LOADING & NOTES

1. Provide pole assemblies designed, manufactured, and installed according to 2013 AASHTO Bridge Design Specifications and the American Association of State Highway and Transportation Officials (AASHTO) Bridge Design Specifications and other applicable specifications. Design structures for a 50-year design life, fatigue damage, and jet loading. Design shall include resistance to wind, vehicular impact, truck-induced load, and approved vibration resulting from use of batting effect.

2. Provide poles to accommodate the maximum length shown in the eastern data with the given loads, dimensions, and material requirements.

3. This drawing shows loads (signs and signals) to be used by manufacturers when designing poles. It does not show actual loading of poles/mastarms or individual projects. Thus, pole/mastarm design may be used with further analysis performed by the following conditions:
   - The pole sign (load 4) is attached to the eastern main section and.

4. The manufacturer is to determine weld sizes, weld length and testing length to conform to the latest edition of the structural welding code AWS D1.1. Provide visual testing (VT) of 100% of welds. Provide magnetic particle testing (MT) or ultrasonic testing (UT) of 100% of all joints for the 2010 welding code.

5. Fabricate pole tubes and mastarm tubes from more than two pieces of steel. When using 2 pieces, place the (longitudinal) weld seam directly opposite another. Transverse weld seams prohibited.

6. Fabricate mastarm arms and connections according to the latest engineering standard.

7. Provide permanent tags on all pole sections per section 1440 table 740-1 of the specification. Provide a weatherproof metal cap on all exposed sections of the structure.

8. The department will reject damaged or defective poles for any of the following:
   - Voids or flaws.
   - Surface defects.
   - Corrosion.
   - Residual welds.
   - Defective welds.

9. For the pole size, use a 1/2" minimum diameter hole at each traffic sign head location. Open the hole on the horizontal axis of the mastarm.

ELEVATION VIEW

MASTARM DATA

<table>
<thead>
<tr>
<th>Mastarm</th>
<th>Load Component</th>
<th>Weight (lbs)</th>
<th>Height (ft)</th>
<th>Base Area (sq ft)</th>
<th>Wind Area (top) (sq ft)</th>
<th>Wind Area (side) (sq ft)</th>
<th>Fatigue Area (bottom) (sq ft)</th>
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<tbody>
<tr>
<td>No. 1</td>
<td>100</td>
<td>15</td>
<td>10</td>
<td>30</td>
<td>100</td>
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<td>10</td>
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<tr>
<td>No. 2</td>
<td>150</td>
<td>20</td>
<td>15</td>
<td>40</td>
<td>150</td>
<td>70</td>
<td>15</td>
</tr>
<tr>
<td>No. 3</td>
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<td>25</td>
<td>20</td>
<td>50</td>
<td>200</td>
<td>80</td>
<td>20</td>
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<tr>
<td>No. 4</td>
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<td>30</td>
<td>25</td>
<td>60</td>
<td>250</td>
<td>90</td>
<td>25</td>
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Adopted by the Alaska DOT&PF Alaska Standard Plan
Carolyn Manchak, PE
Master Sheet Engineer
Adoption Date: 07/17/2006
Last Code and Style Update: 07/17/2006
REINFORCED HANDHOLE DETAILS

POST TOP LOWER SECTION DETAIL

POST TOP UPPER SECTION CONNECTING PLATE

POST TOP LOWER SECTION CONNECTING PLATE

POLE BASE DETAILS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 15 TO 35 MASTARM LOWER SECTION

Carolyn McElwain, P.E.
Project Engineer

Adoption Date: 07/17/2000

Next Code and Standards Review Date: 07/17/2000

Material Requirements

<table>
<thead>
<tr>
<th>Material Quality Grade</th>
<th>Steel 1-1/2&quot; Thick</th>
<th>Steel 2-1/2&quot; Thick</th>
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<tbody>
<tr>
<td>Tension Grip Bolts</td>
<td>400MPa</td>
<td>500MPa</td>
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<tr>
<td>Fasteners</td>
<td>M12 x 24 x 1-3/4</td>
<td>M12 x 24 x 1-3/4</td>
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<tr>
<td>Paint</td>
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<td>Galvanizing</td>
<td>B5314</td>
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<tr>
<td>Color</td>
<td>Yellow</td>
<td>Yellow</td>
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</tbody>
</table>

Model No: T-54.10
Mastarm & Stiffened Box with 15' to 35' Mastarm Signal Pole

Mastarm Base Plate

Mastarm Mounting Plate

Ring Detail

Section A-B

Vibration Mitigator Connection Detail

Tube to Transverse Plate Weld Detail

(Angle with tube and welding symbol for clarity)

Material Schedule

State of Alaska DOT&PF
ALASKA STANDARD PLAN

Signal Pole

With 15' to 35' Mastarm Mastarm & Stiffened Box

Adopted as Alaskan Standard Plan

Adopter Date

07/17/2006

Project Engineer

Carolyn Wardhouse, P.E.

Next Code and Standards Review

07/17/2006
UPPER SECTION OPTIONS

MASTARM SLIP SPlice ELEVATION DETAIL

POST TOP STANDARD UPPER SECTION BASE DETAIL

POST TOP CONNECTING PLATE DETAIL

UPPER SECTION WITH 15' TO 35' MASTARM
UPPER SECTION WITH 35' MASTARM