

- WIM CABINET FOUNDATION NOTES:**
1. COORDINATE SIZE OF OPENING WITH WIM CONTROLLER CABINET BOTTOM CONDUIT CUT-OUTS
  2. CONCRETE = 4,000 PSI (MIN.)
  3. REBAR=EPOXY COATED FY=60,000 PSI (MIN.)
  4. PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION
  5. INCLUDE CONDUITS

**WIM CONTROLLER FOUNDATION DETAILS**  
SCALE: NTS

**NOTES:**

1. THE WIM INTERNAL CABINET LAYOUT SHALL BE AS PER WIM MANUFACTURER'S RECOMMENDATION AND APPROVED BY THE ILLINOIS TOLLWAY.
2. SEAL CABINET TO FOUNDATION JOINT WITH SILICONE SEALANT TO PREVENT WATER INTRUSION. LOCATE CABINET ABOVE HIGH WATER LEVEL.
3. INSTALL 2" PVC SPARE CONDUIT FOR FUTURE USE. EXTEND 12" OUTSIDE OF CONCRETE FOUNDATION. PROVIDE CONDUIT MARKING FOR EASE OF FUTURE LOCATING.

**NOTE TO DESIGNER**  
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M-ITS-1600

WEIGH-IN-MOTION CABINET AND FOUNDATION DETAILS

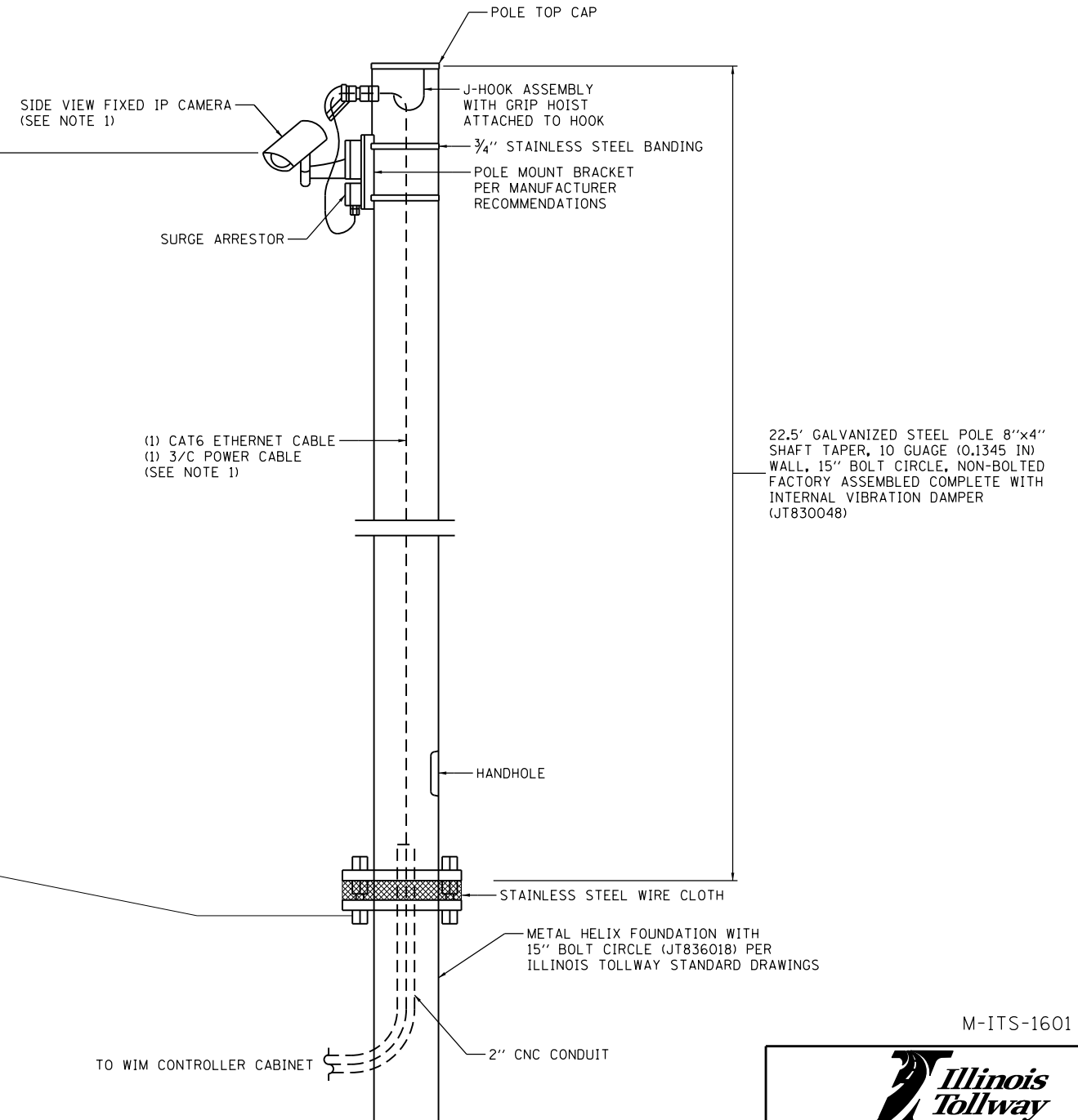
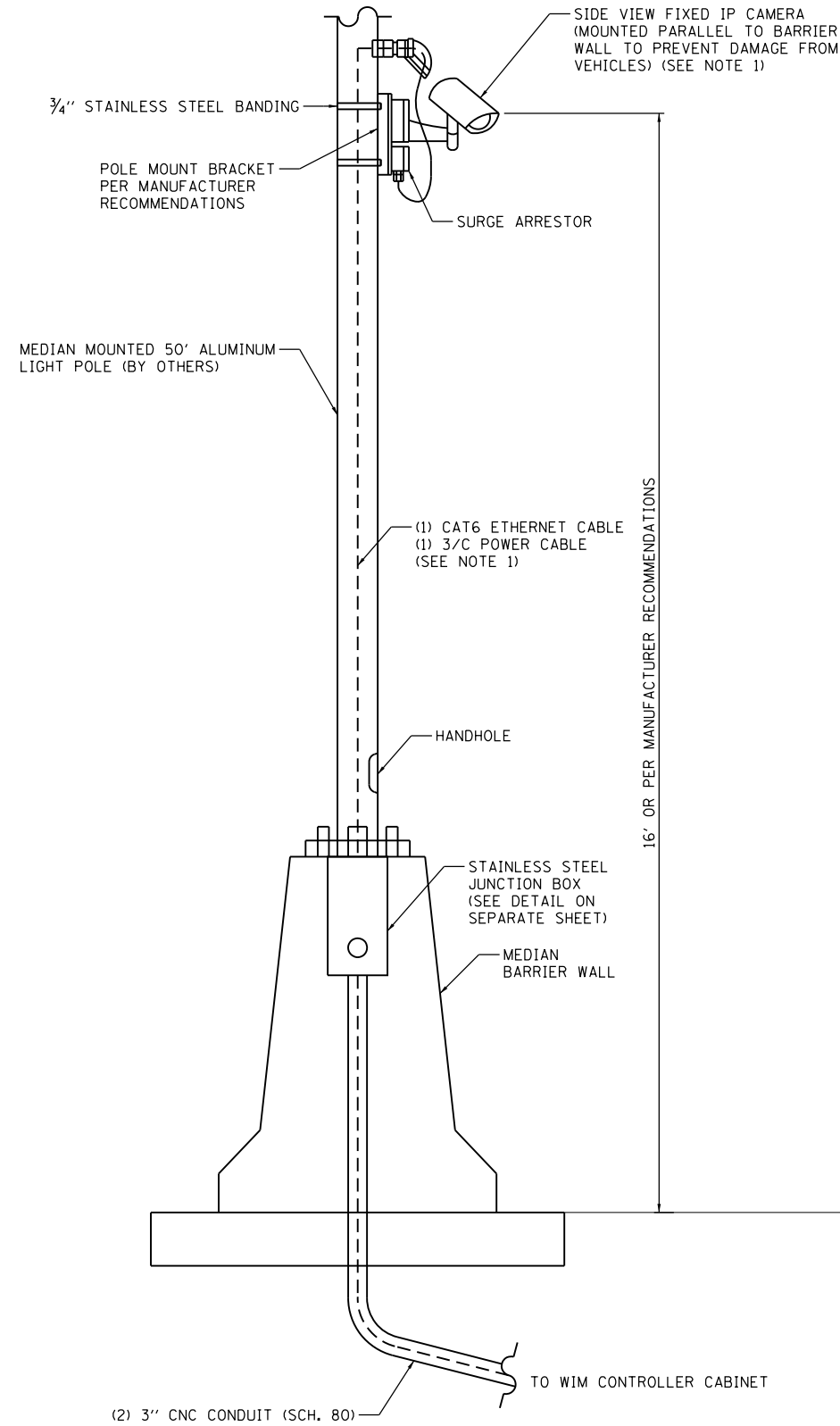
DATE  
3-31-2016

