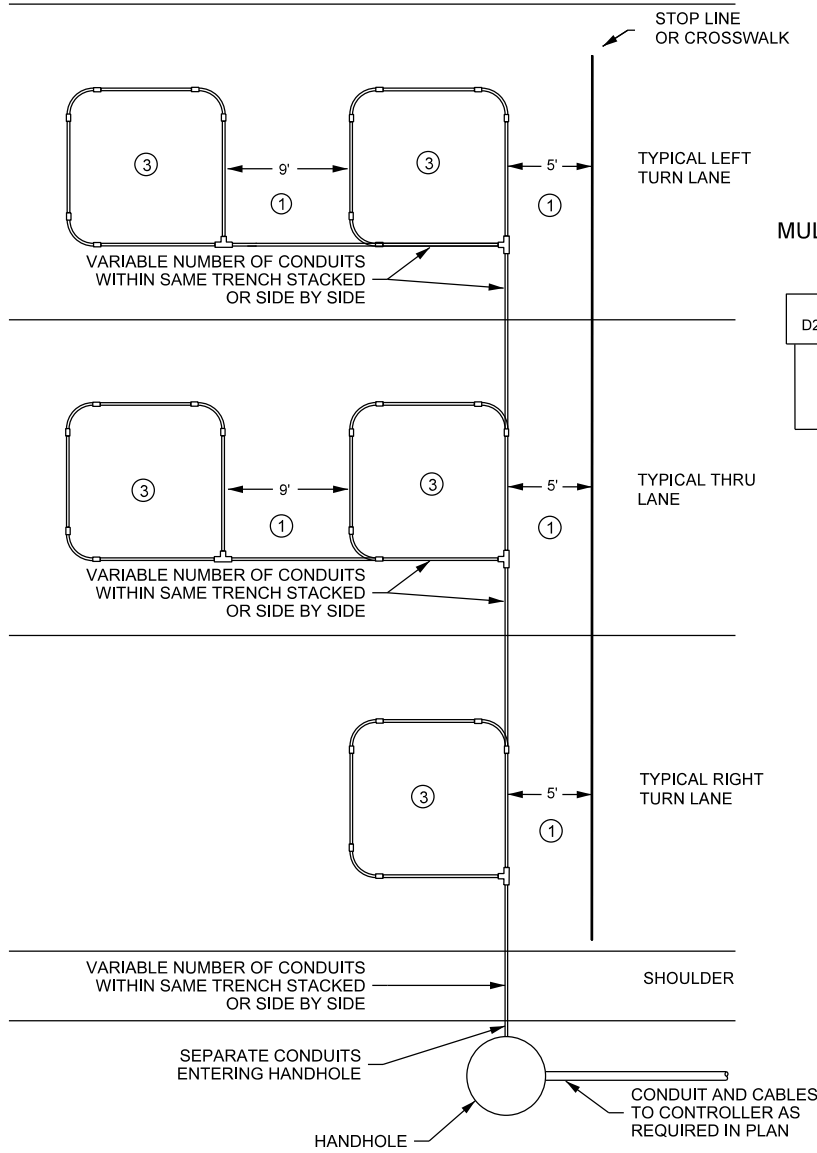
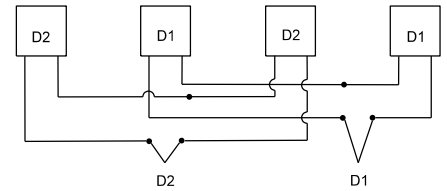


