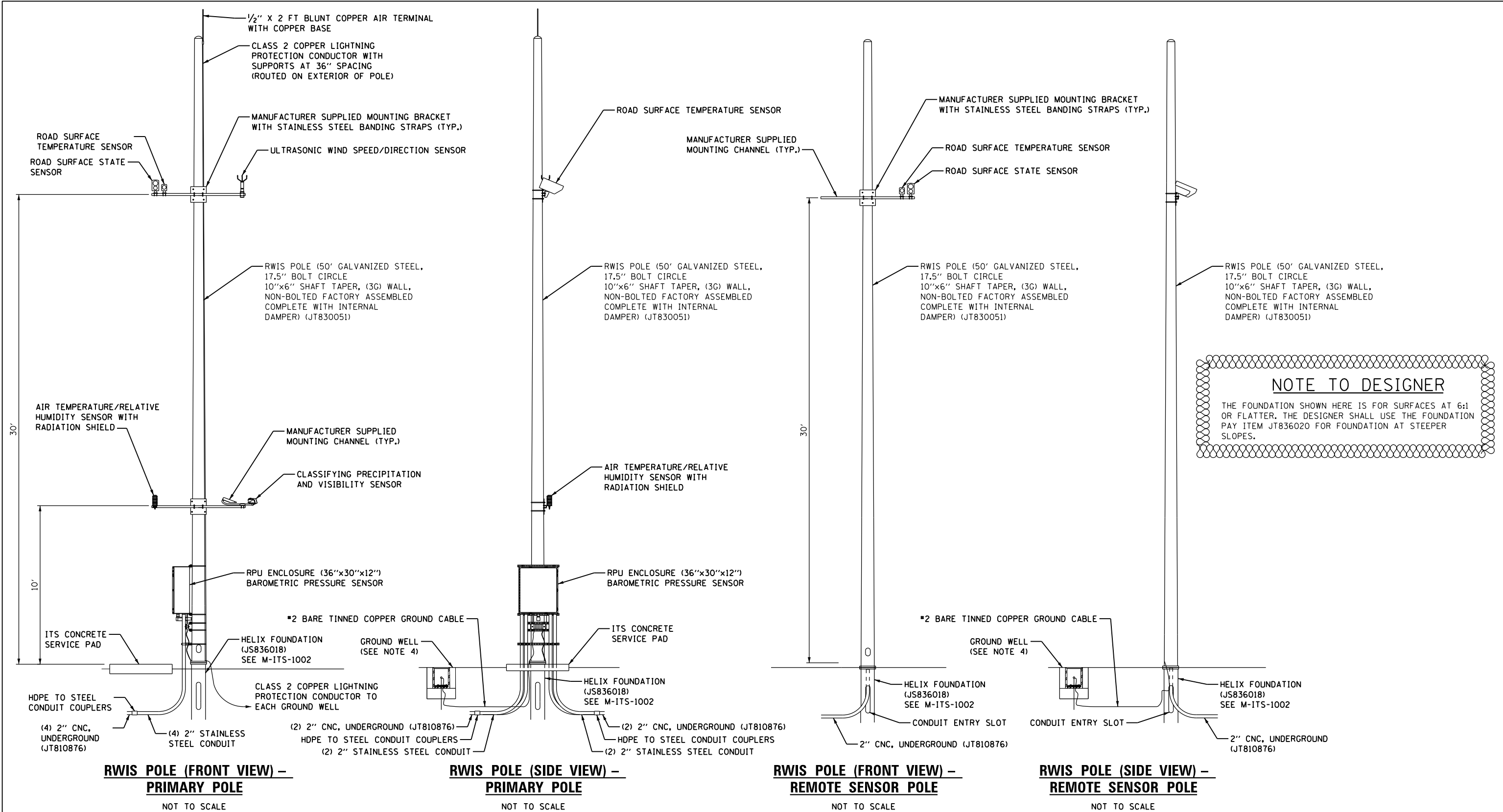


<b>Illinois Tollway Base Sheet Revisions</b>
--

Section M	Base Sheet Drawings	
Drawing	Modification Summary	Effective: 2019-03-01
<b>Pole Assembly (ITS)-Series 1000</b>		
M-ITS-1000	<b>Elevation Views Pole Mounted ITS Element Assembly</b> Changed disconnect switch to unfused.	
M-ITS-1003	<b>ITS Concrete Service Pad (2 sheets)</b> New drawing with three types of service pads for ITS poles for flat and slope installation.	
M-ITS-1004	<b>Cabinet Wiring Diagram - ITS Pole Mounted Enclosure (Solar Powered MVDS) (2 sheets)</b> New cabinet layout separating ITS enclosure and dedicated co-located solar generator/battery cabinet with four 6 V batteries.	
<b>Dynamic Message Sign (ITS)-Series 1100</b>		
M-ITS-1108	<b>DMS Cabinet Wiring Diagram</b> Changed to Cisco 4000 series switch. Changed IP Relay to DIN IV.	
<b>Cabinet Wiring (ITS)-Series 1200</b>		
M-ITS-1200 to M-ITS-1217	<b>Cabinet Wiring Diagrams</b> 18 new ITS enclosure drawings replace old 56 ITS enclosure drawings for clarification. Drawings 1200 to 1217 have been redone completely. Consolidated equipment configurations. Standardized to-scale equipment layout. Changed to Cisco 4000 series switch. Eliminated 24 VAC transformer and 24 VAC CCTVs. Additional 24 VDC power supply. Cat6 Ethernet surge protectors revised to PoE++ compatible models.	
<del>M-ITS-12018 to M-ITS-1255</del>	<b>Cabinet Wiring Diagrams</b> Retired due to consolidation.	
<b>Roadway Weather Information System (ITS)-Series 1300</b>		
M-ITS-1300	<b>RWIS Pole, Sensor Mounting Detail</b> Pole height changed to 50 feet as standard pole for ITS with 17.5 inch bolt circle.	
M-ITS-1301	<b>RWIS Cabinet Wiring Diagram</b> Changed to Cisco 4000 series switch. Not connected to RWIS controller, for future use. Added IP Relay. Disconnected, for future use. Added secondary sensor pole cabinet wiring diagram. Cabinet is part of the design but was omitted in last year release.	
M-ITS-1303	<b>Typical RWIS Grounding Schematic</b> New drawing showing RWIS grounding system with grounding cable.	
<b>Solar Powered Generator (ITS)-Series 1400</b>		
<del>M-ITS-1402</del>	<b>Pole Mounted Solar MVDS Assembly</b> Co-located solar generator cabinet redesigned as M-ITS-1004.	
<b>Tower Mounted CCTV (ITS)-Series 1500</b>		
M-ITS-1500	<b>Tower Mount Camera Details</b> Cameras shown at offset height to avoid view obstruction. Pole mounting arm revised to Axis Q6155-E IP camera.	
M-ITS-1503	<b>Cabinet Wiring Diagram - Tower Mounted CCTV</b> Revised to show 24 VDC power supply, drawing drawn to scale.	
