

Standard Drawing Index

City of Columbus, Ohio

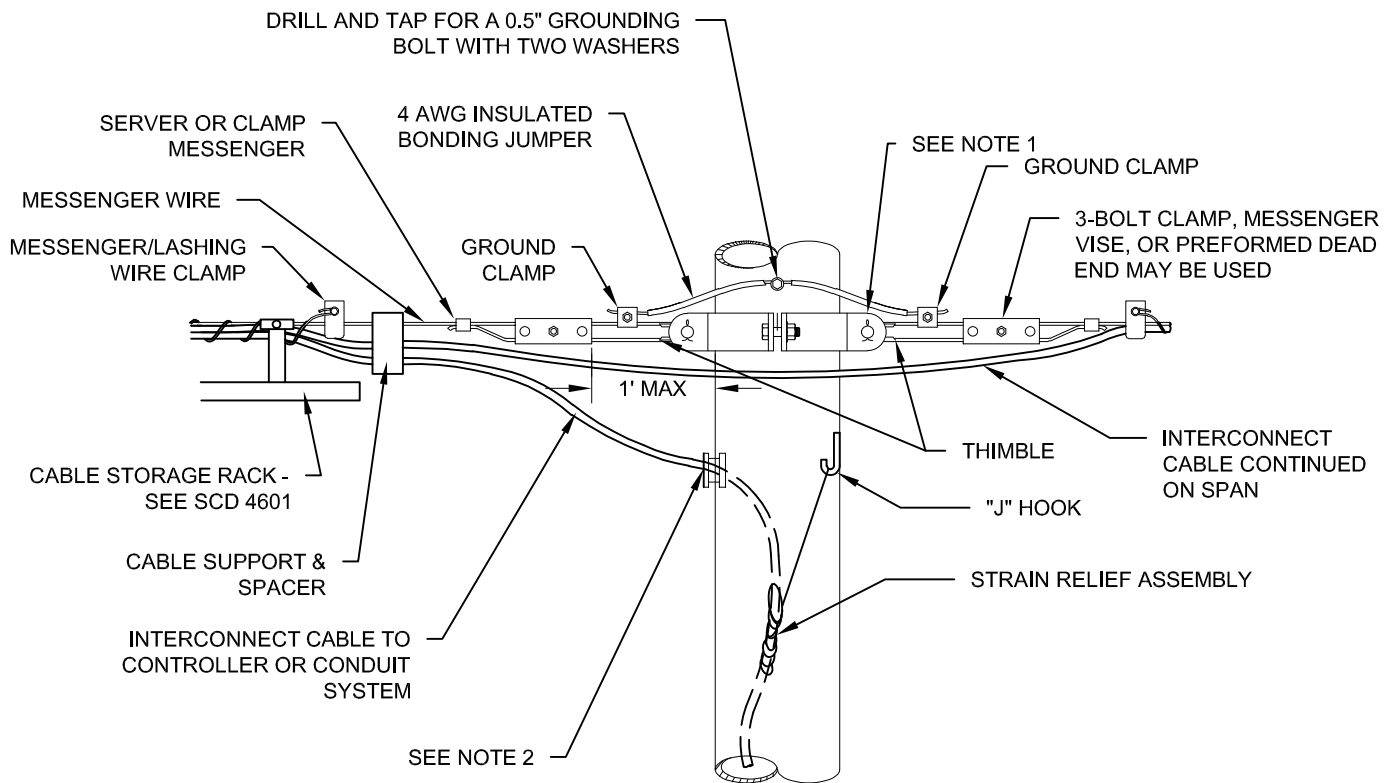
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Division of Design and Construction

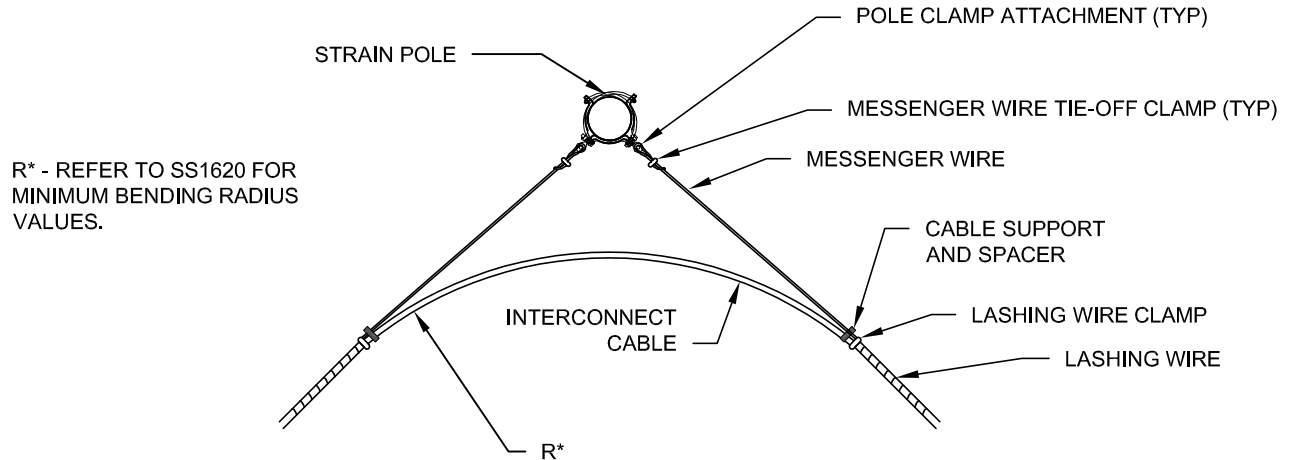
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[4600-4650]