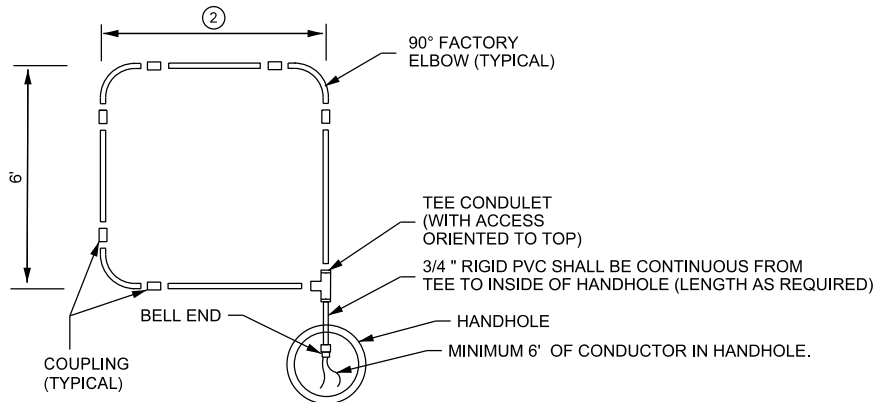
TYPICAL CROSS STREET RIGID PVC LOOP DETECTOR LAYOUT



MULTIPLE LOOP SERIES HOOKUP



TYPICAL RIGID PVC LOOP DETECTOR DETAIL



NOTES:

- SEE SHEET 2 OF 3 FOR ADDITIONAL NOTES.
- ① DIMENSION SHOWN IS TYPICAL. USE GIVEN DIMENSION INDICATED ON PLAN LAYOUT.
- ② THIS DIMENSION MAY VARY ACCORDING TO LOOP SIZE ON PLAN LAYOUT.
- ③ 6' x 6' RIGID PVC LOOP DETECTOR (CENTERED IN THE LANE).

NO SCALE SHEET 1 OF 3



DRW: CLK DATE: 8/15/14
APP: DRP DATE: 8/15/14

DETECTION - SIGNAL
PREFORMED RIGID PVC CONDUIT
LOOP DETECTOR

STANDARD
PLATE
NO.
TRAF-1765

NOTES:

ROADWAY LOOP DETECTOR CONDUCTORS AND LOOP DETECTOR LEAD-IN CABLES SHALL BE IN ACCORDANCE WITH SPEC 3815.

THE 3/4" RIGID PVC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40. SEE SPEC. 3803.

THREE CORNERS OF EACH LOOP DETECTOR SHALL BE A 90° FACTORY ELBOW (6" RADIUS). THE FOURTH SHALL BE A RIGID PVC TEE CONDULET.

APPROVED RIGID PVC PRIMER AND CEMENT SHALL BE USED FOR THE RIGID PVC JOINTS.

ALL SLACK MUST BE REMOVED FROM LOOP DETECTOR CONDUCTORS WITHIN THE RIGID PVC.

THE ROADWAY LOOP DETECTOR CONDUCTORS (1/C#14) SHALL BE TWISTED THREE TURNS PER FOOT FROM THE RIGID PVC TEE CONDULET TO THE HANDHOLE.

ATTACH A FERROUS METAL ITEM IN OR ADJACENT TO THE TEE CONDULET COVER OR AS DIRECTED BY THE ENGINEER.

EACH LOOP DETECTOR CONDUIT TO THE HANDHOLE SHALL BE SLOPED TOWARDS THE HANDHOLE.

LOOP DETECTOR CONDUITS TO THE HANDHOLE MAY BE PLACED WITHIN THE SAME TRENCH.

THE LOOP DETECTOR ROADWAY CONDUCTORS SHALL EXTEND 6' TO 10' INTO THE HANDHOLE FOR SPLICING.

NO SPLICES SHALL BE ALLOWED IN CONDUIT.

IF BENDING OF THE RIGID PVC LOOP LEAD-IN CONDUIT IS REQUIRED, AN APPROPRIATE HEATING BLANKET OR DEVICE APPROVED BY THE ENGINEER SHALL BE USED. EXPOSED FLAME OR TORCHES ARE NOT ALLOWED.

TYPICAL SIZE OF LOOP DETECTORS ARE 6' x 6' AND 6' x 10'. REFER TO INTERSECTION LAYOUT FOR SPECIFIC LOOP DETECTORS TO BE PLACED.

ALL LOOP DETECTORS SHALL HAVE 4 TURNS OF CONDUCTORS.


THE LOOP DETECTOR ROADWAY CONDUCTORS AND THE LOOP DETECTOR LEAD-IN CABLE CONDUCTORS SHALL BE PROPERLY PREPARED AND CLEANED BEFORE SPLICING.