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**NOTE:**

1. THE NUMBER OF CAMERAS AND ASSOCIATED CABLING SHALL BE IN ACCORDANCE WITH THE WEIGH-IN-MOTION MANUFACTURER REQUIREMENTS TO PROVIDE FULL ENFORCEMENT COVERAGE OF ALL LANES INDICATED ON THE PLANS.



M-ITS-1601

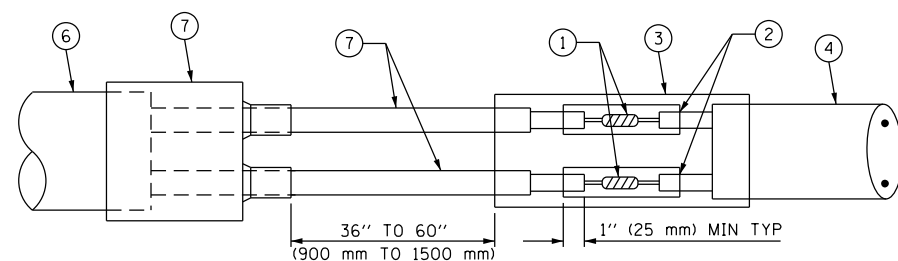


WEIGH-IN-MOTION  
IP CAMERA DETAILS

DATE  
3-31-2017

## LOOP DETECTOR SPLICE DETAIL

- |  |  |
|--|--|
| <p>① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.</p> <p>② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.</p> <p>③ WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.</p> <p>④ NO. 14 2/C TWISTED, SHIELDED CABLE.</p> | <p>⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.</p> <p>⑥ PRE-FORMED LOOP.</p> <p>⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL.</p> |
|--|--|

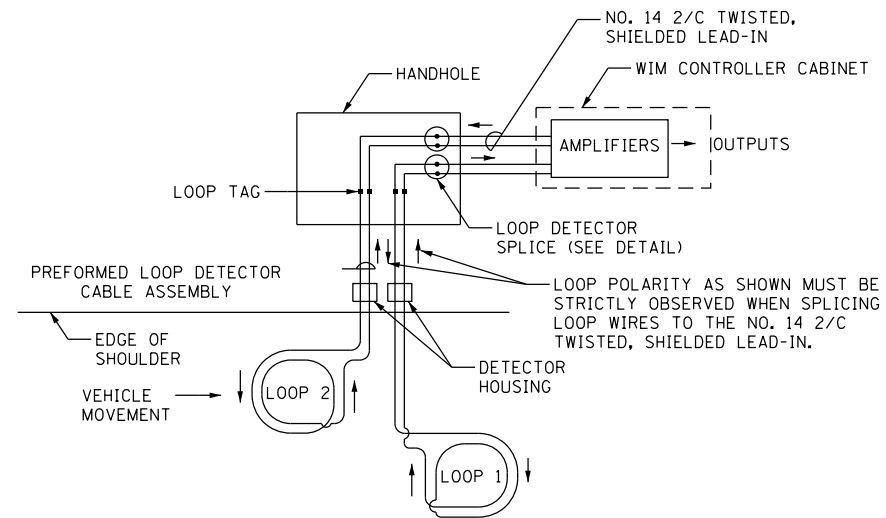


### NOTE TO DESIGNER

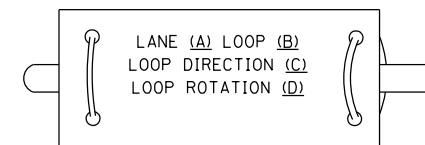
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### NOTES:

1. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, SINCE NEW CONCRETE PAVEMENT IS PROPOSED. INSTALLATION SHALL BE ACCORDING TO THE STANDARD SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
2. FOLLOW LOOP DETECTOR MANUFACTURER RECOMMENDATIONS FOR MINIMUM SEPARATION DISTANCE FROM REBAR MATS. USE STAND OFFS AS REQUIRED.



