

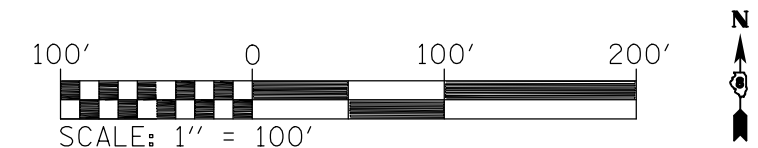
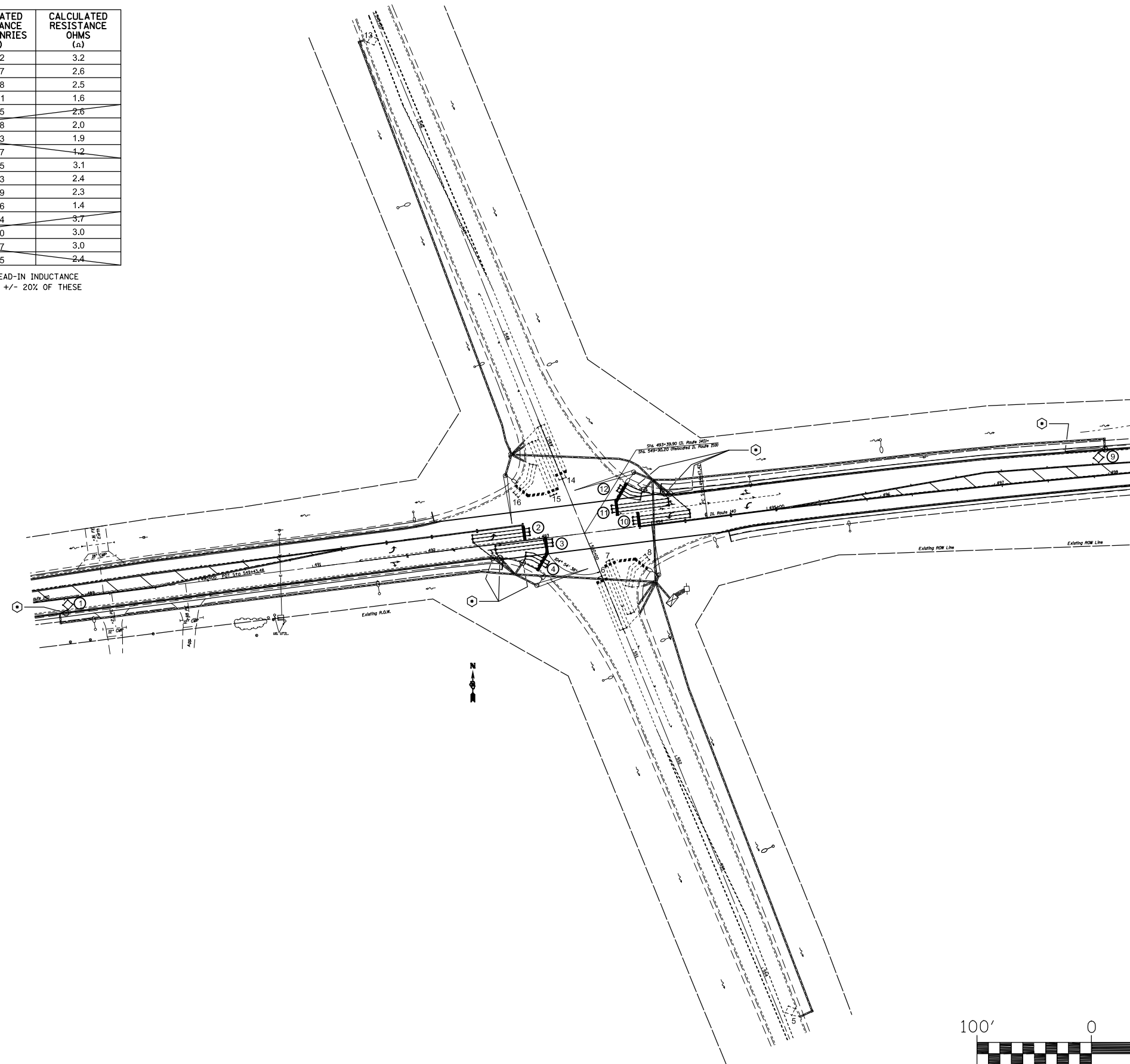
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS  
FOR IL 140 & IL 159

LOOP#	PHASE #	LOOP SIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1. EB CCO	6	6 x 6	6	381.2	3.2
2. EB LT CD	1	6 x 50(Q)	3-6-3	830.7	2.6
3. EB THRU CD	6	6 x 50(Q)	3-6-3	825.8	2.5
4. EB RT CD	6	6 x 20(Q)	3-6-3	374.1	1.6
5. NB CCO	4	6 x 6	6	354.5	2.6
6. NB LT CD	7	6 x 50(Q)	3-6-3	801.8	2.0
7. NB THRU CD	4	6 x 50(Q)	3-6-3	798.3	1.9
8. NB RT CD	4	6 x 30(Q)	3-6-3	495.7	1.2
9. WB CCO	2	6 x 6	6	373.5	3.1
10. WB LT CD	5	6 x 50(Q)	3-6-3	822.3	2.4
11. WB THRU CD	2	6 x 50(Q)	3-6-3	817.9	2.3
12. WB RT CD	2	6 x 20(Q)	3-6-3	366.6	1.4
13. SB CCO	8	6 x 6	7	510.4	3.7
14. SB LT CD	3	6 x 50(Q)	3-6-3	850.0	3.0
15. SB THRU CD	8	6 x 50(Q)	3-6-3	846.7	3.0
16. SB RT CD	8	6 x 30(Q)	3-6-3	546.5	2.4

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

Q=QUADRAPOLE

⊙ =SEE DETAIL A



FILE NAME =	USER NAME = burnsideem	DESIGNED -	REVISED -
et:\pw_work\p1dot\burnsideem\d0351326\d076g58-sh1-TS.dgn		DRAWN -	REVISED -
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -
	PLOT DATE = 3/20/2014	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETECTOR LOOP REPLACEMENT PLAN  
IL 140 & IL 159

SCALE: NA SHEET NO. 2 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(133,134,135)RS-4	MADISON	28	18
CONTRACT NO. 76G58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				