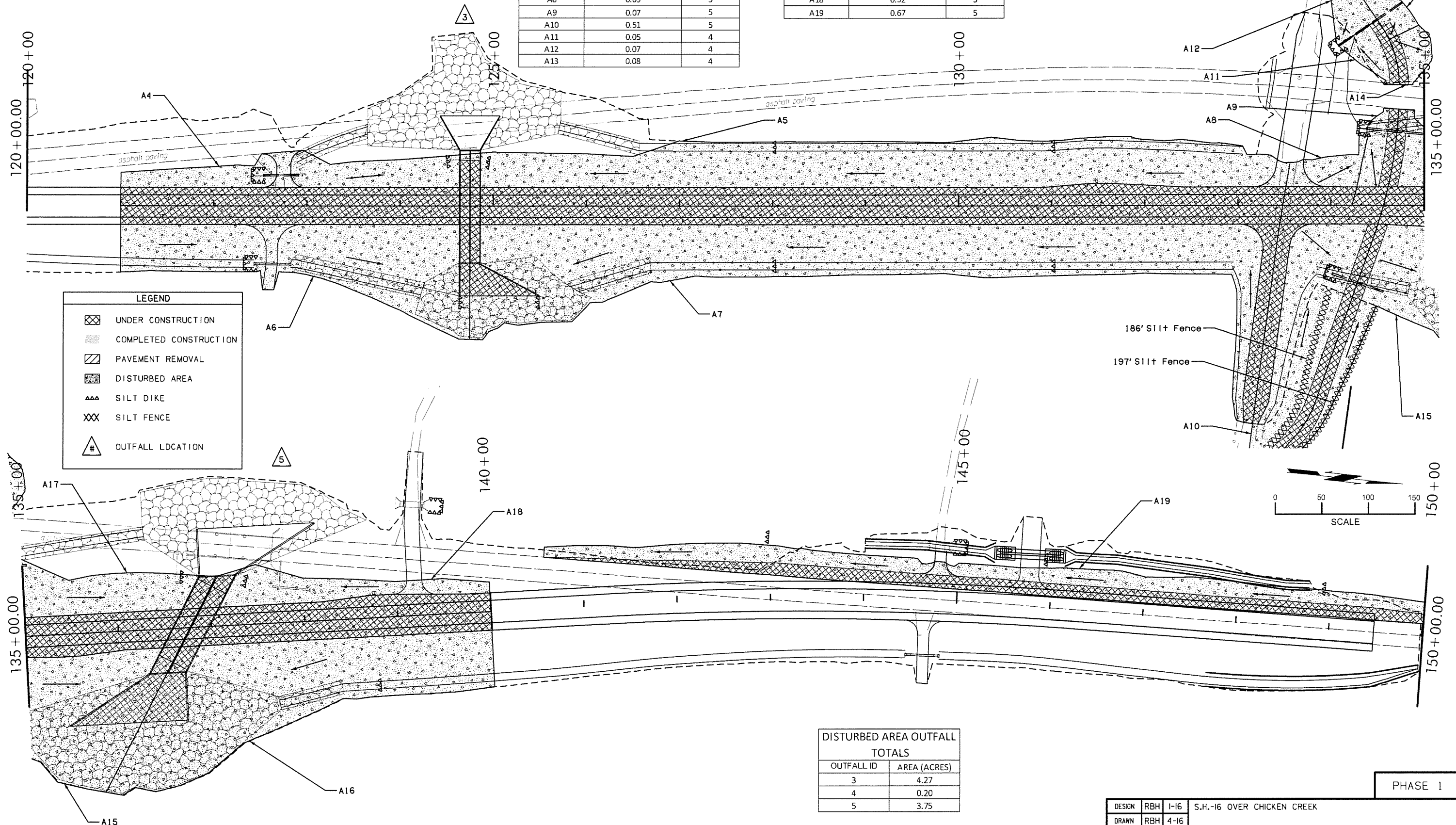
PHASE 1

DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHMERR		
EROSION CONTROL PLAN (SHEET 1 OF 9)			STATE JOB NO. 28858(04) SHEET NO. 24
			CREEK COUNTY SH-16

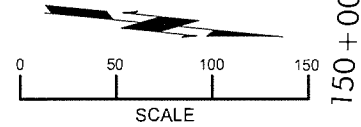


DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A4	0.41	3
A5	1.32	3
A6	0.76	3
A7	1.78	3
A8	0.09	5
A9	0.07	5
A10	0.51	5
A11	0.05	4
A12	0.07	4
A13	0.08	4

DISTURBED AREAS CONT.		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A14	0.04	5
A15	0.76	5
A16	0.94	5
A17	0.35	5
A18	0.32	5
A19	0.67	5



LEGEND	
[Cross-hatch pattern]	UNDER CONSTRUCTION
[Dotted pattern]	COMPLETED CONSTRUCTION
[Diagonal lines]	PAVEMENT REMOVAL
[Stippled pattern]	DISTURBED AREA
[Three triangles]	SILT DIKE
[XXX]	SILT FENCE
[#]	OUTFALL LOCATION



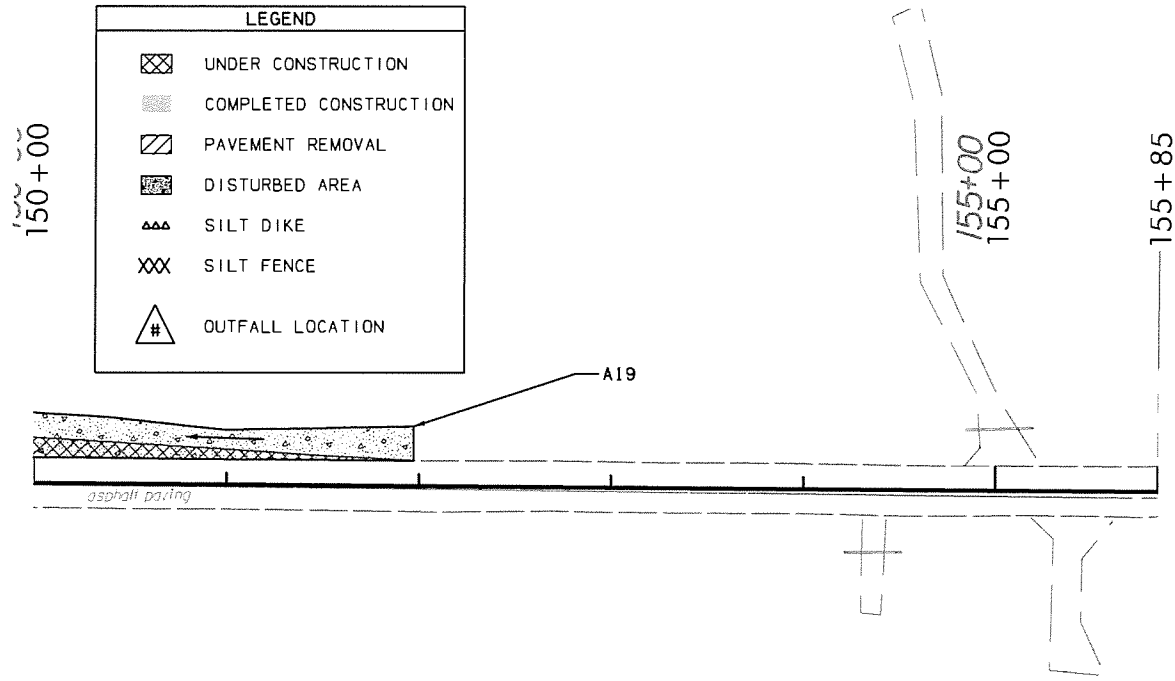
DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
3	4.27
4	0.20
5	3.75

DESIGN	RBH	1-16
DRAWN	RBH	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

S.H.-16 OVER CHICKEN CREEK
EROSION CONTROL PLAN
 (SHEET 2 OF 9)
 STATE JOB NO. 28858(04) SHEET NO. 25
 CREEK COUNTY SH-16

PHASE 1

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DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A19	0.67	5

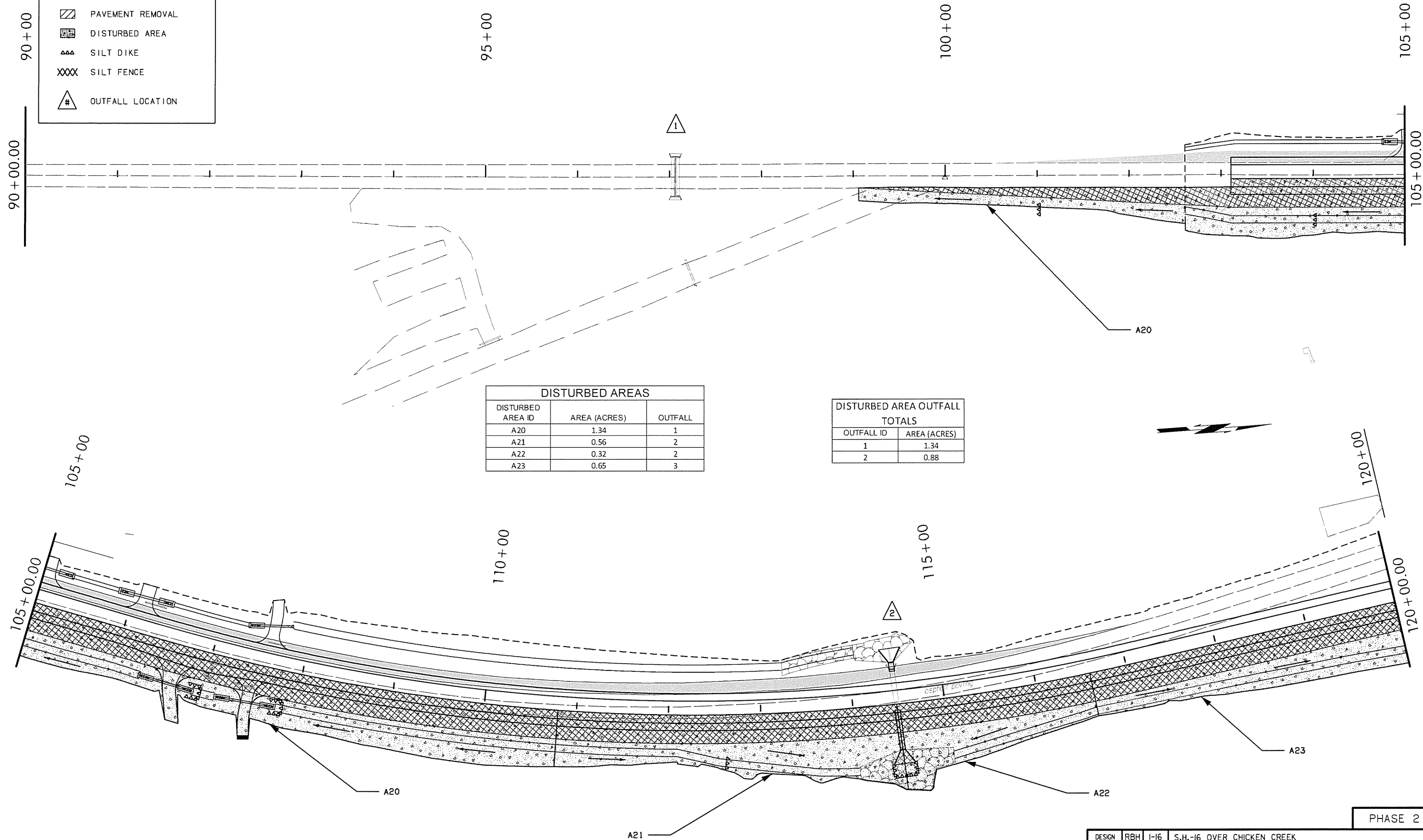
DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	0.49
2	0.42
3	4.27
4	0.20
5	3.75

6/16/2016 JP28858_04 Erosion Control.dgn

PHASE 1

DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK EROSION CONTROL PLAN (SHEET 3 OF 9) STATE JOB NO. 28858(04) SHEET NO. 26 CREEK COUNTY SH-16
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	PAVEMENT REMOVAL
	DISTURBED AREA
	SILT DIKE
	SILT FENCE
	OUTFALL LOCATION



DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A20	1.34	1
A21	0.56	2
A22	0.32	2
A23	0.65	3

DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	1.34
2	0.88

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DESIGN	RBH	1-16
DRAWN	RBH	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

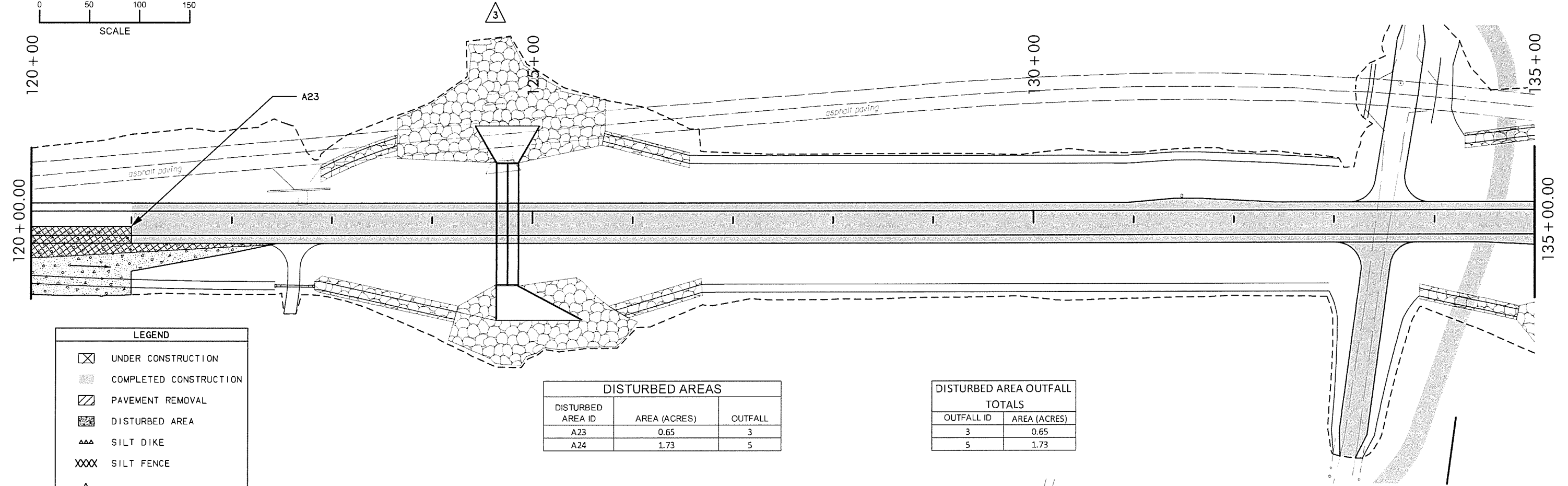
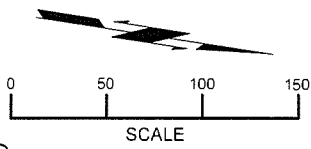
PHASE 2

S.H.-16 OVER CHICKEN CREEK

EROSION CONTROL PLAN
(SHEET 4 OF 9)

STATE JOB NO. 28858(04) SHEET NO. 27

CREEK COUNTY SH-16

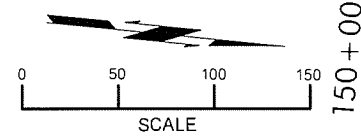
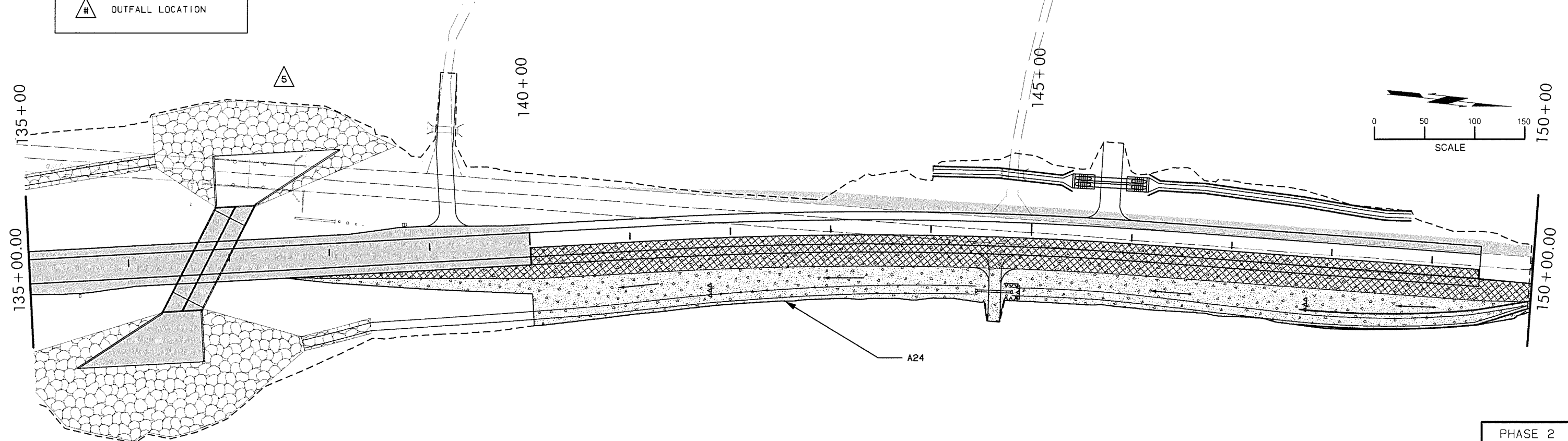


LEGEND

- UNDER CONSTRUCTION
- COMPLETED CONSTRUCTION
- PAVEMENT REMOVAL
- DISTURBED AREA
- SILT DIKE
- SILT FENCE
- OUTFALL LOCATION

DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A23	0.65	3
A24	1.73	5

DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
3	0.65
5	1.73










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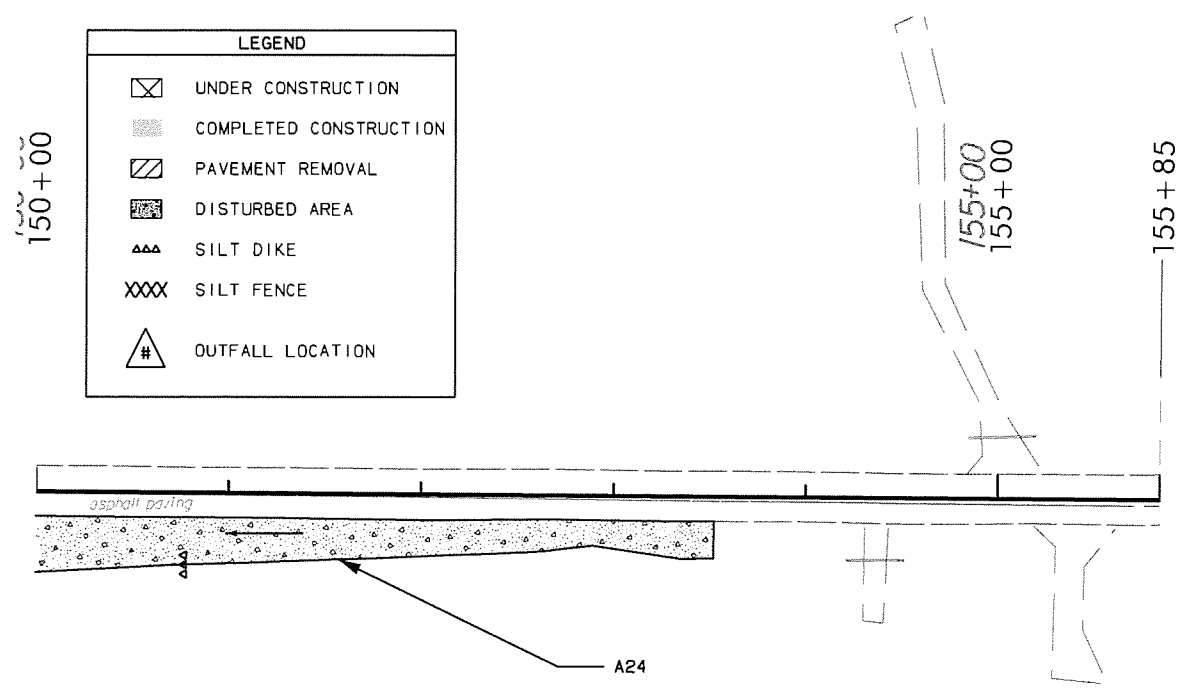
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DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

PHASE 2

**EROSION CONTROL PLAN
(SHEET 5 OF 9)**

STATE JOB NO. 28858(04) SHEET NO. 28
CREEK COUNTY SH-16

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	PAVEMENT REMOVAL
	DISTURBED AREA
	SILT DIKE
	SILT FENCE
	OUTFALL LOCATION



DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A24	1.73	5

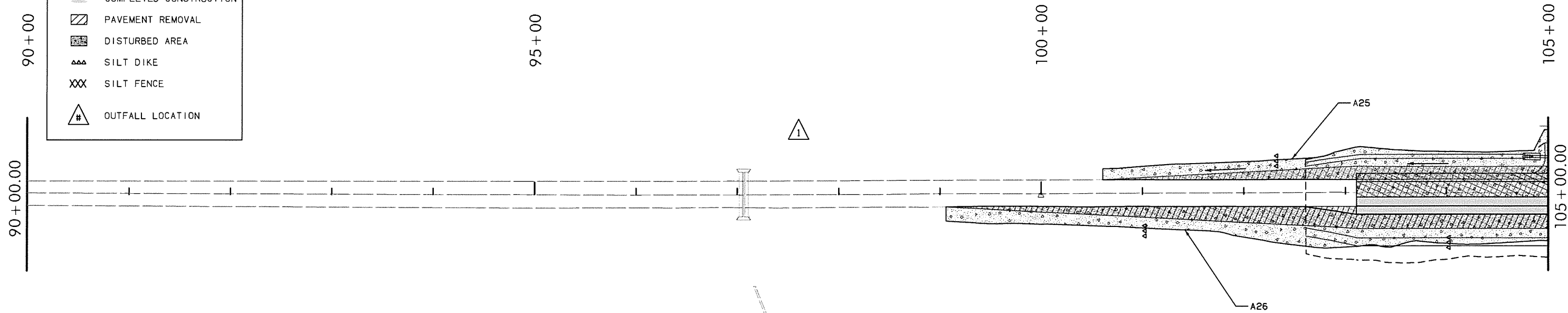
DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	1.34
2	0.88
3	0.65
5	1.73

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PHASE 2

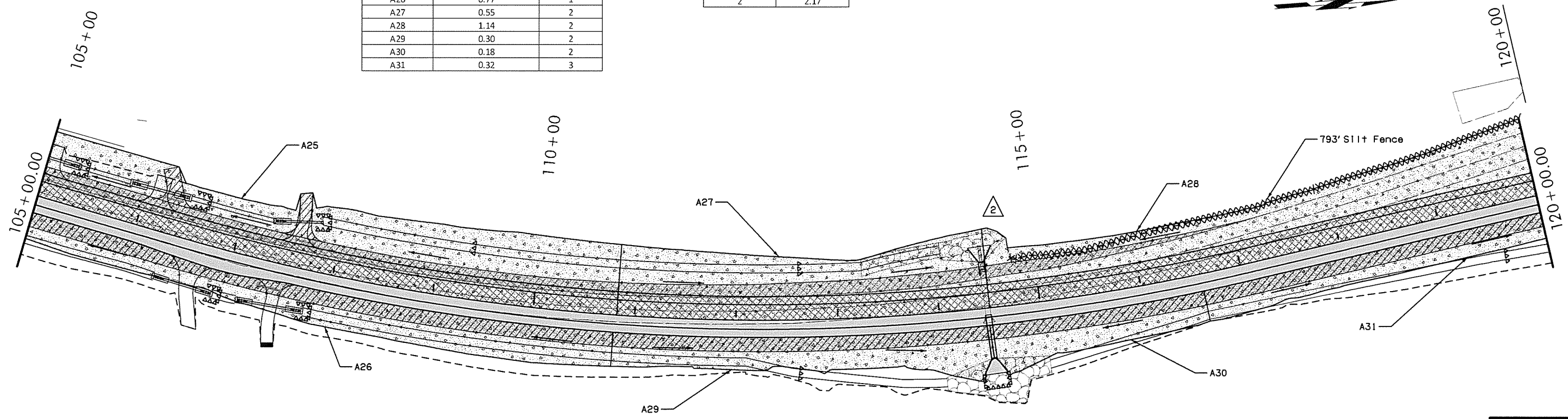
DESIGN	RBH	1-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		
			EROSION CONTROL PLAN (SHEET 6 OF 9)
			STATE JOB NO. 28858(04) SHEET NO. 29
			CREEK COUNTY SH-16

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	PAVEMENT REMOVAL
	DISTURBED AREA
	SILT DIKE
	SILT FENCE
	OUTFALL LOCATION



DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A25	1.16	1
A26	0.77	1
A27	0.55	2
A28	1.14	2
A29	0.30	2
A30	0.18	2
A31	0.32	3

DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	1.93
2	2.17



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DESIGN	RBH	1-16
DRAWN	RBH	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

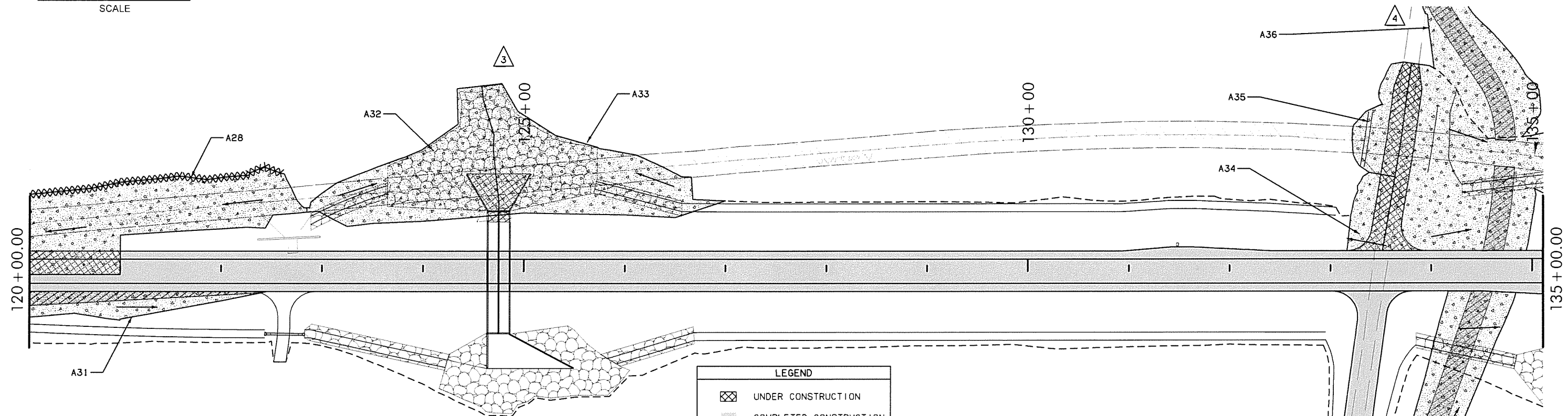
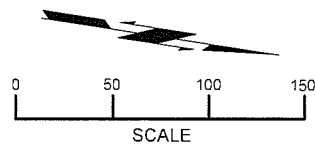
PHASE 3

S.H.-16 OVER CHICKEN CREEK

EROSION CONTROL PLAN
(SHEET 7 OF 9)

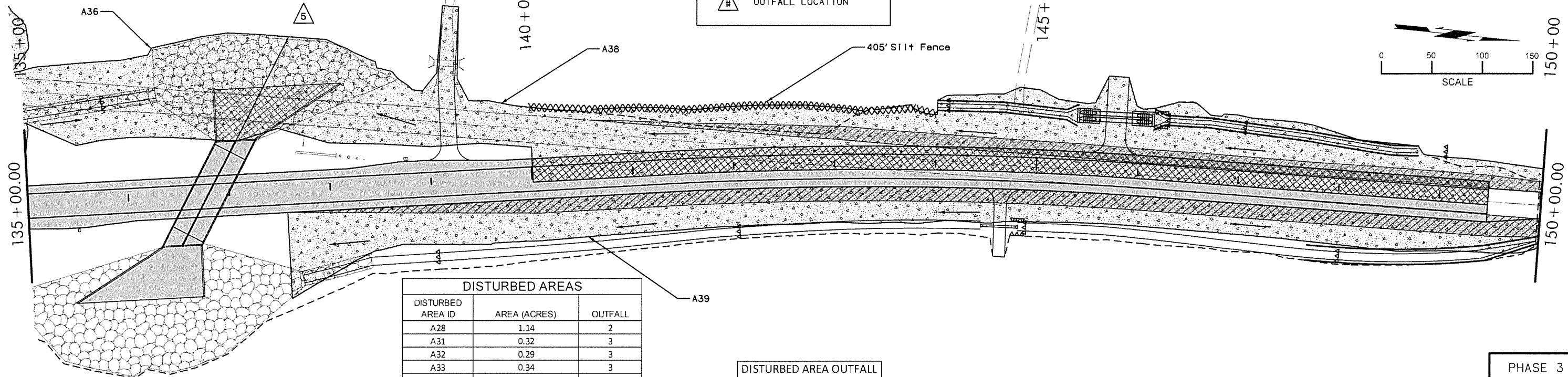
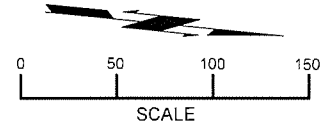
STATE JOB NO. 28858(04) SHEET NO. 30

CREEK COUNTY SH-16



LEGEND

- UNDER CONSTRUCTION
- COMPLETED CONSTRUCTION
- PAVEMENT REMOVAL
- DISTURBED AREA
- SILT DIKE
- SILT FENCE
- OUTFALL LOCATION



DISTURBED AREAS

DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A28	1.14	2
A31	0.32	3
A32	0.29	3
A33	0.34	3
A34	0.06	3
A35	0.09	4
A36	1.14	5
A37	0.34	5
A38	2.02	5
A39	1.21	5

DISTURBED AREA OUTFALL TOTALS








OUTFALL ID	AREA (ACRES)
3	1.01
4	0.09
5	4.71

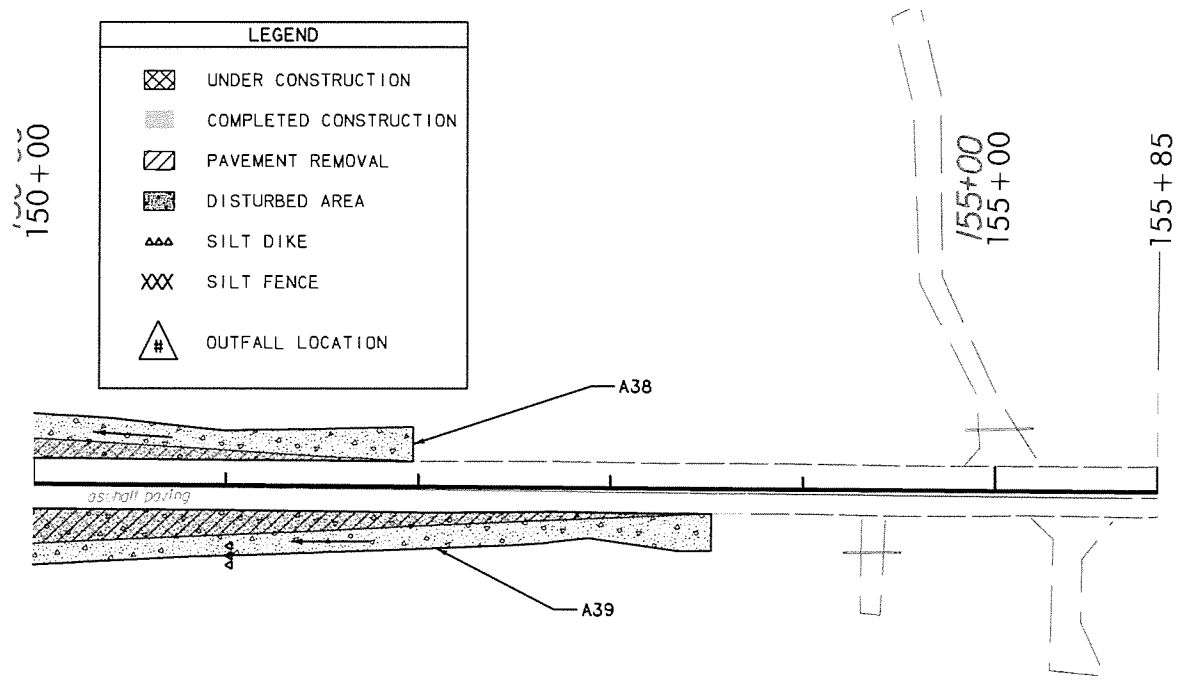
DESIGN	RBH	1-16
DRAWN	RBH	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMMER	

S.H.-16 OVER CHICKEN CREEK
EROSION CONTROL PLAN
 (SHEET 8 OF 9)
 STATE JOB NO. 28858(04) SHEET NO. 31
 CREEK COUNTY SH-16

PHASE 3

6/6/2016 JP28858_04 Erosion Control.08.dgn

LEGEND	
	UNDER CONSTRUCTION
	COMPLETED CONSTRUCTION
	PAVEMENT REMOVAL
	DISTURBED AREA
	SILT DIKE
	SILT FENCE
	OUTFALL LOCATION



DISTURBED AREAS		
DISTURBED AREA ID	AREA (ACRES)	OUTFALL
A38	2.02	5
A39	1.21	5

DISTURBED AREA OUTFALL TOTALS	
OUTFALL ID	AREA (ACRES)
1	1.93
2	2.17
3	1.01
4	0.09
5	4.71

6/16/2016 JP28858_04 Erosion Control109.dgn

PHASE 3

DESIGN	RBH	1-16
DRAWN	RBH	4-16
CHECKED	TAC	5-16
APPROVED		
SQUAD	SCHEMME	

S.H.-16 OVER CHICKEN CREEK

EROSION CONTROL PLAN
(SHEET 9 OF 9)

STATE JOB NO. 28858(04) SHEET NO. 32
CREEK COUNTY SH-16

SECTION 8, T15N, R10E

Existing Curve #1
 PI Sta= 112+27.04
 X= 293,246.85
 Y= 2,483,883.76
 Δ = 34°23'41.77" LT
 D= 3°00'00.00"
 T= 591.11'
 L= 1,146.50'
 R= 1,909.86'
 E= 89.38'

CRL 'A' Curve #1
 PI Sta= 111+81.48
 X= 2483867.7710
 Y= 293204.1832
 Δ = 29°20'46.73" LT
 D= 2°45'00.00"
 T= 545.55'
 L= 1067.14'
 R= 2083.48'
 E= 70.24'
 e= 8.0% eMax=8.0%
 V= 70 mph

Existing Curve #2
 PI Sta= 131+93.84
 X= 295,191.08
 Y= 2,483,404.15
 Δ = 12°27'52.03" RT
 D= 2°00'00.00"
 T= 312.85'
 L= 623.22'
 R= 2,864.79'
 E= 17.03'

CRL 'A' Curve #2
 PI Sta= 143+74.35
 X= 2483375.1644
 Y= 296383.0697
 Δ = 7°24'56.98" RT
 D= 1°30'00.00"
 T= 247.54'
 L= 494.39'
 R= 3819.72'
 E= 8.01'
 e= 5.2% eMax=8.0%
 V= 70 mph

251ST \odot ALIGNMENT POINTS

PT	STA	X	Y
1	5+00.00	2,483,022.97	295,363.77
2	8+79.97	2,493,402.87	295,370.84
3	10+30.70	2,483,553.59	295,368.71
4	15+08.57	2,484,031.38	295,377.57

DESIGN	RBW	I-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBW	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		

GEOMETRIC LAYOUT

6/16/2016 JP28858_04_Geom.dgn

90+00

95+00

100+00

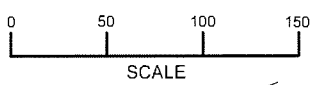
105+00

SECTION 8, TOWNSHIP 15N, RANGE 10E

SECTION 9, TOWNSHIP 15N, RANGE 10E

LEGEND

	PROPOSED PAVEMENT
	PAVEMENT REMOVAL



UTILITY OWNER CONTACT INFORMATION

UTILITY	OWNER	CONTACT PERSON	ADDRESS	PHONE	CELL
TUG, FO	AT&T	JAMIE HEADRICK	5305 E 71ST ST, TULSA OK 74136	918-596-4275	918-607-7028
EOH	EAST CENTRAL EC	MURRAY MCPHERSON	POB 1178, OKMULGEE OK 74447	918-756-0873	
EOH	OG&E	STEVE ECHARD	POB 321, MC M109, OKLA CITY OK 73101	405-553-5785	405-831-9011
EOH	GRDA	DOUG HILL	POB 1128, PRYOR OK 74362	918-824-7847	
G, W	TOWN OF SLICK	RANDY WOOD	102 W PERSHING, BRISTOW OK 74010	918-367-1800	918-633-5765

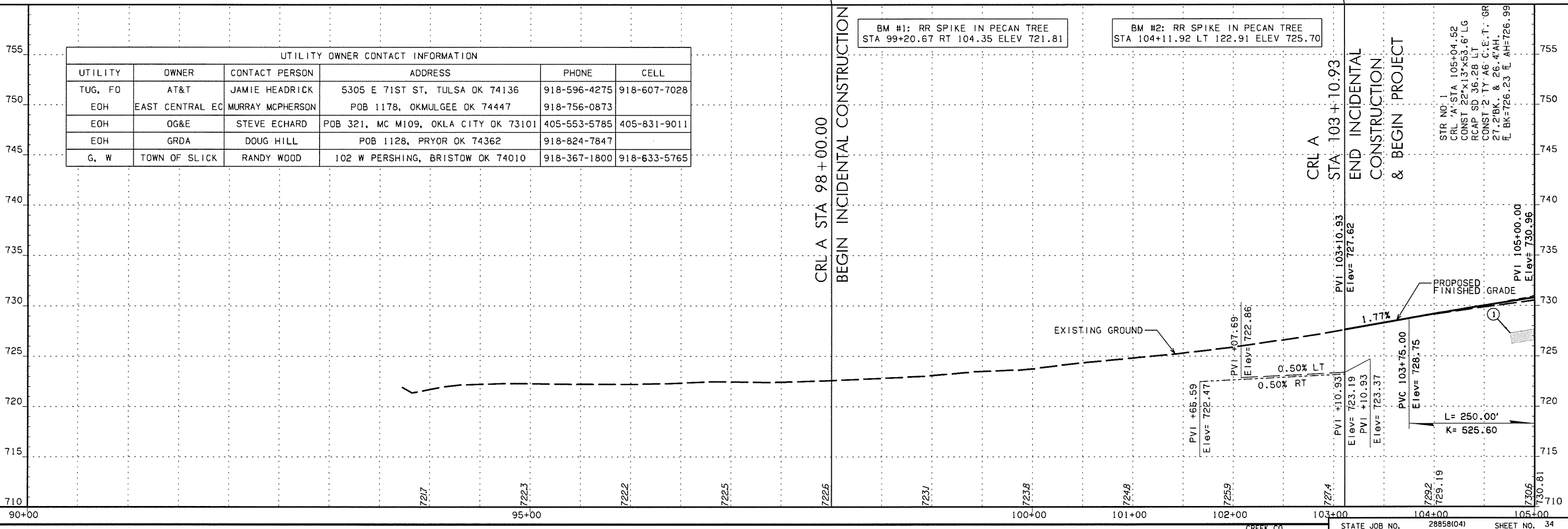
BM #1: RR SPIKE IN PECAN TREE
STA 99+20.67 RT 104.35 ELEV 721.81

BM #2: RR SPIKE IN PECAN TREE
STA 104+11.92 LT 122.91 ELEV 725.70

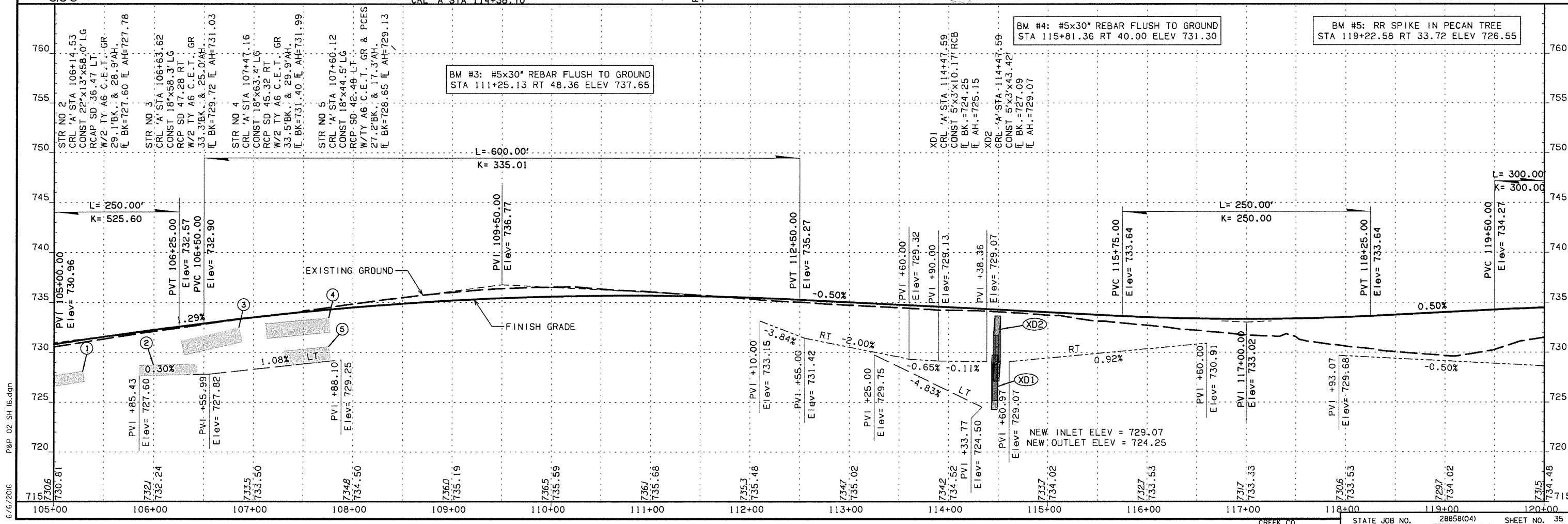
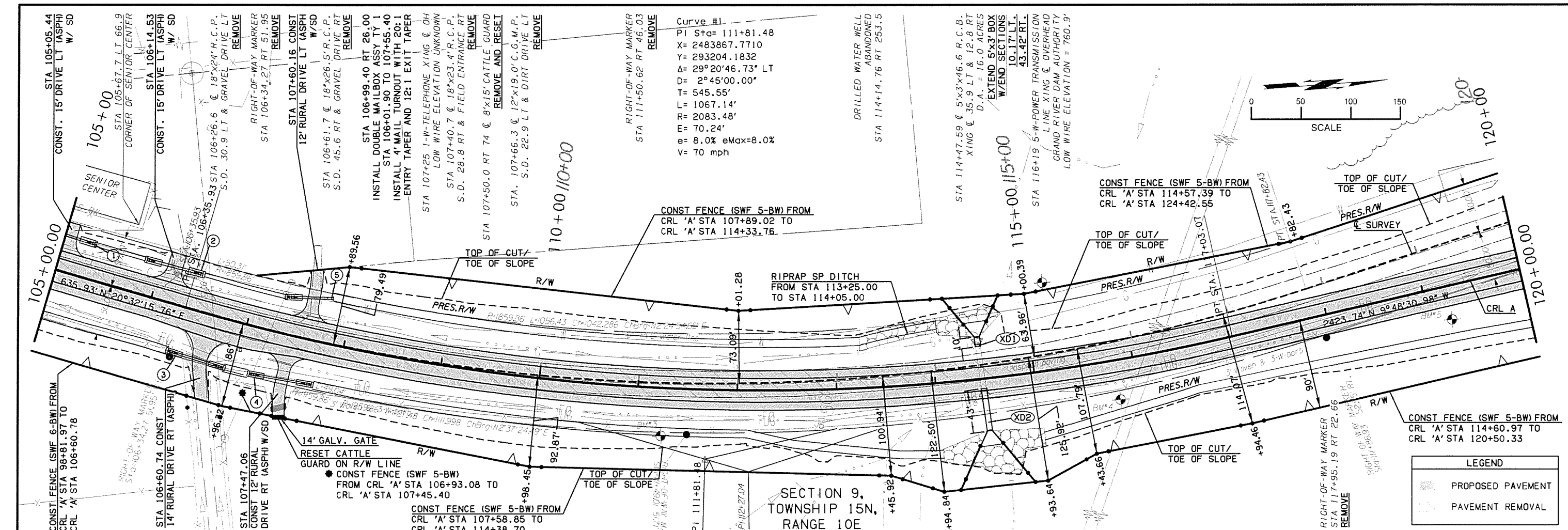
CRL A STA 98+00.00
BEGIN INCIDENTAL CONSTRUCTION

CRL A
STA 103+10.93
END INCIDENTAL CONSTRUCTION & BEGIN PROJECT

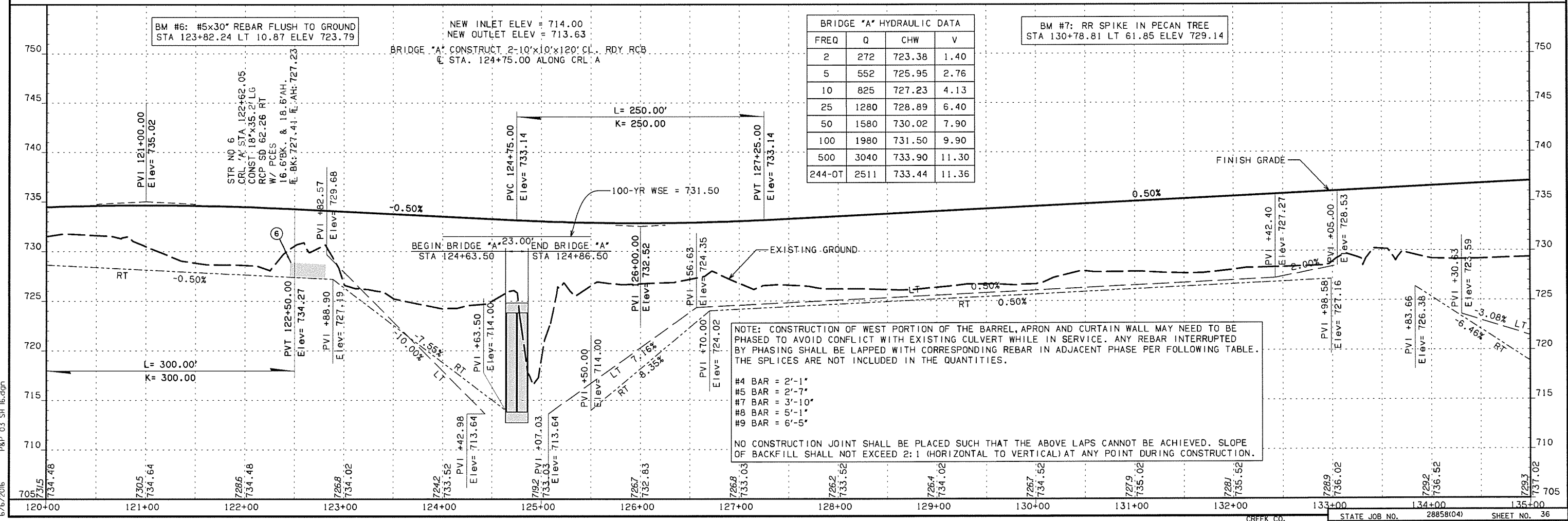
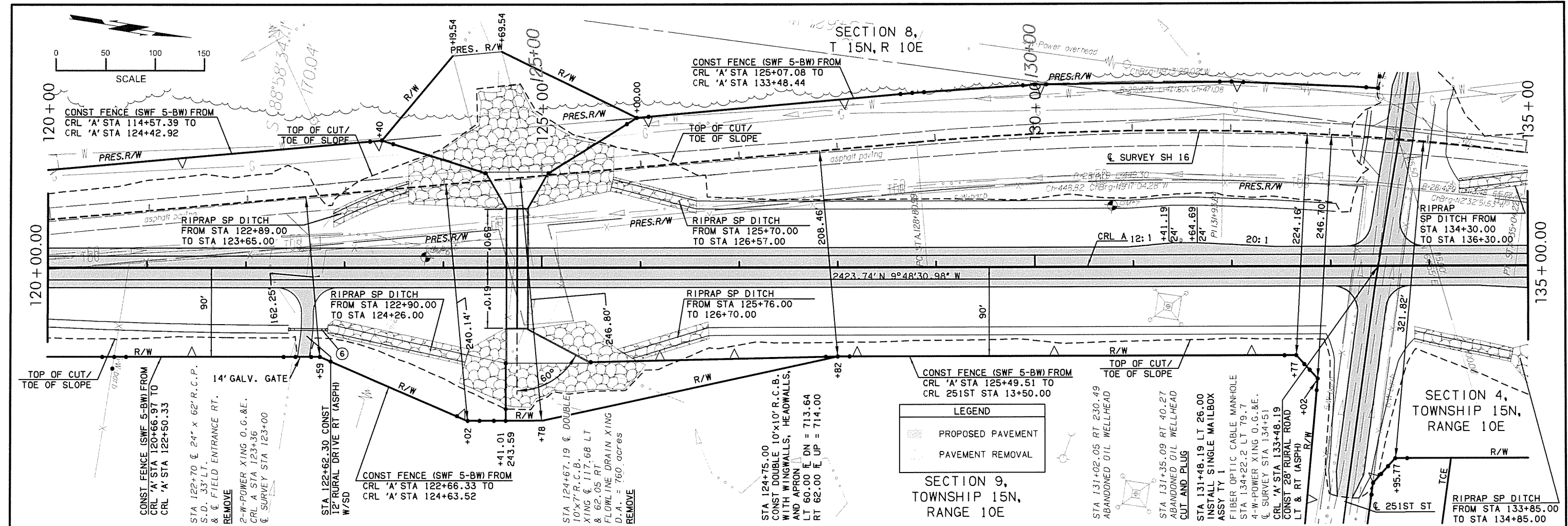
STR NO. 1
CRL 'A' STA 105+04.52
CONST 22"x13"x53.6" LG
RCAP SD 36.28 LT
CONST 2" TY A6 C.E.T. GR
27.2BK & 26.4" AH
ELEV=726.23 ELEV AH=726.99

