6-16-06 Letting, Item 083

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	1

* D-6 IL. 48 IMPROVEMENT 2006
CONTRACT* 72784

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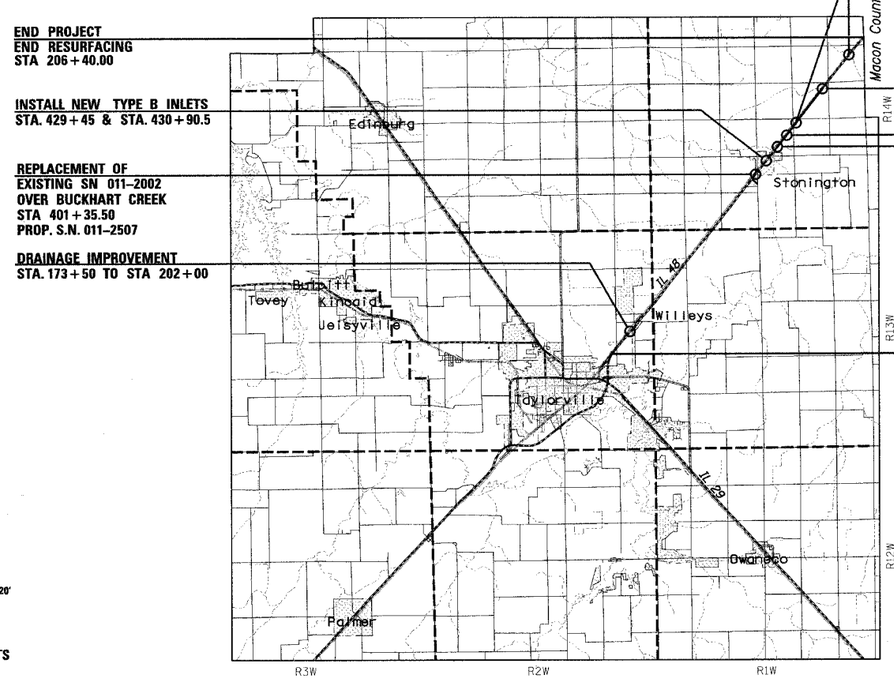
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP 714 (IL 48)
D–6 IL 48 IMPROVEMENT 2006
PROJECT: F-0714(015)
CHRISTIAN COUNTY
C–96–504–07

D–96–517–03

LOCATION OF SECTION INDICATED THUS: –



END PROJECT
END RESURFACING
STA 206+40.00

INSTALL NEW TYPE B INLETS
STA. 429+45 & STA. 430+90.5

REPLACEMENT OF
EXISTING SN 011–2002
OVER BUCKHART CREEK
STA 401+35.50
PROP. S.N. 011–2507

DRAINAGE IMPROVEMENT
STA. 173+50 TO STA 202+00

GUARDRAIL REMOVAL, REPLACEMENT AND ADJUSTMENT
STA 12+77.5 TO STA. 17+60.5
STA 172+21.5 TO STA. 176+62

REPLACEMENT OF SINGLE BARREL BOX CULVERT WITH SN 011–7055 OVER TRIBUTARY TO BUCKHART CREEK
STA 110+98.50

REPLACEMENT OF SINGLE BARREL BOX CULVERT WITH SN 011–2512 OVER TRIBUTARY TO BUCKHART CREEK
STA 3+01.00

STATION EQUATION
STA 443+57.80 BK = STA 0+04.32 AH

BEGIN PROJECT
BEGIN RESURFACING
STA 227+41.20 BK =
STA 64+00.00 AH

NET LENGTH OF PROJECT = 58,597.80 FEET = 11.10 MILES

0 1 2 3 4 5 MILES
SCALE

ADT = 4100 (2005)
% SU = 5.0 (2001)
% MU = 12.0 (2001)

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-04	666001
280001-02	701006-02
482001	701011-01
515001-02	701201-02
542401	701301-02
602011	701306-01
602306-01	701311-02
602401-01	701321-08
602421	701326-02
604001-02	701501-03
630001-06	702001-06
630301-03	704001-02
631011-02	720011
631032-02	780001-01
635006-02	781001-02
635011-01	BLR 21-6

0 100' 200' 300' — 1" = 100'
0 10' 20' 30' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1–800–892–0123

CHRISTOPHER P. KONEFAL — LICENSED PROFESSIONAL ENGINEER — ILLINOIS
3/28/06
EXPIRATION DATE: 11/30/07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 30 2006
Chris McReady
DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR
May 12, 2006
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
May 12, 2006
Milton R. Sees, P.E.
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: SAL MADONIA (217) 782-4761
SQUAD LEADER: KEN ANDERSON (217) 524-7546

CONTRACT NO. 72784

CHRISTIAN COUNTY SECTION D–6 IL. 48 IMPROVEMENT 2006 FAP 714 (IL 48)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	2
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 RESURFACING 2006

GENERAL NOTES

1.) THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

2.) EXCEPT AS NOTED IN THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

3.) WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

4.) SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION. AREAS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER AND SEEDED AS SOON AS POSSIBLE.

5.) ALL SAW CUTS, NECESSARY TO COMPLETE THE WORK DETAILED IN THESE PLANS, SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED. THE MINIMUM SAW CUT DEPTH IN THE PAVEMENT SHALL BE 1½" UNLESS UNLESS OTHERWISE SPECIFIED IN A DETAIL SHOWN IN THE PLANS.

6.) UNLESS DIRECTED BY THE ENGINEER, PAVEMENT MARKING LINES SHALL NOT BE LAID DIRECTLY OVER A LONGITUDINAL CRACK OR JOINT NOR OVER A TAR OR ASPHALT PAINTED LINE. THE EDGE OF A CENTERLINE OR LANE LINE SHALL BE OFFSET A MINIMUM DISTANCE OF 2" FROM A LONGITUDINAL CRACK OR JOINT. EDGE LINES SHALL BE APPROXIMATELY 2" FROM THE EDGE LINE OF PAVEMENT. SEE SECTION 780 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.

7.) ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

8.) ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

9.) IN ADDITION TO THE FIELD SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

10.) THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT, AND NO COMPENSATION WILL BE ALLOWED.

11.) THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY OTHERS AND IS INTENDED TO BE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBLITY TO COORDINATE HIS CONSTRUCTION ACTIVITIES WITH THE VARIOUS UTILITY OWNERS. ALL POTENTIAL CONFLICTS SHALL BE INVESTIGATED AND REMEDIAL ACTION TAKEN PRIOR TO INTERRUPTION OF THE CONTRACTOR'S PROGRESS.

12.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED.

13.) ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM. ALL STATION AND OFFSET REFERENCES ARE TO THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.

14.) THE DISTRICT BUREAU OF OPERATIONS SHALL BE NOTIFIED AT LEAST 14 DAYS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS (PH: 217-785-5312)

15.) REMOVAL OF EXISTING CORRUGATED METAL PIPE CULVERTS AS DETAILED IN THESE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

COMMITMENTS: NONE

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:

BITUMINOUS MATERIALS (PRIME COAT)	0.00038 TON/SQ. YD. (ON PAVEMENT)
BITUMINOUS MATERIALS (PRIME COAT)	0.001425 TON/SQ.YD. (ON AGG)
BITUMINOUS CONCRETE SURFACE / BINDER	0.056 TON/SQ. YD. PER 1"
AGGREGATE MATERIAL	2.05 TON/CU. YD.
RIPRAP	1.75 TON/CU. YD.
MULCH METHOD	2.0 TON/ACRE
AGRICULTURE GROUND LIMESTONE	2.0 TON/ACRE
NITROGEN FERTILIZER NUTRIENT	90 LBS./ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	90 LBS./ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS./ACRE
AGGREGATE PRIME COAT	0.002 TON/SQ. YD.

MIXTURE REQUIREMENTS

MIXTURE USE(S)	INCIDENTAL BIT. SURF. & BIT. CONC. SURF. CSE. SUPERPAVE MIX C, N50	LEVELING BINDER (MACHINE METHOD), SUPERPAVE	BITUMINOUS BASE COURSE SUPERPAVE 10" & 11¾"	BITUMINOUS SHOULDERS SUPERPAVE
AC/PG	PG 64-22	PG 64-22	PG 58-22	PG 58-22
MAX. RAP %	15	20	15	15
DESIGN AIR VOIDS	4.0% @ N DESIGN = 50	4.0% @ N DESIGN = 50	2.0% @ N DESIGN = 50	2.0% @ N DESIGN = 30
MIXTURE COMPOSITION	IL 9.5 OR 12.5	IL 9.5	IL 19.0	BAM
FRICTION AGGREGATE	MIX C	N/A	N/A	N/A

DISTRICT SIX	
EXAMINED March 27	20 06
OPERATIONS ENGINEER	
EXAMINED March 23	20 06
PROGRAM IMPLEMENTATION ENGINEER	
EXAMINED March 29	20 06
PROGRAM DEVELOPMENT ENGINEER	

GENERAL NOTES
F.A.P. ROUTE 714 - IL ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

FILE NAME: COMBINED GN (REV. 2/28/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	3
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

SUMMARY OF QUANTITIES

				S.N. 011-2507		S.N. 011-2512		S.N. 011-7055		ROADWAY RESURFACING	
				ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-2507 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-2512 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-7055 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	PARKING LANES 50% STATE 50% VILLAGE
	SUMMARY OF QUANTITIES	UNIT	TOTAL	CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE	
CODE NO.	PAY ITEM		QUANTITY	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	1000-2A	Y025
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	29	29							
20200100	EARTH EXCAVATION	CU. YD.	1963	240		272		292		1159	
20200500	EARTH EXCAVATION (WIDENING)	CU. YD.	119	37		40		42			
20400800	FURNISHED EXCAVATION	CU. YD.	437			288		149			
25000200	SEEDING, CLASS 2	ACRE	4.6	0.6		0.6		0.5		2.9	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	414	54		54		45		261	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	414	54		54		45		261	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	414	54		54		45		261	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	9.2	1.2		1.2		1.0		5.8	
25100115	MULCH, METHOD 2	ACRE	4.6	0.6		0.6		0.5		2.9	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	750	60		60		50		580	
28000300	TEMPORARY DITCH CHECKS	EACH	26							26	
28000400	PERIMETER EROSION BARRIER	FOOT	5700							5700	
28100107	STONE RIPRAP, CLASS A4	SQ. YD.	412				236		176		
28200200	FILTER FABRIC	SQ. YD.	412				236		176		
31100300	SUBBASE GRANULAR MATERIAL, TYPE A 4"	SQ. YD.	651	213		270		168			
35100100	AGGREGATE BASE COURSE, TYPE A	TON	78	78							
35800100	PREPARATION OF BASE	SQ. YD.	84							84	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	71.55	0.68		0.88		0.87		67.85	1.27
40600300	AGGREGATE (PRIME COAT)	TON	286.65	1.81		2.93		2.91		279	
40600895	CONSTRUCTING TEST STRIP	EACH	2							2	
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ. YD.	2452	54						2398	
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ. YD.	193							193	
40600990	TEMPORARY RAMP	SQ. YD.	1464	62						1402	
40800040	INCIDENTAL BITUMINOUS SURFACING	TON	260							260	
44000006	BITUMINOUS SURFACE REMOVAL 1½"	SQ. YD.	100	100							
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ. YD.	182664	717		1223		1321		176056	3347
44000100	PAVEMENT REMOVAL	SQ. YD.	561	174		250		137			
44001430	BITUMINOUS SHOULDER REMOVAL	SQ. YD.	1159	314		437		408			
44200104	PAVEMENT PATCHING, TYPE I, 9 INCH	SQ. YD.	50							50	
44200108	PAVEMENT PATCHING, TYPE II, 9 INCH	SQ. YD.	700							700	
44200112	PAVEMENT PATCHING, TYPE III, 9 INCH	SQ. YD.	400							400	
44200114	PAVEMENT PATCHING, TYPE IV, 9 INCH	SQ. YD.	400							400	
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	56769			500		441		55828	
48101200	AGGREGATE SHOULDERS TYPE B	TON	5804			85		89		5630	
48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	4959	92		119		115		4633	

SUMMARY OF QUANTITIES
F.A.P. ROUTE 714 - IL ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

SUMMARY OF QUANTITIES

CODE NO.	SUMMARY OF QUANTITIES PAY ITEM	UNIT	TOTAL QUANTITY	S.N. 011-2507 ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	S.N. 011-2507 STRUCTURE S.N. 011-2507 80% FEDERAL 20% STATE	S.N. 011-2512 ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	S.N. 011-2512 STRUCTURE S.N. 011-2512 80% FEDERAL 20% STATE	S.N. 011-7055 ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	S.N. 011-7055 STRUCTURE S.N. 011-7055 80% FEDERAL 20% STATE	ROADWAY RESURFACING ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	ROADWAY RESURFACING PARKING LANES 50% STATE 50% VILLAGE
			CONSTRUCTION TYPE CODE	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	I000-2A	Y025
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1						
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1				1				
50100500	REMOVAL OF EXISTING STRUCTURES NO. 3	EACH	1						1		
50300225	CONCRETE STRUCTURES	CU. YD.	93.8		93.8						
50800105	REINFORCEMENT BARS	POUND	51495		7060		30930		13505		
50800205	REINFORCEMENT BARS (EPOXY COATED)	POUND	310		310						
50901001	STEEL BRIDGE RAIL	FOOT	299.86		114.68		104.32		80.86		
51201400	FURNISHING STEEL PILES HP 10 X 42	FOOT	1284		1284						
51202700	DRIVING STEEL PILES	FOOT	1284		1284						
51203400	TEST PILE STEEL HP 10 X 42	EACH	2		2						
51205200	TEMPORARY SHEET PILING	SQ. FT.	1907				1345		562		
51500100	NAME PLATES	EACH	3		1		1		1		
54003000	CONCRETE BOX CULVERTS	CU. YD.	208.1				127.9		80.2		
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	32							32	
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	52							52	
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	104	104							
54215559	METAL END SECTIONS 24"	EACH	2	2							
550A0040	STORM SEWERS, CLASS A, TYPE 1 10"	FOOT	12	12							
550A0080	STORM SEWERS, CLASS A, TYPE 1 16"	FOOT	30	30							
550A0120	STORM SEWERS, CLASS A, TYPE 1 24"	FOOT	70	70							
55100400	STORM SEWER REMOVAL 10"	FOOT	34	34							
55100500	STORM SEWER REMOVAL 12"	FOOT	67	67							
55100800	STORM SEWER REMOVAL 16"	FOOT	56	56							
60209700	CATCH BASINS, TYPE C, SPECIAL, TYPE 1 FRAME, CLOSED LID	EACH	1	1							
60220400	MANHOLES, TYPE A, SPECIAL, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1							
X0325375	MANHOLES, TYPE A, SPECIAL, 9' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1							
60240210	INLETS, TYPE B, TYPE 1 FRAME, OPEN LID	EACH	2							2	
* 63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	1887.5	87.5		575		575		650	
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2							
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	10	2		4		4			
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	18	2		4		4		8	
63200305	STEEL PLATE BEAM GUARDRAIL REMOVAL	FOOT	1045			477		468		100	
63300900	VERTICAL ADJUSTMENT OF GUARDRAIL	FOOT	840							840	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	2	2							
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL. MO.	16	4		4		4		4	
67100100	MOBILIZATION	L. SUM	1	0.25		0.25		0.25		0.25	

* SPECIALTY ITEMS

SUMMARY OF QUANTITIES
F.A.P. ROUTE 714 - IL ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

Rev.

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	5
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

SUMMARY OF QUANTITIES

				S.N. 011-2507		S.N. 011-2512		S.N. 011-7055		ROADWAY RESURFACING	
				ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-2507 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-2512 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	STRUCTURE S.N. 011-7055 80% FEDERAL 20% STATE	ROADWAY F.A.P. 714 80% FEDERAL 20% STATE	PARKING LANES 50% STATE 50% VILLAGE
	SUMMARY OF QUANTITIES	UNIT	TOTAL	CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE		CONSTRUCTION TYPE CODE	
CODE NO.	PAY ITEM		QUANTITY	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	X028-2A	I000-2A	Y025
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L. SUM	1							1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L. SUM	1	0.25		0.25		0.25		0.25	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L. SUM	1	0.34		0.33		0.33			
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L. SUM	1	1							
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L. SUM	1	0.25		0.25		0.25		0.25	
70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321, SPECIAL	EACH	3	1		1		1			
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL. DAY	12	3		3		3		3	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	3	1		1		1			
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	11854	130		160		154		11410	
70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	137561	898		1342		1318		134003	
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	72	24		24		24			
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ. FT.	3237	397		479		469		1892	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1400	525		450		425			
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1200	325		450		425			
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	137561	898		1342		1318		134003	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	723	5		7		7		704	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	62	10		18		18		16	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	18	2		4		4		8	
* 78202000	TERMINAL MARKER - POST MOUNTED	EACH	2	2							
78300100	PAVEMENT MARKING REMOVAL	SQ. FT.	216	64		76		76			
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	722	5		7		7		703	
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ. FT.	478		478						
X0324118	GRANULAR CULVERT BACKFILL	CU. YD.	439		214		118		107		
X0325283	BITUMINOUS SHOULDER REMOVAL AND REPLACEMENT 8"	SQ. YD.	500							500	
X3550700	BITUMINOUS BASE COURSE SUPERPAVE 10"	SQ. YD.	2717	783		990		944			
X3550810	BITUMINOUS BASE COURSE SUPERPAVE 11½"	SQ. YD.	580	190		240		150			
X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIXTURE C, N50	TON	12464	90		120		117		11715	422
X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	6043	67		60		58		5858	
X7200201	WIDTH RESTRICTION SIGNING	L. SUM	1	0.34		0.33		0.33			
XX005496	TRAFFIC BARRIER TERMINAL, TYPE 6A (SPECIAL)	EACH	2	2							
Z0002600	BAR SPLICERS	EACH	191		24		92		75		
⊙ Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	8	4		2		2			
⊙ Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	6	2		2		2			
Z0073100	TEMPORARY SHORING	EACH	2				1		1		
X0325376	THREE SIDED PRECAST CONCRETE STRUCTURES, 25' x 6'-2"	FOOT	43		43						

⊙ SFTY-3N
* SPECIALTY ITEMS

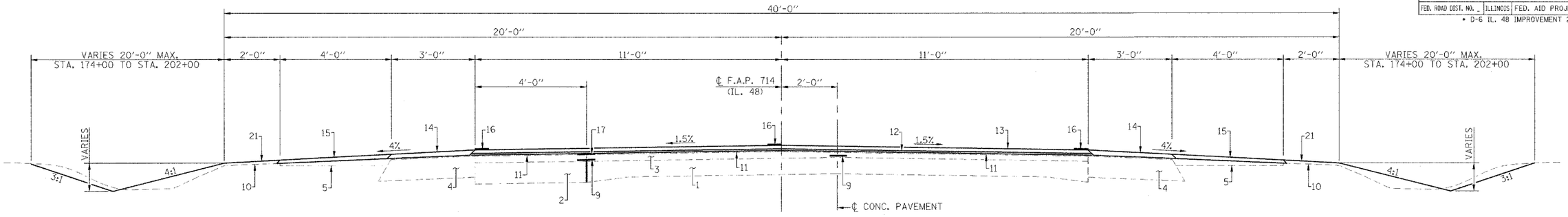
SUMMARY OF QUANTITIES
F.A.P. ROUTE 714 - IL ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

Rev.

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	6
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



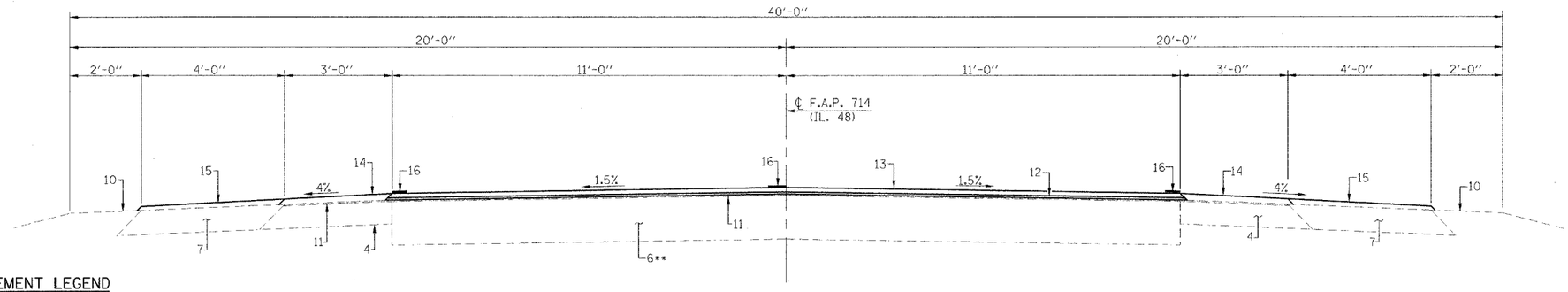
TYPICAL SECTION #1

STA. 64+00.00 TO STA. 392+00.00
STA. 407+00.00 TO STA. 411+42.00
STA. 429+82.00 TO STA. 430+00.00 RT. & STA. 430+85.00 LT.

STA. 434+17.00 TO STA. 443+57.80
STATION EQUATION: STA. 443+57.80 B.K.= STA. 0+04.32 A.H.
STA. 0+04.32 TO STA. 0+06.00
STA. 5+96.00 TO STA. 108+00.40
STA. 113+96.60 TO STA. 206+40.00

STATION EQUATION

STA. 227+41.20 BK = STA. 64+00.00 AH (PROJECT BEGINS)



TYPICAL SECTION #2

STA. 392+00.00 TO STA. 399+53.00
STA. 403+17.00 TO STA. 407+00.00

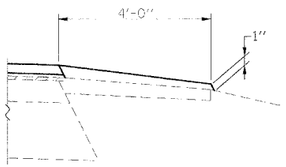
** NOTE: STA. 405+00 TO STA. 407+00
EXISTING CONCRETE PAVEMENT WITH
EXISTING BITUMINOUS SURFACE

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

EXIST. BIT. OVERLAY THICKNESS

STA 64+00 TO STA 392+00	6"
STA 407+00 TO STA 418+76	6"
STA 418+76 TO STA 430+00	2 1/2"
STA 430+00 TO STA 2+53	3 1/2"
STA 2+53 TO STA 40+80	2 1/2"
STA 40+80 TO STA 54+00	3 1/2"
STA 54+00 TO STA 111+00	2 1/2"
STA 111+00 TO STA 133+00	3 1/2"
STA 133+00 TO STA 143+00	2 1/2"
STA 143+00 TO STA 148+50	3 1/2"
STA 148+50 TO STA 206+40	2 1/2"



PROP. AGGREGATE SHOULDER DETAIL

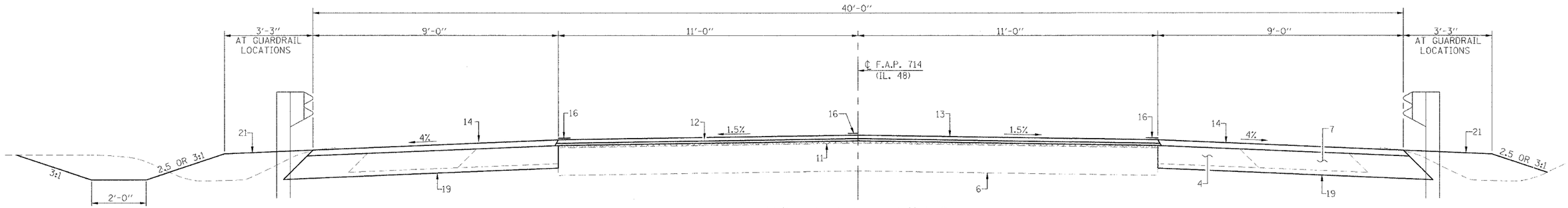
DETAILS AND TYPICAL ROADWAY SECTIONS F.A.P. ROUTE 714 - IL. ROUTE 48 SECTION D-6 IL. 48 IMPROVEMENT 2006 CHRISTIAN COUNTY

FILE NAME: D&TRS (REV. 3/27/06)

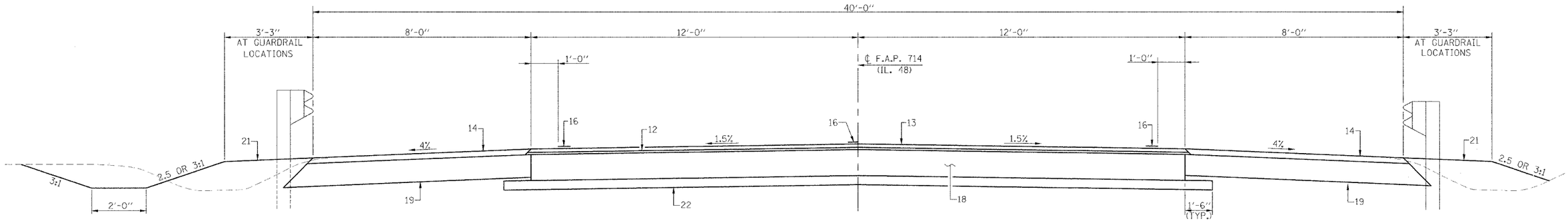
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	7
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



PROPOSED TYPICAL SECTION #3
STA. 399+53 TO STA. 401+00 & STA. 401+71 TO STA. 403+17



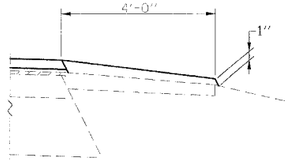
PROPOSED TYPICAL SECTION #4
STA. 401+00 TO STA. 401+71
STA. 2+57 TO STA. 3+47
STA. 110+70 TO STA. 111+26

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

EXIST. BIT. OVERLAY THICKNESS

STA 64+00 TO STA 392+00	6"
STA 407+00 TO STA 418+76	6"
STA 418+76 TO STA 430+00	2 1/2"
STA 430+00 TO STA 2+53	3 1/2"
STA 2+53 TO STA 40+80	2 1/2"
STA 40+80 TO STA 54+00	3 1/2"
STA 54+00 TO STA 111+00	2 1/2"
STA 111+00 TO STA 133+00	3 1/2"
STA 133+00 TO STA 143+00	2 1/2"
STA 143+00 TO STA 148+50	3 1/2"
STA 148+50 TO STA 206+40	2 1/2"



PROP. AGGREGATE SHOULDER DETAIL

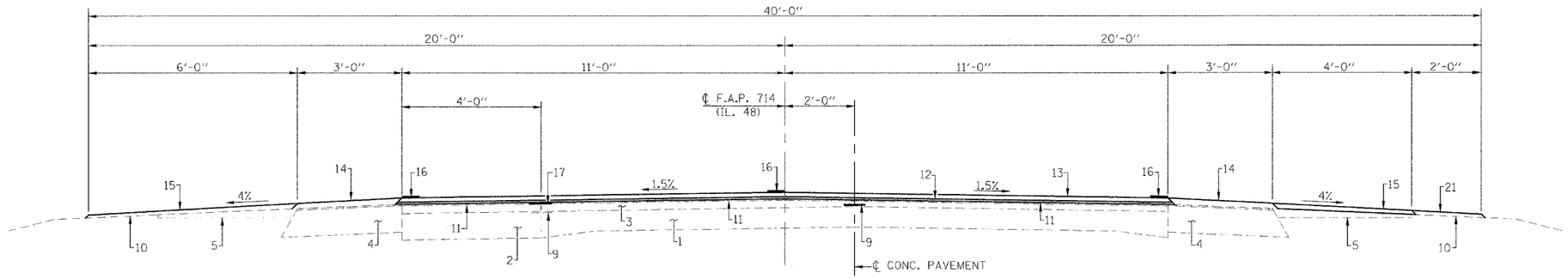
DETAILS AND
TYPICAL ROADWAY SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: D&TRS (REV. 3/29/06)

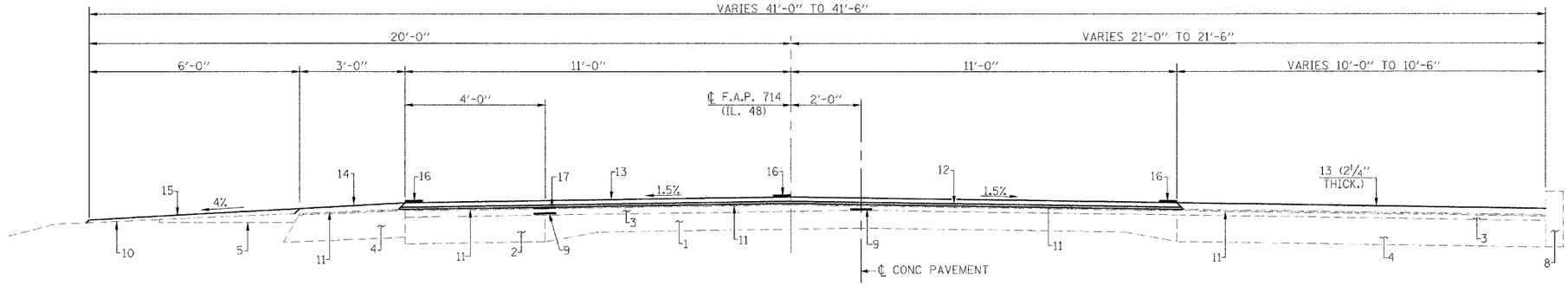
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	8
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



TYPICAL SECTION #5
STA. 411+42.00 TO STA. 413+00.00



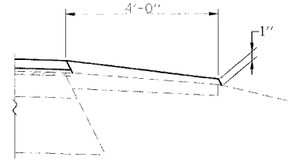
TYPICAL SECTION #6
STA. 413+00.00 TO STA. 418+11.00

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

EXIST. BIT. OVERLAY THICKNESS

STA 64+00 TO STA 392+00	6"
STA 407+00 TO STA 418+76	6"
STA 418+76 TO STA 430+00	2 1/2"
STA 430+00 TO STA 2+53	3 1/2"
STA 2+53 TO STA 40+80	2 1/2"
STA 40+80 TO STA 54+00	3 1/2"
STA 54+00 TO STA 111+00	2 1/2"
STA 111+00 TO STA 133+00	3 1/2"
STA 133+00 TO STA 143+00	2 1/2"
STA 143+00 TO STA 148+50	3 1/2"
STA 148+50 TO STA 206+40	2 1/2"



PROP. AGGREGATE SHOULDER DETAIL

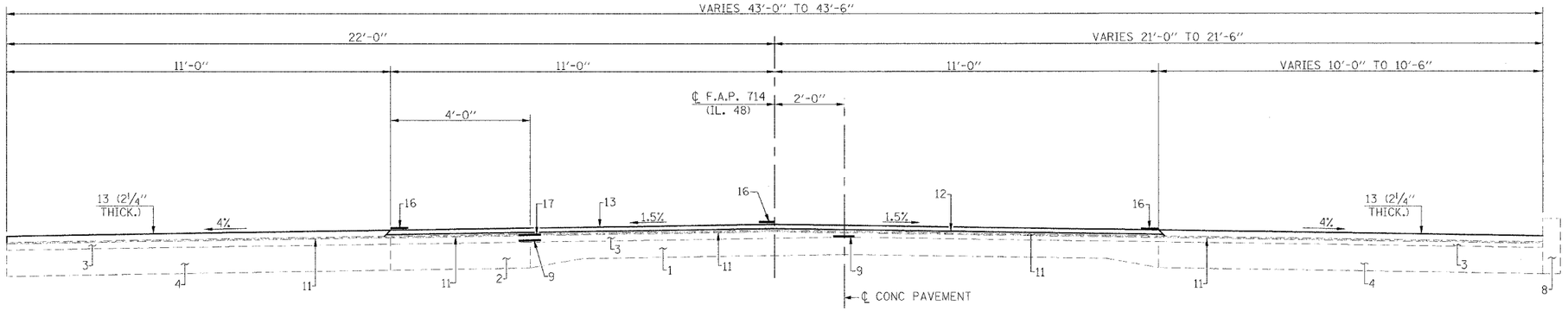
DETAILS AND
TYPICAL ROADWAY SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: D&TRS (REV. 3/28/06)

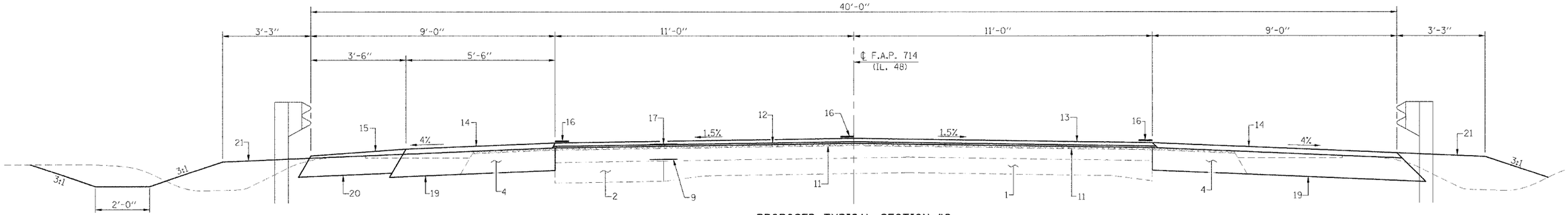
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	9
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



TYPICAL SECTION #7
STA. 418+11 TO STA. 429+82



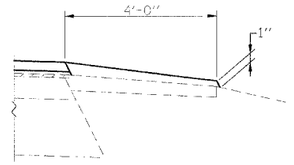
PROPOSED TYPICAL SECTION #8
STA. 0+06.0 TO STA. 2+57
STA. 3+47 TO STA. 5+96.0
STA. 108+00.4 TO STA. 110+70
STA. 111+26 TO STA. 113+96.6

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12 1/4"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 3/4"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1 1/2")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2 1/4")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11 1/2"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

EXIST. BIT. OVERLAY THICKNESS

STA 64+00 TO STA 392+00	6"
STA 407+00 TO STA 418+76	6"
STA 418+76 TO STA 430+00	2 1/2"
STA 430+00 TO STA 2+53	3 1/2"
STA 2+53 TO STA 40+80	2 1/2"
STA 40+80 TO STA 54+00	3 1/2"
STA 54+00 TO STA 111+00	2 1/2"
STA 111+00 TO STA 133+00	3 1/2"
STA 133+00 TO STA 143+00	2 1/2"
STA 143+00 TO STA 148+50	3 1/2"
STA 148+50 TO STA 206+40	2 1/2"



PROP. AGGREGATE SHOULDER DETAIL

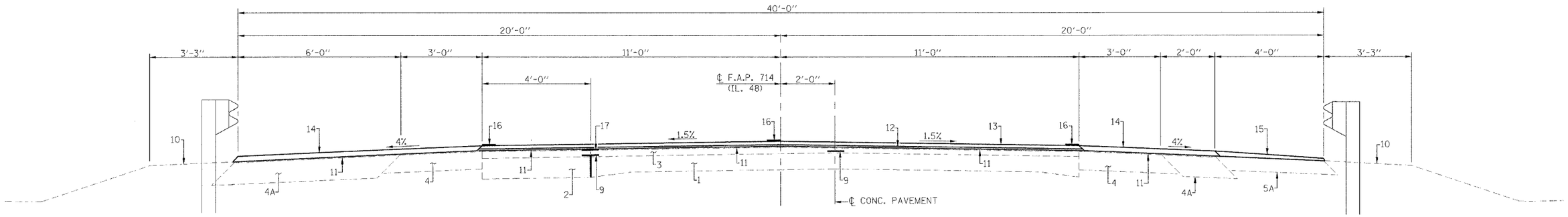
DETAILS AND
TYPICAL ROADWAY SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: D&TRS (REV. 2/2/06)

CONTRACT NO. 72784

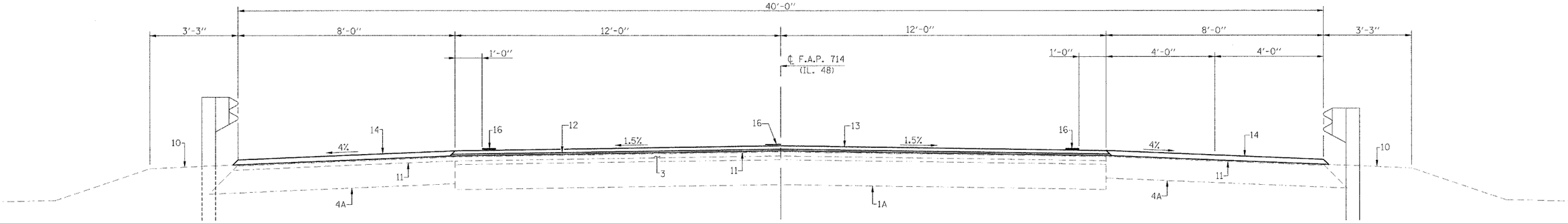
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	10
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



PROPOSED TYPICAL SECTION #9

(STA. 430+00 TO STA. 431+92 RT., STA. 430+85 TO STA. 431+92 LT. & STA. 432+72 TO STA. 434+17)



PROPOSED TYPICAL SECTION #10

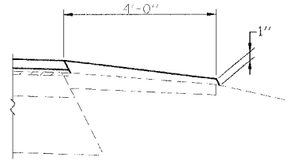
(STA. 431+92 TO STA. 432+72)

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

EXIST. BIT. OVERLAY THICKNESS

STA 64+00 TO STA 392+00	6"
STA 407+00 TO STA 418+76	6"
STA 418+76 TO STA 430+00	2 1/2"
STA 430+00 TO STA 2+53	3 1/2"
STA 2+53 TO STA 40+80	2 1/2"
STA 40+80 TO STA 54+00	3 1/2"
STA 54+00 TO STA 111+00	2 1/2"
STA 111+00 TO STA 133+00	3 1/2"
STA 133+00 TO STA 143+00	2 1/2"
STA 143+00 TO STA 148+50	3 1/2"
STA 148+50 TO STA 206+40	2 1/2"



PROP. AGGREGATE SHOULDER DETAIL

DETAILS AND TYPICAL ROADWAY SECTIONS F.A.P. ROUTE 714 - IL. ROUTE 48 SECTION D-6 IL. 48 IMPROVEMENT 2006 CHRISTIAN COUNTY

FILE NAME: D&TPS (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	11
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

PAVEMENT SCHEDULE

LOCATION	LENGTH (FOOT)	WIDTH (FOOT)	BITUMINOUS BINDER THICKNESS (INCH)	BITUMINOUS SURFACE THICKNESS (INCH)	BITUMINOUS SURFACE REMOVAL (VAR. DEPTH) (SQ. YD.)	LEVELING BINDER SUPER N50 (TON)	BITUMINOUS CONCRETE SURFACE CSE. SUPERPAVE (TON)	BITUMINOUS MATERIALS PRIME COAT (TON)	AGGREGATE PRIME COAT (TON)	BITUMINOUS SURFACE REMOVAL BUTT JOINT (SQ. YD.)
STA. 64+00 TO STA. 392+00	32,800	22	0.75	1.5	80,177.78	3,367.47	6,734.93	30.47	160.36	74
STA. 392+00 TO STA. 399+53	753	22	0.75	1.5	1,840.67	77.31	154.62	0.70	3.68	
CULVERT OMISSION (S.N. 011-2507) STA. 399+53 TO STA. 403+17										
STA. 403+17 TO STA. 407+00	383	22	0.75	1.5	936.22	39.32	78.64	0.36	1.87	
STA. 407+00 TO STA. 411+42	442	22	0.75	1.5	1,080.44	45.38	90.76	0.41	2.16	
STA. 411+42 TO STA. 413+00	158	22	0.75	1.5	386.22	16.22	32.44	0.15	0.77	
STA. 413+00 TO STA. 418+11	511	22	0.75	1.5	1,249.11	52.46	104.92	0.47	2.50	
STA. 418+11 TO STA. 429+82	1171	22	0.75	1.5	2,862.44	120.22	240.44	1.09	5.72	
STA. 429+82 TO STA. 431+92	210	22	0.75	1.5	513.33	21.56	43.12	0.20	1.03	
CULVERT (S.N. 011-2505)										
STA. 431+92 TO STA. 432+72	80	24	0.75	1.5	213.33	896	17.92	0.08	0.43	
STA. 432+72 TO STA. 443+57.80	1,085.80	22	0.75	1.5	2,654.18	111.48	222.96	1.01	5.31	
STATION EQUATION - STA. 443+57.80 BACK = STA. 0+04.32 AHEAD										
STA. 0+04.32 TO STA. 0+06	1.68	22	0.75	1.5	4.11	0.17	0.34	0.00	0.01	
CULVERT OMISSION (S.N. 011-2512) STA. 0+06 TO STA. 5+96										
STA. 5+96 TO STA. 108+00.40	10,204.40	22	0.75	1.5	24,944.09	1,047.65	2,095.30	9.48	49.89	
CULVERT OMISSION (S.N. 011-7055) STA. 108+00.40 TO STA. 113+96.60										
STA. 113+96.60 TO STA. 206+40	9,243.40	22	0.75	1.5	22,594.98	948.99	1,897.98	8.59	45.19	74
TOTAL					139,456.90	5,857.19	11,714.37	53.01	278.92	148
PAY ITEM TOTAL					139,457	5858	11,715	53.01	279	148

SHOULDER SCHEDULE

LOCATION	LENGTH (FOOT)	AGGREGATE SHOULDERS, WIDTH (FOOT)	BITUMINOUS SHOULDERS, WIDTH (FOOT)	AGGREGATE SHOULDERS, TYPE B (TON)	BITUMINOUS SURFACE REMOVAL (VAR. DEPTH) (SQ. YD.)	BITUMINOUS SHOULDERS, SUPERPAVE (TON)	BITUMINOUS MATERIALS PRIME COAT (TON)	BITUMINOUS CONCRETE SURFACE CSE. SUPERPAVE (TON)
SHOULDER ITEMS								
STA. 64+00 TO STA. 392+00	32,800	4' LT. & RT.	3' LT. & RT.	3,320.49	21,866.67	2,755.20	8.31	
STA. 392+00 TO STA. 399+53	753	4' LT. & RT.	3' LT. & RT.	76.23	502.00	63.25	0.19	
CULVERT OMISSION (S.N. 011-2507) STA. 399+53 TO STA. 403+17								
STA. 403+17 TO STA. 407+00	383	4' LT. & RT.	3' LT. & RT.	38.77	255.33	32.17	0.10	
STA. 407+00 TO STA. 411+42	442	4' LT. & RT.	3' LT. & RT.	44.75	294.67	37.13	0.11	
STA. 411+42 TO STA. 413+00	158	6' LT., 4' RT.	3' RT.	19.99	52.67	6.64	0.02	
STA. 413+00 TO STA. 418+11	511	6' LT.		38.80				
STA. 429+82 TO STA. 430+00	18	4' LT. & RT.	3' LT. & RT.	1.82	12.00	1.51	0.00	
STA. 430+00 TO STA. 430+85	85	4' LT. & RT.	3' LT. & 5' RT.	8.60	75.56	9.52	0.03	
STA. 430+85 TO STA. 431+92	107	4' RT.	6' LT. & 5' RT.	5.42	130.78	16.48	0.05	
CULVERT (S.N. 011-2505)								
STA. 431+92 TO STA. 432+72	80	---	8' LT. & RT.	---	142.22	17.92	0.05	
STA. 432+72 TO STA. 434+17	145	4' RT.	6' LT. & 5' RT.	7.34	177.22	22.33	0.07	
STA. 434+17 TO STA. 443+57.80	940.80	4' LT. & RT.	3' LT. & RT.	95.42	677.20	87.81	0.24	
STATION EQUATION - STA. 443+57.80 BACK = STA. 0+04.32 AHEAD								
STA. 0+04.32 TO STA. 0+06	1.68	4' LT. & RT.	3' LT. & RT.	0.17	1.12	0.14	0.00	
CULVERT OMISSION (S.N. 011-2512)								
STA. 0+06 TO STA. 5+96								
STA. 5+96 TO STA. 108+00.40	10,204.40	4' LT. & RT.	3' LT. & RT.	1,033.04	6,802.93	857.17	2.59	
CULVERT OMISSION (S.N. 011-7055)								
STA. 108+00.40 TO STA. 113+96.60								
STA. 113+96.60 TO STA. 206+40	9,243.40	4' LT. & RT.	3' LT. & RT.	935.75	6,162.27	776.45	2.34	
TOTAL				5626.42	37,102.63	4,674.93	14.10	
SIDEROAD QUANTITIES TO BE SUBTRACTED					504	42.34	0.19	
TOTAL ADJUSTED QUANTITY					36,598.63	4632.59	13.91	
PAY ITEM TOTAL				5627	36,599	4,633	13.91	
STONINGTON PARKING LANE ITEMS								
STA. 413+00 TO STA. 418+11	511		10' TO 10'-6" RT.		581.97		0.22	73.33
STA. 418+11 TO STA. 429+82	1171	-	11' LT., 10' TO 10'-6" RT.	-	2,764.86		1.05	348.37
TOTAL					3,346.83		1.27	421.70
PAY ITEM TOTAL					3,347		1.27	422

SCHEDULE OF QUANTITIES
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: PAV&SHLDR SCHED (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	12
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

ENTRANCE IMPROVEMENT SCHEDULE

LOCATION	TYPE OF ENTRANCE	EX MATERIAL TYPE	WIDTH ACROSS FRONT (FOOT)	WIDTH ACROSS BACK (FOOT)	LENGTH (FROM EDGE OF PVT. TO LIMITS OF IMPROVEMENT) (FOOT)	PR BIT. CONC. THICKNESS (INCH)	BIT. SURF. REM. - BUTT JOINT (SQ. YD.)	P.C.C. SURF. REM. - BUTT JOINT (SQ. YD.)	BITUMINOUS MATERIALS PRIME COAT (TON)	TEMPORARY RAMP (SQ. YD.)	* INCIDENTAL BITUMINOUS SURFACE (TON)	PREPARATION OF BASE (SQ. YD.)	AGGREGATE SHOULDERS, TYPE B (TON)
STA. 70+68 RT.	S.R. (1400 E.)	BITUMINOUS	82	55	10	1.5	76.11		0.03	45.56	7.39		
STA. 90+47 RT.	F.E.	EARTH	24										
STA. 120+25 RT.	S.R. (1550 E.)	BITUMINOUS	72	51	10	1.5	68.33		0.03	40.00	6.74		
STA. 168+45 LT.	F.E.	AGGREGATE	65	45									
STA. 168+70 RT.	F.E.	BITUMINOUS	65	45	10	1.5	61.11		0.02	36.11	5.13		
STA. 191+47 RT.	P.E.	BITUMINOUS	65	48	10	1.5	62.78		0.02	36.11	5.27		
STA. 201+67 LT.	F.E.	AGGREGATE	36	16									
STA. 211+56 RT.	F.E.	EARTH	24										
STA. 220+60 RT.	P.E.	BITUMINOUS	53	32	10	1.5	47.22		0.02	29.44	3.97		
STA. 221+45 TO STA. 222+70 RT.	P.E.	AGGREGATE	126	126							**		**
STA. 222+70 LT.	S.R. (1700 E.)	BITUMINOUS	54	36	10	1.5	50.00		0.02	30.00	5.20		
STA. 222+70 RT.	S.R. (1700 E.)	BITUMINOUS	54	44	10	1.5	54.44		0.02	30.00	5.57		
STA. 222+90 TO STA 225+00 LT.	P.E.	AGGREGATE	210	210							**		**
STA. 225+07 RT.	P.E. & M.B.	AGGREGATE	64	28	13	3.5					13.02	66.44	
STA 230+00 RT.	P.E. & M.B.	BITUMINOUS	107	71	13	3.5	128.56		0.05	59.44	25.20		
STA. 232+92 RT.	S.R. (1600 E.)	BITUMINOUS	78	52	10	1.5	72.22		0.03	43.33	7.07		
STA. 233+21 RT.	F.E.	EARTH	30										
STA. 233+29 LT.	S.R. (1600 E.)	BITUMINOUS	78	55	10	1.5	73.89		0.03	43.33	7.21		
STA. 246+60 RT.	F.E.	EARTH	24										
STA. 254+51 LT. ***	P.E.	BITUMINOUS	34	27	10	1.5	33.89		0.01	18.89	2.85		
STA. 256+17 RT.	F.E.	EARTH	28										
STA. 292+62 LT.	S.R. (1675 E.)	BITUMINOUS	50	38	10	1.5	48.89		0.02	27.78	5.11		
STA. 292+62 RT.	S.R. (1675 E.)	BITUMINOUS	56	36	10	1.5	51.11		0.02	31.11	5.29		
STA. 299+92 RT.	F.E.	EARTH	24										
STA. 311+22 RT.	C.E.	CONCRETE	56	44	10	1.5		55.56	0.02	31.11	4.67		
STA. 316+00 RT.	S.R. (T.R. 210)	BITUMINOUS	100	56	10	1.5	86.67		0.03	55.56	8.28		
STA. 316+15 LT.	S.R. (T.R. 210)	BITUMINOUS	70	46	10	1.5	64.44		0.02	38.89	6.41		
STA. 335+85 RT.	F.E.	EARTH	28		10								
STA. 338+00 LT.	P.E.	BITUMINOUS	59	46	10	1.5	58.33		0.02	32.78	4.90		
STA. 338+00 RT.	F.E.	EARTH	28										
STA. 343+91 RT.	F.E.	EARTH	28										
STA. 360+45 LT.	S.R. (1750 E.)	BITUMINOUS	58	40	10	1.5	54.44		0.02	32.22	5.57		
STA. 360+45 RT.	S.R. (1750 E.)	BITUMINOUS	58	40	10	1.5	54.44		0.02	32.22	5.57		
STA. 377+11 LT.	F.E.	AGGREGATE	40	18									
STA. 377+50 RT.	F.E.	EARTH	28										
STA. 386+08 RT.	C.E.	CONCRETE	72	54	10	1.5		70.00	0.03	40.00	5.88		
STA. 391+00 RT.	C.E.	CONCRETE	70	50	10	1.5		66.67	0.03	38.89	5.60		
STA. 395+00 RT.	PRIVATE ROAD	BITUMINOUS	66	50	10	1.5	64.44		0.02	36.67	5.41		
PROJECT OMISSION STA. 399+53 TO STA. 403+17 (S.N. 011-2507)													
STA. 404+02 RT.	ALLEY (P.E.)	BITUMINOUS	39	23	10	1.5	34.44		0.01	21.67	2.89		
STA. 404+67 RT. TO STA. 407+09 RT.	S.R. (CORZINE ST.) S.R. (LIVERGOOD ST.)	BITUMINOUS BITUMINOUS	242	242	10	1.5	268.89		0.10	134.44	23.59		
STA. 410+00 RT.	P.E.	BITUMINOUS	68	54	10	1.5	67.78		0.03	37.78	5.69		
STA. 412+37 RT.	S.R. (MAIN & DIVISION)	BITUMINOUS	96	76	10	1.5	95.56		0.04	53.33	9.03		
REFER TO PAVEMENT SCHEDULE FOR STA. 413+00 TO STA. 429+82 RT. & STA. 418+11 TO STA. 429+67 LT.													
STA. 433+97 LT.	F.E.	AGGREGATE	36	16									
STA. 442+12 RT.	P.E.	AGGREGATE	35	26	5	3.5					3.32	16.94	2.59
STA. 442+47 LT.	F.E.	BITUMINOUS	34	20	10	1.5	30.00		0.01	18.89	2.52		
STA. EQUATION 443+57.80 = STA. 0+04.32													
CULVERT OMISSION STA. 0+06 TO STA. 5+96 (S.N. 011-2512)													
STA. 8+70 RT.	F.E.	EARTH	24										
STA. 13+55 RT.	F.E.	EARTH	28										
STA. 27+96 RT.	F.E.	EARTH	28										
STA. 41+24 LT.	S.R. (1900 E.)	BITUMINOUS	66	46	10	1.5	62.22		0.02	36.67	6.23		
STA. 41+24 RT.	S.R. (1900 E.)	BITUMINOUS	58	44	10	1.5	56.67		0.02	32.22	5.76		
STA. 54+40 LT.	S.R. (1915 E.)	BITUMINOUS	76	50	10	1.5	70.00		0.03	42.22	6.88		
STA. 54+44 RT.	S.R. (1915 E.)	BITUMINOUS	44	28	10	1.5	40.00		0.02	24.44	4.36		
STA. 62+89 RT.	F.E.	EARTH	24										
STA. 86+65 RT.	F.E.	EARTH	24										
STA. 106+71 RT.	F.E.	EARTH	28										
CULVERT OMISSION STA. 108+00.4 TO STA. 113+96.6 (S.N. 011-7055)													
STA. 121+07 LT.	S.R. (2000 E.)	BITUMINOUS	58	38	10	1.5	53.33		0.02	32.22	5.48		
STA. 121+07 RT.	S.R. (2000 E.)	BITUMINOUS	68	40	10	1.5	60.00		0.02	37.78	6.04		
STA. 121+30 TO STA. 123+15 RT.	P.E.	AGGREGATE	235	235							**		**
STA. 123+92 LT.	S.R. (2000 E.)	BITUMINOUS	54	32	10	1.5	47.78		0.02	30.00	4.01		
STA. 123+92 RT.	S.R. (2000 E.)	BITUMINOUS	60	40	10	1.5	55.56		0.02	33.33	4.67		
STA. 134+20 RT.	F.E.	EARTH	24										
STA. 155+32 RT.	F.E.	EARTH	24										
STA. 169+58 RT.	F.E.	EARTH	24										
STA. 179+25 RT.	F.E.	AGGREGATE	44	24									
STA. 191+95 LT.	S.R. (2080 E.)	BITUMINOUS	48	30	10	1.5	43.33		0.02	26.67	4.64		
STA. 191+95 RT.	S.R. (2080 E.)	BITUMINOUS	54	40	10	1.5	52.22		0.02	30.00	5.39		
TOTAL							2249.11	192.22	0.93	1401.11	259.81	83.39	2.59
PAY ITEM TOTAL							2250	193	0.93	1402	260	84	3

NOTE: SIDE ROAD AND ENTRANCE STATIONS ARE APPROXIMATE. FOR ALL AGGREGATE FIELD ENTRANCES, QUANTITY IS INCLUDED IN SHOULDER SCHEDULE.

* INCLUDES AN ADDITIONAL 1 TON OF INCIDENTAL BITUMINOUS SURFACE HAS BEEN ADDED TO ACCOUNT FOR 4'-0" SHOULDER AT ALL SIDEROAD LOCATIONS.

** AGGREGATE AND BITUMINOUS QUANTITIES AT THESE LOCATIONS HAVE BEEN INCLUDED IN THE SHOULDER SCHEDULE.

*** EXISTING ENTRANCE IN POOR CONDITION. ADDITIONAL REMOVAL AND REPLACEMENT REQUIRED.

SCHEDULE OF QUANTITIES
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: ENT SCHED (REV. 3/1/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	13
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

SCHEDULE
EARTHWORK

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 173+50 TO STA. 174+00	14	11	1	-10
STA. 174+00 TO STA. 175+00	44	33	6	-27
STA. 175+00 TO STA. 176+00	31	23	15	-8
STA. 176+00 TO STA. 177+00	35	26	15	-11
STA. 177+00 TO STA. 178+00	41	31	6	-25
STA. 178+00 TO STA. 179+00	50	38	2	-36
STA. 179+00 TO STA. 180+00	54	41	4	-37
STA. 180+00 TO STA. 181+00	44	33	6	-27
STA. 181+00 TO STA. 182+00	41	31	4	-27
STA. 182+00 TO STA. 183+00	31	23	6	-17
STA. 183+00 TO STA. 184+00	33	25	7	-18
STA. 184+00 TO STA. 185+00	56	42	4	-38
STA. 185+00 TO STA. 186+00	56	42	4	-38
STA. 186+00 TO STA. 187+00	46	35	6	-29
STA. 187+00 TO STA. 188+00	48	36	6	-30
STA. 188+00 TO STA. 189+00	41	31	6	-25
STA. 189+00 TO STA. 190+00	31	23	11	-12
STA. 190+00 TO STA. 191+00	43	32	20	-12
STA. 191+00 TO STA. 192+00	52	39	20	-19
STA. 192+00 TO STA. 193+00	63	47	20	-27
STA. 193+00 TO STA. 194+00	45	34	13	-21
STA. 194+00 TO STA. 195+00	46	35	2	-33
STA. 195+00 TO STA. 196+00	69	52	7	-45
STA. 196+00 TO STA. 197+00	52	39	13	-26
STA. 197+00 TO STA. 198+00	24	18	6	-12
STA. 198+00 TO STA. 199+00	24	18	9	-9
STA. 199+00 TO STA. 200+00	19	14	6	-8
STA. 200+00 TO STA. 201+00	17	13	4	-9
STA. 201+00 TO STA. 202+00	9	7	7	0
DRAINAGE AREA TOTAL	1,159	869	236	-633
GUARDRAIL IMPROVEMENT LOCATIONS				
STA. 12+43 TO STA. 17+94			174	+174
STA. 171+01 TO STA. 176+48			174	+174
ROADWAY RESURFACING PROJECT TOTAL	1,159	869	584	-285

THERE WILL NOT BE A FURNISHED EXCAVATION QUANTITY FOR THE ROADWAY RESURFACING PORTION OF THIS PROJECT SINCE THERE IS EXCESS EARTH EXCAVATION.

SCHEDULE
PIPE CULVERTS, CLASS D, TYPE 1 15"

LOCATION	QUANTITY (FOOT)
STA. 201+51 TO STA. 201+83 LT.	32
TOTAL	32

SCHEDULE
PIPE CULVERTS, CLASS D, TYPE 1 18"

LOCATION	QUANTITY (FOOT)
STA. 191+33 TO STA. 191+85 RT.	52
TOTAL	52

SCHEDULE
STRIP REFLECTIVE CRACK CONTROL TREATMENT

LOCATION	QUANTITY (FOOT)
STA. 64+00 TO STA. 392+00 7' LT.	32,800
BITUMINOUS PAVEMENT OMISSION - STA. 392+00 TO STA. 407+00	
STA. 407+00 TO STA. 431+92 7' LT.	2,492
CULVERT OMISSION - STA. 431+92 TO STA. 432+72 (P.C.C. PAVEMENT)	
STA. 432+72 TO STA. 443+57.80 7' LT.	1,085.8
STA. EQN.: STA. 443+57.80 = STA. 0+04.32	
STA. 0+04.32 TO STA. 0+06 7' LT.	1.68
CULVERT OMISSION - STA. 0+06 TO STA. 5+96	
STA. 5+96 TO STA. 108+00.4 7' LT.	10,204.4
CULVERT OMISSION - STA. 108+00.4 TO STA. 113+96.60	
STA. 113+96.60 TO STA. 206+40 7' LT.	9,243.4
TOTAL	55,827.28
PAY ITEM TOTAL	55,828

SCHEDULE
PERMANENT SEEDING

LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN FERT. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)	POTASSIUM FERT. NUT. (POUND)	MULCH METHOD 2 (ACRE)	AGRICULTURAL GROUND LIMESTONE (TON)
STA. 173+50 TO STA. 202+00	2.9	261	261	261	2.9	5.8
TOTAL	2.9	261	261	261	2.9	5.8

SCHEDULE
EROSION CONTROL ITEMS

LOCATION	PERIMETER EROSION BARRIER (FT.)	TEMP. DITCH CHECK (EACH)	TEMP. EROSION CONTROL SEEDING (POUND)
STA. 173+50 TO STA. 202+00 LT.	2,850		290
STA. 173+50 TO STA. 202+00 RT.	2,850		290
STA. 176+00, 36' LT & 29' RT.		2	
STA. 178+00, 35' LT & 28' RT.		2	
STA. 180+00, 34' LT & 28' RT.		2	
STA. 182+00, 33' LT & 28' RT.		2	
STA. 184+00, 34' LT & 28' RT.		2	
STA. 186+00, 33' LT & 27' RT.		2	
STA. 188+00, 34' LT & 28' RT.		2	
STA. 190+00, 36' LT & 31' RT.		2	
STA. 192+00, 36' LT & 32' RT.		2	
STA. 193+90, 36' LT & 33' RT.		2	
STA. 196+00, 33' LT & 33' RT.		2	
STA. 198+00, 32' LT & 30' RT.		2	
STA. 200+00, 31' LT & 28' RT.		2	
TOTAL	5,700	26	580

SCHEDULE
RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	RAISED REFL PAVT MRK REM (EACH)	RAISED REFL PAVT MRK (EACH)
STA. 64+00 TO STA. 399+53	410	410
CULVERT OMISSION - STA. 399+53 TO STA. 403+17		
STA. 403+17 TO STA. 431+92	36	36
CULVERT - STA. 431+92 TO STA. 432+72	0	1
STA. 432+72 TO STA. 443+57.80	14	14
STA. EQN.: STA. 443+57.80 = STA. 0+04.32		
STA. 0+04.32 TO STA. 0+06	0	0
CULVERT OMISSION - STA. 0+06 TO STA. 5+96		
STA. 5+96 TO STA. 108+00.4	128	128
CULVERT OMISSION - STA. 108+00.4 TO STA. 113+96.60		
STA. 113+96.60 TO STA. 206+40	115	115
TOTAL	703	704

NOTE: RAISED REFLECTORS ASSUMED TO BE AT ±80' CTS.

