

Blue Sheet Materials

The "Submittals for Field Qualification Equipment and Materials – Electrical Equipment and Materials" (commonly referred to as the "Blue Sheets") contain a list of materials and equipment that are normally qualified by the Inspector. Brand names and model numbers are listed for most types of equipment. As per standard specification 00960.02, the contractor must submit two copies of the current version of the Blue Sheets **prior to starting work**.

The Blue Sheets are updated frequently by the Traffic Signal Standards Unit. Use the most current version that is in effect at the date of the bid let. Verify the date of the current version at the website below or contact the Traffic Signal Engineer: <http://www.oregon.gov/ODOT/HWY/TS/pages/signals.aspx>.

The inspector is responsible for:

- The initial qualification of materials **before** they are installed. This is documented on the blue sheet's "Initial Submittal" box for each material. **Exception: Write-in materials require initial qualification by the TRAFFIC SIGNAL ENGINEER (NOT the Engineer of Record).**
- Obtaining CMO's, if required. This is documented on the blue sheet's "CMO Required" box for all applicable materials.
- Inspecting and accepting all blue sheet materials that are installed on the project. This is documented on the blue sheet's "Inspected & Accepted on Project" box for each material.

Materials arriving at the project site should be accompanied by proper certifications. No materials shall be installed until certifications are received and checked for compliance by the Inspector. Field verify that materials checked on the Blue Sheets are the same parts to be incorporated into the project; if not, NEW submittals will need to be submitted.

Catalogue Cut Sheets/Write-in Materials

If the contractor proposes to use a material that is not listed in the Blue Sheets (write-in material), the contractor shall submit a catalogue cut sheet for that material. The cut sheet shall identify the specific product intended to be used; manufacturer's name, identifying number, size, detailed scale drawings, wiring diagrams, etc. **Mail, Fax, or e-mail the Blue Sheet for the material & the cut sheet(s) to the TRAFFIC SIGNAL ENGINEER (NOT the Engineer of Record) for initial qualification of the material.**

**Read the instructions included in the Blue Sheets carefully.
They are up-to-date and always printed with the sheets.**

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Table of Contents page

The contractor will check boxes if the material is NOT on the project. For all boxes checked, the material page(s) for these items should be deleted from the submittal.

BLUE SHEETS Page 3

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9.	CABLE TIES	<input type="checkbox"/>
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14.	CONDUIT PLUG	<input type="checkbox"/>
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19.	JUNCTION BOXES (HYBRID)	<input type="checkbox"/>
20.	JUNCTION BOXES (HAND HOLE)	<input type="checkbox"/>
21.	TERMINAL BLOCKS	<input type="checkbox"/>
22.	TIWN WIRE	<input type="checkbox"/>
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24.	XTRA BLANK FORM	<input type="checkbox"/>

INITIAL SUBMITTAL

AGREE WITH "NOT ON PROJECT"

RETURNED FOR CORRECTION

Date: _____

Name: _____

CTSI Card# _____

Qualifications or corrections are subject to all requirements of the current issue of the Standard Specifications for Highway Construction as modified by the Project Special Provisions.

Revised July 22, 2014 Contract No. _____

Always check the revision date! Use the most current version.

The "Initial Submittal" box is for inspector use only.

Complete this after contract is awarded and BEFORE work starts.

Inspector will review the contents page. If it looks correct check "agree" box. If it doesn't look correct check "returned" box and send back to contractor for correction.

BLUE SHEETS

BONDED BUSHINGS

DESCRIPTION: Metallic conduit bushings with a lug to clamp bond wires, Insulated throat. Aluminum not allowed.

USE: On ends of conduit allowing bonding of the conduit system.

The material name, description, and use are described for each material.

BRAND/MANUFACTURER CATALOGUE/PART NO.

<input type="checkbox"/> Blackjack (T&B)	'BG' series
<input type="checkbox"/> Appleton	'GIB' series
<input type="checkbox"/> Crouse-Hinds (Lazy Lug)	'GLL' series
<input type="checkbox"/> Arlington Industries	452 thru 457
<input type="checkbox"/> Bridgeport	#383 thru 390
<input type="checkbox"/> RACO	1214
<input type="checkbox"/> RACO	1216
<input type="checkbox"/> RACO	1218
<input type="checkbox"/> RACO	1290
<input type="checkbox"/> RACO	1292
<input type="checkbox"/> O-Z/Gedney	BLG
<input type="checkbox"/> O-Z/Gedney	HBLG
<input type="checkbox"/> _____	_____
<input type="checkbox"/> _____	_____

Contractor may also write-in materials proposed for installation based on the project plans and specs. **A catalogue cut sheet MUST be submitted for write-in materials.**

Revised July 22, 2014

Contract No. _____

Contractor will check box(es). Except for conduit and wire, DO NOT CHECK MORE THAN 2 BOXES.

Always check the revision date! Use the most current version.

Complete this after contract is awarded and BEFORE work starts.

Inspector will review the material page. If it looks correct check "Qualified" box. If it doesn't look correct check "returned" box and send back to contractor for correction.

Submit write-in materials and cut sheet to the Traffic Signal Engineer for approval.

Complete this after work is installed for the entire project.

Inspector will check one of the two boxes.

Write-in the "quantity accepted" and/or "quantity rejected". Writing in "ALL" is acceptable.

The "Qualified as Noted" box typically only used by the Traffic Signal Engineer for write-ins.

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INITIAL SUBMITTAL

QUALIFIED
 QUALIFIED AS NOTED
 RETURNED FOR CORRECTION

Date: _____
Name: _____
CTSI Card# _____

Qualifications or corrections are subject to all requirements of the current issue of the Standard Specifications for Highway Construction as modified by the Project Special Provisions.

INSPECTED & ACCEPTED ON PROJECT

Date: _____
Name: _____
CTSI Card# _____

Verified Materials By Markings/Packaging
Quantity accepted _____
Quantity rejected _____

Materials Accompanied By Manufacturer's or Supplier's Certification (Copy attached)
Quantity accepted _____
Quantity rejected _____

CMO REQUIRED (If steel or iron, see specifications)

Received Date: _____

If CMO is required for a material, this check box will be on the page. Inspector will check box and date when CMO is received.

Bond Wire

Blue Sheets
Common Electrical

DESCRIPTION: Typically 6 AWG, 7 Strand copper wire. THWN insulated required when installed in conduit.

USE: Bond/grounding wire for 120V AC circuits.

Typical Sources of Info:

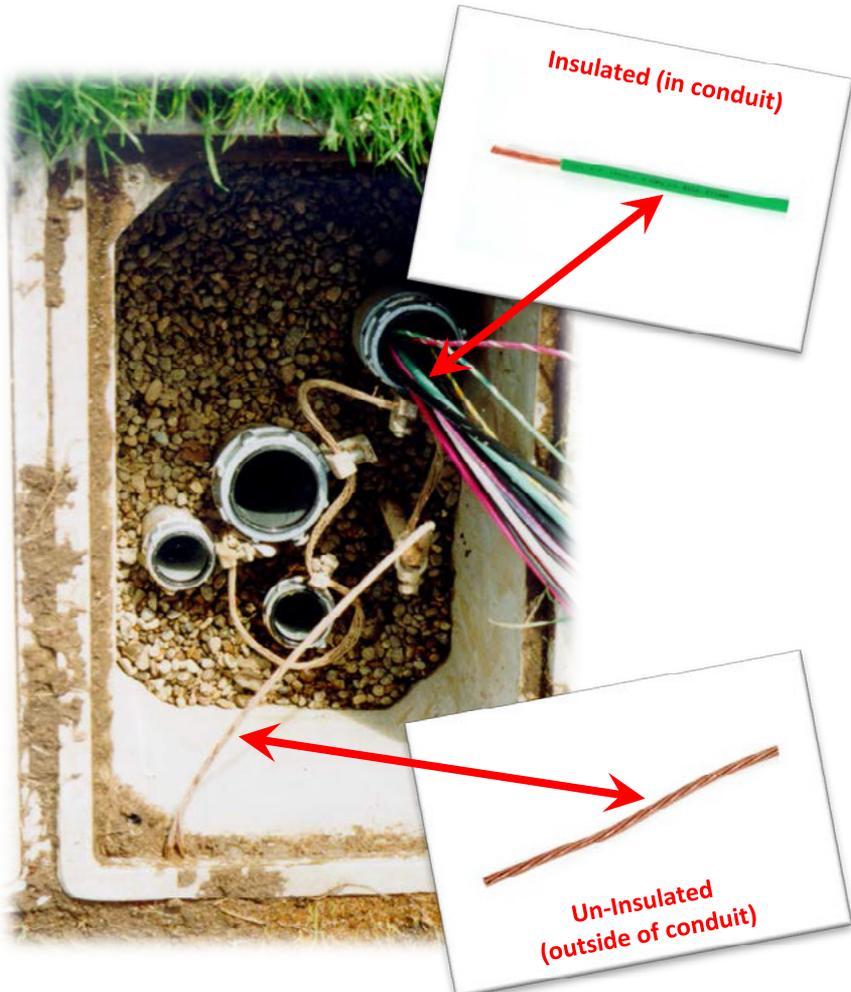
Specs: 00960.50(a) & 02920.23

Std. Dwg: TM450, TM452, & TM472

Plan Sheets: NO

Additional Installation Info: pg. 144

Blue Sheet
Materials



Bonded Bushings

Blue Sheets
Common Electrical

DESCRIPTION: Metallic conduit bushings with a lug to clamp bond wires and an insulated throat. Aluminum not allowed.

USE: On the ends of conduit, allowing bonding of the conduit system.

Typical Sources of Info:

Specs: 00960.42(4) & 02920.12

Std. Dwg: TM472

Plan Sheets: NO

Additional Installation Info: pg. 144

Blue Sheet
Materials



DESCRIPTION: Black nylon or plastic strips UV resistant, with a positive, non-release binding. No metal grippers allowed.

USE: Strapping control cable/wire to messenger cable on spans. Installed at 6" spacing.

