CONTRACT NO. 76960

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9128	28-RS-1	MADISON	14	14

STA.   TO STA.

FED. ROAD DIST. NO.   ILLINOIS   FED. AID PROJECT

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR COLLINSVILLE ROAD AND BLACK LANE

LOOP	PHASE (ϕ)	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
1. EB CCO A	6	6' X 6'	6	360.0	2.8
2. EB CCO B	6	6' X 6'	6	357.7	2.7
3. EB LT CD	1	6' X 50'Q	3-6-3	812.8	2.2
4. EB THRU CD A	6	6' X 50'Q	3-6-3	819.1	2.3
5. EB THRU CD	6	6' X 50'Q	3-6-3	815.7	2.3
6. EB RT CD	6	6' X 25'Q	3-6-3	443.9	1.6
7. NB CCO	4	NA	NA	NA	NA
8. NB LT CD	4	6' X 50'Q	3-6-3	833.0	2.7
9. NB THRU CD	4	6' X 50'Q	3-6-3	831.2	2.6
10. NB RT CD A	4	NA	NA	NA	NA
11. NB RT CD B	4	6' X 25'Q	3-6-3	458.1	1.9
12. WB CCO	2	6' X 6'	6	364.4	2.9
13. WB CCO	2	6' X 6'	6	361.7	2.8
14. WB LT CD	5	6' X 50'Q	3-6-3	820.0	2.4
15. WB THRU CD A	2	6' X 50'Q	3-6-3	816.8	2.3
16. WB THRU CD B	2	6' X 50'Q	3-6-3	813.2	2.2
17. WB RT CD	2	6' X 25'Q	3-6-3	439.1	1.5
18. SB CCO A	3	NA	NA	NA	NA
19. SB CCO B	3	NA	NA	NA	NA
20. SB LT CD	3	6' X 50'Q	3-6-3	803.1	2.0
21. SB THRU CD	3	6' X 50'Q	3-6-3	801.0	1.9
22. SB RT CD A	3	NA	NA	NA	NA
23. SB RT CD B	3	6' X 25'Q	3-6-3	425.5	1.2

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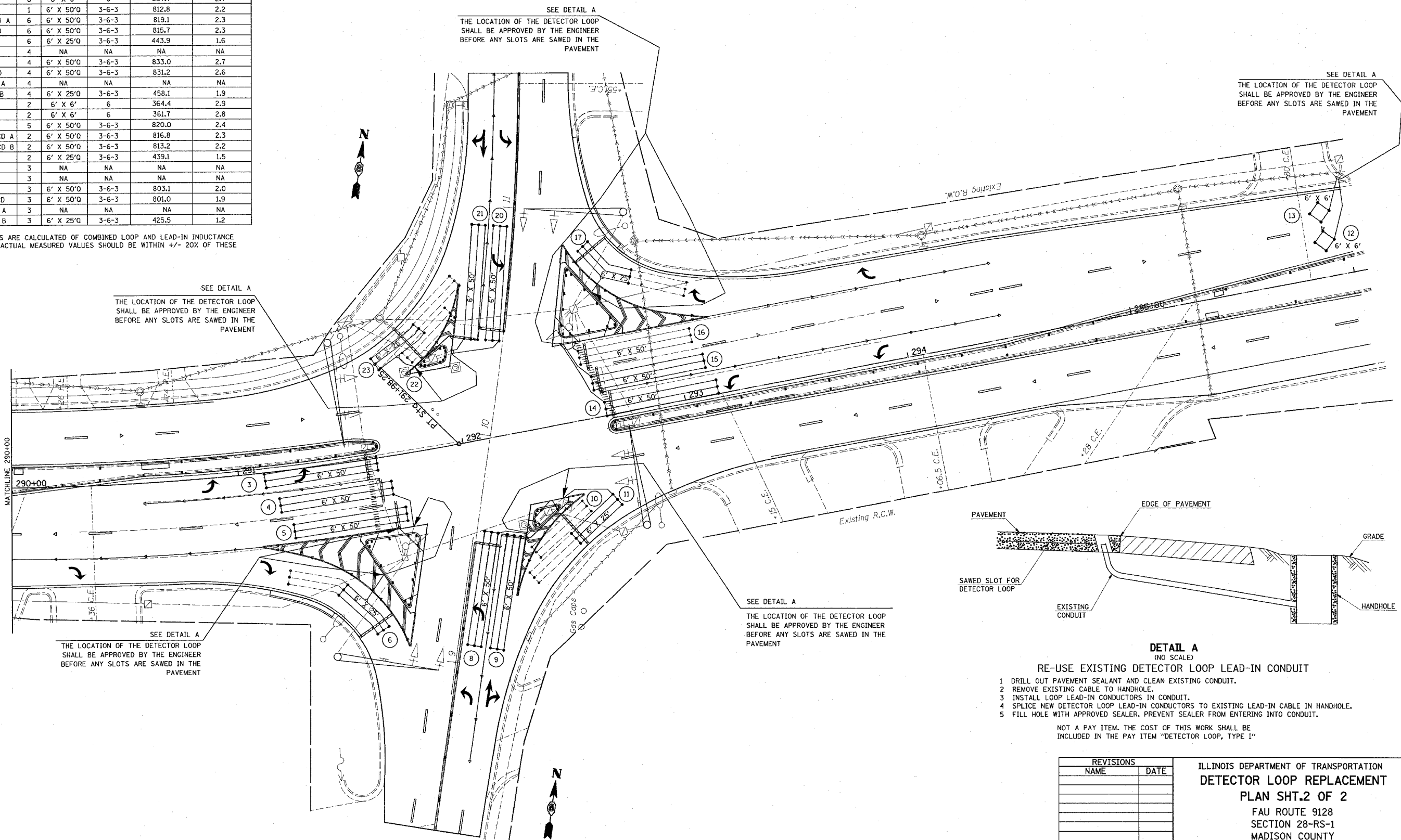

SEE DETAIL A
THE LOCATION OF THE DETECTOR LOOP SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT

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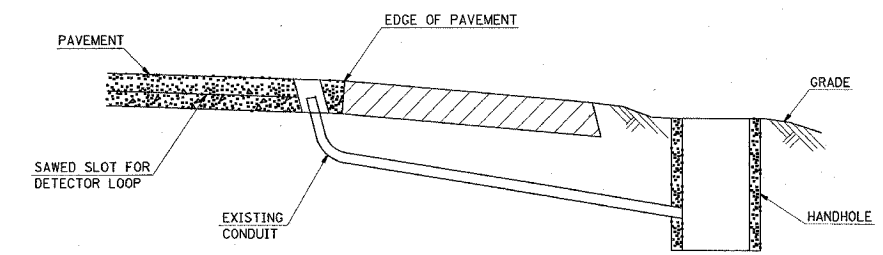
DETAIL A
(NO SCALE)
RE-USE EXISTING DETECTOR LOOP LEAD-IN CONDUIT

PAVEMENT
EDGE OF PAVEMENT
GRADE
SAWED SLOT FOR DETECTOR LOOP
EXISTING CONDUIT
HANDHOLE

1. DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
2. REMOVE EXISTING CABLE TO HANDHOLE.
3. INSTALL LOOP LEAD-IN CONDUCTORS IN CONDUIT.
4. SPLICE NEW DETECTOR LOOP LEAD-IN CONDUCTORS TO EXISTING LEAD-IN CABLE IN HANDHOLE.
5. 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, TYPE I"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DETECTOR LOOP REPLACEMENT
PLAN SHT. 2 OF 2
FAU ROUTE 9128
SECTION 28-RS-1
MADISON COUNTY

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY