

**SURVEILLANCE LOOP DETECTOR
INSTALLATION DETAILS**

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SHEET 1 OF 2

3-6-03
6-14-02
2-13-02
3-12-01
10-21-99
7-29-99
10-13-98
REV. 8-6-98

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	SHEET NO.
6		
STATE	DIST.	COUNTY
TEXAS	SAT	BEXAR
CONT.	SECT.	JOB
		HIGHWAY NO.

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
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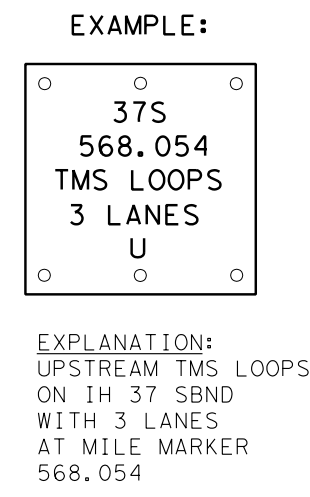
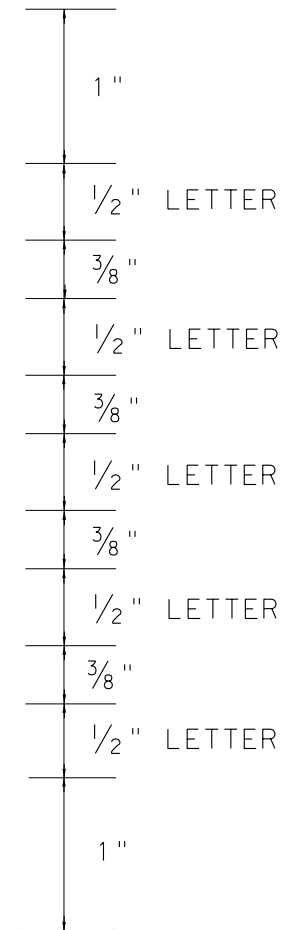
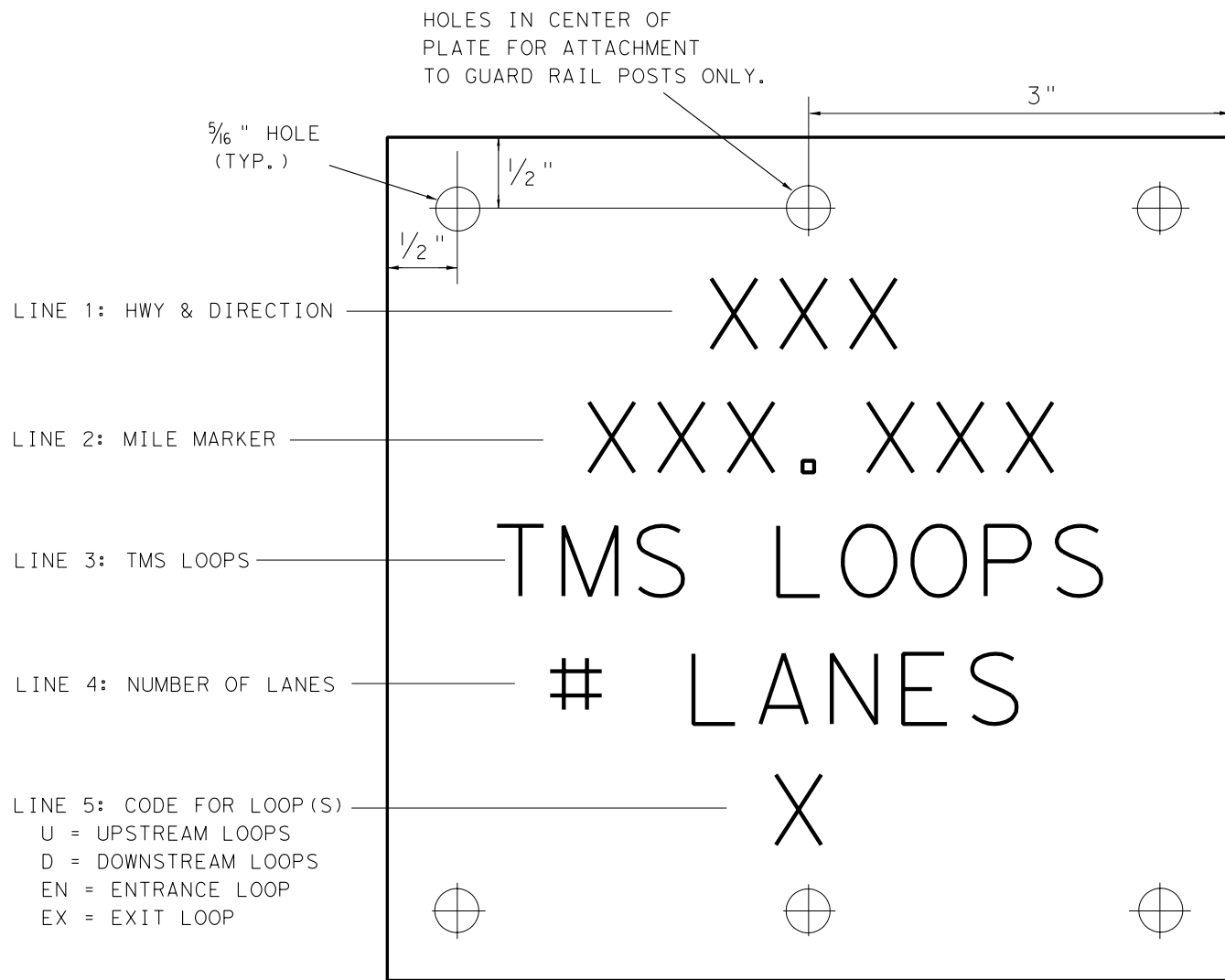
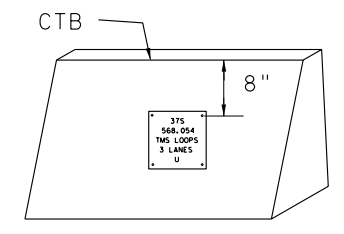


