

1-20-2012 LETTING ITEM 054

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
 HIGHWAY BRIDGE PROGRAM**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	1
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

INDEX OF SHEETS

- 1. COVER SHEET
- 2. SUMMARY OF QUANTITIES & TYPICAL CROSS SECTION
- 3. PLAN AND PROFILE
- 4.-9. BRIDGE PLANS
- 10.-11. STATION CROSS SECTIONS

STANDARDS:

- 515001-03 NAME PLATE FOR BRIDGES
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701901-02 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 27-1 TRAFFIC BARRIER TERMINAL TYPE 5A

UTILITIES

FRONTIER COMMUNICATIONS
 225 NORTH BROAD STREET
 CARLINVILLE, IL 62626

MJM ELECTRIC COOPERATIVE
 P.O. BOX 80
 CARLINVILLE, IL 62626

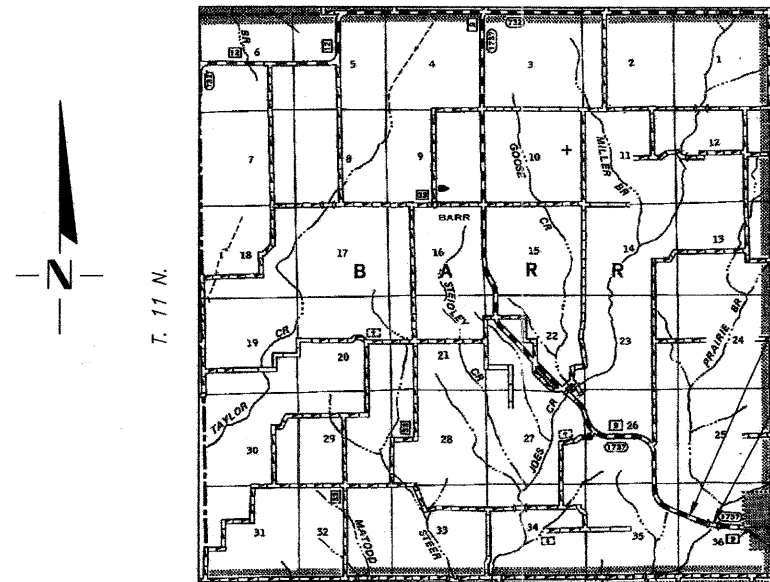
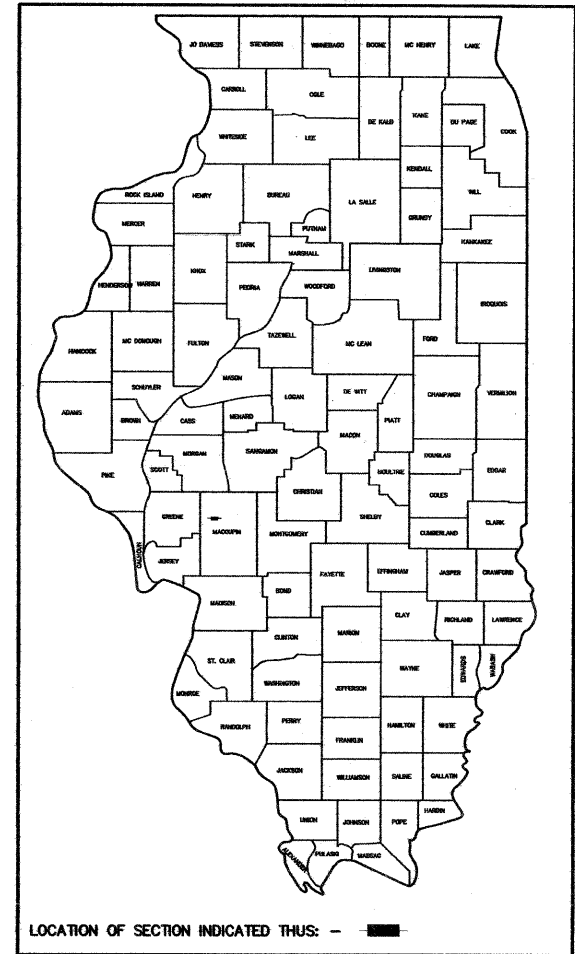
DESIGN FUNCTIONAL CLASSIFICATION:
 MAJOR COLLECTOR (NON-URBAN) 0-400 ADT
 CURRENT ADT = 250
 DESIGN SPEED: 3R GUIDELINES

SCALES

PLAN	0' = 1" = 50'
PROFILE HORIZ.	0' = 1" = 50'
PROFILE VERT.	0' = 1" = 5'
CROSS SECTIONS-HORIZ.	0' = 1" = 10'
CROSS SECTIONS-VERT.	0' = 1" = 5'

SECTION 10-00094-00-BR
 F.A.S. ROUTE 1737/C.H.9
 MACOUPIN COUNTY
 PROJECT BHS-1737(104)
 C-96-201-12

R. 9 W., 3rd. P.M.



Improvement Ends
 Sta. 527+80

Sta. 526+56.08 ~ Special Bridge Design
 Precast Prestressed Concrete Deck
 Beam Bridge. Three Spans @ 50'-0"
 33'-0" Rdwy., 30°45' Skew
 Proposed Structure No. 059-3024
 Existing Structure No. 059-3024

Improvement Begins
 Sta. 525+00

LAYOUT

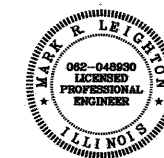
APPROXIMATE SCALE = 1" = 1 MILE
 Net Length of Section = 280.00 Feet = 0.053 Miles

APPROVED October 13 2011
Thomas A. Bumbas
 COUNTY ENGINEER

PASSED October 25 2011
James J. ...
 DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

PASSED October 25 2011
Ben ...
 DISTRICT SIX ENGINEER OF CONSTRUCTION

Releasing For Bid Based on Limited Review
October 25 2011
Roy ...
 DEPUTY DIRECTOR OF HIGHWAYS
 REGION FOUR ENGINEER
 STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION



Mark R. Leichter 10-14-11
 ILLINOIS PROFESSIONAL NO. 48930 Expires 11-30-13

COOMBE-BLOXDORF P.C.
 Consulting Engineers • Land Surveyors • Planners
 700 South Grand Avenue West, Springfield, Illinois 62764 217/441-6677
 Design Firm License No. 184-002703

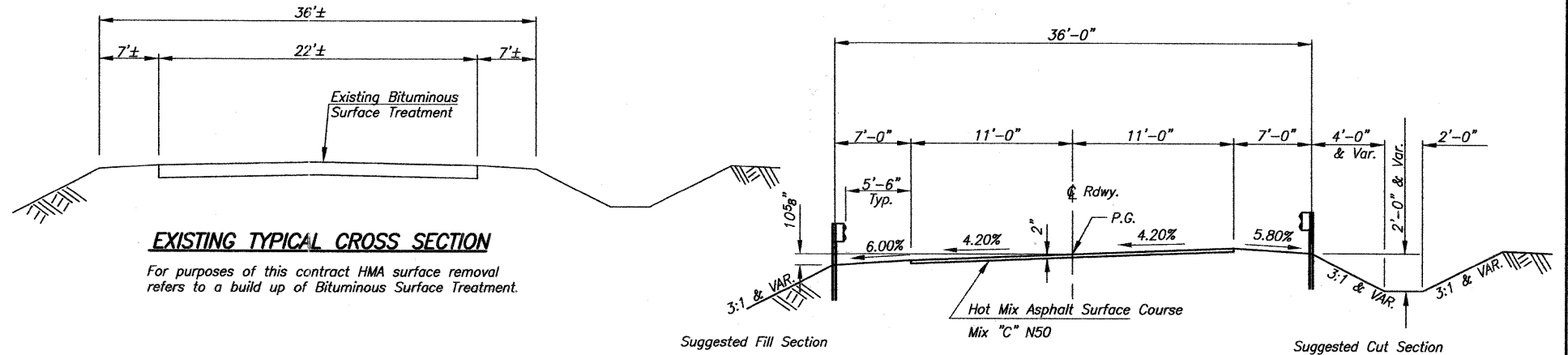
CONTRACT NO. **93557**

TOLL FREE JOINT UTILITY LOCATING
 INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
 TELEPHONE NUMBER 1-800-892-0123

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SUMMARY OF QUANTITIES CONSTRUCTION TYPE CODE 0014			
BRIDGE TYPE: X080			
CODE NO.	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	35
20300100	CHANNEL EXCAVATION	CU YD	200
20400800	* FURNISHED EXCAVATION	CU YD	135
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	32
40603310	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	100
44000157	HOT MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	318
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS, (27" DEPTH)	SQ FT	4,950
50900205	△ STEEL RAILING, TYPE S1	FOOT	302
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	551
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	100
63100075	△ TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	△ TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67100100	MOBILIZATION	L SUM	1
70101830	* TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
78201000	△ TERMINAL MARKER-DIRECT APPLIED	EACH	4
Z0001900	* ASBESTOS BEARING PAD REMOVAL	EACH	33
Z0012754	* STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	168
X2501000	* SEEDING CLASS 2 (SPECIAL)	ACRE	0.2
X2810208	* STONE RIPRAP, CLASS A4 (SPECIAL)	TON	386

* SEE SPECIAL PROVISIONS
△ SPECIALTY ITEMS



EXISTING TYPICAL CROSS SECTION

For purposes of this contract HMA surface removal refers to a build up of Bituminous Surface Treatment.

APPLICATION RATES USED IN QUANTITY CALCULATIONS

BITUMINOUS MATERIALS (PRIME COAT)	0.10 GALLON/SQ. YD.
HOT MIX ASPHALT (BINDER AND SURFACE COURSE)	112 LBS./SQ. YD./INCH
STONE RIPRAP	1.50 TON/CU. YD.

BITUMINOUS CONCRETE MIXTURE REQUIREMENTS			
ITEM	ASPHALT GRADE	AGGREGATE COMPOSITION	VOIDS
HMA SURFACE COURSE (Mix "C") N50	PG 64-22	IL 9.5 or 12.5	4.0% @ N50 DESIGN

Road Classification: Major Collector(Non-Urban) ADT 0-400
Current ADT 250

PROPOSED TYPICAL CROSS SECTION

Sta. 525+50 to Sta. 525+81.7

Transition from the proposed roadway to the existing roadway to be constructed from Sta. 525+00 to 525+50 and from Sta. 527+31.7 to 527+80.

GUARD RAIL SCHEDULE

TRAFFIC BARRIER TERMINAL, TY. 5A		TRAFFIC BARRIER TERMINAL, TY.1 SPECIAL (TANGENT)	
LT. STA. 525+78.16 TO 525+91.41	= 1 EACH	LT. STA. 525+28.16 TO 525+78.16	= 1 EACH
RT. STA. 525+58.52 TO 525+71.77	= 1 EACH	RT. STA. 525+08.52 TO 525+58.52	= 1 EACH
LT. STA. 527+41.58 TO 527+54.83	= 1 EACH	LT. STA. 527+54.83 TO 528+04.83	= 1 EACH
RT. STA. 527+21.94 TO 527+35.19	= 1 EACH	RT. STA. 527+35.19 TO 527+85.19	= 1 EACH
TOTAL = 4 EACH		TOTAL = 4 EACH	

GENERAL NOTES

WHERE SECTION AND SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AND EASEMENTS AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 0.2 ACRES

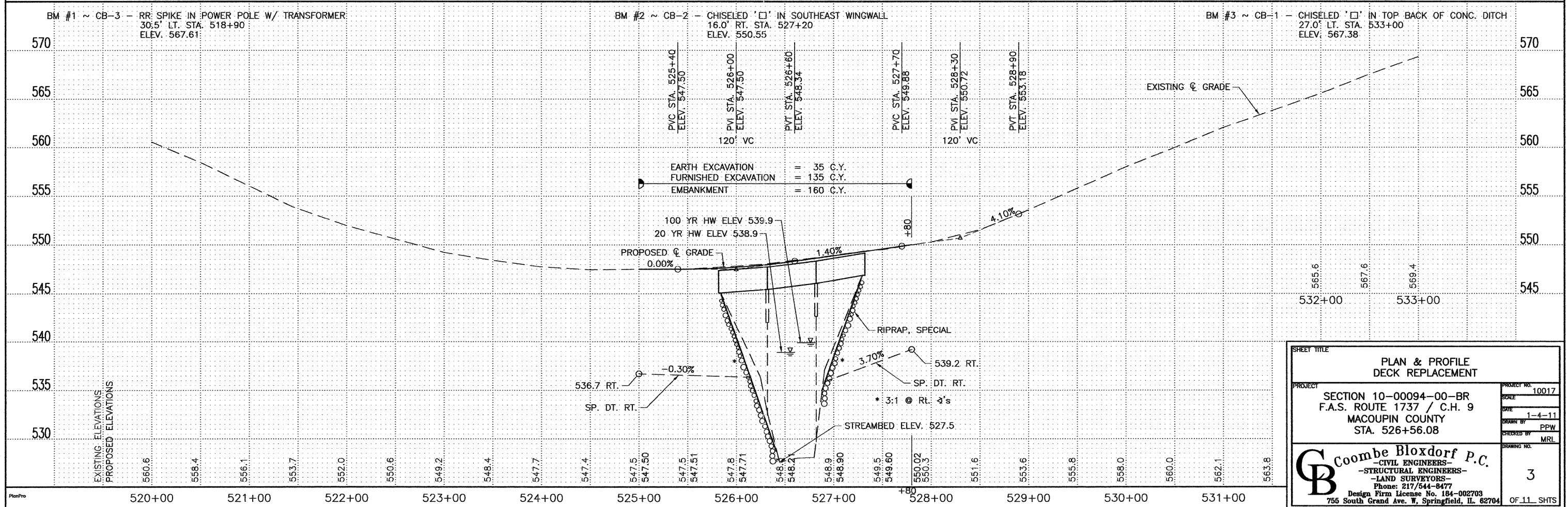
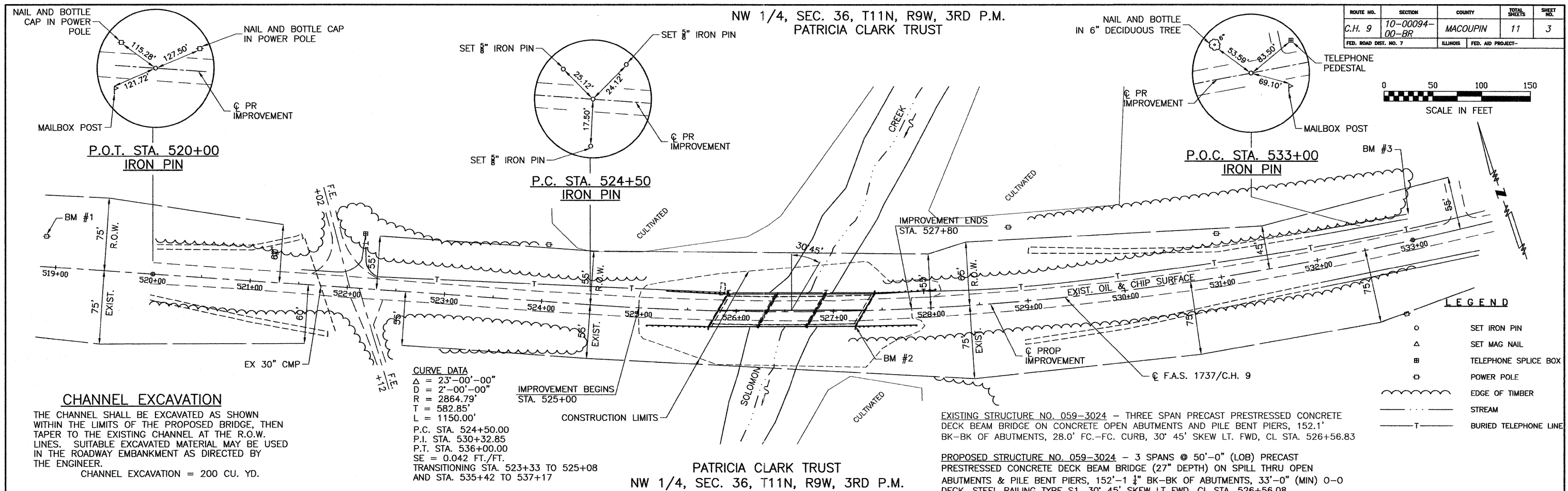
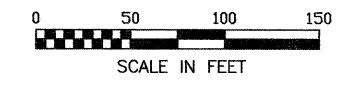
THE COST OF REMOVAL OF ANY OBSTRUCTIONS OR CULVERTS NOT OTHERWISE INCLUDED IN REMOVAL OF EXISTING STRUCTURES WHICH INTERFERE WITH CONSTRUCTION WILL BE CONSIDERED INCIDENTAL TO THE COST OF EARTH EXCAVATION.

ALL PLAN ELEVATIONS REPRESENT USGS DATUM.

SHEET TITLE SUMMARY OF QUANTITIES & TYPICAL CROSS SECTION		PROJECT NO. 10017
PROJECT SECTION 10-00094-00-BR F.A.S. ROUTE 1737 / C.H. 9 MACOUPIN COUNTY STA. 526+56.08		DATE 8/26/2011
DRAWN BY MRL		CHECKED BY MCB
Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Phone: 217/544-8477 Design Firm License No. 184-002703 755 South Grand Ave. W. Springfield, IL 62704		SHEET NO. 2 OF 11 SHTS

NW 1/4, SEC. 36, T11N, R9W, 3RD P.M.
PATRICIA CLARK TRUST

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



SHEET TITLE
PLAN & PROFILE
DECK REPLACEMENT

PROJECT
SECTION 10-00094-00-BR
F.A.S. ROUTE 1737 / C.H. 9
MACOUPIN COUNTY
STA. 526+56.08

PROJECT NO. 10017
SCALE
DATE 1-4-11
DRAWN BY PPW
CHECKED BY MRL
DRAWING NO. 3

Coombe Bloxdorf P.C.
 CIVIL ENGINEERS-
 STRUCTURAL ENGINEERS-
 LAND SURVEYORS-
 Phone: 217/544-8477
 Design Firm License No. 184-002703
 755 South Grand Ave. W. Springfield, IL 62704

OF 11 SHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	4
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

* Existing S.N. 059-3024 - Three span precast prestressed concrete deck beam bridge on concrete open abutments, and pile bent piers, 152.1' bk-bk of abutments, 28.0' fc-fc curb, 30° skew lt. fwd. @ Sta. 526+56.08 (Superstructure to be removed)

* No Salvage

GENERAL NOTES

The Standard Specifications adopted by the Department of Transportation January 1, 2012 shall apply to this work.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

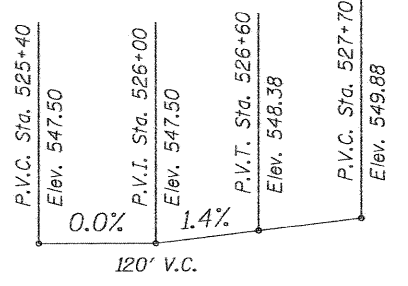
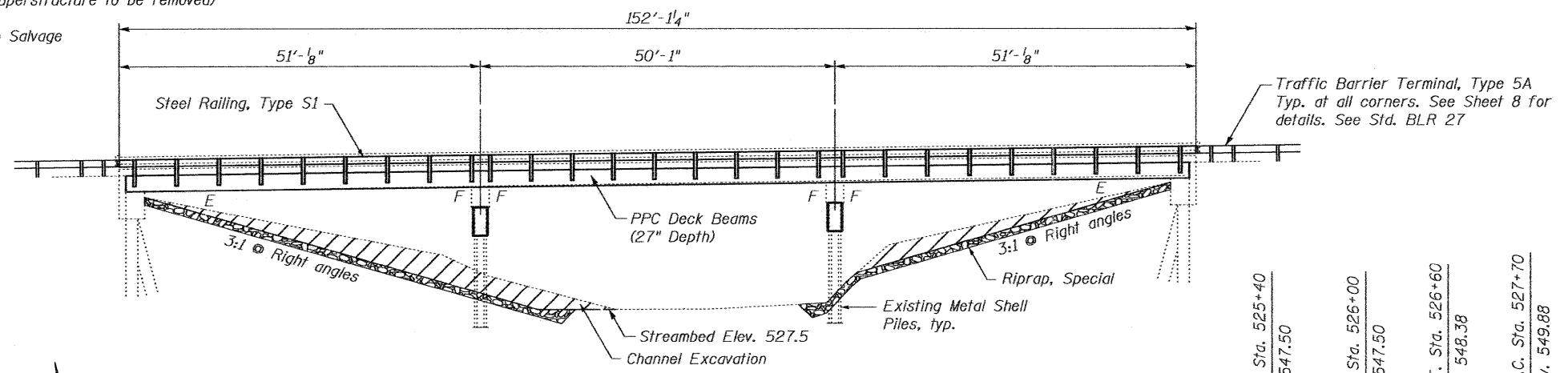
Structural Repair of Concrete shall occur prior to placement of the new deck beams. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

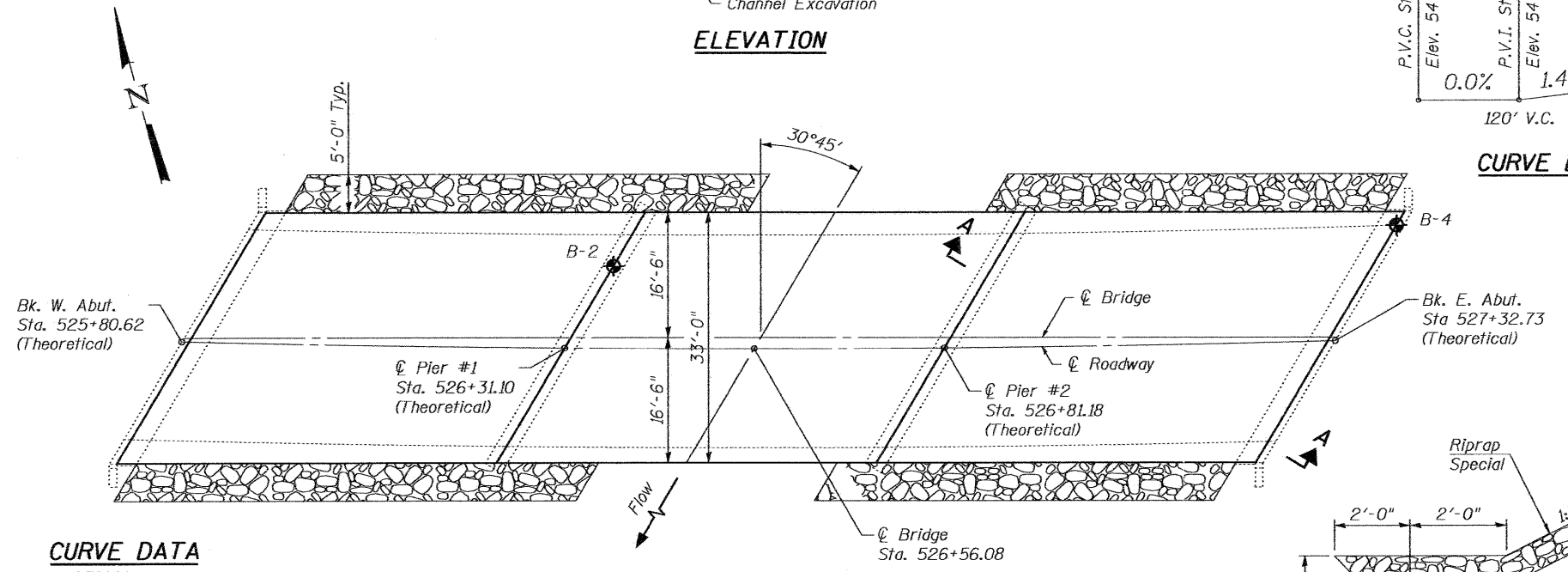
If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth).