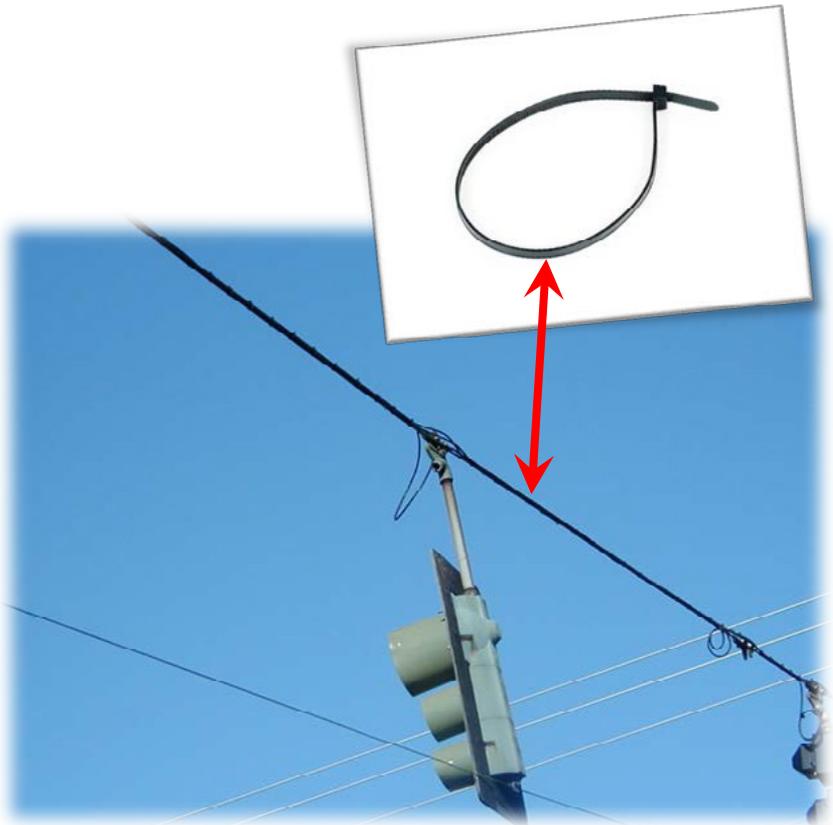
Typical Sources of Info:

Specs: 00990.40(b) & 02920.22

Std. Dwg: TM452

Plan Sheets: NO

Additional Installation Info: pg. 148



Conduit (Metallic)

Blue Sheets
Common Electrical

DESCRIPTION: Galvanized rigid conduit and fittings and liquid-tight flexible metal conduit. IMC (Intermediate Metallic Conduit) or EMT (Electrical Metallic Tubing) not allowed.

USE: Houses electrical conductors.

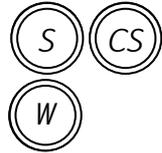
Typical Sources of Info:

Specs: 00960.41, 00960.42 & 02920.10

Std. Dwg: NO

Plan Sheets: YES (size & location), Typically NO (material type)

Additional Installation Info: pg. 124



Blue Sheet
Materials



DESCRIPTION:

- High Density Polyethylene (HDPE) , schedule 40 standard
- Fiberglass rigid non-metallic conduit and fittings, schedule 40. Typically used for elbows
- PVC (marked for electrical use, typically Grey), schedule 40 standard

USE: Houses electrical conductors.

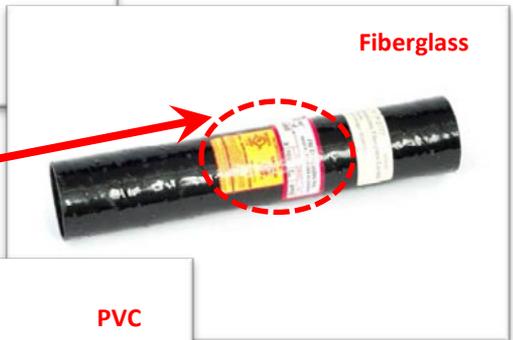
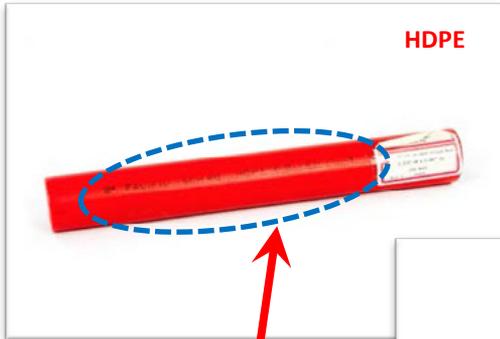
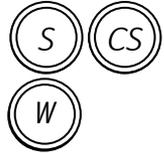
Typical Sources of Info:

Specs: 00960.42 & 02920.11

Std. Dwg: NO

Plan Sheets: YES (size & location), Typically NO (material type)

Additional Installation Info: pg. 124



ID Stamp



Conduit Bushings

Blue Sheets
Common Electrical

DESCRIPTION: Conduit bushings with insulated throat but no bonding lug. Metallic style has an insulated throat.

USE: Used on the ends of conduit when bonding lugs are not required to protect the electrical wiring.

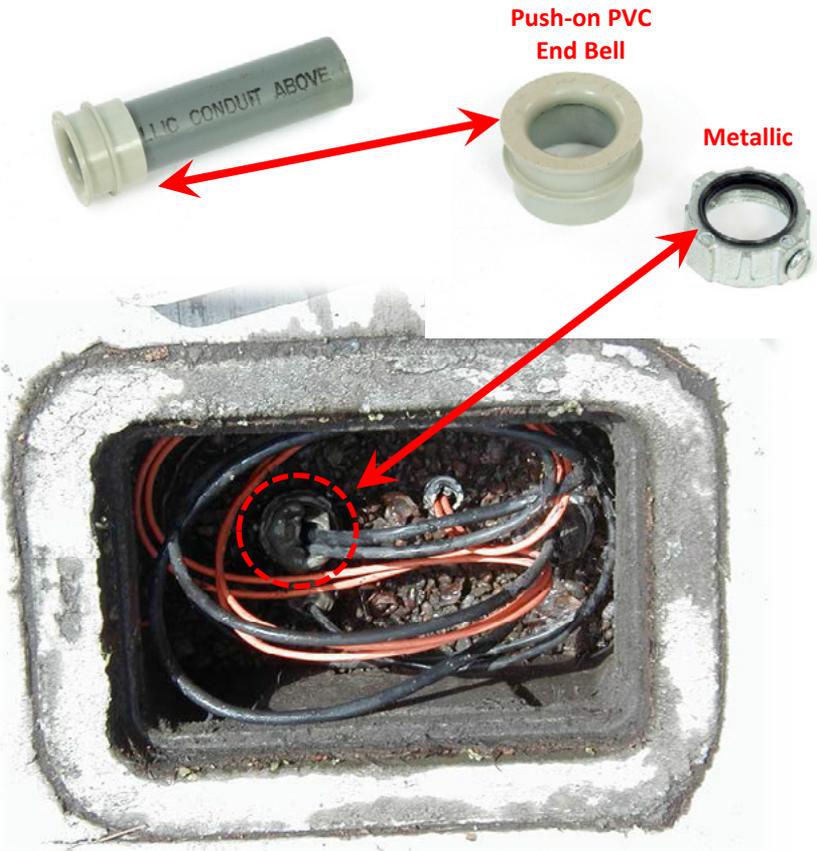
Typical Sources of Info:

Specs: 00960.42(g)(4) & 02920.12

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pg. 146



DESCRIPTION:

- Hub: Nylon insulated steel or malleable iron connector, with neoprene "O" ring
- Conduit Body: Malleable iron conduit body hot dip galvanized with cover and moisture-proof gasket

USE:

- Hub: To provide a watertight connection to cast iron junction boxes. In the past, was used for meter bases, service cabinets, & terminal cabinets - NOT a common item used on current projects.
- Conduit Body: To provide a conduit transition/pull point. Typically used for installing a photoelectric cell.

Typical Sources of Info:

Specs: 02920.12

Std. Dwg: TM465 & TM488

Plan Sheets: NO

Additional Installation Info: NO



Factory Installed Hub on pole (NOT a blue sheet item)



Conduit Hub (Note: no longer used for terminal cabinets)



Conduit Body



Conduit Plug

Blue Sheets
Common Electrical

DESCRIPTION: Closed cell polyethylene foam style is pre-formed for a specific conduit size. Spray foam not allowed. Cut to a supplier suggested length for conduit sizes. Mechanical device (clay/putty material called Duct Seal) style fits into conduit opening to form a seal to conduit and wires/cables.

USE: Inserted into exposed end of conduit in foundations and junction boxes, to keep debris out of the conduit. Not watertight.

Typical Sources of Info:

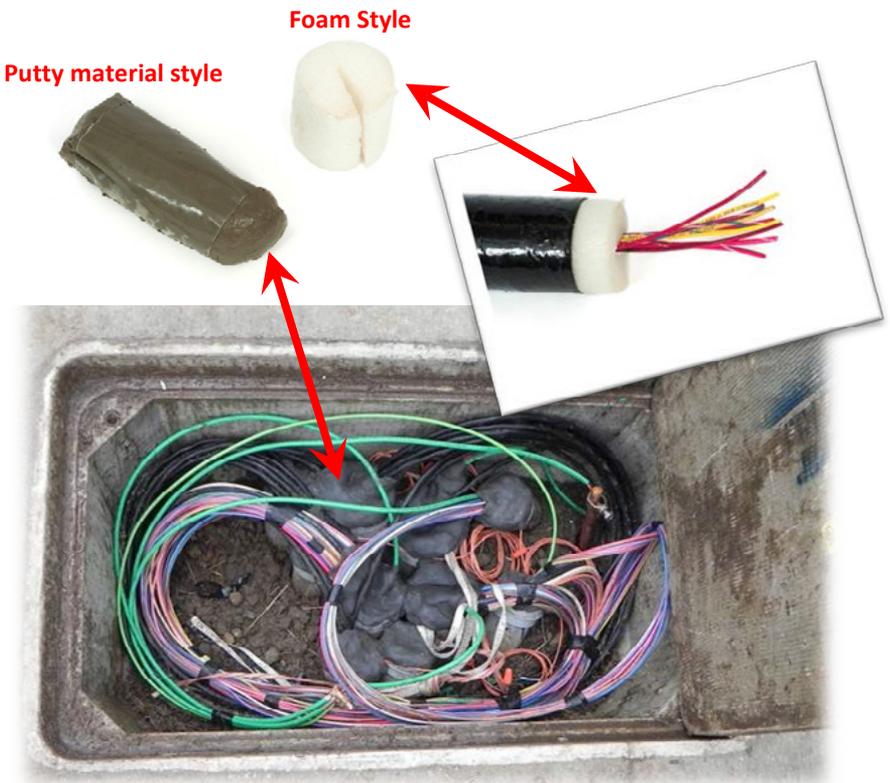
Specs: 00960.42(g) & 02920.28

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pgs. 124, 126 & 146

Blue Sheet
Materials



DESCRIPTION: Weatherproof, malleable iron with a hot-dip galvanized finish.

USE: To provide for limited conduit expansion movement when crossing expansion joints in/on structures and between fitted enclosures.

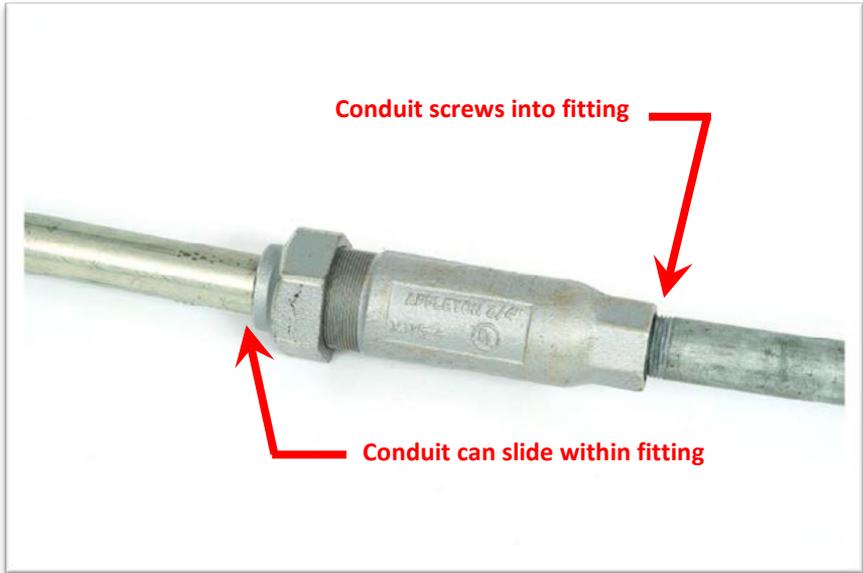
Typical Sources of Info:

Specs: 00960.42(k) & 02920.12

Std. Dwg: NO

Plan Sheets: Typically NO

Additional Installation Info: pg. 124



Ground Rod & Clamp

Blue Sheets
Common Electrical

DESCRIPTION: Copper coated 5/8 inch metal rod, 8 feet to 10 feet long with clamp.

USE: To ground electrical installation. All poles, conduit runs with 120V+ AC, and controller cabinet must be bonded to ground rod using full-contact clamps.

Typical Sources of Info:

Specs: 00960.50(b) & 02920.27

Std. Dwg: TM450, TM452, TM455, TM457, TM482, TM485 & TM492

Plan Sheets: NO

Additional Installation Info: pg. 144

Blue Sheet
Materials



DESCRIPTION: Watertight boxes of cast iron, gasketed lid held down with stainless steel screws. For traffic areas the lids shall be recessed type and for surface mounted the lids shall be overlapping.

USE: As a pull point or wire access point in traffic areas (pavement).

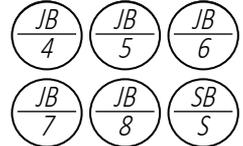
Typical Sources of Info:

Specs: 00960.44 & 02920.14(b)

Std. Dwg: NO

Plan Sheets: YES

Additional Installation Info: NO



Junction Boxes (Concrete)

Blue Sheets
Common Electrical

DESCRIPTION: Open-bottom boxes of pre-cast reinforced concrete with brass or stainless steel fasteners. Polymer concrete also allowed.

USE: As a pull point or wire access point.

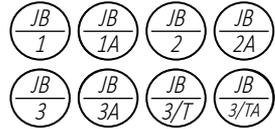
Typical Sources of Info:

Specs: 00960.44 & 02920.14(c), (d)

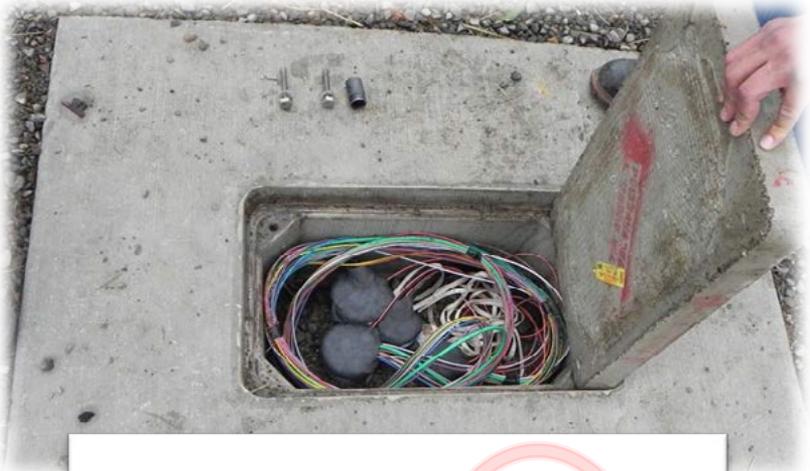
Std. Dwg: TM472

Plan Sheets: YES (location & size), Typically NO (material)

Additional Installation Info: pgs. 128 & 130



Blue Sheet
Materials



Traffic Rated Lid
(approx. 2" thick)



**Non-Traffic
Rated Lid**



DESCRIPTION: Open-bottom boxes made of polymer, fiberglass, and/or polymer concrete.

USE: As a pull point or wire access point.

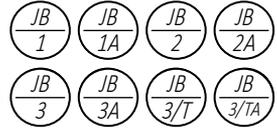
Typical Sources of Info:

Specs: 00960.44 & 02920.14(e)

Std. Dwg: TM472

Plan Sheets: YES (location & size), Typically NO (material)

Additional Installation Info: pgs. 128 & 130



**Traffic Rated Lid
(approx. 2" thick)**



**Non-Traffic
Rated Lid**



Junction Boxes (Hand Hole)

Blue Sheets
Common Electrical

DESCRIPTION: Open bottom boxes made of polymer, fiberglass, and/or polymer concrete.

USE: As a pull point/wire access point for communication cables like fiber optic, etc.

Typical Sources of Info:

Specs: 00960.44 & 02920.14(e)

Std. Dwg: TM472

Plan Sheets: YES (location & size), Typically NO (material)

Additional Installation Info: pgs. 128 & 130



DESCRIPTION: Sectional wire termination points, 600 Volt rated, solder-less connections, tubular clamp, sized for wire being terminated, channel mount assembly.

USE: For terminating wires/cables in the terminal cabinet on a signal pole and in the 332S signal controller cabinet.

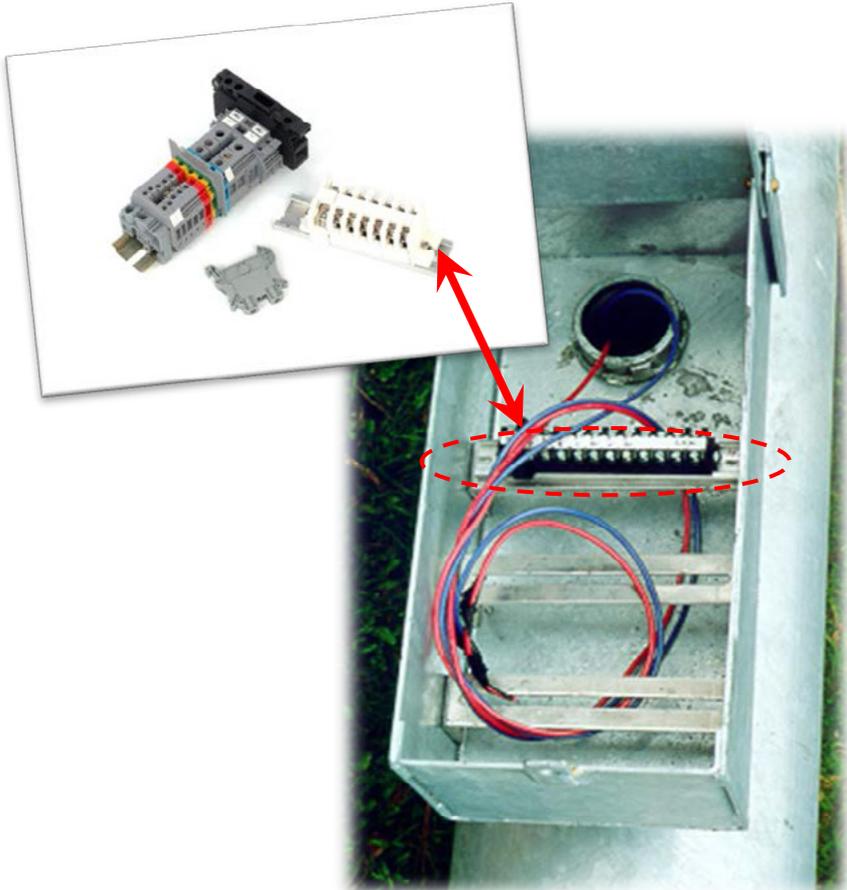
Typical Sources of Info:

Specs: 00990.41(a) & 02925.41(c)

Std. Dwg: TM488

Plan Sheets: NO

Additional Installation Info: pg. 120



DESCRIPTION: Stranded copper conductor, color coded wire.

- THWN wire has PVC insulation and nylon jacket. Visually, this insulation is “shinier” than XHHW
- XHHW wire has cross-linked polyethylene insulation. This insulation is more durable than THWN

USE: To provide electricity to equipment for all single conductor applications.

Typical Sources of Info:

Specs: 00960.45, 02920.20, 02920.21 & 02920.23

Std. Dwg: TM470

Plan Sheets: YES

Additional Installation Info: pgs. 146 & 148

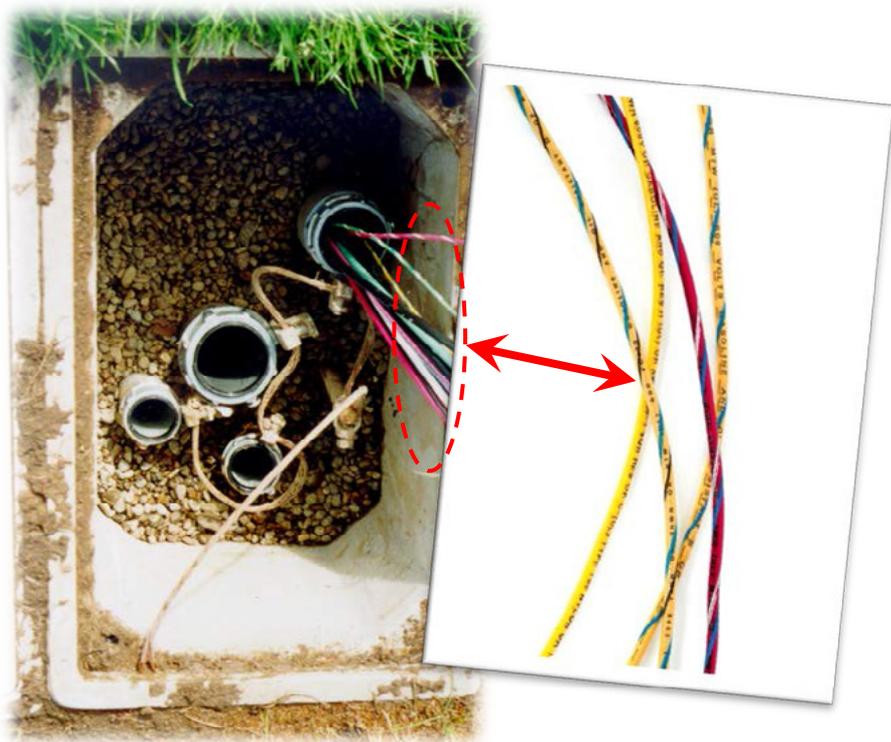
N-C

N-12C

N-14C

N/G

N G



DESCRIPTION: Red polyethylene film, 6" wide, 4 mils thick. Printed with "CAUTION BURIED ELECTRICAL LINE" legend (or similar legend).

