

76411

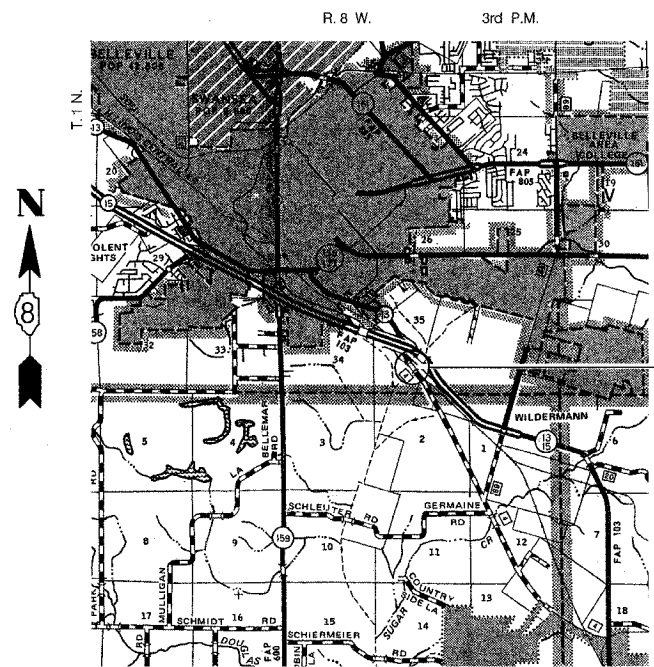
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	1
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**  
F.A.P. ROUTE 103 (OLD ILLINOIS 13)  
SECTION 27-3BR  
PROJECT : *F-0103(065)*  
ST. CLAIR COUNTY  
C-98-059-05  
STRUCTURE REPLACEMENT

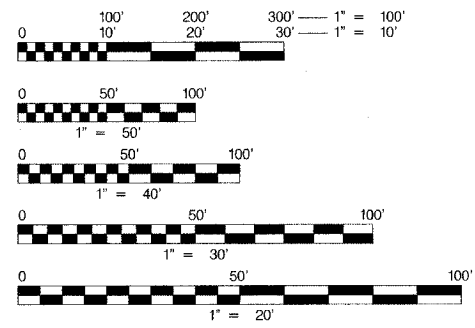
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IDOT STANDARDS	
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28001-02	701101-01
48201	701106-01
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515001-02	701426-02
630001-06	702001-06
630301-03	704001-02
631011-02	720011
635006-02	780001-01

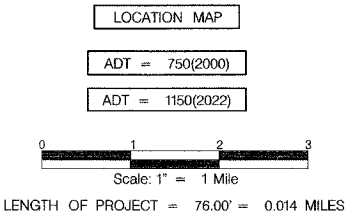


PROPOSED STRUCTURE:  
REINFORCED CONCRETE DOUBLE BARREL BOX CULVERT,  
LENGTH 51'-6", 12'-0" (M) X 10'-0" (H), 0° SKEW.  
STA. 85+70. STRUCTURE REPLACEMENT OVER AN  
UNNAMED TRIBUTARY TO RICHLAND CREEK.  
S.N. 082-0402 (EXISTING) S.N. 082-2042 (PROPOSED)



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.

FUNCTIONAL CLASSIFICATION : OTHER PRINCIPAL ARTERIAL



LATITUDE: 38° 29' 16"  
LONGITUDE: 89° 57' 23.15"



*Christopher P. Kehlman 10/24/05*  
EXPIRATION DATE: 11/30 /05

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED March 23, 2006

Mike Adams  
DEPUTY DIRECTOR OF HIGHWAYS REGION 5 / DISTRICT 8

May 12, 2006  
Mike Adams  
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: PATTI LE BEAU (618)346-3179  
SQUAD CONTACT: ARTHUR MUEHLFELD (618)346-3209

CONTRACT NO. 76411

**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 CUTTING OF THE EXISTING PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE COST PER SQUARE YARD FOR PAVEMENT REMOVAL. THE SAW CUT DEPTH SHALL BE THE FULL DEPTH OF THE PAVEMENT.
- 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, RELOCATED OR COVERED 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 SEPERATELY 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 RESPONSIBILITY 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.

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY ALSO BE OBTAINED BY CALLING J.U.L.I.E. AND FOR NON-J.U.L.I.E. MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

- M.C.I.  
2400 N. GLENVILLE  
RICHARDSON, TX. 75082  
CONTACT: DEAN BOYERS  
1-972-729-6016
- ILLINOIS AMERICAN WATER  
BELLEVILLE, IL. 62220  
1-618-277-1151
- SBC  
203 GOETHE STREET  
COLLINSVILLE, IL.  
CONTACT: JANET BURNS  
1-618-346-6494
- AMEREN SERVICES CO.  
1901 CHOUTEAU AVE.  
ST. LOUIS, MO. 63103  
1-314-621-3222
- CHARTER COMMUNICATIONS  
3660 SOUTH GEYER ROAD  
ST. LOUIS, MO.  
1-314-579-4800
- 360-METWORKS  
CONTACT: CHRIS THERRIEN  
1-416-848-2011

(MEMBERS OF J.U.L.I.E. (800)892-0123 ARE INDICATED BY \*. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

**COMMITMENTS: NONE**

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

BITUMINOUS CONCRETE SURFACE/BINDER/SHOULDER	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
TEMPORARY EROSION CONTROL SEEDING	100 LBS./ACRE

**EROSION AND SEDIMENT CONTROL NOTES**

1. PLANS INCLUDE ESTIMATED QUANTITIES FOR TEMPORARY EROSION AND SEDIMENT CONTROL. THESE ARE WORST CASE ESTIMATES. DISTURBANCE OF AREAS BEYOND THE LIMITS OF ACTUAL IMPROVEMENT IS TO BE HELD TO A MINIMUM.
2. TEMPORARY SEEDING AND MULCH SHALL BE COMPLETED ON A TIMELY BASIS AS DIRECTED BY THE ENGINEER, ON EXPOSED GROUND AND SHALL BE IN ACCORDANCE WITH SECTION 280 OF THE STANDARD SPECIFICATIONS EXCEPT THAT MULCH AND TEMPORARY SEEDING SHALL BE PAID FOR AS TEMPORARY EROSION CONTROL SEEDING AND NO OTHER PAYMENT WILL BE PERMITTED.
3. ALL AREAS DISTURBED FOR ANY REASON SHALL BE SEEDED WITH CLASS 2 SEEDING AS DIRECTED BY THE ENGINEER. NUTRIENTS SHALL CONFORM TO ARTICLE 250.04 EXCEPT FERTILIZER NUTRIENTS WILL NOT BE PAID FOR SEPERATELY AS INCLUDED IN THE COST OF CLASS 2 SEEDING.
4. CLASS 2 SEEDING AND EROSION CONTROL BLANKET IS TO BE PLACED AS SOON AS EARTHWORK IS COMPLETED.
5. EROSION CONTROL BLANKET IS TO BE PLACED ON ALL SLOPES 3:1 OR STEEPER.
6. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USED SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER RECOMMENDED INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.
7. EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN 14 DAYS.
- ~~8. SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE AND ON A REGULAR BASIS, AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "EARTH EXCAVATION" AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.~~
9. FINAL SEEDING SHALL BE PERFORMED AS SOON AS POSSIBLE.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	2
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				

**MIXTURE REQUIREMENTS**

MIXTURE USE	SURFACE	BASE COURSE	SHOULDER	TOP LIFT SHOULDERS
AC/PG	PG 64-22	PG 58-22	PG 58-22	PG 58-22
RAP % (MAX.)	15%	30%	30%	30%
DESIGN AIR VOIDS	4.0% @ Ndes = 70	2.0% @ Ndes = 50	2.0% @ Ndes = 30	**2.0% @ Ndes = 30
MIXTURE COMPOSITION				
GRADIAN MIXTURE				
FRICTION AGGREGATE	MIXTURE C	BSE CSE	BAM	BAM

\*\* TOP LIFT SHOULDERS - DESIGN THIS MIX AT 2.0% VOIDS AND ADD ASPHALT TO REDUCE VOIDS TO 1.5%.

PLAN QUANTITIES FOR BITUMINOUS CONCRETE SURFACE COURSE ITEMS CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ. YD./IN.

GENERAL NOTES  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY OF RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

Rev.

SUMMARY OF QUANTITIES					
CODE NO.	SUMMARY OF QUANTITIES PAY ITEM	UNIT	TOTAL QUANTITY	ROADWAY	STRUCTURE
				FAP 103 80% FEDERAL 20% STATE	S.N. 082-2042 80% FEDERAL 20% STATE
				CONSTRUCTION 1000	TYPE CODE X028-2A
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	199	199	
20200100	EARTH EXCAVATION	CU. YD.	67	67	
20400800	FURNISHED EXCAVATION	CU. YD.	405	405	
25000200	SEEDING, CLASS 2	ACRE	0.30	0.30	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	27	27	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	27	27	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	27	27	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.60	0.60	
25100115	MULCH, METHOD 2	ACRE	0.30	0.30	
25100630	EROSION CONTROL BLANKET	SQ. YD.	1259	1259	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	30	30	
28000400	PERIMETER EROSION BARRIER	FOOT	621	621	
28100109	STONE RIPRAP, CLASS A5	SQ. YD.	187		187
28200200	FILTER FABRIC	SQ. YD.	231		231
44000100	PAVEMENT REMOVAL	SQ. YD.	147	147	
44000710	BITUMINOUS BASE COURSE REMOVAL	SQ. YD.	28	28	
48202000	BITUMINOUS SHOULDERS (SUPERPAVE)	TON	99	99	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50800105	REINFORCEMENT BARS	POUND	34610		34610
51205200	TEMPORARY SHEET PILING	SQ. FT.	1962		1962
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU. YD.	207.4		207.4
* 63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	397	397	
* 63000025	STEEL PLATE BEAM GUARDRAIL ATTACHED TO STRUCTURES	FOOT	53		53
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2	
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	EACH	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	50	50	
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL. MO.	4	4	
67100100	MOBILIZATION	L. SUM	1	1	
70103800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L. SUM	1	1	

SUMMARY OF QUANTITIES					
CODE NO.	SUMMARY OF QUANTITIES PAY ITEM	UNIT	TOTAL QUANTITY	ROADWAY	STRUCTURE
				FAP 103 80% FEDERAL 20% STATE	S.N. 082-2042 80% FEDERAL 20% STATE
				CONSTRUCTION 1000	TYPE CODE SFTY-3N X028-2A
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL. DAY	5	5	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	42	42	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	938	938	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ. FT.	276	276	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	210	210	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	210	210	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	938	938	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8	8	
* 78201000	TERMINAL MARKER DIRECT APPLIED	EACH	2	2	
78300100	PAVEMENT MARKING REMOVAL	SQ. FT.	284	284	
X0321100	GEOTEXTILE RETAINING WALL	SQ. FT.	101		101
X0324118	GRANULAR CULVERT BACKFILL	CU. YD.	816	816	
X0324762	WIDE LOAD <sup>DETOUR</sup> SIGNING	L. SUM	1	1	
X3550800	BITUMINOUS BASE COURSE SUPERPAVE 11"	SQ. YD.	186	186	
X3560120	BITUMINOUS CONCRETE BASE COURSE WIDENING, SUPERPAVE 8 INCH	SQ. YD.	178	178	
X4066416	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIXTURE C, N70	TON	21	21	
X7010825	TRAFFIC CONTROL & PROTECTION, STANDARD 701423 (SPECIAL)	L. SUM	1	1	
Z0002600	BAR SPLICERS	EACH	144		144
Z0030250	IMPACT ATTENUATORS TEMPORARY (NON-DIRECTIVE), TEST LEVEL 3	EACH	2		2
Z0030350	IMPACT ATTENUATORS RELOCATE (NON-DIRECTIVE), TEST LEVEL 3 (RELOCATE)	EACH	2		2
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L. SUM	1	1	

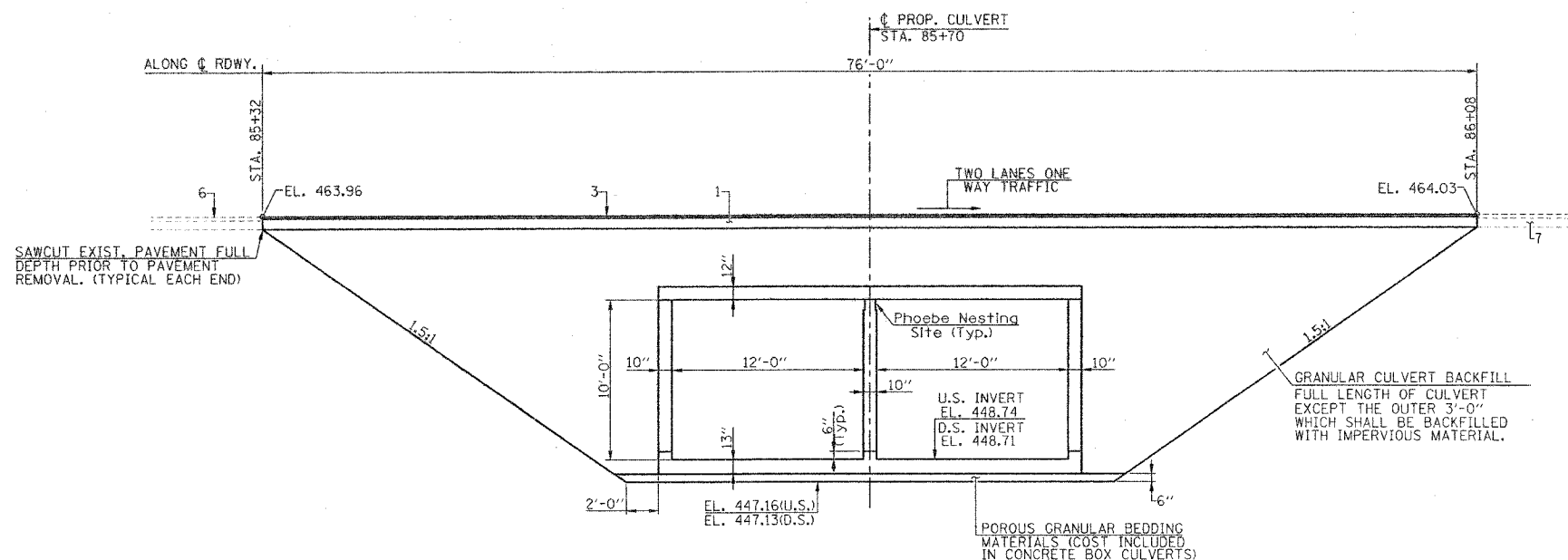
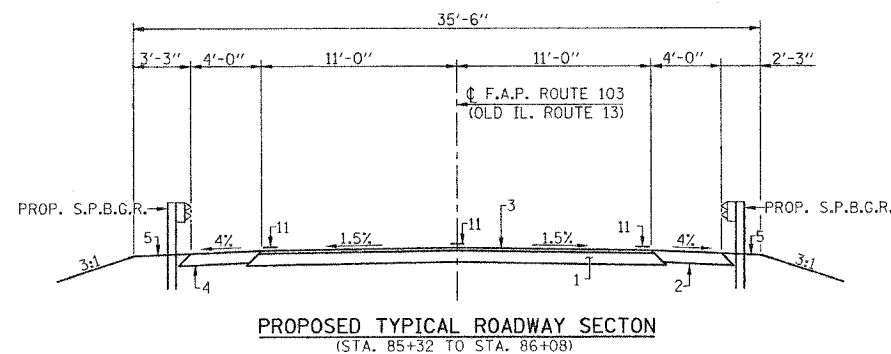
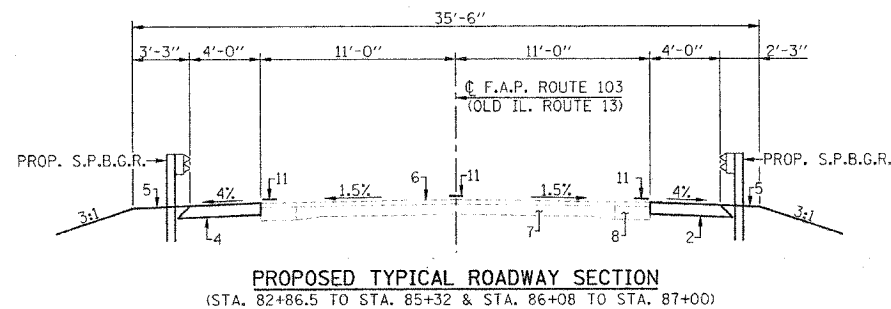
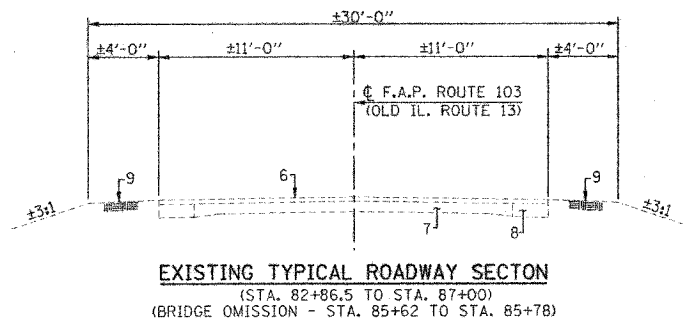
\*SPECIALTY ITEMS

Rev.

