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</tr>
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</table>
**Plan View**

- 5 pairs of #4 S(E) bars
- #4 A(E) bars at 9" cts.

**Section B-B**

- Symmetry about E
- #4 S(E) bars at 9" cts.
- A(E)
- S(E)
- B(E)

**View C-C**

- Fabric bearing pad
- Fixed

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Two 2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25° lifting pin shall be used to engage the lifting loops during handling.

**Bar List**

<table>
<thead>
<tr>
<th>Bar</th>
<th>Size</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>A(E)</td>
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<td>3'-7''</td>
<td>S(E)</td>
</tr>
<tr>
<td>B(E)</td>
<td>#4</td>
<td>3'-2''</td>
<td>S(E)</td>
</tr>
</tbody>
</table>

**Bill of Material**

- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Expansion bearing pad shall be bonded to the substructure.
- Omit holes when using expansion bearings.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

**State of Illinois**

**Department of Transportation**

**11" x 48" PPC Deck Beam**

**Structure No.**

**PD-1148-0**

**File Name**

**User Name**

**Plot Scale**

**Plot Date**

**Drawn**

**Revised**

**Desired -**

**Checked -**

**Designed -**

**Revised -**

**Printed -**

**State of Illinois**

**County**

**TOTAL**

**SHEET NO.**

**SHEETS**

**RTE.**

**F.A.**

**F.AID PROJECT**

**CONTRACT NO.**

**COUNTY**

**DEPARTMENT OF TRANSPORTATION**

**BILL OF MATERIAL**

- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestress prestressed concrete deck beams.
- Expansion bearing pad shall be bonded to the substructure.

**NOTES**

- Fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25° lifting pin shall be used to engage the lifting loops during handling.
- Compression shims are 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

**Lifting Loop Detail**

- 3" Radius
- Top of beam
- 210 KSI STRANDS
- 2" lifting pin

**Section A-A**

- Symmetry about ~
- Except as noted
**SECTION A-A**

- Bars at fixed ends only
- Skew rods at fixed ends

**SECTION B-B**

- Similar about E except as noted

**SECTION B-B**

- Skew rods at 1'-6" cts., Top
- 3 spaces at 6" = 9" cts.
- #4 S(E) bars at 9" cts.
- 1'-6" U(E) bars
- #4 S(E) bars
- 9" S(E) bars
- 4 pairs of #4 S(E) bars

**PLAN VIEW**

- 6'-0" #4 U(E) bars
- 3'-7" #4 S(E) bars
- 5'-9" #5 B(E) bars full length

**VIEW C-C**

- Foot of Beam
- Lifting pin shall be used to engage the lifting loops during handling.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

**FABRIC BEARING PAD**

- Interior
- Exterior

**BAR LIST**

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<th>Size</th>
<th>Length</th>
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<td>5'-9&quot;</td>
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</table>

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Expansion bearing pad shall be bonded to the substructure.
- Compression shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Expansion bearing pad shall be bonded to the substructure.
Structural Design:

**PLAN VIEW**

- #4 U bars at 9'' cts.
- #4 S bars at 9'' cts.
- Cut to fit Fan - #4 S bars.
- End to end beam S bars.

**SECTION B-B** (Showing dimensions)

- #4 A(E) bars at 1'-6'' cts.
- Top S(E) bars 1 pair of #4

**SECTION A-A**

- #4 S bars at 9'' cts.
- Lifting loop of lift 60° min. angle

**VIEW C-C**

- Fabric Bearing Pad
- Fabric Bearing Pad Fixed

**LIFTING LOOP DETAIL**

- 5'' Rods
- Top of Beam
- Lifting pin shall be used to engage the lifting loops during handling.

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<tr>
<td>S(E)</td>
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**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 0.78'' and the nominal cross-sectional area shall be 0.005 sq. in.
- A minimum 3'-7'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- The nominal diameter shall be 0.78'' and the nominal cross-sectional area shall be 0.005 sq. in.
- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'ci, shall be 6000 psi.
- Prestressed concrete deck beams shall be used in the concrete for precast prestressed concrete deck beams.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 0.78'' and the nominal cross-sectional area shall be 0.005 sq. in.
- A minimum 3'-7'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- The nominal diameter shall be 0.78'' and the nominal cross-sectional area shall be 0.005 sq. in.
- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'ci, shall be 6000 psi.
5 pairs of #4 S(E) bars

PLAN VIEW

SECTION A-A

B(E) A(E) S(E)

52''

SECTION B-B

B(E) A(E) S(E)

FABRIC BEARING PAD

VIEW C-C

S(E)

U(E)

NOTE:

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

BILLY OF MATERIAL

State of Illinois
Department of Transportation

BILL OF MATERIAL

Precast Prestressed
Concrete Deck Beam, 11'' depth

NOTES

Compressive strength of prestressed concrete at release, $f''_{c,1}$, shall be 5000 psi.

Compressive strength of prestressed concrete, $f''_{c}$, shall be 6000 psi.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be $\frac{1}{2}''$ and the nominal cross-sectional area shall be 0.153 sq. in.

Prestressing steel shall be used in the concrete for prestressed concrete deck beams.

Expansion bearing pad shall be bonded to the substructure.

Expansion bearing pad shall be bonded to the substructure.

A minimum 2'' lifting pin shall be used to engage the lifting loops during handling.

The lifting loops shall be 60° min. angle.

~ Lifting loop of lift

~ Lifting loop of lift

~ 2'' } Holes for dowel

~ 2'' } Holes for dowel

~ ~ 2'' } Holes for dowel

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

The nominal diameter shall be $\frac{1}{2}''$ and the nominal cross-sectional area shall be 0.153 sq. in.

Two 2'' lifting pins shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

Compressive strength of prestressed concrete at release, $f''_{c,1}$, shall be 6000 psi.

Compressive strength of prestressed concrete at release, $f''_{c}$, shall be 5000 psi.

52''

15''

LIFTING LOOP DETAIL

Top of Beam

3'' Radius

$\frac{3}{4}''$ & Convol

PLAN VIEW

SECTION A-A

LIFTING LOOP DETAIL

Top of Beam

3'' Radius

$\frac{3}{4}''$ & Convol
**PLAN VIEW**

- 9''
- 1'-6''
- 3 spaces at 6'' =

**SECTION A-A**

- #4 A(E) bars at 1'-6'' cts., Top
- 6 -#4 U(E) bars cl.

**SECTION B-B**

- 5 -#5 B(E) bars full length, Top
- #4 S(E) bars at 9'' cts.

**CUT TO FIT**

- Fan -#4 S(E) bars.

**END TO END BEAM**

- 7' S(E) bars
- 1 pair of #4 Short bars
- 6'-1''
- 10' S(E) bars

**LIFTING LOOP DETAIl**

- 6''
- 6''
- 5' Radius
- 6''

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**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
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- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
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- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
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- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 25/32'' lifting pin shall be used to engage the lifting loops during handling.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
**SECTION A-A**

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

**SECTION B-B**

Notes:
- 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

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Note: See sheet 06-01-16 for additional details and Bill of Materials.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1'' thick.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1'' thick.