## DETECTOR LOOP WIRING SCHEMATIC



- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY.
- B. LOOP #1 IS THE LOOP IN THE LANE DOWN STREAM OF THE BENDING PLATE SENSORS.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

## LOOP LEAD-IN CABLE TAG

M-ITS-1602



WEIGH-IN-MOTION  
LOOP DETECTOR DETAILS

DATE  
3-31-2017

**SIGNAL CONDUITS:**

- ① 2" CONDUIT  
1-TEMPERATURE SENSOR LEAD  
2-POWER 3/C  
2-CAT6
- ② 2" CONDUIT  
2-LOOP LEADS  
2-QUARTZ LEADS W/GND
- ③ 2" CONDUIT  
2-LOOP LEADS  
2-QUARTZ LEADS W/GND  
1-TEMPERATURE SENSOR LEAD
- ④ (2) 3" CONDUITS  
4-LOOP LEADS  
4-QUARTZ LEADS W/GND  
1-CAT6  
1-POWER 3/C
- ⑤ 3" CONDUIT  
8-LOOP LEADS  
8-QUARTZ LEADS W/GND
- ⑥ 2" CONDUIT  
1-CAT6  
1-POWER 3/C

**NOTES:**

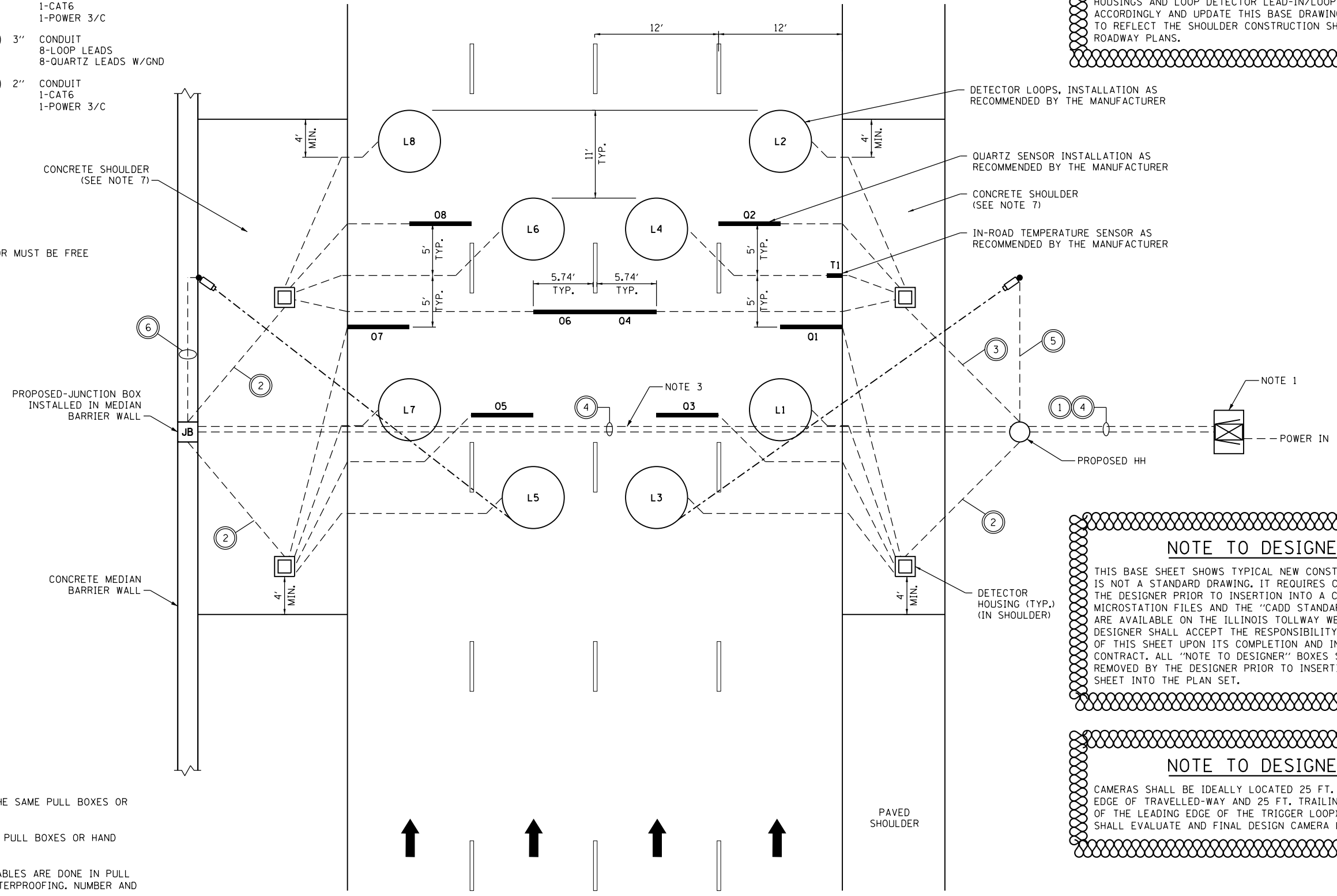
- 1 PROPOSED ROADSIDE WIM CABINET.
- 2 PAVEMENT ON EITHER SIDE OF EACH SENSOR MUST BE FREE OF JOINTS AND CRACKS FOR 2".
- 3 PROPOSED UNDERBORE.