SUMMARY OF QUANTITIES  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042

FILE NAME: SH1003 REV. 12/17/05

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	4
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				



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

**PAVEMENT LEGEND**

1. PROPOSED BITUMINOUS CONCRETE BASE COURSE 11"
2. BITUMINOUS CONCRETE BASE COURSE WIDENING 8" (TO REMAIN IN PLACE AND BE RE-USED AS BITUMINOUS SHOULDER)
3. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIXTURE C, N TO 2"
4. PROPOSED BITUMINOUS SHOULDER SUPERPAVE (8")
5. PROPOSED EARTH SHOULDER
6. EXISTING BITUMINOUS OVERLAYS (±4")
7. EXISTING P.C.C. PAVEMENT (9-6-9)
8. EXISTING P.C.C. WIDENING (8")
9. EXISTING EARTH SHOULDER
10. TEMPORARY PAVEMENT MARKING - LINE 4"
11. PAINT PAVEMENT MARKING - LINE 4"
12. EXISTING BRIDGE

DETAILS AND  
TYPICAL ROADWAY SECTIONS  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY OF RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

FILE NAME: SHT004 (REV. 10/5/05)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	5
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				

**SCHEDULE GRANULAR CULVERT BACKFILL**

LOCATION	QUANTITY (CU. YD.)
STA. 85+32 TO STA. 86+08	816
TOTAL	816

**SCHEDULE PAVEMENT REMOVAL**

LOCATION	QUANTITY (SQ. YD.)
STA. 85+32 TO STA. 85+62	73.5
STA. 85+78 TO STA. 86+08	73.5
TOTAL	147.0

**SCHEDULE GUARDRAIL MARKERS**

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 83+70.5 RT.	1	
STA. 84+45.5 RT.	1	
STA. 85+20.5 RT.	1	
STA. 85+95.5 RT.	1	
STA. 83+70.5 LT.	1	
STA. 84+45.5 LT.	1	
STA. 85+20.5 LT.	1	
STA. 85+95.5 LT.	1	
STA. 83+20.5 RT.		1
STA. 83+20.5 LT.		1
TOTAL	8	2

**SCHEDULE TREE REMOVAL (6 TO 15 UNITS DIAMETER)**

LOCATION	QUANTITY (UNIT)
STA. 85+50 37.5' LT.	10
STA. 85+66.5 43.5' LT.	9
STA. 85+66.5 43.5' LT.	9
STA. 85+66.5 43.5' LT.	9
STA. 85+66.5 43.5' LT.	9
STA. 85+67 46' LT.	8
STA. 85+67 46' LT.	8
STA. 85+69 46' LT.	9
STA. 85+69 46' LT.	9
STA. 85+70 42' LT.	8
STA. 85+71 40' LT.	12
STA. 85+74 35' LT.	6
STA. 85+79.5 26' LT.	15
STA. 85+82 44' LT.	6
STA. 85+82 44' LT.	6
STA. 85+83 40' LT.	6
STA. 85+87.5 40.5' LT.	10
STA. 85+89.5 37.5' LT.	12
STA. 85+91 31' LT.	10
STA. 85+79.5 25' RT.	8
STA. 85+80.5 27' RT.	12
STA. 85+85 23' RT.	8
TOTAL	199

**GUARDRAIL SCHEDULE**

LOCATION	STEEL PLATE BEAM GUARDRAIL REMOVAL (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE GUARDRAIL TYPE A (FOOT)	STEEL PLATE BEAM GUARDRAIL ATTACHED TO STRUCTURES (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 2 (EACH)
<b>STAGE I</b>					
STA. 85+37 TO STA. 85+62 LT.	25				
STA. 83+20.5 TO STA. 83+70.5 LT.		1		186.25	
STA. 83+70.5 TO STA. 85+56.75 LT.					
STA. 85+56.75 TO STA. 85+83.25 LT.				26.5	
STA. 85+83.25 TO STA. 85+95.5 LT.			12.25		
STA. 85+95.5 TO STA. 86+08 LT.					1
<b>STAGE II</b>					
STA. 85+37 TO STA. 85+62 RT.	25				
STA. 83+20.5 TO STA. 83+70.5 RT.		1		186.25	
STA. 83+70.5 TO STA. 85+56.75 RT.					
STA. 85+56.75 TO STA. 85+83.25 RT.				26.5	
STA. 85+83.25 TO STA. 85+95.5 RT.			12.25		
STA. 85+95.5 TO STA. 86+08 RT.					1
TOTAL	50	2	397	53	2

**SCHEDULE EROSION CONTROL ITEMS**

LOCATION	PERIMETER EROSION BARRIER (FT.)	EROSION CONTROL BLANKET (SQ. YD.)	TEMP. EROSION CONTROL SEEDING (POUND)
STA. 82+87 TO STA. 85+60 RT.	293		
STA. 85+80 TO STA. 86+05 RT.	45		
STA. 82+87 TO STA. 83+35 LT.	263		
STA. 86+05 TO STA. 86+15 LT.	20		
STA. 82+86.5 TO STA. 86+08 LT.		775	18
STA. 82+86.5 TO STA. 86+08 RT.		484	12
TOTAL	621	1259	30

**PAVEMENT MARKING SCHEDULE**

LOCATION	LENGTH (FT.)	PAVEMENT MK. REMOVAL		TEMP. PVMT. MK. LINE - 4"		SHORT TERM PVMT. MARKING		WORK ZONE PVMT. MARKING REMOVAL		THERMOPLASTIC PVMT. MK. LINE - 4"	
		WHITE (SQ. FT.)	YELLOW (SQ. FT.)	WHITE (FT.)	YELLOW (FT.)	WHITE (FT.)	YELLOW (FT.)	WHITE (SQ. FT.)	YELLOW (SQ. FT.)	WHITE (FOOT)	YELLOW (FOOT)
STA. 82+86.5 TO STA. 87+00 C	414		33		110	42*					110
STA. 82+86.5 TO STA. 87+00 RT.	414	138		414				138		414	
STA. 82+86.5 TO STA. 87+00 LT.	414		113	414					138		414
TOTAL		284		938		42*		276		938	

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES IS FOR ONE APPLICATION.  
 \* 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

**BITUMINOUS SCHEDULE**

LOCATION	BITUMINOUS BASE COURSE SUPERPAVE 11 INCH (SQ. YD.)	BITUMINOUS SHOULDER (SUPERPAVE) (TON)	BIT. CONC. SURFACE COURSE, SUPERPAVE MIXTURE C, N70 (TON)	BIT. CONC. BASE COURSE, WIDENING SUPERPAVE 8 INCH (SQ. YD.)	BIT. CONC. BASE COURSE, REMOVAL (SQ. YD.)
STA. 82+86.5 TO STA. 85+62 RT.				124	
STA. 85+78 TO STA. 87+00 RT.				54	
STA. 82+86.5 TO STA. 87+00 LT.		84			
STA. 85+32 TO STA. 86+08 RT.		15			
STA. 85+32 TO STA. 86+08	186		21		
STA. 85+32 TO STA. 86+62 RT. (STAGE I WIDENING)					14
STA. 85+78 TO STA. 86+08 RT. (STAGE I WIDENING)					14
TOTAL	186	99	21	178	28

**EARTHWORK SCHEDULE**

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 82+86.5 TO STA. 87+00	67	50	455	-405
TOTAL	67	50	455	-405

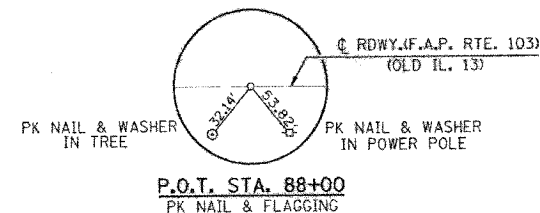
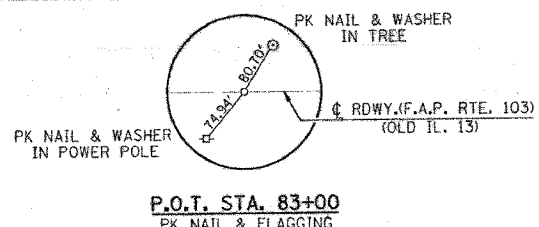
**SCHEDULE PERMANENT SEEDING**

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. 82+86.5 TO STA. 86+08 LT.	0.18	16	16	16	0.18	0.36
STA. 82+86.5 TO STA. 86+08 RT.	0.09	8	8	8	0.09	0.18
STA. 85+35 TO STA. 86+05 EASEMENT RT.	0.03	3	3	3	0.03	0.06
TOTAL	0.30	27	27	27	0.30	0.60

QUANTITY SCHEDULES  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042

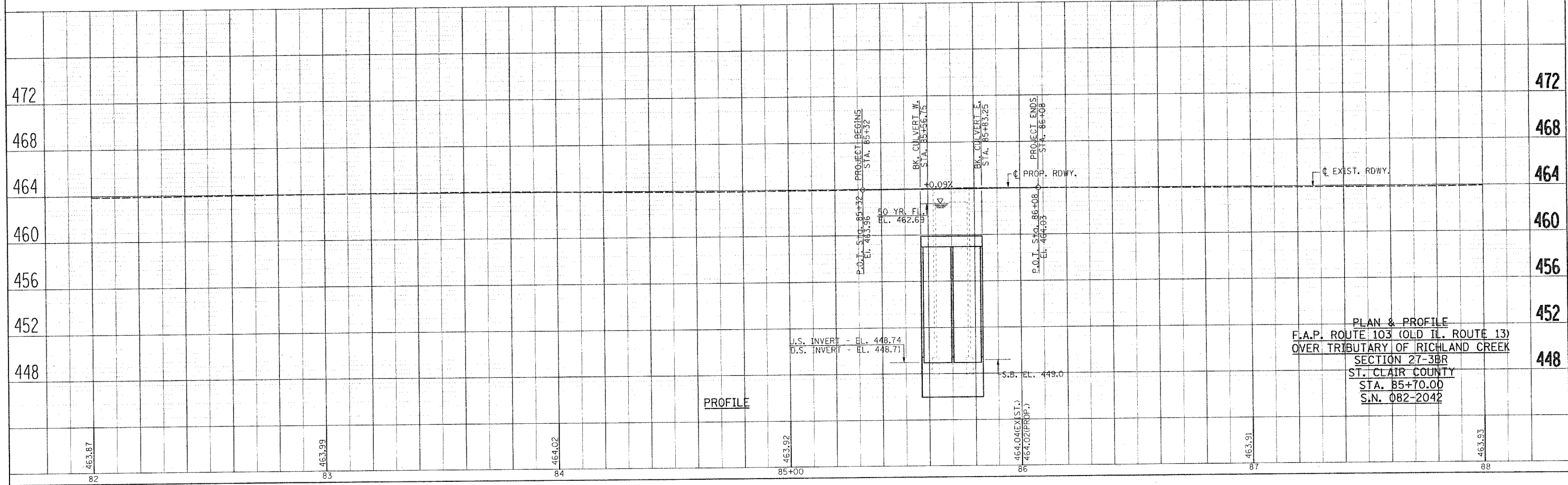
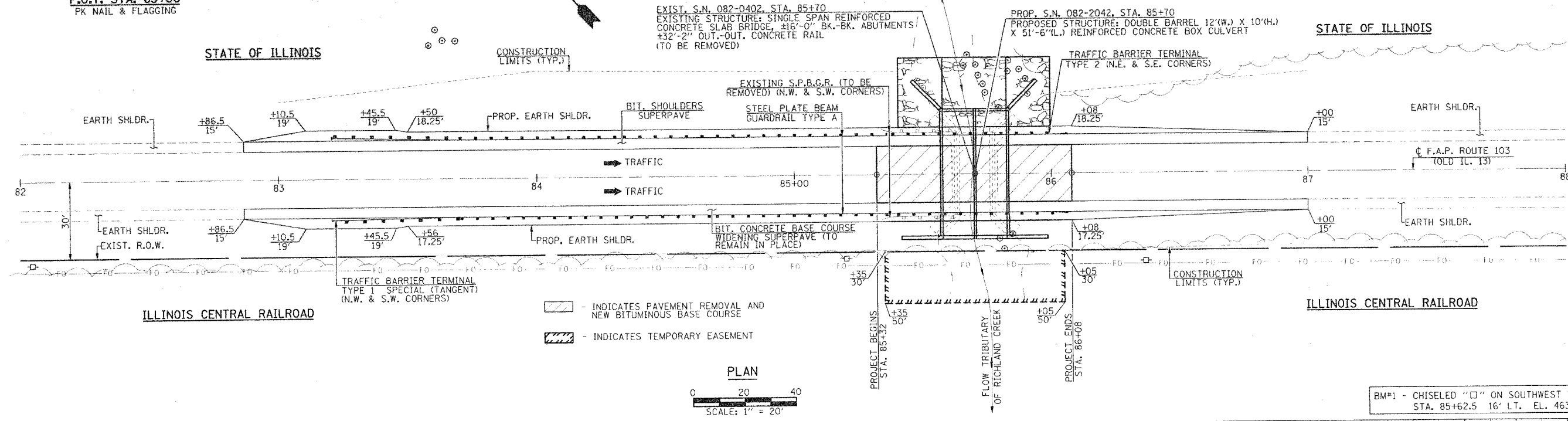
SECTION 35, T. 1 N., R. 8 W., 3rd P.M.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	6
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				



