

6340000 SPAN WIRE ASSEMBLY
COMMENTS FROM INDUSTRY REVIEW

Gene Syfrett
D-3 Traffic Operations

Comments:

During the spec change they refer to wood and concrete poles but have omitted **STEEL** strain poles which is used widely across the state. Recommend adding STEEL to the types of strain poles be utilized.

Response: Connection to Steel Strain pole is addressed in Indexes 17727& 17723.

David C. O'Hagan, PE
State Roadway Design Engineer
850-414-4283

Comments:

It appears to me that steel strain poles have been consciously left out of this specification and I do not understand why.

Response: In 634-2.3 Hardware and Fittings, we are addressing eye bolt attachments, which are only used on concrete and wood poles, steel poles have a strap connection.

Ray Martin
FDOT District 5, Traffic Operations
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Comments:

Changing the size of the messenger cable requires the signal and sign attachment hardware to change. Although this spec. is not the place to include this requirement, it should be added to the 650 spec or it may be better to put a note in the Standard Index. It does seem like a common sense issue but back in the mid 1990's when the messenger size increased to 7/16" after being 1/4" for a long time, contractors used the same small messenger clamps they had been using forever. If we have something stating the attachment hardware must be sized/made for/engineered for the span wire it is attached to, it will be easier to address these problems if they do occur with this span wire size increase.

Why are we adding wood poles to the spec? At this time we only use wood poles in temporary/emergency situations.

Response: The clamp details are the contractor's responsibility. This Specification intends to include details for temporary/emergency situation.

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Comments:

6340000 Comments by Dan Haldi D5 Concrete Technolgist 386-740-3516 634 Span Wire Assemblies – Comments as follows: 634-2.1 1st paragraph: changes messenger to catenary wire support for single point attachment. But 2nd paragraph still implies messenger in 1st para as single point and in addition for 2-point attachment. SUGGEST combining paragraphs or re-write to give more definitive direction. 634- Other section re-writes (removing messenger as only support) are equally confusing. SUGGEST combining paragraphs as needed. Submitted 12-17-08.

Response: Agreed.

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Comments:

It would be beneficial to construction, maintenance, and CEI personnel if the specification prescribed the amount of sag that is to be incorporated into the spanwire assembly installation. I understand in lieu of “sag,” there was a conscious decision to address “tension” as an alternative measure in the specification and I am sure there is some basis for this. It has been confirmed to me in discussions of this topic with our structures office, that the tension tables referenced in the specification were developed in consideration of the particular catenary span wire length dead load with 5% sag calculation. This is fine for theoretical purposes and structural calculations, but due to the fact that tension is dynamic, it is not practical for CEI or maintenance resources to subsequently inspect or double-check tension after initial installation by the contractor. In contrast, since sag is static, it could be easily calculated and measured at any time after the initial installation if this method of measurement was specifically addressed in the specification.

Response: Agreed. Sag requirement is implemented in lieu of tension requirement for catenary wire.

Eddy Scott
FDOT District 2

Specifications / Design Review
Quality Assurance Manager
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Comments:

These are issues with the Specs and Design Standards mainly related to the decision to use single point attachment span wires. Some of these issues were discussed at the recent DDE meeting. I didn't make any comments on the industry review web site for the Modifications to Spec 634. Let me know if I need to or if this will suffice.

1. DS 17356 sheet 1 of 1 – Our District's practice has been not to install single point attachment span wires (SPASW) since this index was modified recently to eliminate the details for installing signs on SPASW's. If SPASW's are required appropriated details should be included in this index.

Response: Index 17356 is for Overhead Span Wire Mounted Signs. We deleted the one point attachment sheet since it detailed the old two-wire single point system. For this type of sign installation, we do not want to use Single Cable Single Attachment Assembly. We will add some details to Index 17727 to show how signs are mounted to Single Cable Single Attachment Assembly.

2. DS 17344 sheet 5 of 6 – Mounting detail (2 locations) for overhead school signs indicates attachment to a messenger wire which is not an option for a SPASW.

Response: Single Cable Single Attachment Assembly does not apply to Index 17344 either.

3. DS 17344 sheet 5 of 6 – Top right detail calls for 3/8" wire rope clamp. As the size of catenary wire varies from 1/4" to 1/2" per Spec 634 shouldn't this vary too?

Response: The diameter of the U-bolt or rope clamp may not change for different cable wires. However, the shape needs to be sized to accommodate the variation on the wires by the contractor. Index 17344 will be modified accordingly.

4. DS 17733 – Change " messenger wire" to "messenger wire or catenary wire" to accommodate SPASW.

Response: Will change the wording.

5. DS 17727 – Both sheets – View of pole from top shows multiple wires connected to a single eye bolt in apparent conflict with 634-3.3 (f).

Response: Will change Specification 634 and index 17727 will both be updated.

6. DS 17727 – Sheet 1 of 2 – Unlike sheet 2 of 2 there are no details for either wood or steel poles for single point attachments.