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing Superstructures.

Hot Mix Asphalt Surface Course Mix "C", N50, shall be used to level out beam camber and maintain the vertical alignment and shall be constructed according to Section 582 of the Standard Specifications.



CURVE DATA



CURVE DATA

Δ = 23°00'
 D = 2°00'
 T = 582.85
 L = 1150.00'
 E = 58.69'
 R = 2864.79
 S.E. = 4.2%
 P.C. = Sta. 524+50.00
 P.T. = Sta. 536+00.00
 P.I. = Sta. 530+32.85
 Full Superelevation 0.042 ft/ft
 from Sta. 525+08 to sta 535+42

LOADING HL-93 (NEW CONST.)
LOADING HS20-44 (EXIST. CONST.)
 No allowance for future wearing surface.

DESIGN SPECIFICATIONS

NEW CONSTRUCTION
 2010 AASHTO LRFD Bridge Design Specifications

EXISTING CONSTRUCTION
 2002 AASHTO Bridge Design Specifications
 1995 FHWA Seismic Retrofitting Manual for Highway Bridges

DESIGN STRESSES

NEW CONSTRUCTION

PRECAST PRESTRESSED UNITS
 f'c = 6,000 psi
 f'ci = 5,000 psi
 fpu = 270,000 psi (1/2" low lax strands)
 fpbt = 201,960 psi (1/2" low lax strands)

EXISTING CONSTRUCTION

FIELD UNITS

f'c = 2,500 psi
 fy = 40,000 psi (Reinforcement - 1964 Construction)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	542.04	518.0	518.0	543.94

SECTION A-A

Note: See Special Provisions for Riprap, Special

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4 (Special)	Ton			386
Removal of Existing Superstructures	Each	1		1
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4,950		4,950
Steel Railing, Type S1	Foot	302		302
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	551		551
PC Mortar Fairing Course	Foot	100		100
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.		168	168
Asbestos Bearing Pad Removal	Each	33		33
Hot Mix Asphalt Surface Course, Mix "C", N50	Ton	64		64

WATERWAY INFORMATION

Drainage Area = 22.8 sq. mi. Low Grade Elev. 547.50 @ Sta. 525+50

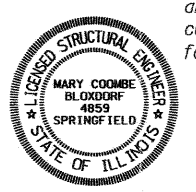
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater E.I.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Min. Calc.									
Design	20	4188	504	504	538.9	0.9	0.9	539.8	539.8
Base	100	6450	577	577	539.9	2.2	2.2	542.1	542.1
Overtopping									
Max. Calc.	500	8760	630	630	540.7	3.6	3.6	544.3	544.3

SOLOMON CREEK
 RE-BUILT 20__ BY
 MACOUPIN COUNTY
 SECTION 10-00094-00-BR
 FAS RTE. 1737 STA. 526+56.08
 FA PROJ. BHS 1737 (104)
 S.N. 059-3024 LOADING HL 93

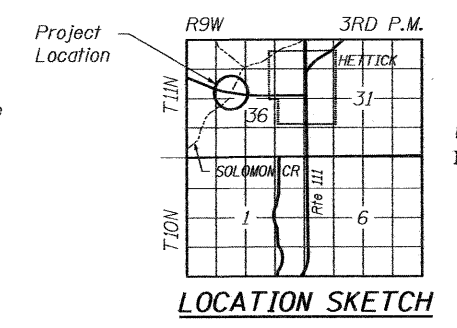
NAME PLATE

See Std. 515001
 Existing Name Plate shall be cleaned and relocated next to new Name Plate.
 Cost included with Name Plates.

I certify to the best of my knowledge, information and belief, this bridge design is structurally adequate for the Design Loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO Standard Specifications for Highway Bridges.



Mary Coombe Bloxdorf
 ILLINOIS STRUCTURAL NO. 4859
 EXPIRES 11/30/12
 DATE: 10/14/11



LOCATION SKETCH

SHEET TITLE
GENERAL PLAN AND ELEVATION

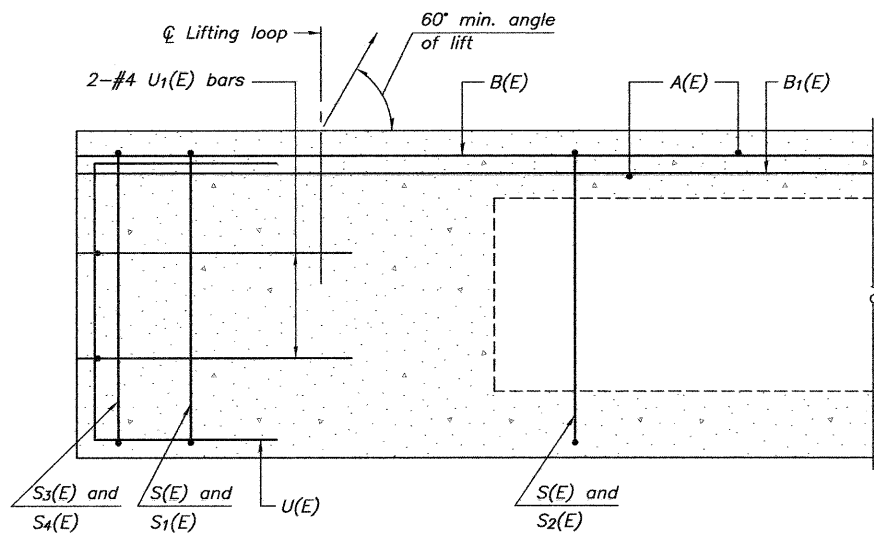
PROJECT: F.A.S. ROUTE 1737 / C.H. 9 SECTION 10-00094-00-BR MACOUPIN COUNTY STATION 526+56.08

PROJECT NO. 10017
 DATE: 8/26/2011
 DESIGN BY: [Blank]
 DRAWN BY: CFC
 CHECKED BY: MRL
 DRAWING NO. 4
 OF 11 SHTS

Coombe-Bloxdorf P.C.
 -CIVIL ENGINEERS-
 -STRUCTURAL ENGINEERS-
 -LAND SURVEYORS-
 Design Firm License No. 184-002703

PLOT DATE = 10/12/2011
 FILE NAME = ...-me-bridge-me-001-spe.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = JPC

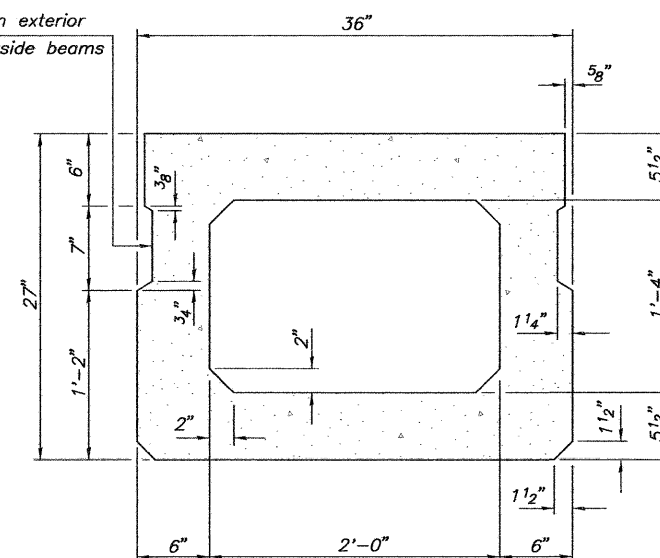
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	5
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



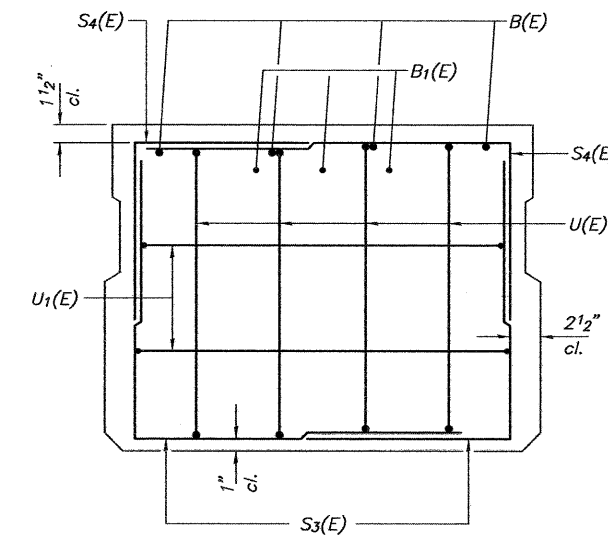
SECTION C-C

* Rail Post Anchor Devices (Sheet 8) to be cast into exterior face of outside beam.