Notes:
- Connect beams in pairs with the tie assemblies shown.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The transverse tie assembly shall be tightened to a snug fit and the threads shall be used in the concrete for prestressed concrete deck beams.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 5/8'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Initial prestressing force shall be 6000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of precast prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 5/8'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
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- Two 5/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 5/8'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
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- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
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Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
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- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
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- A minimum 5/8'' lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.
SECTION A-A

PLAN VIEW

Note: Spacing of SE(E) and Sy(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.

MINIMUM BAR LAP

#5. 5'6" x 2'-6"

SECTION B-B

(Showing dimensions)

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

END TO END BEAM 9"

BAR LIST

(For Beam only)

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<tr>
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</tbody>
</table>

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

4'-#4 A(E) bars at 1'-6" cts., bottom of top slab

4'-#4 S(E) bars, bottom

4'-#4 S(E) bars, top

4'-#4 U(E) bars, bottom, 1' to fit

4'-#4 S(E) bars, bottom, 1' to fit

4'-#5 U(E) bars, full length, to top cl.

4'-#5 B(E) bars, full length, to top cl.

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

36" MIN. ANGLE

LIFTING LOOP

60° min. angle

Fan -#4 S(E) bars, bottom. Cut to fit

Fan -#4 S(E) bars, top. Cut to fit

2'-#4 U(E) bars, bottom, 1' to fit

2'-#4 U(E) bars, full length, to top cl.

SECTION B-B

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerlines of beam in the permissible strand locations shown.
**SECTION A-A**

**LIFTING LOOP DETAIL**

**6''**

**6''**

**3'' Radius**

**Top of Beam**

**BAR S(E)**

**BAR S(U)**

**BAR A(E)**

**BAR U(E)**

**BILL OF MATERIAL**

- **Conc. Deck Bms. (17'' depth)**
- **Precast Prestressed**

**NOTES**

- **Fabric Bearing Pad**
  - Fixed

- **Plan View**
  - E 3/8'' Holes for dowel rods at fixed ends and interior

**Typical Transverse Tie Assembly**

- **2''** Lifting loops
  - 2 each end
- **3''** Hole for transverse tie assemblies

**Notes:**

- Connect beams in pairs with the transverse tie configuration shown.

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

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

**shall be used in the concrete for precast prestressed concrete deck beams.**

**Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.**

**Compression strength of prestressed concrete, F'c, shall be 6000 psi.**

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

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' 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. Protects on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 3/8'' Fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 3/8'' lifting pin shall be used to engage the lifting loops during handling.

**Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.**

**Fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.**

**A minimum 3/8'' lifting pin shall be used to engage the lifting loops during handling.**

**Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.**

**Notes:**

- Connect beams in pairs with the transverse tie configuration shown.

**FILE NAME**

- PD-1736-LD

**PLOT SCALE**

- PLOT DATE

**CHECKED**

- DRAWN

**CHECKED**

- DESIGNED

**REVISED**

- REVISED

**STATE OF ILLINOIS**

**DEPARTMENT OF TRANSPORTATION**

**17'' x 36'' PPC Deck Beam Details**

**STRUCTURE NO.**

**STATE OF ILLINOIS**

**DEPARTMENT OF TRANSPORTATION**

**17'' x 36'' PPC Deck Beam Details**

**STRUCTURE NO.**
Plan View

Bar List

Section B-B

Minimum Bar Lap

VIEW C-C

Section A-A

VIEW B-B

Bar List

One Beam Only

Note: Spacing of SHE and SHE/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 flue.
**NOTES**

All bearing pads shall be 1" thick. Omit holes when using expansion bearings. Expansion bearing pad shall be bolted to the substructure.

**FABRIC BEARING PAD**

**FIXED**

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

Compressive strength of prestressed concrete, $f'_{c}$, shall be 6000 psi. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. 

Two "h" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 5/8" lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.15(b) and 1021.37 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

**NOTES**

Compressive strength of prestressed concrete beams, $f'_{c}$, shall be 6000 psi. Compressive strength of prestressed concrete of reuses, $f'_{c}$, shall be 5000 psi.

**BILL OF MATERIAL**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in. The 5/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads are in place. Two 5/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. Expansion bearing pad shall be bolted to the substructure.
**PLAN VIEW**

Note: Spacing of #4A and #4S 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 B-B**

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

**SECTION B-B**

Note: Spacing of #4A and #4S 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.

**MINIMUM BAR LAP**

#4 bars ≥ 2" x 6"

#5 bars ≥ 3" x 6"
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

User Name: [USER NAME]

Bill of Material

FABRIC BEARING PAD
(Fixed) FABRIC BEARING PAD
(Interior)

Notation:
- 3" holes
- Transverse tie configuration shown

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

Prestressing steel shall be uncoated high-strength, low-relaxation 7-wire strand, Grade 270. The nominal diameter shall be 2/5" and the nominal cross-sectional area shall be 0.03 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Prongs on exterior faces of bridge shall be filed with grout after transverse tie assembly is in place.
Two 2/3" lifting pins shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 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.

Plan View

Typical Transverse Tie Assembly

NOTES

 Missouri

17" x 48" PPC Deck Beam Details

Structure No.

State of Illinois

Department of Transportation

File Name = PD-1748-0D

Plot Scale = 1:120

Plot Date = 1-28-16

Designed =

Checked =

Drawn =

Checked =

Drawn =

Designed =

Revise =

Revise =

Revise =

Revise =

Department of Transportation

State of Illinois

Contract No.

Total Sheets

Sheet No.
PLAN VIEW

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie where necessary in the transverse ties.

MINIMUM BAR LAP

\#5 bar = 2'-6"
\#4 bar = 1'-11"
\#3 bar = 9'
\#2 bar = 6'-9"
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1'' thick.

Notes:
1. Two "'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
2. A minimum 1-2-3'' lifting pin shall be used to engage the lifting loops during handling.
3. Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

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

Compressive strength of prestressed concrete of rebar, Fc, shall be 5000 psi.

Notes:
1. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
2. The nominal diameter shall be 2-1/8'' and the nominal cross-sectional area shall be 0.378 sq. in.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 2-1/8'' and the nominal cross-sectional area shall be 0.378 sq. in.