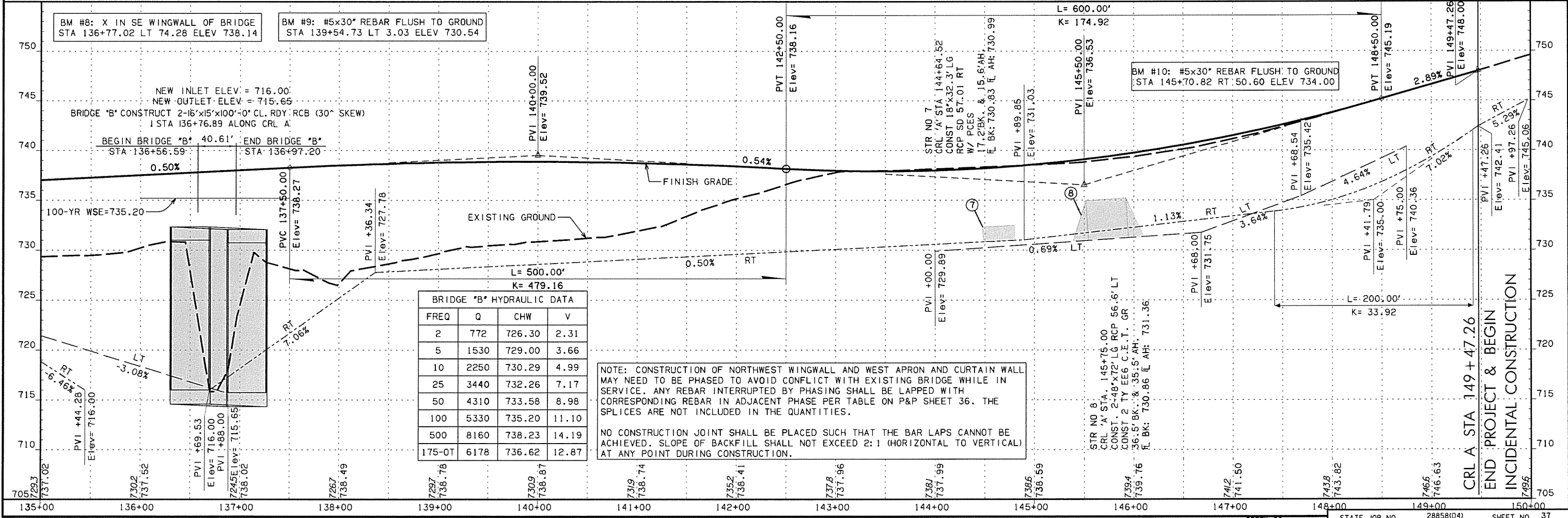
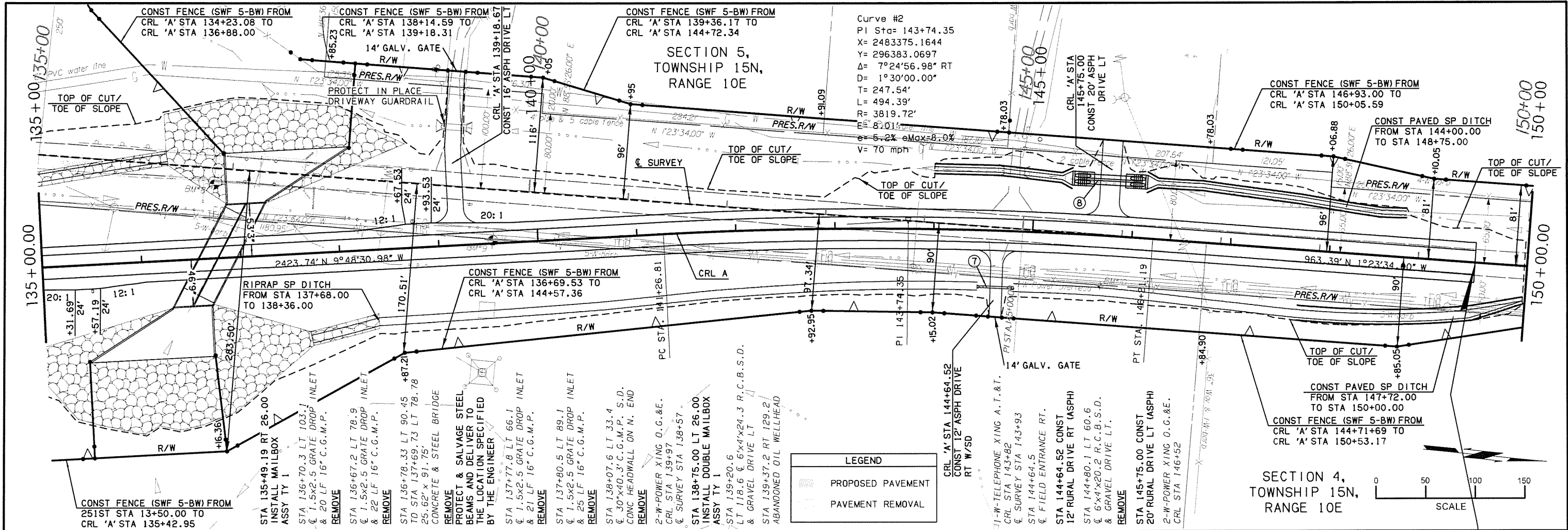


6/16/2016 P&P 01 SH 16.dgn

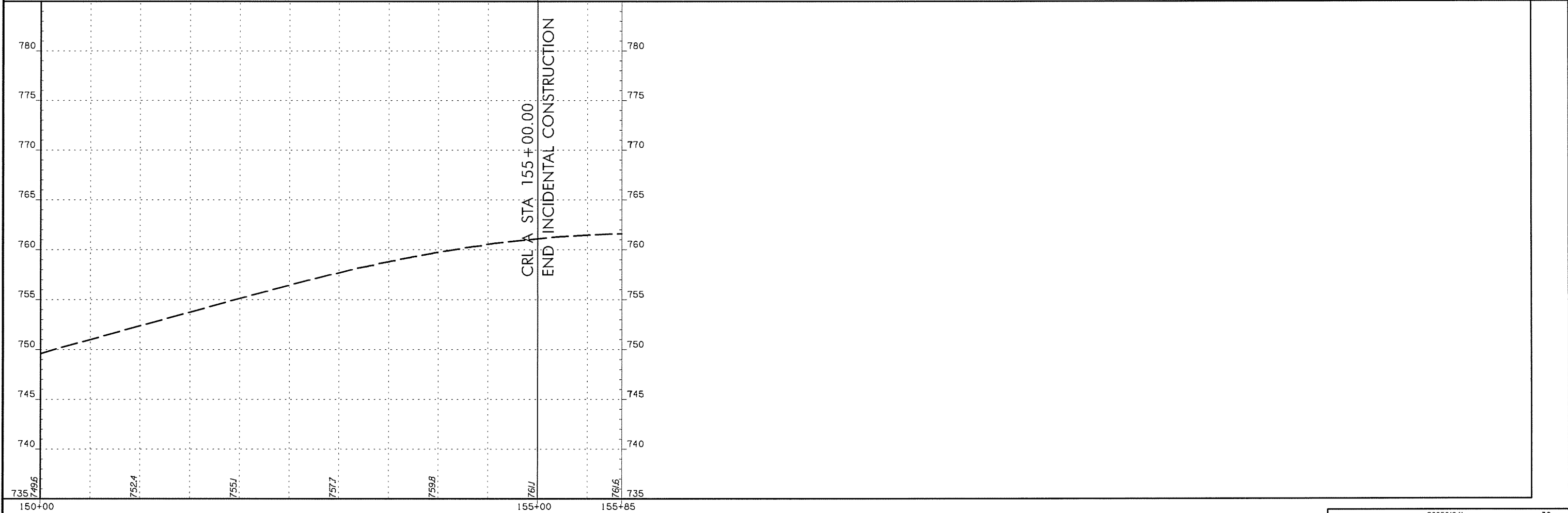
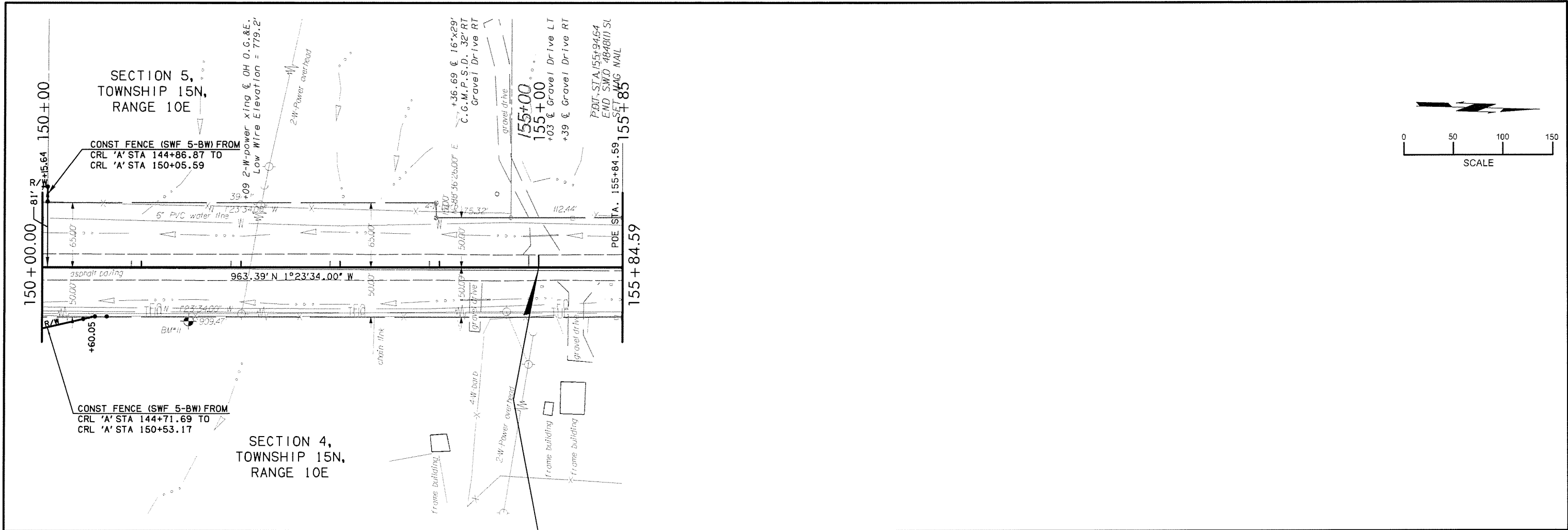


6/6/2016 P&P 02 SH 16.dgn





P&P 04 SH 16.dgn
 6/6/2016



6/7/2016 P&P_05_SH_16.dgn

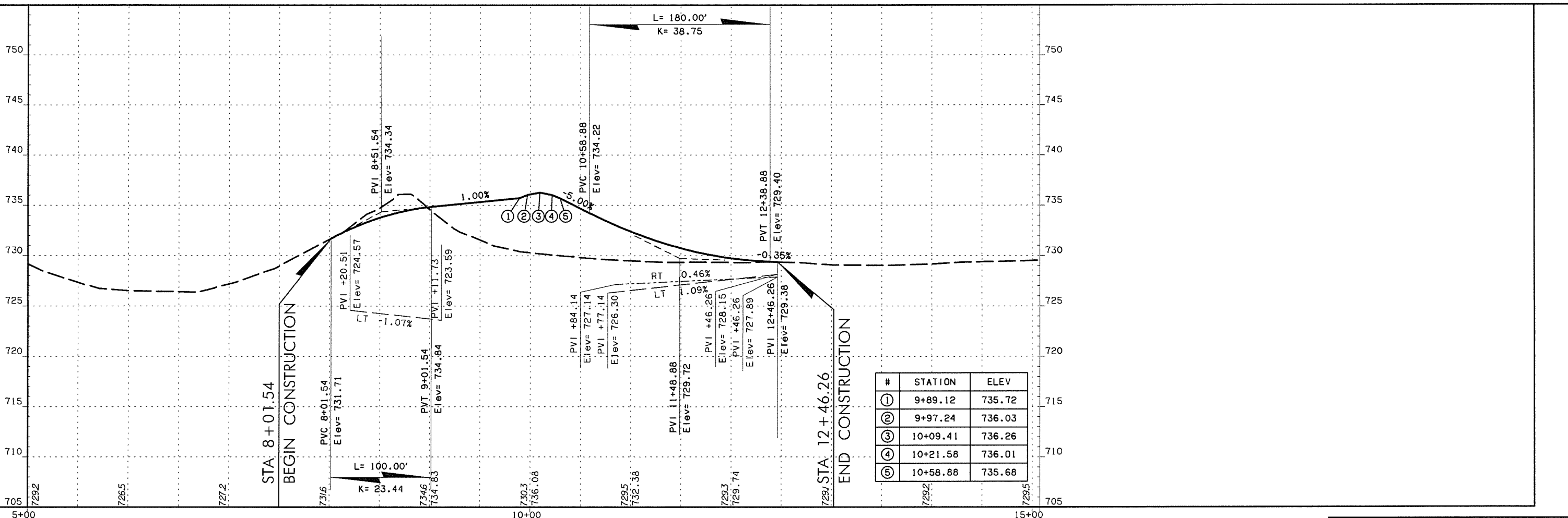
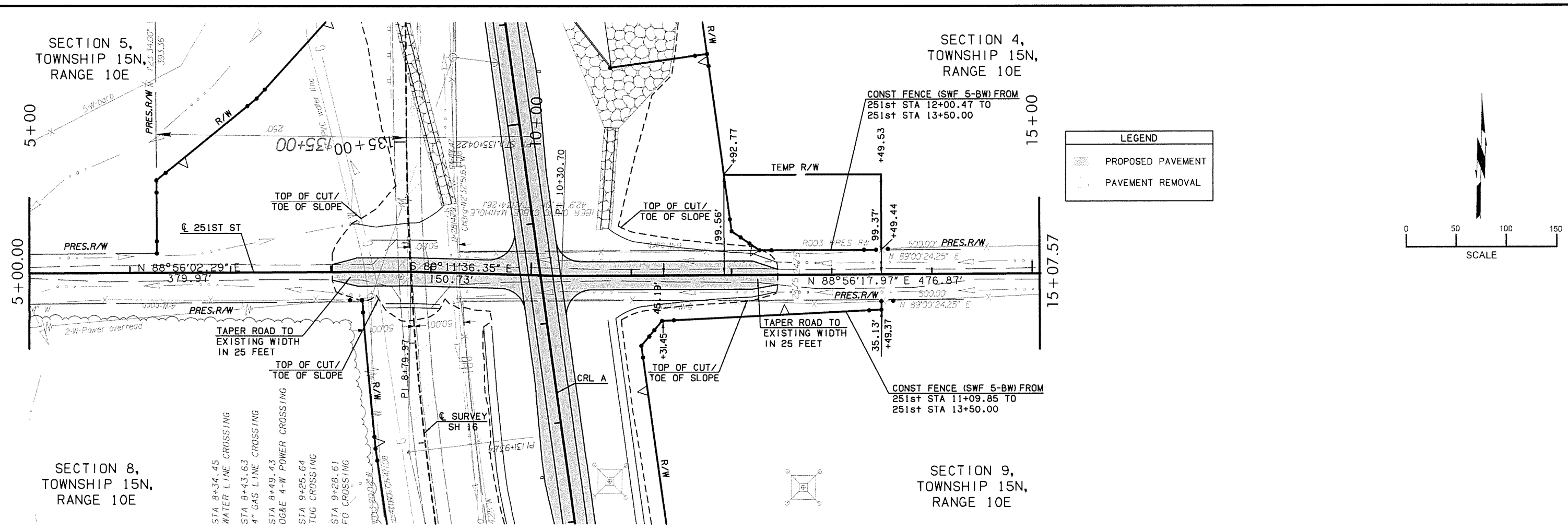
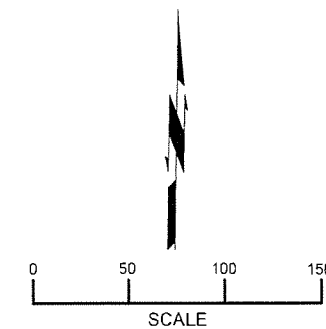
SECTION 5,
TOWNSHIP 15N,
RANGE 10E

SECTION 4,
TOWNSHIP 15N,
RANGE 10E

SECTION 8,
TOWNSHIP 15N,
RANGE 10E

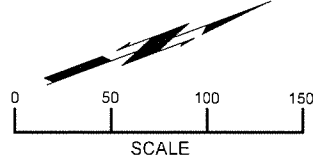
SECTION 9,
TOWNSHIP 15N,
RANGE 10E

LEGEND	
	PROPOSED PAVEMENT
	PAVEMENT REMOVAL



6/7/2016 P&P 06 251st.dgn

NOTE: PHASE 2 DETOUR PAVEMENT BASED ON SURVEY CL
 PHASE 3 DETOUR PAVEMENT BASED ON CRL A.



SECTION 8, TOWNSHIP 15N, RANGE 10E

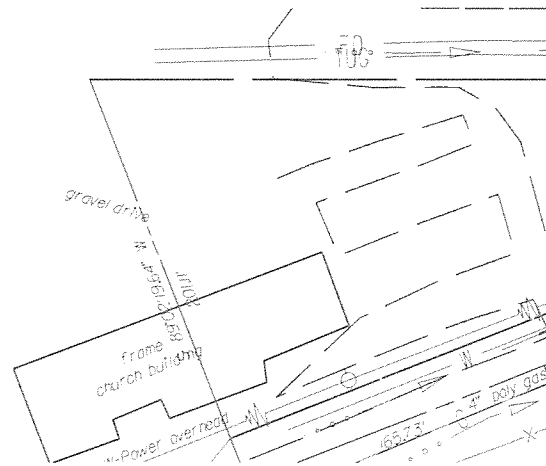
90+00

95+00

100+00
 STA 100+60.89
 BEGIN DETOUR TAPER LT

105+00

LEGEND	
	PROPOSED PAVEMENT
	DETOUR PAVEMENT



SECTION 9, TOWNSHIP 15N, RANGE 10E

DETOUR
 (SHEET 1 OF 5)

BM #1: RR SPIKE IN PECAN TREE
 STA 99+20.67 RT 104.35 ELEV 721.81

BM #2: RR SPIKE IN PECAN TREE
 STA 104+11.92 LT 122.91 ELEV 725.70

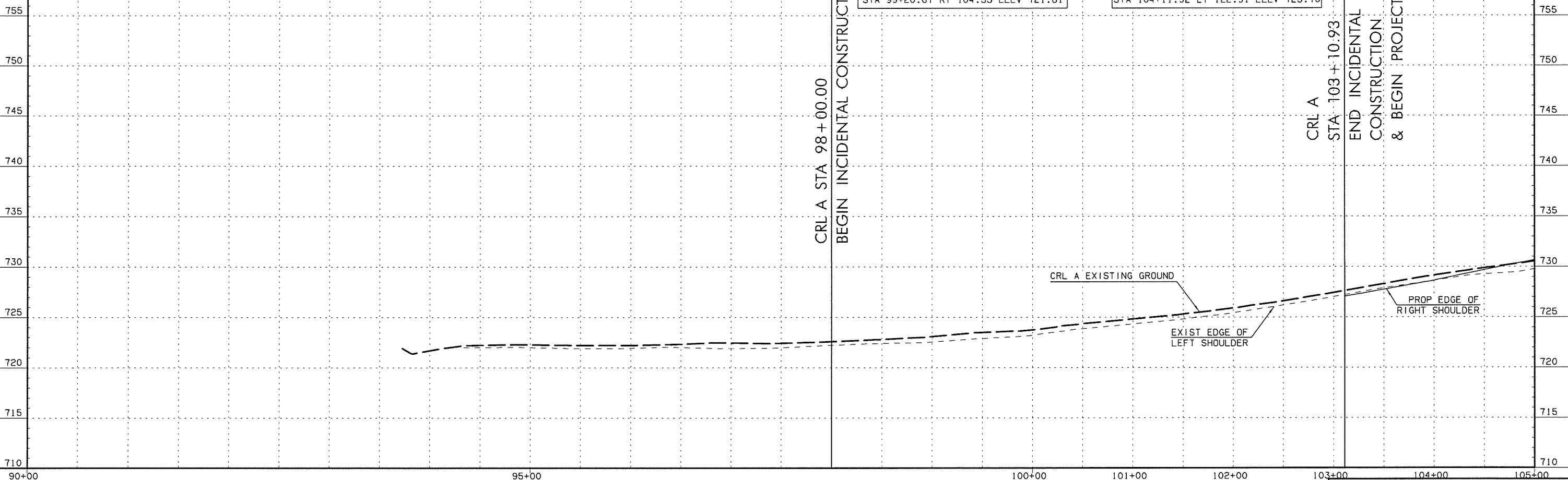
CRL A STA 98+00.00
 BEGIN INCIDENTAL CONSTRUCTION

CRL A
 STA 103+10.93
 END INCIDENTAL CONSTRUCTION
 & BEGIN PROJECT

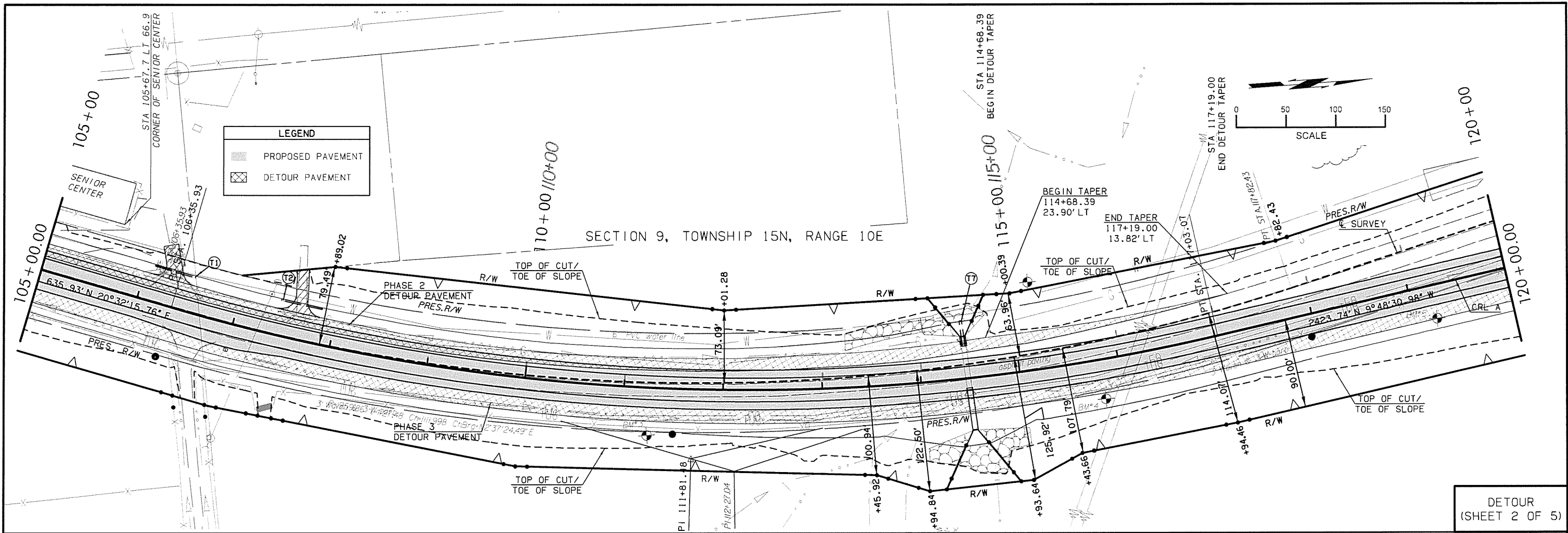
CRL A EXISTING GROUND

EXIST EDGE OF LEFT SHOULDER

PROP EDGE OF RIGHT SHOULDER

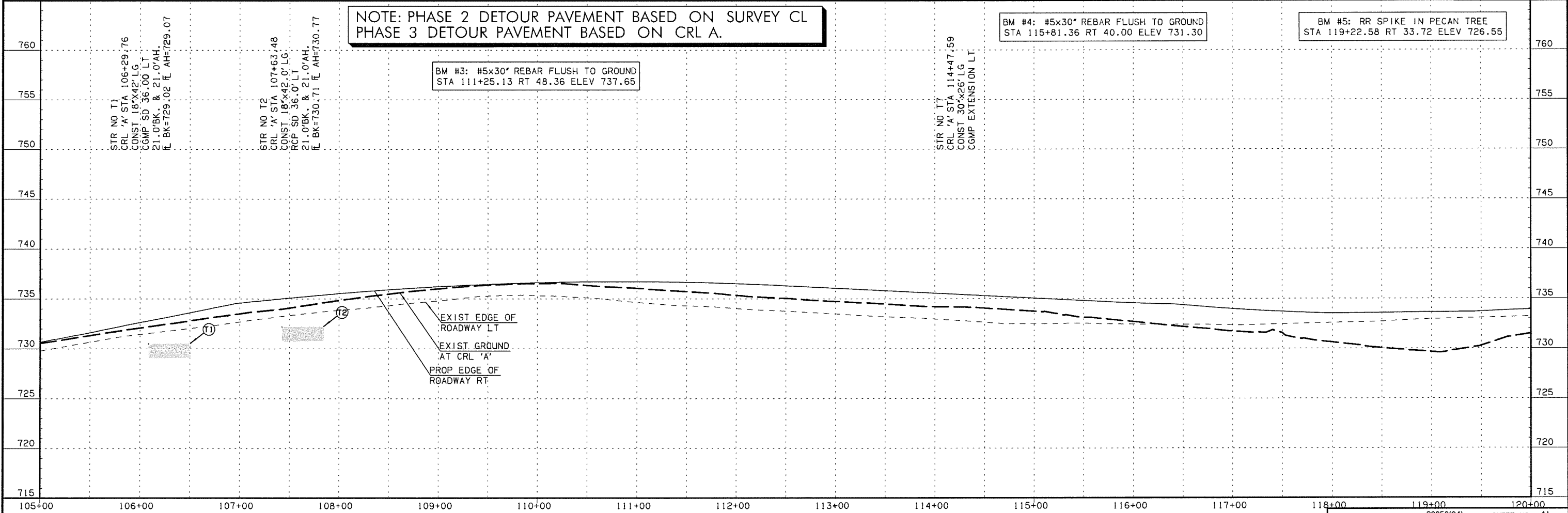


6/6/2016 P&P 51SH 16 Detour.dgn

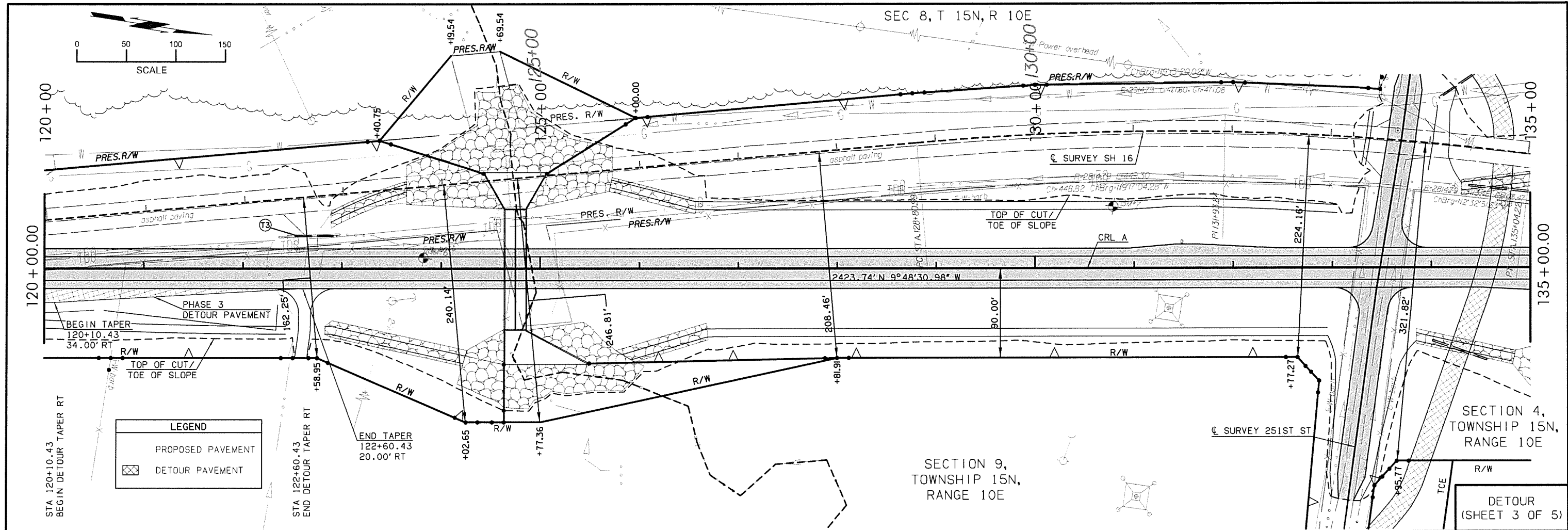


DETOUR
(SHEET 2 OF 5)

NOTE: PHASE 2 DETOUR PAVEMENT BASED ON SURVEY CL
PHASE 3 DETOUR PAVEMENT BASED ON CRL A.



6/6/2016 P&P 52 SH 16 Detour.dgn

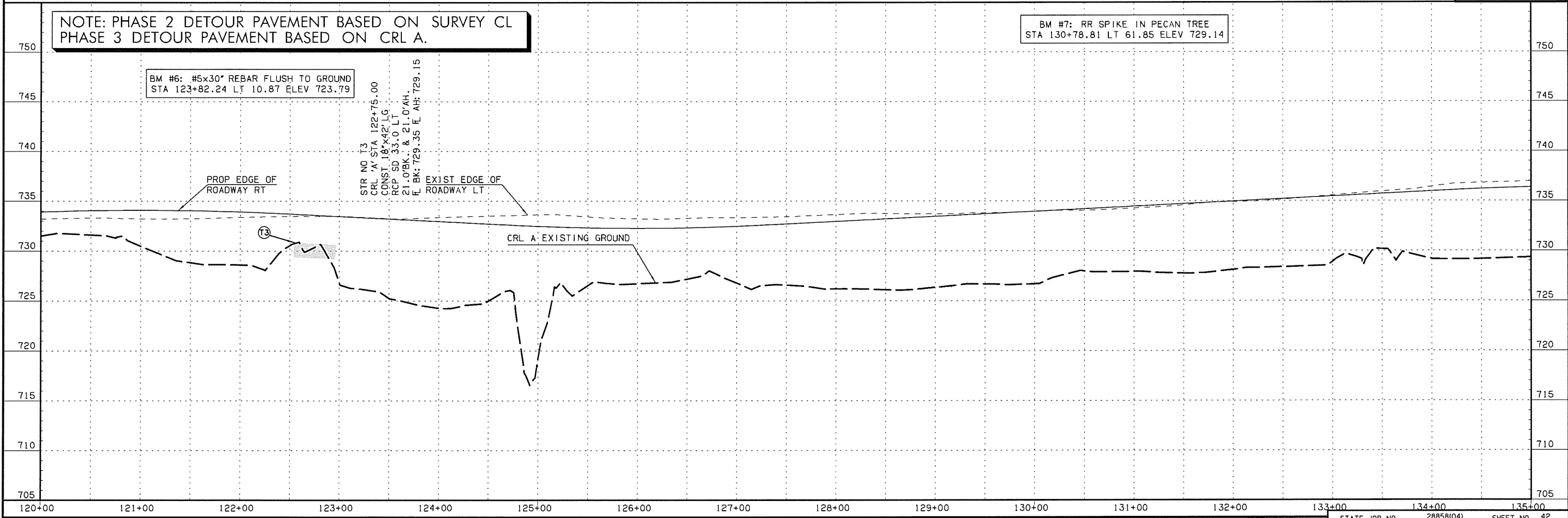


NOTE: PHASE 2 DETOUR PAVEMENT BASED ON SURVEY CL
 PHASE 3 DETOUR PAVEMENT BASED ON CRL A.

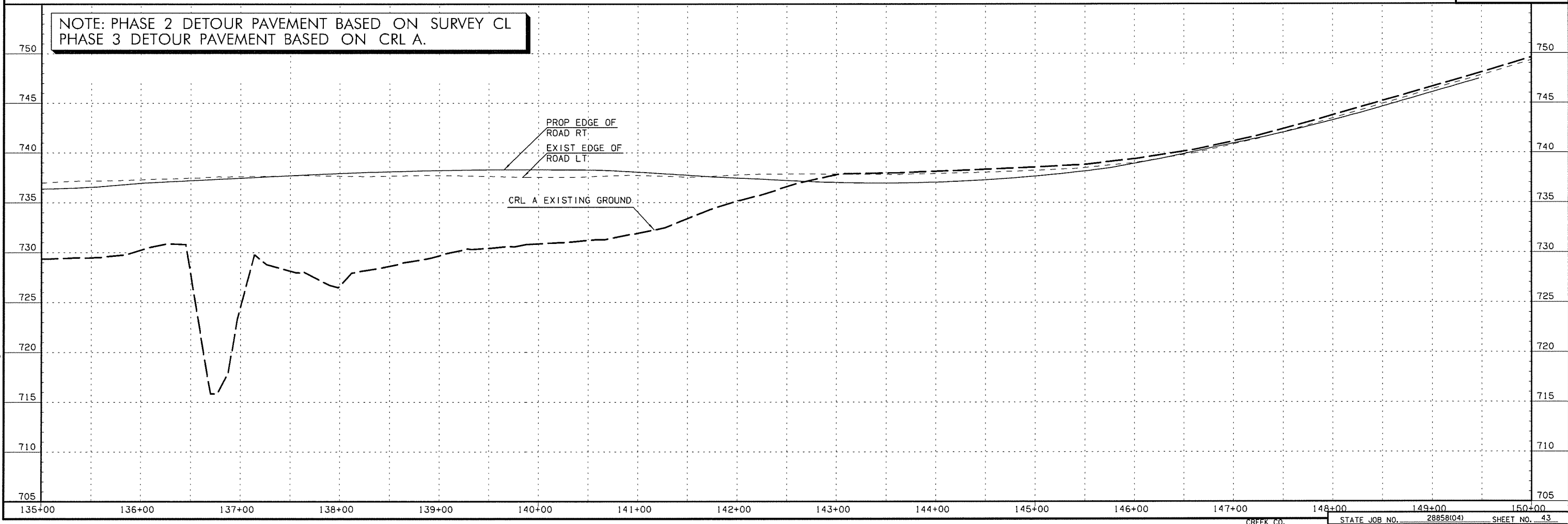
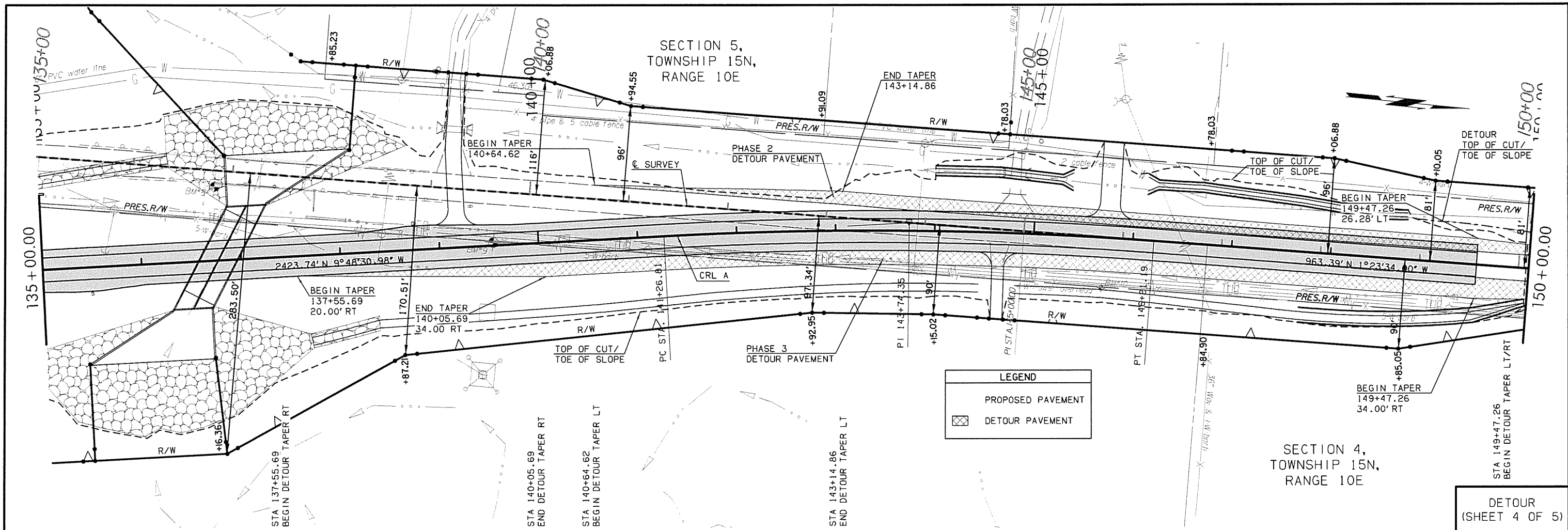
BM #7: RR SPIKE IN PECAN TREE
 STA 130+78.81 LT 61.85 ELEV 729.14

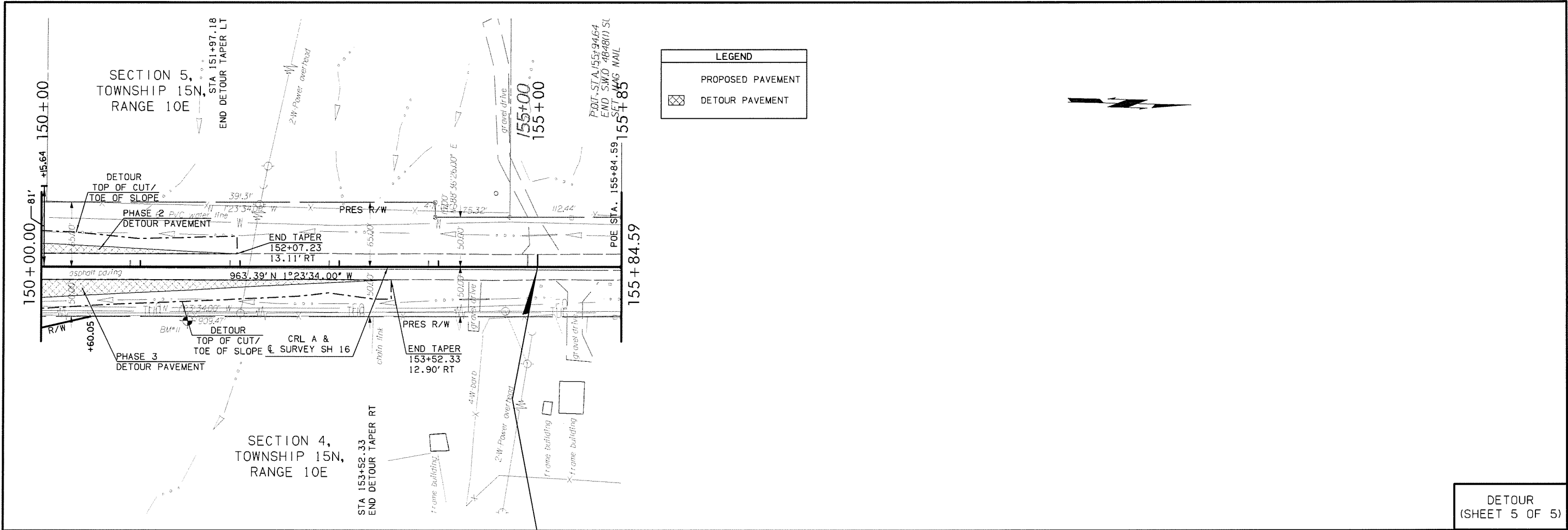
BM #6: #5x30" REBAR FLUSH TO GROUND
 STA 123+82.24 LT 10.87 ELEV 723.79

STR NO T3
 CRL 'A' STA 122+75.00
 CONST. 18"x42" LG
 RCP SD 33.0' LT
 21.0' BK. & 21.0' AH
 ELEV. BK: 729.35 ELEV. AH: 729.15



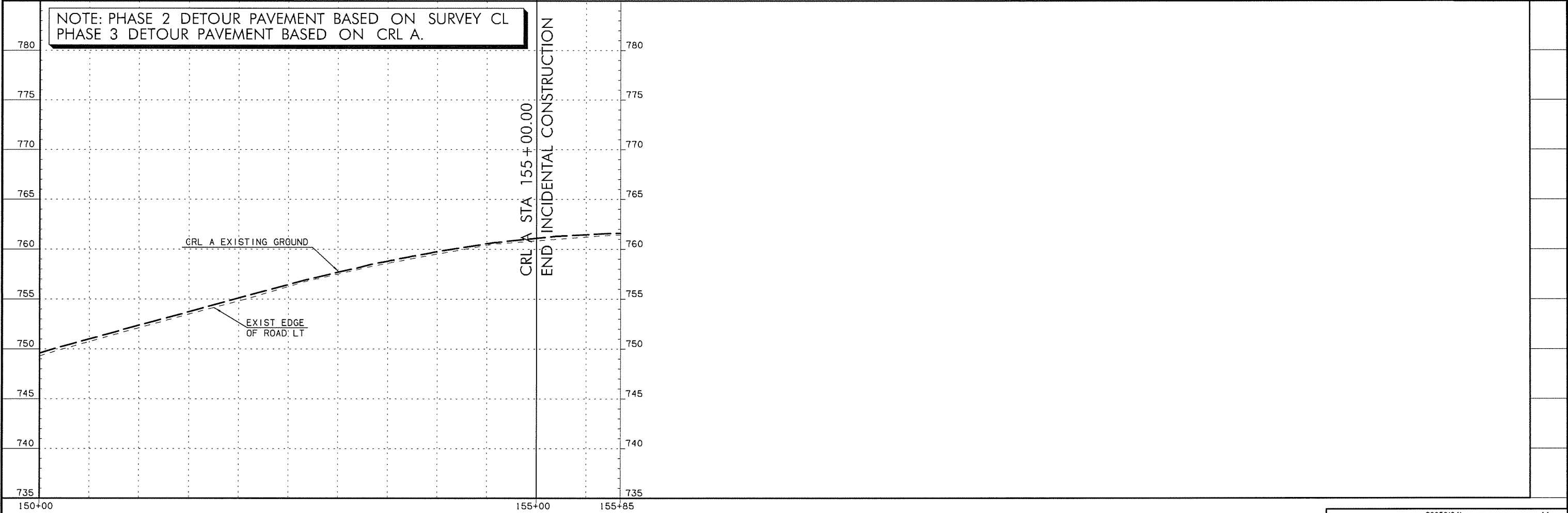
6/6/2016 P&P 53_SH 16 Detour.dgn



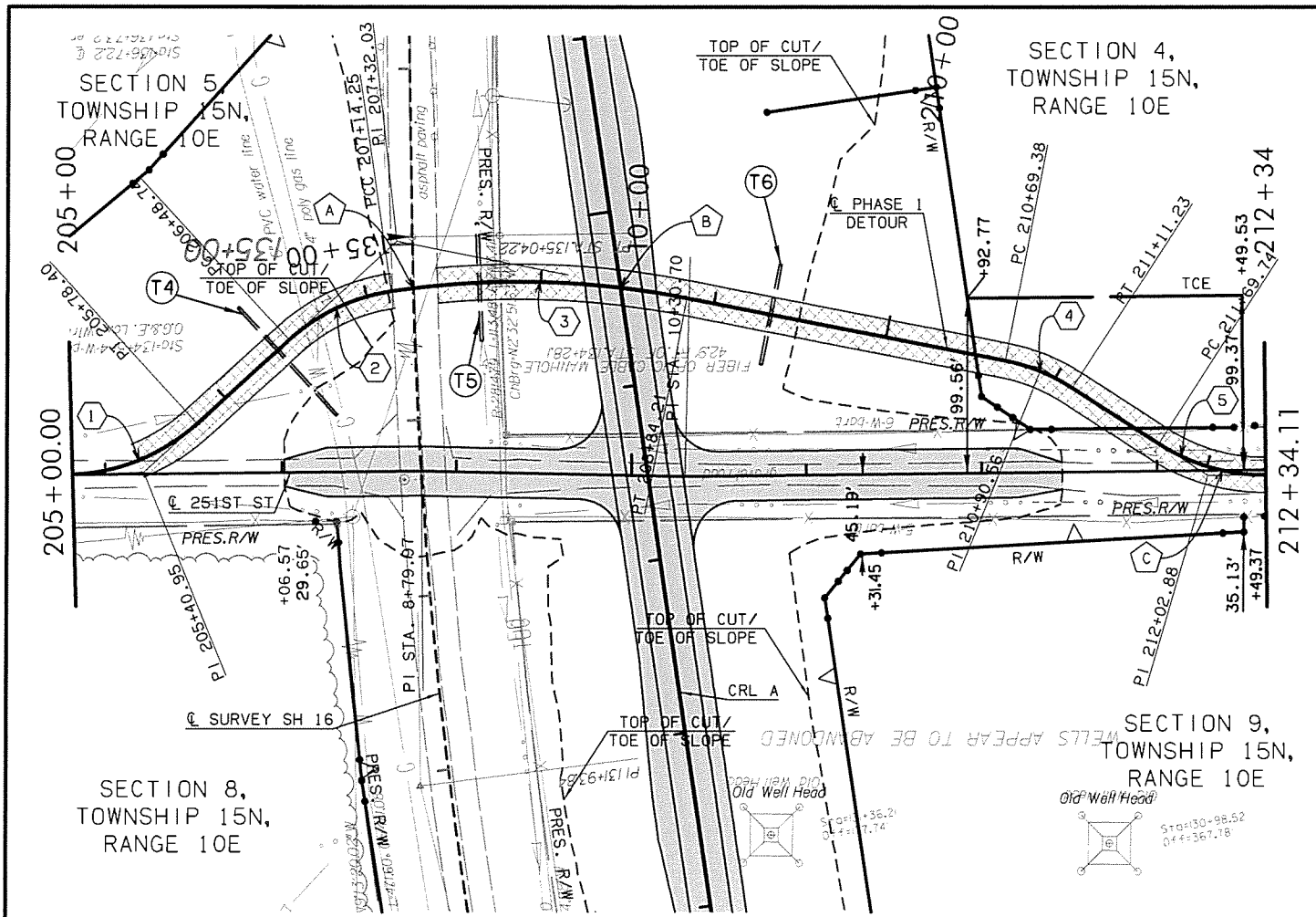


DETOUR
(SHEET 5 OF 5)

NOTE: PHASE 2 DETOUR PAVEMENT BASED ON SURVEY CL
PHASE 3 DETOUR PAVEMENT BASED ON CRL A.



6/6/2016 P&P 55 SH 16 Detour.dgn



- Ⓐ ☒ PHASE 1 DETOUR STA 207+26.98 =
☒ SURVEY SH 16 STA 134+75.10
- Ⓑ ☒ PHASE 1 DETOUR STA 208+45.61 =
☒ CRL A STA 134+56.33
- Ⓒ ☒ PHASE 1 DETOUR STA 212+09.24 =
☒ SURVEY 251ST STREET STA 13+37.48

LEGEND

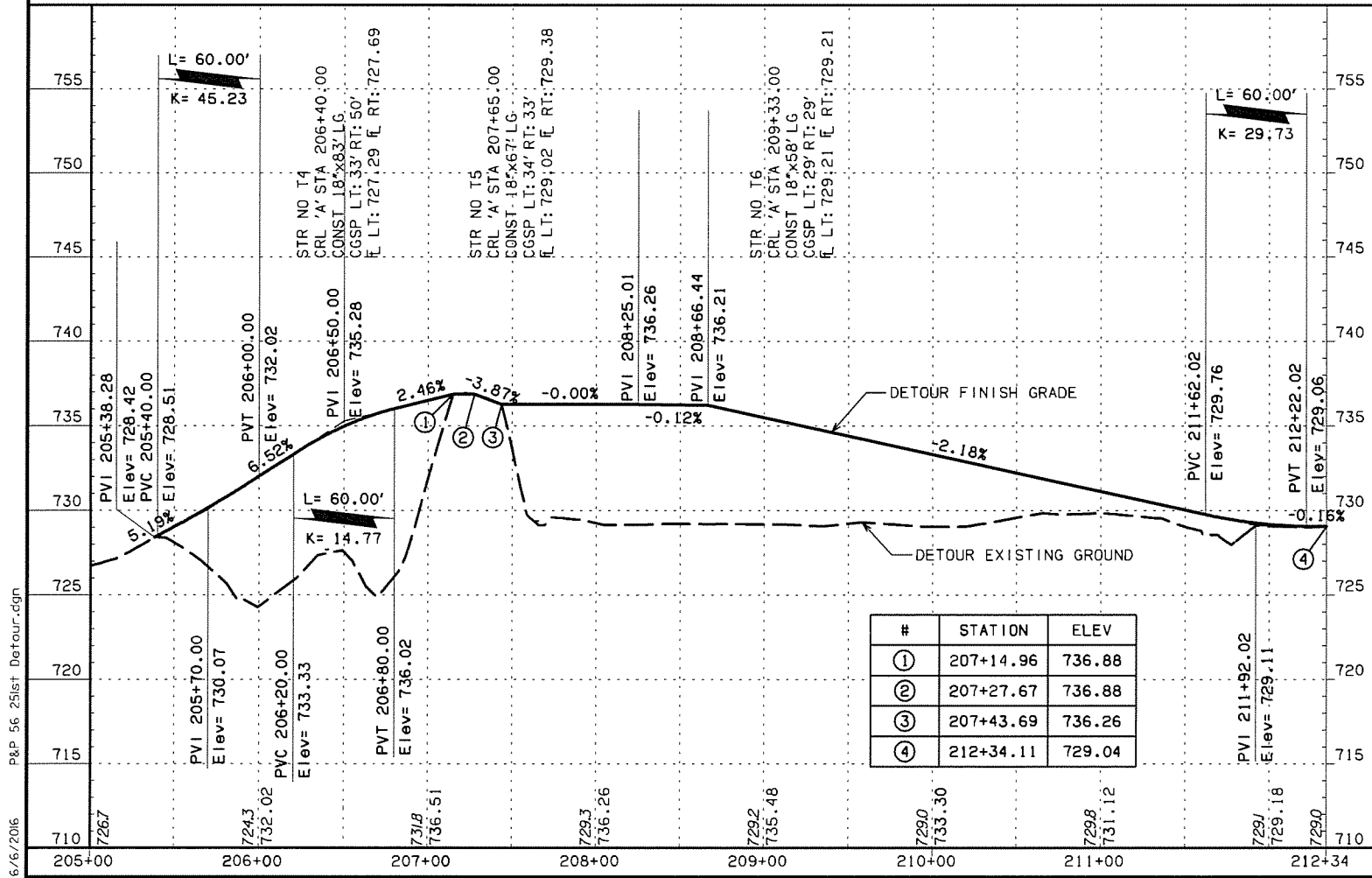
▬ PROPOSED PAVEMENT

▨ DETOUR PAVEMENT

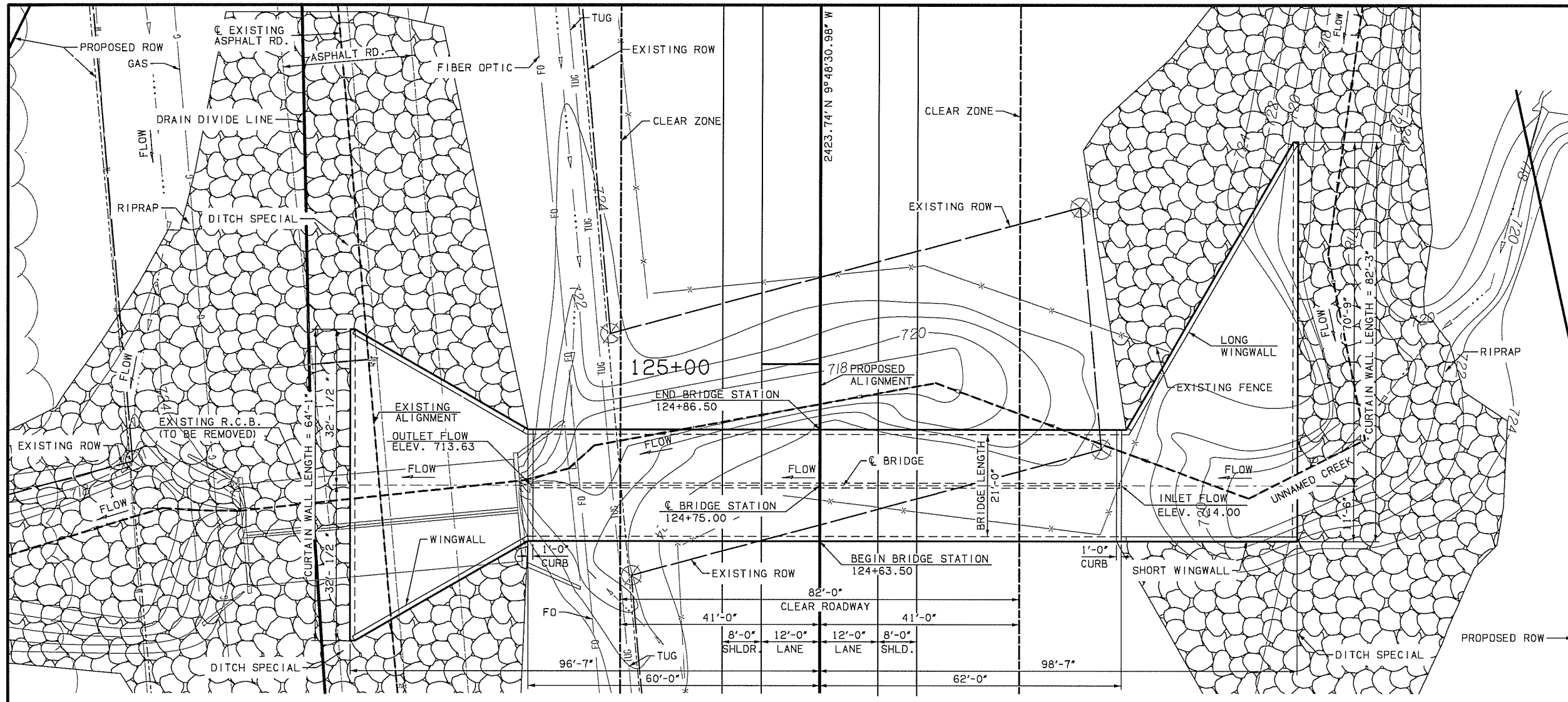
⬡ CURVE DATA

	PI	Delta	Dc	R	L	T	V
1	205+40.95	40°50'01.97"	52°05'13.46"	110.00	78.40	40.95	20
2	206+82.50	34°07'28.62"	52°05'13.46"	110.00	65.51	33.76	20
3	208+00.06	19°28'33.44"	11°27'32.96"	500.00	169.96	85.81	30
4	210+90.56	21°48'03.40"	52°05'13.46"	110.00	41.85	21.18	20
5	212+02.88	33°31'47.89"	52°05'13.46"	110.00	64.37	33.14	20

251ST
DETOUR



6/6/2016 P&P 56 251st Detour.dgn



PLAN

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN DATA
 Class AA Concrete $f'_c = 4 \text{ KSI}$
 Reinforcing Steel $f_y = 60 \text{ KSI}$

HYDRAULIC DATA

Q2 = 272 cfs
 V2 = 1.40 fps
 CHW2 = 723.38 ft

Q5 = 552 cfs
 V5 = 2.76 fps
 CHW5 = 725.95 ft

Q10 = 825 cfs
 V10 = 4.13 fps
 CHW10 = 727.23 ft

Q25 = 1280 cfs
 V25 = 6.40 fps
 CHW25 = 728.89 ft

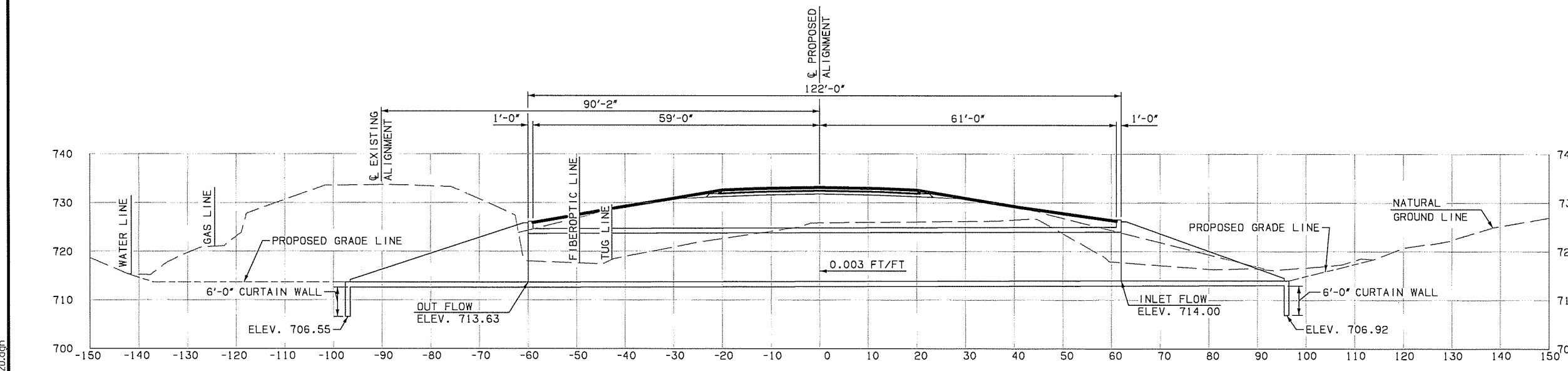
Q50 = 1580 cfs
 V50 = 7.90 fps
 CHW50 = 730.02 ft

Q100 = 1980 cfs
 V100 = 9.90 fps
 CHW100 = 731.50 ft

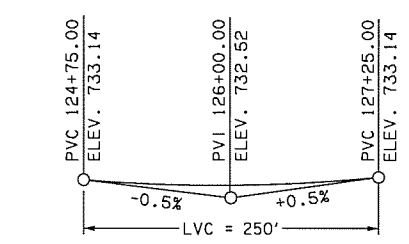
Q500 = 3040 cfs
 V500 = 11.30 fps
 CHW500 = 733.90 ft

Qot = 2511 cfs
 Overtopping Year = 244
 Vot = 11.36 fps
 Overtopping Elev. = 733.44

Total Drainage Area = 755 acres
 Controlled Drainage Area = 0 acres
 Effective Drainage Area = 755 acres



ELEVATION



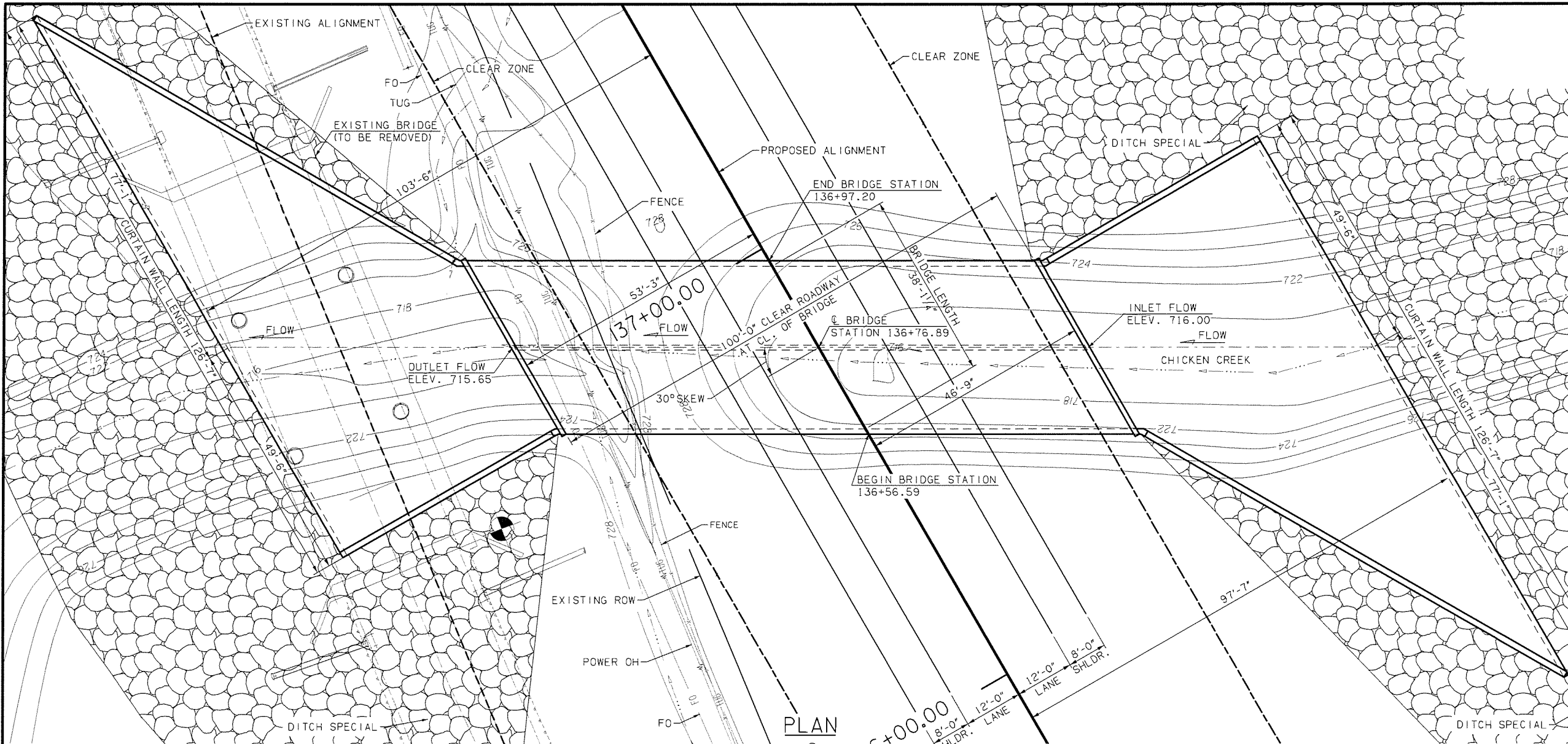
QUANTITIES		
ITEM	UNIT	TOTAL
Unclassified Excavation	C.Y.	4,548
Structural Excavation Unclassified	C.Y.	412
Class 'AA' Concrete	C.Y.	570
Reinforcing Steel	LB.	78,446
(SP) Nest Prevention - Netting	L.SUM	1.00
Type I Plain Riprap	TON	2,243
Filter Fabric (Riprap)	S.Y.	2,556
Removal of Exst. Bridge Structure	L.SUM	1.00

DESIGN	SOB	9-14	S.H.-16 OVER UNNAMED CREEK
DRAWN	TLN	9-14	
CHECKED	OGB	9-14	
APPROVED			
SQUAD	SCHMERR		

BRIDGE 'A' CONSTRUCT 2-10'x10'x20' CL RDY RCB
GENERAL PLAN & ELEVATION

STATE JOB NO. 28858(04) SHEET NO. 46
 CREEK COUNTY SH-16

5/16/2016 Twin 10x10 20.dgn



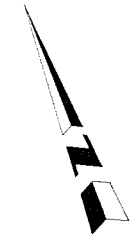
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN DATA
 Class AA Concrete $f'_c = 4 \text{ KSI}$
 Reinforcing Steel $f_y = 60 \text{ KSI}$

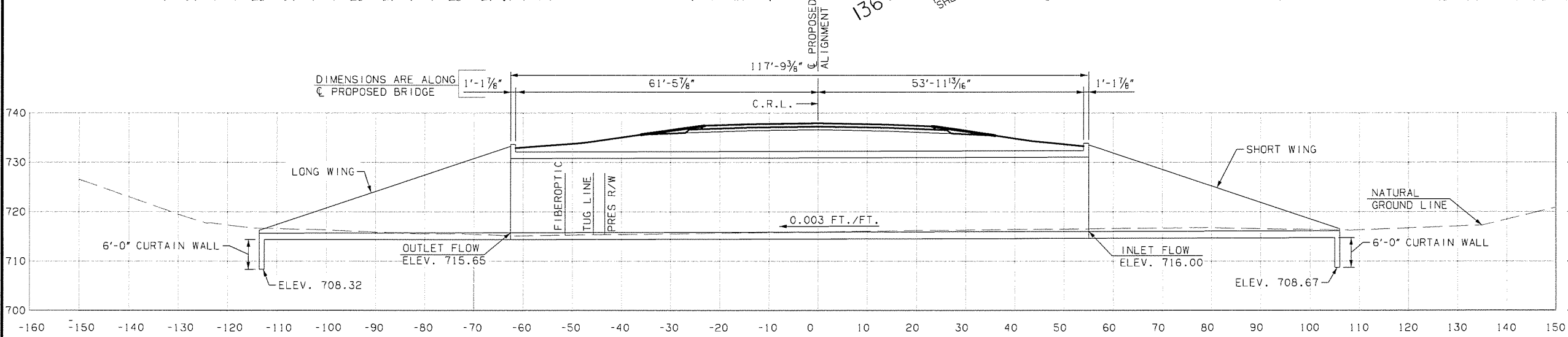
HYDRAULIC DATA

Q2 = 772 cfs	V2 = 2.31 fps	CHW2 = 726.30 ft
Q5 = 1530 cfs	V5 = 3.66 fps	CHW5 = 729.00 ft
Q10 = 2250 cfs	V10 = 4.99 fps	CHW10 = 730.29 ft
Q25 = 3440 cfs	V25 = 7.17 fps	CHW25 = 732.26 ft
Q50 = 4310 cfs	V50 = 8.98 fps	CHW50 = 733.58 ft
Q100 = 5330 cfs	V100 = 11.10 fps	CHW100 = 735.20 ft
Q500 = 8160 cfs	V500 = 14.19 fps	CHW500 = 738.23 ft
Qot = 6178 cfs	Overtopping Year = 175	Vot = 12.87 fps
Overtopping Elev. = 736.62		

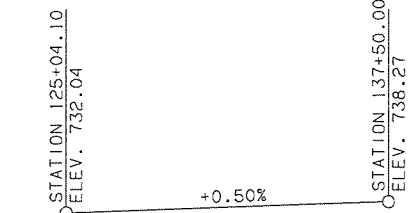
Total Drainage Area = 4435 acres
 Controlled Drainage Area = 0 acres
 Effective Drainage Area = 4435 acres



PLAN



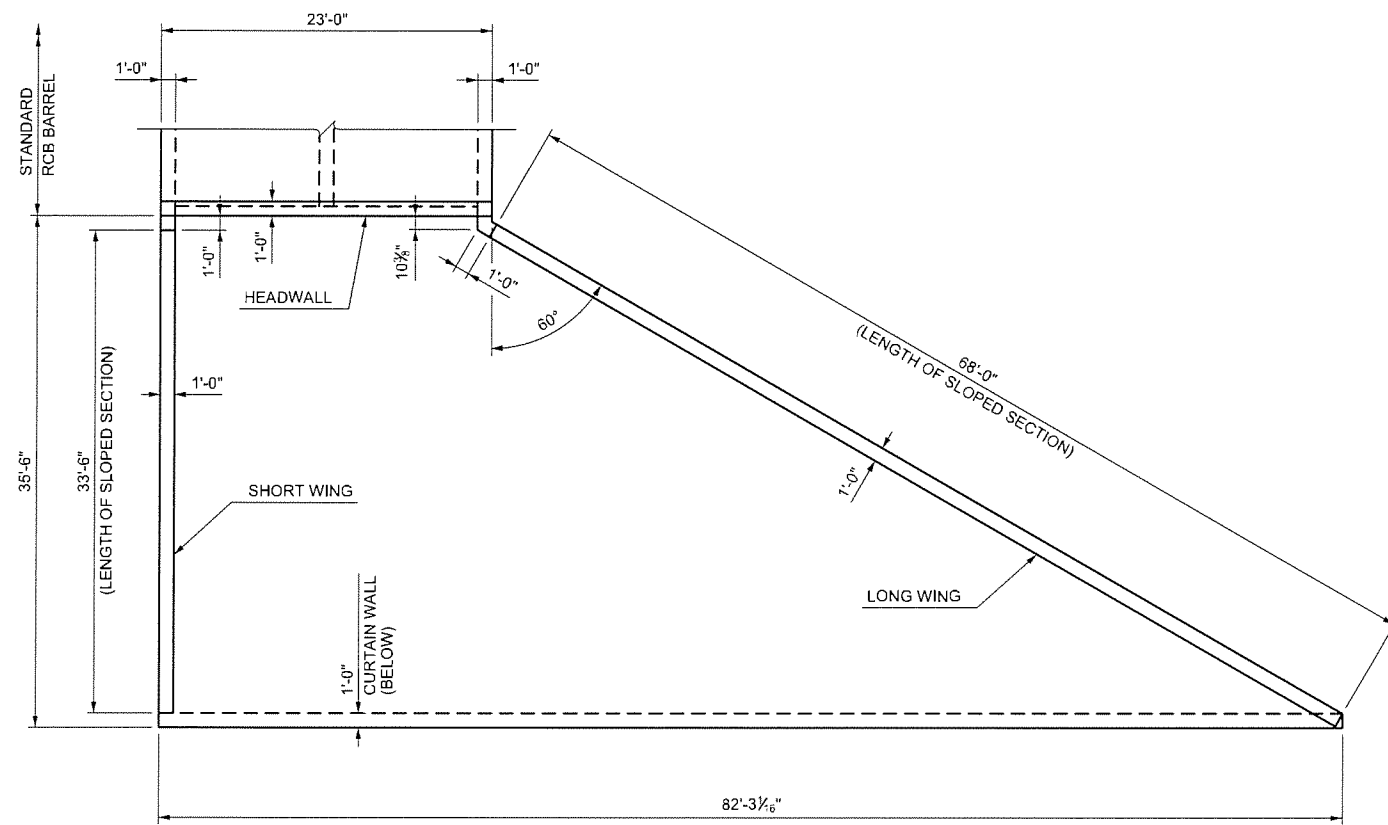
ELEVATION



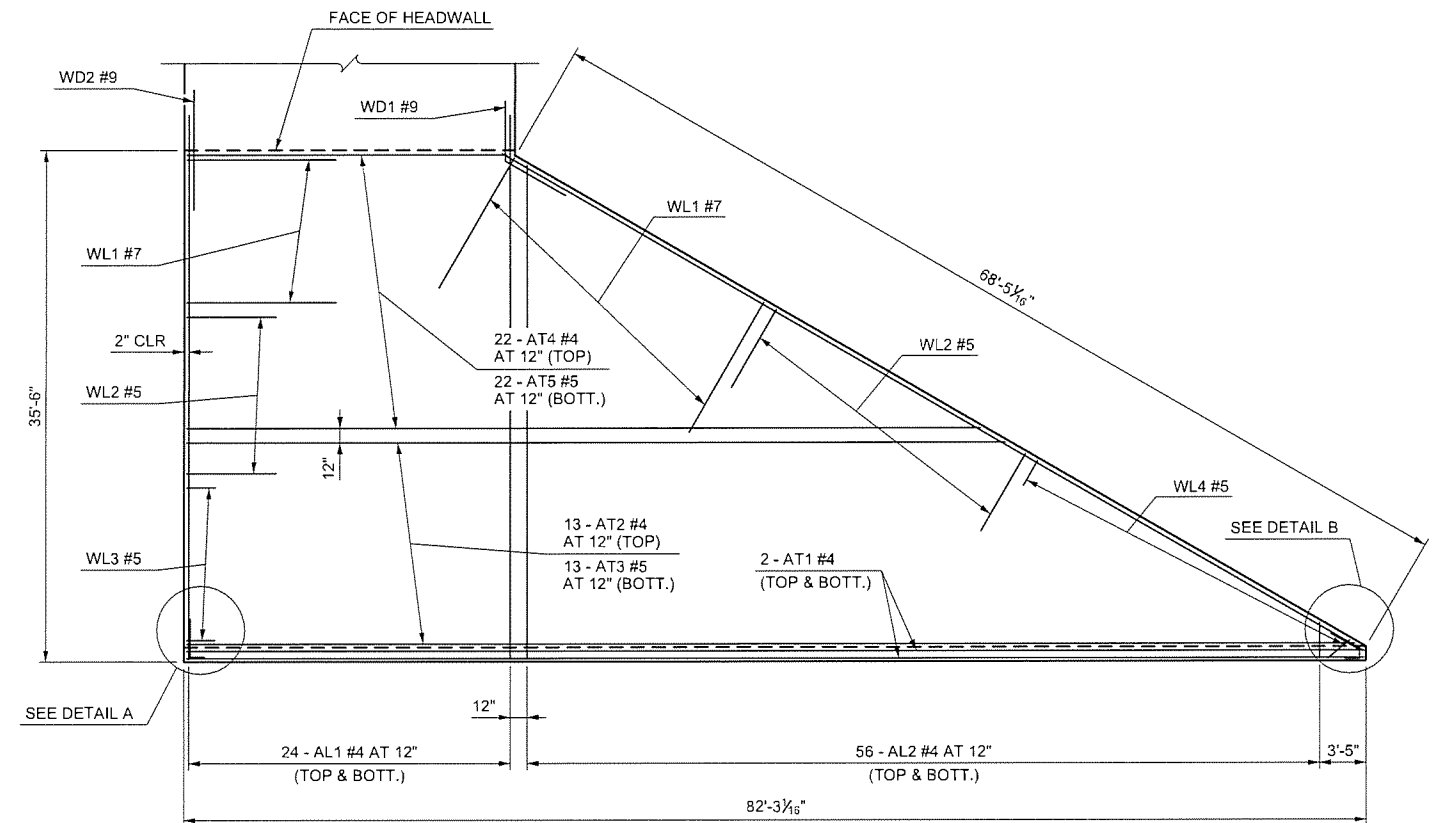
QUANTITIES		
ITEM	UNIT	TOTAL
Unclassified Excavation	C.Y.	6,023
Structural Excavation Unclassified	C.Y.	883
Class 'AA' Concrete	C.Y.	1,368
Reinforcing Steel	LB.	24,123
(SP) Nest Prevention - Netting	L.SUM	1.00
Type I-A Plain Riprap	TON	4,300
Type I-A Filter Blanket	TON	1,040
Filter Fabric (Riprap)	S.Y.	3,675
Removal of Exist. Bridge Structure	L.SUM	1.00

DESIGN	SDK	9-14	S.H.-16 OVER CHICKEN CREEK BRIDGE 'B' CONSTRUCT 2-16'x15'x100'-0" CL R/W RCB (30° SKEW) GENERAL PLAN & ELEVATION STATE JOB NO. 28858(04) SHEET NO. 47 CREEK COUNTY SH-16
DRAWN	TLN	9-14	
CHECKED	DGB	9-14	
APPROVED			
SQUAD	SCHEMMER		

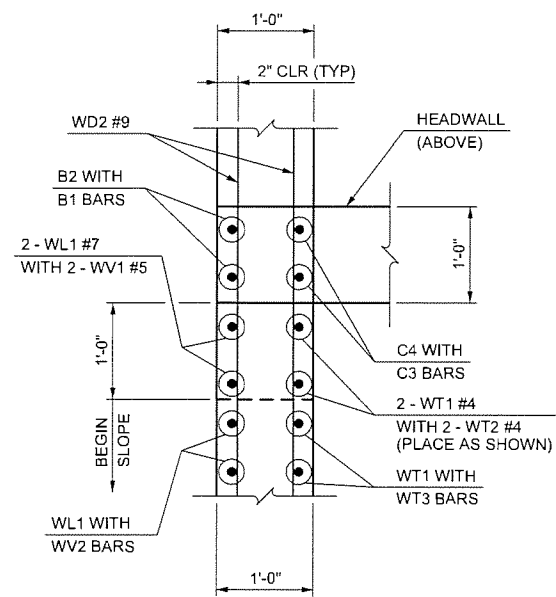
6/16/2016 Twin 16x15 2D.dgn



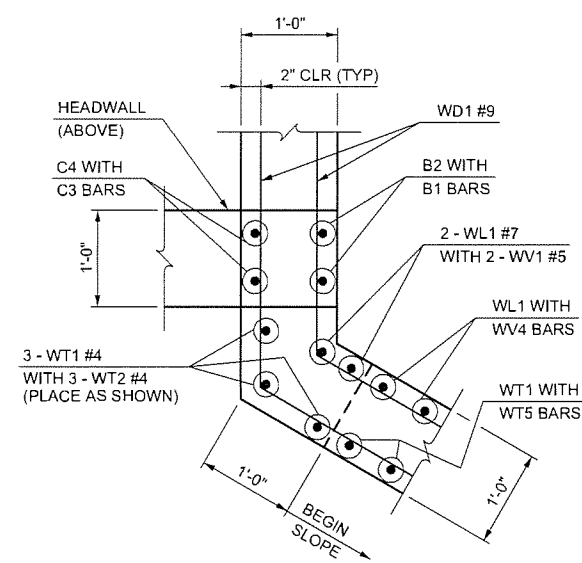
END SECTION PLAN



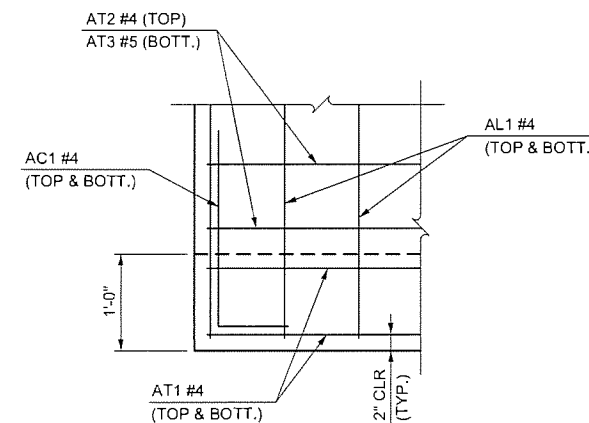
APRON REINFORCING



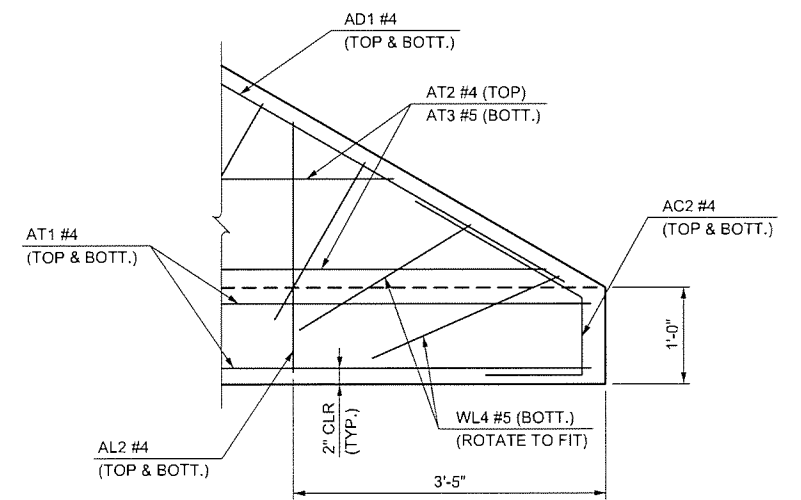
PLAN OF SHORT WING AT BARREL



PLAN OF LONG WING AT BARREL



DETAIL A



DETAIL B

6/16/2016 End Section I.4.dgn

PREPARED BY:
THE SCHEMMER ASSOCIATES
FIRM C. A. 5964

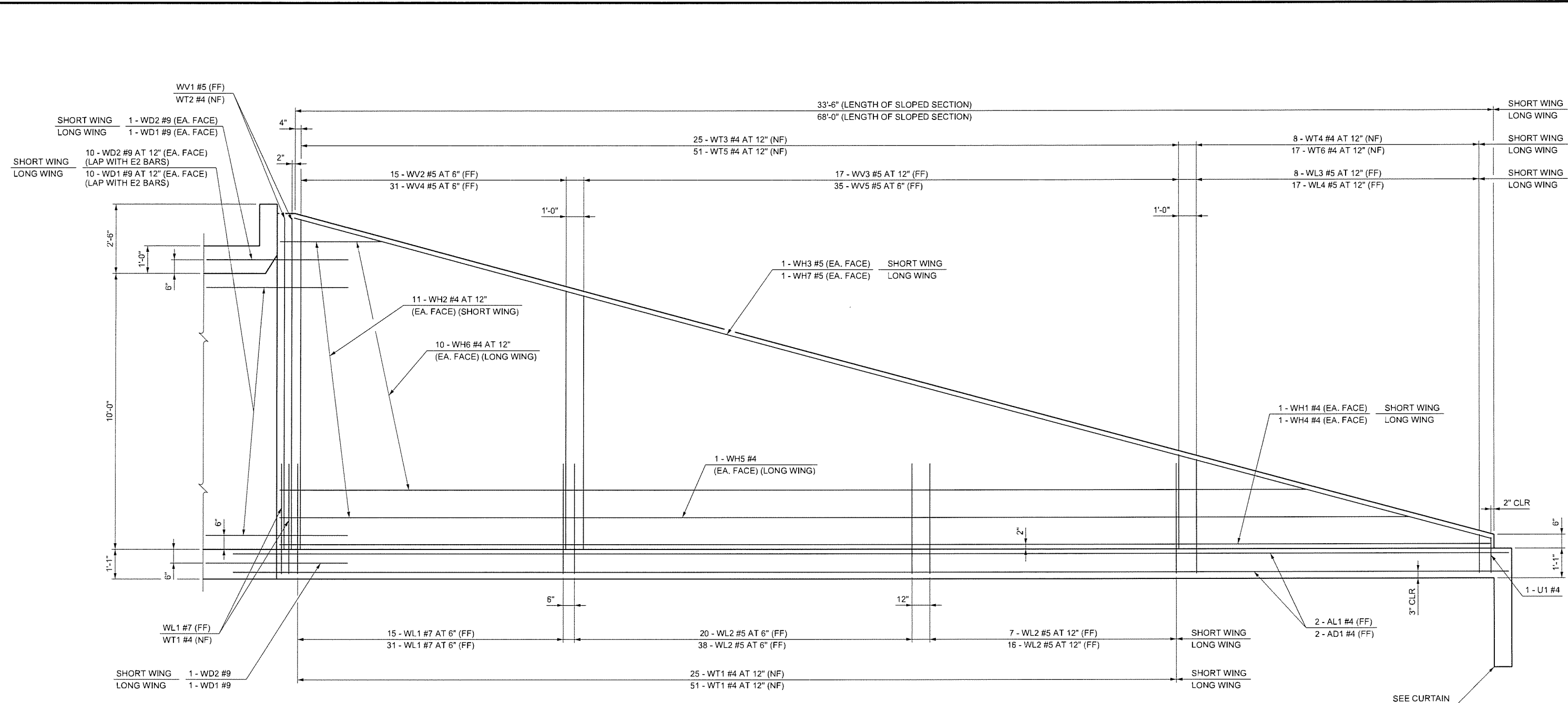
STEPHEN D. KATHOL, P.E.
OKLA. REG. NO. 24623

DATE

SCHEMMER
ARCHITECTS ENGINEERS PLANNERS

REGISTERED PROFESSIONAL ENGINEER
STEPHEN D. KATHOL
24623
O.C.E. # 11107

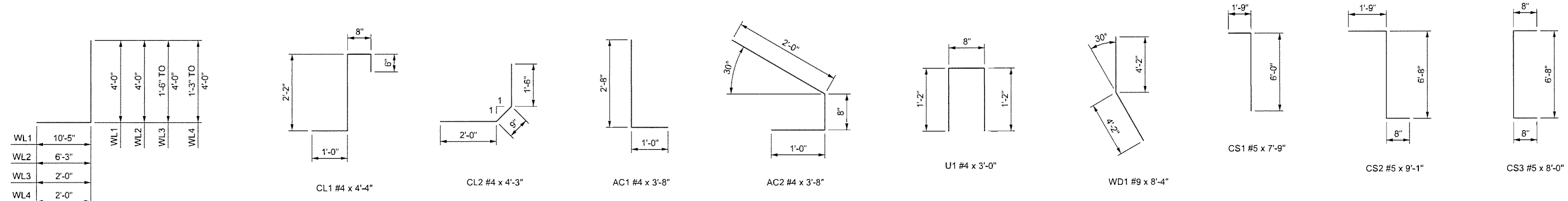
DESIGN	MKR	I-16	S.H.-16 OVER CHICKEN CREEK BRIDGE "A" RIGHT END SECTION DETAILS (SHEET 1 OF 4) STATE JOB NO. 28858(04) SHEET NO. 48 CREEK COUNTY SH-16
DRAWN	MKR	I-16	
CHECKED	DGB	I-16	
APPROVED			
SQUAD	SCHEMMER		



WING ELEVATION

NOTE: FF = FAR FACE
NF = NEAR FACE

SEE CURTAIN WALL DETAILS



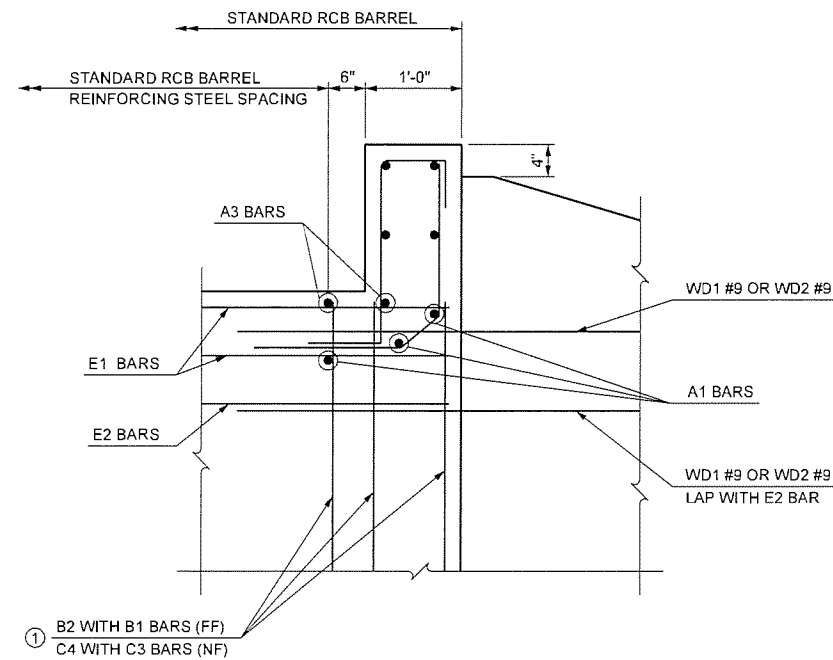
WL1 #7 x 14'-5"
WL2 #5 x 10'-3"
WL3 #5 x 4'-9" AVG.
WL4 #5 4'-7½" AVG.

PREPARED BY:
THE SCHEMME ASSOCIATES
FIRM C. A. 5964

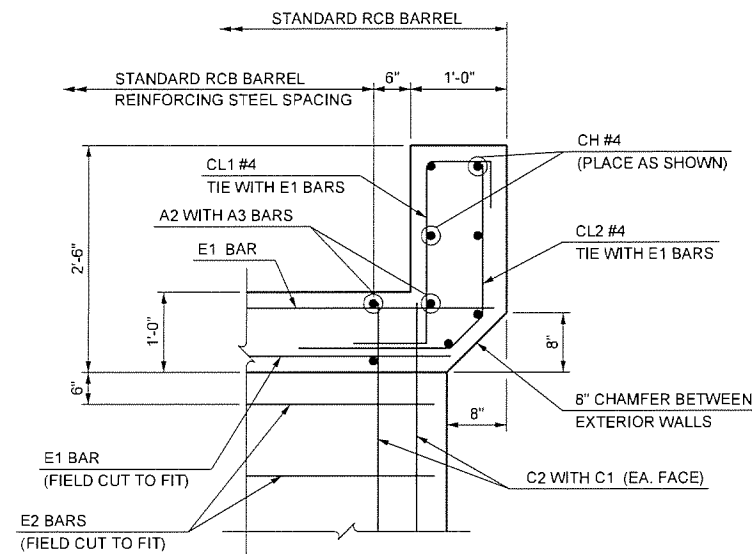
STEPHEN D. KATHOL
24623
REGISTERED PROFESSIONAL ENGINEER
OKLA. REG. NO. 24623

DATE: _____
STEPHEN D. KATHOL, P.E.
OKLA. REG. NO. 24623

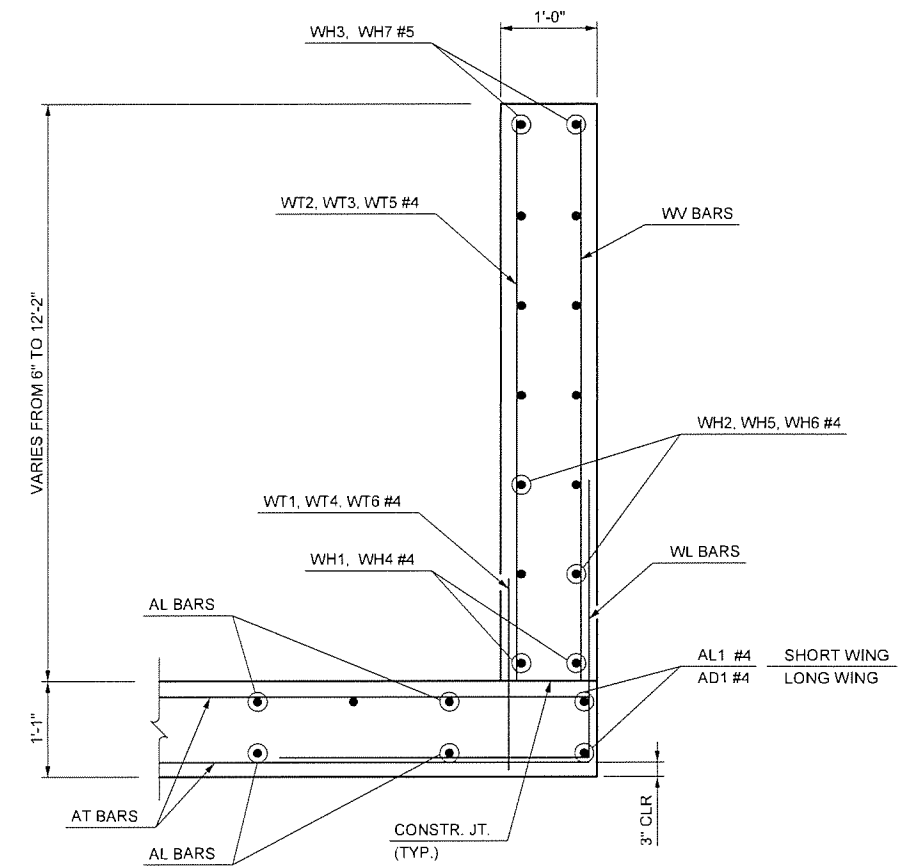
DESIGN	MKR	I-16	S.H.-16 OVER CHICKEN CREEK BRIDGE "A" RIGHT END SECTION DETAILS (SHEET 2 OF 4) STATE JOB NO. 28858(04) SHEET NO. 49 CREEK COUNTY SH-16
DRAWN	MKR	I-16	
CHECKED	DCB	I-16	
APPROVED			
SQUAD	SCHEMMER		



HEADWALL DETAIL AT EXTERIOR WALL



HEADWALL DETAIL AT INTERIOR WALL



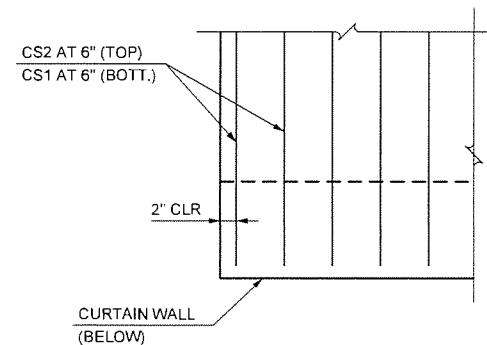
TYPICAL SECTION THRU WING

NOTE: NF = NEAR FACE
FF = FAR FACE

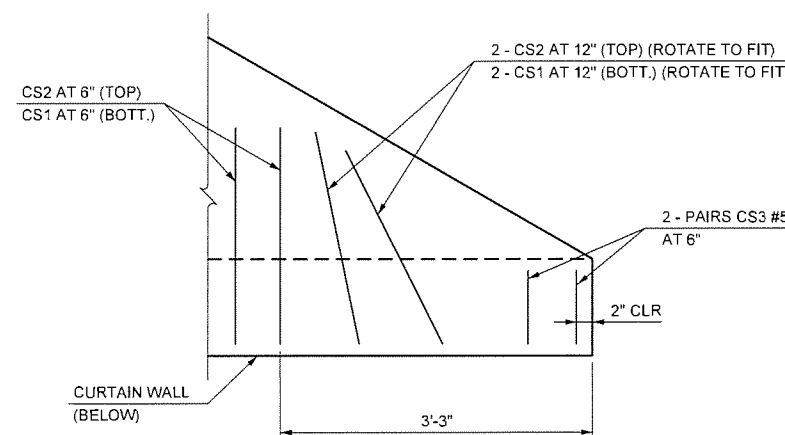
① TO CONSTRUCT ONE END SECTION AS SHOWN, THE FOLLOWING BARS ARE REQUIRED IN ADDITION TO THOSE CALLED IN THE RCB BARREL STANDARD:

- 2 - C3 BARS
- 2 - C4 BARS

ADDITIONAL WEIGHT IS INCLUDED IN QUANTITIES.



CURTAIN WALL AT STRAIGHT END - APRON PLAN



CURTAIN WALL AT SKEWED END - APRON PLAN

PREPARED BY:
THE SCHEMMER ASSOCIATES
FIRM C. A. 5964

DATE: STEPHEN D. KATHOL, P.E.
OKLA. REG. NO. 24623

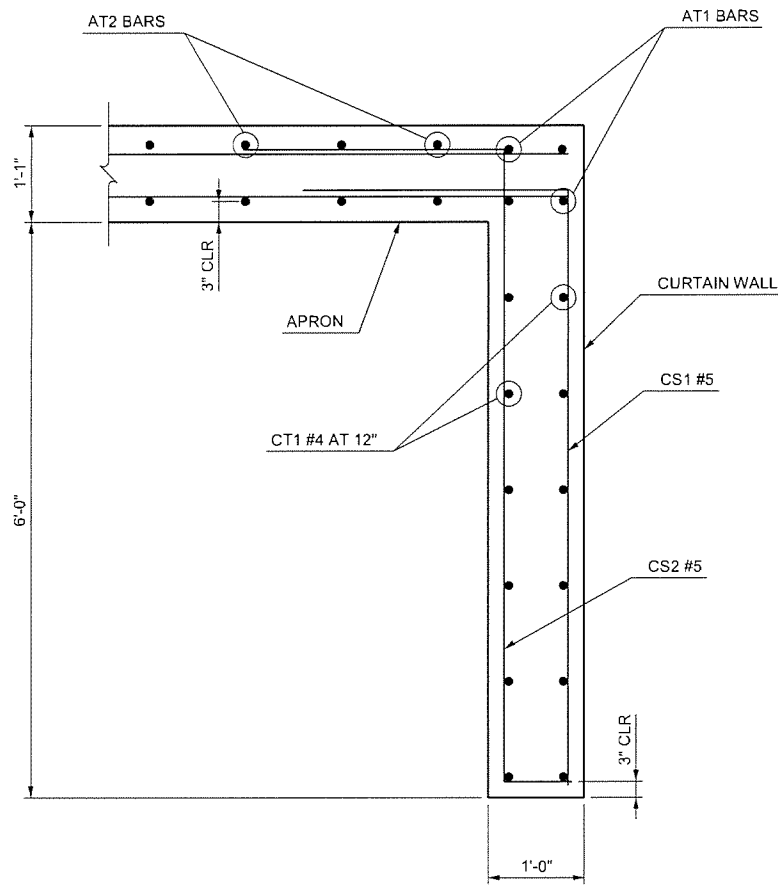
SCHEMMER
ARCHITECTS ENGINEERS PLANNERS

REGISTERED PROFESSIONAL ENGINEER
STEPHEN D. KATHOL
24623
OKLAHOMA

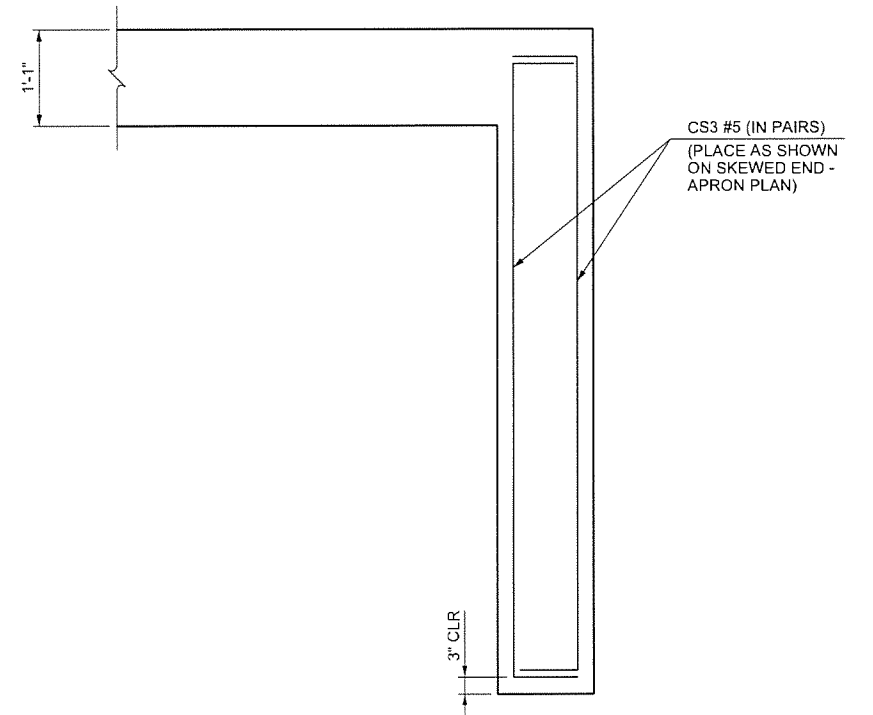
DESIGN	MKR	I-16	S.H.-16 OVER CHICKEN CREEK BRIDGE "A" RIGHT END SECTION DETAILS (SHEET 3 OF 4) STATE JOB NO. 28858(04) SHEET NO. 50 CREEK COUNTY SH-16
DRAWN	MKR	I-16	
CHECKED	DGB	I-16	
APPROVED			
SQUAD	SCHEMMER		

APRON, HEADWALL & CURTAIN WALL BAR LIST					
ONE APRON, ONE HEADWALL, AND ONE CURTAIN WALL SHOWN					
10' SPAN					
MARK	SIZE	NO.	FORM	LENGTH	REMARKS
AC1	#4	2	BNT	3'-8"	
AC2	#4	2	BNT	3'-8"	
② AD1	#4	2	STR	71'-4"	
AL1	#4	48	STR	37'-9"	
① AL2	#4	112	STR	18'-5½" AVG.	2'-7" TO 34'-4"
② AT1	#4	4	STR	84'-5"	
② AT2	#4	13	STR	73'-4" AVG.	63'-0" TO 83'-8"
② AT3	#5	13	STR	73'-4" AVG.	63'-0" TO 83'-8"
AT4	#4	22	STR	40'-6" AVG.	22'-3" TO 58'-9"
AT5	#5	22	STR	40'-6" AVG.	22'-3" TO 58'-9"
CH	#4	4	STR	22'-8"	
CL1	#4	26	BNT	4'-4"	
CL2	#4	26	BNT	4'-3"	
CS1	#5	162	BNT	7'-9"	
CS2	#5	162	BNT	9'-1"	
CS3	#5	4	BNT	8'-0"	
② CT1	#4	12	STR	84'-5"	

WINGWALL BAR LIST					
LONG AND SHORT WING INCLUDED					
MARK	SIZE	NO.	FORM	LENGTH	REMARKS
WD1	#9	23	BNT	8'-4"	
WD2	#9	23	STR	8'-4"	
WH1	#4	2	STR	34'-4"	
① WH2	#4	22	STR	17'-7½" AVG.	3'-3" TO 32'-0"
WH3	#5	2	STR	35'-3"	
② WH4	#4	2	STR	71'-4"	
② WH5	#4	2	STR	66'-7"	
① WH6	#4	20	STR	32'-0" AVG.	5'-9" TO 58'-3"
② WH7	#5	2	STR	71'-3"	
WL1	#7	50	BNT	14'-5"	
WL2	#5	81	BNT	10'-3"	
WL3	#5	8	BNT	4'-9" AVG.	3'-6" TO 6'-0"
WL4	#5	17	BNT	4'-7½" AVG.	3'-3" TO 6'-0"
WT1	#4	81	STR	2'-10"	
WT2	#4	5	STR	12'-0"	
WT3	#4	25	STR	7'-8" AVG.	3'-6" TO 11'-10"
WT4	#4	8	STR	2'-9" AVG.	1'-6" TO 4'-0"
WT5	#4	51	STR	7'-7½" AVG.	3'-4" TO 11'-11"
WT6	#4	17	STR	2'-7½" AVG.	1'-3" TO 4'-0"
WV1	#5	4	STR	12'-0"	
WV2	#5	15	STR	10'-7½" AVG.	9'-5" TO 11'-10"
WV3	#5	17	STR	6'-3½" AVG.	3'-6" TO 9'-1"
WV4	#5	31	STR	10'-7½" AVG.	9'-4" TO 11'-11"
WV5	#5	35	STR	6'-3" AVG.	3'-4" TO 9'-2"
U1	#4	2	BNT	3'-0"	



CURTAIN WALL DETAIL



CURTAIN WALL END DETAIL

NOTE: SEE RCB CULVERTS - BARREL DETAILS FOR ADDITIONAL INFORMATION.

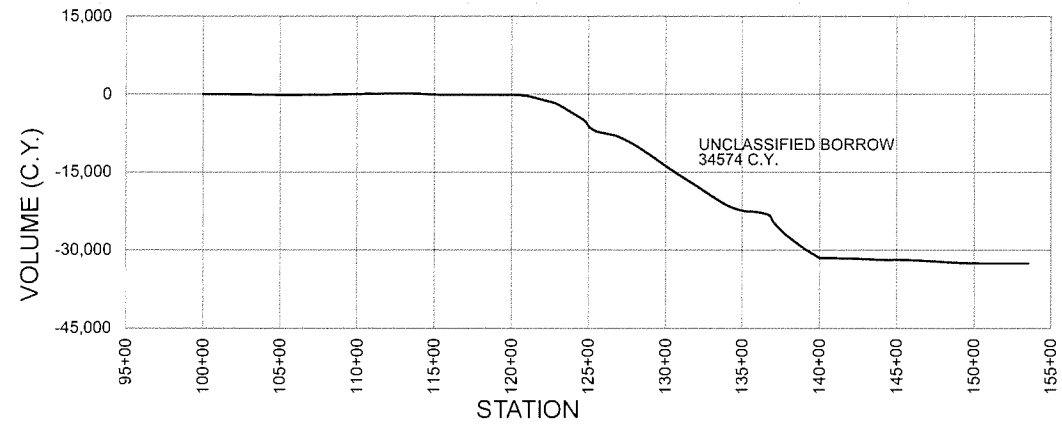
- ① QUANTITY SHOWN REPRESENTS TWO SETS.
- ② INCLUDES 2'-6" LAP.

PREPARED BY:
THE SCHEMMER ASSOCIATES
FIRM C. A. 5964

DATE: _____

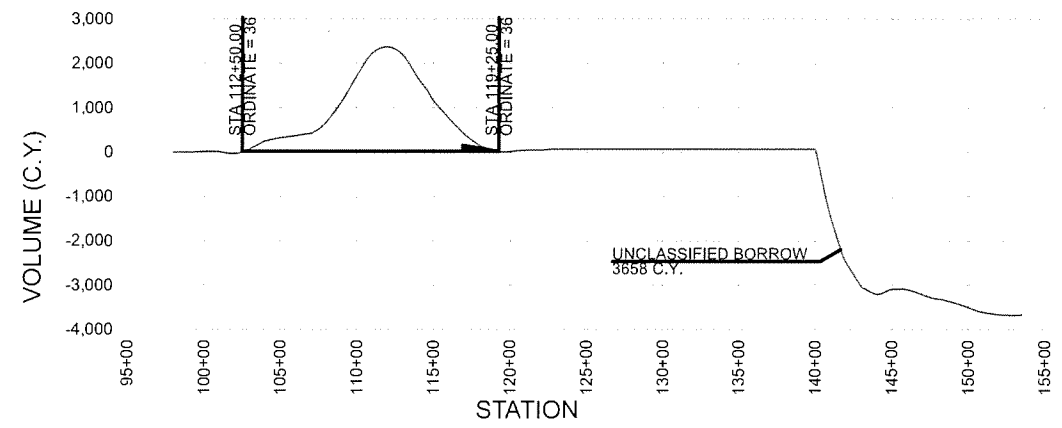
STEPHEN D. KATHOL, P.E.
OKLA. REG. NO. 24623

DESIGN	MKR	I-16	S.H.-16 OVER CHICKEN CREEK BRIDGE "A" RIGHT END SECTION DETAILS (SHEET 4 OF 4) STATE JOB NO. 28858(04) SHEET NO. 51 CREEK COUNTY SH-16
DRAWN	MKR	I-16	
CHECKED	DGB	I-16	
APPROVED			
SQUAD	SCHEMMER		



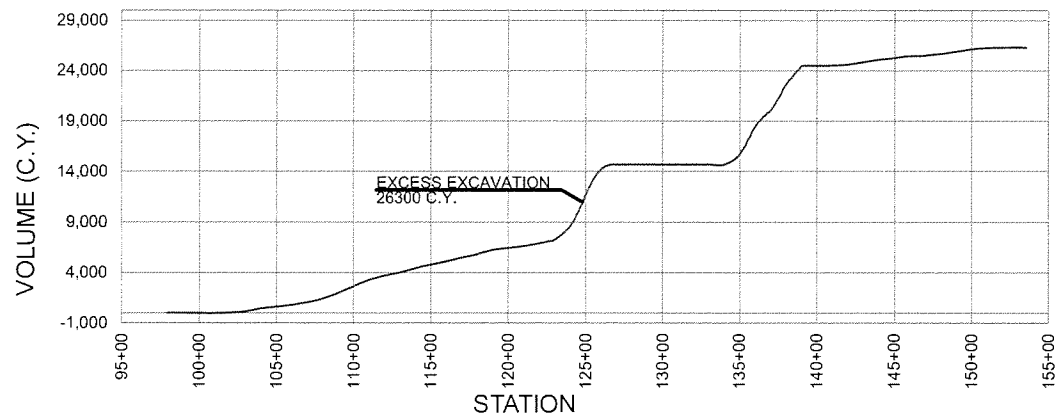
PHASE 1: CRL SH-16
SHEET ESTIMATE #1
STA. 100+00.00 TO STA. 155+00.00

UNCL EXCAV.	13129	C.Y.
BORROW (+15%)	47703	C.Y.
UNCL BORROW	34574	C.Y.
EXCESS EXCAV.	-	C.Y.



