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**INDIANA DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL CANTILEVER STRUCTURE**

**DRAWING INDEX**

**SEPTEMBER 2013**

**STANDARD DRAWING NO.** E 805-TSCS-01

---

/s/ Alfredo B. Hanza 02/05/13

DESIGN STANDARDS ENGINEER  DATE

/s/ Mark A. Miller 03/27/13

CHIEF ENGINEER  DATE
INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
SINGLE SIGNAL ARM POLE ELEVATION,
DIMENSIONS, AND BASE PLATE WELD DETAIL
SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-02

NOTES:
2. See Standard Drawing E 805-SGGR-01 to -03 for grounding details.

POLE DIMENSIONS

<table>
<thead>
<tr>
<th>CANTILEVER ARM LENGTH L</th>
<th>SECTION 1</th>
<th>WALL THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15' to 35'</td>
<td>17''</td>
<td>5/16''</td>
</tr>
<tr>
<td>&gt;35' to 60'</td>
<td>24''</td>
<td>5/16''</td>
</tr>
</tbody>
</table>

POLE ELEVATION

POLE/BASE PLATE WELD DETAIL A

See Standard Drawing E 805-TSCS-02 for signal arm details.
See Standard Drawing E 805-TSCS-05

Pole outside face

(5/16 + 0.44) x 5/16

1/4

45°

5/16'' x 2'' Backing ring

1/8"

Seal weld

Base plate

See Detail A

Handhole A

Handhole B

Top cover

See Standard Drawing E 805-TSCS-09
**INDIANA DEPARTMENT OF TRANSPORTATION**

**STANDARD DRAWING NO. E 805-TSCS-03**

**SEPTEMBER 2013**

**TRAFFIC SIGNAL CANTILEVER STRUCTURE**

**SIGNAL ARM DIMENSIONS & DETAILS**

---

**NOTES:**

1. Number of cable inlets depends on arm L. (See Arm Dimensions Table). The inlet diameter shall be 1 3/4" with rubber grommet (Typ.)

2. Optional splice can be used for arm length of greater than 40'. Field assembly shall achieve a snug tight joint, with minimum overlap not less than 1.5 times the inside dimension of the end section.

3. Arm rise R is measured in the undeflected position without vertical loads on the arm.

4. See Standard Drawings E 805-TSCS-07 and -08 for placement of signal and signs for each arm length.

5. If seam welds are used, the weld location for the arms shall be along the bottom, and on the side of pole as shown.

---

**ARM DIMENSIONS TABLE**

<table>
<thead>
<tr>
<th>L (ft.)</th>
<th>ARM DIAMETER AT POLE</th>
<th>ARM WALL THICKNESS (in.)</th>
<th>R (in.)</th>
<th>CABLE INLETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>8&quot;</td>
<td>5/16&quot;</td>
<td>7 1/2&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>20</td>
<td>10&quot;</td>
<td>5/16&quot;</td>
<td>10&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>25</td>
<td>11&quot;</td>
<td>5/16&quot;</td>
<td>11 1/2&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>30</td>
<td>13&quot;</td>
<td>5/16&quot;</td>
<td>13&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>35</td>
<td>14&quot;</td>
<td>5/16&quot;</td>
<td>1 3/4&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>40</td>
<td>15&quot;</td>
<td>5/16&quot;</td>
<td>1&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>45</td>
<td>17&quot;</td>
<td>5/16&quot;</td>
<td>1 3/4&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>50</td>
<td>19&quot;</td>
<td>5/16&quot;</td>
<td>2&quot;</td>
<td>A, B, C, D</td>
</tr>
<tr>
<td>55</td>
<td>20&quot;</td>
<td>5/16&quot;</td>
<td>2 3/4&quot;</td>
<td>A, B, C, D</td>
</tr>
<tr>
<td>60</td>
<td>21&quot;</td>
<td>5/16&quot;</td>
<td>2&quot;</td>
<td>A, B, C, D, E</td>
</tr>
</tbody>
</table>

---

**INSTRUCTIONS:**

- **End section extension with wall thickness 3/16" min. and with drilled hole for 5/8" bolt**
- **Base section with wall thickness 5/16" and field drilled hole for 5/8" bolt with curved washer and lock nut**
- **OPTIONAL ARM SPLICE DETAIL**
- **TYPICAL SEAM WELD**

