

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|             |         |              |              |
|-------------|---------|--------------|--------------|
| PROJECT NO. | SECTION | SHEET NO.    | TOTAL SHEETS |
| F.A.P. 75   | 8BR-4   | SANGAMON 342 | 196          |
|             |         |              | 21 SHEETS    |

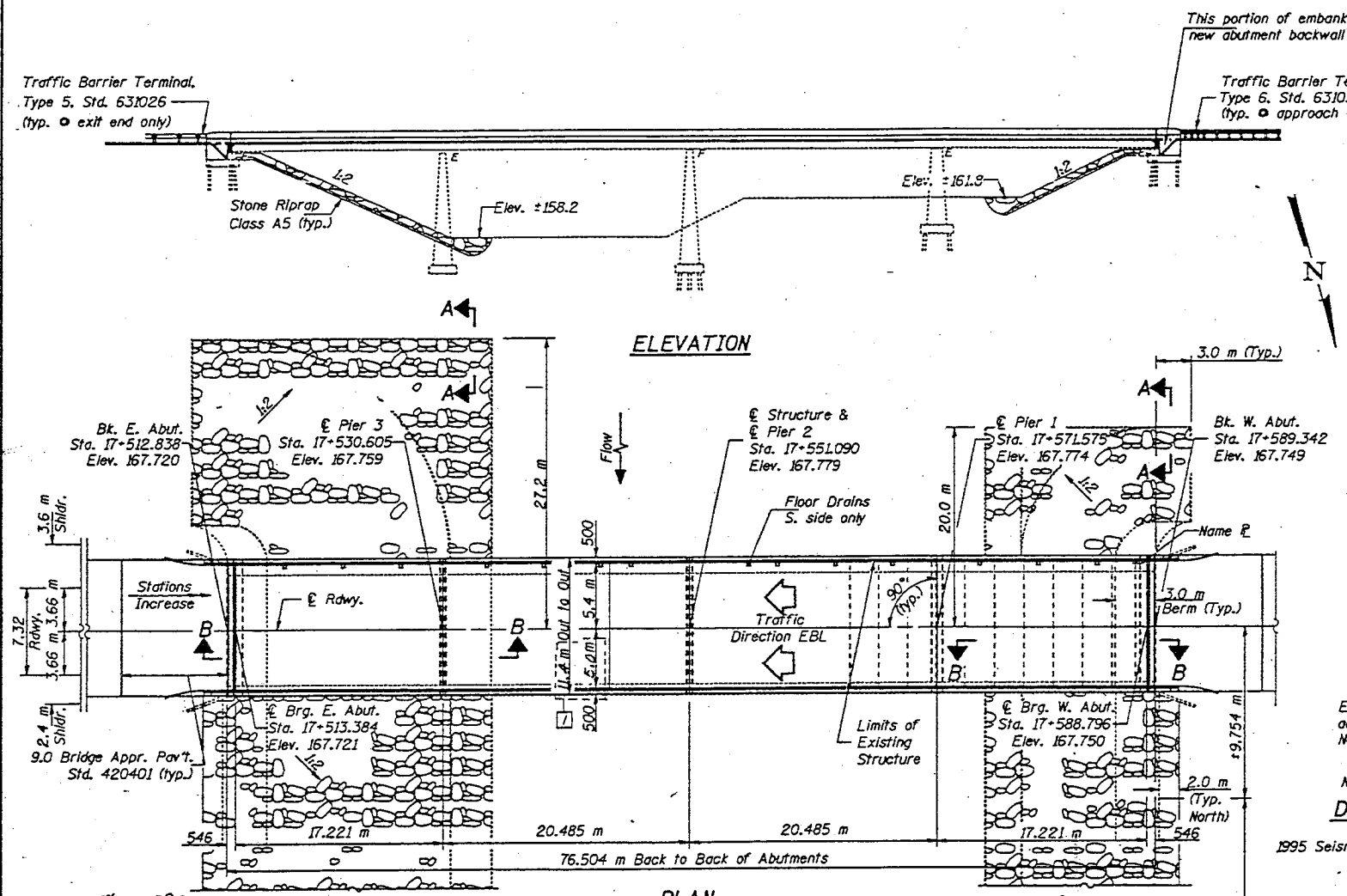
Bench Mark: Chiseled "□" in S-ERLY corner of SE-ERLY wingwall of Bridge #084-0039 of NB lane.  
I.L. 29, Elev. 168.137.

Existing Structure: S.N. 084-0040, built in 1961 as S.B.I. Route 24, Section 8-B-1. A four span continuous steel superstructure on stub abutments and solid stem piers on steel piles. 76.5 m bk. to bk. abutms. and 10.97 m O. to O. deck. The existing RC deck to be removed and replaced with full depth precast post-tensioned concrete deck panels.  
Traffic to be maintained utilizing crossovers.

No salvage

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts M 22, open holes 24 mm  $\phi$ , unless otherwise noted.
- Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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.
- Two 3 mm adjusting shims, of the dimensions of the top bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- All dimensions are in millimeters (mm) except as noted.
- All new structural steel shall be shop primed with the inorganic zinc rich primer per AASHTO M 300, Type 1.
- Painting of existing structural steel shall be done under a separate painting contract. Prior to pouring the new concrete for the deck, all loose rust, loose mill scale and all other loose, detrimental foreign material shall be removed from the portions of flanges of stringers in contact with concrete. The removal shall be accomplished according to the requirements of the SSPC Surface Preparation Specifications SP-3 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be included with "Concrete Superstructure".
- The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.
- Anchor bolts shall be set before bolting diaphragms over supports.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Metric dimensions for bolt spacings, bolt hole diameters, edge clearance, etc. are soft converted (rounded to the nearest millimeter) based upon data from existing plans.
- Cast-in-place concrete construction will not be allowed for the deck or parapets except at the locations indicated on the plans.



STATION 17+551.09  
REBUILT BY  
STATE OF ILLINOIS  
F.A.P. 75 SECTION 8BR-4  
PROJECT BHF-STPF-75 (2B)  
LOADING MS18  
STR. NO. 084-0040

NAME PLATE

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

LOADING MS18

No Future Wearing Surface Allowed

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 Interims  
1995 Seismic Retrofitting Manual for Highway Bridges  
FHWA-RD-94-052

DESIGN STRESSES

FIELD UNITS

- New Construction
  - $f_c = 35$  MPa (superstructure)
  - $f_c = 24$  MPa (substructure)
  - $f_y = 400$  MPa (reinforcement)
  - $f_y = 250$  MPa (Structural Steel-AASHTO M270 Grade 250)
- Existing Structure
  - $f_c = 9.65$  MPa (substructure)
  - $f_c = 138$  MPa (reinforcement)
  - $f_c = 138$  MPa (structural steel)
  - $n = 10$

Precast Post-Tensioned Deck Panels

- $f_c = 35$  MPa
- $f_c = 28$  MPa
- $f_{pu} = 1035$  MPa (25.4 mm  $\phi$  bars)
- $f_{sl} = 724$  MPa (25.4 mm  $\phi$  bars)

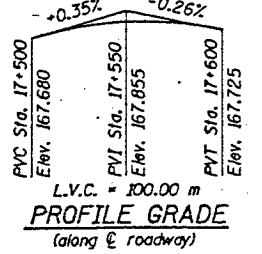
SEISMIC DATA

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.05g  
Site Coefficient (S) = 1.2

TOTAL BILL OF MATERIAL

| ITEM   | UNIT           | SUPER | SUB  | TOTAL |
|--|----------------|-------|------|-------|
| Reinforcement Bars, Epoxy Coated               | kg             | 580   | 2720 | 3300  |
| Concrete Superstructure                        | m <sup>3</sup> | 7.5   |      | 7.5   |
| Concrete Structures                            | m <sup>3</sup> |       | 28.1 | 28.1  |
| Furnishing & Erecting Structural Steel         | kg             | 4510  |      | 4510  |
| Stud Shear Connectors                          | Each           | 2862  |      | 2862  |
| Elastomeric Bearing Assembly Type 1            | Each           | 12    |      | 12    |
| Floor Drains                                   | Each           | 14    |      | 14    |
| Preformed Joint Seal 102 mm                    | m              | 22.4  |      | 22.4  |
| Concrete Removal                               | m <sup>3</sup> |       | 22.2 | 22.2  |
| Removal of Existing Concrete Deck              | Each           | 1     |      | 1     |
| Structure Excavation                           | m <sup>3</sup> |       | 80   | 80    |
| Name Plates                                    | Each           | 1     |      | 1     |
| Precast, Post-Tensioned Bridge Deck            | m <sup>2</sup> | 833.3 |      | 833.3 |
| Bridge Deck Microsilica Concrete Overlay 60 mm | m <sup>2</sup> | 780.3 |      | 780.3 |
| Precast Bridge Parapet                         | m              | 148.8 |      | 148.8 |
| Stone Riprap, Class A5                         | m <sup>2</sup> |       |      | 1405  |
| Jack & Remove Existing Bearings                | Each           | 12    |      | 12    |
| Formed Concrete Repair = <125 mm               | m <sup>2</sup> |       | 0.1  | 0.1   |
| Slopedwall Removal                             | m <sup>2</sup> |       |      | 1045  |
| Filter Fabric for use with Riprap              | m <sup>2</sup> |       |      | 1405  |
| Bridge Deck Grooving                           | m <sup>2</sup> | 735   |      | 735   |

\*Limits of slopedwall removal for this structure is measured to 6.1 m north of  $\epsilon$  Rowy.

