<table>
<thead>
<tr>
<th>CELL / MODEL NAME</th>
<th>DESCRIPTION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIA-SB-Greater than 48-0</td>
<td>Diaphragm Integral Abutment; Steel beam Greater than 48 inch depth beam; No skew</td>
<td>2/17/2017</td>
</tr>
<tr>
<td>DIA-SB-Greater than 48-L</td>
<td>Diaphragm Integral Abutment; Steel beam Greater than 48 inch beam depth; Left skew</td>
<td>2/17/2017</td>
</tr>
<tr>
<td>DIA-SB-Greater than 48-R</td>
<td>Diaphragm Integral Abutment; Steel beam Greater than 48 inch beam depth; Right skew</td>
<td>2/17/2017</td>
</tr>
<tr>
<td>DIA-SB2448-0</td>
<td>Diaphragm Integral Abutment; Steel beam 24-48 inch beam depth; No skew</td>
<td>2/17/2017</td>
</tr>
<tr>
<td>DIA-SB2448-L</td>
<td>Diaphragm Integral Abutment; Steel beam 24-48 inch beam depth; Left skew</td>
<td>2/17/2017</td>
</tr>
<tr>
<td>DIA-SB2448-R</td>
<td>Diaphragm Integral Abutments; Steel beam 24-48 inch beam depth; Right skew</td>
<td>2/17/2017</td>
</tr>
</tbody>
</table>
**Diaphragm at Abutment**

- Roadway
- Abutment
- Approach slab
- Construction joint
- Steel rocker with elastomeric neoprene leveling pad
- Approach slab seat
- Control point
- Control point
- Steel rocker
- Elastomeric neoprene leveling pad
- Back of Abutment
- Anchor bolts
- 1/2" x 3/4" formed joint with bridge relief joint sealer (full width)
- 2" Chamfer
- 2" P/J (per Article 1031.08 of the Standard Specifications) bonded to neoprene leveling pad
- 2" P/J (per Article 1031.08 of the Standard Specifications) bonded to neoprene leveling pad
- Steel rocker with elastomeric neoprene leveling pad
- Formed joint 4" x 4" x 1"
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Notes:
  - Concrete in diaphragm is included with Concrete Superstructure on sheet of.
  - For details of bars s10 (E), s11 (E) and v100 (E) see sheet of.
  - The approach slab seat shall have a constant slope determined from the control points shown.
  - Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

**Section B-B**

- Approach slab
- Control point
- Approach slab seat

**Plan at Abutment**

- Showing bottom flange of beam
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

**Section A-A**

- Steel rocker with elastomeric neoprene leveling pad
- Formed joint 4" x 4" x 1"
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.

**Notes:**

- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10 (E), s11 (E) and v100 (E) see sheet of.
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
**DIAPHRAGM AT ABUTMENT**

- **approach slab seat**
- **control point**
- **construction joint**

**DIAPHRAGM AT ABUTMENT**

**SECTION B-B**

- **approach slab seat**
- **control point**
- **construction joint**

**SECTION A-A**

- **7/16" x 3/4" formed joint with bridge relief joint sealer (full width)**
- **1/16" drilled holes**
- **m10 (E)**
- **v100 (E)**
- **s10 (E)**
- **v10 (E)**
- **m11 (E)**
- **s11 (E)**

**PLAN AT ABUTMENT**

(Shewing bottom flange of beam)

- **Steel rocker with elastomeric neoprene leveling pad**
- **m33 (E)**
- **Anchor Bolts**
- **m10 (E)**
- **m11 (E)**
- **m12 (E)**
- **m12 (E)**

**Notes:**
- Reinforcement bars in diaphragms are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars m10 (E), s11 (E) and v100 (E) see sheet of.
- The m10 (E) and s11 (E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

**DIA-SB>48-L**

**2-17-2017**
DIAPHRAGM DETAILS

**Approach Slab Seat**
- The approach slab seat shall have a constant slope determined from the control points shown.
- Spacing for these bars shall be at right angles to the beams.
- The s10(E) and s11(E) bars shall be placed parallel to the beams.
- For details of bars s10(E), s11(E) and v100(E) see sheet... of...
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

**Construction Joint**
- Reinforcement bars in diaphragm are billed with superstructure on sheet... of...
- Concrete in diaphragm is included with Concrete Superstructure on sheet... of...
- For details of bars m10(E), s10(E) and v100(E) see sheet... of...

