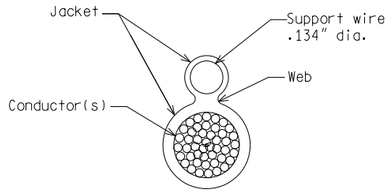
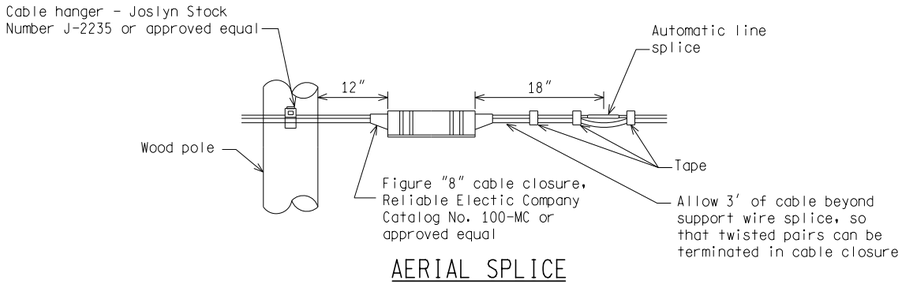
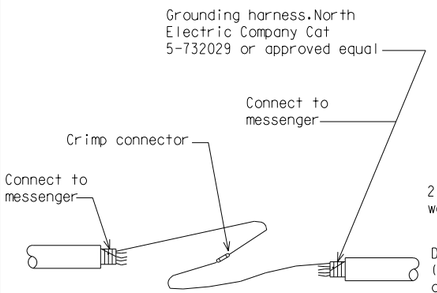


FIGURE 8 CABLE

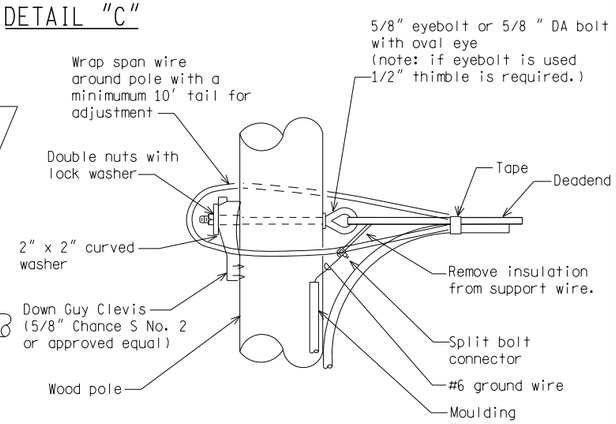
INTERGRAL MESSENGER (I.M.) CABLE SECTION DETAIL "A"



AERIAL SPLICE DETAIL "C"



CABLE CLOSURE DETAIL "D"



DEAD-END POLE DETAIL "E"

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PREPARED BY TRAFFIC AND SAFETY

DRAWN BY: DJF

CHECKED BY:

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL) FHWA APPROVAL DATE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN FOR

INSTALLATION OF INTEGRAL MESSENGER CABLE

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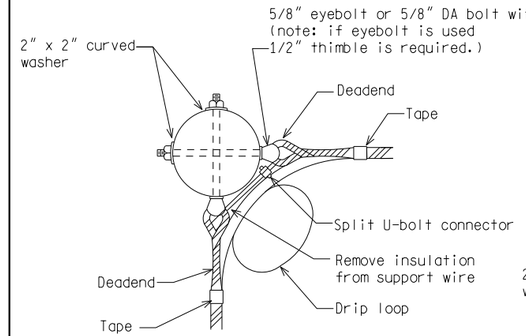
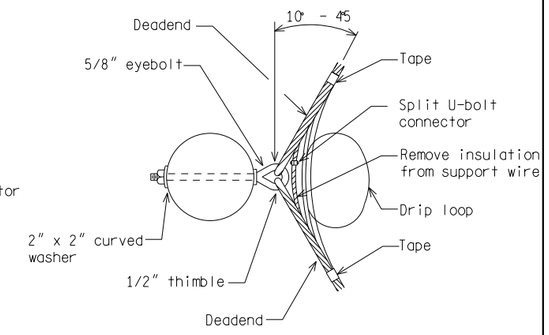
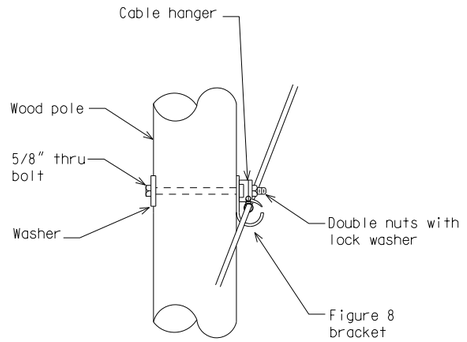