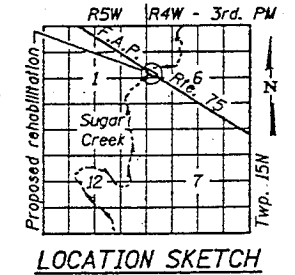
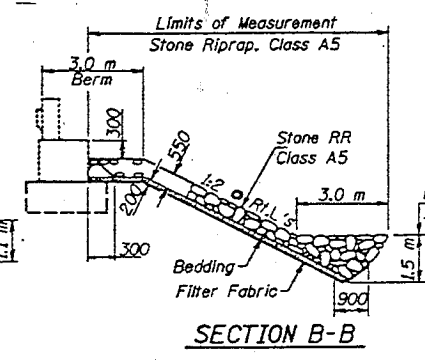
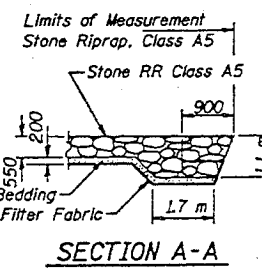


DESIGNED James K. Klein  
CHECKED [Signature]  
DRAWN R. Sommer  
CHECKED J.K.K. PMP

EXAMINED [Signature]  
PASSED [Signature]



EXPIRES 11-30-2000



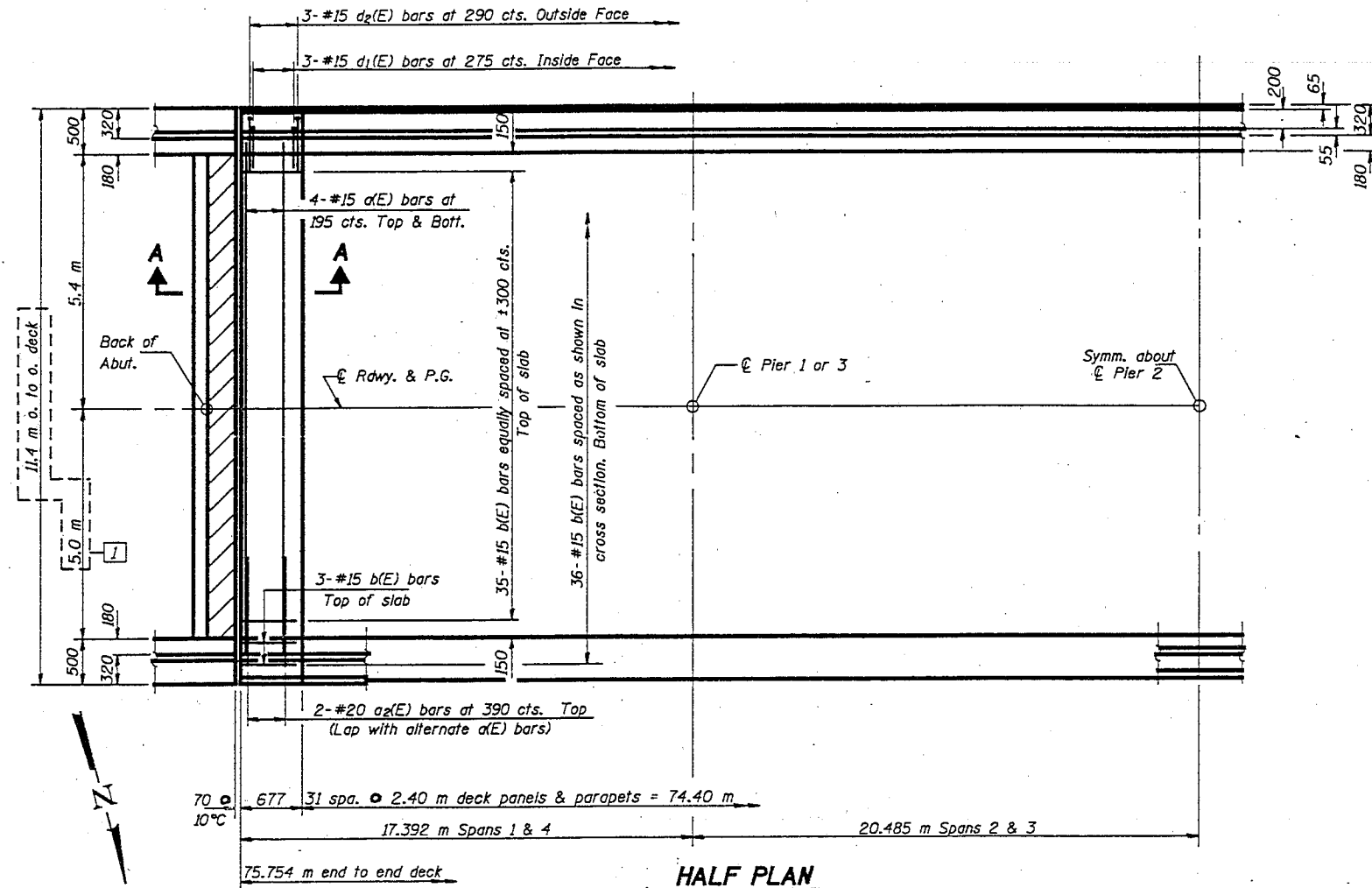
GENERAL PLAN  
ILLINOIS ROUTE 29 OVER  
SUGAR CREEK  
F.A.P. ROUTE 75 - SECTION 8(BR-4)  
SANGAMON COUNTY  
STATION 17+551.09  
STRUCTURE NO. 084-0040

Revised 9-13-99 P.M.P.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

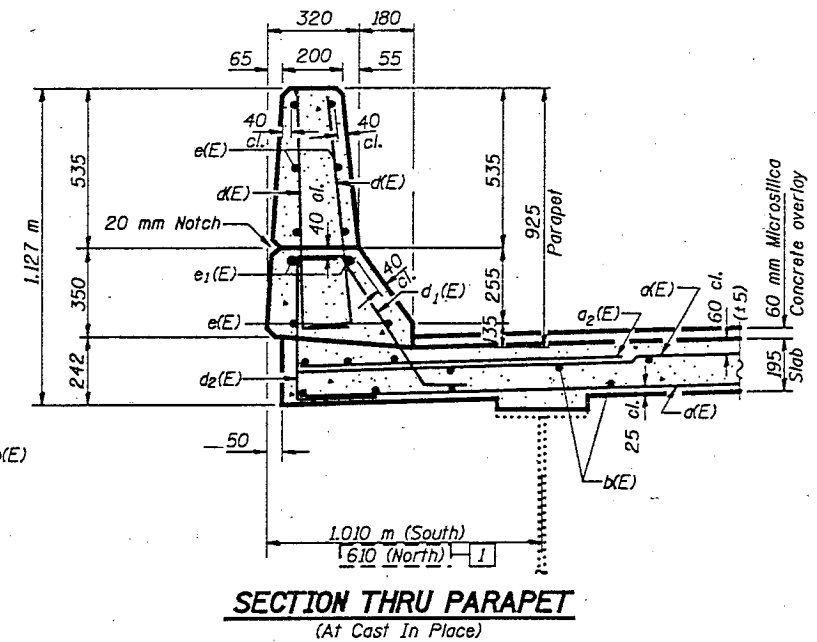
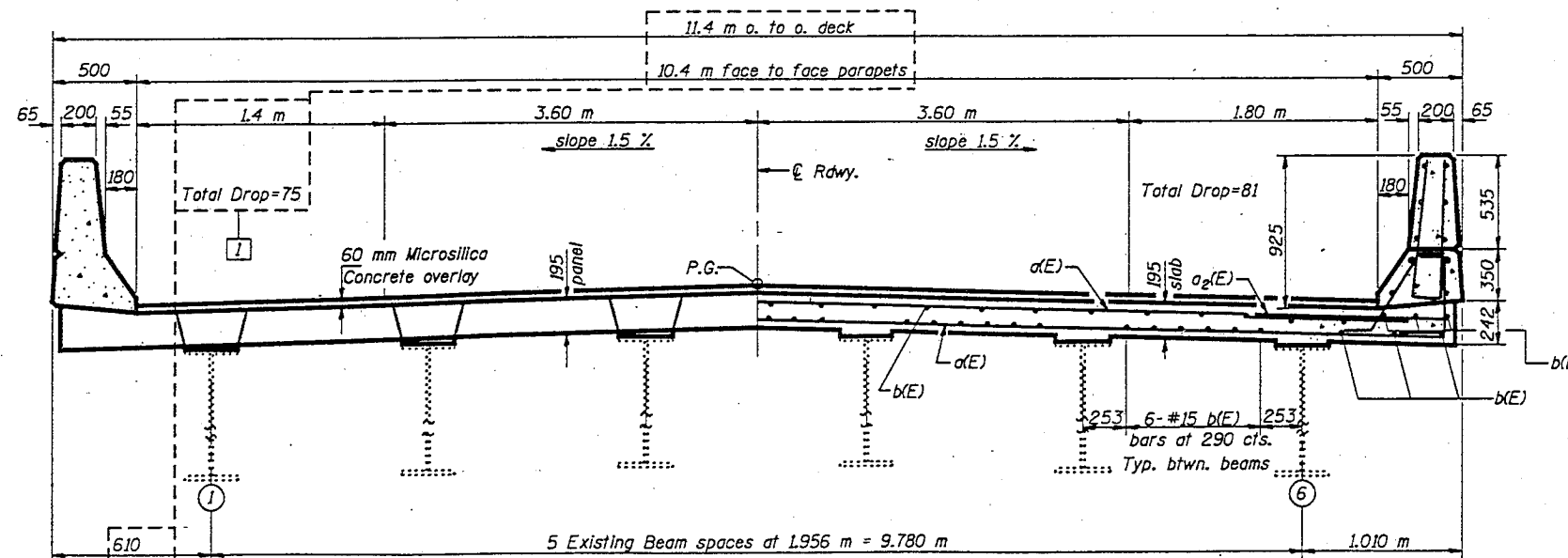
|                       |         |          |                   |           |
|-----------------------|---------|----------|-------------------|-----------|
| ROUTE NO.             | SECTION | COUNTY   | SHEET             | SHEET NO. |
| 75                    | 8(BR-4) | SANGAMON | 342               | 200       |
| FED. ROAD DIST. NO. 7 |         | ALIGNED  | FED. ROAD PROJECT |           |

SHEET NO. 5  
21 SHEETS



Notes: The Contractor may, at his option, provide and construct precast concrete parapets in lieu of the cast-in-place parapets shown. Any such revisions shall be reflected in the shop drawings. A minimum of 2 steel inserts shall be provided at each face of each parapet section. In addition, the maximum insert spacing at the front face shall be 465mm. Anchors for the inserts shall be placed in the cast-in-place slab as shown on the Section thru Parapet on sheet #8 of 21.  
This item, including any additional anchors required, shall be paid for at the contract unit price bid per meter for "Precast Concrete Parapet", and the contract quantity of the item "Concrete Superstructure" modified to reflect the corresponding reduction in that quantity.

**MIN. BAR LAP**  
#15 bar = 510



DESIGNED James K Klein  
CHECKED Patrick M Petrone  
DRAWN R. Sommer  
CHECKED JPK PMP

March 31 1999  
EXAMINED Thomas J. Donaghy  
ENGINEER OF PUBLIC DESIGN  
PASSED Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

AT PRECAST DECK PANEL

**CROSS SECTION**  
(Looking East)

AT CAST IN PLACE

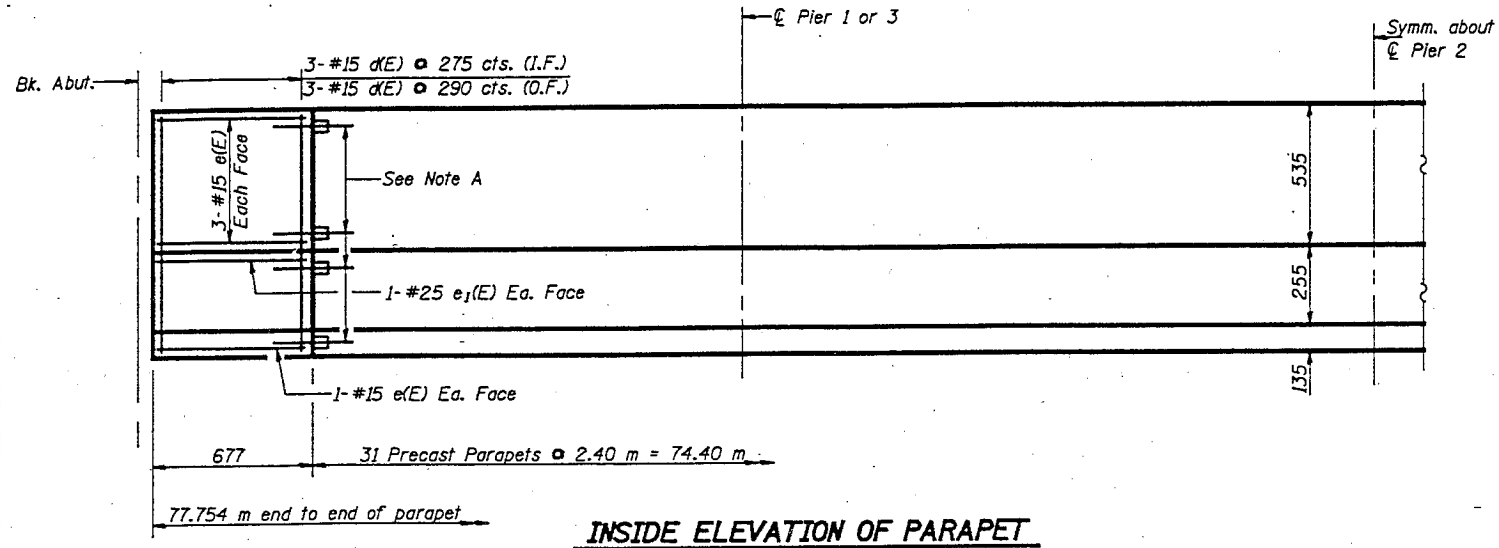
Notes: See Sheet #6 of 21 for superstructure details and Bill of Material. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 20 x 3-#15 etc. indicates 20 lines of bars with 3 lengths per line. See Sheet #6 of 21 for parapet reinforcement. All dimensions are in millimeters (mm) except as noted. All edges shall have 20 mm chamfer, unless noted otherwise.

**SUPERSTRUCTURE**  
**F.A.P. RT. 75 SEC. 8(BR-4)**  
**SANGAMON COUNTY**  
**STATION 17+551.09**

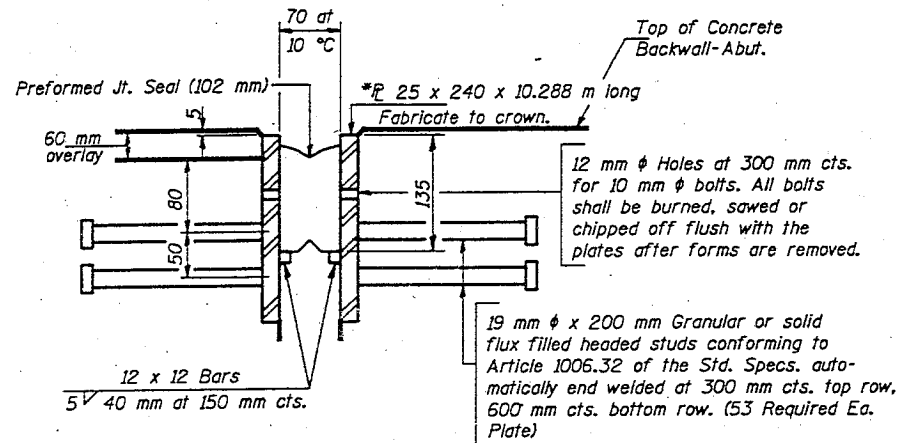
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|             |         |          |       |           |
|-------------|---------|----------|-------|-----------|
| ROUTE NO.   | SECTION | COUNTY   | SHEET | SHEET NO. |
| 75          | 8(BR-4) | SANGAMON | 342   | 201       |
| SHEET NO. 6 |         |          |       | 21 SHEETS |

Note A: Lap  $d_3(E)$  bar splicers in precast parapets with #15  $a(E)$  &  $d_4(E)$  bar splicers with #25  $e_1(E)$  bars. See sheet #11 of 21.



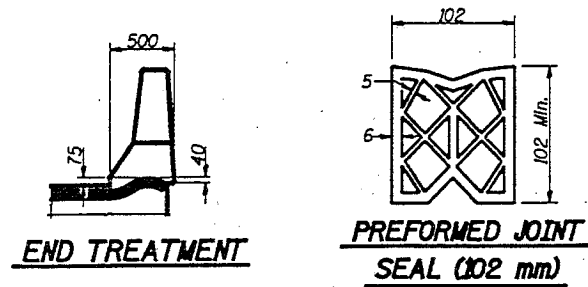
**INSIDE ELEVATION OF PARAPET**



**DETAIL A**

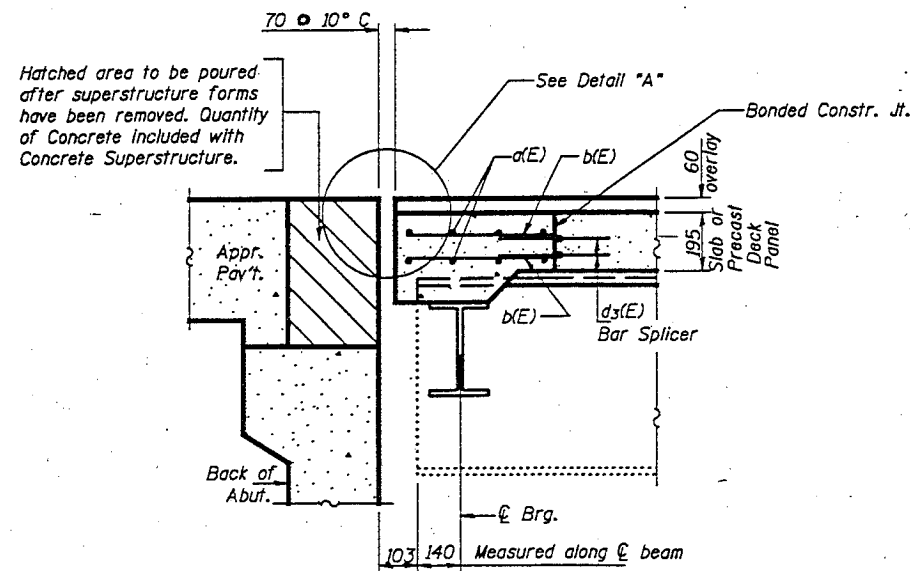
Facing South, W. Abut. Facing North E. Abut.  
\*Furnish in segments of 6 m maximum length. Maximum space between installed segments shall be 5 mm. Seal space with Silicone Sealant suitable for Structural Steel.