Notes:
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Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 2-1/8'' and the nominal cross-sectional area shall be 0.378 sq. in.
**MINIMUM BAR LAP**

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

**MINIMUM BAR LAP**

The end to end beam:

- **PLAN VIEW**
  - Fan – #4 S(E) bars, Top, Cut to 6" @ 12"
  - Fan – #4 S(E) bars, Bottom, Cut to 6"
  - #4 S(E) bars at 6" cts., Top
  - #4 S(E) bars at 6" cts., Bottom
  - #4 S(E) bars at 3'-0" cts., Top
  - #4 S(E) bars at 3'-0" cts., Bottom

- **VIEW C-C**
  - #4 S(E) bars, Top
  - #4 S(E) bars, Bottom
  - #4 B(E) bars, Top
  - #4 B(E) bars, Bottom
  - #4 S(E) bars, Top
  - #4 S(E) bars, Bottom
  - #4 A(E) bars at 3'-0" cts., Bottom of Top slab

- **SECTION B-B**
  - #4 - #17 strands
  - #4 - #17 strands
  - #4 - #17 strands

- **SECTION A-A**
  - #4 - #17 strands

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<td>U(E)</td>
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<td>9'-0&quot;</td>
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</tr>
</tbody>
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**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)

**For additional details and Bill of Materials.**
**NOTES**

Presstressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.153 sq. in.

The 3/4" radius of the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be grouted after transverse tie assembly is in place.

Two 3/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 3/4" lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

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

Compressive strength of prestressed concrete in rebar, f'cu, shall be 5000 psi.
**PLAN VIEW**

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

**MINIMUM BAR LAP**

- #4 bar = 2'-10"
- #5 bar = 5'-2"

**BAR LIST**

**ONE BEAM ONLY**

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<tr>
<td>U(E)</td>
<td>#4</td>
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</tbody>
</table>

Note: See sheet of for additional details and Bill of Materials.

**SECTION A-A**

**SECTION B-B**

(Showing dimensions)

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

**SECTION A-A**

(Showing reinforcement and permissible strand locations)

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

**SECTION C-C**

**VIEW C-C**

**One key up selector**

Plan of grade beam

**NOTE:**

- #5 bar = 2'-6"
- #4 bar = 1'-11"
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1'' thick.

Notes:
1. 2'' holes shall be used in the concrete for precast prestressed concrete deck beams.
2. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
3. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 7/8'' and the nominal cross-sectional area shall be 0.153 sq. in. The 1/2'' holes in the transverse tie assembly shall be tightened to a snug fit and the threads set. Prestressed concrete bridge shall be filled with great. Other transverse tie assembly shall not be used.
4. Two 7/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
5. A minimum 2'' lifting pin shall be used to engage the lifting loops during handling.
6. Prestress strands shall be 270 ksi strands.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1'' thick.

Notes:
1. 2'' holes shall be used in the concrete for precast prestressed concrete deck beams.
2. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
3. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 7/8'' and the nominal cross-sectional area shall be 0.153 sq. in. The 1/2'' holes in the transverse tie assembly shall be tightened to a snug fit and the threads set. Prestressed concrete bridge shall be filled with great. Other transverse tie assembly shall not be used.
4. Two 7/8'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
5. A minimum 2'' lifting pin shall be used to engage the lifting loops during handling.
6. Prestress strands shall be 270 ksi strands.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
B(E) 1'-6'' 3 spaces at 6'' = End to end beam 9''

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4'' in the immediate area of the transverse tie. The diagrams to note the block outs for the transverse tie.

**Minimum Bar Lap**

- #5 bar = 2'-6''
- #4 bar = 1'-11''

**Bar List**

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(E)</td>
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<td>S(E)</td>
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<tr>
<td>S(E)</td>
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<td>S(E)</td>
</tr>
<tr>
<td>B(E)</td>
<td>#4</td>
<td>2'-7''</td>
<td>S(E)</td>
</tr>
<tr>
<td>S(E)</td>
<td>#4</td>
<td>4'-0''</td>
<td>S(E)</td>
</tr>
<tr>
<td>U(E)</td>
<td>#5</td>
<td>9''</td>
<td>S(E)</td>
</tr>
</tbody>
</table>

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

**View C-C**

**Plan View**

**Section A-A**

**Section B-B**

**Section B-B**

**Minimum Bar Lap**

- #5 bar = 2'-6''
- #4 bar = 1'-11''

**Table:**

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
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<td>S(E)</td>
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<tr>
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<td>S(E)</td>
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<td>4'-0''</td>
<td>S(E)</td>
</tr>
<tr>
<td>U(E)</td>
<td>#5</td>
<td>9''</td>
<td>S(E)</td>
</tr>
</tbody>
</table>
Fabric bearing pad shall be bonded to the substructure.

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

**Fabric Bearing Pad**

**Bar U (E)**

**Bar S (E)**

**Bar S (E)**

**Plan View**

**Section A-A**

**Typical Transverse Tie Assembly**

**Lifting Loop Detail**

**Bill of Material**

**Notes**

Pre-stressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be \( \frac{1}{2} \)" and the nominal cross-sectional area shall be 0.253 sq. in.

The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be engaged with a lifting pin during handling.

Corrosion inhibitor shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of precast concrete, \( f'c \), shall be 6000 psi.

Compressive strength of prestressed concrete, \( f'ci \), shall be 5000 psi.

Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Notes:
**SECTION A-A**

End to end beam

PLAN VIEW

**SECTION B-B**

(Showing dimensions)

**SECTION B-B**

(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.

**MINIMUM BAR LAP**

- #5 5.0' × 2.5' (For information only)
- #4 3.0' × 1.5'
- #4 2.0' × 0.5'
- #3 1.0' × 0.5'

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse. The engineer is to select the block outs for the transverse ties.

**VIEW C-C**

(Showing dimensions)

**BAR LIST**

<table>
<thead>
<tr>
<th>Bar</th>
<th>No.</th>
<th>Size</th>
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<th>Shape</th>
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<tr>
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<td>#5</td>
<td>2'-7''</td>
<td>A(E)</td>
</tr>
<tr>
<td>B(E)</td>
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<td>B(E)</td>
<td>#4</td>
<td>#5</td>
<td>6'-5''</td>
<td>B(E)</td>
</tr>
<tr>
<td>S(E)</td>
<td>#4</td>
<td>#5</td>
<td>8''</td>
<td>S(E)</td>
</tr>
<tr>
<td>S(E)</td>
<td>#4</td>
<td>#5</td>
<td>6'-0''</td>
<td>S(E)</td>
</tr>
</tbody>
</table>

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

**DEPARTMENT OF TRANSPORTATION**

**STATE OF ILLINOIS**

21" x 30" PPC DECK BEAM

**REVISIONS:**

**FILE NAME:**

**USER NAME:**

**PLOT SCALE:**

**PLOT DATE:**

**CHECKED:**

**DRAWN:**

**CHECKED:**

**DESIGNED:**

**REVISED:**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF ILLINOIS**

21" x 30" PPC DECK BEAM

**STRUCTURE NO.:**

**F.A. RTE. SECTION:**

**FED. AID PROJECT:**

**CONTRACT NO.:**

**TOTAL SHEETS:**

**SHEET NO.:**

**PD-2136-R**

06-01-16
Fabric Bearing Pad

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

Lifting Loop Detail

Typical Transverse Tie Assembly

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation T-wire strand, Grade 270.
- The nominal diameter shall be 5/8" and the minimum 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 shall be sealed. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 3/4" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Prestressing steel shall be uncoated high strength, low relaxation T-wire strand, Grade 270.
- Compressive strength of unstrained concrete, f'cu, shall be 5000 psi.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Plan View

Notes:
- Connect beams in pairs with the transverse tie configuration shown.
PLAN VIEW

SECTION A-A

SECTION B-B

VIEW C-C

TABLE:

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
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<tbody>
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<td>4'-0''</td>
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</tr>
<tr>
<td>#5</td>
<td></td>
<td>4'-0''</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>5'-11''</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
<td>6'-0''</td>
<td></td>
</tr>
</tbody>
</table>

MINIMUM BAR LAP

#4 bar = 2'-11"
#5 bar = 3'-6"

Note: Spacing of S(E) and S(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.