<b>Flashing Beacon (ITS)-Series 1700</b>		
M-ITS-1701	<b>Flashing Sign Beacon Installation Wiring Diagram</b> Revised to show full cabinet layout accomodating flasher beacon. Re-drawn to scale. Added flashing beacon, new surge suppressor.	
<b>IPDC Facility (ITS)-Series 1800</b>		
M-ITS-1802, 1803, 1805, 1806, 1809, 1810	<b>IPDC Facility</b> Building modified to accommodate larger generator room door, door stoppers. Additional exterior CCTV cameras. Added bird deterrant. Added exterior GFCI outlets.	
M-ITS-1802	Note 2: Seal door opening and protrusion/access against rodent and bugs. Note 3: Install removable stainless bollards per Illinois Tollway Maintenance.	
M-ITS-1803	Added 240 V service power outlet outside side wall.	
<b>Conduit Details at Integral Abutment Bridge (ITS)-Series 1900</b>		
M-ITS-1900	<b>Conduit Details at Integral Abutment Bridge with MSE Wall (Sheet 3)</b> Removed note stating concrete encasement to be placed monolithic with the approach slab. Added 0.5" PJF at the back of the abutment and approach bent. Added 0.75" PJF between the approach slab and encasement. Added detail for deflection and expansion fittings at the encasement and pile bent. Added detail for deflection fitting at encasement and abutment.	
<b>100 FT. Monopole (ITS)-Series 2000</b>		
M-ITS-2000 Sheet 4	<b>100 FT. Monopole Closed Circuit Television (CCTV) Camera Tower</b> Added sheet 4 of 4 showing hexagonal service pad.	

New Sheet

X Retired Sheet



**NOTE TO DESIGNER**  
 THE FOUNDATION SHOWN HERE IS FOR SURFACES AT 6:1 OR FLATTER. THE DESIGNER SHALL USE THE FOUNDATION PAY ITEM JT836020 FOR FOUNDATION AT STEEPER SLOPES.

**RWIS POLE (FRONT VIEW) – PRIMARY POLE**

NOT TO SCALE

**RWIS POLE (SIDE VIEW) – PRIMARY POLE**

NOT TO SCALE

**RWIS POLE (FRONT VIEW) – REMOTE SENSOR POLE**

NOT TO SCALE

**RWIS POLE (SIDE VIEW) – REMOTE SENSOR POLE**

NOT TO SCALE

**NOTE TO DESIGNER**

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

ANY MODIFICATIONS TO THIS DRAWING MUST BE ILLUSTRATED WITH A CHANGE CLOUD AND THE ILLINOIS TOLLWAY MUST APPROVE OF ANY CHANGES PRIOR TO THE DRAWING BECOMING FINAL. CHANGES TO THE MASTER REFERENCE DRAWING ARE PROHIBITED.

**NOTES:**

1. ALL ITEMS ON THIS SHEET ARE INCLUDED IN PAY ITEM "ROADWAY WEATHER INFORMATION SYSTEM" (JT131142) UNLESS NOTED OTHERWISE.
2. SEE M-ITS-1302 FOR RPU ENCLOSURE, REMOTE SENSOR ENCLOSURE, AND CONDUIT INSTALLATION DETAILS.
3. SENSORS MOUNTED ON RWIS POLES SHALL HAVE THEIR CABLING ROUTED INSIDE THE POLE.
4. ONLY ONE GROUND WELL SHOWN FOR CLARITY. INSTALL 3 GROUND RODS IN A TRIAD CONFIGURATION.