DATE	BY	REVISION

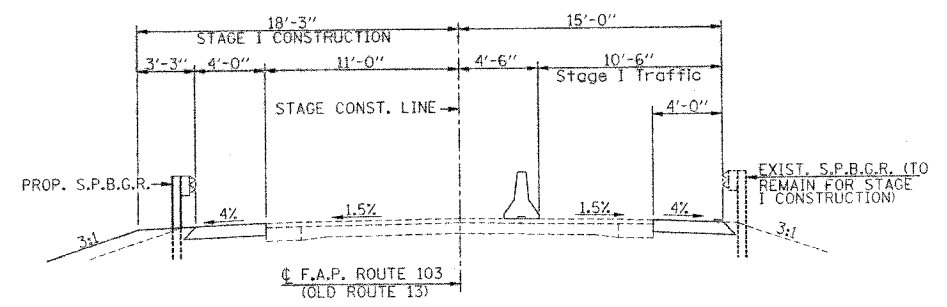
DATE	BY	REVISION



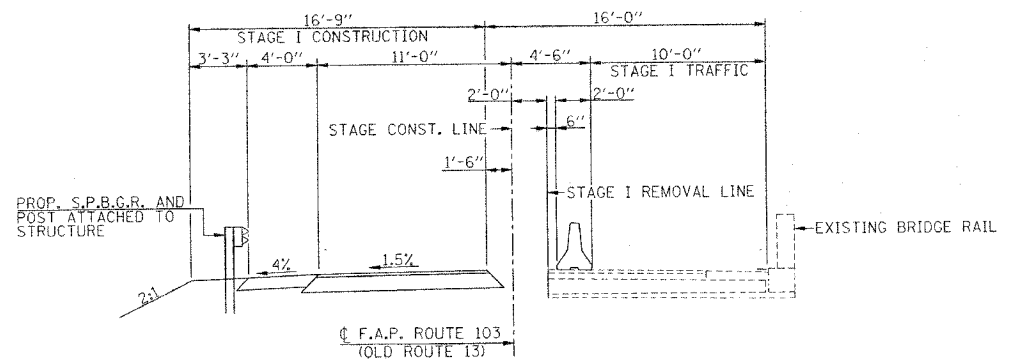
PLAN & PROFILE  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042

BM#1 - CHISELED "□" ON SOUTHWEST WINGWALL  
 STA. 85+62.5 16' LT. EL. 463.44

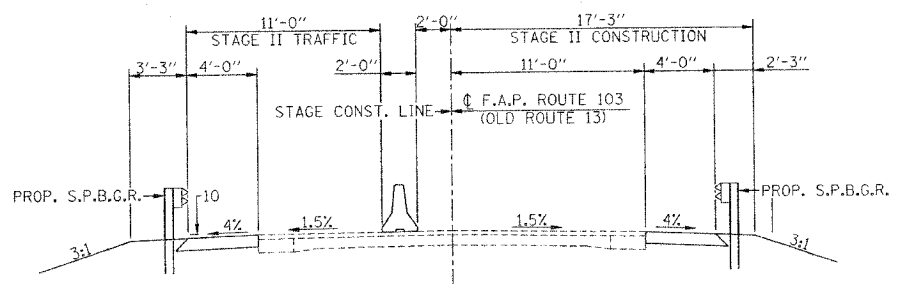
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	7
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				



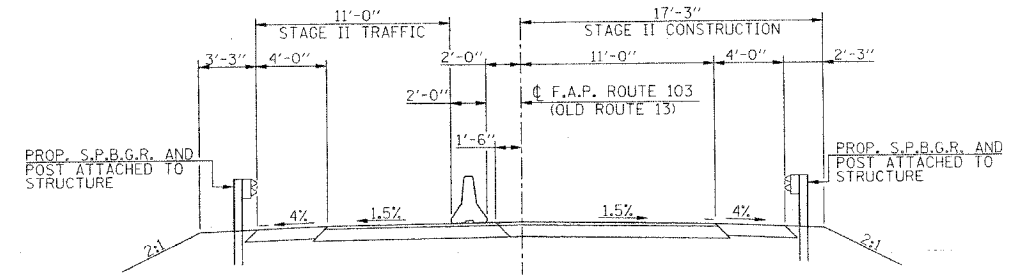
STAGE I TRAFFIC  
(LOOKING UPSTATION)



STAGE I TRAFFIC OVER EXISTING  
BRIDGE/PROPOSED CULVERT  
(LOOKING UPSTATION)



STAGE II TRAFFIC  
(LOOKING UPSTATION)

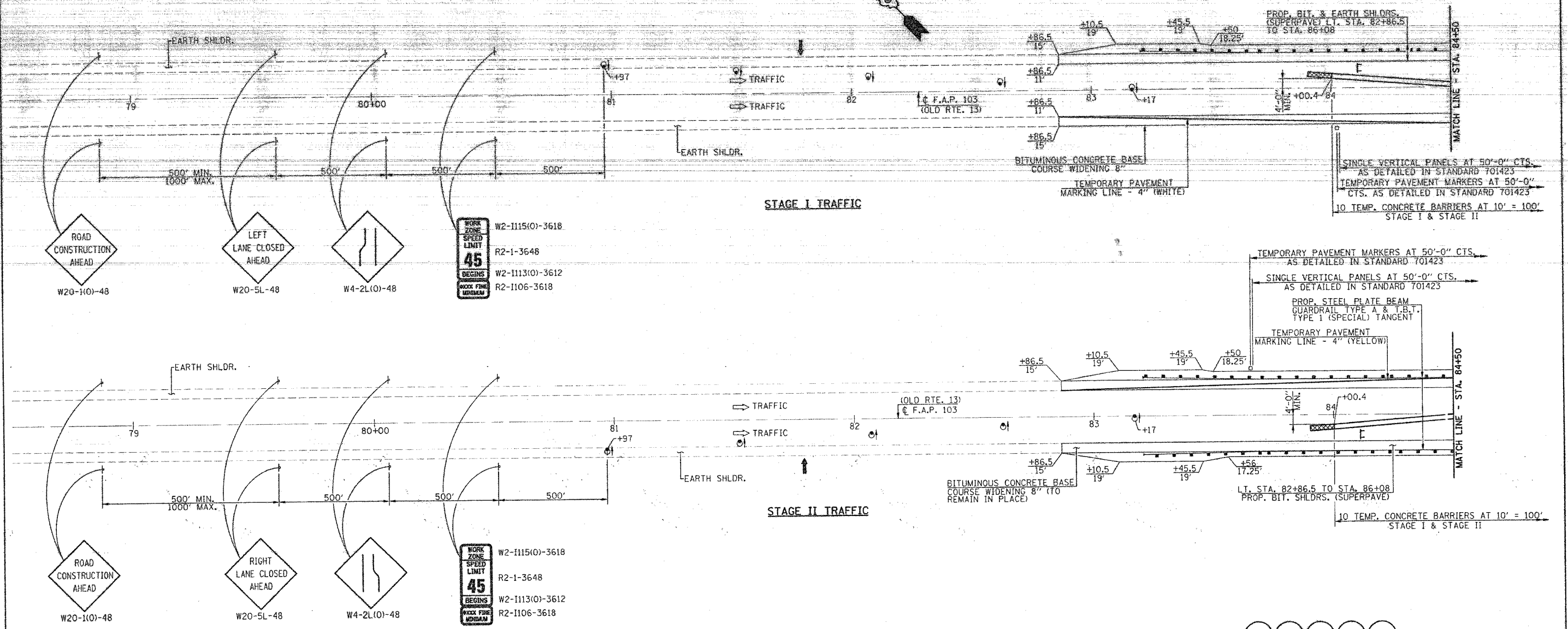


STAGE II TRAFFIC OVER PROPOSED CULVERT  
(LOOKING UPSTATION)

STAGE CONSTRUCTION TRAFFIC DETAILS  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042



F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103 27-3BR	ST. CLAIR	22	8
STA. 85+32 TO STA. 86+08			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			
CONTRACT NO. 76411			

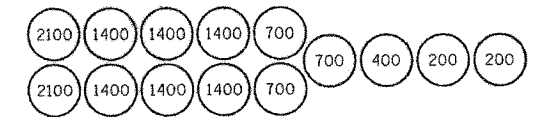


**SUGGESTED STAGE CONSTRUCTION SEQUENCE**

- STAGE I**
1. CONSTRUCT BITUMINOUS CONCRETE BASE COURSE WIDENING 8" RT. STA. 82+86.5 TO STA. 87+00 - (4'-0" WIDE).
  2. ERECT TRAFFIC CONTROL FOR STAGE I.
  3. REMOVE EXISTING STRUCTURE LEFT, @ STA. 85+70.
  4. CONSTRUCT PROPOSED STAGE I DOUBLE BARREL 12' x 10' REINFORCED CONCRETE BOX CULVERT.
  5. CONSTRUCT PROPOSED BITUMINOUS & EARTH SHOULDERS LT. STA. 82+86.5 TO STA. 87+00.
  6. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS LT. STA. 83+20.5 TO STA. 85+95.5.
  7. CONSTRUCT BITUMINOUS BASE COURSE AND SURFACE COURSE.
- STAGE II**
1. ERECT TRAFFIC CONTROL FOR STAGE II.
  2. REMOVE EXISTING STRUCTURE RT. @ STA. 85+70.
  3. CONSTRUCT PROPOSED STAGE II DOUBLE BARREL 12' x 10' REINFORCED CONCRETE BOX CULVERT AND END SECTIONS.
  4. CONSTRUCT PROPOSED BITUMINOUS & EARTH SHOULDERS SHOULDERS RT. STA. 82+86.5 TO STA. 87+00.
  5. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS RT. STA. 83+20.5 TO STA. 85+95.5.
  6. CONSTRUCT BITUMINOUS BASE COURSE AND SURFACE COURSE.
- FINAL**
1. INSTALL SHORT-TERM PAVEMENT MARKINGS AND REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
  2. FINAL STRIPING, SEEDING AND MISCELLANEOUS CLEANUP.

**GENERAL NOTES**

1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 8 TRAFFIC SECTION OF THE BUREAU OF OPERATIONS AT LEAST ONE WEEK PRIOR TO IMPLEMENTING STAGE TRAFFIC CONTROL.
2. 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".
3. THE CONTRACTOR SHALL MAINTAIN FULL OPERATIONAL STATUS OF ALL SIDEROADS AND ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
4. 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.
5. EXISTING POSTED SPEED LIMIT IS 55 MPH.



**BARREL IMPACT ATTENUATOR DIAGRAM**

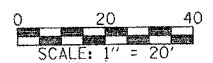
IF SAND BARRELS ARE USED FOR IMPACT ATTENUATORS REFER TO THIS BARREL LAYOUT DIAGRAM. SAND MASS (POUNDS) ARE SHOWN FOR EACH BARREL.

**SYMBOLS**

- ↑ ARROW BOARD
- ▨ WORK AREA
- ⊙ DRUM WITH STEADY BURNING LIGHT
- ◇ TYPE C BIDIRECTIONAL REFLECTOR
- ▬ TEMPORARY CONCRETE BARRIER
- ▬▬ IMPACT ATTENUATOR
- ⊙ DIRECTIONAL INDICATOR BARRICADE WITH STEADY BURNING LIGHT
- ⊥ SIGN
- WHITE BI-DIRECTIONAL TEMPORARY PAVEMENT MARKER
- ⌈ TYPE III BARRICADE

SEE SHEET NO. 9 FOR TRAFFIC CONTROL & TEMPORARY PAVEMENT MARKING SCHEDULES.  
WORK THIS SHEET WITH SHEETS 7 & 9 OF 22 SHEETS.

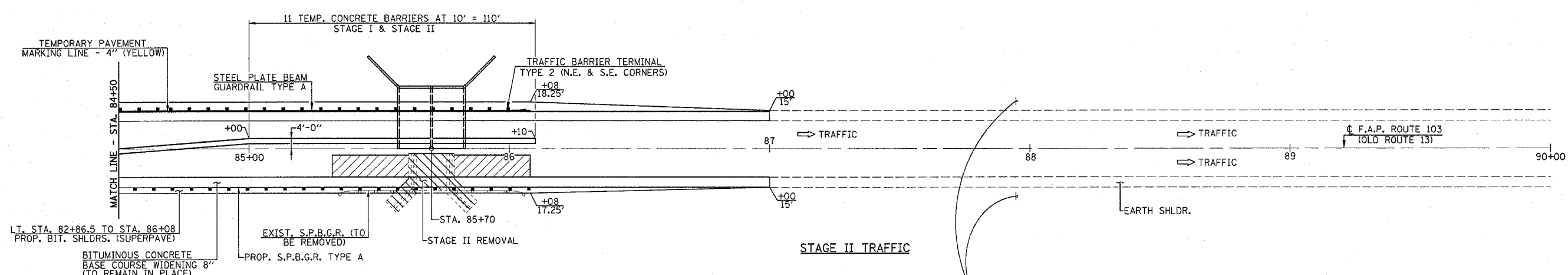
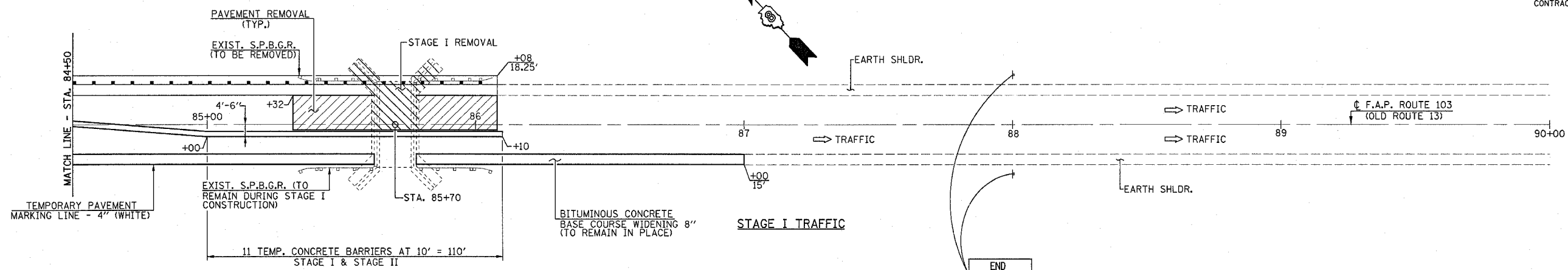
**STAGE CONSTRUCTION TRAFFIC DETAILS**  
F.A.P. ROUTE 103 (OLD I.L. ROUTE 13)  
OVER TRIBUTARY OF RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042



FILE NAME: SH1008 (REV. 10/11/05)



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	9
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				



TRAFFIC CONTROL SCHEDULE

LOCATION STATION TO STATION	TEMP. CONC. BARRIER (FOOT)	RELOCATE TEMP. CONC. BARRIER (FOOT)	IMPACT ATTENUATORS (EACH)	RELOCATE IMPACT ATTENUATOR (EACH)
STAGE I				
STA. 83+85.4 TO STA. 84+00.4			2	
STA. 84+00.4 TO STA. 86+10	210			
STAGE II				
STA. 83+85.4 TO STA. 84+00.4				2
STA. 84+00.4 TO STA. 86+10		210		
TOTAL	210	210	2	2

SCHEDULE TEMPORARY PAVEMENT MARKING

LOCATION STATION TO STATION	TEMP. PAV'T. MARKING LINE - 4\"/>
STAGE I	
STA. 82+86.5 TO STA. 87+00 RT.	414
STAGE II	
STA. 82+86.5 TO STA. 87+00 LT.	414
TOTAL	828

SYMBOLS

- ↑ ARROW BOARD
- ▨ WORK AREA
- ⊙ DRUM WITH STEADY BURNING LIGHT
- ◇ TYPE C BIDIRECTIONAL REFLECTOR
- ▬ TEMPORARY CONCRETE BARRIER
- ▬ IMPACT ATTENUATOR
- ⊙ DIRECTIONAL INDICATOR BARRICADE WITH STEADY BURNING LIGHT
- ⊥ SIGN
- WHITE BI-DIRECTIONAL TEMPORARY PAVEMENT MARKER
- ⊥ TYPE III BARRICADE

FOR GENERAL NOTES SEE SHEET 8 OF 22 SHEETS.  
WORK THIS SHEET WITH SHEETS 7 & 8 OF 22 SHEETS.