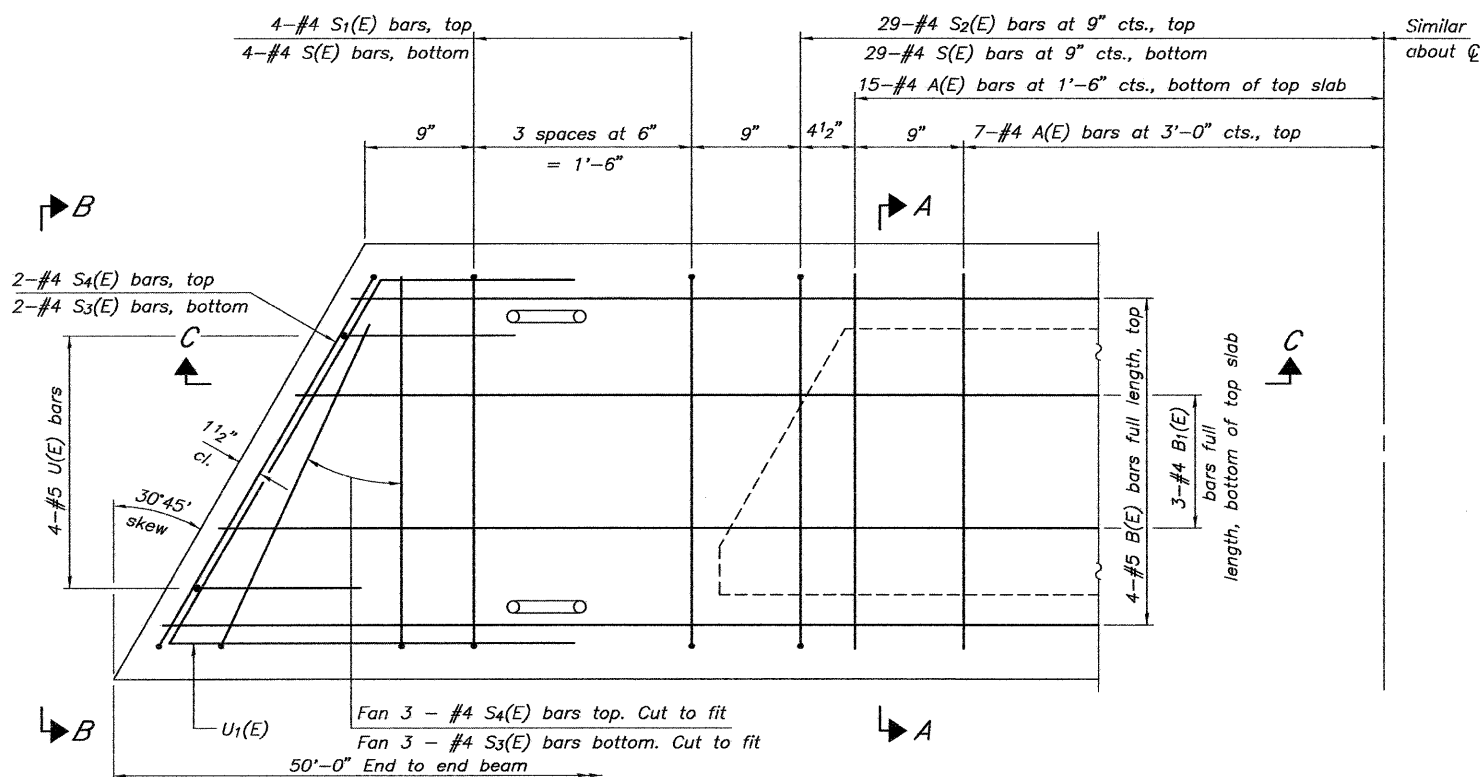
* Omit key on exterior face of outside beams



SECTION A-A
(Showing dimensions)

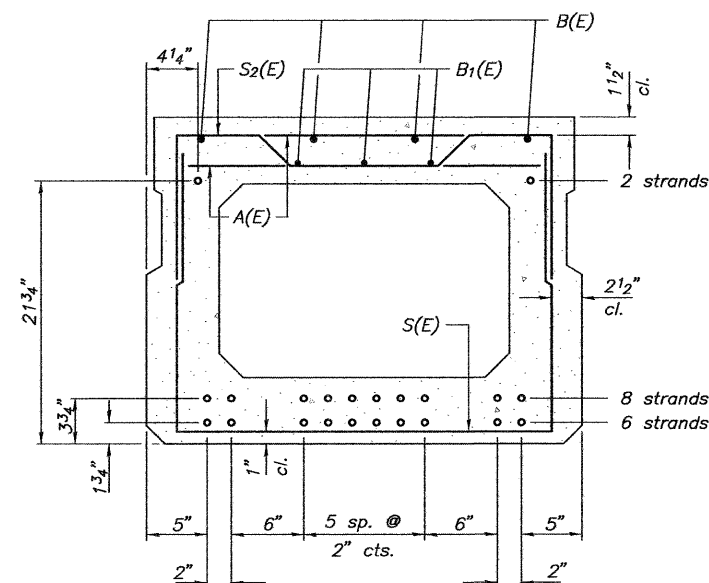


VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION A-A

(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

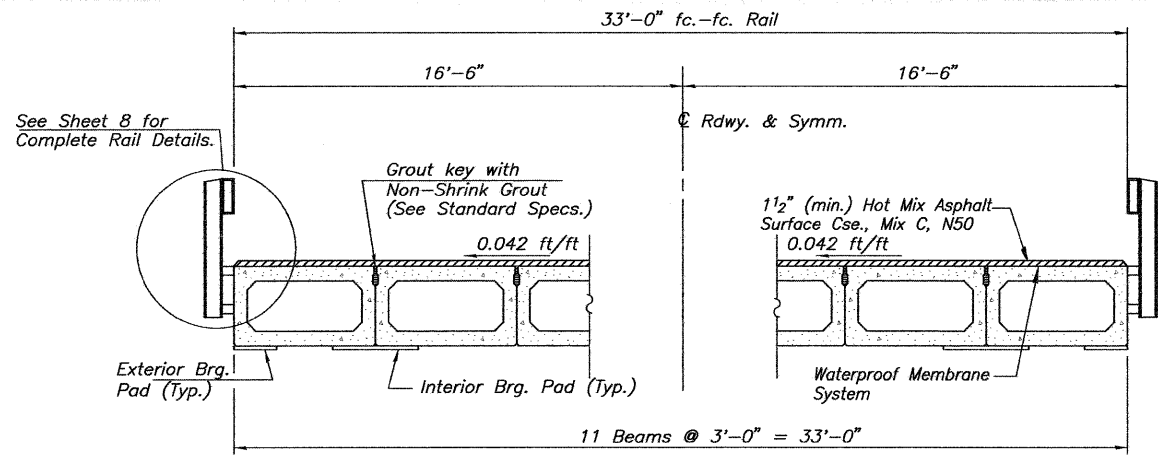
BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	44	#4	2'-7"	—
B(E)	4	#5	49'-8"	—
B1(E)	3	#4	49'-8"	—
S(E)	66	#4	6'-5"	┌
S1(E)	8	#4	5'-11"	┌
S2(E)	58	#4	6'-2"	┌
S3(E)	8	#4	4'-3"	┌
S4(E)	8	#4	4'-0"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	6'-11"	┌

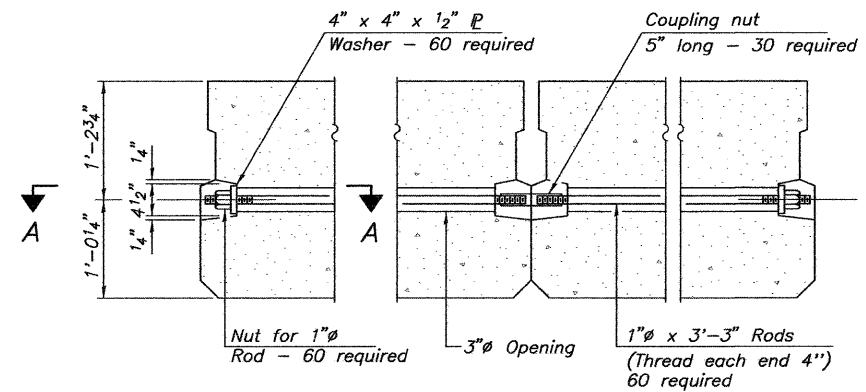
Note: See sheet 6 of 11 for additional details and Bill of Material.

SHEET TITLE		SUPERSTRUCTURE	
PROJECT	SECTION 10-00094-00-BR	PROJECT NO.	10017
	F.A.S. 1737/C.H. 9	SCALE	
	MACOUPIN COUNTY	DATE	8/26/2011
	STA. 526+56.08	DRAWN BY	MRL
		CHECKED BY	MCB
Coombe-Bloxdorf P.C. CIVIL ENGINEERS- STRUCTURAL ENGINEERS- LAND SURVEYORS Phone: 217/544-8477 Design Firm License No. 184-002703 755 South Grand Ave. W. Springfield, IL 62704		DRAWING NO.	5
			OF 11 SHEETS

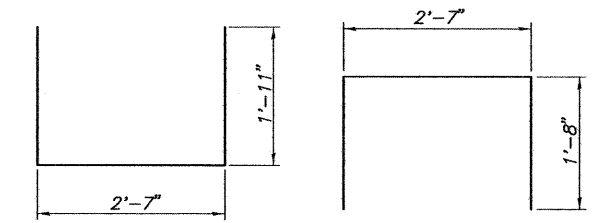
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