STANDARD DRAWING No.	STANDARD DRAWING TITLE	REVISION DATE
4600	Messenger Wire Details for Fiber Optic Cable	07/01/2020
4601	Fiber Optic Cable Slack Storage Rack	07/01/2020
4602	Modified Conduit Riser	07/01/2020
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MESSENGER WIRE WITH ACCESSORIES - STRAIN POLE



CABLE BEND AT STRAIN POLE

MESSENGER WIRE DETAILS FOR FIBER OPTIC CABLE

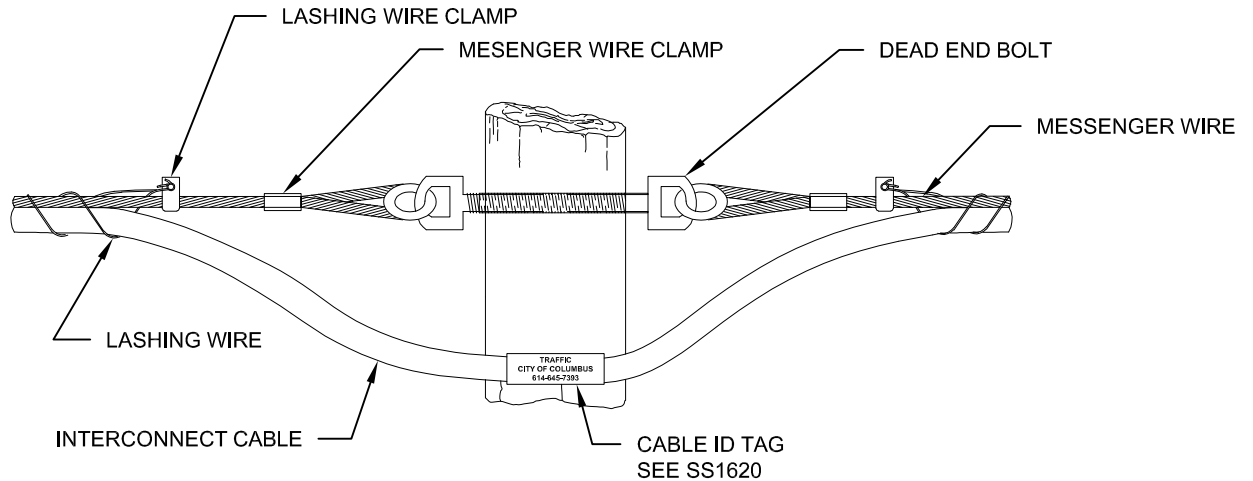
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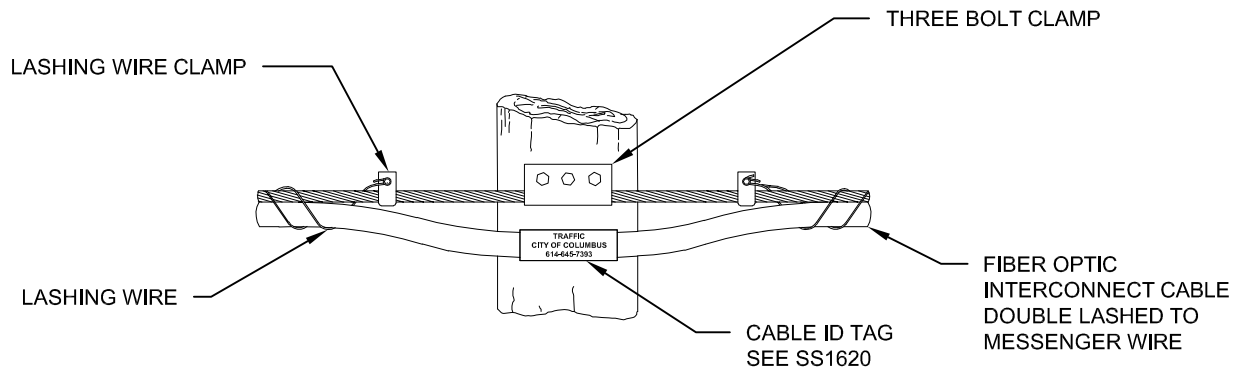
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MESSENGER WIRE WITH DOUBLE DEAD END BOLT ATTACHMENT - WOOD POLE



MESSENGER WIRE WITH ACCESSORIES - THREE BOLT CLAMP - WOOD POLE

MESSENGER WIRE DETAILS FOR FIBER OPTIC CABLE

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NOTES:

1. MESSENGER WIRE POLE ATTACHMENT SHALL BE BY A POLE CLAMP ON STEEL POLES AND BE A 5/8 INCH THRU-BOLT (OR THIMBLE-EYE BOLT) WITH WASHERS ON WOOD POLES.
2. FIBER OPTIC CABLE ENTERS POLE THROUGH 1 - 1/4" TO 1 - 1/2" DIAMETER HOLE DRILLED BELOW MESSENGER WITH HEAVY DUTY GROMMET AND BLACK SILICONE SEALANT APPLIED AFTER CABLES ARE INSTALLED.
3. THE INTERCONNECT CABLE SHALL HAVE A SAG OF APPROXIMATELY 1.5% OR MATCH SAG OF EXISTING UTILITY LINES.
4. THE MINIMUM 3-BOLT SIZE GALVANIZED CLAMP SHALL BE 6 INCHES LONG WITH 1/2 INCH DIAMETER BOLTS. PREFORMED GUY GRIPS SHALL NOT BE USED TO ATTACH THE MESSENGER WIRE TO THE SIGNAL POLES. THEIR USE IS LIMITED TO BULL RING ATTACHMENTS.
5. FOR ALL AERIAL SPANS CROSSING ROADWAYS, THE CONTRACTOR SHALL INSTALL MESSENGER WIRE USING A DOUBLE DEAD END BOLT ASSEMBLY ON BOTH ENDS OF THE MESSENGER WIRE IN PLACE OF POLE CLAMPS.
6. THIS METHOD OF ENTERING STRAIN POLE IS APPLICABLE ONLY TO LOOSE BUFFER TUBE CABLES WITH 24 FIBER STRANDS OR LESS. INSTALLER MUST ENSURE MINIMUM LOADED BEND RADII OF CABLES ARE NOT EXCEEDED DURING INSTALLATION.
7. A CABLE ID TAG SHALL BE INSTALLED AT EACH POLE ATTACHMENT LOCATION. THE MARKER SHALL BE PLACED OVER THE ENTIRE CABLE-MESSENGER WIRE BUNDLE. SEE SS1620.
8. MESSENGER WIRE AT WOOD POLES AND OTHER POLES AS DIRECTED BY THE ENGINEER SHALL BE GROUNDED PER THE REQUIREMENTS OF THE NATIONAL ELECTRIC SAFETY CODE AND AS DETAILED. THE MAXIMUM ACCEPTABLE RESISTANCE IS 25 OHM. ADDITIONAL GROUNDING RODS MAY BE INSTALLED TO MEET THIS REQUIREMENT. GROUND RODS ARE TO BE FURNISHED IN ACCORDANCE WITH CMSC 625.16. COUPLINGS, CONNECTORS, STAPLES, AND MOLDING SHALL CONFORM TO THE REQUIREMENTS OF MIS-055.