STAGE CONSTRUCTION TRAFFIC DETAILS  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY OF RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042



FILE NAME: SHT009 REV. 10/11/05

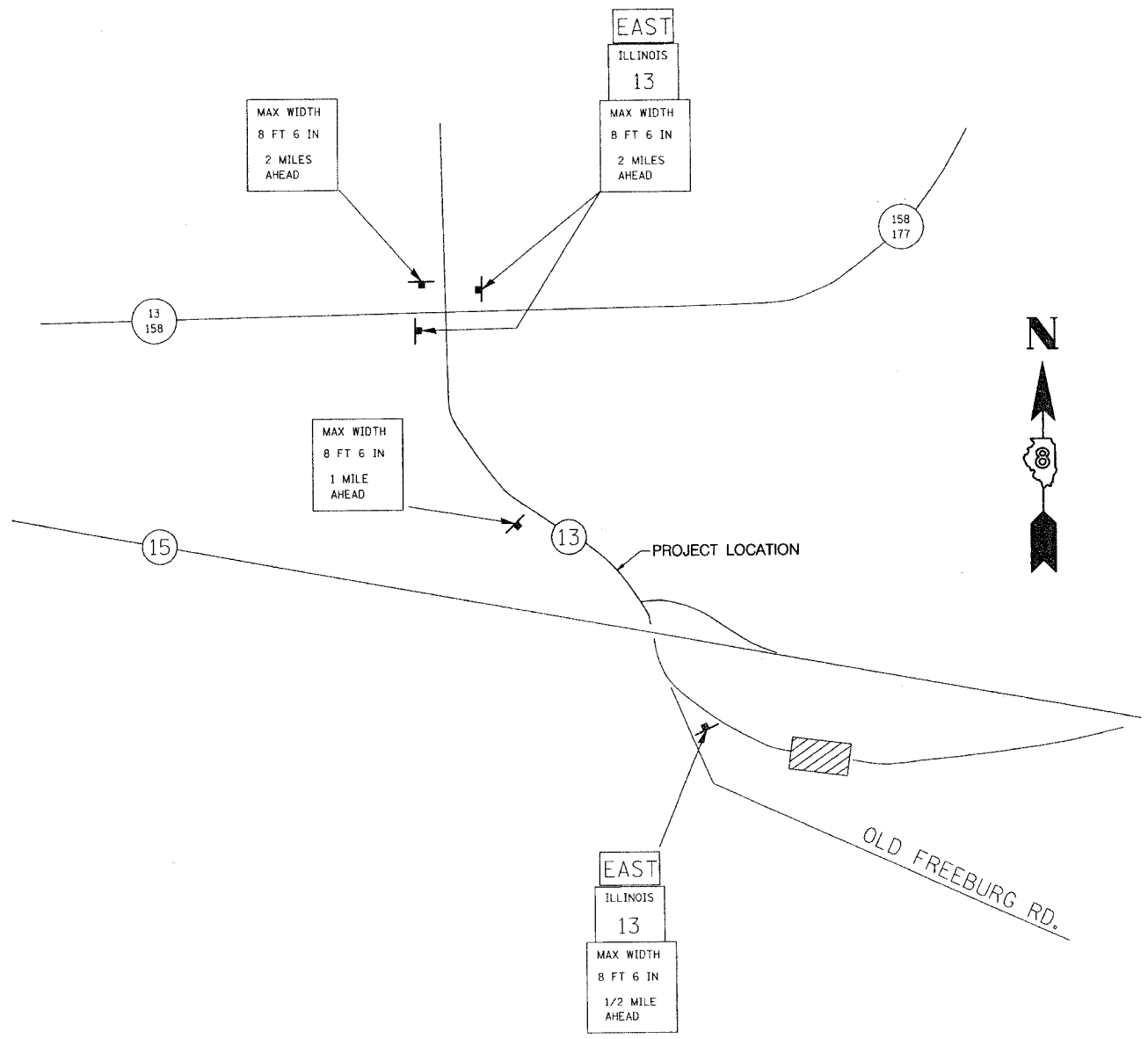
# IL 13 OVER TRIBUTARY TO RICHLAND CREEK- BELLEVILLE

### NOTES

1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T.
2. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE R.E./R.T. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE T.M. BUILDING IN FAIRVIEW HGTS., AND RETURN THEM UPON COMPLETION OF THE CONTRACT.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR WIDE LOAD SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.

### SIGNS REQUIRED

- |   |     |
|---|-----|
| MAX WIDTH<br>8 FT 6 IN<br>1/2 MILE<br>AHEAD | (1) |
| MAX WIDTH<br>8 FT 6 IN<br>2 MILES<br>AHEAD  | (3) |
| MAX WIDTH<br>8 FT 6 IN<br>1 MILE<br>AHEAD   | (1) |
| ILLINOIS<br>13                              | (3) |
| EAST  | (3) |

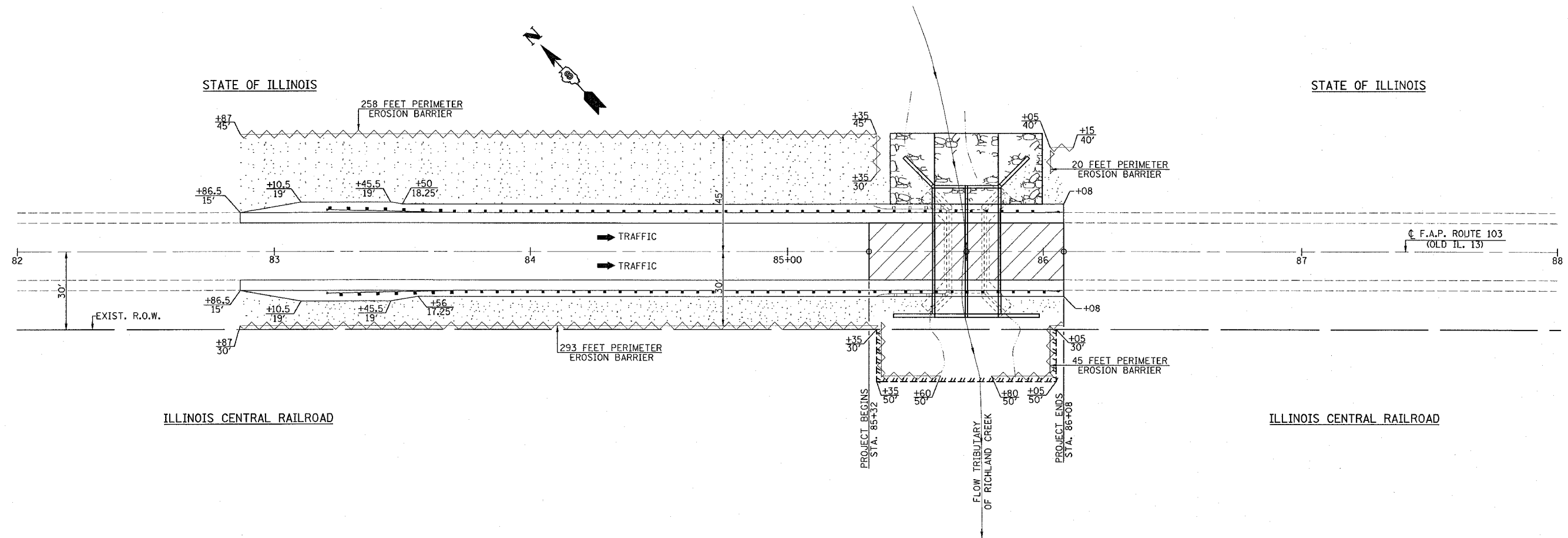






WIDTH RESTRICTION SIGNING LOCATIONS  
(NOT TO SCALE)

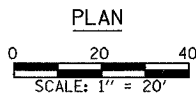
**STAGE CONSTRUCTION TRAFFIC DETAILS**  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042

SECTION 35, T. 1 N., R. 8 W., 3rd P.M.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
103	27-3BR	ST. CLAIR	22	11
STA. 85+32 TO STA. 86+08				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76411				



- LEGEND**
-  - PAVEMENT & STRUCTURE REMOVAL LIMITS
  -  - SEEDING, CLASS 2 WITH MULCH, METHOD 2
  -  - RIPRAP, CLASS A5
  -  - PERIMETER EROSION BARRIER



EROSION CONTROL  
 F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
 OVER TRIBUTARY OF RICHLAND CREEK  
 SECTION 27-3BR  
 ST. CLAIR COUNTY  
 STA. 85+70.00  
 S.N. 082-2042





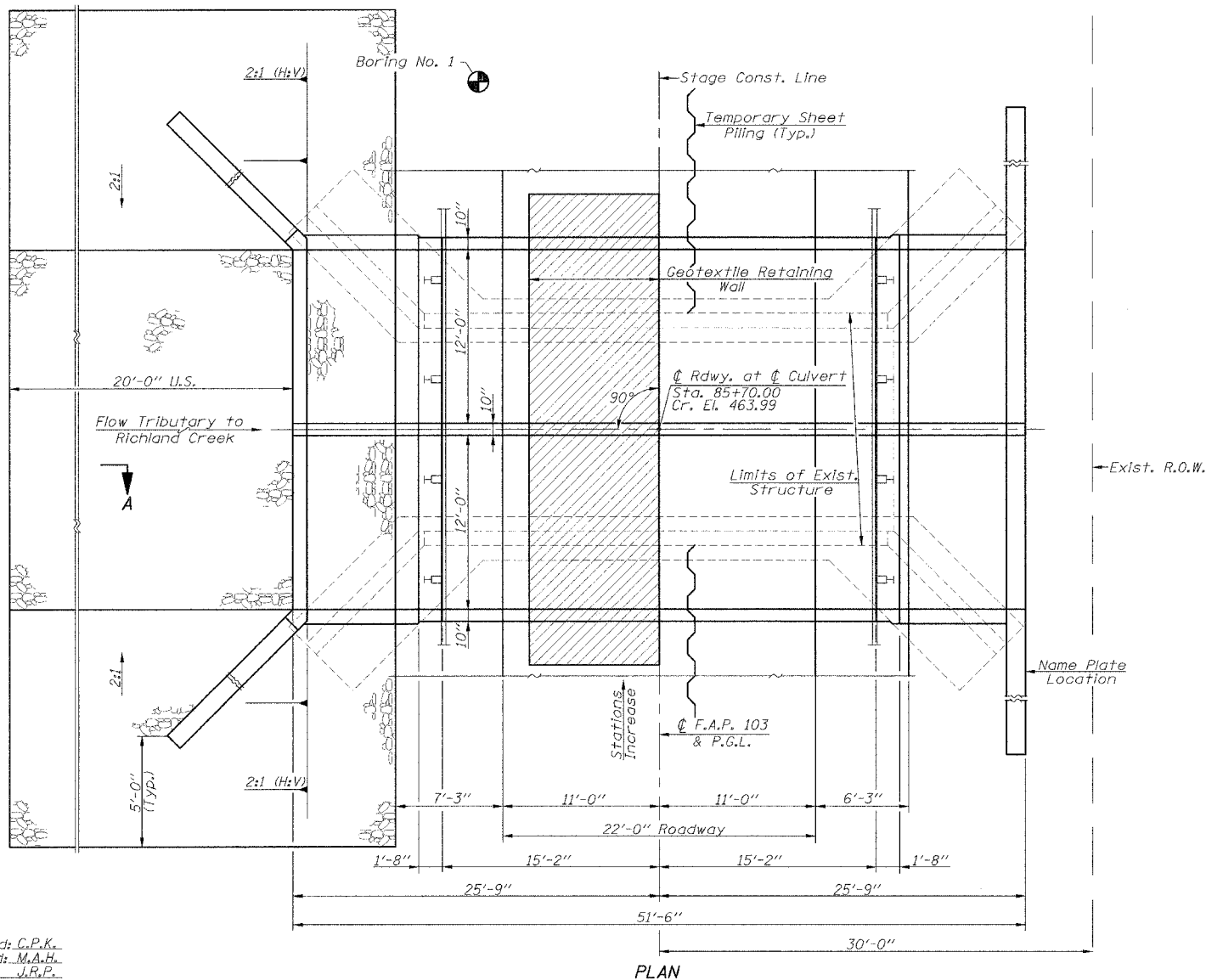
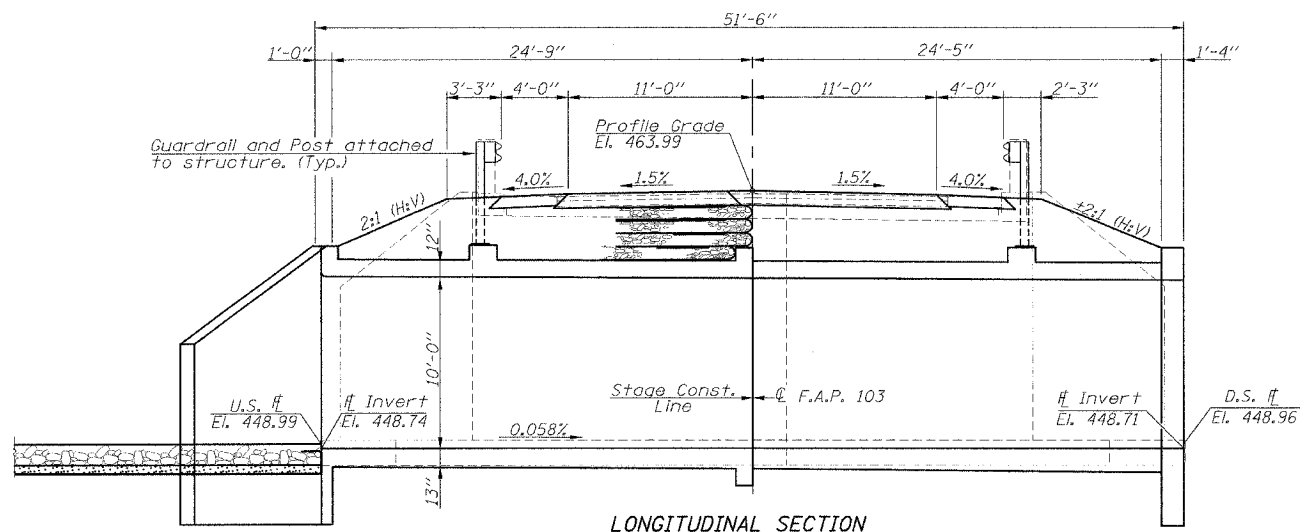


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 1
F.A.P. 103	27-3BR	ST. CLAIR	22	14	OF 9 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

CONTRACT NO. 76411

Existing Structure: Single Span Reinforced Concrete Slab Bridge on Closed Reinforced Concrete Abutments with Reinforced Concrete Wingwalls.  $\pm 16'-0"$  Bk.-Bk. Abutments,  $\pm 32'-2"$  Out.-Out. Deck, Concrete Railing,  $0^\circ$  Skew. Traffic to be maintained utilizing Stage Construction. Existing Structure No. 082-0402. No salvage.  
Benchmark: Chiseled "□" on top of Southwest Wingwall Sta. 85+62.5 16' Lt. El. 463.44



**TOTAL BILL OF MATERIAL**

Item	Unit	Quantity
Stone Riprap, Class A5	Sq. Yd.	187
Filter Fabric	Sq. Yd.	231
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	34610
Temporary Sheet Piling	Sq. Ft.	1962
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	207.4
Bar Splicers	Each	144
Steel Plate Beam Guardrail Attached to Structures	Foot	53
Geotextile Retaining Wall	Sq. Ft.	101

**WATERWAY INFORMATION**

Drainage Area = 3.78 Sq. Mi. Low Grade Elev. = 463.75 @ Sta. 80+70

Flood	Freq. Yr.	Opening Sq. Ft.		Head - ft.		Headwater EL			
		Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.		
Design	50	1820	164	240	462.69	2.59	1.05	465.28	463.74
Base	100	2104	164	240	463.41	2.42	1.37	465.83	464.78
Exist. Overtopping	17	1380	156	240	461.60	2.15		463.75	
Prop. Overtopping	50	1820	156	240	462.70		1.05	463.75	
Max. Calc.	500	2792	164	240	465.07	3.60	0.80	468.67	465.87

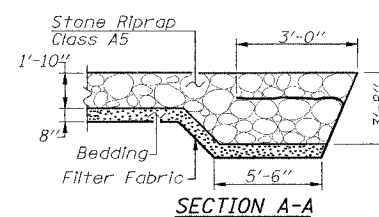
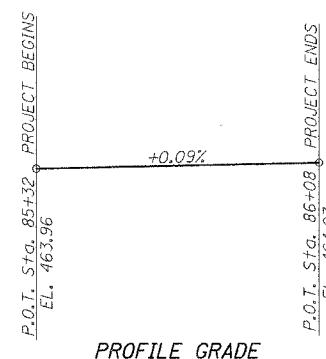
**DESIGN SPECIFICATIONS**  
2002 A.A.S.H.T.O. Specifications.