Response: Both of these sheets are to be used together. The details for the hardware on sheet 1 also apply to sheet 2. Sheet 1 details only the concrete pole but it seem obvious that the wood and steel details would also apply to the single point attachment with the same modifications. It seems to be redundant to draw all the details all over again. Further clarification will be provided in Index 17727.

7. Spec 634 – General – Are additional specs needed for Steel Strain poles and their attachments or do these suffice?

Response: No additional specification necessary. They are included in Indexes 17723 & 17727.

8. Spec 634-3.3 (g) references Spec 650-3 for signal height clearances and 650-3 is in error. DS 17727 (both sheets) have the correct mounting height. Suggest both these Specs reference this Index instead.

Response: The wording will be revised in 634-3.3 to refer to the Index 17727. Section 650-3.3 is not in error, the 19 feet maximum clearance is the MUTCD requirement for vertical heads. The MUTCD does allow a 22 feet maximum for horizontal signals.

9. Spec 634-2.2 – This apparently allows a ¼ “ catenary or messenger to be used yet tables under 634-3.3 (d) & (e) provide no ¼” wire tension requirements for either.

Response: ¼” wires are removed from the Specification.

10. Spec 634-3.3 (f) – Paragraph needs rewording.
 - a. What is the intent of “Connect a maximum of one 7/16 inch catenary wire to...” implies that you could attach more than one smaller size wire and that ½” wire can’t be used.
 - b. Would this same restrictions apply to messenger wire?
 - c. What is the intent of “...Class C, to one ½ inch diameter messenger or catenary wire to a single wood or concrete strain pole.”? How can a two point attachment be used if you can’t connect a catenary and a messenger wire to a single pole? How can single point attachment box span be used if you can’t attaché two catenary wires to a single pole?

Response: Specification 634 will be rewritten to address the issue.

11. Spec 634-3.3 (j) – As worded this may imply that the requirement does not apply to single point attachments. Suggest changing “...in two point attachments...” to ...if used...”.

Response: Paragraph rewritten

12. Spec 634-3.2 (c) & (d) Also 634-3.3 (b) – Plural use of the word “assemblies” (5 locations at least) implies that more than one assembly. Per the payment method the entire intersection is one assembly. Suggest rewording and using singular form throughout.

Response: Will do

Note that all references are to the current Design Standards (including applicable Modifications & Interims) and current Specifications (including Supplemental Specs). The only exception is to Spec 634 which is under modification and out for industry review. For your reference links to all three are below

<http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm>

<http://www2.dot.state.fl.us/SpecificationsEstimates/Implemented/CurrentBK/Default.aspx?PageAddr=lt;a%20hrefeq;qt:http://www.dot.state.fl.us/specificationsofficeqt;gt;Specifications%20and%20Estimateslt;/agt;>

<http://www2.dot.state.fl.us/SpecificationsEstimates/Development/IndustryReview.aspx?PageAddr=lt;a%20hrefeq;qt:http://www.dot.state.fl.us/specificationsofficeqt;gt;Specifications%20and%20Estimateslt;/agt;>

Thanks,
Eddy Scott
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From: Pitman, Jimmy
Sent: Wednesday, December 10, 2008 10:17 AM
To: Majboor, Belqis; Asmus, Ryan; Dicks, Christopher; Driggers JR, James; Humphries, Travis
Cc: Blakley, Michael; Lewis, Raymond; Lynch, Richard; Bolt, Katherine
Subject: FW: Mast Arm Policy

Please implement the policy below on all jobs that are at or less than the phase 3 review stage.

From: Parks, Robert
Sent: Wednesday, December 10, 2008 10:11 AM
To: Bennett, James; Pitman, Jimmy; Thomas, Kathy; Henderson, Bill; Jordan, Joe
Subject: Fw: Mast Arm Policy

FYI

From: Blanchard, Brian
To: FDOT-DISTPROD; FDOT-DISTOPS
Sent: Mon Dec 08 16:11:03 2008
Subject: Mast Arm Policy

I asked David O'Hagan to implement this requirement immediately. He is working with the DDE's to have similar language added to the PPM. The reason for the email is normally we would discuss this first with the directors. I don't think we are consistent from district to district,

so if you want to have further discussion, we can add this to the agenda of the next director's meeting or you can give me a call. Thanks

Signalized Intersections within ten (10) miles of the coastline:

Mast Arms are required for all signalized intersections on the SHS that are located within ten (10) miles of the coastline. A Design Variance can be requested to allow a Single-Point Span-Wire design when a mast arm design is not possible at an individual location. The Department will cover the cost for a "galvanized" mast arm only. If the Local Maintaining Agency wants a "painted" mast arm, then they will have to pay for the additional cost and commit to cover the maintenance cost.

Signalized Intersections outside ten (10) miles of the coastline (includes Evacuation Route or SIS Roadways):

Single-Point Span-Wire design will be use for all signalized intersections on the SHS that are located outside ten (10) miles of the coastline. The intent is to require single point everywhere outside ten (10) miles of the coastline , but if a municipality insists, we can allow the 2 point attachment. If the Local Maintaining Agency wants a mast arm at an individual location, then they will have to pay for the additional cost and commit to cover the maintenance cost if the mast arm is painted.

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Response:
