

ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information – Incomplete forms will be returned)

Contact Information:

Date: November 13, 2018
Originator: **Cheryl Hudson**
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Standard Plans:

Index Number: **649-010**
Sheet Number (s): 1
Index Title: Steel Strain Pole

Summary of the changes:

Added Note 4H (longitudinal seam weld); Changed note # 4H to 4I.

Commentary / Background:

Longitudinal weld note added, same criteria as Mast Arms and High Mast Light Poles.

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – |

Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

- | Yes | N/A | |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Proposed Standard Plan Instructions (SPI) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input type="checkbox"/> | Other Support Documents |

Implementation:

- Design Bulletin (Interim) DCE Memo Program Mgmt. Bulletin FY-Standard Plans (Next Release)

————— **Contact the Roadway Design Office for assistance in completing this form** —————

NOTES:

1. Work with Index 634-001 for grounding and span wire details. See the Plans for clamp spacing, cable sizes and forces, signals and sign mounting locations and details.

2. Shop Drawings:

This Index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.

3. Materials:

- A. Strain Pole and Backing Rings:
 - a. Less than 3/16": ASTM A1011 Grade 50, 55, 60 or 65
 - b. Greater than or equal to 3/16": ASTM A572 Grade 50, 55, 60 or 65
 - c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)
- B. Steel Plates: ASTM A36
- C. Weld Metal: E70XX
- D. Bolts, Nuts and Washers:
 - a. High Strength Bolts: ASTM F3125, Grade A325, Type 1
 - b. Nuts: ASTM A563 Grade DH Heavy-Hex
 - c. Washers: ASTM F436 Type 1, one under turned element
- E. Anchor Bolts, Nuts and Washers:
 - a. Anchor Bolts: ASTM F1554 Grade 55
 - b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)
 - c. Plate Washers: ASTM A36 (2 per bolt). Split-lock washers and self-locking nuts are not permitted
- F. Handhole Frame: ASTM A709 or ASTM A36, Grade 36
- G. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65
- H. Aluminum Pole Caps and Nut Covers: ASTM B26 (319-F)
- I. Stainless Steel Screws: AISI Type 316
- J. Threaded Bars/Studs: ASTM A36 or ASTM A307
- K. Concrete: Class IV (Drilled Shaft) for all environmental classifications.
- L. Reinforcing Steel: Specification 415

4. Fabrication:

- A. Pole Taper: Change diameter at a rate of 0.14 inches per foot, round or 12-sided (Min.)
- B. Upright splices are not permitted. Transverse welds are only permitted at the base.
- C. Provide bolt hole diameters as follows:
 - a. Bolts (except Anchor Bolts): Bolt diameter plus 1/16", prior to galvanizing.
 - b. Anchor Bolts: Bolt diameter plus 1/2", maximum.
- D. Locate handhole 180° from 2" wire entrance pipe.
- E. Identification Tag: (Submit details for approval.)
 - a. 2"x 4" (Max.) aluminum identification tag.
 - b. Locate on the inside of the pole and visible from the handhole.
 - c. Secure to pole with 1/8" diameter stainless steel rivets or screws.
 - d. Include the following information on the ID Tag:
 - 1. Financial Project ID
 - 2. Pole Type
 - 3. Pole height
 - 4. Manufacturers' Name
 - 5. Fy of Steel
 - 6. Base Wall Thickness
- F. Provide a 'J' or 'C' hook at the top of the pole for signal wiring support (See Sheet 3).
- G. Perform all welding in accordance with Specification 460-6.4.