**LOADING HS 20-44**  
Allow 50 lb/ft<sup>2</sup> for Future Wearing Surface.

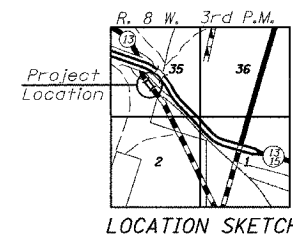
**DESIGN STRESSES**  
FIELD UNITS  
f<sub>c</sub> = 3500 psi  
f<sub>y</sub> = 60000 psi (Reinf.)

**NOTES**

- Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage 1 Removal.
- Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M31, M42 or M53, Grade 60.
- For backfilling and embankment, see Standard Specifications.
- A pre-cast culvert alternate is not allowed.
- The layout of the stone riprap may be varied in the field to suit ground conditions as directed by the Engineer.
- All construction joints shall be bonded.
- Exposed edges shall have a  $\frac{3}{4}$ " chamfer.



STA. 85+70.00  
BUILT 200 BY  
STATE OF ILLINOIS  
F.A.P. RTE. 103 SECTION 27-3BR  
LOADING HS 20  
STR. NO. 082-2042  
**NAME PLATE**  
(Standard 515001)



**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

MARK A. HENDERSON  
5519  
LICENSED  
STRUCTURAL  
ENGINEER  
STATE OF ILLINOIS  
4/30/06  
Exp. Date: 11/30/06

**GENERAL PLAN & ELEVATION**  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

Designed: C.P.K.  
Checked: M.A.H.  
Drawn: J.R.P.  
Checked: M.A.H.

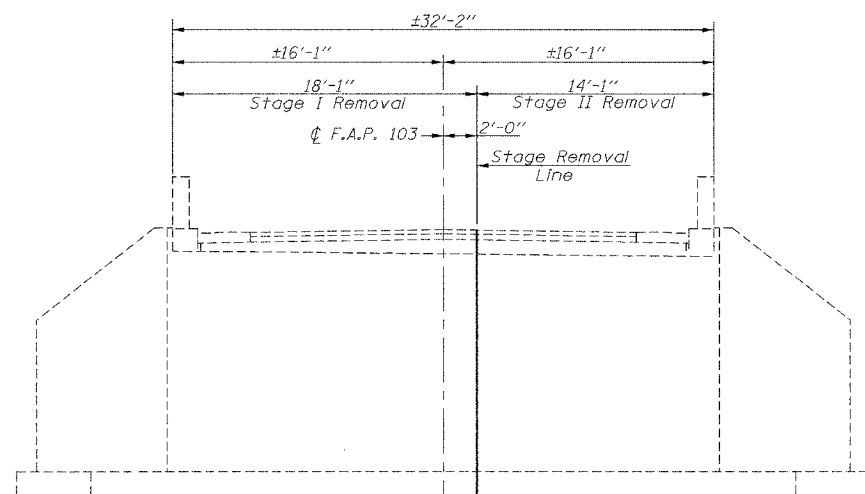


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

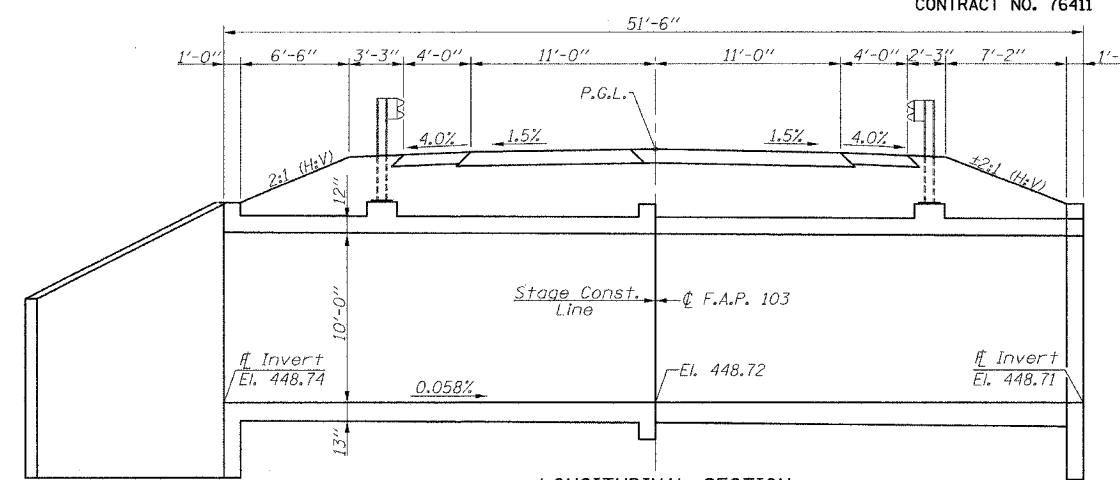
ROUTE NO.	ST. CL. CO.	COUNTY	SHEET	SHEET	SHEET
F.A.P. 103	27-3BR	ST. CLAIR	22	15	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

SHEET NO. 2  
OF 9 SHEETS

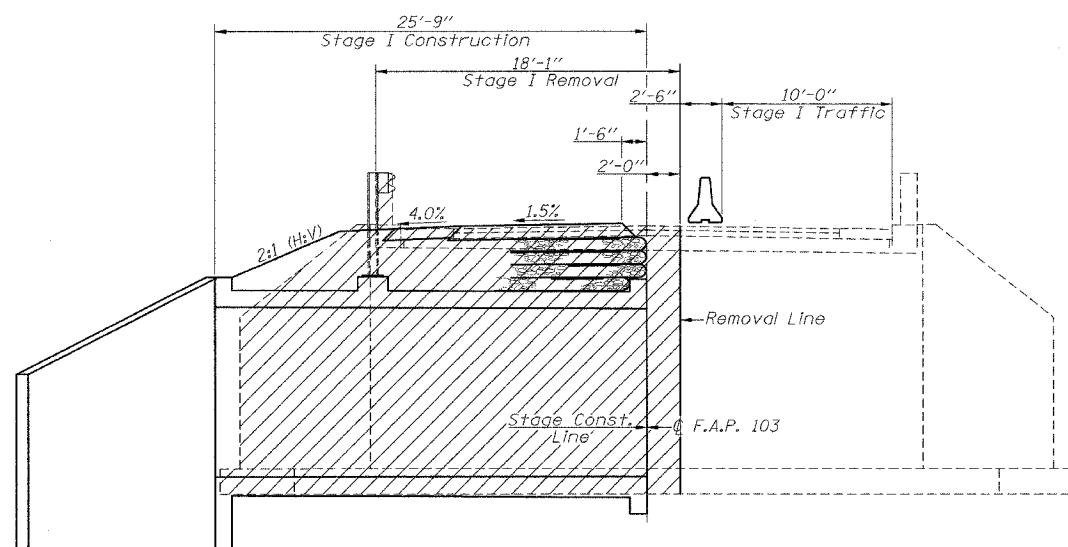
CONTRACT NO. 76411



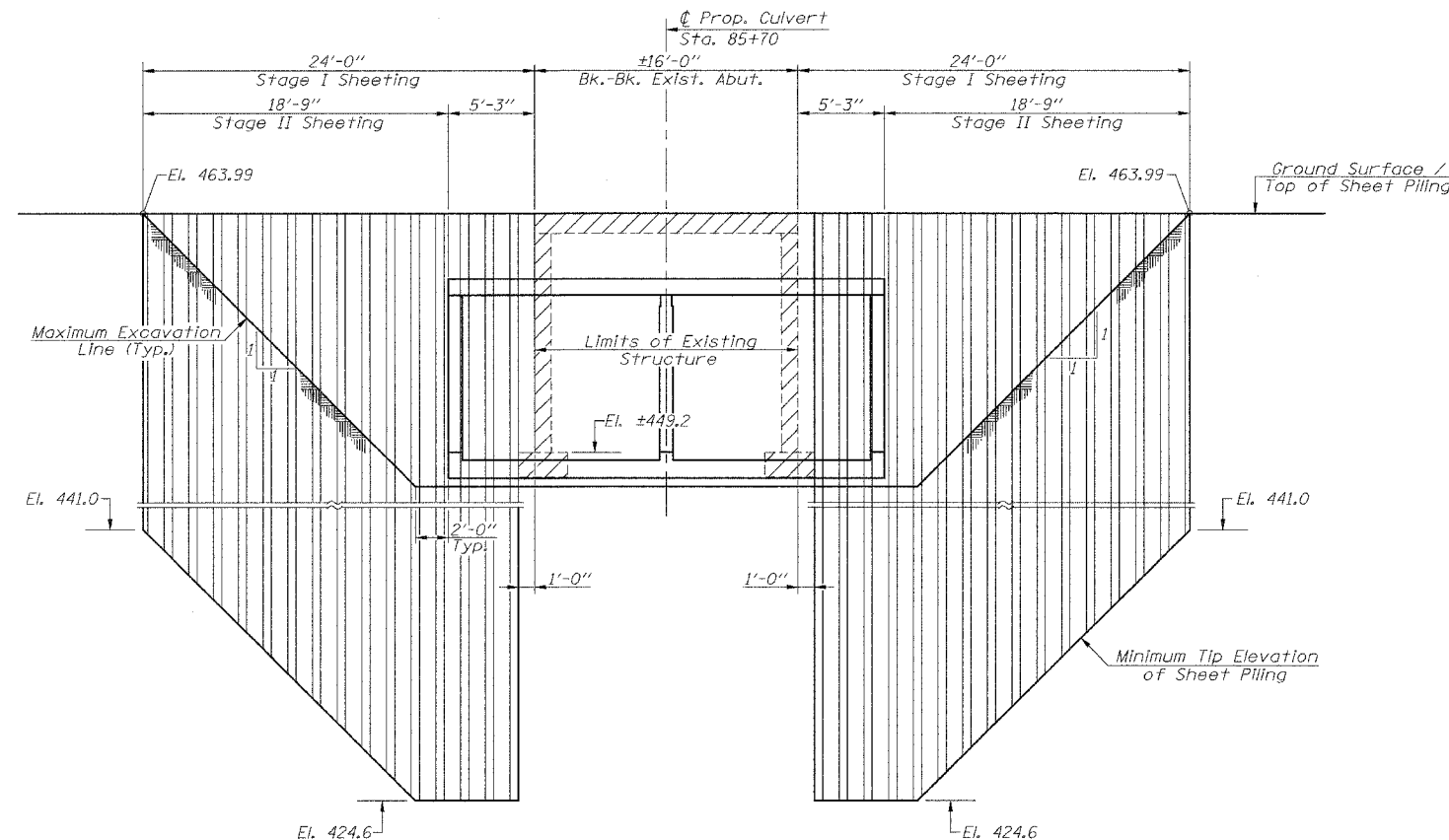
EXISTING BRIDGE ELEVATION  
(Looking East)



LONGITUDINAL SECTION

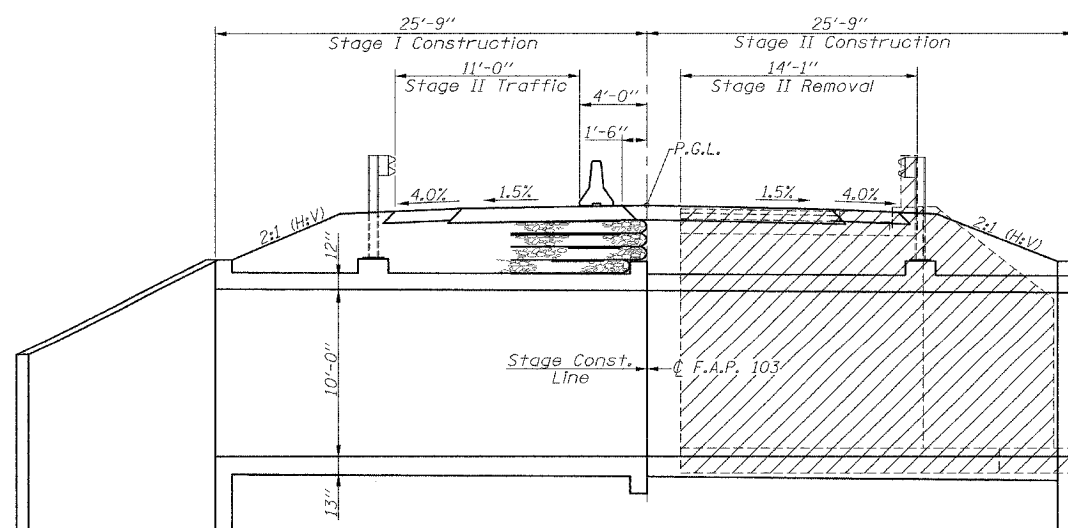


STAGE I TRAFFIC & CONSTRUCTION  
(Looking East)



ELEVATION - TEMPORARY SHEET PILING  
(Minimum Required Section Modulus = 33.5 in<sup>3</sup>/ft.)

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.  
The contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. The connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.