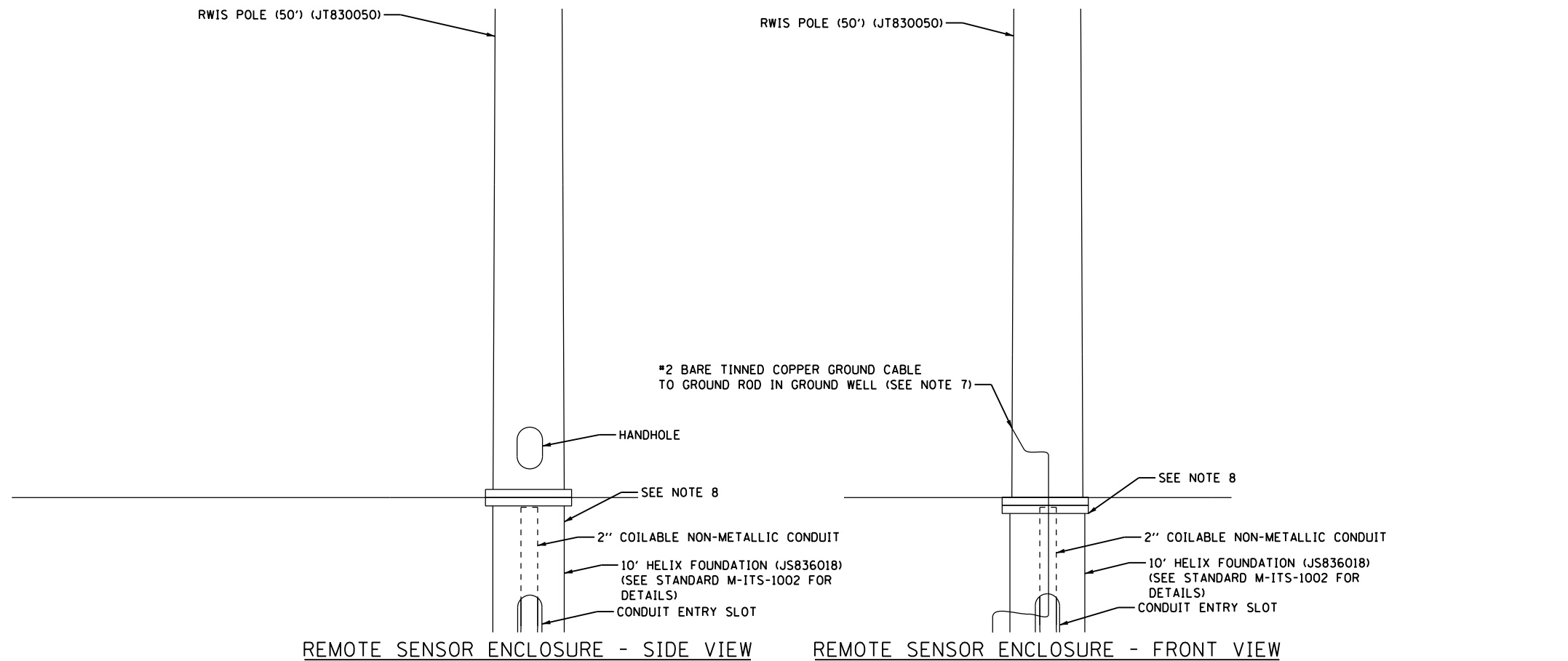


RWIS POLE, SENSOR MOUNTING DETAIL

DATE  
 3-01-2019

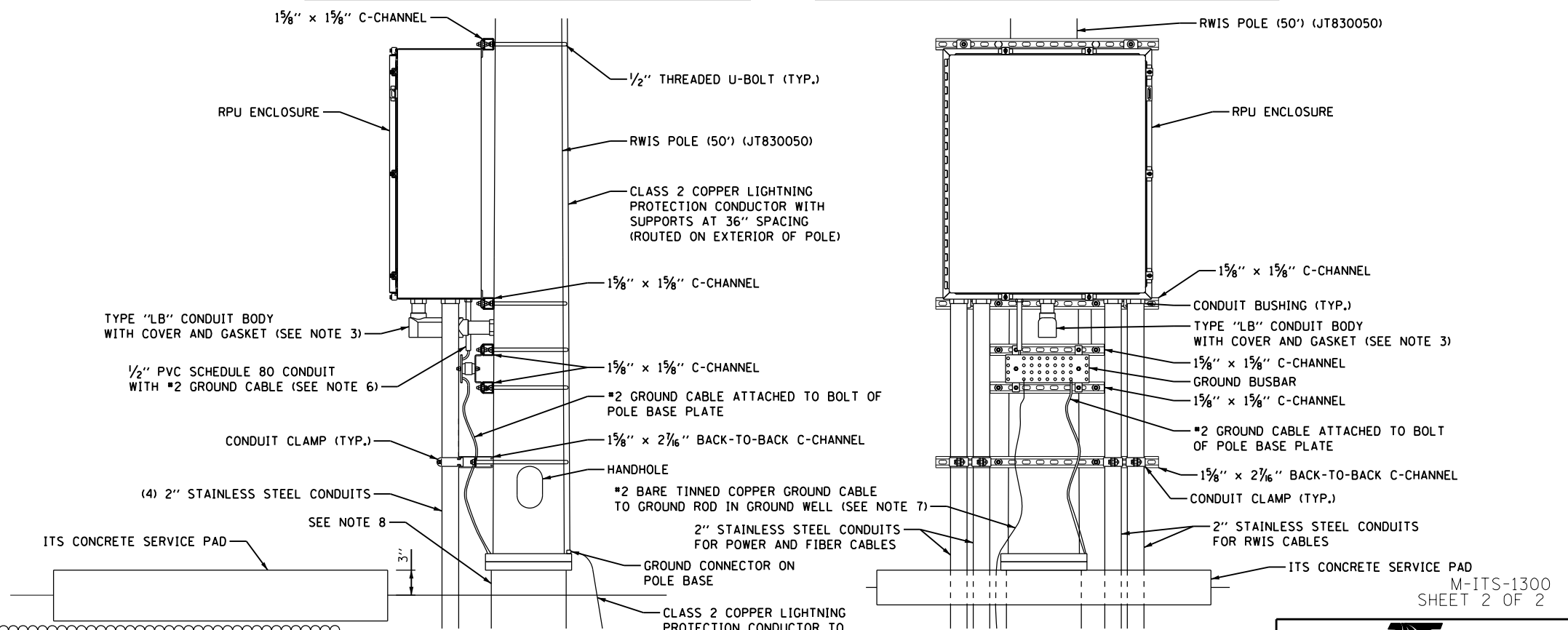
**GENERAL NOTES:**

1. RWIS POLES SHIELDED BY GUARDRAIL SHALL BE LOCATED A MINIMUM OF 5' BEHIND THE GUARDRAIL POST. SEE ILLINOIS TOLLWAY GUARDRAIL STANDARD (SECTION C OF STANDARDS) FOR MORE INFORMATION. ALL OTHER POLES SHALL BE LOCATED OUTSIDE THE CLEAR ZONE. FINAL LOCATION TO BE APPROVED BY THE ENGINEER.
2. ANY GROUND CABLES ROUTED INSIDE THE ENCLOSURE SHALL BE GREEN INSULATED TYPE RHW CONDUCTORS. ANY GROUND CONDUCTORS THAT ARE BURIED SHALL BE BARE COPPER TINNED. ANY GROUND CONNECTED TO THE EXTERNAL GROUND BUSBAR SHALL BE EXOTHERMICALLY WELDED TO THE BUSBAR. PVC SCH 80 CONDUIT SHOULD BE GROMMETTED ON END GOING TO BUSBAR TO PREVENT RODENTS AND INSECTS FROM ENTERING.
3. PROVIDE A 1/2" ALUMINUM CONDUIT NIPPLE WITH LB FITTING FOR ROUTING ITS ELEMENT CABLES INSIDE THE POLE TO THE EQUIPMENT ENCLOSURE. DRILL AND TAP POLE FOR THE CONDUIT NIPPLE. CABLE SLACK SHALL BE PULLED AND FASTENED WITHIN THE TOP OF THE POLE. PROPER CABLE STRAIN RELIEF SHALL BE INSTALLED AND APPROVED BY THE ENGINEER. ALL CABLE RUN INSIDE THE POLE SHALL NOT HANG BELOW THE TOP OF THE HANDHOLE COVER ON THE POLE.
4. ALL CONDUITS ENTERING THE ENCLOSURE SHALL BE SEALED. SEE "ITS POLE MOUNTED ENCLOSURE, ITS ASSEMBLY (CCTV OR MVDS)" SPECIAL PROVISION FOR MORE DETAIL FOR RODENT PROTECTION.
5. CONTRACTOR TO PROVIDE ALL POWER, COMMUNICATIONS AND GROUND WIRING REQUIRED FOR SYSTEM OPERATION.
6. ATTACH PVC SCH 80 CONDUIT TO ENCLOSURE FOR SUPPORT. USE METAL BUSHING WHEN CONNECTING PVC TO CABINET. USE GROMMETS AT BOTH ENDS OF CONDUIT TO SEAL CONDUIT BUT ALLOW GROUND CABLE TO RUN THROUGH BOTH ENDS.
7. GROUND RODS SHALL BE PLACED A MINIMUM OF 10' FROM THE FOUNDATION. A GROUND WELL SHALL BE INCLUDED TO PERMIT ACCESS TO THE GROUND ROD CONNECTION. CONNECTION TO THE GROUND BUSBAR AND THE GROUND ROD SHALL BE EXOTHERMICALLY WELDED.
8. A FLAT STEEL MESH PANEL ALONG WITH A COMMERCIALY AVAILABLE HYDROPHOBIC LOW DENSITY COMPOSITE BACKFILL MATERIAL (KNOWN AS O-SET 250) SHALL BE INSTALLED BETWEEN THE ANCHOR BASE AND THE POLE TO PREVENT THE ENTRY OF RODENTS INTO THE POLE. SEE SPECIAL PROVISIONS FOR MORE DETAILS.
9. BACKFILL PER ILLINOIS TOLLWAY STANDARD HI. BACKFILL SHALL BE TO THE TOP OF THE POLE BASE ON ALL SIDES.
10. ALL CABLING (INCLUDING CABLING INSIDE THE ENCLOSURE) SHALL BE OUTDOOR RATED.
11. CONSTRUCT A CONCRETE SERVICE PAD 6 INCHES FROM THE POLE BASE ON THE SAME SIDE AS THE RPU OR REMOTE SENSOR ENCLOSURE, CENTERED ON THE RPU OR REMOTE SENSOR ENCLOSURE.
12. THIRTY DAYS PRIOR TO INSTALLING ANY SENSORS, THE CONTRACTOR SHALL COORDINATE DEVICE CONFIGURATION WITH THE ENGINEER.
13. THE DISCONNECT SWITCH, SUPPORT, AND ASSOCIATED CONDUIT SHALL BE INSTALLED FOR RWIS SITES WHERE THE UTILITY SERVICE INSTALLATION IS GREATER THAN 500 FEET FROM THE RPU ENCLOSURE OR LOCATED ON THE OPPOSITE SIDE OF THE ROADWAY FROM THE RPU ENCLOSURE.
14. ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
15. FINAL PLACEMENT HEIGHTS OF THE SENSORS SHALL BE BASED ON SITE CONDITIONS, ILLINOIS TOLLWAY OPERATIONAL NEEDS, AND AS PER MANUFACTURER'S MOUNTING RECOMMENDATIONS. THE HEIGHT SHALL BE APPROVED BY THE ENGINEER ONLY AFTER REVIEW BY ILLINOIS TOLLWAY ITS OPERATIONS.



REMOTE SENSOR ENCLOSURE - SIDE VIEW

REMOTE SENSOR ENCLOSURE - FRONT VIEW



RPU ENCLOSURE - SIDE VIEW

RPU ENCLOSURE - FRONT VIEW

**NOTE 1 TO DESIGNER**

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

LASERS SENSORS MUST BE LOCATED WITHIN 50 FEET (ON DIAGONAL) OF THE AIM POINT ON THE BRIDGE DECK SURFACE.