MESSENGER WIRE DETAILS FOR FIBER OPTIC CABLE

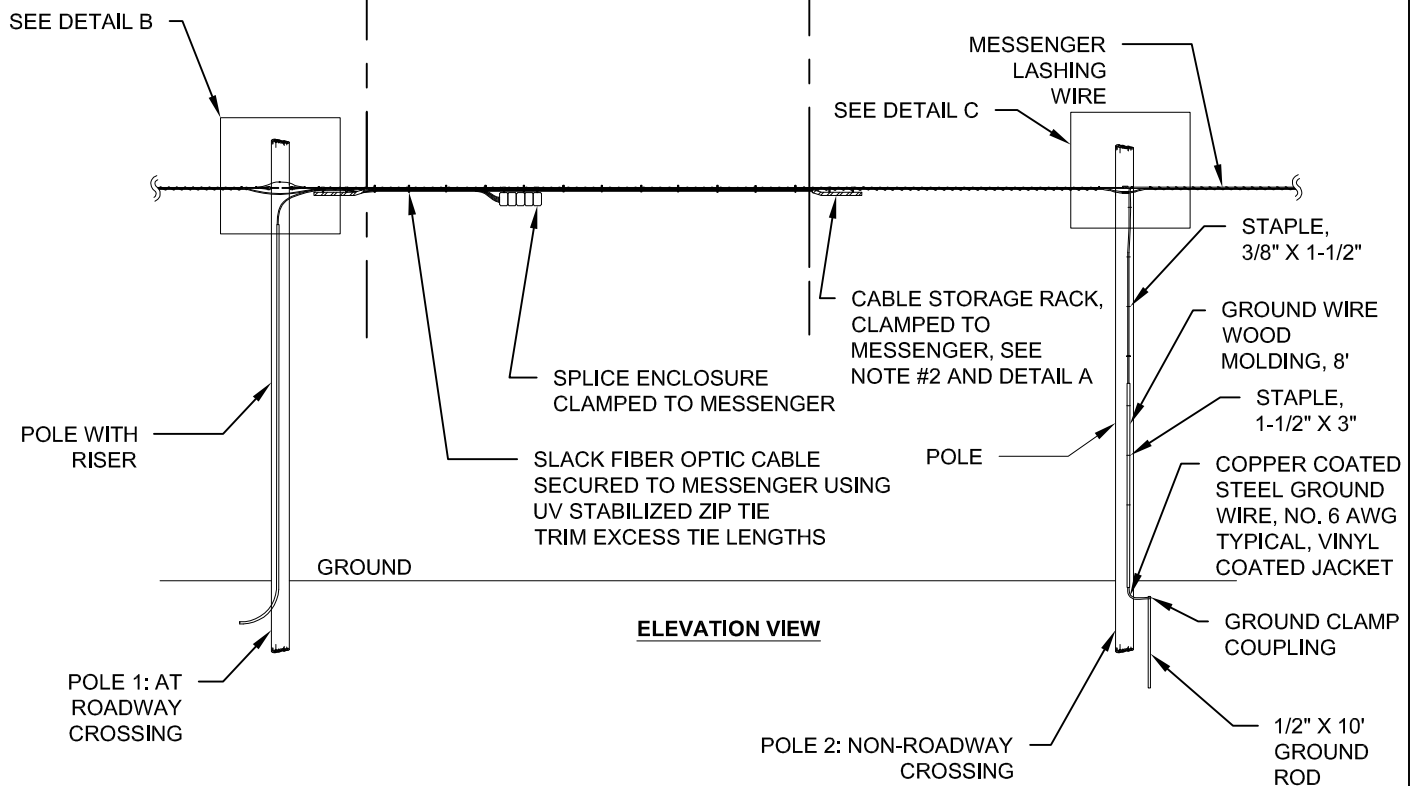
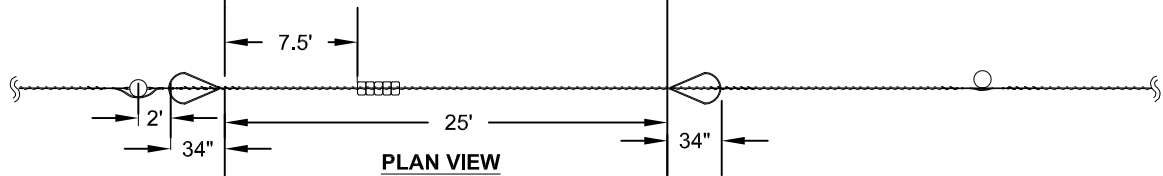
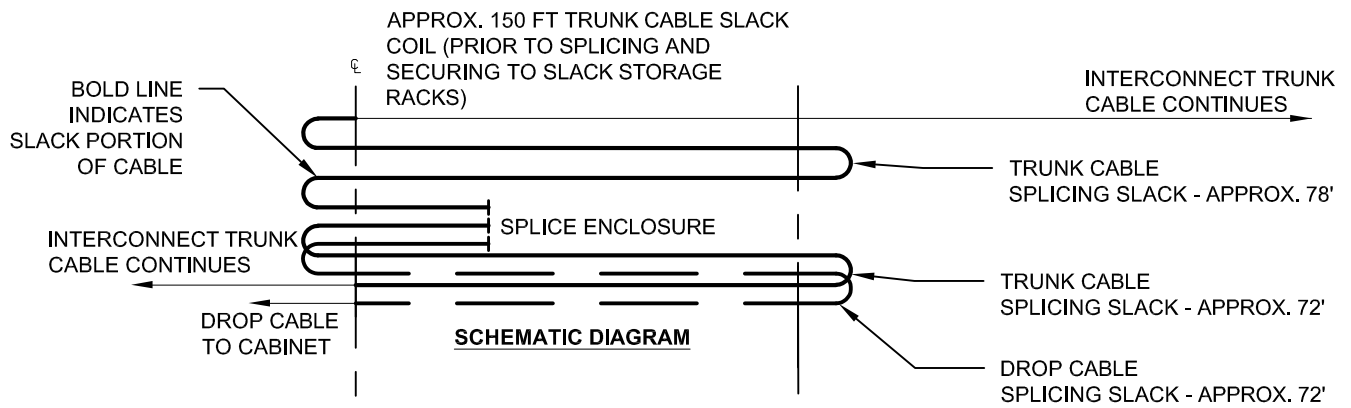
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FIBER OPTIC CABLE AERIAL SLACK STORAGE RACK