SCHEDULE
PAVEMENT MARKING

LOCATION	LENGTH (FT.)	TEMP. PVMT. MARKING LINE - 5"			SHORT TERM PVMT. MARKING		WORK ZONE PVMT. MARKING REMOVAL		PAINT PVMT. MARKING LINE - 5"		
		WHITE (FT.)	YELLOW SKIP DASH 30' SPACING (FT.)	YELLOW NO PASSING (FT.)	WHITE (FT.)	YELLOW (FT.)	WHITE (SQ. FT.)	YELLOW (SQ. FT.)	WHITE (FT.)	YELLOW SKIP DASH 30' SPACING (FT.)	YELLOW NO PASSING (FT.)
STA. 64+00 TO STA. 214+83	15,083	30,166	3,770			3,017		498	30,166	3,770	
STA. 214+83 TO STA. 220+48	565	1,130	140 LT.	565 RT.		113		17	1,130	140 LT.	565 RT.
STA. 220+48 TO STA. 223+18	270	540		540 LT. & RT.		54		18	540		540 LT. & RT.
STA. 223+18 TO STA. 230+98	780	1,560	200 RT.	780 LT.		156		26	1,560	200 RT.	780 LT.
STA. 230+98 TO STA. 280+00	4,902	9,804	1,230			980		162	9,804	1,230	
STA. 280+00 TO STA. 297+70	1,770	3,540		3,540 LT. & RT.		354		59	3,540		3,540 LT. & RT.
STA. 297+70 TO STA. 305+00	730	1,460	180 RT.	730 LT.		146		24	1,460	180 RT.	730 LT.
STA. 305+00 TO STA. 399+53	9,453	18,906	2,370			1,891		312	18,906	2,370	
CULVERT OMISSION STA. 399+53 TO STA. 403+17											
STA. 403+17 TO STA. 431+92	2,875	5,750	720			576		95	5,750	720	
CULVERT STA. 431+92 TO STA. 432+72	80	160	20			16		3	160	20	
STA. 432+72 TO STA. 443+57.80	1,085.8	2,172	270			217		36	2,172	270	
STA. EQN: STA 443+57.80 = STA. 0+04.32											
STA. 0+04.32 TO STA. 0+06	1.68	4							4		
CULVERT OMISSION STA. 0+06 TO STA. 5+96											
STA. 5+96 TO STA. 108+00.4	10,204.4	20,409	2,550			2,041		337	20,409	2,550	
CULVERT OMISSION STA. 108+00.4 TO STA. 113+96.6											
STA. 113+96.6 TO STA. 206+40	9,243.4	18,487	2,310			1,850		305	18,487	2,310	
SUB-TOTAL		114,088	13,760	6,155		11,410		1,892	114,088	13,760	6,155
TOTAL		134,003			11,410		1,892		134,003		

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS.
* 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

SCHEDULE OF QUANTITIES
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: QS (REV. 3/2/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	14
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

GUARDRAIL SCHEDULE

LOCATION	STEEL PLATE BEAM GUARDRAIL REMOVAL (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 13+94 TO STA. 14+06.5 LT.	12.5				
STA. 14+15 TO STA. 14+27.5 RT.	12.5				
STA. 16+19 TO STA. 16+31.5 RT.	12.5				
STA. 16+48 TO STA. 16+60.5 LT.	12.5				
STA. 12+77.5 TO STA. 13+27.5 RT.		1		1	1
STA. 13+27.5 TO STA. 14+27.5 RT.			100	1	
STA. 12+81.5 TO STA. 13+31.5 LT.		1		1	1
STA. 13+31.5 TO STA. 14+06.5 LT.			75	1	
STA. 16+31.5 TO STA. 16+94 RT.			62.5	1	
STA. 16+94 TO STA. 17+44 RT.		1		1	1
STA. 16+60.5 TO STA. 17+10.5 LT.			50	1	
STA. 17+10.5 TO STA. 17+60.5 LT.		1		1	1
STA. 172+85 TO STA. 172+97.5 RT.	12.5				
STA. 173+34 TO STA. 173+46.5 LT.	12.5				
STA. 174+76.5 TO STA. 174+89 RT.	12.5				
STA. 175+74.5 TO STA. 175+87 LT.	12.5				
STA. 172+21.5 TO STA. 172+71.5 LT.		1		1	1
STA. 172+71.5 TO STA. 173+46.5 LT.			75	1	
STA. 171+35 TO STA. 171+85 RT.		1		1	1
STA. 171+85 TO STA. 172+97.5 RT.			112.5	1	
STA. 175+74.5 TO STA. 176+62 LT.			87.5	1	
STA. 176+62 TO STA. 177+12 LT.		1		1	1
STA. 174+76.5 TO STA. 175+64 RT.			87.5	1	
STA. 175+64 TO STA. 176+14 RT.		1		1	1
TOTAL	100	8	650	16	8

NOTE: STATIONS ARE APPROXIMATE.

SCHEDULE
VERTICAL ADJUSTMENT OF GUARD RAIL

LOCATION	QUANTITY (FOOT)
STA. 14+16.5 TO STA. 16+48 LT.	241.5
STA. 14+27.5 TO STA. 16+19 RT.	191.5
STA. 172+97.5 TO STA. 174+76.5 RT.	179
STA. 173+46.5 TO STA. 175+74.5 LT.	228
TOTAL	840

SCHEDULE
DRAINAGE IMPROVEMENT BENCHMARKS

STATION	ELEVATION	LOCATION
STA. 117+40 RT.	614.31	CHISELED "□" IN TOP OF HDWL. 2X3 BOX CULVERT (B.M. 605)
STA. 133+10 RT.	615.06	CHISELED "□" IN TOP OF HDWL. 2X2 BOX CULVERT (B.M. 604)
STA. 155+67 RT.	614.64	CHISELED "□" IN TOP OF EAST HDWL. ELLIP. PIPE (B.M. 603)
STA. 179+21 LT.	621.18	CHISELED "□" IN EAST SIDE OF R.R. SIGNAL LIGHT (TJM#102)
STA. 194+00 RT.	615.88	CHISELED "□" IN CENTER OF 24" R.C.C.P. (TJM#100)
STA. 222+20 LT.	633.09	CHISELED "□" IN TOP OF WEST HDWL. 2x2 BOX CULVERT (B.M. 600)

SCHEDULE
SHOULDER REMOVAL AND REPLACEMENT 8"

LOCATION	QUANTITY (SQ. YD.)
ENTIRE PROJECT LENGTH	500
TOTAL	500

THIS IS AN ESTIMATED QUANTITY

SCHEDULE
PAVEMENT PATCHING, 9 INCH

LOCATION	TYPE I (SQ. YD.)	TYPE II (SQ. YD.)	TYPE III (SQ. YD.)	TYPE IV (SQ. YD.)
ENTIRE PROJECT LENGTH	50	700	400	400
TOTAL	50	700	400	400

THIS IS AN ESTIMATED QUANTITY

MAINLINE (IL. 48) BITUMINOUS SUMMARY SCHEDULE

LOCATION	BIT. SURF. REMOVAL (VAR. DEPTH) (SQ. YD.)	LEVELING BINDER SUPER N50 (TON)	BIT. CONC. SURF. CSE. SUPERPAVE (TON)	BITUMINOUS MATERIALS PRIME COAT (TON)	BIT. SURF. REMOVAL BUTT JOINT (SQ. YD.)	BITUMINOUS SHOULDERS SUPERPAVE (TON)	INCIDENTAL BITUMINOUS SURFACE (TON)
PAVEMENT SCHEDULE	139,457	5,858	11,715	53.01	148		
SHOULDER SCHEDULE	36,599			13.91		4,633	
ENTRANCE SCHEDULE				0.93	2,250		260
ROADWAY GRAND TOTAL	176,056	5,858	11,715	67.85	2,398	4,633	260

MAINLINE (IL. 48) AGGREGATE SUMMARY SCHEDULE

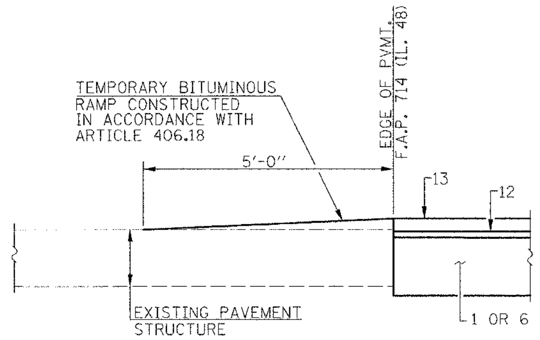
LOCATION	AGGREGATE PRIME COAT (TON)	AGGREGATE SHOULDERS TYPE B (TON)
PAVEMENT SCHEDULE	279	
SHOULDER SCHEDULE		5,627
ENTRANCE SCHEDULE		3
ROADWAY GRAND TOTAL	279	5,630

FILE NAME: GS (REV. 3/28/06)

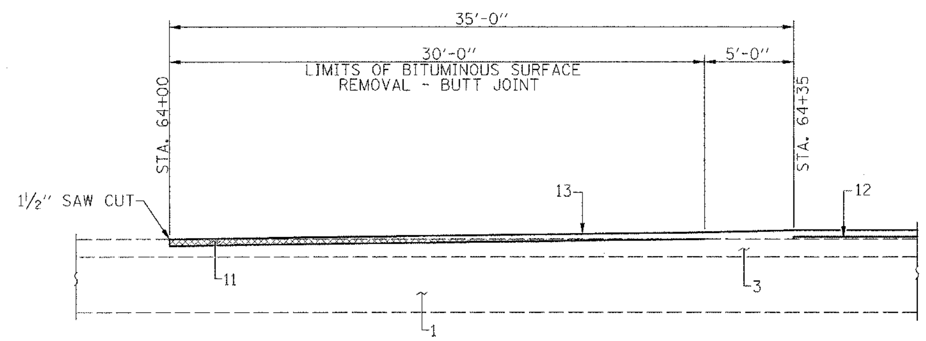
SCHEDULE OF QUANTITIES
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	15
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

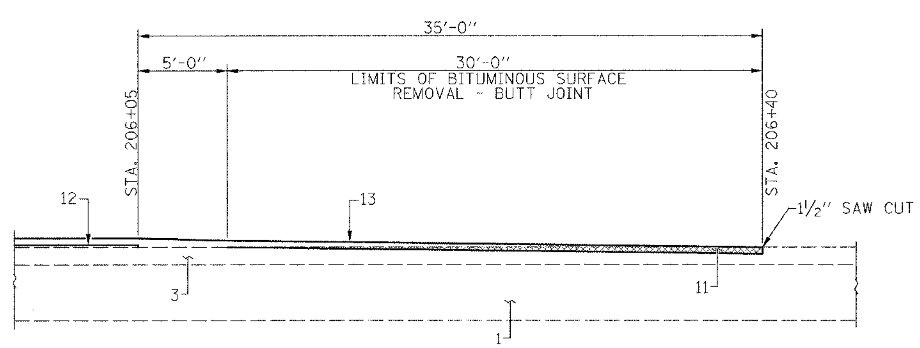
* D-6 IL. 48 IMPROVEMENT 2006



TEMPORARY RAMP DETAIL
(AT ALL SIDEROADS - SEE SCHEDULE)



BUTT JOINT DETAIL
(STA. 64+00 TO STA. 64+35)



BUTT JOINT DETAIL
(STA. 206+05 TO STA. 206+40)

PAVEMENT LEGEND

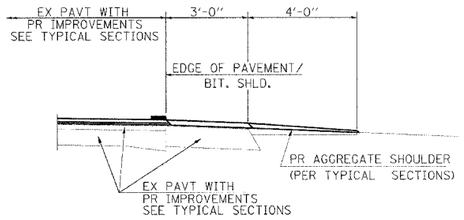
1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

BUTT JOINT AND TEMPORARY RAMP DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

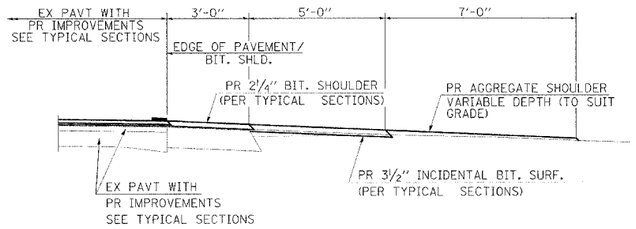
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	16
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

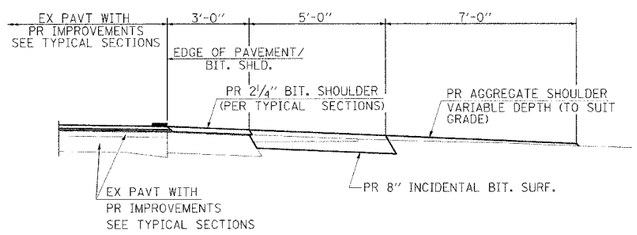


SECTION A-A FOR EX EARTH/ AGGREGATE FE



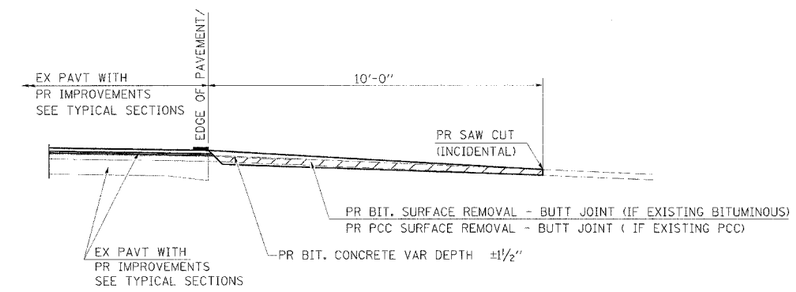
SECTION A-A FOR EX EARTH/AGGREGATE PE

NOT APPLICABLE TO THESE LOCATIONS: (STA. 221+45 TO STA. 222+70 RT.)
(STA. 222+90 TO STA. 225+00 LT.)
(STA. 121+30 TO STA. 123+65 LT.)

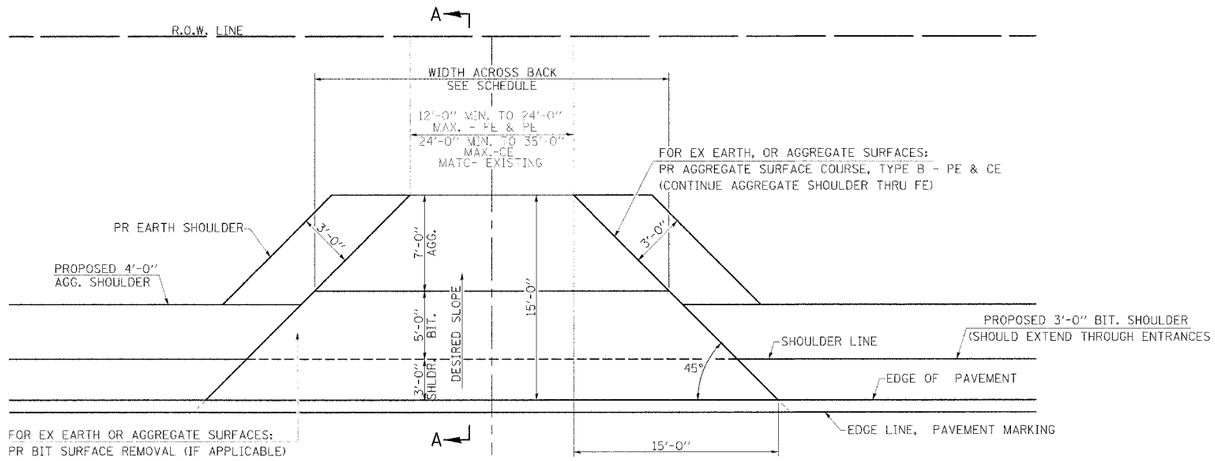


SECTION A-A FOR EX EARTH/AGGREGATE CE & SIDE ROAD

(NOT APPLICABLE TO THIS PROJECT)

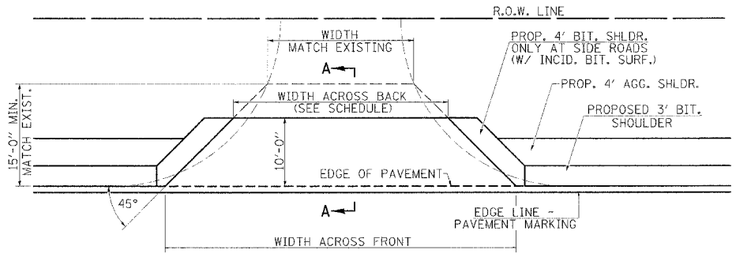


SECTION A-A FOR EX BITUMINOUS/ PC CONCRETE PE, FE, CE & SIDE ROAD



EARTH OR AGGREGATE SURFACE PLAN

(FIELD ENTRANCE, PRIVATE ENTRANCE & COMMERCIAL ENTRANCE)



BITUMINOUS OR CONCRETE PLAN

(FIELD ENTRANCE, PRIVATE ENTRANCE, COMMERCIAL ENTRANCE & SIDE ROAD)

NOTE : BIT. SHOULDERS SHOULD NOT EXTEND THROUGH SIDE ROADS.

GENERAL NOTES:

THE RESIDENT ENGINEER WILL DETERMINE THE EXACT TYPE OF IMPROVEMENT TO BE COMPLETED FOR ALL ENTRANCES, SIDEROADS AND MAILBOX TURNOUTS ON THIS PROJECT.

THE PLAN DETAILS AND SCHEDULES SHOULD BE USED AS A GUIDE FOR THE ENGINEER TO IMPLEMENT THE FINAL DESIGN. THE ENGINEER MAY DECIDE TO SALVAGE PORTIONS OF THE EXISTING ENTRANCE PAVEMENT STRUCTURE; THEREFORE, REDUCING PAY ITEM QUANTITIES. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THIS REDUCTION IN QUANTITIES.

ANY WORK THE ENGINEER REQUIRES WHICH IS NOT COVERED BY A PAY ITEM CONTAINED IN THE PLANS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

BITUMINOUS CONCRETE REQUIRED TO CONSTRUCT THE ENTRANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 406 AND 408 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

WHEN THE BITUMINOUS CONCRETE PROPOSED FOR THE IMPROVEMENT IS THICKER THAN 75 mm (3 INCHES) AND REQUIRE PLACEMENT IN MORE THAN ONE LIFT. THE BOTTOM LIFT(S) SHALL MEET THE REQUIREMENTS OF BITUMINOUS BASE COURSE IN SECTION 406 OF THE STANDARD SPECIFICATIONS AND THE TOP LIFT OF 50 mm (2 INCHES) SHALL MEET THE REQUIREMENTS OF BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE.

THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH SECTIONS 351, 358, 408, 423 AND 440 OF THE STANDARD SPECIFICATIONS.

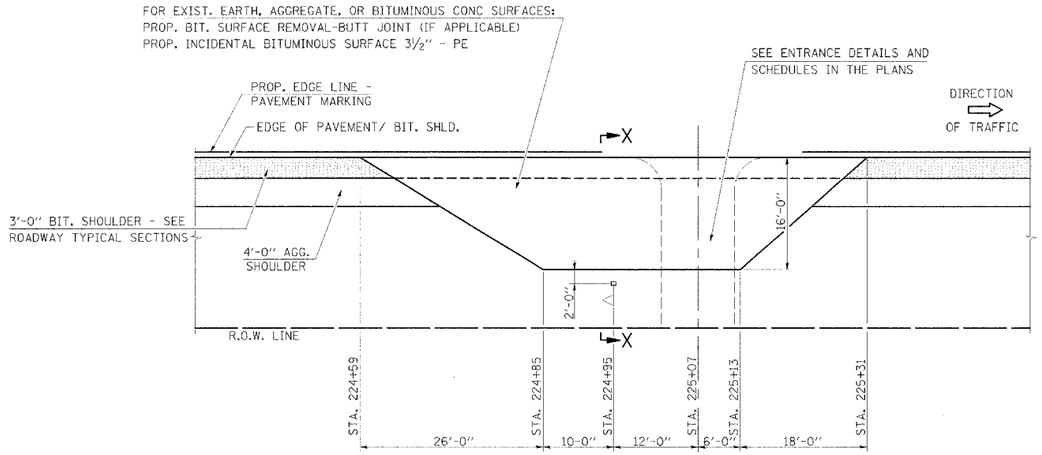
ENTRANCE AND SIDEROAD DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: SR ED (REV. 3/28/06)

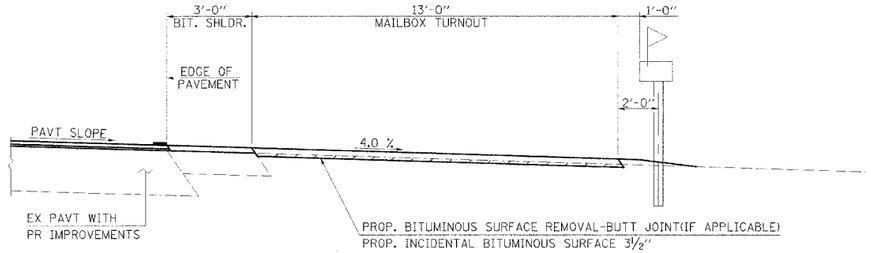
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	17
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

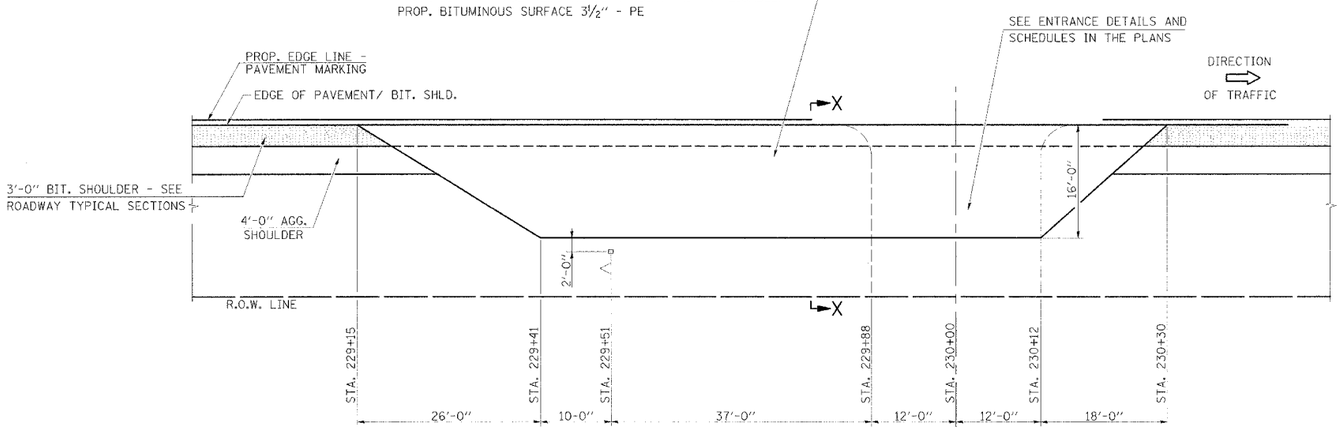
• D-6 IL. 48 IMPROVEMENT 2006



PLAN - MAILBOX TURNOUT
(P.E. STA. 225+07 RT.)



SECTION X-X THRU MAILBOX TURNOUT



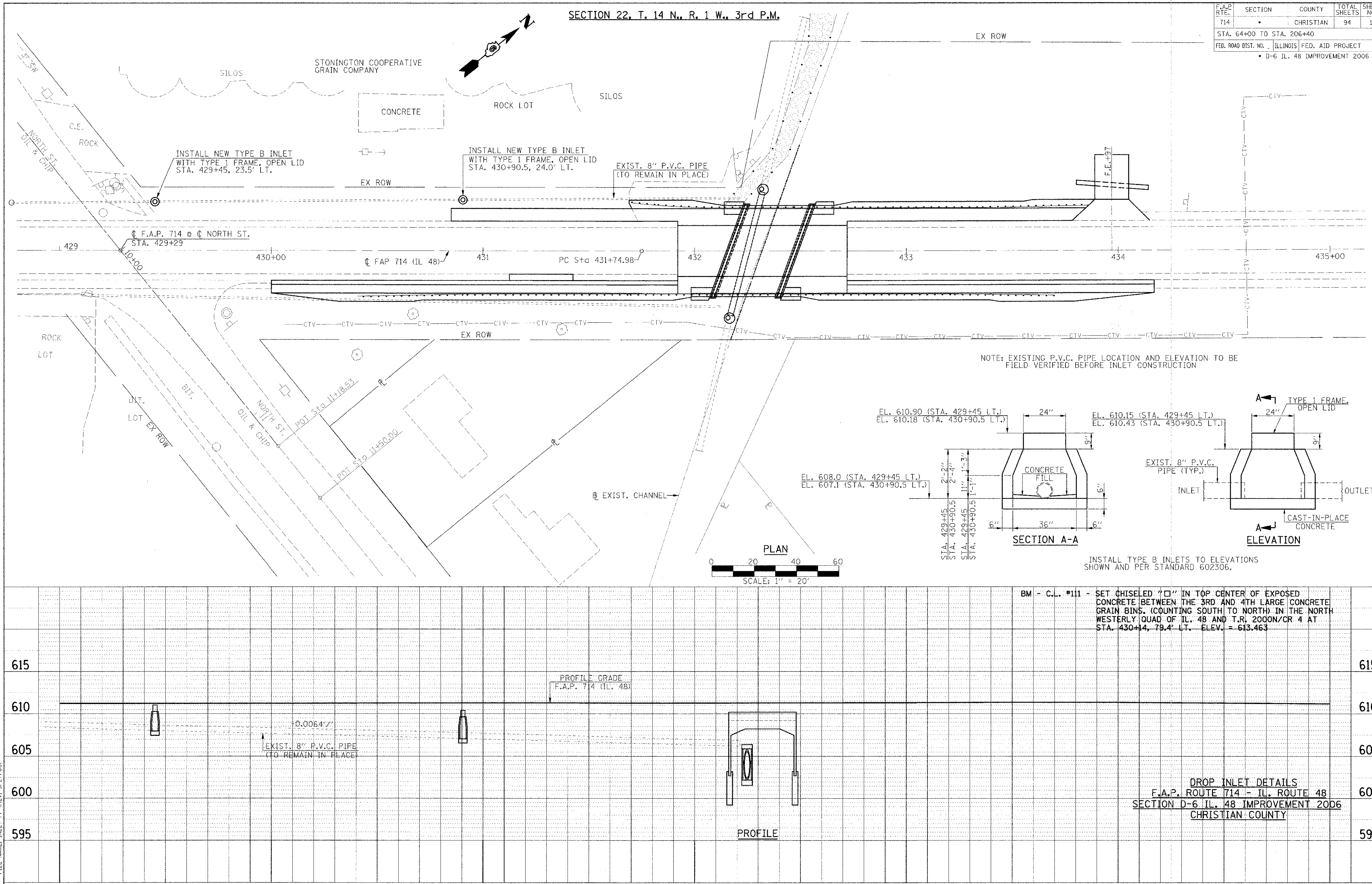
PLAN - MAILBOX TURNOUT
(P.E. STA. 230+00 RT.)

MAILBOX TURNOUT DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: MBTD (REV. 3/27/06)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	18
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



SECTION 22, T. 14 N., R. 1 W., 3rd P.M.
N
STONINGTON COOPERATIVE
GRAIN COMPANY
SILOS
CONCRETE
ROCK LOT
SILOS
EX ROW
C.E.
ROCK
NORTH ST.
OIL & CHIP
INSTALL NEW TYPE B INLET
WITH TYPE 1 FRAME, OPEN LID
STA. 429+45, 23.5' LT.
INSTALL NEW TYPE B INLET
WITH TYPE 1 FRAME, OPEN LID
STA. 430+90.5, 24.0' LT.
EXIST. 8" P.V.C. PIPE
(TO REMAIN IN PLACE)
EX ROW
℄ F.A.P. 714 @ ℄ NORTH ST.
STA. 429+29
429
430+00
℄ FAP 714 (IL 48)
431
PC Sta 431+74.98
432
433
434
435+00
F.E.+97
CTV
EX ROW
ROCK
LOT
BIT.
LOT
EX ROW
BIT.
NORTH ST.
OIL & CHIP
POT Sta 11+18.53
POT Sta 11+50.00
℄ EXIST. CHANNEL
NOTE: EXISTING P.V.C. PIPE LOCATION AND ELEVATION TO BE
FIELD VERIFIED BEFORE INLET CONSTRUCTION
EL. 610.90 (STA. 429+45 LT.)
EL. 610.18 (STA. 430+90.5 LT.)
24"
9"
2'-2"
2'-4"
1'-3"
11"
1'-1"
CONCRETE
FILL
6"
EL. 608.0 (STA. 429+45 LT.)
EL. 607.1 (STA. 430+90.5 LT.)
STA. 429+45
STA. 430+90.5
STA. 429+45
STA. 430+90.5
6"
36"
6"
SECTION A-A
EL. 610.15 (STA. 429+45 LT.)
EL. 610.43 (STA. 430+90.5 LT.)
A
TYPE 1 FRAME,
OPEN LID
24"
9"
EXIST. 8" P.V.C.
PIPE (TYP.)
INLET
OUTLET
CAST-IN-PLACE
CONCRETE
A
ELEVATION
INSTALL TYPE B INLETS TO ELEVATIONS
SHOWN AND PER STANDARD 602306.
PLAN
0
20
40
60
SCALE: 1" = 20'
BM - C.L. #111 - SET CHISELED "□" IN TOP CENTER OF EXPOSED
CONCRETE BETWEEN THE 3RD AND 4TH LARGE CONCRETE
GRAIN BINS. (COUNTING SOUTH TO NORTH) IN THE NORTH
WESTERLY QUAD OF IL. 48 AND T.R. 2000N/CR 4 AT
STA. 430+14, 79.4' LT. ELEV. = 613.463
615
610
605
600
595
PROFILE GRADE
F.A.P. 714 (IL. 48)
0.0064'/'
EXIST. 8" P.V.C. PIPE
(TO REMAIN IN PLACE)
PROFILE
429
430+00
431
432
433
434
435+00

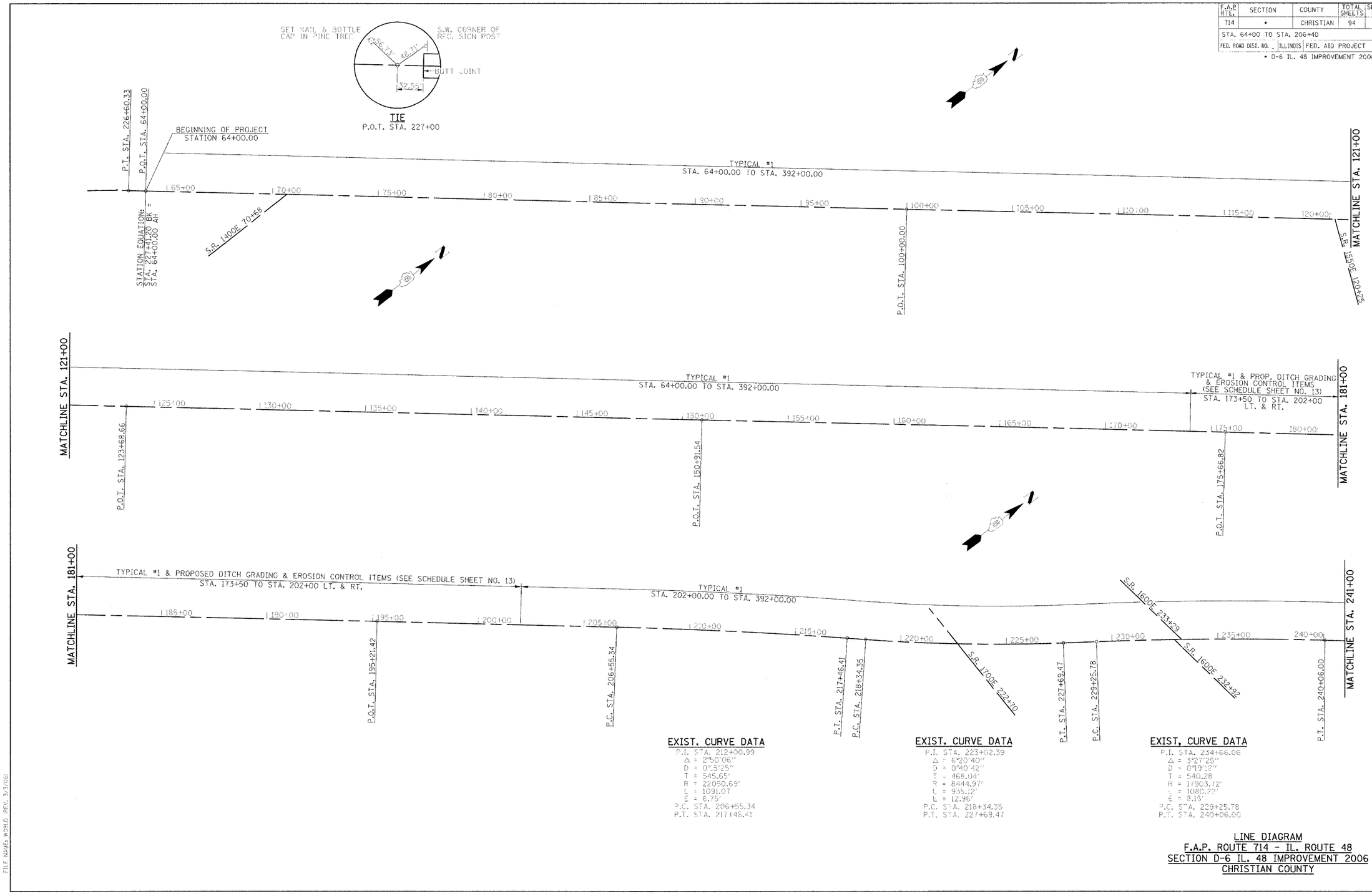
DROP INLET DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: INLET PP (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	19
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



EXIST. CURVE DATA
P.I. STA. 212+00.99
Δ = 2°50'06"
D = 0°5'25"
T = 545.65'
R = 22050.69'
L = 1091.07
E = 6.75'
P.C. STA. 206+55.34
P.T. STA. 217+46.41

EXIST. CURVE DATA
P.I. STA. 223+02.39
Δ = 5°20'40"
D = 0°40'42"
T = 468.04'
R = 8444.97'
L = 935.12'
E = 12.96'
P.C. STA. 218+34.35
P.T. STA. 227+69.47

EXIST, CURVE DATA
P.I. STA. 234+66.06
Δ = 3°27'25"
D = 0°19'12"
T = 540.28
R = 17903.72'
L = 1080.22'
E = 8.15'
P.C. STA. 229+25.78
P.T. STA. 240+06.00

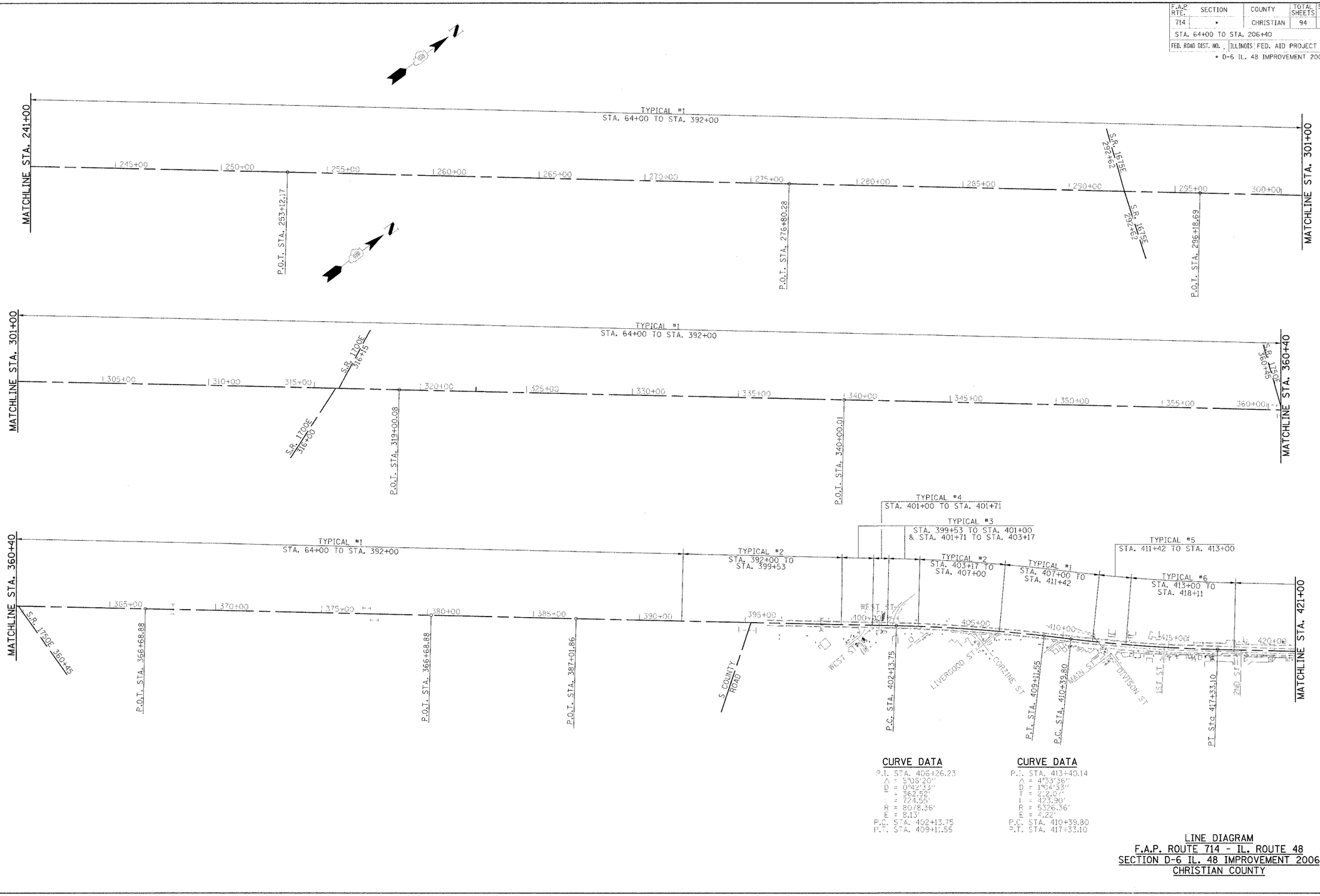
LINE DIAGRAM
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: #DGN.D (REV. 3/3/06)

CONTRACT NO. 72784

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	20
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



CURVE DATA

P.I. STA. 406+26.23
Δ = 5°08'20"
D = 0°42'33"
T = 362.52'
L = 724.55'
R = 8078.36'
m = 8.13'
P.C. STA. 402+13.75
P.T. STA. 409+11.55

CURVE DATA

P.I. STA. 413+40.14
Δ = 4°33'36"
D = 1°04'52"
T = 212.07'
L = 423.90'
R = 5326.36'
E = 4.22'
P.C. STA. 410+39.80
P.T. STA. 417+33.10

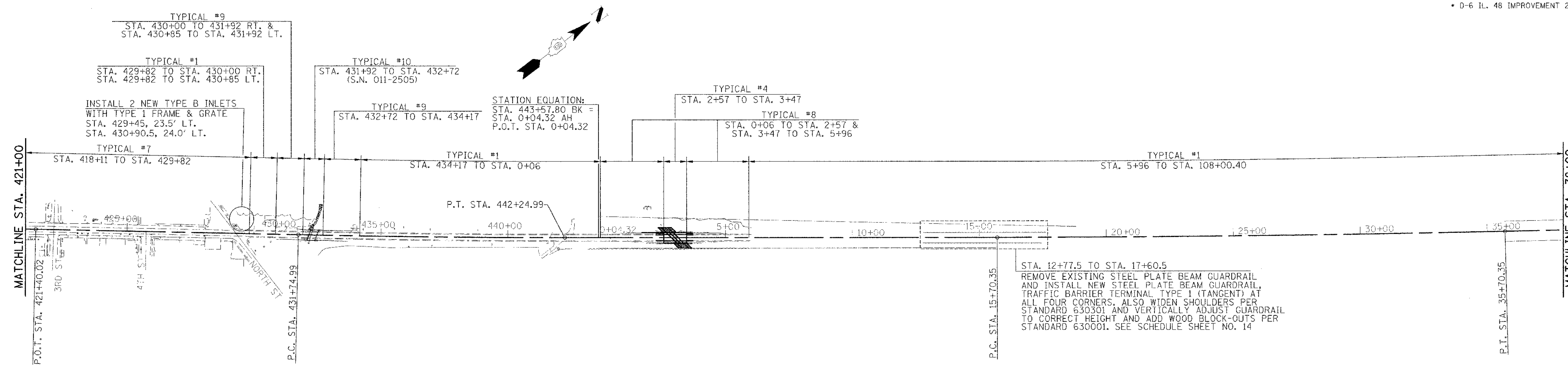
LINE DIAGRAM
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: W:\S U (REV. 3/2/06)

CONTRACT NO. 72784

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	21
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

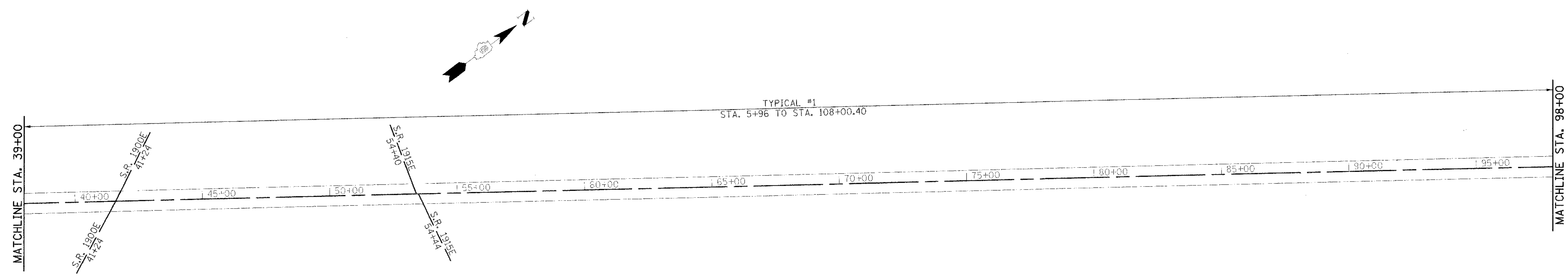


EXIST. CURVE DATA

P.I. STA. 437+00.00
Δ = 1°18'33"
D = 0°07'29"
T = 525.02'
L = 1050.00'
R = 45995.99'
E = 3.00'
P.C. STA. 431+74.99
P.T. STA. 442+24.99

EXIST. CURVE DATA

P.I. STA. 15+70.35
Δ = 1°25'23"
D = 0°04'16"
T = 1000.05'
L = 2000.00'
R = 80531.70'
E = 6.21'
P.C. STA. 15+70.35
P.T. STA. 35+70.35

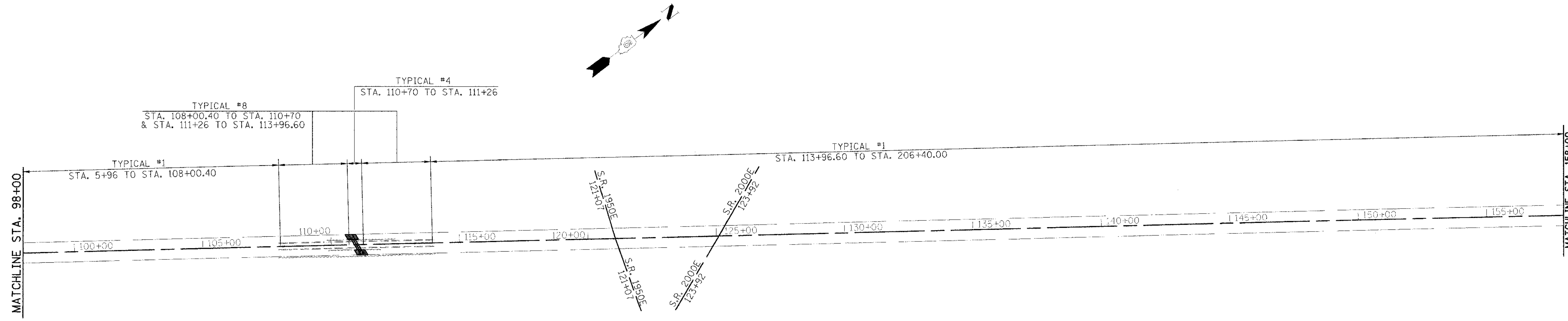


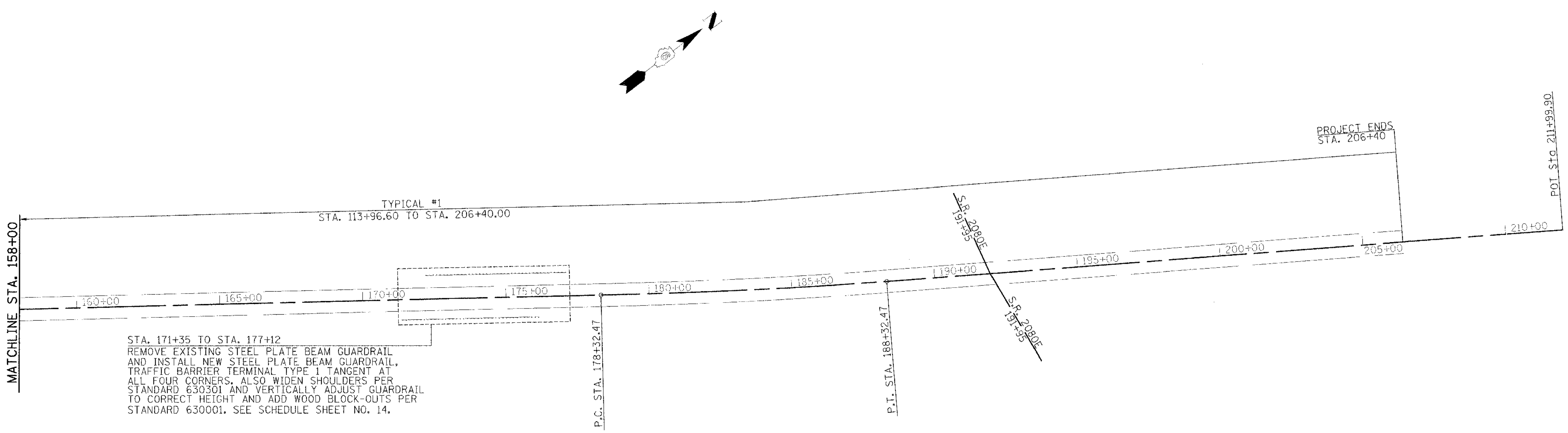
LINE DIAGRAM
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

CONTRACT NO. 72784

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	22
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006





EXIST. CURVE DATA

P.I. STA. 188+32.59
Δ = 3°01'31"
D = 0°18'09"
T = 500.12'
L = 1000.00'
R = 18939.26'
E = 6.60'
P.C. STA. 178+32.47
P.T. STA. 188+32.47

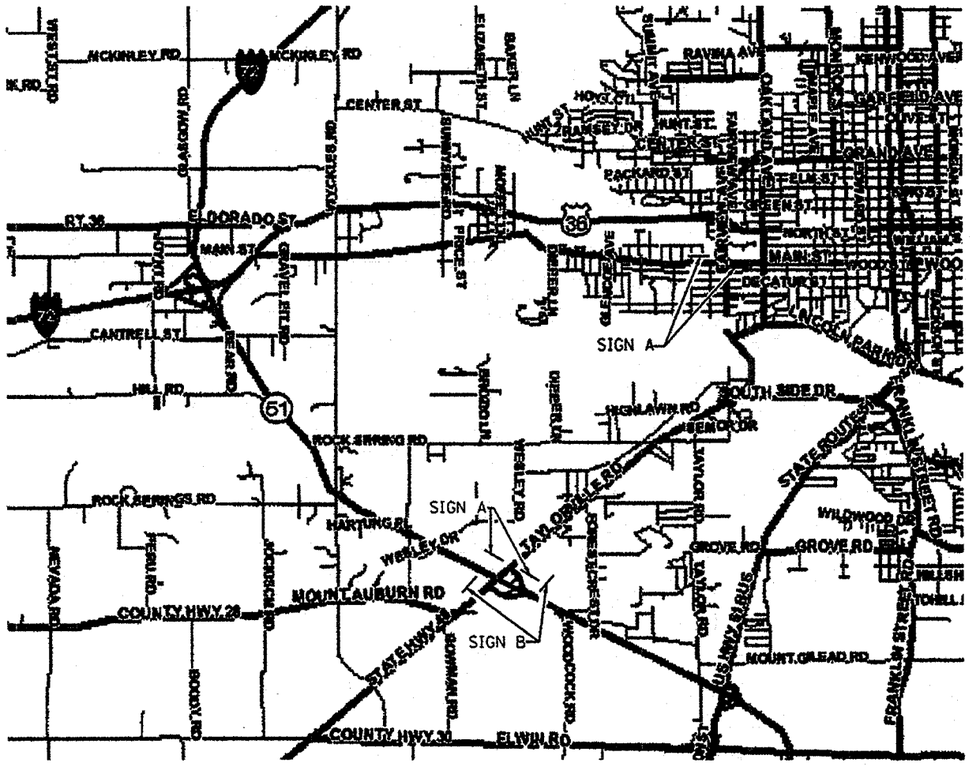
FILE NAME: WOBLD (REV. 3/2/06)

LINE DIAGRAM
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

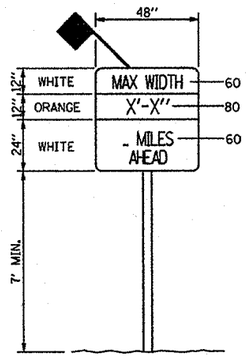
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	23
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

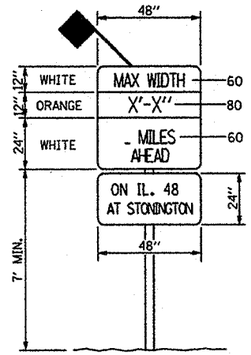
* D-6 IL. 48 IMPROVEMENT 2006



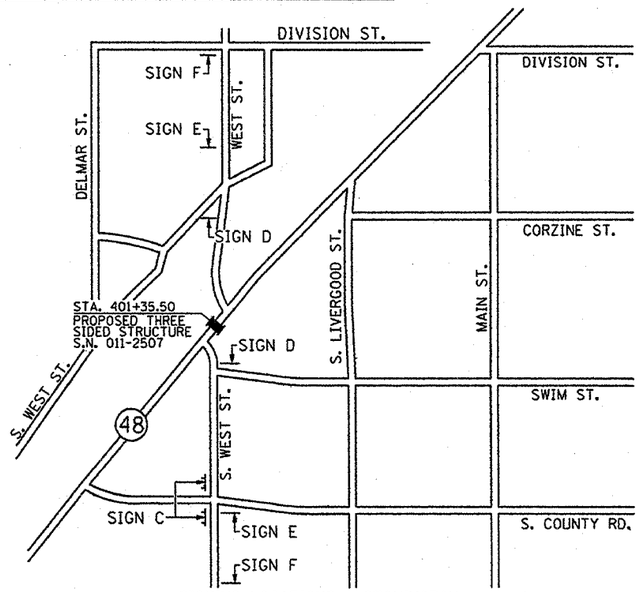
WIDTH RESTRICTION SIGNING LOCATIONS - DECATUR



SIGN A
(WIDTH RESTRICTION SIGN)



SIGN B
(WIDTH RESTRICTION SIGN)



LEGEND

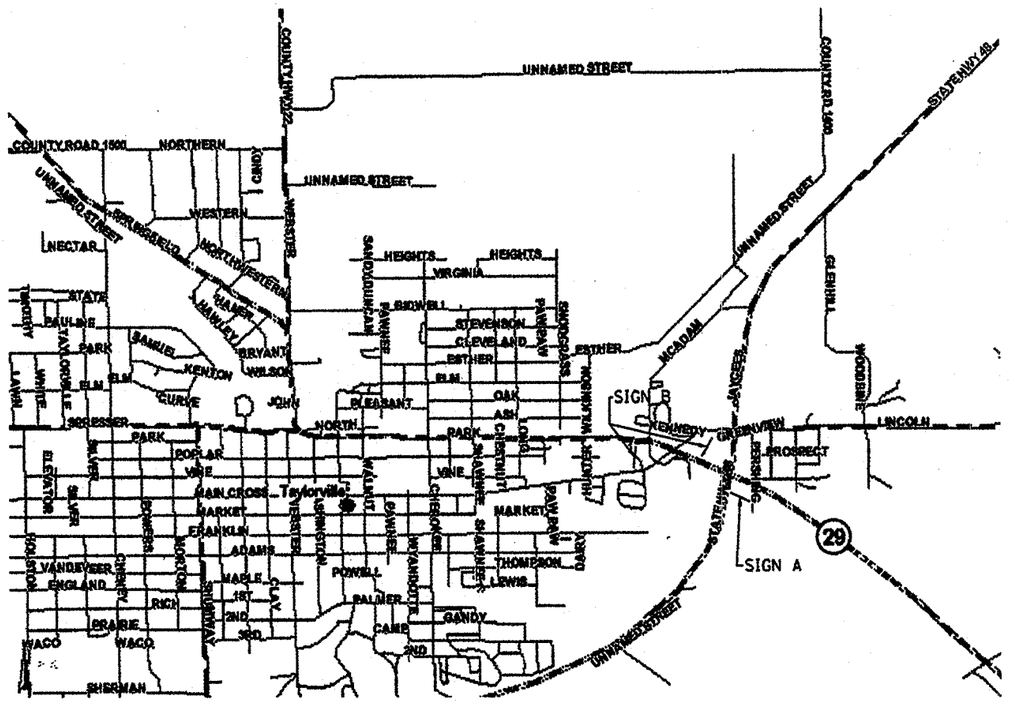
SIGN C - TWO TYPE III BARRICADES WITH TWO FLASHING LIGHTS ON EACH BARRICADE AND R11-3A-3060 SIGNS. "ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY"

SIGN D - BLR STANDARD 21

SIGN E - "ROAD CLOSED 500 FT." W20-3(013)636

SIGN F - "ROAD CLOSED AHEAD" W20-3(013)636

SIGNING LOCATIONS - STONINGTON
(FOR CONSTRUCTION OF S.N. 011-2507 ONLY)
REFER TO STANDARD BLR-21



WIDTH RESTRICTION SIGNING LOCATIONS - TAYLORVILLE

WIDTH RESTRICTION SIGNING DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

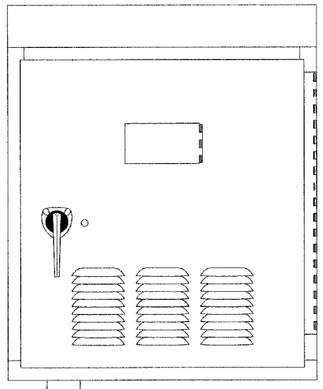
FILE NAME: WRSD (REV. 5/4/06)

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

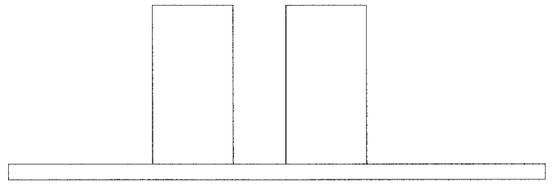
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	24
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



TEMPORARY CONTROLLER CABINET

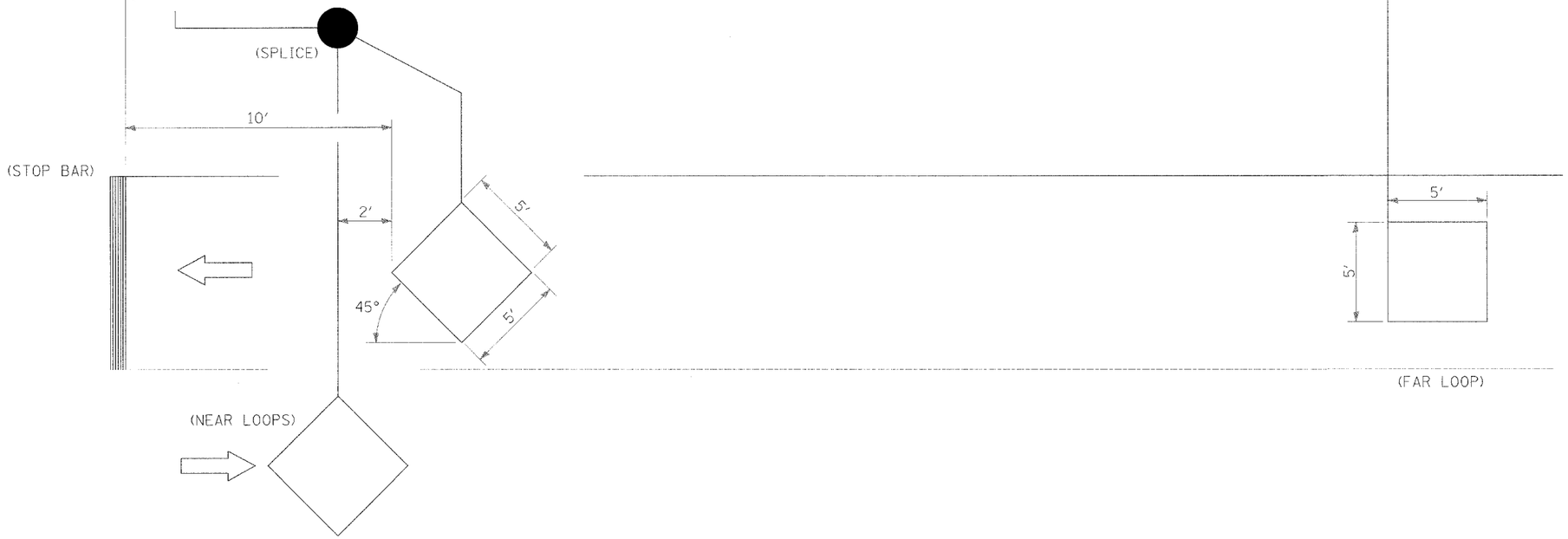
DETECTOR AMPLIFIER NOTES



AMP 1: DELAY = 8 SECONDS
DELAY SHALL BE INHIBITED DURING GREEN

AMP 2: NO DELAY

FAR LOOP DISTANCE TABLE	
ADVISORY SPEED (MPH)	DISTANCE FROM STOP BAR (FT.)
30 OR LESS	220
35	260
40	300
45	330
50	370
55	400



NOTE: ALL LOOPS CENTERED IN LANE.
WORK THIS SHEET WITH STAGE CONSTRUCTION TRAFFIC DETAIL SHEET NOS. 30, 31, 52, 53, 69 & 70.