**NOTE 2 TO DESIGNER**

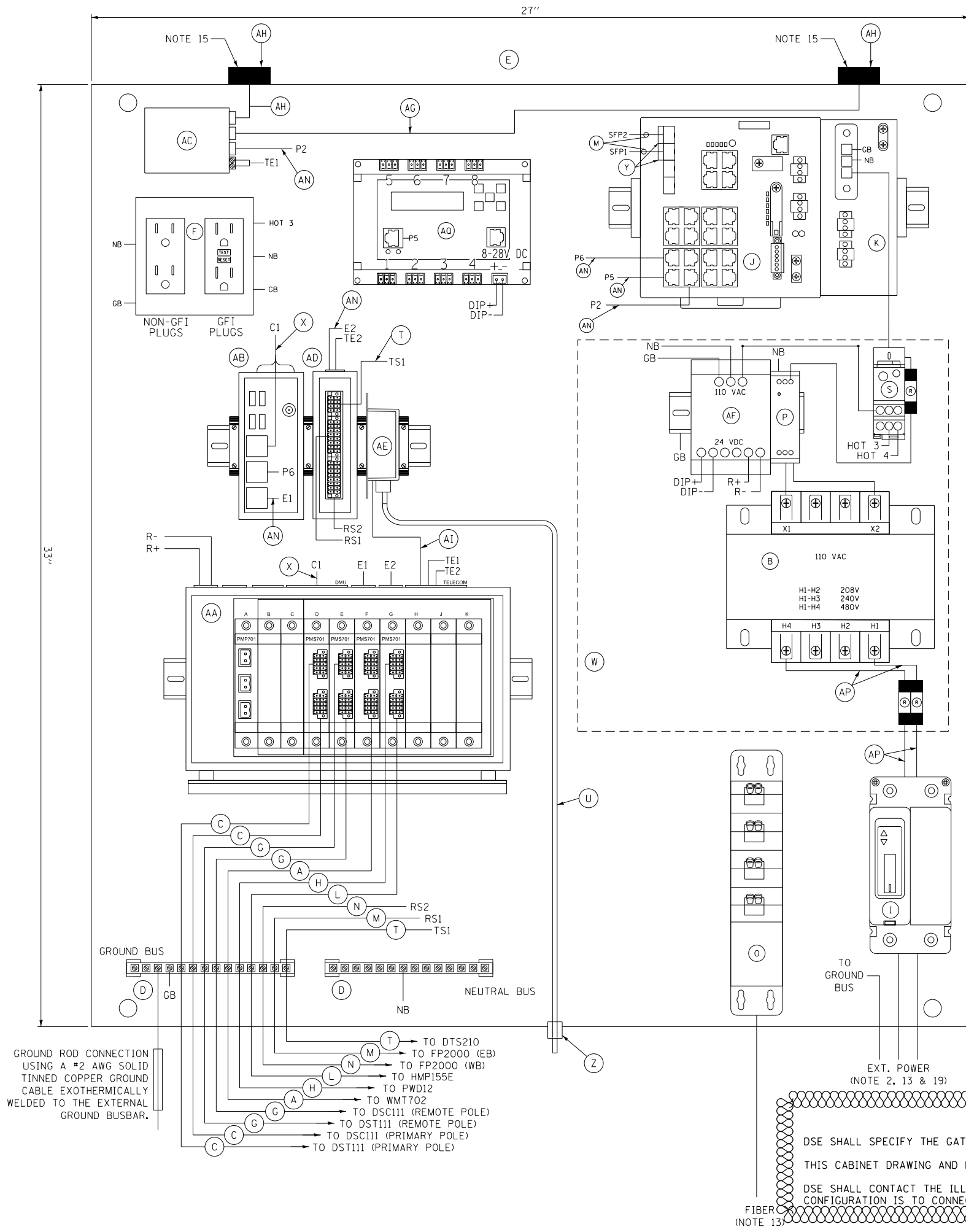
FOR BRIDGE MOUNTING APPLICATIONS, THE DESIGNER SHALL DEVELOP STRUCTURAL FOUNDATION AND POLE MOUNTING DETAILS.

M-ITS-1300  
SHEET 2 OF 2



RWIS POLE, SENSOR MOUNTING DETAIL

DATE  
3-01-2019



- | ITEM | DESCRIPTION  |
|------|--|
| A    | WMT700 CABLE, VAISALA 237890   |
| B    | CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95   |
| C    | DSC11/DST111 CABLE (PRIMARY POLE), VAISALA 216547  |
| D    | TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.   |
| E    | NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30   |
| F    | TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR  |
| G    | DSC11/DST111 CABLE (REMOTE POLE), VAISALA DR221742150M   |
| H    | PWD12 CABLE, VAISALA 217148  |
| I    | 480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B229G07   |
| J    | 8 ELECTRICAL PORT AND TWO FOC PORT SWITCH CISCO MODEL CISCO/IE-3000-8TC-E  |
| K    | CISCO POWER SUPPLY, PWR-IE170W-PC-AC-  |
| L    | HMP155E CABLE, VAISALA 220497  |
| M    | FP2000 TYPE IIA CABLE (EB SENSOR), VAISALA 76420300  |
| N    | FP2000 TYPE IIA CABLE (WB SENSOR), VAISALA 76421500 (FOR SENSORS GREATER THAN 500' FROM RWIS ENCLOSURE USE TYPE V CABLE, VAISALA 76420500)   |
| O    | SMF PATCH PANEL WITH LC CONNECTORS FIBER CONNECTIONS G420U008LAB-XXX-0   |
| P    | 120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MAIS/D/1/SI OR APPROVED EQUAL   |
| Q    | PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/FIX1LG6 WITH COVER-FIX2LG6   |
| R    | 10 AMP FUSE, GOULD (MERSEN)/ATM-10   |
| S    | SPLICE BLOCK, ALTECH/38041   |
| T    | DTS210 CABLE (20 METERS), VAISALA  |
| U    | 1/8" PRESSURE HOSE, VAISALA  |
| V    | NOT USED FOR THIS SHEET APPLICATION  |
| W    | CLEAR PLEXIGLASS SAFETY COVER ENCOMPASSING ITEMS R, S, B, P, & AF. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.) |
| X    | DMU703 CABLE, VAISALA 210267   |
| Y    | (2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES  |
| Z    | PRESSURE PORT, VAISALA 16941DM   |
| AA   | POWER MANAGEMENT UNIT, VAISALA PMU701  |
| AB   | DATA MANAGEMENT UNIT, VAISALA DMU703   |
| AC   | CDMA MODEM ASSEMBLY (FOR VERIZON NETWORK)  |
| AD   | DIGITAL ROAD INTERFACE, VAISALA DRI701   |
| AE   | PRESSURE SENSOR, VAISALA PTB110  |
| AF   | AC/DC POWER UNIT - 24VDC, VAISALA  |
| AG   | WIRELESS MODEM ANTENNA CABLE, WITH SMA CONNECTORS PCTEL/PROFLEX PLUS 195-RG58/U  |
| AH   | WIRELESS MODEM ANTENNAS, PCTEL/BMLPVDB700/2500   |
| AI   | PTB110 CABLE, VAISALA 210271-250   |
| AJ   | NOT USED FOR THIS SHEET APPLICATION  |
| AK   | NOT USED FOR THIS SHEET APPLICATION  |
| AL   | TRANSFORMER COVERS, SQUARE D/9070FSC2  |
| AM   | NOT USED FOR THIS SHEET APPLICATION  |
| AN   | INDOOR/OUTDOOR RATED CAT6 (4000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET  |
| AO   | NOT USED FOR THIS SHEET APPLICATION  |
| AP   | #10 AWG  |
| AQ   | POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4   |

- NOTES:
- ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
  - CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
  - ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
  - NOT USED FOR THIS SHEET APPLICATION.
  - EACH 120VAC OUTLET, PS, OR TRANSFORMER (ITEM F, K, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
  - MOUNT ITEMS J & K ON A 11.75 INCH CONTINUOUS SECTION OF DIN RAIL. THE DIN RAIL SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
  - ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
  - NOT USED FOR THIS SHEET APPLICATION
  - THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE 1900 QUAD BOX GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
  - NOT USED FOR THIS SHEET APPLICATION
  - NOT USED FOR THIS SHEET APPLICATION
  - NOT USED FOR THIS SHEET APPLICATION
  - ALL CABLES SHALL ENTER THE ENCLOSURE FROM THE BOTTOM. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THE HANDHOLE.
  - POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
  - THE CELL MODEM ANTENNAS SHALL BE PROPERLY SEALED TO PREVENT WATER PENETRATION INTO THE CABINET.
  - NOT USED FOR THIS SHEET APPLICATION
  - NOT USED FOR THIS SHEET APPLICATION
  - CABLES TO BE ROUTED THROUGH POLE.
  - NOT USED FOR THIS SHEET APPLICATION
  - NOT USED FOR THIS SHEET APPLICATION
  - NOT USED FOR THIS SHEET APPLICATION
  - DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
  - BOND NEUTRAL AND GROUND BUSES TOGETHER, WHEN REQUIRED. TIE THE ENCLOSURE INTO THE GROUND BUS.
  - ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
  - ITEM AL SHALL BE PLACED ON ITEM B.
  - ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
  - ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.

**NOTE 1 TO DESIGNER**

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

LASERS SENSORS MUST BE LOCATED WITHIN 50 FEET (ON DIAGONAL) OF THE AIM POINT ON THE BRIDGE DECK SURFACE.

M-ITS-1301  
SHEET 1 OF 2



RWIS CABINET WIRING DIAGRAM

DATE  
3-01-2019

**NOTE 2-4 TO DESIGNER**

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

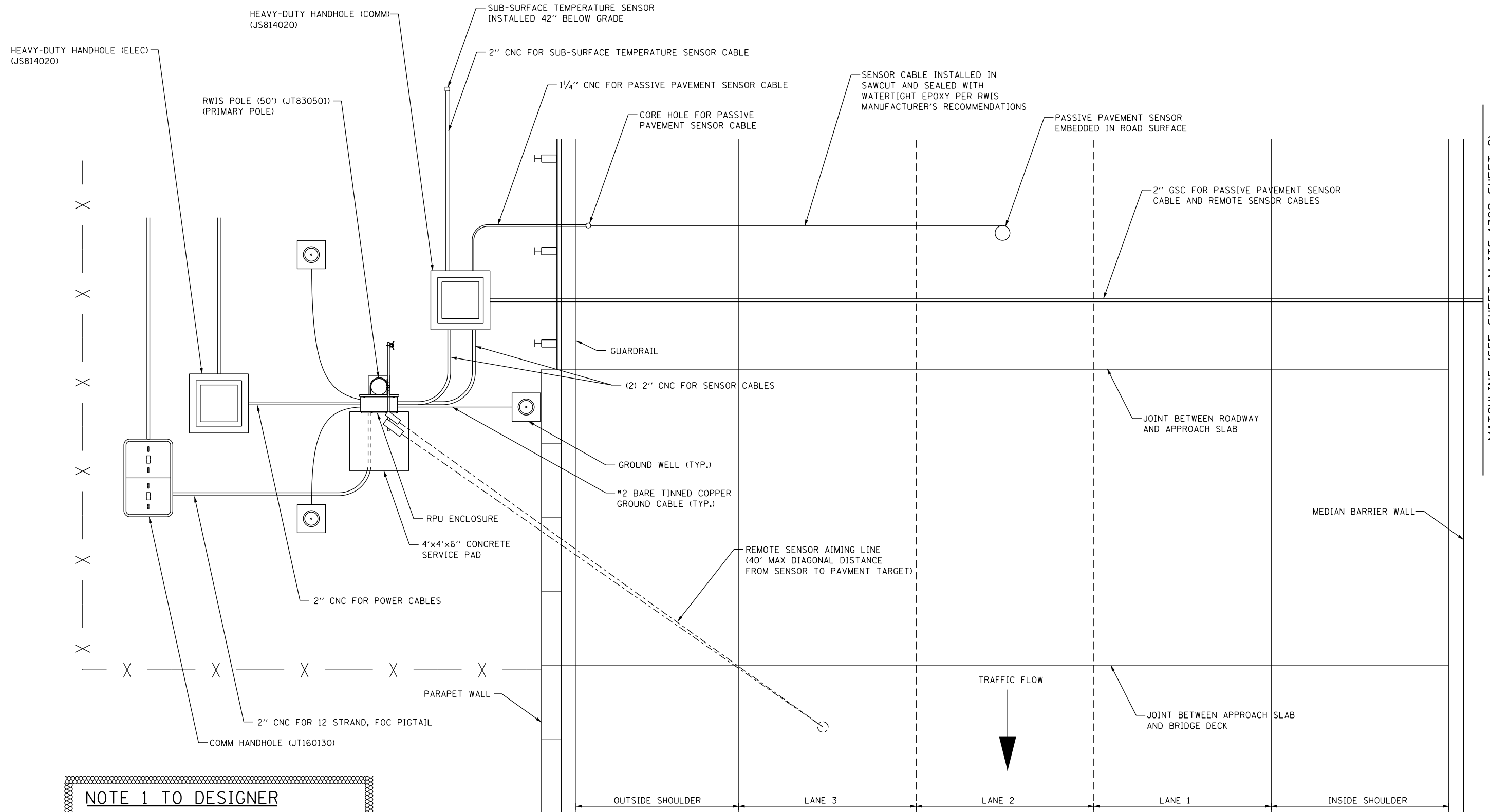
THIS CABINET DRAWING AND EQUIPMENT IS NOT DRAWN TO SCALE.

DSE SHALL CONTACT THE ILLINOIS TOLLWAY ITS UNIT TO DETERMINE IF CABINET SHOULD BE CONNECTED TO FIBER. THE DEFAULT CONFIGURATION IS TO CONNECT TO THE MODEM.

FIBER (NOTE 13)

GROUND ROD CONNECTION USING A #2 AWG SOLID TINNED COPPER GROUND CABLE EXOTHERMICALLY WELDED TO THE EXTERNAL GROUND BUSBAR.

TO DTS210  
TO FP2000 (EB)  
TO FP2000 (WB)  
TO HMP155E  
TO PWD12  
TO WMT702  
TO DSC111 (REMOTE POLE)  
TO DST111 (REMOTE POLE)  
TO DSC111 (PRIMARY POLE)  
TO DST111 (PRIMARY POLE)



MATCHLINE (SEE SHEET M-ITS-1302 SHEET 2)

**NOTE 1 TO DESIGNER**


THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

LASERS SENSORS MUST BE LOCATED WITHIN 50 FEET (ON DIAGONAL) OF THE AIM POINT ON THE BRIDGE DECK SURFACE.

**NOTE 2 TO DESIGNER**

THE DESIGNER SHALL COMPLETE THE COMPONENT REQUIREMENTS TABLE AS REQUIRED TO INDICATE WHICH COMPONENTS ARE TO BE INSTALLED ON EACH POLE MOUNTED ITS ASSEMBLY. DESIGNER TO EXPAND CHART AS NECESSARY.