STAGE II TRAFFIC & CONSTRUCTION  
(Looking East)

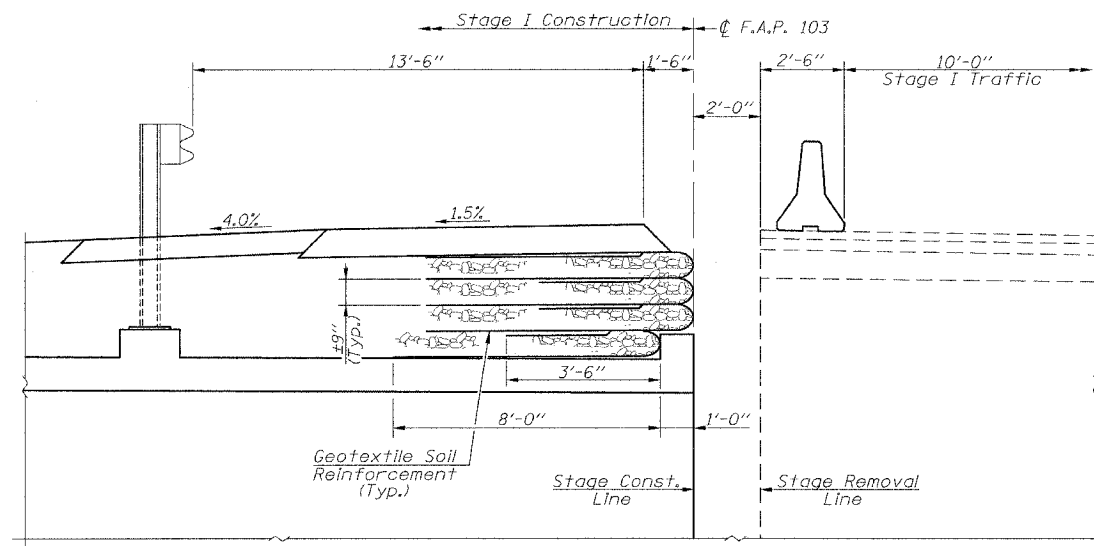
▨ - Indicates removal of existing structure

STAGING AND DETAILS  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

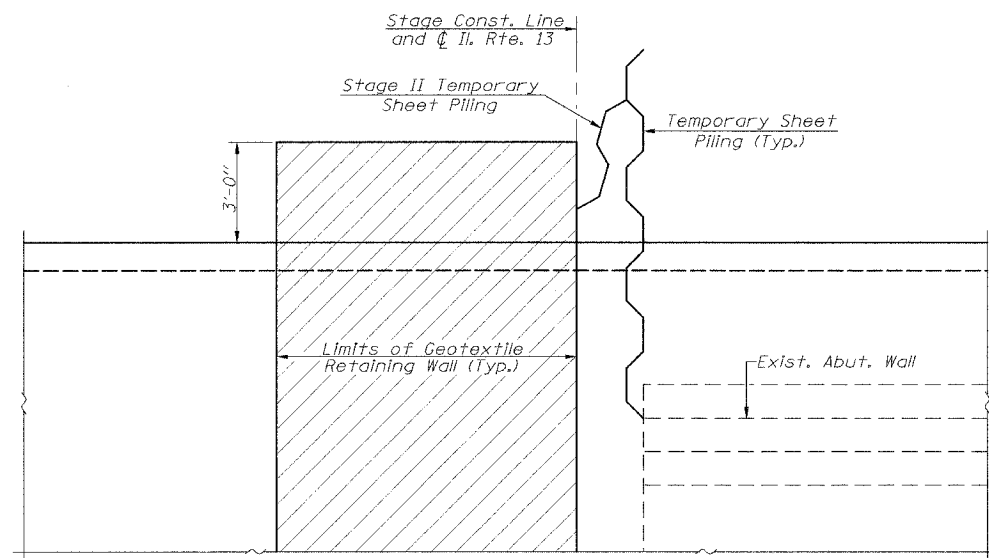
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 3 OF 9 SHEETS
F.A.P. 103	27-33R	ST. CLAIR	22	16	
ILL. ROAD DIST. NO. 7	ILLINOIS	ILLINOIS	TOD. AIR PROJECT		

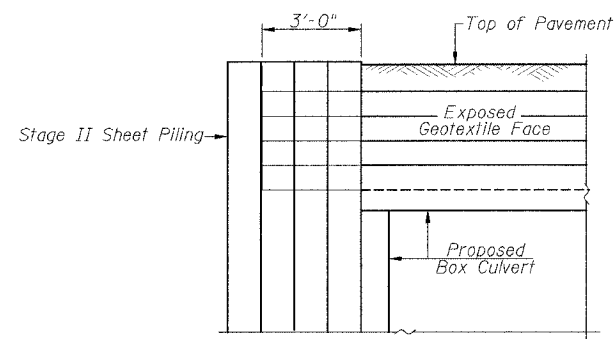
CONTRACT NO. 76411



TYPICAL SECTION



PLAN

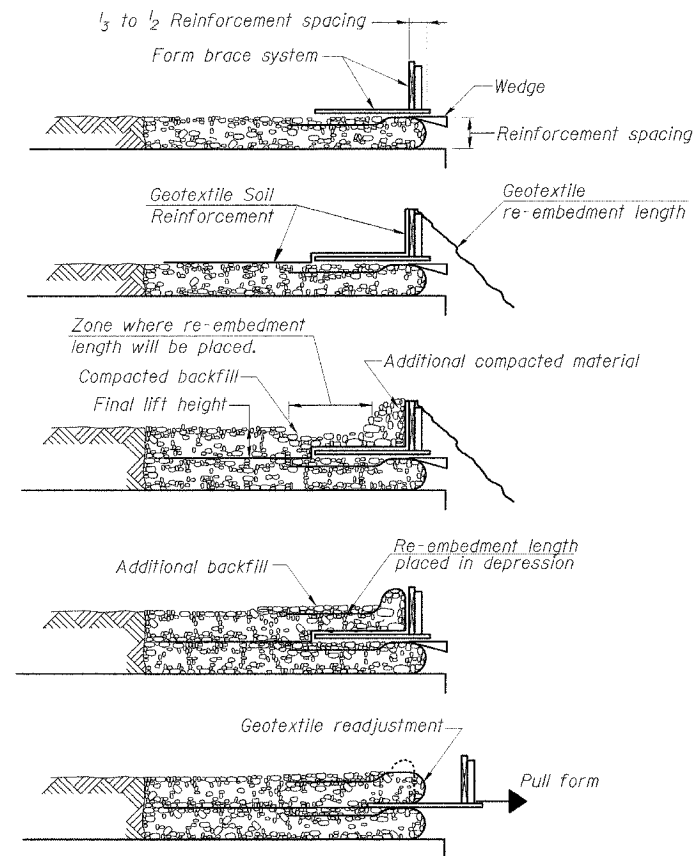


ELEVATION

BILL OF MATERIAL

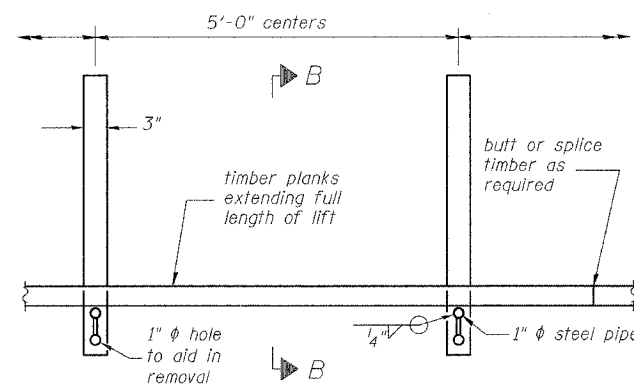
Item	Unit	Quantity
Geotextile Retaining Wall	Sq. Ft.	101

Note:  
The geotextile soil reinforcement shall have a minimum allowable tensile strength (T min.) of 17 lb./in. as determined by the procedure described in the Special Provision. The computations supporting the determination of T min. shall be submitted to the engineer for approval.

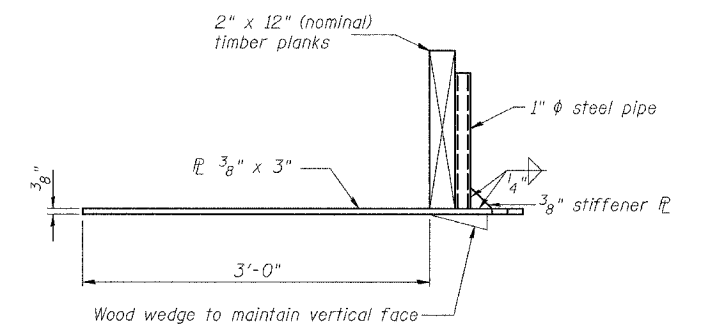


1. Place form brace system on completed reinforcement level; back from the finished fabric face a distance of  $\frac{1}{3}$  to  $\frac{1}{2}$  the geotextile reinforcement spacing.
2. Position fabric so that the required geotextile re-embedment length extends over the top of the form brace and the design reinforcement width is placed with no slack against the previous level.
3. Compact backfill material in lifts to final lift height, create ( $\pm 3''$ ) depression in zone where re-embedment length will be located and place additional height of compacted material against form brace.
4. Fold Geotextile re-embedment length back over form brace into zone where depression was made in backfill and place additional compacted backfill, ( $\pm 3''$ ) to embed geotextile and bring to final lift height.
5. Pull form brace outward allowing geotextile face to slightly readjust to form tight round face and level with plan reinforcement spacing.

GEOTEXTILE WALL  
SUGGESTED CONSTRUCTION PROCEDURE



PLAN



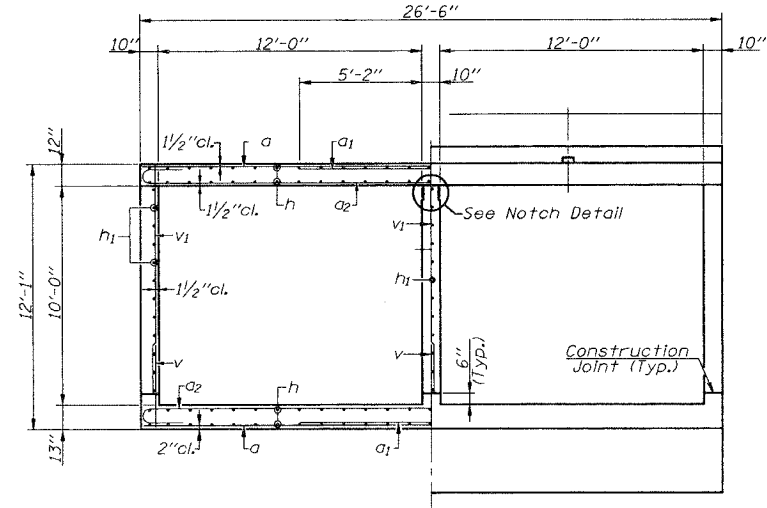
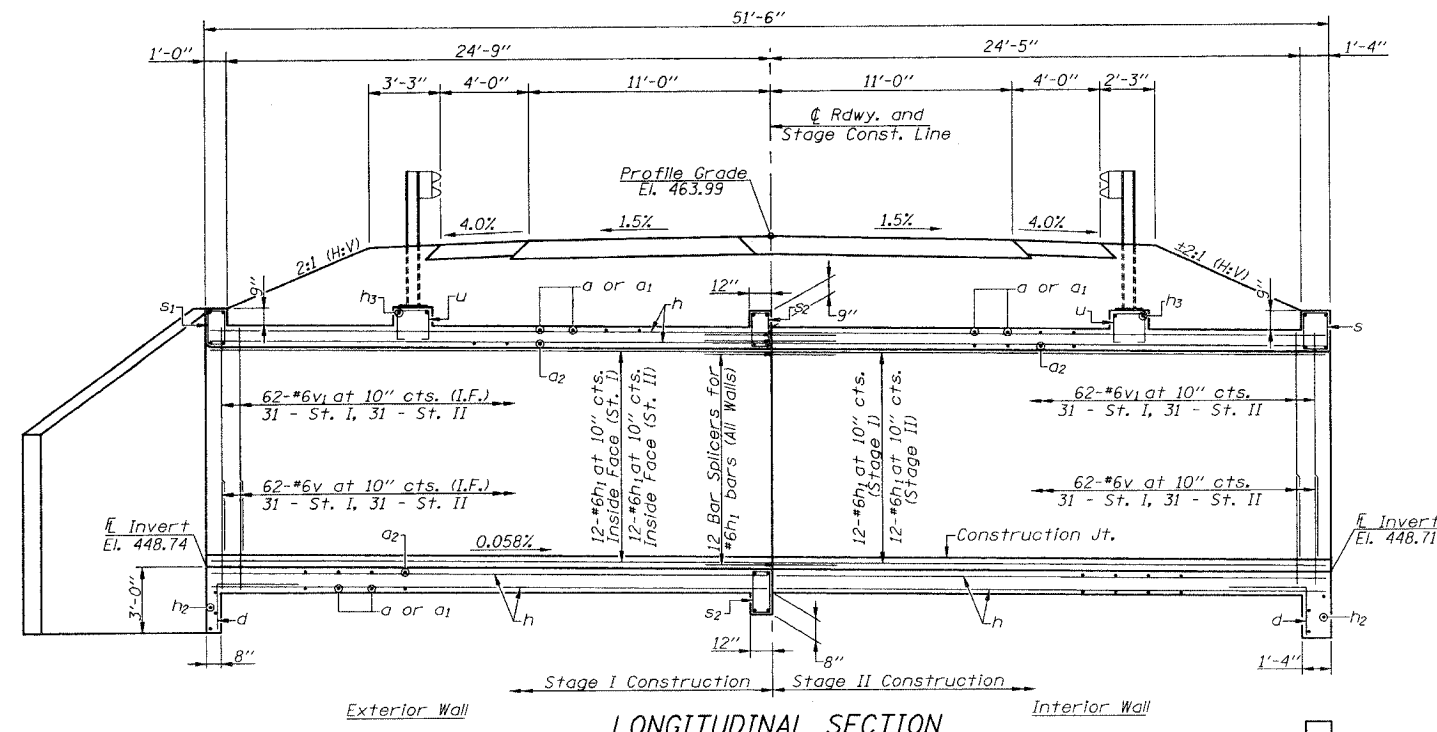
SECTION B-B

