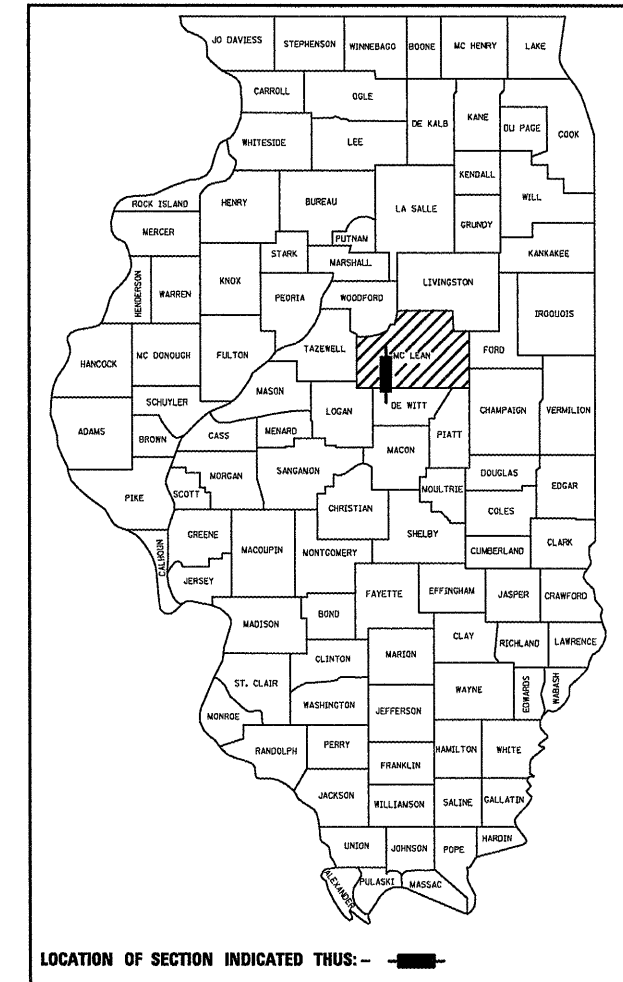


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**
F.A.P. ROUTE 676 (US 150)
SECTION (9-1)BJR
MCLEAN COUNTY

| | | | | |
|---------------------|----------|--------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 676 | (9-1)BJR | MCLEAN | 17 | 1 |
| FED. ROAD DIST. NO. | ILLINOIS | CONTRACT NO. 70731 | | |

* 17+1=18

D-95-020-08



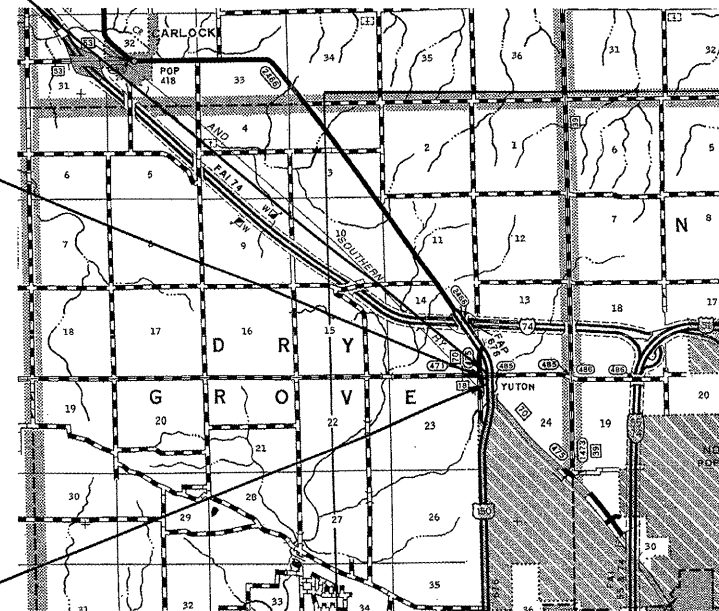
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4 - 4A

| CURRENT TRAFFIC DATA | |
|----------------------|--------|
| 2008 ADT | = 3800 |
| 2028 ADT | = 4550 |
| PV + PC % | = 87.7 |
| SU % | = 5.9 |
| MU % | = 6.4 |

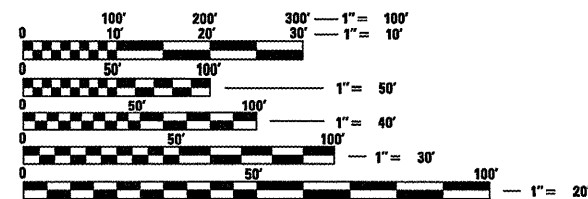
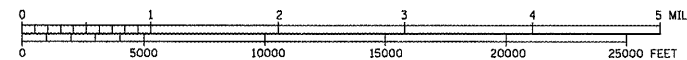
DESIGN DESIGNATION
O.P.A.

PROJECT ENDS
STATION 196+46.00

S. N. 057-0202
STA. 191+11.72 TO STA. 195+20.66
EXISTING 3 SPAN, STEEL PLATE GIRDER
BRIDGE 89' 2" WIDE X 406-5" LONG



PROJECT BEGINS
STATION 189+90.00



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
OR 811

PROJECT ENGINEER: KEVIN TRAPP
SQUAD LEADER: JEFF M. SHERER
DESIGNER: JEFF M. SHERER
PHONE: (217)465-4181
CONTRACT NO. 70731

GROSS LENGTH = 657.0 FEET = 0.124 MILES
NET LENGTH = 657.0 FEET = 0.124 MILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 1/28 20 09

Joseph E. Gowen
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

March 27 20 09
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT

March 27 20 09
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

PLOT DATE = 1/28/2009
 FILE NAME = I:\projects\70731\cover.dgn
 PLOT SCALE = 1/8"=1'-0"
 USER NAME = sherer,jm

INDEX OF SHEETS

| SHEET NO. | ITEM |
|-----------|--|
| 1 | COVER SHEET |
| 2 | INDEX OF SHEETS / HIGHWAY STANDARDS |
| 3 | GENERAL NOTES |
| 4-4A | SUMMARY OF QUANTITIES |
| 5 | SCHEDULE OF QUANTITIES/ PLAN NOTES |
| 6 | EXISTING / PROPOSED ROADWAY TYPICAL SECTIONS |
| 7 | EXISTING / PROPOSED STRUCTURE TYPICAL SECTIONS |
| 8 | PLAN VIEW |
| 9 | STAGING PLANS |
| 10-11 | WIDTH RESTRICTION SIGNING |
| 12-17 | S.N. 057-0202 REPAIR PLANS |

LIST OF STANDARDS

| STANDARD NO. | DESCRIPTION |
|--------------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 420401-07 | BRIDGE APPROACH PAVEMENT |
| 442201-03 | CLASS C AND D PATCHES |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER |
| 701006-03 | OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701101-02 | OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE |
| 701201-03 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH |
| 701422-02 | LANE CLOSURE, MULTILANE, FOR SPEEDS \geq 45 MPH TO 55 MPH |
| 701423-03 | LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS $>$ 45 MPH TO 55 MPH |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 704001-05 | TEMPORARY CONCRETE BARRIER |

| | | | | | | | | | | |
|--|-----------------------|----------------|---------------|---|---|---|---------------------|------------------|-----------------------|-------------------|
| FILE NAME = c:\pwwork\pwwork\PIWIDOT\SHERERJH\dms83928\7031Summary.dgn | USER NAME = shererjm | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INDEX OF SHEETS /HIGHWAY STANDARDS | F.A.P. RTE. 676 | SECTION (9-1)BJR | COUNTY MCLEAN | TOTAL SHEETS 17 | SHEET NO. 2 |
| PLOT SCALE = 100.0000' / IN. | PLOT DATE = 1/30/2009 | DRAWN - JMS | CHECKED - JMS | REVISED - | SCALE: N/A | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | CONTRACT NO. 70731 | |
| | | | | | | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