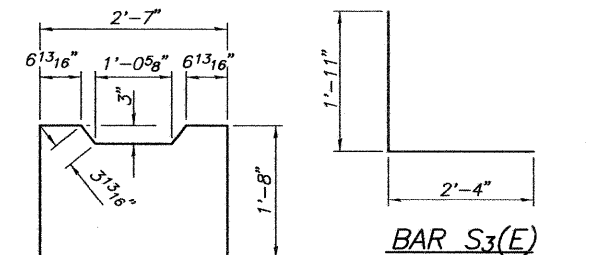
CROSS SECTION
Looking East



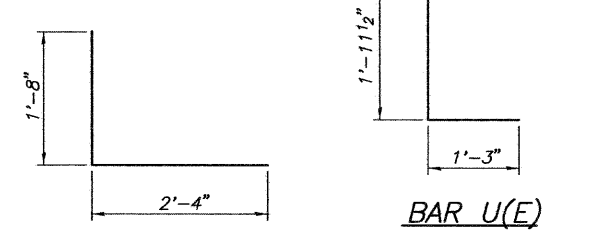
TYPICAL TRANSVERSE TIE ASSEMBLY



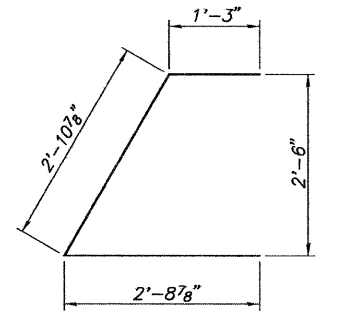
BAR S(E) **BAR S1(E)**



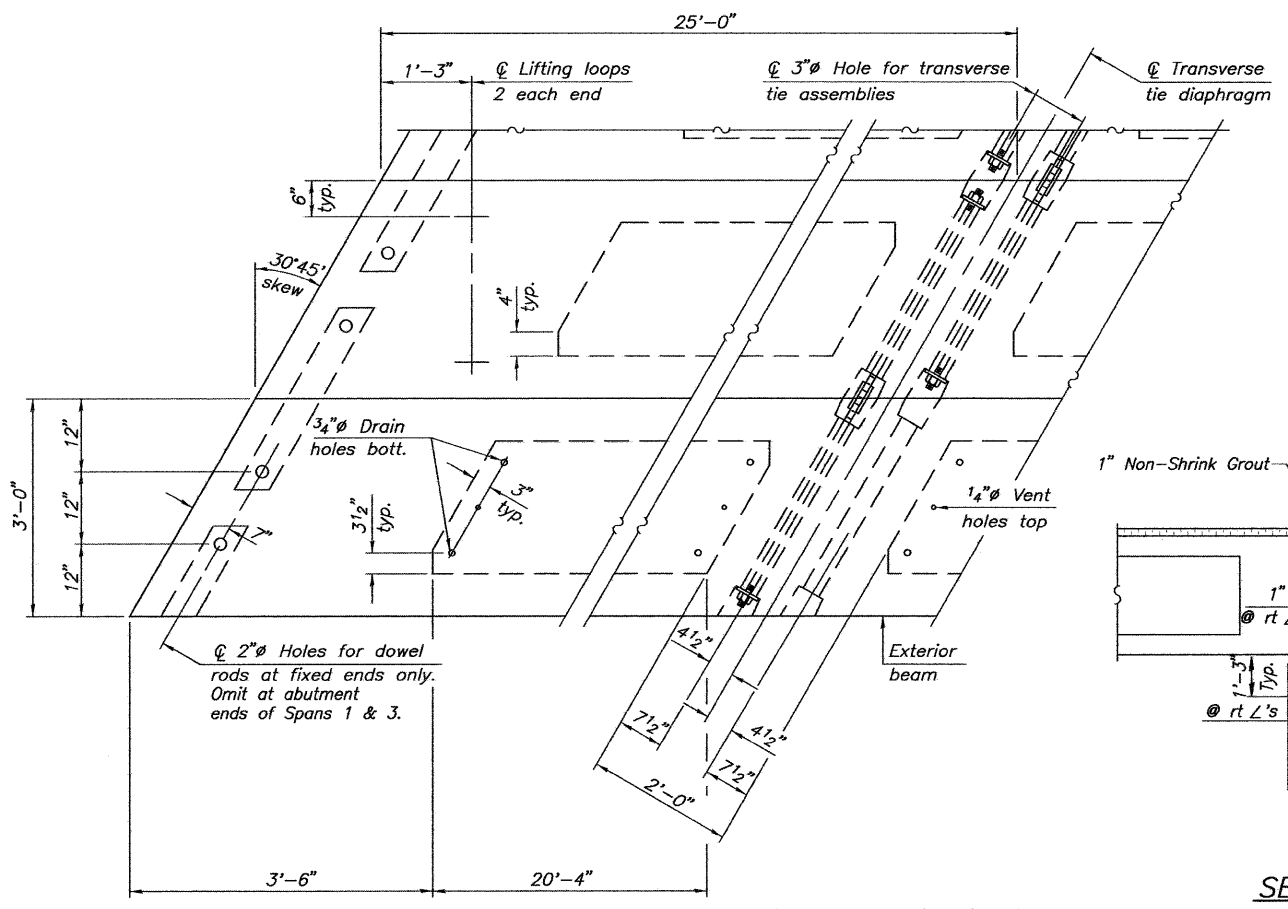
BAR S2(E) **BAR S3(E)**



BAR U(E) **BAR S4(E)**

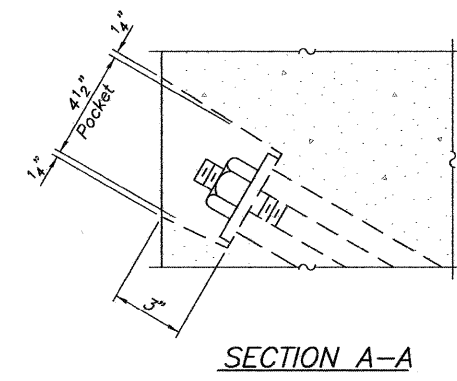


BAR U1(E)

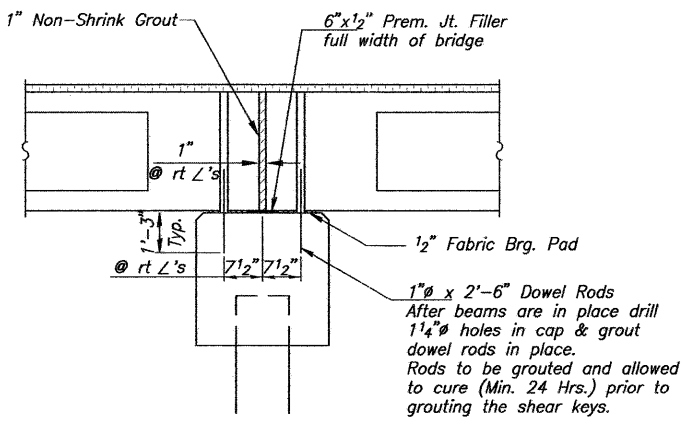


PLAN VIEW

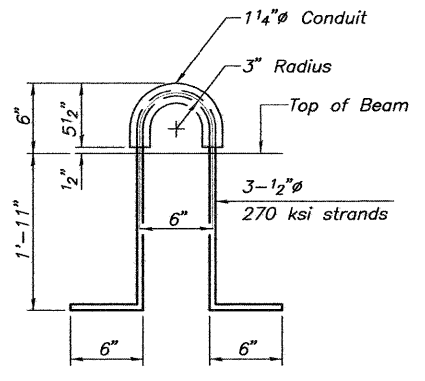
Note: Connect beams in pairs with the transverse tie configuration shown.



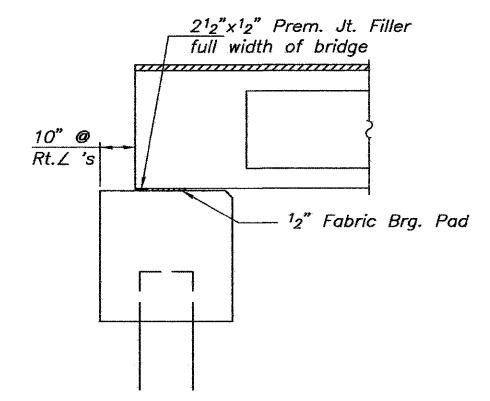
SECTION A-A



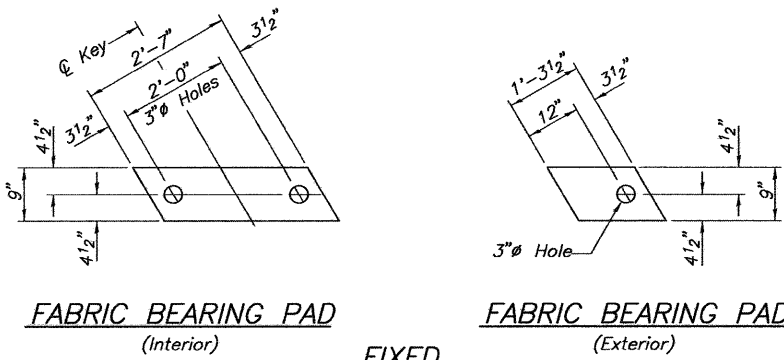
SECTION AT PIERS



LIFTING LOOP DETAIL



SECTION AT ABUTMENTS



FABRIC BEARING PAD (Interior) **FABRIC BEARING PAD (Exterior)**

Notes: All bearing pads shall be 1/2" thick. Omit holes when using expansion bearings. Expansion bearing pad shall be bonded to the substructure.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	4,950
---	---------	-------

SHEET TITLE
SUPERSTRUCTURE DETAILS

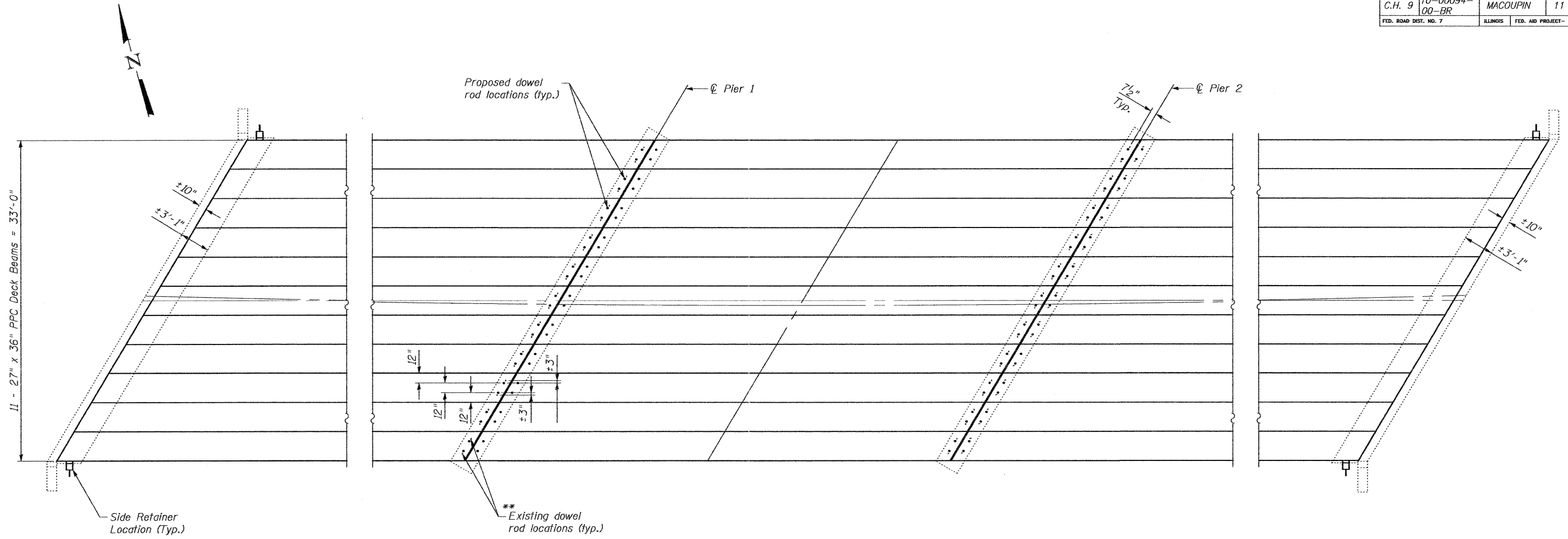
PROJECT: SECTION 10-00094-00-BR
F.A.S. ROUTE 1737/C.H. 9
MACOUPIN COUNTY
STA. 526+56.08

PROJECT NO. 10017
SCALE: 8/26/2011
DRAWN BY: MRL
CHECKED BY: MCB
DRAWING NO. 6

Coombe-Bloxdorf P.C.
-CIVIL ENGINEERS-
-STRUCTURAL ENGINEERS-
-LAND SURVEYORS-
Phone: 217/544-8477
Firm License No. 184-002703
755 South Grand Ave. V. Springfield, IL 62704

OF 11 SHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	7
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



PLAN

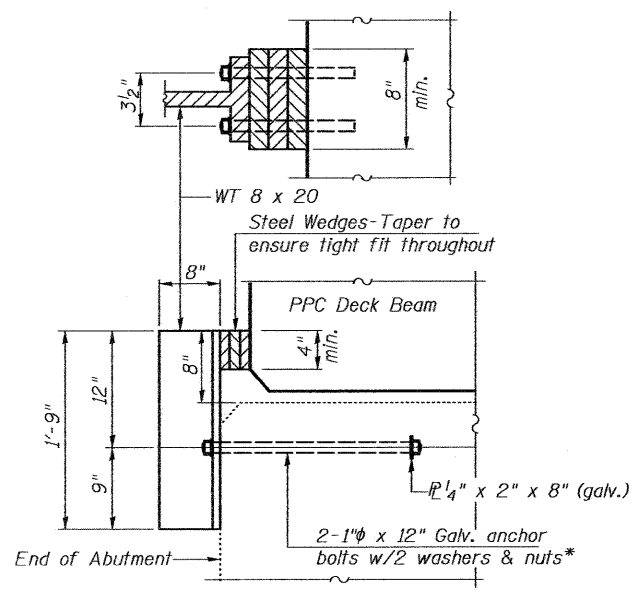
(Showing Existing Substructure and Proposed Deck Beams)

**Burn off flush with existing bearing seat, grind smooth and seal with epoxy. Cost is included in Removal of Existing Superstructure.