INDUCTION LOOP DETECTOR

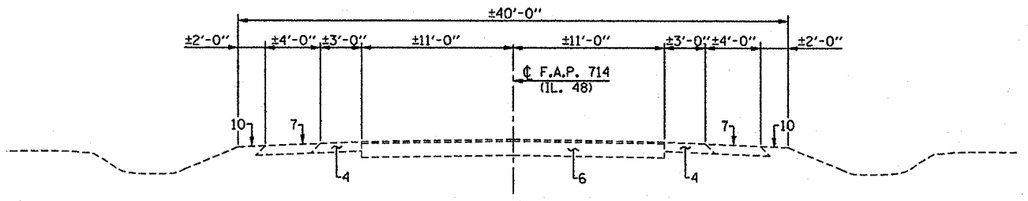
TEMPORARY BRIDGE TRAFFIC SIGNAL
LOOP PLACEMENT DETAILS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: BRIDGE_TEMP (REV. 3/28/06)

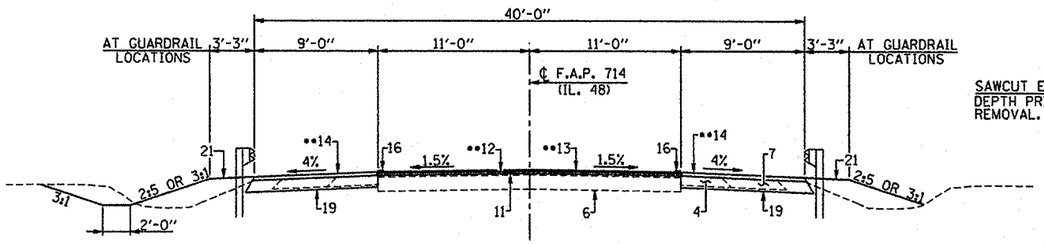
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	25
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

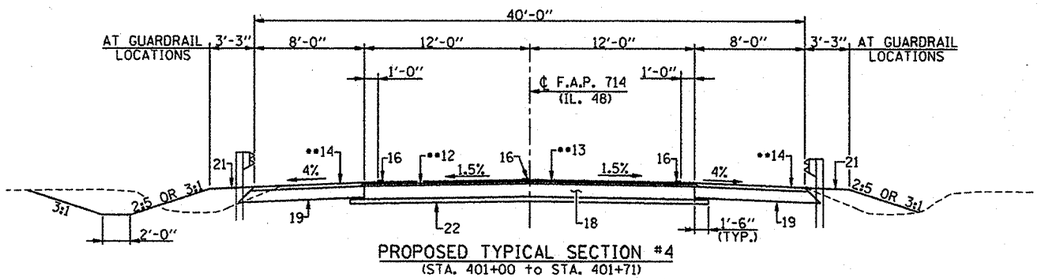


EXISTING TYPICAL SECTION
(STA. 399+53 to STA. 403+17)

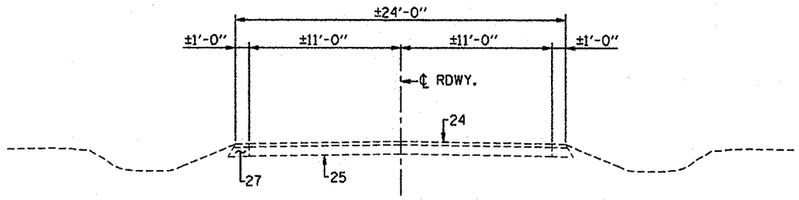


PROPOSED TYPICAL SECTION #3
(STA. 399+53 TO STA. 401+00 & STA. 401+71 TO STA. 403+17)

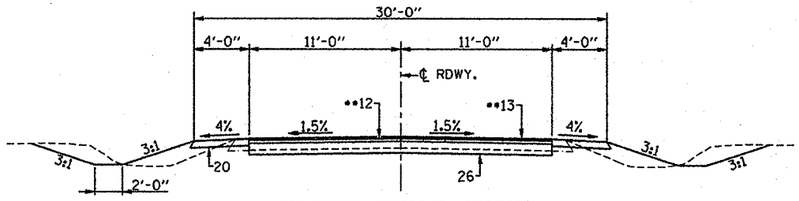
** TO BE PLACED AFTER BOTH STAGES HAVE BEEN COMPLETED.



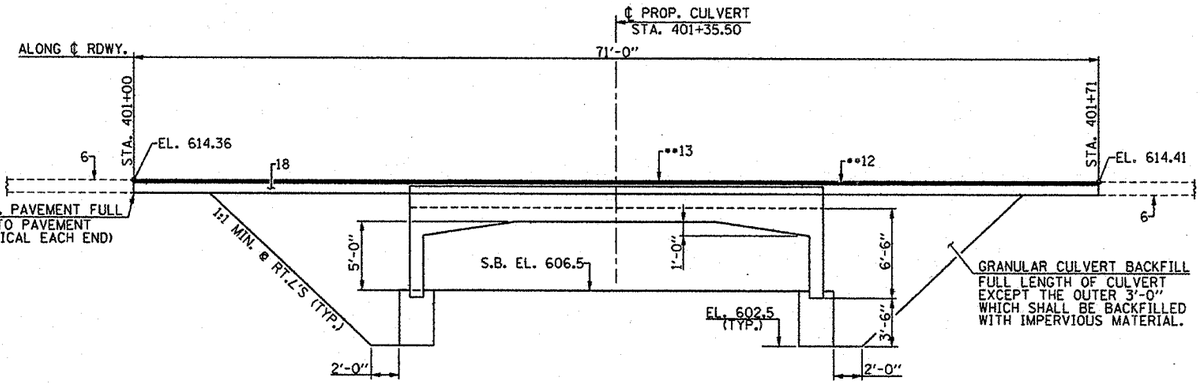
PROPOSED TYPICAL SECTION #4
(STA. 401+00 to STA. 401+71)



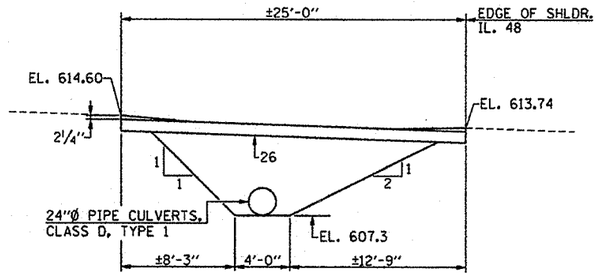
EXISTING TYPICAL SECTION
(S. WEST STREET & WEST STREET)



PROPOSED TYPICAL SECTION
(WEST STREET)



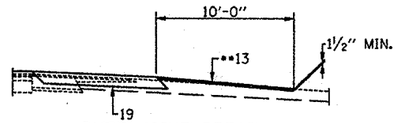
ELEVATION - BOX CULVERT
NOTE: ALL DIMENSIONS ARE AT RIGHT ANGLES EXCEPT AS NOTED.



ELEVATION - BOX CULVERT
(WEST STREET - LOOKING NORTH)
(BEFORE BITUMINOUS PLACEMENT)

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"



BUTT JOINT DETAIL
(S. WEST STREET)

DETAILS AND
TYPICAL ROADWAY SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

FILE NAME: D&TRS (REV. 5/4/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	26
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006

GUARDRAIL SCHEDULE

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 2 (EACH)	TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL) (EACH)	TRAFFIC BARRIER TERMINAL TYPE 6A (EACH)	STEEL BRIDGE RAIL (FOOT)
STAGE I						
STA. 400+60.5, 52' RT. TO STA. 400+70, 41.5' RT. (S. WEST STREET)			1			
STA. 400+70, 41.5' RT. TO STA. 400+21.5 33' RT. (S. WEST STREET)		12.5				
STA. 400+70, 41.5' RT. TO STA. 401+06.83 RT.				1		
STA. 401+06.83 TO STA. 401+64.17 RT.						57.34
STA. 401+64.17 TO STA. 401+95.57 RT.					1	
STA. 401+95.57 TO STA. 402+33.07 RT.		37.5				
STA. 402+33.07 TO STA. 402+83.07 RT.	1					
STAGE II						
STA. 399+87.93 TO STA. 400+37.93 LT.	1					
STA. 400+37.93 TO STA. 400+75.43 LT.		37.5				
STA. 400+75.43 TO STA. 401+06.83 LT.					1	
STA. 401+06.83 TO STA. 401+64.17 LT.						57.34
STA. 401+64.17 TO STA. 401+87, 38.5' LT.				1		
STA. 401+87, 38.5' LT. TO STA. 401+92, 53' LT. (WEST STREET)			1			
TOTAL	2	87.5	2	2	2	114.68

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	EARTH EXCAVATION WIDENING
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 399+53 TO STA. 403+17	182	136	68	+68	
STA. 399+53 TO STA. 403+17 LT.					37
STA. 0+00 TO STA. 1+63 (DITCH)	58	44	22	+22	
TOTAL	240	180	90	+90	37

THERE WILL NOT BE A FURNISHED EXCAVATION QUANTITY SINCE THERE IS EXCESS EARTH EXCAVATION.

BITUMINOUS SCHEDULE

LOCATION	TEMPORARY RAMP (SQ. YD.)	BITUMINOUS BASE COURSE SUPERPAVE 11½" (SQ. YD.)	BIT. CONC. SURFACE COURSE, SUPERPAVE MIXTURE C, N50 (TON)	LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)	BIT. CONCRETE BASE COURSE SUPERPAVE 10" (SQ. YD.)	BITUMINOUS SHOULDERS SUPERPAVE (TON)
STA. 399+53 TO STA. 403+17 LT.							
STA. 399+53 TO STA. 401+00 LT.						147	19
STA. 401+00 TO STA. 401+71		190			0.12	126	
STA. 401+71 TO STA. 403+17 LT.						146	19
STA. 399+53 TO STA. 401+00			30	25	0.25		
STA. 401+00 TO STA. 401+71			16	13			14
STA. 401+71 TO STA. 403+17			30	25	0.25		
STA. 399+53 TO STA. 401+00 RT.						147	19
STA. 401+71 TO STA. 403+17 RT.						146	19
STA. 401+00 TO STA. 401+71 STAGE I WIDENING						71	
WEST STREET	33		9	4	0.04		
S. WEST STREET	29		5		0.02		
TOTAL	62	190	90	67	0.68	783	92

PAVEMENT MARKING SCHEDULE

LOCATION	LENGTH (FT.)	PAVEMENT MK. REMOVAL WHITE (SQ. FT.)	PAVEMENT MK. REMOVAL YELLOW (SQ. FT.)	TEMP. PVMT. MK. LINE - 5" WHITE (FT.)	TEMP. PVMT. MK. LINE - 5" YELLOW (FT.)	SHORT TERM PVMT. MARKING LINE - 5" WHITE (FT.)	SHORT TERM PVMT. MARKING LINE - 5" YELLOW (FT.)	WORK ZONE PVMT. MARKING REMOVAL WHITE (SQ. FT.)	WORK ZONE PVMT. MARKING REMOVAL YELLOW (SQ. FT.)	PAINT PVMT. MK. LINE - 5" WHITE (SQ. FT.)	PAINT PVMT. MK. LINE - 5" YELLOW (SQ. FT.)	TEMPORARY PAINT PAVEMENT MARKING LINE-24" WHITE (FOOT)
STA. 397+95.8 TO STA. 401+00 (℄)	304.2		34									
STA. 401+71 TO STA. 404+44.5 (℄)	273.5		30									
STA. 399+53 TO STA. 403+17 LT. (EDGE)	364			364					153	364		
STA. 397+95.8 TO STA. 404+44.5 ℄	648.7				170						170	
STA. 399+53 TO STA. 403+17 RT. (EDGE)	364			364					153	364		
STA. 397+95.8 TO STA. 404+44.5 ℄	648.7					•130			43			
STA. 397+95.8 (STOP BAR) RT.	12							24				12
STA. 404+44.5 (STOP BAR) LT.	12							24				12
TOTAL		64		898		130		397		898		24

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS.
• 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

SCHEDULE PERMANENT SEEDING

LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN FERT. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)	POTASSIUM FERT. NUT. (POUND)	MULCH METHOD 2 (ACRE)	AGRICULTURAL GROUND LIMESTONE (TON)	TEMPORARY EROSION CONTROL SEEDING (POUND)
STA. 399+45 TO STA. 403+32	0.60	54	54	54	0.60	1.2	60
TOTAL	0.60	54	54	54	0.60	1.2	60

SCHEDULE GUARDRAIL & TERMINAL MARKERS

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)	TERMINAL MARKER POST MOUNTED (EACH)
STA. 400+00 LT.	1		
STA. 400+50 LT.	1		
STA. 400+65 RT. (S. WEST ST.)	1		
STA. 401+00 LT.	1		
STA. 401+00 RT. (S. WEST ST.)	1		
STA. 401+75 LT. (WEST ST.)	1		
STA. 401+75 RT.	1		
STA. 401+95 (WEST ST.)	1		
STA. 402+25 RT.	1		
STA. 402+75 RT.	1		
STA. 399+87.93 LT.		1	
STA. 402+45.57 RT.		1	
STA. 400+60, 53' RT.			1
STA. 401+93, 53' LT.			1
TOTAL	10	2	2

SCHEDULE GRANULAR CULVERT BACKFILL

LOCATION	QUANTITY (CU. YD.)
STA. 401+00 TO STA. 401+21.83 & STA. 401+49.17 TO STA. 401+71	202
STA. 401+21.83 TO STA. 401+49.17	12
TOTAL	214

SCHEDULE SUB-BASE GRANULAR MATERIAL TYPE A 4"

LOCATION	QUANTITY (SQ. YD.)
STA. 401+00 TO STA. 401+71	213
TOTAL	213

SCHEDULE BITUMINOUS SURFACE REMOVAL - BUTT JOINT

LOCATION	QUANTITY (SQ. YD.)
S. WEST STREET	54
TOTAL	54

SCHEDULE BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

LOCATION	QUANTITY (SQ. YD.)
STA. 399+53 TO STA. 401+00	360
STA. 401+71 TO STA. 403+17	357
TOTAL	717

SCHEDULE AGGREGATE PRIME COAT

LOCATION	QUANTITY (TON)
STA. 399+53 TO STA. 401+00	0.72
STA. 401+00 TO STA. 401+71	0.38
STA. 401+71 TO STA. 403+17	0.71
TOTAL	1.81

SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

LOCATION	QUANTITY (EACH)
STA. 399+53 TO STA. 403+17 LT.	5
TOTAL	5

SCHEDULE BITUMINOUS SURFACE REMOVAL

LOCATION	QUANTITY (SQ. YD.)
WEST STREET	100
TOTAL	100

SCHEDULE PAVEMENT REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 401+00 TO STA. 401+71	221
TOTAL	221

SCHEDULE BITUMINOUS SHOULDER REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 399+53 TO STA. 403+17 LT. & RT.	243
STA. 401+00 TO STA. 401+71 9' SHLDR. LT. ST. I	71
TOTAL	314

SCHEDULE AGGREGATE BASE COURSE TYPE A

LOCATION	QUANTITY (TON)
WEST STREET	78
TOTAL	78

SCHEDULE PIPE CULVERTS, CLASS D, TYPE 1 24"

LOCATION	QUANTITY (FOOT)
STA. 401+41 TO STA. 402+45 LT.	104
TOTAL	104

SCHEDULE STORM SEWER REMOVAL 10"

LOCATION	QUANTITY (FOOT)
STA. 401+22, 48' RT. TO STA. 401+27, 31' RT.	17
STA. 401+27, 31' RT. TO STA. 401+32, 47' RT.	17
TOTAL	34

SCHEDULE MANHOLES, TYPE A SPECIAL, 9' DIAMETER, TYPE 1 FRAME, CLOSED LID

LOCATION	QUANTITY (EACH)
STA. 401+27, 40.5' RT.	1
TOTAL	1

SCHEDULE MANHOLES, TYPE A SPECIAL, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID

LOCATION	QUANTITY (EACH)
STA. 401+47, 31' LT.	1
TOTAL	1

SCHEDULE STORM SEWER REMOVAL 12"

LOCATION	QUANTITY (FOOT)
STA. 401+27, 31' RT. TO STA. 401+47, 33' LT.	67
TOTAL	67

SCHEDULE STORM SEWER REMOVAL 16"

LOCATION	QUANTITY (FOOT)
STA. 400+93, 42' RT. TO STA. 401+35, 7' RT.	56
TOTAL	56

SCHEDULE STORM SEWERS, CLASS A, TYPE 1, 10"

LOCATION	QUANTITY (FOOT)
STA. 401+22, 48' RT. TO STA. 401+24, 43' RT.	6
STA. 401+30, 42' RT. TO STA. 401+32, 47' RT.	6
TOTAL	12

SCHEDULE STORM SEWERS, CLASS A, TYPE 1, 16"

LOCATION	QUANTITY (FOOT)
STA. 400+94, 41' RT. TO STA. 401+24, 39' RT.	30
TOTAL	30

SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	QUANTITY (EACH)
STA. 399+75 (℄)	1
STA. 400+55 (℄)	1
STA. 401+35 (℄)	1
STA. 402+15 (℄)	1
STA. 402+95 (℄)	1
TOTAL	5

SCHEDULE STORM SEWERS, CLASS A, TYPE 1, 24"

LOCATION	QUANTITY (FOOT)
STA. 401+28, 37' RT. TO STA. 401+47, 30' LT.	70
TOTAL	70

SCHEDULE CATCH BASINS, TYPE C, SPECIAL, TYPE 1 FRAME, CLOSED LID

LOCATION	QUANTITY (EACH)
STA. 400+93, 41' RT.	1
TOTAL	1

SCHEDULE FURNISHING & ERECTING R.O.W. MARKERS

LOCATION	QUANTITY (EACH)
STA. 400+74.60, 74.72' RT.	1
STA. 401+59.60, 36.48' RT.	1
TOTAL	2

SCHEDULE TREE REMOVAL (6 TO 15 UNITS DIAMETER)

LOCATION	QUANTITY (UNITS)
STA. 401+01.5, 51' RT.	11
STA. 401+22.5, 45' RT.	12
STA. 401+43, 37' RT.	6
TOTAL	29

QUANTITY SCHEDULES
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

FILE NAME: QS DEV. 3/27/06

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	27
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

- INDICATES BITUMINOUS SURFACE REMOVAL - BUTT JOINT
- INDICATES BITUMINOUS SURFACE REMOVAL
- INDICATES PAVEMENT REMOVAL LIMITS
- INDICATES TEMPORARY RIGHT OF WAY EASEMENT
- INDICATES PERMANENT RIGHT OF WAY EASEMENT
- INDICATES ℄ PROPOSED DITCH FLOW
- INDICATES ℄ PROPOSED RIGHT OF WAY
- INDICATES PROPOSED RIGHT OF WAY MARKER

SECTION 28, T. 14 N., R. 1 W., 3rd P.M.

EX RR ROW — 8" TILE — EX RR ROW

SIGN POST — TOP CENTER OF NORTH BOLT

CHISELED "X" IN TOP OF CULVERT HDWLL. S.N. 011-2002

CHISELED "X" IN TOP OF CULVERT HDWLL. S.N. 011-2002

P.C. STA. 402+13.74
PK NAIL IN CHISELED "X"

NORFOLK SOUTHERN

PROPOSED THREE SIDED PRECAST CONCRETE STRUCTURE
STRUCTURE NO. 011-2507
(STA. 401+35.50) 0° SKEW

EXISTING DOUBLE 10'x5'-6" CONCRETE BOX CULVERT
S.N. 011-2002 (STA. 401+33) 0° SKEW

INSTALL NEW 24"Ø X 104' PIPE CULVERTS, CLASS D, TYPE I WITH METAL END SECTIONS
℄ INLET - STA. 402+45, EL. 607.8, 38' LT.
℄ OUTLET - 401+41, EL. 606.3, 40' LT.

EXIST. 15"Ø COMBINATION CLAY AND C.M.P. (TO BE REMOVED)

TRAFFIC BARRIER TERMINAL TYPE 6A (S.W. & N.E. CORNERS)

BEGIN BITUMINOUS BASE COURSE - STA. 401+00

END BITUMINOUS BASE COURSE - STA. 401+71

P.C.

℄ BEARING N. 38° 29'49" E.

3'x5' DOUBLE BARREL CONCRETE BOX CULVERT

EX ROW

37.5' S.P.B.G.R. TYPE A (S.W. & N.E. CORNERS)

TRAFFIC BARRIER TERMINAL TYPE I SPECIAL (TANGENT) (S.W. & N.E. CORNERS)

BILLY L. & EDNA L. DAVIS

ROBERT G. & RUTH E. HANAUER

BEARING S. 89° 23'18" W.

S. WEST STREET

SWIM STREET

CAR PORT

FLAG POLE

ALLEY ROCK

NAIL & PENNY IN TELEPHONE POLE

TOP CENTER OF NORTH BOLT

SIGN POST

NAIL & PENNY IN GUY POLE

P.I. STA. 405+62.89
PK NAIL IN CHISELED "X"

EXIST. CURVE DATA

PI STA. = 405+62.89
Δ = 5° 18' 41" (RT)
D = 0° 45' 40"
R = 7,527.60'
T = 349.15'
L = 697.80'
E = 8.09'
S.E. RUN = NONE
P.C. STA. = 402+13.74
P.T. STA. = 409+11.54

SECTION 27, T. 14 N., R. 1 W., 3rd P.M.

NOTE: SEE THE NEXT SHEET FOR S. WEST STREET, WEST STREET, CATCH BASIN AND MANHOLE DETAILS.

0 20 40 60
SCALE: 1" = 20'

PLAN

PROFILE

BM#588: CHISELED "□" IN CENTER OF EAST HEADWALL OF 3'x5' DOUBLE BARREL CONCRETE BOX CULVERT STA. 398+59.0 31.4' RT. EL. 611.79

2¼" PROP. BIT. OVERLAY OVER MILLED SURFACE

PROJECT BEGINS STA. 401+00 EL. 614.36

PROJECT ENDS STA. 401+71 EL. 614.41

℄ PROP. RDWY.

℄ EXIST. RDWY.

STA. 401+50 LT. EL. 607.5

S.B. EL. 606.50

BEGIN SPECIAL DITCH STA. 399+75 LT. EL. 607.3

STA. 400+00 LT. EL. 607.2

STA. 400+50 LT. EL. 606.9

STA. 401+00 LT. EL. 606.6

STA. 402+00 LT. EL. 607.4

STA. 402+50 LT. EL. 607.8

END SPECIAL DITCH STA. 403+00 LT. EL. 608.0

-0.4% -0.6% -0.6% -0.4% +0.4% +0.2% +0.4%

	399+00	400+00	401+00	402+00	403+00	404+00
EXIST.	613.63	614.12	614.21	614.28	614.08	613.86
PROP.	613.78	614.27	614.36	614.43	614.23	614.13

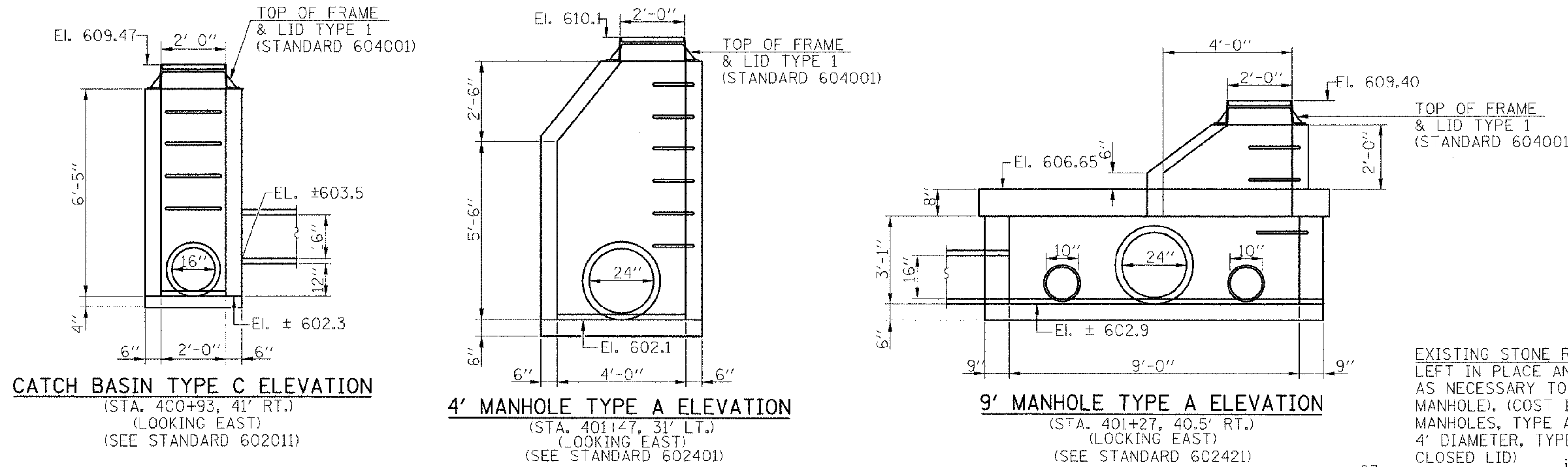
615 610 605 600 595

PLAN AND PROFILE
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

FILE NAME: PP (REV. 3/27/06)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	28
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

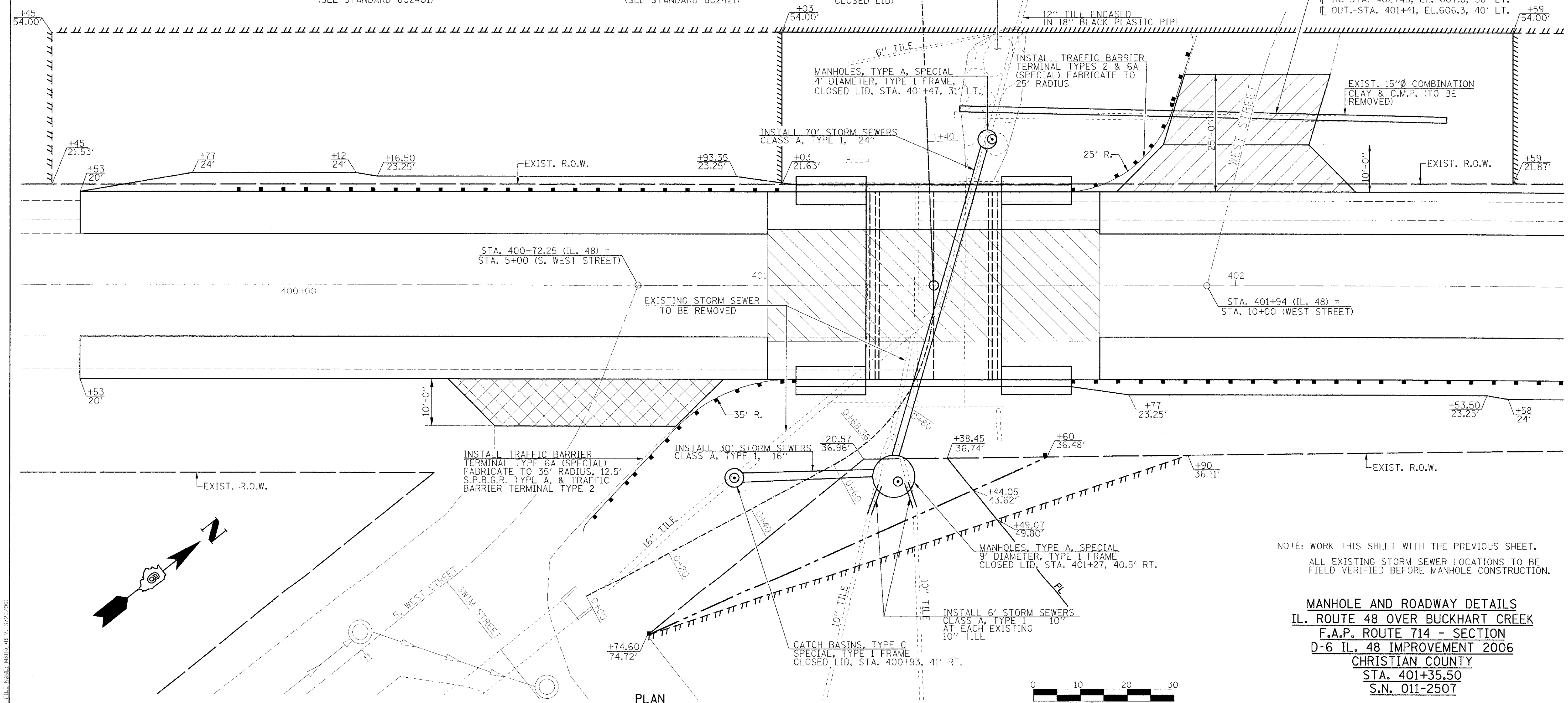
* D-6 IL. 48 IMPROVEMENT 2006



- INDICATES BITUMINOUS SURFACE REMOVAL - BUTT JT.
- INDICATES BITUMINOUS SURFACE REMOVAL
- INDICATES PAVEMENT REMOVAL LIMITS
- INDICATES TEMPORARY RIGHT OF WAY EASEMENT
- INDICATES PERMANENT RIGHT OF WAY EASEMENT
- INDICATES ℄ PROPOSED DITCH FLOW
- INDICATES ℄ PROPOSED RIGHT OF WAY
- INDICATES PROPOSED RIGHT OF WAY MARKER

℄ BUCKHART CREEK LAYOUT TABLE

LOCATION (BUCKHART CREEK)	LOCATION (IL. 48)	OFFSET	ELEVATION
STA. 0+00 =	STA. 400+61.3	66.65' RT.	606.80
STA. 0+20 =	STA. 400+78.9	57.16' RT.	606.74
STA. 0+40 =	STA. 400+96.5	47.66' RT.	606.68
STA. 0+60 =	STA. 401+14.2	38.17' RT.	606.62
STA. 0+68.36 =	STA. 401+21.1	33.52' RT.	606.59
STA. 0+80 =	STA. 401+28.8	24.88' RT.	606.37
STA. 1+40 =	STA. 401+34.2	30.68' LT.	606.31



PLAN

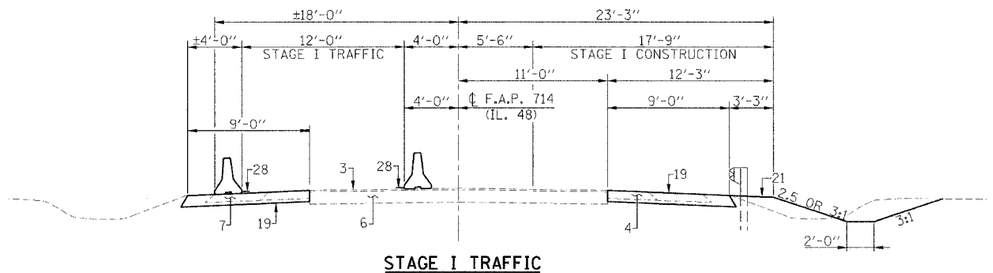
NOTE: WORK THIS SHEET WITH THE PREVIOUS SHEET.
ALL EXISTING STORM SEWER LOCATIONS TO BE FIELD VERIFIED BEFORE MANHOLE CONSTRUCTION.

MANHOLE AND ROADWAY DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

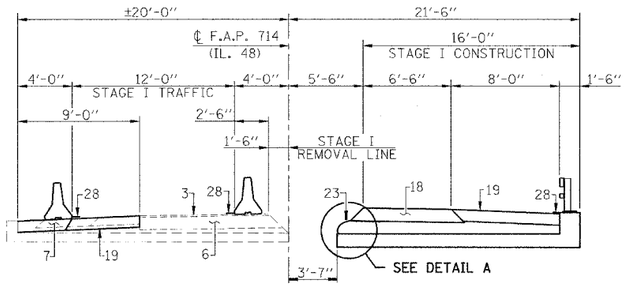
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	29
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

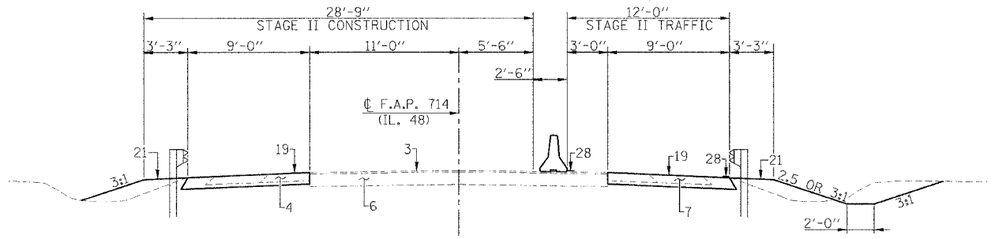
• D-6 IL. 48 IMPROVEMENT 2006



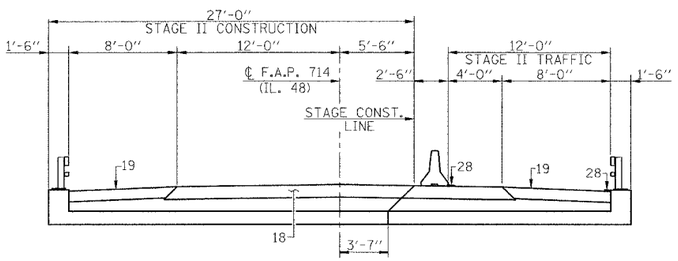
STAGE I TRAFFIC
(LOOKING NORTH)



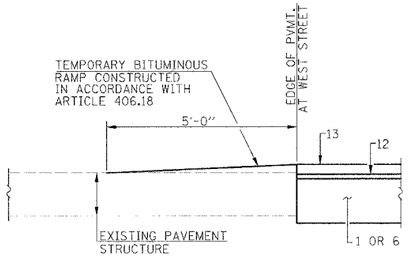
STAGE I TRAFFIC OVER CULVERT
(LOOKING NORTH)



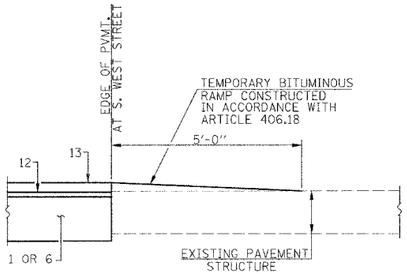
STAGE II TRAFFIC
(LOOKING NORTH)



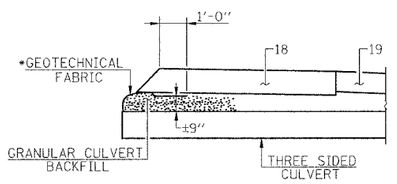
STAGE II TRAFFIC OVER CULVERT
(LOOKING NORTH)



TEMPORARY RAMP DETAIL
(STA. 401+68 TO STA. 402+26.6)



TEMPORARY RAMP DETAIL
(STA. 400+30 TO STA. 400+82)



DETAIL A

* GEOTECHNICAL FABRIC TO BE PLACED UNDERNEATH BITUMINOUS BASE STA. 401+00 TO STA. 401+71. (COST OF GEOTECHNICAL FABRIC TO BE INCLUDED IN GRANULAR CULVERT BACKFILL.)

ESTIMATED QUANTITY - 189 SQ. YD. FOR GEOTECHNICAL FABRIC.

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

WORK THIS SHEET WITH THE FOLLOWING TWO SHEETS.

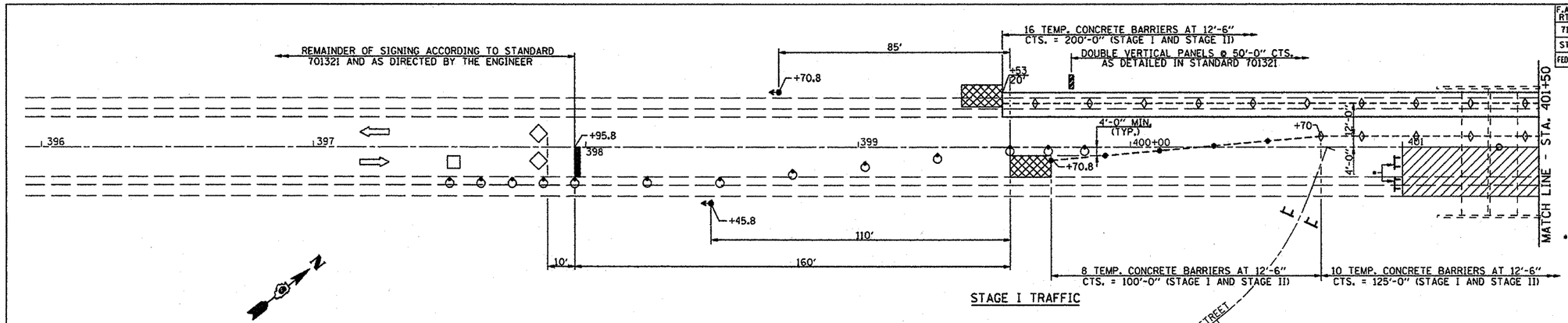
STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

FILE NAME= SCTN 401V 1/21/06

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	30
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



SUGGESTED STAGE CONSTRUCTION SEQUENCE

STAGE I

1. THE CONTRACTOR SHALL PLACE MAX. WIDTH SIGNS AND ROAD CLOSED AHEAD SIGNS AS SHOWN ON SHEET 23, BEFORE IMPLEMENTING ANY STAGE TRAFFIC CONTROL. THESE SIGNS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION STANDARD 701321 (SPECIAL)".
2. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10" LT. STA. 399+53 TO STA. 403+17 - (9'-0" WIDE).
3. ERECT TRAFFIC CONTROL FOR STAGE I.
4. REMOVE EXISTING STRUCTURE RIGHT, ℄ STA. 401+33.
5. CONSTRUCT PROPOSED STAGE I THREE SIDED 25'-0" X 6'-2"" CULVERT AND WINGWALLS ℄ STA. 401+35.5.
6. CONSTRUCT PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10" RT. STA. 399+53 TO STA. 403+17 9'-0" WIDE.
7. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS RT. RADIALLY ALONG S. WEST STREET & STA. 401+64.17 TO STA. 402+83.07.
8. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE 11½" STA. 401+00 TO STA. 401+71 RT.

STAGE II

1. ERECT TRAFFIC CONTROL FOR STAGE II.
2. REMOVE EXISTING STRUCTURE LEFT ℄ STA. 401+33.
3. CONSTRUCT PROPOSED STAGE II PRECAST THREE SIDED 25'-0" X 6'-2" CULVERT AND WINGWALLS ℄ STA. 401+35.5.
4. CONSTRUCT PROPOSED BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10" LT. STA. 401+00 TO STA. 401+71.
5. REMOVE EXISTING 15"Ø C.M.P. AND INSTALL NEW 24"Ø PIPE CULVERT CLASS D, TYPE 1. FILL AND PLACE AGGREGATE BASE COURSE TYPE A AT WEST STREET.
6. CONSTRUCT PROPOSED AGGREGATE SHOULDERS LT. STA. 399+53 TO STA. 401+00 & STA. 401+71 TO STA. 403+17 WITH OMISSION OF AGGREGATE SHOULDERS FROM STA. 401+71 TO STA. 402+29 LT. AT WEST STREET.
7. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS LT. STA. 399+87.93 TO STA. 401+06.83 & RADIALLY ALONG WEST STREET.
8. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE 11½" STA. 401+00 TO STA. 401+71 RT.

FINAL

1. INSTALL SHORT-TERM PAVEMENT MARKINGS AND REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
2. REMOVE SHORT TERM PAVEMENT MARKINGS AND COMPLETE BITUMINOUS CONCRETE BINDER AND SURFACE SURFACE COURSE ON IL. 48 AND WEST STREET UNDER TRAFFIC WITH FLAGGERS.
3. FINAL STRIPING, SEEDING AND MISCELLANEOUS CLEANUP.

FILE NAME: 28.3 (REV. 5/5/06)

GENERAL NOTES

1. THIS TRAFFIC CONTROL DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
2. THE CONTRACTOR SHALL NOTIFY LARRY SIMON (PH. 785-5836) IN THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST ONE WEEK PRIOR TO IMPLEMENTING STAGE TRAFFIC CONTROL.
3. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE REVISED STAGE TRAFFIC PATTERNS DURING ALL PHASES OF STAGE CONSTRUCTION SHALL BE REMOVED AS SPECIFIC IN SECTION 783 OF THE STANDARD SPECIFICATIONS AND PAID FOR AS "PAVEMENT MARKING REMOVAL".
4. THE CONTRACTOR SHALL MAINTAIN FULL OPERATIONAL STATUS OF ALL SIDEROADS AND ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
5. TEMPORARY CONCRETE BARRIER. THE BARRIER UNIT AT EACH END OF THE INSTALLATION SHALL BE SECURED TO THE PAVEMENT OR SHOULDER USING ALL SIX ANCHORING PINS FOR F SHAPE OR ALL SIX DOWEL BARS FOR NEW JERSEY SHAPE.
6. EACH DETECTOR LOOP SHALL BE CONNECTED TO A SEPERATE DETECTOR AMPLIFIER.
7. THE COST TO INSTALL TEMPORARY PAVEMENT MARKING AS DETAILED ON THESE SHEETS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL & PROTECTION STANDARD 701321, SPECIAL".
8. SIGNING FOR STAGE II SAME AS STAGE I.

0 20 40
SCALE: 1" = 20'

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

* - TO BE PLACED WHEN NO WORK IS BEING PERFORMED

WORK THIS SHEET WITH THE PREVIOUS SHEET AND THE NEXT SHEET.

SEE THE NEXT SHEET FOR TRAFFIC CONTROL & TEMPORARY PAVEMENT MARKING SCHEDULES.

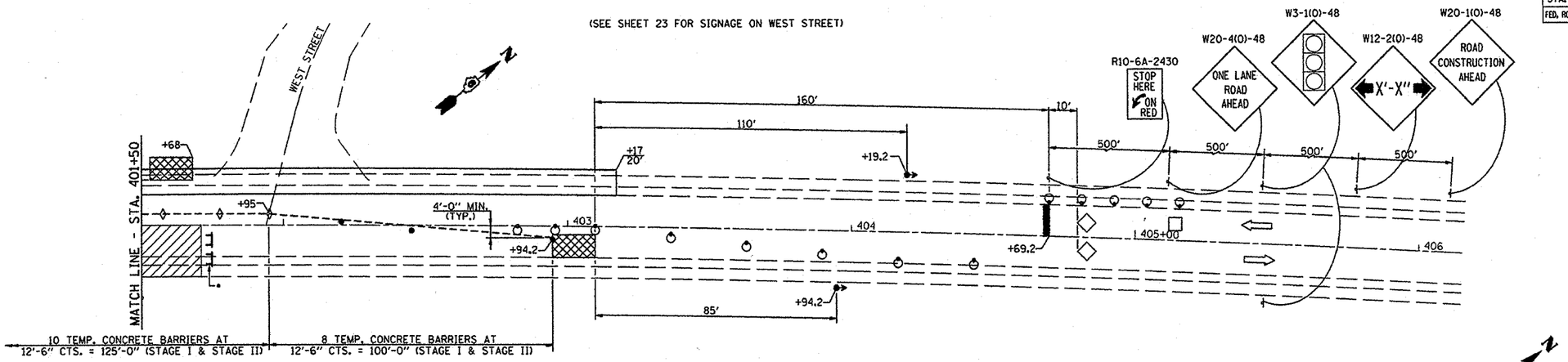
STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	31
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

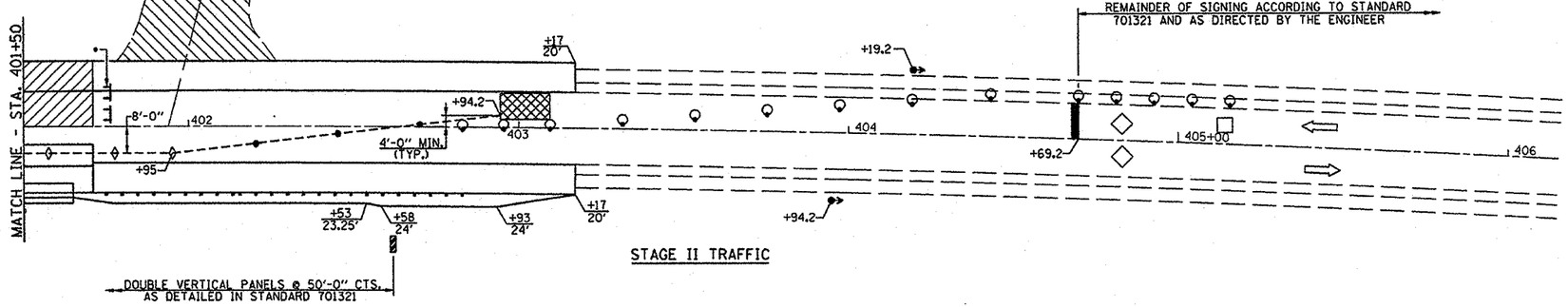
• D-6 IL. 48 IMPROVEMENT 2006



STAGE I TRAFFIC

BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10"
STA. 399+53 TO STA. 403+17 LT. - 9'-0"

• - TO BE PLACED WHEN NO WORK IS BEING PERFORMED



STAGE II TRAFFIC

TRAFFIC CONTROL SCHEDULE

LOCATION STATION TO STATION	TEMP. CONC. BARRIER (FOOT)	RELOCATE TEMP. CONC. BARRIER (FOOT)	IMPACT ATTENUATOR TEMPORARY (EACH)	RELOCATE IMPACT ATTENUATOR (EACH)
STAGE I				
STA. 399+38 TO STA. 399+53			1	
STA. 399+53 TO STA. 401+53 16' LT.	200			
STA. 401+53 TO STA. 401+68			1	
STA. 399+55.8 TO STA. 399+70.8			1	
STA. 399+70.8 TO STA. 402+94.2 4' LT.	325			
STA. 402+94.2 TO STA. 403+19.2			1	
STAGE II				
STA. 399+55.8 TO STA. 399+70.8				1
STA. 399+70.8 TO STA. 402+94.2 RT.		325		
STA. 402+94.2 TO STA. 403+19.2				1
TOTAL	525	325	4	2

SCHEDULE
TEMPORARY PAVEMENT MARKING

LOCATION STATION TO STATION	TEMP. PAV'T. MARKING LINE - 5" (FOOT)	TEMP. PAV'T. MARKING LINE - 24" (FOOT)
STAGE I		
STA. 397+95.8 RT.		12
STA. 399+53 TO STA. 403+17 LT.	364	
STA. 397+95.8 TO STA. 404+69.2 (℄)	170	
STA. 404+69.2 LT.		12
STAGE II		
STA. 399+53 TO STA. 403+17 RT.	364	
TOTAL	898	24

SCALE: 1" = 20'

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

NOTE:
SIGNING FOR STAGE II SAME AS STAGE I.

WORK THIS SHEET WITH THE PREVIOUS TWO SHEETS.

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

FILE NAME: 283 (REV. 5/5/06)

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

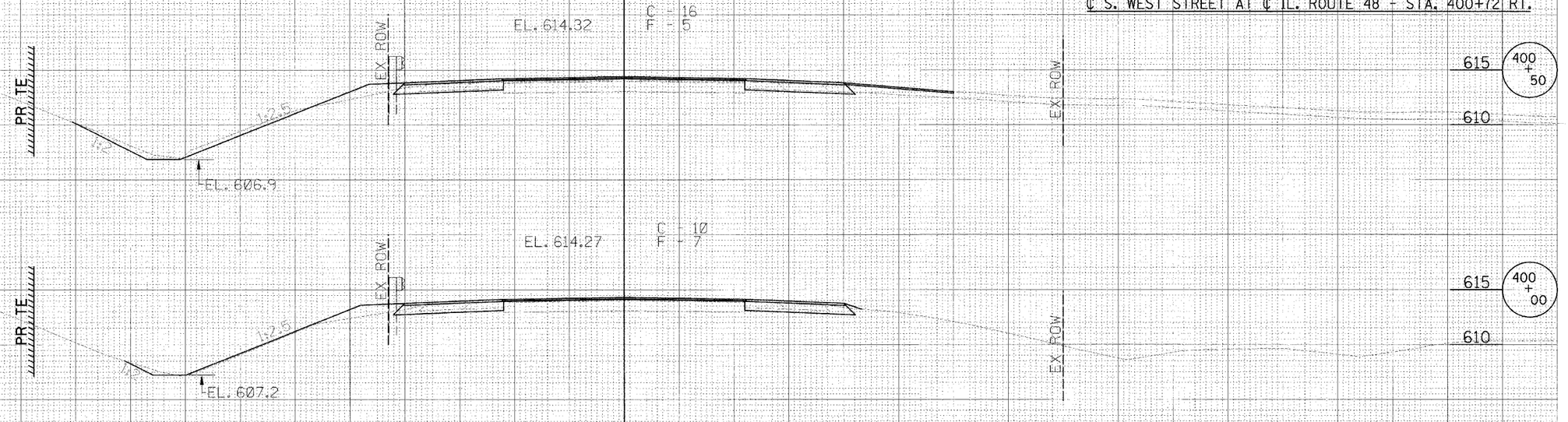
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	32
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

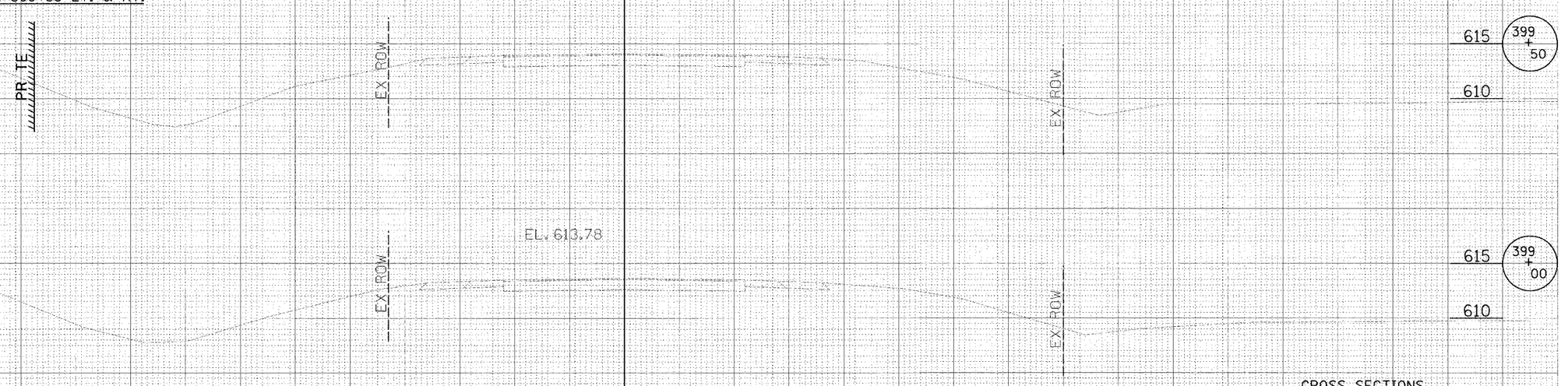
80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

℄ S. WEST STREET AT ℄ IL. ROUTE 48 - STA. 400+72 RT.



INSTALL TRAFFIC BARRIER TERMINAL - STA. 399+87.93 LT.

BEGIN SHOULDER WIDENING - STA. 399+53 LT. & RT.



CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED BY — PLOTTED BY — CHECKED BY — AREAS — AREAS CHECKED — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED BY — PLOTTED BY — CHECKED BY — AREAS — AREAS CHECKED — DATE

PLOT DATE = #DATE#
FILE NAME = #FILE#
PLOT SCALE = #SCALE#
USER NAME = #USER#

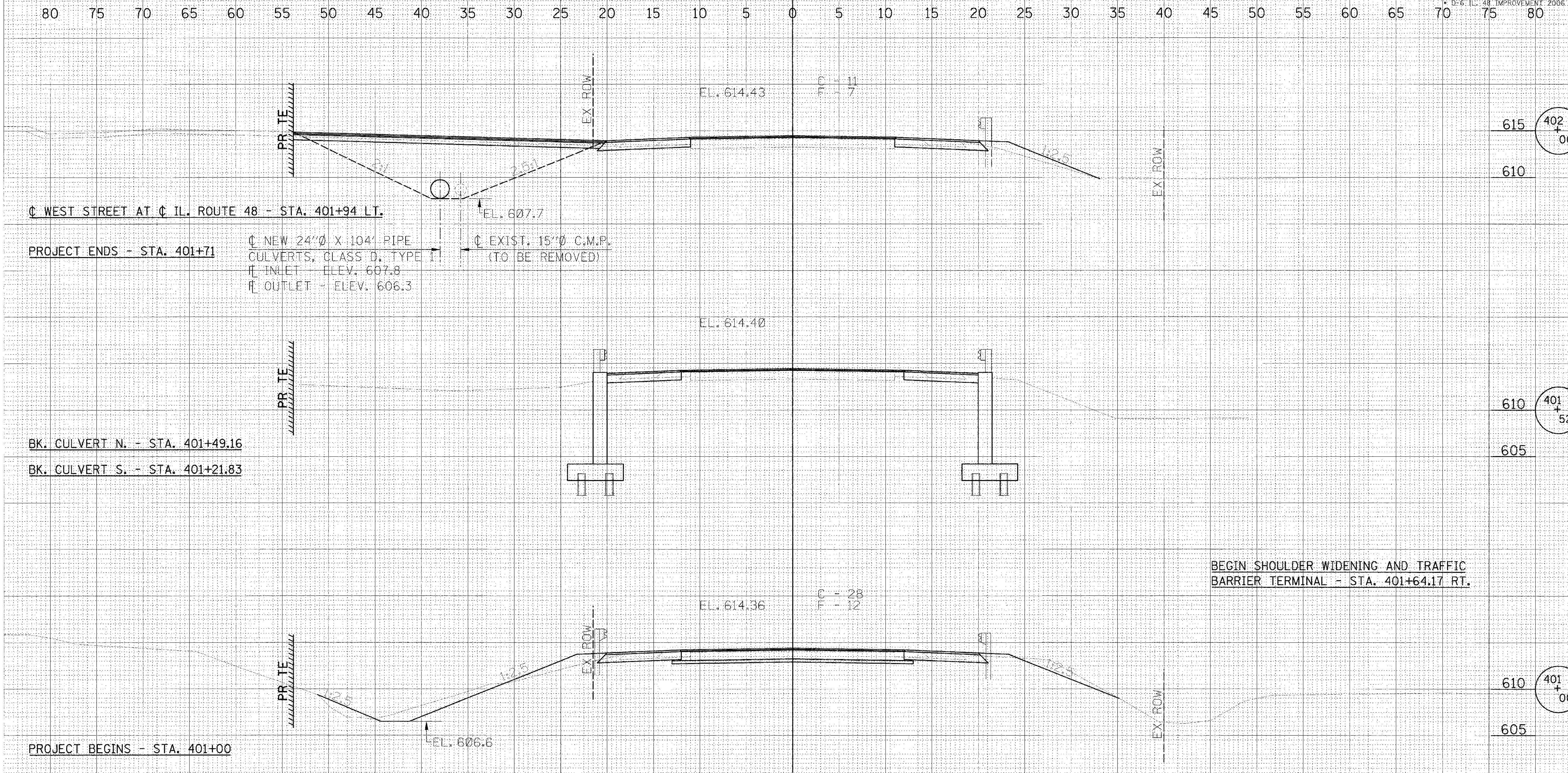
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	33

STA. 401+00 TO STA. 401+71

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



EL. 614.43
C - 11
F - 7
EX ROW
PR TE
615
610
402+00
EL. 607.7
℄ WEST STREET AT ℄ IL. ROUTE 48 - STA. 401+94 LT.
PROJECT ENDS - STA. 401+71
℄ NEW 24"Ø X 104' PIPE CULVERTS, CLASS D, TYPE 1
℄ INLET - ELEV. 607.8
℄ OUTLET - ELEV. 606.3
℄ EXIST. 15"Ø C.M.P. (TO BE REMOVED)
EL. 614.40
610
605
401+52
BK. CULVERT N. - STA. 401+49.16
BK. CULVERT S. - STA. 401+21.83
BEGIN SHOULDER WIDENING AND TRAFFIC BARRIER TERMINAL - STA. 401+64.17 RT.
EL. 614.36
C - 28
F - 12
1:2.5
EL. 606.6
401+00
PROJECT BEGINS - STA. 401+00

CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

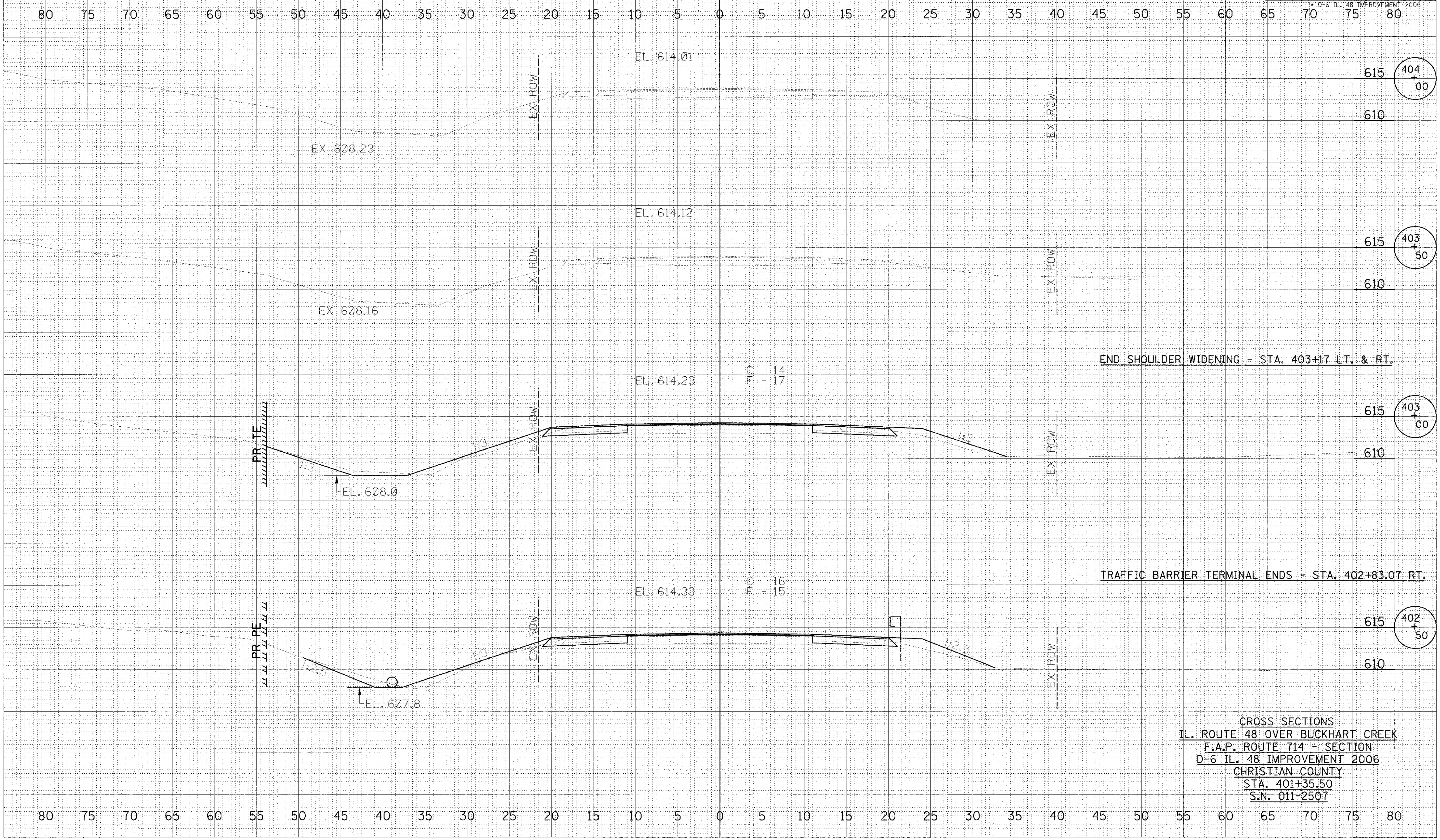
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	34

STA. 401+00 TO STA. 401+71

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	35
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

INSTALL NEW CATCH BASIN TYPE C SPECIAL, TYPE 1 FRAME, CLOSED LID, STA. 400+93, 41' RT.