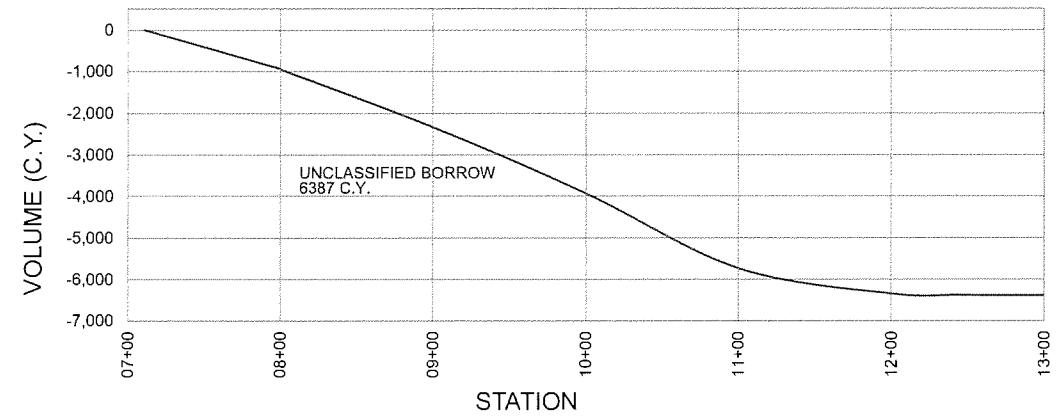
PHASE 2: CRL SH-16
SHEET ESTIMATE #3
STA. 100+00.00 TO STA. 155+00.00

UNCL EXCAV.	5144	C.Y.
BORROW (+15%)	8802	C.Y.
UNCL BORROW	3658	C.Y.
EXCESS EXCAV.	-	C.Y.



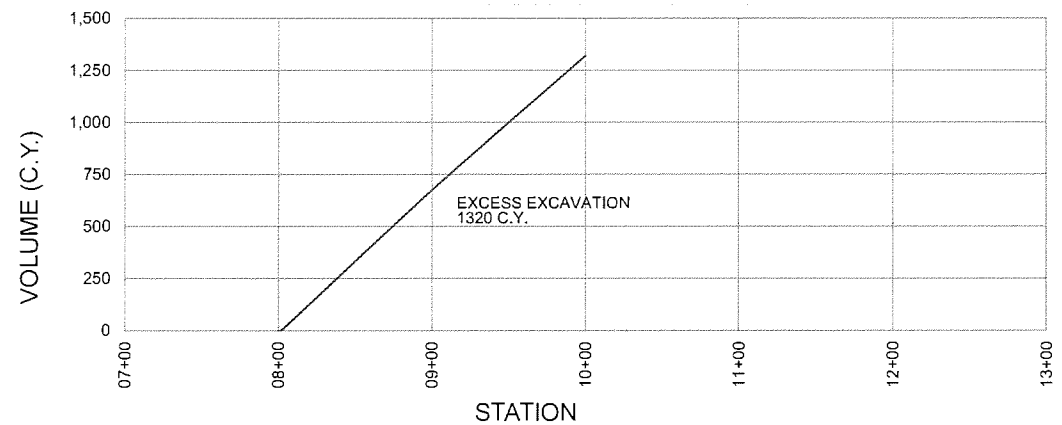
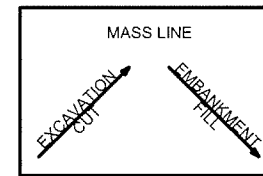
PHASE 3: CRL SH-16
SHEET ESTIMATE #4
STA. 100+00.00 TO STA. 155+00.00

UNCL EXCAV.	27842	C.Y.
BORROW (+15%)	1542	C.Y.
UNCL BORROW	-	C.Y.
EXCESS EXCAV.	26300	C.Y.



PHASE 1: CRL 251st
SHEET ESTIMATE #2
STA. 7+00.00 TO STA. 13+00.00

UNCL EXCAV.	279	C.Y.
BORROW (+15%)	6666	C.Y.
UNCL BORROW	6387	C.Y.
EXCESS EXCAV.	-	C.Y.



PHASE 1: CRL 251st
SHEET ESTIMATE #5
STA. 7+00.00 TO STA. 13+00.00

UNCL EXCAV.	1320	C.Y.
BORROW (+15%)	0	C.Y.
UNCL BORROW	-	C.Y.
EXCESS EXCAV.	1320	C.Y.

DESIGN	RBH	I-16	S.H.-16 OVER CHICKEN CREEK
DRAWN	RBH	4-16	
CHECKED	TAC	5-16	
APPROVED			
SQUAD	SCHEMMER		
MASS HAUL DIAGRAMS			
STATE JOB NO. 28858(04) SHEET NO. 52			
CREEK COUNTY SH-16			

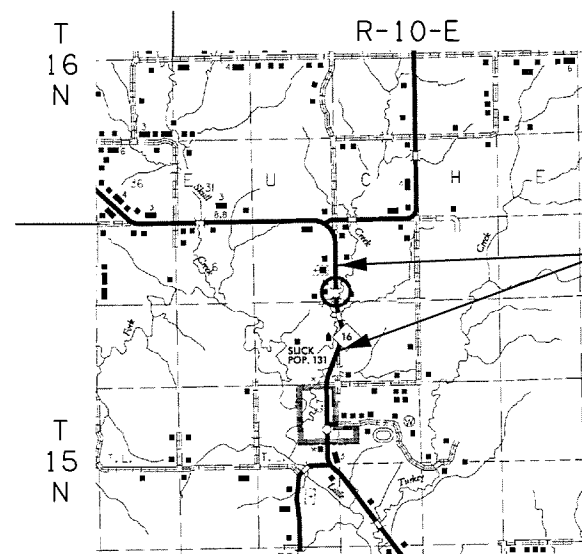
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION

SURVEY OF
S.H. 16
SWO 4848(D)
J/P NO. 28962(04)

CREEK COUNTY

S.H. 16, BRIDGE OVER CHICKEN CREEK,
8.2 MILES EAST OF S.H. 48



SURVEY EXTENTS

INDEX OF SHEETS

1	TITLE SHEET
2-3	SURVEY INFORMATION (notes, letters)
4-7	COGO POINTS, ALIGNMENT DATA & CHECK LEVELS
9-14	SURVEY DATA SHEETS
14-17	GEOMETRIC DATA SHEETS
SURVEY BEGAN: 9-24-12	
SURVEY COMPLETED: 11-30-12	
PERSONNEL:	
MONTE KING	TITLE: PROFESSIONAL LAND SURVEYOR
MATT SUTTERFIELD	CREW CHIEF
JAMES STAFFORD	FIELD PERSONEL
CODY KEETH	FIELD PERSONEL
EQUIPMENT:	
LEICA TCA1103 ROBOTIC TOTAL STATION	
TOPCON AUTOMATIC LEVEL	
TOPCON GR3 GPS SYSTEM	
RANGER DATA COLLECTOR - CARLSON SURVCE	

STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION

SWO 4848(1) J/P 28858(04) SH 16 CO. CREEK

HORIZONTAL CONTROL:
 Oklahoma Coordinate System of 1927 Zone.
 Oklahoma Coordinate System of 1983 North 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. Primary Control adjusted to SWO 4525(1) Control Monuments (3rd) Order
 Stations C-19-800 and C-19-801
 A) Closure before adjustment X Y Angles
 Trav. Length No. Angles : 1:
 B) : is () Order before adjustment.
 C) Method of Distance Measurement:
 Electronic GPS Triangulation Chained
 D) Instrument used for angles

2. Secondary Control adjusted to Primary Control (3rd) Order
 Stations C-19-800 and C-19-801
 A) Closure before adjustment X Y Angles
 B) Secondary Control : is (3rd) Order. Tied to M-51-850
 C) Method of Distance Measurement:
 Electronic GPS Triangulation Chained
 D) Instrument used for Horiz. & Vert. control Topcon GR3 GPS & Topcon Auto Level

VERTICAL CONTROL IS (3rd) order. Elevations taken from SWO 4525(1) BENCH MARK #31 (3rd) order and tied to SWO 4525(1) BENCH MARK #33 (3rd) order.
 NGVD 29 datum
 NAVD 89 datum

(1) HORIZONTAL: (3rd Order = Class I = 1 : 10,000'
 (3rd Order = Class II = 1 : 5,000'
 (2) VERTICAL: (1st Order = 0.017FL 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 _____ Monte Duane King
 Copy in each Alignment _____ Professional Land Surveyor
 and level book _____

(FORM SD #20)
 Rev. 11/03

 Date
 November 30, 2012

STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION

SWO_4848(1) Job/Piece_28858(04) Eng. Contract No. 1294-V 1.0.3 & 4A

LAND SURVEYOR'S CERTIFICATION

I hereby certify that all land and property sub-division distances, angles, corners, and monumentation made or used in conjunction 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 Survey Instruction";
- Its supplement, "Restoration of Lost or Obliterated Corners and Sub-division of Sections";
- "Oklahoma Minimum Standards for the Practice of Land Surveying" as adopted by the State Board of Licensure 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.

Dated this 30th day of November, 2012

Land Surveyor _____
 Monte Duane King
 Professional Land Surveyor

Oklahoma Licensed Land Surveyor No. 1271
 Certificate of Authorization No. 5954

Utilities	
Utility	Phone Number
Telephone Lines & F.O. AT&T	No Contact Info.
Electric Lines USIC/OG&E	(580)276-3364
SAPULPA	
Water Lines SLICK PWA	(918)633-5765
NATURAL GAS LINES SLICK PWA	(918)633-5765

PROJECT LENGTH 5594.64 Ft. 1.06 MI.
 BEGINNING STATION : 100+00.00
 ENDING STATION : 155+94.64

Electronic File Transfer Disclaimer:
 These Files, Drawings and/or Notes are provided for information only. The Oklahoma Department of Transportation (ODOT) 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. ODOT 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 ODOT 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.

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 17, 2010.



OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
SURVEY DATA SHEET			
PLS	MDK		
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS		
SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. 51			

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

White Hawk Engineering & Design

Survey Division
1265 S. Eastern
Moore, Oklahoma 73160
Phone 405-735-6096 Fax 405-794-7166

November 30, 2012

TO: Larry Reser, Chief of Surveys
FROM: Monte D. King, Oklahoma Survey Manager
SUBJECT: SWO 4848(1) - J/P 28858(04) - Creek County - S.H. 16 - Bridge over Chicken Creek, 8.2 miles East of S.H. 48.

HISTORICAL LETTER & WRITTEN REPORT

1. GENERAL

Method of Survey: Field Conventional

Survey began September 24, 2012
Survey completed - November 30, 2012

Unit of Measurement: U.S. Survey Foot.

2. SURVEY ASSIGNMENT

Prime Consultant - Schemmer Architects, Engineers and Planners
8556 East 101st Street, Suite C
Tulsa, OK 74133

3. PURPOSE OF SURVEY

The purpose of this survey was to obtain adequate information for the design and construction of a new bridge over Chicken Creek.

4. SURVEY LIMITS

This survey began at a point identified as Sta. 490+53.5 (NS-379 Section Line) on SAP No. 1016(2) plans and was extended north to a point identified as P.I. Sta. 431+87.5 on SAP No. 1016(1) plans, making the length of survey approximately 1.11 miles.

5. ALIGNMENT

The centerline of this survey is along and identical to the centerline of present S.H. 16 as shown on SAP No. 1016(1) plans & SAP No. 1016(2) plans. Centerline was re-established from the centerline of the existing bridge over Chicken Creek, centerline of

existing cross drain structures and the centerline of the existing paving. 3 right-of-way markers were found within the limits of this survey. The alignment determined using these right-of-way markers did not fit the existing cross drain structures or the paving. The centerline of the cross drain structures and the centerline of the existing paving are one and the same.

6. STATIONING

As instructed in the Survey Special Provisions for this survey, a station value of 100+00.00 was assigned to the Beginning of Survey and increased to the North without equation to the End of the Survey using field measured distances. Station equations with the existing plans were shown at the beginning and end of this survey.

7. HORIZONTAL CONTROL

- A. Primary Horizontal Control for this survey is the National Geodetic Survey(s) Oklahoma State Plane Coordinate System of 1983, North Zone. Data was obtained utilizing O.D.O.T. Survey Division Primary Control Points (C-19-800 and C-19-801) set under S.W.O. 4525(1). The O.D.O.T. control monuments are along the north boundary of Section 5 which was bounded on this survey.
- B. 3 Primary Project Control Points were set on this survey. 2 monuments were set when this survey was first started. The monuments were set near the beginning and end of the survey as originally defined. The O.D.O.T. monuments were both occupied with the GPS base and both of the control monuments on this survey were tied averaging 30 RTK recordings from each of the O.D.O.T. monuments. An average of the horizontal data obtained by this method was used. The Survey Special Provisions were revised and the project was extended to the South approximately 1800 feet. A 3rd Project Control Monument was established on the south end of this survey and horizontal control on this monument was established by averaging 30 RTK recordings from the other 2 Project Control Monuments.

8. VERTICAL CONTROL

- A. Vertical Control Datum for this survey is NGS NAVD 88. Vertical Control for this survey was taken from SWO 4525(1) bench marks established along this survey. Bench Marks No. 31 and 33 as shown on the Check Level and Bench Mark List from S.W.O. 4525(1) were found in place and the Adjusted Elevations shown on these bench marks were held and used to establish Adjusted Elevations on this survey.
- B. Bench Marks were established approximately every 700 feet along this Survey and a level loop was run through the bench marks with the auto level. The accuracy is within the NGS 3rd order requirements. A Check Level Form detailing the results was submitted.

9. Topography and Digital Terrain Model

Topography and ground points were obtained by the field conventional method utilizing

GPS RTK and Total Station observations. Coverage band widths for this survey described as follows:
250 feet right and 150 feet left of the Centerline of Survey from the Beginning of Survey to a point 500 feet south of the existing bridge on Chicken Creek; thence right and left of Centerline of Survey from a point 500 feet south of the existing a point 500 feet north of the existing bridge; thence 250 feet right and 150 feet left Centerline of Survey, north to the End of the Survey. The actual band width on side of the survey is 250 feet as most of the data was obtained prior to the revise Provisions. Flow line profiles were obtained out to 1000 feet.

10. LAND TIES

Complete land tie information was obtained on 4 sections on this project. Sections 5, 8 and 9, T15N, R10E of the I.B.M. Corner locations along the west line of Section 5 were established under SWO 4525(1). All 3 of these corner location monument references were found in place. Certified Corner Records were obtained on the sections required on this survey. All of the filed corners found in place were used on this survey. Monuments (#4 rebar with caps CA2074) were found at the north west corners of Section 8, but corner records were not on file. These monuments not used on this survey. They do not fit the surrounding monuments or corner locations determined on this survey. Certified Corner Records were prepared for the corners on the above described sections.

11. PROPERTY TIES

Ownership information was obtained from the Creek County Court House on all property adjacent to or joining the limits of this survey. Property lines were confirmed and shown based on the property descriptions obtained and the land corners and as determined on this survey.

11. EXISTING RIGHT-OF-WAY

- A. Right-of-Way shown on this survey is based on SAP No. 1016(1) and SAP No. 1016(2) plans.
- B. Statutory Section Line Right-of-Way for this area is a total of 49.5 feet.

12. UTILITIES

All utility companies servicing the project were contacted thru Call Okie. The request was issued thru Ticket Number 12100411481119. Utilities notified: USIC/OG&E/Sapulpa, Slick PWA and USIC/AT&T. The underground utility locations were painted and flagged by utility personnel or contract utility locators. All utility locations as flagged and painted were obtained by field conventional methods and recorded in the submitted SWO 4848_1_V1_TOPO.DGN. ODOT Form SD-1 of Public and Privately Owned Utilities was generated from those locations and submitted.

OKLAHOMA DEPARTMENT OF TRANSPORTATION			
SURVEY DIVISION			
PLS	MDK		
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS	SWO 4848 (1)	PROJECT NO. 28858(04) SHEET NO. 52

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

13. ENVIRONMENTAL CONCERNS

There are what appear to be 3 abandoned well locations along the limits of this survey. 1. Well Head 367.8' Rt. of Sta. 130+98.5 367.8' Rt.
 2. Well Head 177.8' Rt. of Sta. 131+36.2
 3. Well Head 184.5' Rt. of Sta. 139+66.9
 Concrete pad 121.5' Rt. of Sta. 139+66.9

14. DRAINAGE

Drainage areas, bridge side view details of the bridge at Chicken Creek, and high water information have all been placed in the Submitted SWO 4848 1_V1_DRA design file. High water information was taken from SAP 1016(1) plans. The plans show the extreme high water elevation at the bridge to be 731.60 feet. Physical marks provided by Mr. Robert Campbell, a long time resident in the area (26430 W. Hwy. 16), are very close to this elevation. Mr. Campbell said the highest he has seen it (best he could remember) was in the early 1950's. He stated that before the flood control dams were built in the area, it flooded the bottom almost every year.

The SAP No. 1016(1) Plans show a DA of 7.5 sq. miles. The drainage area for the Chicken Creek crossing and all other drains crossing centerline were determined by attaching the area USGS Quadrangle to the SWO4848 1_V1.dgn file and tracing the drainage divides. The drainage area for Chicken Creek was determined to be 4458 acres or 6.75 sq. miles. Additional drainage areas were determined by this method at the following locations: R.C.P. xing N.S. section line road 296' S. of beginning of survey D.A. = 70.3 acres. R.C.B. xing centerline @ Sta. 97+06.50 (centerline extended back) D.A. = 71.9 acres. R.C.B. xing centerline @ Sta. 114+45.40 D.A. = 16.0 acres. R.C.B. xing centerline @ Sta. 124+66.27 D.A. = 760.0 acres.

15. Submission of Survey Data:

All digital survey data has been submitted via Compact Disc, and a complete listing of all Data files created and used in conjunction with this survey has been placed on the submitted CD as "SWO4848_Index.pdf".

All reports and ODOT Forms have been archived on the submitted disk and include the following:

1. Historical Letter and Written Report of Survey
2. ODOT Form SD-1 - Transmittal Letter
3. ODOT Form SD-7 - Public and Privately Owned Utilities List
4. ODOT Form SD-20 - Survey Control Accuracy Statement
5. ODOT Form SD-41 - Surveyor's Certification
6. 18 - Oklahoma Certified Corner Records
7. Cogo Data and Alignment Reports

8. Benchmarks and Check Levels List
9. Project Index

Monte Duane King
 Oklahoma Survey Manager, LS #1271
 White Hawk Engineering and Design

PLS	MDK		OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS		
			SURVEY DATA SHEET
			SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. S3

Project Name: Default
 Description:
 Horizontal Alignment Name: R003
 Description:
 Style: Present R/W
 STATION EASTING NORTHING

Element: Linear
 POB (7028) -5+00.00 2483951.4953 295400.3662
 PC (7029) 0+00.00 2483451.5705 295391.6988
 Tangent Direction: S 89°00'24.25" W
 Tangent Length: 500.00

Non-collinear

Element: Circular
 PC (7029) 0+00.00 2483451.5705 295391.6988
 PI () 0+56.75 2483447.9058 295448.3288
 CC (309) 2486260.4852 295573.4698
 PT (7022) 1+13.48 2483446.5266 295505.0568
 Radius: 2814.79
 Delta: 2°18'35.54" Right
 Degree of Curvature(Arc): 2°02'07.89"
 Length: 113.48
 Tangent: 56.75
 Chord: 113.47
 Middle Ordinate: 0.57
 External: 0.57
 Tangent Direction: N 3°42'09.26" W
 Radial Direction: N 86°17'50.74" E
 Chord Direction: N 2°32'51.63" W
 Radial Direction: N 88°36'26.28" E
 Tangent Direction: N 1°23'33.72" W

Non-collinear

Element: Linear
 PT (7022) 1+13.48 2483446.5266 295505.0568
 POE (7043) 22+03.90 2483395.7166 297594.8594
 Tangent Direction: N 1°23'34.00" W
 Tangent Length: 2090.42

Project Name: Default
 Description:
 Horizontal Alignment Name: R004
 Description:
 Style: Present R/W
 STATION EASTING NORTHING

Element: Linear
 POB (7020) 0+00.00 2483132.9831 291385.3620
 PI (7012) 8+38.61 2483427.1879 292170.6723
 Tangent Direction: N 20°32'15.76" E
 Tangent Length: 838.61

Element: Linear

PI (7012) 8+38.61 2483427.1879 292170.6723
 POE (7014) 13+38.61 2483418.0016 292670.5879
 Tangent Direction: N 1°03'09.83" W
 Tangent Length: 500.00

Project Name: Default
 Description:
 Horizontal Alignment Name: R005
 Description:
 Style: Present R/W
 STATION EASTING NORTHING

Element: Linear
 POB (7015) -34+77.42 2483468.8697 292596.5937
 PI (7011) -31+77.42 2483474.3815 292296.6443
 Tangent Direction: S 1°03'09.83" E
 Tangent Length: 300.00

Element: Linear

PI (7011) -31+77.42 2483474.3815 292296.6443
 PC (7004) -27+35.10 2483629.5575 292710.8503
 Tangent Direction: N 20°32'15.75" E
 Tangent Length: 442.32

Non-collinear

Element: Circular
 PC (7004) -27+35.10 2483629.5575 292710.8503
 PI () -21+59.47 2483831.5046 293249.8987
 CC (305) 2481887.9082 293363.3353
 PT (7016) -16+18.62 2483693.6375 293808.7799
 Radius: 1859.86
 Delta: 34°23'42.21" Left
 Degree of Curvature(Arc): 3°04'50.34"
 Length: 1116.49
 Tangent: 575.63
 Chord: 1099.80
 Middle Ordinate: 83.15
 External: 87.04
 Tangent Direction: N 20°32'15.97" E
 Radial Direction: S 69°27'44.03" E
 Chord Direction: N 3°20'24.88" E
 Radial Direction: N 76°08'33.76" E
 Tangent Direction: N 13°51'26.24" W

Non-collinear

Element: Linear
 PT (7016) -16+18.62 2483693.6375 293808.7799
 PI (7044) -9+67.62 2483537.7212 294440.8317
 Tangent Direction: N 13°51'26.02" W
 Tangent Length: 651.00

Element: Linear

PI (7044) -9+67.62 2483537.7212 294440.8317
 PI (7045) -8+87.62 2483464.5567 294408.4749
 Tangent Direction: S 66°08'33.98" W
 Tangent Length: 80.00

R005 PAGE 2

Element: Linear
 PI (7045) -8+87.62 2483464.5567 294408.4749
 PI (7046) -8+37.62 2483452.5815 294457.0197
 Tangent Direction: N 13°51'26.02" W
 Tangent Length: 50.00

Element: Linear
 PI (7046) -8+37.62 2483452.5815 294457.0197
 PI (7047) -7+57.62 2483525.7460 294489.3764
 Tangent Direction: N 66°08'33.98" E
 Tangent Length: 80.00

Element: Linear
 PI (7047) -7+57.62 2483525.7460 294489.3764
 PC (7018) -3+60.06 2483430.5294 294875.3641
 Tangent Direction: N 13°51'26.03" W
 Tangent Length: 397.56

Non-collinear

Element: Circular
 PC (7018) -3+60.06 2483430.5294 294875.3641
 PI () -1+23.75 2483373.9313 295104.7997
 CC (309) 2486260.4852 295573.4698
 PT (7030) 1+11.54 2483355.0318 295340.3572
 Radius: 2914.79
 Delta: 9°16'12.48" Right
 Degree of Curvature(Arc): 1°57'56.49"
 Length: 471.60
 Tangent: 236.31
 Chord: 471.08
 Middle Ordinate: 9.53
 External: 9.56
 Tangent Direction: N 13°51'26.30" W
 Radial Direction: N 76°08'33.70" E
 Chord Direction: N 9°13'20.02" W
 Radial Direction: N 85°24'46.18" E
 Tangent Direction: N 4°35'13.82" W

Non-collinear

Element: Linear
 PT (7030) 1+11.54 2483355.0318 295340.3572
 POE (7031) 6+11.54 2482855.1469 295329.6285
 Tangent Direction: S 88°46'13.74" W
 Tangent Length: 500.00

OKLAHOMA DEPARTMENT OF TRANSPORTATION				
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	TOTAL SHEETS
	OKLA.			
REVISIONS				
DESCRIPTION	REVISIONS	DATE		

Project Name: Default
 Description:
 Horizontal Alignment Name: R006
 Description:
 Style: Present R/W
 STATION EASTING NORTHING

Element: Linear
 POB (7032) 0+00.00 2482853.9438 295379.1139
 PI (7033) 2+95.47 2483149.3459 295385.4541
 Tangent Direction: N 88°46'13.60" E
 Tangent Length: 295.47

Element: Linear
 PI (7033) 2+95.47 2483149.3459 295385.4541
 PI (7034) 6+88.83 2483139.7849 295778.6958
 Tangent Direction: N 1°23'34.00" W
 Tangent Length: 393.36

Element: Linear
 PI (7034) 6+88.83 2483139.7849 295778.6958
 PI (7035) 8+38.83 2483289.7406 295782.3417
 Tangent Direction: N 88°36'26.00" E
 Tangent Length: 150.00

Element: Linear
 PI (7035) 8+38.83 2483289.7406 295782.3417
 PI (7036) 10+60.48 2483284.3531 296003.9263
 Tangent Direction: N 1°23'34.00" W
 Tangent Length: 221.65

Element: Linear
 PI (7036) 10+60.48 2483284.3531 296003.9263
 PI (7037) 10+80.48 2483304.3472 296004.4124
 Tangent Direction: N 88°36'26.00" E
 Tangent Length: 20.00

Element: Linear
 PI (7037) 10+80.48 2483304.3472 296004.4124
 PI (7038) 18+80.48 2483284.9023 296804.1760
 Tangent Direction: N 1°23'34.00" W
 Tangent Length: 800.00

Element: Linear
 PI (7038) 18+80.48 2483284.9023 296804.1760
 PI (7039) 18+95.48 2483299.8979 296804.5406
 Tangent Direction: N 88°36'26.00" E
 Tangent Length: 15.00

Element: Linear
 PI (7039) 18+95.48 2483299.8979 296804.5406
 PI (7040) 24+95.48 2483285.3142 297404.3634
 Tangent Direction: N 1°23'34.00" W

R006
 Tangent Length: 600.00

Element: Linear
 PI (7040) 24+95.48 2483285.3142 297404.3634
 PI (7041) 25+10.48 2483300.3097 297404.7279
 Tangent Direction: N 88°36'26.00" E
 Tangent Length: 15.00

Element: Linear
 PI (7041) 25+10.48 2483300.3097 297404.7279
 POE (7042) 26+98.23 2483295.7461 297592.4287
 Tangent Direction: N 1°23'34.00" W

Tangent Length: 187.76

COORDINATE POINT LIST

SW04848(1) - J/P 28858(04) - S.H. 16 - CREEK CO.

BRIDGE OVER CHICKEN CREEK, 8.2 MILES EAST OF S.H. 48

CONTROL POINTS

7400, 293556.0519, 2483715.7739, 726.55, CP
 7401, 296656.7626, 2483279.7029, 767.74, CP
 7402, 291487.5747, 2483490.1963, 726.49, CP

BENCH MARKS

1, 291566.9023, 2483523.1696, 721.81, BM RR spike
 2, 293161.3164, 2483840.8871, 737.65, BM #5 REBAR
 4, 293626.3597, 2483839.1647, 731.30, BM #5 REBAR
 5, 293965.3911, 2483783.9366, 733.25, BM RR SFK IN TREE
 6, 294412.7995, 2483669.4775, 723.79, BM SET #5 RB
 7, 295093.3471, 2483512.4311, 729.14, RR SFK IN TREE
 8, 295662.5959, 2483408.5474, 738.14, X ON HWL BRIDGE
 9, 295967.9427, 2483436.4317, 730.54, BM #5 REBAR
 10, 296582.0918, 2483421.2657, 734.00, BM #5 REBAR
 11, 297157.9629, 2483410.4935, 0.00, BM #5 REBAR
 13, 298110.1960, 2483360.3140, 751.50, "X" ON S. END E. HWL
 12, 297731.6960, 2483354.4320, 755.21, BM #5REBAR

LAND CORNER REFERENCE POINTS & TOPO

900, 300706.6344, 2483313.6986, 779.12, 7 INCH METAL POST
 902, 300661.5412, 2483297.3195, 783.12, FD NAIL
 903, 300610.0106, 2483244.2542, 781.54, SET #4 RB
 904, 300600.4592, 2483325.0675, 775.27, SET #4 RB
 905, 300609.1040, 2483331.1426, 775.39, 3 INCH METAL POST
 907, 292744.2537, 2483439.8051, 726.29, SET #4 RB
 908, 292673.6643, 2483435.3865, 724.91, 3 INCH METAL POST
 909, 292724.0574, 2483496.1714, 729.61, SET #4 RB
 911, 290089.0471, 2483456.7776, 743.12, SET #4 RB
 913, 290094.4416, 2483463.2570, 743.15, SET 100D
 914, 290094.0199, 2483515.1863, 748.14, FH NUT
 916, 290173.0702, 2486089.8463, 767.43, SET 100 D
 917, 290138.4946, 2486115.0359, 769.91, FD REF #4 RB
 918, 290135.3790, 2486075.9810, 769.93, 3" METAL POST
 921, 292787.6912, 2486663.0574, 840.60, SET 100D
 922, 292794.4529, 2486667.7792, 841.60, 6 INCH METAL POST
 924, 292803.9899, 2486720.4134, 842.31, 8 INCH METAL POST
 925, 293412.6254, 2486641.4594, 813.44, GRAV ST
 926, 293454.7761, 2486640.2691, 814.19, GRAV
 927, 293459.6096, 2486619.5674, 812.40, GRAV
 928, 293468.8253, 2486620.9467, 812.34, GRAV ST
 929, 293465.7618, 2486640.1335, 814.46, GRAV
 930, 293507.1850, 2486639.3657, 814.63, GRAV
 931, 293508.2636, 2486668.2490, 815.00, GRAV ST
 932, 293462.7827, 2486666.7556, 815.01, GRAV
 933, 293462.8931, 2486690.0577, 815.61, DT
 934, 293482.4147, 2486650.2203, 815.53, DT
 935, 293481.7005, 2486666.1308, 814.83, GRAV ST

936, 293419.0030, 2486666.9614, 813.56, GRAV
 937, 293422.7135, 2486693.8035, 817.00, FE ST
 938, 293432.1466, 2486693.0577, 816.56, FE
 939, 293482.8628, 2486691.6731, 817.71, FE
 940, 293433.3185, 2486699.5430, 817.59, FE
 941, 293404.3129, 2486624.0495, 812.56, FE ST
 942, 293431.8209, 2486624.0658, 813.81, FE
 943, 293431.2692, 2486603.6516, 811.07, FE
 944, 293429.9647, 2486619.5135, 812.82, FP N-E-S
 945, 293432.1970, 2486624.1314, 813.53, 6 INCH METAL POST
 946, 293455.3299, 2486624.1027, 813.22, SET 100D
 948, 293432.3516, 2486693.1623, 816.93, 3 INCH METAL POST
 949, 300468.3423, 2479048.9436, 762.12, FD ODOT CRP
 950, 300539.0117, 2479119.6395, 752.59, FD #4 RB
 951, 300609.8012, 2479190.3998, 747.74, FD #4 RB
 952, 300680.4342, 2479261.0231, 745.44, FD #4 RB
 953, 300515.7976, 2475378.6998, 741.02, FD MWG ODOT
 954, 300424.2795, 2475416.1061, 732.55, FD #4 RB
 955, 300382.8578, 2475456.3848, 734.44, FD #4 RB
 956, 300241.3264, 2475496.7830, 742.45, FD #4 RB
 958, 300470.9214, 2477952.7790, 755.54, FD #4 RB
 959, 300272.4616, 2477975.3467, 761.29, FD #4 RB
 960, 300274.0106, 2477956.3591, 761.52, FD #4 RB
 961, 289989.5370, 2476218.1279, 813.88, SET 100D
 962, 289981.5941, 2476221.9666, 814.59, 2" METAL POST
 963, 289981.0652, 2476214.4227, 813.89, 3" METAL POST
 964, 289948.9823, 2476177.4351, 809.79, 3" METAL POST
 966, 290059.1420, 2480559.4945, 712.50, SET #4 RB
 968, 289996.4609, 2480559.3456, 713.66, SET #4 RB
 969, 289996.5580, 2480541.3559, 713.46, 4" METAL POST
 970, 290030.3476, 2480539.8737, 712.65, 5" METAL POST

RIGHT-OF-WAY

7001, 291898.9566, 2483432.1810, 0.00, RW
 7003, 292024.9286, 2483479.3748, 0.00, RW
 7004, 292710.6503, 2483629.5575, 0.00, RW
 7005, 292675.7675, 2483723.2017, 0.00, RW
 7011, 292296.6443, 2483474.3815, 0.00, RW
 7012, 292170.6723, 2483477.1879, 0.00, RW
 7014, 292670.5875, 2483418.0016, 0.00, RW
 7015, 292596.5937, 2483468.8697, 0.00, RW
 7016, 293806.7795, 2483698.6375, 0.00, RW
 7017, 293832.7303, 2483790.7271, 0.00, RW
 7018, 294875.3641, 2483430.5294, 0.00, RW
 7019, 294899.3145, 2483527.6190, 0.00, RW
 7022, 295805.0568, 2483446.5266, 0.00, RW
 7010, 294481.6697, 2483630.9955, 0.00, RW
 7023, 294522.3156, 2483722.0511, 0.00, RW
 7024, 294570.8604, 2483710.0755, 0.00, RW
 7025, 294530.4145, 2483618.6203, 0.00, RW
 7026, 293342.2544, 2483455.2076, 0.00, RW
 7027, 296350.9218, 2483955.1325, 0.00, RW
 7028, 296400.3662, 2483951.4563, 0.00, RW
 7029, 296391.6988, 2483451.5708, 0.00, RW

OKLAHOMA DEPARTMENT OF TRANSPORTATION			
SURVEY DIVISION			
PLS	MDK		
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS		
SURVEY DATA SHEET			
SWO 4848 ()		PROJECT NO. 28858(04)	SHEET NO. 56

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
REVISIONS					
DESCRIPTION	REVISIONS	DATE			

COORDINATE POINT LIST Page 3

7030, 295340.3572, 2483355.0315, 0.00, RW
7031, 295329.6285, 2482955.1469, 0.00, RW
7032, 295379.1135, 2482553.5435, 0.00, RW
7033, 295385.4541, 2483149.3459, 0.00, RW
7034, 295775.6958, 2483139.7845, 0.00, RW
7035, 295782.3417, 2483269.7406, 0.00, RW
7036, 296003.9263, 2483264.3531, 0.00, RW
7037, 296004.4124, 2483304.3472, 0.00, RW
7038, 296804.1760, 2483284.5023, 0.00, RW
7039, 296804.5426, 2483259.8979, 0.00, RW
7040, 297404.3634, 2483285.3142, 0.00, RW
7041, 297404.7273, 2483300.3097, 0.00, RW
7042, 297592.4257, 2483255.7461, 0.00, RW
7043, 297594.8594, 2483355.7166, 0.00, RW
7044, 294440.8317, 2483527.7212, 0.00, RW
7045, 294435.4745, 2483464.5567, 0.00, RW
7046, 294457.0197, 2483452.5515, 0.00, RW
7047, 294469.3764, 2483525.7460, 0.00, RW
7020, 291385.3620, 2483132.9631, 0.00, RW
7007, 291387.1650, 2483240.4459, 0.00, RW
7008, 291557.1025, 2483487.5712, 0.00, RW
7009, 291390.5386, 2483441.5235, 0.00, RW
7049, 296295.5402, 2483297.4391, 0.00, RW
7050, 296475.5655, 2483292.8914, 0.00, RW
7051, 297013.1670, 2483294.8255, 0.00, RW
7052, 297490.0227, 2483296.4791, 0.00, RW
7053, 296693.1641, 2483267.8445, 0.00, RW
7054, 294255.6873, 2483686.3905, 0.00, RW
7055, 294252.8550, 2483693.8451, 0.00, RW
7056, 292767.4196, 2483649.7152, 0.00, RW
7057, 292719.5677, 2483632.5695, 0.00, RW
7013, 295855.6356, 2483305.5831, 0.00, DEED CORNER
7058, 295857.6759, 2483265.4775, 0.00, RW
7059, 292721.8974, 2483739.8284, 0.00, RW
7060, 296685.6608, 2483417.8222, 0.00, RW

PROPERTY CORNERS
8000, 291390.5538, 2483466.2701, 0.00, PC
8001, 291556.6586, 2483463.2252, 0.00, PC
8002, 291590.3513, 2484775.9985, 0.00, PC
8003, 290089.3199, 2484802.9502, 0.00, PC
8004, 291368.7837, 2482144.9610, 0.00, PC
8005, 292687.5204, 2482120.5112, 0.00, PC
8006, 292922.5395, 2483438.1412, 0.00, PC
8007, 292926.2651, 2483646.8079, 0.00, PC
8008, 292928.9676, 2483646.7555, 0.00, PC
8011, 292740.0377, 2484758.0362, 0.00, PC
8012, 294274.2851, 2484727.3555, 0.00, PC
8015, 294250.8171, 2483413.6912, 0.00, PC
8016, 295337.5695, 2482071.6475, 0.00, PC
8017, 295385.7154, 2484707.2550, 0.00, PC
8018, 296443.0216, 2482373.9533, 0.00, PC
8020, 295992.0205, 2482948.0597, 0.00, PC
8021, 296275.8753, 2482941.0544, 0.00, PC

COGO POINT LIST Page 4

8023, 296655.0135, 2482045.9530, 0.00, PC
8024, 296660.9200, 2482189.4797, 0.00, PC
8025, 296443.0216, 2482373.9533, 0.00, PC
8027, 296465.0954, 2483076.8112, 0.00, PC
8025, 296707.8816, 2484682.3165, 0.00, PC
8030, 296985.1246, 2482039.5665, 0.00, PC
8031, 297005.1712, 2482894.0347, 0.00, PC
8033, 297471.7639, 2482894.7539, 0.00, PC
8035, 298027.0715, 2484657.3784, 0.00, PC
8036, 297978.4578, 2482020.3193, 0.00, PC
8037, 293435.8535, 2483428.7466, 0.00, PC
8038, 293439.7626, 2483647.5117, 0.00, PC
8040, 297469.2914, 2482029.5426, 0.00, PC
8041, 297456.1667, 2482690.3658, 0.00, PC
8042, 297591.0315, 2482690.6366, 0.00, PC

LAND CORNERS
9062, 297903.0143, 2478058.3220, 0.00, WS #4 W/CAP
9063, 295252.4636, 2478106.3510, 0.00, SW# #4 W/CAP
9232, 300613.6134, 2480649.0855, 0.00, NS
9305, 297553.3097, 2480659.6377, 0.00, CS
9032, 300569.4683, 2478010.0047, 0.00, NWS
9033, 300657.7534, 2483288.1645, 0.00, SW33
9233, 300709.7078, 2485526.2734, 0.00, S33
9034, 300761.6572, 2485564.3524, 0.00, SW34
9104, 298003.6052, 2483340.9575, 0.00, W4
9103, 298097.4741, 2486606.7555, 0.00, W3
9205, 296309.2002, 2480749.8522, 0.00, S5
9204, 295411.4540, 2486021.0875, 0.00, S4
9003, 295457.0510, 2485648.7513, 0.00, SW3
9105, 292602.0607, 2478160.8742, 0.00, WS
9109, 292716.8740, 2483441.5105, 0.00, WS
9110, 292810.3764, 2483651.4786, 0.00, W10
9006, 293951.6435, 2478215.5577, 0.00, SW6
9208, 290033.9650, 2480847.8735, 0.00, S8
9009, 290065.3326, 2483450.6294, 0.00, SW5fnd#4
9209, 290113.3072, 2486115.2698, 0.00, S5fnd#4
9010, 290162.0000, 2486739.3915, 0.00, SW10fnd#6
9304, 298050.5386, 2485973.7976, 0.00, C4
9004, 295365.9369, 2483393.4224, 0.00, S5
9308, 292659.2667, 2480759.1066, 0.00, C8
9305, 292763.5014, 2486068.1551, 0.00, C9

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OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
PLS	MDK		
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS		
SURVEY DATA SHEET			
SWO 4848 (1) PROJECT NO. 28858(04)			SHEET NO. 57

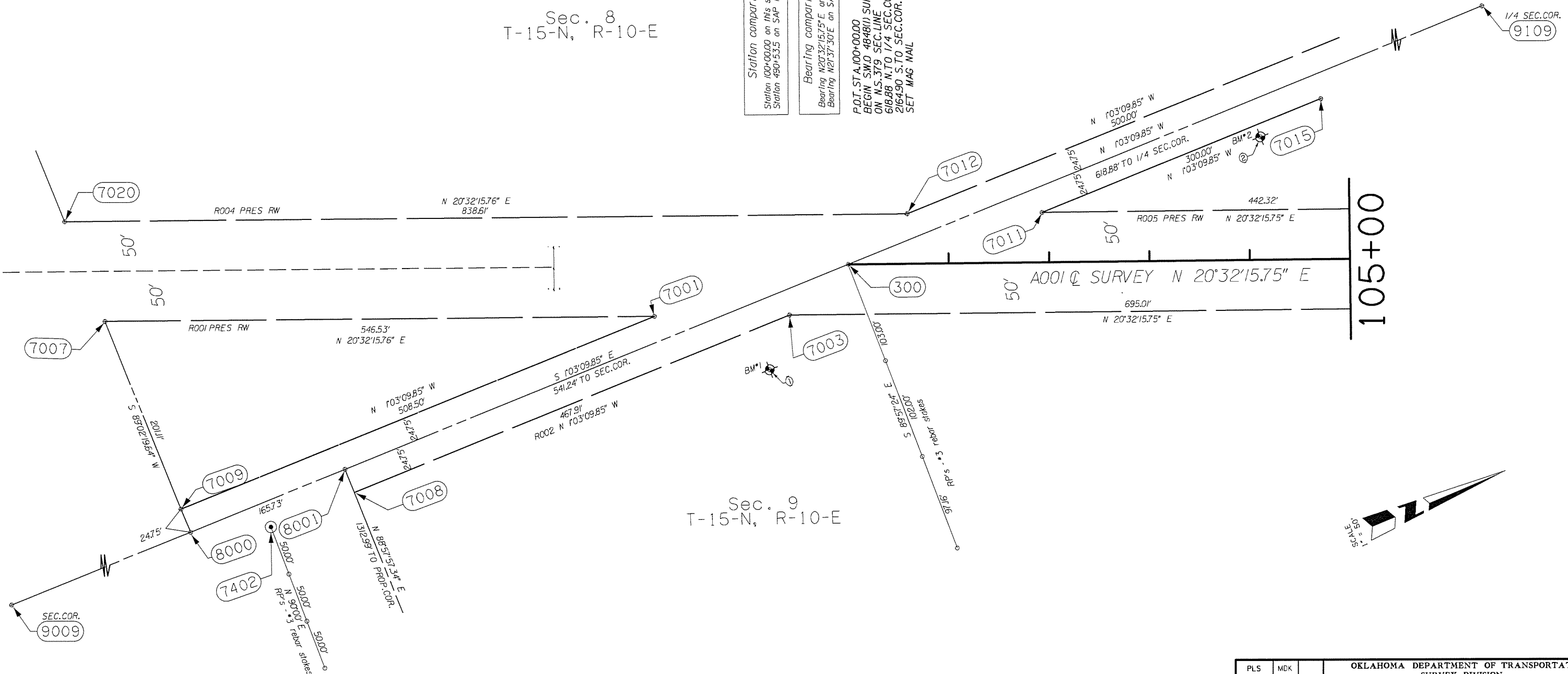
OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	

Sec. 8
T-15-N, R-10-E

Station comparison
Station 100+00.00 on this survey.
Station 450+55.5 on SAP No. 10161(2) PLANS

Bearing comparison
Bearing N20°32'15.75" E on this survey.
Bearing N27°37'30" E on SAP 10161(2) PLANS.

P.O.T. STA. 100+00.00
BEGIN SW 1/4 4848(1) SURVEY
ON N.S. 379 SEC. LINE
618.88' N. TO 1/4 SEC. COR.
2164.90' S. TO SEC. COR.
SET MAG NAIL



Sec. 9
T-15-N, R-10-E

OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION			
SURVEY DATA SHEET			
PLS	MDK		
DRAWN	MDK		
CHECKED	TRK		
APPROVED	MDK		
CREW	MS	SWO 4848 (1)	PROJECT NO. 28858(04) SHEET NO. 58

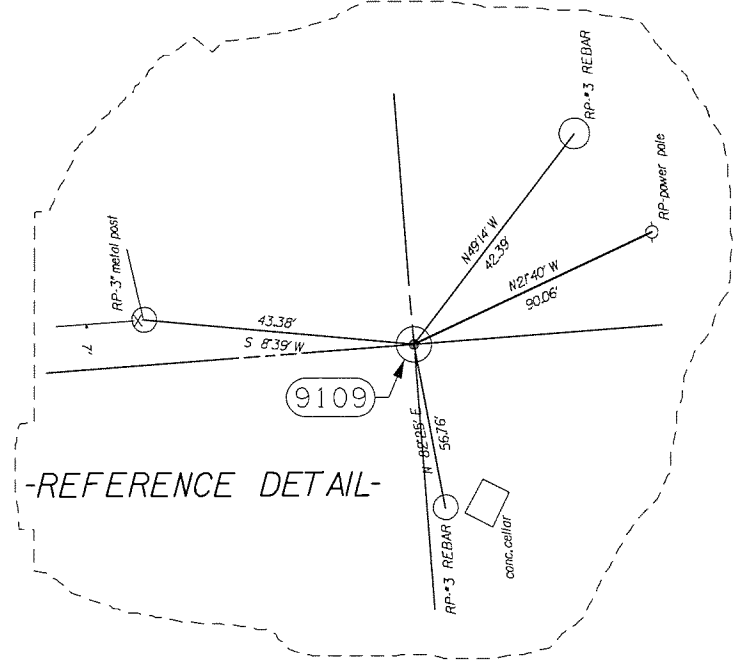
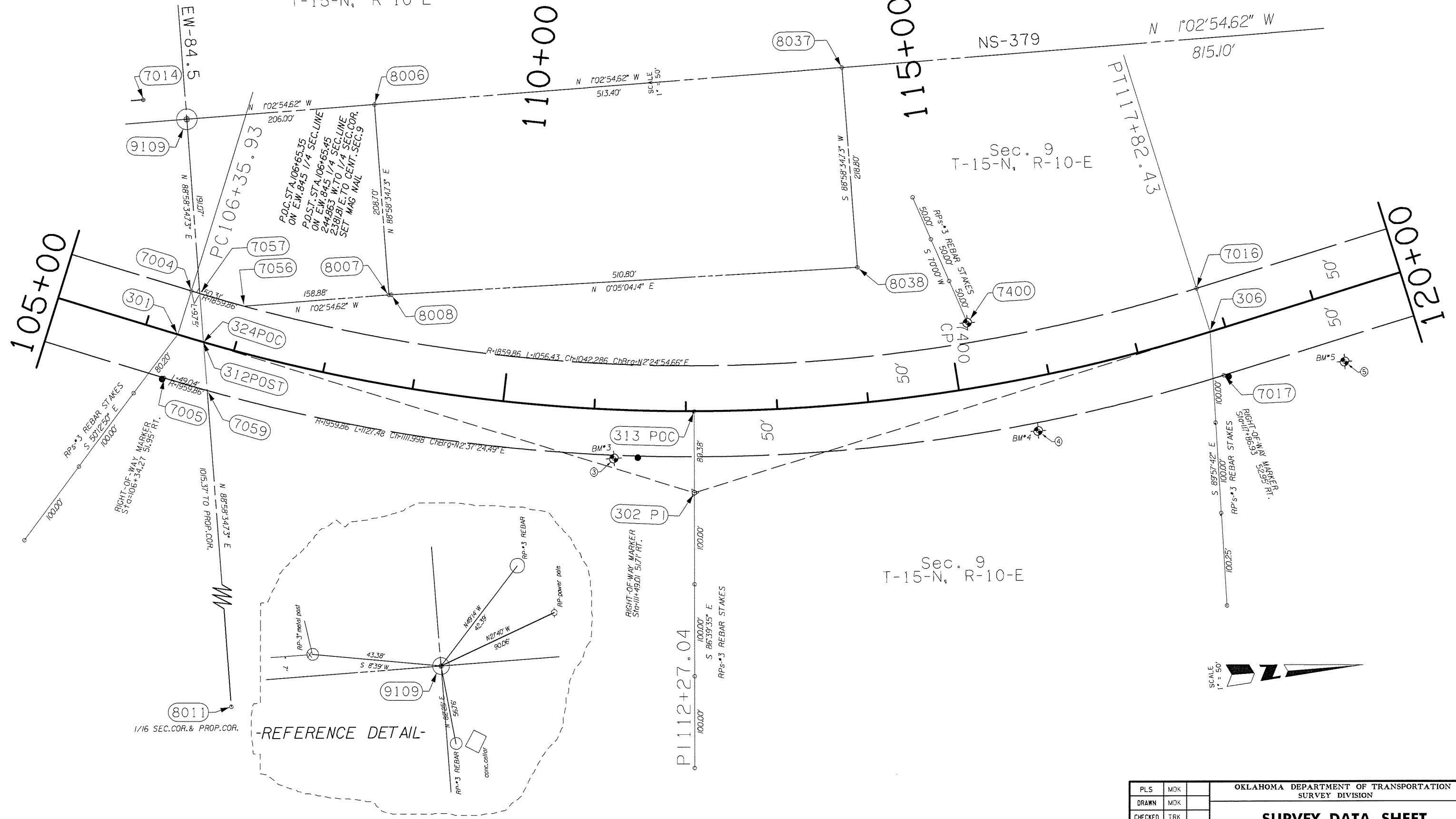
OKLAHOMA DEPARTMENT OF TRANSPORTATION				
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.
	OKLA.			
DESCRIPTION			REVISIONS	DATE

Sec. 8
T-15-N, R-10-E

Sec. 8
T-15-N, R-10-E

Sec. 9
T-15-N, R-10-E

Sec. 9
T-15-N, R-10-E



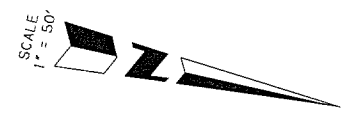
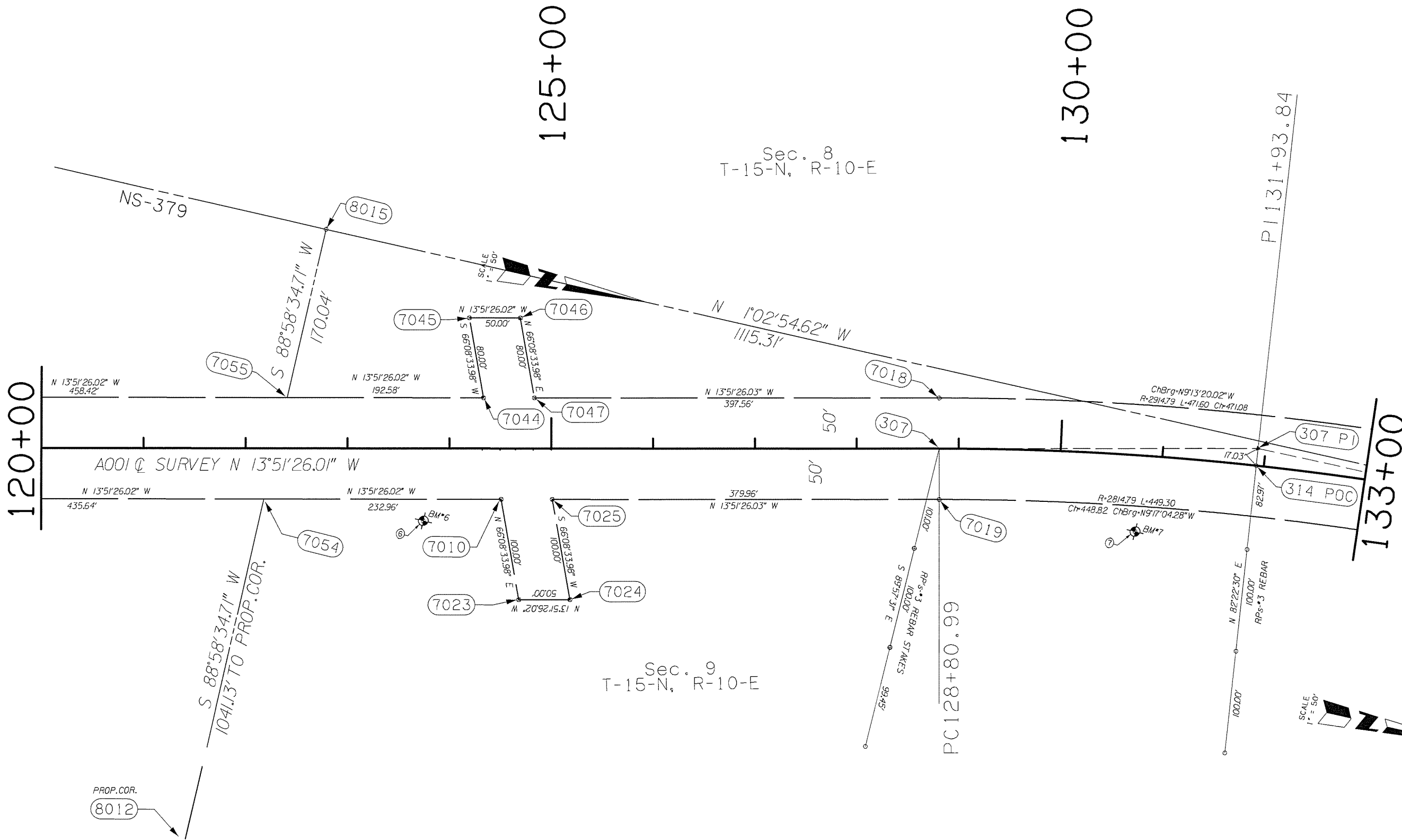
PLS	MDK	
DRAWN	MDK	
CHECKED	TRK	
APPROVED	MDK	
CREW	MS	

OKLAHOMA DEPARTMENT OF TRANSPORTATION
SURVEY DIVISION

SURVEY DATA SHEET

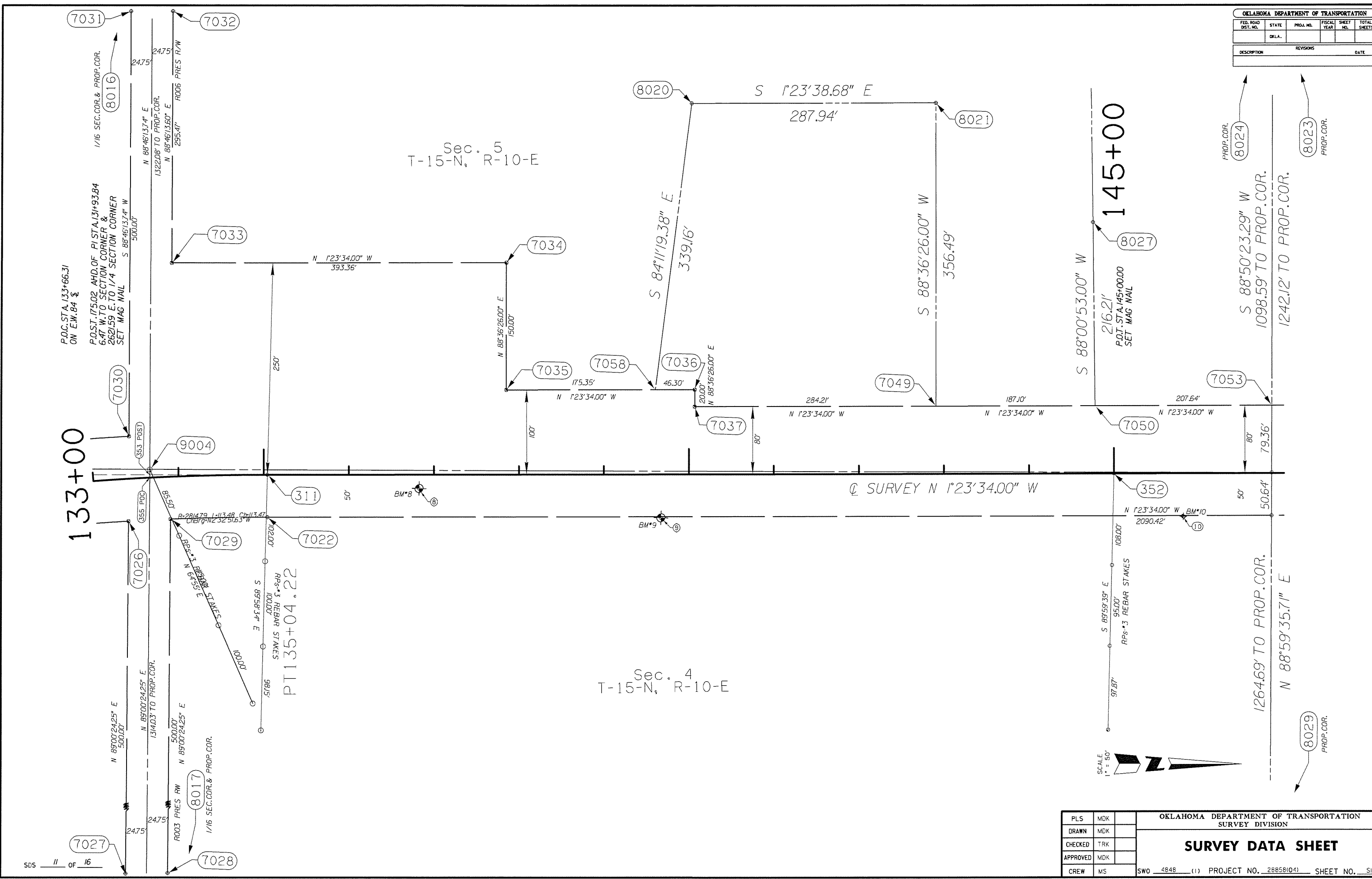
SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. 59

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION		REVISIONS		DATE	



OKLAHOMA DEPARTMENT OF TRANSPORTATION SURVEY DIVISION					
SURVEY DATA SHEET					
PLS	MDK				
DRAWN	MDK				
CHECKED	TRK				
APPROVED	MDK				
CREW	MS	SWO 4848 (1)	PROJECT NO. 28858(04)	SHEET NO. 510	

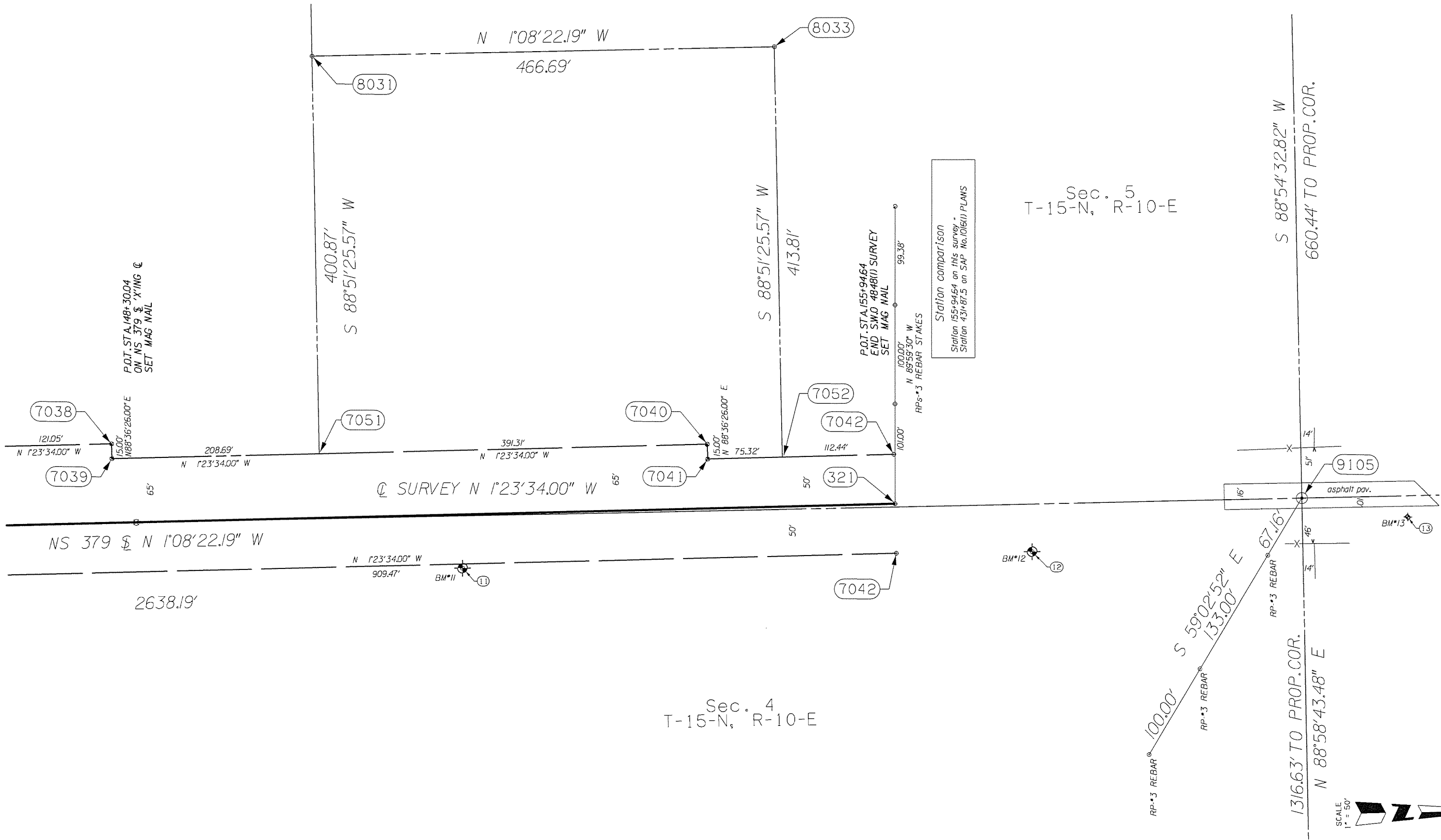
OKLAHOMA DEPARTMENT OF TRANSPORTATION				
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.
	OKLA.			
DESCRIPTION		REVISIONS	DATE	



OKLAHOMA DEPARTMENT OF TRANSPORTATION				
SURVEY DIVISION				
PLS	MDK			
DRAWN	MDK			
CHECKED	TRK			
APPROVED	MDK			
CREW	MS	SWO 4848 (1)	PROJECT NO. 28858(04)	SHEET NO. 511

SDS 11 OF 16

OKLAHOMA DEPARTMENT OF TRANSPORTATION				
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	TOTAL SHEETS
	OKLA.			
REVISIONS				
DESCRIPTION	REVISIONS	DATE		



Sec. 4
T-15-N, R-10-E

Sec. 5
T-15-N, R-10-E



OKLAHOMA DEPARTMENT OF TRANSPORTATION				
SURVEY DIVISION				
SURVEY DATA SHEET				
PLS	MDK			
DRAWN	MDK			
CHECKED	TRK			
APPROVED	MDK			
CREW	MS	SWO 4848 (1)	PROJECT NO. 28858(04)	SHEET NO. 512

WHITE HAWK ENGINEERING AND DESIGN					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

SECTION CORNER - FOUND #6 REBAR STAKE FOUND AND FILED BY PENN LS 1086 2/24/95 USED #6 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

1/4 SECTION CORNER - SET A MAG NAIL WITH AN ALUMINUM WASHER IN ASPHALT PAVING THIS CORNER LOCATION IS ON LINE AND PROPORTIONAL MEASUREMENT BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #5 REBAR STAKE FOUND AND FILED BY TRANSUE LS 916 6/25/84 USED #5 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

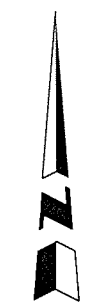
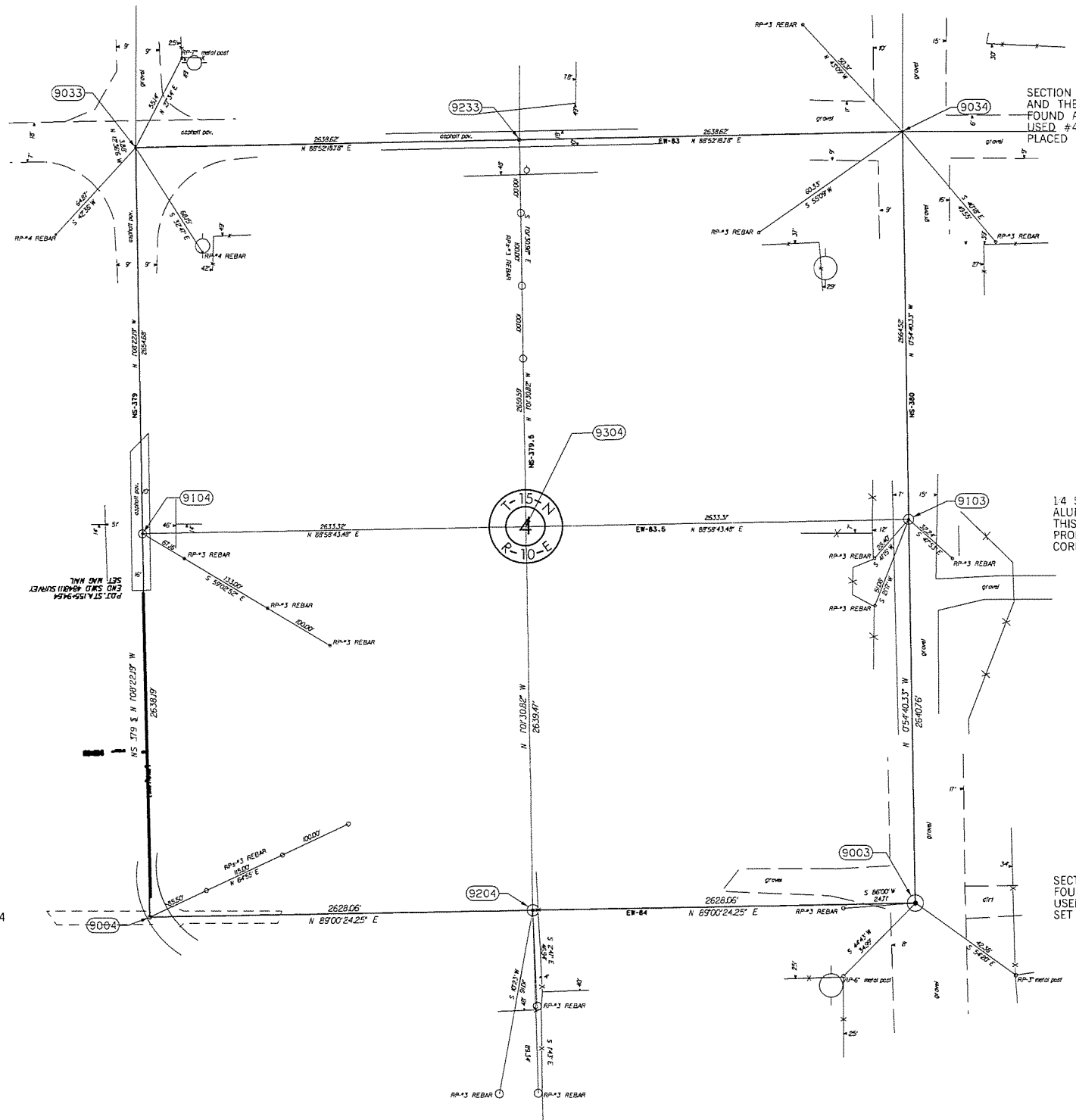
1/4 SECTION CORNER - SET MAG NAIL WITH ALUMINUM WASHER. THIS CORNER LOCATION IS ON LINE AND HALF THE DISTANCE BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #4 REBAR STAKE AND THE REFERENCES BY PENN LS 1088 FOUND AND FILED BY PENN LS 1088 2/4/95 USED #4 REBAR AS FOUND IN PLACE AND PLACED 3 NEW REFERENCES

1/4 SECTION CORNER - SET A MAG NAIL WITH AN ALUMINUM WASHER 6" DEEP IN GRAVEL ROAD THIS CORNER LOCATION IS ON LINE AND PROPORTIONAL MEASUREMENT BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #5 REBAR STAKE FOUND AND FILED BY TRANSUE LS 916 6/25/84 USED #5 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

1/4 SECTION CORNER - SET #4 REBAR WITH CAP THIS CORNER LOCATION IS ON LINE AND HALF THE DISTANCE BETWEEN THE SECTION CORNERS.



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS				WHITE HAWK ENGINEERING AND DESIGN 1265 S.EASTERN, MOORE, OK 73160 (405) 735-6096
DRAWN				SURVEY DATA SHEET
CHECKED				
APPROVED				
CREW				
SWO 4846 (1) PROJECT NO. 28858(04) SHEET NO. S13				

WHITE HAWK ENGINEERING AND DESIGN					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

SECTION CORNER - FOUND MAG NAIL WITH A WASHER PLS 1551. THIS CORNER LOCATION WAS ESTABLISHED UNDER S.W.O. 4545(1) FROM U.S.P.W. PROJ. NO. NRS 384-B PLANS & SAP No. 1016(1) PLANS. USED MONUMENT AS FOUND IN PLACE. FOUND AND USED O.D.O.T. REFERENCES .

1/4 SECTION CORNER - SET A MAG NAIL WITH AN ALUMINUM WASHER FLUSH WITH THE ASPHALT PAV. THIS CORNER LOCATION IS ON LINE AND HALF THE DISTANCE BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #6 REBAR STAKE FOUND AND FILED BY PENN LS 1086 2/24/95 USED #6 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

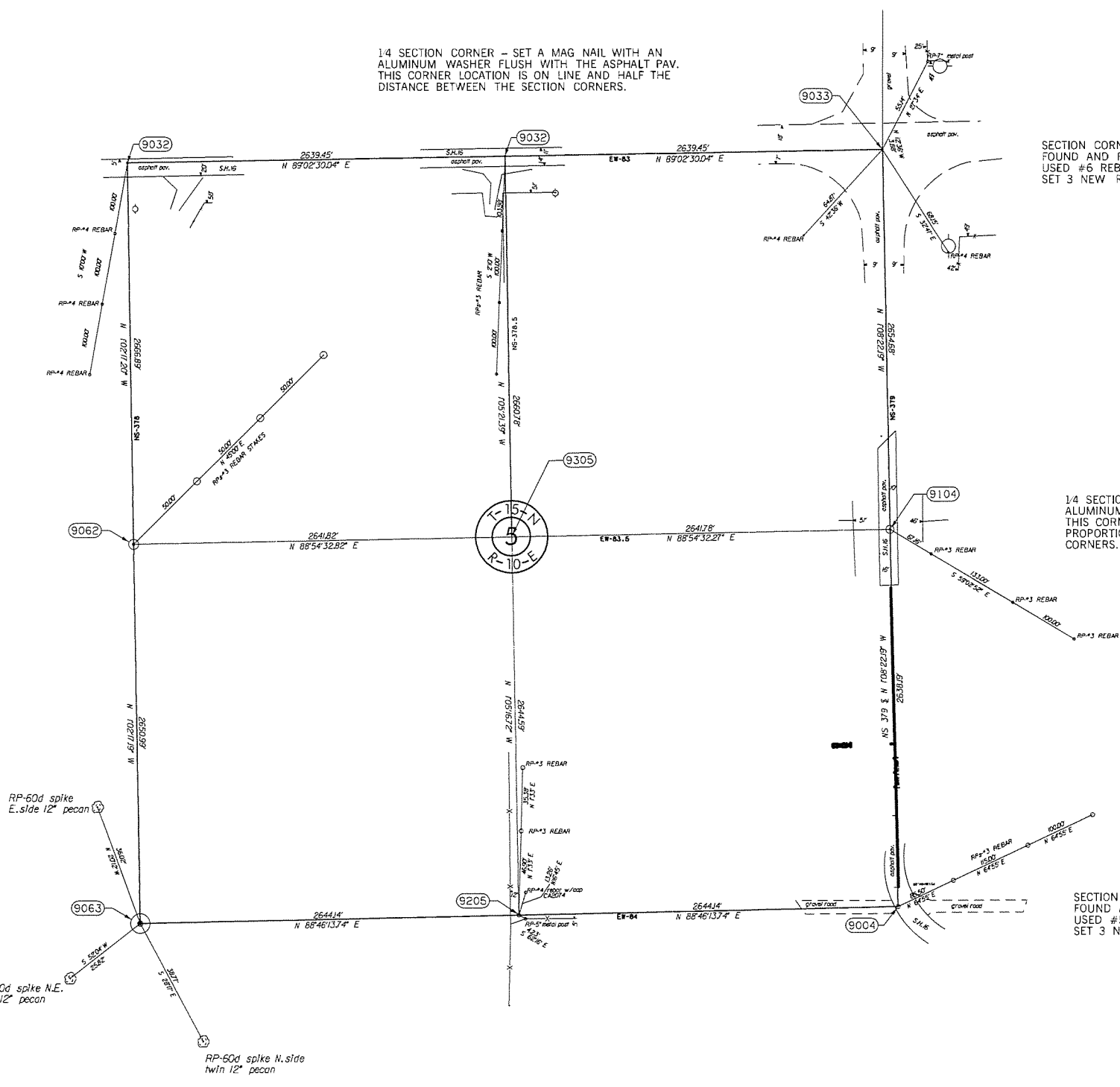
1/4 SECTION CORNER - FOUND #4 REBAR STAKE WITH ODOT PLASTIC CAP PLS 1551. THIS CORNER IS ON LINE AND PROPORTIONATE MEASUREMENT BETWEEN THE SECTION CORNERS NORTH AND SOUTH. USED MONUMENT AS FOUND IN PLACE. FOUND AND USED ODOT REFERENCES.

1/4 SECTION CORNER - SET A MAG NAIL WITH AN ALUMINUM WASHER IN ASPHALT PAVING THIS CORNER LOCATION IS ON LINE AND PROPORTIONAL MEASUREMENT BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #4 REBAR STAKE WITH ODOT PLASTIC CAP PLS 1551. THIS CORNER WAS ESTABLISHED BY DOUBLE PROPORTIONATE MEASUREMENT BETWEEN THE ORIGINAL STONE 0.5 MILES W. AND CORNER 1.0 MILES EAST & ORIGINAL STONE 1.0 MILES SOUTH AND CORNER 1.0 MILES NORTH. USED MONUMENT AS FOUND IN PLACE. FOUND AND USED ODOT REFERENCES.

SECTION CORNER - FOUND #5 REBAR STAKE FOUND AND FILED BY TRANSUE LS 916 6/25/84 USED #5 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

1/4 SECTION CORNER - SET #4 REBAR WITH CAP THIS CORNER LOCATION IS ON LINE AND HALF THE DISTANCE BETWEEN THE SECTION CORNERS.



SCALE: 1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS					
DRAWN					
CHECKED					
APPROVED					
CREW					

WHITE HAWK ENGINEERING AND DESIGN
1265 S.EASTERN, MOORE, OK 73160 (405) 735-6096

SURVEY DATA SHEET

SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. S14

WHITE HAWK ENGINEERING AND DESIGN					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

1/4 SECTION CORNER - SET #4 REBAR WITH CAP
THIS CORNER LOCATION IS ON LINE AND HALF THE
DISTANCE BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #4 REBAR STAKE
WITH ODOT PLASTIC CAP PLS 1551. THIS CORNER
WAS ESTABLISHED BY DOUBLE PROPORTIONATE MEASUREMENT
BETWEEN THE ORIGINAL STONE 0.5 MILES W. AND CORNER
1.0 MILES EAST & ORIGINAL STONE 1.0 MILES SOUTHE AND
CORNER 1.0 MILES NORTH. USED MONUMENT AS FOUND IN
PLACE. FOUND AND USED ODOT REFERENCES.

SECTION CORNER - FOUND #5 REBAR STAKE
FOUND AND FILED BY TRANSUE LS 916 62584
USED #5 REBAR AS FOUND IN PLACE AND
SET 3 NEW REFERENCES.

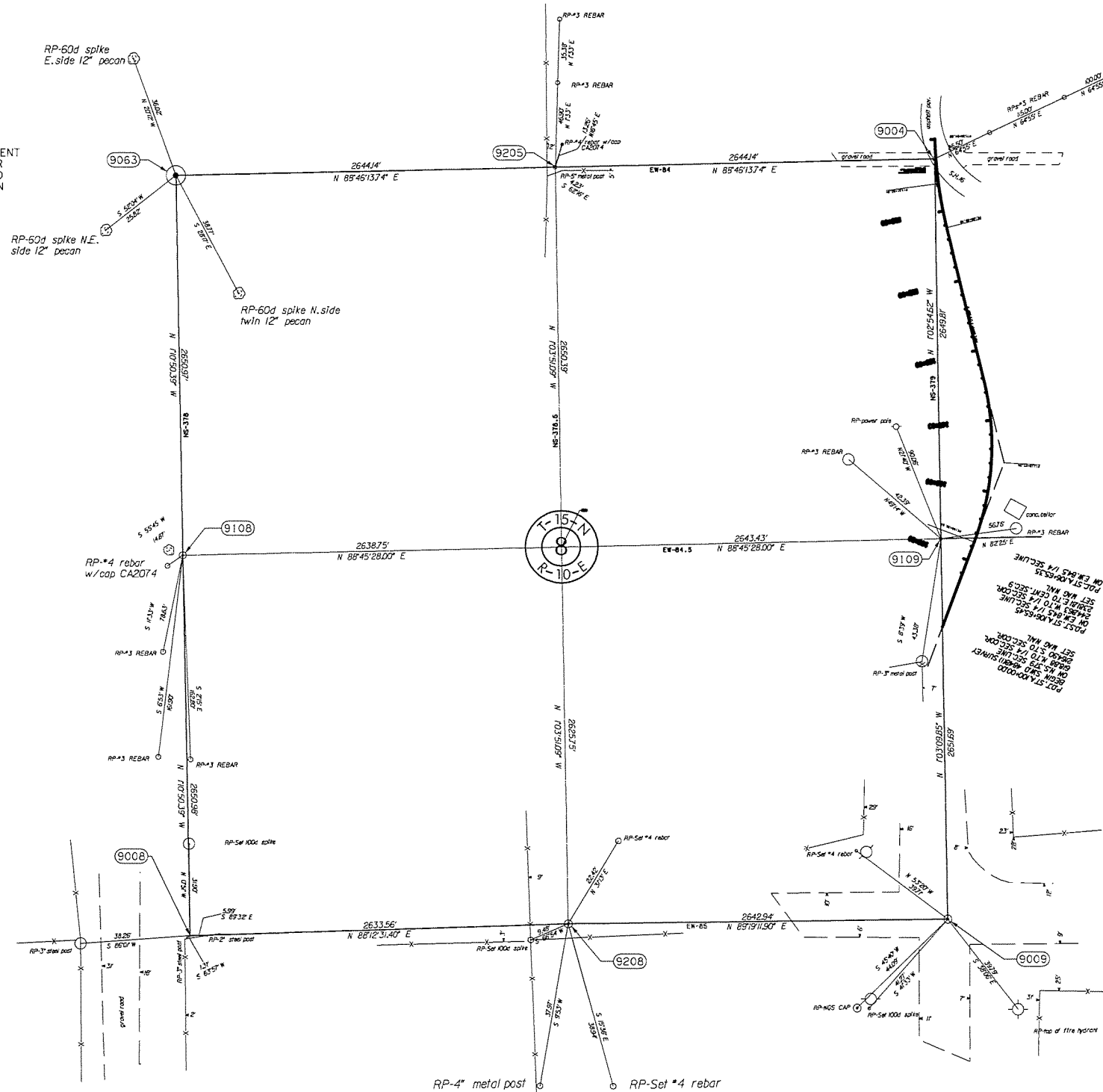
1/4 SECTION CORNER - SET A #4 REBAR STAKE
WITH A WHITE HAWK CAP. THIS CORNER LOCATION
IS ON LINE AND HALF THE DISTANCE BETWEEN
THE SECTION CORNERS.

1/4 SECTION CORNER - FOUND #4 REBAR STAKE
SET AND FILED BY PENN LS 1086 11-14-91. PENN
STATED THAT THE CORNER LOCATION WAS DETERMINED
BY DOUBLE PROPORTIONATE DISTANCE AND STRAIGHT
LINE BETWEEN THE SECTION CORNERS.
USED THE #4 REBAR STAKE AS FOUND IN PLACE
SET 3 NEW REFERENCES

SECTION CORNER - FOUND ORIGINAL STONE IN PLACE
FOUND AND FILED BY PENN LS 1086 42998
SET 3 NEW REFERENCES.

SECTION CORNER - FOUND #4 REBAR STAKE
FOUND AND FILED BY PENN LS 1086 10-15-91
USED #4 REBAR STAKE AS FOUND IN PLACE.
SET 3 NEW REFERENCES.

1/4 SECTION CORNER - FOUND #4 REBAR STAKE
SET AND FILED BY PENN LS 1086 10-15-91. PENN
STATED THAT THE CORNER LOCATION WAS ACCORDING
TO THE PLAT DISTANCE AND BEARING OF THE
ORIGINAL TOWN OF SLICK OKLAHOMA.
USED THE #4 REBAR STAKE AS FOUND IN PLACE
SET 3 NEW REFERENCES



SCALE:
1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS		WHITE HAWK ENGINEERING AND DESIGN
DRAWN		1265 S.EASTERN, MOORE, OK 73160 (405) 735-6096
CHECKED		SURVEY DATA SHEET
APPROVED		
CREW		
SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. S15		

WHITE HAWK ENGINEERING AND DESIGN					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	OKLA.				
DESCRIPTION			REVISIONS	DATE	

SECTION CORNER - FOUND #5 REBAR STAKE FOUND AND FILED BY TRANSUE LS 916 62584 USED #5 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

1/4 SECTION CORNER - FOUND #4 REBAR STAKE SET AND FILED BY PENN LS 1086 11-14-91. PENN STATED THAT THE CORNER LOCATION WAS DETERMINED BY DOUBLE PROPORTIONATE DISTANCE AND STRAIGHT LINE BETWEEN THE SECTION CORNERS. USED THE #4 REBAR STAKE AS FOUND IN PLACE SET 3 NEW REFERENCES

SECTION CORNER - FOUND #4 REBAR STAKE FOUND AND FILED BY PENN LS 1086 10-15-91 USED #4 REBAR STAKE AS FOUND IN PLACE. SET 3 NEW REFERENCES.

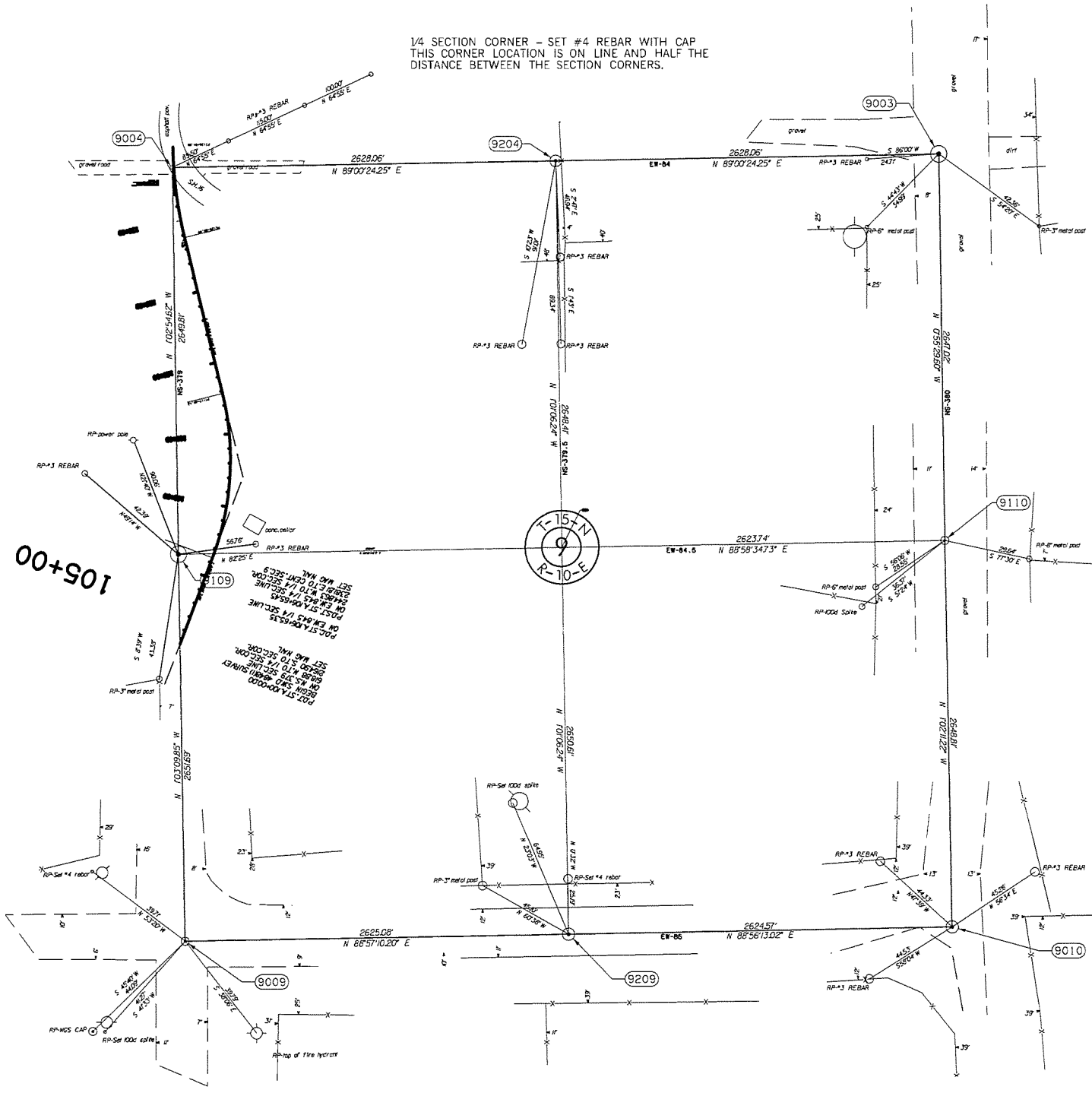
1/4 SECTION CORNER - SET #4 REBAR WITH CAP THIS CORNER LOCATION IS ON LINE AND HALF THE DISTANCE BETWEEN THE SECTION CORNERS.

SECTION CORNER - FOUND #5 REBAR STAKE FOUND AND FILED BY TRANSUE LS 916 62584 USED #5 REBAR AS FOUND IN PLACE AND SET 3 NEW REFERENCES.

1/4 SECTION CORNER - FOUND #5 REBAR STAKE SET AND FILED BY TRANSUE LS 916 6-25-84. USED THE #5 REBAR STAKE AS FOUND IN PLACE ESTABLISHED 3 NEW REFERENCES

SECTION CORNER - FOUND #6 REBAR STAKE. Transue LS 916 FOUND A BENT AND RUSTY #4 REBAR STAKE AT THIS LOCATION AND REPLACED IT WITH A #6 REBAR STAKE. USED THE #6 REBAR STAKE AS FOUND IN PLACE. SET 3 NEW REFERENCES.


1/4 SECTION CORNER - FOUND #4 REBAR STAKE SET AND FILED BY PENN LS 1086 11-14-91. USED #4 REBAR STAKE AS FOUND IN PLACE. SET 2 NEW REFERENCES.



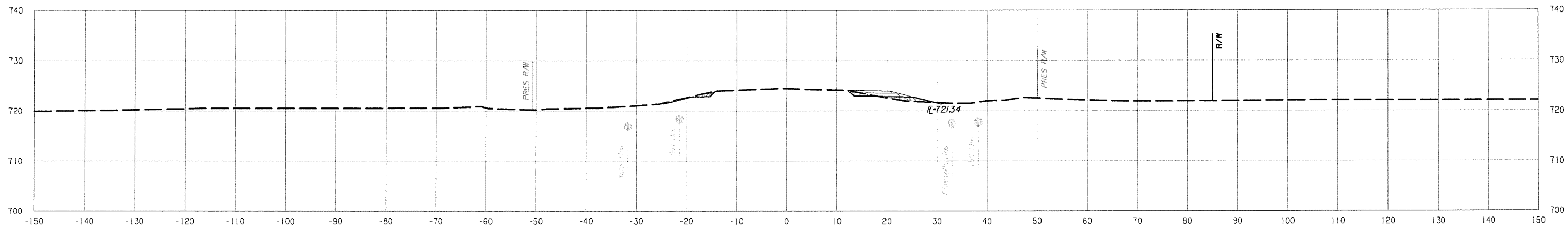
SCALE: 1" = 500'

NOTE: REFERENCE'S SHOWN ARE NOT TO SCALE.

PLS				WHITE HAWK ENGINEERING AND DESIGN 1265 S.EASTERN, MOORE, OK 73160 (405) 735-6096
DRAWN				SURVEY DATA SHEET
CHECKED				
APPROVED				
CREW				
SWO 4848 (1) PROJECT NO. 28858(04) SHEET NO. S16				

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

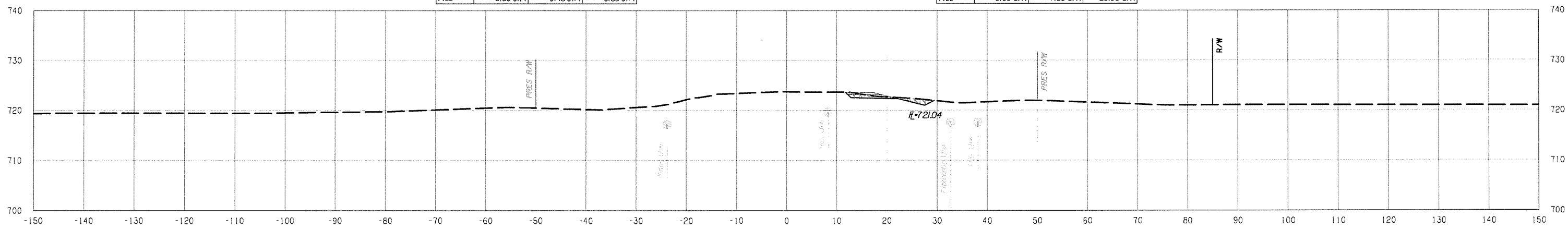
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.21 S.F.	2.83 S.F.	5.48 S.F.
FILL	0.00 S.F.	5.48 S.F.	5.85 S.F.

BEGIN TEMPORARY WIDENING SECTION LT
100 + 60.89

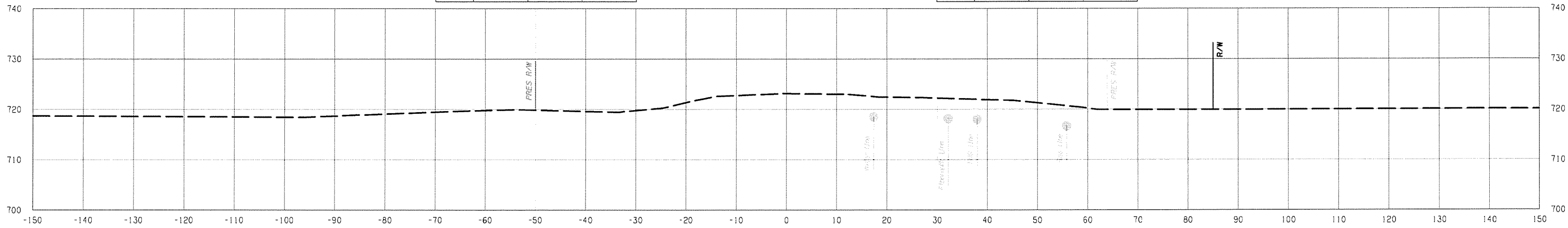
VOLUME	PHASE I	PHASE II	PHASE III
CUT	3.62 C.Y.	14.78 C.Y.	6.17 C.Y.
FILL	0.00 C.Y.	7.10 C.Y.	20.90 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	10.27 S.F.	0.00 S.F.
FILL	0.00 S.F.	0.00 S.F.	10.27 S.F.

100 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	17.89 C.Y.	0.00 C.Y.
FILL	0.00 C.Y.	0.00 C.Y.	20.58 C.Y.



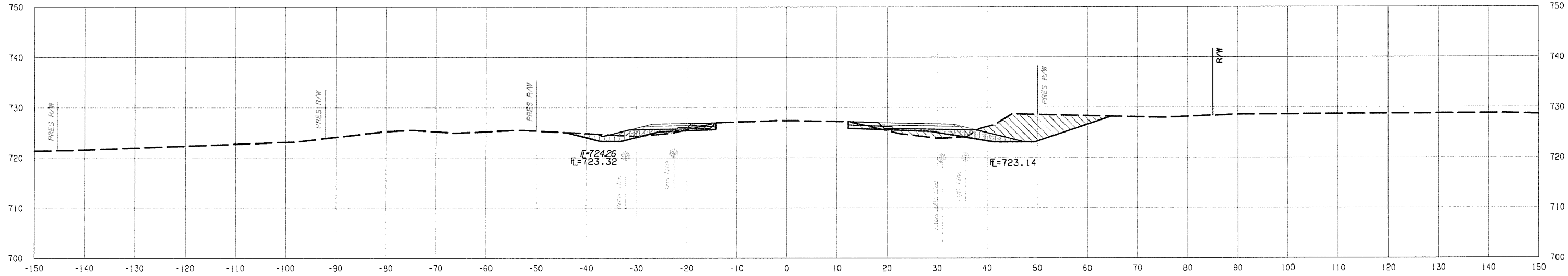
AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	0.00 S.F.	0.00 S.F.
FILL	0.00 S.F.	0.00 S.F.	0.00 S.F.

BEGIN TEMPORARY WIDENING SECTION RT
99 + 05.94

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	0.00 C.Y.	0.00 C.Y.	0.00 C.Y.

- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

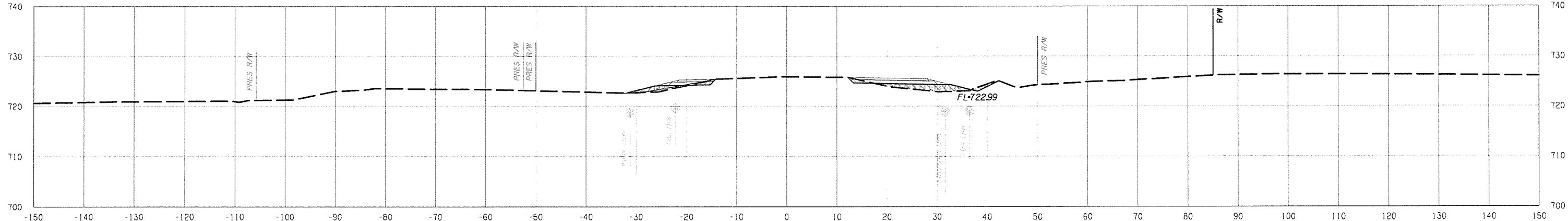
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.52 S.F.	86.77 S.F.	48.55 S.F.
FILL	13.56 S.F.	11.51 S.F.	0.00 S.F.

103 + 00.00

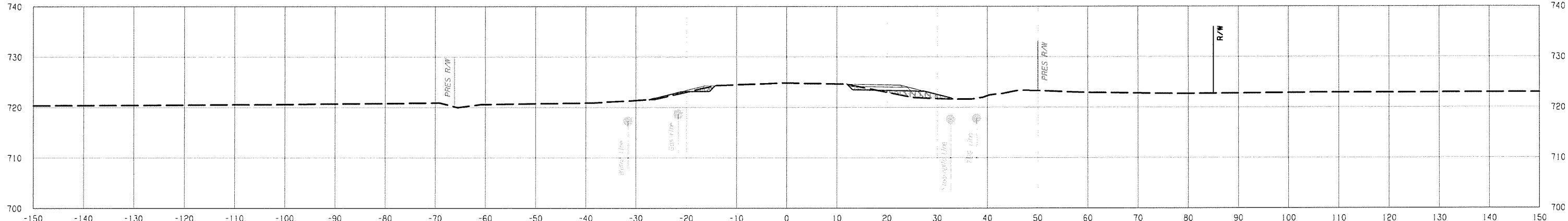
VOLUME	PHASE I	PHASE II	PHASE III
CUT	8.79 C.Y.	169.41 C.Y.	137.19 C.Y.
FILL	45.27 C.Y.	62.48 C.Y.	14.89 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.22 S.F.	4.71 S.F.	25.53 S.F.
FILL	7.70 S.F.	17.83 S.F.	6.99 S.F.

102 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	8.31 C.Y.	13.42 C.Y.	72.98 C.Y.
FILL	20.03 C.Y.	63.88 C.Y.	25.12 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.26 S.F.	2.54 S.F.	13.88 S.F.
FILL	1.70 S.F.	12.17 S.F.	4.80 S.F.

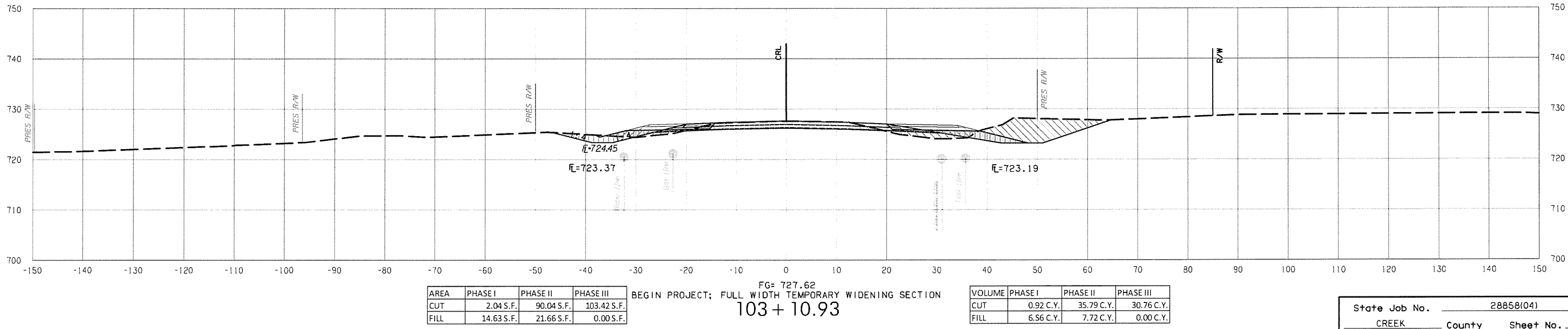
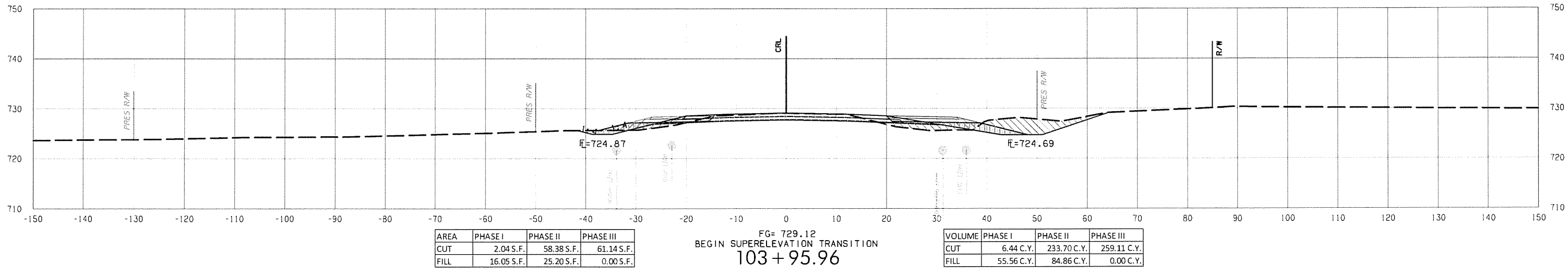
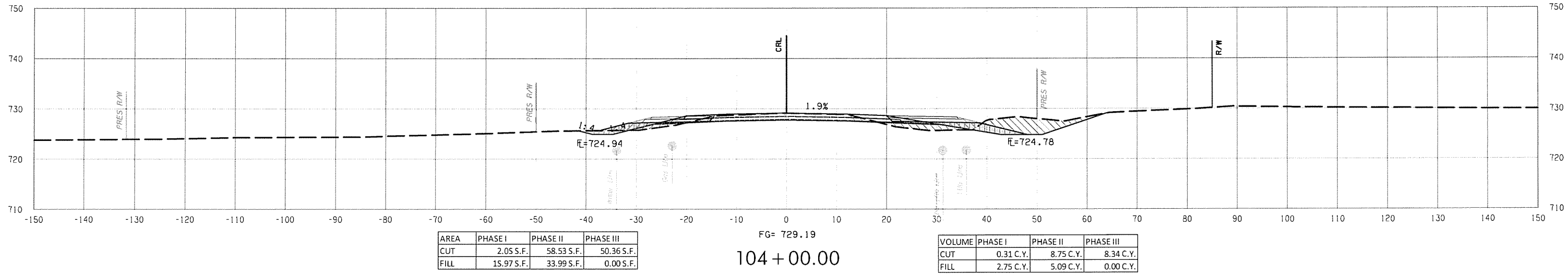
101 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	3.97 C.Y.	3.89 C.Y.	14.02 C.Y.
FILL	1.42 C.Y.	14.70 C.Y.	8.87 C.Y.

6/6/2016 JP28858_041Sec Final.dgn

- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- PERMANENT FLOWLINE
- TEMPORARY FLOWLINE

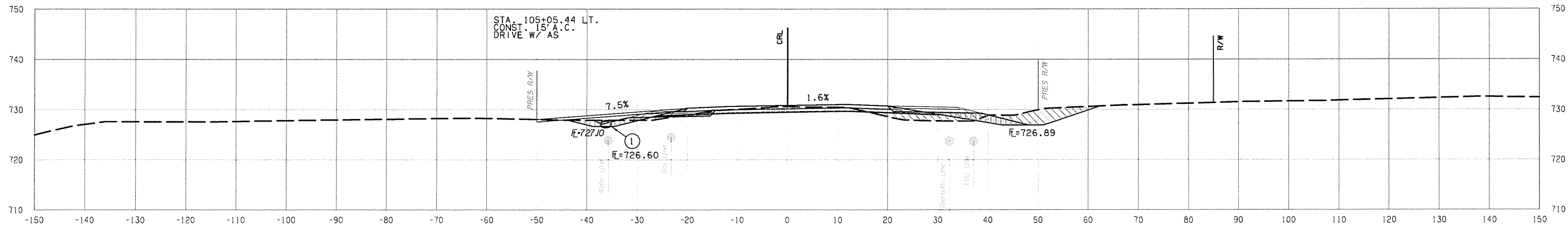
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



6/16/2016 JP28858_04Xsec_Final.dgn

- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

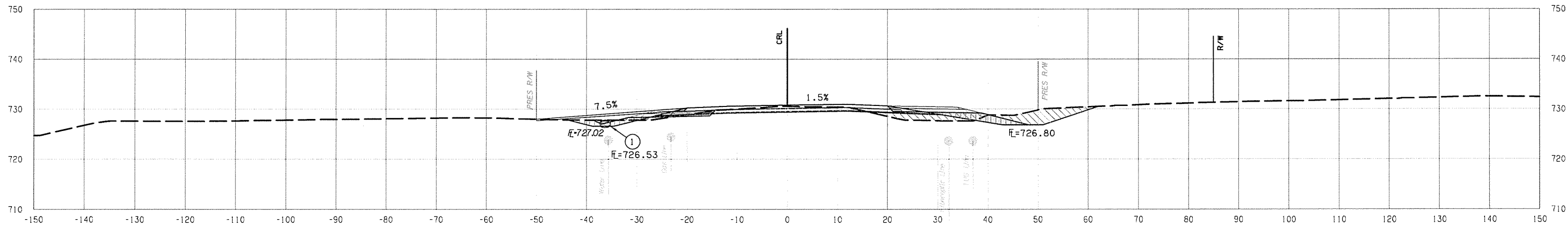
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	5.45 S.F.	43.97 S.F.	43.36 S.F.
FILL	4.61 S.F.	30.94 S.F.	0.00 S.F.

FG= 730.89
Q DRIVEWAY LT
105 + 05.44

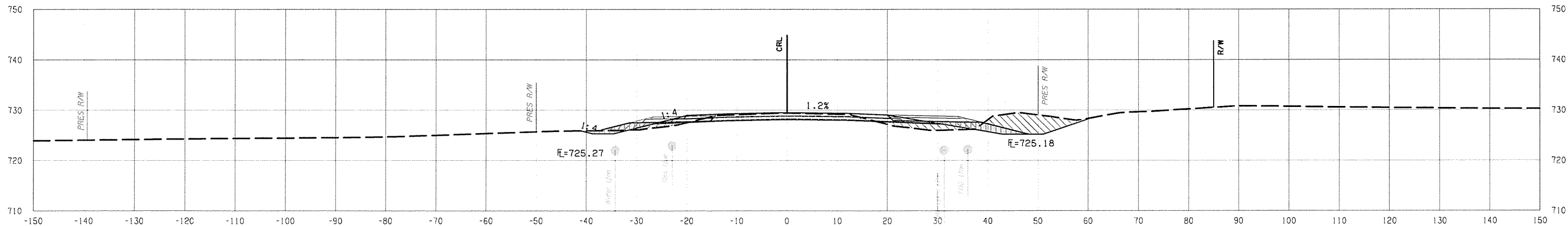
VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.93 C.Y.	7.30 C.Y.	7.28 C.Y.
FILL	0.50 C.Y.	5.99 C.Y.	0.14 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	5.63 S.F.	42.80 S.F.	43.18 S.F.
FILL	0.54 S.F.	30.98 S.F.	1.43 S.F.