Notes:
- #4 bar = 2'-11"
- #5 bar = 3'-6"
- Bar List:
  - #4: 3 bars
  - #5: 2 bars

One Beam Only

For Information Only

BAR LIST

Note: See sheet of for additional details and bill of materials.
Notes:
- All bearing pads shall be 1" thick.
- Drill holes when using expansion bearings.
- Expansion bearing pad shall be bored into the substructure.
- Expansion bearing pads shall be bonded to the structure.

**FABRIC BEARING PAD**
- Interior
- Exterior

**PLAN VIEW**
- Note: Connect beams in pairs with the transverse tie configuration shown.

**SECTION A-A**
- Typical Transverse Tie Assembly

**NOTES**
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 3/8" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of the bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- All bearing pads shall be 1" thick.
- A minimum 2/3" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.
PLAN VIEW

Notes:
- Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse fan.
- The diagrams to miss the block outs for the transverse fans.

MINIMUM BAR LAP

- #4 bar • 2'-6"
- #5 bar • 2'-6"

BARS LIST

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
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<td>#4</td>
<td>5'-11&quot;</td>
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<tr>
<td>3</td>
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<td></td>
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<tr>
<td>5</td>
<td>#4</td>
<td>9&quot;</td>
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</tr>
<tr>
<td>6</td>
<td>#4</td>
<td>3'-0&quot;</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>#4</td>
<td>1'-6&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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

VIEW C-C

SECTION A-A

- #4 S(E) bars, Top
- #4 S(E) bars, Bottom
- Fan -#4 S(E) bars, Top. Cut to fit
- Fan -#4 S(E) bars, Bottom. Cut to fit

SECTION B-B

- #4 A(E) bars at 3'-0" cts., Top
- #4 A(E) bars at 3'-0" cts., Bottom
- #4 A(E) bars at 6" cts., Top
- #4 A(E) bars at 6" cts., Bottom
- #5 B(E) bars at 1'-11" cts., Top
- #5 B(E) bars at 1'-11" cts., Bottom
- #4 S(E) and S(E) bars at 9" cts., Top
- #4 S(E) and S(E) bars at 9" cts., Bottom
- #4 S(E) bars at 9" cts., Top
- #4 S(E) bars at 9" cts., Bottom
- #4 A(E) bars at 3'-0" cts., Top
- #4 A(E) bars at 3'-0" cts., Bottom
- #4 S(E) and S(E) bars at 3'-0" cts., Top
- #4 S(E) and S(E) bars at 3'-0" cts., Bottom
- #4 S(E) bars at 3'-0" cts., Top
- #4 S(E) bars at 3'-0" cts., Bottom

Note: See sheet of for additional details and Bill of Materials.
FABRIC BEARING PAD

Fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

Expansion bearing pad shall be bonded to the substructure.

Omit holes when using expansion bearings.

All bearing pads shall be 1" thick.

Notes:

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

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

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

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Expansion bearing and steel shall be bonded to the substructure.

Expansion bearing pad shall be 1" thick.

Expansion bearing pad shall be bonded to the substructure.

Lifting pin shall be used to engage the lifting loops during handling.

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.

The nominal diameter shall be ½" 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.

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.

Prestressing steel shall be uncoated high strength, low relaxation 15-wire strand, Grade 270.

Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" # lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed prestressed concrete deck beams.

Compressive strength of prestressed concrete, Tc, shall be 6000 psi.

Compressive strength of prestressed concrete of release, Tp, shall be 5000 psi.

PD-2148-LD 1-28-16

FABRIC BEARING PAD

FABRIC BEARING PAD

PLAN VIEW

SEC'TION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" 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.

Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" # lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed prestressed concrete deck beams.

Compressive strength of prestressed concrete, Tc, shall be 6000 psi.

Compressive strength of prestressed concrete of release, Tp, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed

Conc. Deck Bms. (21" depth)

Precast Prestress Steel

PD-2148-LD 1-28-16

FABRIC BEARING PAD

FABRIC BEARING PAD

PLAN VIEW

SEC'TION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" 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.

Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" # lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed prestressed concrete deck beams.

Compressive strength of prestressed concrete, Tc, shall be 6000 psi.

Compressive strength of prestressed concrete of release, Tp, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed

Conc. Deck Bms. (21" depth)

Precast Prestress Steel

PD-2148-LD 1-28-16

FABRIC BEARING PAD

FABRIC BEARING PAD

PLAN VIEW

SEC'TION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" 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.

Two ½" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" # lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed prestressed concrete deck beams.

Compressive strength of prestressed concrete, Tc, shall be 6000 psi.

Compressive strength of prestressed concrete of release, Tp, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed

Conc. Deck Bms. (21" depth)

Precast Prestress Steel
PLAN VIEW

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

MINIMUM BAR LAP

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

BAR LIST

For information only

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
</tr>
</thead>
<tbody>
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<td>#4</td>
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<td>4'</td>
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<td>S(E)</td>
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<td>5'-11''</td>
</tr>
</tbody>
</table>

Note: See sheet for additional details and BID of materials.
TRANSVERSE TIE CONFIGURATION SHOWN.

Note: Connect beams in pairs with the
Pocket 4"

""

3"

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

BAR U (E)

BAR S4(E)

BAR S5(E)

BAR S2(E)

BAR S(E)

BAR A4(E)

BAR A(E)

BAR U(E)

NOTES

Precast prestressed
Concrete Deck Beams, 12" depth, SC, FL

BILL OF MATERIAL

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

shall be used in the concrete for precast prestressed concrete deck beams.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications,

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

Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided
for each bearing pad location.

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.

The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1/4" 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.

Three 1/4" lifting loops are required for each bearing pad location.

At least 3/4" lifting pin shall be used to engage the lifting loops during handling.

Two 3/4" lifting loops are required for each bearing pad location.

The 1/4" 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.

The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

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set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly
is in place.

The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

Three 1/4" lifting loops are required for each bearing pad location.

At least 3/4" lifting pin shall be used to engage the lifting loops during handling.

Two 3/4" lifting loops are required for each bearing pad location.