**LEGEND:**

- L - INDUCTIVE LOOP
- O - QUARTZ SENSOR
- T - TEMPERATURE SENSOR
- E - ELECTRONICS CABINET
- ① - CONDUIT TAG
- JB - JUNCTION BOX
- - DETECTOR HOUSING
- ◻ - WIM CAMERA

**GENERAL NOTES:**

1. SIGNAL AND POWER CABLES CAN NOT SHARE THE SAME PULL BOXES OR CONDUITS.
2. ALL LOOP LEAD-IN SPLICES MUST BE MADE IN PULL BOXES OR HAND HOLES.
3. ALL CONNECTIONS BETWEEN LOOP AND LEAD CABLES ARE DONE IN PULL BOX AND ARE SOLDERED THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.
4. ROAD SURFACE PAVEMENT CONDITIONS MUST MEET CURRENT ASTM E1318 REQUIREMENTS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.
5. CABLES IN PAVEMENT SAW CUTS MUST BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.
6. ALL QUARTZ LEADS SHALL INCLUDE A GROUND WIRE AS REQUIRED BY QUARTZ SENSOR MANUFACTURER.
7. CONCRETE SHOULDER LIMIT WITHIN WEIGH-IN-MOTION SITE SHALL EXTEND TO 4 FT. MINIMUM BEYOND DETECTOR HOUSING OR LOOP DETECTOR LEAD-IN/CUTS IN SHOULDER AS SHOWN.



**NOTE TO DESIGNER**  
 DESIGNER SHALL COORDINATE CONSTRUCTION OF CONCRETE SHOULDER LIMITS WITH THE LOCATION OF WIM DETECTOR HOUSINGS AND LOOP DETECTOR LEAD-IN/LOOP CUTS ACCORDINGLY AND UPDATE THIS BASE DRAWING AS NECESSARY TO REFLECT THE SHOULDER CONSTRUCTION SHOWN IN THE ROADWAY PLANS.

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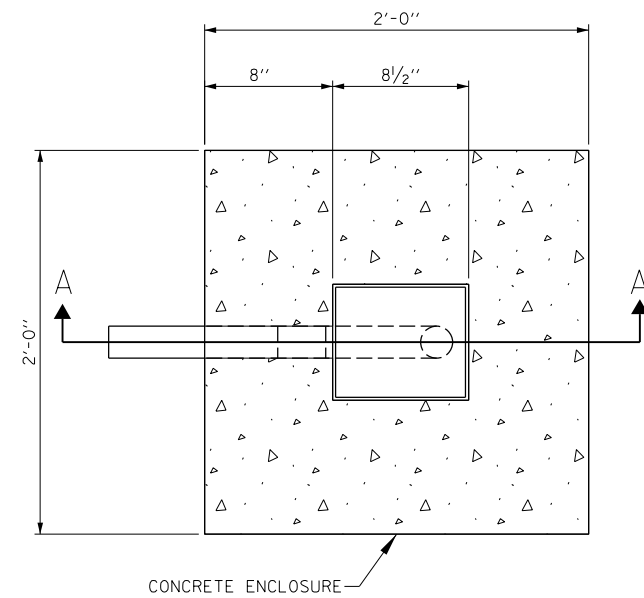
**NOTE TO DESIGNER**  
 CAMERAS SHALL BE IDEALLY LOCATED 25 FT. OFFSET FROM EDGE OF TRAVELLED-WAY AND 25 FT. TRAILING (DOWNSTREAM OF THE LEADING EDGE OF THE TRIGGER LOOP). DESIGNER SHALL EVALUATE AND FINAL DESIGN CAMERA LOCATIONS.

M-ITS-1603

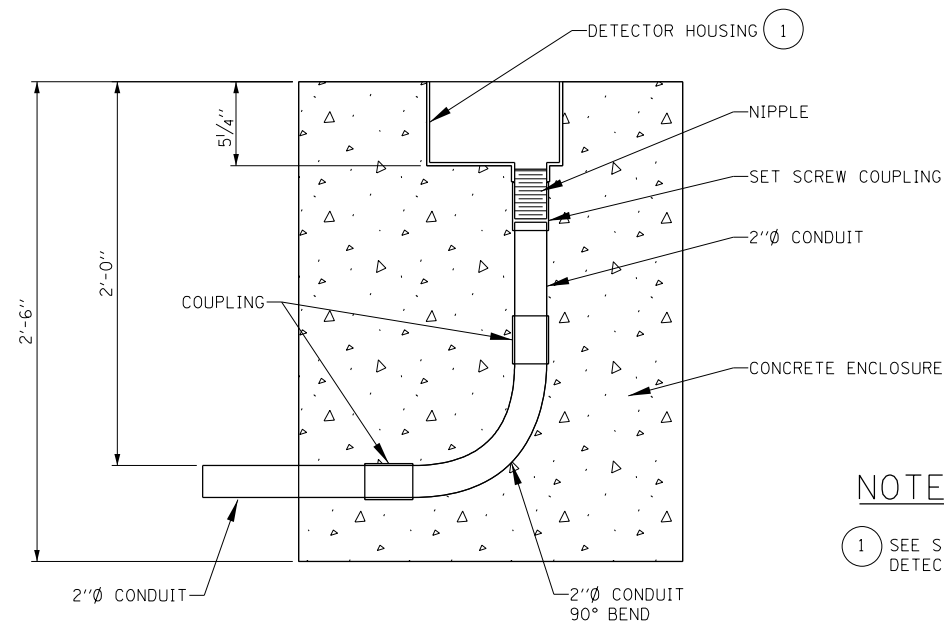


WEIGH-IN-MOTION  
 DETECTOR LOOP AND  
 QUARTZ SENSOR DETAIL

DATE  
 3-31-2017



PLAN



SECTION A-A

NOTE:

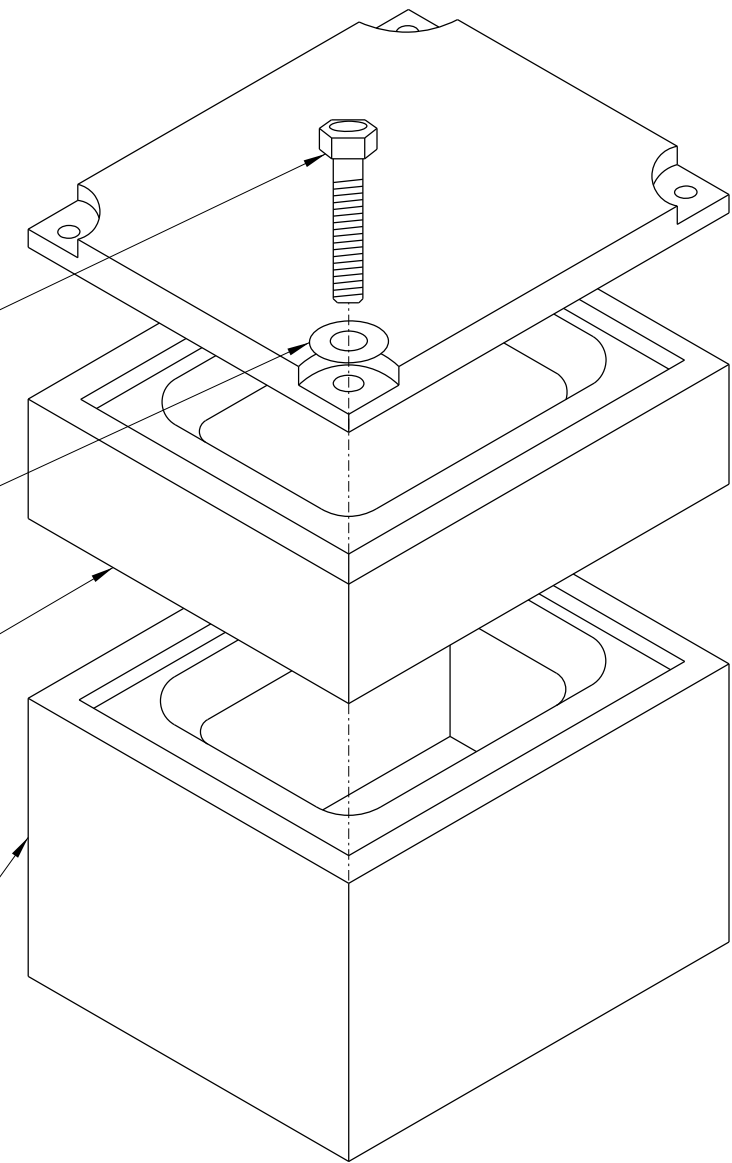
① SEE STANDARD DRAWING M-WIM-1707 FOR DETECTOR HOUSING DETAIL.

1/2"x4" HEX HEAD STAINLESS STEEL BOLT  
(4 REQUIRED) THREADED 3 1/2"

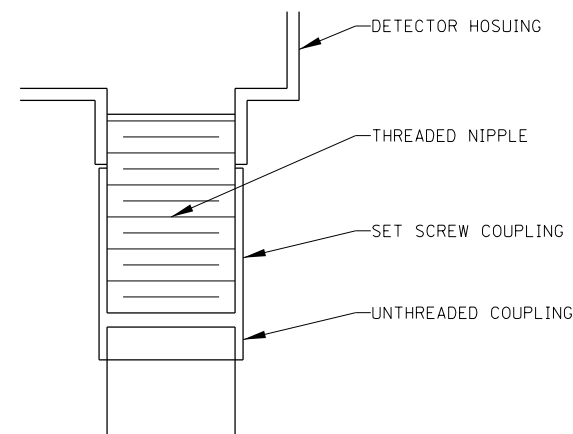
STAINLESS STEEL WASHER  
1/2" (4 REQUIRED)

