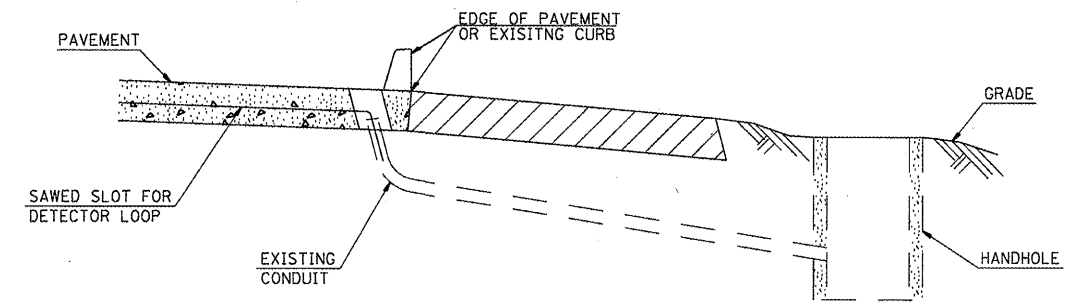


**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS  
FOR IL 159 AND MORO ROAD**

LOOP	PHASE (Ø)	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (µH)	CALCULATED RESISTANCE OHMS (Ω)
1 NB_LI	5	6' X 50'	3-6-3	1235.74	2.71
2 NB_THRU=L2	2	6' X 50'	3-6-3	1235.74	2.71
3 NB_RI	2	6' X 20'	3-6-3	1235.74	2.71
4 NB_THRU=L2	2	6' X 6'	6	369.72	2.79
5 WB_THRU=L1	8	6' X 50'	3-6-3	1262.36	3.31
6 WB_RI	8	6' X 30'	3-6-3	1546.36	2.84
7 SB_THRU=L2	6	6' X 50'	3-6-3	1239.48	2.79
8 SB_LI	1	6' X 50'	3-6-3	1239.48	2.79
9 SB_THRU=L2	6	6' X 6'	6	378.74	3.18
10 SB_RI	6	6' X 20'	3-6-3	1239.48	2.79
11 EB_THRU=L1	4	6' X 50'	3-6-3	1214.84	2.23
12 EB_RI	4	6' X 50'	3-6-3	1214.84	2.23

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.



**DETAIL  
(NO SCALE)  
RE-USE EXISTING DETECTOR LOOP LEAD-IN CABLE IN ONDUIT**

- 1 LOCATE UNDERGROUND CABLE FROM H.H. TO PAVEMENT.
- 2 DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
- 3 REMOVE EXISTING LEAD-IN CONDUCTORS TO HANDHOLE.
- 4 INSTALL LOOP LEAD-IN CONDUCTORS IN EXISTING CONDUIT.
- 5 SPLICE NEW DETECTOR LOOP LEAD-IN CONDUCTORS TO EXISTING LEAD-IN CABLE IN HANDHOLE.
- 6 FILL HOLE WITH APPROVED SEALER. PREVENT SEALER FROM ENTERING INTO CONDUIT.

NOT A PAY ITEM. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "DETECTOR LOOP REPLACEMENT"

**ELECTRICAL GENERAL NOTES:**

- 1 THE EXISTING DETECTOR LOOP CONDUIT FROM PAVEMENT TO THE HANDHOLE WILL BE RE-USED FOR THE REPLACED DETECTOR LOOP. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING THE EXISTING CONDUIT DURING THE CONSTRUCTION OPERATION. SHOULD ANY DAMAGE OCCURS DUE TO THE CONTRACTOR'S OPERATIONS, REPAIRS WILL BE MADE TO THE SATISFACTION OF THE ENGINEER AND WILL BE DONE AT THE CONTRACTOR'S EXPENSE.

**ELECTRICAL QUANTITIES:**

CODE NO.	DESCRIPTION	UNIT	QUANTITY
88600600	DETECTOR LOOP REPLACEMENT	FOOT	1635
80300100	LOCATING UNDER GROUND CABLE	FOOT	100

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DETECTOR LOOP REPLACEMENT</b>	F.A.P. Rte.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			604	101, 102, 103	MADISON	13	9	
		CHECKED -	REVISED -			SCALE: 50' = 1"		SHEET NO. OF SHEETS		STA. TO STA.	FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT
		DATE -	REVISED -					CONTRACT NO. 76027			