FG= 730.81
105 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	11.51 C.Y.	158.65 C.Y.	136.85 C.Y.
FILL	28.35 C.Y.	99.49 C.Y.	2.46 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	2.07 S.F.	63.30 S.F.	48.35 S.F.
FILL	15.94 S.F.	26.89 S.F.	0.00 S.F.

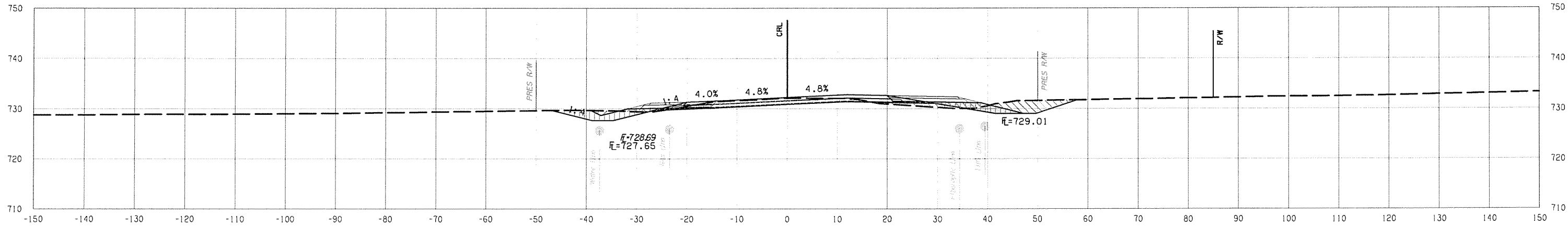
FG= 729.51
104 + 19.26

VOLUME	PHASE I	PHASE II	PHASE III
CUT	1.47 C.Y.	43.45 C.Y.	35.21 C.Y.
FILL	13.09 C.Y.	24.97 C.Y.	0.00 C.Y.

6/16/2016 JP28858_04Xsec.Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

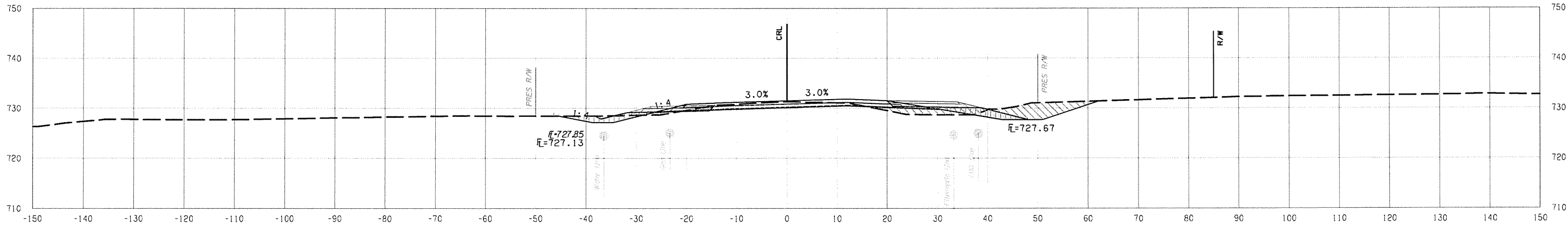
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	6.28 S.F.	34.04 S.F.	59.59 S.F.
FILL	5.55 S.F.	19.22 S.F.	0.58 S.F.

FG= 732.24
106 + 00.00

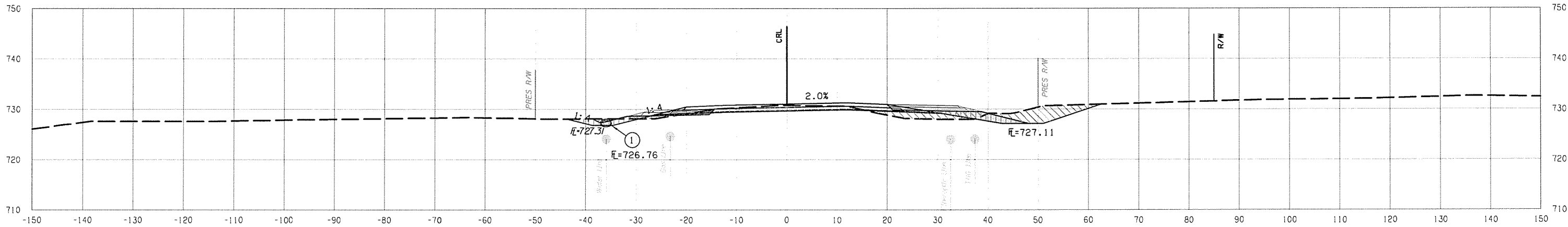
VOLUME	PHASE I	PHASE II	PHASE III
CUT	10.65 C.Y.	80.54 C.Y.	108.45 C.Y.
FILL	13.35 C.Y.	54.70 C.Y.	3.57 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	4.37 S.F.	46.44 S.F.	48.78 S.F.
FILL	6.05 S.F.	28.31 S.F.	2.52 S.F.

FG= 731.49
BEGIN SHOULDER ROLL RT
105 + 45.96


VOLUME	PHASE I	PHASE II	PHASE III
CUT	5.42 C.Y.	51.43 C.Y.	52.23 C.Y.
FILL	6.96 C.Y.	37.63 C.Y.	3.54 C.Y.






AREA	PHASE I	PHASE II	PHASE III
CUT	5.38 S.F.	46.13 S.F.	45.23 S.F.
FILL	4.85 S.F.	30.59 S.F.	3.01 S.F.

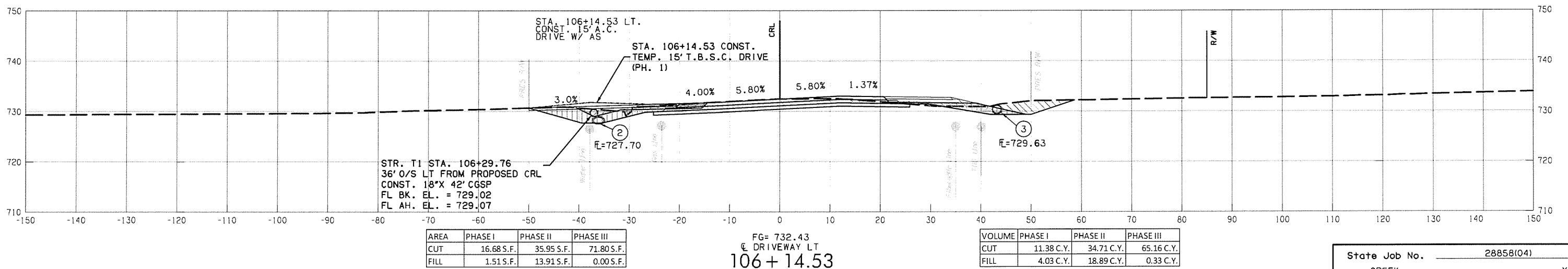
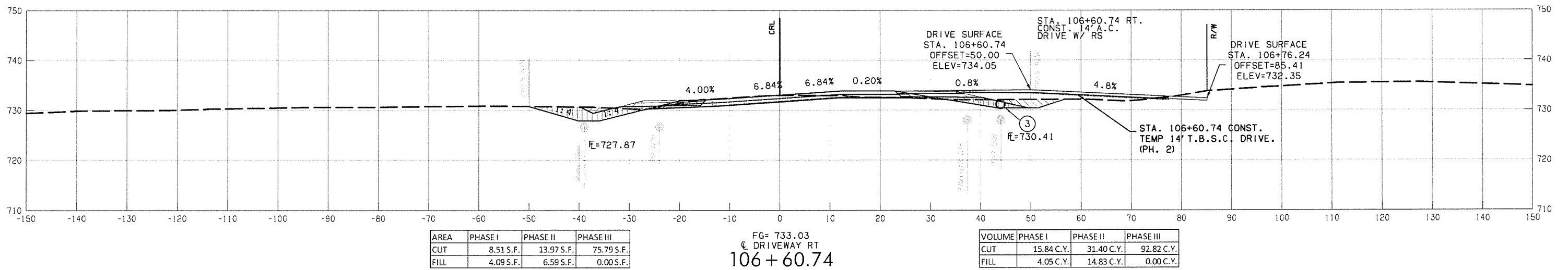
FG= 731.05
REVERSE CROWN
105 + 15.96


VOLUME	PHASE I	PHASE II	PHASE III
CUT	2.29 C.Y.	19.06 C.Y.	18.74 C.Y.
FILL	2.30 C.Y.	14.96 C.Y.	0.73 C.Y.




 CONSTRUCTION FOR DETOURS
 $\bar{E}=123.45$ PERMANENT FLOWLINE
 $\bar{E}=123.45$ TEMPORARY FLOWLINE

 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

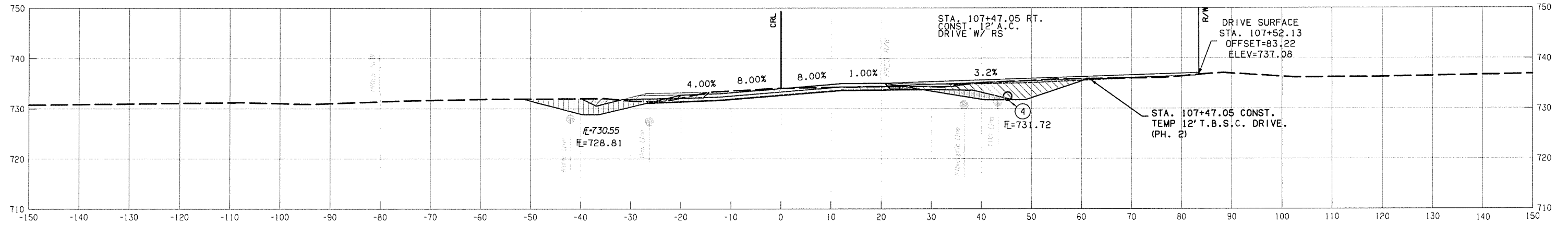
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



 CONSTRUCTION FOR DETOURS
 $\bar{E}=123.45$ PERMANENT FLOWLINE
 $\bar{E}=123.45$ TEMPORARY FLOWLINE

 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

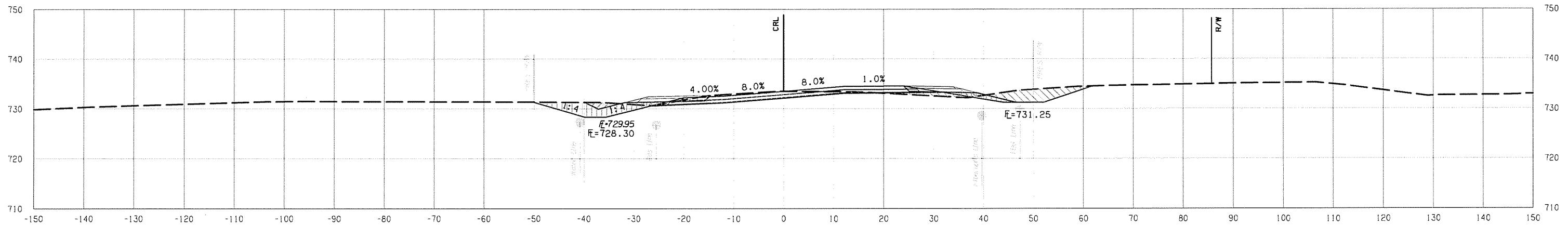
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	8.54 S.F.	79.22 S.F.	85.48 S.F.
FILL	4.87 S.F.	0.00 S.F.	0.00 S.F.

FG= 734.01
 CL DRIVEWAY RT
 107 + 47.05

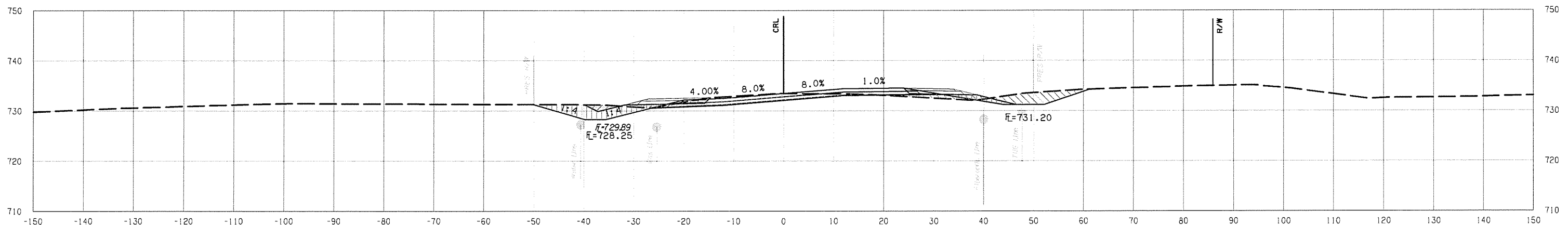
VOLUME	PHASE I	PHASE II	PHASE III
CUT	14.63 C.Y.	100.28 C.Y.	139.80 C.Y.
FILL	9.65 C.Y.	12.98 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	8.25 S.F.	35.87 S.F.	74.97 S.F.
FILL	4.77 S.F.	12.96 S.F.	0.00 S.F.

FG= 733.50
 107 + 00.00





VOLUME	PHASE I	PHASE II	PHASE III
CUT	1.24 C.Y.	5.43 C.Y.	11.16 C.Y.
FILL	0.81 C.Y.	2.33 C.Y.	0.00 C.Y.



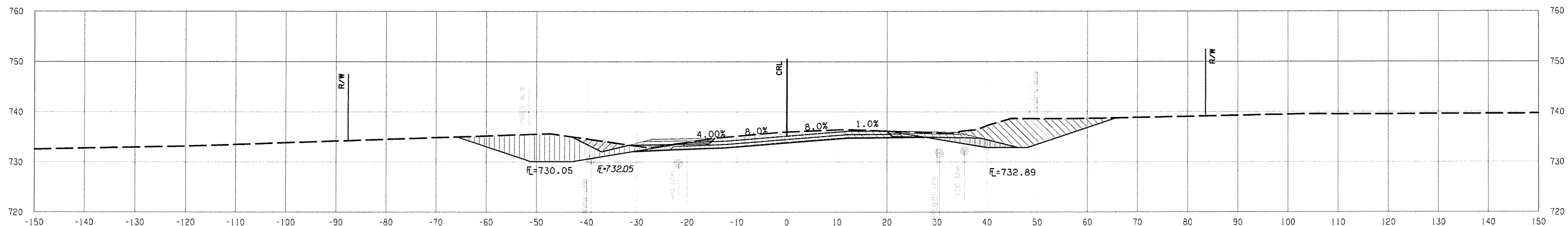
AREA	PHASE I	PHASE II	PHASE III
CUT	8.28 S.F.	36.70 S.F.	74.19 S.F.
FILL	4.62 S.F.	14.11 S.F.	0.00 S.F.

FG= 733.46
 FULL SUPERELEVATION
 106 + 95.96

VOLUME	PHASE I	PHASE II	PHASE III
CUT	10.95 C.Y.	33.05 C.Y.	97.82 C.Y.
FILL	6.53 C.Y.	15.52 C.Y.	0.00 C.Y.

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

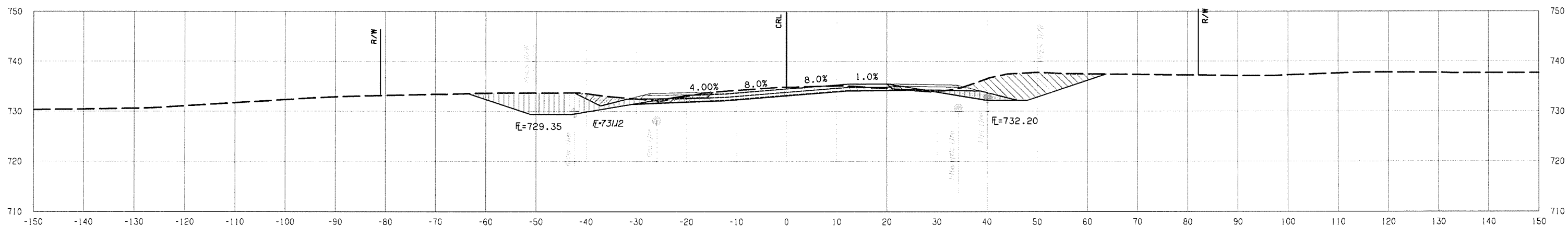
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	16.41 S.F.	143.61 S.F.	169.56 S.F.
FILL	2.45 S.F.	0.00 S.F.	0.00 S.F.

FG= 735.19
109 + 00.00

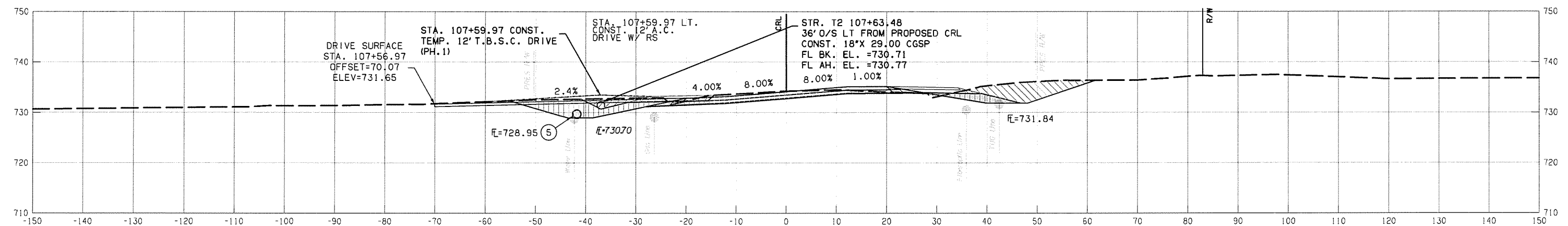
VOLUME	PHASE I	PHASE II	PHASE III
CUT	59.43 C.Y.	459.60 C.Y.	565.69 C.Y.
FILL	9.51 C.Y.	3.81 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	15.68 S.F.	104.57 S.F.	135.92 S.F.
FILL	2.01 S.F.	1.79 S.F.	0.00 S.F.

FG= 734.50
108 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	26.92 C.Y.	103.33 C.Y.	176.16 C.Y.
FILL	2.68 C.Y.	2.62 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	20.63 S.F.	79.22 S.F.	101.72 S.F.
FILL	1.13 S.F.	0.00 S.F.	0.00 S.F.

FG= 734.13
107 + 59.97

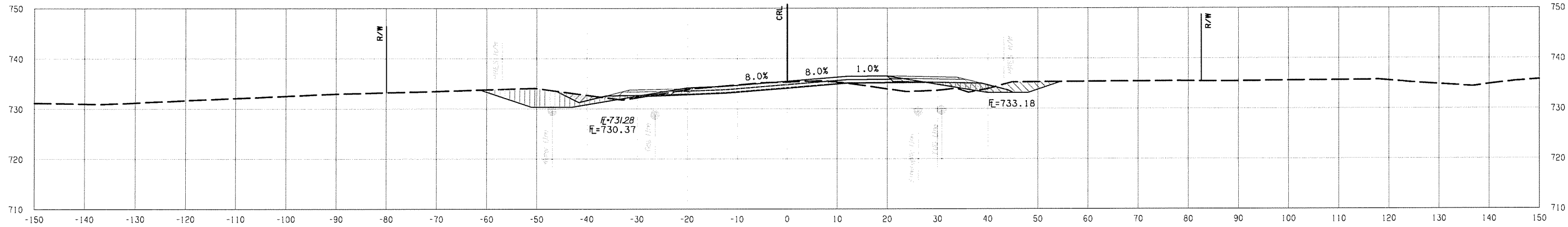
VOLUME	PHASE I	PHASE II	PHASE III
CUT	6.98 C.Y.	100.28 C.Y.	44.79 C.Y.
FILL	1.65 C.Y.	12.98 C.Y.	0.00 C.Y.

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CONSTRUCTION FOR DETOURS
 E=123.45 PERMANENT FLOWLINE
 E=123.45 TEMPORARY FLOWLINE

CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

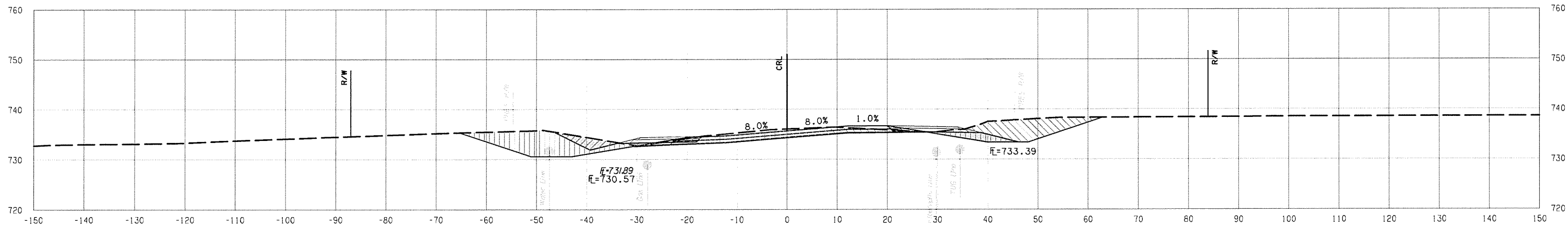
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	10.96 S.F.	23.75 S.F.	92.07 S.F.
FILL	5.04 S.F.	36.44 S.F.	0.00 S.F.

FG= 735.48
 112+00.00

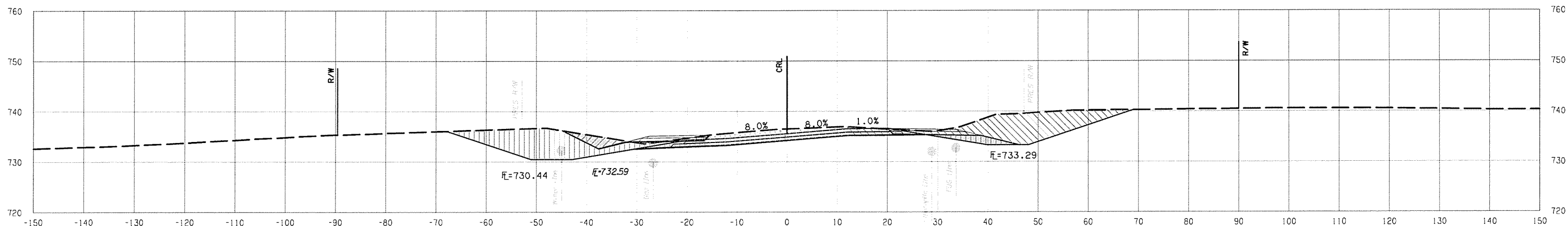
VOLUME	PHASE I	PHASE II	PHASE III
CUT	56.39 C.Y.	220.85 C.Y.	424.14 C.Y.
FILL	15.92 C.Y.	77.78 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	19.49 S.F.	95.52 S.F.	136.96 S.F.
FILL	2.43 S.F.	0.09 S.F.	0.00 S.F.

FG= 735.68
 111+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	74.19 C.Y.	500.37 C.Y.	609.87 C.Y.
FILL	7.92 C.Y.	0.18 C.Y.	0.00 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	20.57 S.F.	174.68 S.F.	192.37 S.F.
FILL	1.29 S.F.	0.00 S.F.	0.00 S.F.

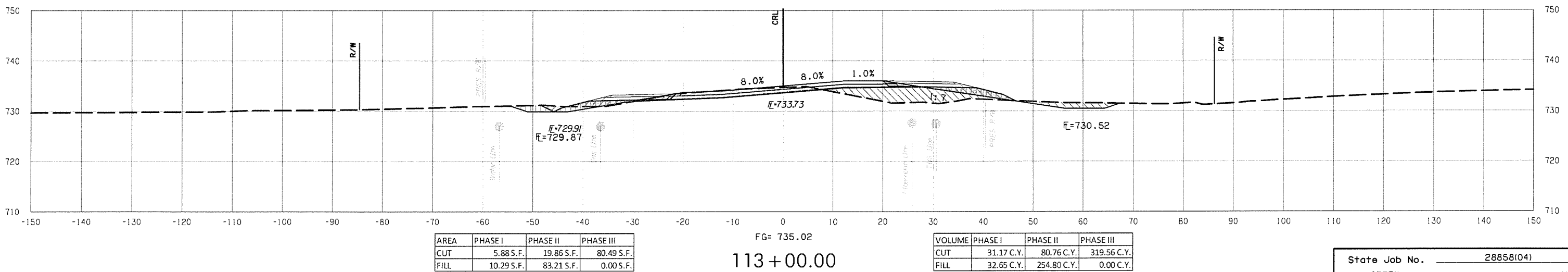
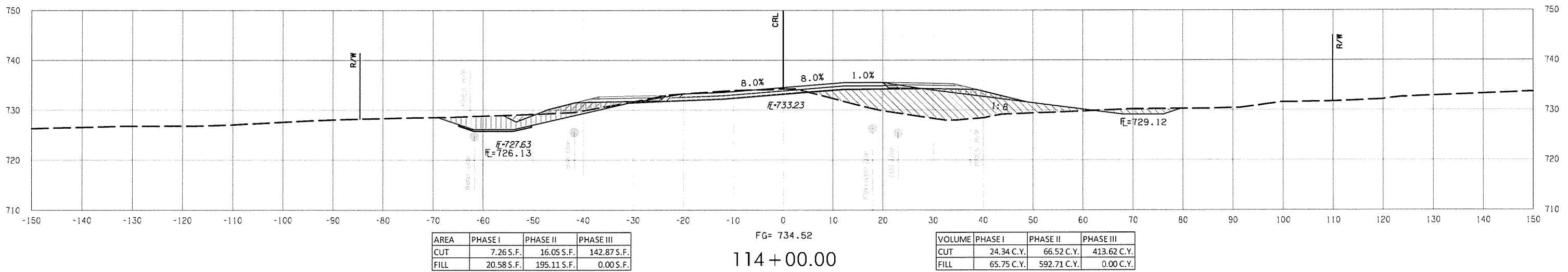
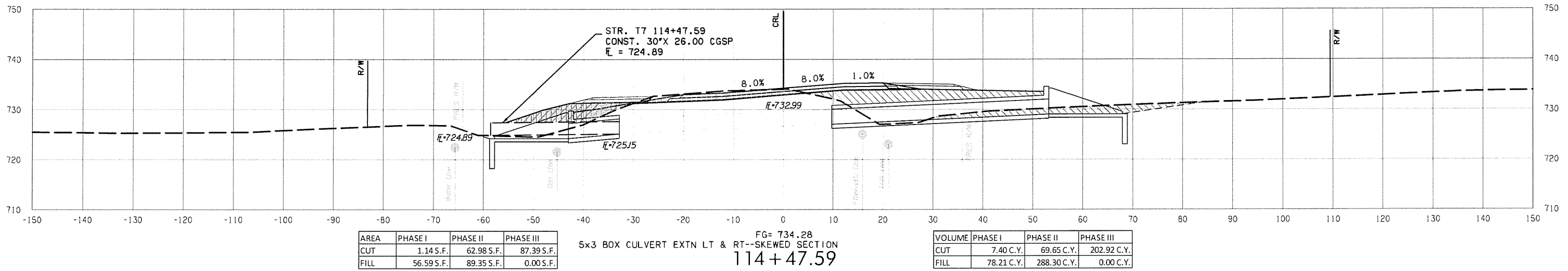
FG= 735.59
 110+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	68.49 C.Y.	589.44 C.Y.	670.23 C.Y.
FILL	7.97 C.Y.	0.00 C.Y.	0.00 C.Y.

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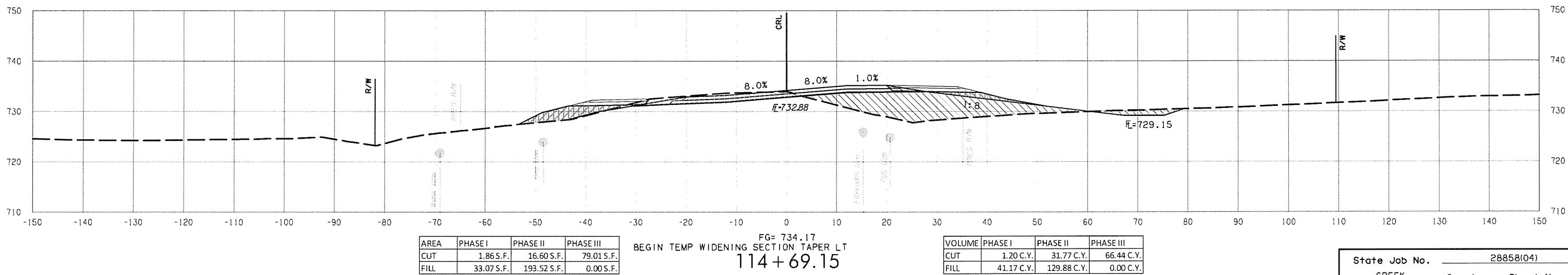
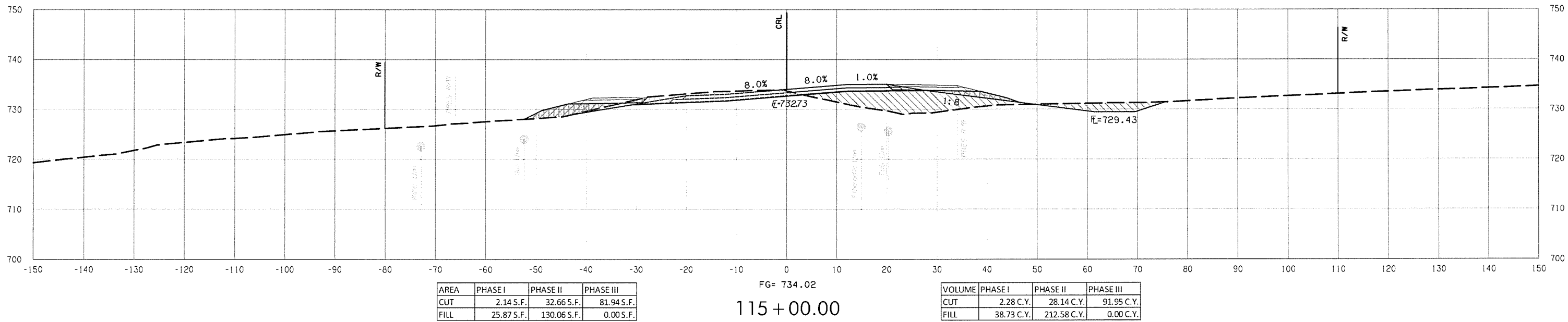
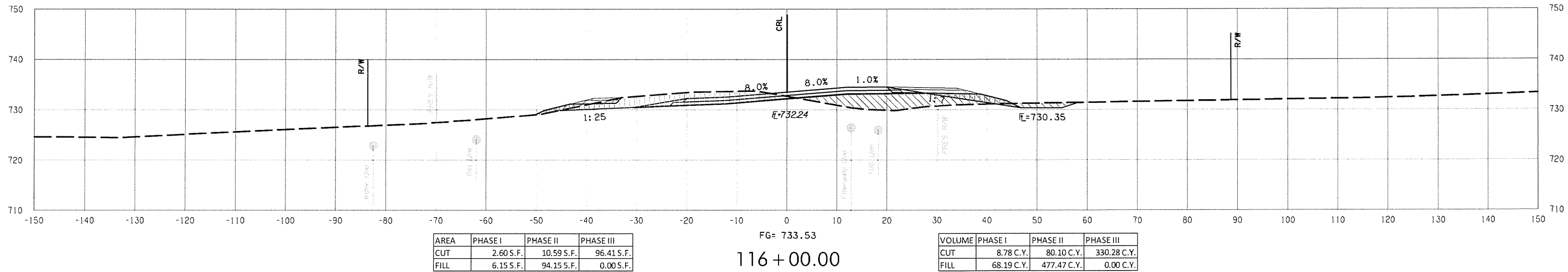
-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- PERMANENT FLOWLINE
- TEMPORARY FLOWLINE

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.

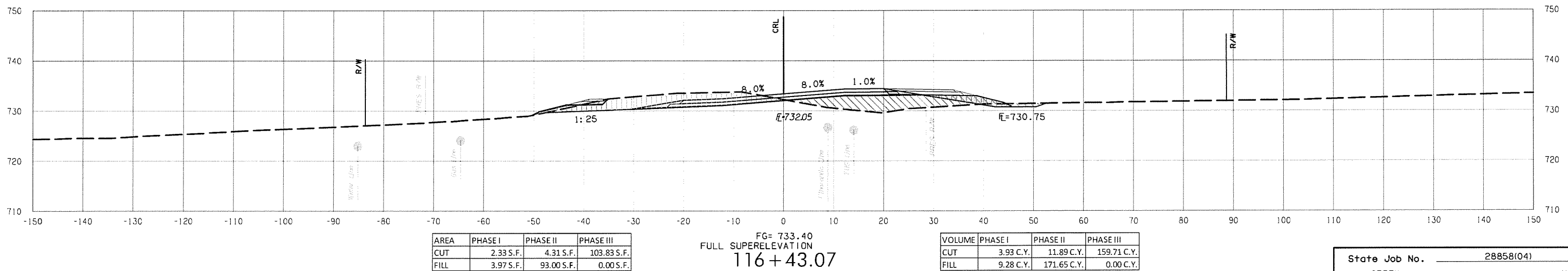
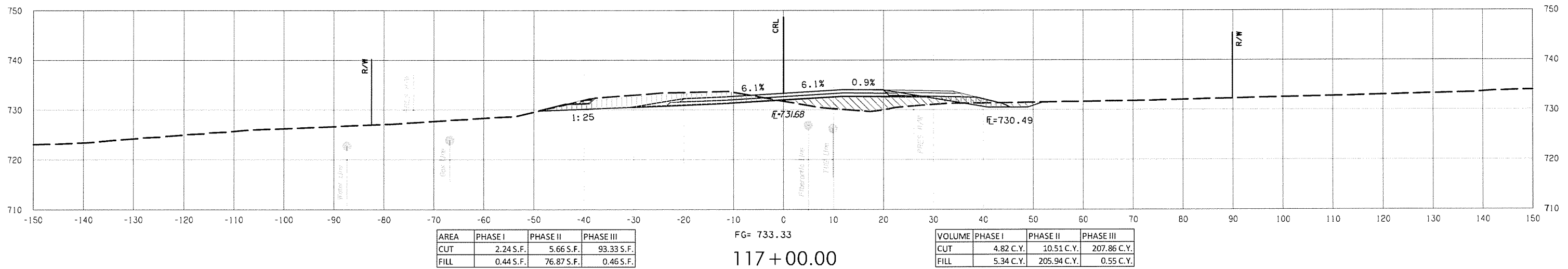
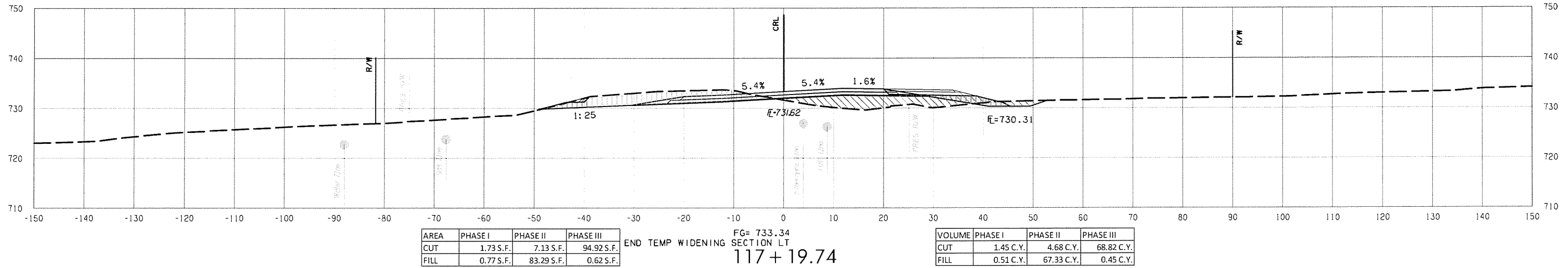






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 CONSTRUCTION FOR DETOURS
 $\bar{E}=123.45$ PERMANENT FLOWLINE
 $\bar{E}=123.45$ TEMPORARY FLOWLINE

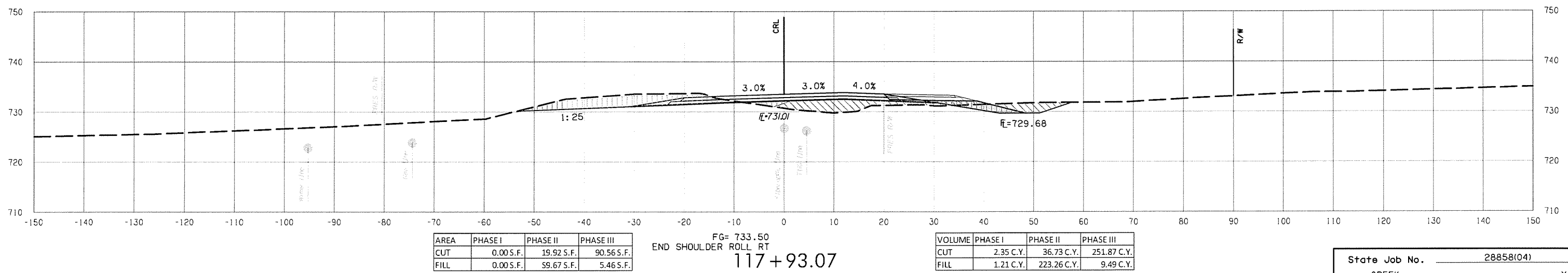
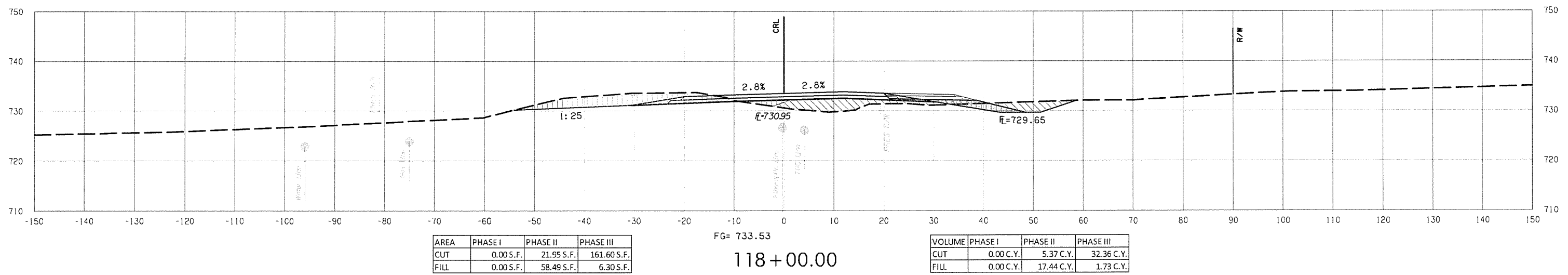
 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

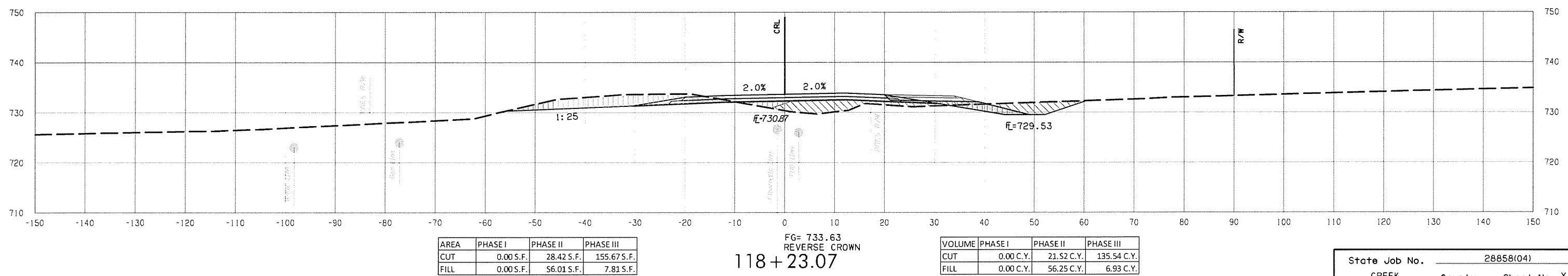
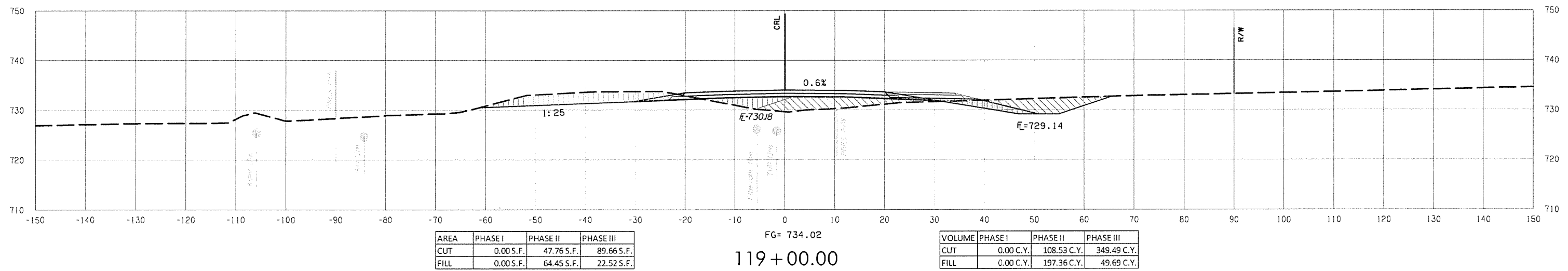
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







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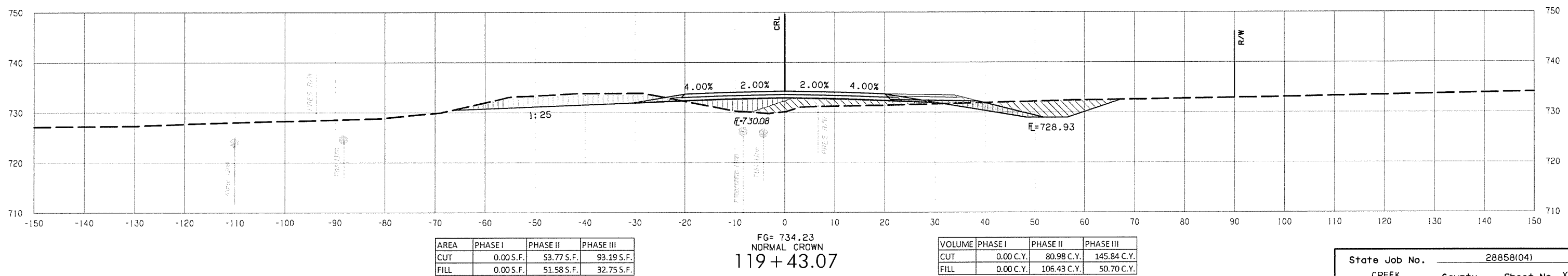
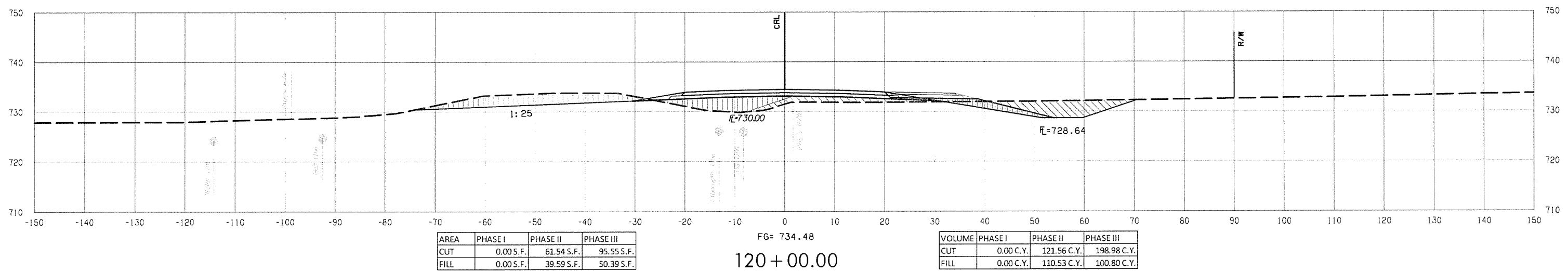
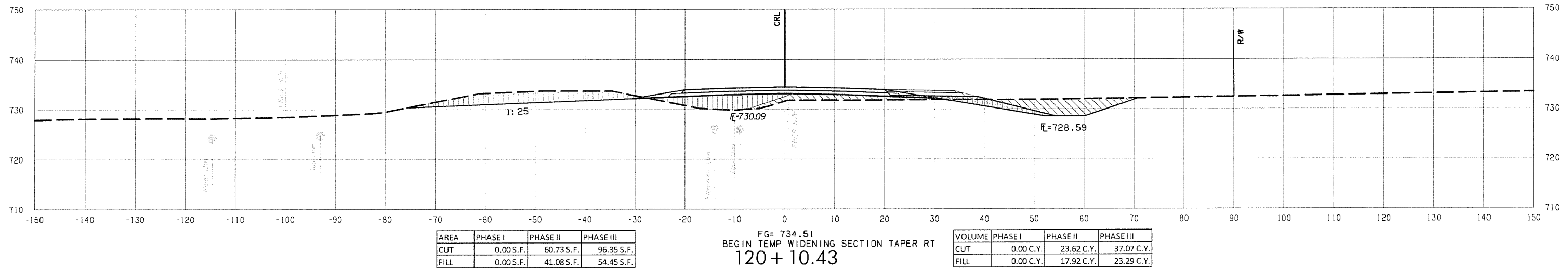
-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3





NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



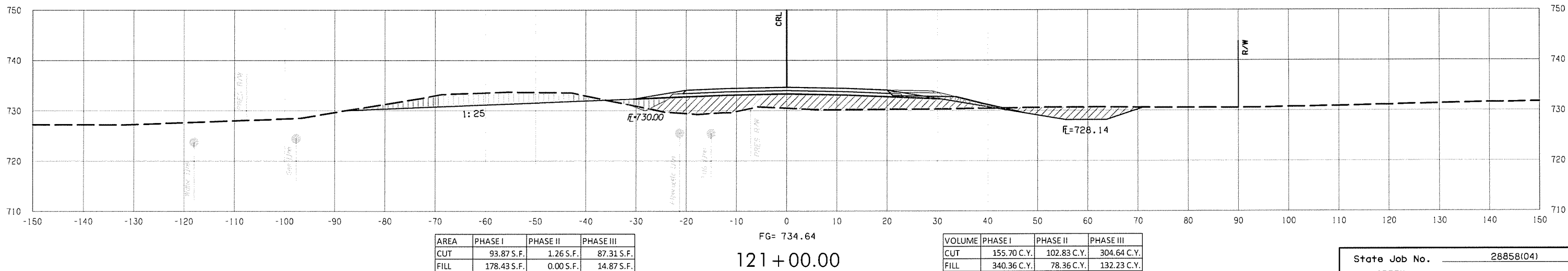
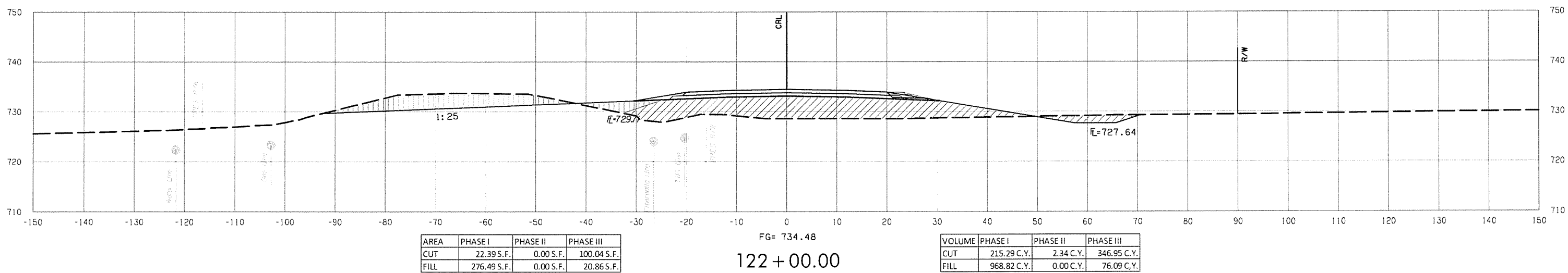
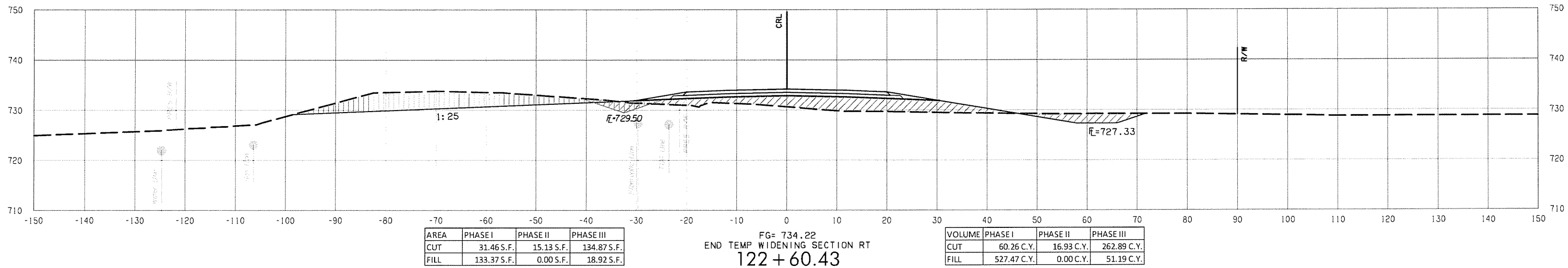
-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

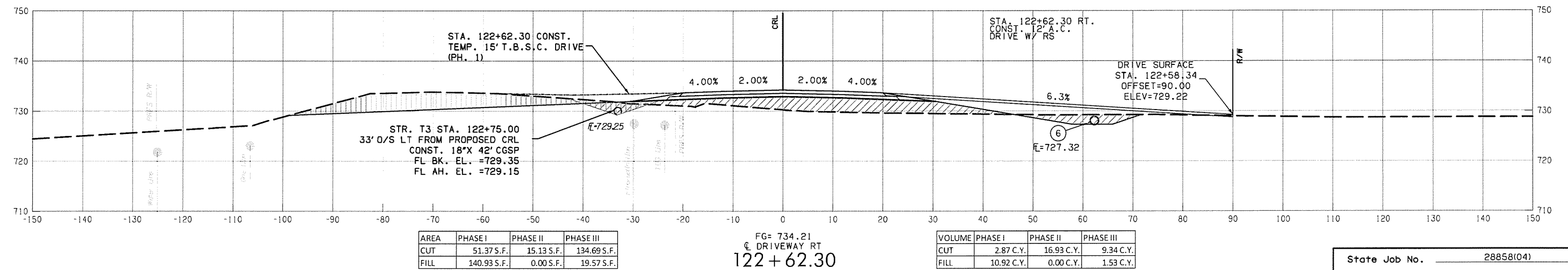
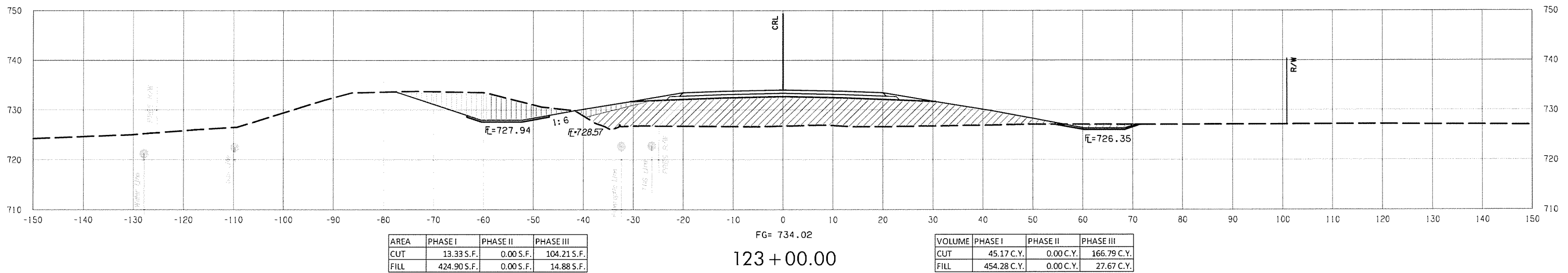
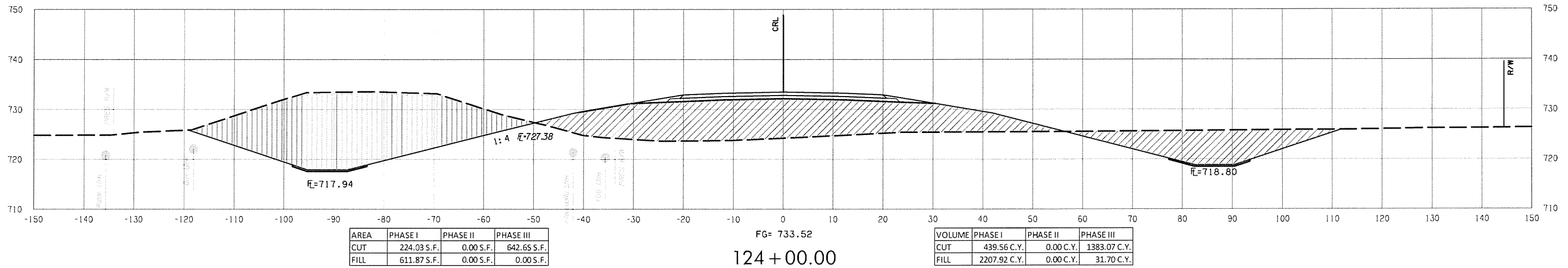
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



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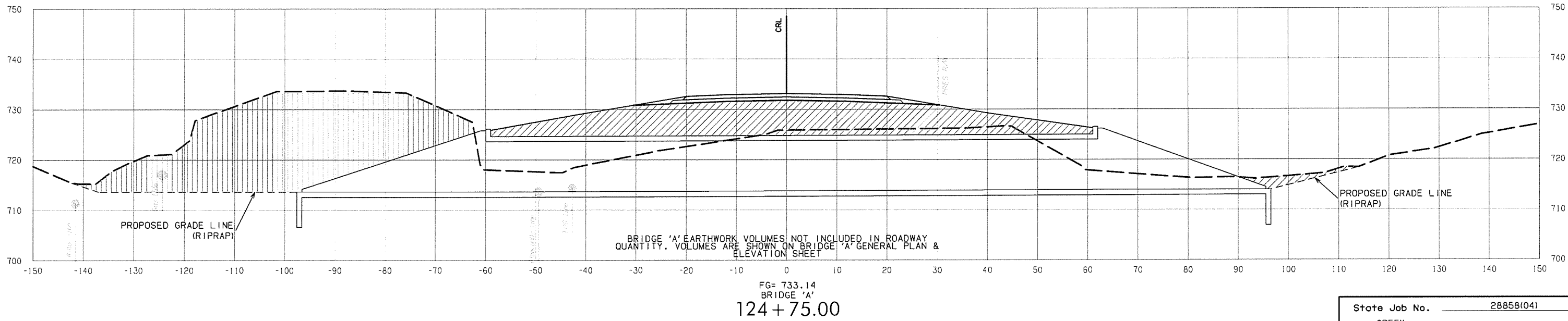
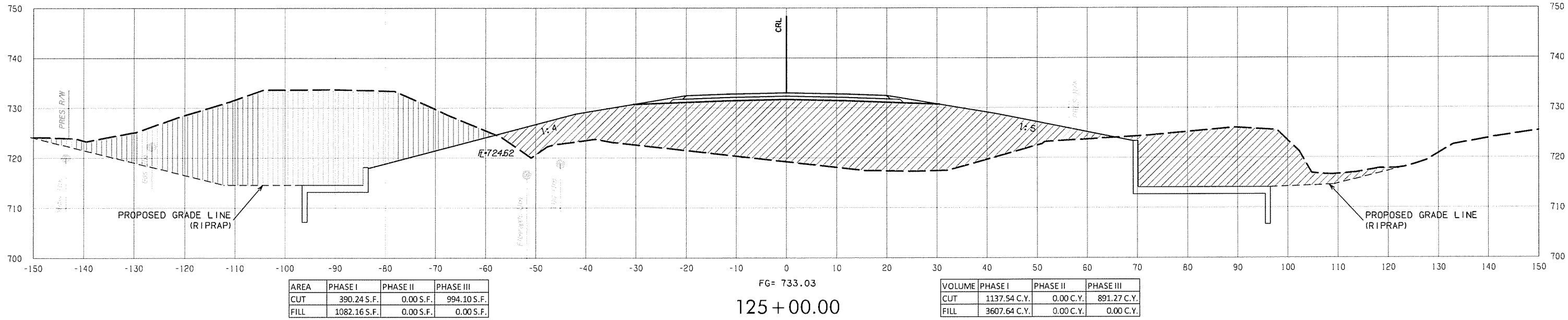
-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
- CONSTRUCTION PHASE 3

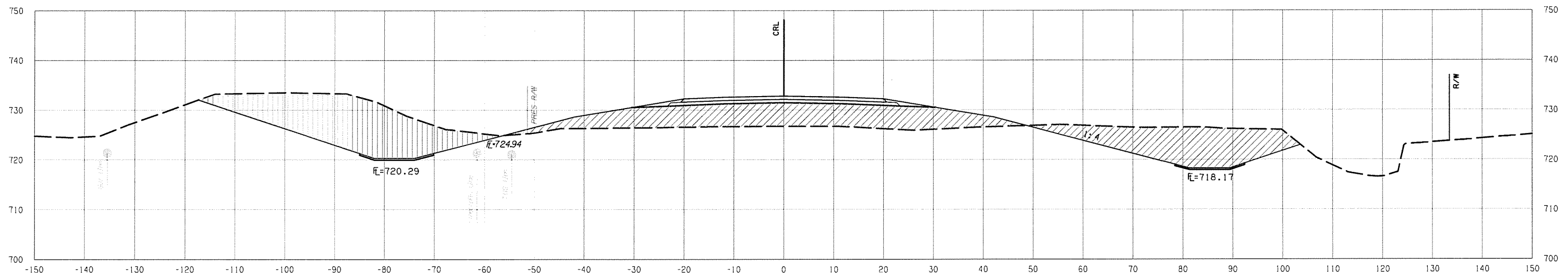
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

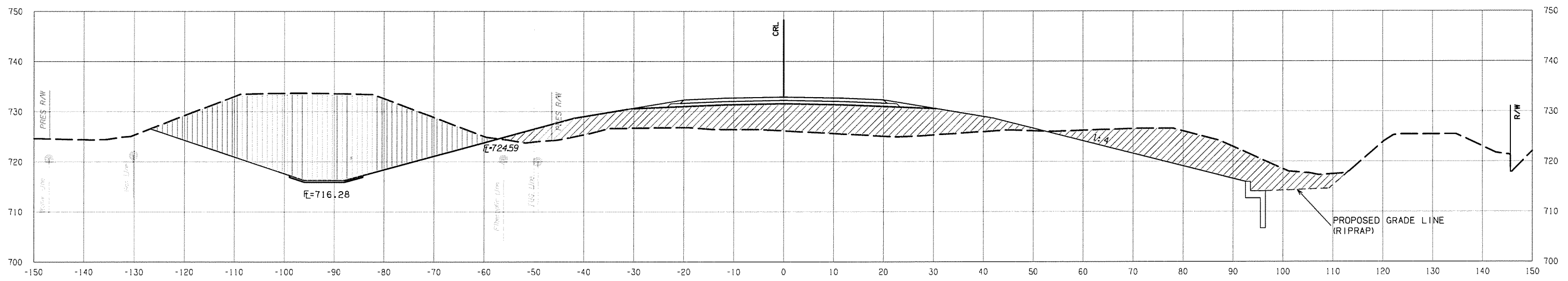
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	277.27 S.F.	0.00 S.F.	382.49 S.F.
FILL	373.34 S.F.	0.00 S.F.	0.00 S.F.