**Notes**
- Field Bend
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

**Steel Rocker**
- Steel rocker with elastomeric neoprene leveling pad
- Steel rocker with elastomeric neoprene leveling pad

**Elastomeric Neoprene Leveling Pad**
- Elastomeric neoprene leveling pad
- Elastomeric neoprene leveling pad

**Control Point**
- Control point
- Control point

**Diaphragm at Abutment**
- Diagram showing the details of diaphragm at abutment with various components and measurements.

**Section A-A**
- Diagram showing section A-A with details such as beams, reinforcements, and joint sealer.

**Section B-B**
- Diagram showing section B-B with details of approach slab and control point.
DIAPHRAGM AT ABUTMENT

SECTION A-A

PLAN AT ABUTMENT
(Showing bottom flange of beams)

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10(E), s11(E) and v100(E) see sheet of.
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO.

DIAGRAM B-B

DIAPHRAGM AT ABUTMENT

- #5 s10(E) bars at ±12" cts., typ. between beams.
- #5 s11(E) bars at ±12" cts., each end.
- #5 s11(E) bars, each end. See Section A-A.
- #6 m10(E) bars at ±12" cts., each end. See Section A-A.
- #6 m12(E) bars at ±12" cts., each end. See Section A-A.
- #5 m10(E) bars, typ. thru each beam. (Secure bars such that they remain centered and level during pouring of the concrete.)
- Steel Rocker with elastomeric neoprene leveling pad
- Elastic joint formed of neoprene.
- Steel rocker with elastomeric neoprene joint sealer
- Construction joint recommended by supplier.
- #5 s10(E) bars at ±12" cts., typ. between beams
- #5 s11(E) bars at ±12" cts., typ. between beams. See Section A-A.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10(E), s11(E) and v100(E) see sheet of.
- The approach slab seat shall have a constant slope determined from the control points shown.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
DIAPHRAGM AT ABUTMENT

DIAPHRAGM AT ABUTMENT

SECTION B-B

Slope %

Approach slab seat

Construction joint

Control point

Tape bars at ±12" cts., typ. between beams.

Steel Rocker

Elastomeric Neoprene Leveling pad

DIAPHRAGM AT ABUTMENT

SECTION A-A

(36 ft. C.L.)

Slope %

Approach slab seat

Control point

2" P.I.P. (See Article 1051) of the

standard specifications bonded to

wingwall with suitable adhesive as

recommended by supplier.

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

For details of bars v100(E), s11(E) and v10(E) see sheet of .

The s10(E) and s11(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

For details of bars v100(E), s11(E) and v10(E) see sheet of .

The s10(E) and s11(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

For details of bars v100(E), s11(E) and v10(E) see sheet of .

The s10(E) and s11(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

For details of bars v100(E), s11(E) and v10(E) see sheet of .

The s10(E) and s11(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

For details of bars v100(E), s11(E) and v10(E) see sheet of .

The s10(E) and s11(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.
 Reinforcement bars in diaphragm are billed with superstructure on sheet of.
Concrete in diaphragm is included with Concrete Superstructure on sheet of.
For details of bars s10(E), s11(E), and v100(E) see sheet of. The s10(E) and s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. The approach slab seat shall have a constant slope determined from the control points shown.
For bearing details see sheet of. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10(E), s11(E), and v100(E) see sheet of. The s10(E) and s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. The approach slab seat shall have a constant slope determined from the control points shown.
- For bearing details see sheet of. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10(E), s11(E), and v100(E) see sheet of. The s10(E) and s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. The approach slab seat shall have a constant slope determined from the control points shown.
- For bearing details see sheet of. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- For details of bars s10(E), s11(E), and v100(E) see sheet of. The s10(E) and s11(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. The approach slab seat shall have a constant slope determined from the control points shown.
- For bearing details see sheet of. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.