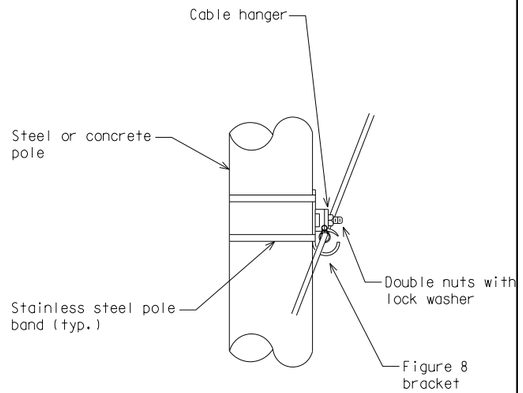
90 DEG. CORNER POLE DETAIL "F"



10 DEG. - 45 DEG. ANGLE POLE DETAIL "G"



TANGENT POLE (WOOD POLE) DETAIL "H"



TANGENT POLE (STEEL OR CONCRETE POLE) DETAIL "I"

NOTE FOR DETAILS "E", "F", "G":
Individual connectors to be taped with 3 layers of approved plastic tape & overall one layer of half lap approved plastic tape

NOT TO SCALE

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BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN | (SPECIAL DETAIL) FHWA APPROVAL DATE | PLAN DATE | SIG-011-A | SHEET 2 of 4

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AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION

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CS: | JN:

DRAWING | SHEET

DESCRIPTION:
Integral messenger wire consists of a support wire and a conductor core laid parallel and covered with a single extrusion of black low density polyethylene. The single extrusion provides a jacket over the support wire and core, and forms a web joining the two. See detail "A" this sheet. The support wire is 0.134 inches in diameter. Grade 190 steel, Class A galvanized, Extra High Strength steel having a rated breaking strength of 2680 pounds.

INSTALLATION:
Every effort shall be made to limit the length of spans to a maximum of 250 feet. Integral messenger wire is prone to low frequency wind vibration commonly referred to as "dancing" while "dancing" may not be so violent in low wind areas as to attract attention. Prolonged low amplitude vibration will eventually cause open circuits and/or support wire failure. Therefore, REA recommends that all integral messenger distribution wire be spiraled approximately one spiral for each 15 feet of span.

Spiraling of the wire should be done from every other pole by applying the spiraling torque to the support clamp after the two outside bolts have been properly tightened, thus keeping the spiraling torque on the support wire and not on the core. As spiraling operations proceed along a lead, spiraling at alternate poles should be in opposite directions, thereby reducing the torsion otherwise imposed on those clamps which are at the intermediate poles. The procedure to be followed in spiraling distribution wire is shown in detail "B" of this sheet.

If clamps are not adequately tightened the torsion developed in spiraling will cause the support wire to turn in the clamp resulting in the migration of the spirals from the spans toward the pole. "Dancing" of the wire and damage to it at the poles will be the final results of inadequate clamping. The proper type of support clamps must be used on all corners as shown in details "E", "F", "G" and "I" of this sheet.

When pulling the wire up to correct sag, a suitable wire grip should be used directly on the insulated support wire. The grip should be of such desig n as to give proper holding power and yet not damage the support wire jacket. The Crescent Tool Company #800 or an equivalent grip is suggested. A standard line wire grip should not be used because it will damage the insulation. If the insulation is damaged in any way, it must be repaired with sealing compound or by cutting out the damaged portion. At deadends, it is necessary to remove the support wire covering before applying the deadend grips. It must be done carefully to avoid damaging the support wire or core the eclectrical continuity of the support wire must be maintained throughout the lead.

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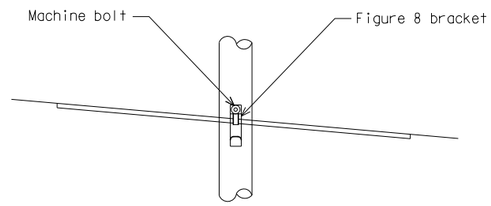
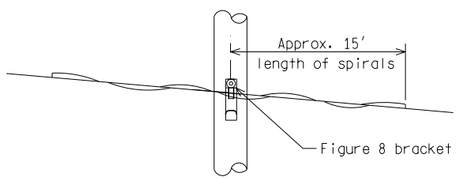


Step 1 - Support and position integral messenger wire with cable brackets.

Step 2 - Fasten and support clamp to the support messenger at the pole. Tighten the carriage bolts to the manufacturer's specifications.

Step 3 - Spiral wire in the opposite direction from which the previous adjacent spiraling operation was performed. If the adjacent spans are unequal, use the shorter span for determining the number of spirals.

Step 4 - Place the clamp on the machine bolt and tighten nuts to the manufacturer's specifications.



I.M. CABLE SPIRALS
DETAIL "B"

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MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS DELIVERY STANDARD PLAN	(SPECIAL DETAIL) FHWA APPROVAL DATE	PLAN DATE	SIG-011-A	SHEET 4 of 4
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