USE: To warn of buried electrical line for any conduit located outside of the paved roadway. Placed the full length of the conduit, 6" below the ground surface.

Blue Sheet
Materials

Typical Sources of Info:

Specs: 00960.42(e) & 02920.13

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pg. 126



Aluminum Sign Mounting Framework

Blue Sheets
Traffic Signal Specific

DESCRIPTION: An aluminum assembly for mounting signs on a mast arm, pole and spanwire installations. The Type A mount is used on spanwire installations and the Type B mount is used on mast arm and pole installations (an adjustable bracket without tenon).

USE: To attach signs to a mast arm or span wire

Typical Sources of Info:

Specs: 02925.62(a),(c),(d) & 02925.67(c)

Std. Dwg: TM465

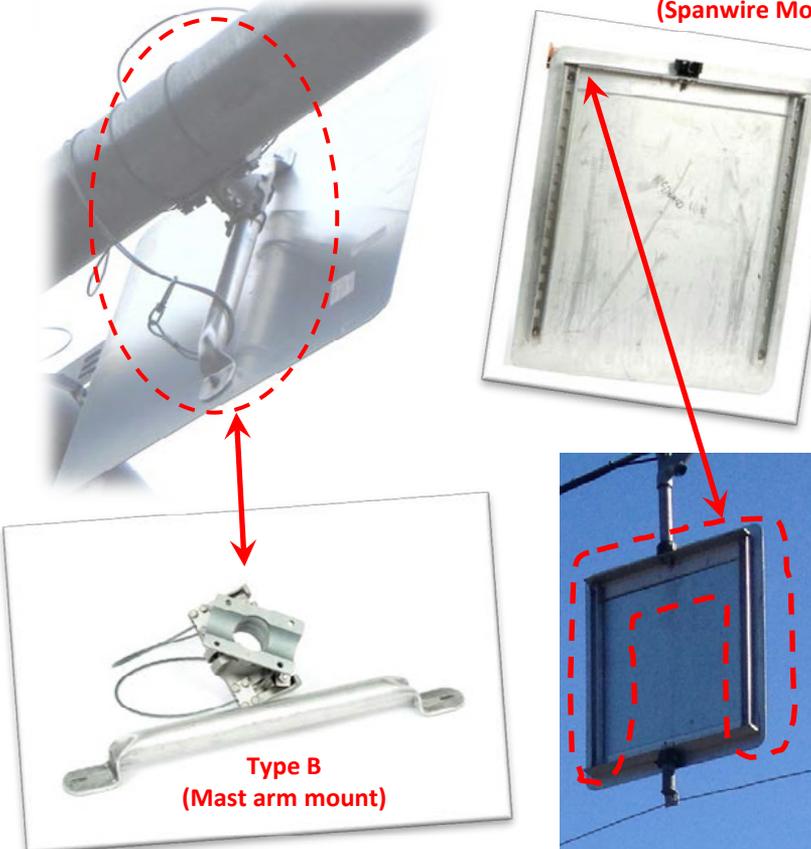
Plan Sheets: Typically YES

Additional Installation Info: NO



Blue Sheet
Materials

**Type A
(Spanwire Mount)**



DESCRIPTION: Aluminum sheet powder-coated flat black louvered or black polycarbonate attached with stainless steel screws and washers with reflective sheeting installed along the edge.

USE: Shield around vehicle signal to provide a contrast to the background.

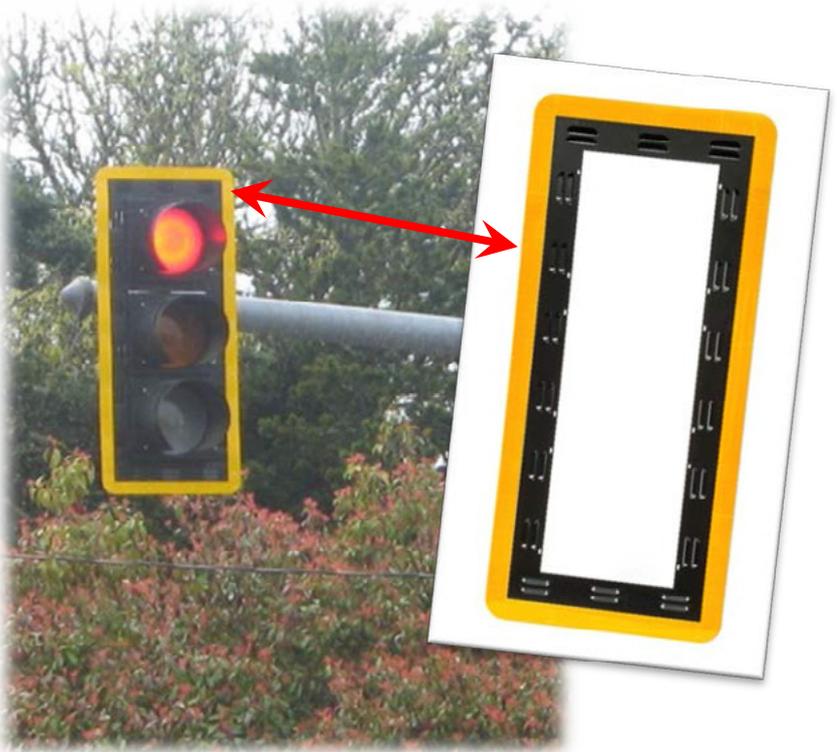
Typical Sources of Info:

Specs: 00990.42(a) & 02925.64(e)

Std. Dwg: TM460

Plan Sheets: NO

Additional Installation Info: pg. 154



Control Cable

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Multi-conductor bundled cable with assorted stranded copper wires (typically 14 AWG, but may be other sizes). Must meet color code on standard drawings.

USE: Used to provide electrical energy. Strapped to messenger cable on spans, used in mast arms. May also be used in conduit runs.

Typical Sources of Info:

Specs: 02920.20, 02920.21, 02920.22, & 00990.40(a)

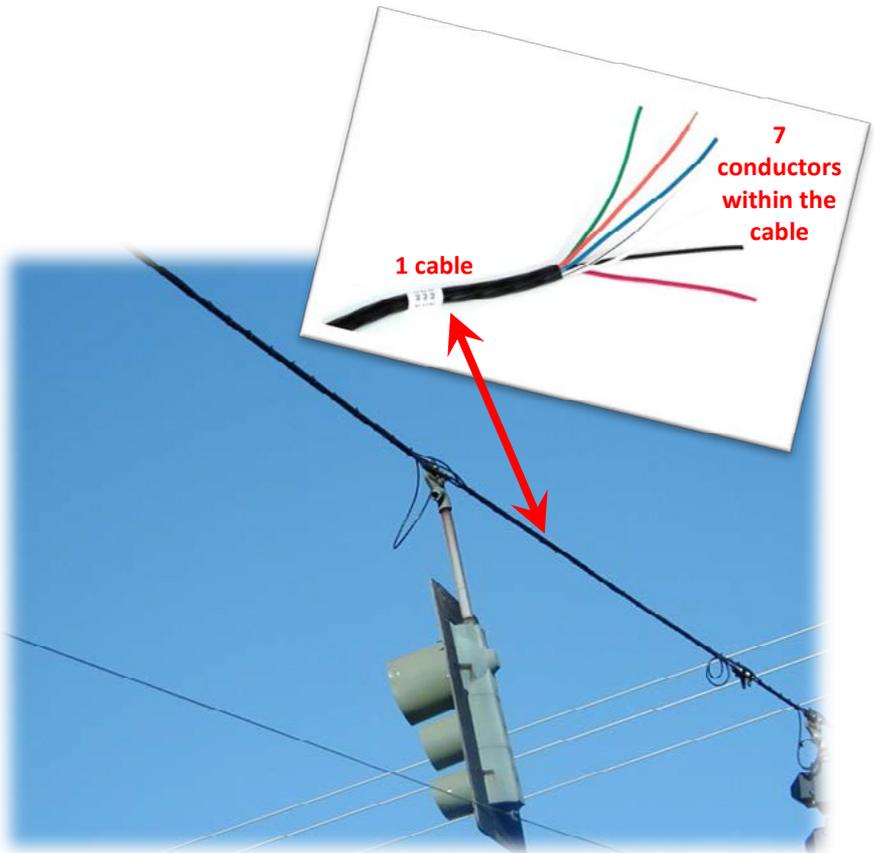
Std. Dwg: TM470

Plan Sheets: YES

Additional Installation Info: pgs. 146 & 148



Blue Sheet
Materials



DESCRIPTION: Hardware for attaching spanwire installations to strain poles. Hot-dip galvanized.

USE:

- To hang messenger cable (the cable above signal heads): An eyebolt + strandvise.
- To hang tether cable (the cable below signal heads): An eyebolt + "S" hook (state supplied, designed to yield if the tether cable is struck by a high load) + turnbuckle + strandvise.

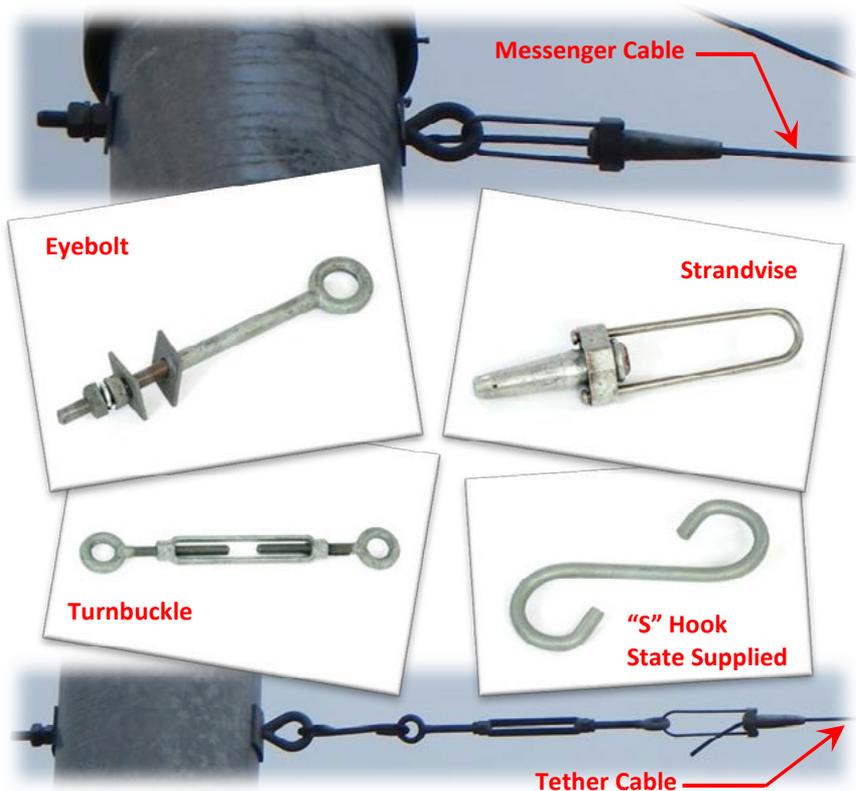
Typical Sources of Info:

Specs: 00990.40(c), 00990.40 (d), & 02920.24

Std. Dwg: TM452

Plan Sheets: NO

Additional Installation Info: pgs. 136 & 138



DESCRIPTION: Shielded cable containing 6+ twisted pairs of No. 19 AWG wires. REA spec. PE-22 (air-core, for overhead) or PE-39 (gel-fill, for underground), polyethylene jacket.