C - 14
F - 11

EL. 606.68

EL. 602.3

PR. TE

PROP. R.O.W.

610 0+40 605

C - 9
F - 9

EL. 606.74

PR. TE

PROP. R.O.W.

610 0+20 605

C - 5
F - 0

EL. 606.8

PR. TE

PROP. R.O.W.

610 0+00 605

BEGIN DITCH RELOCATION - STA. 0+00

DITCH RELOCATION
CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

DATE
BY
FINAL SURVEY: SURVEYED, PLOTTED, NOTE BOOK, NO.
ORIGINAL SURVEY: SURVEYED, PLOTTED, NOTE BOOK, NO.
AREAS CHECKED

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	36

STA. 401+00 TO STA. 401+71

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

W. EDGE THREE-SIDED CULVERT - STA. 1+26.5

C = 29
F = 0
EL. 610.1

1:2.5

EL. 606.37

INSTALL NEW MANHOLE TYPE A SPECIAL,
4' DIAMETER, TYPE 1 FRAME, CLOSED LID
STA. 401+47, 31' LT.

EL. 602.0

610 1 + 40

605

E. EDGE THREE-SIDED CULVERT - STA. 0+83.5

W.W.

C = 15
F = 4

1:2

1:3

EL. 606.59

PR. TE

PROP. R.O.W.

EL. 602.9

INSTALL NEW MANHOLE TYPE A, SPECIAL
9' DIAMETER, TYPE 1 FRAME, CLOSED LID
STA. 401+27, 40.5' RT.

610 0 + 68.36

605

C = 11
F = 10

1:2

1:3

EL. 606.62

PR. TE

PROP. R.O.W.

610 0 + 60

605

DITCH RELOCATION
CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FINAL SURVEY — NOT FIELD BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — PLOTTED — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOT FIELD BOOK — NO. — BY — DATE — SURVEYED — PLOTTED — PLOTTED — AREAS — AREAS CHECKED

PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	37
STA. 401+00 TO STA. 401+71				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		
* D-6 IL. 48 IMPROVEMENT 2006				

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

END DITCH RELOCATION STA. 1+63

C - 9
F - 0

EL. 606.31

610

605

1 + 60

DITCH RELOCATION
CROSS SECTIONS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.50
S.N. 011-2507

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PROJECTED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
PROJECTED
AREAS
AREAS CHECKED
BY
DATE

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	38
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

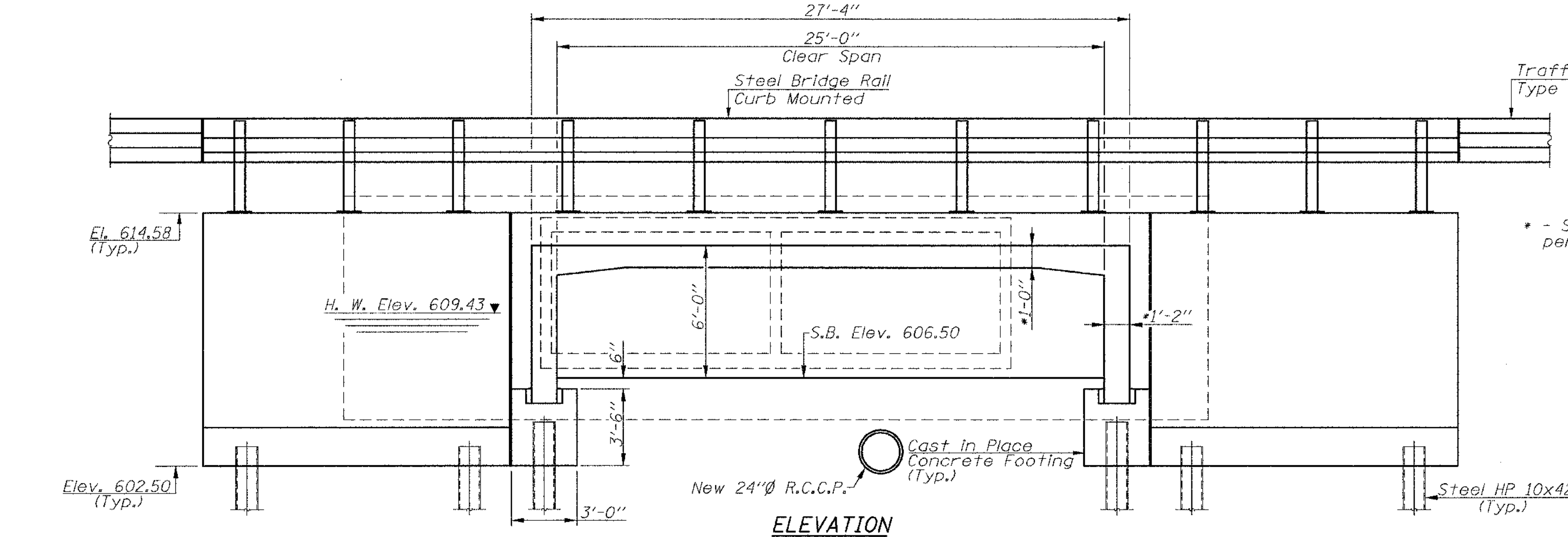
* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 1 OF 10 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark: B.M. #589 - Chiseled "□" in center of E. Headwall of 3' x 5' Double Barrel Concrete Box Culvert, Sta. 398+59.00, 31.4' Rt., Elev. 611.79

Existing Structure: S.N. 011-2002 built in 1928 as a Double Barrel 5'-6" x 10'-0" R.C. Box Culvert with a Culvert Length of +/- 22'-0". Traffic to be maintained utilizing stage construction. No Salvage.

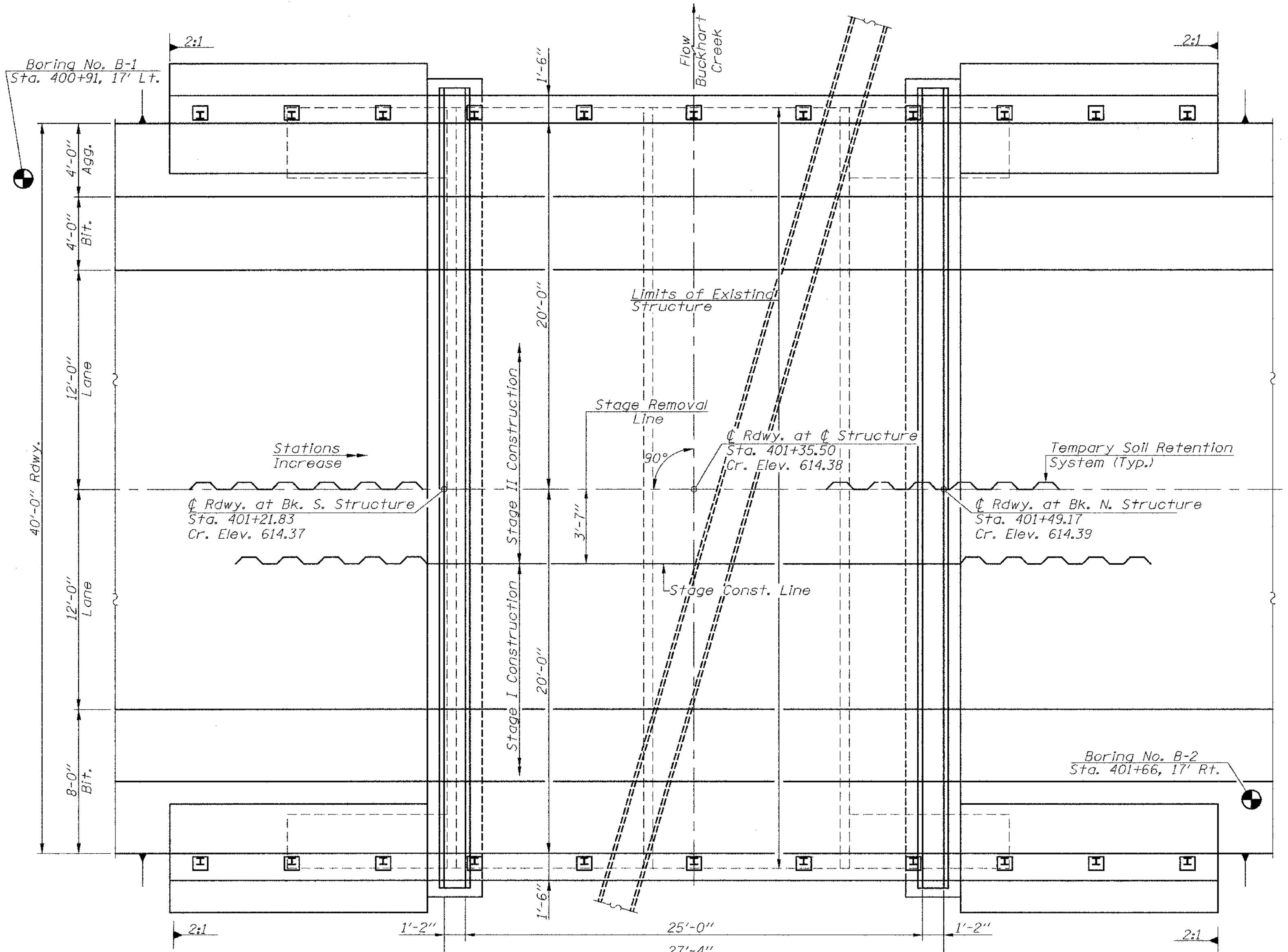


ELEVATION

* - Slab and wall thickness may vary per manufacturer's design

STA. 401+35.50
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RTE. 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
LOADING HS 20-44
STR. NO. 011-2507

NAME PLATE
(Standard 515001)



PLAN

HIGHWAY CLASSIFICATION

F.A.P. Route 714 - IL. Route 48
Functional Class: Minor Arterial (Non-urban)
A.D.T. 4900(2003), 5980(2023)
D.H.V. 600(2021)
Design Speed: 35 mph
Posted Speed: 35 mph

LOADING HS 20-44

Allow 50#/Sq. Ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications.

DESIGN STRESSES

NEW CONSTRUCTION

FIELD UNITS

f'_c = 3500 p.s.i.
f_y = 60000 p.s.i. (reinforcement)

PRECAST UNITS

f'_c = 5000 p.s.i.
f_y = 60000 p.s.i. (reinforcement)
f_y = 65000 p.s.i. (welded wire fabric)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Site Coeffecient = 1.5
Bedrock Acceleration Coeffecient (A) = 0.06g

MARK A. HENDERSON 5513 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS 3/28/06
Exp. Date: 11/30/06

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal Of Existing Structures	Each	1
Concrete Structures	Cu. Yd.	93.8
Reinforcement Bars	Pound	7060
Reinforcement Bars, Epoxy Coated	Pound	310
Steel Bridge Rail	Foot	114.68
Furnishing Steel Piles HP 10x42	Foot	1284
Driving Steel Piles	Foot	1284
Test Pile, Steel HP 10x42	Each	2
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	478
Bar Splicers	Each	24
Three Sided Precast Concrete Structures, 25'-0" x 6'-2"	Foot	43.0
Granular Culvert Backfill	Cu. Yd.	214

WATERWAY INFORMATION

Drainage Area = 2.84 Sq. Mi.
Ex. Low Grade Elev. 613.90 ft. @ Sta. 400+76
Pr. Low Grade Elev. ft. @ Sta.

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	159	45	55	609.39	0.02	0.02	609.41	609.41
Design	50	248	46	56	609.43	0.03	0.03	609.46	609.46
Base	100	286	46	56	609.45	0.01	0.02	609.46	609.47
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	378	46	56	609.44	0.11	0.11	609.55	609.55

10 Year Velocity through Existing Bridge = N/A
10 Year Velocity through Proposed Bridge = 2.89 fps

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

The option of using a precast footing is not allowed.

After the keyways have been grouted and cured, the joints on all three sides of the structure shall be externally sealed using 13" wide external sealing bands conforming to Article 1057.01. Cost included with Three-Sided Precast Concrete Structures.

All details shown were developed assuming the use of cast in place headwalls and wingwalls placed as shown. The Contractor has the option of using precast headwalls and wingwalls. If the precast option is used, details for the headwalls and wingwalls and revised footing details shall be submitted to the Engineer for approval.

The footing design is based on the following maximum reactions applied at the top of footing/pedestal walls: Vertical 7.6 K/FT ℄ + 4.3 K/FT ℄. Horizontal 3.9 K/FT ℄ + 2.0 K/FT ℄.

The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete footing design with calculations, details, and the required seals shall be submitted for review and approval.

All construction joints shall be bonded.

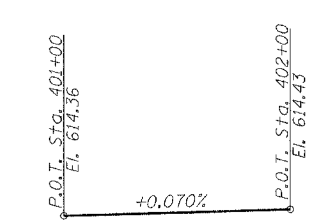
Excavate behind the existing culvert before Stage I Removal. Install temporary soil retention system as required. Saw cut the existing structure at the stage removal line.

The Contractor shall drive one (1) test pile in a permanent location at the North footing and the South footing as directed by the Engineer before ordering the remainder of the piles.

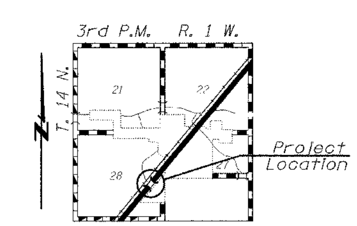
APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TJD)
Engineer of Bridges and Structures

INDEX OF SHEETS

1 - GENERAL PLAN & ELEVATION
2 - STAGING AND DETAILS
3 - TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
4 - CULVERT FOOTING DETAILS
5 - WINGWALL DETAILS
6 - HEADWALL DETAILS
7 - BAR SPLICER ASSEMBLY DETAILS
8 - STEEL BRIDGE RAIL CURB MOUNTED
9 & 10 - BORINGS



PROFILE GRADE
(Along ℄ Roadway)



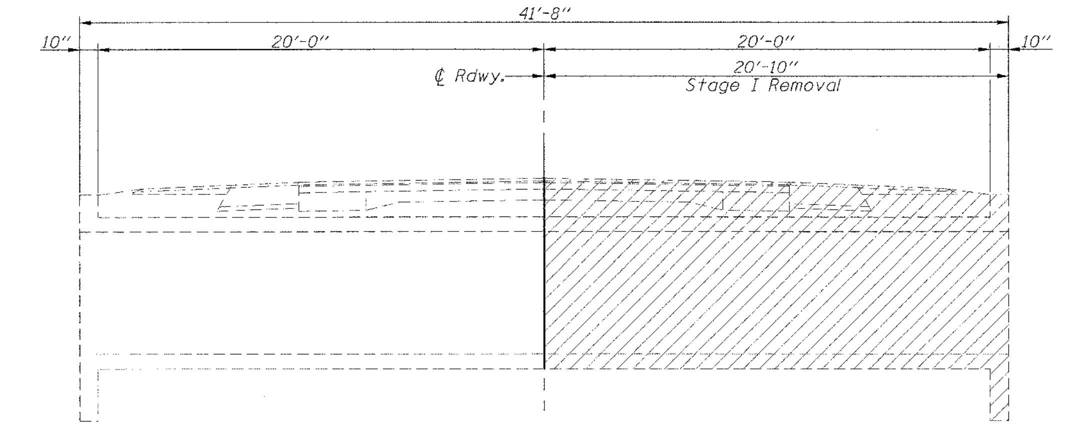
LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

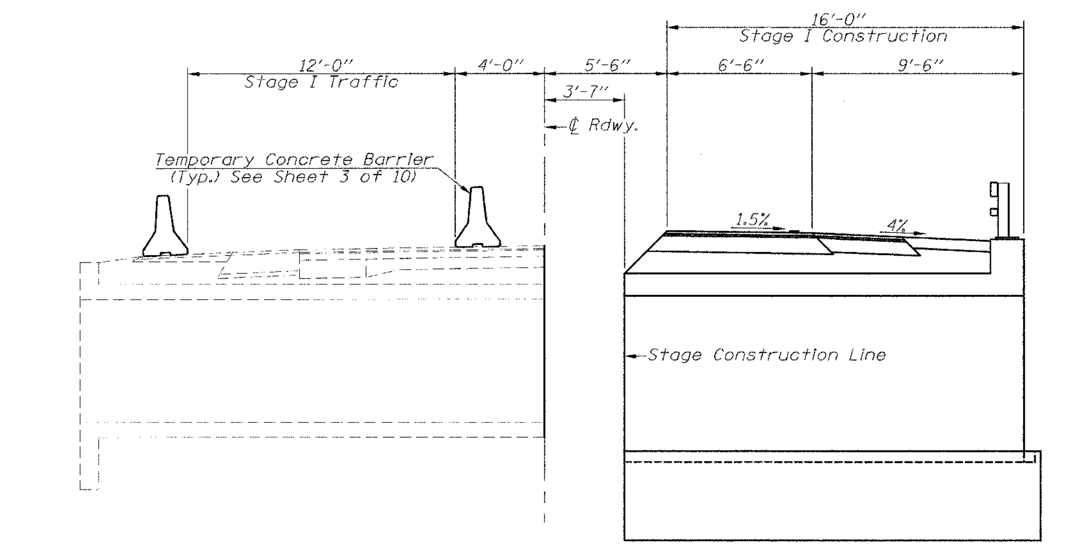
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	39
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

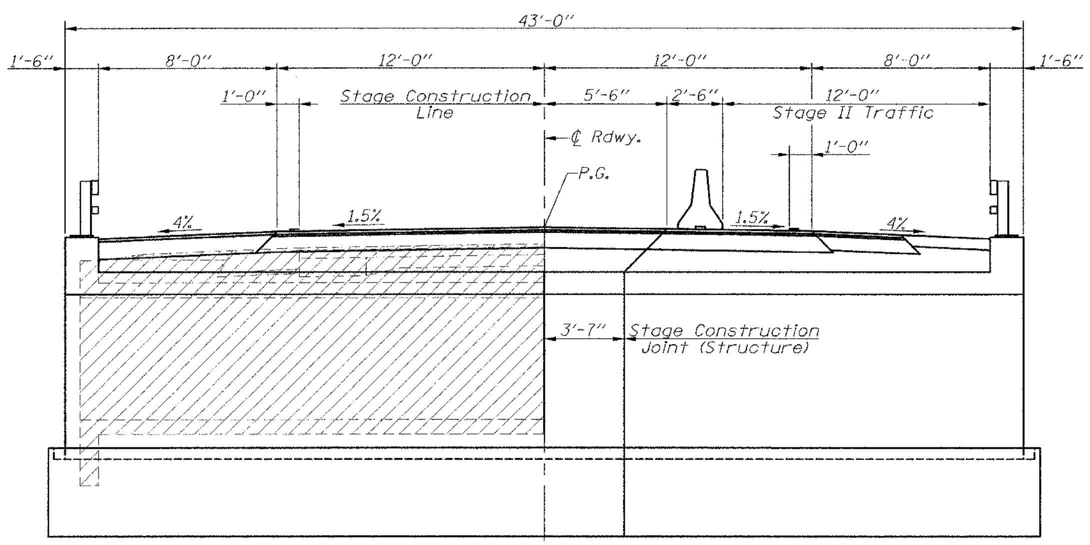
SHEET NO. 2 OF 10 SHEETS



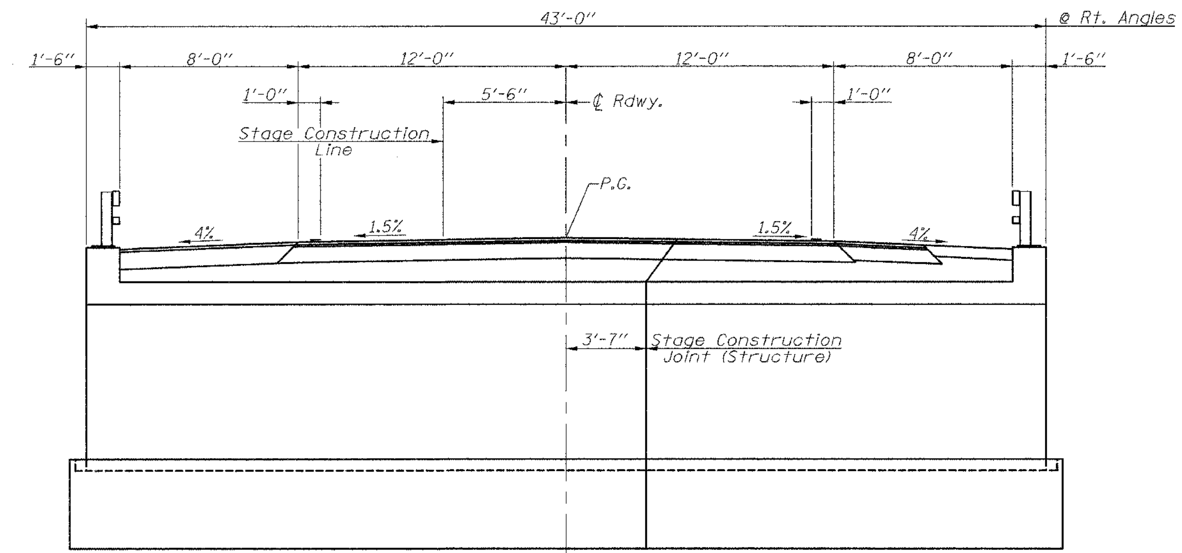
STAGE I REMOVAL
(Looking North)



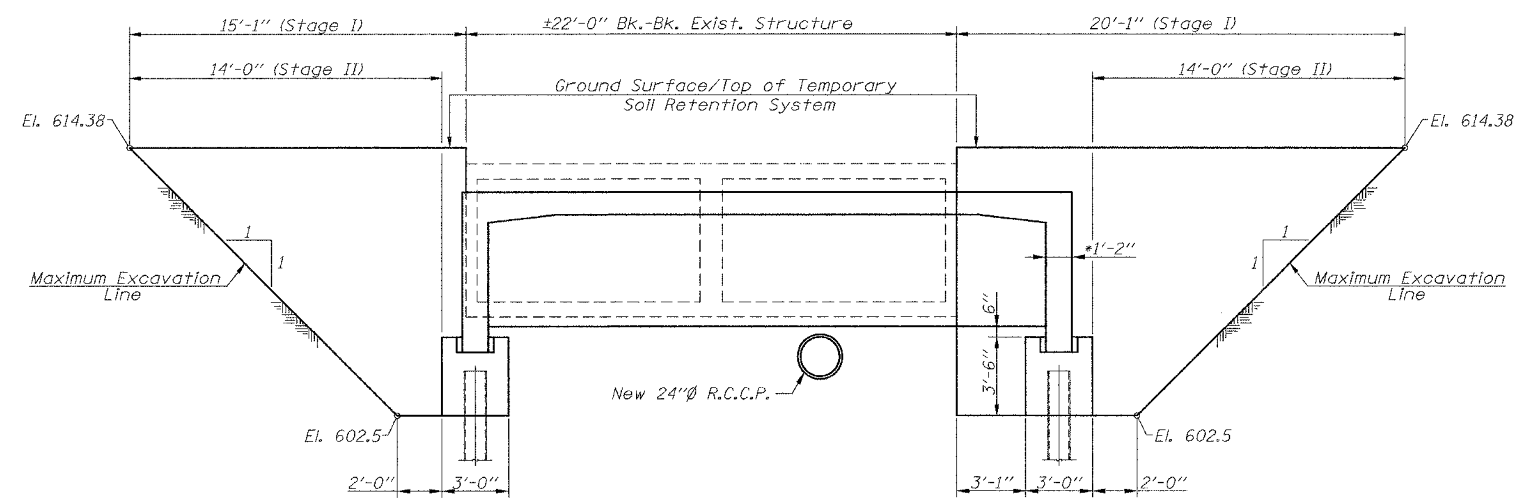
STAGE I TRAFFIC & CONSTRUCTION
(Looking North)



STAGE II TRAFFIC & CONSTRUCTION
(Looking North)



LONGITUDINAL SECTION
(Looking North)



TEMPORARY SOIL RETENTION SYSTEM

Notes: A cantilevered sheet piling system does not appear feasible and additional members or other retention systems may be necessary. The contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Hatched area indicates "Removal of Existing Structures".

See roadway plans for quantity of Temporary Concrete Barrier.

STAGING AND DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

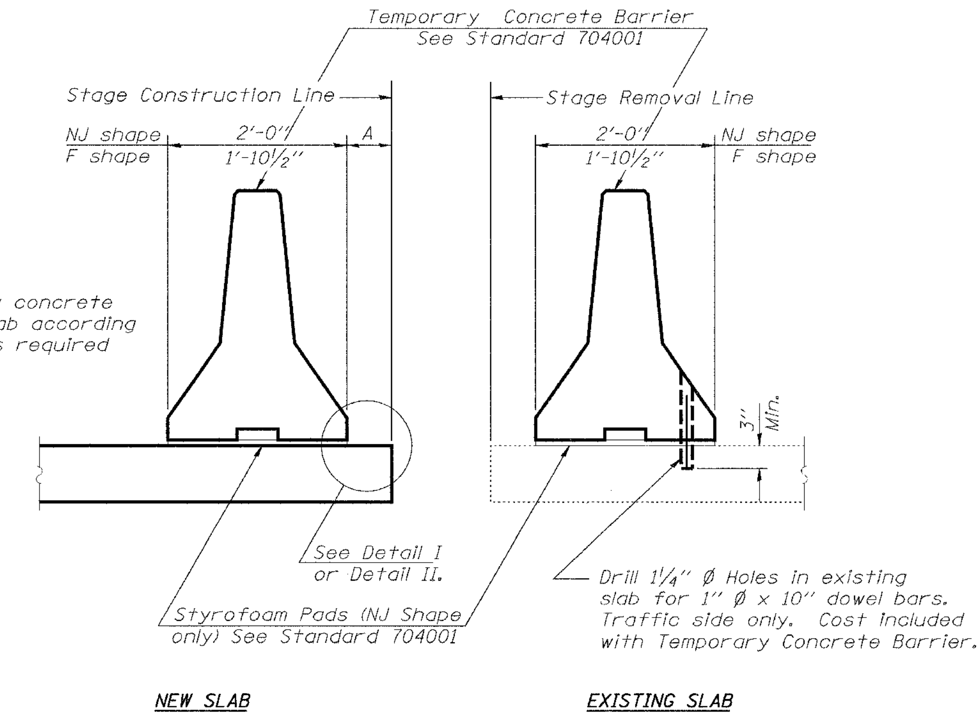
FILE NAME: 1348-1 STRUCTURE (REV. 3/27/06)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	40
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



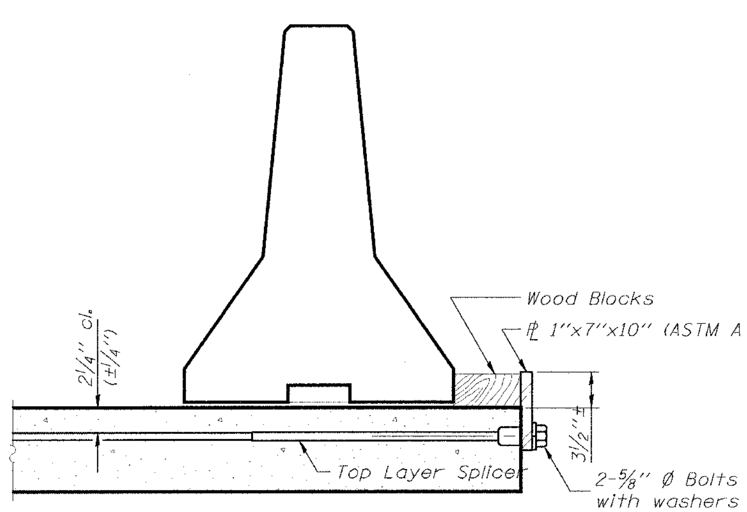
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" Ø bolts screwed to coupler at approximate ℄ of each barrier panel.

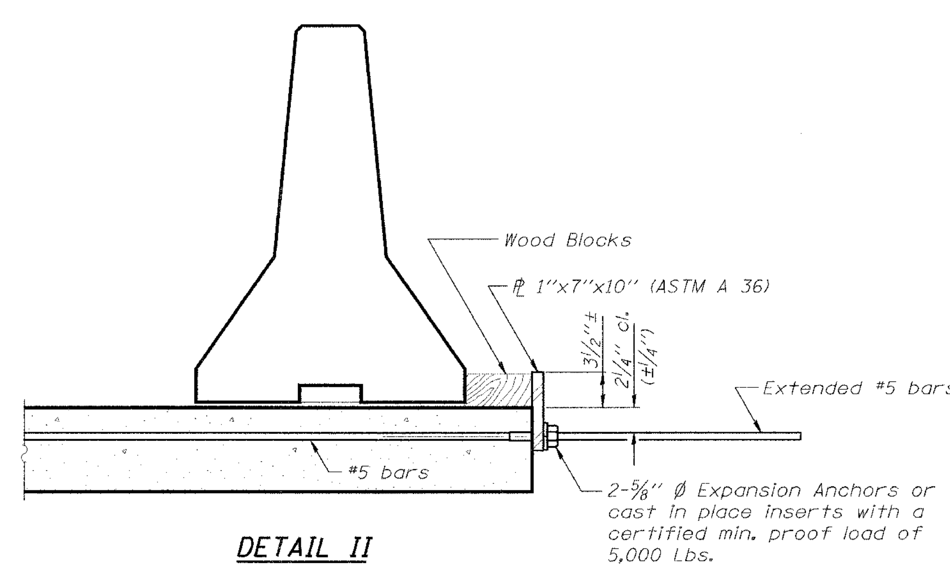
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" Ø Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



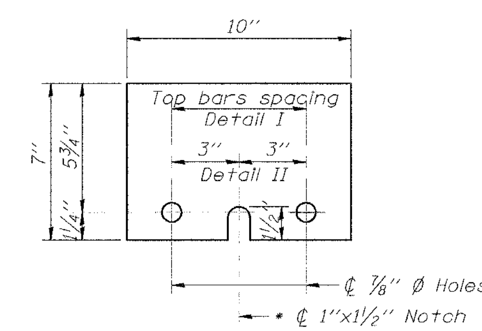
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ℙ 1"x7"x10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

FILE NAME: 1345-1 STRUCTURE (REV. 3/27/06)

R-27 10-22-04

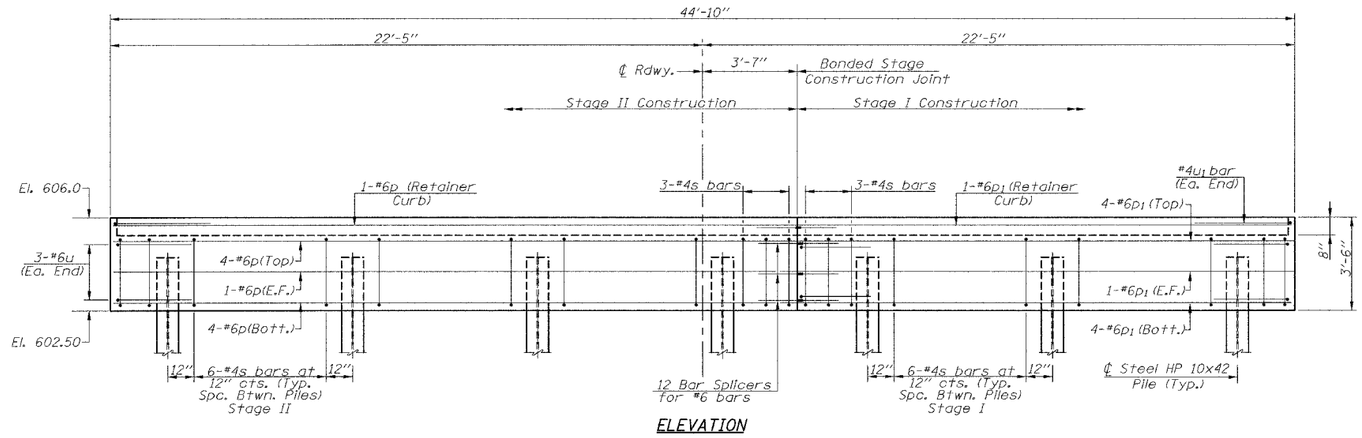
CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	41
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

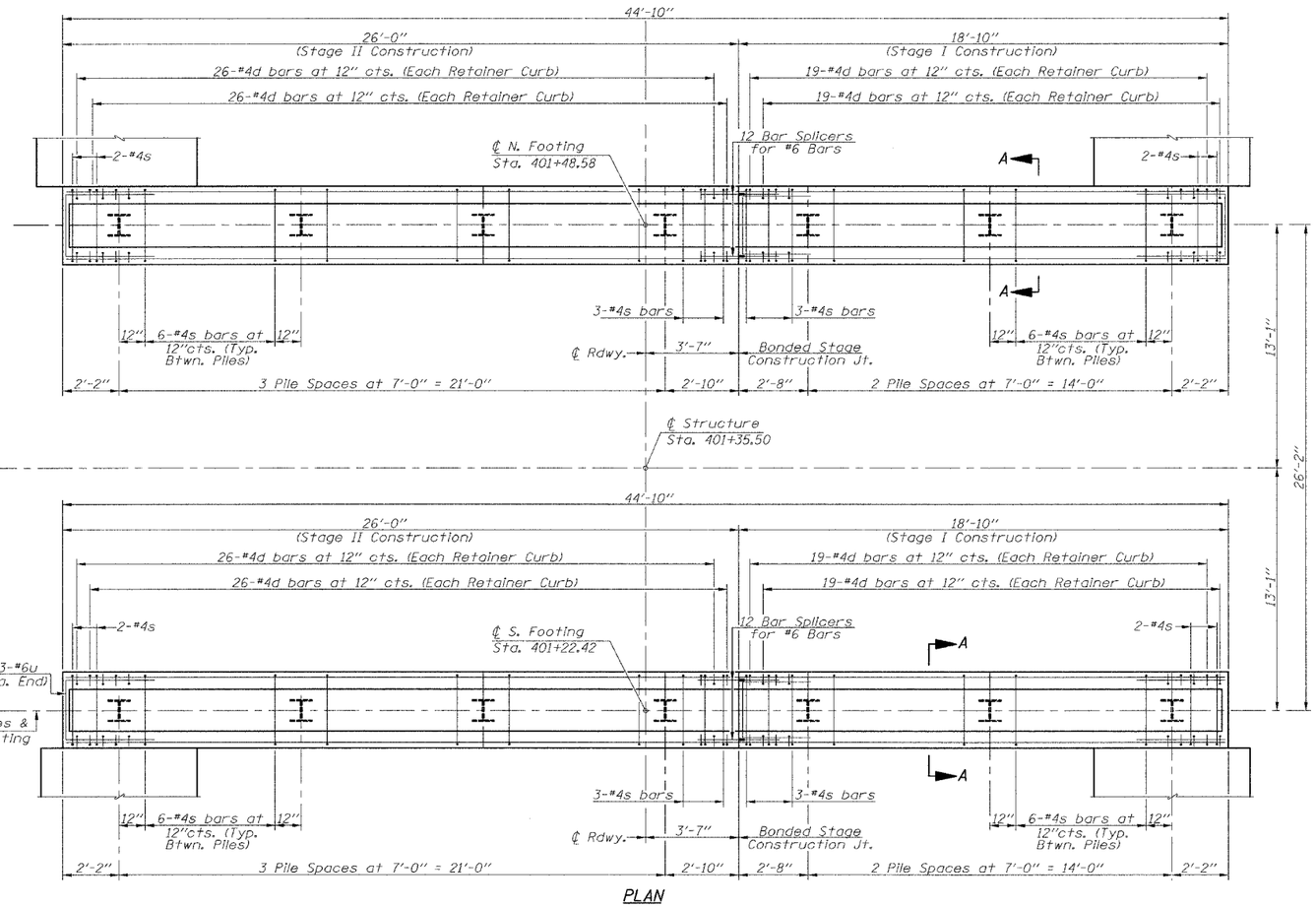
SHEET NO. 4 OF 10 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006

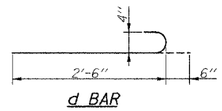
Note: Any structure excavation dewatering shall be included in the cost of "Concrete Structures".



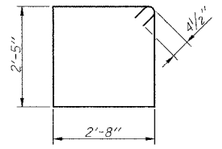
ELEVATION



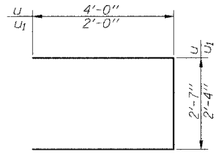
PLAN



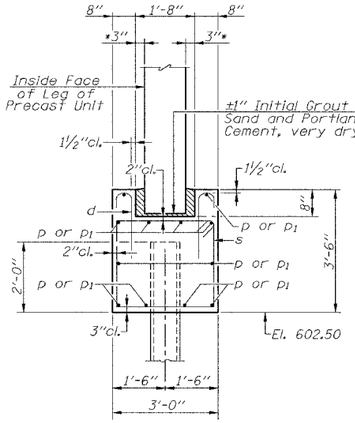
d BAR



s BAR



u or u1 BAR



SECTION A-A

* Varies depending on thickness of leg of precast unit.

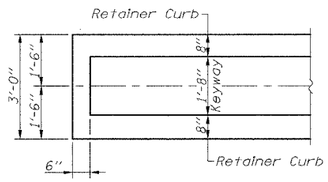
PILE DATA

	SOUTH FOOTING	NORTH FOOTING
Type:	Steel HP 10x42	Steel HP 10x42
Capacity:	43 Tons (Driven to 65 Tons)	43 Tons (Driven to 65 Tons)
Est. Length:	44'	50'
No. Req'd.	6 + 1 Test Pile	6 + 1 Test Pile

TWO FOOTINGS BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d	360	#4	3'-0"	
p	24	#6	25'-8"	
p1	24	#6	18'-6"	
s	80	#4	10'-11"	
u	12	#6	10'-7"	
u1	4	#4	4'-4"	

Concrete Structures	Cu.Yd.	31.3
Reinforcement Bars	Pound	3100
Furnishing Steel Piles HP 10x42	Foot	564
Driving Steel Piles	Foot	564
Test Pile, Steel HP 10x42	Each	2

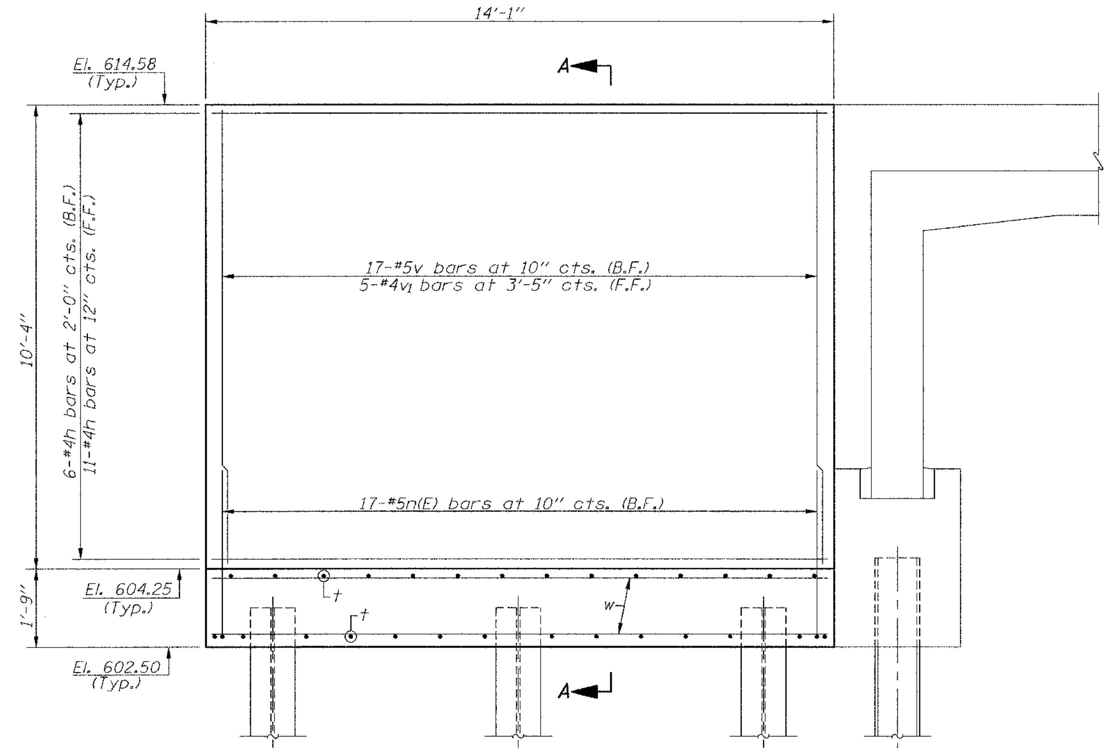


FOOTING END DETAIL

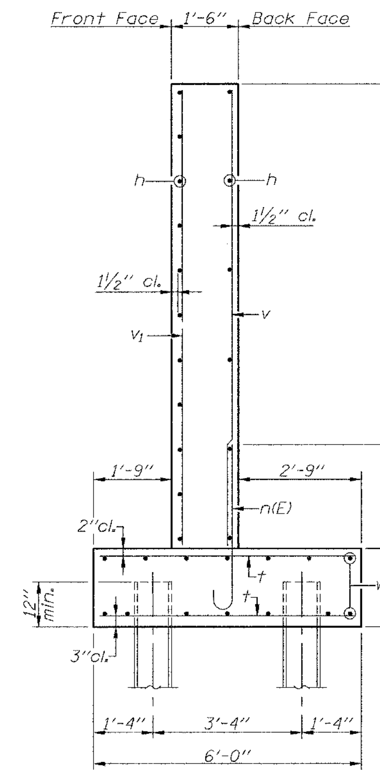
CULVERT FOOTING DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

FILE NAME: 1248 STRUCTURE REV 3-27-07

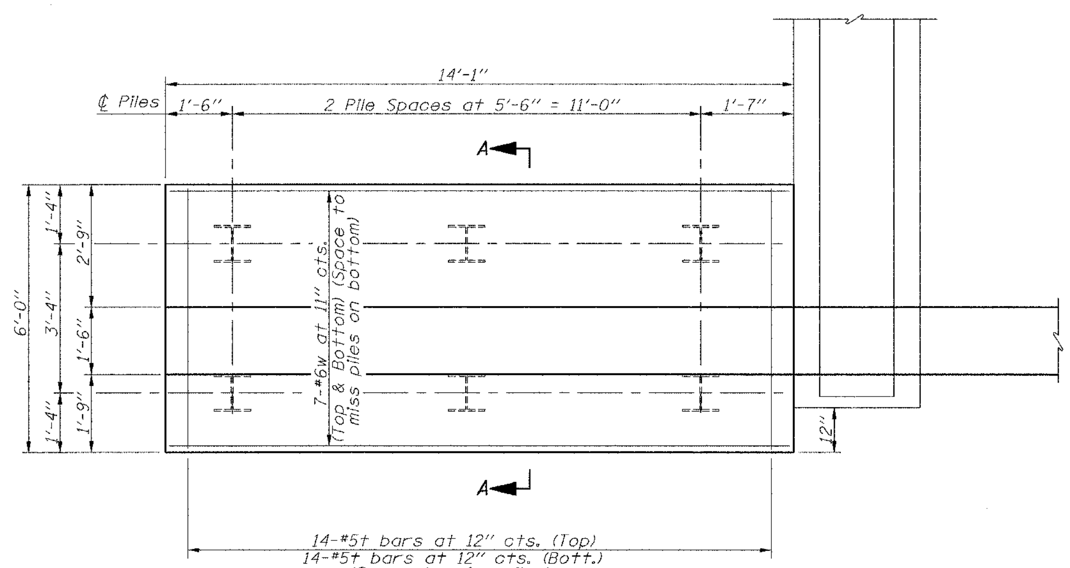
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033



WINGWALL ELEVATION



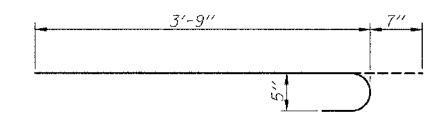
SECTION A-A



FOOTING PLAN

PILE DATA

	Northwest & Northeast Wings	Southwest & Southeast Wings
Type:	Steel HP 10x42	Steel HP 10x42
Capacity:	18 Tons (Driven to 27 Tons)	18 Tons (Driven to 27 Tons)
Est. Length:	33'	27'
No. Req'd.	12	12



BAR n(E)

(FOUR WINGWALLS) BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h	68	#4	13'-9"	——
n(E)	68	#5	4'-4"	⊃
t	112	#5	5'-8"	——
v	68	#5	10'-1"	——
v1	20	#4	10'-1"	——
w	56	#6	13'-9"	——

Item	Unit	Quantity
Concrete Structures	Cu.Yd.	54.3
Reinforcement Bars	Pound	3290
Reinforcement Bars (Epoxy Coated)	Pound	310
Furnishing Steel Piles HP 10x42	Foot	720
Driving Steel Piles	Foot	720

Reinforcement bars designated (E) shall be epoxy coated.

Structure Excavation required for wingwalls included in the bid item for "Three Sided Precast Structures."

WINGWALL DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

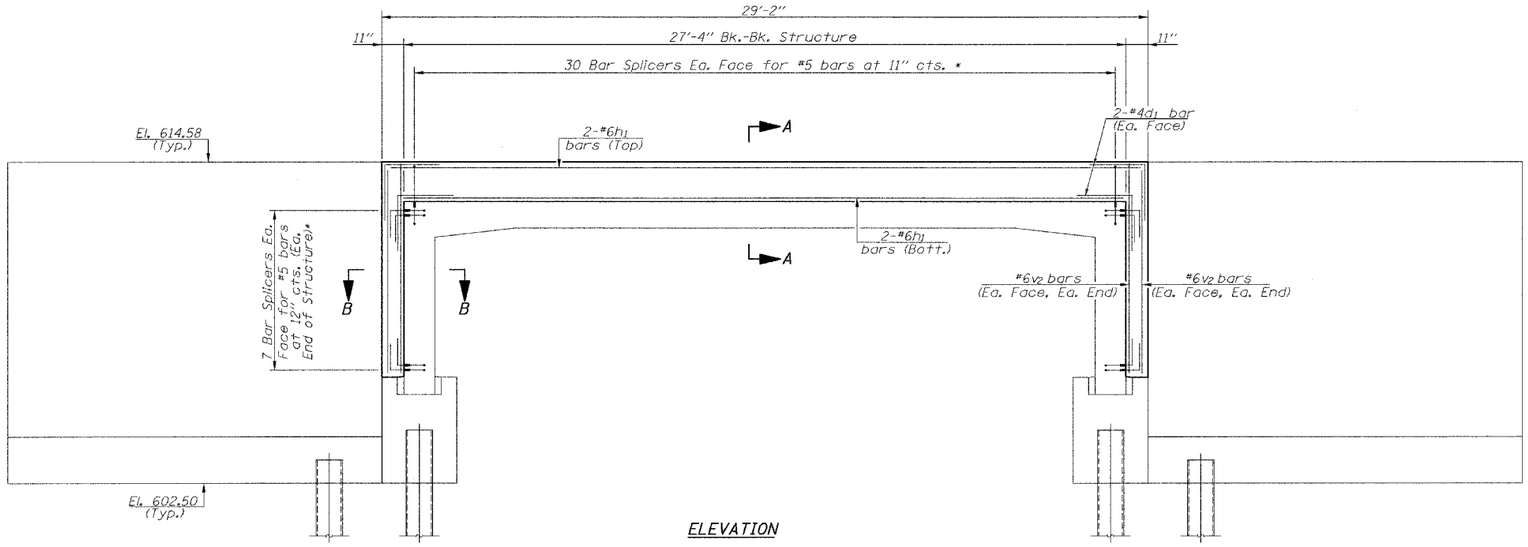
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

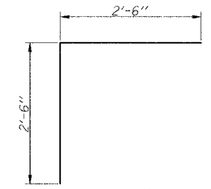
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	43
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 6 OF 10 SHEETS

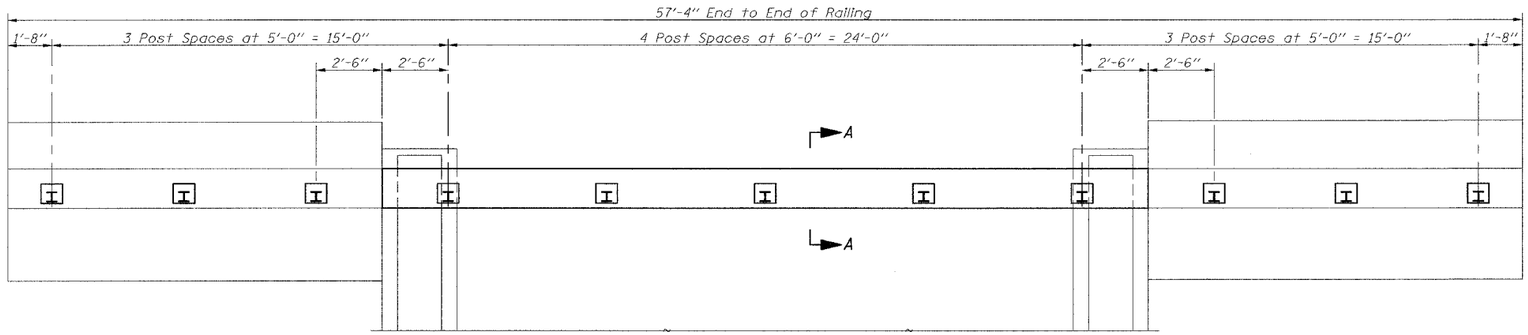
* D-6 IL. 48 IMPROVEMENT 2006



ELEVATION



d_1 Bar

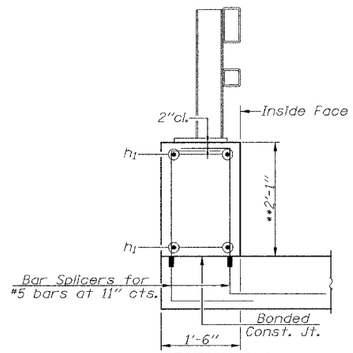


PLAN

* Cost of Bar Splicers are included in the cost of "Three Sided Precast Concrete Structures".

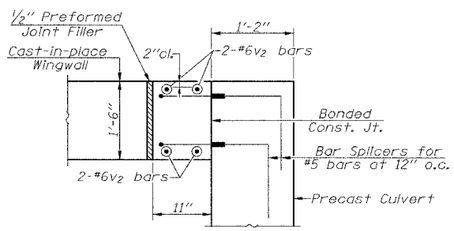
TWO HEADWALLS
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d_1	16	#6	5'-0"	⌐
h_1	8	#6	28'-10"	——
v_2	16	#6	8'-4"	——
Concrete Structures			Cu. Yd.	8.2
Reinforcement Bars			Pound	670

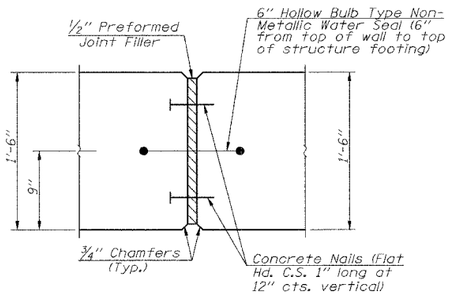


SECTION A-A

** Dimension may vary depending on top slab thickness of three-sided Precast Concrete Structure.



SECTION B-B



CORNER SEAL DETAIL

HEADWALL DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

FILE NAME: 48-1 STRUCTURE DET. 3-27-06

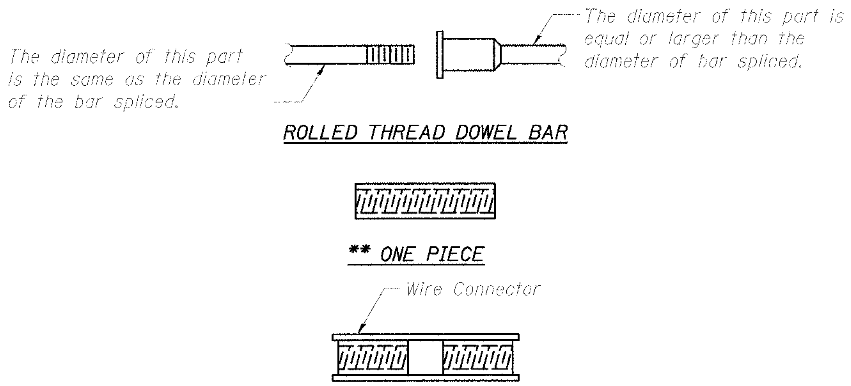
CONTRACT NO. 72784

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	44
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

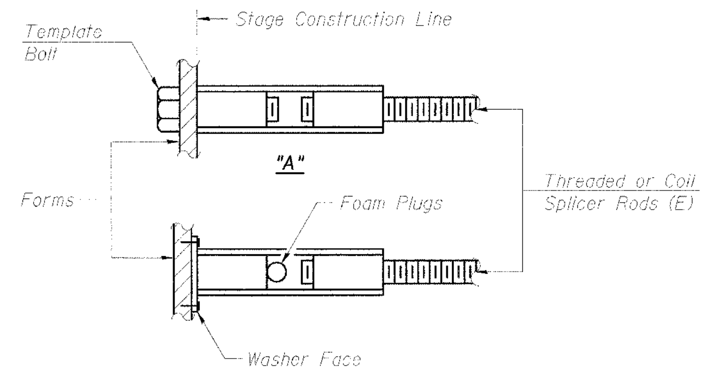
* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 7 OF 10 SHEETS



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

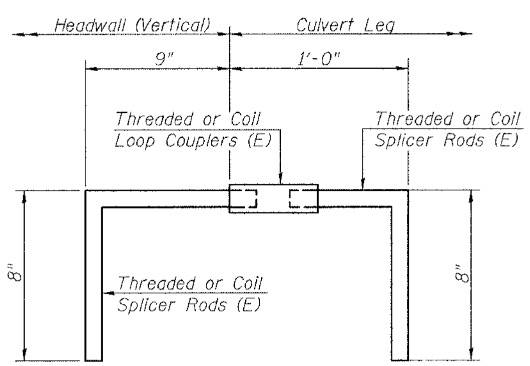
① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} - Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

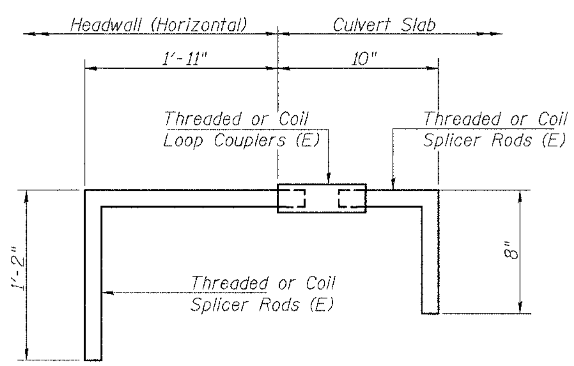
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



FOR HEADWALL (VERTICAL)***

(Cast into Three Sided Precast Concrete Structure)

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 56

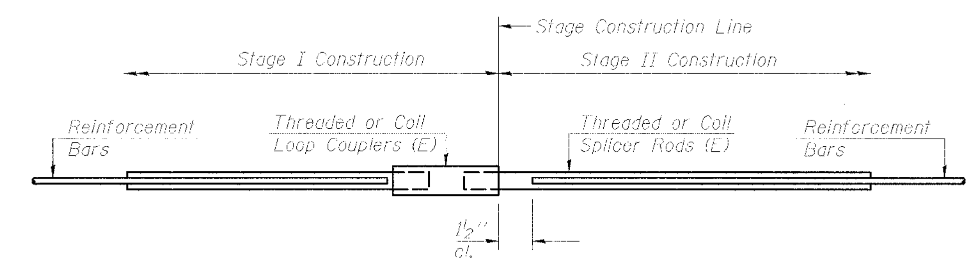


FOR HEADWALL (HORIZONTAL)***

(Cast into Three Sided Precast Concrete Structure)

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 120

*** The cost of the bar splicer assemblies for headwalls will be included in the cost of Three Sided Precast Concrete Structures.