---

**INDIANA DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL CANTILEVER STRUCTURE**

**SIGNAL ARM DIMENSIONS & DETAILS**

**SEPTEMBER 2013**

**STANDARD DRAWING NO. E 805-TSCS-03**

---

**STATE OF**

**CHIEF ENGINEER**

**DATE**

---

**DESIGN STANDARDS ENGINEER**

**DATE**

---

**NO.**

**PROFESSIONAL ENGINEER**

**DATE**

---

**PROFESSIONAL ENGINEER**

**DATE**
SPLICE PLATES, AND POLE TOP COVER DETAILS

SIGNAL ARM POLE BASE PLATE, BOTTOM
TRAFFIC SIGNAL CANTILEVER STRUCTURE

Trimming the washer will not be allowed. Bolt circle shall allow clearance for the plate washer. Cutting or trimming the washer will not be allowed.

NOTES:
2. Bolt circle shall allow clearance for the plate washer. Cutting or trimming the washer will not be allowed.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
SIGNAL ARM POLE BASE PLATE, BOTTOM SPLICE PLATES, AND POLE TOP COVER DETAILS
SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-04

/\ Alfredo B. Hanza 03/26/13
DESIGN STANDARDS ENGINEER DATE

/\ Mark A. Miller 03/27/13
CHIEF ENGINEER DATE

STATE OF IN

M. L. CLAYTON,
REGISTRERED PROFESSIONAL ENGINEER
PLATES AND BOLTS FOR SIGNAL SINGLE ARM CANTILEVER

<table>
<thead>
<tr>
<th>ARM LENGTH</th>
<th>FLANGE PLATE A x B</th>
<th>BOLT PATTERN C x D</th>
<th>RING STIFFENER, GUSSET PLATE \textit{w}</th>
<th>FLANGE PLATE THICKNESS \textit{t}</th>
<th>BOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td>15' TO 35'</td>
<td>22&quot; X 22&quot;</td>
<td>17 1/2&quot; X 17 1/2&quot;</td>
<td>3/8&quot;</td>
<td>1 1/2&quot;</td>
<td>1 1/8&quot; - 7 UNC x 4 1/4&quot; LONG</td>
</tr>
<tr>
<td>&gt;35' TO 60'</td>
<td>33&quot; X 33&quot;</td>
<td>27 1/2&quot; X 27 1/2&quot;</td>
<td>1/2&quot;</td>
<td>1 3/4&quot;</td>
<td>1 1/2&quot; - 6 UNC x 6 1/4&quot; LONG</td>
</tr>
</tbody>
</table>

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL CANTILEVER STRUCTURE

SIGNAL ARM CONNECTION DETAILS

SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-05

/\ Alfredo B. Hanza 02/05/13
/\ Mark A. Miller 03/27/13

DESIGN STANDARDS ENGINEER DATE

CHIEF ENGINEER DATE

NOTE:
2. The required signal arm rise shall be built into the gusset plate at the angle \(X\). The angle \(X\) is described as arc tan \(R/L\), where \(R\) is the arm rise and \(L\) is the arm length. Both \(R\) and \(L\) vary and are listed in the Arm Dimension Table on Standard Drawing E 805-TSCS-03.
1. Handhole A shall be used at the base of the pole. Handhole B shall be used at all other locations.

2. In lieu of fabricated handhole frame as shown, frame may be cut from 3" plate with rolling direction vertical.


NOTES:
- Drill and tap for 2 screws, 3/8" - 20 Chase thread after galvanizing.
- 1" x 3" flat bar frame
- 1/2" Ø holes (Typ.)
- 6" x 8" x 3/16" Plate
- 8" x 12" x 3/16" Plate
- Grounding clamp
- Drill and tap for 4 screws, 3/8" - 20 Chase thread after galvanizing.
- 1" x 3" flat bar frame
- 1/2" Ø holes (Typ.)
- 8" x 12" x 3/16" Plate
NOTE:

1. The structure arms and pole are designed for the above loading conditions. Foundation types A and C are designed for arms having length of 35 ft or less. See Standard Drawings E 805-TSCS-16 and -18 for foundation types A and C.
NOTES:


2. The structure arms and pole are designed for the above loading conditions. Foundation types B and D are designed for arms having length of greater than 35 ft to 60 ft. See Standard Drawings E 805-TSCS-17 and -19 for foundation types B and D.
Pole Section 1.
Base diameter of Pole Section 2 shall be equal to top diameter of
3 details.
See Standard Drawing E 805-SGGR-01 to -03 for grounding
details.
See Standard Drawing E 805-TSCS-06 for handhole details.