USE: For communication between traffic signal controllers. Installed with no splices between separate signal controllers.

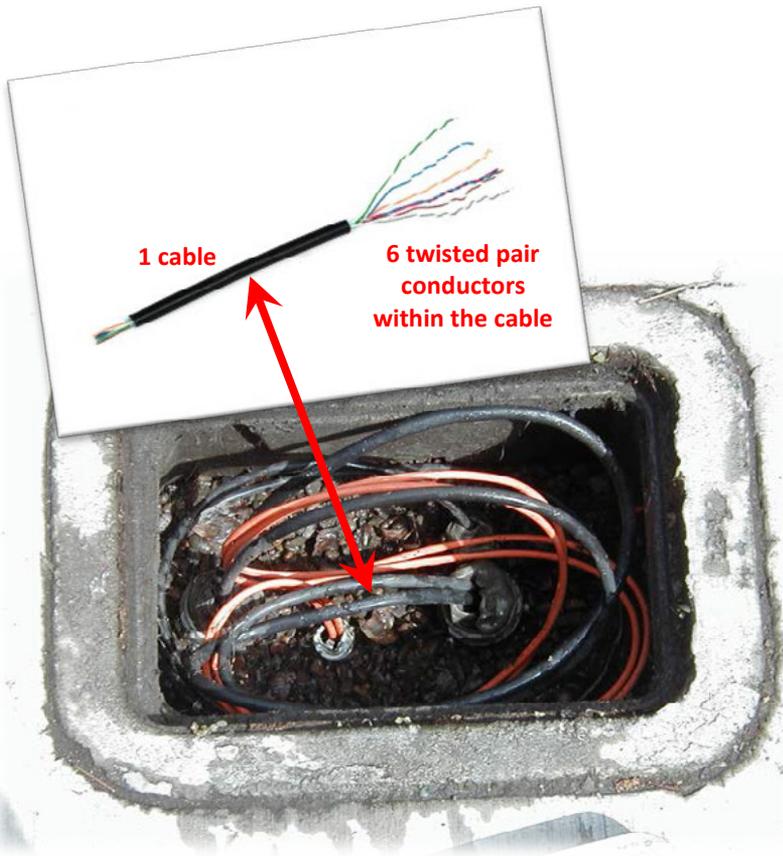
Typical Sources of Info:

Specs: 00990.40(e) & 02920.22

Std. Dwg: TM498

Plan Sheets: YES

Additional Installation Info: pg. 146



DESCRIPTION: Light Emitting Diode (LED) Unit which replaces incandescent bulbs in signal heads and pedestrian heads. Flange mount type, clear.

USE: To illuminate vehicle and pedestrian signals.

Typical Sources of Info:

Specs: 00990.42(a), 00990.42 (b), & 02925.51(b)

Std. Dwg: TM460

Plan Sheets: NO

Additional Installation Info: pgs. 152 & 154



Loop Feeder Cable

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Polyethylene jacketed, shielded cable with two twisted No. 14 AWG wires and bare tinned copper drain wire or No. 14 AWG wires wrapped with mylar tape. IMSA Spec. No. 50-2. May also be No. 18 AWG wires if shown in the plans.

USE: Connects pairs of loop wires to controller, splice only at the junction box nearest the loop wires.

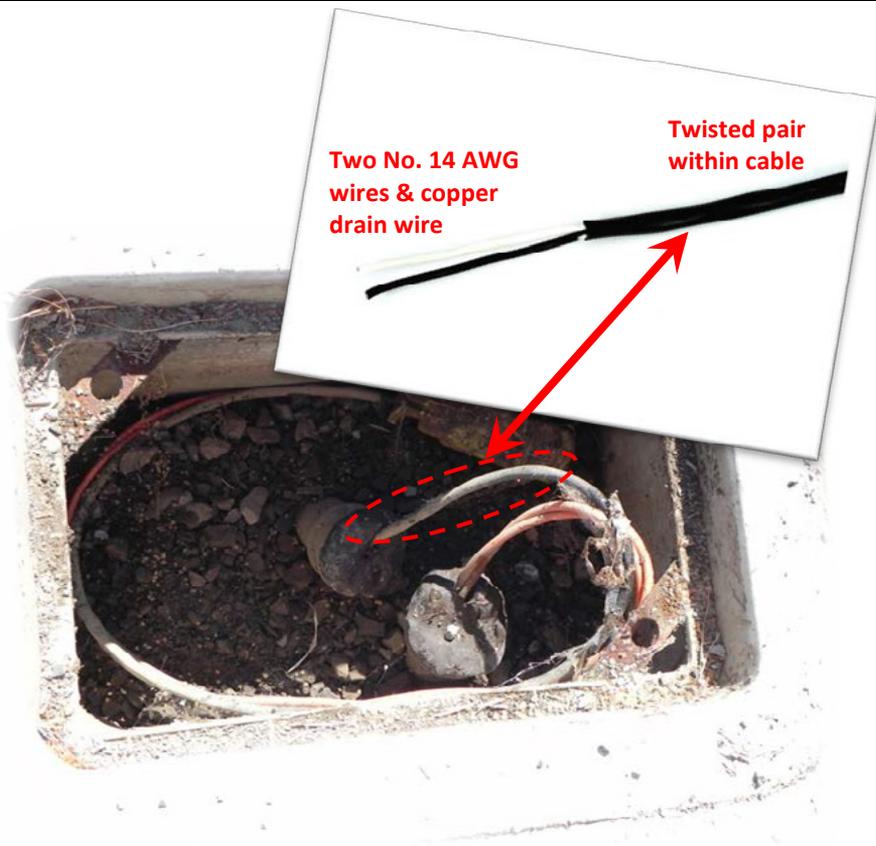
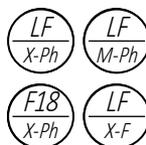
Typical Sources of Info:

Specs: 02920.22

Std. Dwg: TM475

Plan Sheets: YES

Additional Installation Info: pg. 146 & 168



DESCRIPTION: Two-piece plastic enclosure flooded with silicon grease. Includes screw on silicon grease filled wire connectors.

USE: Used to connect loop feeder and loop wire (splice point).

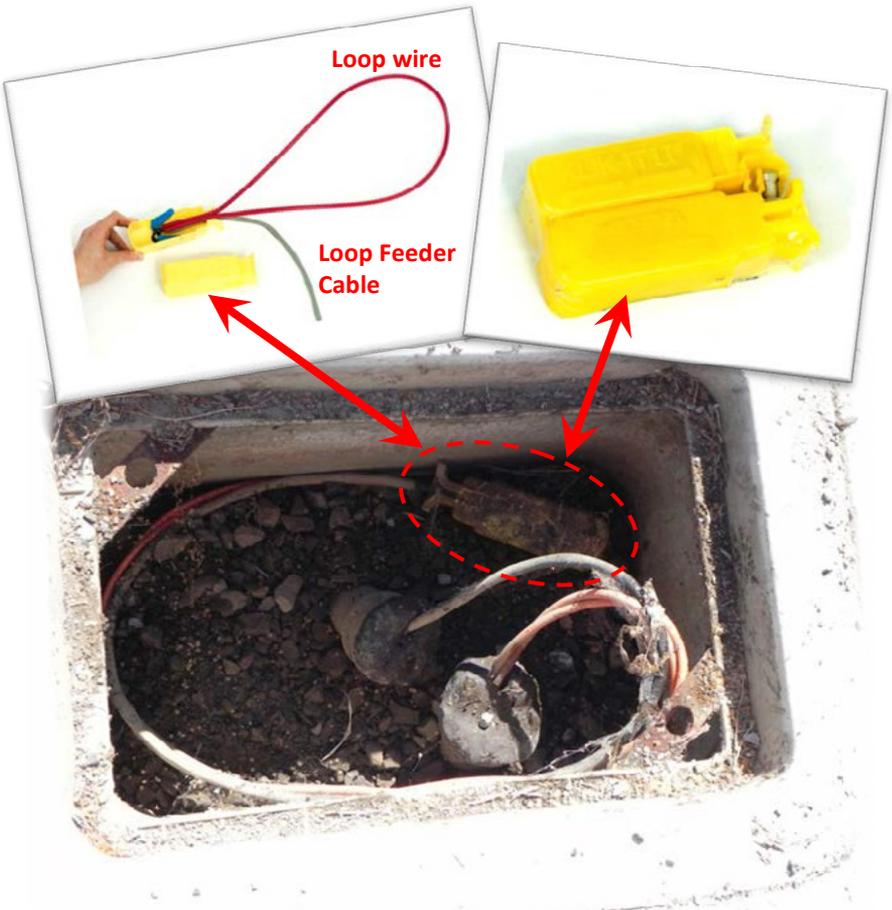
Typical Sources of Info:

Specs: 00990.43(b)(4)

Std. Dwg: TM475

Plan Sheets: NO

Additional Installation Info: pg. 168



Loop Wire (XHHW/DUCT)

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Stranded copper conductor, with cross-linked polyethylene insulation, No. 14 AWG wire. Encased in a polyethylene tube (sleeve). Wire and tube must be stamped with proper IMSA 51.7.

USE: Used to detect vehicles. Loop wire is installed in the pavement in a circle or diamond pattern. The pair of loop wires, from the pavement to the junction box, is manually twisted 4 to 6 turns per foot.