STANDARD

Bar Size	No. Assemblies Required	Location
#6	24	FOOTINGS
Total	24	

BAR SPLICER ASSEMBLY DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

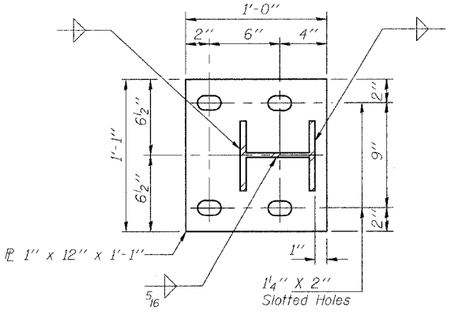
BSD-1 10-22-04

CONTRACT NO. 72784

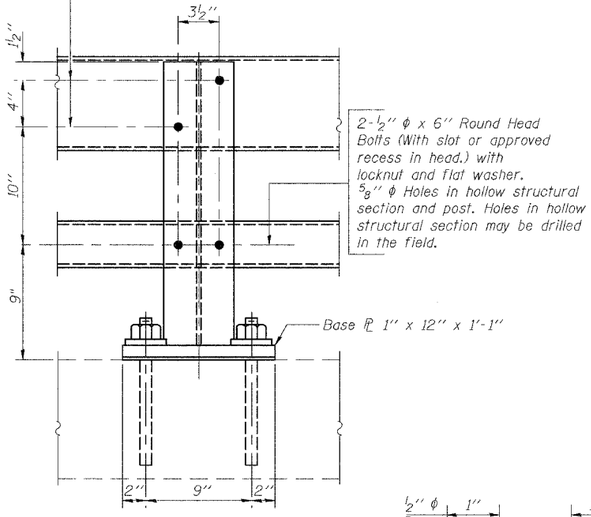
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	45
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8 OF 10 SHEETS

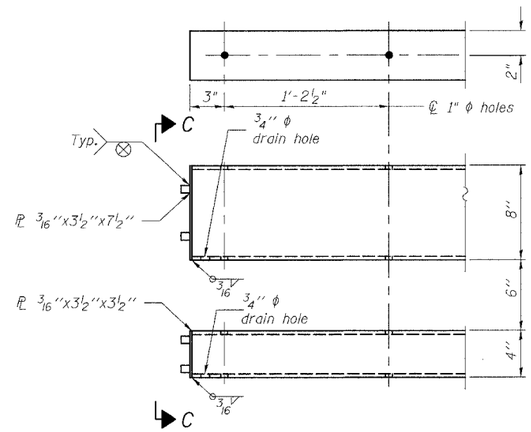
* D-6 IL. 48 IMPROVEMENT 2006



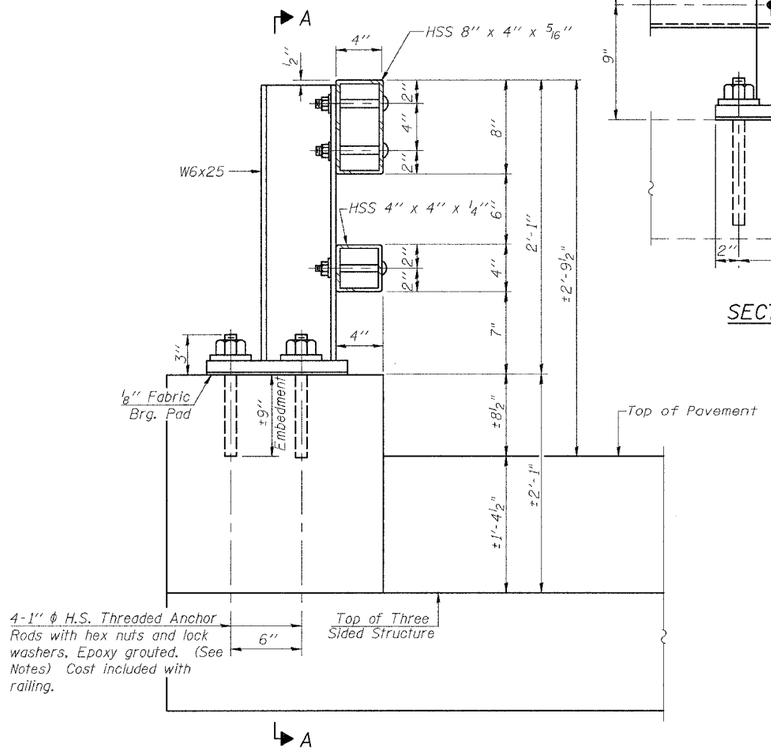
BASE PLATE DETAIL



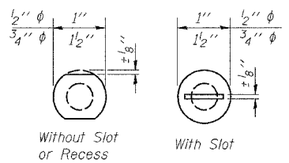
SECTION A-A



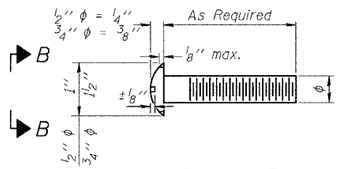
END OF RAIL DETAILS



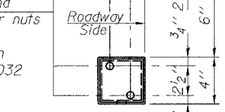
SECTION AT RAIL POST



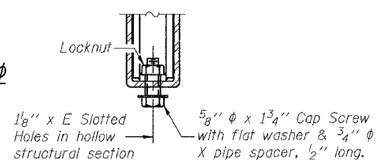
VIEW B-B



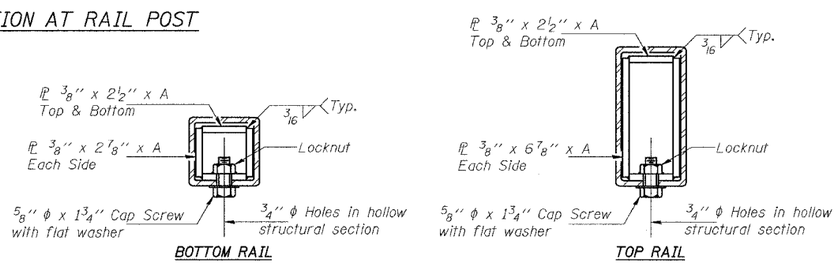
DETAIL OF ½" ϕ & ¾" ϕ ROUND HEAD BOLTS



VIEW C-C

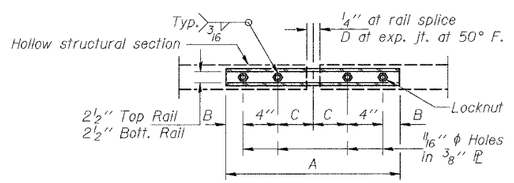


RAIL SPLICE CONNECTION AT EXPANSION JT.



SECTIONS AT RAIL SPLICE

(6'-3" Maximum Post Spacing)



PLAN-BOTT. SPLICE PL TYPICAL

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one ⅛" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

Expansion joint width shall be "D" at 50° F and shall be adjusted for other temperatures according to Article 503.10(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Nuts for 1" ϕ threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional ⅛ turn.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail	Foot	114.68

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

STEEL BRIDGE RAIL
CURB MOUNTED
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

FILE NAME: 1148-1 STRUCTURE REV. 3/28/06

R-31 10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	46
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9 OF 10 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006

Illinois Department of Transportation
Division of Highways
Bdist District 6

SOIL BORING LOG

Page 1 of 2

Date 5/11/05

ROUTE FAP 714 (IL 48) DESCRIPTION IL 48 over Tributary to Buckhart Creek LOGGED BY M. Tappan

SECTION 134B LOCATION NW 1/4, SEC. 27, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2507 Pr 011-2002 Ex
Station 401+31 +/-

BORING NO. 1 SW WW
Station 400+91
Offset 17.0R Lt
Ground Surface Elev. 613.3 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 605.9 ft

Groundwater Elev.:
▽ First Encounter 591.8 ft
▽ Upon Completion Washed ft
▽ After ____ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
V. Dark Grey Moist SILTY CLAY (Fill)			
	0		
-5	1 2	0.5 B	35
607.80 Grey Moist SILTY CLAY			
	1		
	1 3	0.9 B	28
	1		
Brown and Grey	1 2	0.6 B	31
-10			
	1		
Dark Grey	2 2	0.7 B	20
599.80 Brown and Grey ? st LOAM to CLAY LOAM	0		
	1 1	0.4 B	22
-15			
	0		
Olive Brown and Grey V. Moist LOAM	0 0	0.1 B	25
Sampler advanced by Weight of Hammer 595.30 Grey V. Moist SAND LOAM	0		
593.30 -20	0 1	0.2 B	14

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Grey Moist CLAY LOAM (Till)			
Free Water ▽			
	0		
-5	5 9	1.7 B	10
	3		
-25	9 12	4.2 S-14	8
585.30 Grey Medium to Coarse Grained SAND			
	1		
-30	2 4		
	6		
-35	22 26		
575.80 Grey Moist CLAY LOAM (Till)			
	8		
-40	15 17	9.7 S-13	9

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bdist District 6

SOIL BORING LOG

Page 2 of 2

Date 5/11/05

ROUTE FAP 714 (IL 48) DESCRIPTION IL 48 over Tributary to Buckhart Creek LOGGED BY M. Tappan

SECTION 134B LOCATION NW 1/4, SEC. 27, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2507 Pr 011-2002 Ex
Station 401+31 +/-

BORING NO. 1 SW WW
Station 400+91
Offset 17.0R Lt
Ground Surface Elev. 613.3 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 605.9 ft

Groundwater Elev.:
▽ First Encounter 591.8 ft
▽ Upon Completion Washed ft
▽ After ____ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Grey Moist CLAY LOAM (Till) (continued)			
	5		
Olive Brown and Grey -45	14 18	8.3 S-10	10
548.30 Boring Completed			
	6		
Olive Brown and Grey -50	15 20	8.6 S-15	10
	5		
Grey Moist CL (Till) w/ Interbedded SILT Seams -55	27 27	9.1 S-12	16
	5		
Grey Moist CLAY LOAM (Till) -60	17 25	8.6 S-14	10

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Grey Moist CLAY LOAM (Till) (continued)			
	7		
Light Brownish Grey -65	16 22	7.3 B	10
-70			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

BORINGS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	47
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 10 OF 10 SHEETS

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
District 6

Page 1 of 2 | Date 5/16/05

ROUTE FAP 714 (IL 48) DESCRIPTION IL 48 over Tributary to Buckhart Creek LOGGED BY M. Tappan

SECTION 134B LOCATION NW 1/4, SEC. 27, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2507 Pr / 011-2002 Ex
Station 401+31 +/-

BORING NO. 2 NE WW
Station 401+66
Offset 17.0ft Rt
Ground Surface Elev. 613.4 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 605.9 ft

Groundwater Elev.:
First Encounter 594.9 ft
Upon Completion Washed ft
After ___ Hrs. Plugged ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Grey to Brown and Grey Moist SILTY CLAY (Fill)			1 3 4	1.1 B	28
Brown and Grey			1 3 4	1.4 B	31
		-5			
Brown and Grey Moist SILTY CLAY	607.90		1 3 3	1.1 B	28
			0 2 2	0.7 B	32
		-10			
Dark Grey			1 3 4	1.6 B	24
Interbedded w/ Grey V. Moist LOAM Seams			0 1 1	0.8 B	29
Grey V. Moist LOAM	598.40	-15	0 1 1	0.5 B	23
Grey Wet Dirty Medium to Coarse Grained SAND w/ Some Gravel Free Water	595.40		0 0 1		
		-20			
Grey Wet Dirty Medium to Coarse Grained SAND w/ Some Gravel *(continued)*					
Grey Moist CLAY LOAM (Till)	592.40		1 5 7	3.7 B	9
			1 5 12	6.2 S-13	8
		-25			
w/ Interbedded Medium Grained SAND Seams			3 8 10	6.3 S-12	11
		-30			
w/ Interbedded Medium Grained Sandy GRAVEL Seams Washed			4 11 15	7.1 S-14	14
		-35			
Grey Moist CLAY LOAM (Till)			5 16 19	9.0 S-14	9
		-40			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
District 6

Page 2 of 2 | Date 5/16/05

ROUTE FAP 714 (IL 48) DESCRIPTION IL 48 over Tributary to Buckhart Creek LOGGED BY M. Tappan

SECTION 134B LOCATION NW 1/4, SEC. 27, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2507 Pr / 011-2002 Ex
Station 401+31 +/-

BORING NO. 2 NE WW
Station 401+66
Offset 17.0ft Rt
Ground Surface Elev. 613.4 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 605.9 ft

Groundwater Elev.:
First Encounter 594.9 ft
Upon Completion Washed ft
After ___ Hrs. Plugged ft

Description	Elev.	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Grey Moist CLAY LOAM (Till) *(continued)*					
Grey and Olive Brown			10 22 22	9.3 B	11
		-45			
			5 16 21	9.1 S-13	11
		-50			
Grey Moist CLAY LOAM (Till)			7 17 22	8.2 S-10	10
		-55			
w/ Interbedded Grey Fine to Medium Grained SAND Seams			9 53 47 /5"	+10.0 S-10	10
		-60			
Grey Moist CLAY LOAM (Till) *(continued)*			12 20 23	+10.0 B	10
Boring Completed	548.90	-65			
		-70			
		-75			
		-80			

Refer STA to cl. of Existing Structure = 401+31, STA increase to North

Refer Elevation to Chisled X @ STA 401+50 on NE WW = 613.8'

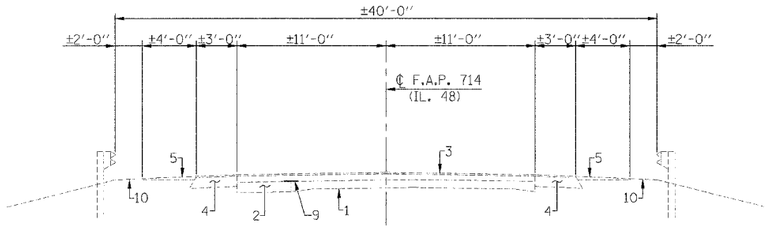
The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

BORINGS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 401+35.5
S.N. 011-2507

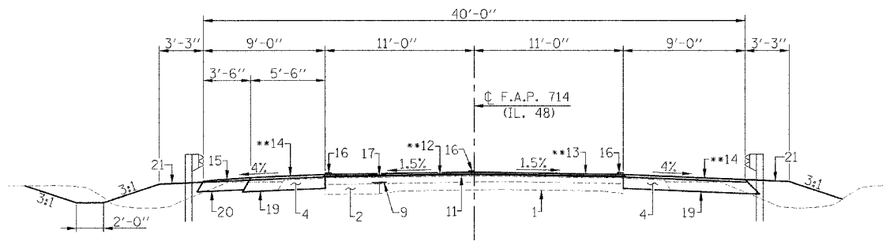
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	48
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

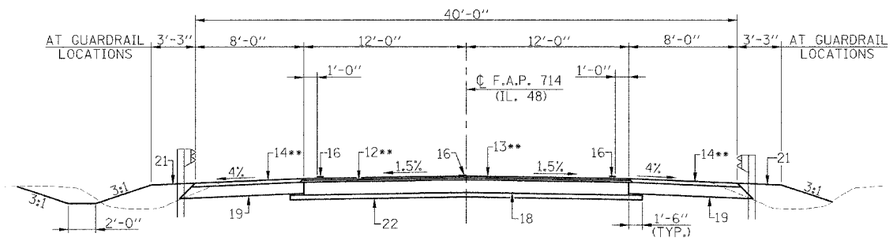


EXISTING TYPICAL SECTION
(STA. 0+06.0 TO STA. 5+96.0)

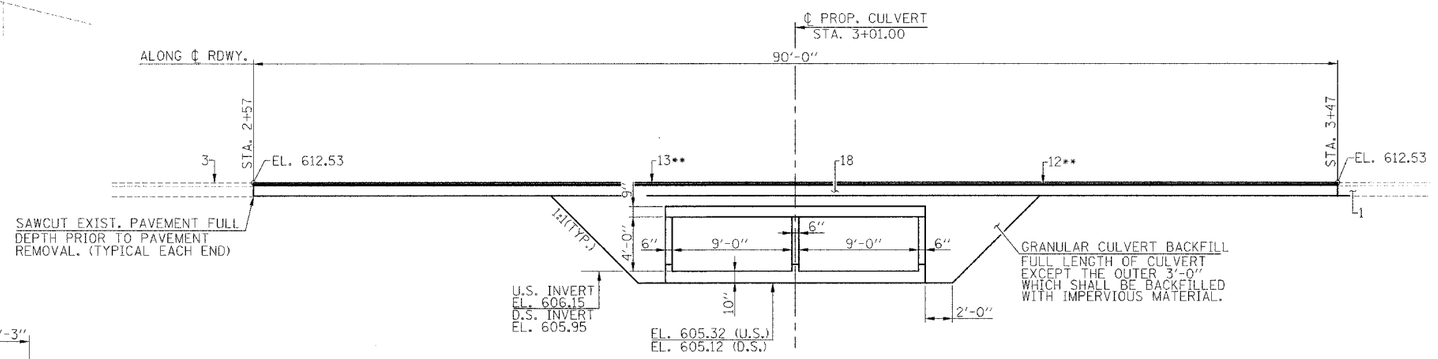


PROPOSED TYPICAL SECTION #8
(STA. 0+06.0 to STA. 2+57 & STA. 3+47 TO STA. 5+96.0)

** TO BE PLACED AFTER BOTH STAGES HAVE BEEN COMPLETED.



PROPOSED TYPICAL SECTION #4
(STA. 2+57 to STA. 3+47)



ELEVATION - BOX CULVERT
NOTE: ALL DIMENSIONS ARE AT RIGHT ANGLES EXCEPT AS NOTED.

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

DETAILS AND
TYPICAL ROADWAY SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: DATRS (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	49
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

*D-6 IL. 48 IMPROVEMENT 2006

PAVEMENT MARKING SCHEDULE

LOCATION	LENGTH (FT.)	PAVEMENT MK. REMOVAL WHITE (SQ. FT.)	PAVEMENT MK. REMOVAL YELLOW (SQ. FT.)	SHORT TERM PVMT. MARKING WHITE (FT.)	SHORT TERM PVMT. MARKING YELLOW (FT.)	WORK ZONE PVMT. MARKING REMOVAL WHITE (SQ. FT.)	WORK ZONE PVMT. MARKING REMOVAL YELLOW (SQ. FT.)	PAINT PVMT. MK. LINE - 5" WHITE (SQ. FT.)	PAINT PVMT. MK. LINE - 5" YELLOW (SQ. FT.)	TEMPORARY PAVEMENT MARKING LINE-5" WHITE (FOOT)	TEMPORARY PAVEMENT MARKING LINE-5" YELLOW (FOOT)	TEMPORARY PAVEMENT MARKING LINE-24" YELLOW (FOOT)
STA. 442+56 TO STA. 7+01.7 ℄	799.2				*160	53			200		200	
STA. 0+25.5 TO STA. 5+96.0 LT. (EDGE)	570.5						189	571		571		
STA. 0+06.0 TO STA. 5+76.5 RT. (EDGE)	562.9						189	571		571		
STA. 442+56 (STOP BAR) RT.	12					24						12
STA. 7+01.7 (STOP BAR) LT.	12					24						12
STA. 442+56 TO STA. 2+57 (℄)	354.5	38										
STA. 3+47 TO STA. 7+01.7 (℄)	354.7	38										
TOTAL		76		160		479		1342		1342		24

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS.
* 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

GUARDRAIL SCHEDULE

LOCATION	STEEL PLATE BEAM GUARDRAIL REMOVAL (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 6A (EACH)	STEEL BRIDGE RAIL (FOOT)
STAGE I					
STA. 1+90 TO STA. 4+05 RT.	215				
STA. 0+40.02 TO STA. 0+90.02 RT.		1			
STA. 0+90.02 TO STA. 2+65.02 RT.			175		
STA. 2+65.02 TO STA. 2+96.42 RT.				1	
STA. 2+96.42 TO STA. 3+48.58 RT.					52.16
STA. 3+48.58 TO STA. 3+79.98 RT.				1	
STA. 3+79.98 TO STA. 4+92.48 RT.			112.5		
STA. 4+92.48 TO STA. 5+42.48 RT.		1			
STAGE II					
STA. 1+71 TO STA. 4+33 LT.	262				
STA. 0+59.52 TO STA. 1+09.52 LT.		1			
STA. 1+09.52 TO STA. 2+22.02 LT.			112.5		
STA. 2+22.02 TO STA. 2+53.42 LT.				1	
STA. 2+53.42 TO STA. 3+05.58 LT.					52.16
STA. 3+05.58 TO STA. 3+36.98 LT.				1	
STA. 3+36.98 TO STA. 5+11.98 LT.			175		
STA. 5+11.98 TO STA. 5+61.98 LT.		1			
TOTAL	477	4	575	4	104.32

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION CUBIC YARD	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE CUBIC YARD	EMBANKMENT CUBIC YARD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CUBIC YARD	EARTH EXCAVATION WIDENING CUBIC YARD
STA. 0+06.0 TO STA. 5+96.0	272	204	522	-318	
STA. 0+25.5 TO STA. 5+96.0 LT.		30		+30	40
TOTAL	272	234	522	-288	40

BITUMINOUS SCHEDULE

LOCATION	BITUMINOUS BASE COURSE SUPERPAVE 11½" (SQ. YD.)	BIT. CONC. SURFACE COURSE, SUPERPAVE MIXTURE C, N50 (TON)	BIT. CONC. BINDER COURSE, SUPERPAVE MIXTURE C, N50 (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)	BIT. CONCRETE BASE COURSE SUPERPAVE 10" (SQ. YD.)	BITUMINOUS SHOULDERS SUPERPAVE (TON)
STA. 2+57 TO STA. 3+47 LT. STAGE I					55	
STA. 0+06.0 TO STA. 2+57 RT.		26	13	0.21	251	32
STA. 2+57 TO STA. 3+47	240	20	10	0.15	160	20
STA. 0+25.5 TO STA. 2+57 LT.		24	12	0.16	142	18
STA. 3+47 TO STA. 5+96.0 LT.		26	13	0.17	152	19
STA. 3+47 TO STA. 5+76.5 RT.		24	12	0.19	230	30
TOTAL	240	120	60	0.88	990	119

SCHEDULE PERMANENT SEEDING

LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN FERT. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)	POTASSIUM FERT. NUT. (POUND)	MULCH METHOD 2 (ACRE)	AGRICULTURAL GROUND LIMESTONE (TON)	TEMPORARY EROSION CONTROL SEEDING (POUND)
STA. 0+06.0 TO STA. 5+76.5 RT.	0.3	27	27	27	0.3	0.6	30
STA. 0+25.5 TO STA. 5+96.0 LT.	0.3	27	27	27	0.3	0.6	30
TOTAL	0.6	54	54	54	0.6	1.2	60

SCHEDULE GRANULAR CULVERT BACKFILL

LOCATION	QUANTITY (CU. YD.)
STA. 2+57 TO STA. 3+47 (℄)	118
TOTAL	118

SCHEDULE SUBBASE GRANULAR MATERIAL, TYPE A 4"

LOCATION	QUANTITY (SQ. YD.)
STA. 2+57 TO STA. 3+47	270
TOTAL	270

SCHEDULE PAVEMENT REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 2+57 TO STA. 3+47	250
TOTAL	250

SCHEDULE BITUMINOUS SHOULDER REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 0+25.5 TO STA. 5+96.0 LT.	191
STA. 0+06.0 TO STA. 5+76.5 RT.	191
STA. 2+57 TO STA. 3+47,5'-6" SHLDR. LT. ST.I	55
TOTAL	437

SCHEDULE AGGREGATE SHOULDERS, TYPE B

LOCATION	QUANTITY (TON)
STA. 0+06.0 TO STA. 2+57 LT.	41
STA. 3+47 TO STA. 5+96.0 LT.	44
TOTAL	85

SCHEDULE AGGREGATE PRIME COAT

LOCATION	QUANTITY (TON)
STA. 0+06 TO STA. 2+57	1.23
STA. 2+57 TO STA. 3+47	0.48
STA. 3+47 TO STA. 5+96	1.22
TOTAL	2.93

SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	QUANTITY (EACH)
STA. 0+06 ℄	1
STA. 1+40 ℄	1
STA. 2+20 ℄	1
STA. 3+00 ℄	1
STA. 3+80 ℄	1
STA. 4+60 ℄	1
STA. 5+40 ℄	1
TOTAL	7

SCHEDULE STRIP REFLECTIVE CRACK CONTROL TREATMENT

LOCATION	QUANTITY (FOOT)
STA. 0+06 TO STA. 2+57 LT.	251
STA. 3+47 TO STA. 5+96.0 LT.	249
TOTAL	500

SCHEDULE BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

LOCATION	QUANTITY (FOOT)
STA. 0+06 TO STA. 2+57	614
STA. 3+47 TO STA. 5+96.0	609
TOTAL	1223

SCHEDULE GUARDRAIL & TERMINAL MARKERS

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 0+75 LT.	1	
STA. 1+25 LT.	1	
STA. 1+75 LT.	1	
STA. 2+25 LT.	1	
STA. 2+75 LT.	1	
STA. 3+25 LT.	1	
STA. 3+75 LT.	1	
STA. 4+25 LT.	1	
STA. 4+75 LT.	1	
STA. 5+25 LT.	1	
STA. 0+60 RT.	1	
STA. 1+10 RT.	1	
STA. 1+60 RT.	1	
STA. 2+10 RT.	1	
STA. 2+60 RT.	1	
STA. 3+60 RT.	1	
STA. 4+10 RT.	1	
STA. 4+60 RT.	1	
STA. 5+10 RT.	1	
STA. 0+40.02 RT.		1
STA. 0+59.52 LT.		1
STA. 5+42.48 RT.		1
STA. 5+61.98 LT.		1
TOTAL	18	4

FILE NAME: QS (REV. 3/27/06)

QUANTITY SCHEDULES
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	50
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006

#4 REBAR FLUSH
#4 REBAR FLUSH
23.00'
22.87'
18.53'
℄ EXIST. RDWY.
#4 REBAR FLUSH
STA. 0+04.32
PK NAIL IN CHISELED "X"

NOTCH IN S.E. CORNER OF G.R. POST
NAIL & B.C. IN END G.R. POST
24.35'
60.75'
℄ EXIST. RDWY.
NAIL & B.C. IN END G.R. POST
STA. 15+07.35
PK NAIL & B.C. IN CHISELED "X"

R.R. BOX
NORFOLK SOUTHERN RAILROAD

EXIST. R.O.W.
VARIES
40'-0"
CONST. LIMITS
TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (ALL FOUR CORNERS)
STA. 3+01.00 - ℄ RDWY. AT ℄ STRUCTURE
PROPOSED DOUBLE BARREL 9' X 4' CAST IN PLACE CONCRETE BOX CULVERT. 60'-9¾" LENGTH ALONG SKEW. 45° SKEW RT. FORWARD
STRUCTURE NO. 011-2512
EXISTING S.P.B.G.R. TYPE A (TO BE REMOVED AT ALL FOUR CORNERS)
BEGIN BITUMINOUS BASE CSE. STA. 2+57
END BITUMINOUS BASE CSE. STA. 3+47
IL 48
STA. 0+04.32 = STA. 443+57.80
TRAFFIC BARRIER TERMINAL TYPE 6A (ALL FOUR CORNERS)
PROPOSED S.P.B.G.R. TYPE A (TO BE INSTALLED AT ALL FOUR CORNERS)
EXISTING SINGLE BARREL 9' X 4' CONCRETE BOX CULVERT
STA. 3+00
44° SKEW RT. FORWARD
FLOW TRIBUTARY TO BUCKHART CREEK

PLAN
0 20 40 60
SCALE: 1" = 20'

BENCHMARK WS-1 - CHISELED "□" ON S. END OF EAST HEADWALL
EL. 611.91

PROJECT BEGINS STA. 2+57
PROJECT ENDS STA. 3+47
FUTURE 2½" BIT. CONC. OVERLAY

BEGIN SPECIAL DITCH STA. 0+50 LT. EL. 608.3
BEGIN SPECIAL DITCH STA. 1+25 RT. EL. 608.2
STA. 1+00 LT. EL. 607.5
STA. 1+50 LT. EL. 607.0
STA. 1+50 RT. EL. 608.1
STA. 2+00 LT. EL. 606.7
STA. 2+00 RT. EL. 607.8
STA. 2+50 LT. EL. 606.4
STA. 2+50 RT. EL. 607.5
U.S. S.B. EL. 606.4
D.S. S.B. EL. 606.2
STA. 3+50 LT. EL. 606.5
STA. 3+50 RT. EL. 607.5
STA. 4+00 LT. EL. 606.9
STA. 4+00 RT. EL. 607.7
STA. 4+50 LT. EL. 607.3
STA. 4+50 RT. EL. 607.9
STA. 5+00 LT. EL. 607.1
STA. 5+00 RT. EL. 608.1
END SPECIAL DITCH LT. STA. 5+50 EL. 608.3
END SPECIAL DITCH RT. STA. 5+60 EL. 608.2
-1.6% -0.4% -1.0% -0.6% -0.6% -0.6% -0.6% -2.2% -0.6% +5.6% +1.0% +0.4% +0.8% +0.4% +0.8% +0.4% +0.8% +0.4% +0.8%

PROFILE

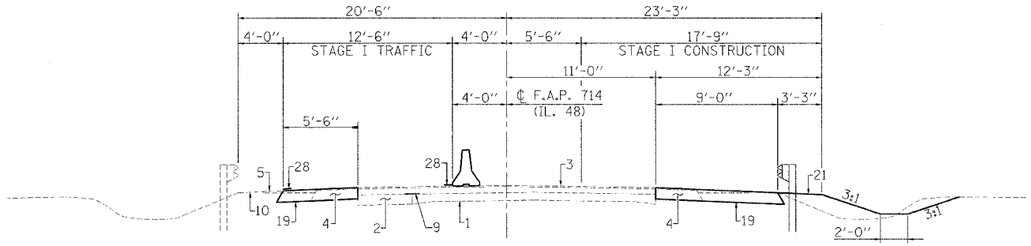
PLAN & PROFILE
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: PP (REV. 2/22/06)

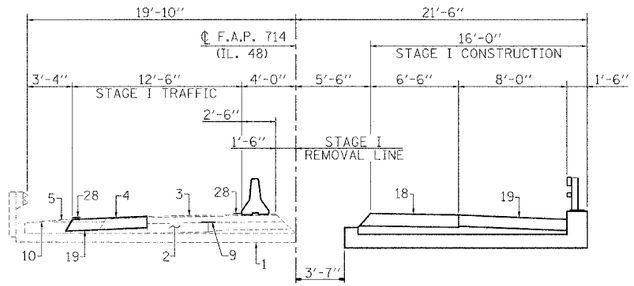
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	51
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

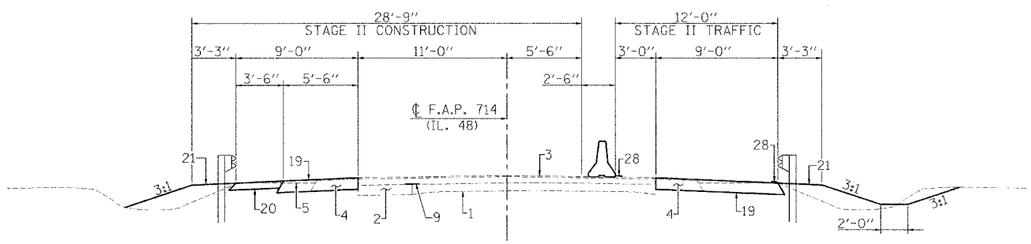
• D-6 IL. 48 IMPROVEMENT 2006



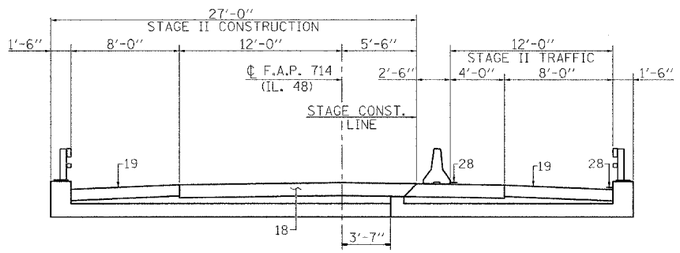
STAGE I TRAFFIC
(LOOKING NORTH)



STAGE I TRAFFIC OVER CULVERT
(LOOKING NORTH)



STAGE II TRAFFIC
(LOOKING NORTH)



STAGE II TRAFFIC OVER CULVERT
(LOOKING NORTH)

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

WORK THIS SHEET WITH THE NEXT TWO SHEETS.

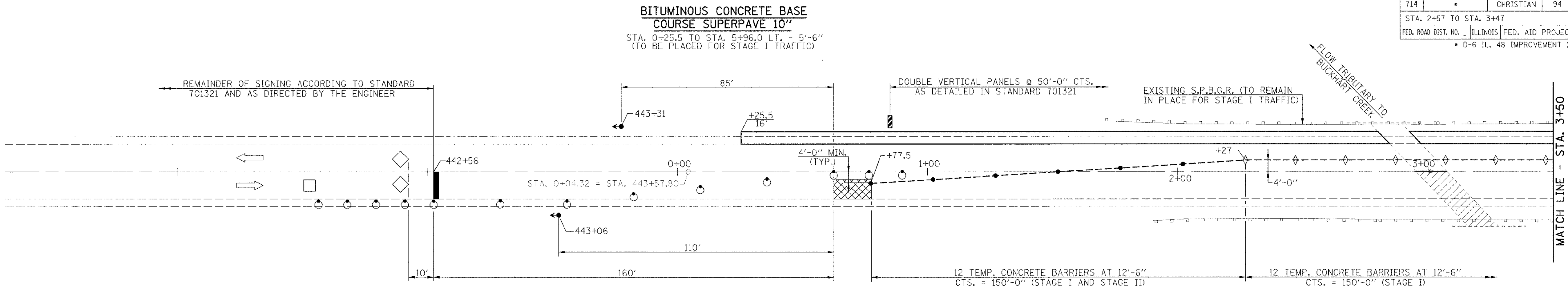
STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

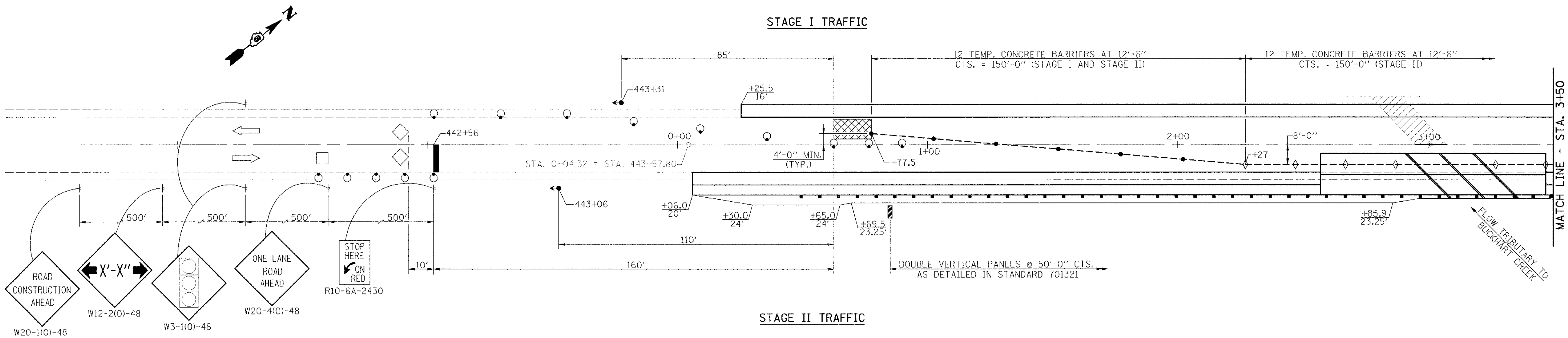
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	52
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006



STAGE I TRAFFIC



STAGE II TRAFFIC

SUGGESTED STAGE CONSTRUCTION SEQUENCE

STAGE I

1. THE CONTRACTOR SHALL PLACE MAX. WIDTH SIGNS AND ROAD CLOSED AHEAD SIGNS AS SHOWN ON THESE PLANS, BEFORE IMPLEMENTING ANY STAGE TRAFFIC CONTROL. THESE SIGNS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION STANDARD 701321 (SPECIAL)".
2. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10" LT. STA. 0+25.5 TO STA. 5+96.0 - (5'-6" WIDE).
3. ERECT TRAFFIC CONTROL FOR STAGE I.
4. REMOVE EXISTING GUARDRAIL AND STRUCTURE RIGHT. ℄ STA. 3+00.
5. CONSTRUCT PROPOSED STAGE I 9'-0" X 4'-0" CULVERT AND WINGWALLS ℄ STA. 3+01.
6. CONSTRUCT PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10" AND GUARDRAIL RT. STA. 0+06.0 TO STA. 5+76.5.
7. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE RT. STA. 2+57 TO STA. 3+47.

STAGE II

1. ERECT TRAFFIC CONTROL FOR STAGE II.
2. REMOVE EXISTING STRUCTURE LEFT ℄ STA. 3+00.
3. CONSTRUCT PROPOSED STAGE II 9'-0" X 4'-0" CULVERT AND WINGWALLS WINGWALLS ℄ STA. 3+01.
4. CONSTRUCT PROPOSED BITUMINOUS CONCRETE BASE COURSE SUPERPAVE AND GUARDRAIL LT. STA. 0+25.5 TO STA. 5+96.0.
5. CONSTRUCT PROPOSED AGGREGATE SHOULDERS LT. STA. 0+25.5 TO STA. 2+57 & STA. 3+47 TO STA. 5+96.0.
6. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE LT. STA. 2+57 TO STA. 3+47.

FINAL

1. INSTALL SHORT-TERM PAVEMENT MARKINGS AND REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
2. REMOVE SHORT TERM PAVEMENT MARKINGS. FINAL BITUMINOUS CONCRETE BINDER AND SURFACE COURSE WILL BE PLACED UNDER TRAFFIC WITH FLAGGERS AT A LATER DATE.
3. STRIPING, SEEDING AND MISCELLANEOUS CLEANUP.

GENERAL NOTES

1. THIS TRAFFIC CONTROL DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
2. THE CONTRACTOR SHALL NOTIFY LARRY SIMON (PH. 785-5836) IN THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST ONE WEEK PRIOR TO IMPLEMENTING STAGE TRAFFIC CONTROL.
3. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE REVISED STAGE TRAFFIC PATTERNS DURING ALL PHASES OF STAGE CONSTRUCTION SHALL BE REMOVED AS SPECIFIC IN SECTION 783 OF THE STANDARD SPECIFICATIONS AND PAID FOR AS "PAVEMENT MARKING REMOVAL".
4. THE CONTRACTOR SHALL MAINTAIN FULL OPERATIONAL STATUS OF ALL SIDEROADS AND ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
5. TEMPORARY CONCRETE BARRIER. THE BARRIER UNIT AT EACH END OF THE INSTALLATION SHALL BE SECURED TO THE PAVEMENT OR SHOULDER USING ALL SIX ANCHORING PINS FOR F SHAPE OR ALL SIX DOWEL BARS FOR NEW JERSEY SHAPE.
6. EACH DETECTOR LOOP SHALL BE CONNECTED TO A SEPERATE DETECTOR AMPLIFIER.
7. THE COST TO INSTALL TEMPORARY PAVEMENT MARKING AS DETAILED ON THESE SHEETS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL & PROTECTION STANDARD 701321, SPECIAL".
8. SIGNING FOR STAGE II SAME AS STAGE I.

0 20 40
SCALE: 1" = 20'

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- □ ◇ INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- ◊ TYPE C BIDIRECTIONAL REFLECTOR
- ---- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- • STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

WORK THIS SHEET WITH THE PREVIOUS SHEET AND THE NEXT SHEET.

SEE THE NEXT SHEET FOR TRAFFIC CONTROL & TEMPORARY PAVEMENT MARKING SCHEDULES.

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: SC10283 (REV. 1/30/06)

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

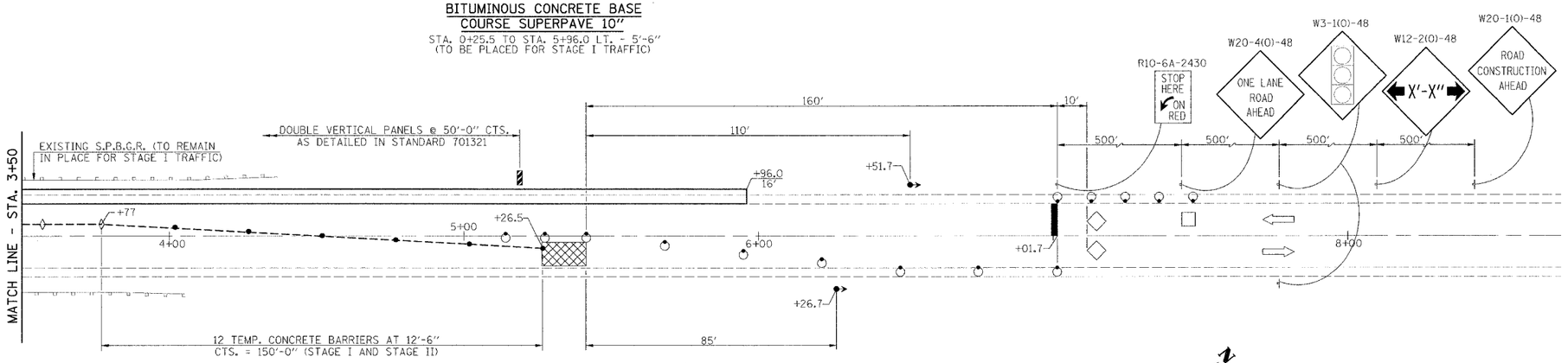
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	53
STA. 2+57 TO STA. 3+47				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

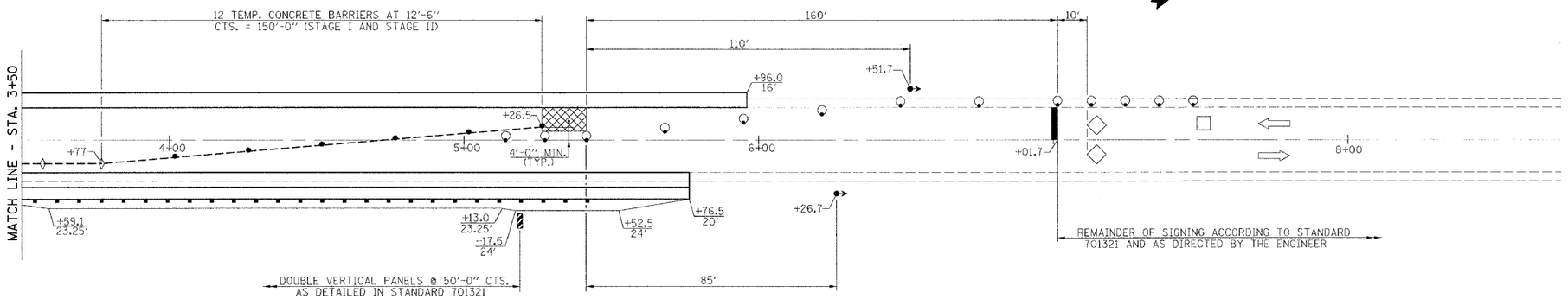
• D-6 IL. 48 IMPROVEMENT 2006

BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10"

STA. 0+25.5 TO STA. 5+96.0 LT. - 5'-6"
(TO BE PLACED FOR STAGE I TRAFFIC)



STAGE I TRAFFIC



STAGE II TRAFFIC

TRAFFIC CONTROL SCHEDULE

LOCATION STATION TO STATION	TEMP. CONC. BARRIER (FOOT)	RELOCATE TEMP. CONC. BARRIER (FOOT)	IMPACT ATTENUATOR TEMPORARY (EACH)	RELOCATE IMPACT ATTENUATOR (EACH)
STAGE I				
STA. 0+62.5 TO STA. 0+77.5			1	
STA. 0+77.5 TO STA. 5+26.5 LT.	450			
STA. 5+26.5 TO STA. 5+41.5			1	
STAGE II				
STA. 0+62.5 TO STA. 0+77.5				1
STA. 0+77.5 TO STA. 5+26.5 RT.		450		
STA. 5+26.5 TO STA. 5+41.5				1
TOTAL	450	450	2	2

SCHEDULE TEMPORARY PAVEMENT MARKING

LOCATION STATION TO STATION	TEMP. PAV'T. MARKING LINE - 5" (FOOT)	TEMP. PAV'T. MARKING LINE - 24" (FOOT)
STAGE I		
STA. 442+56 RT.		12
STA. 0+25.5 TO STA. 5+96.0 LT.	571	
STA. 442+56 TO STA. 7+01.7 (℄)	200	
STA. 7+01.7		12
STAGE II		
STA. 0+06.0 TO STA. 5+76.5 RT.	571	
TOTAL	1342	24

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- □ ◇ INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- ◊ TYPE C BIDIRECTIONAL REFLECTOR
- ---- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- • STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

0 20 40
SCALE: 1" = 20'

NOTE:
SIGNING FOR STAGE II SAME AS STAGE I.

WORK THIS SHEET WITH THE TWO PREVIOUS SHEETS AND THE NEXT SHEET.

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: SC-72783 (REV. 1-31-08)

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	54

STA. 2+57 TO STA. 3+47

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

• D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

EL. 612.40 C - 15 F - 29

EXIST. R.O.W.

3:1

EL. 606.7

EL. 607.3

EXIST. R.O.W.

610 2 + 00

605

EL. 612.36 C - 10 F - 30

EXIST. R.O.W.

3:1

EL. 607.0

EL. 608.1

EXIST. R.O.W.

610 1 + 50

605

EL. 612.37 C - 7 F - 30

EXIST. R.O.W.

3:1

EL. 607.5

EXIST. R.O.W.

610 1 + 00

605

BEGIN TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) - STA. 0+59.5 LT.

EL. 612.30 C - 7 F - 23

EXIST. R.O.W.

3:1

EL. 608.3

EXIST. R.O.W.

610 0 + 50

BEGIN TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) - STA. 0+40.0 RT.

605

SHOULDER WIDENING BEGINS - STA. 0+06.0 RT.

EXIST. R.O.W.

SHOULDER WIDENING BEGINS - STA. 0+25.5 LT.

CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FINAL SURVEY NOTE BOOK NO. | DATE | BY | SURVEYED | PLOTTED | AREAS | AREAS CHECKED

ORIGINAL SURVEY NOTE BOOK NO. | SURVEYED | PLOTTED | AREAS | AREAS CHECKED

PLOT DATE = &DATE&
FILE NAME = &FILE&
PLOT SCALE = &SCALE&
USER NAME = &USER&

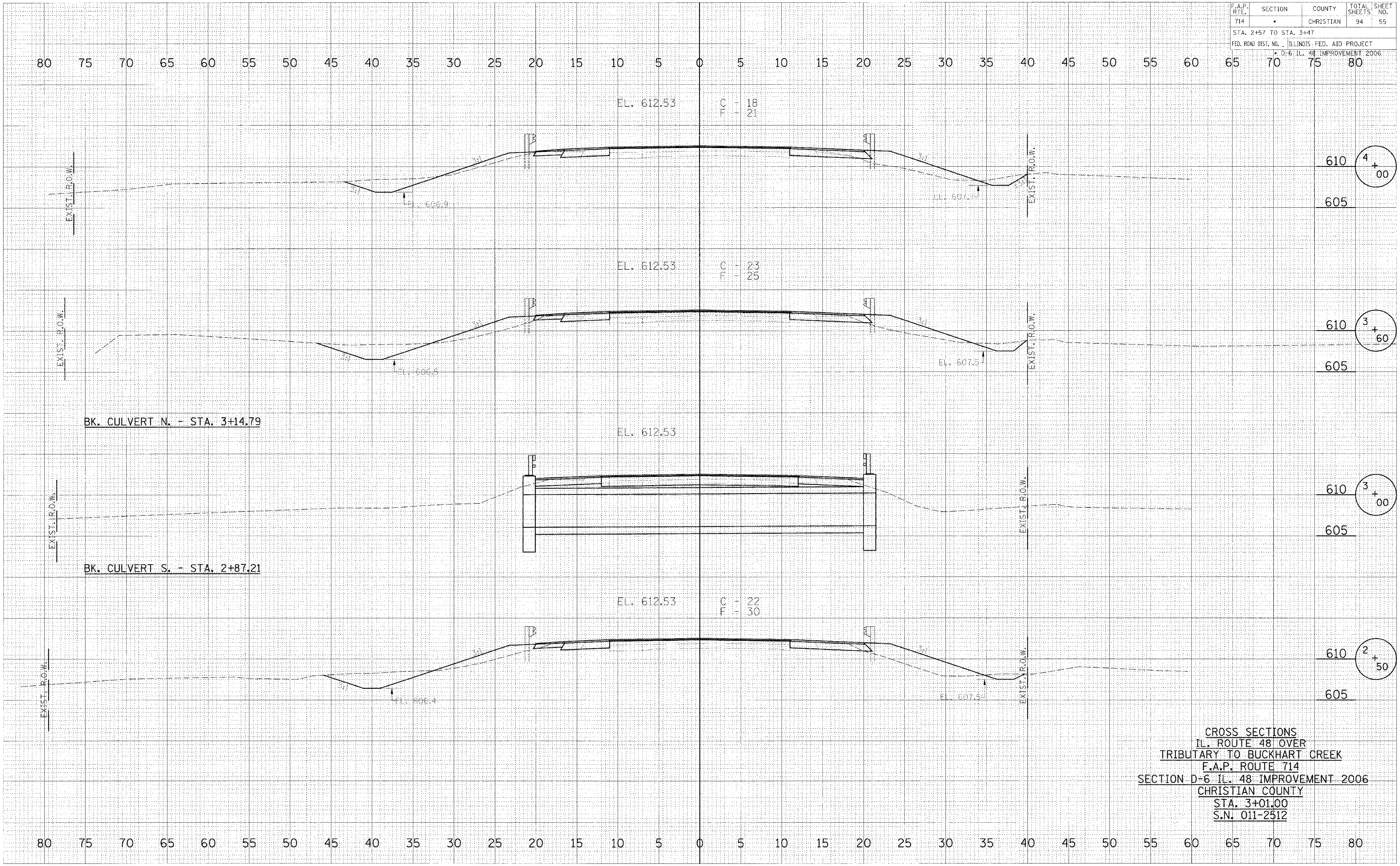
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	55

STA. 2+57 TO STA. 3+47

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

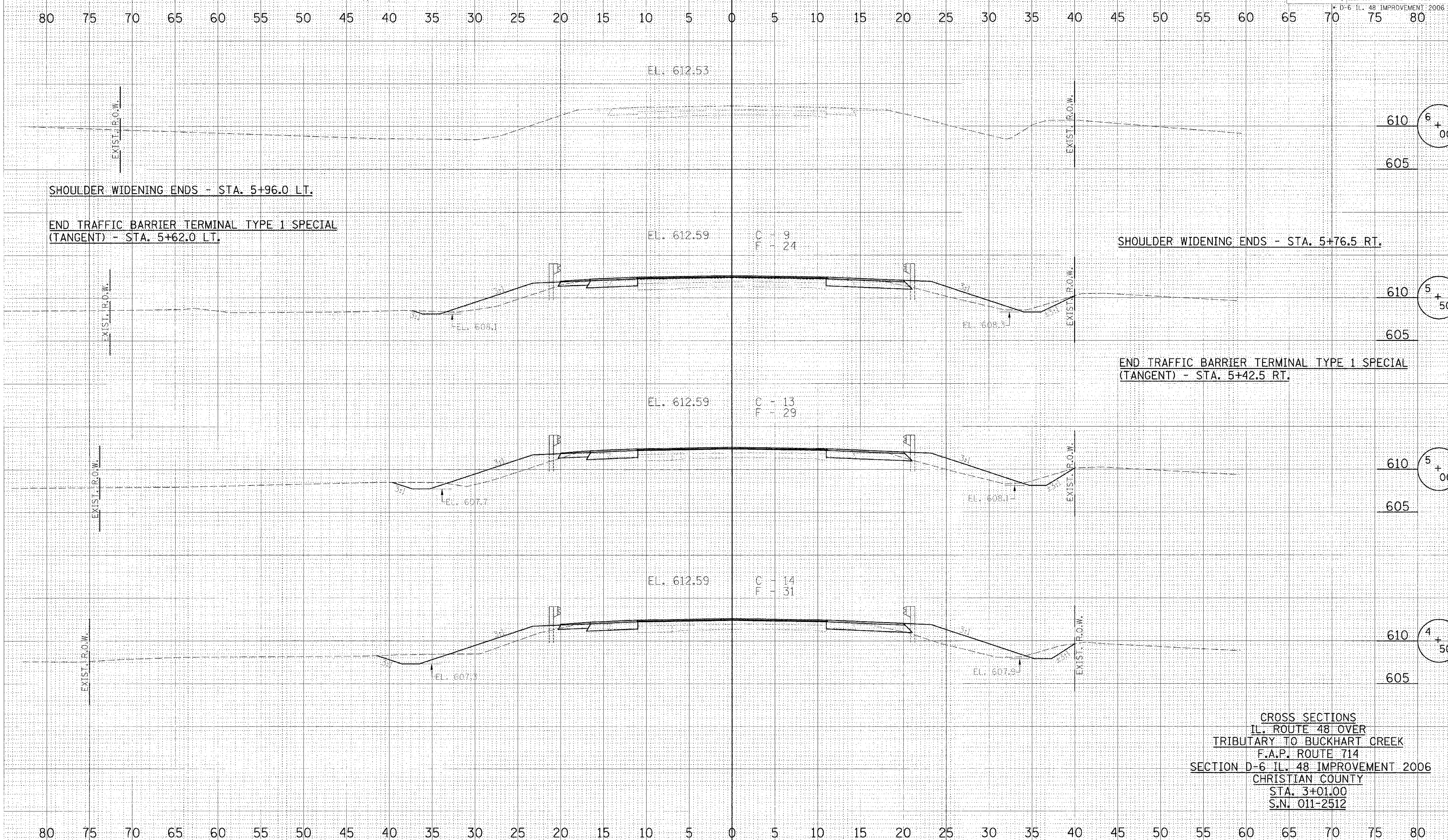
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	56

STA. 2+57 TO STA. 3+47

FED. ROAD DIST. NO. _ | ILLINOIS FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80
EL. 612.53
EXIST. R.O.W.
610
605
6+00
SHOULDER WIDENING ENDS - STA. 5+96.0 LT.
END TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) - STA. 5+62.0 LT.
EL. 612.59
C - 9
F - 24
SHOULDER WIDENING ENDS - STA. 5+76.5 RT.
EL. 608.1
EL. 608.3
5+50
END TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) - STA. 5+42.5 RT.
EL. 612.59
C - 13
F - 29
EL. 607.7
EL. 608.1
5+00
EL. 612.59
C - 14
F - 31
EL. 607.9
4+50
3:1

CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	57
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 1 OF 8 SHEETS

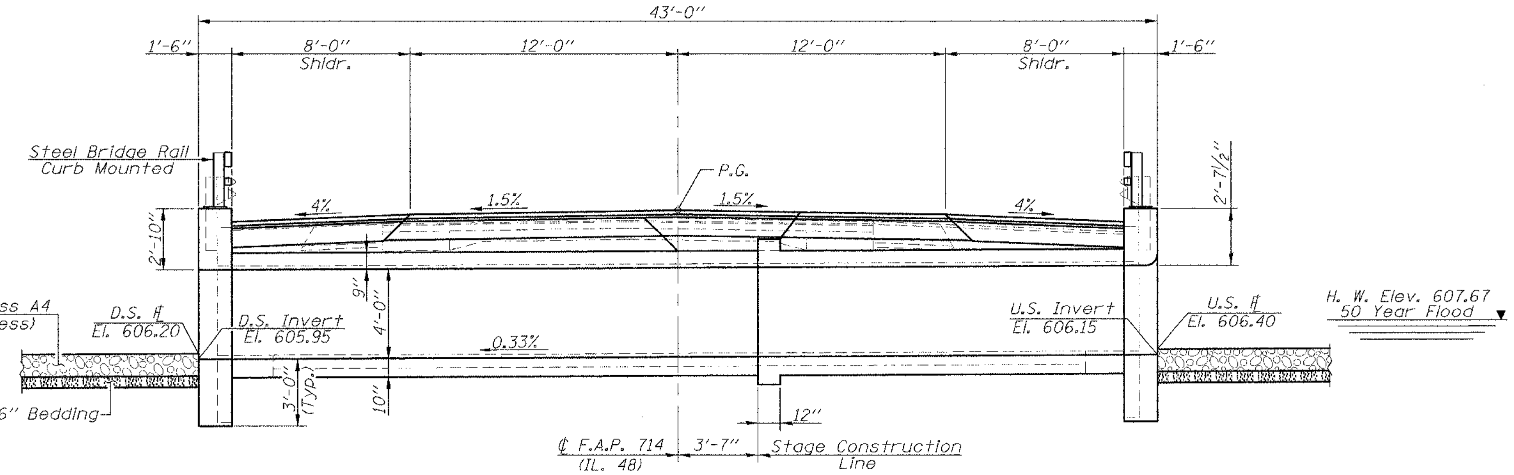
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark WS-1 - Chiseled "□" on S. End of East Headwall
El. 611.91

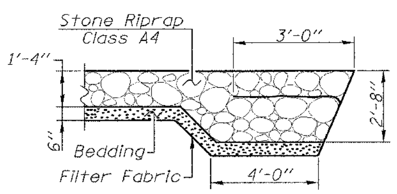
Existing Structure: Single Barrel 9' (W.) x 4' (H.) Cast in Place Concrete Culvert built in 1928. It measures 14'-4" in length as measured along centerline roadway, 57'-5⅝" width Out.-Out. headwalls along skew. 44° Skew Rt. Forward.
Existing Structure No. : None
No Salvage

STA. 3+01.00
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RTE. 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
LOADING HS 20-44
STR. NO. 011-2512

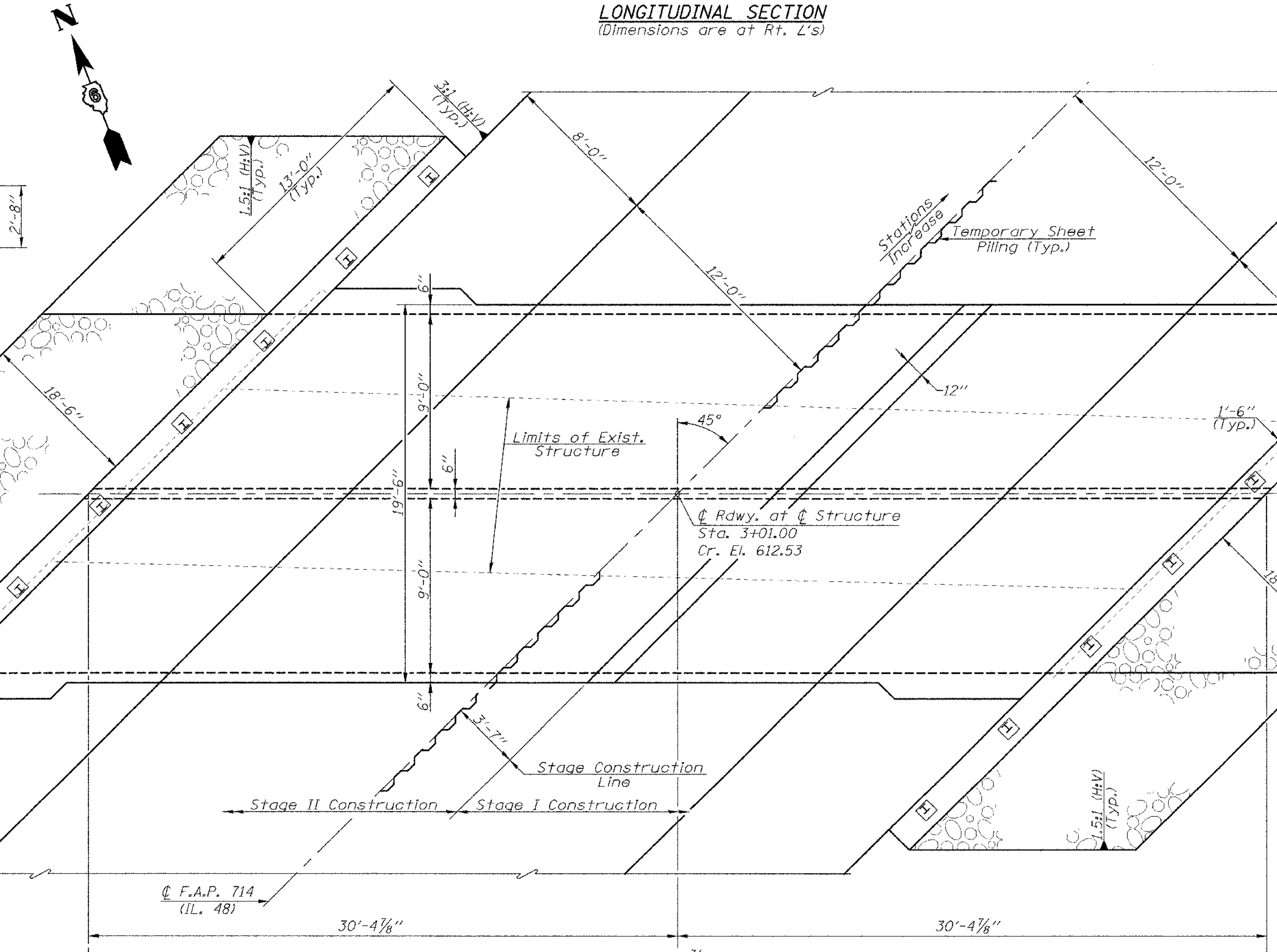
NAME PLATE
(Standard 515001)



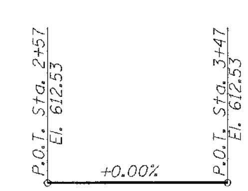
LONGITUDINAL SECTION
(Dimensions are at Rt. ∠'s)



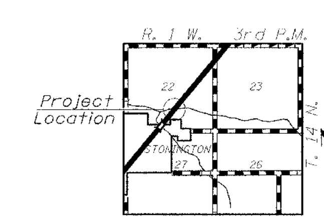
SECTION A-A



PLAN



PROFILE GRADE
(Along ℄ Roadway)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A4	Sq. Yd.	236
Filter Fabric	Sq. Yd.	236
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	30930
Temporary Sheet Piling	Sq. Ft.	1345
Steel Bridge Rail	Foot	104.32
Concrete Box Culverts	Cu. Yd.	127.9
Bar Splicers	Each	92
Name Plates	Each	1
Granular Culvert Backfill	Cu. Yd.	118
Temporary Shoring	Each	1

DESIGN SPECIFICATIONS
2002 A.A.S.H.T.O. Specifications.