NOTES:

VERTICAL CLEARANCE CRITERIA:
Maintain 40'-0" minimum clearance from top of pavement to the camera lens.

POLE DIMENSIONS

<table>
<thead>
<tr>
<th>CANTILEVER ARM LENGTH</th>
<th>POLE SECTION 1</th>
<th>POLE SECTION 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BASE DIAMETER</td>
<td>WALL THICKNESS</td>
</tr>
<tr>
<td>15' to 35'</td>
<td>24&quot;</td>
<td>1/8</td>
</tr>
<tr>
<td>&gt;35' to 60'</td>
<td>24&quot;</td>
<td>1/8</td>
</tr>
</tbody>
</table>

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION POLE ELEVATION,
DIMENSIONS, AND BASE PLATE WELD DETAIL
SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-09

/s/ Alfredo B. Hanza 02/05/13
DESIGN STANDARDS ENGINEER DATE
/s/ Mark A. Miller 03/27/13
CHIEF ENGINEER DATE

See RPD 805-T-200d
Revised, eff. 12-01-13

See RPD 805-T-200d
Revised, eff. 12-01-13
**NOTES:**

1. Number of cable inlets depends on L. See Arm Dimensions Table. The inlet diameter shall be 1 3/4" with rubber grommet (typ.).

2. Optional splice can be used for arm length of greater than 40 ft. Field assembly shall achieve a snug tight joint having overlap not less than 1.5 times the inside dimension of the end section.

3. Arm rise R is measured in the undeflected position without vertical loads on the arm.


5. If seam welds are used, the weld location for the arms shall be along the bottom, and on the side of the pole as shown.

---

**ARM DIMENSIONS TABLE**

<table>
<thead>
<tr>
<th>L</th>
<th>ARM DIAMETER AT POLE</th>
<th>ARM WALL THICKNESS</th>
<th>R</th>
<th>CABLE INLETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>15'</td>
<td>5 1/2&quot;</td>
<td>1/8&quot;</td>
<td>7 1/2&quot;</td>
<td>A</td>
</tr>
<tr>
<td>20'</td>
<td>5 1/2&quot;</td>
<td>1/8&quot;</td>
<td>10&quot;</td>
<td>A</td>
</tr>
<tr>
<td>25'</td>
<td>7&quot;</td>
<td>1/8&quot;</td>
<td>1'-0 1/2&quot;</td>
<td>A</td>
</tr>
<tr>
<td>30'</td>
<td>8&quot;</td>
<td>1/8&quot;</td>
<td>1'-3&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>35'</td>
<td>8&quot;</td>
<td>1/8&quot;</td>
<td>1'-5 1/2&quot;</td>
<td>A, B</td>
</tr>
<tr>
<td>40'</td>
<td>9&quot;</td>
<td>1/8&quot;</td>
<td>1'-8&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>45'</td>
<td>10&quot;</td>
<td>1/8&quot;</td>
<td>1'-10 1/2&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>50'</td>
<td>11&quot;</td>
<td>1/8&quot;</td>
<td>2'-1&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>55'</td>
<td>11&quot;</td>
<td>1/8&quot;</td>
<td>2'-3 1/2&quot;</td>
<td>A, B, C</td>
</tr>
<tr>
<td>60'</td>
<td>12&quot;</td>
<td>1/8&quot;</td>
<td>2'-6&quot;</td>
<td>A, B, C</td>
</tr>
</tbody>
</table>

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**INDIANA DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL CANTILEVER STRUCTURE COMBINATION ARM DIMENSIONS & DETAILS**

**SEPTEMBER 2013**

**STANDARD DRAWING NO.** E 805-TSCS-10

---

**CHIEF ENGINEER**

/s/ Alfredo B. Hanza

02/05/13

**DESIGN STANDARDS ENGINEER**

/s/ Mark A. Miller

03/27/13
NOTES:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

eneral drawing E 805-TSCS-06 for handhole details.
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.

INDIANA DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL CANTILEVER STRUCTURE
COMBINATION ARM CONNECTION DETAILS
SEPTEMBER 2013
STANDARD DRAWING NO. E 805-TSCS-11

Notes:
2. The required combination arm rise shall be built into the gusset plate at the angle X. The angle X is described as arc tan R/L, where R is the combination arm rise and L is the arm length. Both R and L vary and are listed in the Arm Dimensions Table on Standard Drawing E 805-TSCS-03.
3. Diameter at the bottom of Pole Section 2 shall match the diameter at the top of Pole Section 1.
NOTES:
1. Orient bottom splice and bottom connection plates with combination arm as shown on the bottom splice plate detail on Standard Drawings E 805-TSCS-04 and -12.
2. All plate dimensions shall be based upon the outside diameter D at the top of pole section 1.
3. Diameter at bottom of pole section 2 shall match the diameter at the top of pole section 1.
INDIANA DEPARTMENT OF TRANSPORTATION

STANDARD DRAWING NO. E 805-TSCS-14

SEPTEMBER 2013

NOTE:
1. The structure arms and pole are designed for the above loading conditions. Foundation types A and C are designed for arms having length of 35 ft or less. See Standard Drawings E 805-TSCS-16 and -18 for foundation types A and C.

LEGEND

DEVICE DESCRIPTION

(A) 12" - 5 Section Signal Head With Backplates
(B) 36" x 30" Regulatory Sign
(C) 18" x 96" Street Name Sign
(D) 1 - Mounted Camera
(E) 12" - 3 Section Signal Head With Backplates
(F) 18" x 132" Street Name Sign
(G) Top Pole Luminare

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL CANTILEVER STRUCTURE

COMBINATION ARM LOADING

FOR ARM OF 35' OR LESS

SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-14

/\ Alfredo B. Hanza 02/05/13
\ design standards engineer date

/\ Mark A. Miller 03/27/13
\ chief engineer date
NOTES:
2. The structure arms and pole are designed for the above loading conditions. Foundation types B and D are designed for arms having length of greater than 35 ft to 60 ft. See Standard Drawings E 805-TSCS-17 and -19 for foundation types B and D.
NOTES:
1. Alternate 6" x 6" x 1/2" square washer with hex nut welded to lower end may be substituted for bent anchor bolt.
2. Bolt circle, b, shall allow clearance for the plate washer. Cutting or trimming the washer will not be allowed.
4. A tooled line or other type of permanent marking shall be provided on the top of the foundation to indicate the direction of the conduit.

BILLC OF MATERIALS

<table>
<thead>
<tr>
<th>DRILLED SHAFT TYPE A</th>
</tr>
</thead>
<tbody>
<tr>
<td>REINFORCING BARS</td>
</tr>
<tr>
<td>SIZE OR MARK</td>
</tr>
<tr>
<td>#7 9</td>
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Concrete, Class A 3.4 CYS
NOTES:

1. Alternate 8" x 8" x 1/2" square plate tapped and welded to the anchor bolt may be substituted for bent anchor bolt.

2. Bolt circle, b, shall allow clearance for the plate washer. Cutting or trimming the washer will not be allowed.


4. A tooled line or other type of permanent marking shall be provided on the top of the foundation to indicate the direction of the conduits.
NOTES:

1. Alternate 6" x 6" x 1/2" square washer with hex nut welded to lower end may be substituted for the bend in the anchor bolt.

2. Minimum H required is 4 ft. soil cover over the entire footing area.

3. Bolt circle, B, shall allow clearance for the plate washer. Cutting or trimming the washer will not be allowed.


6. A tooled line or other type of permanent marking shall be provided on the top of the foundation to indicate the direction of the conduits.

BILLY OF MATERIALS

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<th>Size or Mask</th>
<th>Number of Bars</th>
<th>Length</th>
<th>Weight (lbs.)</th>
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<td>11'-4&quot;</td>
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CONCRETE

Concrete, Class A 8.2 CYS

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL CANTILEVER STRUCTURE

SPREAD FOOTING FOUNDATION TYPE C

FOR ARM OF 35' OR LESS

SEPTEMBER 2013

STANDARD DRAWING NO. E 805-TSCS-18

/\ Alfredo B. Hanza 02/05/13
DESIGN STANDARDS ENGINEER DATE

/\ Mark A. Miller 03/27/13
CHIEF ENGINEER DATE