FG= 732.83
126 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	565.65 C.Y.	0.00 C.Y.	1154.01 C.Y.
FILL	981.58 C.Y.	0.00 C.Y.	0.00 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	267.40 S.F.	0.00 S.F.	728.71 S.F.
FILL	448.55 S.F.	0.00 S.F.	0.00 S.F.

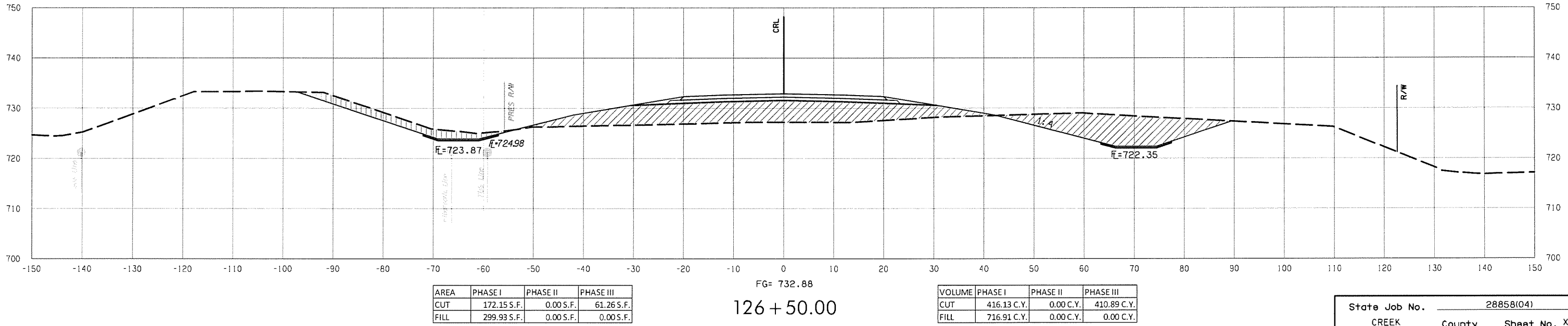
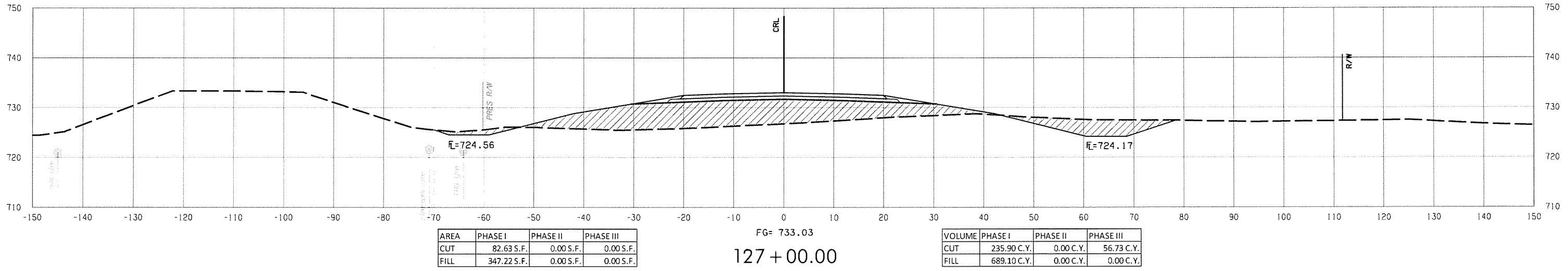
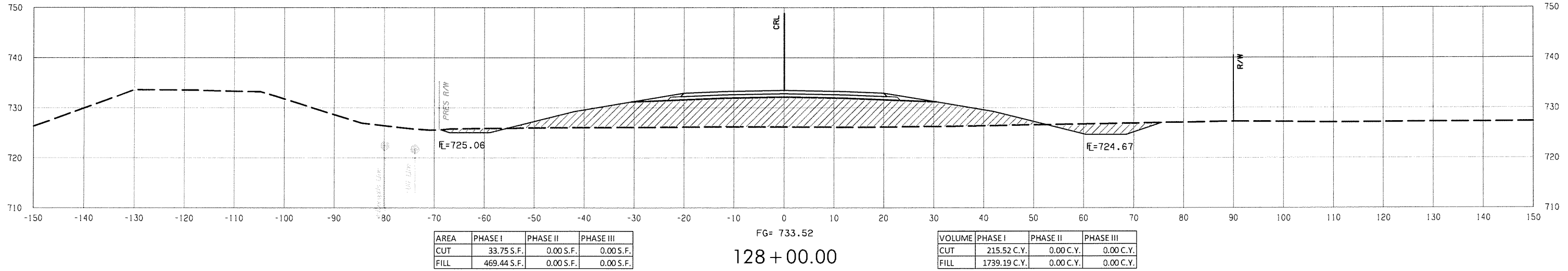
FG= 732.89
125 + 43.92

VOLUME	PHASE I	PHASE II	PHASE III
CUT	534.88 C.Y.	0.00 C.Y.	1401.22 C.Y.
FILL	1431.72 C.Y.	0.00 C.Y.	0.00 C.Y.





6/6/2016 JP28858_04\Sec Find.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

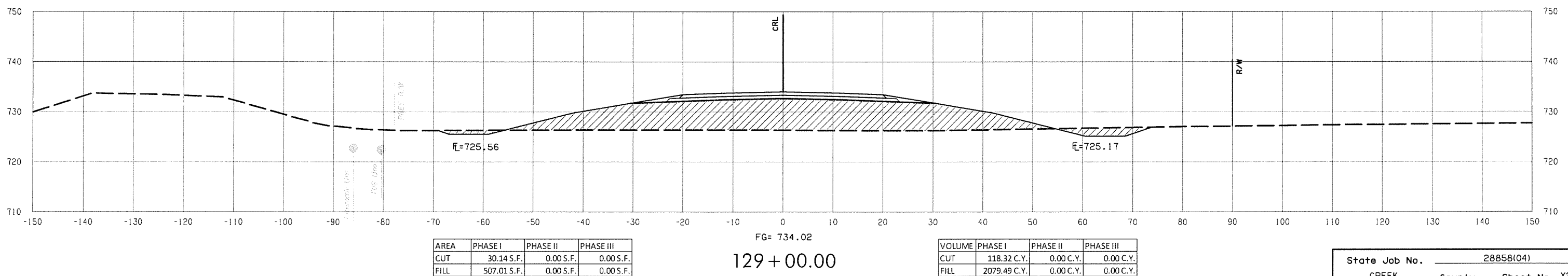
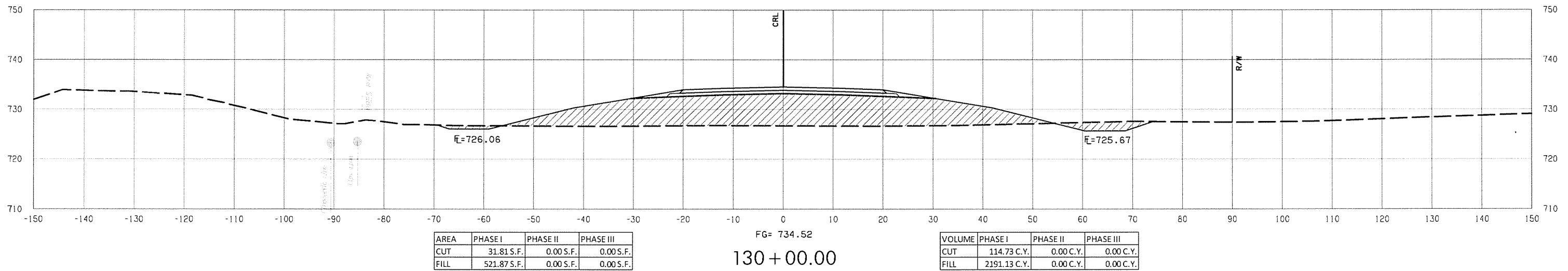
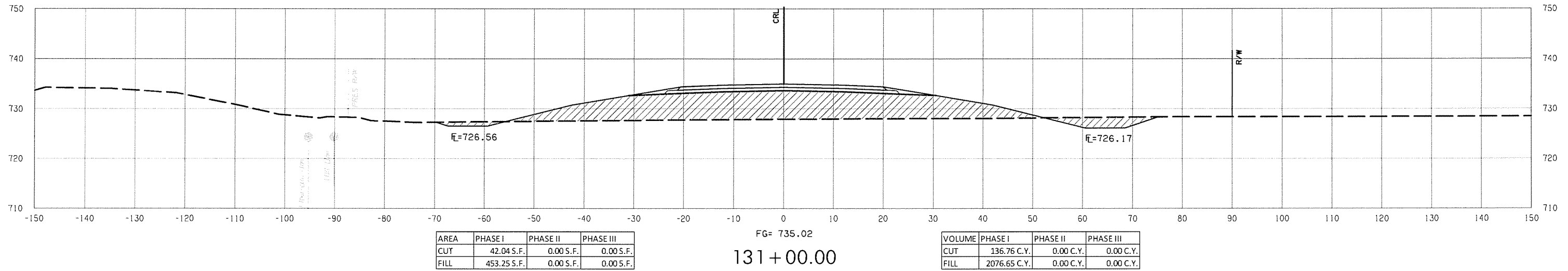
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







6/6/2016 JP28858_00A1sec Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

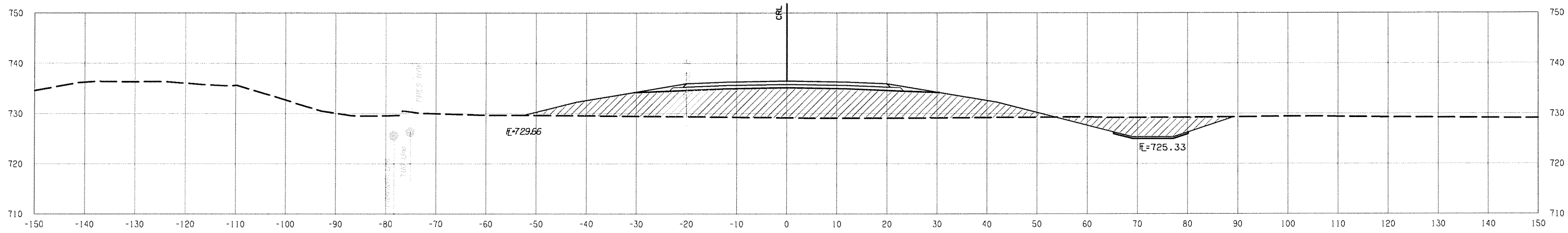
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



6/16/2016 JP28858_04\$sec Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

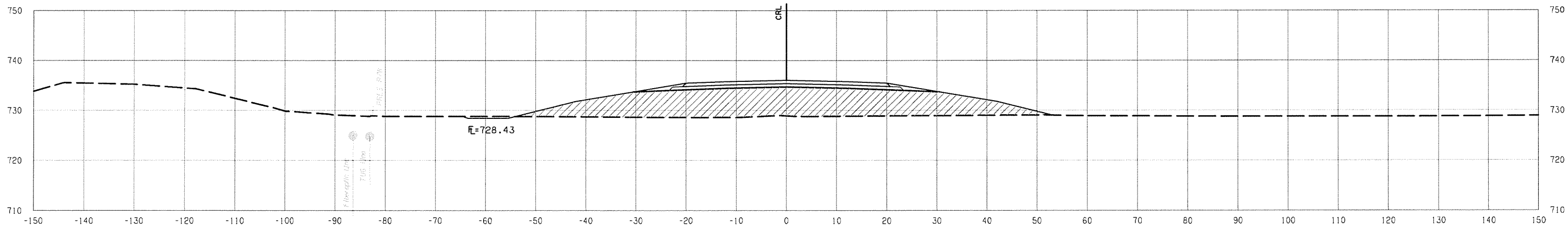
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	85.47 S.F.	0.00 S.F.	0.00 S.F.
FILL	459.40 S.F.	0.00 S.F.	0.00 S.F.

VOLUME	PHASE I	PHASE II	PHASE III
CUT	171.12 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	1957.77 C.Y.	0.00 C.Y.	0.00 C.Y.

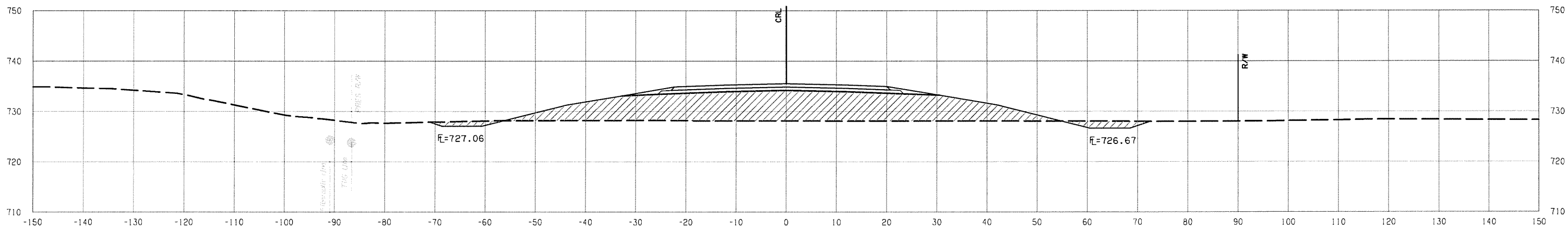
FG= 736.52
134 + 00.00



AREA	PHASE I	PHASE II	PHASE III
CUT	6.93 S.F.	0.00 S.F.	0.00 S.F.
FILL	459.90 S.F.	0.00 S.F.	0.00 S.F.

VOLUME	PHASE I	PHASE II	PHASE III
CUT	65.60 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	2015.11 C.Y.	0.00 C.Y.	0.00 C.Y.

FG= 736.02
133 + 00.00







AREA	PHASE I	PHASE II	PHASE III
CUT	28.49 S.F.	0.00 S.F.	0.00 S.F.
FILL	486.33 S.F.	0.00 S.F.	0.00 S.F.

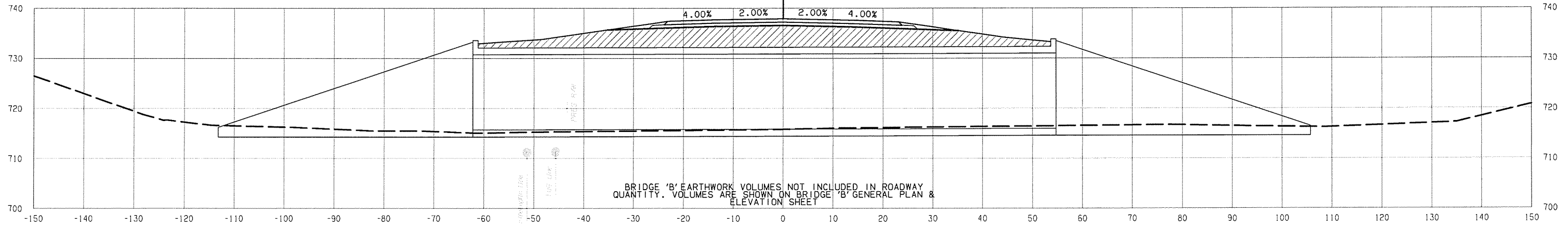
VOLUME	PHASE I	PHASE II	PHASE III
CUT	130.61 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	2000.96 C.Y.	0.00 C.Y.	0.00 C.Y.

FG= 735.52
132 + 00.00

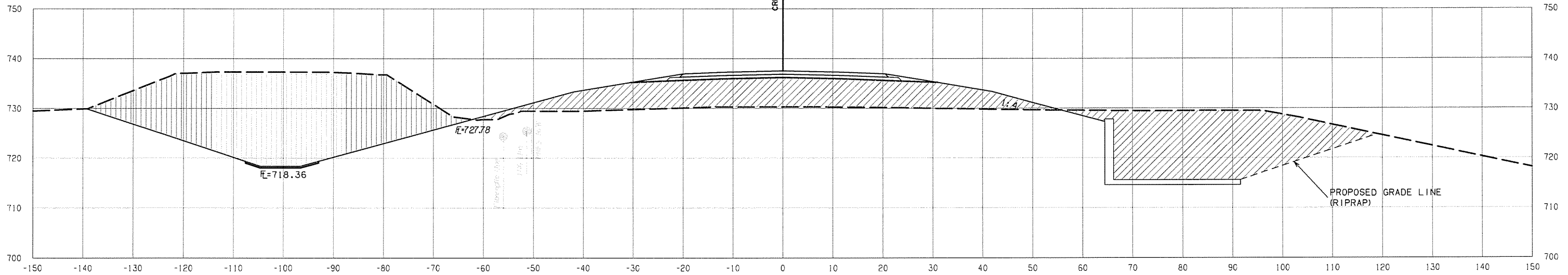
6/6/2016 JP28858_04Xsec Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



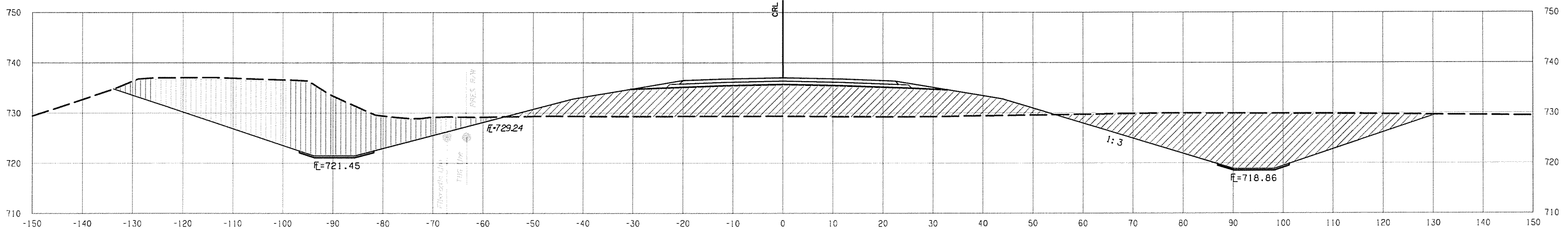
FG= 737.90
BRIDGE 'B'--SKEWED SECTION
136+76.89



AREA	PHASE I	PHASE II	PHASE III
CUT	568.22 S.F.	0.00 S.F.	920.36 S.F.
FILL	506.69 S.F.	0.00 S.F.	0.00 S.F.

VOLUME	PHASE I	PHASE II	PHASE III
CUT	1914.30 C.Y.	0.00 C.Y.	2732.18 C.Y.
FILL	2178.53 C.Y.	0.00 C.Y.	0.00 C.Y.

FG= 737.52
136+00.00



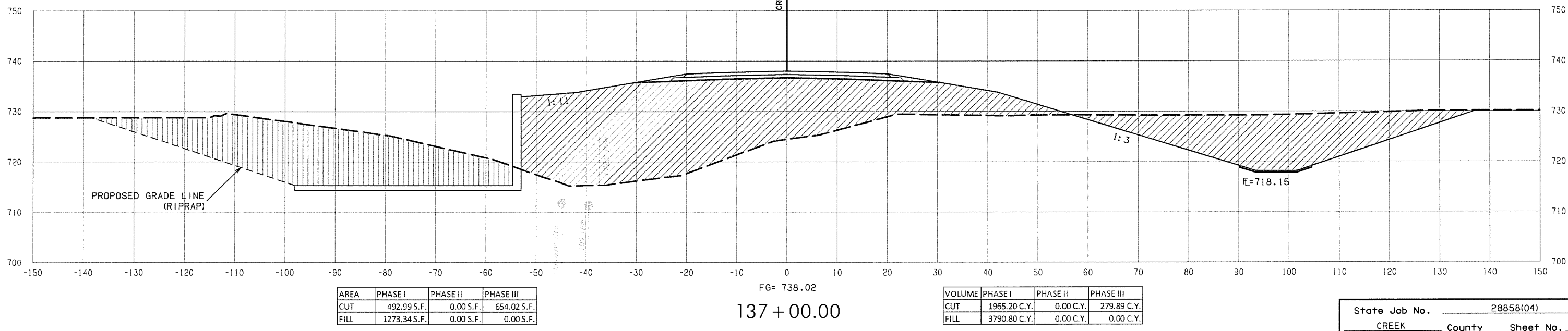
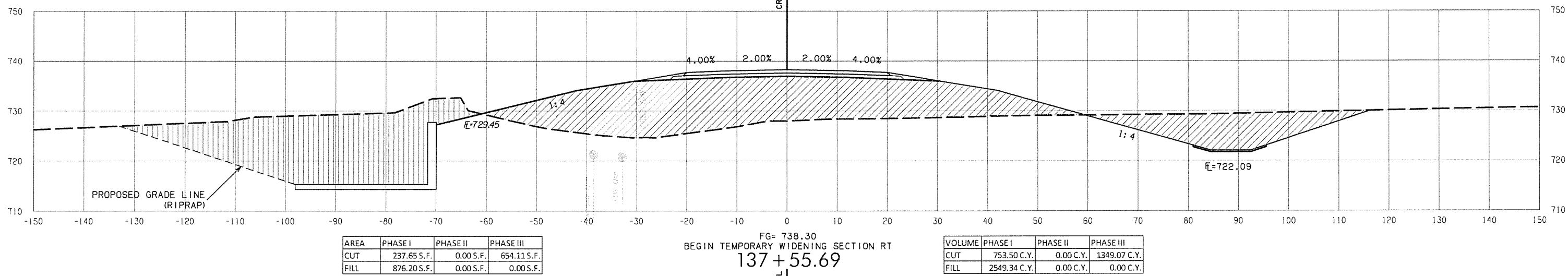
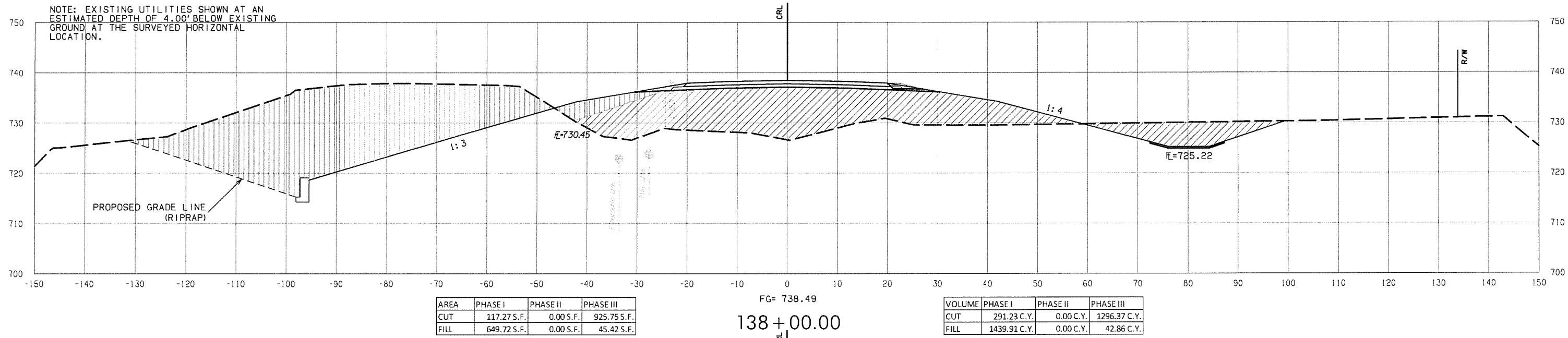
AREA	PHASE I	PHASE II	PHASE III
CUT	465.50 S.F.	0.00 S.F.	555.02 S.F.
FILL	516.28 S.F.	0.00 S.F.	0.00 S.F.

VOLUME	PHASE I	PHASE II	PHASE III
CUT	1020.32 C.Y.	0.00 C.Y.	1027.82 C.Y.
FILL	2077.83 C.Y.	0.00 C.Y.	0.00 C.Y.





FG= 737.02
135+00.00

- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
- CONSTRUCTION PHASE 3

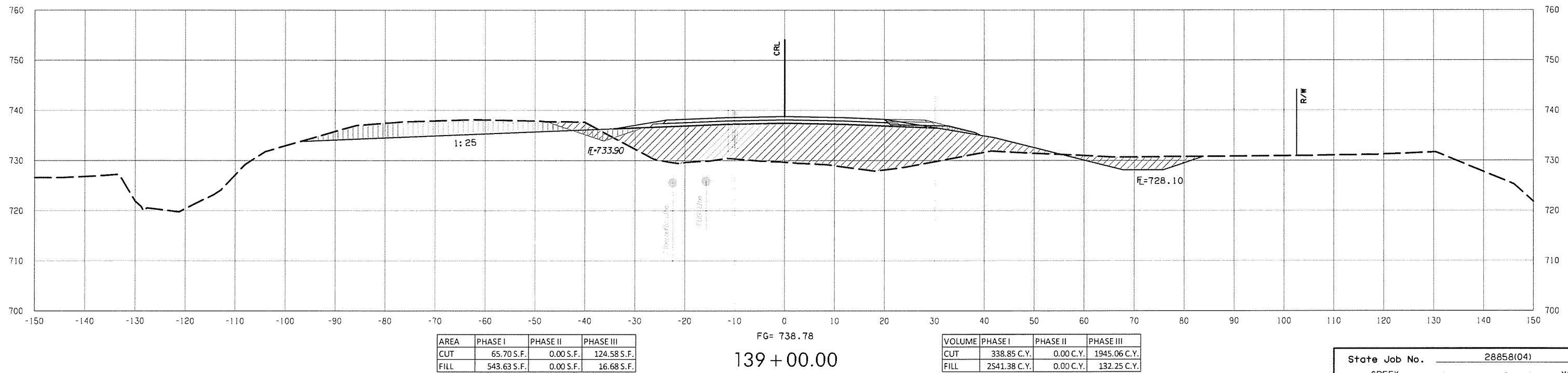
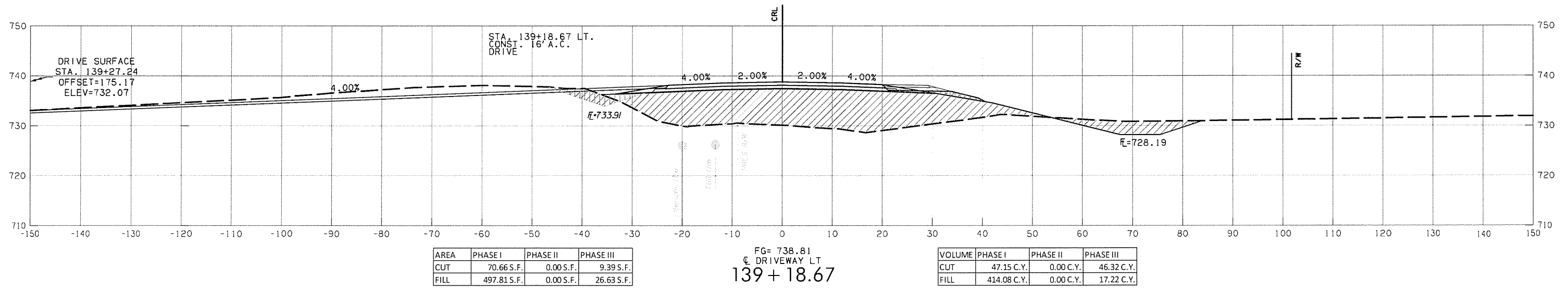
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







6/16/2016 JP28858_04\sec Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

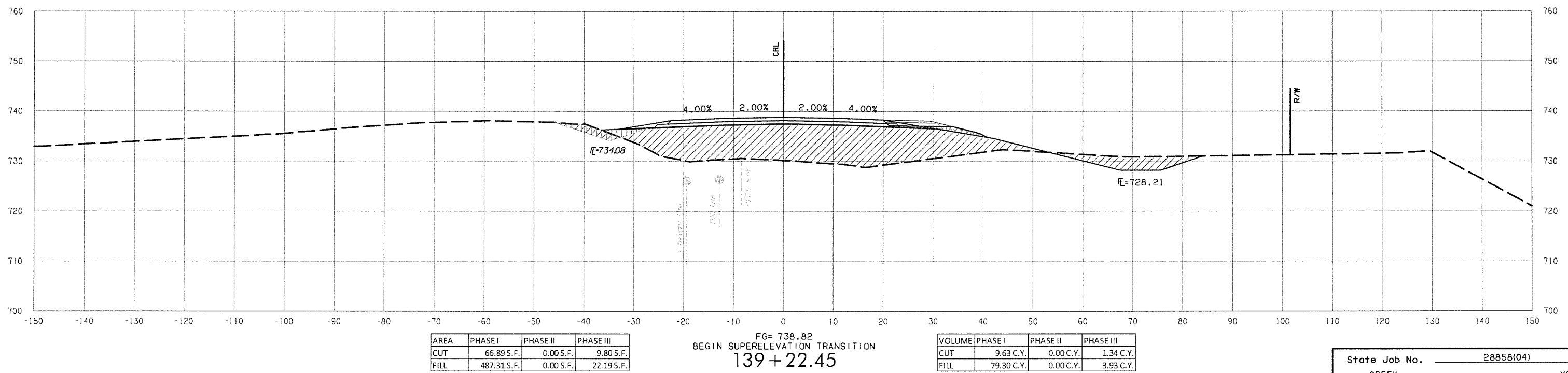
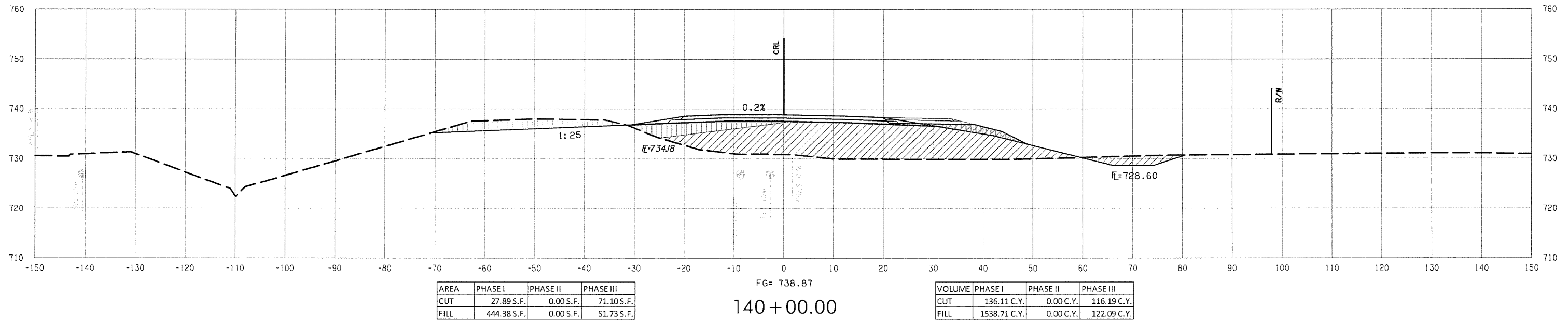
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.







6/6/2016 JP28858_04Xsec F1.mxd.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

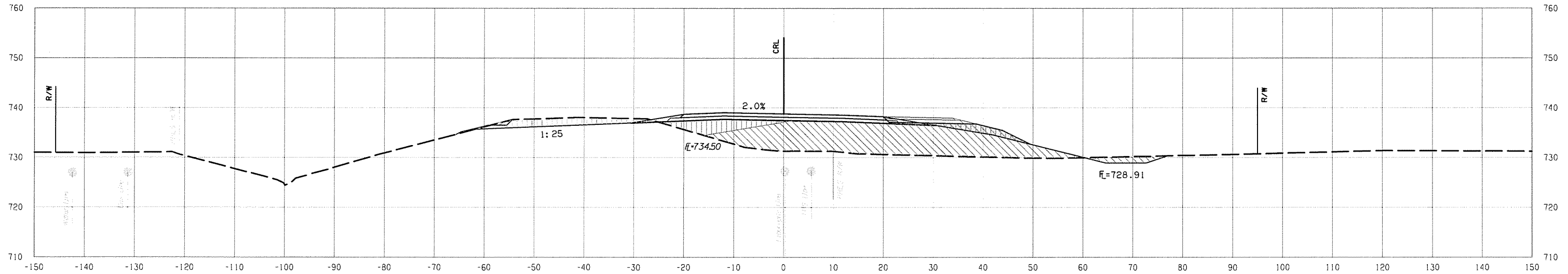
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



6/16/2016 JP28858_04Xsec Final.dgn

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

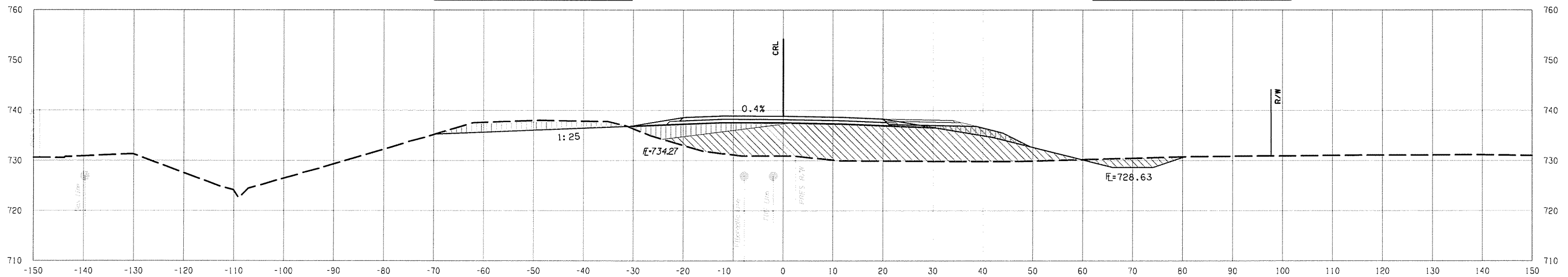
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.78 S.F.	15.52 S.F.	52.49 S.F.
FILL	1.07 S.F.	367.80 S.F.	42.74 S.F.

FG= 738.81
BEGIN TEMP WIDENING SECTION LT & REVERSE CROWN
140+63.76




VOLUME	PHASE I	PHASE II	PHASE III
CUT	1.92 C.Y.	45.28 C.Y.	132.35 C.Y.
FILL	1.32 C.Y.	1000.37 C.Y.	115.56 C.Y.






AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	26.59 S.F.	70.59 S.F.
FILL	0.00 S.F.	441.12 S.F.	50.70 S.F.

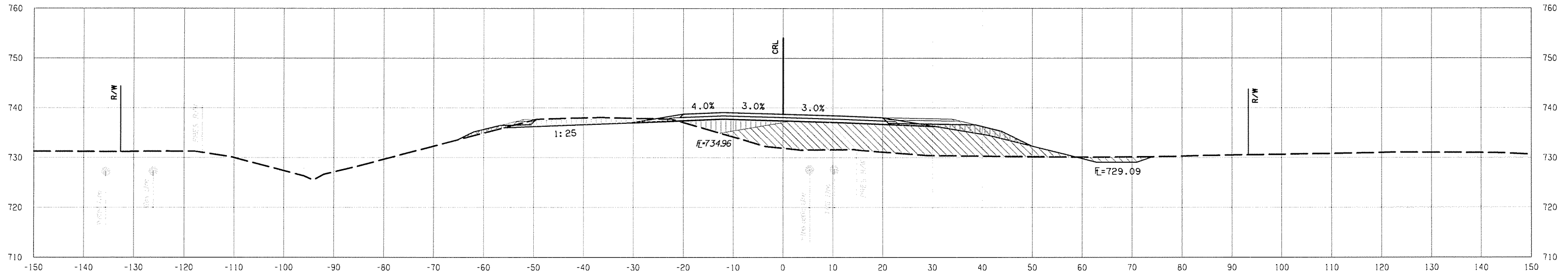
FG= 738.86
END TEMP WIDENING SECTION TAPER RT
140+05.69

VOLUME	PHASE I	PHASE II	PHASE III
CUT	2.94 C.Y.	2.80 C.Y.	14.93 C.Y.
FILL	53.85 C.Y.	53.45 C.Y.	12.41 C.Y.

 CONSTRUCTION FOR DETOURS
 PERMANENT FLOWLINE
 TEMPORARY FLOWLINE

 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

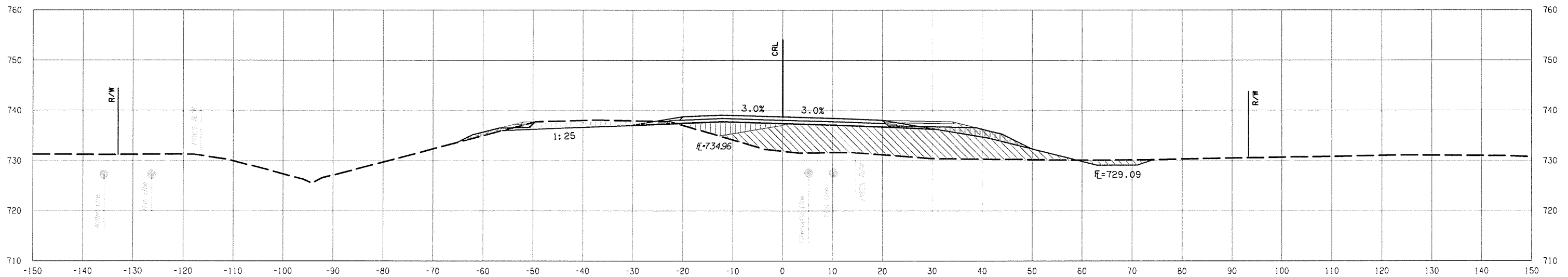
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.81 S.F.	12.21 S.F.	54.00 S.F.
FILL	6.03 S.F.	321.00 S.F.	32.04 S.F.

FG= 738.74
141+00.00





VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.06 C.Y.	0.41 C.Y.	1.82 C.Y.
FILL	0.23 C.Y.	12.45 C.Y.	1.25 C.Y.



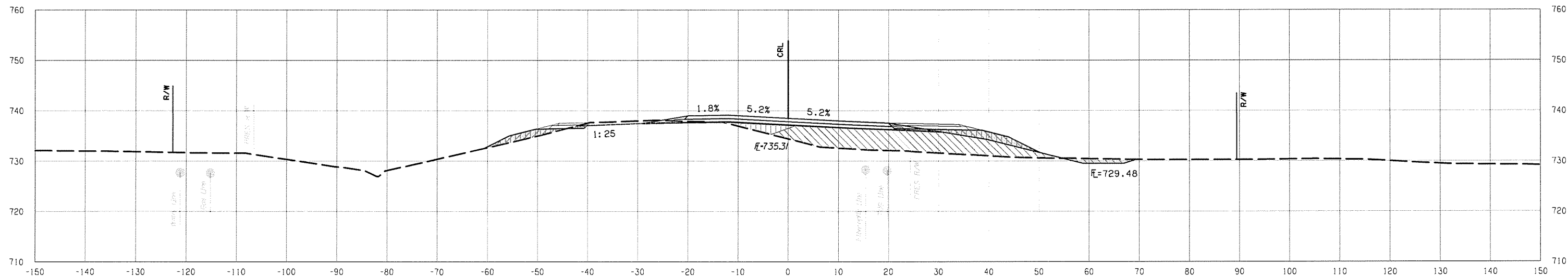
AREA	PHASE I	PHASE II	PHASE III
CUT	1.81 S.F.	12.19 S.F.	54.28 S.F.
FILL	5.93 S.F.	321.60 S.F.	32.30 S.F.

FG= 738.74
BEGIN SHOULDER ROLL LT
140+99.09

VOLUME	PHASE I	PHASE II	PHASE III
CUT	2.35 C.Y.	18.13 C.Y.	69.85 C.Y.
FILL	5.27 C.Y.	518.71 C.Y.	56.46 C.Y.

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3





NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



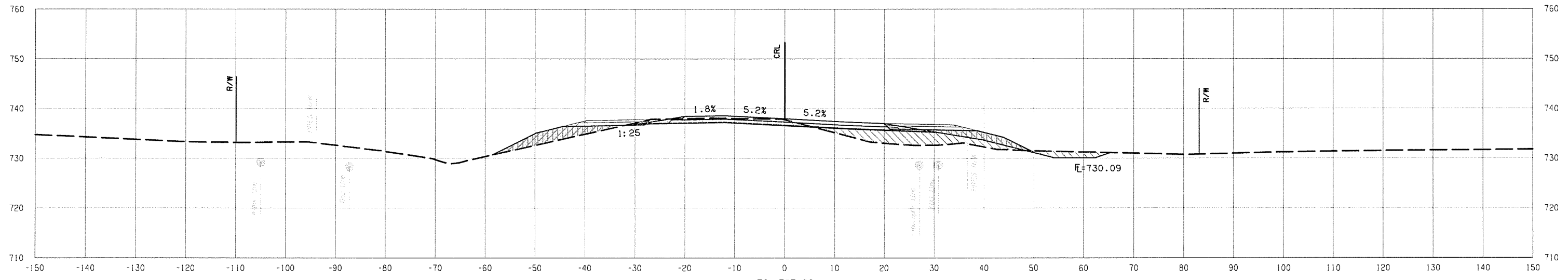
AREA	PHASE I	PHASE II	PHASE III
CUT	1.86 S.F.	10.66 S.F.	45.23 S.F.
FILL	15.66 S.F.	208.47 S.F.	15.64 S.F.

FG= 738.50
FULL SUPERELEVATION
141+76.81

VOLUME	PHASE I	PHASE II	PHASE III
CUT	5.22 C.Y.	32.53 C.Y.	141.14 C.Y.
FILL	35.47 C.Y.	866.09 C.Y.	78.00 C.Y.

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLDWLINE
-  CONSTRUCTION PHASE 3

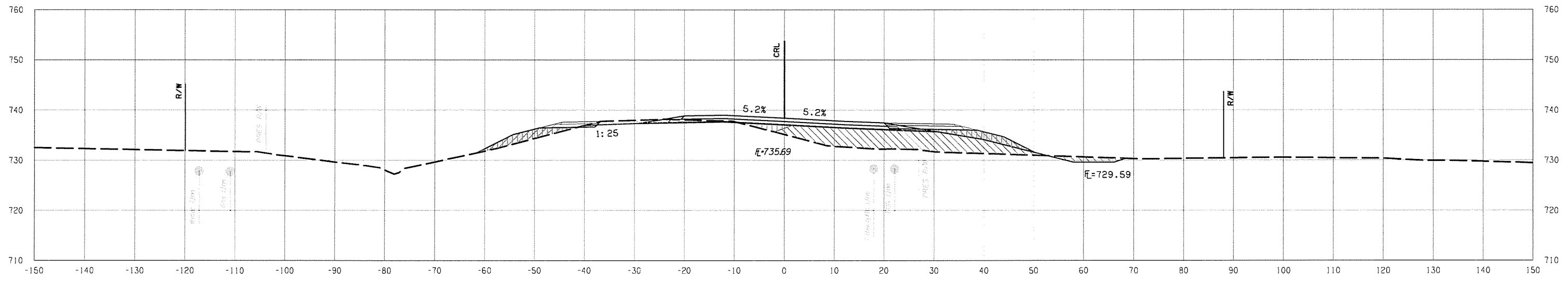
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	4.09 S.F.	15.13 S.F.	85.12 S.F.
FILL	39.91 S.F.	97.81 S.F.	0.00 S.F.

FG= 737.96
143 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	11.01 C.Y.	50.32 C.Y.	260.44 C.Y.
FILL	137.23 C.Y.	599.14 C.Y.	19.84 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	1.85 S.F.	12.04 S.F.	55.52 S.F.
FILL	24.53 S.F.	183.53 S.F.	9.32 S.F.

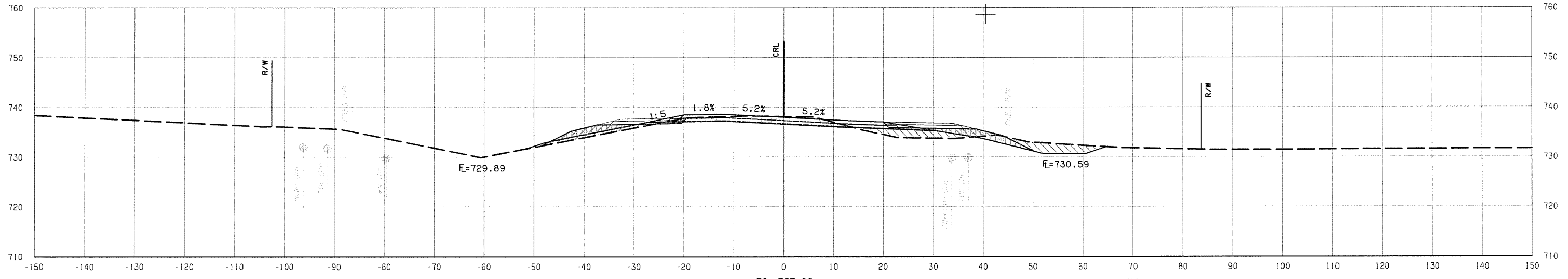
FG= 738.41
142 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	1.59 C.Y.	9.75 C.Y.	43.26 C.Y.
FILL	19.85 C.Y.	193.59 C.Y.	12.33 C.Y.