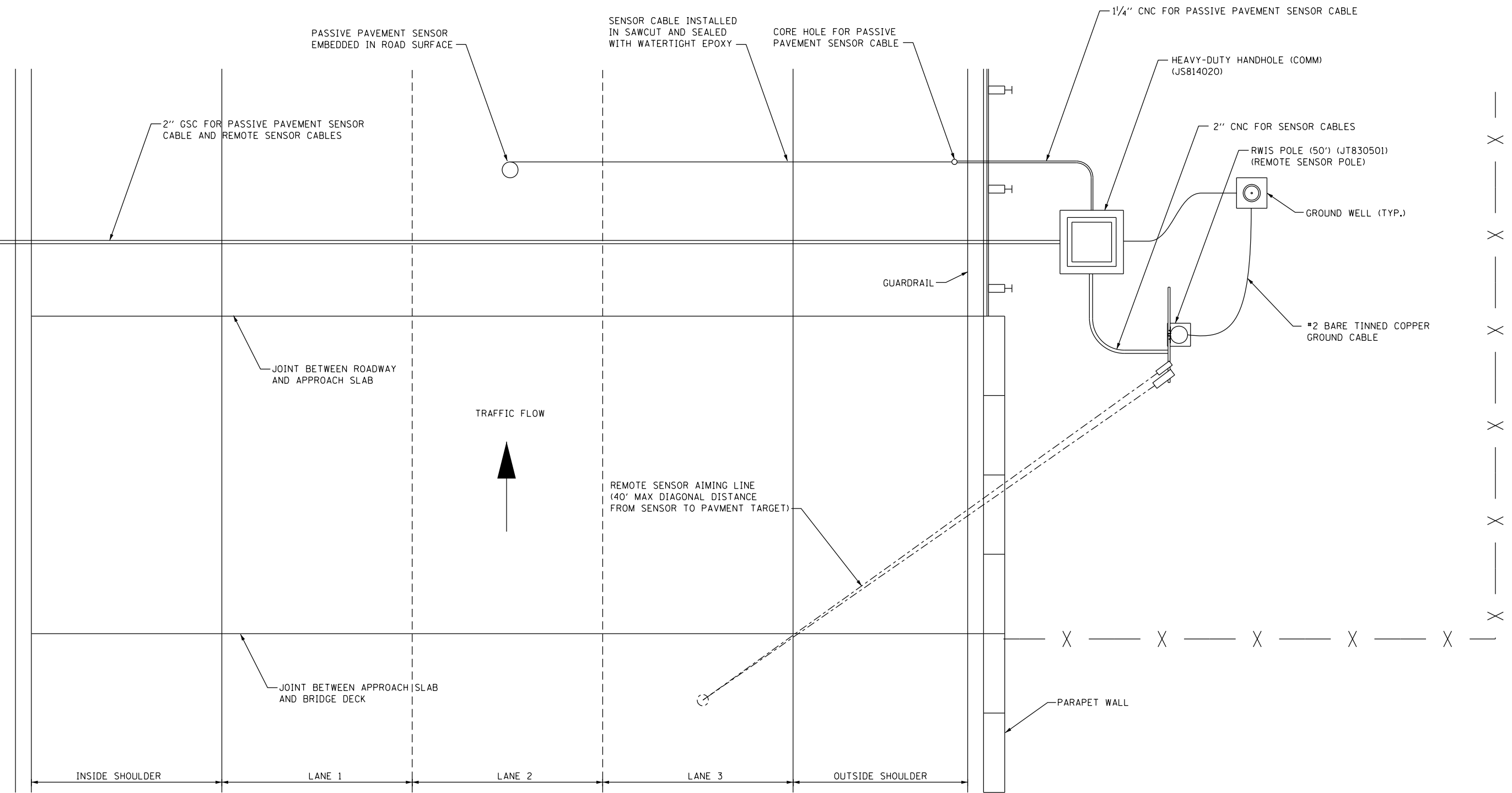
M-ITS-1302



TYPICAL RWIS SITE  
INSTALLATION PLAN  
(SHEET 1 OF 2)

DATE  
3-01-2018

MATCHLINE (SEE SHEET M-ITS-1302 SHEET 1)



**NOTE 2 TO DESIGNER**  
 THE DESIGNER SHALL COMPLETE THE COMPONENT REQUIREMENTS TABLE AS REQUIRED TO INDICATE WHICH COMPONENTS ARE TO BE INSTALLED ON EACH POLE MOUNTED ITS ASSEMBLY. DESIGNER TO EXPAND CHART AS NECESSARY.

**NOTE 1 TO DESIGNER**  
 THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.  
 LASERS SENSORS MUST BE LOCATED WITHIN 50 FEET (ON DIAGONAL) OF THE AIM POINT ON THE BRIDGE DECK SURFACE.

M-ITS-1302

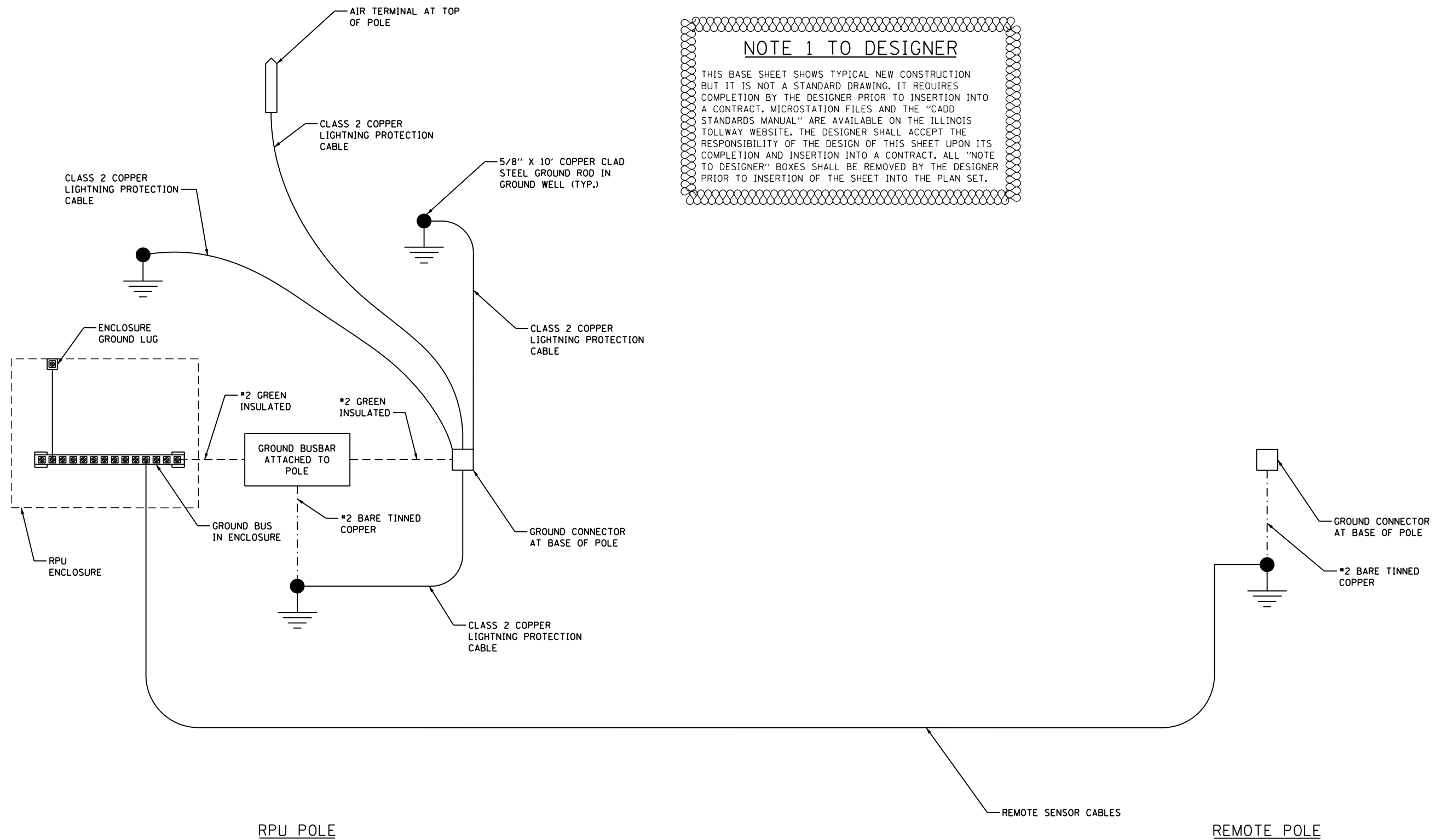


TYPICAL RWIS SITE  
INSTALLATION PLAN  
(SHEET 2 OF 2)

DATE  
3-01-2018

**NOTE 1 TO DESIGNER**

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



M-ITS-1303  
SHEET 1 OF 1



TYPICAL RWIS GROUNDING SCHEMATIC

DATE  
3-01-2019