The 1/4" 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.

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At least 3/4" lifting pin shall be used to engage the lifting loops during handling.

Two 3/4" lifting loops are required for each bearing pad location.

The 1/4" 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.
PLAN VIEW

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diagonal to meet the black out for the transverse tensile strands.

MINIMUM BAR LAP

#4 bar • 2'-10"
#5 bar • 2'-6"

BAR LIST

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<thead>
<tr>
<th>No.</th>
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<th>Strands</th>
</tr>
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<tbody>
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<tr>
<td>4(E)</td>
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<td>2'-6&quot;</td>
<td></td>
</tr>
<tr>
<td>5(E)</td>
<td>#5</td>
<td>4'-2&quot;</td>
<td></td>
</tr>
<tr>
<td>5(E)</td>
<td>#6</td>
<td>2'-0&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Note: See sheet 3 for additional details and Bill of Materials.

SECTION B-B

(Showing dimensions)

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

SECTION A-A

Lifting loop

of lift

60° min. angle

MINIMUM BAR LAP

#5 bar = 2'-6"
#4 bar = 1'-11"

SECTION C-C

VIEW C-C

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

MINIMUM BAR LAP

#5 bar = 2'-6"
#4 bar = 1'-11"

Note: See sheet 3 for additional details and Bill of Materials.

SECTION A-A

Lifting loop

of lift

60° min. angle

MINIMUM BAR LAP

#5 bar = 2'-6"
#4 bar = 1'-11"

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

SECTION B-B

(Showing dimensions)

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

SECTION A-A

Lifting loop

of lift

60° min. angle

MINIMUM BAR LAP

#5 bar = 2'-6"
#4 bar = 1'-11"

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

SECTION B-B

(Showing dimensions)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
**FABRIC BEARING PAD**

**FIXED**

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

**PLAN VIEW**

- 3" Holes
- 3" Radius
- 3" Lifted loops for transverse tie assembly
- 3" Vent
- 1" x 2'-10" Rods

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" hole 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.
- Two 3" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 1/4" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed 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.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.

**BILL OF MATERIAL**

- Prestressed Concrete Deck Beams, 27" depth

**STATE OF ILLINOIS**

**DEPARTMENT OF TRANSPORTATION**

**27" x 36" PPC DECK BEAM DETAILS**

**STORAGE NO.**

**FILE NAME**

**PD-2736-0D**

**FILE DATE**

**PLOT SCALE**

**PLOT DATE**

**CHECKED**

**DRAWN**

**REVISED**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF ILLINOIS**

**F.A.**

**RTE.**

**SECTION**

**COUNTY**

**CONTRACT NO.**

**TOTAL SHEETS**

**SHEET NO.**

**REVISED**

**CHECKED**

**DRAWN**
PLAN VIEW

Notes:
1. Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragm to miss the block outs for the transverse ties.
2. The number of strands specified in each row are permissible strand locations shown. Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the face of outside beams.

BAR LIST
(See sheet of for additional details and Bill of Material)

<table>
<thead>
<tr>
<th>No.</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2'-10&quot;</td>
<td>S(E)</td>
</tr>
<tr>
<td>2</td>
<td>#4</td>
<td>6'-2&quot;</td>
<td>S(E)</td>
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<td>3</td>
<td>#4</td>
<td>5'-11&quot;</td>
<td>S(E)</td>
</tr>
<tr>
<td>4</td>
<td>#4</td>
<td>2'-7&quot;</td>
<td>S(E)</td>
</tr>
</tbody>
</table>

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

27" x 38" PPC DECK BEAM
STRUCTURE NO.

REVISED
REVISED
REVISED
REVISED

FILE NAME USER NAME
PLOT SCALE PLOT DATE
CHECKED DRAWN CHECKED DESIGNED

F.A. RTE. SECTION
STATE OF ILLINOIS
FED. AID PROJECT
TOTAL SHEETS SHEET NO.
CONTRACT NO.
DEPARTMENT OF TRANSPORTATION
Fabric Bearing Pad (dimension)

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

Plan View

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

Section A-A

Typical Transverse Tie Assembly

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
- The #1 rod 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.
- Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2½" lifting pin shall be used to engage the lifting loop during handling.

Notes:
- Corrosion inhibitor, per Article 201.100 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f', shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f', shall be 6000 psi.
**Plan View**

- **SECTION A-A**
  - End to end beam
  - Fan - #4 S(E) bars, top. Cut to fit
  - Fan - #4 S(E) bars, bottom. Cut to fit

- **SECTION B-B**
  - (Showing dimensions)
  - Face of outside beams
  - Omit key on exterior and Bill of Material.
  - Note: See sheet of for additional details and Bill of Material.

- **SECTION B-B**
  - (Showing reinforcement and permissible strand locations)
  - Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse flanks to miss the block outs for the transverse flanks.

- **Minimum Bar Lap**
  - #5 bar = 2'-6"
  - #4 bar = 1'-11"
  - #4 bar = 2'-6"

- **Bar List**
  - ONE BEAM ONLY
  - Bar No.  Size  Length  Shape
  - A (E)  #4  2'-7"  B (E)
  - A (E)  #4  4'-6"  S (E)
  - B (E)  #4  4'-6"  S (E)
  - S (E)  #4  2'-7"  B (E)
  - S (E)  #4  4'-6"  S (E)
  - S (E)  #4  2'-7"  U (E)
  - U (E)  #4  8"  U (E)
  - U (E)  #5  8"  U (E)
  - U (E)  #5  8"  U (E)

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

**Notes**
- Lifting loop of lift 60° min. angle
- 3 spaces at 6"
- 5" cl.
- 2" cl.
- 1" cl.
- 9"
- 2'-0"
- 6'-2"
- 5'-11"
- 1'-2"
- 1'-4"
- 1'-6"
- 9" cts.
- 3 spacing @ 6"
- 5" cl.
- 2" cl.
- 1" cl.

**_sections**

- **VIEW C-C**
  - Plan view
  - Overhead view
  - Section view

**Dimensions**
- 27" x 36" PPC Deck Beam

**Design**
- State of Illinois Department of Transportation
- Structure No.
- Contract No.
- Sheet No.
- Plot Scale
- Plot Date
- Checked
- Drawn
- Designed
- Revised
- Department of Transportation
- County
- Federal Aid Project
- Total Sheets
- Sheet No.

**Bar List**
- ONE BEAM ONLY
- Bar List
- Size
- Length
- Shape
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Compression testing shall be used to engage the lifting loops during handling.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- Prestressing strands shall be 270 ksi strands.
- Fabric adjusting shims shall be provided.
- Prestressing strand shall be tightened to a snug fit and the threads 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.
**PLAN VIEW**

- SYMBOLS:
  - S(E): Symmetrical #4 bars.
  - U(E): #5 bars.