PLATE DETAILS

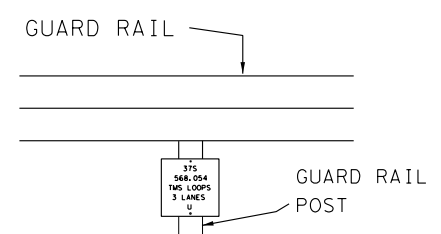
6" X 6" X 1/8" THICK UNPAINTED POLISHED ALUMINUM PLATE WITH LETTERS AND NUMBERS STAMPED INTO PLATE. FINISH SHALL BE SMOOTH AND FREE OF FLAWS, BURRS, OR SHARP EDGES.

- LOOP INSTALLATION NOTES:**
1. THE PAVEMENT CUT IS TO BE MADE WITH AN APPROVED SAW TO NEAT LINES AND LOOSE MATERIAL REMOVED. THE CUT SHALL BE CLEAN AND DRY WHEN THE WIRE AND LOOP SEALANT IS PLACED.
 2. WHERE MORE THAN ONE LOOP IS PLACED, THE LOOP DETECTOR WIRE FROM LOOP TO GROUND BOX SHALL NOT BE PLACED IN A SAW CUT WITH WIRE FROM OTHER LOOPS UNLESS OTHERWISE SHOWN IN THE PLANS.
 3. THE LOOP WIRE SHALL BE TWISTED A MINIMUM OF FIVE TURNS PER FOOT FROM THE EDGE OF THE ROAD TO THE GROUND BOX AND NO SPLICES SHALL BE PERMITTED IN THE LOOP OR IN THE RUN TO THE GROUND BOX.
 4. THE 1/C #14 LOOP WIRE SHALL BE SINGLE CONDUCTOR CROSSLINKED POLYETHYLENE (0.045) INSULATED WIRE, TYPE: RHH, RHW, USE, 14 AWG STRANDED COPPER RATED AT 600 VOLTS.
 5. THE 2/C #14 LOOP CABLE SHALL BE TWO CONDUCTOR SHIELDED CABLE, 14 AWG, 19 X 27 STRANDED, 600 VOLT TINNED COPPER, POLYETHYLENE INSULATED, TWISTED PAIR, TWISTED A MINIMUM OF THREE TWISTS PER FOOT, ALUMINUM - POLYESTER SHIELD, 16 AWG STRANDED TINNED COPPER DRAIN WIRE, 100% SHIELD COVERAGE. THE LOOP CABLE SHALL BE CONTINUOUS WITHOUT SPLICES.
 6. THE LOOP WIRE SHALL BE SPLICED TO THE LOOP CABLE BY SOLDERING CONDUCTORS, SECURING WITH A WIRE NUT AND FULLY ENCAPSULATING INTO A WATERTIGHT COMMERCIAL SPLICING KIT.
 7. ALL LOOP WIRE PLACED IN A SAWCUT SHALL BE SEALED BY FULLY ENCAPSULATING IT WITH LOOP WIRE SEALANT AS APPROVED BY THE ENGINEER.
 8. ALL LOOP DETECTORS SHALL BE 6' X 6' CENTERED BETWEEN THE ULTIMATE LANE LINES.
 9. LOOP DETECTOR WIRE AND LOOP DETECTOR CABLE SHALL BE LABELLED IN THE FIRST GROUND BOX AND CABINET TO IDENTIFY IN WHICH LANE THE LOOP IS LOCATED IN ACCORDANCE WITH THE EQUIPMENT ADDRESS INDEX SHEET.
 10. LOOP DETECTOR WIRE AND LOOP DETECTOR CABLE SHALL BE TESTED IN THE PRESENCE OF THE ENGINEER USING A MEGOHMMETER AND CONTINUITY TESTER. THE RESISTANCE BETWEEN GROUND AND EACH SIDE OF THE LOOP DETECTOR WIRE OR LOOP DETECTOR CABLE SHALL BE TESTED. ANY LOOP HAVING LESS THAN 50 MEG-OHMS TO GROUND SHALL BE REPLACED BY THE CONTRACTOR. THE TEST SHALL BE PERFORMED BEFORE, AFTER THE RUBBER SEAL, AND AFTER THE ACP OVERLAY.
 11. ANY JUNCTION BOXES PLACED IN RAIL SHALL BE 18" X 18" X 6" CAST IRON, HOT DIP GALV. WATERTIGHT (NEMA - 4) SIMILAR TO OZ/GEDNEY CAT. YU-181806. ALL CONDUIT ENTERING THE BOX SHALL ENTER THROUGH DRILLED AND SEALED HOLES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH THE FABRICATOR THE HOLE LOCATIONS. THE CONTRACTOR SHALL FURNISH A CATALOG SUBMITTAL TO THE ENGINEER FOR APPROVAL.
 12. SURVEILLANCE LOOP DETECTORS SHALL BE PAID FOR AS EACH LOOP DETECTOR WHICH SHALL BE PAYMENT FOR ALL MATERIAL AND LABOR FROM THE LOOP DETECTOR TO BUT NOT INCLUDING THE GROUND BOXES OR 2/C #14 LOOP CABLE.
 13. LOOPS SHALL BE INSTALLED PRIOR TO FINAL ACP MAT.