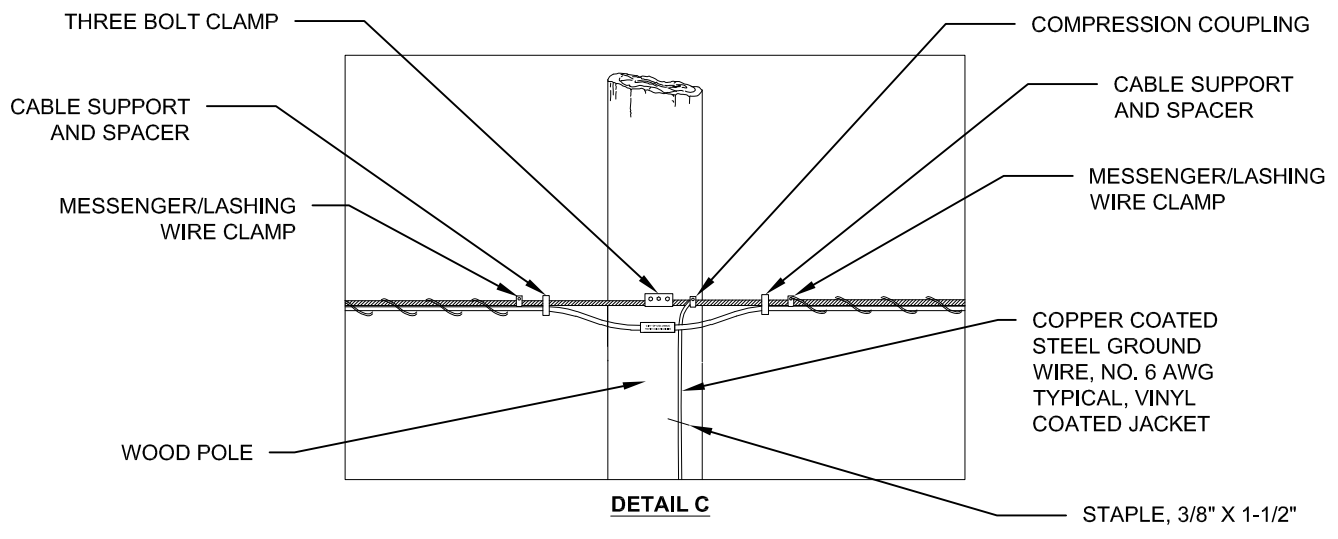
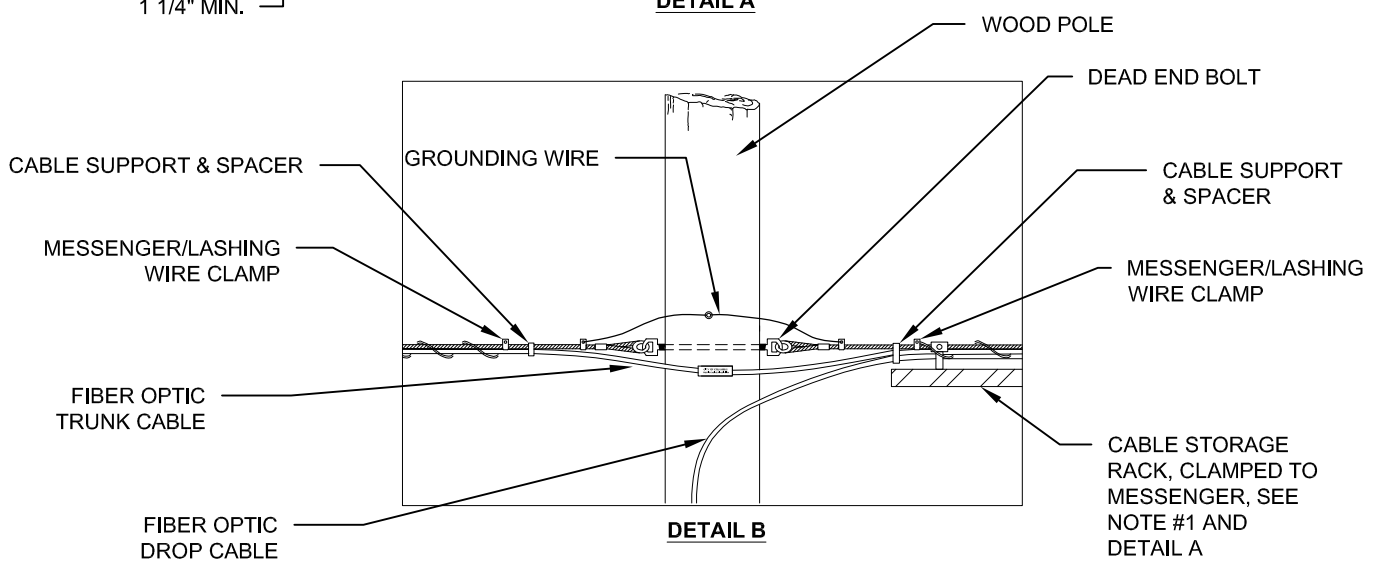
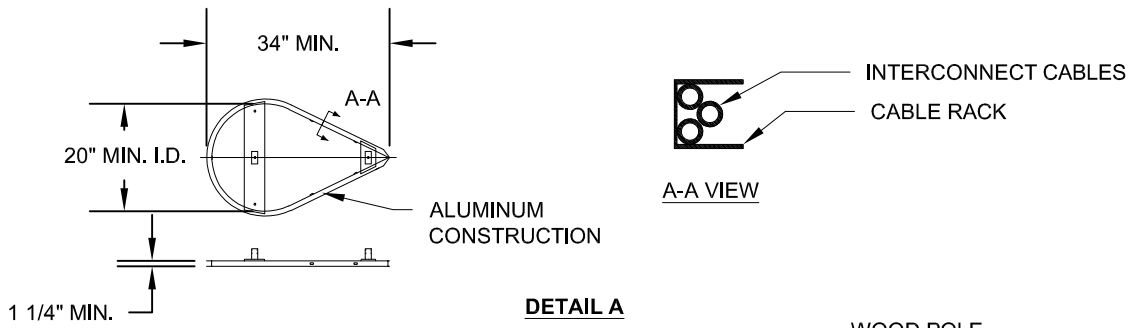
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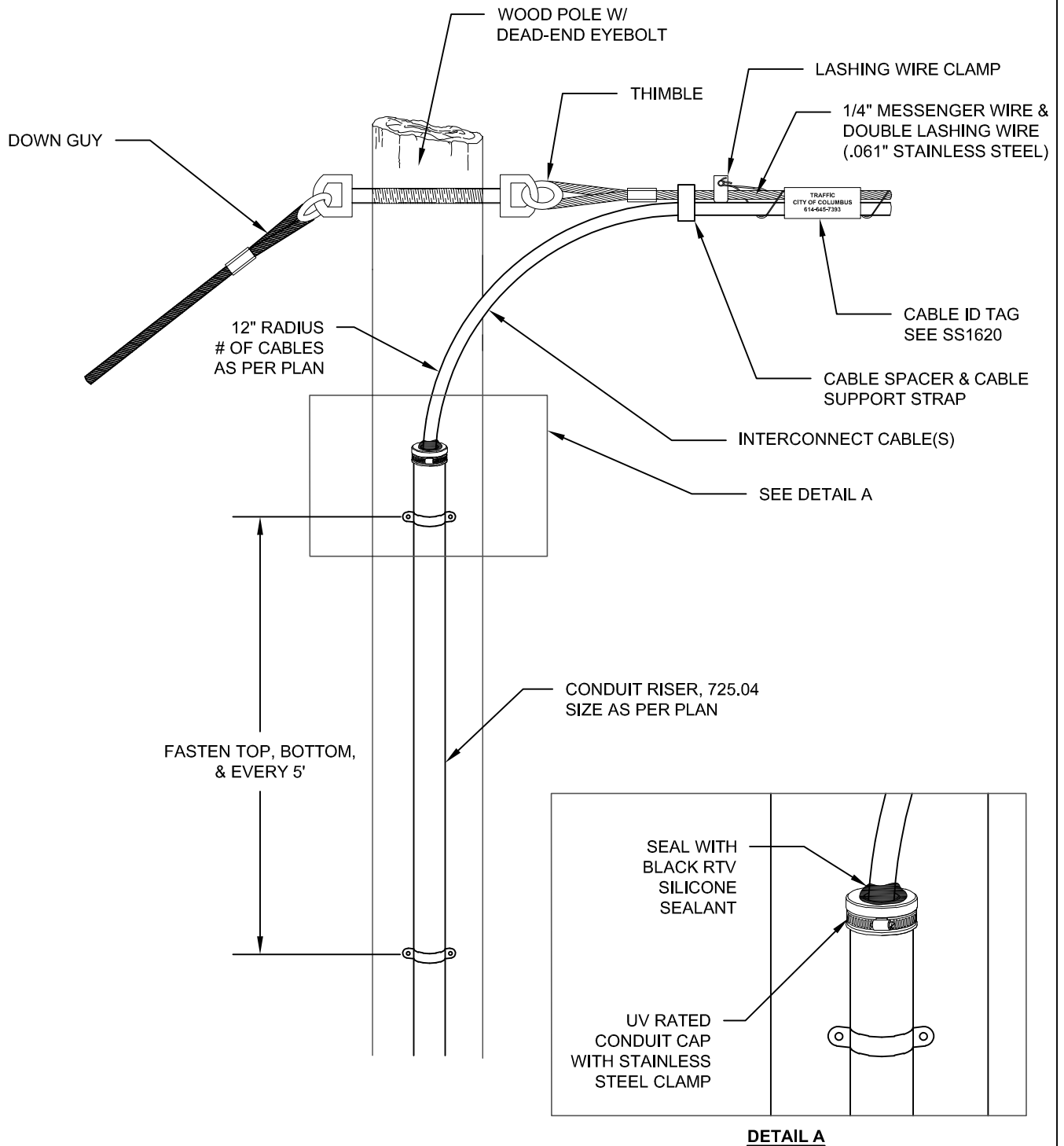
FIBER OPTIC CABLE AERIAL SLACK STORAGE RACK