- Notes:
  - Spacing of S(E) and S(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 tie.
  - Permissible strand locations are symmetrically about the centerline of beam.
  - Place the number of strands specified in each row about the centerline of beam in the permissible strand locations shown.

- MINIMUM BAR LAP:
  - #5 bar = 2'-6"
  - #4 bar = 1'-11"

**BAR LIST (ONE BEAM ONLY)**

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Qty</th>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(E)</td>
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<td>3'-10&quot;</td>
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</tr>
<tr>
<td>B(E)</td>
<td>1</td>
<td>#4</td>
<td>6'-11&quot;</td>
<td></td>
</tr>
<tr>
<td>S(E)</td>
<td>1</td>
<td>#4</td>
<td>6'-11&quot;</td>
<td></td>
</tr>
<tr>
<td>S(E)</td>
<td>1</td>
<td>#5</td>
<td>6'-11&quot;</td>
<td></td>
</tr>
</tbody>
</table>

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

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 0.25" and the nominal cross-sectional area shall be 0.153 sq. in.
- Two 0.25" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 0.25" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed 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.
- Expansion bearing pad shall be bonded to the substructure.
- All bearing pads shall be 1" thick.
- Omit holes when using expansion bearings.
- 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.
- The nominal diameter shall be 0.25" 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.

BILL OF MATERIAL

- Precast Prestressed
- Concrete Deck Beams (27" depth) 5a. fr.
PLAN VIEW

Notes:
- Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie in order to miss the transverse tie.
- Place the number of strands specified in each row symmetrically about the centerline of each beam in the permissible strand locations shown.
- The number of bars specified in each row is for the top and bottom levels of the transverse tie.
- Permissible strand locations are shown.
- Fan bars must be cut to fit.
- Note: See sheet  for additional details and Bill of Materials.

MINIMUM BAR LAP
- Top bar + 5'-6"
- #5 bar + 2'-6"

SECTION A-A
- #4 bars, bottom
- #4 bars, top
- #4 bars, bottom
- #4 bars, top

SECTION B-B
- #4 bars, bottom
- #4 bars, top

VIEW C-C
- #4 bars, bottom
- #4 bars, top
- #4 bars, bottom
- #4 bars, top

BAR LIST
(For information only)

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

Note: See sheet  for additional details and Bill of Materials.
EXPANSION BEARING PAD

All bearing pads shall be 1" thick.
Grid holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.

SECTION A-A

TYPICAL TRANSVERSE TIE ASSEMBLY

PLAN VIEW

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

NOTES

Post-tensioning steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be 5/8" and the nominal cross-sectional area shall be 0.27 sq. in.
The 1" rod in the transverse tie assembly shall be tightened to a snug fit and the threads set.
3" holes for dowel type. 3'' holes bott. for dowel type.
A minimum 2'" lifting pin shall be used to engage the lifting loops during handling.
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.
Two 2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
Compressive strength of prestressed concrete, $f_{c}$, shall be 6000 psi.
Compressive strength of prestressed concrete at release, $f'_{ci}$, shall be 5000 psi.
All bearing pads shall be 1'' thick.

FABRIC BEARING PAD

Difficult
Notes:
Grid holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.

LIFTING LOOP DETAIL

BILL OF MATERIAL
**Plan View**

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse ties to allow for the transverse ties.

**Minimum Bar Lap**

#5 bar = 2'-6"

**Section B-B**

Note: The number of strands specified in each row is symmetrically about the centerline of the beam. See sheet  for additional details and locations of strand locations shown.

**Bar List**

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
<th>Shape</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4</td>
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<tr>
<td>#4</td>
<td>8'-5&quot;</td>
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<td>S(E)</td>
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<td>2'-6&quot;</td>
<td>S(E)</td>
</tr>
<tr>
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<td>1'-11&quot;</td>
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</tr>
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<td>#4</td>
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<td>A(E)</td>
</tr>
<tr>
<td>#4</td>
<td>3'-0&quot;</td>
<td>A(E)</td>
</tr>
</tbody>
</table>

**Section A-A**

**View C-C**

Lifting loop of lift 60° min. angle

**Notation**

- #4: Size designation
- #5: Size designation
- S(E): Strand (Stirrup End)
- A(E): Strand (At End)
- B(E): Strand (At Beam End)
- U(E): Strand (At Uniform)

**Table**

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Size</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>#4</td>
<td>8'-5&quot;</td>
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</tr>
<tr>
<td>14</td>
<td>#4</td>
<td>1'-11&quot;</td>
</tr>
</tbody>
</table>

*Note: See sheet for additional details and locations of strand locations shown.*
**Notes:**
- All bearing pads shall be 1" thick.
- Drill holes when using expansion bearings.
- Expansion bearing pad shall be bonded to the substructure.

**KEY**
- Exterior
- Interior
- (Exterior)
- (Interior)

**SECTION A-A**

**TYPICAL TRANSVERSE TIE ASSEMBLY**

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The minimum diameter shall be 5/8" and the control cross-sectional area shall be 0.293 sq. in.
- The 1" # rod 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.
- Two 5/8" lifting pins shall be used to engage the lifting loops during handling.
- A minimum 3/8" # lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.
- Compressive strength of prestressed concrete after tensioning, f'cu, shall be 6000 psi.
(Showing dimensions)

**MINIMUM BAR LAP**

**Bar List**

*(For information only)*

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<th>Bar</th>
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Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Note: See sheet of for additional details and Bill of Materials.

**PLAN VIEW**

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

Pre stressing steel shall be uncoated high strength, low relaxation 7wire strand, Grade 270.

The minimum diameter shall be 1/4" and the nominal cross-sectional area shall be 0.253 sq. in.

The 1" # rods in the transverse tie assembly shall be tightened to a snug fit and the threads cut. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2-1/2" #8 lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

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

PD-3336-00

**BILL OF MATERIAL**

- Prestressed Concrete Deck Beam Details
- 33' x 36' PPC Deck Beam Details

**STATE OF ILLINOIS**

DEPARTMENT OF TRANSPORTATION
Note: Spacing of S(E) and S(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 tie.

Minimum Bar Lap

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

Minimum Bar Lap

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)

Note: See sheet of for additional details and bill of materials.
**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 5/8" 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.

Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

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

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

Compressive strength of prestressed concrete, $f'_{c}$, shall be 6000 psi.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

*Fabric Bearing Pad (Interior)*

*Fabric Bearing Pad (Exterior)*

**PLAN VIEW**

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

*Section A-A*

**Typical Transverse Tie Assembly**

*Typical Transverse Tie Assembly*
Notes:
- All bearing pads shall be 1'' thick.
- Steel bolts when using expansion bearings.
- Expansion bearing pads shall be bonded to the substructure.

Plan View

Typical Transverse Tie Assembly

Notes:
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 5/8'' and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/4'' holes 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.
- 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)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for 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.
- Prestressed Prestressed
- Conc. Deck Bms. (33'' depth) Sq. Ft.
SECTION A-A

PLAN VIEW

Note: Spacing of S(E) and S(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.

