

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND SOUTHWIND DRIVE**

LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
EB_THRU_LN_*1	6' X 50'	3-6-3	836	2.72
EB_CCO_*2	6' X 6'	5	246	2.05
WB_LT_LN_*3	6' X 50'	3-6-3	806	2.03
WB_THRU_LN_*4	6' X 50'	3-6-3	806	2.03
WB_CCO_*5	6' X 6'	6	343	2.36

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

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND HARTMAN LANE**

LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
EB_LT_LN_*1	6' X 50'	3-6-3	835	2.69
EB_THRU_LN_*2	6' X 50'	3-6-3	835	2.69
EB_CCO_*3	6' X 6'	5	243	1.98
EB_CCO_*4	6' X 6'	7	498	3.43
WB_THRU_LN_*5	6' X 50'	3-6-3	802	1.97
WB_CCO_*6	6' X 6'	6	346	2.45
SB_RT_LN_*7	6' X 35'	3-6-3	605	2.14

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

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND N. GREEN MOUNT ROAD**

LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
EB_LT_LN_*1	6' X 50'	3-6-3	856	3.18
EB_THRU_LN_*2	6' X 50'	3-6-3	852	3.10
EB_RT_LN_*3	6' X 50'	3-6-3	845	2.94
EB_CCO_*4	6' X 6'	7	504	3.57
WB_LT_LN_*5	6' X 50'	3-6-3	811	2.16
WB_THRU_LN_*6	6' X 50'	3-6-3	811	2.16
WB_CCO_*7	6' X 6'	6	350	2.51

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

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND WHITESIDE ROAD**

LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
EB_LT_LN_*1	6' X 50'	3-6-3	806	2.05
EB_THRU_LN_*2	6' X 50'	3-6-3	806	2.05
EB_CCO_*3	6' X 6'	5	235	1.82
WB_LT_LN_*4	6' X 50'	3-6-3	836	2.74
WB_THRU_LN_*5	6' X 50'	3-6-3	836	2.74
WB_CCO_*6	6' X 6'	6	361	2.77

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

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND WARRIOR WAY**

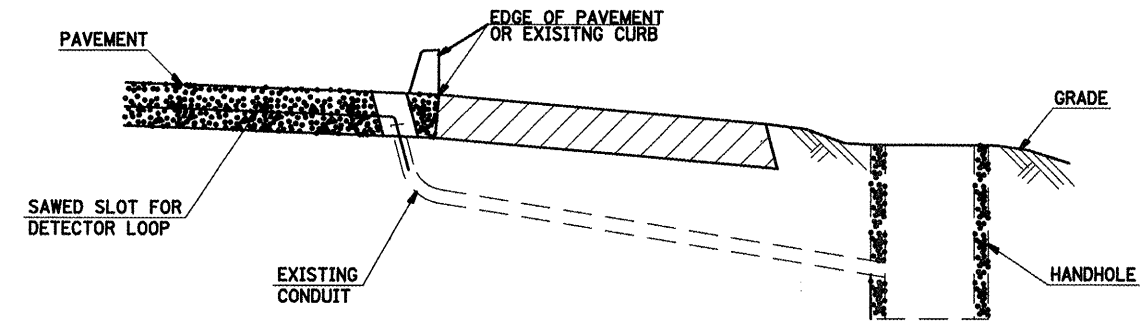
LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
EB_LT_LN_*1	6' X 50'	3-6-3	809	2.12
EB_THRU_LN_*2	6' X 50'	3-6-3	809	2.12
EB_THRU_LN_*3	6' X 50'	3-6-3	809	2.12
EB_CCO_*4	6' X 6'	5	250	2.15
WB_LT_LN_*5	6' X 50'	3-6-3	854	3.15
WB_THRU_LN_*6	6' X 50'	3-6-3	854	3.15
WB_CCO_*7	6' X 6'	7	494	3.33
WB_LT_LN_*8	6' X 50'	3-6-3	822	2.41
SB_THRU_LANE_*9	6' X 50'	3-6-3	831	2.61

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

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR LEBANON AVE. AND CROSS STREET**

LOOP	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES ( $\mu H$ )	CALCULATED RESISTANCE OHMS ( $\Omega$ )
1 EB_LT_LN_*1	6' X 50'	3-6-3	852	3.09
2 EB_THRU_LN_*2	6' X 50'	3-6-3	852	3.09
3 EB_CCO_*3	6' X 6'	6	357	2.68
4 EB_CCO_*4	6' X 6'	6	357	2.68
5 WB_THRU_LN_*5	6' X 50'	3-6-3	810	2.14
6 WB_CCO_*6	6' X 6'	5	228	1.65

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:**

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 OCCURE 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.

SCHEDULE OF QUANTITIES			TOTAL	INTERSECTION OF LEBANON AVE. WITH					
CODE NO	ITEM	UNIT	QUANTITIES	SOUTHWIND DR.	WHITESIDE RD	HARTMAN LN.	WARRIOR WAY	N GREENMOUNT RD	CROSS ST
80300100	LOCATING UNDERGROUND CABLE	FOOT	702	87	92	341	53	74	55
88600600	DETECTOR LOOP REPLACEMENT	FOOT	4998	573	749	791	1271	980	634