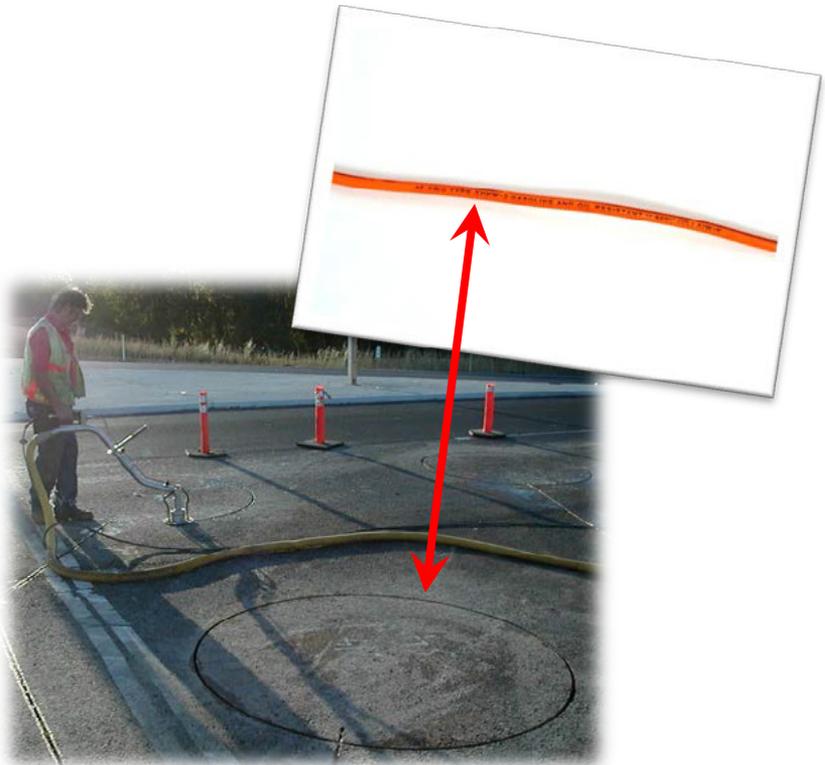
Typical Sources of Info:

Specs: 00990.43(2) & 02920.23

Std. Dwg: TM475 & TM480

Plan Sheets: YES

Additional Installation Info: pgs. 160, 162, & 168



DESCRIPTION: Bare steel cable comprised of 7 strands of galvanized wire. Utilities grade 3/8 inch diameter with 11,500 lbs. break.

USE: Supports control cables, signal heads and signs on a spanwire installation.

Typical Sources of Info:

Specs: 00990.40(c) & 02920.22

Std. Dwg: TM452

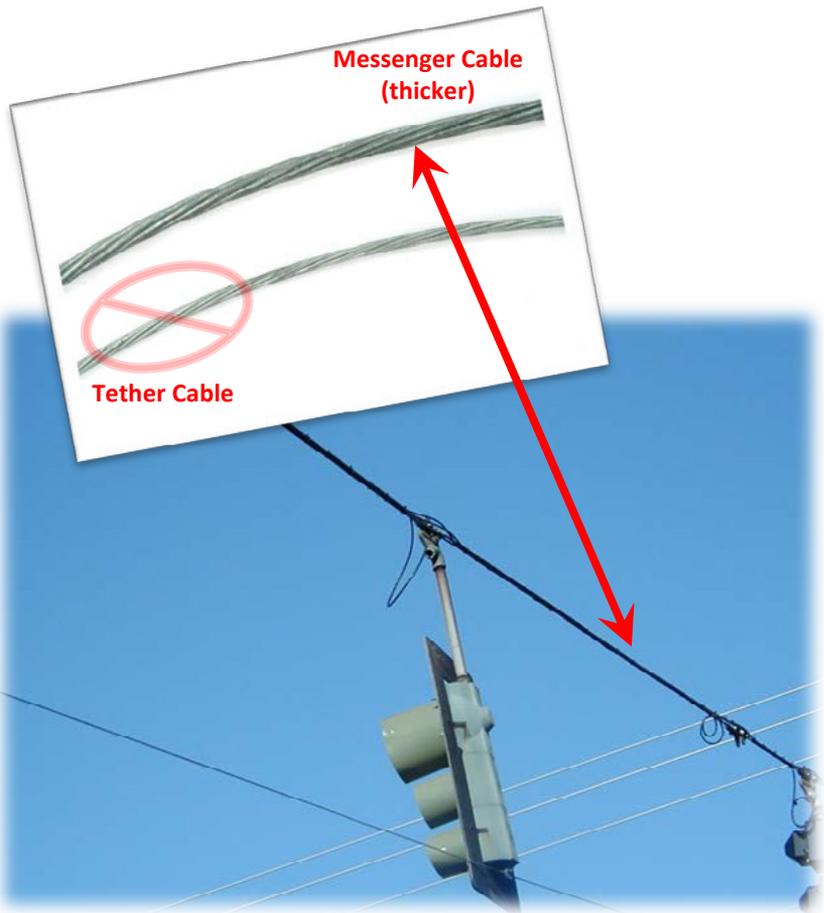
Plan Sheets: YES

Additional Installation Info: pg. 136

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39

42



DESCRIPTION: Socket into which the power company's meter will be installed. Stainless steel or powder coated base.

USE: For power companies to meter power. Used between power source and service cabinet for temporary signals only (located on a temporary signal pole).

Note: for permanent installations, the meter base is inclusive to the "Service Cabinet" (see pgs. 44 & 174 for more info).

Typical Sources of Info:

Specs: 00960.49(a)

Std. Dwg: TM455 & TM485

Plan Sheets: YES

Additional Installation Info: NO



DESCRIPTION: Four inch diameter galvanized steel pipe mounted on a cast aluminum or galvanized cast iron base.

USE: Freestanding pole for mounting of pedestrian signals.

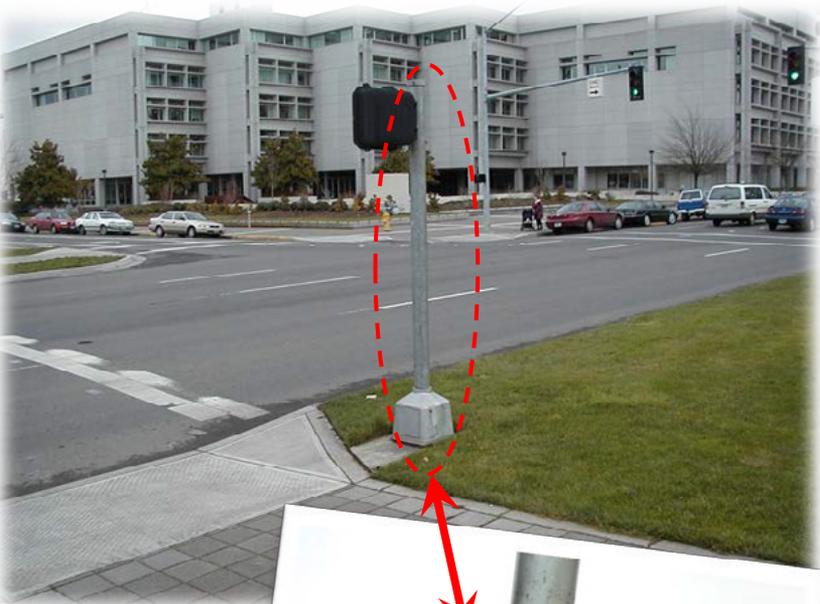
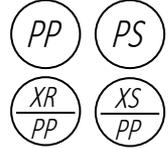
Typical Sources of Info:

Specs: 02925.33 (a) & 02925.33(c)

Std. Dwg: TM457

Plan Sheets: YES

Additional Installation Info: pgs. 106 & 116



Pedestal (Vehicle Signal)

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Four inch diameter galvanized steel pipe with welded base plate bolted to a cast aluminum or galvanized cast iron transformer base.

USE: Freestanding pole for mounting vehicle signals. Other equipment may be mounted with vehicle signal.

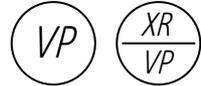
Typical Sources of Info:

Specs: 02925.33(a) & 02925.33(b)

Std. Dwg: TM457

Plan Sheets: YES

Additional Installation Info: pgs. 106 & 116



DESCRIPTION: Pole mounted signals. Aluminum powder coated black or black polycarbonate with stainless steel hardware.

USE: To indicate walk/don't walk pedestrian phases at marked crosswalks.

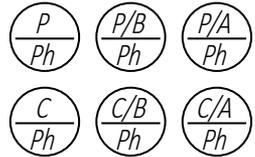
Typical Sources of Info:

Specs: 00990.42(d) & 02925.65(a) thru (c)

Std. Dwg: TM467

Plan Sheets: YES

Additional Installation Info: pg. 152



Pedestrian Signal Mount

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Swing open clam shell compartment.

USE: To connect pedestrian signal to pole, with wire terminals.

Typical Sources of Info:

Specs: 02925.65(d)

Std. Dwg: TM467

Plan Sheets: YES

Additional Installation Info: pg. 150



Blue Sheet
Materials



Preformed Vehicle Detector Loop

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Five turns of No. 14 AWG XHHW or No. 16 AWG TFFN wire encased in either schedule 40 PVC or rubber hydraulic hose totally filled with sealant.

USE: Used to detect vehicles in thin, poor pavement or concrete bridge decks.

Typical Sources of Info:

Specs: check special provisions

Std. Dwg: NO

Plan Sheets: YES

Additional Installation Info: pg. 166



Blue Sheet
Materials



PTR (Part Time Restriction) Signs

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Flat black, painted, aluminum alloy case with part-time legend when lit. LED illuminated legend.

USE: To indicate part time restrictions when applicable. Typically used for restricted turn moves when signals have railroad preemption.

Typical Sources of Info:

Specs: NO

Std. Dwg: TM497

Plan Sheets: YES

Additional Installation Info: NO



Blue Sheet
Materials



PTR sign ON
(Typical LED sign Message)

DESCRIPTION: Push button with mounts. Note the new standard, which has replaced the type “H” mount used in the past.

USE: For pedestrians to request the walk phase.

Blue Sheet
Materials

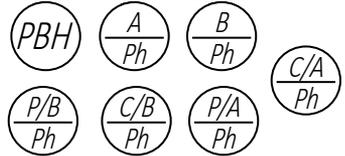
Typical Sources of Info:

Specs: 00990.43(a) & 02925.66

Std. Dwg: TM467

Plan Sheets: YES

Additional Installation Info: pg. 152



**New Standard
(9"x12" mount)**



**"H" mount style -
no longer used**

DESCRIPTION: Aluminum framework of ¼ inch channel or 1/8 inch sheet stock. One piece welded construction for newer installations, two-piece bolt together for retro-fit. Both styles anodized after fabrication.

USE: To raise the controller cabinet from the foundation 8 inches, providing additional work space under the cabinet. Use building paper gasket and non-hardening water tight seal between riser and cabinet and between foundation and riser.