MINIMUM BAR LAP

4 #5 at 1'-0"

3 #6 at 2'-6"

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

STRESSING AND ELECTRICAL INSTALLATION

Note: See sheet of for additional details and BL of materials.

FILE NAME = USER NAME =

PLOT SCALE = PLOT DATE =

CHECKED = DRAWN =

CHECKED = DESIGNED =

REVISED = REVISED = REVISED =

DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS

F.A. RTE.

SECTION ILLINOIS FED. AID PROJECT

TOTAL SHEETS SHEET

COUNTY

CONTRACT NO.

PD-3348-0 6-6-85
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1/8" 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.
- Two 1/4"-fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitors, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

PLAN VIEW

- Connect beams in pairs with the transverse tie configuration shown.

SECTION A-A

- Transverse tie shall be a 3/8"-thick plate with a 3" diameter hole.
- A 3/8" bolt shall be used to secure the transverse tie assembly.

TYPICAL TRANSVERSE TIE ASSEMBLY

- The lifting pin shall engage the lifting loops during handling.
- The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.153 sq. in.
- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

FABRIC BEARING PAD

- Bearing pads shall be 1" thick.
- Expansion bearing pads shall be bonded to the substructure.

BAR S(E)

- Bars shall be 1/2" in diameter.
- 1/2" bars shall be required.

BAR U(E)

- Bars shall be 1/2" in diameter.
- 1/2" bars shall be required.

BAR S4(E)

- Bars shall be 1/2" in diameter.
- 1/2" bars shall be required.

BAR U4(E)

- Bars shall be 1/2" in diameter.
- 1/2" bars shall be required.

LIFTING LOOP DETAIL

- Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/4"-fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion inhibitors, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.
- Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BIL OF MATERIAL

- Prestressed concrete, Comp. Deck Beam, 33" x 48" 1/8"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be 1/8" and the nominal cross-sectional area shall be 0.153 sq. in.

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

The 1" # rods in the transverse tie assembly shall be tightened to a snug fit and the threads shall be coated with thread compound. The beam shall be grouted with transverse tie assembly in place.

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

Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings.

All bearing pads shall be 1" thick. Expansion bearing pad shall be bonded to the substructure.

Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

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

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FILE NAME =
USER NAME =
PLOT SCALE =
PLOT DATE =
CHECKED =
DRAWN =
CHECKED =
DESIGNED =
REVISED =
REVISED =
REVISED =
REVISED =

5450 S. State St.
Chicago, IL 60615
800-522-0004
www.dot.illinois.gov
### BAR LIST

**ONE BEAM ONLY**

(For information only)

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**PLAN VIEW**

Note: Spacing of S(E) and S(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragm to allow the blockouts for the transverse ties.

**MINIMUM BAR LAP**

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**SECTION A-A**

**SECTION B-B**

(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.

**SECTION B-B**

(Showing dimensions)
**PLAN VIEW**

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

**MINIMUM BAR LAP**

- #4 bar = 1'-11''
- #5 bar = 2'-6''

**SECTION B-B**

(Approximate dimensions)

Notes: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**

(For information only)

| No. | Size | Length | Strand
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Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.
Expansion bearing pad shall be bonded to the substructure. Omit holes when using expansion bearings. All bearing pads shall be 1" thick.

Notes:

- 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.

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

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. Prestressing steel shall be used in the concrete for precast prestressed concrete deck beams. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 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.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nearest diameter shall be 3/8" and the nominal cross-sectional area shall be 0.253 sq. in.

- The 1" holes for 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.

- Two ¾" lifting pins shall be used to engage the lifting loops during handling.

- A minimum 2½" lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 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.

- Prestressed concrete shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nearest diameter shall be 3/8" and the nominal cross-sectional area shall be 0.253 sq. in.

- The 1" holes for 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.

- Two ¾" lifting pins shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 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.
**PLAN VIEW**

Note: Spacing of S(E) and S(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**

**SECTION B-B**

**VIEW C-C**

**BAR LIST**

One beam only

**MINIMUM BAR LAP**

Notes: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

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**BAR S(E)**

**BAR U(E)**

**LIFTING LOOP DETAIL**

**TYPICAL TRANSVERSE TIE ASSEMBLY**

**NOTES**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 3/8" and the nominal cross-sectional area shall be 0.153 sq. in. The 1/2" 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- 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.
- Ten 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Ten 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Ten 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Ten 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Ten 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.
- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- 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.

**PLAN VIEW**

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

**BILL OF MATERIAL**

Pre-compression prestressed concrete deck beams are identified in Figure 10-5. The prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The compressive strength of prestressed concrete, $f'_c$, shall be 6000 psi. The compressive strength of prestressed concrete at release, $f'_{ci}$, shall be 5000 psi.

**FILE NAME**

PD-4236-LD

**CHECKED**

**DRAWN**

**DESIGNED**

**REVISED**

**DEPARTMENT OF TRANSPORTATION**

**STATE OF ILLINOIS**

**CONTRACT NO.**

**SHEET NO.**

**SHEETS**

**TOTAL**

**F.A. RTE. SECTION**

**FED. AID PROJECT**

**COUNTY**

**ILLINOIS**
PLAN VIEW

SECTION A-A

SECTION B-B

VIEW C-C

BAR LIST

ONE BEAM ONLY

MINIMUM BAR LAP

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

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

Note: See sheet of for additional details and Bill of Materials.

EMERGENCY HOOK...
**PRECAST Prestressed**

**STATE OF ILLINOIS**

**DEPARTMENT OF TRANSPORTATION**

**BILL OF MATERIAL**

**BAR S(E)**

**FABRIC BEARING PAD**

**FIXED**

**BAR S(E)**

**BAR U(E)**

**NOTES**

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

**PLAN VIEW**

- Connect beams in pairs with the transverse tie configuration shown.

**SECTION A-A**

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 7/8" and the netted cross-sectional area shall be 0.153 sq. in.
- The 7/8" 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.

**TYPICAL TRANSVERSE TIE ASSEMBLY**

- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

**LIFTING LOOP DETAIL**

- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling.

- Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

- The nominal diameter shall be 1" and the netted cross-sectional area shall be 0.153 sq. in.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

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

- The nominal diameter shall be 7/8" and the netted cross-sectional area shall be 0.153 sq. in.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.

- The nominal diameter shall be 3" and the netted cross-sectional area shall be 7.07 sq. in.

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

- Compressive strength of prestressed concrete, f'c, shall be 5000 psi.
**PLAN VIEW**

Note: Spacing of S(E) and S(E) bars may be adjusted up to 8" in the bendover area of the transverse ties diagonally to miss the block outs for the transverse ties.