GENERAL NOTES
Excavation behind existing culvert walls shall be done before removing the existing top slab. The Contractor shall saw cut the existing culvert at the stage removal line before Stage I Removal.
The layout of the stone riprap may be varied in the field to suit ground conditions as directed by the Engineer.
Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60.
For backfilling and embankment, see Standard Specifications.
A Pre-cast culvert alternate is not allowed.
All construction joints shall be bonded.
Exposed edges shall have a standard ¾" chamfer unless otherwise noted.

LOADING HS 20-44
Allow for 50#/sq. ft. future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinforcement)

INDEX OF SHEETS

1 - GENERAL PLAN & ELEVATION
2 - STAGING DETAILS
3 - TEMPORARY CONCRETE BARRIER
4 & 5 - CULVERT DETAILS
6 - STEEL BRIDGE RAIL CURB MOUNTED
7 - BAR SPLICER ASSEMBLY DETAILS
8 - BORINGS

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E Anderson (TJD)
Engineer of Bridges and Structures

MARK A. HENDERSON 5518 STRUCTURAL ENGINEER STATE OF ILLINOIS
3/29/06
Exp. Date: 11/30/06

WATERWAY INFORMATION

Drainage Area = 2.41 Sq. Mi.
Ex. Low Grade Elev. 612.05 ft. @ Sta. 3+13
Pr. Low Grade Elev. 612.37 ft. @ Sta. 0+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	233	30.22	48.06	607.67	3.94	2.36	611.61	610.03
Design	50	354	30.22	63.00	607.67	4.72	3.22	612.39	610.89
Base	100	404	30.22	68.76	607.67	4.85	3.54	612.52	611.21
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	523	30.22	72.00	607.67	5.13	4.30	612.80	611.97

GENERAL PLAN & ELEVATION
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

Designed: F.L.L.
Checked: M.A.H.
Drawn: J.R.P.
Checked: F.L.L.

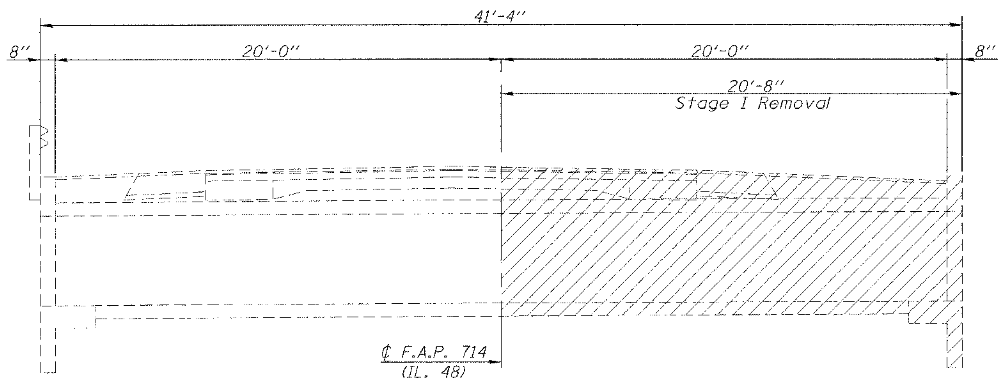
FILE NAME: STRUCTURE REV. 3/28/06

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

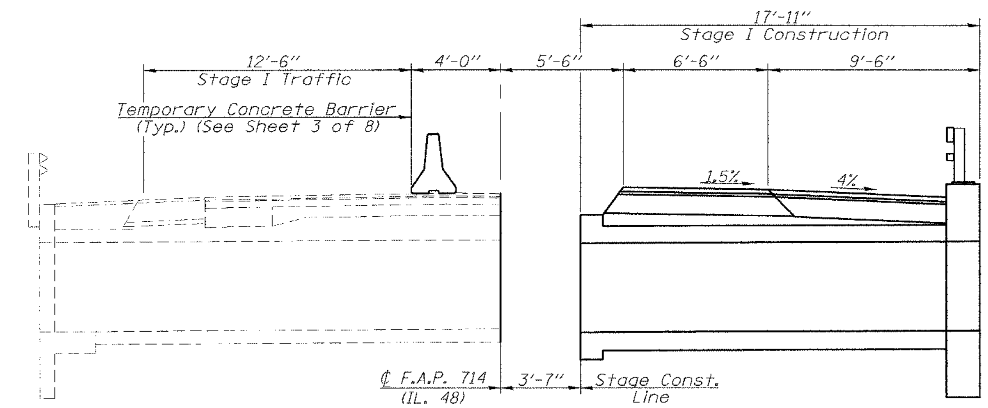
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	58
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

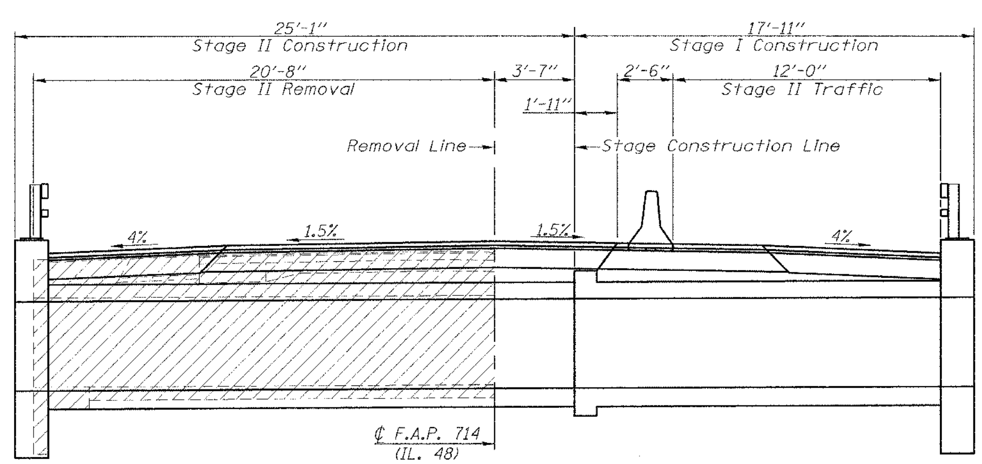
SHEET NO. 2 OF 8 SHEETS



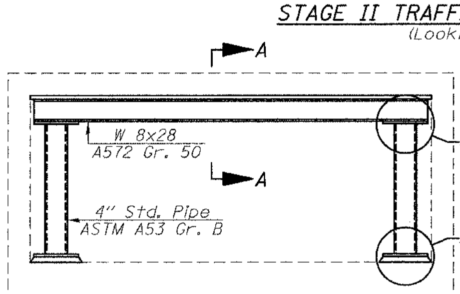
STAGE I REMOVAL
(Looking East)



STAGE I TRAFFIC & CONSTRUCTION
(Looking East)

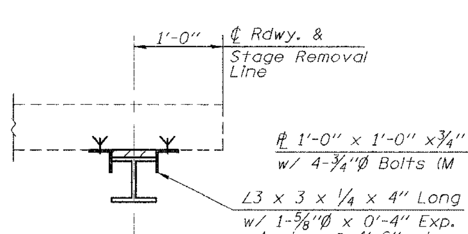


STAGE II TRAFFIC & CONSTRUCTION
(Looking East)

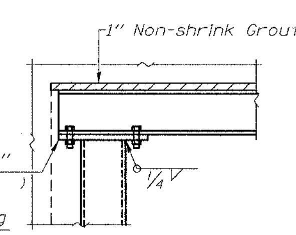


TEMPORARY SUPPORT DETAIL

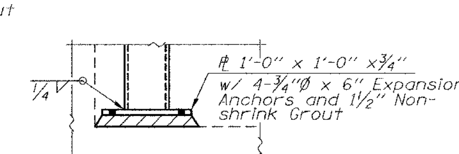
Note: Place temporary support prior to Stage I Removal.



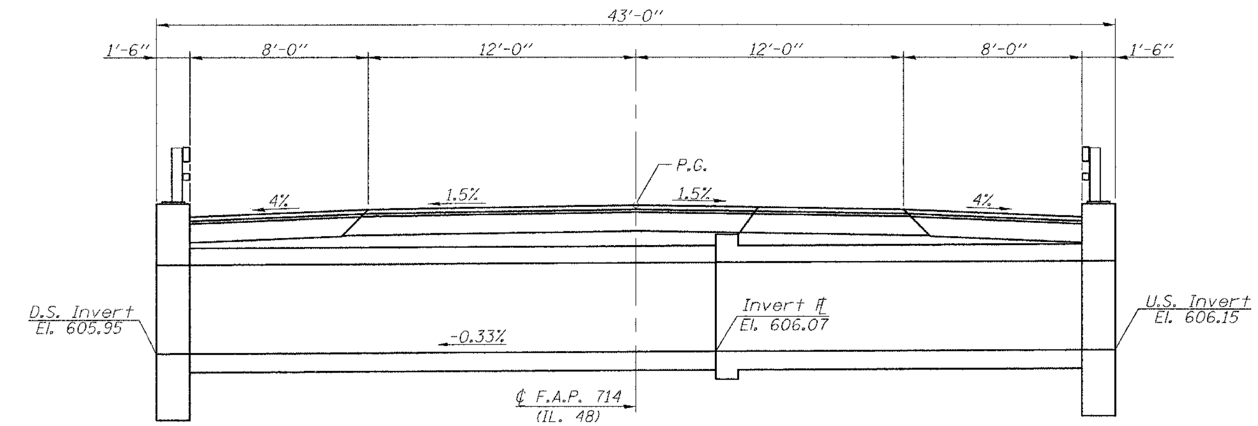
SECTION A-A



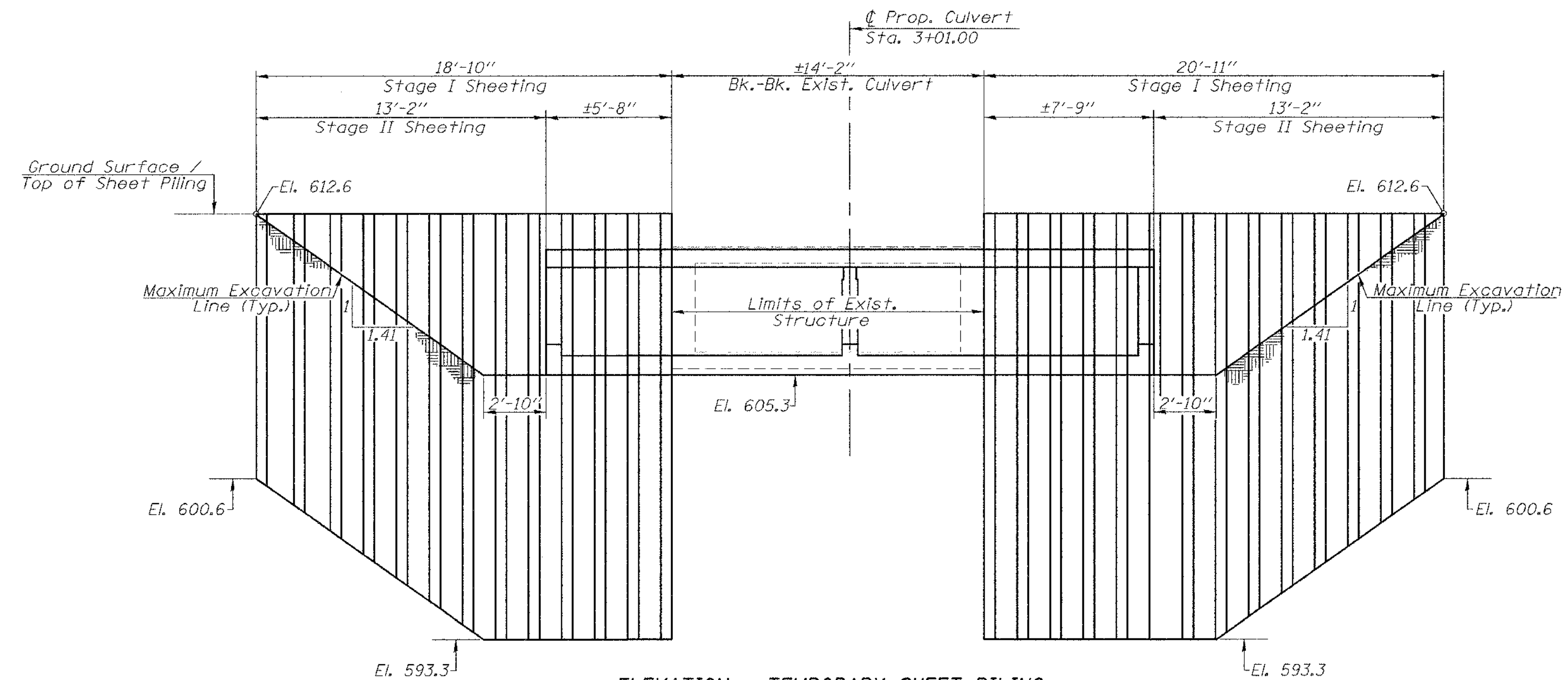
DETAIL A



DETAIL B



LONGITUDINAL SECTION
(Looking East)



ELEVATION - TEMPORARY SHEET PILING
(Minimum Required Section Modulus = 3.3 in³/ft.)

Note: If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
Hatched area indicates "Removal of Existing Structures".

STAGING AND DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

CONTRACT NO. 72784

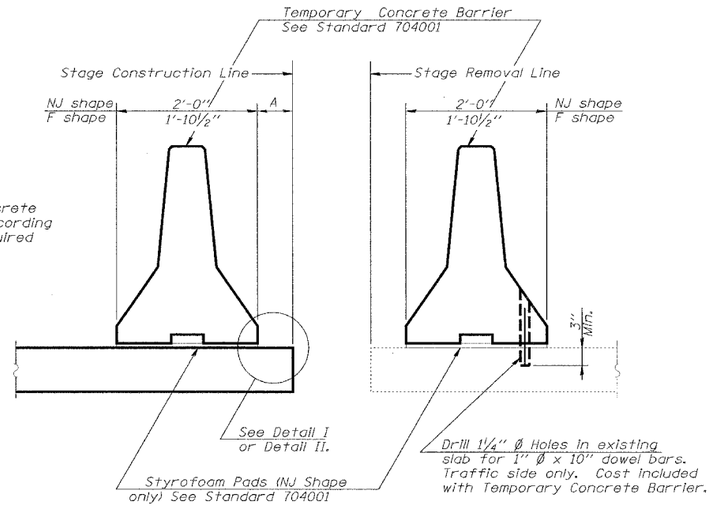
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	59
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 3 OF 8 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be Anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB EXISTING SLAB

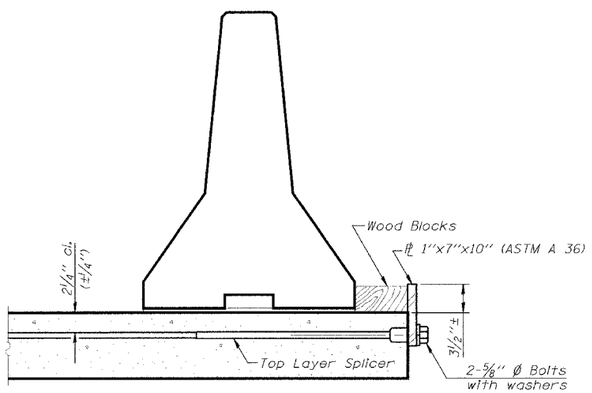
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" Ø bolts screwed to coupler at approximate ℄ of each barrier panel.

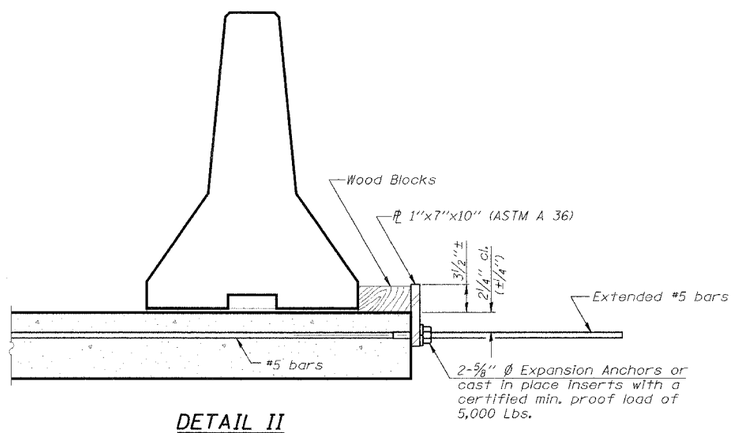
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x1"x10" steel ℙ to the concrete slab with 2-⅞" Ø Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



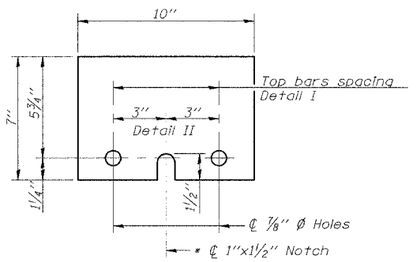
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ℙ 1"x7"x10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: STRUCTURE DETAILS

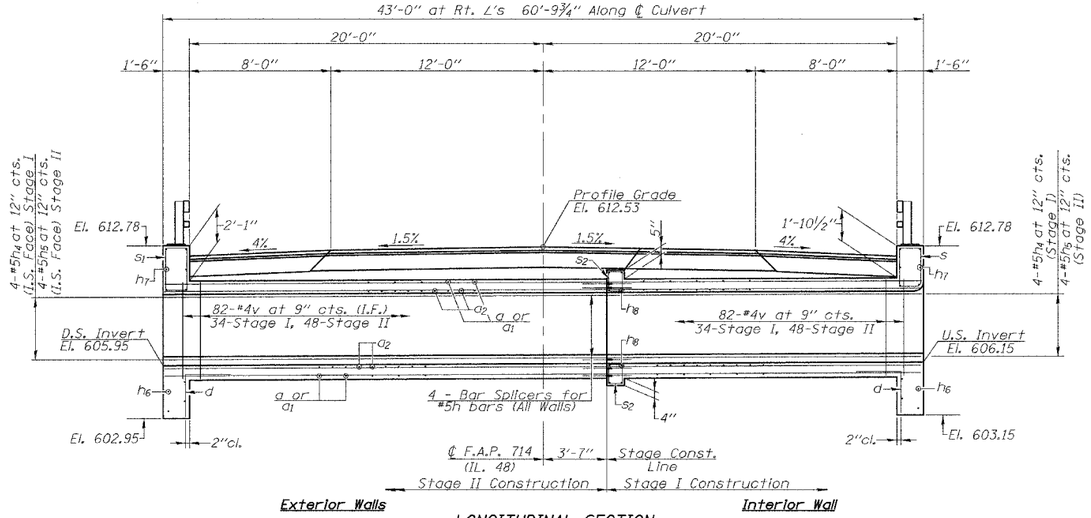
R-27 10-22-04

CONTRACT NO. 72784

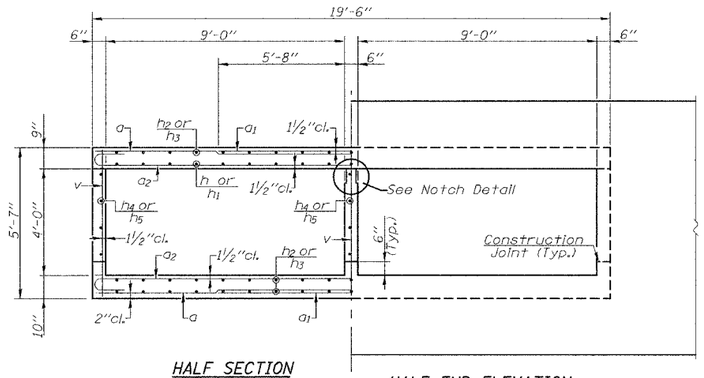
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	60
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 4 OF 8 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006



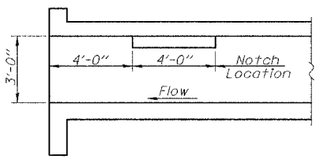
LONGITUDINAL SECTION
(Looking East)
(Dimensions are at Rt. Angles to ℄ Roadway except as noted)



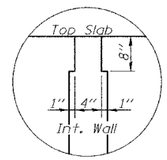
HALF SECTION THRU BARREL

HALF END ELEVATION

ELEVATION

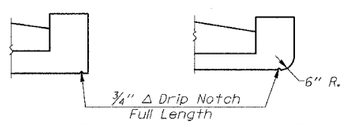


LONGITUDINAL SECTION
(Downstream End Only)

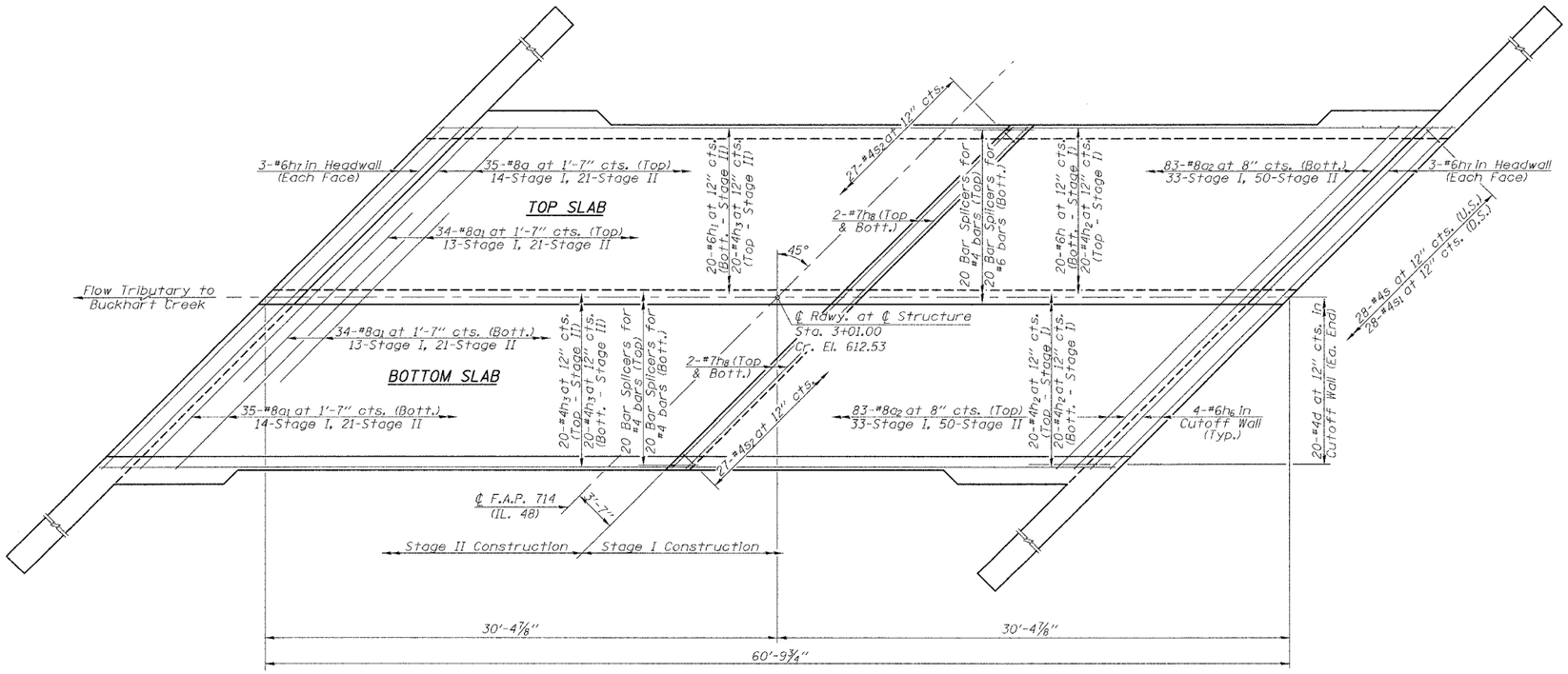


NOTCH DETAIL

Notch formed by rough finished board attached to and removed with the formwork. Do not chamfer.



DRIP NOTCH DETAIL



PLAN

Note: Work this sheet with Sheet 5 of 8.

CULVERT DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

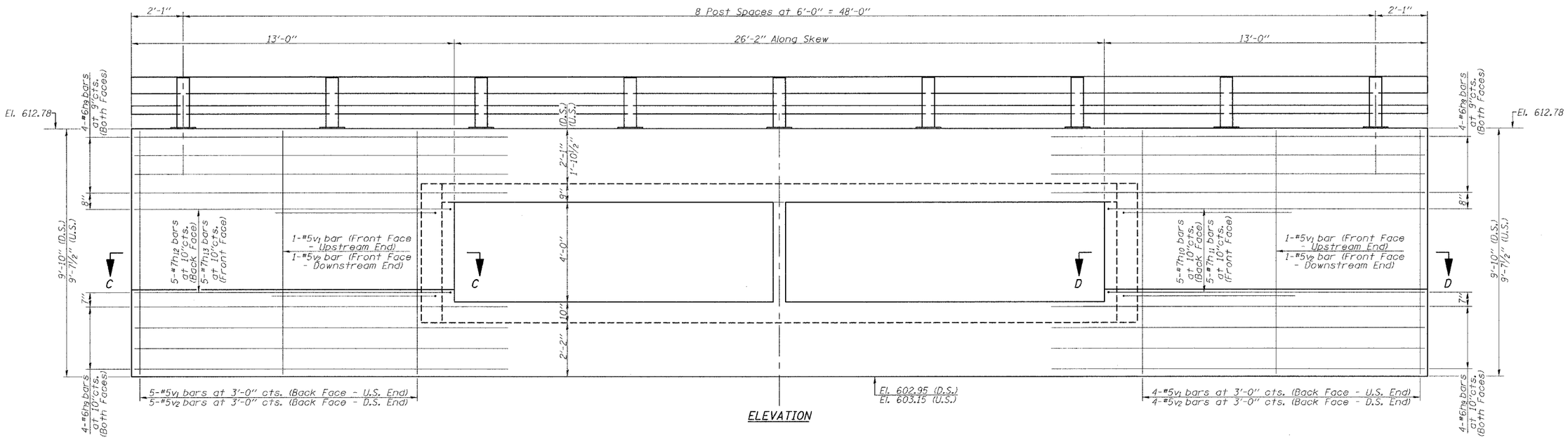
FILE NAME: STRUCTURE (REV. 1/28/06)

CONTRACT NO. 72784

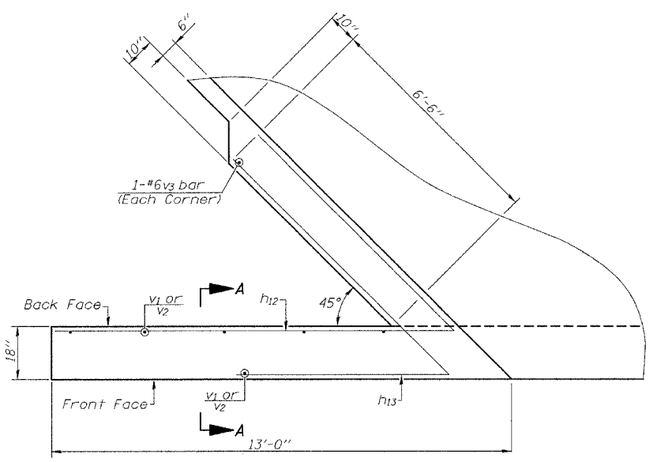
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	61
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

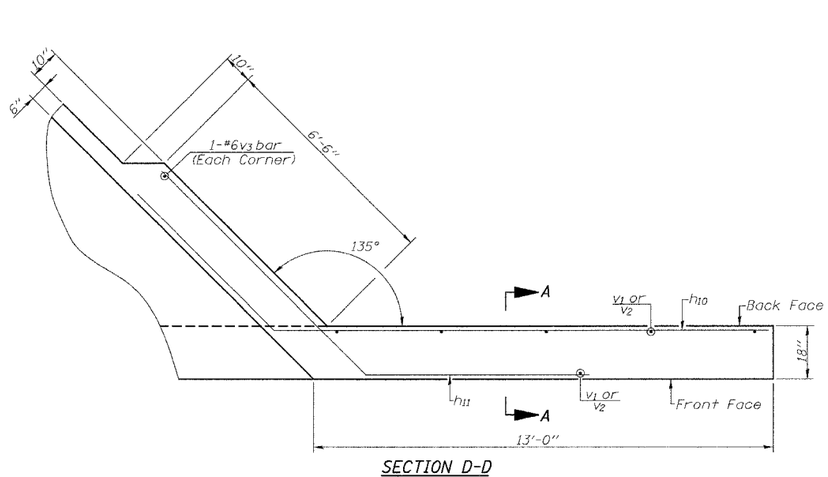
SHEET NO. 5 OF 8 SHEETS



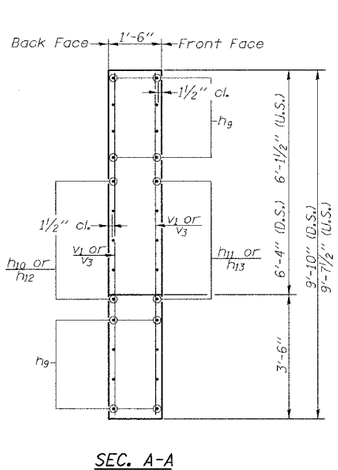
ELEVATION



SECTION C-C



SECTION D-D

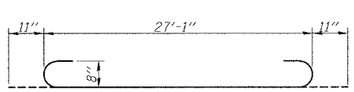


SEC. A-A

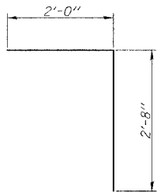
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	70	#8	27'-1"	
a1	68	#8	11'-4"	
a2	166	#8	28'-11"	
d	40	#4	4'-8"	
h	20	#6	24'-9"	
h11	20	#6	34'-11"	
h12	60	#4	24'-9"	
h13	60	#4	34'-11"	
h14	12	#5	24'-9"	
h15	12	#5	34'-11"	
h16	8	#6	28'-0"	
h17	12	#6	30'-0"	
h18	8	#7	27'-1"	
h19	64	#6	18'-6"	
h110	10	#7	19'-4"	
h111	10	#7	13'-0"	
h112	10	#7	19'-0"	
h113	10	#7	13'-4"	
s	28	#4	7'-5"	
s1	28	#4	8'-1"	
s2	54	#4	3'-9"	
v	246	#4	5'-2"	
v1	11	#5	9'-3"	
v2	11	#5	9'-5"	
v3	4	#6	5'-2"	
Concrete Box Culverts			Cu. Yd.	127.9
Reinforcement Bars			Pound	30,930
Bar Splicers			Each	92

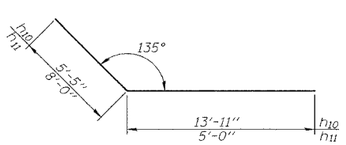
Work this sheet with Sheet No. 4 of 8.



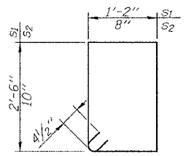
BAR a2



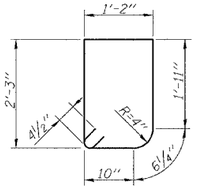
BAR d



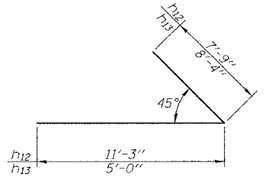
BARS h10 & h11



BARS s1 & s2



BAR s



BARS h12 & h13

CULVERT DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: STRUCTURE REVL 3/27/001

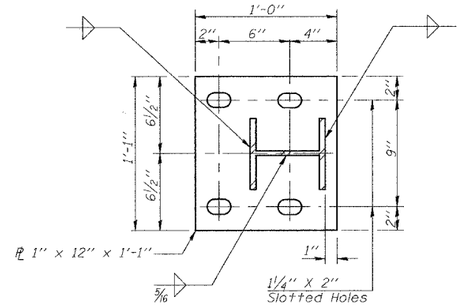
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

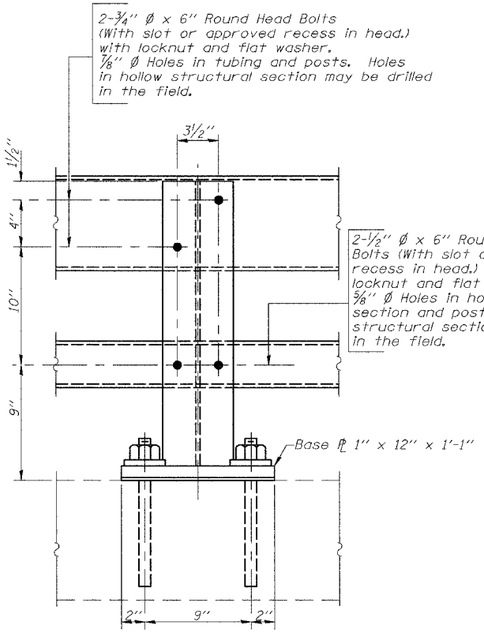
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	•	CHRISTIAN	94	62
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006

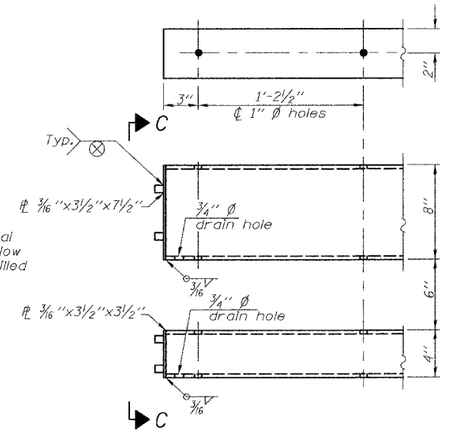
SHEET NO. 6 OF 8 SHEETS



BASE PLATE DETAIL



SECTION A-A



END OF RAIL DETAILS

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

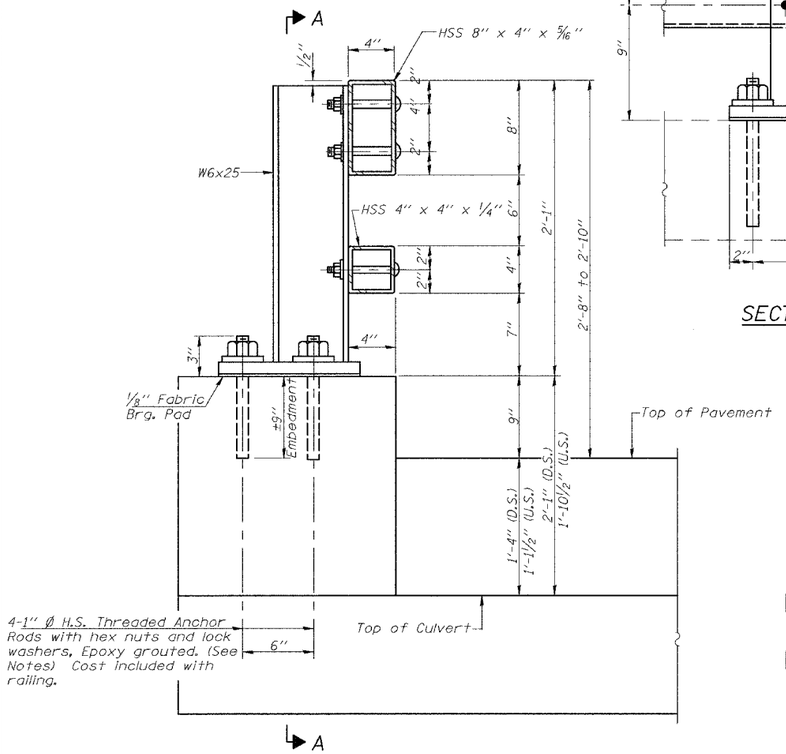
Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one ⅛" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

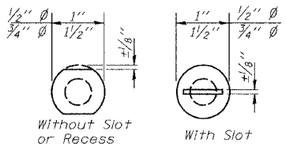
Expansion joint width shall be "D" at 50° F and shall be adjusted for other temperatures according to Article 503.10(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

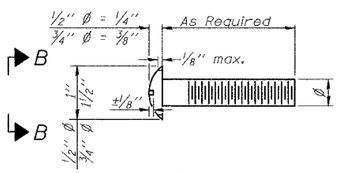
Nuts for 1" Ø threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional ⅛ turn.



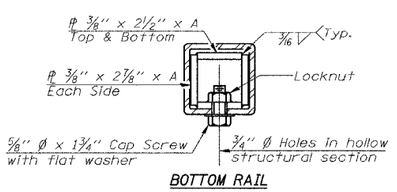
SECTION AT RAIL POST



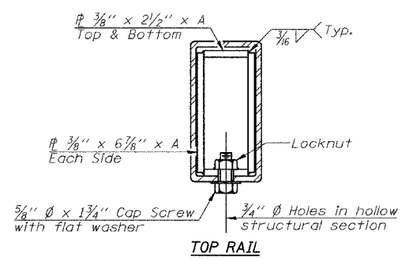
VIEW B-B



DETAIL OF ½" ϕ & ¾" ϕ ROUND HEAD BOLTS



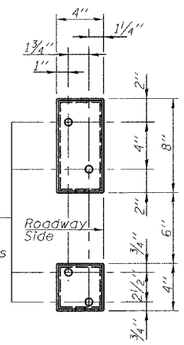
BOTTOM RAIL



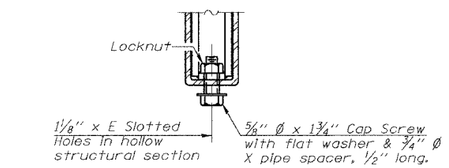
TOP RAIL

(6'-3" Maximum Post Spacing)

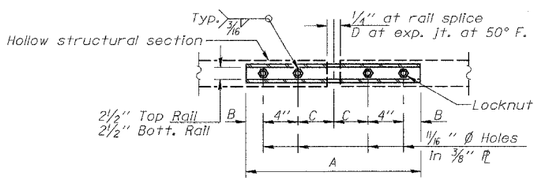
SECTIONS AT RAIL SPLICE



VIEW C-C



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail	Foot	104.32

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

STEEL BRIDGE RAIL
CURB MOUNTED
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: STRUCTURE (REV.) 3/22/06

R-31 10-22-04

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

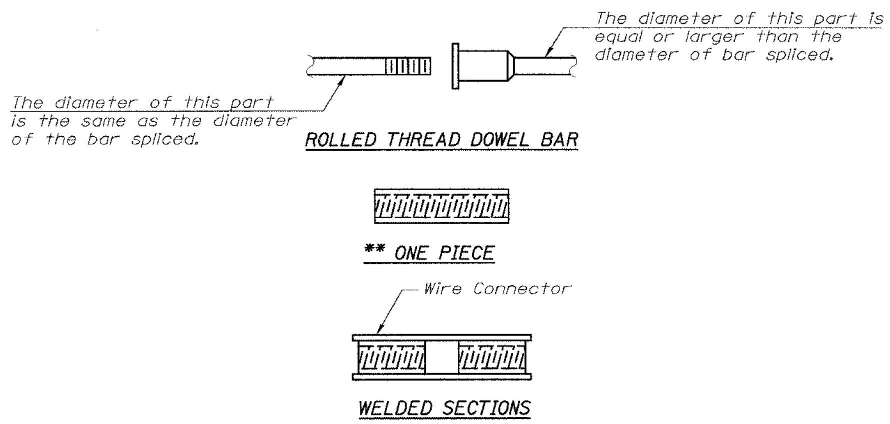
CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	63
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

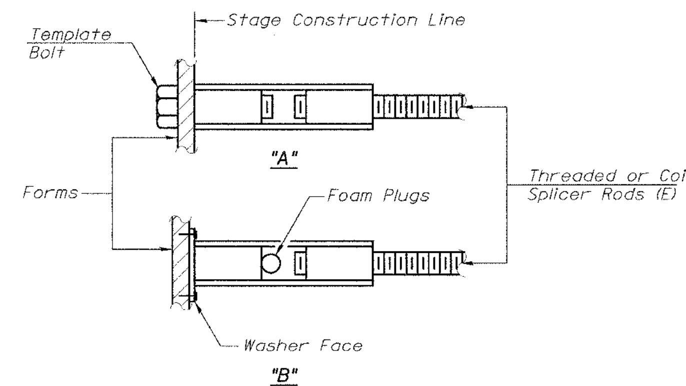
SHEET NO. 7 OF 8 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

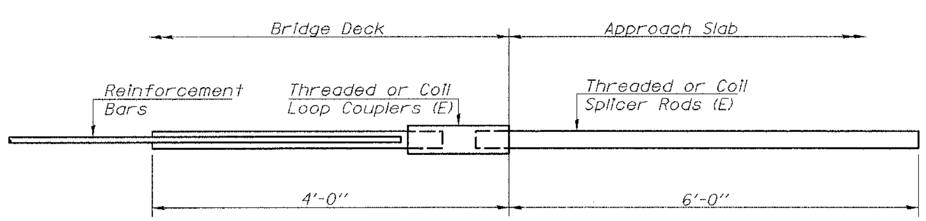
① Minimum Capacity = 1.25 x fy x At (Tension in kips)

② Minimum *Pull-out Strength = 1.25 x fs_{allow} x At (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
At = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

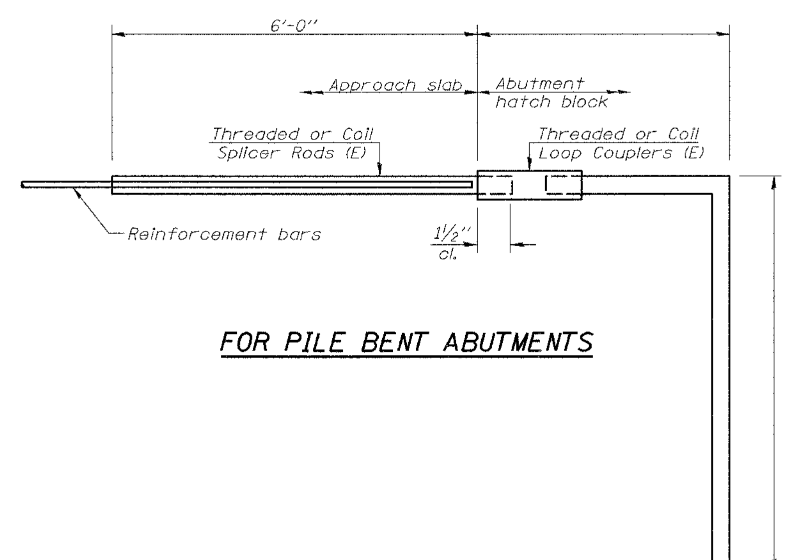
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



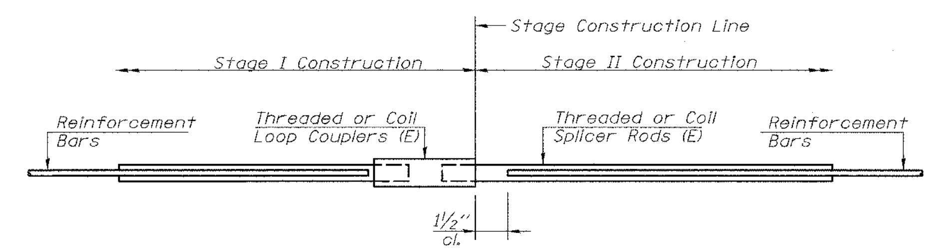
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#6	20	TOP SLAB
#4	20	TOP SLAB
#4	40	BOTTOM SLAB
#5	12	WALLS
Total	92	

BAR SPLICER ASSEMBLY DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

BSD-1 10-22-04

CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	64
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 8 OF 8 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation
Division of Highways
IDOT District 6

SOIL BORING LOG

Page 1 of 1

Date 12/20/05

ROUTE FAP 714 (IL-48) DESCRIPTION IL 48 over Trib. to Buckhart Creek LOGGED BY M. Tappan

SECTION D-6 IL 48 Improvement 2006 LOCATION SE 1/4, SEC. 22, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2512
Station 3+01

BORING NO. 2512-1W
Station 2+63
Offset 26.0ft LT
Ground Surface Elev. 608.9 ft

Surface Water Elev. 606.7 ft
Stream Bed Elev. 606.7 ft

Groundwater Elev.:
▽First Encounter 595.9 ft
▼Upon Completion Washed ft
▼After 72 Hrs. 602.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Very Dark Gray Moist SILTY CLAY	1		
	3	1.0	26
	4	P	
	1		
	3	1.4	21
Tan and Dark Gray Moist	3	B	
-5	1		
	2	0.6	27
Tan and Gray Moist SILTY CLAY ▼	2	B	
601.40			
Gray V. Moist LOAM to SAND LOAM	1		
	2	0.5	20
	1	B	
-10			
	0		
	0	0.3	19
	2	B	
596.40			
Gray Wet Medium SAND ▽	1		
	3		
	4		
-15			
593.40			
Gray Moist CLAY LOAM (Till)	0		
	3	2.1	10
	6	B	
	5		
	16	+10.0	8
	28	S-9	
-20			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Gray Moist CLAY LOAM (Till) (continued)	7		
	21	+10.0	8
	29	S-10	
	5		
	17	9.1	16
Interbedded with SILT Seams 584.40	27	S-10	
Boring Completed			
-25			
Washed Augers			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\CONT FILES\CHRISTIAN\IL 48 CULVERTS NORTH OF STONINGTON.GPJ Data Template DISTEMPLT.GDT Date Printed 1/13/06
Latitude 39 Deg 38.850 N Longitude 89 Deg 11.126 W Datum NAD83 Job Number D-96-517-03

Illinois Department of Transportation
Division of Highways
IDOT District 6

SOIL BORING LOG

Page 1 of 1

Date 12/20/05

ROUTE FAP 714 (IL-48) DESCRIPTION IL 48 over Trib. to Buckhart Creek LOGGED BY M. Tappan

SECTION D-6 IL 48 Improvement 2006 LOCATION SE 1/4, SEC. 22, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-2512
Station 3+01

BORING NO. 2512-2E
Station 3+39
Offset 32.0ft RT
Ground Surface Elev. 608.4 ft

Surface Water Elev. 606.7 ft
Stream Bed Elev. 606.7 ft

Groundwater Elev.:
▽First Encounter 599.4 ft
▼Upon Completion Washed ft
▼After 72 Hrs. 601.4 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dark Gray Moist SILTY CLAY	1		
	2	1.2	25
	3	B	
	1		
	1	0.7	28
Tan and Dark Gray Moist -5	2	B	
	0		
	1	0.3	26
Dark Gray V. Moist ▼	1	B	
600.40			
Gray Wet LOAM to SAND LOAM ▽	0		
	0	0.2	19
-10	1	B	
597.90			
Gray Fine to Medium SAND	0		
	2		
	7		
	1		
Gray Medium to Coarse Sand Washed	3		
-15	5		
592.90			
Gray Moist CLAY LOAM (Till) Washed	2		
	11	6.8	9
	19	S-12	
	7		
	26	+10.0	8
-20	40	S-11	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Gray Moist CLAY LOAM (Till) Washed (continued)			
	5		
	16	7.3	17
with 8" SILT Seam	19	S-10	
583.40 -25			
Boring Completed			
Refer STA, Elevation to cL of Existing Structure cL = 6121.4', STA 3+01, Increase to North			
-30			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H - Sampler Advanced By Weight of Hammer, W.O.P - Advanced by Weight of Pipe, B.S. - Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\CONT FILES\CHRISTIAN\IL 48 CULVERTS NORTH OF STONINGTON.GPJ Data Template DISTEMPLT.GDT Date Printed 1/13/06
Latitude 39 Deg 38.661 N Longitude 89 Deg 11.121 W Datum NAD83 Job Number D-96-517-03

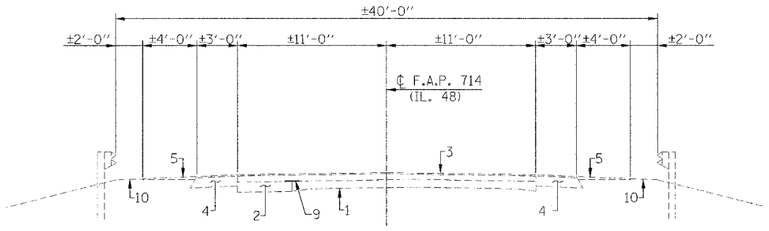
BORINGS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 3+01.00
S.N. 011-2512

FILE NAME: STRUCTBE REV. 3/27/061

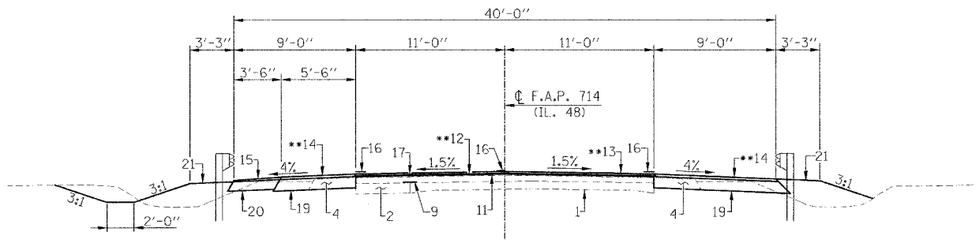
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	65
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

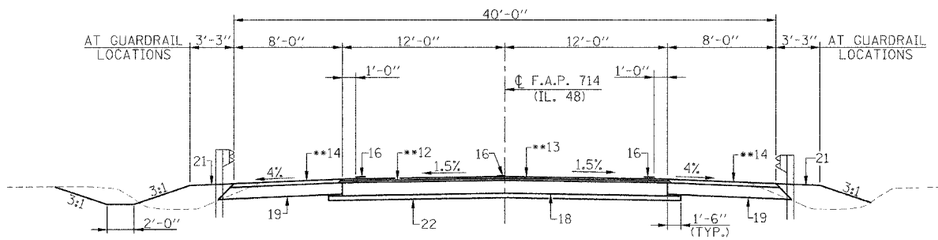


EXISTING TYPICAL SECTION
STA. 108+00.4 TO STA. 113+96.6

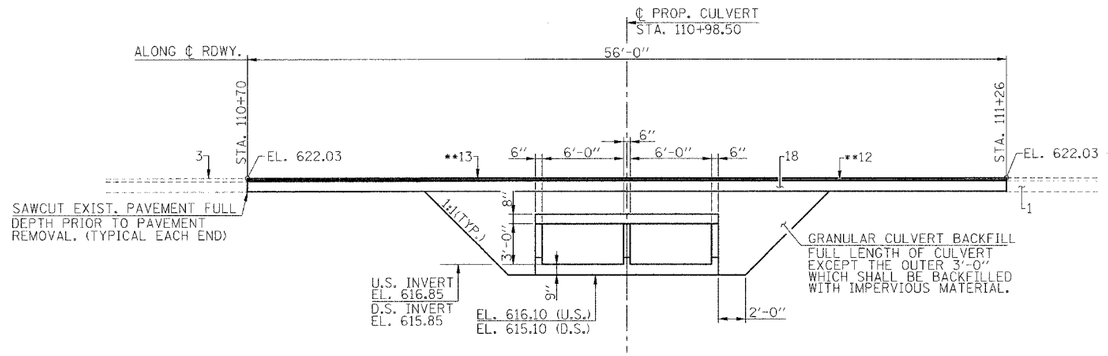


PROPOSED TYPICAL SECTION #8
STA. 108+00.4 TO STA. 110+70
STA. 111+26 TO STA. 113+96.6

** TO BE PLACED AFTER BOTH STAGES HAVE BEEN COMPLETED



PROPOSED TYPICAL SECTION #4
(STA. 110+70 TO STA. 111+26)



ELEVATION - BOX CULVERT

NOTE: ALL DIMENSIONS ARE AT RIGHT ANGLES EXCEPT AS NOTED.