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NOTES:

- 1. INSTALLATION AND DIMENSIONS AS SHOWN ARE TYPICAL AND WILL VARY BETWEEN SITES. MANUAL ADJUSTMENT OF SPACING BETWEEN RACKS AND PLACEMENT OF SPLICE ENCLOSURE WILL BE REQUIRED IN FIELD TO ENSURE ALL CABLES AND HARDWARE IS SECURELY FASTENED TO AERIAL SPAN
- 2. SLACK CABLE SHALL NOT BE STORED OVER ROADWAYS OR DRIVEWAYS AND SHALL BE 10 FEET (MINIMUM) FROM POLES AT SIGNALIZED INTERSECTIONS.
- 3. FOR FIBER OPTIC CABLE, STORE A MINIMUM OF 75 FEET OF EACH CABLE ENTERING THE ADJACENT SPLICE ENCLOSURE OR AS SHOWN ON PLANS.
- 4. CABLE STORAGE RACKS SHALL BE USED FOR ALL AERIAL INTERCONNECT CABLE SLACK STORAGE.

FIBER OPTIC CABLE AERIAL SLACK STORAGE RACK	
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NOTES:

1. CONNECT CONDUIT RISER TO UNDERGROUND CONDUIT USING CONDUIT WITH A 90° BEND WITH A 36" RADIUS. THE RISER IS TO MEET THE TOP OF THE CONDUIT BEND BELOW GROUND LEVEL. THE RIGID GALVANIZED STEEL FIBER OPTIC CABLE RISER SHALL TRANSITION AFTER THE 36" RADIUS 90° BEND TO THE HORIZONTAL CONDUIT (MATERIAL SPECIFIED IN THE PLANS) USING A WATERTIGHT COUPLING DESIGNED FOR THIS APPLICATION.

MODIFIED CONDUIT RISER FOR FIBER OPTIC CABLE

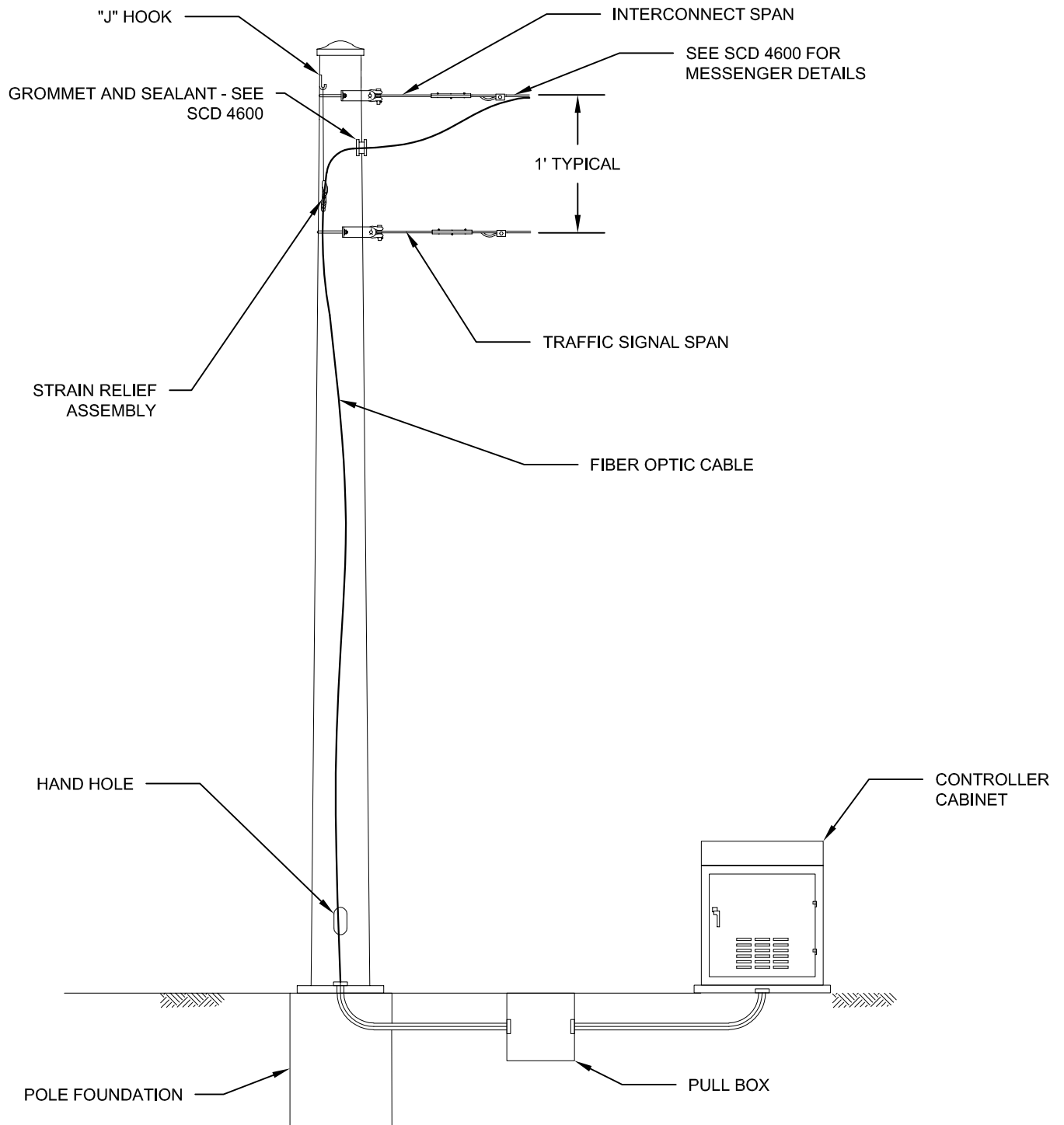
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NOTES:

1. PROPOSED INTERCONNECT CABLE TO BE INSTALLED THROUGH DRILLED HOLE AS IDENTIFIED IN THIS DRAWING OR AS DIRECTED BY ENGINEER.
2. FIELD VERIFY CONDUIT BENDS ARE OF SUFFICIENT RADIUS TO PREVENT DAMAGE TO FIBER OPTIC CABLE.

AERIAL FIBER OPTIC CABLE STRAIN POLE ENTRY

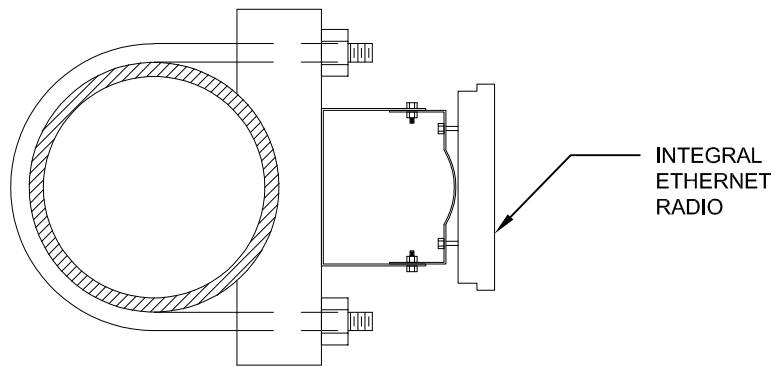
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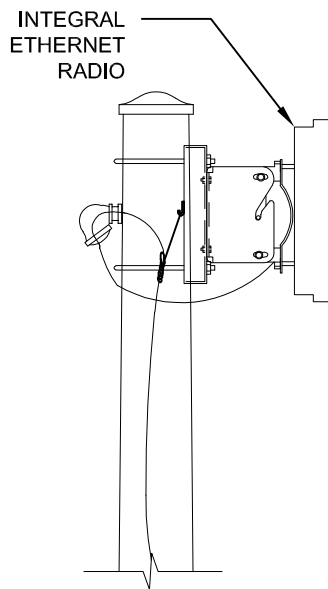
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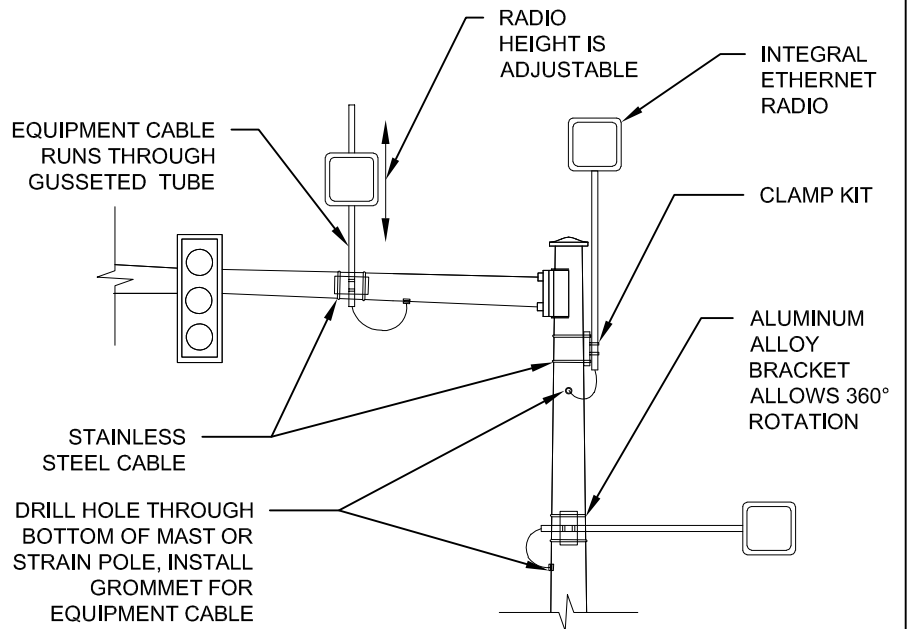
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**TYPICAL WIRELESS
MOUNTING BRACKET DETAIL
TOP VIEW**



**TYPICAL WIRELESS MOUNTING
TO POLE DETAIL
SIDE VIEW**



**TYPICAL WIRELESS MOUNTING
TO POLE EXTENSION DETAIL
FRONT VIEW**

NOTES:

1. ALL MOUNTING HARDWARE SHALL BE COATED TO MATCH THE FINISH OF THE RESPECTIVE POLE.

WIRELESS RADIO MOUNTING DETAILS

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