**SECTION A-A**

- #4 S(E) bars, top
- #4 S(E) bars, bottom
- #4 S(E) bars at 9" cts., top
- #4 S(E) bars at 9" cts., bottom of top slab

**SECTION B-B**

- #4 S(E) bars at 9" cts., bottom
- #4 A(E) bars at 1'-6" cts., bottom of top slab
- #4 A(E) bars at 3'-0" cts., top

**MINIMUM BAR LAP**

- #4 bar = 1'-11"
- #5 bar = 2'-6"

**SECTION B-B**

(Note: Showing reinforcement and permissible strand locations)

- Bottom strand:
  - 6-8-15
- Top strand:
  - 6-8-15

- Symmetrical about ~
  - 5'
- Omit key on exterior
  - 3'-7"
- Plan of concrete beam
  - 6'-0"
- 5 spaces at 6" = 2'-6"
- End to end beam
  - 9"


NOTES

- Prestressing steel shall be uncoated high strength, low relaxation, 7-wire strand, Grade 270. The nominal diameter shall be 3/8" 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.

- Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

- A minimum 3/8" lifting pin shall be used to engage the lifting loops during handling. Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.

- Compressive strength of prestressed concrete, Fc', shall be 6000 psi.

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

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

- Notes:

- Prestressed concrete deck beams shall be constructed in pairs with the transverse tie configuration shown.
PLAN VIEW

SECTION A-A

- #4 S(E) bars, top
- 6 spaces at 6" x 2'-6"
- #4 S(E) bars, bottom
- #4 A(E) bars at 1'-6" cts., bottom of top slab
- #4 A(E) bars at 3'-0" cts., top
- 2-#4 S(E) bars, bottom
- 2-#4 S(E) bars, top
- 3-#4 S(E) bars, bottom. Cut to fit
- Fan -#4 S(E) bars, top. Cut to fit

SECTION B-B

- #4 S(E) bars, top
- 6 spaces at 6" x 2'-6"
- #4 S(E) bars, bottom
- #4 S(E) bars at 9" cts., top
- #4 S(E) bars at 9" cts., bottom
- #4 S(E) bars at 9'-0" cts., top
- #4 S(E) bars at 9'-0" cts., bottom
- #4 S(E) bars at 9'-0" cts., top
- #4 S(E) bars at 9'-0" cts., bottom
- #4 A(E) bars at 1'-6" cts., bottom of top slab
- #4 A(E) bars at 3'-0" cts., top
- 2-#4 S(E) bars, bottom
- 2-#4 S(E) bars, top
- 3-#4 S(E) bars, bottom. Cut to fit
- Fan -#4 S(E) bars, top. Cut to fit

MINIMUM BAR LAP
- #4 bar = 2'-6"
- #5 bar = 2'-6"

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

60° min. angle of lift
Lifting loop
Face of outside beams

BAR LIST
ONE BEAM ONLY
(For Information Only)

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Note: See sheet of for additional details and BID of Material.
Fabric Bearing Pad

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

Plan View

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

Typical Transverse Tie Assembly

Notes:
1. Prestressing steel shall be uncoated high strength, low relaxation T-wire strand, Grade 270.
2. The nominal diameter shall be 1/4" and the nominal cross-sectional area shall be 0.153 sq. in.
3. The 1/4" rods in the transverse tie assembly shall be tightened to a snug fit and the threads taped.
4. Pocket on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
5. Two 1/4" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
6. A minimum 5/8" lifting pin shall be used to engage the lifting loops during handling.
7. Bars shall be used in the concrete for prestressed concrete deck beams.
8. The compressive strength of prestressed concrete, f_c, shall be 5000 psi.
9. Prestressing steel shall be used in the concrete for precast prestressed concrete deck beams.
10. The compressive strength of prestressed concrete at release, f'c, shall be 6000 psi.

Bill of Material

State of Illinois
Department of Transportation

62" x 48" PPC Deck Beam Details
Structure No.
PLAN VIEW

Note: Spacing of SEI and SE(E) bars may be adjusted up to 4" in the immediate area of the transverse tie to miss the block out for the transverse tie.

MINIMUM BAR LAP

#5 bars #1-12
#5 bars #2-12

6-8-15

SECTION A-A

SECTION B-B

SECTION C-C

VIEW C-C

BAR LIST

ONE BEAM ONLY

For information only

Note: Place the number of strands specified in each row symmetrically about the centerline of beams in the permissible strand locations shown.

Note: See page of for additional details and Bill of Materials.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

62" x 48" PPC DECK BEAM
STRUCTURE NO.
**Notes:**

All bearing pads shall be 1'' thick.

Steel rods when using expansion bearings.

Expansion bearing pads shall be bonded to the substructure.

**TYPICAL TRANSVERSE TIE ASSEMBLY**

1. **Washer** - required
   - 4'' x 4'' x 3''

2. **Coupling nut** - required
   - 5/8'' long

3. **Rods** - required
   - 3/8'' diameter

4. **Lifting pin** - used to engage the lifting loops during handling.

5. **Lifting loop detail**
   - 3'' Radius

6. **Beam**
   - 10'' wide
   - 10'' high

7. **FABRIC BEARING PAD**
   - Exterior
   - Interior

8. **Pocket**
   - 3'' x 3''

9. **Drain**
   - 3'' x 3''

10. **Conduit**
    - 2'' x 2''

11. **Conduit**
    - 2'' x 4''

12. **Conduit**
    - 2'' x 6''

13. **Concrete deck beam details**

14. **42'' x 48'' PPC DECK BEAM DETAILS**

15. **Compressive strength of prestressed concrete at release, f\text{c}^\text{r}, shall be 5000 psi.**

16. **Compressive strength of prestressed concrete, f\text{c}, shall be 6000 psi.**

17. **Prestressing steel shall be uncoated high strength, low relaxation, 7-wire strand, Grade 270.**

18. **Transverse tie configuration shown.**

19. **Transverse tie assemblies**

20. **Expansion bearing pad shall be bonded to the substructure.**

21. **Omit holes when using expansion bearings.**

22. **All bearing pads shall be 1'' thick.**

23. **Steel rods when using expansion bearings.**

24. **Expansion bearing pads shall be bonded to the substructure.**

25. **Notes:**

   - Two 3'' fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
   - A minimum 2½'' lifting pin shall be used to engage the lifting loops during handling.
   - Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for prestressed concrete deck beams.
   - Compressive strength of prestressed concrete, f\text{c}, shall be 6000 psi.
   - Compressive strength of prestressed concrete at release, f\text{c}^\text{r}, shall be 5000 psi.

26. **STATE OF ILLINOIS**

27. **DEPARTMENT OF TRANSPORTATION**

28. **FILE NAME = USER NAME**

29. **PLOT SCALE = PLOT DATE = CHECKED = DRAWN = CHECKED = DESIGNED = REVISED = REVISED = REVISED = REVISED = DEPARTMENT OF TRANSPORTATION = STATE OF ILLINOIS**

30. **F.A. RTE. SECTION = CONTRACT NO. FRM = sheets = TOTAL = SHEETS = SHEET = NO. = IRON MOUNT**