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12¼"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 ¾"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1½")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2¼")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11½"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

DETAILS AND
TYPICAL ROADWAY SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: D&TRS (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	66
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* -D-6 IL. 48 IMPROVEMENT 2006

GUARDRAIL SCHEDULE

LOCATION	STEEL PLATE BEAM GUARDRAIL REMOVAL (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 6A (EACH)	STEEL BRIDGE RAIL (FOOT)
STAGE I					
STA. 109+91 TO STA. 111+93 RT.	202				
STA. 108+34.43 TO STA. 108+84.43 RT.		1			
STA. 108+84.43 TO STA. 110+59.43 RT.			175		
STA. 110+59.43 TO STA. 110+90.83 RT.				1	
STA. 110+90.83 TO STA. 111+30.99 RT.					40.16
STA. 111+30.99 TO STA. 111+62.39 RT.				1	
STA. 111+62.39 TO STA. 112+74.89 RT.			112.5		
STA. 112+74.89 TO STA. 113+24.89 RT.		1			
STAGE II					
STA. 109+85 TO STA. 112+51 LT.	266				
STA. 108+72.11 TO STA. 109+22.11 LT.		1			
STA. 109+22.11 TO STA. 110+34.61 LT.			112.5		
STA. 110+34.61 TO STA. 110+66.01 LT.				1	
STA. 110+66.01 TO STA. 111+06.17 LT.					40.16
STA. 111+06.17 TO STA. 111+37.57 LT.				1	
STA. 111+37.57 TO STA. 113+12.57 LT.			175		
STA. 113+12.57 TO STA. 113+62.57 LT.		1			
TOTAL	468	4	575	4	80.32

PAVEMENT MARKING SCHEDULE

LOCATION	LENGTH (FT.)	PAVEMENT MK. REMOVAL WHITE (SQ. FT.)	PAVEMENT MK. REMOVAL YELLOW (SQ. FT.)	TEMP. PVMT. MK. LINE - 5" WHITE (FT.)	TEMP. PVMT. MK. LINE - 5" YELLOW (FT.)	SHORT TERM PVMT. MARKING WHITE (FT.)	SHORT TERM PVMT. MARKING YELLOW (FT.)	WORK ZONE PVMT. MARKING REMOVAL WHITE (SQ. FT.)	WORK ZONE PVMT. MARKING REMOVAL YELLOW (SQ. FT.)	PAINT PVMT. MK. LINE - 5" WHITE (SQ. FT.)	PAINT PVMT. MK. LINE - 5" YELLOW (SQ. FT.)	TEMPORARY PAINT PAVEMENT MARKING LINE-24" WHITE (FOOT)
STA. 107+11.5 TO STA. 114+85.5 (℄)	774				200		*156		52		200	
STA. 108+00.4 TO STA. 113+58.9 RT. (EDGE)	558.5			559				185		559		
STA. 108+38.1 TO STA. 113+96.6 LT. (EDGE)	558.5			559				185		559		
STA. 107+11.5 (STOP BAR) RT.								24				12
STA. 114+85.5 (STOP BAR) LT.								24				12
STA. 107+11.5 TO STA. 110+70 (℄)	356.2		38									
STA. 111+26 TO STA. 114+85.5 (℄)	356.2		38									
TOTAL		76		1318		156		470		1318		24

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS.
* 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

SCHEDULE
GRANULAR CULVERT BACKFILL

LOCATION	QUANTITY (CU. YD.)
STA. 110+70 TO STA. 111+26	107
TOTAL	107

SCHEDULE
SUBBASE GRANULAR MATERIAL TYPE A 4"

LOCATION	QUANTITY (SQ. YD.)
STA. 110+70 TO STA. 111+26	168
TOTAL	168

SCHEDULE
PAVEMENT REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 110+70 TO STA. 111+26	137
TOTAL	137

SCHEDULE
BITUMINOUS SHOULDER REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 108+00.4 TO STA. 113+58.9 RT.	187
STA. 108+38.1 TO STA. 113+96.6 LT.	187
STA. 110+70 TO STA. 111+26 LT. ST. I SHLDR.	34
TOTAL	408

SCHEDULE
AGGREGATE SHOULDERS, TYPE B

LOCATION	QUANTITY (TON)
STA. 108+38.1 TO STA. 110+70 LT.	41
STA. 111+26 TO STA. 113+96.6 LT.	48
TOTAL	89

SCHEDULE
GUARDRAIL & TERMINAL MARKERS

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 108+75 RT.	1	
STA. 109+25 RT.	1	
STA. 109+75 RT.	1	
STA. 110+25 RT.	1	
STA. 110+75 RT.	1	
STA. 111+45 RT.	1	
STA. 111+95 RT.	1	
STA. 112+45 RT.	1	
STA. 112+95 RT.	1	
STA. 109+00 LT.	1	
STA. 109+50 LT.	1	
STA. 110+00 LT.	1	
STA. 110+50 LT.	1	
STA. 111+30 LT.	1	
STA. 111+80 LT.	1	
STA. 112+30 LT.	1	
STA. 112+80 LT.	1	
STA. 113+30 LT.	1	
STA. 108+34.43 RT.		1
STA. 108+72.11 LT.		1
STA. 113+24.89 RT.		1
STA. 113+62.57 LT.		1
TOTAL	18	4

SCHEDULE
AGGREGATE PRIME COAT

LOCATION	QUANTITY (TON)
STA. 108+00.4 TO STA. 113+96.6	2.91
TOTAL	2.91

SCHEDULE
STRIP REFLECTIVE CRACK CONTROL TREATMENT

LOCATION	QUANTITY (FOOT)
STA. 108+00.4 TO STA. 110+70 LT.	270
STA. 111+26 TO STA. 113+96.6 LT.	271
TOTAL	441

SCHEDULE
RAISED REFLECTIVE PAVEMENT MARKERS

LOCATION	QUANTITY (FOOT)
STA. 108+60 (℄)	1
STA. 109+40 (℄)	1
STA. 110+20 (℄)	1
STA. 111+00 (℄)	1
STA. 111+80 (℄)	1
STA. 112+60 (℄)	1
STA. 113+40 (℄)	1
TOTAL	7

SCHEDULE
BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

LOCATION	QUANTITY (SQ. YD.)
STA. 108+00.4 TO STA. 110+70	659
STA. 111+26 TO STA. 113+96.6	662
TOTAL	1321

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION CUBIC YARD	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE CUBIC YARD	EMBANKMENT CUBIC YARD	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) CUBIC YARD	EARTH EXCAVATION WIDENING CUBIC YARD
STA. 108+00 TO STA. 113+96.6	292	219	399	-180	
STA. 108+38.1 TO STA. 113+96.6 LT.	-	31	-	+31	42
TOTAL	292	250	399	-149	42

BITUMINOUS SCHEDULE

LOCATION	BITUMINOUS SHOULDERS SUPERPAVE (TON)	BITUMINOUS BASE COURSE SUPERPAVE 11¾" (SQ. YD.)	BIT. CONC. SURFACE COURSE, SUPERPAVE MIXTURE C, N50 (TON)	LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)	BIT. CONCRETE BASE COURSE SUPERPAVE 10" (SQ. YD.)
STA. 108+00.4 TO STA. 110+70 RT.	34		28	14	0.23	270
STA. 108+38.1 TO STA. 110+70 LT.	18		24	12	0.16	142
STA. 110+70 TO STA. 111+26	13	150	13	6	0.09	100
STA. 111+26 TO STA. 113+58.9 RT.	29		24	12	0.20	233
STA. 111+26 TO STA. 113+96.6 LT.	21		28	14	0.19	165
STA. 110+70 TO STA. 111+26 LT. ST. I SHLDR.						34
TOTAL	115	150	117	58	0.87	944

SCHEDULE
PERMANENT SEEDING

LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN FERT. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)	POTASSIUM FERT. NUT. (POUND)	MULCH METHOD 2 (ACRE)	AGRICULTURAL GROUND LIMESTONE (TON)	TEMPORARY EROSION CONTROL SEEDING (POUND)
STA. 108+00.4 TO STA. 113+58.9 RT.	0.25	22.5	22.5	22.5	0.25	0.5	25
STA. 108+38.1 TO STA. 113+96.6 LT.	0.25	22.5	22.5	22.5	0.25	0.5	25
TOTAL	0.50	45	45	45	45	1.0	50

QUANTITY SCHEDULES
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: QS (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	67
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL 48 IMPROVEMENT 2006

#4 REBAR FLUSH
#4 REBAR FLUSH
20.57'
20.78'
18.82'
℄ EXIST. RDWY.
#4 REBAR FLUSH
STA. 101+00
PK NAIL IN CHISELED "X"

EAST EDGE OF STREET SIGN
43.18'
92°-40'
45.22'
℄ EXIST. RDWY.
NAIL & B.C. IN LIGHT POLE
NAIL & B.C. IN POWER POLE
STA. 121+00
PK NAIL & B.C. IN CHISELED "X"

STA. 110+98.50 - ℄ RDWY. AT ℄ STRUCTURE
PROPOSED DOUBLE BARREL 6' X 3' CAST IN PLACE CONCRETE BOX CULVERT. 49'-7¾" LENGTH ALONG SKEW. 30° SKEW RT. FORWARD.
S.N. 011-7055

NORFOLK SOUTHERN RAILROAD
EXIST. 48"Ø C.M.P. (TO REMAIN IN PLACE)
EXIST. R.O.W.
CONST. LIMITS
TRAFFIC BARRIER TERMINAL TYPE 6A (ALL FOUR CORNERS)
EXISTING S.P.B.G.R. TYPE A (TO BE REMOVED AT ALL FOUR CORNERS)
BEGIN BITUMINOUS BASE CSE. STA. 110+70
END BITUMINOUS BASE CSE. STA. 111+26
PROPOSED S.P.B.G.R. TYPE A (TO BE INSTALLED AT ALL FOUR CORNERS)
TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (ALL FOUR CORNERS)
EXISTING 24"Ø C.M.P. (TO BE REMOVED) COST INCLUDED WITH REMOVAL OF EXISTING STRUCTURES NO. 3
FLOW TRIBUTARY TO BUCKHART CREEK
EXISTING SINGLE BARREL 6' X 3' CONCRETE BOX CULVERT STA. 111+00 32° SKEW RT. FORWARD

+38.1 20' | +62.1 24' | +97.1 24' | +01.6 23.25' | +55.5 23.25' | +16.7 23.25' | +33.1 23.25' | +37.6 24' | +72.6 24' | +96.6 20'
+00.4 20' | +24.4 24' | +59.4 24' | +63.9 23.25' | +80.3 23.25' | +41.6 23.25' | +95.4 23.25' | +99.9 24' | +34.9 24' | +58.9 20'

40'-0" | 40'-0"

105 | 109 | 110+00 | 112 | 113 | 114

PLAN
0 20 40 60
SCALE: 1" = 20'

BENCHMARKS: BM WS-2 - CHISELED "D" ON CENTER OF WEST HEADWALL OF EXISTING 6' X 3' BOX CULVERT. EL. 621.558
BM WS-3 - CHISELED "X" ON TOP OF 48"Ø C.M.P. UNDERNEATH RAILROAD. 49' LT. STA. 110+62 EL. 618.928

PROJECT BEGINS STA. 110+70
PROJECT ENDS STA. 111+26
FUTURE 2¼" BIT. CONC. OVERLAY

BEGIN SPECIAL DITCH RT. STA. 108+75 LT. EL. 618.1
BEGIN SPECIAL DITCH LT. STA. 108+75 LT. EL. 617.9
STA. 109+00 RT. EL. 618.0
STA. 109+00 LT. EL. 617.8
STA. 109+50 RT. EL. 617.8
STA. 109+50 LT. EL. 617.6
STA. 110+00 RT. EL. 617.6
STA. 110+00 LT. EL. 617.4
STA. 110+50 RT. EL. 617.4
STA. 110+50 LT. EL. 617.2
U.S. S.B. EL. 617.1
D.S. S.B. EL. 616.1
STA. 110+50 LT. EL. 617.6
STA. 110+50 RT. EL. 617.5
STA. 112+00 LT. & RT. EL. 617.8
STA. 112+50 LT. & RT. EL. 618.0
STA. 113+00 LT. & RT. EL. 618.2
BEGIN SPECIAL DITCH LT. & RT. STA. 113+25 EL. 618.3

-0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.4% | -0.6% | -0.12% | +0.8% RT. | +1.0% LT. | +0.4% LT. | +0.6% RT. | +0.4% | +0.4% | +0.4%

625 | 620 | 615

621.87 622.02 | 621.83 621.98 | 621.94 622.09 | 621.85 622.03 | 621.96 622.13 | 621.97 622.12 | 621.99 622.14

108+00 | 109+00 | 110+00 | 111+00 | 112+00 | 113+00 | 114+00

PROFILE

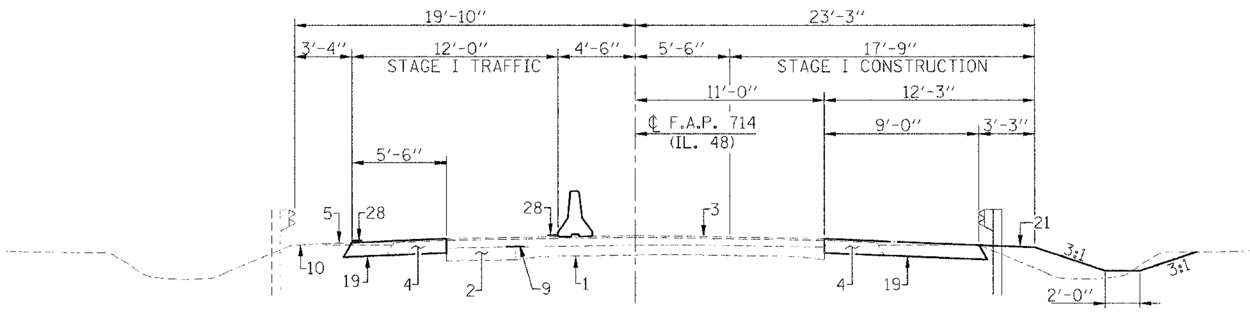
PLAN & PROFILE
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: 6x3 PP (REV. 3/2/06)

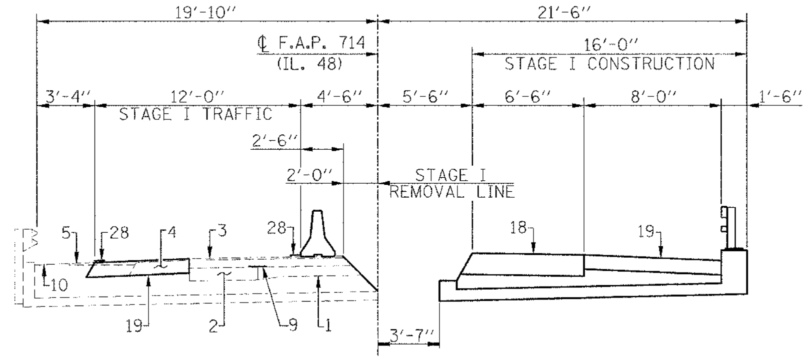
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	68
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

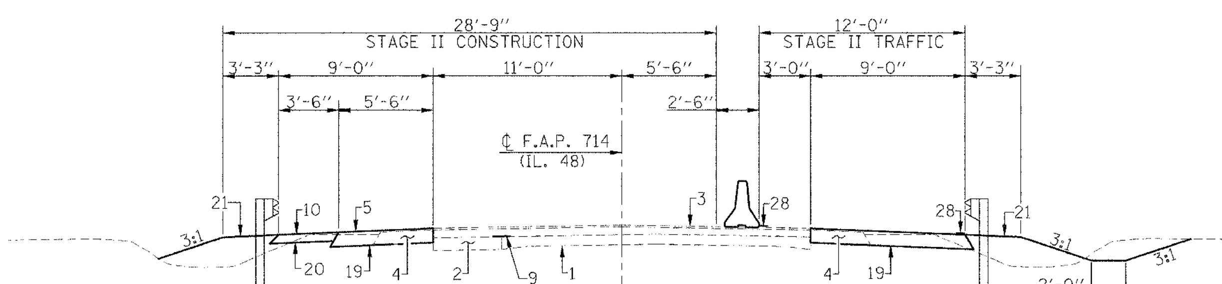
* D-6 IL. 48 IMPROVEMENT 2006



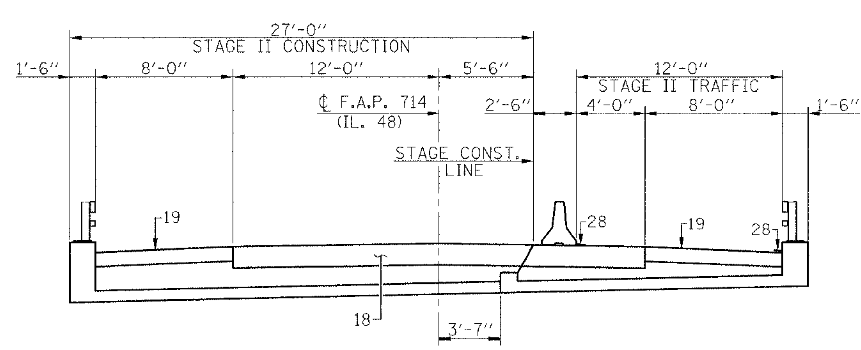
STAGE I TRAFFIC
(LOOKING NORTH)



STAGE I TRAFFIC OVER CULVERT
(LOOKING NORTH)



STAGE II TRAFFIC
(LOOKING NORTH)



STAGE II TRAFFIC OVER CULVERT
(LOOKING NORTH)

PAVEMENT LEGEND

1. EXISTING 9"-7"-9" P.C.C. PAVEMENT
1A. EXISTING 9" P.C.C. BASE COURSE
2. EXISTING P.C.C. WIDENING
3. EXISTING BITUMINOUS CONCRETE OVERLAY
4. EXISTING BITUMINOUS SHOULDER 8"
4A. EXISTING BITUMINOUS SHOULDER 10"
5. EXISTING AGGREGATE SHOULDER WEDGE
5A. EXISTING AGGREGATE SHOULDER 6"
6. EXISTING BITUMINOUS CONCRETE PAVEMENT, 12 1/4"
7. EXISTING AGGREGATE SHOULDER 8"
8. EXISTING CONCRETE CURB
9. EXISTING STRIP REFLECTIVE CRACK CONTROL TREATMENT
10. EXISTING EARTH SHOULDER
11. PROPOSED BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
12. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE, N50 3/4"
13. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX. "C", N50 (1 1/2")
14. PROPOSED BITUMINOUS SHOULDER, SUPERPAVE (2 1/4")
15. PROPOSED AGGREGATE SHOULDER (SEE DETAIL)
16. PROPOSED PAINT PAVEMENT MARKING - LINE 5" (STRIPE FOR 11'-0" LANE WIDTH)
17. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
18. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 11 1/2"
19. PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10"
20. PROPOSED AGGREGATE SHOULDER 6"
21. PROPOSED EARTH SHOULDER
22. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
23. GEOTECHNICAL FABRIC AND GRANULAR BACKFILL
24. EXISTING OIL & CHIP OVERLAY
25. EXISTING AGGREGATE BASE
26. PROPOSED AGGREGATE BASE COURSE TYPE A 13"
27. EXISTING AGGREGATE SHOULDER
28. TEMPORARY PAVEMENT MARKING - LINE 5"

WORK THIS SHEET WITH THE NEXT TWO SHEETS.

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

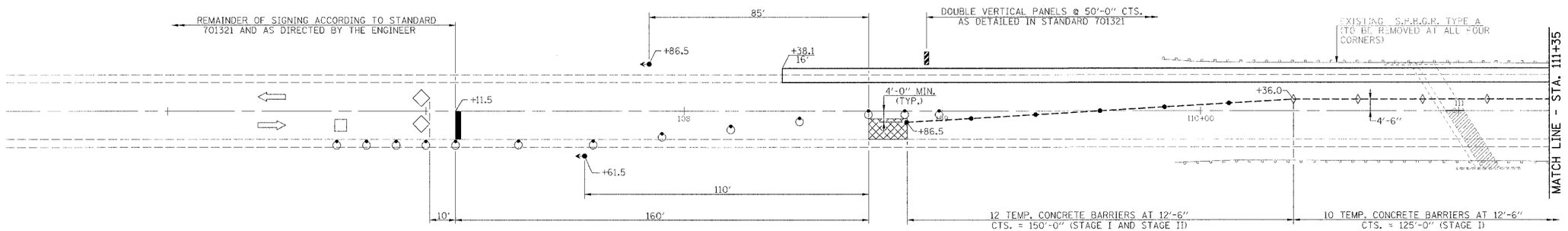
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	69
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

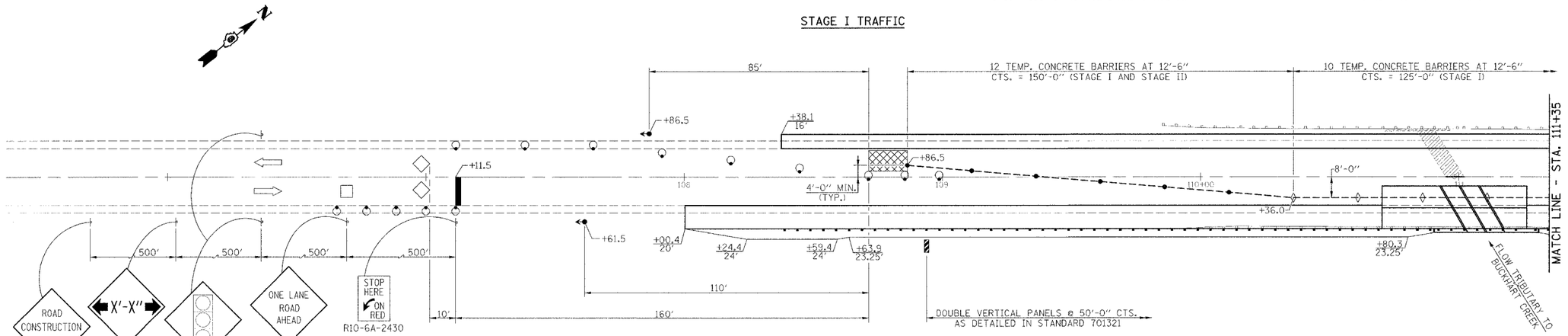
* D-6 IL. 48 IMPROVEMENT 2006

BITUMINOUS CONCRETE BASE COURSE WIDENING SUPERPAVE 10"

STA. 108+38.1 TO STA. 113+96.6 LT. - 5'-6"
(TO BE PLACED FOR STAGE I TRAFFIC)



STAGE I TRAFFIC



STAGE II TRAFFIC

SUGGESTED STAGE CONSTRUCTION SEQUENCE

STAGE I

1. THE CONTRACTOR SHALL PLACE MAX. WIDTH SIGNS AND ROAD CLOSED AHEAD SIGNS AS SHOWN ON THESE PLANS, BEFORE IMPLEMENTING ANY STAGE TRAFFIC CONTROL. THESE SIGNS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION STANDARD 701321 (SPECIAL)".
2. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE WIDENING SUPERPAVE 10" LT. STA. 108+38.1 TO STA. 113+96.6 - (5'-6" WIDE).
3. ERECT TRAFFIC CONTROL FOR STAGE I.
4. REMOVE EXISTING GUARDRAIL AND STRUCTURE RIGHT, ℄ STA. 111+00.
5. CONSTRUCT PROPOSED STAGE I 6'-0" X 3'-0" CULVERT AND WINGWALLS ℄ STA. 110+98.5.
6. CONSTRUCT PROPOSED BITUMINOUS BASE COURSE SUPERPAVE 10" AND GUARDRAIL RT. STA. 108+00.4 TO STA. 113+58.9.
7. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE RT. STA. 110+70 TO STA. 111+26.

STAGE II

1. ERECT TRAFFIC CONTROL FOR STAGE II.
2. REMOVE EXISTING STRUCTURE LEFT ℄ STA. 111+00.
3. CONSTRUCT PROPOSED STAGE II 6'-0" X 3'-0" CULVERT AND WINGWALLS ℄ STA. 110+98.5.
4. CONSTRUCT PROPOSED BITUMINOUS CONCRETE BASE COURSE SUPERPAVE 10" AND GUARDRAIL LT. STA. 108+38.1 TO STA. 113+96.6.
5. CONSTRUCT PROPOSED AGGREGATE SHOULDERS LT. STA. 108+38.1 TO STA. 110+70 & STA. 111+26 TO STA. 113+96.6.
6. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE LT. STA. 110+70 TO STA. 111+26.

FINAL

1. INSTALL SHORT-TERM PAVEMENT MARKINGS AND REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
2. REMOVE SHORT TERM PAVEMENT MARKINGS. FINAL BITUMINOUS CONCRETE BINDER AND SURFACE COURSE WILL BE PLACED UNDER TRAFFIC WITH FLAGGERS AT A LATER DATE.
3. STRIPING, SEEDING AND MISCELLANEOUS CLEANUP.

GENERAL NOTES

1. THIS TRAFFIC CONTROL DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
2. THE CONTRACTOR SHALL NOTIFY LARRY SIMON (PH. 785-5836) IN THE DISTRICT 6 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST ONE WEEK PRIOR TO IMPLEMENTING STAGE TRAFFIC CONTROL.
3. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE REVISED STAGE TRAFFIC PATTERNS DURING ALL PHASES OF STAGE CONSTRUCTION SHALL BE REMOVED AS SPECIFIC IN SECTION 783 OF THE STANDARD SPECIFICATIONS AND PAID FOR AS "PAVEMENT MARKING REMOVAL".
4. THE CONTRACTOR SHALL MAINTAIN FULL OPERATIONAL STATUS OF ALL SIDEROADS AND ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
5. TEMPORARY CONCRETE BARRIER. THE BARRIER UNIT AT EACH END OF THE INSTALLATION SHALL BE SECURED TO THE PAVEMENT OR SHOULDER USING ALL SIX ANCHORING PINS FOR F SHAPE OR ALL SIX DOWEL BARS FOR NEW JERSEY SHAPE.
6. EACH DETECTOR LOOP SHALL BE CONNECTED TO A SEPERATE DETECTOR AMPLIFIER.
7. THE COST TO INSTALL TEMPORARY PAVEMENT MARKING AS DETAILED ON THESE SHEETS SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL & PROTECTION STANDARD 701321, SPECIAL".
8. SIGNING FOR STAGE II SAME AS STAGE I.

0 20 40
SCALE: 1" = 20'

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

SEE THE NEXT SHEET FOR TRAFFIC CONTROL & TEMPORARY PAVEMENT MARKING SCHEDULES.

WORK THIS SHEET WITH THE PREVIOUS SHEET AND THE NEXT SHEET.

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: SCTD&3 (REV. 3/3/09)

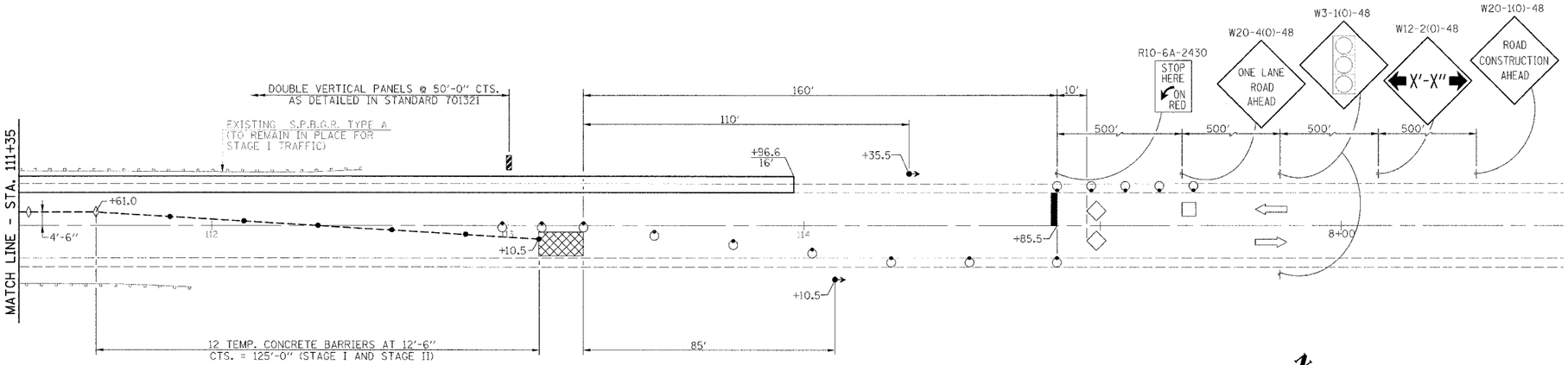
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	70
STA. 110+70 TO STA. 111+26				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

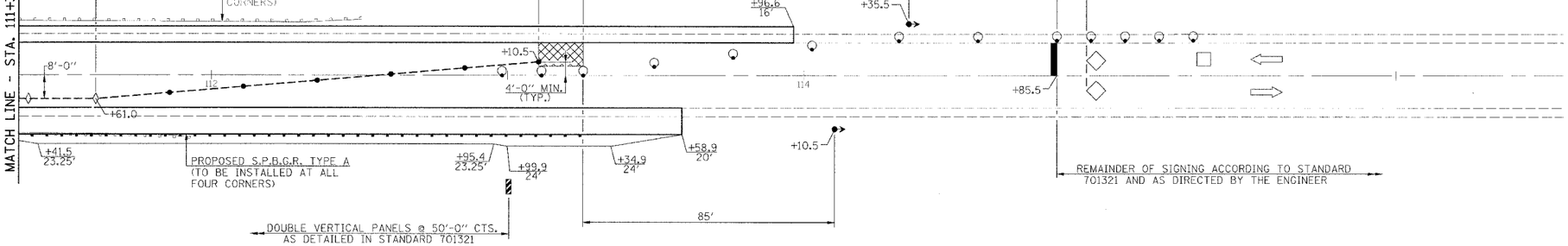
* D-6 IL. 48 IMPROVEMENT 2006

BITUMINOUS CONCRETE BASE COURSE WIDENING SUPERPAVE 10"

STA. 108+38.1 TO STA. 113+96.6 LT. - 5'-6"
(TO BE PLACED FOR STAGE I TRAFFIC)



STAGE I TRAFFIC



STAGE II TRAFFIC

TRAFFIC CONTROL SCHEDULE

LOCATION STATION TO STATION	TEMP. CONC. BARRIER (FOOT)	RELOCATE TEMP. CONC. BARRIER (FOOT)	IMPACT ATTENUATOR TEMPORARY (EACH)	RELOCATE IMPACT ATTENUATOR (EACH)
STAGE I				
STA. 108+71.5 TO STA. 108+86.5			1	
STA. 108+86.5 TO STA. 113+10.5 LT.	425			
STA. 113+10.5 TO STA. 113+25.5			1	
STAGE II				
STA. 108+71.5 TO STA. 108+86.5				1
STA. 108+86.5 TO STA. 113+10.5 RT.		425		
STA. 113+10.5 TO STA. 113+25.5				1
TOTAL	425	425	2	2

SCHEDULE TEMPORARY PAVEMENT MARKING

LOCATION STATION TO STATION	TEMP. PAV'T. MARKING LINE - 5" (FOOT)	TEMP. PAV'T. MARKING LINE - 24" (FOOT)
STAGE I		
STA. 107+11.5 RT.		12
STA. 108+38.1 TO STA. 113+96.6 LT.	559	
STA. 107+11.5 TO STA. 114+85.5 (℄)	200	
STA. 114+85.5		12
STAGE II		
STA. 108+00.4 TO STA. 113+58.9 RT.	559	
TOTAL	1318	24

SYMBOLS

- WORK AREA
- SIGN
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY RUMBLE STRIP
- INDUCTION LOOP DETECTOR
- DOUBLE VERTICAL PANEL
- TYPE C BIDIRECTIONAL REFLECTOR
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

NOTE:
SIGNING FOR STAGE II SAME AS STAGE I.

WORK THIS SHEET WITH PREVIOUS TWO SHEETS.

0 20 40
SCALE: 1" = 20'

STAGE CONSTRUCTION TRAFFIC DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: SCTD33 REV. 3/3/06

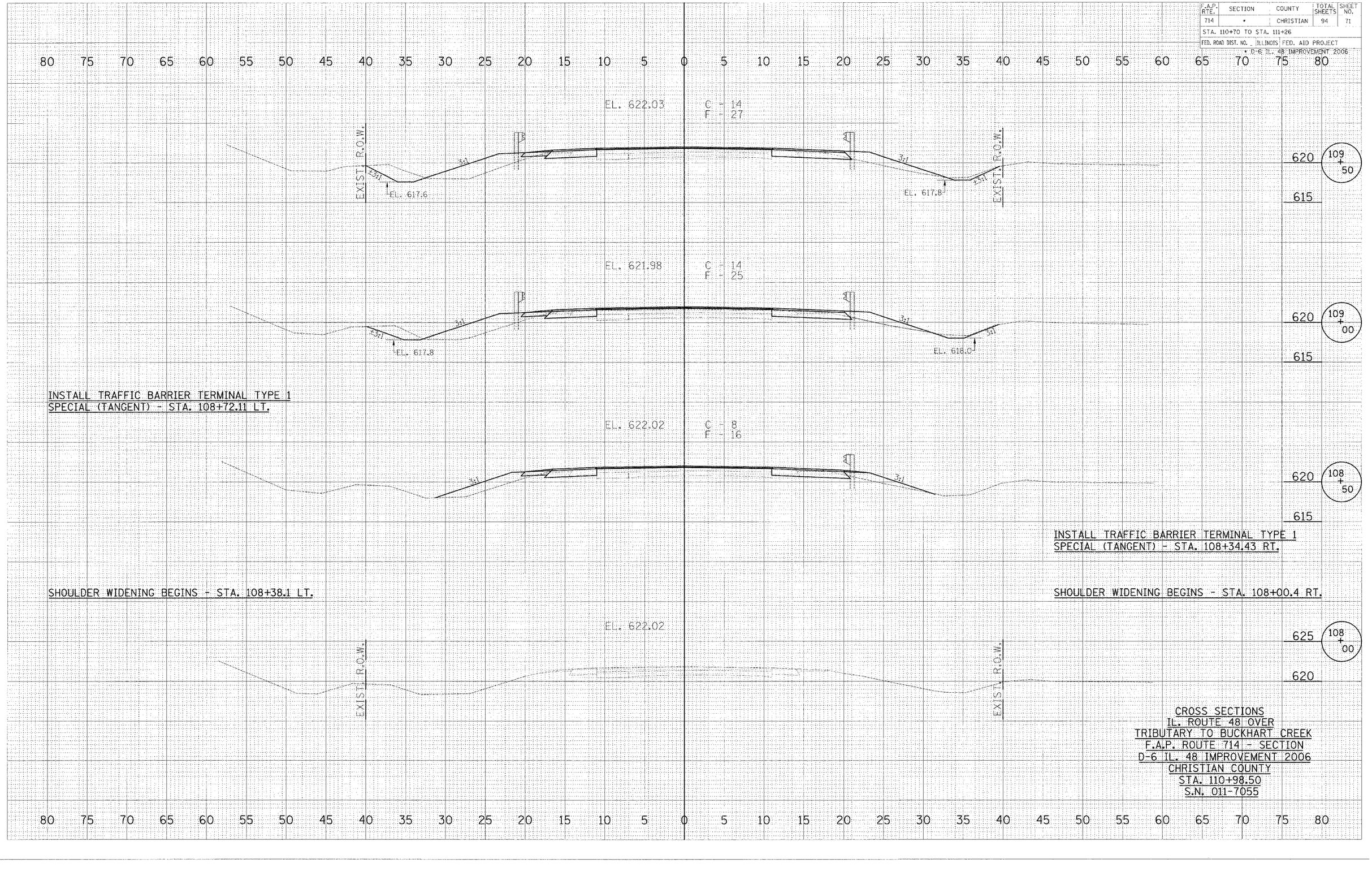
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	71

STA. 110+70 TO STA. 111+26

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

DATE | BY | SURVEYED | PLOTTED | NOTE BOOK | AREAS | CHECKED

ORIGINAL SURVEY | FINAL SURVEY | NOTE BOOK | IND.

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

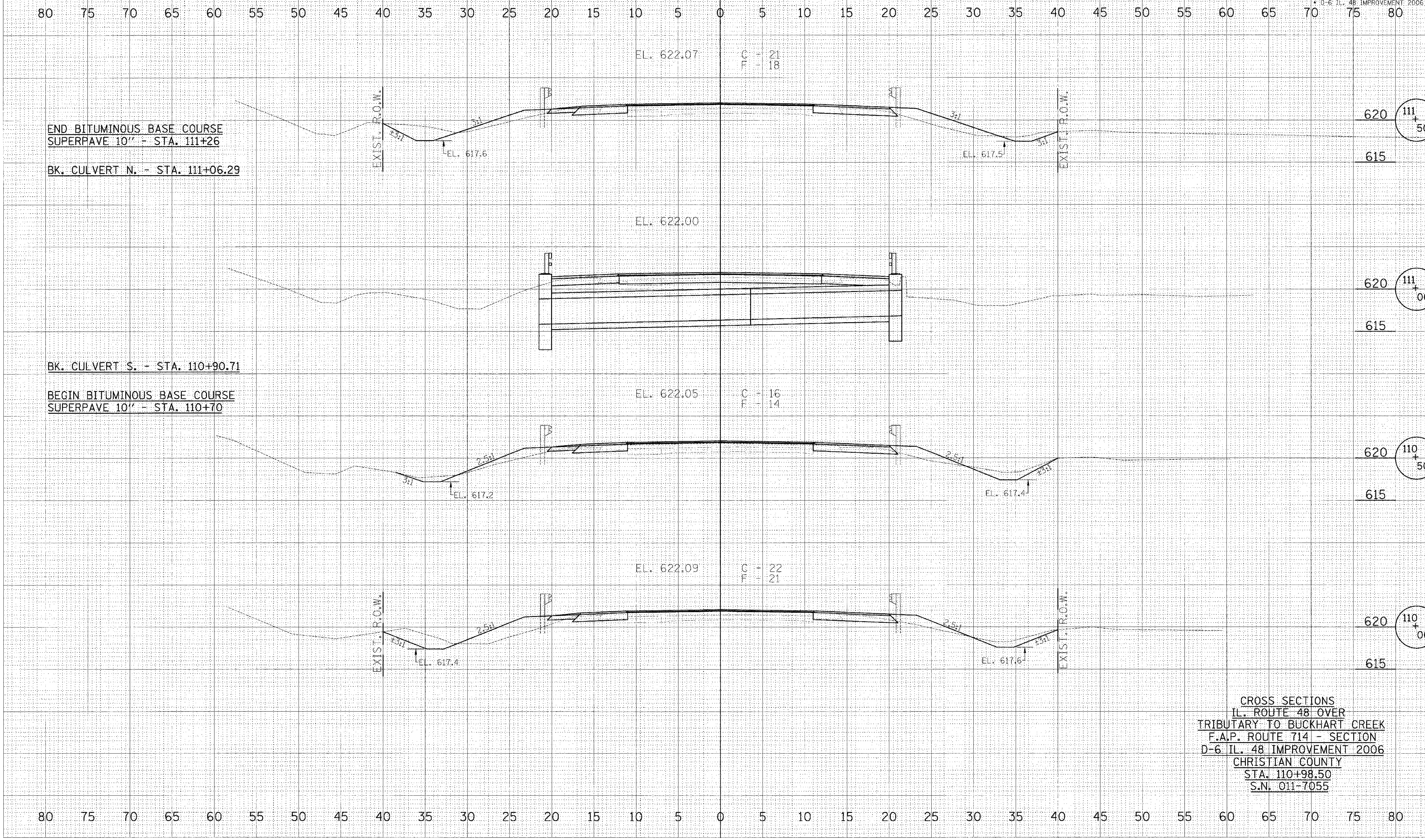
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	72

STA. 110+70 TO STA. 111+26

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	73

STA. 110+70 TO STA. 111+26

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

SHOULDER WIDENING ENDS - STA. 113+96.6 LT.

END TRAFFIC BARRIER TERMINAL TYPE 1
SPECIAL (TANGENT) - STA. 113+62.57 LT.

EL. 622.13 C - 8 F - 17

EXIST. R.O.W.

3:1

SHOULDER WIDENING ENDS - STA. 113+58.9 RT.

620 113 + 50

615

END TRAFFIC BARRIER TERMINAL TYPE 1
SPECIAL (TANGENT) - STA. 113+24.89 RT.

EL. 622.12 C - 14 F - 21

EL. 618.2

620 113 + 00

615

EL. 622.13 C - 15 F - 22

EL. 618.0

620 112 + 50

615

EL. 622.13 C - 14 F - 22

EL. 617.8

620 112 + 00

615

CROSS SECTIONS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

ORIGINAL SURVEY / FINAL SURVEY
NOTE BOOK
NO.
SURVEYED BY
PLOTTED BY
DRAWN BY
AREAS
AREAS CHECKED
DATE

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

Benchmarks: BM WS-2 - Chiseled "□" on center of West headwall of existing 6' x 3' box culvert. El. 621.558

BM WS-3 - Chiseled "X" on top of 48"Ø C.M.P. underneath railroad. 49' Lt. Sta. 110+62 El. 618.928

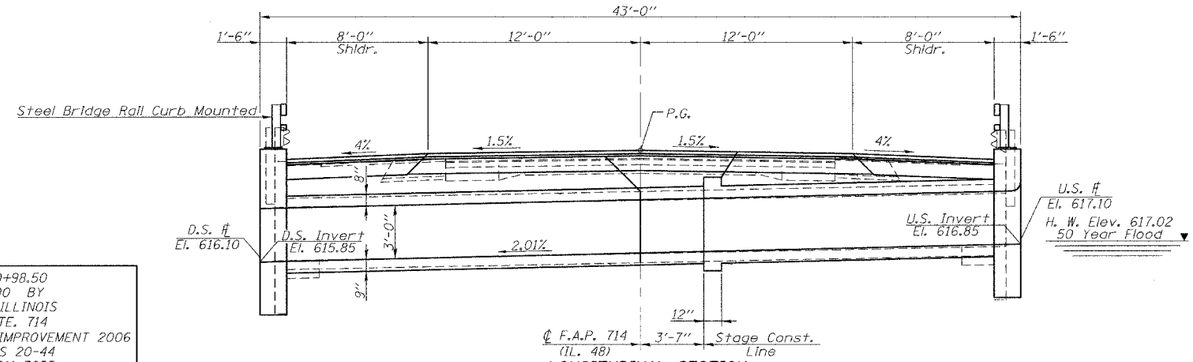
Existing Structure: Single Barrel 6'(W.) x 3'(H.) cast in place concrete culvert built in 1928. 8'-3" Length along ℄ Rdwy., 48'-9" Width Out.-Out. Headwalls parallel to traffic. 32° Skew Right Forward. Existing Structure No.: None

No Salvage

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	74
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1 OF 8 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006



LONGITUDINAL SECTION
(Dimensions at Rt. ∠'s)

STA. 110+98.50
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RTE. 714
SECTION D-6 IL. 48 IMPROVEMENT 2006
LOADING HS 20-44
STR. NO. 011-7055

NAME PLATE
(Standard 515001)

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A4	Sq. Yd.	176
Filter Fabric	Sq. Yd.	176
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	13505
Bar Splicers	Each	75
Steel Bridge Rail	Foot	80.86
Temporary Sheet Piling	Sq. Ft.	562
Concrete Box Culverts	Cu. Yd.	80.2
Granular Culvert Backfill	Cu. Yd.	107
Temporary Shoring	Each	1
Name Plates	Each	1

WATERWAY INFORMATION

Drainage Area = 0.67 Sq. Mi.

Ex. Low Grade Elev. 621.83 ft. @ Sta. 111+08

Pr. Low Grade Elev. 621.98 ft. @ Sta. 109+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - ft. Exist.	Head - ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	128	15.94	27.72	616.88	3.98	2.54	620.86	619.42
Design	50	199	15.94	36.00	617.02	5.70	3.21	622.72	620.23
Base	100	229	15.94	36.00	617.07	6.67	3.49	623.74	620.56
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	301	15.94	36.00	617.18	9.58	4.21	626.76	621.39

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications.

GENERAL NOTES

Excavation behind existing culvert walls shall be done before removing the existing top slab. The Contractor shall saw cut the existing culvert at the stage removal line before Stage I Removal.

Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60.

Layout of the riprap may be varied in the field to suit ground conditions as directed by the Engineer.

A precast culvert alternate is not be allowed.

For backfilling and embankment, see Standard Specifications.

All construction joints shall be bonded.

Exposed edges shall have a standard ¾" chamfer unless otherwise noted.

LOADING HS 20-44

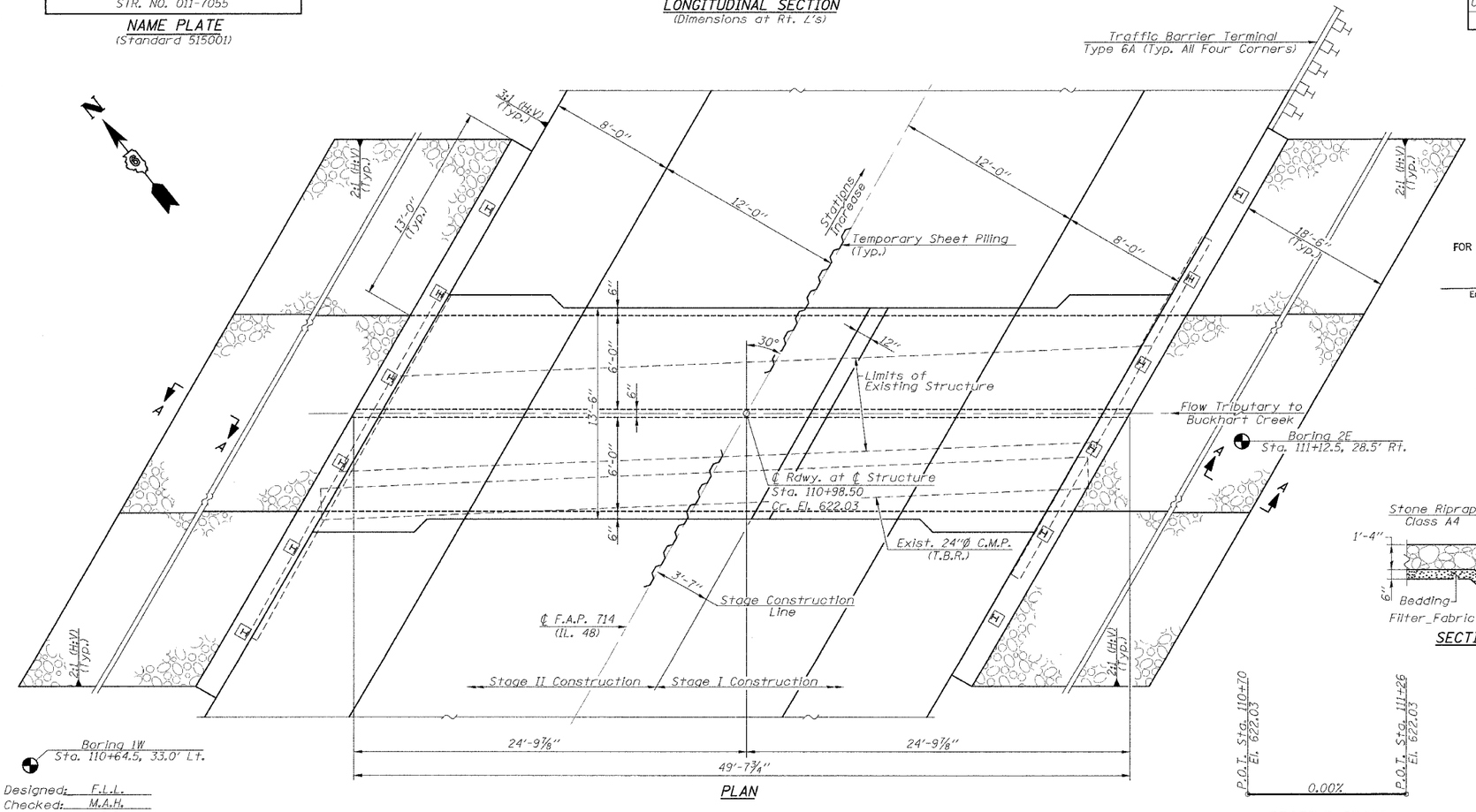
Allow for 50#/sq. ft. future wearing surface.

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinforcement)

INDEX OF SHEETS

1 - GENERAL PLAN & ELEVATION
2 - STAGING DETAILS
3 - TEMPORARY CONCRETE BARRIER
4 & 5 - CULVERT DETAILS
6 - STEEL BRIDGE RAIL CURB MOUNTED
7 - BAR SPLICER ASSEMBLY DETAILS
8 - BORINGS



PLAN

Designed: F.L.L.
Checked: M.A.H.
Drawn: J.R.P.
Checked: F.L.L.

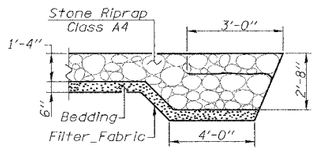
FILE NAME: STRUCTURE (REV. 3/27/06)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson (TSV)
Engineer of Bridges and Structures

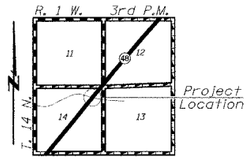
MARK A. HENDERSON 5515 STRUCTURAL ENGINEER STATE OF ILLINOIS 3/29/06

Exp. Date: 11/30/06



SECTION A-A

PROFILE GRADE
(Along ℄ Roadway)



LOCATION SKETCH

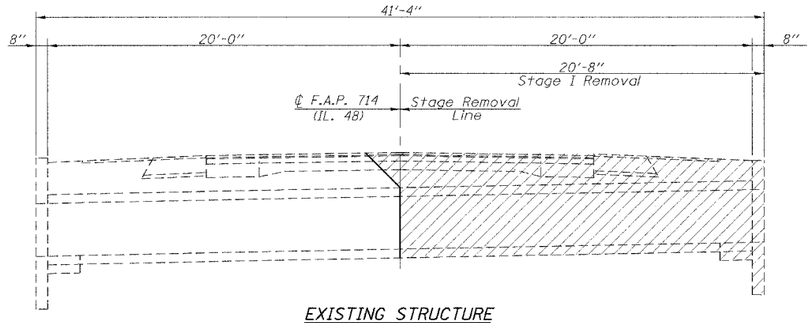
GENERAL PLAN & ELEVATION
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

CONTRACT NO. 72784

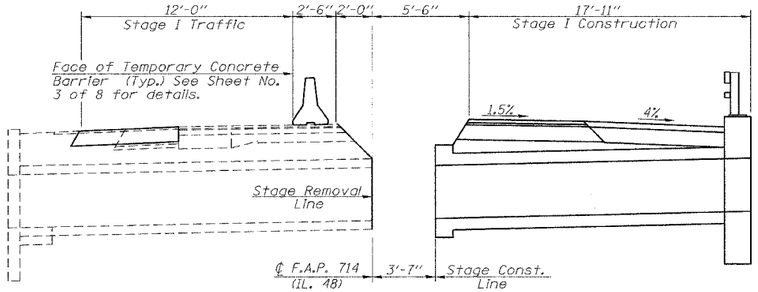
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	75
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 8 SHEETS

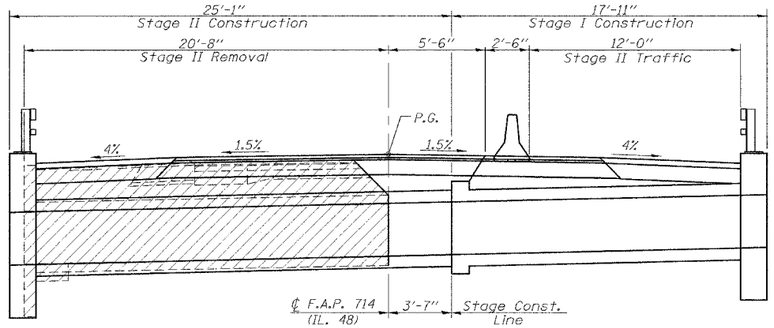
* D-6 IL. 48 IMPROVEMENT 2006



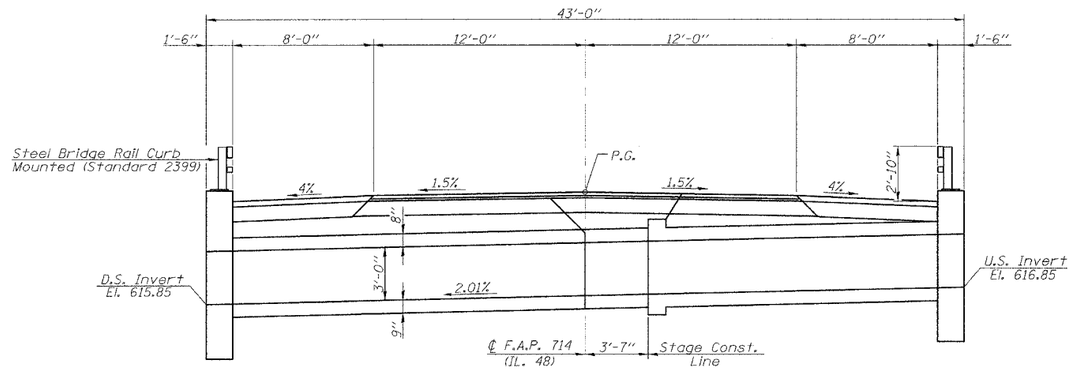
EXISTING STRUCTURE
(Looking East)



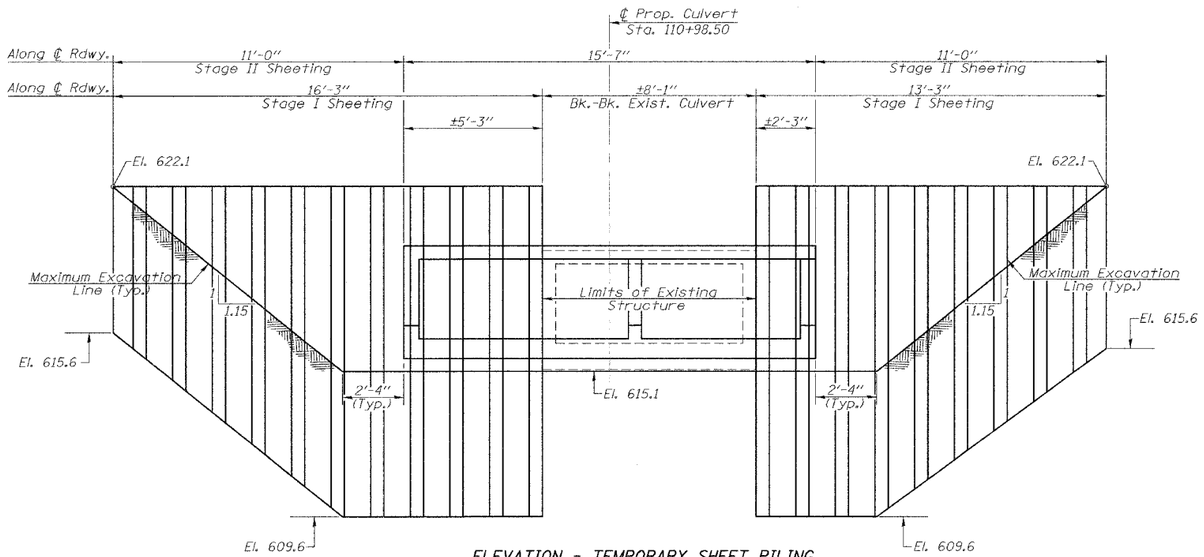
STAGE I TRAFFIC & CONSTRUCTION
(Looking East)



STAGE II TRAFFIC & CONSTRUCTION
(Looking East)

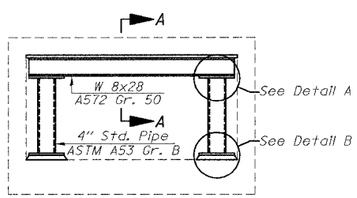


LONGITUDINAL SECTION
(Looking East)



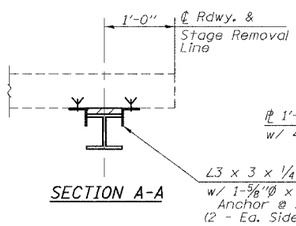
ELEVATION - TEMPORARY SHEET PILING
(Minimum Required Section Modulus = 2.5 in.³/ft.)

Notes: If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

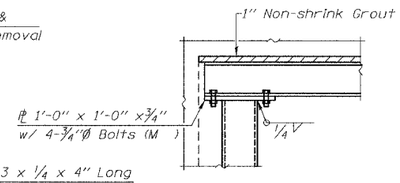


TEMPORARY SUPPORT DETAIL

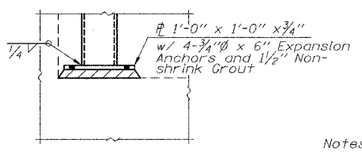
Note: Place temporary support prior to Stage I Removal. Cost included with "Temporry Shoring".



SECTION A-A



DETAIL A



DETAIL B

Notes: Hatched areas indicate "Removal of Existing Structures".

See Roadway Plans for quantity of Temporary Concrete Barrier.

All dimensions at Rt. ∠'s unless otherwise noted.

STAGING AND DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: STRUCTURE REV. 3-27-06

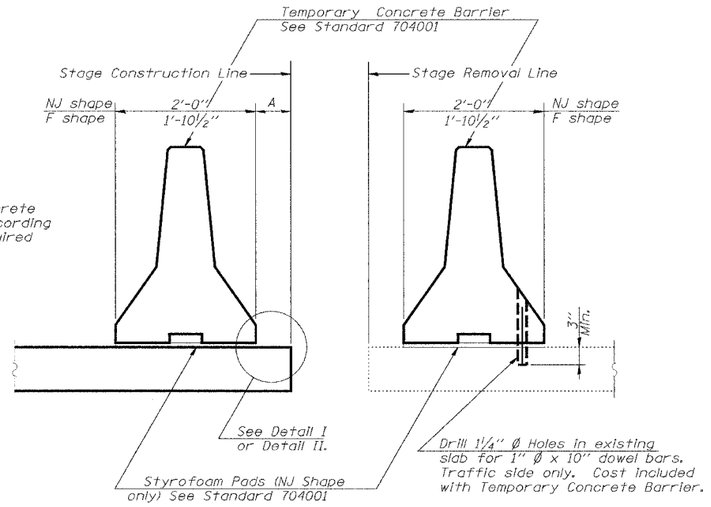
CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	76
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 3 OF 8 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



When "A" is 3'-6" or less, the temporary concrete barrier shall be Anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

NEW SLAB

EXISTING SLAB

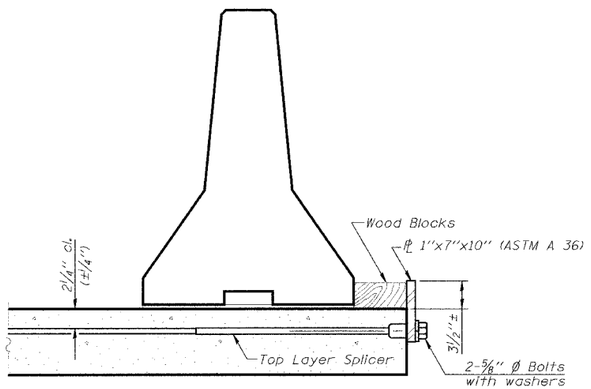
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" Ø bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" Ø Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

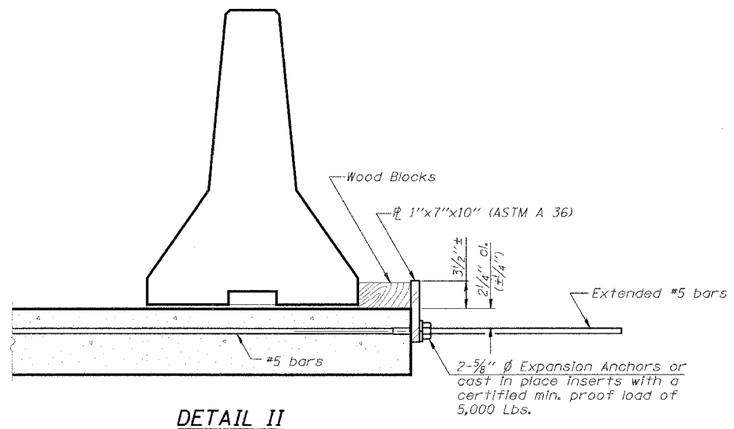
Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



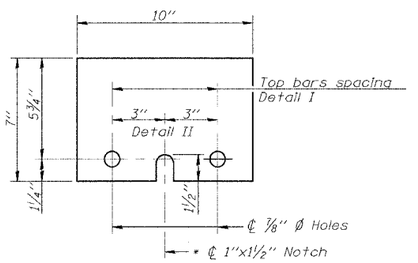
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ℙ 1"x7"x10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

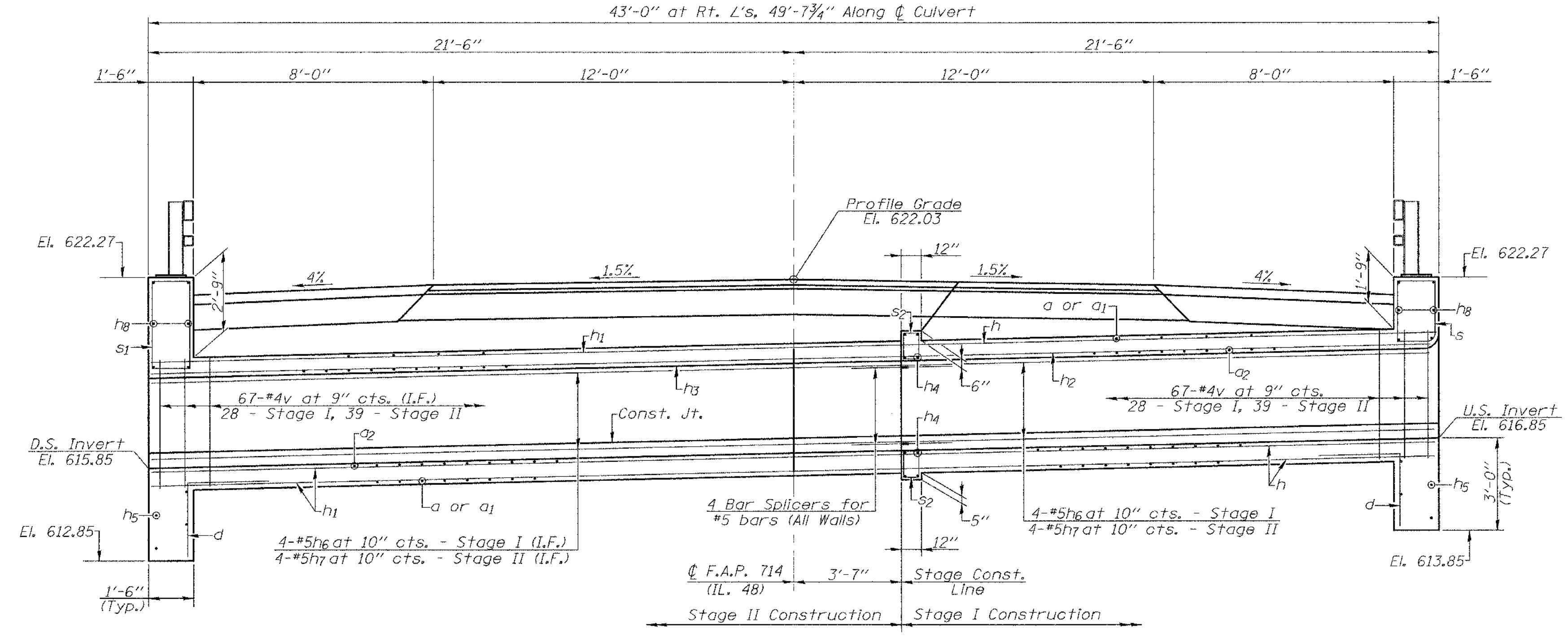
FILE NAME: STRUCTURE (REV. 3/21/05)

R-27 10-22-04

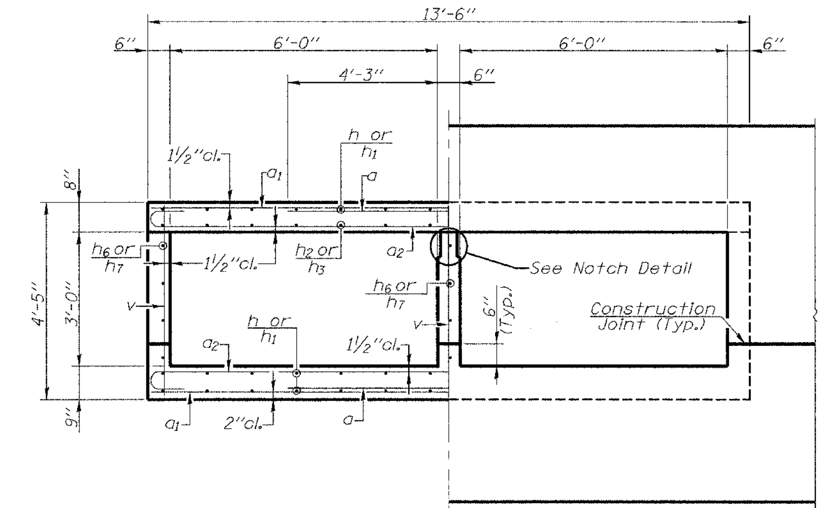
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	•	CHRISTIAN	94	77
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006

SHEET NO. 4 OF 8 SHEETS

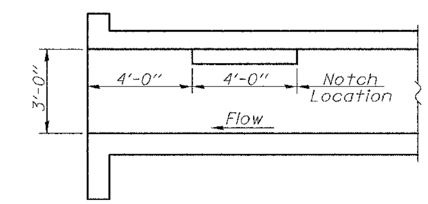


LONGITUDINAL SECTION
(Looking East)
(Dimensions are at Rt. ∠'s to ℄ Rdwy. except as noted)

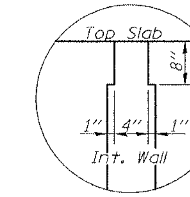


HALF SECTION THRU BARREL

HALF SECTION END ELEVATION

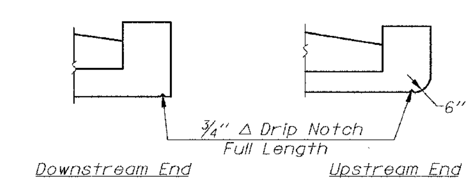


LONGITUDINAL SECTION
(Downstream End Only)

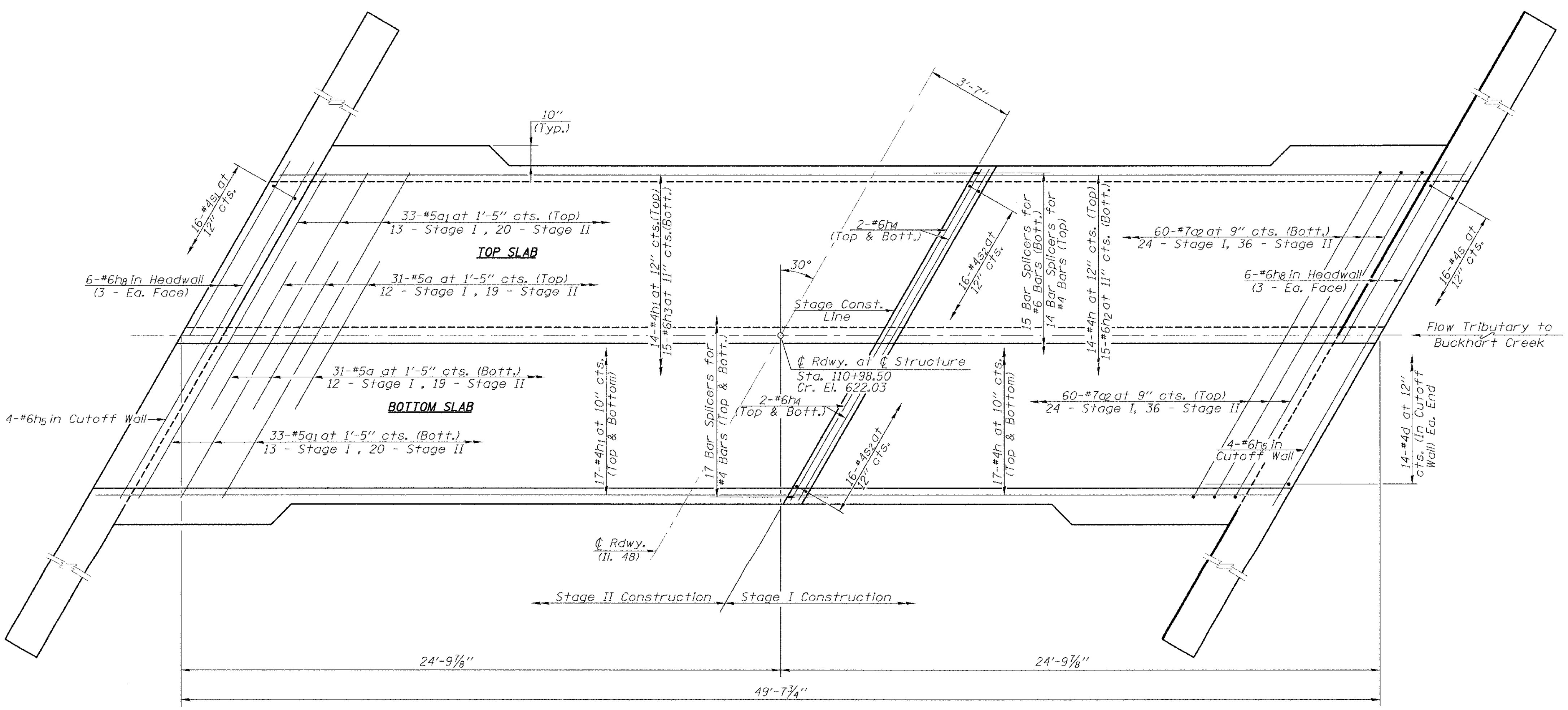


NOTCH DETAIL

Notch formed by rough finished board attached to and removed with the formwork. Do not chamfer.