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

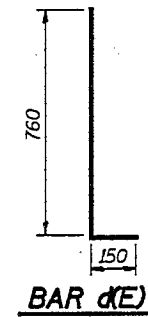


**END TREATMENT**

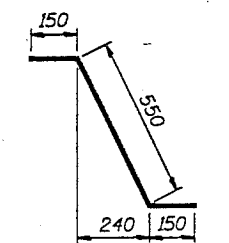
**PREFORMED JOINT SEAL (102 mm)**



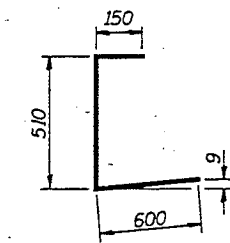
**SECTION A-A**  
(At Abutments)



**BAR a(E)**



**BAR d1(E)**



**BAR d2(E)**

**SUPERSTRUCTURE  
BILL OF MATERIAL**

| Bar   | No. | Size           | Length (m) | Shape |
|---|-----|----------------|------------|-------|
| $a(E)$                                      | 16  | #15            | 11.20      | —     |
| $a_2(E)$                                    | 8   | #20            | 1.20       | —     |
|   |     |                | 1          | —     |
| $b(E)$                                      | 154 | #15            | 0.62       | —     |
| $c(E)$                                      | 24  | #15            | 0.91       | —     |
| $d_1(E)$                                    | 12  | #15            | 0.85       | —     |
| $d_2(E)$                                    | 12  | #15            | 1.26       | —     |
| $e(E)$                                      | 32  | #15            | 0.62       | —     |
| $e_1(E)$                                    | 8   | #25            | 0.62       | —     |
| Reinforcement Bars, Epoxy Coated            |     | kg             | 580        |       |
| Concrete Superstructure                     |     | m <sup>3</sup> | 7.5        |       |
| Bridge Deck Microsilica Conc. Overlay 60 mm |     | m <sup>2</sup> | 780.3      |       |
| Precast, Post-Tensioned Bridge Deck         |     | m <sup>2</sup> | 833.3      |       |

Reinforcement bars designated (E) shall be epoxy coated.  
Work this sheet with sheet #5 & #7 thru 11 of 21.

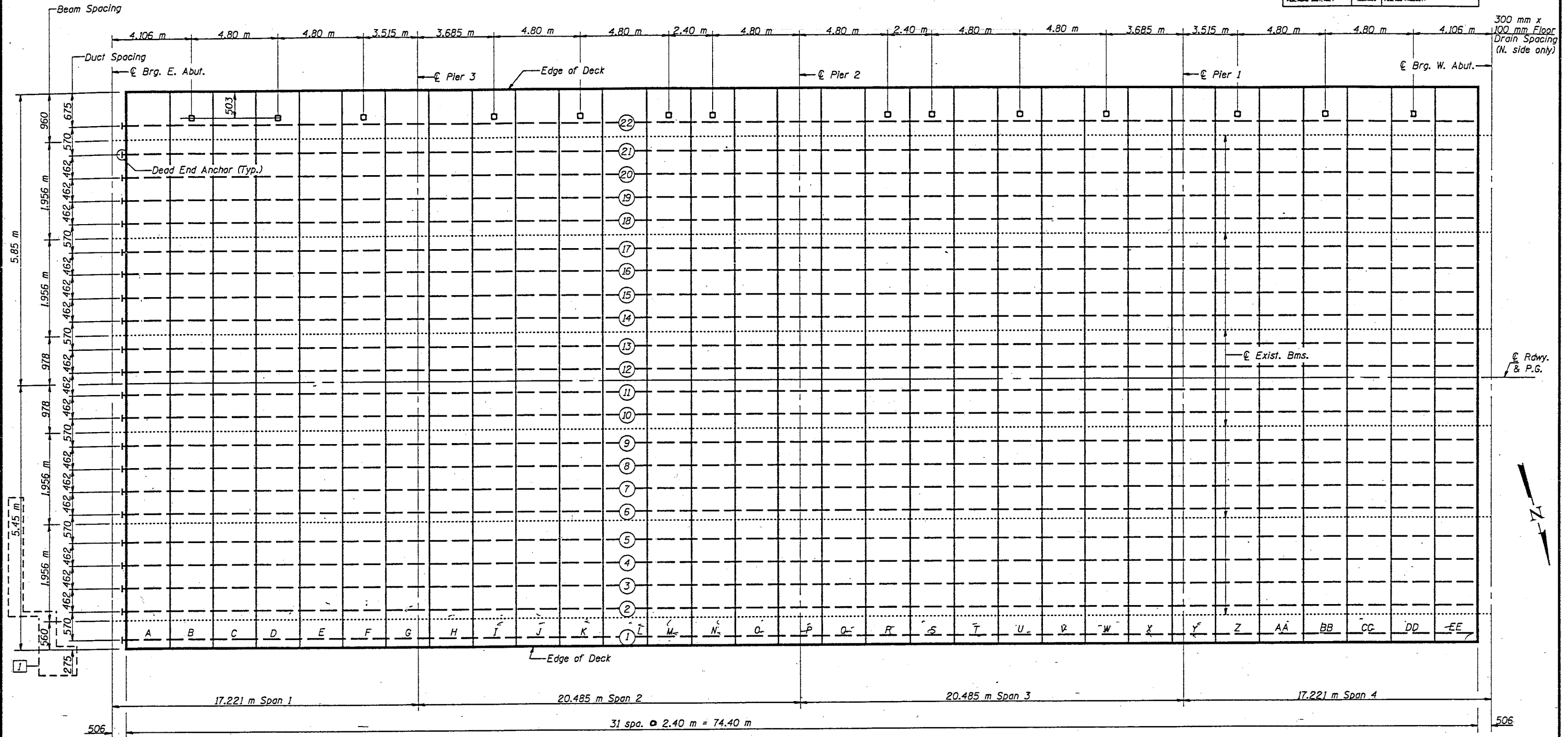
**SUPERSTRUCTURE DETAILS**  
**F.A.P. RT. 75 SEC. 8(BR-4)**  
**SANGAMON COUNTY**  
**STATION 17+551.09**

DESIGNED James K Klein  
CHECKED Patrick M Petrone  
DRAWN R. Sommer  
CHECKED JKK PM P

March 31 1999  
EXAMINED Thomas J. Damagala  
DESIGNER OF PUBLIC DESIGN  
PASSED Ralph E. Anderson  
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|                       |         |          |                    |     |             |
|-----------------------|---------|----------|--------------------|-----|-------------|
| ROUTE NO.             | SECTION | BRIDGE   | SHEET              | NO. | SHEET NO. 7 |
| 75                    | 8(BR-4) | SANGAMON | 342                | 202 | 21 SHEETS   |
| FILING NO. (LOCALITY) |         | DATE     | FILE NO. (PROJECT) |     |             |



**PLAN**

**LEGEND**

- Dead End Anchor
- ① — Duct Designation

Notes: Friction losses were computed in accordance with the 1997 AASHTO specifications, using wobble coefficient  $K = 0.00066$  per meter and curvature coefficient  $u=0.15$ . Anchorage set assumed at 3 mm.  
 Post-Tensioning bars shall have an initial tensioning stress of 724 MPa and an ultimate tensile strength of 1035 MPa.  
 Cast-in-Place concrete shall be Class BD conforming to Section 1020 of the Standard Specifications with a minimum compressive strength of 35 MPa.  
 An alternate post-tensioning system using uncoated high strength, low relaxation 7-wire strands 15.2 mm  $\phi$ , nominal cross-sectional area of 140 mm<sup>2</sup> ( $F_u=1860$  MPa) is allowed.  
 If the Contractor chooses an alternate post-tensioning system, the revised details and provisions along with design calculations performed under the direction of and sealed & signed by a Structural Engineer Licensed in the State of Illinois, shall be submitted for approval by the Engineer. The revised design and details shall be such that there is no net tensile stress in any point of the deck under any loading condition, short term as well as long term.

**SEQUENCE OF ERECTION**

1. The erection procedure shown on sheet #10 of 21 applies.
2. Erect panels starting at panel A and proceed westward.
3. The number of panels to be erected prior to the bar stressing procedure shall be as per bar manufacturer's recommendations. The erection procedure shall be approved by the Engineer prior to beginning stressing operation.

Work this sheet with sheets #5 & #8 thru #11 of 21.