GEOTEXTILE TEMPORARY  
FORM BRACE DETAIL

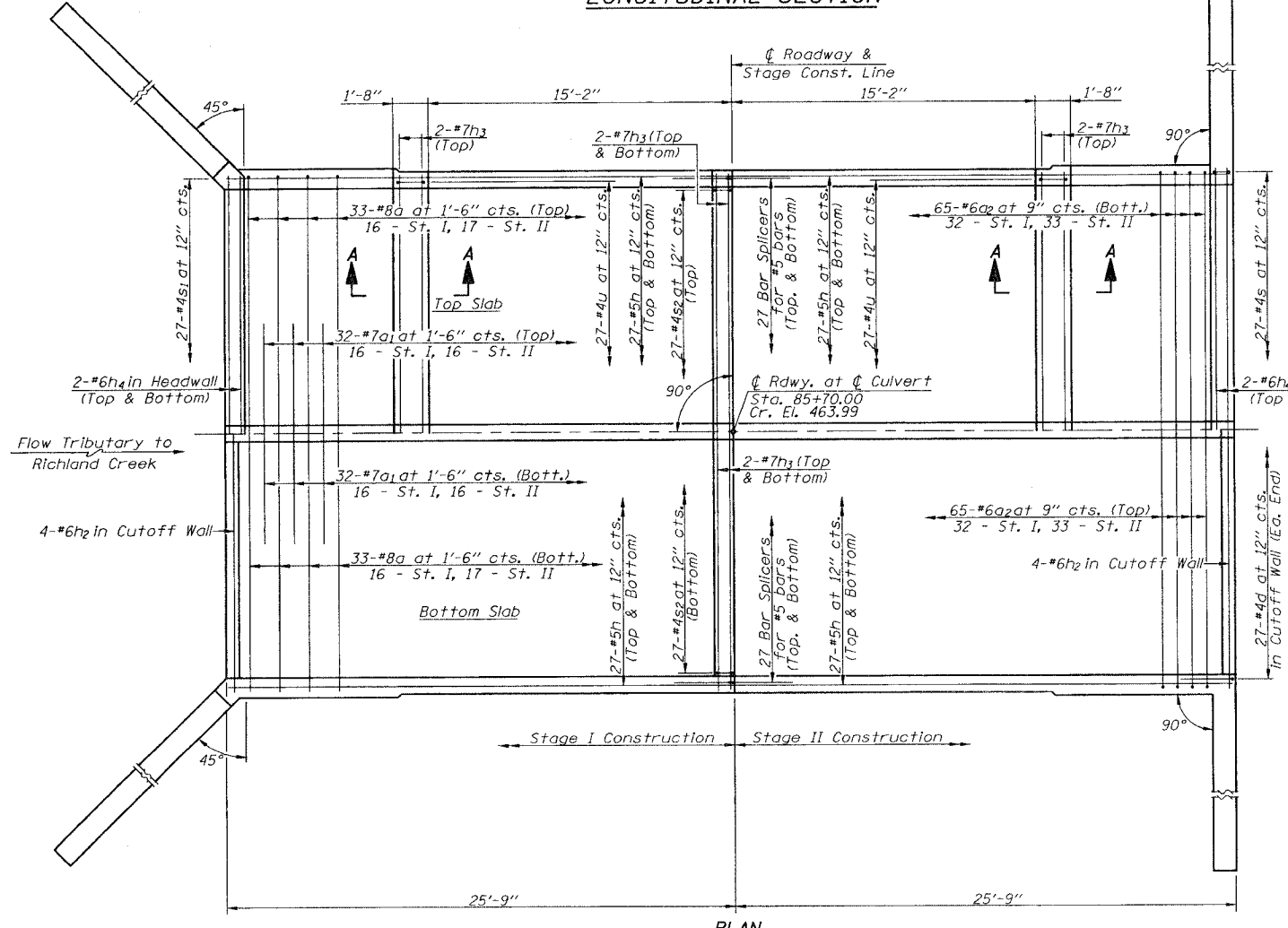
Note:  
The temporary form brace detail is provided as a guide. The contractor is responsible for the design and performance of the form system used.

GEOTEXTILE RETAINING WALL  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-33R  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

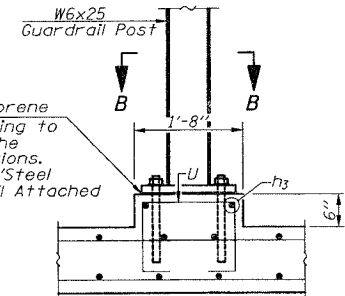
CONTRACT NO. 76411



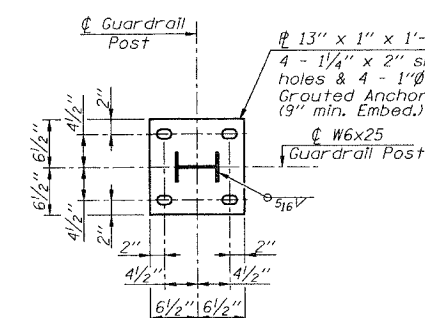
ELEVATION



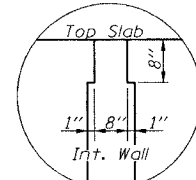
PLAN



SECTION A-A

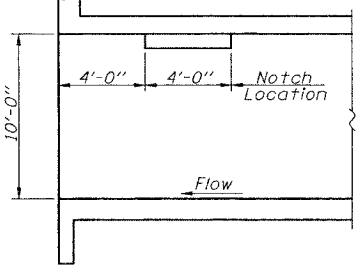


SECTION B-B

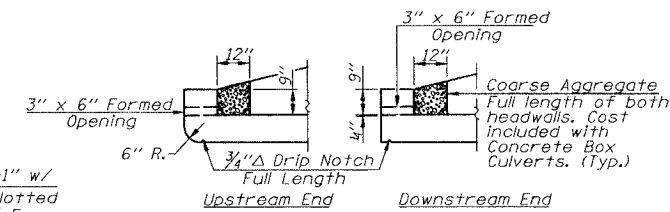


NOTCH DETAIL

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



LONGITUDINAL SECTION  
(Downstream End Only)

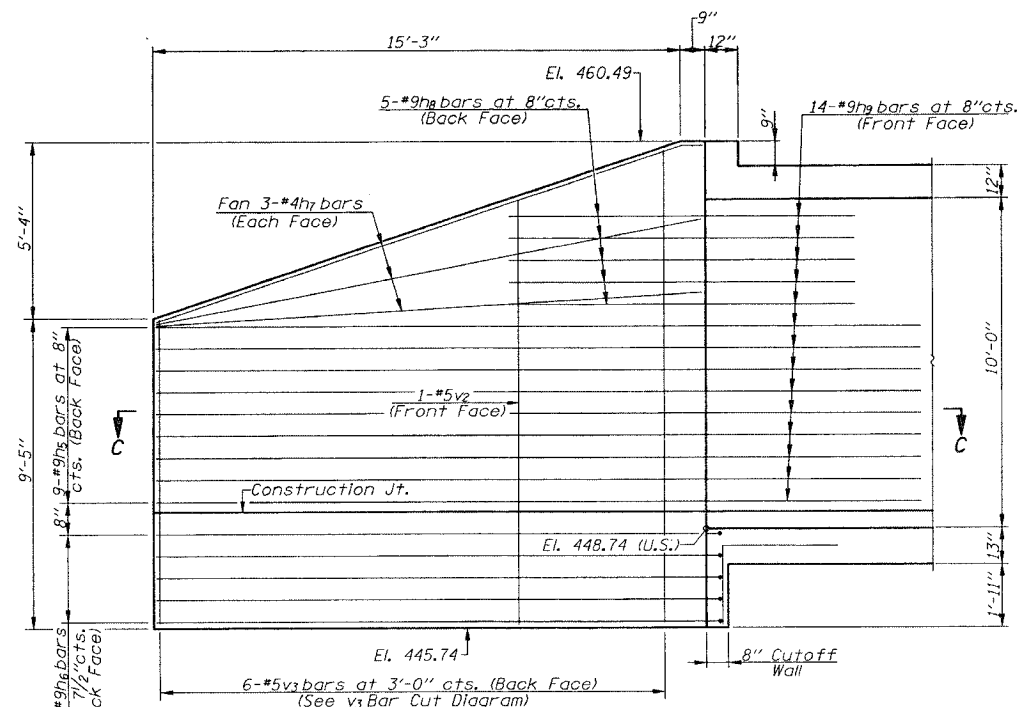


DRAIN DETAIL

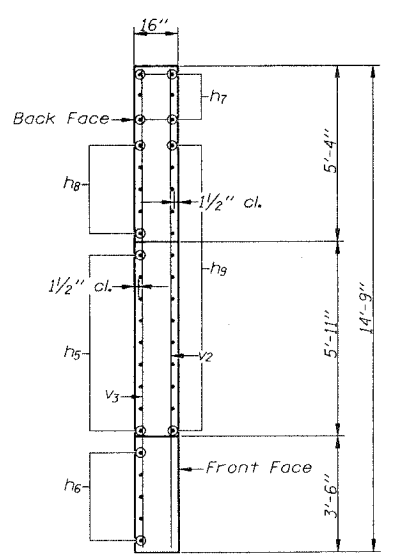
Work this Sheet with Sheet Nos. 5 & 6 of 9.  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

CULVERT DETAILS  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

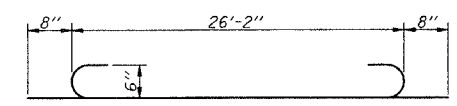
The contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule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



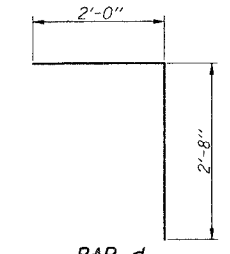
**PARTIAL ELEVATION  
CULVERT CORNER**



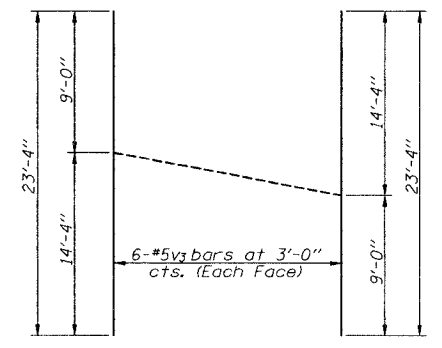
**SEC. D-D**



**BAR a2**

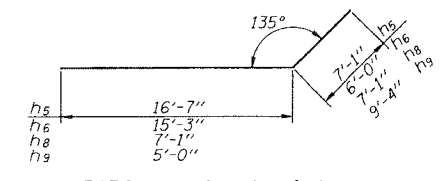


**BAR d**

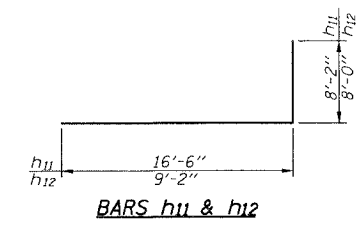


**BAR v3 CUT DIAGRAM**

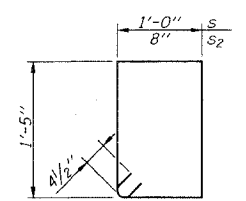
Note: Order v3 bars full length. Lay out in field as shown. Cut along cut line. Use remainder of bar in opposite face of footing.