DRIP NOTCH DETAIL



PLAN

Work this Sheet with Sheet No. 5 of 8.

CULVERT DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

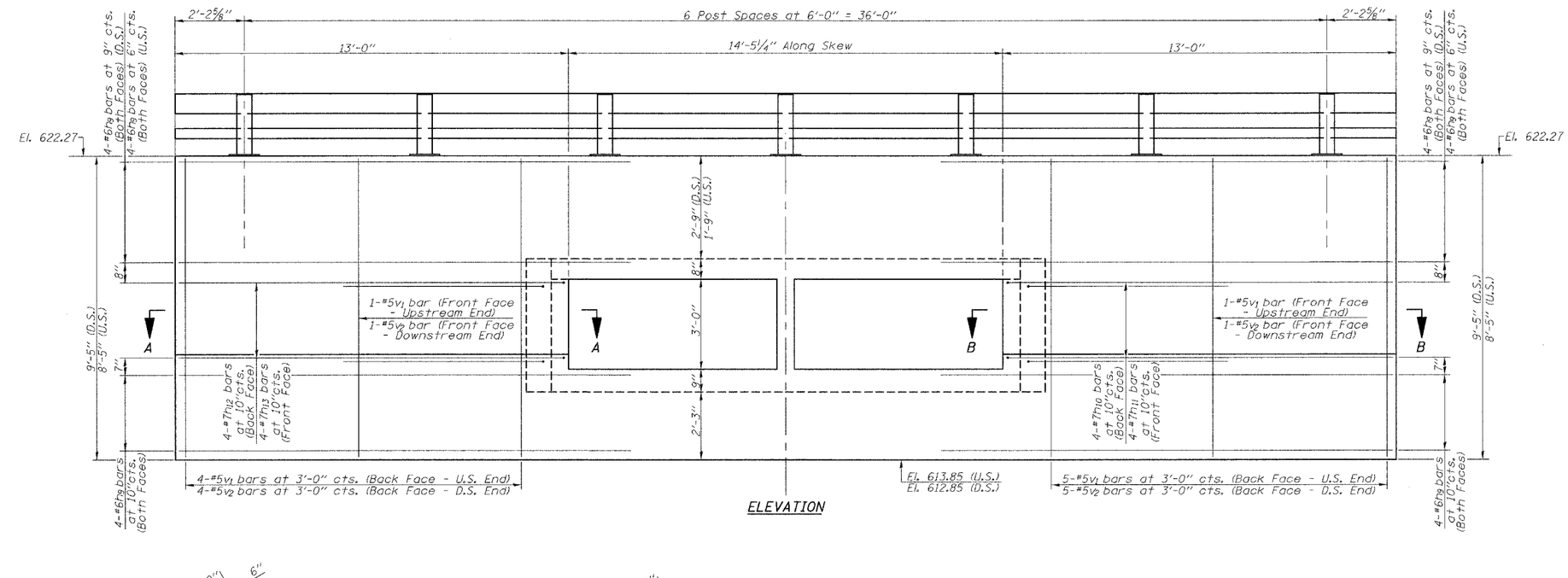
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

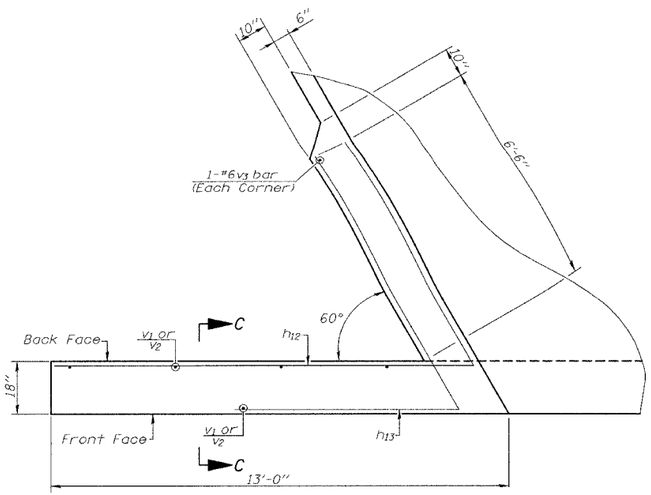
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	78
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

* D-6 IL. 48 IMPROVEMENT 2006

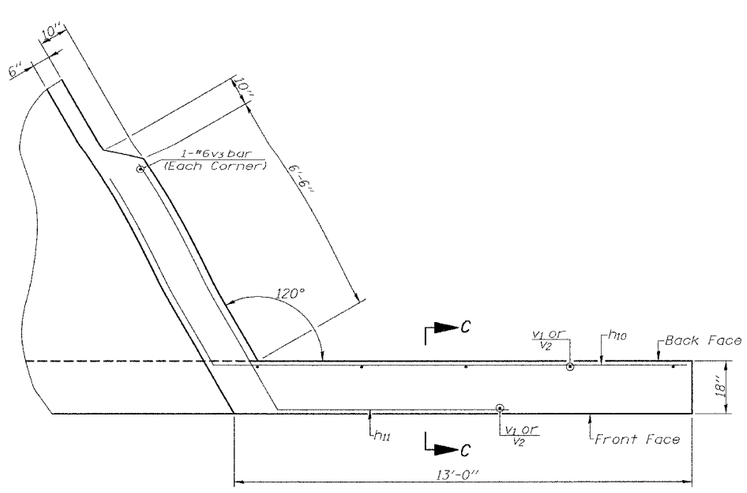
SHEET NO. 5 OF 8 SHEETS



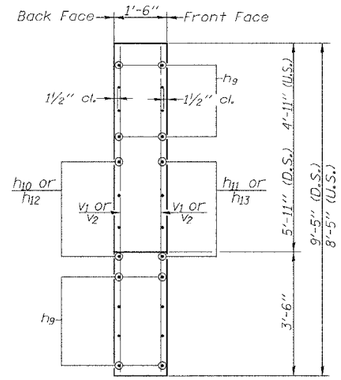
ELEVATION



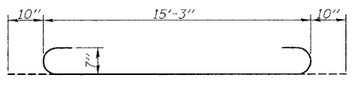
SECTION A-A



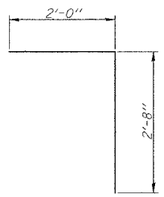
SECTION B-B



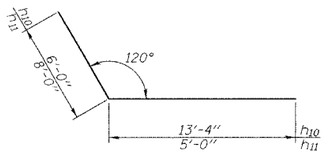
SEC. C-C



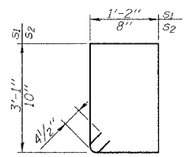
BAR a2



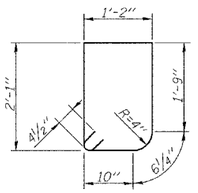
BAR d



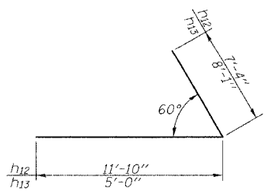
BARS h10 & h11



BARS s1 & s2



BAR s



BARS h12 & h13

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	62	#5	9'-0"	
a1	66	#5	15'-3"	
a2	120	#7	16'-11"	
d	28	#4	4'-8"	
h	48	#4	20'-4"	
h1	48	#4	28'-7"	
h2	15	#6	20'-4"	
h3	15	#6	28'-7"	
h4	8	#6	15'-3"	
h5	8	#6	16'-0"	
h6	12	#5	20'-4"	
h7	12	#5	28'-7"	
h8	12	#6	20'-0"	
h9	64	#6	16'-0"	
h10	8	#7	19'-4"	
h11	8	#7	13'-0"	
h12	8	#7	19'-2"	
h13	8	#7	13'-1"	
s	16	#4	7'-1"	
s1	16	#4	9'-3"	
s2	32	#4	3'-9"	
v	201	#4	4'-1"	
v1	11	#5	8'-1"	
v2	11	#5	9'-1"	
v3	4	#6	4'-1"	
Concrete Box Culverts			Cu. Yd.	80.2
Reinforcement Bars			Pound	13505
Bar Splicers			Each	75

Work this sheet with Sheet No. 4 of 8.

CULVERT DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: STRUCTURE (REV 3-27-06)

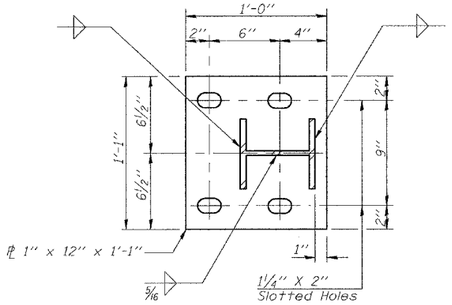
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033

CONTRACT NO. 72784

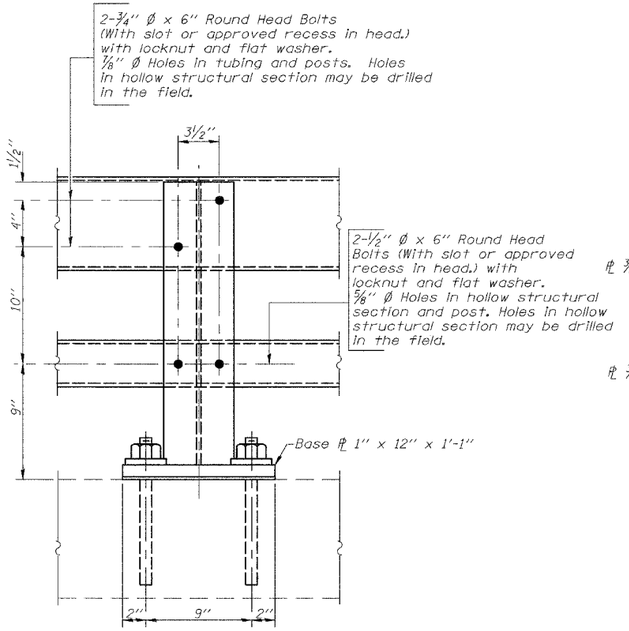
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	79
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 OF 8 SHEETS

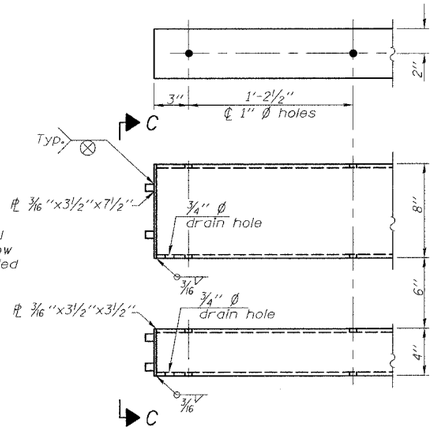
* D-6 IL. 48 IMPROVEMENT 2006



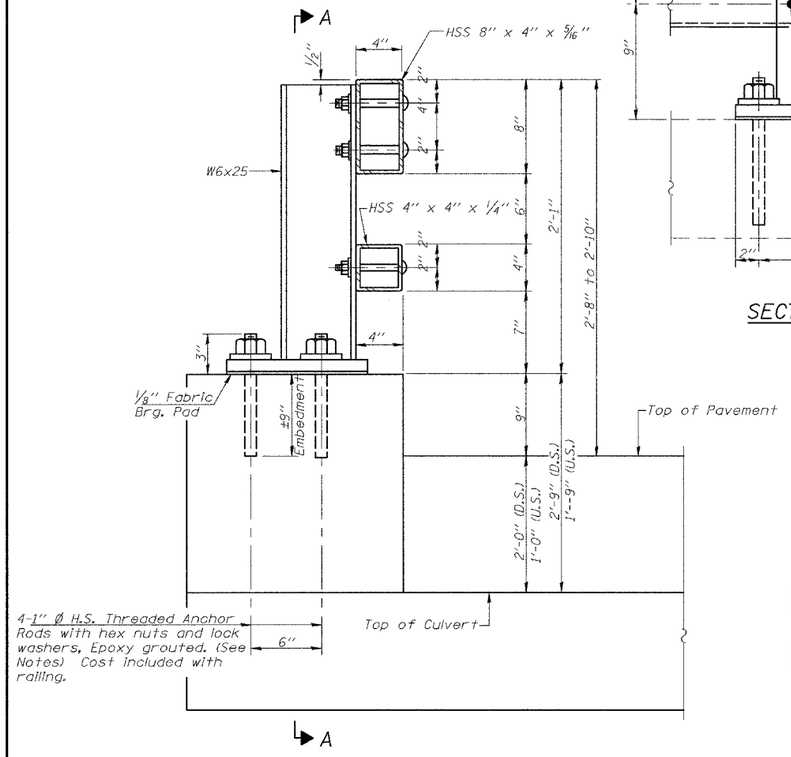
BASE PLATE DETAIL



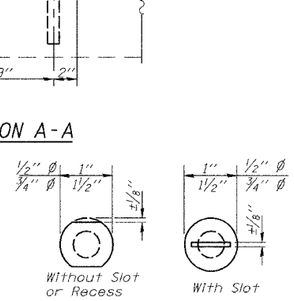
SECTION A-A



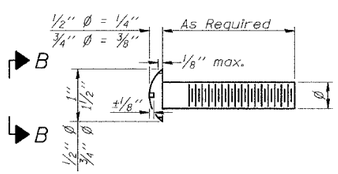
END OF RAIL DETAILS



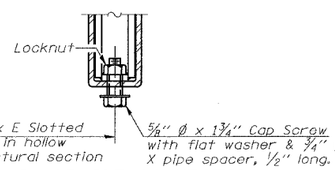
SECTION AT RAIL POST



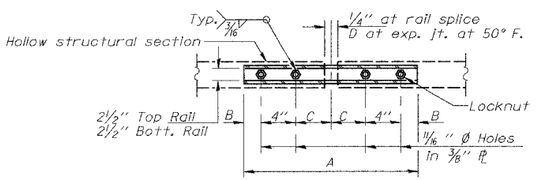
VIEW B-B



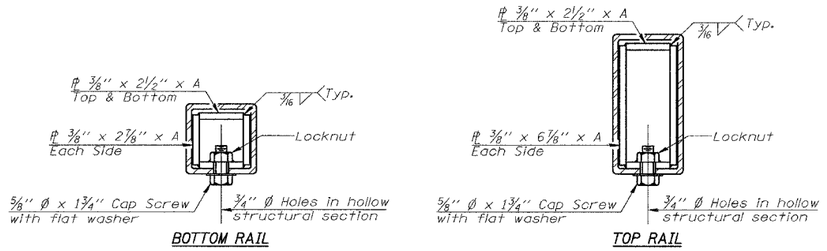
DETAIL OF ½" ϕ & ¾" ϕ ROUND HEAD BOLTS



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE ℄ TYPICAL



SECTIONS AT RAIL SPLICE

(6'-3" Maximum Post Spacing)

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A 307 except that threaded rods, nuts and washers shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one ⅛" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

Expansion joint width shall be "D" at 50° F and shall be adjusted for other temperatures according to Article 503.10(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Nuts for 1" Ø threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional ⅛ turn.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail	Foot	80.86

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2½"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
Rail Splice	¼"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

STEEL BRIDGE RAIL
CURB MOUNTED
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

FILE NAME: STRUCTURE REV 3/27/06

R-31 10-22-04

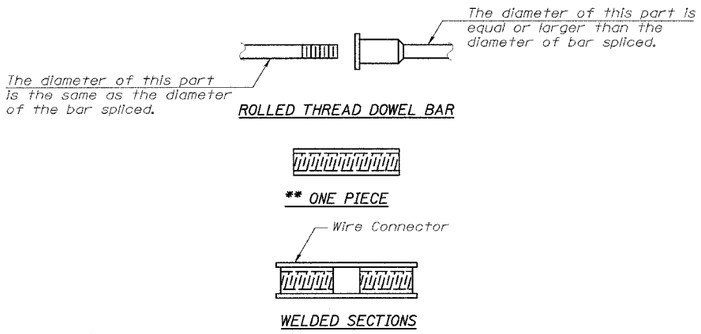
CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	80
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 OF 8 SHEETS

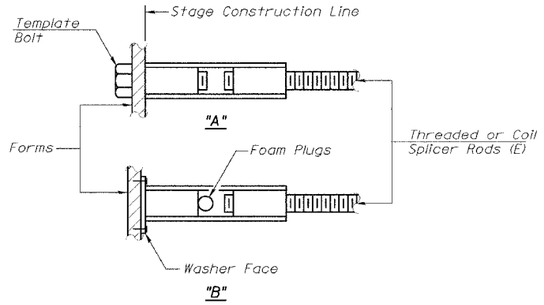
* D-6 IL. 48 IMPROVEMENT 2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

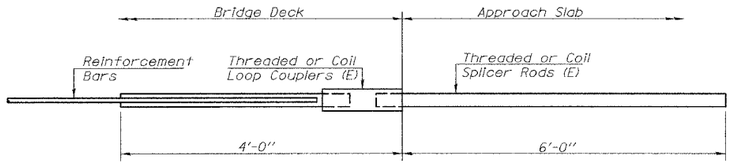
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

1. Minimum Capacity = 1.25 x fy x At (Tension in kips)
2. Minimum *Pull-out Strength = 1.25 x fsallow x At (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.
fsallow = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
At = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

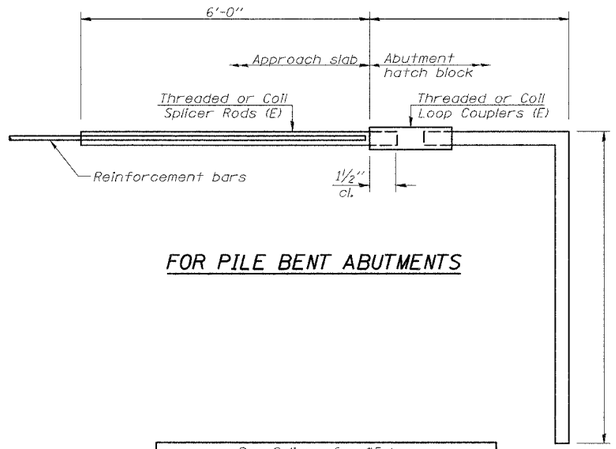
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



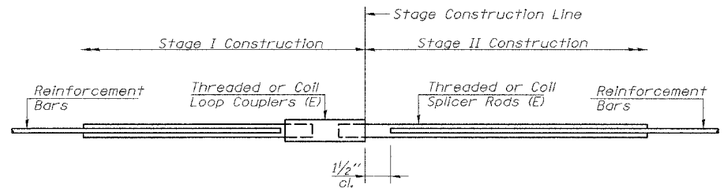
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#6	15	TOP SLAB
#4	14	TOP SLAB
#4	34	BOTTOM SLAB
#5	12	WALLS
Total	75	

BAR SPLICER ASSEMBLY DETAILS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

BSD-1 10-22-04

FILE NAME: STRUCTURE DIEG. 9-27-07

CONTRACT NO. 72784

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	81
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8 OF 8 SHEETS

* D-6 IL. 48 IMPROVEMENT 2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Illinois Department of Transportation
Division of Highways
IDOT District 6

SOIL BORING LOG

Page 1 of 1

Date 12/27/05

ROUTE FAP 714 (IL-48) DESCRIPTION IL 48 over Trib. to Buckhart Creek LOGGED BY M. Tappan

SECTION D-6 IL 48 Improvement 2006 LOCATION NE 1/4, SEC. 14, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-7055
Station 110+98.5

BORING NO. 7055-1W
Station 110+64.5
Offset 33.0ft LT
Ground Surface Elev. 616.7 ft

Surface Water Elev. 616.3 ft
Stream Bed Elev. 616.3 ft

Groundwater Elev.:
☑ First Encounter 605.7 ft
▼ Upon Completion Washed ft
▼ After 24 Hrs. 609.2 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Brown and Gray Moist SILTY CLAY			
	0		
-5	1 2	1.0 B	18
610.70			
Brown and Gray Moist CLAY LOAM ▼	0 1 1	0.7 B	21
-10	0 2 2	1.0 B	19
606.20			
Gray Dirty Wet Coarse SAND ▽	0 1 2		
-15	0 2 2		
Gray Medium to Coarse SAND	2 5		
With 1/4" Gravel Washed	2		
	1		
-20	2 3		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Gray Dirty Wet Coarse SAND (continued) 596.20			
Gray Moist LOAM (Fill) Washed	0		
	1 2	0.6 B	17
	0		
	1 3	0.9 B	19
-25			
588.70			
Gray Medium Clean SAND Washed	5		
586.70 -30	7 12		
Boring Completed			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H -- Sampler Advanced By Weight of Hammer, W.O.P -- Advanced by Weight of Pipe, B.S. -- Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\CHRISTIAN\IL 48 CULVERTS NORTH OF STONINGTON.GPJ Data Template DATEMPLT.GDT Data Printed 1/13/06
Latitude 39 Deg 40.042 N Longitude 89 Deg 09.698 W Datum NAD83 Job Number D-96-517-03

Illinois Department of Transportation
Division of Highways
IDOT District 6

SOIL BORING LOG

Page 1 of 1

Date 12/27/05

ROUTE FAP 714 (IL-48) DESCRIPTION IL 48 over Trib. to Buckhart Creek LOGGED BY M. Tappan

SECTION D-6 IL 48 Improvement 2006 LOCATION NE 1/4, SEC. 14, TWP. 14 N, RNG. 1 W, 3 PM

COUNTY Christian DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 011-7055
Station 110+98.5

BORING NO. 7055-2E
Station 111+12.5
Offset 28.5ft RT
Ground Surface Elev. 617.2 ft

Surface Water Elev. 616.3 ft
Stream Bed Elev. 616.3 ft

Groundwater Elev.:
☑ First Encounter 603.7 ft
▼ Upon Completion Washed ft
▼ After 24 Hrs. 614.7 ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Brown and Gray Moist SILTY CLAY	1		
	2 2	1.3 B	25
▼ 614.20			
Tan and Light Gray Moist SILTY CLAY LOAM	1		
-5	2 3	0.8 B	28
611.20			
Brown and Gray V. Moist LOAM	0 1 1	0.4 B	19
609.20			
Brown and Gray Moist CLAY LOAM	1		
-10	2 3	1.0 B	21
606.20			
Gray V. Moist SAND LOAM	1 2 3		16
604.20			
Gray Medium to Coarse SAND ▽	0 0 2		
-15			
	2		
Gray Medium SANDY GRAVEL Washed	6 10		
	3		
Poor Recovery -20	10 12		

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Washed Gray Medium to Coarse SAND (continued) 596.20	1		
Gray V. Moist LOAM Washed	2 1	0.5 B	15
	1		
	2 3	0.8 B	15
-25 Moist LOAM To CLAY LOAM Washed			
589.20			
Gray Fine SAND with CLAY LOAM Seams Washed	2 5		
587.20 -30	7		
Boring Completed			
Refer STA to cL of Existing Structure = 110+98.5, Increase to North			
Refer Elevation to BM WS-2 = 621.6'			
-35			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
Abbreviations W.O.H -- Sampler Advanced By Weight of Hammer, W.O.P -- Advanced by Weight of Pipe, B.S. -- Before Seating
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)

File Name S:\SOILS\GINT FILES\CHRISTIAN\IL 48 CULVERTS NORTH OF STONINGTON.GPJ Data Template DATEMPLT.GDT Data Printed 1/13/06
Latitude 39 Deg 40.048 N Longitude 89 Deg 09.690 W Datum NAD83 Job Number D-96-517-03

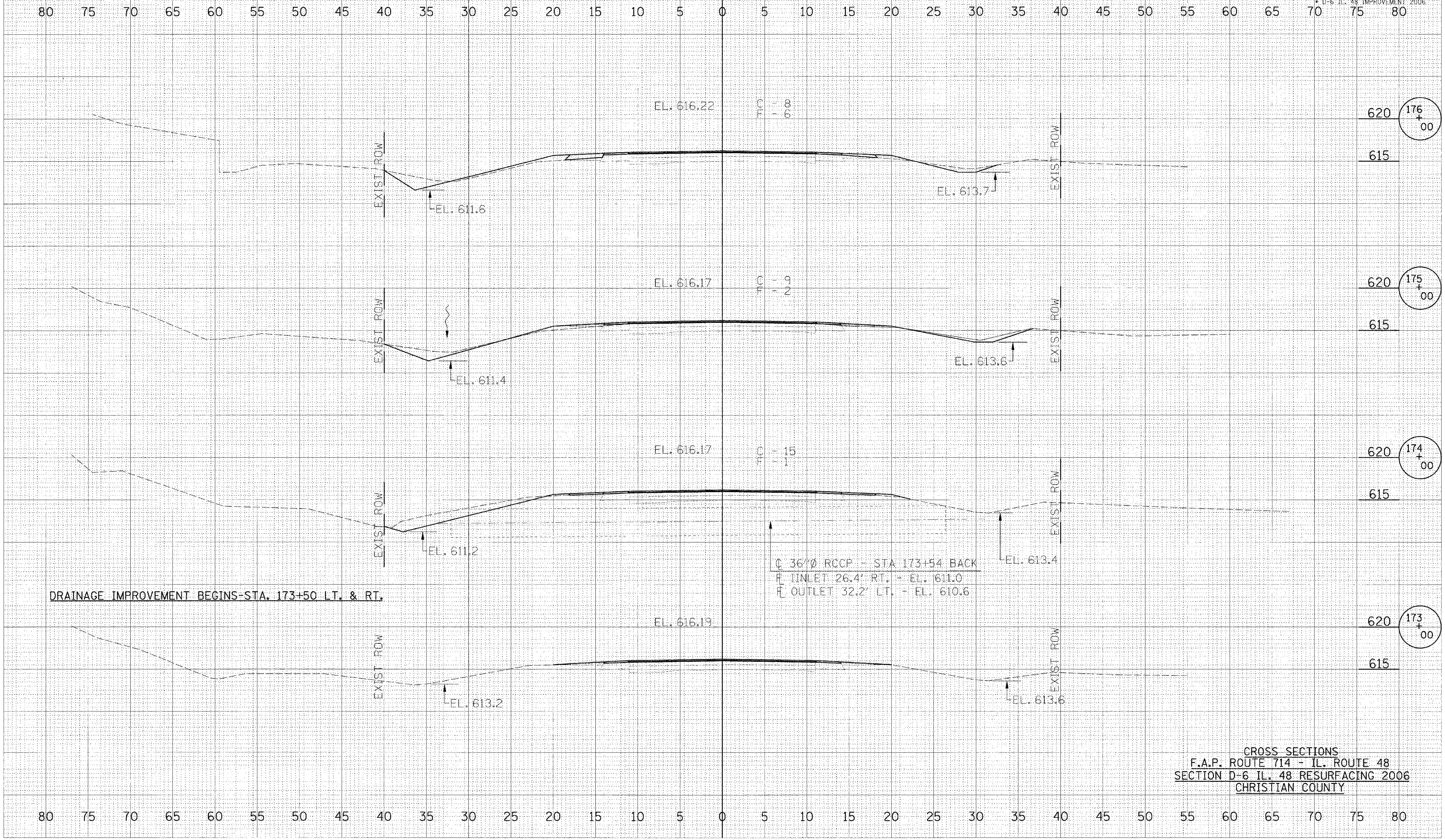
FILE NAME: STRUCTURE REV. 1/21/01

BORINGS
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	82
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

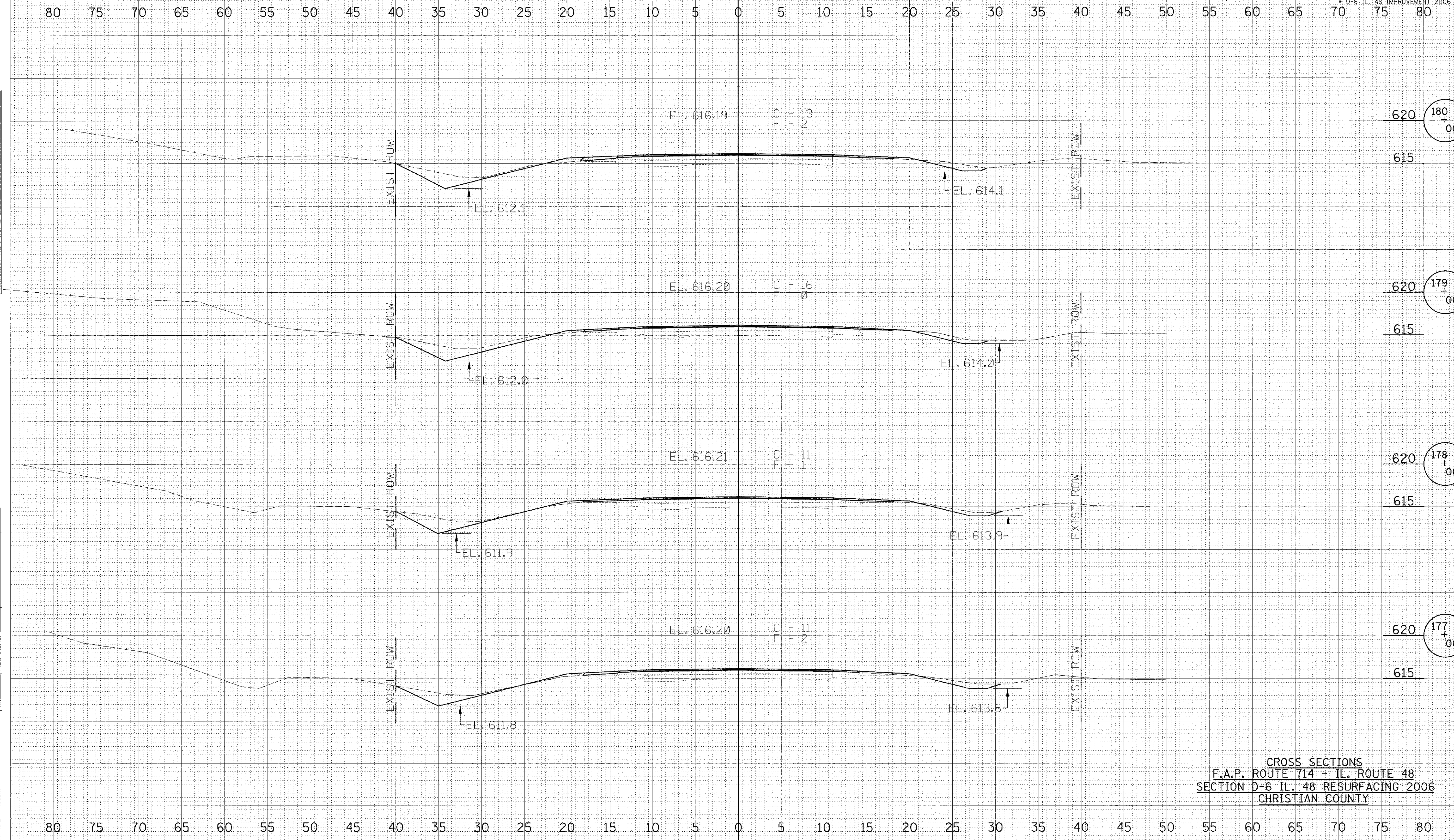


CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	83
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

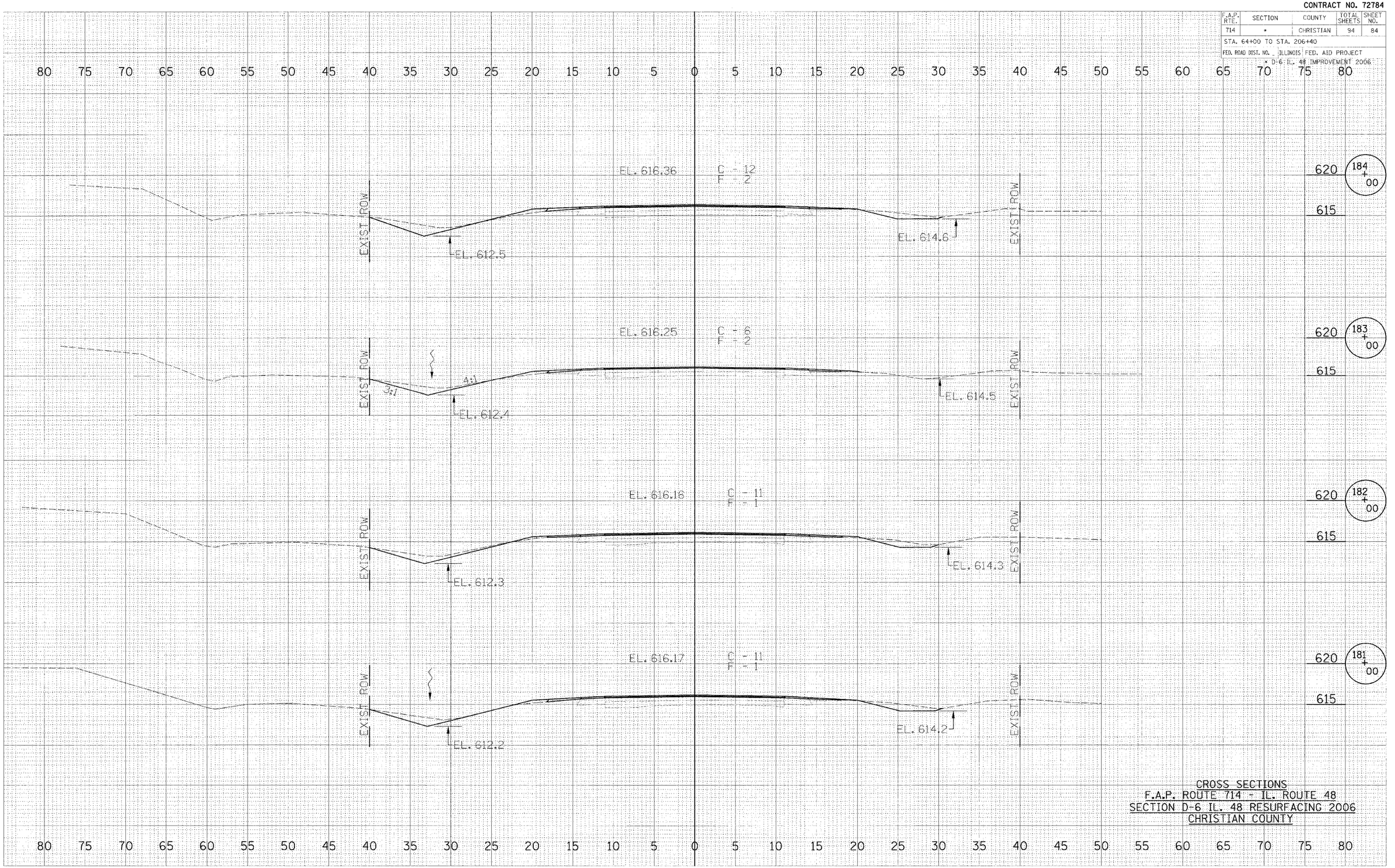
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	84

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

DATE
BY
FINAL SURVEY NOTE BOOK NO.
SURVEYED PLOTTED AREAS AREAS CHECKED

ORIGINAL SURVEY NOTE BOOK NO.
SURVEYED PLOTTED AREAS AREAS CHECKED

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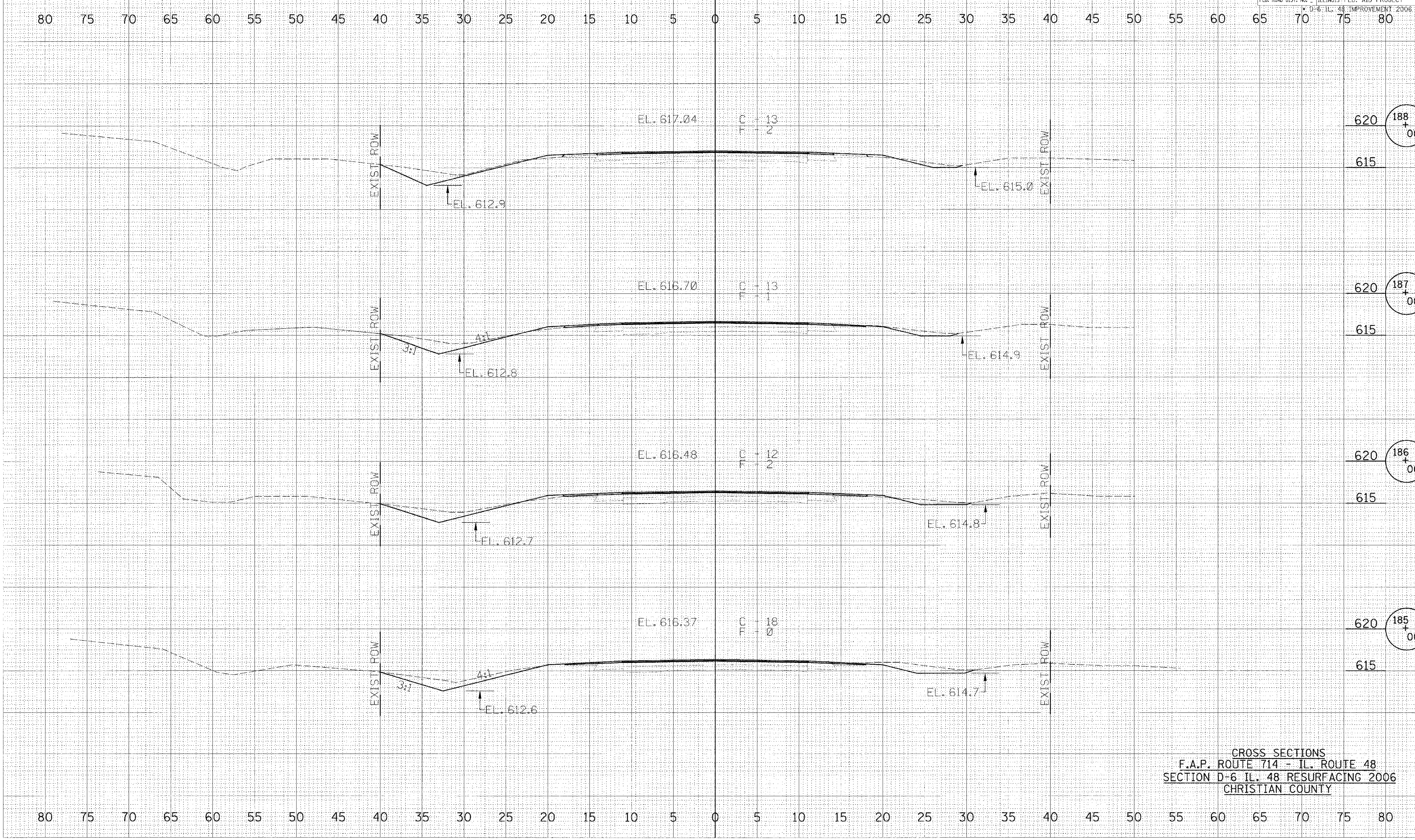
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	85

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006



CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

FINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

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CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	86

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

EL. 617.90

620 P.E. + 47

615

EXIST ROW

℄ NEW 18"Ø X 52' PIPE CULVERT, CLASS D, TYPE 1
℄ INLET 31' RT. - EL. 615.0
℄ OUTLET 31' RT. - EL. 614.8

EL. 617.82 C - 15 F - 6

620 191 + 00

615

EXIST ROW 4:1 EL. 613.2

4:1 EL. 615.1 EXIST ROW

SUMMIT - STA. 190+00 RT.

BEGIN DRAINAGE IMPROVEMENT STA. 190+00 RT.

EL. 617.58 C - 8 F - 5

620 190 + 00

615

EXIST ROW 4:1 EL. 613.1

EL. 615.4 EXIST ROW

EL. 617.32 C - 9 F - 1

620 189 + 00

615

EXIST ROW 4:1 EL. 613.0

EL. 615.1 EXIST ROW

CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

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PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	-	CHRISTIAN	94	87

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

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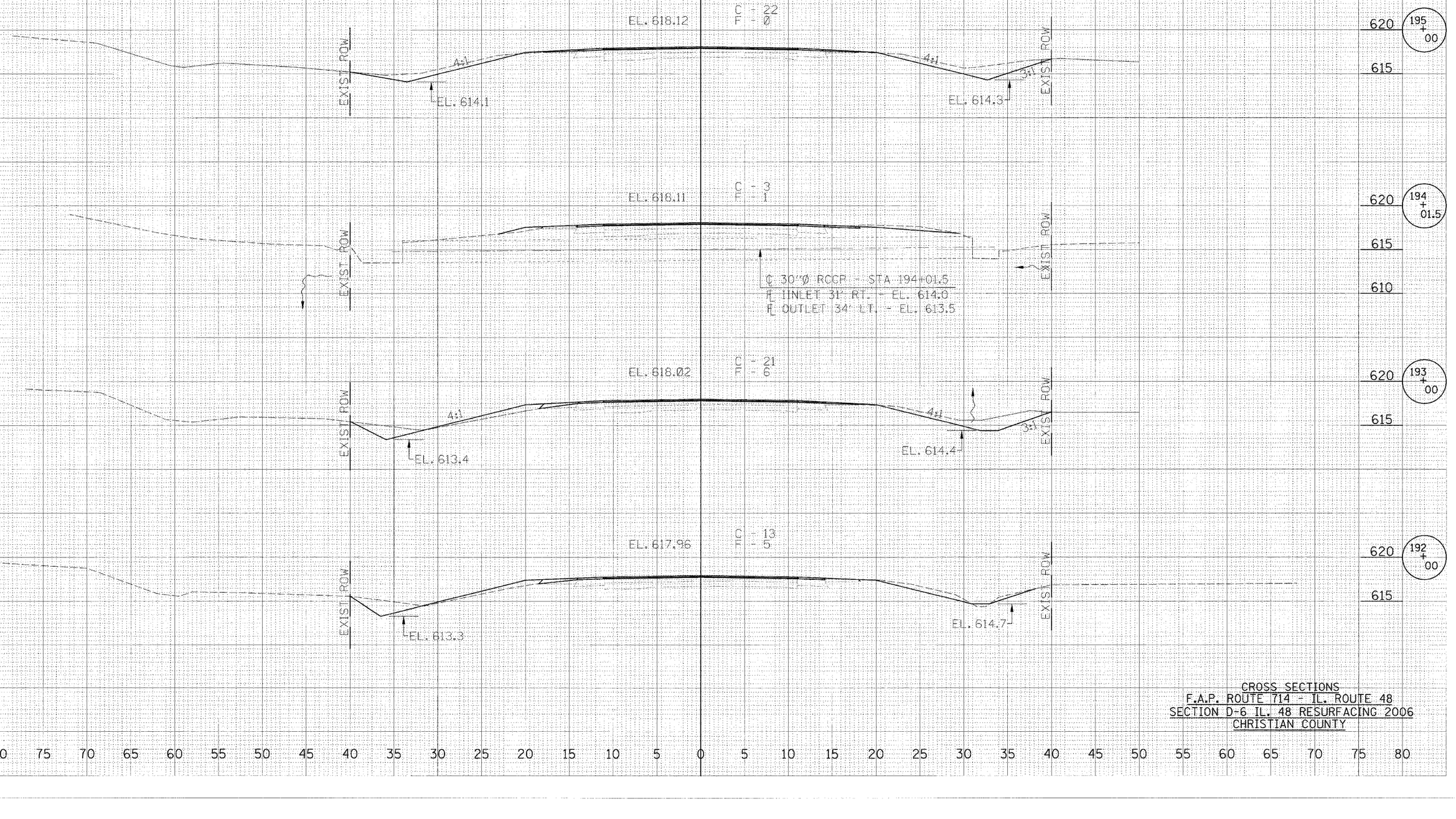

CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TRACED
AREAS CHECKED
BY
DATE

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	88

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

EL. 618.00 C - 6 F - 1

EXIST ROW

EL. 614.9

EL. 615.5

EXIST ROW

620 615 199 + 00

EL. 618.01 C - 7 F - 4

EXIST ROW

EL. 614.8

4:1

EL. 615.2

EXIST ROW

620 615 198 + 00

EL. 617.95 C - 13 F - 3

EXIST ROW

EL. 614.7

4:1

EL. 614.9

EXIST ROW

620 615 197 + 00

EL. 618.05 C - 15 F - 4

EXIST ROW

EL. 614.4

EL. 614.6

EXIST ROW

620 615 196 + 00

CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FINAL SURVEY — NO. _____ — NOTE BOOK — SURVEYED — PLOTTED — CHECKED — AREAS — AREAS CHECKED — BY — DATE

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CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	89

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

STA. 202+00 - END DRAINAGE IMPROVEMENT LT. & RT.

EL. 618.32

C - 1
F - 4

EXIST ROW

EL. 615.8

EL. 616.4

EXIST ROW

620
615

202 + 00

EL. 618.23

EXIST ROW

℄ NEW 15"Ø X 32' PIPE CULVERT, CLASS D, TYPE 1
E INLET 29' RT. - EL. 615.8
E OUTLET 29' RT. - EL. 615.7

620
615

F.E. + 67

EL. 618.01

C - 5
Ø

EXIST ROW

EL. 615.5

EL. 616.1

EXIST ROW

620
615

201 + 00

EL. 618.01

C - 4
2

EXIST ROW

EL. 615.2

EL. 615.8

EXIST ROW

620
615

200 + 00

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
NOTES
AREAS ENTERED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
NOTES
AREAS ENTERED
BY
DATE

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	90

STA. 64+00 TO STA. 206+40

FED. ROAD DIST. NO. _ ILLINOIS | FED. AID PROJECT

* D-6 IL. 48 IMPROVEMENT 2006

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

206+00 30' 616.4

EXIST. ROW

EL. 616.1

EL. 618.51

206+00 28' 617.4

EL. 617.1

EXIST. ROW

620

615

205 + 00

EL. 618.44

EXIST. ROW

EL. 616.0

EL. 616.9

EXIST. ROW

620

615

204 + 00

EL. 618.33

EXIST. ROW

EL. 615.9

EL. 616.7

EXIST. ROW

620

615

203 + 00

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

CROSS SECTIONS
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 RESURFACING 2006
CHRISTIAN COUNTY

FINAL SURVEY
NO. | BY | DATE
SURVEYED
PLOTTED
PROJECT
AREAS
AREAS CHECKED

ORIGINAL CURVE:
SURVEYED
PLOTTED
PROJECT
AREAS
AREAS CHECKED
NO. | 60'E BOOK

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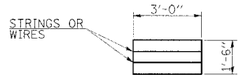
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

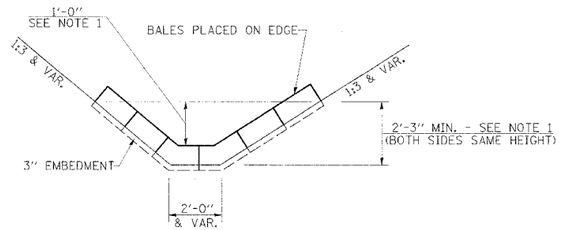
CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	91
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

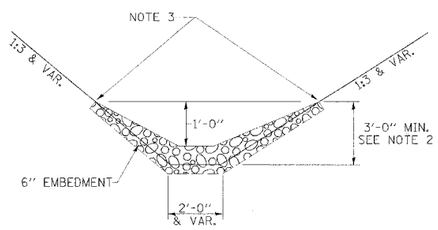
* D-6 IL. 48 IMPROVEMENT 2006



HAY OR STRAW BALE
(TYPICAL ELEVATION)



HAY OR STRAW BALE TEMPORARY DITCH CHECK
(TYPICAL)



STONE DUMPED RIPRAP DITCH CHECK
(TYPICAL)

NOTE 1: BALES SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3 m OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE BALES.

NOTE 2: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3 m OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 3: ENDS SHALL BE TIED INTO SLOPES.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN

ITEM	SYMBOL
AGGREGATE (EROSION CONTROL) [STONE DUMPED RIPRAP DITCH CHECKS (Height = 0.6 m)]	
TEMPORARY DITCH CHECKS (HAY OR STRAW BALE DITCH CHECKS OR APPROVED SUBSTITUTION)	
INLET PIPE PROTECTION (I&PP) (HAY OR STRAW BALE DITCH CHECKS OR APPROVED SUBSTITUTION)	
EROSION CONTROL FENCE	
EARTH EXCAVATION FOR EROSION CONTROL (SEDIMENT BASINS)	
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY (OUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (Requirement)	* ITEM *
ITEM PLACED AS DIRECTED BY ENGINEER (When required by situation)	ITEM
DIRECTION OF OVERLAND FLOW	

GENERAL NOTES:

All items shall be constructed as shown on this sheet, on Standard 280001, and as directed by the Engineer.

The symbology on the STORM WATER POLLUTION PREVENTION PLAN sheets does not represent the size or quantity of bales, for number of bales refer to details and notes shown on this sheet and/or as directed by the Engineer.

See Sheet No. 13 for Erosion Control Items Schedule.

STORM WATER POLLUTION
PREVENTION PLAN
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: SWPPLANEX (REV. 3/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	•	CHRISTIAN	94	92
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-6 IL. 48 IMPROVEMENT 2006

STORM WATER POLLUTION PREVENTION PLAN

Route: FAP 714 Marked: IL 48

Section: D-6 IL. 48 Improvement 2006 Project No.: NA

County: Christian County Contract No.: 72784

This plan has been prepared to comply with the provision of the NPDES Permit Number ILR10_____ issued by the Illinois Environmental Protection Agency for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquire of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Christ M Reed
(Signature)

March 30, 2006
(Date)

Deputy Director
(Title)

Note: The above boxed in area will be filled out by IDOT - Construction after the award of the contract to obtain the required NPDES permit.

The following plan was established and included in these plans to direct the Contractor in the placement of temporary erosion control systems and to provide a storm water pollution prevention plan for compliance under NPDES. The Contractor shall abide to all requirements within this plan as part of the contract.

The purpose of this plan is to prevent / minimize siltation within the construction zone and to eliminate sediments from entering and leaving the construction zone by utilizing proper temporary erosion control systems and providing ground cover within a reasonable time.

Certain items, as shown in this plan and referenced by the legend, shall be placed by the Contractor at the beginning of construction at locations shown on the plans. Other items shall be placed by the Contractor as directed by the Engineer on a case by case situation resulting from the Contractor's sequence of activities, time of year and expected weather conditions.

The Contractor shall place permanent erosion control systems and seeding within a reasonable amount of time; therefore, reducing the amount of area being open to the possibility of erosion and reducing the amount of temporary erosion control systems and temporary seeding. The Resident Engineer will determine if temporary erosion control systems shown in the plan can be deleted, the size of the proposed ditch checks, the proper method of installation, and if any additional temporary erosion control systems shall be added which are not included in this plan. The Contractor shall perform all work as directed by the Engineer and as shown in special details and in Standard 280001 of the plans.

The special provisions Temporary Seeding, Temporary Erosion Control Seeding, and Temporary Erosion Control additionally supplement this plan.

All disturbed areas having high potential for erosion, as determined by the Engineer, shall be temporarily seeded or permanently seeded by October 1, 2006 and shall not be reopened until after the winter shutdown period.

SITE DESCRIPTION

Description of Construction Activity:

1. The proposed project consists of the resurfacing of 11.1 miles of two lane highway in the townships of Taylorville, May and Stonington and other outstanding rural areas.
2. Construction consists of grading, constructing culverts, bituminous resurfacing, placing bituminous and aggregate shoulders, guardrail removal and replacement and other miscellaneous work to complete improvements to the proposed roadway.

Description of Intended Sequence of Major Construction Activities Which Will Disturb Earth and Lead to Possible Erosion for Major Portions of the Construction Site:

1. Grading and shaping of ditches for approximately 2850 feet.
2. Excavation will be completed along the IL. 48 section to grade out for proposed roadway ditches.
3. Embankment will be completed at shoulders to raise the existing ground elevation to meet the proposed roadway template.
4. Drainage structures will be installed before and/or during the construction of the excavation and embankment to allow proper drainage across private and field entrances.
5. Placement, maintenance, removal and proper clean-up of temporary erosion control, such as erosion control fence, hay or straw bale ditch checks, temporary seeding, etc.
6. Placement of permanent erosion control, such as seeding, mulch and fertilizer nutrients.
7. Final grading, paving and other miscellaneous items.

Other Reports, Studies and Plans which Aid in the Development of this Storm Water Pollution Prevention Plan as Referenced Documents:

1. Information on the soils within the site was obtained from field reviews which were utilized for proposed placement of the temporary erosion control systems.
2. U. S. G. S. drainage maps indicating drainage patterns and approximate slopes were referenced along with project plan documents to assist in the proposed placement of the temporary erosion control systems.

STORM WATER POLLUTION
PREVENTION PLAN
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: SWPPLANEX (REV. 2/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	93
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

CONTROLS - EROSION CONTROLS AND SEDIMENT CONTROLS

Description of Stabilization Practices at the Beginning of Construction:

1. The area between the existing right-of-way boundaries and limits of the project will be improved and managed for the purposes of controlling erosion within the area, reducing water flow by temporary diversion and minimizing siltation into the construction zone, and establishing vegetative cover which will become permanent vegetation and act as an erosion barrier. Work at the beginning of construction will consist of the following:

   (a) Areas of existing vegetation (woods and grasslands) outside the proposed construction slope limits shall be identified for preserving and shall be protected from mowing, brush cutting, tree removal and other activities which would be detrimental to their maintenance and development.

   (b) Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer.

   (c) As soon as reasonable access is available to all locations where water drains away from the project, temporary ditch checks, and/or erosion control fence shall be installed as called out in this plan and directed by the Engineer.

   (d) Bare and sparsely vegetated ground in highly erodable areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are immediately expected as stated in the special provision "Temporary Erosion Control Seeding".

   (e) At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), erosion control fence, temporary ditch checks, will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the right-of-way line. Erosion control items will not be allowed to be installed to cause flooding to upstream private property which could cause crop damages or other undesireable conditions.

2. Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and overseeding can be complete.

3. A third benefit of these filter areas is that they will begin to provide a screen and buffer. They will help protect the construction site from winds and excess sun and mitigate construction noise and dust.

Description of Stabilization Practices During Construction:

1. During roadway construction, areas outside the construction slope limits as outlined previously herein shall be protected from damaging effects of construction. The Contractor shall not use this area for staging (except as designated on the plans or directed by the Engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.
   (a) Within the construction zone, critical areas which have high flows of water as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
   (b) Top soil and earth stockpiles shall be temporarily seeded if they are to remain unused for more than fourteen days.
   (c) As the Contractor constructs a portion of roadway in a fill section, he/she shall follow the following steps as directed by the Engineer:

   i. Place temporary erosion control systems at locations where water leaves and enters the construction zone
   ii. Temporary seed highly erodable areas outside the construction slope limits
   iii. Construct roadside ditches and provide temporary erosion control systems
   iv. Temporary divert water around proposed culvert locations
   v. Build necessary embankment at culvert locations and then excavate and place culvert
   vi. Continue building up the embankment to the proposed grade while at the same time place permanent erosion control and conduct final shaping to the slopes.

   (d) The Contractor shall immediately follow major earth moving operations with final grading equipment. After the major earth spread operation has moved to a new location, final grading shall be completed within fourteen days. If grading is not completed within fourteen days, all major earth moving operations will be stopped, as directed by the Engineer, until disturbed areas are final graded and seeded.

   (e) Excavated areas and embankments shall be permanently seeded when final graded. If not, they shall be temporarily seeded as stated in the special provision "Temporary Erosion Control Seeding".

   (f) Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution run-off in compliance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

   (g) The Resident Engineer shall inspect the project daily during activities and weekly or after large rains during the winter shutdown period. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other control work is necessary.

   (h) Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance will be paid for in accordance with Article 109.04 of the Standard Specifications.

   (i) The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The costs of this removal shall be included in the unit bid price for the temporary erosion control system. No additional compensation will be allowed.

Description of Structural Practices After Final Grading:

1. Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established with a proper stand.

2. Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded. Temporary ditch checks will be allowed to remain in place where approved by the Engineer.

Maintenance after Construction:

1. Construction is complete after acceptance is received at the final inspection.

2. Areas will be inspected on a regular basis by IDOT District 6 Bureau of Operations.

3. Maintenance crews will perform regular mowings to aid in keeping weeds down and establishing a good roadside seed stand.

4. Maintenance crews will also aid in any ditch maintenance or in any drainage problems.

5. All maintenance will be conducted at times when weather conditions will not cause site damage.

DOCUMENTATION

1. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with Section 4.b. shall be made and retained as part of the plan for at least three years after the date of inspection. The report shall be signed in accordance with part VI.G of the general permit.

2. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incident of Noncompliance (ION)" report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI.G. of the general permit. The report of noncompliance shall be mailed to the following address:

   Illinois Environmental Protection Agency
   Division of Water Pollution Control
   1021 North Grand Avenue E.
   Springfield, IL 62702
   Attn: Compliance Assurance Section

STORM WATER POLLUTION
PREVENTION PLAN
F.A.P. ROUTE 714 - IL. ROUTE 48
SECTION D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY

FILE NAME: SWPPLANEX (REV. 2/27/06)

CONTRACT NO. 72784

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
714	*	CHRISTIAN	94	94
STA. 64+00 TO STA. 206+40				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D-6 IL. 48 IMPROVEMENT 2006

CONTRACTOR CERTIFICATION STATEMENT

This certification statement is part of the Storm Water Pollution Plan for the project described below in accordance with NPDES Permit No. ILR10 _____, issued by the Illinois Environmental Protection Agency on _____.

Route: FAP 714 Marked: IL 48

Section: D-6 IL. 48 Improvement 2006 Project No.: NA

County: Christian County Contract No.: 72784

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature _____ Date _____

Title _____

Name of Firm _____

Street Address _____

City, State, Zip _____

Phone Number _____

Note: The above boxed in area shall be filled out by the Contractor after the award of the contract to obtain the required NPDES Permit from IEPA. This is a requirement for this contract.

FILE NAME: SWPPLANEX (REV. 2/27/06)

STORM WATER POLLUTION
PREVENTION PLAN
F.A.P. ROUTE 714 - IL. ROUTE 48
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