**PRECAST DECK PANEL LAYOUT**  
**F.A.P. RT. 75 SEC. 8(BR-4)**  
**SANGAMON COUNTY**  
**STATION 17+551.09**

|          |                    |          |                   |
|----------|--------------------|----------|-------------------|
| DESIGNED | James K. Klein     | March 31 | 1999              |
| CHECKED  | Patrick M. Patrone | EXAMINED | Thomas J. Donaghy |
| DRAWN    | R. Sommer          | PASSED   | Ralph E. Anderson |
| CHECKED  | JFK                |          | pmp               |

**NOTES**

Post-Tensioning steel shall be uncoated high strength, threaded bars (Fpu = 1035MPa) AASHTO M275. The nominal diameter of the bars shall be 25.4 mm and the nominal cross-sectional area shall be 516.77 mm<sup>2</sup>.

Lifting loops shall be 1-12.7 mm strand (Fu=1860 MPa) as shown. Precast Inserts may be used in lieu of lifting loops.

Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the panels. Cleaning shall be done by sandblasting the keyway areas.

All dimensions are in millimeters (mm) except as noted.

Shear keys to be grouted with non-shrink grout.

Reinforcing steel may be adjusted during the installation of the Post-Tensioning ducts as required to provide planned clearances for Post-Tensioning ducts, anchorages, floor drain blockout, jacks and equipment, if approved by the Engineer.

Bar splicer assemblies, leveling bolts, Post-Tensioning ducts & bars, grout stops, grout, and other items which are cast into or are required for the installation of the Deck Panels shall be included in the contract unit price per m<sup>2</sup> of "Precast Post-Tensioned Bridge Deck". Bar splicer sections which are not cast into the Precast Deck Panels shall be stored and handled by the panel fabricator according to the Standard Specifications, and shall be delivered to the Contractor with the Deck Panels.

The precast panels shall be at least 15 days old prior to placement on steel beams.

Work this sheet with sheets #7 & #9 thru 11 of 21.

**\*BILL OF MATERIAL  
PANEL P1**

| Bar                                 | No. | Size | Length (m)     | Shape |
|-------------------------------------|-----|------|----------------|-------|
| a(E)                                | 28  | #15  | 1.20           |       |
| a <sub>2</sub> (E)                  | 20  | #20  | 1.20           |       |
| b(E)                                | 70  | #15  | 2.25           |       |
| d <sub>3</sub> (E)                  | 28  | #15  | 0.95           |       |
| ***Reinforcement Bars, Epoxy Coated |     |      | kg             | 830   |
| Concrete Superstructure             |     |      | m <sup>3</sup> | 5.09  |

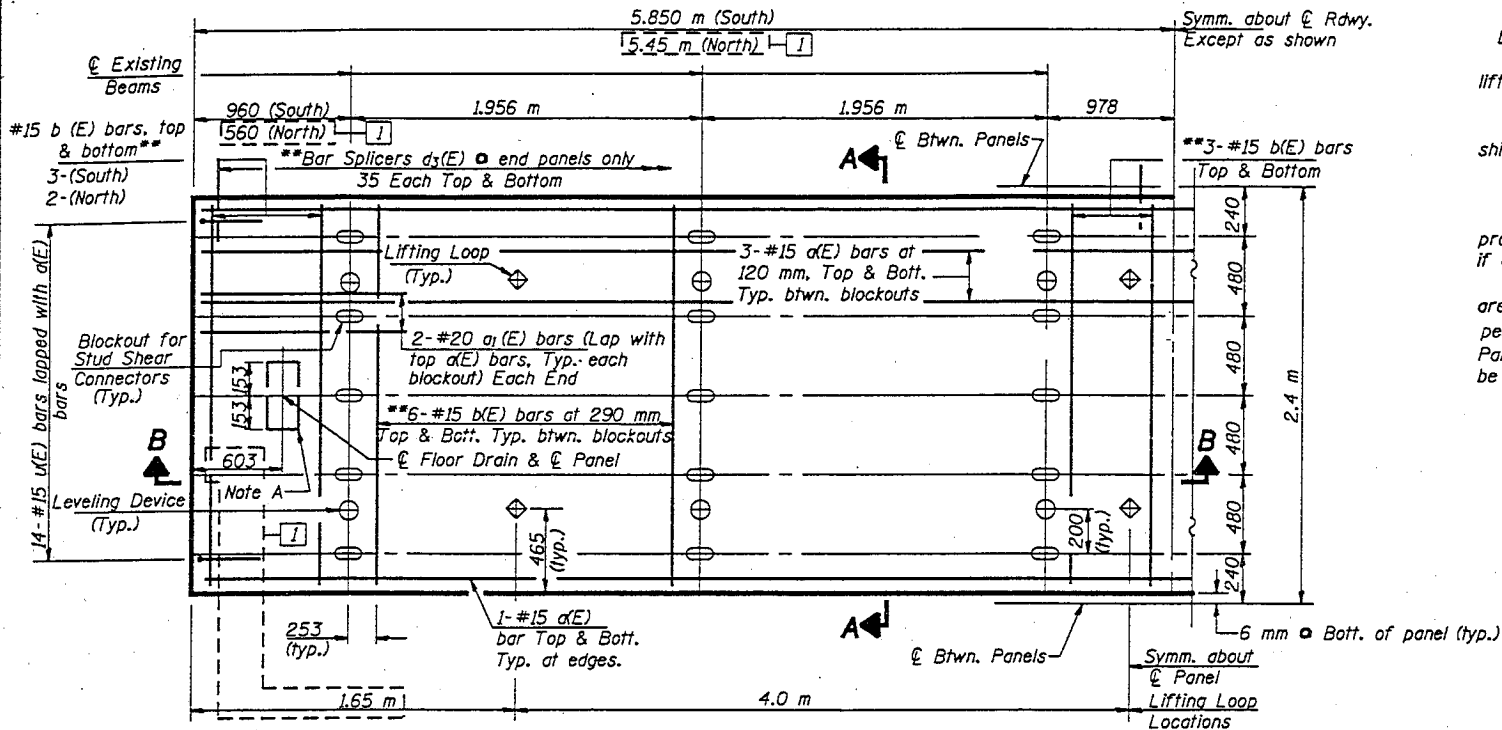
**REINFORCEMENT NOTES**

Reinforcement bars designated (E) shall be epoxy coated.

For information only, the items shown in this Bill of Material are not paid for separately but are included in the cost of "Precast, Post-Tensioned Bridge Deck".

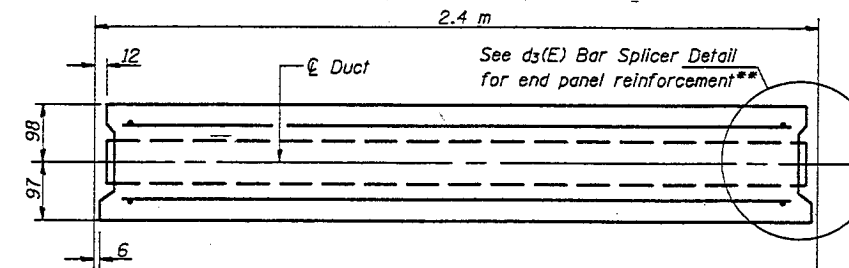
d<sub>3</sub>(E) Bar Splicers shall be lapped to b(E) bars in panel at the end face of the end Precast Panels. Cost included with "Precast Post-Tensioned Bridge Deck". See sheet #9 of 21 for bar splicer details. See Sections A-A & B-B on sheet #6 of 21 for locations.

\*\*\*Additional confinement reinforcement will be required at end anchorages. The Contractor shall submit details to the Engineer for approval. See Special Provisions.

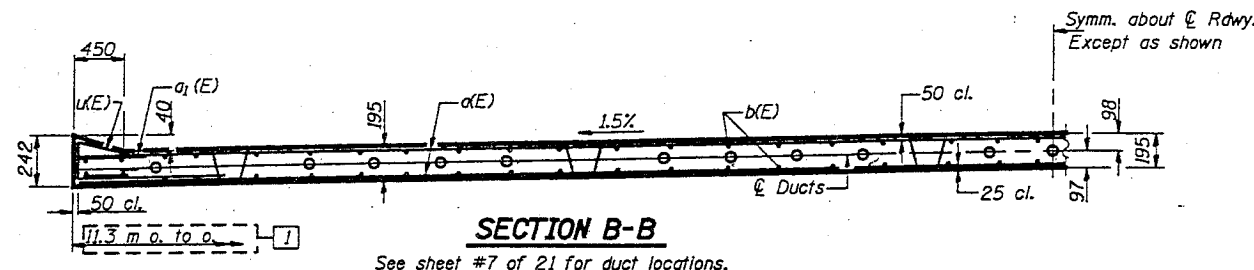


**PLAN-PANELS P1\*\*\***  
(31 Required)

Note A: Provide 306 mm x 106 mm formed opening for floor drains in panels designated on sheet #7 of 21. Cost included with the precast panels.