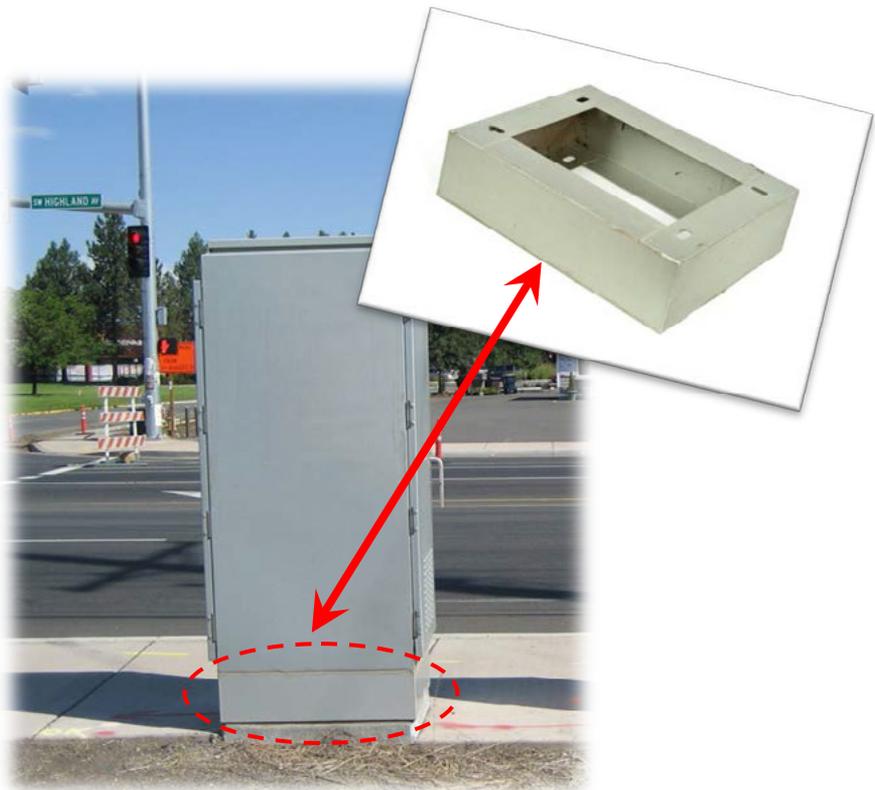
Typical Sources of Info:

Specs: NO

Std. Dwg: TM482

Plan Sheets: Typically NO

Additional Installation Info: pg. 176

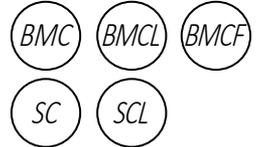


DESCRIPTION: Stand-alone (temporary installations) or Base mounted service cabinet with integral meter base. Includes circuit breakers, contactors, test switches, neutral and ground bars. Stainless, powder coated aluminum, or galvanized steel cabinet.

USE: Used to provide fused electrical service for permanent installations.

Blue Sheet
Materials

Typical Sources of Info:
Specs: 00990.41(c) & 02925.40
Std. Dwg: TM485
Plan Sheets: YES
Additional Installation Info: pg. 174



Stand Alone Service Cabinet Types:

- SC
- SCL



Base Mounted Service Cabinet Types:

- BMC
- BMCL
- BMCF
- BMCFL

DESCRIPTION: Yellow prefabricated nylon “bag”. Includes a fine mesh insert for signal testing with integral elastic bands and clips to secure the covers to the signal head visors (may cover the complete head and backboard).

USE: To cover vehicle and pedestrian signal heads until the signal is turned on.

Typical Sources of Info:

Specs: 00990.42(g) & 02925.68

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pgs. 152 & 154

Cover for Vehicle Signal



Cover for Pedestrian Signals



DESCRIPTION: A fitting of cast bronze that attaches to the messenger cable with two “U” bolts. A wire outlet body hangs from this with a clevis pin through adjustable slot. All fasteners shall be type 304/316 stainless steel.

USE: To mount vehicle signal and signs on span wires. Allows equipment to hang plumb from spanwire, provides cable entrance when wire is installed with correct drip loop.

Blue Sheet
Materials

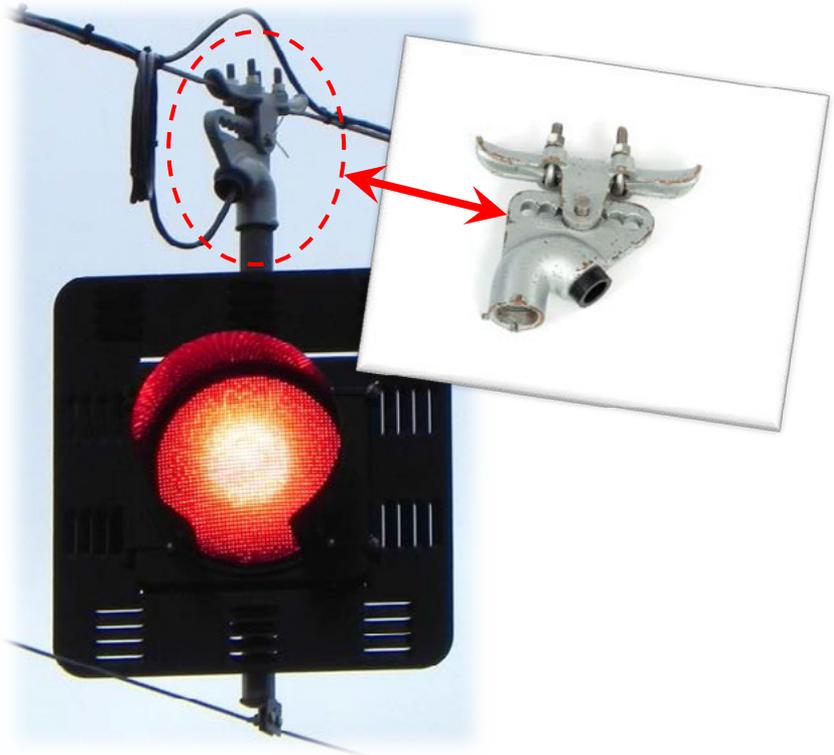
Typical Sources of Info:

Specs: 02925.62(c)

Std. Dwg: TM463

Plan Sheets: NO

Additional Installation Info: pg. 140



Terminal Cabinet

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Constructed of 1/8 inch stainless, galvanized steel, or powder coated aluminum. Contains terminal blocks. Weatherproof fittings at the bottom for span wire installations. Project plans may call for a recessed terminal cabinet (RTC), which is part of the signal pole shop drawings, not a blue sheet item.

USE: To house terminal blocks on poles for all signal circuits.

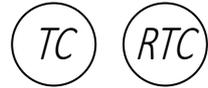
Typical Sources of Info:

Specs: 00990.41(a) & 02925.40

Std. Dwg: TM488

Plan Sheets: YES

Additional Installation Info: pg. 120



DESCRIPTION: ¼ inch galvanized steel cable comprised of 7 strands of galvanized wire. Class A coating conforming to ASTM A 475.

USE: Attached at the bottom of equipment to stabilize and prevent wind movement.

Typical Sources of Info:

Specs: 00990.40(d) & 02920.22

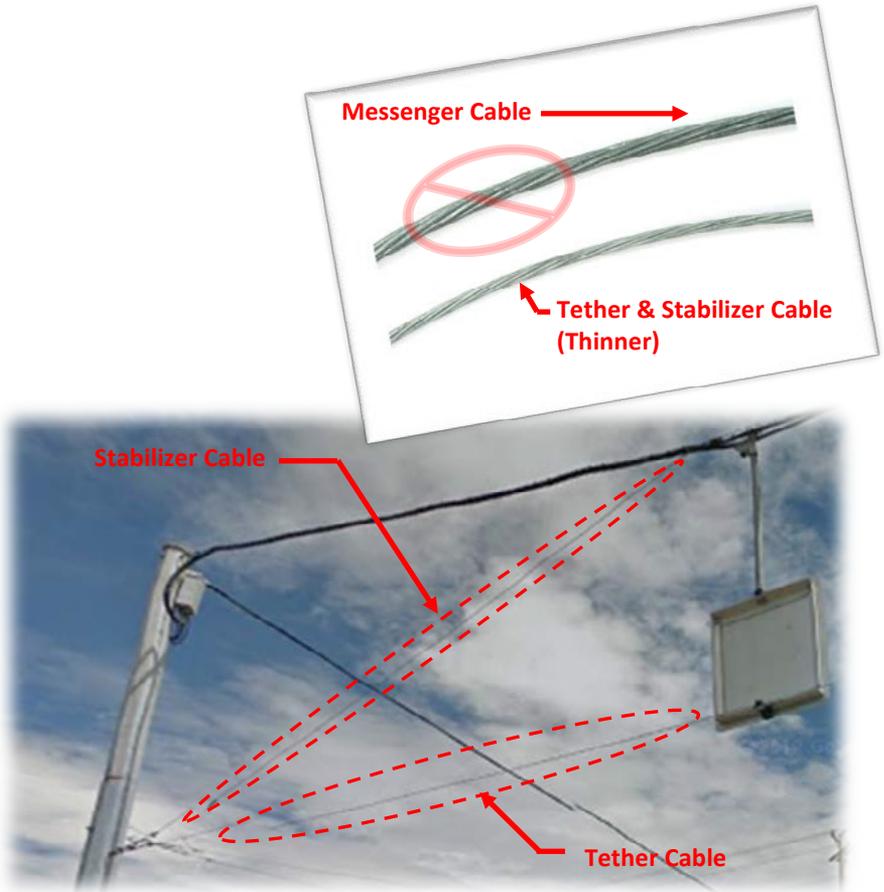
Std. Dwg: TM452

Plan Sheets: YES

Additional Installation Info: pg. 138

38

41



Tether Clamp

Blue Sheets
Traffic Signal Specific

DESCRIPTION: Fitting on bottom of span mounted signal or sign constructed of 1 ½ inch galvanized steel pipe or galvanized metal conduit with plate welded on bottom, tether wire keeper bolted to plate. Galvanized after fabrication. All fasteners type 304/316 stainless steel.

USE: To attach tether cable to vehicle signals and signs.