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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

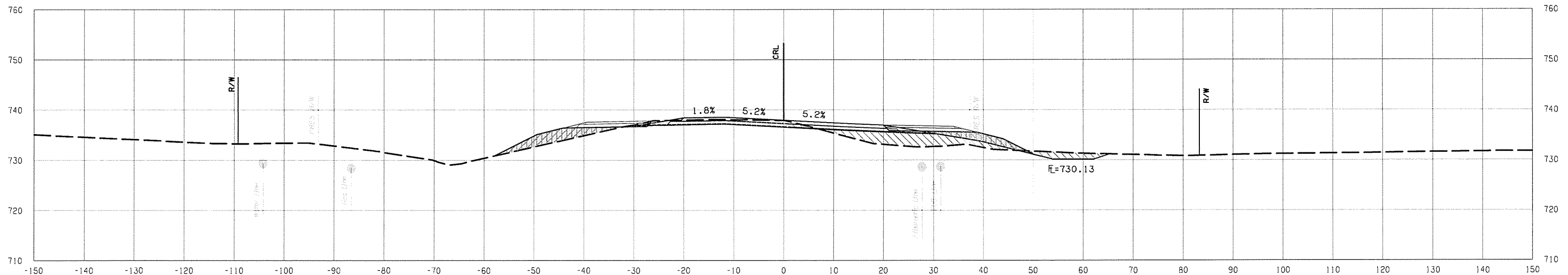
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.76 S.F.	41.12 S.F.	56.31 S.F.
FILL	27.66 S.F.	41.86 S.F.	3.74 S.F.

FG= 737.99
144+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	8.58 C.Y.	105.67 C.Y.	232.30 C.Y.
FILL	127.58 C.Y.	259.69 C.Y.	9.02 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.26 S.F.	20.70 S.F.	79.58 S.F.
FILL	37.24 S.F.	90.24 S.F.	0.85 S.F.

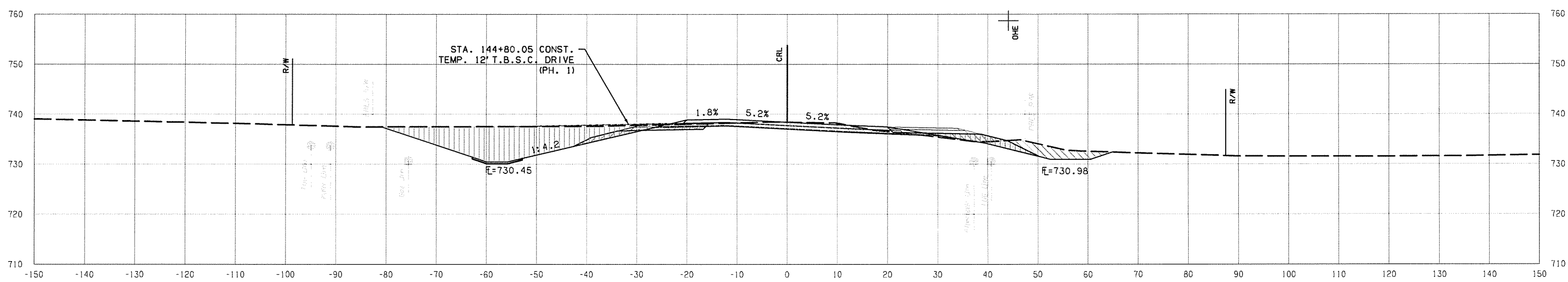
FG= 737.94
END TEMP WIDENING SECTION TAPER LT
143+07.69

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.90 C.Y.	5.10 C.Y.	23.45 C.Y.
FILL	12.63 C.Y.	30.80 C.Y.	0.14 C.Y.

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- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

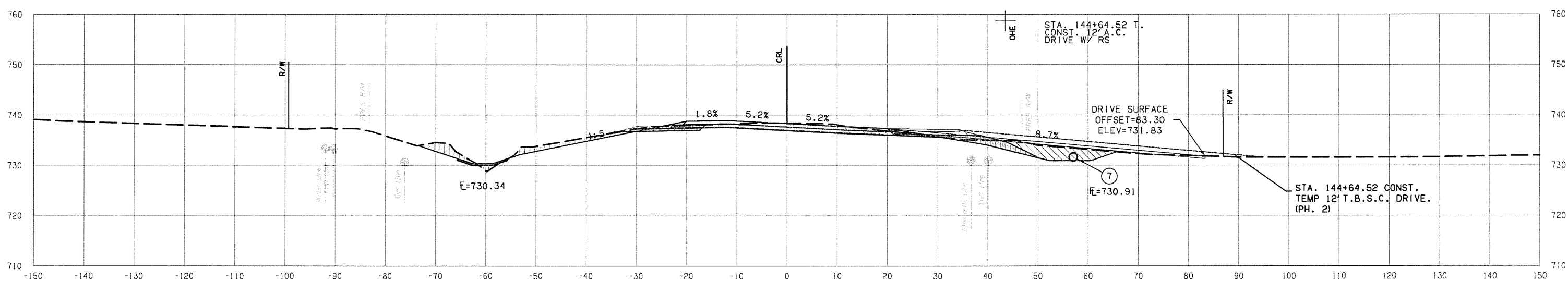
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	25.33 S.F.	54.79 S.F.	241.63 S.F.
FILL	0.00 S.F.	17.38 S.F.	6.78 S.F.

FG= 738.42
144 + 80.05

VOLUME	PHASE I	PHASE II	PHASE III
CUT	11.12 C.Y.	35.81 C.Y.	89.29 C.Y.
FILL	0.05 C.Y.	8.68 C.Y.	6.20 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	13.34 S.F.	69.74 S.F.	68.83 S.F.
FILL	0.16 S.F.	8.86 S.F.	11.97 S.F.

FG= 738.31
CL DRIVEWAY RT
144 + 64.52

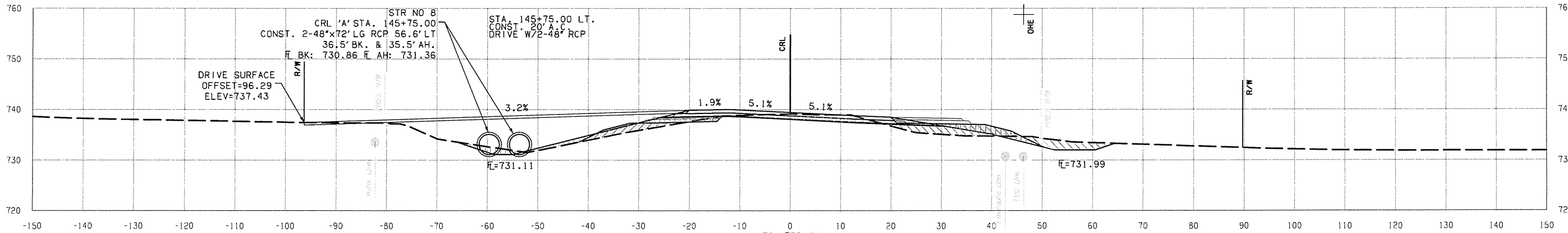
VOLUME	PHASE I	PHASE II	PHASE III
CUT	19.23 C.Y.	132.46 C.Y.	149.52 C.Y.
FILL	38.22 C.Y.	69.69 C.Y.	21.59 C.Y.

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 CONSTRUCTION FOR DETOURS
 $\bar{E}=123.45$ PERMANENT FLOWLINE
 $\bar{E}=123.45$ TEMPORARY FLOWLINE

 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

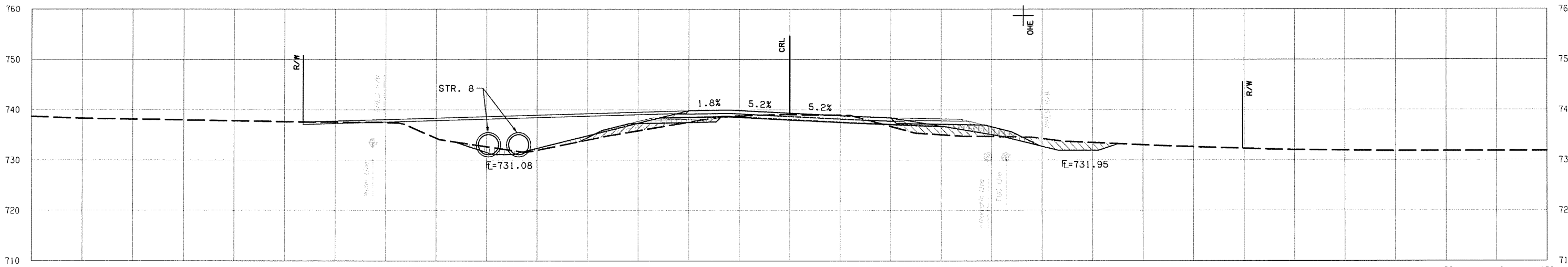
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.24 S.F.	38.80 S.F.	38.91 S.F.
FILL	21.37 S.F.	44.90 S.F.	22.02 S.F.

FG= 739.41
 CL DRIVEWAY LT
145 + 75.00

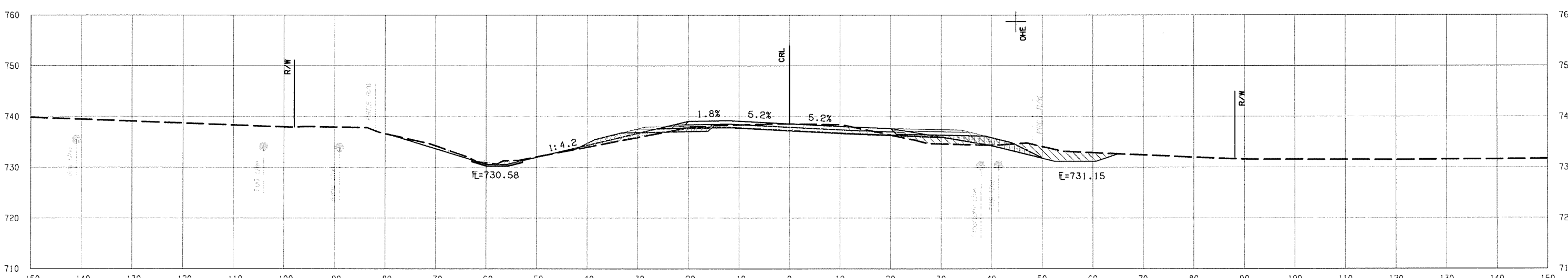
VOLUME	PHASE I	PHASE II	PHASE III
CUT	12.64 C.Y.	127.00 C.Y.	121.60 C.Y.
FILL	59.55 C.Y.	122.33 C.Y.	48.58 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.24 S.F.	40.90 S.F.	39.46 S.F.
FILL	20.85 S.F.	44.64 S.F.	21.03 S.F.

FG= 739.36
 BEGIN SUPERELEVATION TRANSITION
145 + 71.19


VOLUME	PHASE I	PHASE II	PHASE III
CUT	12.00 C.Y.	123.32 C.Y.	116.15 C.Y.
FILL	55.74 C.Y.	115.72 C.Y.	44.61 C.Y.






AREA	PHASE I	PHASE II	PHASE III
CUT	5.86 S.F.	52.64 S.F.	48.64 S.F.
FILL	15.91 S.F.	31.69 S.F.	8.39 S.F.

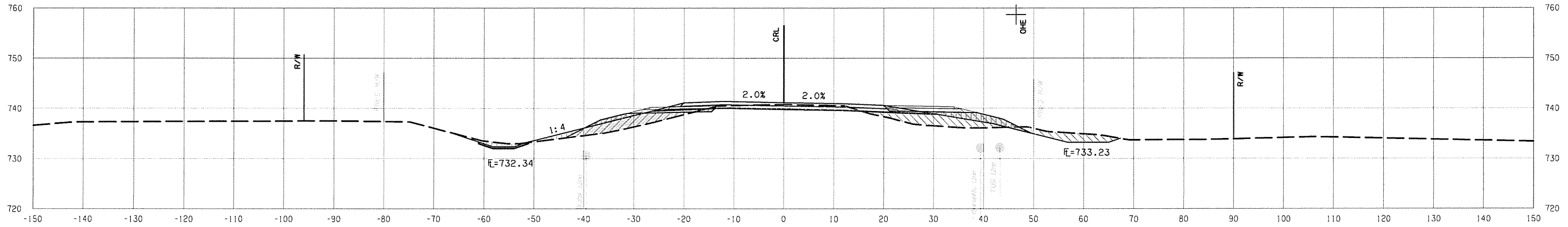
FG= 738.59
145 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	11.52 C.Y.	39.69 C.Y.	107.24 C.Y.
FILL	6.76 C.Y.	20.85 C.Y.	6.45 C.Y.

 CONSTRUCTION FOR DETOURS
 $\bar{E}=123.45$ PERMANENT FLOWLINE
 $\bar{E}=123.45$ TEMPORARY FLOWLINE

 CONSTRUCTION PHASE 1
 CONSTRUCTION PHASE 2
 CONSTRUCTION PHASE 3

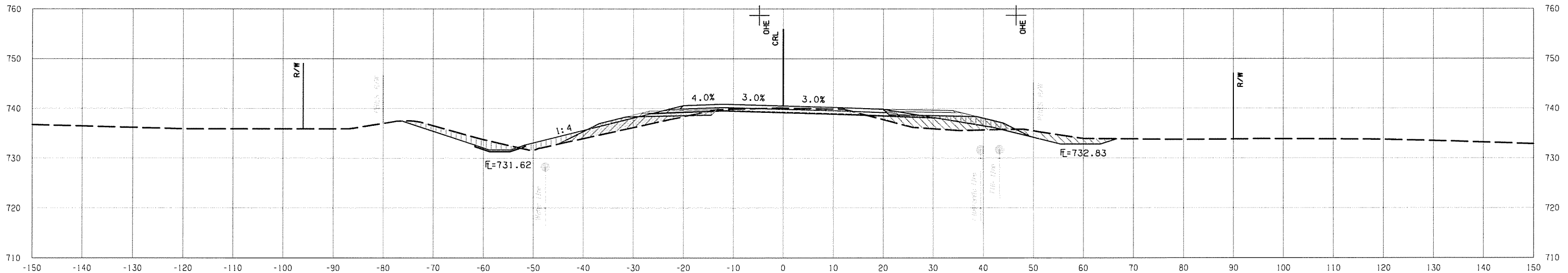
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.89 S.F.	35.19 S.F.	41.53 S.F.
FILL	45.91 S.F.	63.84 S.F.	12.68 S.F.

FG= 741.19
 REVERSE CROWN
146+84.24

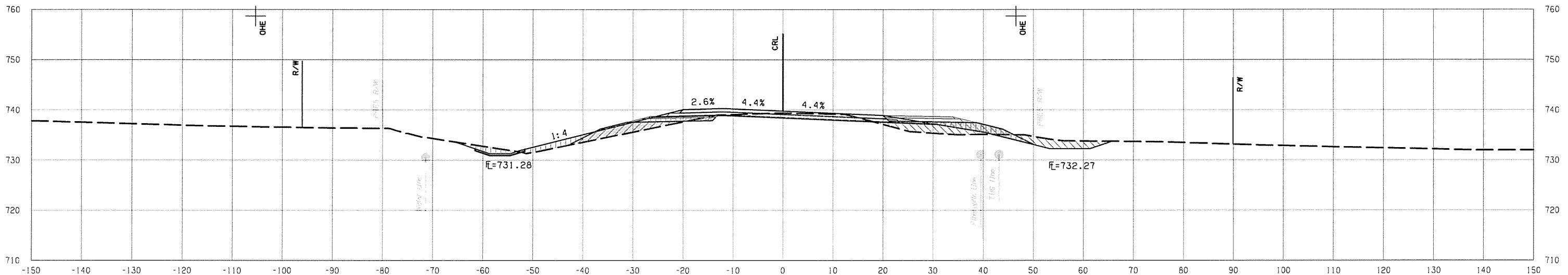
VOLUME	PHASE I	PHASE II	PHASE III
CUT	2.83 C.Y.	44.94 C.Y.	65.29 C.Y.
FILL	63.12 C.Y.	91.49 C.Y.	26.88 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.44 S.F.	33.51 S.F.	58.26 S.F.
FILL	37.98 S.F.	57.76 S.F.	23.05 S.F.

FG= 740.54
 END SHOULDER ROLL LT
146+48.91

VOLUME	PHASE I	PHASE II	PHASE III
CUT	4.78 C.Y.	64.85 C.Y.	87.15 C.Y.
FILL	71.46 C.Y.	109.62 C.Y.	53.41 C.Y.



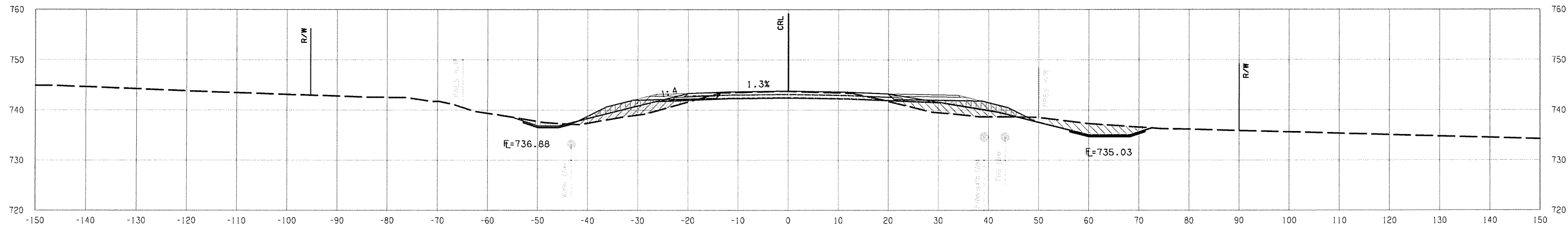
AREA	PHASE I	PHASE II	PHASE III
CUT	2.84 S.F.	38.10 S.F.	37.96 S.F.
FILL	30.63 S.F.	47.47 S.F.	28.22 S.F.

FG= 739.76
146+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	3.24 C.Y.	42.15 C.Y.	41.31 C.Y.
FILL	31.59 C.Y.	56.52 C.Y.	30.22 C.Y.

- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- PERMANENT FLOWLINE
- TEMPORARY FLOWLINE

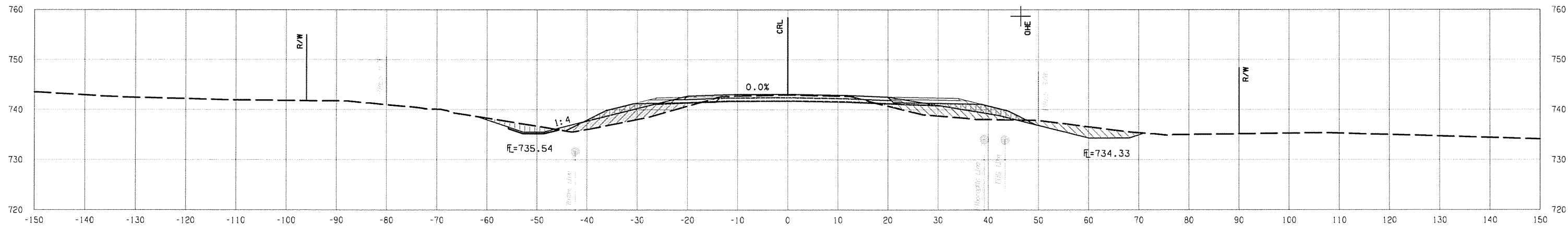
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.65 S.F.	53.17 S.F.	37.01 S.F.
FILL	47.38 S.F.	55.07 S.F.	0.15 S.F.

FG= 743.82
148 + 00.00

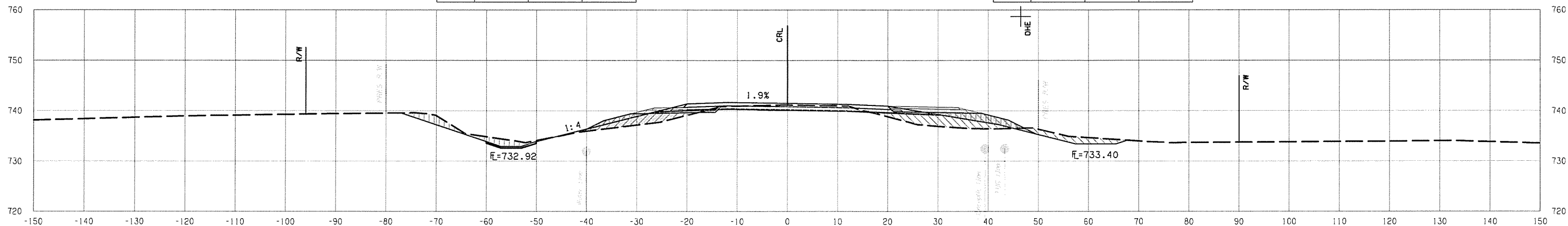
VOLUME	PHASE I	PHASE II	PHASE III
CUT	3.65 C.Y.	53.41 C.Y.	40.67 C.Y.
FILL	63.04 C.Y.	69.40 C.Y.	1.61 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.20 S.F.	46.94 S.F.	39.22 S.F.
FILL	55.37 S.F.	58.03 S.F.	2.48 S.F.

FG= 743.09
147 + 71.19

VOLUME	PHASE I	PHASE II	PHASE III
CUT	9.20 C.Y.	102.76 C.Y.	137.97 C.Y.
FILL	134.39 C.Y.	182.44 C.Y.	10.66 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	3.78 S.F.	31.01 S.F.	65.43 S.F.
FILL	33.27 S.F.	62.30 S.F.	4.55 S.F.

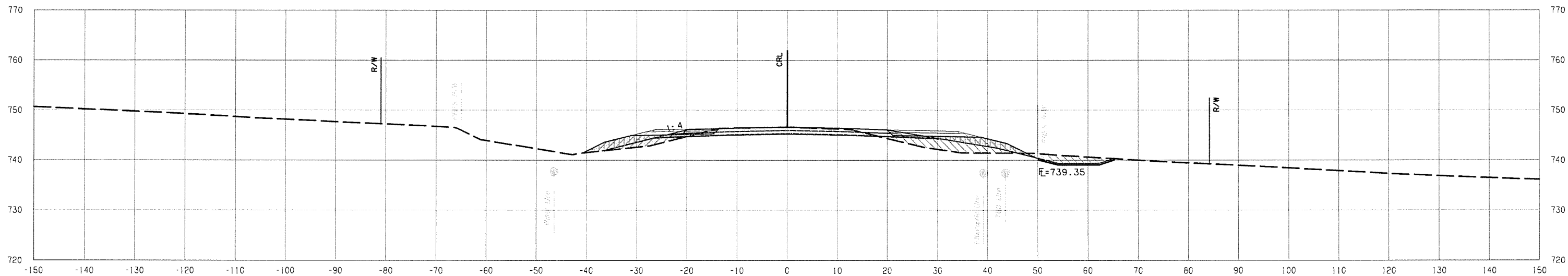
FG= 741.50
147 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	1.65 C.Y.	19.32 C.Y.	31.22 C.Y.
FILL	26.58 C.Y.	42.34 C.Y.	5.78 C.Y.

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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

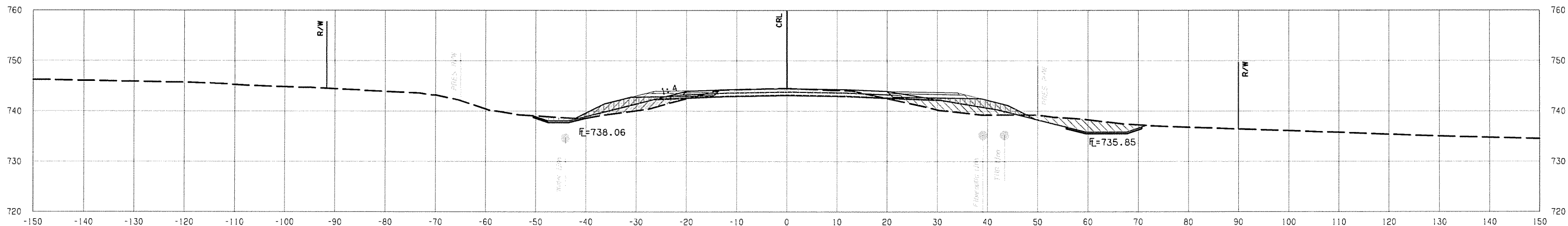
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.92 S.F.	33.43 S.F.	60.86 S.F.
FILL	33.23 S.F.	60.67 S.F.	0.00 S.F.

FG= 746.63
149 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	5.16 C.Y.	118.12 C.Y.	178.09 C.Y.
FILL	117.80 C.Y.	184.08 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.83 S.F.	52.25 S.F.	68.32 S.F.
FILL	41.07 S.F.	55.43 S.F.	0.00 S.F.

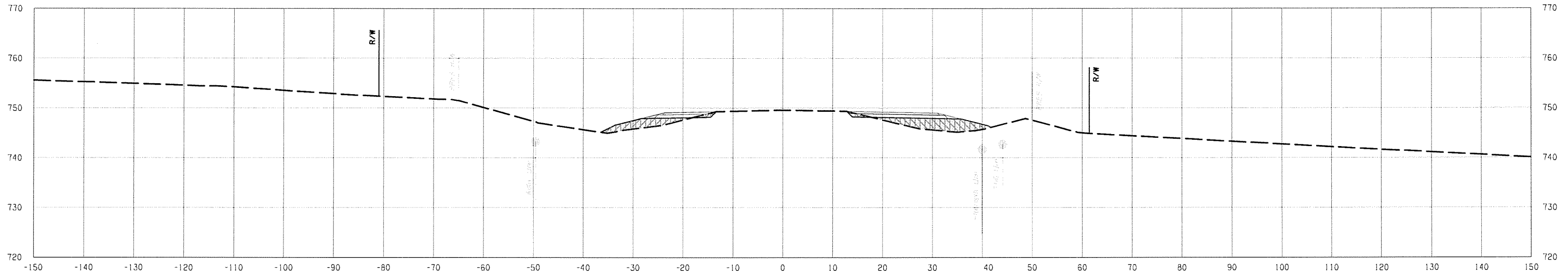
FG= 744.50
NORMAL CROWN
148 + 25.55

VOLUME	PHASE I	PHASE II	PHASE III
CUT	2.59 C.Y.	49.88 C.Y.	49.84 C.Y.
FILL	48.12 C.Y.	60.13 C.Y.	0.08 C.Y.

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- $\bar{E}=123.45$ CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
- CONSTRUCTION PHASE 3

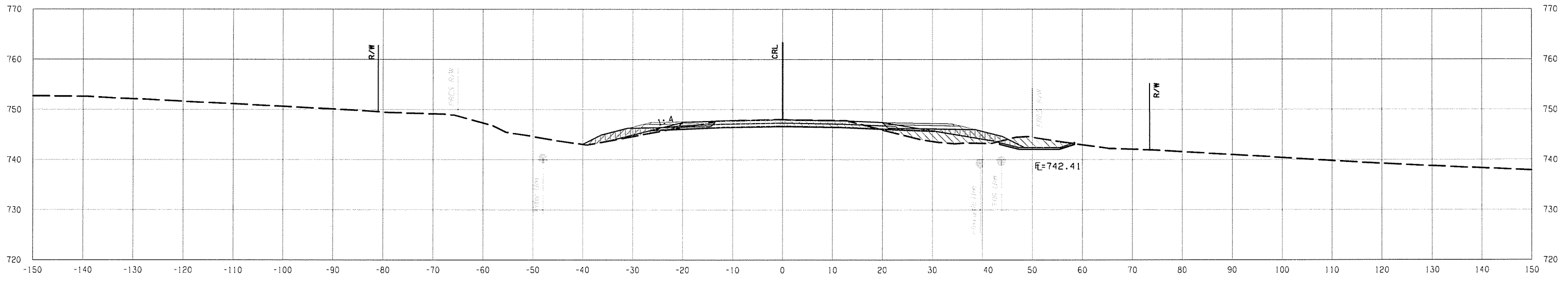
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	1.90 S.F.	2.04 S.F.	61.88 S.F.
FILL	22.22 S.F.	39.65 S.F.	3.94 S.F.

150 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	4.34 C.Y.	35.94 C.Y.	126.09 C.Y.
FILL	49.86 C.Y.	99.49 C.Y.	4.42 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	2.54 S.F.	34.76 S.F.	67.22 S.F.
FILL	22.17 S.F.	48.93 S.F.	0.00 S.F.

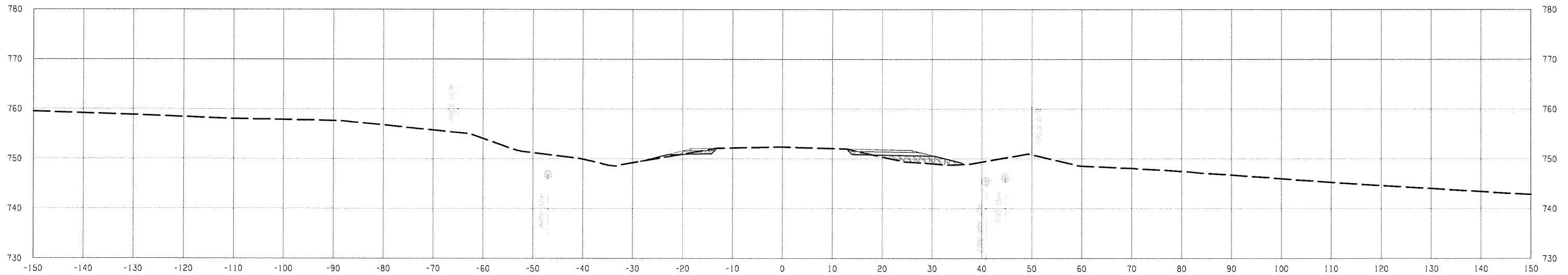
FG= 748.00
END PROJECT; BEGIN TEMP WIDENING SECTION TAPERS LT & RT
149 + 47.26

VOLUME	PHASE I	PHASE II	PHASE III
CUT	3.90 C.Y.	59.68 C.Y.	112.09 C.Y.
FILL	55.76 C.Y.	110.31 C.Y.	0.00 C.Y.

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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

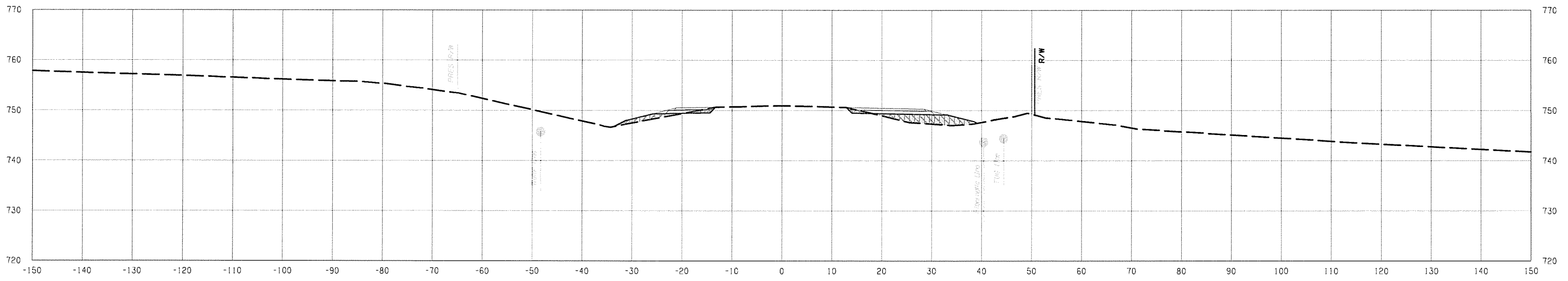
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	3.26 S.F.	2.24 S.F.	20.16 S.F.
FILL	1.72 S.F.	18.44 S.F.	5.50 S.F.

151+00.00





VOLUME	PHASE I	PHASE II	PHASE III
CUT	6.01 C.Y.	4.33 C.Y.	55.01 C.Y.
FILL	11.73 C.Y.	51.53 C.Y.	11.90 C.Y.



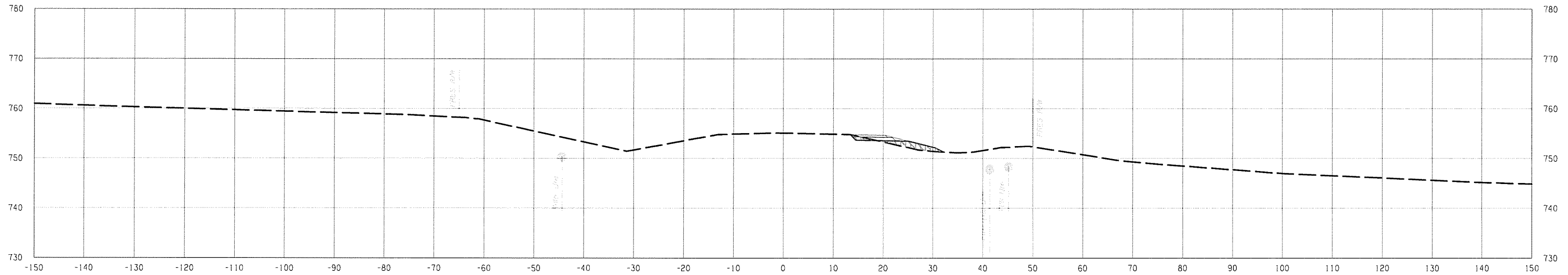
AREA	PHASE I	PHASE II	PHASE III
CUT	2.89 S.F.	2.19 S.F.	36.13 S.F.
FILL	8.72 S.F.	27.42 S.F.	5.09 S.F.

150+47.24

VOLUME	PHASE I	PHASE II	PHASE III
CUT	4.19 C.Y.	3.70 C.Y.	85.74 C.Y.
FILL	31.13 C.Y.	67.48 C.Y.	9.08 C.Y.

-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

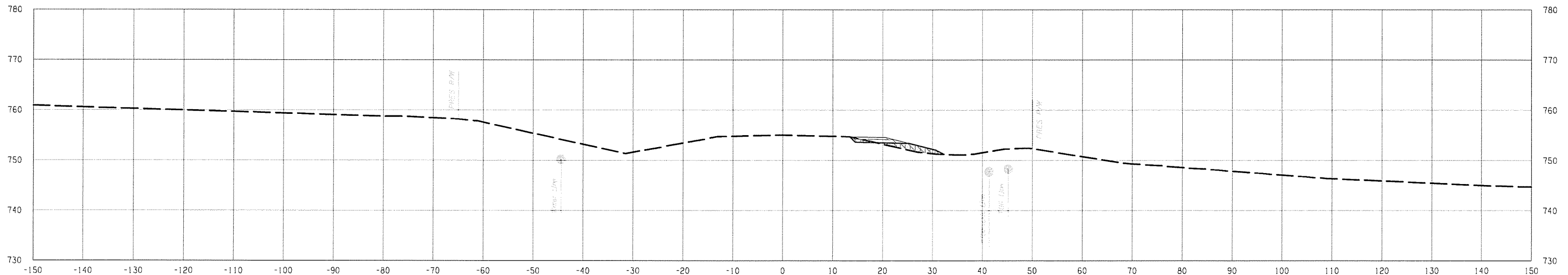
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	2.32 S.F.	10.92 S.F.
FILL	0.00 S.F.	10.92 S.F.	2.32 S.F.

152+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	0.24 C.Y.	1.15 C.Y.
FILL	0.00 C.Y.	1.32 C.Y.	0.28 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	2.35 S.F.	11.14 S.F.
FILL	0.00 S.F.	11.14 S.F.	2.36 S.F.

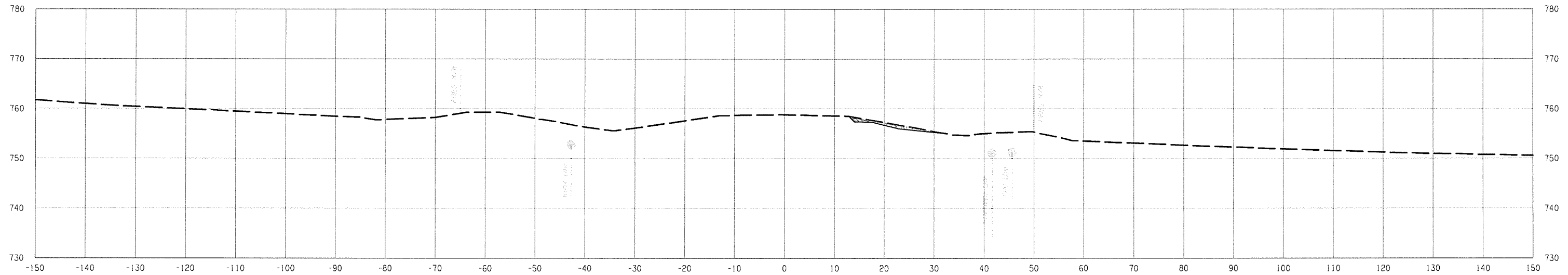
END TEMP WIDENING SECTION LT
151+97.18

VOLUME	PHASE I	PHASE II	PHASE III
CUT	5.87 C.Y.	8.27 C.Y.	56.34 C.Y.
FILL	3.56 C.Y.	61.23 C.Y.	16.26 C.Y.

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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
- $\bar{E}=123.45$ PERMANENT FLOWLINE
-  CONSTRUCTION PHASE 2
- $\bar{E}=123.45$ TEMPORARY FLOWLINE
-  CONSTRUCTION PHASE 3

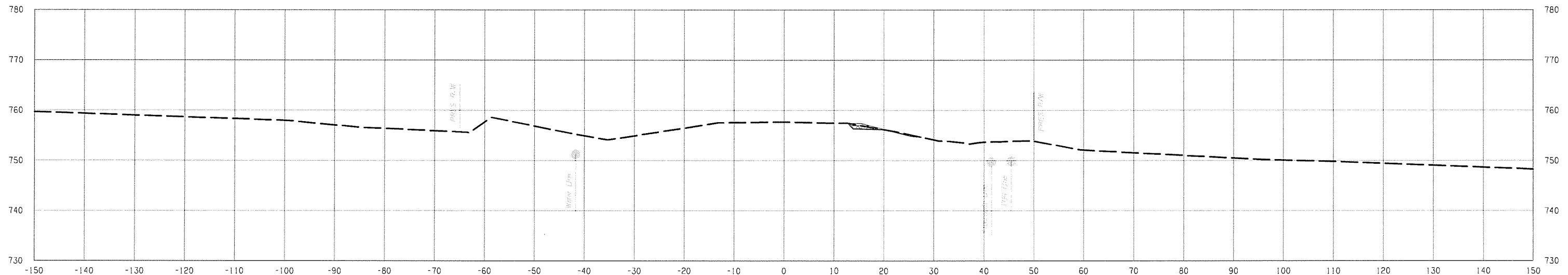
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	9.29 S.F.	0.00 S.F.
FILL	0.00 S.F.	0.00 S.F.	9.29 S.F.

END TEMP WIDENING SECTION RT
153 + 52.33

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	12.10 C.Y.	0.72 C.Y.
FILL	0.00 C.Y.	0.00 C.Y.	13.92 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	3.20 S.F.	0.74 S.F.
FILL	0.00 S.F.	0.00 S.F.	3.20 S.F.

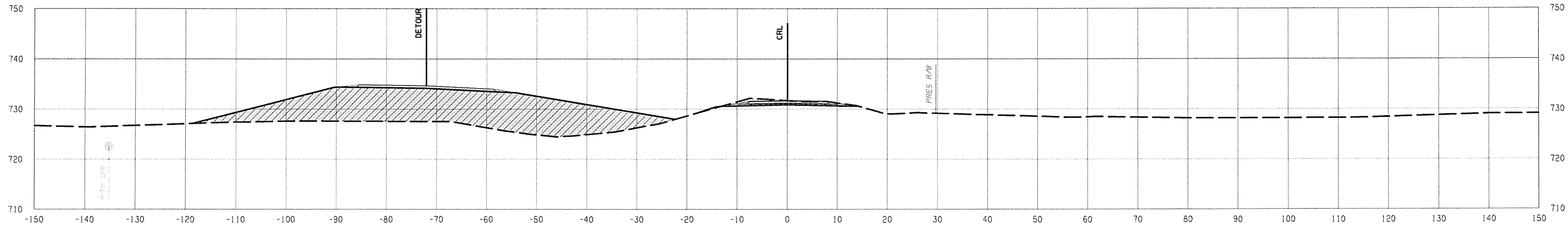
153 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	10.23 C.Y.	21.59 C.Y.
FILL	0.00 C.Y.	23.25 C.Y.	11.76 C.Y.

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- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.

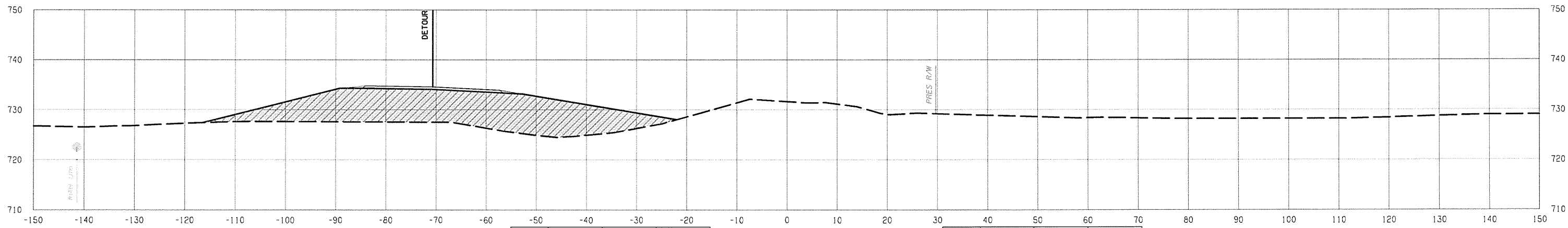


Detour FG= 734.69

AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	0.00 S.F.	21.35 S.F.
FILL	502.67 S.F.	0.00 S.F.	0.00 S.F.

FG= 731.71
BEGIN CONSTRUCTION ON 251st
8+01.54

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	0.00 C.Y.	0.61 C.Y.
FILL	32.67 C.Y.	0.00 C.Y.	0.00 C.Y.

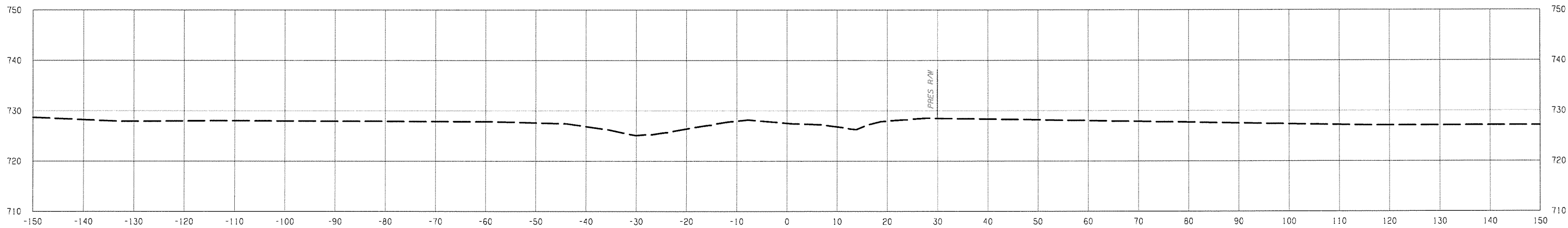


Detour FG= 734.58

AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	0.00 S.F.	0.00 S.F.
FILL	493.54 S.F.	0.00 S.F.	0.00 S.F.

BEGIN DETOUR
8+00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	932.30 C.Y.	0.00 C.Y.	0.00 C.Y.







AREA	PHASE I	PHASE II	PHASE III
CUT	0.00 S.F.	0.00 S.F.	0.00 S.F.
FILL	0.00 S.F.	0.00 S.F.	0.00 S.F.

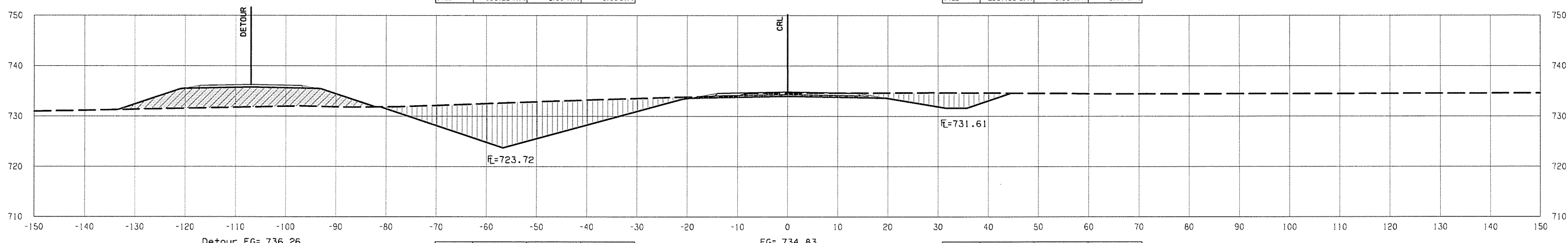
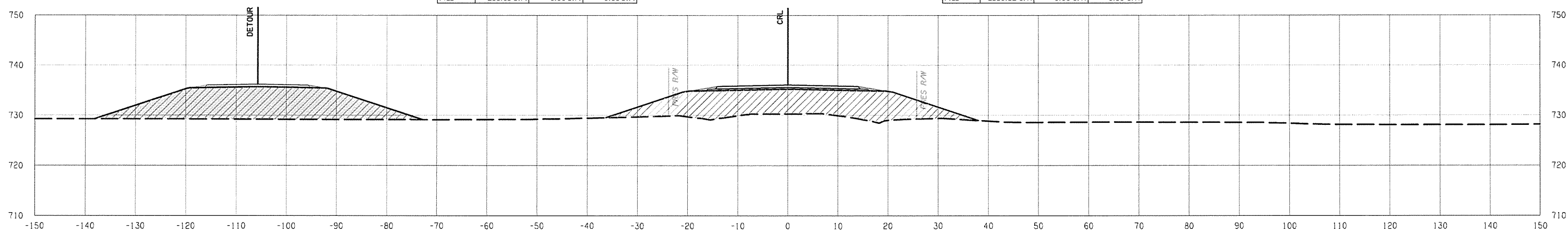
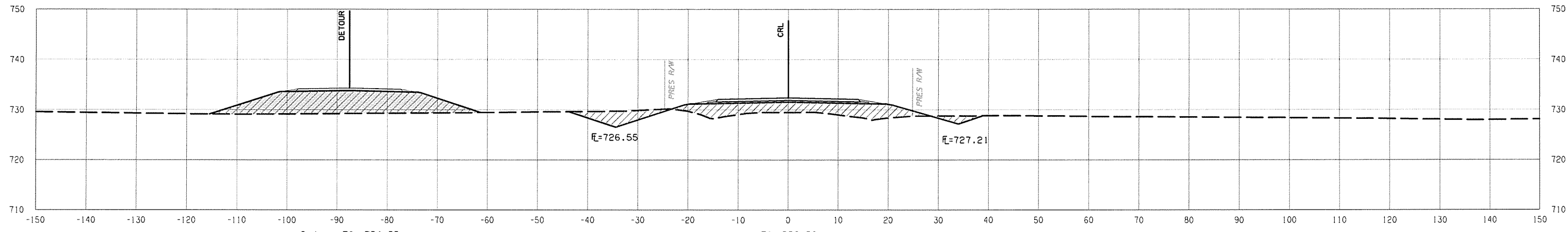
7+11.30

VOLUME	PHASE I	PHASE II	PHASE III
CUT	0.00 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	0.00 C.Y.	0.00 C.Y.	0.00 C.Y.

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-  CONSTRUCTION FOR DETOURS
-  CONSTRUCTION PHASE 1
-  CONSTRUCTION PHASE 2
-  CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

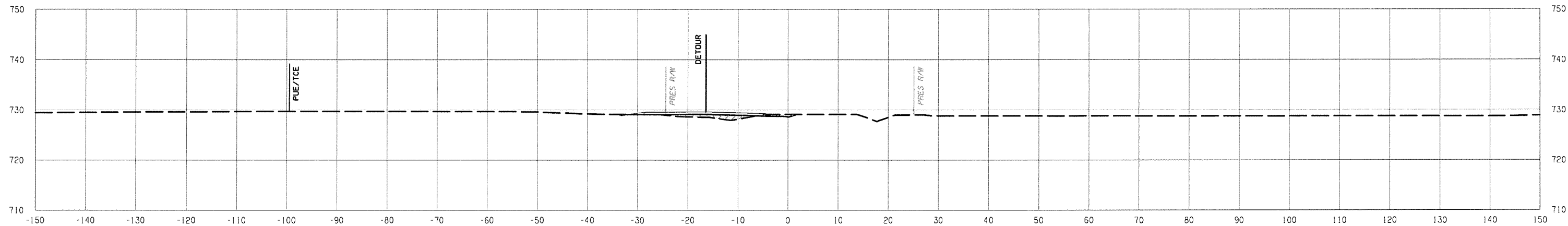
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



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- CONSTRUCTION FOR DETOURS
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- CONSTRUCTION PHASE 3
- $\bar{E}=123.45$ PERMANENT FLOWLINE
- $\bar{E}=123.45$ TEMPORARY FLOWLINE

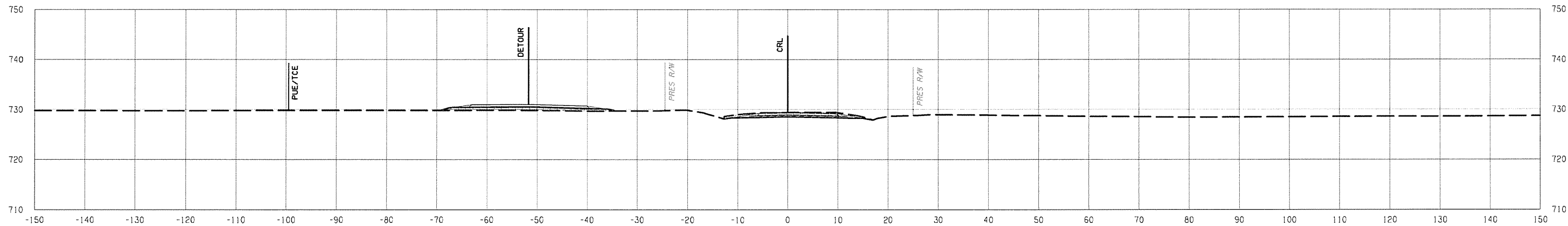
NOTE: EXISTING UTILITIES SHOWN AT AN ESTIMATED DEPTH OF 4.00' BELOW EXISTING GROUND AT THE SURVEYED HORIZONTAL LOCATION.



AREA	PHASE I	PHASE II	PHASE III
CUT	2.52 S.F.	0.00 S.F.	0.00 S.F.
FILL	10.16 S.F.	0.00 S.F.	0.00 S.F.

Detour FG= 729.64
 END DETOUR
 13 + 00.00

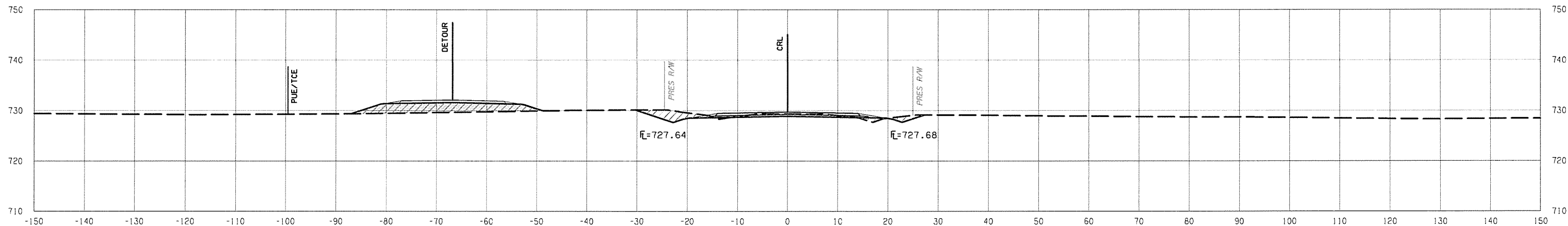
VOLUME	PHASE I	PHASE II	PHASE III
CUT	24.91 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	34.33 C.Y.	0.00 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	22.51 S.F.	0.00 S.F.	0.00 S.F.
FILL	19.83 S.F.	0.00 S.F.	0.00 S.F.

Detour FG= 731.03
 FG= 729.38
 END CONSTRUCTION ON 251st
 12 + 46.26

VOLUME	PHASE I	PHASE II	PHASE III
CUT	45.86 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	81.24 C.Y.	0.00 C.Y.	0.00 C.Y.



AREA	PHASE I	PHASE II	PHASE III
CUT	31.02 S.F.	0.00 S.F.	0.00 S.F.
FILL	62.64 S.F.	0.00 S.F.	0.00 S.F.

Detour FG= 732.10
 FG= 729.74
 12 + 00.00

VOLUME	PHASE I	PHASE II	PHASE III
CUT	132.86 C.Y.	0.00 C.Y.	0.00 C.Y.
FILL	746.84 C.Y.	0.00 C.Y.	0.00 C.Y.

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