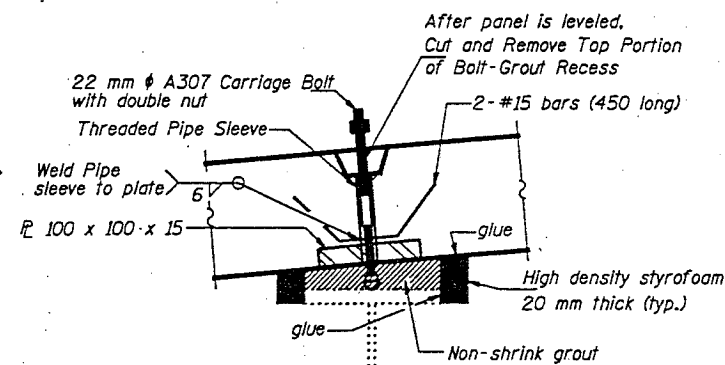


**SECTION A-A**



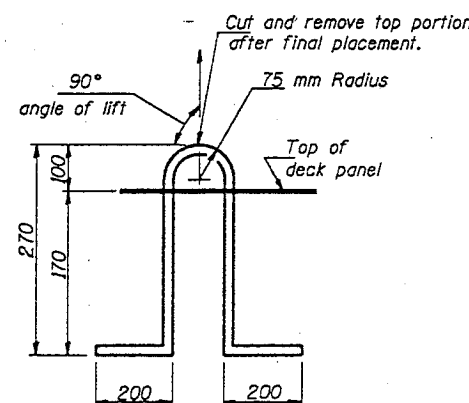
**SECTION B-B**

See sheet #7 of 21 for duct locations.

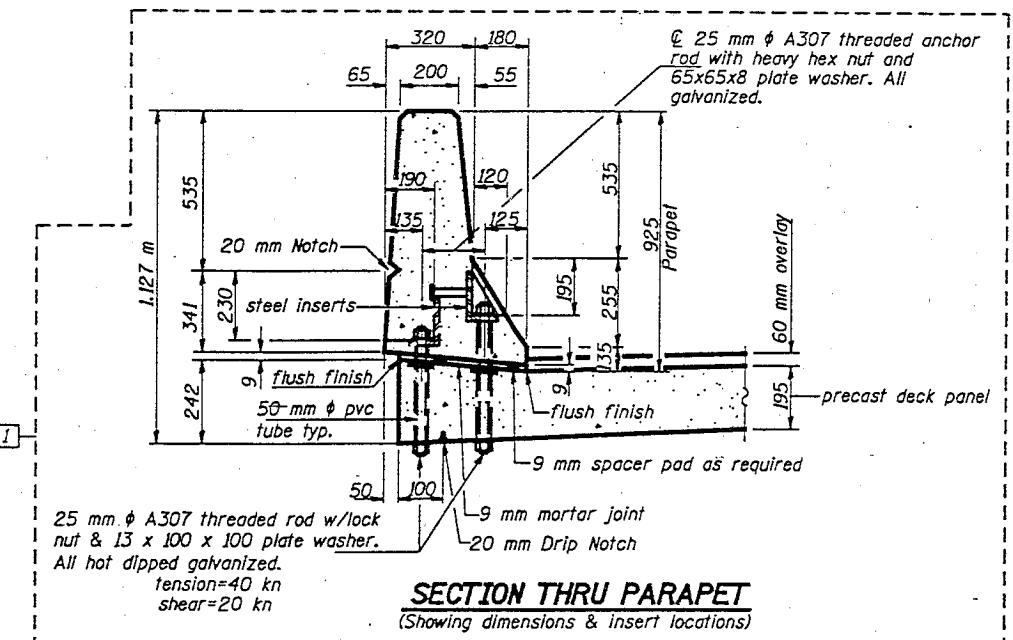


**LEVELING DEVICE DETAIL**

Contractor may submit alternative leveling device to the Engineer for approval.



**LIFTING LOOP DETAIL**



**SECTION THRU PARAPET**  
(Showing dimensions & insert locations)

25 mm  $\phi$  A307 threaded rod w/lock nut & 13 x 100 x 100 plate washer. All hot dipped galvanized. tension=40 kn shear=20 kn

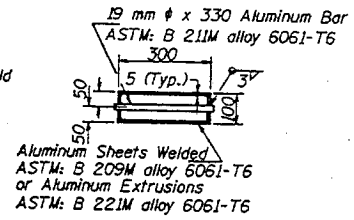
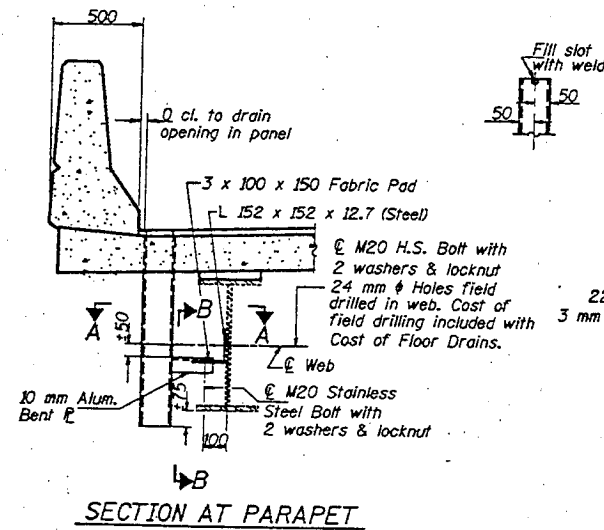
DESIGNED James K Klein  
CHECKED Patrick M Petrone  
DRAWN R. Sommer  
CHECKED JJK pmP

March 31 1999  
EXAMINED Thomas J. Donoghue  
PASSED Ralph E. Anderson  
ENGINEER OF BRIDGE DESIGN  
DIRECTOR OF BRIDGES AND STRUCTURES

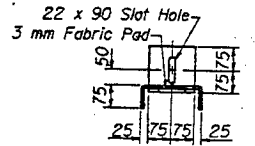
**PRECAST DECK PANEL DETAILS**  
F.A.P. RT. 75 SEC. 8(BR-4)  
SANGAMON COUNTY  
STATION 17+55.09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

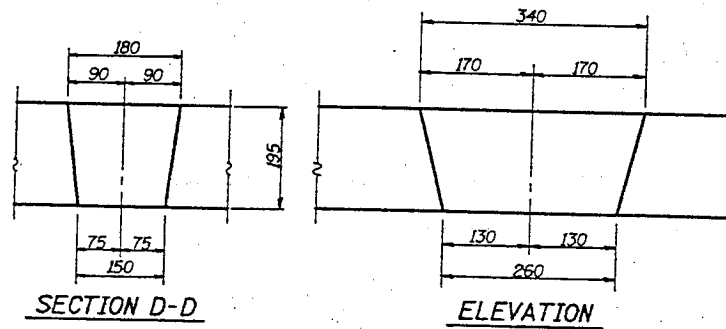
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|----------------------|----------|----------|---------|-------|---------------|
| PROJECT NO.          | DISTRICT | COUNTY   | SECTION | SHEET | SHEET NO. 9   |
| F.A.P. 75            | 8(BR-4)  | SANGAMON | 342     | 204   | 21 SHEETS     |
| PREPARED BY: [Blank] |          |          |         |       | DATE: [Blank] |



TOP PLAN

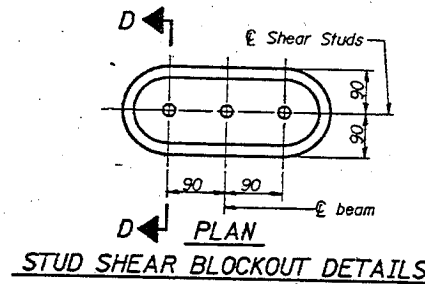


SECTION B-B

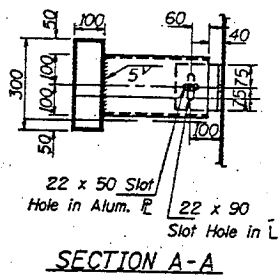


SECTION D-D

ELEVATION

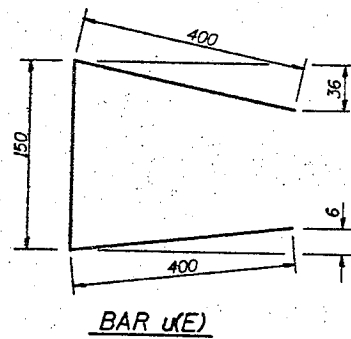


STUD SHEAR BLOCKOUT DETAILS

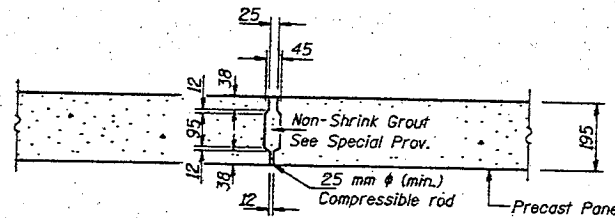


SECTION A-A

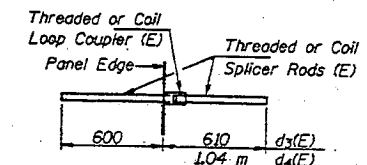
**INSTALLATION:**  
The floor drain shall be installed in the 306 mm x 106 mm formed opening provided in the precast panels with an epoxy bonding material in accordance with Section 1025 of the Standard Specifications and according to the manufacturer's recommendation. Cost included with cost of "Floor Drains."