Typical Sources of Info:

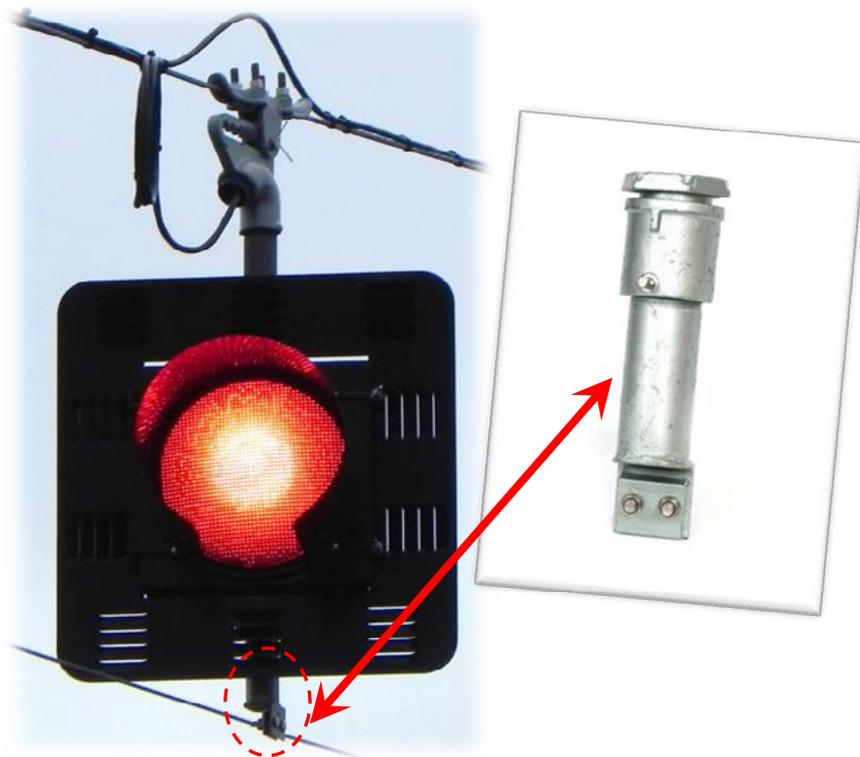
Specs: NO

Std. Dwg: TM463

Plan Sheets: NO

Additional Installation Info: pg. 138

Blue Sheet
Materials



DESCRIPTION: Fitting of cast aluminum with steel insert, powder coated as per spec. Three bolts, split washers, nylon insert lock-nuts if stainless steel, with 2 stainless steel backing washers.

USE: To attach vehicle signals and signs to a 1 ½ inch conduit riser which is supported by a spanwire hanger.

Typical Sources of Info:

Specs: 02925.62(e)

Std. Dwg: TM463

Plan Sheets: NO

Additional Installation Info: pg. 140



Vehicle Signal Bracket (Adj.)

Blue Sheets
Traffic Signal Specific

DESCRIPTION: An extruded aluminum assembly that is adjustable. Its full length supports a vehicle signal on a mast arm and attaches to the arm by means of stainless steel cables.

USE: To mount vehicle signals and signs on a mast arm. Allows for adjustment of signal for height and full support of signal sections. 4" side pole mount used to mount vehicle signals on vehicle pedestals.

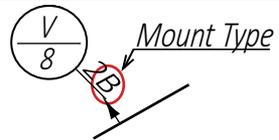
Typical Sources of Info:

Specs: 00990.42(f) & 02925.62(d)

Std. Dwg: TM462

Plan Sheets: YES

Additional Installation Info: pg. 134



Blue Sheet
Materials



DESCRIPTION: Aluminum powder coated black or black polycarbonate open at bottom standard (tunnel). Visor must attach to signal heads with stainless steel screws.

USE: On all signal heads to direct the illumination to the motorist.

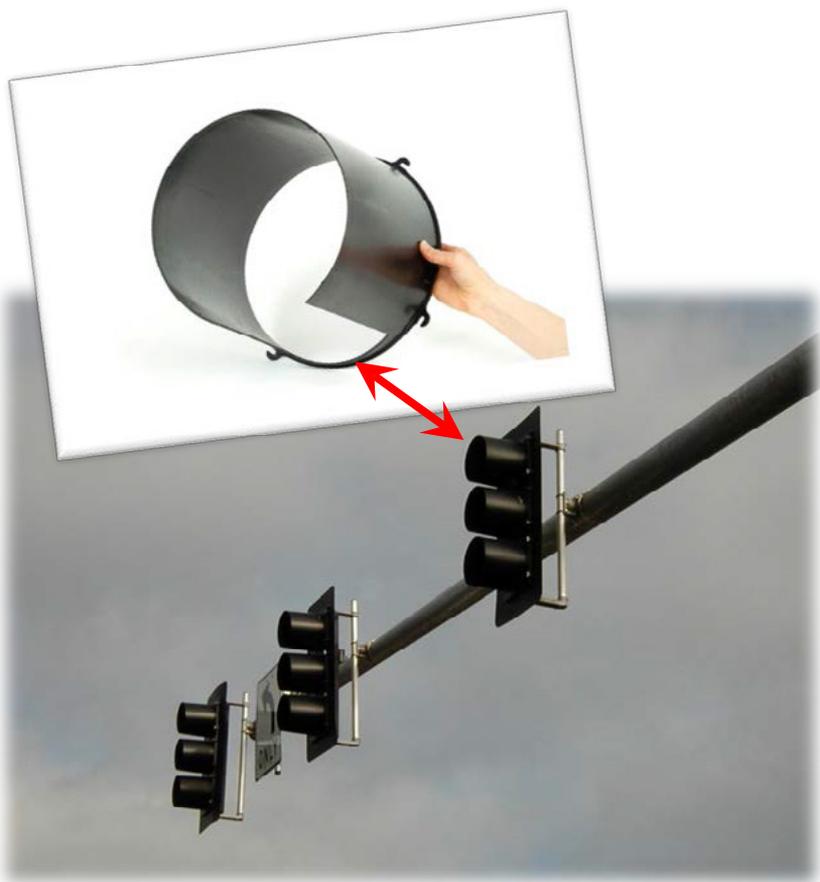
Typical Sources of Info:

Specs: 00990.42(a) & 02925.64(d)

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pg. 154



DESCRIPTION: Aluminum powder coated black or black polycarbonate. May have 1,2,3,4, or 5 signal faces, defined on plan sheets and TM460 by Signal Head Type. All fasteners shall be type 304/316 stainless steel except for brass terminal screws.

USE: To direct vehicles at intersections.

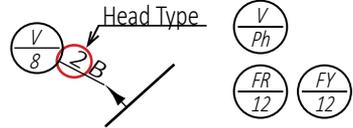
Typical Sources of Info:

Specs: 00990.42(a), (c), 02925.64, & 02925.67(a)

Std. Dwg: TM460

Plan Sheets: YES

Additional Installation Info: pgs. 154 & 156



Modular Assembly
(Three individual signal faces
connected together to create a
Type 2 Signal Head as shown)



In-line Fuse Holder

Blue Sheets
Illumination Specific

DESCRIPTION: 30A 600V single pole or double pole in-line fuse holder with KTK fuse, insulating boots, and set-screw terminations.

USE: To splice illumination wires and provide a fused disconnect in the luminaire/signal pole base.

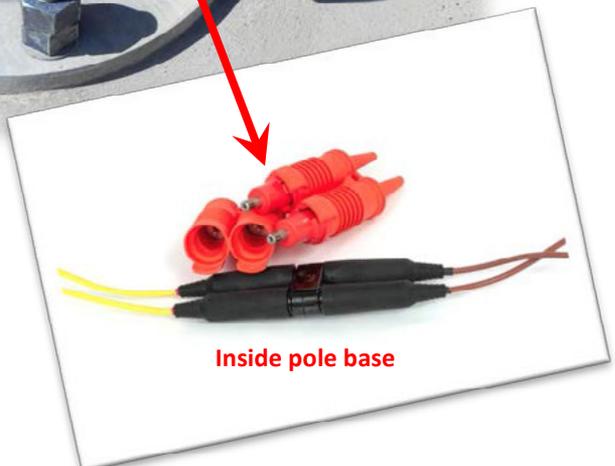
Typical Sources of Info:

Specs: 00970.42 & 02920.26

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pg. 172



DESCRIPTION: A photoelectronic device used for turning on illuminated signs or luminaires meeting specifications under 00970.

USE: To activate illumination systems, luminaires at traffic signals and interior illuminated signs.

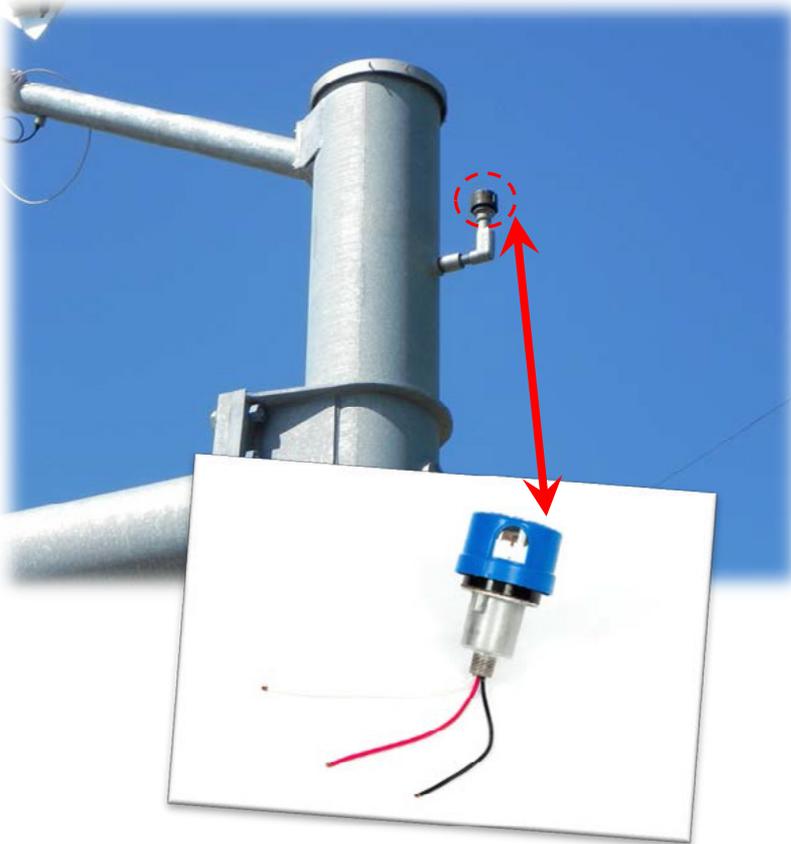
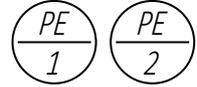
Typical Sources of Info:

Specs: 00970.43 & 02926.41(e)

Std. Dwg: TM465

Plan Sheets: YES

Additional Installation Info: pg. 172



DESCRIPTION: Typically a three conductor No. 10 AWG cable with XHHW conductors and overall PVC jacket.

USE: Illumination cable between the luminaire and the in-line fuse holder in the pole base.

Typical Sources of Info:

Specs: 00970.42

Std. Dwg: NO

Plan Sheets: NO

Additional Installation Info: pg. 172



TC cable connected from the luminaire fixture to the in-line fuse holder in the base of the pole.