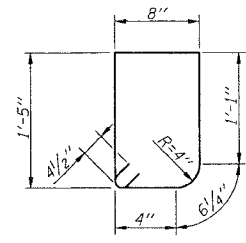
**BARS h5, h6, h8 & h9**



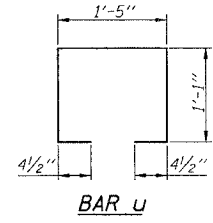
**BARS h11 & h12**



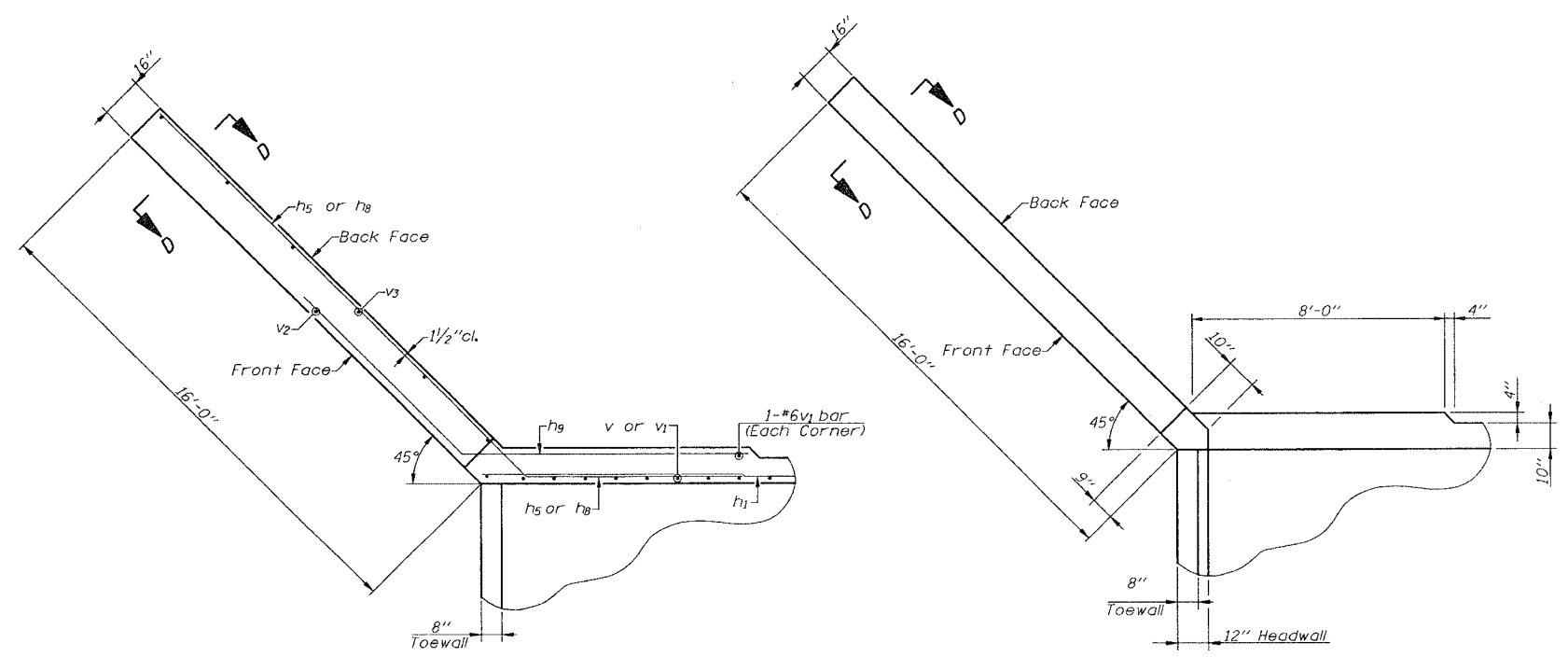
**BARS s & s2**



**BAR s1**



**BAR u**



**SECTION C-C**

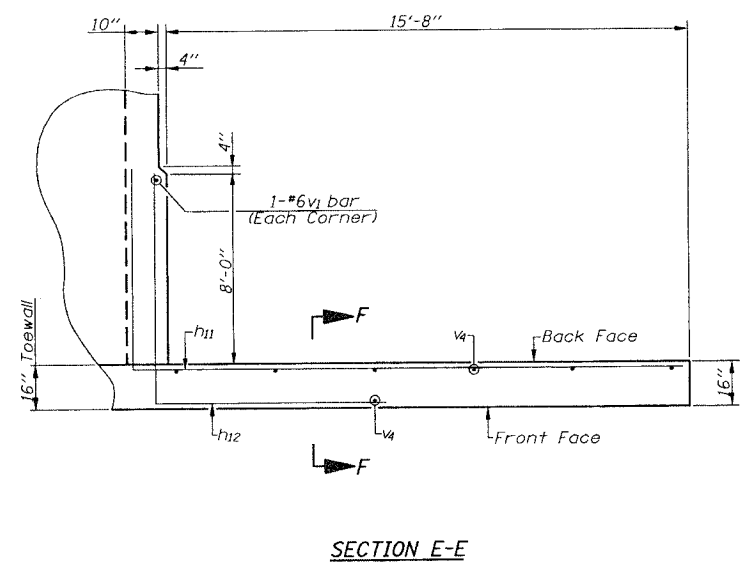
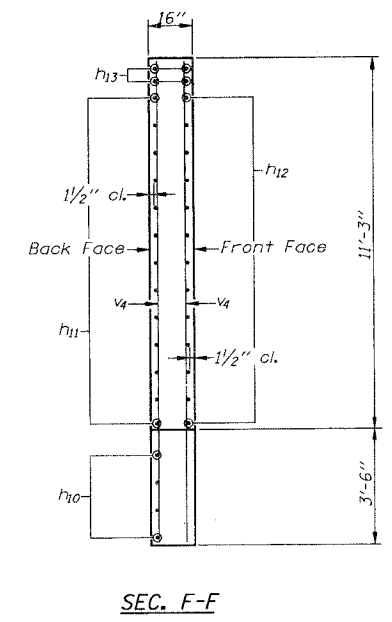
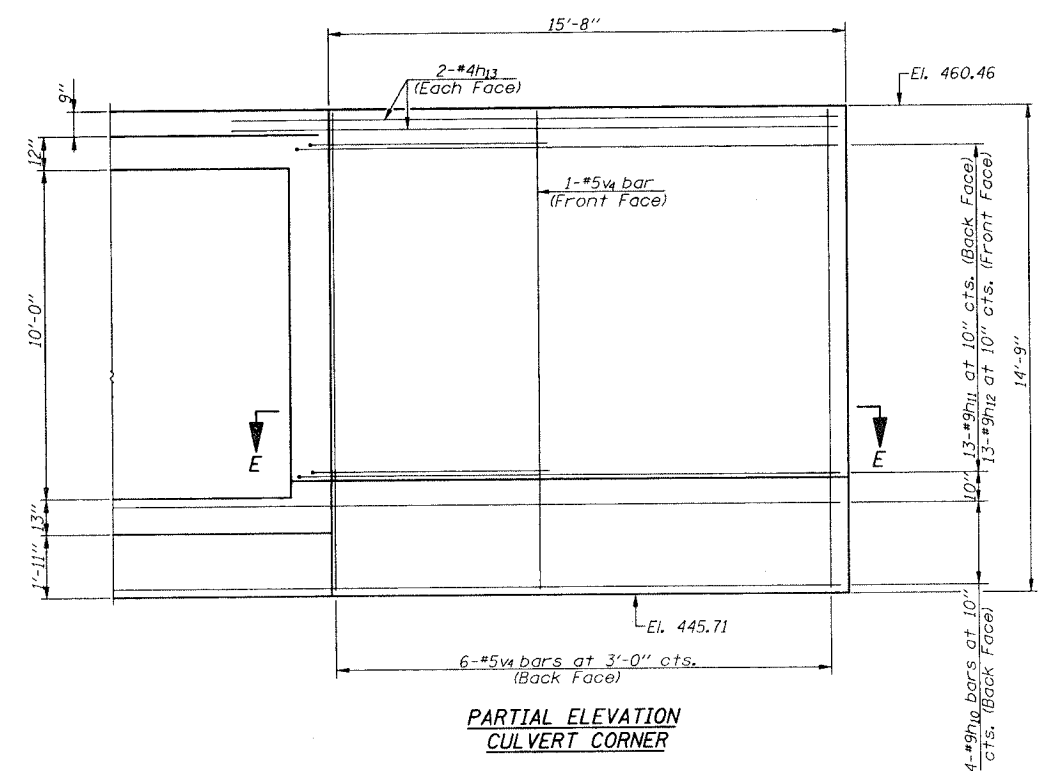
**CORNER DETAIL**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d	66	#8	26'-2"	—
d1	64	#7	11'-2"	—
d2	130	#6	27'-6"	—
d	54	#4	4'-8"	—
h	216	#5	25'-5"	—
h1	72	#6	25'-4"	—
h2	8	#6	26'-4"	—
h3	8	#7	26'-2"	—
h4	8	#6	26'-2"	—
h5	18	#9	23'-8"	—
h6	10	#9	21'-3"	—
h7	12	#4	15'-8"	—
h8	10	#9	14'-2"	—
h9	28	#9	14'-4"	—
h10	8	#9	22'-0"	—
h11	26	#9	24'-8"	—
h12	26	#9	17'-2"	—
h13	8	#4	17'-2"	—
s	27	#4	5'-7"	—
s1	27	#4	4'-9"	—
s2	54	#4	4'-11"	—
u	54	#4	4'-4"	—
v	186	#6	4'-0"	—
v1	190	#6	10'-3"	—
v2	2	#5	12'-8"	—
v3	6	#5	23'-4"	—
v4	14	#5	14'-5"	—
Concrete Box Culverts		Cu. Yd.	207.4	
Reinforcement Bars		Pound	34610	
Bar Splicers		Each	144	

Work this sheet with Sheet Nos. 4 and 6 of 9.

**CULVERT DETAILS**  
**F.A.P. ROUTE 103 (OLD IL. ROUTE 13)**  
**OVER TRIBUTARY TO RICHLAND CREEK**  
**SECTION 27-3BR**  
**ST. CLAIR COUNTY**  
**STA. 85+70.00**  
**S.N. 082-2042**



Note: Work this sheet with Sheet Nos. 4 and 5 of 9.

**CULVERT DETAILS**  
**F.A.P. ROUTE 103 (OLD IL. ROUTE 13)**  
**OVER TRIBUTARY TO RICHLAND CREEK**  
**SECTION 27-3BR**  
**ST. CLAIR COUNTY**  
**STA. 85+70.00**  
**S.N. 082-2042**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 76411

**NOTES**

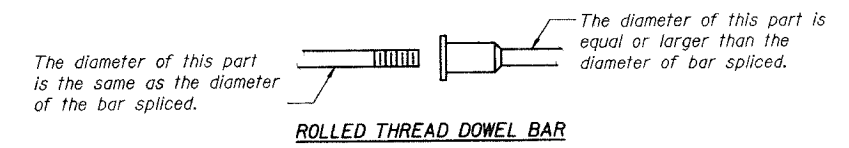
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
All reinforcement bars shall be lapped and tied to 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 =  $1.25 \times f_y \times A_t$   
(Tension in kips)
- ② Minimum \*Pull-out Strength =  $1.25 \times f_{sallow} \times A_t$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $f_{sallow}$  = 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

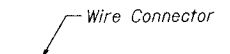
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



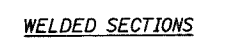
ROLLED THREAD DOWEL BAR



\*\* ONE PIECE



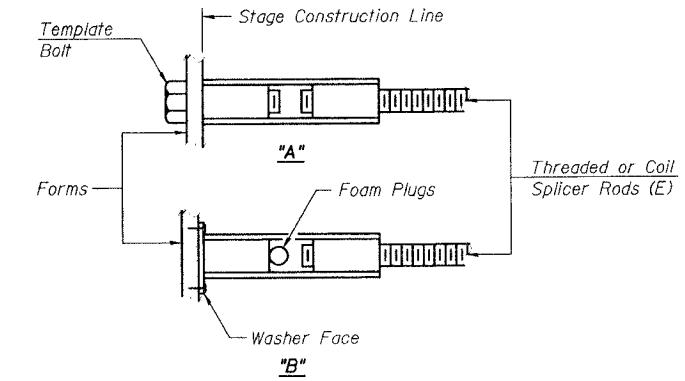
WIRE CONNECTOR



WELDED SECTIONS

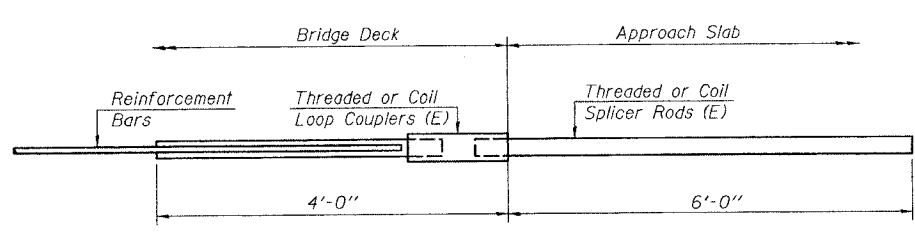
**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



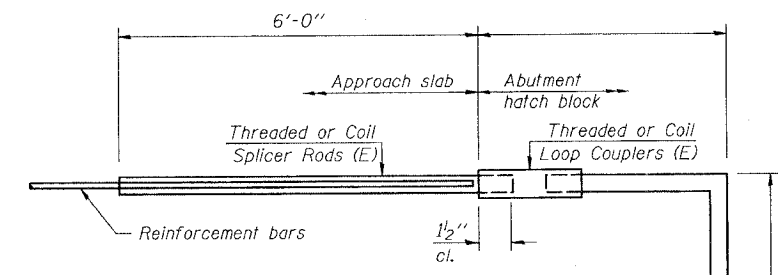
**INSTALLATION AND SETTING METHODS**

"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.



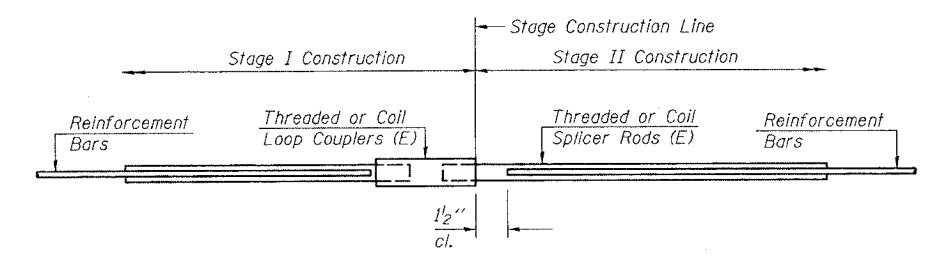
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

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
#5	54	Top Slab
#5	54	Bot. Slab
#6	36	Walls
Total	144	

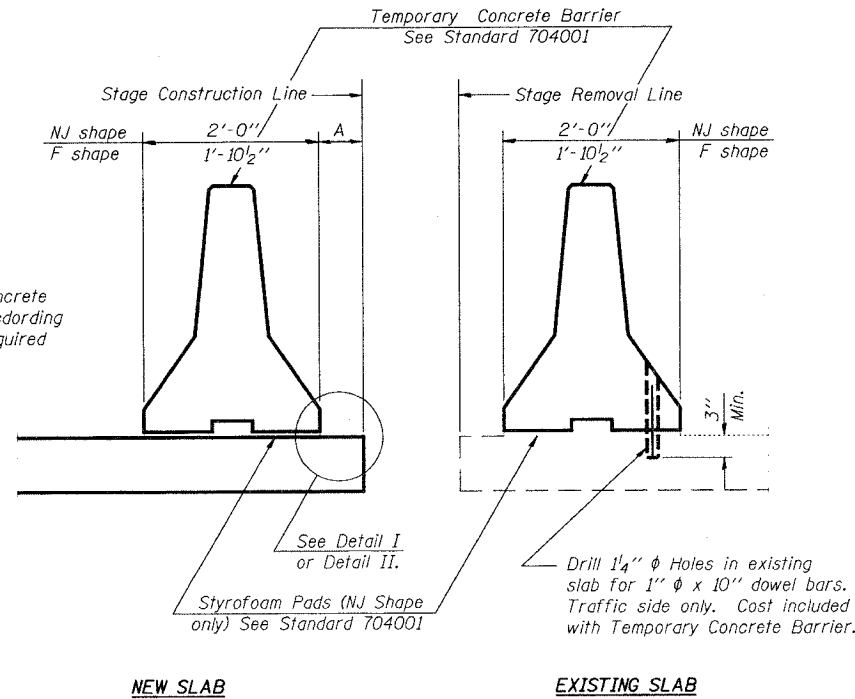
**BAR SPLICER ASSEMBLY DETAILS**  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042



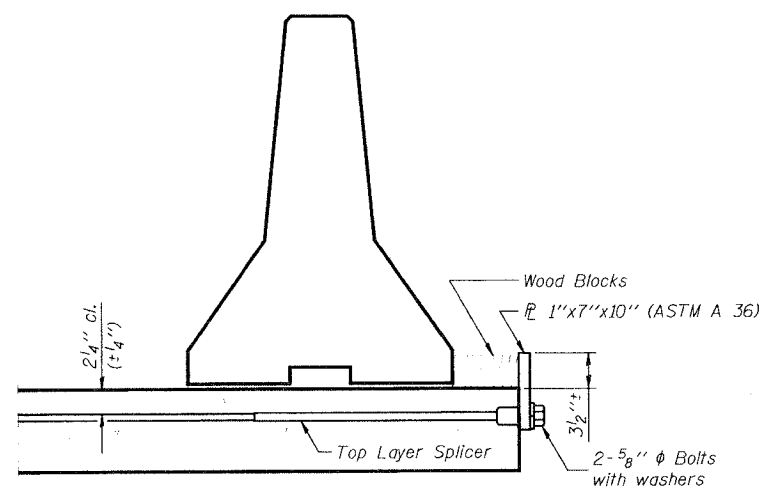
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE	REV.	BY	CHK.	APP.
SHEET NO. 8				
OF 9 SHEETS				

CONTRACT NO. 76411

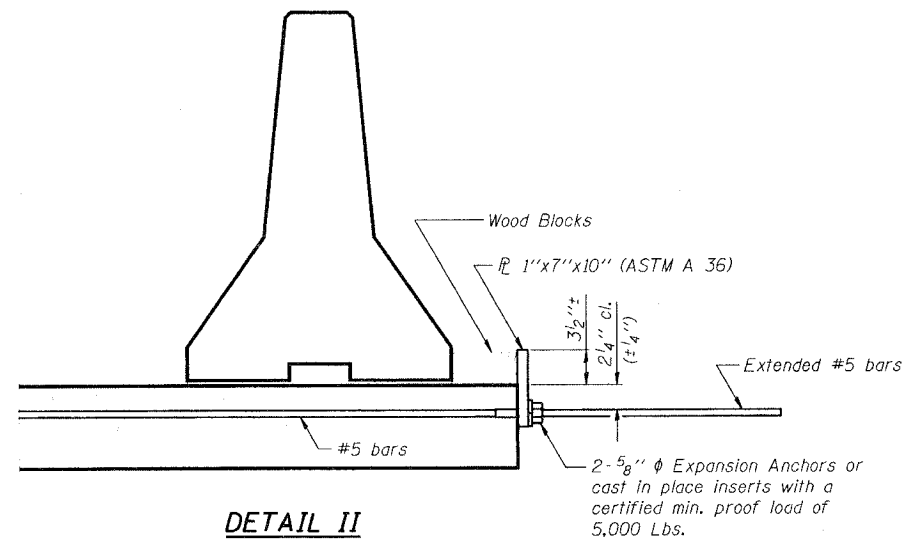


SECTIONS THRU SLAB



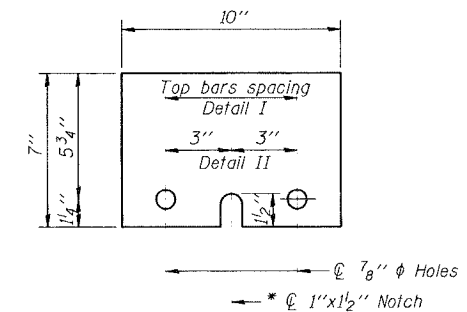
DETAIL I

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.



1"x7"x10"

\* Required only with Detail II

NOTES

- Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{r}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{c}$  of each barrier panel.
- Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel  $\bar{r}$  to the concrete slab with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{c}$  of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.

TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
F.A.P. ROUTE 103 (OLD IL. ROUTE 13)  
OVER TRIBUTARY TO RICHLAND CREEK  
SECTION 27-3BR  
ST. CLAIR COUNTY  
STA. 85+70.00  
S.N. 082-2042