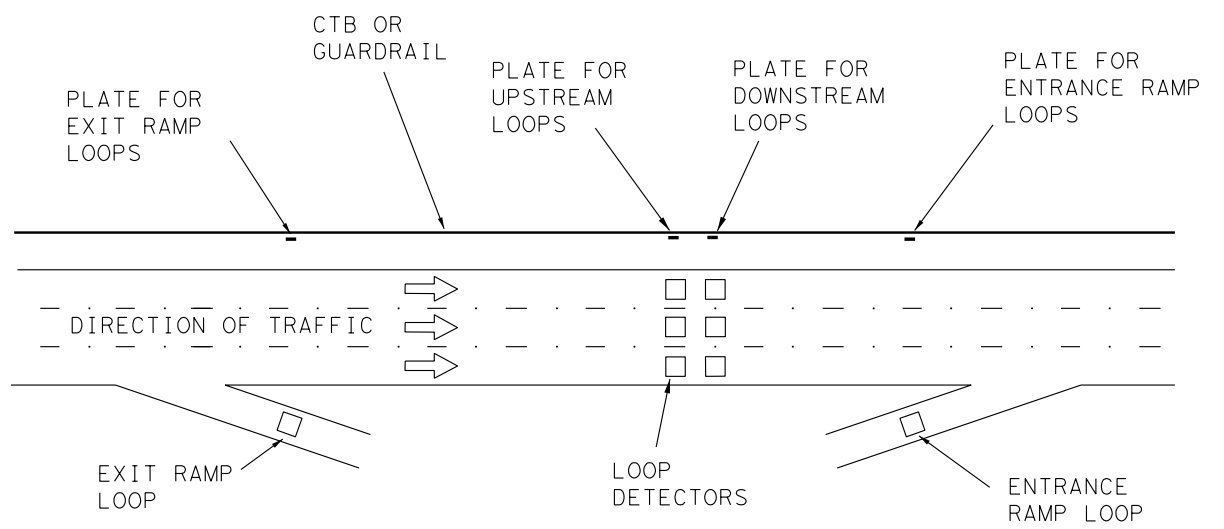
- PLATE INSTALLATION NOTES:**
1. PLATE SHALL BE ATTACHED TO CTB WITH 1/4" X 3/4" LONG GALVANIZED LAG BOLTS & FLAT WASHERS WITH LEAD ANCHORS DRILLED INTO CTB.
 2. PLATE SHALL BE ATTACHED TO METAL GUARD RAIL POSTS USING HILTI GUN WITH APPROPRIATE ANCHORS.
 3. PLATE SHALL BE ATTACHED TO WOOD GUARD RAIL POSTS WITH 1/4" GALVANIZED LAG BOLTS AND WASHERS.
 4. CONTACT TXDOT AT (210)731-5140 TO REQUEST INFORMATION TO BE STAMPED ON PLATE AT EACH LOOP LOCATION (MILE MARKER, ETC). 48 HRS NOTICE REQUIRED.
 5. ALL MATERIALS AND LABOR SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "SURVEILLANCE LOOP DETECTOR" AND NO DIRECT PAYMENT SHALL BE MADE.
 6. IN LOCATIONS WITHOUT CTB OR GUARDRAIL, PLATE SHALL BE ATTACHED TO CONCRETE APRON SURROUNDING GROUND BOX AT LOOP(S).



ATTACH USING 4 OUTSIDE HOLES
PLATE MOUNTED TO CTB



ATTACH USING 2 INSIDE HOLES
PLATE MOUNTED TO GUARD RAIL



LOCATION DETAILS

SURVEILLANCE LOOP DETECTOR INSTALLATION DETAILS

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SHEET 2 OF 2

ORIGINAL DRAWING DATE: 3-18-99	FED. RD. DIV. NO. 6	FEDERAL AID PROJECT NO.	SHEET NO.
7-29-99 6-14-02 3-6-03	STATE TEXAS	DIST. SAT	COUNTY BEXAR
	CON. CONT.	SECT. JOB	HIGHWAY NO.

LEVELS DISPLAYED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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