PRIOR TO FURNISHING AND INSTALLING THE APPROVED SPLICE KIT, THE CONTRACTOR SHALL SOLDER THE ENDS OF THE LOOP DETECTOR AND LEAD-IN CONDUCTOR, AND SHALL FURNISH AND INSTALL AN APPROPRIATE SIZED WIRE NUT TO THE SOLDERED ENDS PRIOR TO THE INSTALLATION OF THE SPLICE KITS.

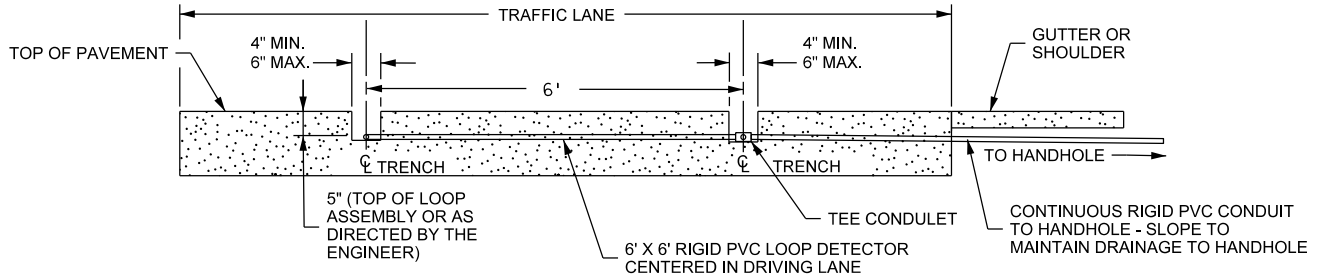
LOOP DETECTORS SHALL BE SPLICED USING A MINNEAPOLIS APPROVED SPLICE KIT. MINNEAPOLIS APPROVED SPLICE KITS SHALL BE FURNISHED AND INSTALLED, EITHER ACCORDING TO MANUFACTURERS INSTRUCTIONS OR BY AN ALTERNATIVE METHOD APPROVED BY THE ENGINEER.

SPLICE KITS SHALL BE FURNISHED AND INSTALLED IN HANDHOLES IN SUCH A MANNER AS TO ENSURE THAT EACH SPLICE KIT IS SUSPENDED AND/OR SECURED NEAR THE TOP OF THE HANDHOLE TO THE SATISFACTION OF THE ENGINEER. (PLACING SPLICE KITS ON TOP OF THE ELECTRICAL CABLES AND CONDUCTORS IS NOT ACCEPTABLE).

NO SCALE SHEET 2 OF 3

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|---|----------|---------------|---|---|
|  | DRW: CLK | DATE: 8/15/14 | <p style="text-align: center;">DETECTION - SIGNAL PREFORMED RIGID PVC CONDUIT LOOP DETECTOR</p> | <p style="text-align: center;">STANDARD PLATE NO. TRAF-1765</p> |
| | APP: DRP | DATE: 8/15/14 | | |

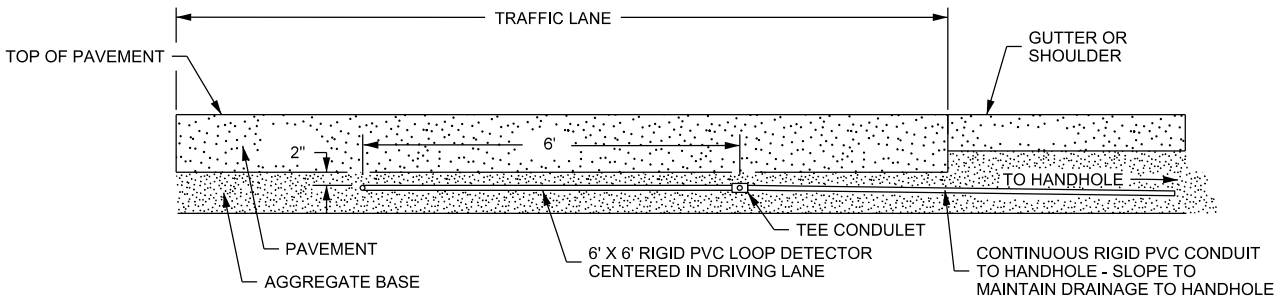
EXISTING PAVEMENT



NOTES:

- USE THE LOOP DETECTOR TO BE PLACED FOR THE PURPOSE OF MARKING THE PAVEMENT LOCATION FOR THE MILLING OPERATION.
- TO ACHIEVE FULL TRENCH DEPTH FOR CONDUIT PLACEMENT, MILL BEYOND THE DESIRED PAVEMENT MARKING.
- PROVIDE A MINIMUM 5" CLEARANCE, MEASURED FROM THE TOP OF THE FINISHED PAVEMENT TO HIGHEST POINT OF LOOP ASSEMBLY (INCLUDING CONDUIT).
- AN AIR COMPRESSOR UNIT (50 HP) IS REQUIRED FOR REMOVING ALL LOOSE MATERIAL FROM TRENCH PRIOR TO TACK COAT APPLICATION.
- APPLY A TACK COAT AT A UNIFORM RATE TO THE BOTTOM AND EDGES OF THE MILLED AREA. USE AN EMULSIFIED ASPHALT PER SPEC. 2357.2A.
- MIXTURE USED TO FILL THE RETROFIT LOOP DETECTOR TRENCHES SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATION 2360. AGGREGATE SIZE A OR B WILL BE ALLOWED WHEN 2360 IS UTILIZED. OTHER WEARING COURSE MIXTURE TYPES ARE ALLOWED WHEN APPROVED BY THE ENGINEER.
- COMPACTION SHALL BE OBTAINED BY THE ORDINARY COMPACTION METHOD. BACKFILL THE TRENCH WITH A MINIMUM OF TWO LIFTS AND COMPACT EACH LIFT. BEFORE COMPACTING THE FIRST LIFT ENSURE THAT THERE IS ADEQUATE MIXTURE ON EACH SIDE AND ABOVE THE CONDUIT SO THAT THE CONDUIT IS NOT DAMAGED DURING COMPACTION OPERATIONS.
- THE COMPACTED MIXTURE IN THE TRENCH SHOULD BE LEFT 1/4" TO 1/2" ABOVE THE ADJACENT PAVEMENT SURFACE TO PROVIDE FOR ADDITIONAL COMPACTION BY TRAFFIC.
- WHEN LOOP DETECTORS ARE MILLED INTO CONCRETE SURFACES, REMOVE RUBBLE, SANDBLAST AND AIR BLAST THE TRENCH TO REMOVE DEBRIS. FILL THE TRENCH WITH AN APPROVED MATERIAL LISTED ON THE MNDOT CONCRETE UNIT'S WEB SITE FOR: "PACKAGED DRY RAPID HARDENING CEMENTITIOUS MATERIALS FOR CONCRETE REPAIRS".
- MILLING IS REQUIRED FOR ALL RIGID PVC LOOP INSTALLATIONS. WHEN LOOPS ARE MILLED INTO EXISTING MILLED SURFACE THAT WILL BE OVERLAYED WITH BITUMINOUS, THE MINIMUM TRENCH DEPTH SHALL BE NO LESS THAN THE HIGHEST LOOP ASSEMBLY IN THE TRENCH.
- WHEN MILLING INTO EXISTING BITUMINOUS SURFACE, BE ADVISED THAT CONCRETE MAY BE ENCOUNTERED UNDER THE BITUMINOUS SURFACE.

NEW PAVEMENT



NOTES:

- OBTAIN THE REQUIRED COMPACTION OF THE AGGREGATE BASE AFTER PLACEMENT OF LOOP DETECTOR AND LEAD-IN CONDUIT.
- THE DEPTH OF THE LOOP MEASURED FROM THE TOP OF THE AGGREGATE BASE TO THE TOP OF THE CONDUIT SHALL NOT EXCEED 2".

NO SCALE SHEET 3 OF 3

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|--|----------|---------------|---|-------------------------------------|
| | DRW: CLK | DATE: 8/15/14 | <p>DETECTION - SIGNAL</p> <p>PREFORMED RIGID PVC CONDUIT</p> <p>LOOP DETECTOR</p> | <p>STANDARD PLATE NO. TRAF-1765</p> |
| | APP: DRP | DATE: 8/15/14 | | |