GENERAL NOTES

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-107.12

THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE LOCAL RAILROAD CONTACT IS:

Mr. **HOWARD SWANSON**
Assistant Division Engineer - Bridges
Norfolk Southern Railway Company
1735 East Condit Street
Decatur, IL. 62521
217-425-2066

SPECIAL ATTENTION IS CALLED TO ARTICLE 107.12 REGARDING RAILROAD FLAGGERS. THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE RAILROAD CONTACT PERSON FOR FLAGGERS IS:

Mr. John Gilbert
Norfolk Southern Railway Company
220 East Garfield Ave.
Princeton, IN 47670
(812) 664-8557

GN 406H Mixture Requirements

| | |
|---------------------|-------------------------------------|
| Location | |
| Mixture Use | Class D Patch (Flex Pvmnt Conn.) |
| AC/PG | PG 64-22 |
| RAP % (Max) | 15 |
| Design Air Voids | 4.0% @ Ndes=50 |
| Mix Comp(Gradation) | IL 9.5 |
| Friction Aggregate | Mix C |

G.N.-631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

COMMITMENTS

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

THERE ARE NO COMMITMENTS FOR THIS PROJECT.

DESIGN NOTE:
ALL PLAN DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD.
THE ENGINEER SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

G.N.-609
PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE THE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

PROTECTIVE COAT TO BE APPLIED TO THE SURFACE OF THE CLASS D PATCHES, NEW CONCRETE MEDIAN SURFACE AND NEW CONCRETE SURFACE AT THE ABUTMENT JOINTS.

| | | | | | | | | | | |
|---|-----------------------|----------------|--------------------|---|-----------------------------------|-------------------------|--------------|---------------------|---------------------------|--------------|
| FILE NAME = | USER NAME = sherer.jm | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | GENERAL NOTES /COMMITMENTS | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ct:\pwork\pido\sherer.jm\dms83928\70715\summary.dgn | DRAWN - JMS | REVISED - | 676 | | | (9-1)BJR | MCLEAN | 17 | 3 | |
| PLOT SCALE = 100.0000 / IN. | CHECKED - JMS | REVISED - | CONTRACT NO. 70731 | | | | | | | |
| PLOT DATE = 1/28/2009 | DATE - 090308 | REVISED - | SCALE: N/A | | | SHEET NO. 1 OF 1 SHEETS | STA. TO STA. | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | |

LOCATION OF WORK:

MCLEAN COUNTY
 STRUCTURE
 IMPROVEMENTS
 S.N. 057-0202
 FAS 676 (US 150)
 STA. 189+89.00
 100% STATE
 STA. 196+46.00

CONSTRUCTION TYPE CODE:

SFTY-2A
 TOTAL
 QUANTITY

| CODE NO | ITEM | UNIT | QUANTITY |
|------------|--|-------|----------|
| 44000500 | COMBINATION CURB AND GUTTER REMOVAL | FOOT | 76.0 |
| 44002020 | CONCRETE MEDIAN SURFACE REMOVAL | SQ FT | 494.0 |
| 44201777 | CLASS D PATCHES, TYPE II, 11 INCH | SQ YD | 62.0 |
| 50102400 | CONCRETE REMOVAL | CU YD | 31.9 |
| 50157300 | PROTECTIVE SHIELD | SQ YD | 95.0 |
| 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 32.3 |
| 50300300 | PROTECTIVE COAT | SQ YD | 1,300.0 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 3,150.0 |
| 50800515 | BAR SPLICERS | EACH | 42.0 |
| 52000110 | PREFORMED JOINT STRIP SEAL | FOOT | 269.0 |
| 58600100 | SAND BACKFILL | CU YD | 60.0 |
| 59100100 | GEOCOMPOSITE WALL DRAIN * | SQ YD | 2.0 |
| 60605000 | COMBINATION CONCRETE CURB AND GUTTER,TYPE B-6.24 | FOOT | 76.0 |
| 60618300 | CONCRETE MEDIAN SURFACE, 4 INCH | SQ FT | 494.0 |
| * 63100085 | TRAFFIC BARRIER TERMINAL, TYPE 6 | EACH | 1.0 |

*ELASTOMERIC MAT AND EXPANSION JOINT WORK IS INCLUDED IN THE COST OF THE GEOCOMPOSITE WALL DRAIN, SEE SHEET 11 FOR DETAILS

(CONT'D NEXT PAGE)

* SPECIALTY ITEM

| | | | | | | | | | | | | | |
|---|----------------------|----------------|-----------|---|------------------------------|-------------------------|--------|---------|---------------------|---------------------------|--------|--------------|-----------|
| FILE NAME = | USER NAME = sharerjm | DESIGNED - JMS | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ci:\pw_work\PMIDOT\SHERERJM\dms83928\70731Summary.dgn | | DRAWN - JMS | REVISED - | | 676 | (9-1)BJR | MCLEAN | 17 | 4 | | | | |
| PLOT SCALE = 100.0000 / / IN. | | CHECKED - JMS | REVISED - | | CONTRACT NO. 70731 | | | | | | | | |
| PLOT DATE = 1/30/2009 | | DATE - 090308 | REVISED - | | SCALE: N/A | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

LOCATION OF WORK:

MCLEAN COUNTY
 STRUCTURE
 IMPROVEMENTS
 S.N. 057-0202
 FAS 676 (US 150)
 STA. 189+89.00
 100% STATE
 STA. 196+46.00

CONSTRUCTION TYPE CODE:

SFTY-2A
 TOTAL
 QUANTITY

| CODE NO | ITEM | UNIT | TOTAL QUANTITY |
|------------|--|--------|----------------|
| 63200310 | GUARDRAIL REMOVAL | FOOT | 60.0 |
| 67100100 | MOBILIZATION | L SUM | 1.0 |
| 70100320 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701422 | L SUM | 1.0 |
| 70100325 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 | EACH | 2.0 |
| 70100450 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701201 | L SUM | 1.0 |
| 70400100 | TEMPORARY CONCRETE BARRIER | FOOT | 1,575.0 |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER | FOOT | 1,425.0 |
| X0325305 | STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES) | SQ FT | 657.0 |
| * X7200201 | WIDTH RESTRICTION SIGNING | L SUM | 1.0 |
| Z0030250 | IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 | EACH | 2.0 |
| Z0030350 | IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 | EACH | 2.0 |
| X7015005 | CHANGEABLE MESSAGE SIGN | CAL DA | 28.0 |
| Z0048665 | RAILROAD PROTECTIVE LIABILITY INSURANCE | L SUM | 1.0 |
| * | SPECIALTY ITEMS | | |

| | | | |
|--|-------------------------------|----------------|-----------|
| FILE NAME : | USER NAME = shorerjm | DESIGNED - JMS | REVISED - |
| g:\pr_work\p1dot\shorerjm\dms83928\707 | Summary.dgn | DRAWN - JMS | REVISED - |
| | PLOT SCALE = 100.0000 ' / IN. | CHECKED - JMS | REVISED - |
| | PLOT DATE = 1/30/2009 | DATE - 090308 | REVISED - |

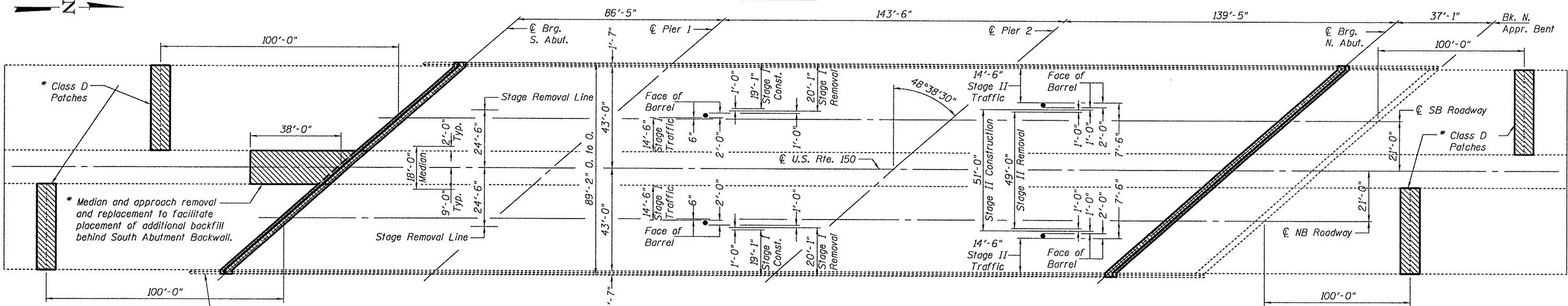
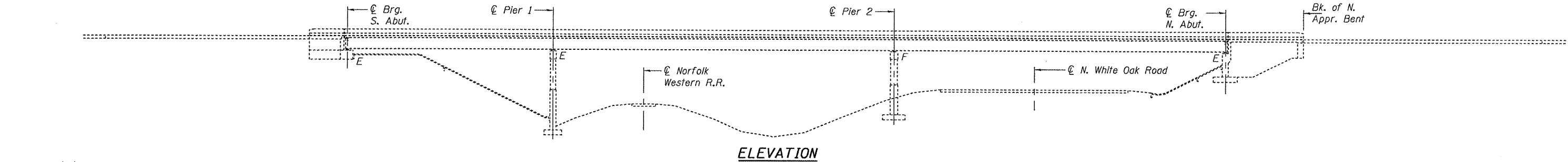
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------|--------|--------------|-----------|
| 676 | 19-118JR | MCLEAN | 17 | 4A |
| CONTRACT NO. 70731 | | | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
 Reinforcement bars designated (E) shall be epoxy coated.
 Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
 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.
 Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.
 The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

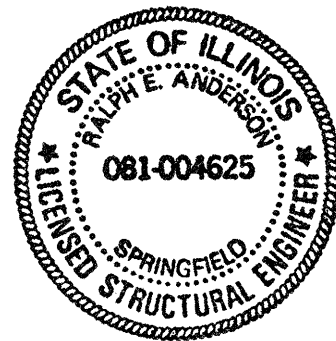
* Removal for Class D patches on the roadway shall be completed prior to deck end and hatch block removal at the bridge. See Roadway plans for details and guardrails.

PROPOSED IMPROVEMENTS

1. Removal of neoprene expansion joints and replacement with preformed joint strip seals at both abutments.
2. Remove and replace expansion joint at south abutment stage line.
3. Structural repair of concrete at North abutment and South pier (South face)
4. Repair South median settlement: remove and replace median surface curb and gutter and fill void with sand backfill.
5. Place HMA expansion patches at bridge approach pavement ends.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|--|---------|----------|
| Concrete Removal | Cu. Yd. | 31.9 |
| Concrete Superstructure | Cu. Yd. | 32.3 |
| Preformed Joint Strip Seal | Foot | 269 |
| Geocomposite Wall Drain | Sq. Yd. | 2.0 |
| Reinforcement Bars, Epoxy Coated | Pound | 3,150 |
| Structural Repair of Concrete ≤ 5 inches | Sq. Ft. | 657 |
| Bar Splicers | Each | 42 |



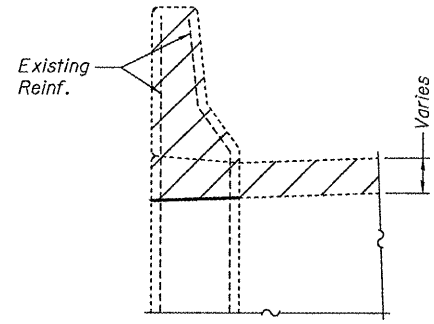
DESIGNED: [Signature]
 CHECKED: Adrian T. Hallaway
 DRAWN: [Signature]
 CHECKED: [Signature] ATH
 EXAMINED: [Signature] March 9, 2009
 PASSED: [Signature] Ralph E. Anderson
 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

Expires: November 30, 2010

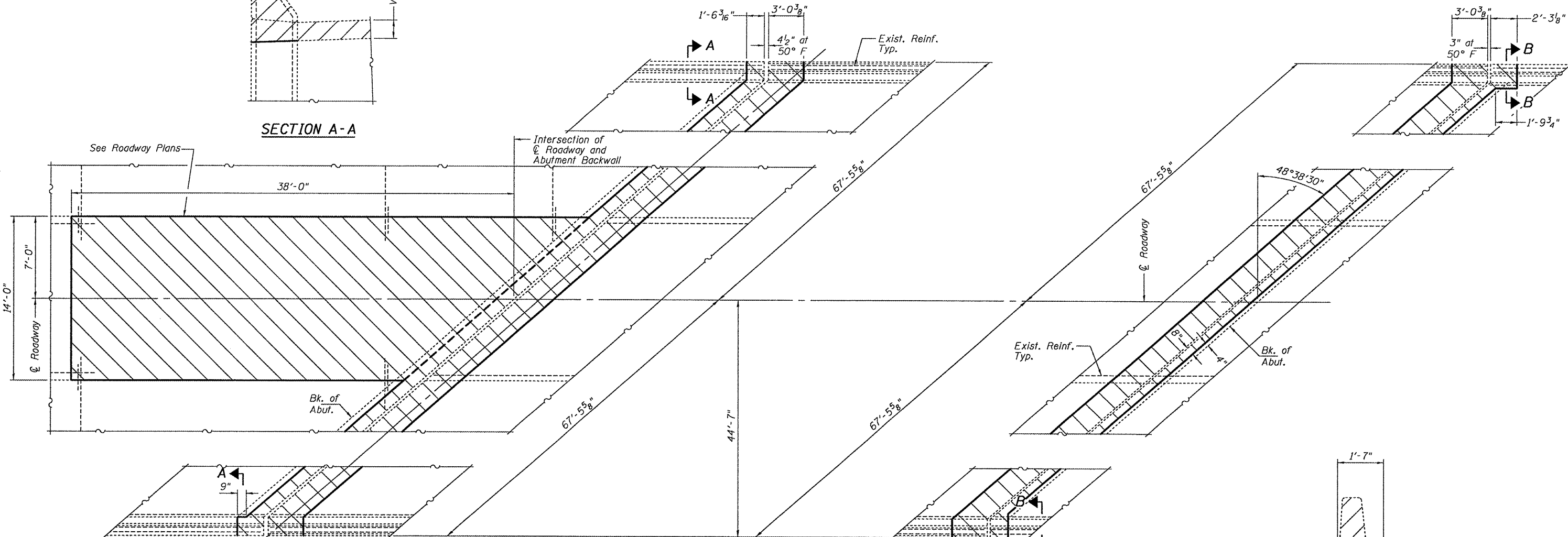
**PLAN AND ELEVATION
SN 057-0202**

| | | | | | |
|-------------|---------------------|----------|---------------------------|--------------|-----------|
| SHEET NO. 1 | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 676 | (9-1)BJR | McLEAN | 17 | 12 |
| 6 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |
| | | | CONTRACT NO. 70731 | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



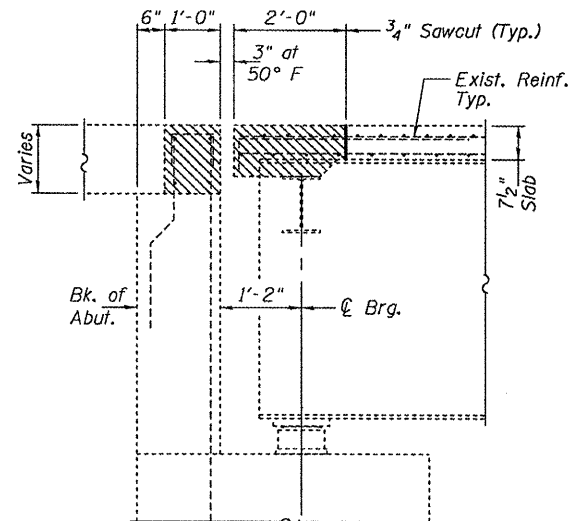
SECTION A-A



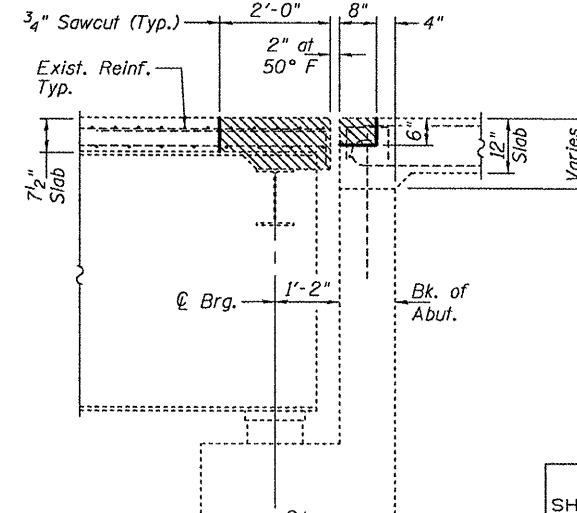
NORTH ABUTMENT
PARTIAL REMOVAL PLAN

SOUTH ABUTMENT
PARTIAL REMOVAL PLAN

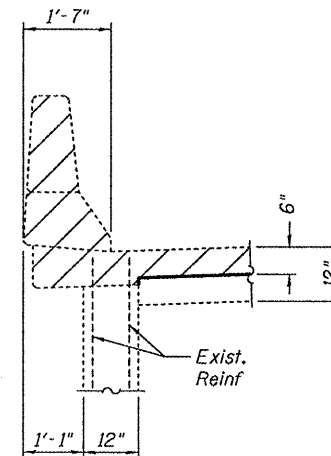
Hatched area indicates area
of concrete removal.
See Sheet 1 of 6 for staging.



TYPICAL SOUTH ABUTMENT SECTION
(Dimensions shown at Rt. L to backwall)



TYPICAL NORTH ABUTMENT SECTION
(Dimensions shown at Rt. L to backwall)



SECTION B-B

SLAB REMOVAL DETAILS
SN 057-0202

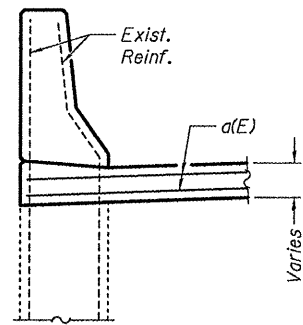
| | |
|----------|------------------|
| DESIGNED | G.G.E. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | G.G.E. A.T.H. |

| | |
|----------|--|
| EXAMINED | March 9, 2009 |
| PASSED | <i>Carl P. ...</i> ENGINEER OF STRUCTURAL SERVICES |
| | <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES |

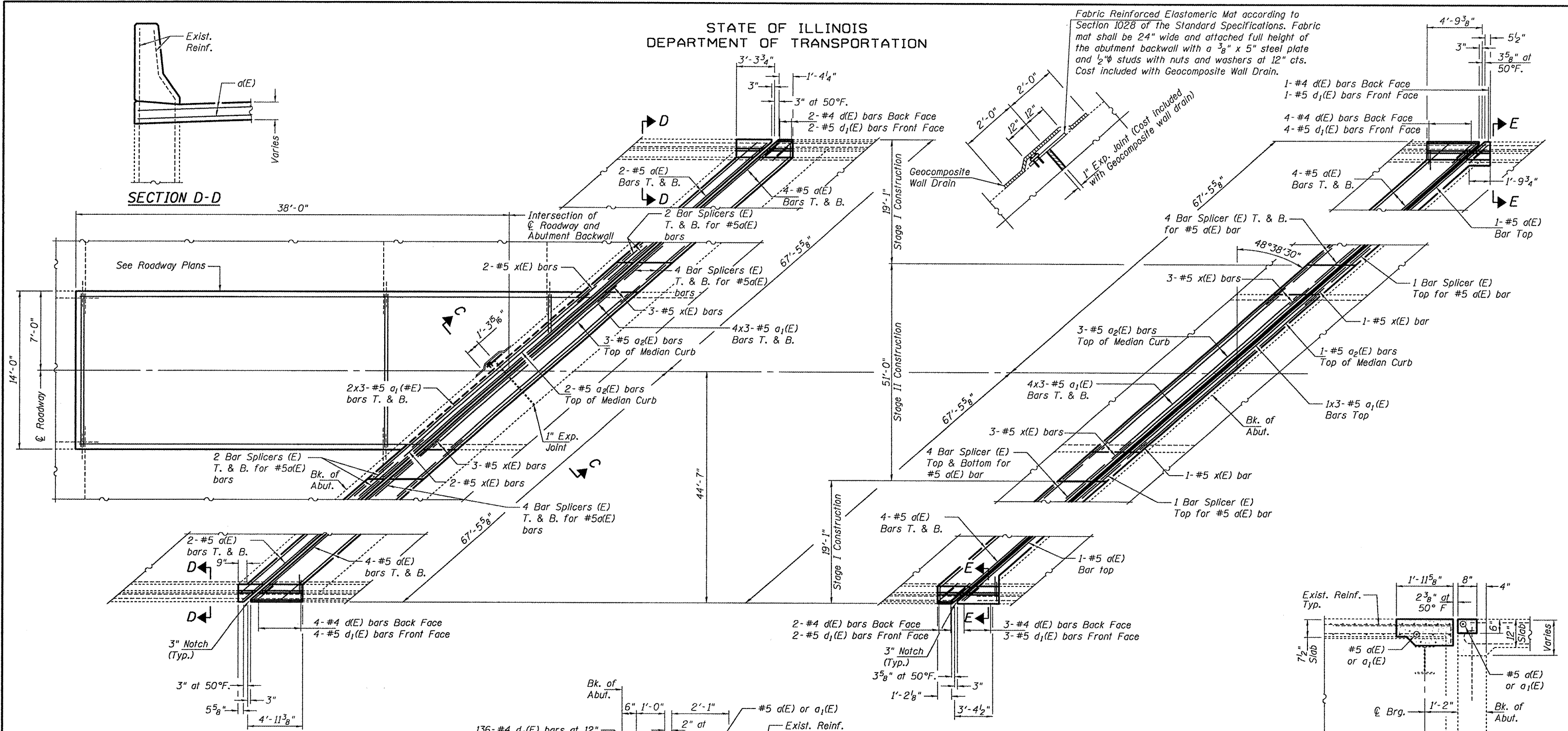
| | | | | | |
|-------------------------|---|---------------------|------------------|--------------------|-----------------|
| SHEET NO. 2 6 SHEETS | F.A.P. RTE. 676 | SECTION (9-1)BJR | COUNTY MCLEAN | TOTAL SHEETS 17 | SHEET NO. 13 |
| | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 70731 | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full height of the abutment backwall with a 3/8" x 5" steel plate and 1/2" studs with nuts and washers at 12" cts. Cost included with Geocomposite Wall Drain.

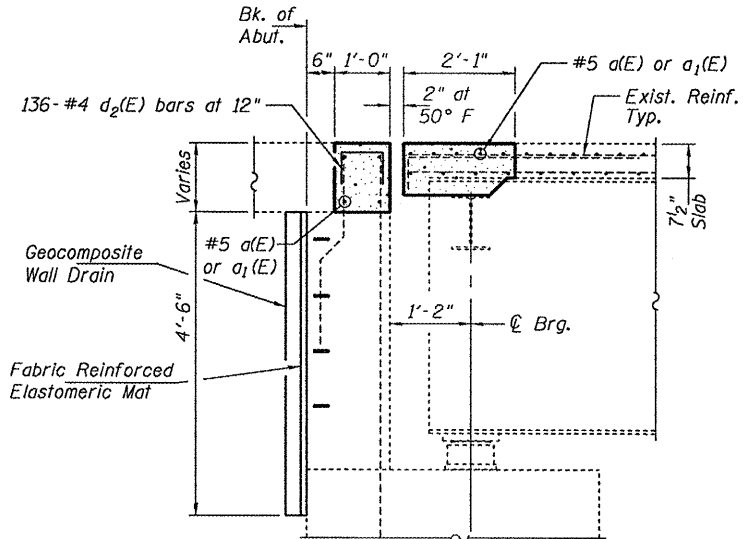


SECTION D-D



**SOUTH ABUTMENT
PARTIAL PLAN**

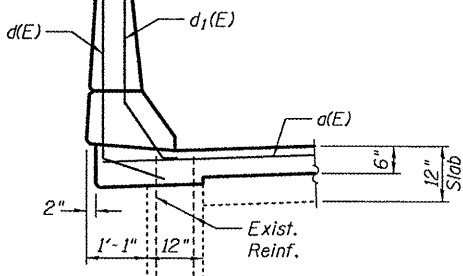
Dimensions for South Abutment are based on a rolled rail strip seal joint. If the contractor elects to use the welded rail strip seal joint, deck dimensions may require adjustments to satisfy the details on base sheet EJ-SSJ.



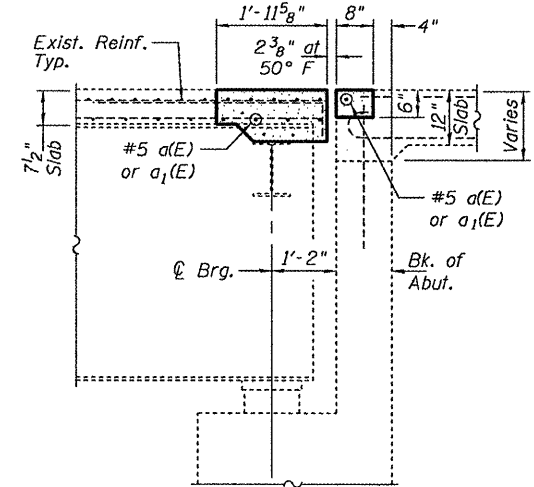
SECTION C-C

(Dimensions shown at Rt. L. to backwall)
(Median not shown)

**NORTH ABUTMENT
PARTIAL PLAN**



SECTION E-E



TYPICAL NORTH ABUTMENT SECTION
(Dimensions shown at Rt. L. to backwall)
(Median not shown)

MIN. BAR LAPS
#5 = 2'-2"

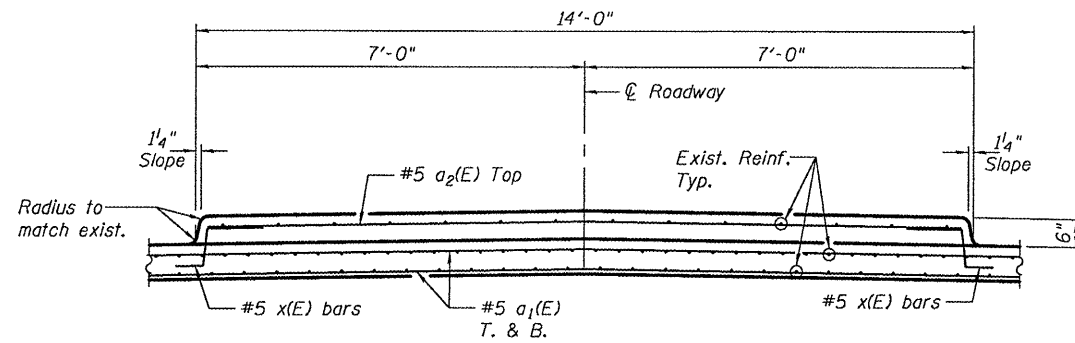
| | |
|----------|------------------|
| DESIGNED | G.G.E. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | G.G.E. A.T.H. |

March 9, 2009
EXAMINED *Carl P. ...*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

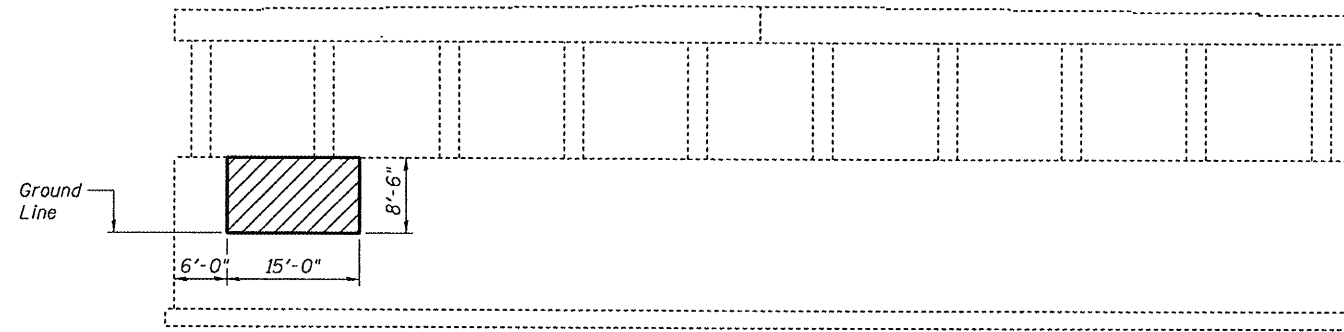
| | | | | | |
|-------------|---------------------|----------|--------------------|------------------|-----------|
| SHEET NO. 3 | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 676 | (9-1)BJR | McLEAN | 17 | 14 |
| 6 SHEETS | FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |
| | | | CONTRACT NO. 70731 | | |

DETAILS
SN 057-0202

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

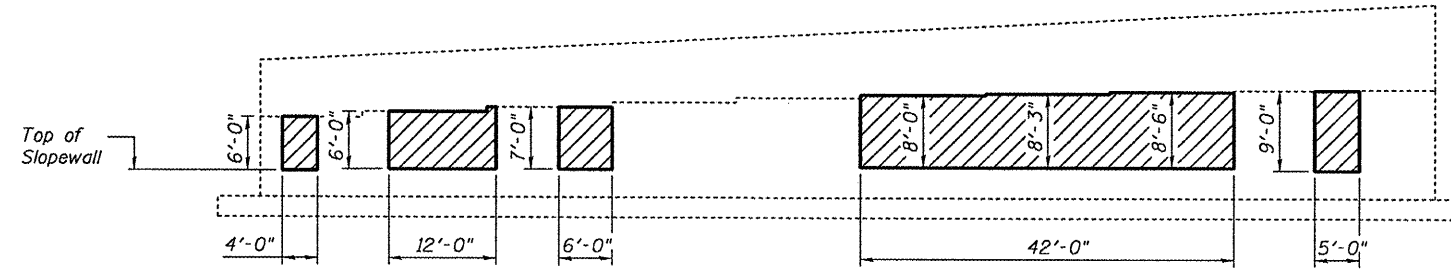
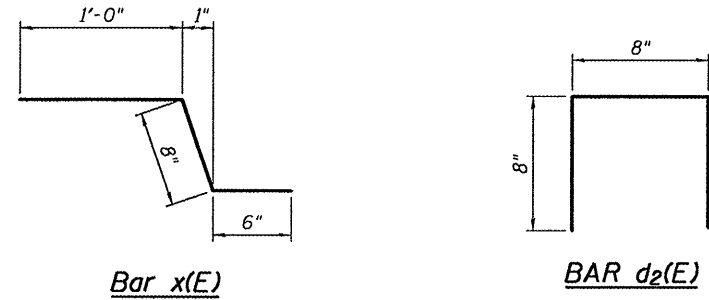


TYPICAL MEDIAN SECTION AT JOINT REMOVAL
(See recessed strip seal joint in raised median detail)

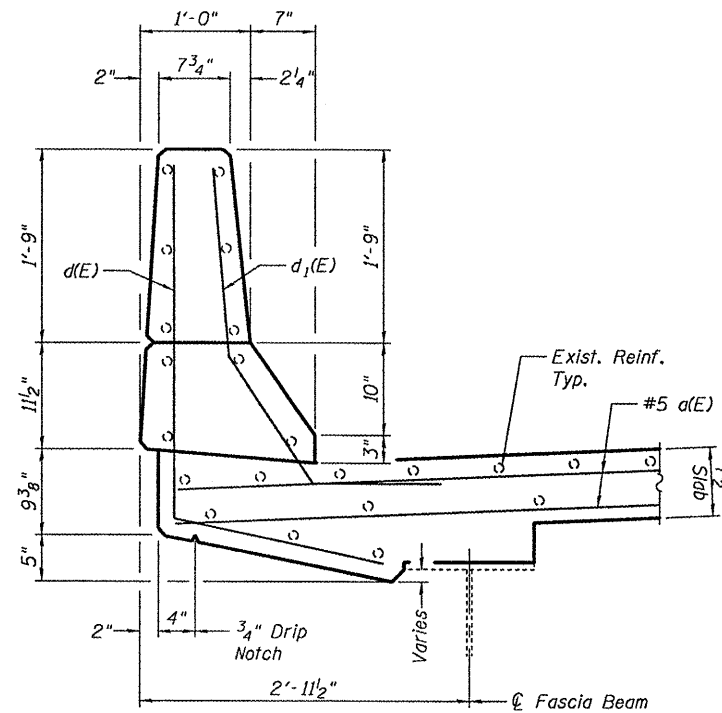
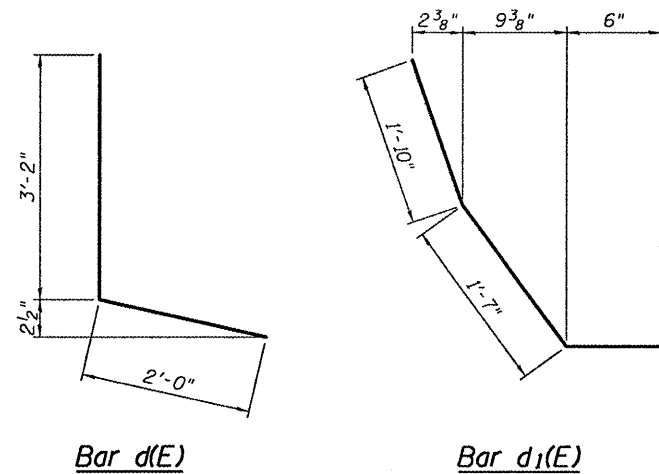


PIER 1 ELEVATION
(Looking South)

Note:
Hatched areas indicate areas of
Structural Repair of Concrete ≤ 5 ".



NORTH ABUTMENT ELEVATION
(Looking North)



TYPICAL PARAPET SECTION

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| a(E) | 42 | #5 | 28'-0" | — |
| a1(E) | 63 | #5 | 23'-9" | — |
| a2(E) | 9 | #5 | 20'-6" | — |
| d(E) | 16 | #4 | 5'-2" | ┌ |
| d1(E) | 16 | #5 | 3'-11" | ┌ |
| d2(E) | 136 | #4 | 2'-0" | ┐ |
| x(E) | 18 | #5 | 2'-2" | └ |

| | | |
|-------------------------------------|---------|-------|
| Concrete Removal | Cu. Yd. | 31.9 |
| Concrete Superstructure | Cu. Yd. | 32.3 |
| Reinforcement Bars, Epoxy Coated | Pound | 3,150 |

Bars indicated thus 1 x 2-#5 etc. indicates
1 line of bars with 2 lengths per line.

| | |
|----------|------------------|
| DESIGNED | G.G.E. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | G.G.E. A.T.H. |

| | |
|----------|--|
| EXAMINED | March 9, 2009 |
| PASSED | <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES |

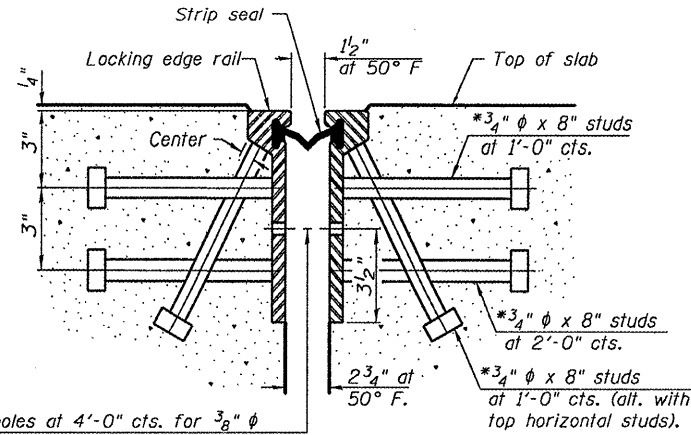
DETAILS
SN 057-0202

| | | | | | |
|-------------------------|-----------------------|---------------------|---------------------------|-----------------------|--------------------|
| SHEET NO. 4 6 SHEETS | F.A.P. RTE. 676 | SECTION (9-1)BJR | COUNTY McLEAN | TOTAL SHEETS 17 | SHEET NO. 15 |
| | FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | CONTRACT NO. 70731 |

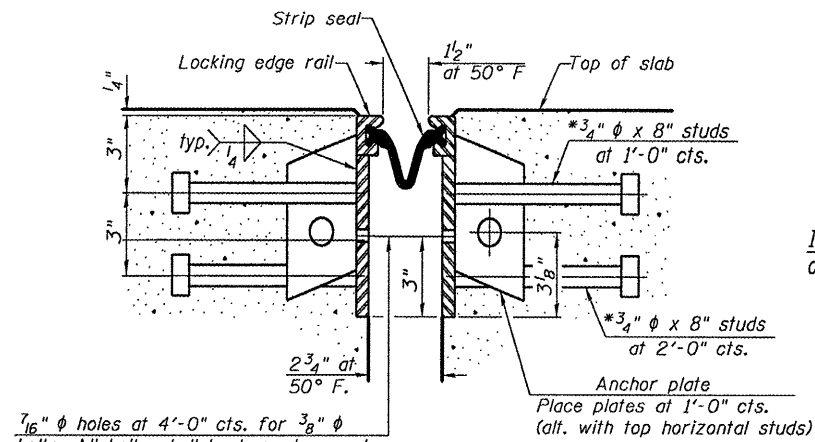
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

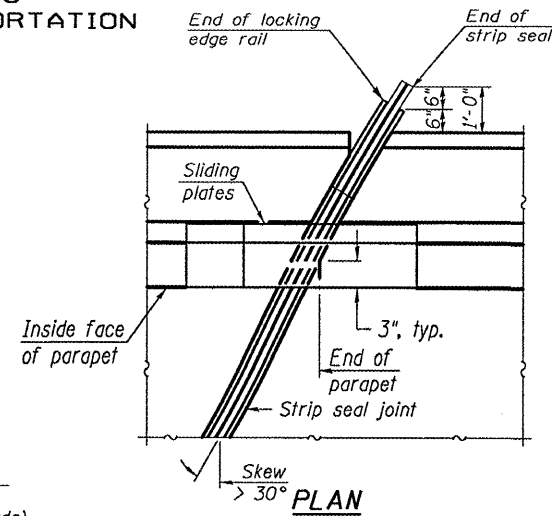
Notes:
Locking edge rails are to be placed 1/4" below the deck elevation through the median. Stop raised median 3" short of deck ends and 3" short of face of abutments.
See median details for reinforcement required.



SECTION THRU ROLLED RAIL JOINT
AT SOUTH ABUTMENT



SECTION THRU WELDED RAIL JOINT
AT SOUTH ABUTMENT



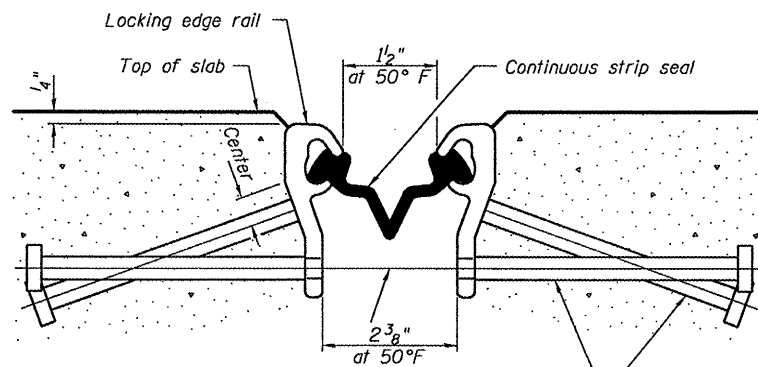
PLAN

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Locking Edge Rails. Open or "webbed" strip seal gland configurations are not allowed. The inside of the Locking Edge Rail groove shall be free of weld residue.

7/16" diameter holes at 4'-0" cts. for 3/8" diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

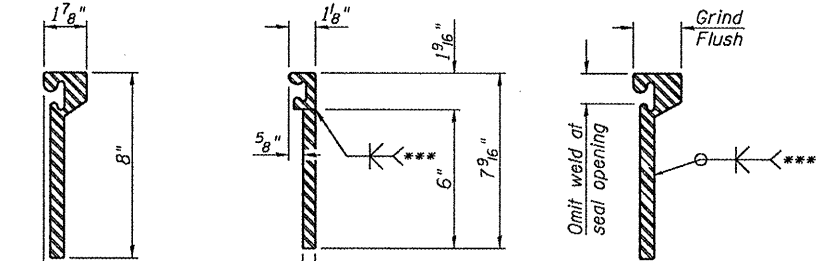
7/16" diameter holes at 4'-0" cts. for 3/8" diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

* Omit weld at seal opening.



SECTION THRU STRIP SEAL JOINT
AT NORTH ABUTMENT

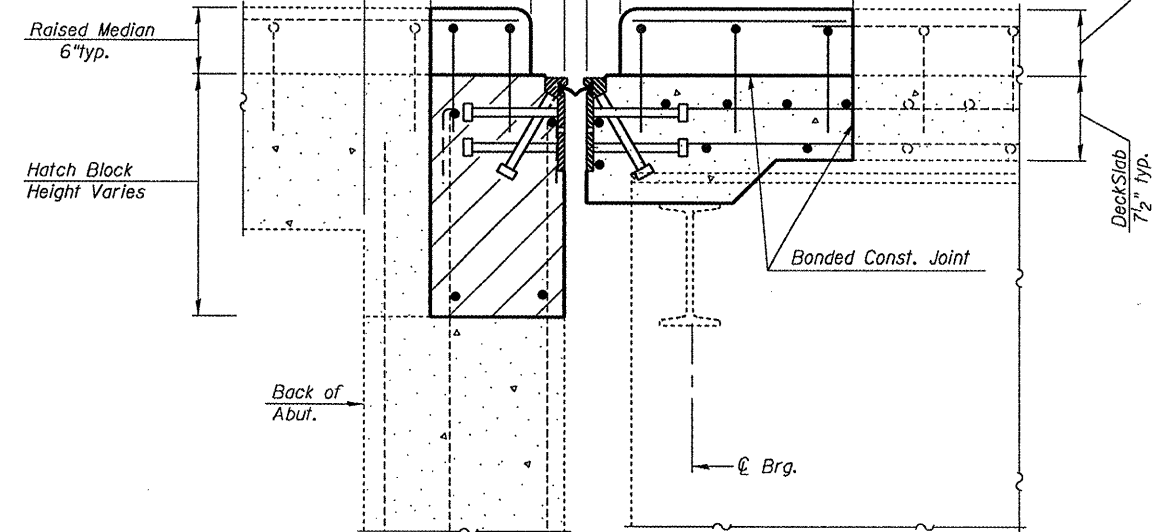
7/16" diameter holes at 4'-0" cts. for 3/8" diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ. Place 1/2" diameter by 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.



WELDED RAIL

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



SECTION A-A

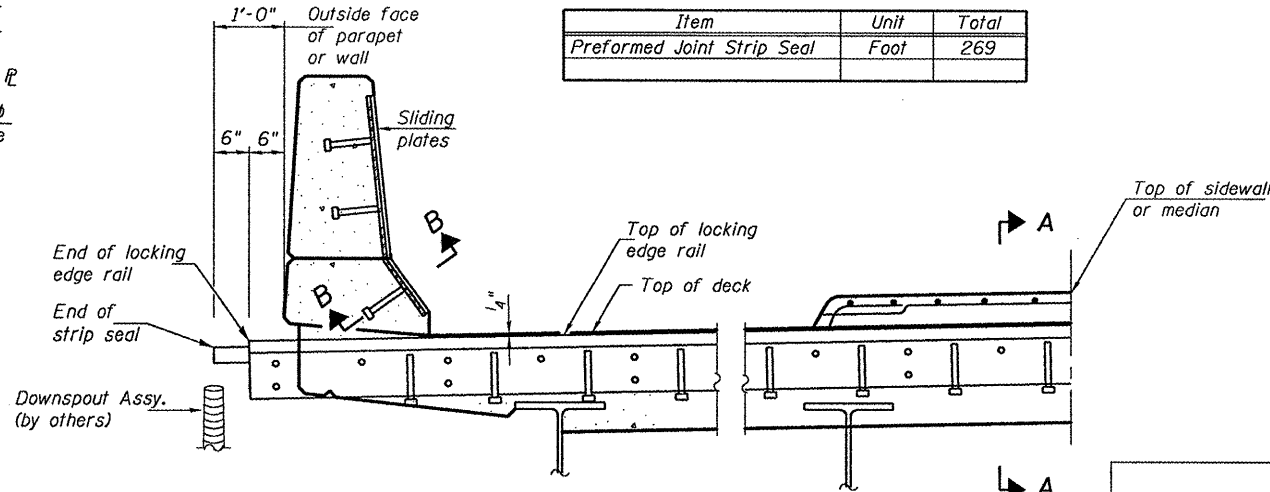
SECTION B-B

PREFORMED JOINT STRIP SEAL DETAILS
SN 057-0202

LOCKING EDGE RAILS

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 269 |



TYPICAL PARTIAL DECK CROSS SECTION

LOCKING EDGE RAIL

LOCKING EDGE RAIL SPLICE

| | |
|----------|------------------|
| DESIGNED | G.G.E. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | G.G.E. A.T.H. |

| | |
|----------|-------------------|
| EXAMINED | March 9, 2009 |
| PASSED | Ralph E. Anderson |

| | | | | | |
|-------------|------------------------------|------------------|-------------------------------------|-----------------|--------------|
| SHEET NO. 5 | F.A.P. RTE. 676 | SECTION (9-1)BJR | COUNTY McLEAN | TOTAL SHEETS 17 | SHEET NO. 16 |
| 6 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT CONTRACT NO. 70731 | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 = $1.25 \times f_y \times A_l$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_l$
(Tension in kips)

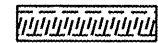
Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

| 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 | 7.9 |
| #5 | 2'-2" | 23.0 | 12.3 |
| #6 | 2'-7" | 33.1 | 17.4 |
| #7 | 3'-5" | 45.1 | 23.8 |
| #8 | 4'-6" | 58.9 | 31.3 |
| #9 | 5'-9" | 75.0 | 39.6 |
| #10 | 7'-3" | 95.0 | 50.3 |
| #11 | 9'-0" | 117.4 | 61.8 |

The diameter of this part is the same as the diameter of the bar spliced.

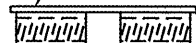
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

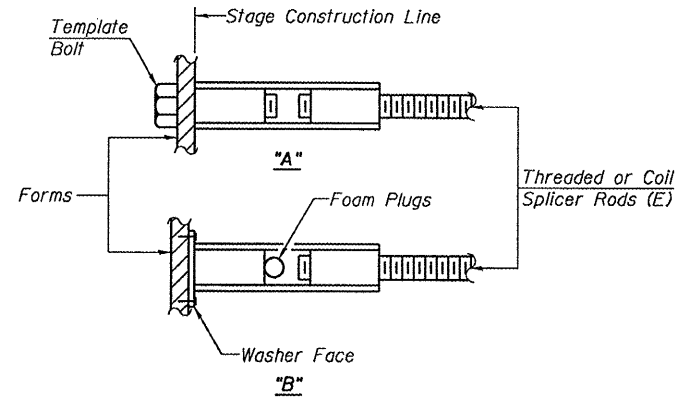
Wire Connector



WELDED SECTIONS

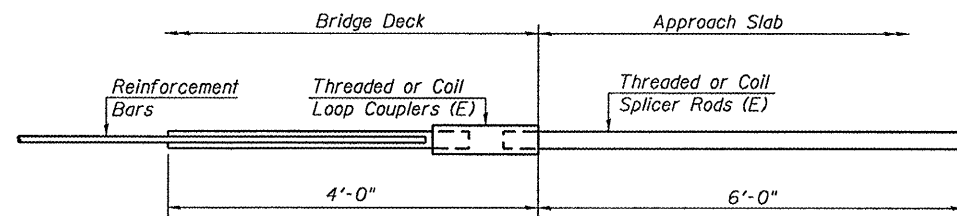
BAR SPLICER ASSEMBLY ALTERNATIVES

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



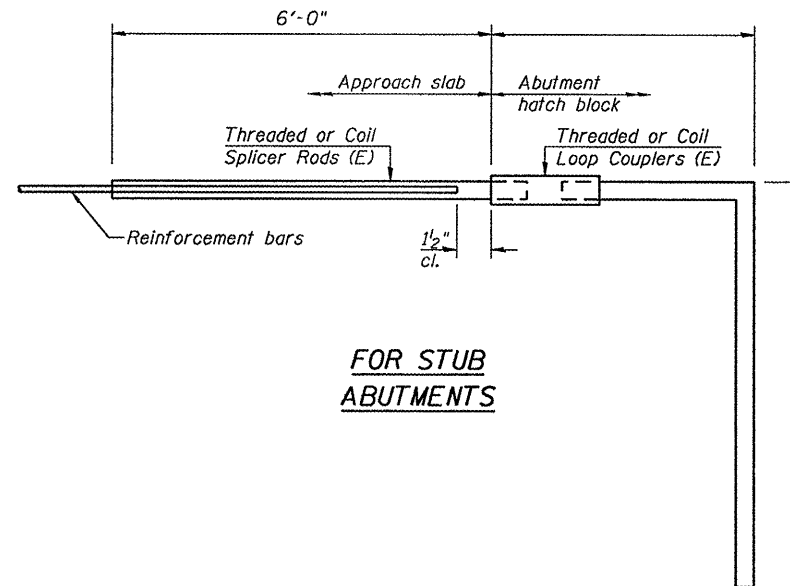
INSTALLATION AND SETTING METHODS

"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.



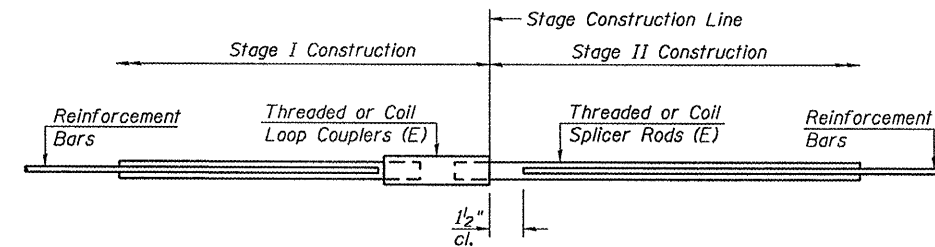
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = |



FOR STUB ABUTMENTS

| |
|--|
| Bar Splicer for #5 bar |
| Min. Capacity = 23.0 kips - tension |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = |



STANDARD

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|-------------|
| #5 | 24 | S. Abutment |
| #5 | 18 | N. Abutment |
| | | |
| | | |

BAR SPLICER ASSEMBLY DETAILS
SN 057-0202

| |
|------------------------|
| DESIGNED G.G.E. |
| CHECKED A.T.H. |
| DRAWN Drew Christopher |
| CHECKED G.G.E. A.T.H. |

March 9, 2009
EXAMINED *A. Carl Krusey*
PASSED *Ralph E. Anderson*
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-1-08

| | | | | | |
|-------------|------------------------------|------------------|-------------------------------------|-----------------|--------------|
| SHEET NO. 6 | F.A.P. RTE. 676 | SECTION (9-1)BJR | COUNTY McLEAN | TOTAL SHEETS 17 | SHEET NO. 17 |
| 6 SHEETS | FED. ROAD DIST. NO. ILLINOIS | | FED. AID PROJECT CONTRACT NO. 70731 | | |