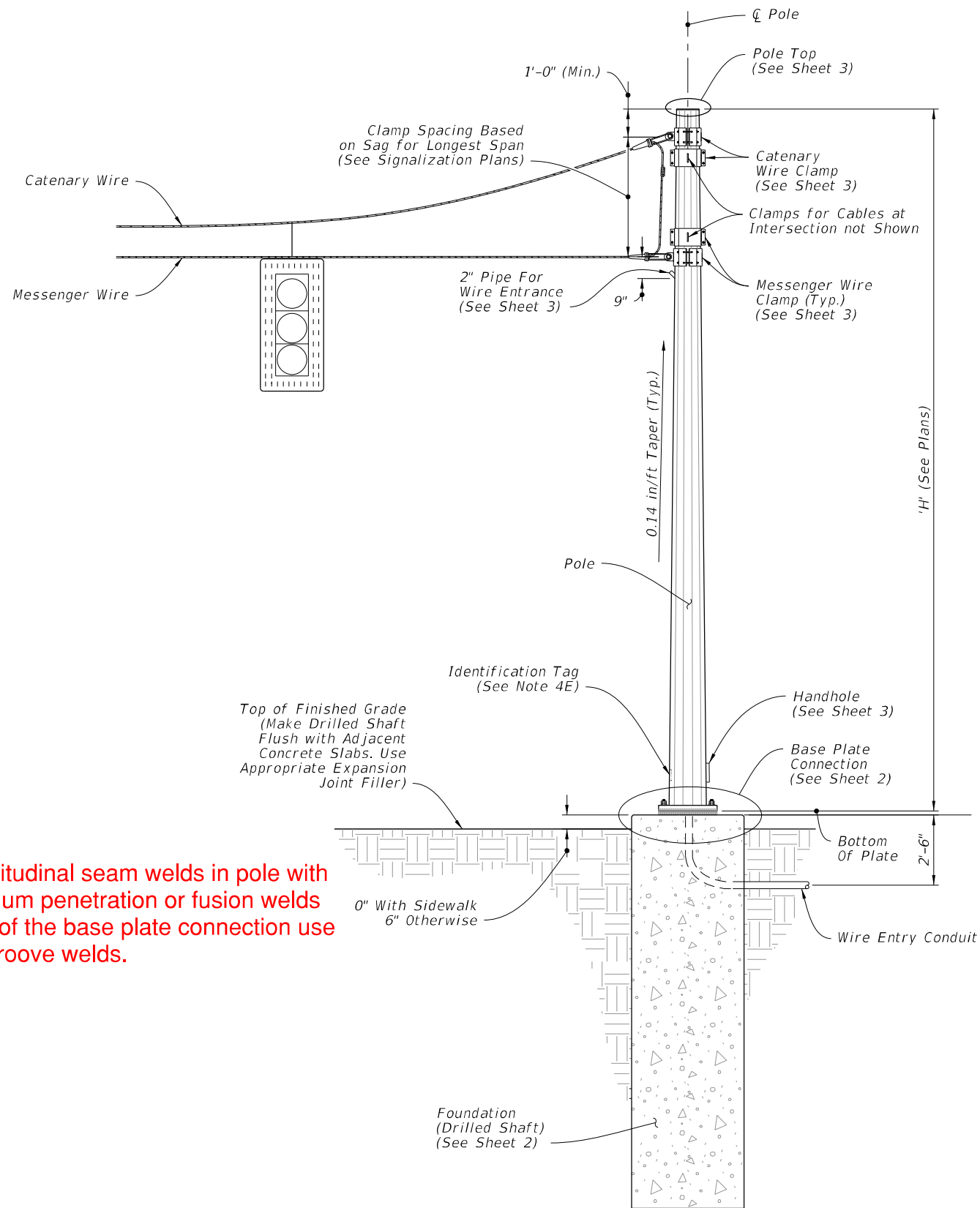
5. Coatings:

- A. All Nuts, Bolts, Washers and Threaded Bars/Studs: ASTM F2329
- B. All other steel items including plate washers: ASTM A123

6. Construction:

- A. Foundation: Specification 455, except that payment is included in the cost of the strain pole.
- B. After installation, place wire screen between top of foundation and bottom of baseplate in accordance with Specification 649-6.


H. Fabricate longitudinal seam welds in pole with 60 percent minimum penetration or fusion welds except, within 6" of the base plate connection use full-penetration groove welds.



STRAIN POLE ASSEMBLY

ELEVATION AND NOTES

10/18/2018 11:54:09 AM

LAST REVISION 11/01/17	REVISION ← 11/01/19	DESCRIPTION:	 FY 2019-20 STANDARD PLANS	STEEL STRAIN POLE	INDEX 649-010	SHEET 1 of 3
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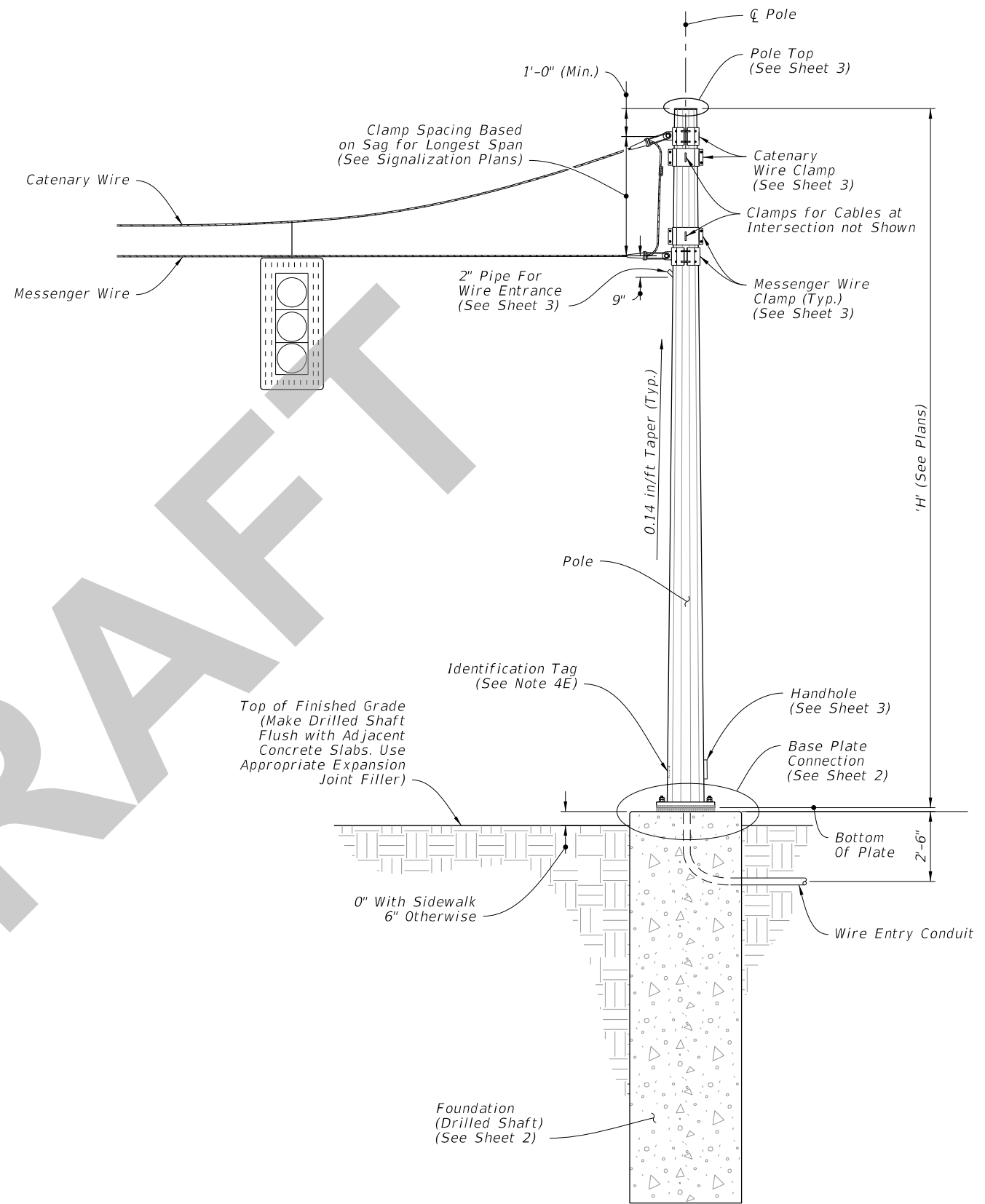
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- H. Fabricate longitudinal seam welds in pole with 60 percent minimum penetration or fusion welds except, within 6" of the base plate connection use full-penetration groove welds.
- I. Hot Dip Galvanize after fabrication.

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STRAIN POLE ASSEMBLY

ELEVATION AND NOTES

8/27/2019 6:56:46 AM

LAST REVISION	DESCRIPTION:
11/01/19	


**FY 2020-21
STANDARD PLANS**

STEEL STRAIN POLE

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