TOTAL BILL OF MATERIAL

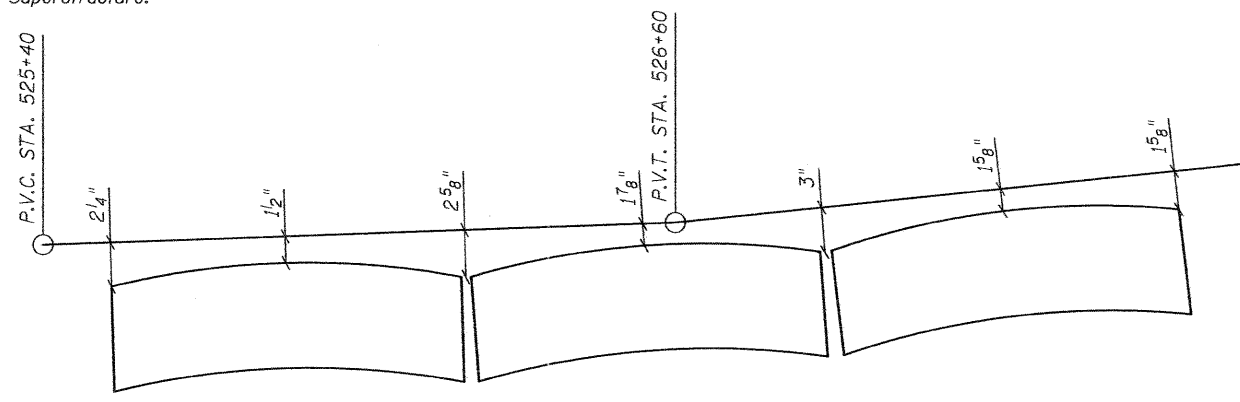
ITEM	UNIT	TOTAL
Asbestos Bearing Pad Removal	Each	22
Waterproofing Membrane System	Sq. Yd.	551

Notes:
 See Plan View on Sheet 6 of 11 for bearing pad layout.
 The side retainers and steel wedges shall have a tight fit against the side of the deck beams and shall be in place prior to grouting the shear keys.
 Cost of anchor bolts and structural steel required for the side retainers shall be included in the cost of the Precast Prestressed Concrete Deck Beams. The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385. Anchor bolts, plate washers and nuts shall be galvanized according to AASHTO M 232.



SIDE RETAINER DETAIL

*Anchor bolts shall be approved threaded rods placed in drilled holes and grouted in place.



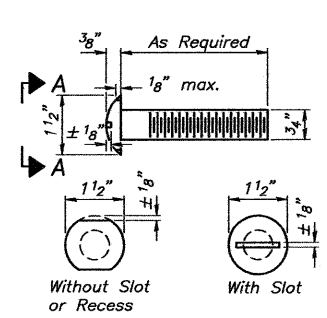
ANTICIPATED HMA WEARING SURFACE PROFILE

(For Information Only)

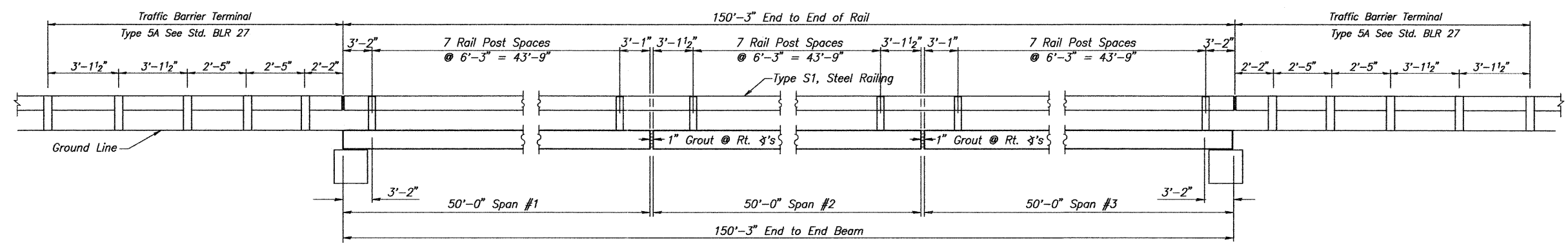
PLOT DATE = 10/12/2011
 FILE NAME = ..\bridge-neg\02-details.dgn
 PLOT SCALE = 5/4000000 1" / 10'
 USER NAME = JPC

SHEET TITLE		SUPERSTRUCTURE DETAILS	
PROJECT	F.A.S. ROUTE 1737 / C.H. 9 SECTION 10-00094-00-BR MACOUPIN COUNTY STATION 526+56.08	PROJECT NO.	10017
DATE	8/26/201	DESIGN BY	CFC
DRAWN BY	MRL	CHECKED BY	MRL
DRAWING NO.	7		
Coombe-Bloxdorf P.C. -CIVIL ENGINEERS- -STRUCTURAL ENGINEERS- -LAND SURVEYORS- Design Firm License No. 184-002703		OF 11 SHTS	

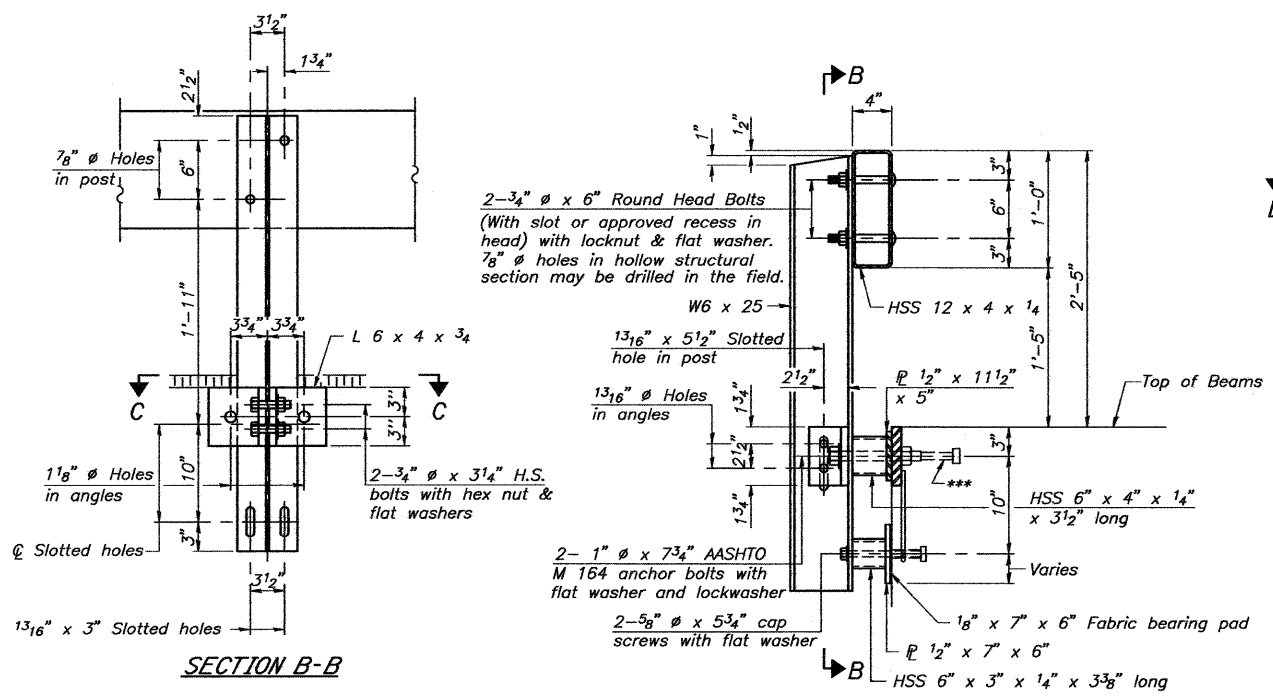
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



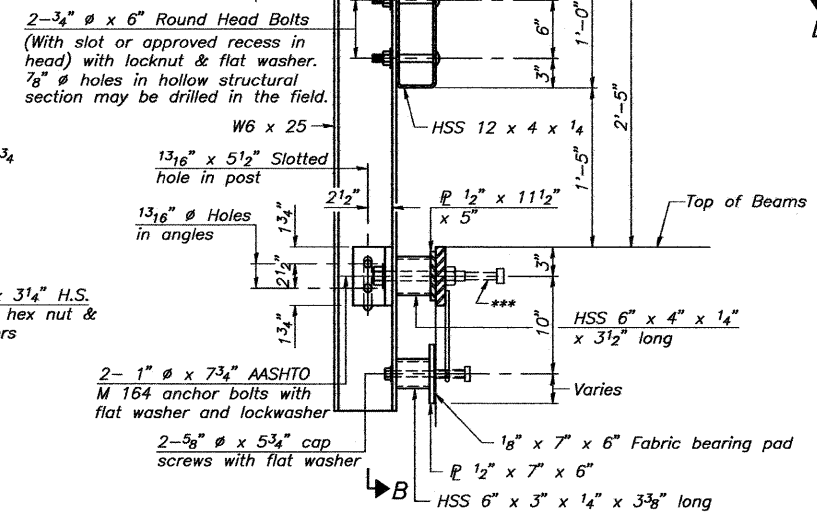
VIEW A-A
ROUND HEAD BOLT



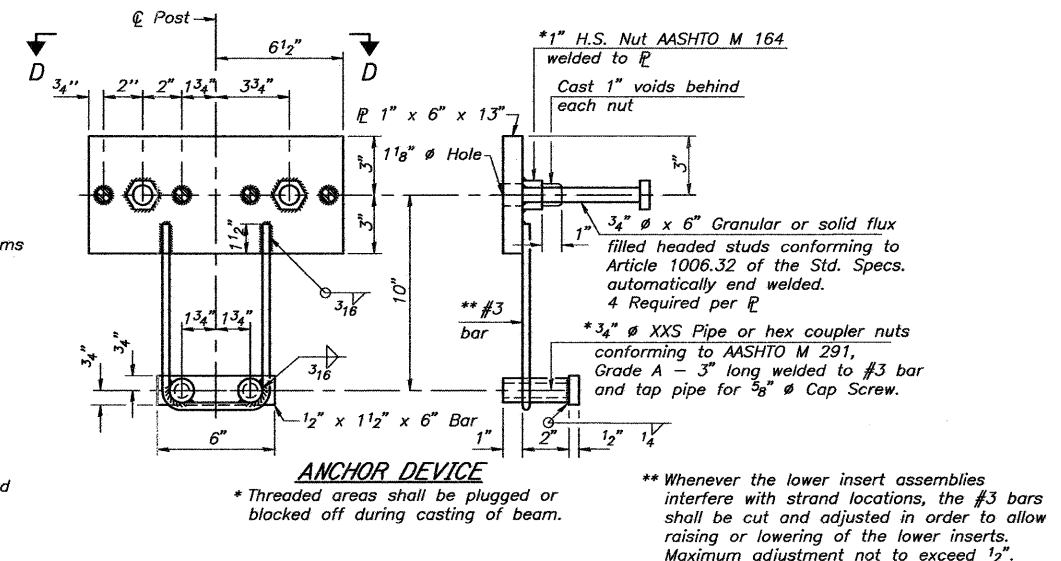
ELEVATION
Showing Inside Face of Rail



SECTION B-B

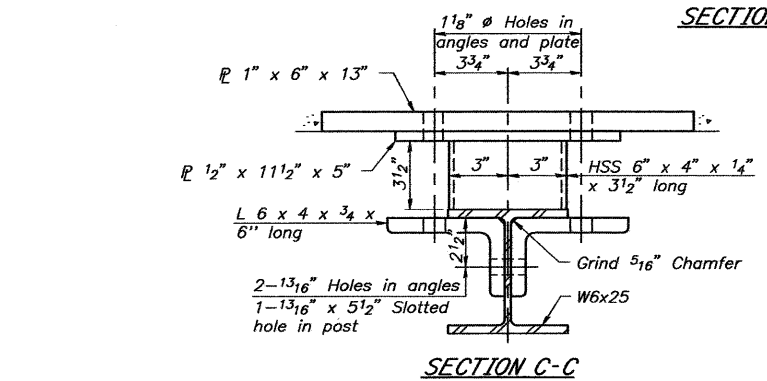


SECTION AT RAILING POST

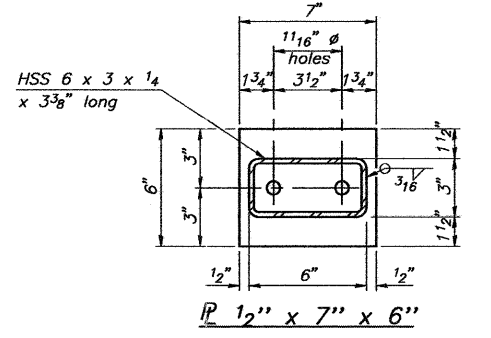


ANCHOR DEVICE

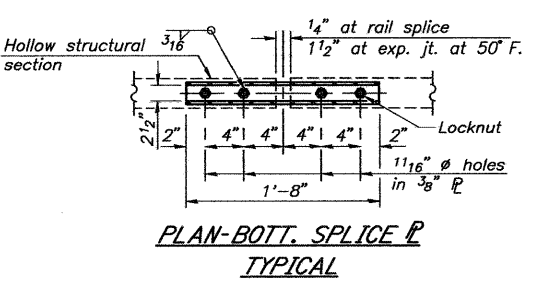
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



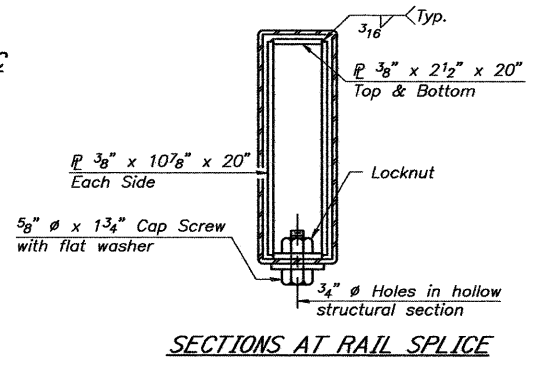
SECTION C-C



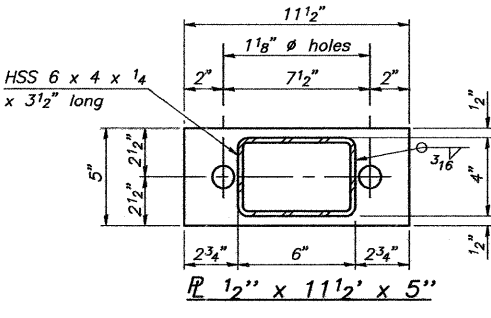
SECTION AT RAIL SPLICE



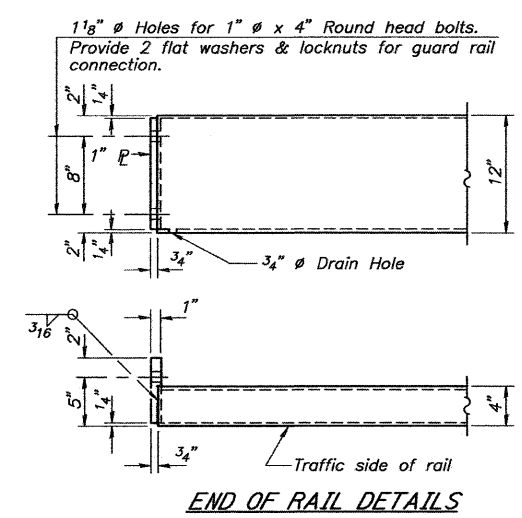
PLAN-BOTT. SPLICE TYPICAL



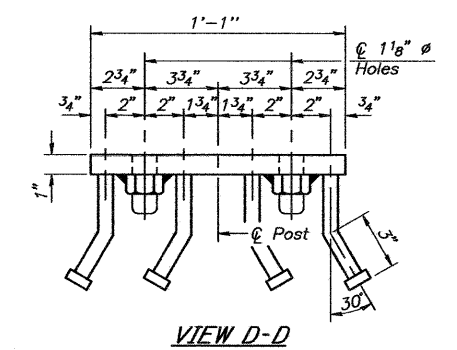
SECTIONS AT RAIL SPLICE



SECTION AT RAIL SPLICE



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	302

SHEET TITLE

STEEL RAILING, S1

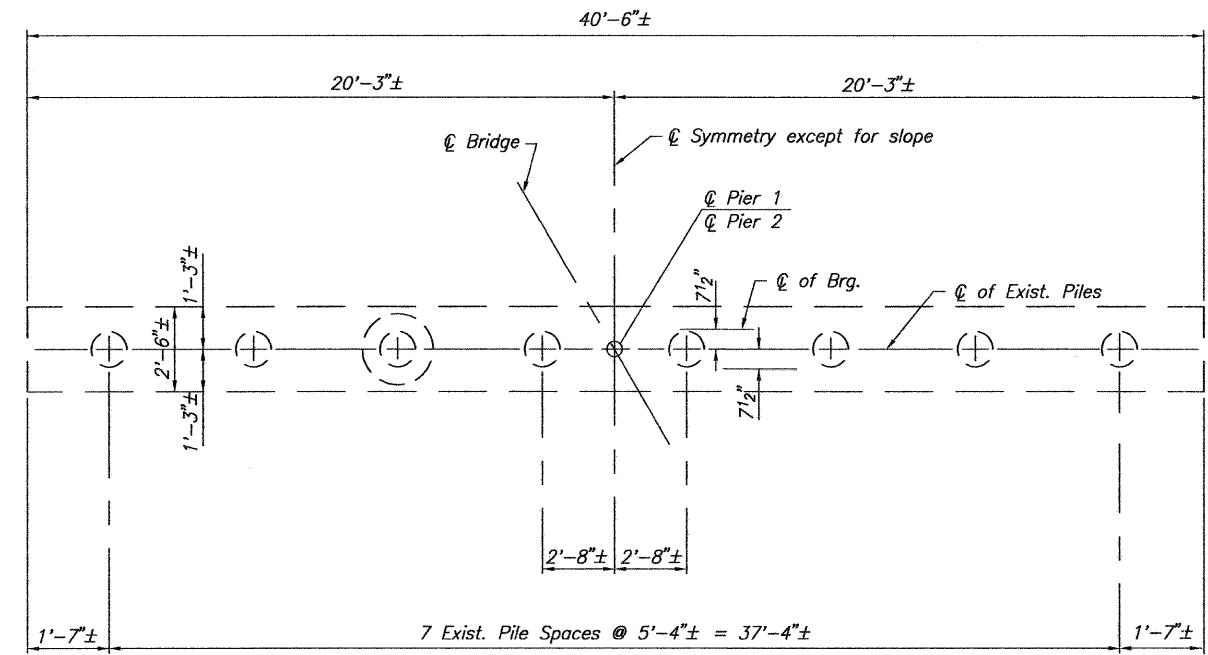
PROJECT: SECTION 10-00094-00-BR
F.A.S. ROUTE 1737/C.H. 9
MACOUPIN COUNTY
STATION 526+56.08

PROJ. NO. 10017
SCALE
DATE 8/25/2011
DRAWN BY PFW
CHECKED BY MRL
DESIGNED BY

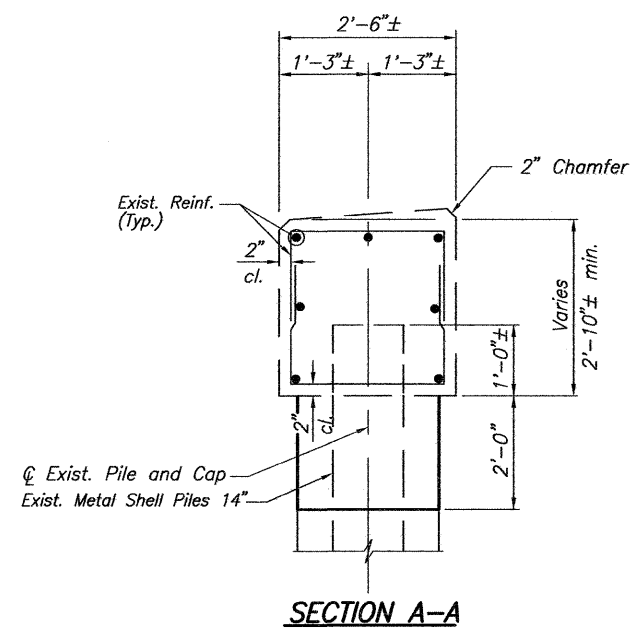
Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Phone: 217/544-0477
Design Firm License No. 184-002703
755 South Grand Ave. W, Springfield, IL 62704

8 OF 11 SHITS

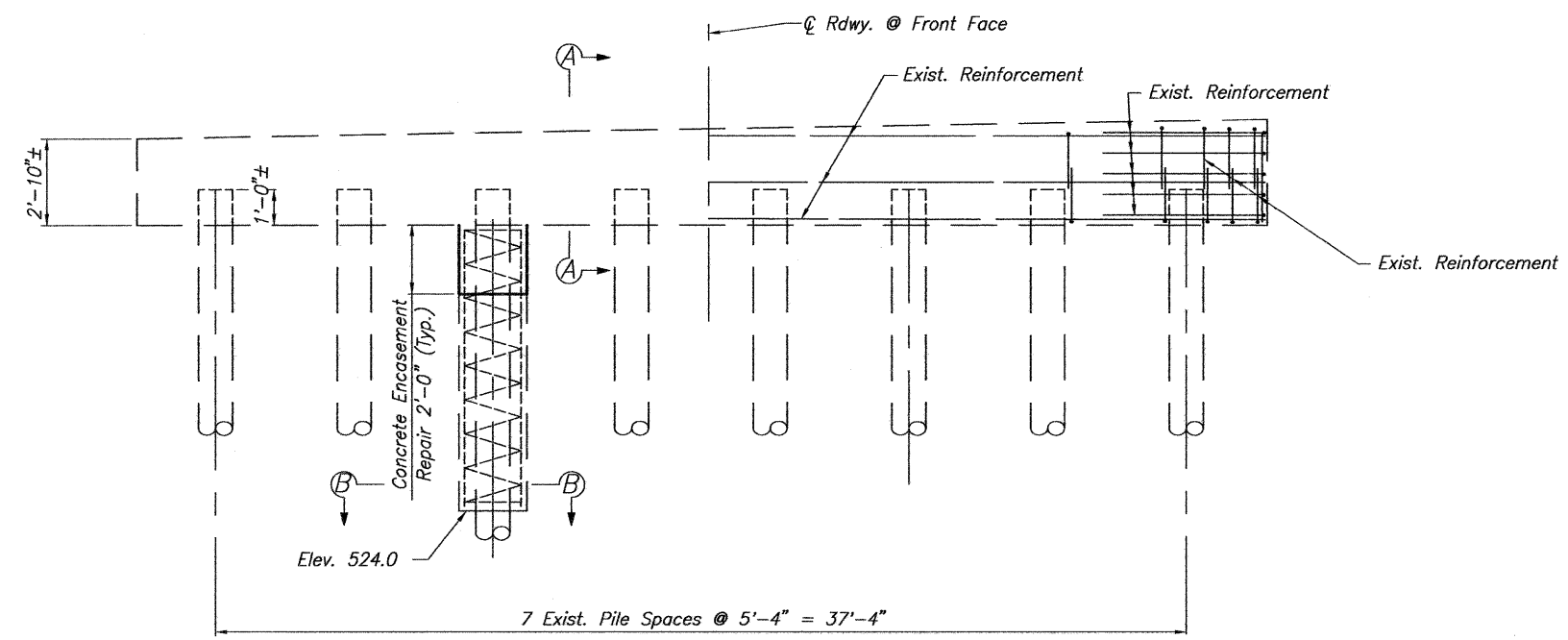
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



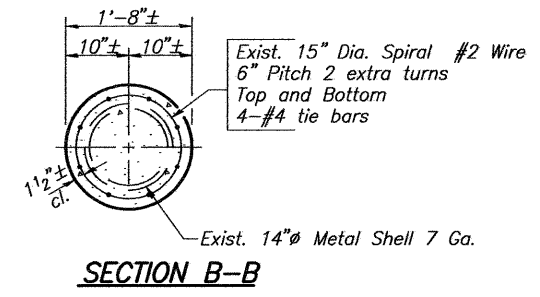
PLAN



SECTION A-A



ELEVATION



SECTION B-B

NOTES

All reinforcement, elevations, pile data and dimensions are information from existing plans.
 The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 Any reinforcement bars that are damaged during concrete repair operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included in Structural Repair of Concrete (Depth equal to or less than 5").

BILL OF MATERIAL - 2 PIERS

Asbestos Bearing Pad Removal (Pier #1 - East side only)	Each	11
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	168

EXISTING PILE DATA

Type	Metal Shell Pile 14"Ø
No. Req'd (2 Abuts.)	16*
Design Capacity	35 Tons/Pile
Est. Length	46 Feet/Pile (Pier #1) 54 Feet/Pile (Pier #2)

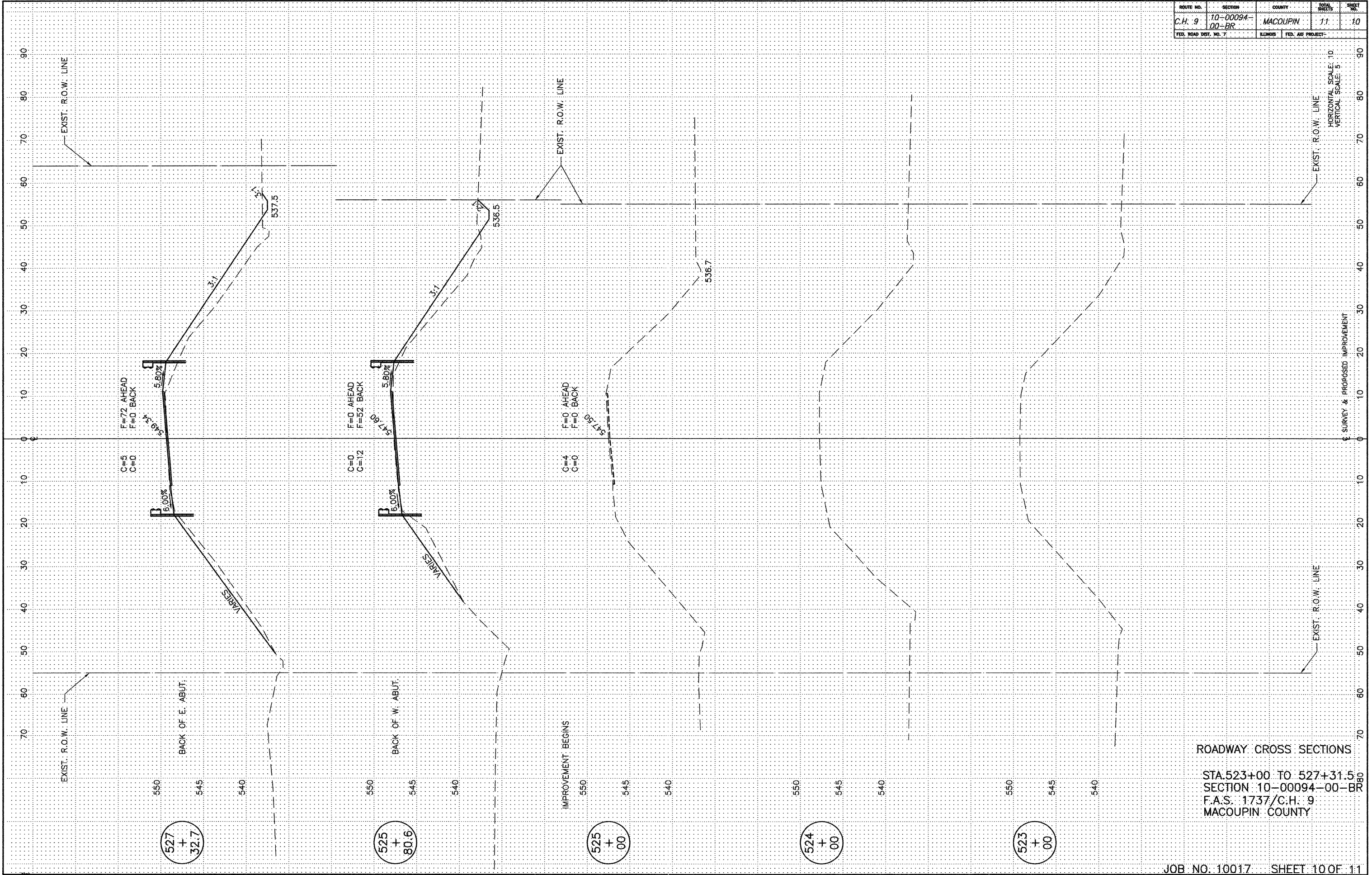
*Includes two metal shell test piles.

PIER REPAIR DETAILS

PROJECT	SECTION 10-00094-00-BR F.A.S. ROUTE 1737/C.H. 9 MACOUPIN COUNTY STA. 526+56.08	PROJECT NO.	10017
DATE	8/26/2011	DRAWN BY	MRL
CHECKED BY	MCB	DRAWING NO.	9

Coombe-Bloxdorf P.C.
 CIVIL ENGINEERS-
 STRUCTURAL ENGINEERS-
 LAND SURVEYORS-
 Phone: 217/544-8477
 Design Firm License No. 184-002703
 755 South Grand Ave. W. Springfield, IL 62704

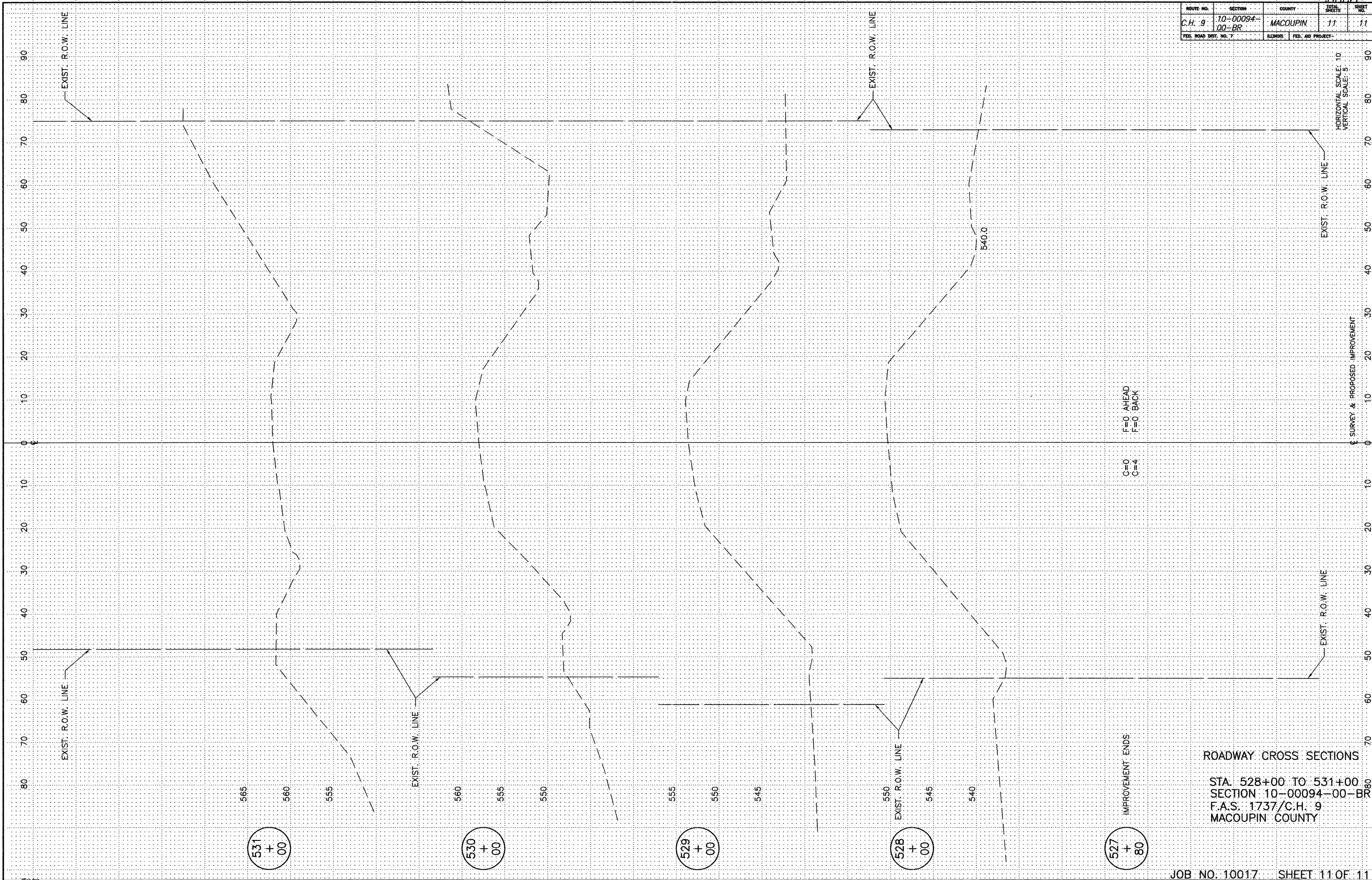
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 9	10-00094-00-BR	MACOUPIN	11	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



ROADWAY CROSS SECTIONS

STA. 523+00 TO 527+31.5
 SECTION 10-00094-00-BR
 F.A.S. 1737/C.H. 9
 MACOUPIN COUNTY

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
C.H. 9	10-00094-00-BR	MACOUPIN	11	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ROADWAY CROSS SECTIONS

STA. 528+00 TO 531+00
 SECTION 10-00094-00-BR
 F.A.S. 1737/C.H. 9
 MACOUPIN COUNTY