BAR u(E)



TRANSVERSE JOINT DETAIL



**d<sub>3</sub>(E) & d<sub>4</sub>(E) BAR SPLICER DETAIL**

d<sub>3</sub>(E) req'd. = 140 (deck) & 32 (parapet)  
d<sub>4</sub>(E) req'd. = 8 (parapet)  
See sheet #21 of 21 for additional details.

|          |            |
|----------|------------|
| DESIGNED | J.K.K.     |
| CHECKED  | PMP        |
| DRAWN    | R. Sommer  |
| CHECKED  | J.K.K. PMP |

|          |                                    |
|----------|------------------------------------|
| DATE     | March 31, 1999                     |
| EXAMINED | Thomas J. Demagallo                |
| PASSED   | Ralph E. Anderson                  |
| TITLE    | ENGINEER OF BRIDGES AND STRUCTURES |

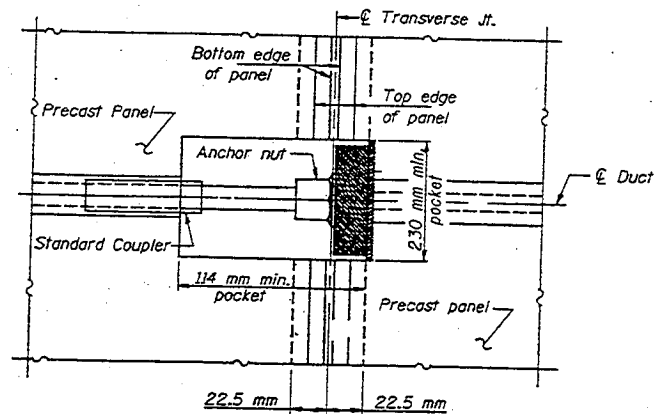
PRECAST DECK PANEL  
F.A.P. RT. 75 SEC. 8(BR-4)  
SANGAMON COUNTY  
STATION 17+551.09

Work this sheet with sheets #7, #8, #10 & #11 of 21.

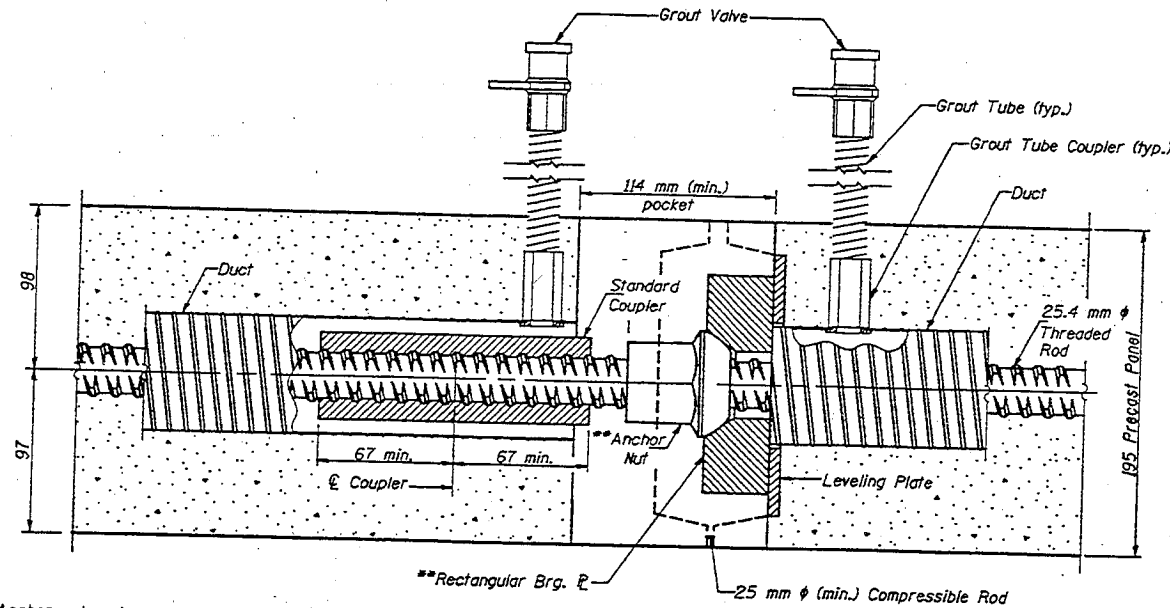
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|             |          |            |             |       |              |
|-------------|----------|------------|-------------|-------|--------------|
| PROJECT NO. | SECTION  | DATE       | BY          | SCALE | SHEET NO. 10 |
| 75          | 8(BR-4)  | SANGAMON   | 3-4-2       | 205   | 21 SHEETS    |
| DESIGNED BY | DRAWN BY | CHECKED BY | APPROVED BY |       |              |

Notes: 1. The Contractor shall make provisions to hold the deck panels down from lift off due to post tensioning operations.  
2. If post-tensioning strands are used as an alternate system, the Contractor shall submit the coupler and anchor details to the Engineer for approval.



PLAN VIEW OF TENDON COUPLER DETAIL

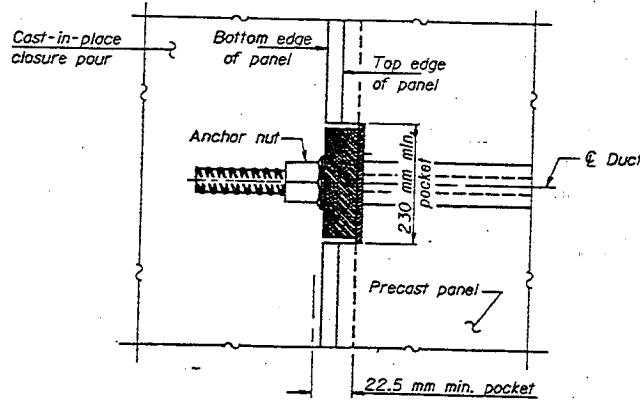


\*\*Anchor nut and rectangular brg. plate may be omitted if the Contractor chooses to post-tension all panels together in the same line of a unit at a time.

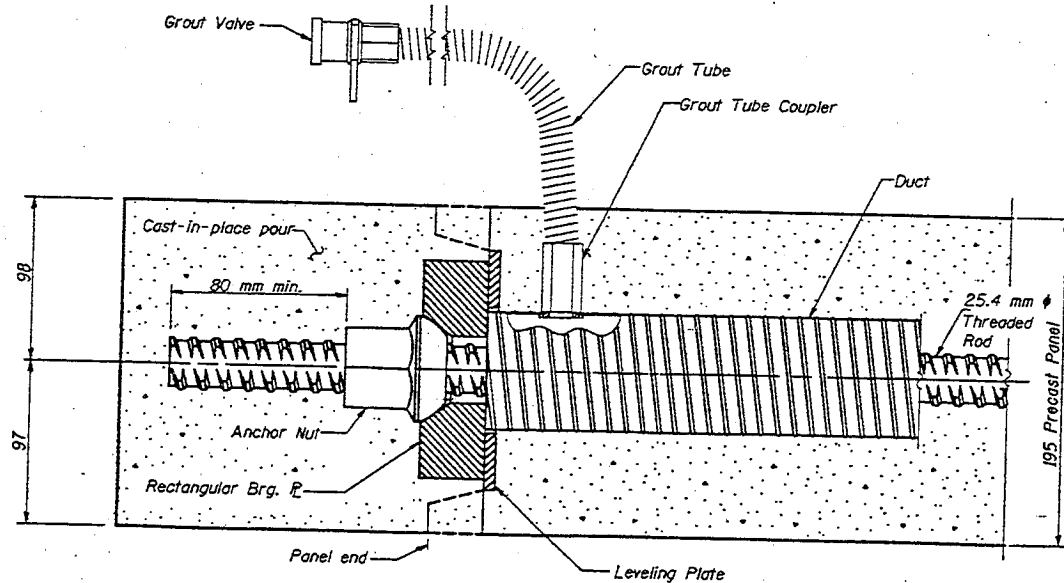
TENDON COUPLER DETAIL  
Note: Reinforcement details not shown for clarity.

ERECTION PROCEDURE FOR PRECAST POST-TENSIONED BRIDGE DECK

1. After taking the elevations of the top flanges of beams, determine the fillet heights as per the procedure shown on sheet #2 of 21.
2. Set the precast panel A at the location shown in plan.
3. Adjust the leveling bolts so that the elevation difference between the bottom of the panel and the top of the beam flange is equal to the calculated fillet height determined in Step 1. Each leveling bolt should be adjusted properly to distribute the load to all beams.
4. Set adjacent panel B with gap indicated in the Transverse Joint Detail. Adjust leveling bolts as in Step 3 above.
5. Insert post-tensioning bars.
6. Couple the post-tensioning rods at the transverse joints as required. See above.
7. Repeat Steps 2 to 5 progressing toward East.
8. Clean the transverse joints.
9. Install the Styrofoam stopper for the beam fillet. See leveling device detail, sheet #8 of 21.
10. Form and pour grout in the transverse joints.
11. After the required curing of the grout in transverse joints, post-tension the bars as per the sequence indicated on sh. #7 of 21.
12. Install shear studs in the preformed holes. Shear studs to be installed only after all post-tensioning of the unit is complete.
13. Grout fillets / haunch areas between beam flanges and the bottom of the slab panel.
14. Grout the ducts.
15. Fill holes around shear studs with non-shrink grout.
16. Fill recesses around post-tensioning anchorages with non-shrink grout.
17. Place the closure pours at the deck joints.
18. Remove the styrofoam strips from the edges of the beam flanges.



PLAN VIEW OF STRESSING END ANCHORAGE



STRESSING END ANCHORAGE  
Note: Reinforcement details not shown for clarity.  
Dead end anchorage details are similar.

|          |                 |
|----------|-----------------|
| DESIGNED | J.K.K.          |
| CHECKED  | P.M.P.          |
| DRAWN    | R. Sommer       |
| CHECKED  | J.K.K. & P.M.P. |

March 31 1999  
EXAMINED *Thomas J. Domagala*  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

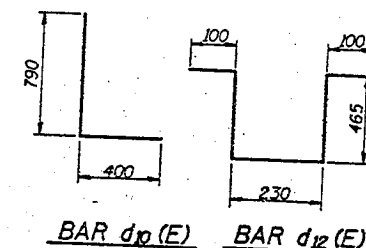
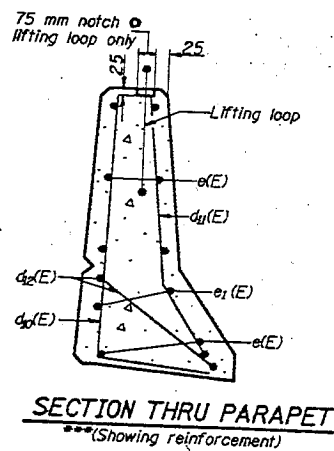
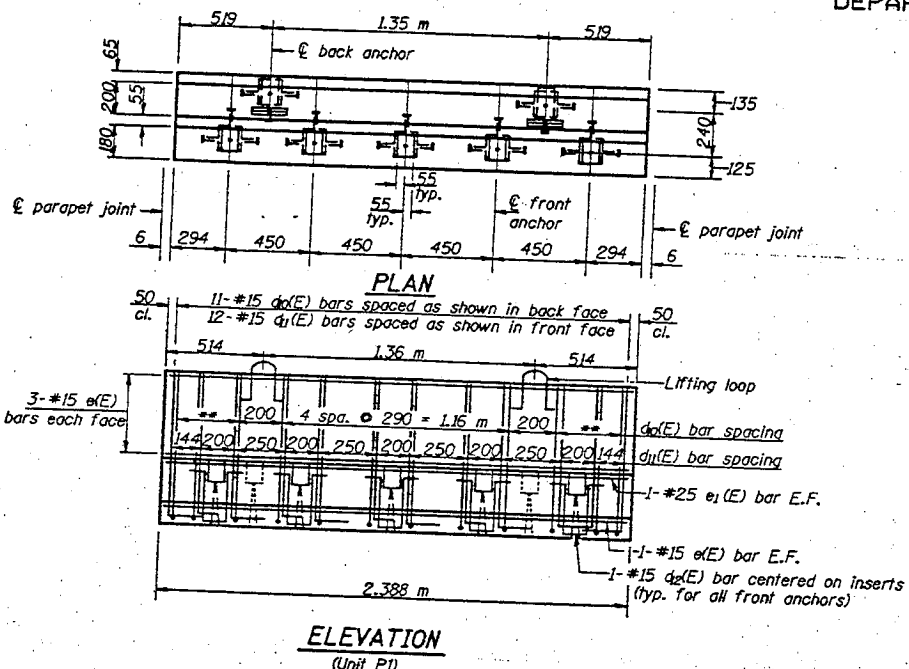
Work this sheet with sheets #7 thru #9 & #11 of 21.

PRECAST DECK PANEL DETAILS  
F.A.P. RT. 75 SEC. 8(BR-4)  
SANGAMON COUNTY  
STATION 17+55.109

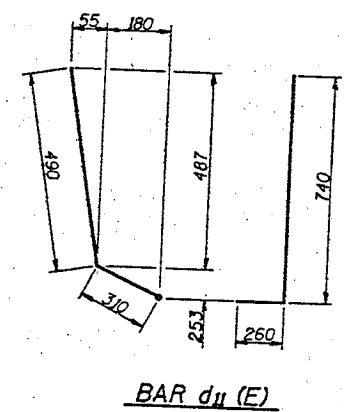
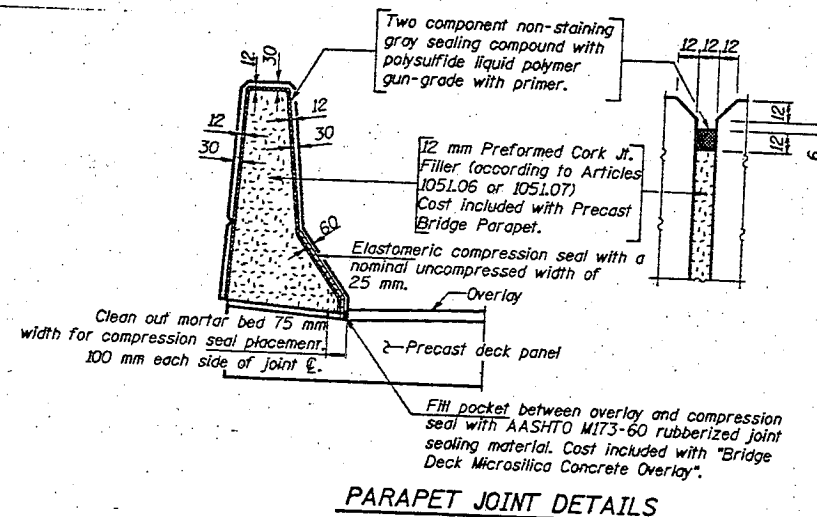
Revised 5-27-99 J.K.K.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|             |          |          |         |       |              |
|-------------|----------|----------|---------|-------|--------------|
| PROJECT NO. | DISTRICT | COUNTY   | SECTION | SHEET | SHEET NO. II |
| 75          | 8BR-4    | SANGAMON | 342     | 206   | 21 SHEETS    |



\*\* 2 spa.  $\emptyset$  182=364  
\*\*\*d3(E) Bar Splicers shall be lapped to e(E) bars & d4(E) bar splicers with e1(E) bar, in Precast Bridge Parapets at the end of the Precast Parapets. Cost included with "Precast Bridge Parapet". See Parapet Elevation, sheet #6 of 21. See sheet #9 of 21 for bar splicer details.



\*For information only. The reinforcement bars shown in this Bill of Material are not paid for separately but are included in the cost of "Precast Bridge Parapet".

BILL OF MATERIAL

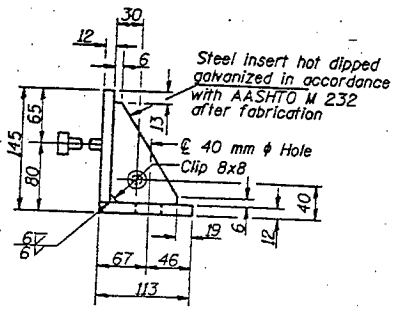
| Bar                    | No.  | Size     | Length (m) | Shape |
|------------------------|------|----------|------------|-------|
| Unit P1 (62 Req'd.)    |      |          |            |       |
| d1(E)                  | 11   | #15      | 1.19       | L     |
| d2(E)                  | 12   | #15      | 1.06       | L     |
| d3(E)                  | 5    | #15      | 1.36       | L     |
| e1(E)                  | 8    | #15      | 2.28       | L     |
| e2(E)                  | 2    | #25      | 2.28       | L     |
|                        |      |          |            |       |
|                        |      |          |            |       |
| Item                   | Unit | Quantity |            |       |
| Precast Bridge Parapet | m    | 148.8    |            |       |

DESIGNED **J.K.K.**  
CHECKED **PMP**  
DRAWN **R. Sommer**  
CHECKED **J.K.K. PMP**

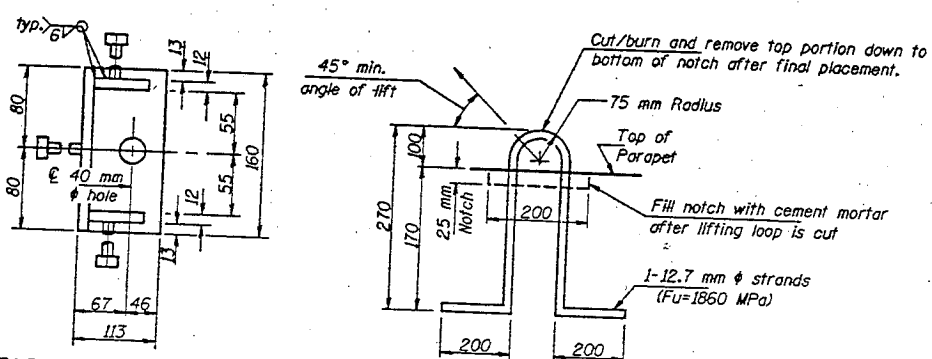
March 31, 1999  
EXAMINED **Thomas J. Domagalicki**  
PASSED **Ralph E. Anderson**  
ENGINEER OF BRIDGES AND STRUCTURES

13 mm  $\emptyset$  x 150 mm granular or solid flux filled studs conforming to Article 1006.32 of the Standard Specifications automatically end welded. Bend side studs as required to avoid studs at next insert.

STEEL INSERT DETAIL



LIFTING LOOP DETAIL



**PRECAST PARAPET DETAILS**  
**F.A.P. RT. 75 SEC. 8(BR-4)**  
**SANGAMON COUNTY**  
**STATION 17+551.09**