

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR IL 159 & BELTLINE RD					
LOOP	PHASE	LOOP SIZE	REQUIRED NUMBER OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1	NB CCO A	6	6'x6'	6	295.0
2	NB CCO B	6	6'x6'	6	292.0
3	NB LT CD	1	6'x50' Q	3-6-3	809.9
4	NB THRU CD A	6	6'x50' Q	3-6-3	807.9
5	NB THRU CD B	6	6'x50' Q	3-6-3	803.8
6	WB LT CD	NA	NA	NA	NA
7	WB THRU CD	NA	NA	NA	NA
8	WB RT CD	NA	NA	NA	NA
9	SB CCO A	2	6'x6'	6	312.0
10	SB CCO B	2	6'x6'	6	308.8
11	SB CCO C	2	6'x6'	6	313.6
12	SB CCO D	2	6'x6'	6	311.2
13	SB LT CD	5	6'x50' Q	3-6-3	820.4
14	SB THRU CD A	2	6'x50' Q	3-6-3	818.1
15	SB THRU CD B	2	6'x50' Q	3-6-3	815.4

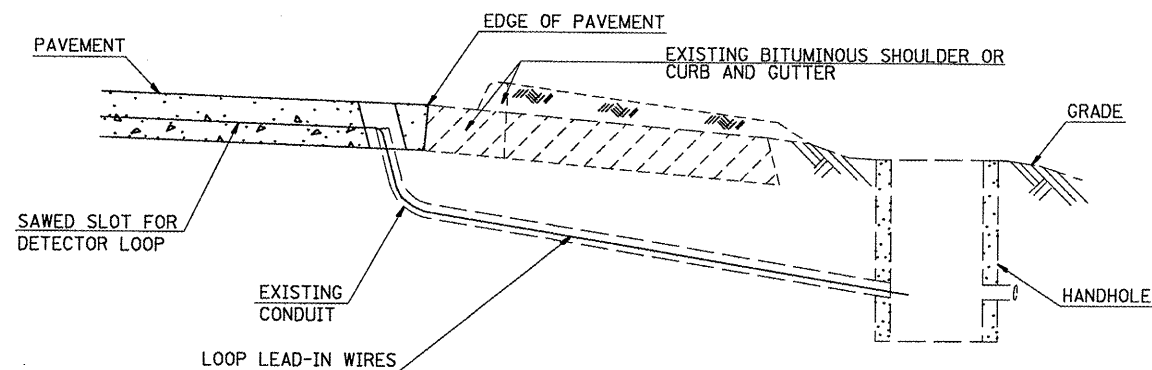
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR IL 159 & CAMELOT DR					
LOOP	PHASE	LOOP SIZE	REQUIRED NUMBER OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1	NB CCO A	6	6'x6'	6	344.4
2	NB CCO B	6	6'x6'	6	341.2
3	NB LT CD	1	6'x50' Q	3-6-3	819.3
4	NB THRU CD A	6	6'x50' Q	3-6-3	816.5
5	NB THRU CD B	6	6'x50' Q	3-6-3	814.2
6	WB THRU CD	NA	NA	NA	NA
7	SB CCO A	2	6'x6'	6	338.4
8	SB CCO B	2	6'x6'	6	335.4
9	SB LT CD	5	6'x50' Q	3-6-3	812.1
10	SB THRU CD A	2	6'x50' Q	3-6-3	809.0
11	SB THRU CD B	2	6'x50' Q	3-6-3	805.7
12	EB LT CD	NA	NA	NA	NA
13	EB THRU CD	NA	NA	NA	NA

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR IL 159 & EAST WEST COUNTRY LN					
LOOP	PHASE	LOOP SIZE	REQUIRED NUMBER OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1	SB CCO A	2	6'x6'	6	319.5
2	SB CCO B	2	6'x6'	6	317.2
3	EB LT CD	5	6'x50' Q	3-6-3	824.0
4	WB THRU CD	NA	NA	NA	NA
5	WB RT CD	NA	NA	NA	NA
6	NB CCO A	6	6'x6'	6	325.3
7	NB CCO B	6	6'x6'	6	322.7
8	NB LT CD	1	6'x50' Q	3-6-3	829.7

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR IL 159 & ST. CHARLES RD					
LOOP	PHASE	LOOP SIZE	REQUIRED NUMBER OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1	NB CCO A	6	6'x6'	6	361.1
2	NB CCO B	6	6'x6'	6	358.3
3	NB LT CD	1	6'x50' Q	2-4-2	449.5
4	NB THRU CD A	6	6'x50' Q	2-4-2	446.7
5	NB THRU CD B	6	6'x50' Q	2-4-2	444.3
6	WB THRU CD	3	6'x50' Q	2-4-2	426.5
7	WB RT CD	3	6'x20'	3-6-3	341.5
8	SB CCO A	2	6'x6'	6	364.0
9	SB CCO B	2	6'x6'	6	361.4
10	SB CCO C	2	6'x6'	6	358.5
11	SB LT CD	5	6'x50' Q	2-4-2	452.2
12	SB THRU CD A	5	6'x50' Q	2-4-2	449.7
13	SB THRU CD B	2	6'x50' Q	2-4-2	447.0
14	EB THRU CD	NA	NA	NA	NA

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR IL 159 & WEST EXIT RAMP					
LOOP	PHASE	LOOP SIZE	REQUIRED NUMBER OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1	NB CCO A	2	6'x6'	6	360.0
2	NB CCO B	2	6'x6'	6	358.0
3	NB THRU CD A	2	6'x50' Q	3-6-3	812.0
4	NB THRU CD B	2	6'x50' Q	3-6-3	810.0
5	WB RT CD	4	6'x50' Q	3-6-3	825.0

THE VALUES CALCULATED ON THIS SHEET ARE CALCULATED OF COMBINED LOOP AND LEED-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN $\pm 20\%$ OF THESE VALUES.



DETAIL A DETECTOR LOOP REPLACEMENT DETAIL

- (NO SCALE)
INSTALLING DETECTOR LOOP WIRES IN EXISTING CONDUIT
- 1 DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
 - 2 REMOVE EXISTING DETECTOR LOOP WIRES TO HANDHOLE.
 - 3 INSTALL NEW LOOP LEAD-IN WIRES IN EXISTING CONDUIT.
 - 4 SPLICE NEW DETECTOR LOOP WIRES TO EXISTING LOOP LEAD-IN CABLE IN HANDHOLE.
 - 5 FILL HOLE WITH APPROVED SEALER. PREVENT SEALER FROM ENTERING INTO CONDUIT.
 - 6 LOCATING UNDERGROUND CABLE WILL BE PAID FOR SEPARATELY.

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

ABBREVIATIONS

CD CALL DELAY
CCO CALL CARRY OVER
Q QUADRAPOLE