DETECTOR HOUSING ADAPTER

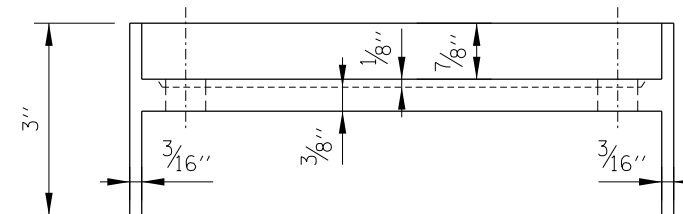
DETECTOR HOUSING



DETECTOR HOUSING  
ADAPTER DETAIL



DETECTOR HOUSING  
COUPLING DETAIL



CROSS SECTION OF HOUSING ADAPTER

NOTE TO DESIGNER

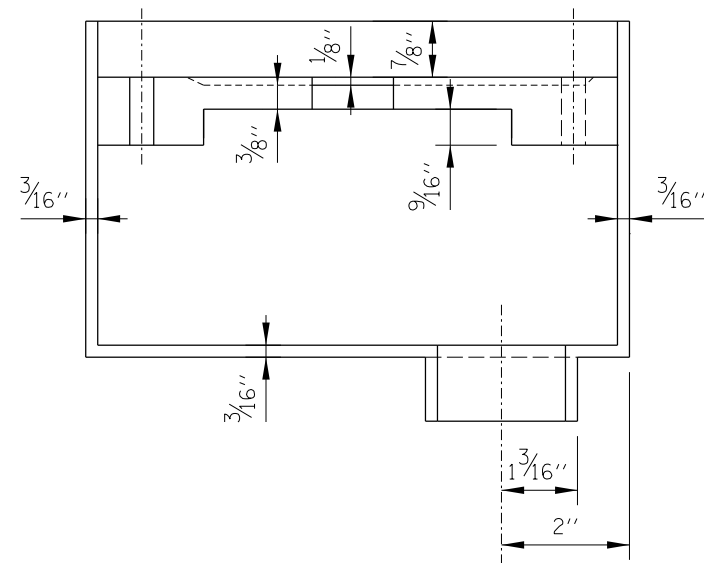
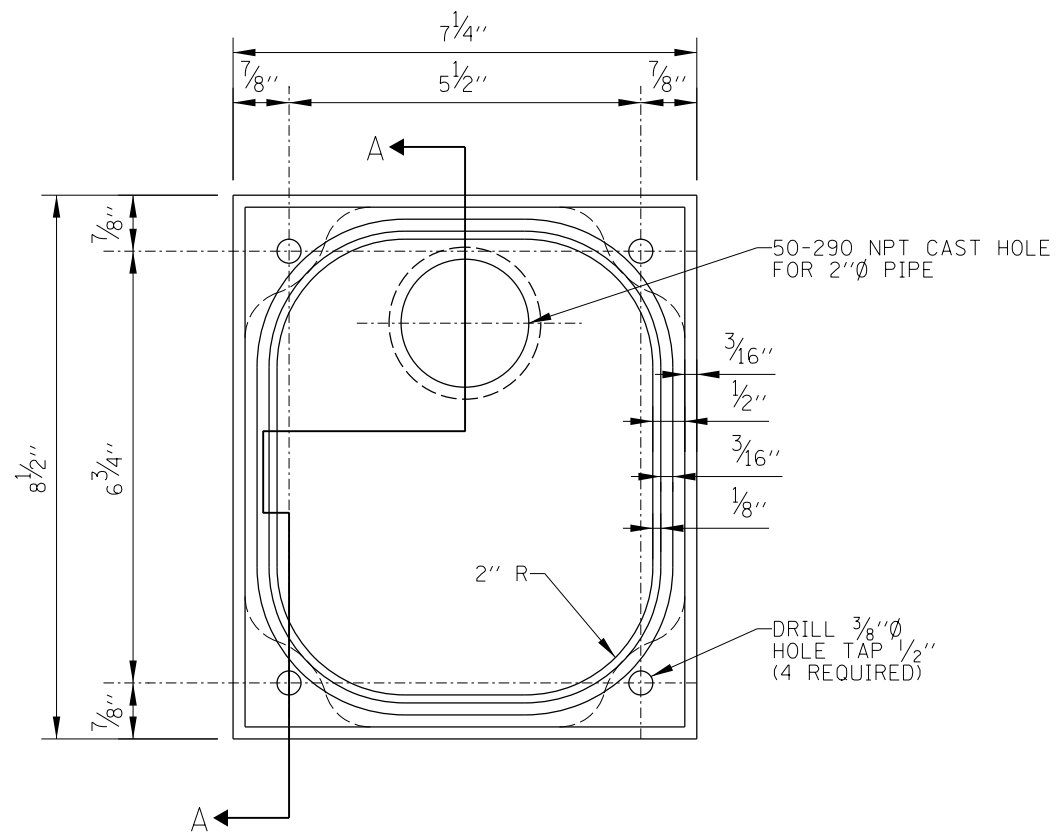
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M-ITS-1604



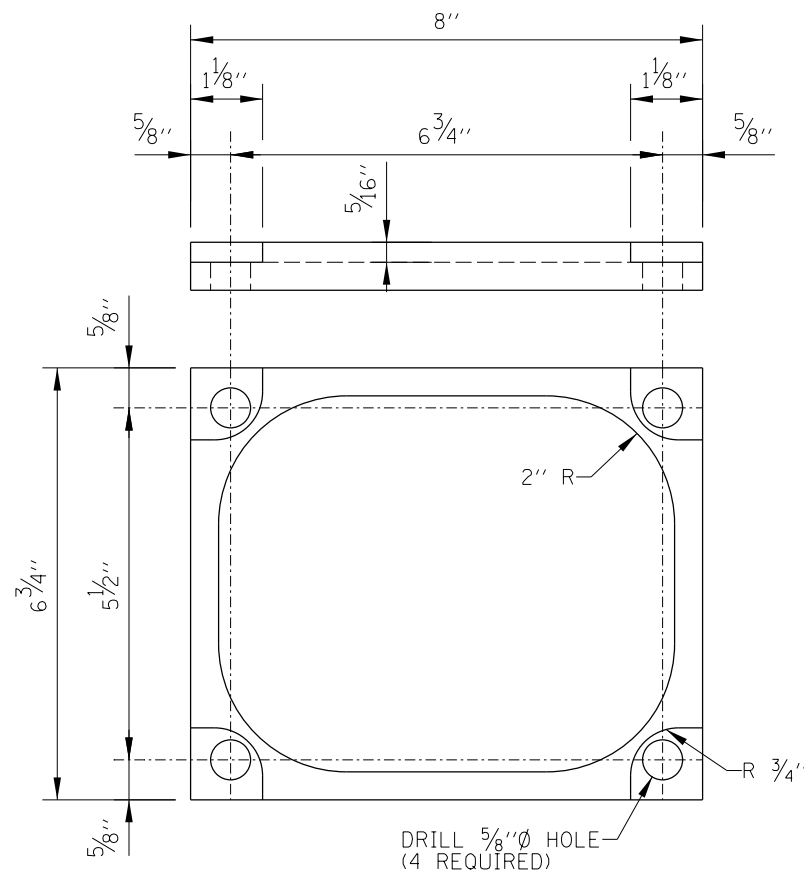
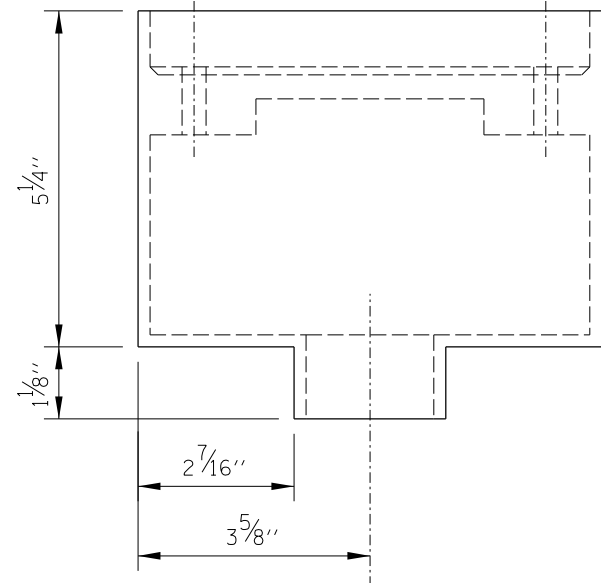
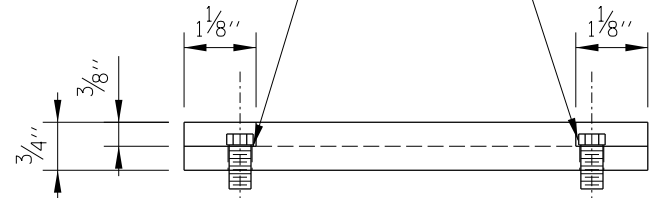
INSTALLATION DETAIL  
DETECTOR HOUSING &  
DETECTOR HOUSING ADAPTER

DATE  
3-31-2016



SECTION A-A

STAINLESS STEEL WASHER 1/2" (4 REQUIRED)  
 1/2"x1" HEX HEAD STAINLESS STEEL BOLT (4 REQUIRED)



**NOTE TO DESIGNER**

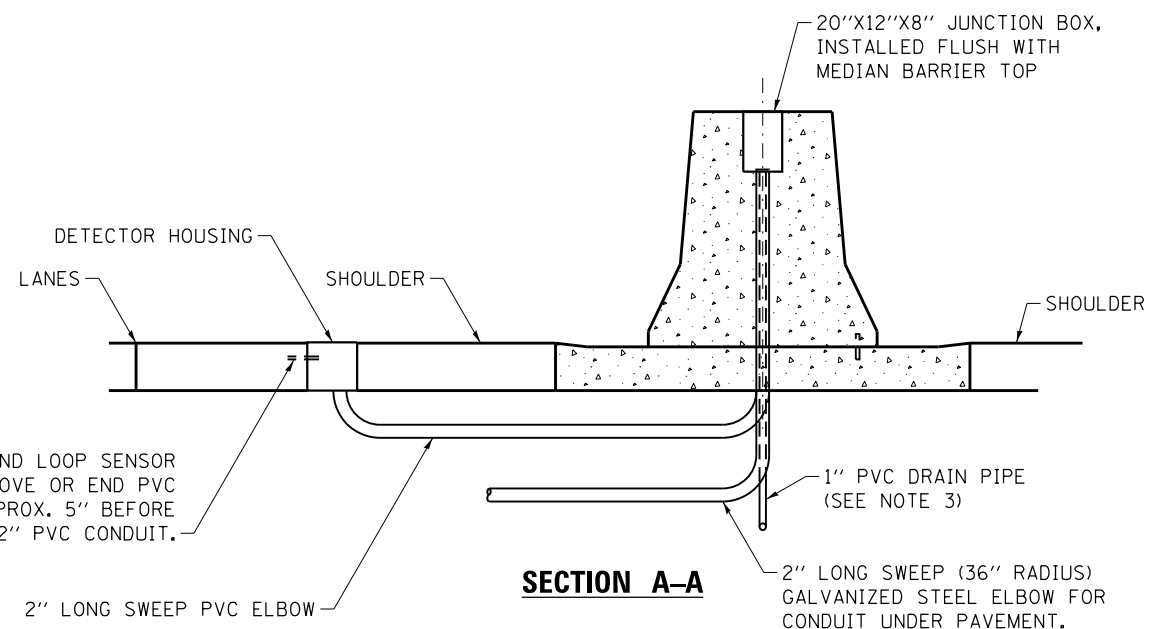
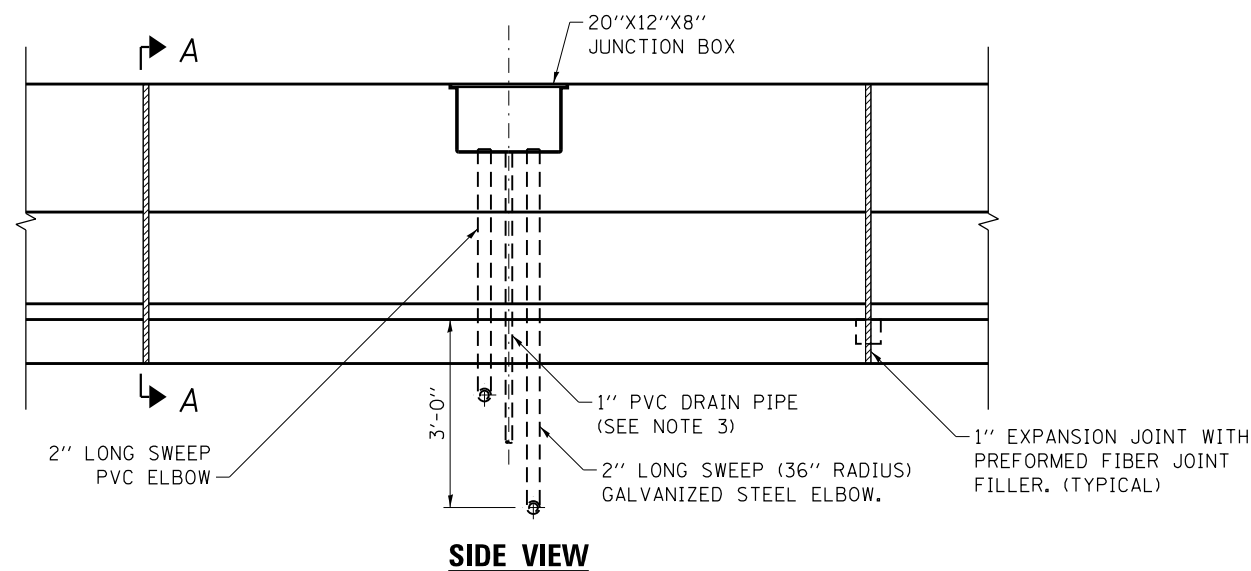
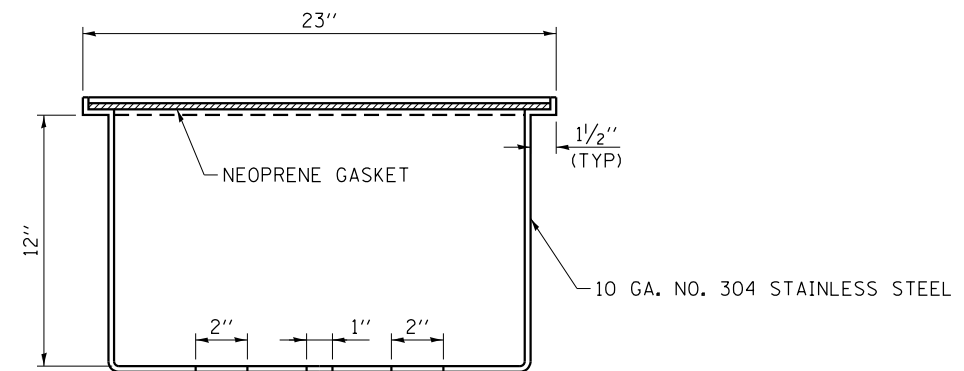
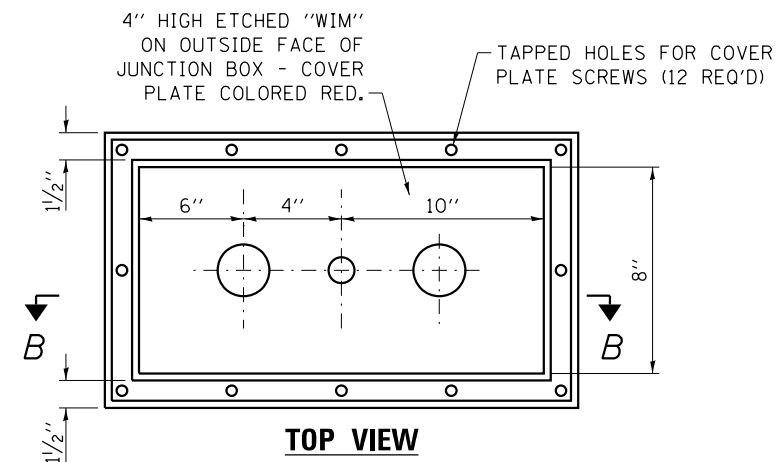
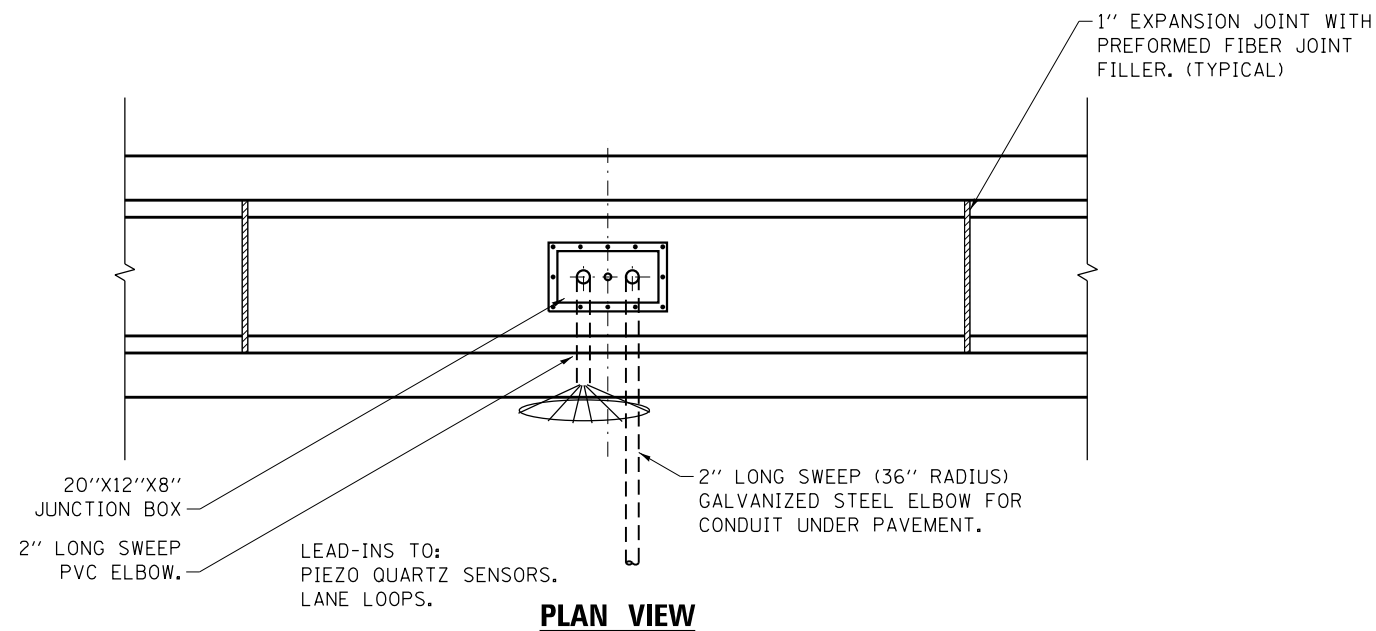
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M-ITS-1605



WEIGH-IN-MOTION  
 DETECTOR HOUSING DETAIL

DATE  
 3-31-2016



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**NOTES:**

1. THE JUNCTION BOX SHALL BE ACCESSED FROM THE TOP OF MEDIAN BARRIER.
2. DUCT SHALL BE CUT AND REMOVED AT JUNCTION BOX CONDUIT OPENINGS AND INSIDE BOX. ELECTRICAL CONDUITS SHALL PROTRUDE 1/4" INTO BOX.
3. CONTRACTOR SHALL INSTALL 1" PVC PIPE TO DRAIN JUNCTION BOX TO AGGREGATE SUBGRADE.

M-ITS-1606



WEIGH-IN-MOTION  
JUNCTION BOX DETAIL

DATE  
3-31-2017