

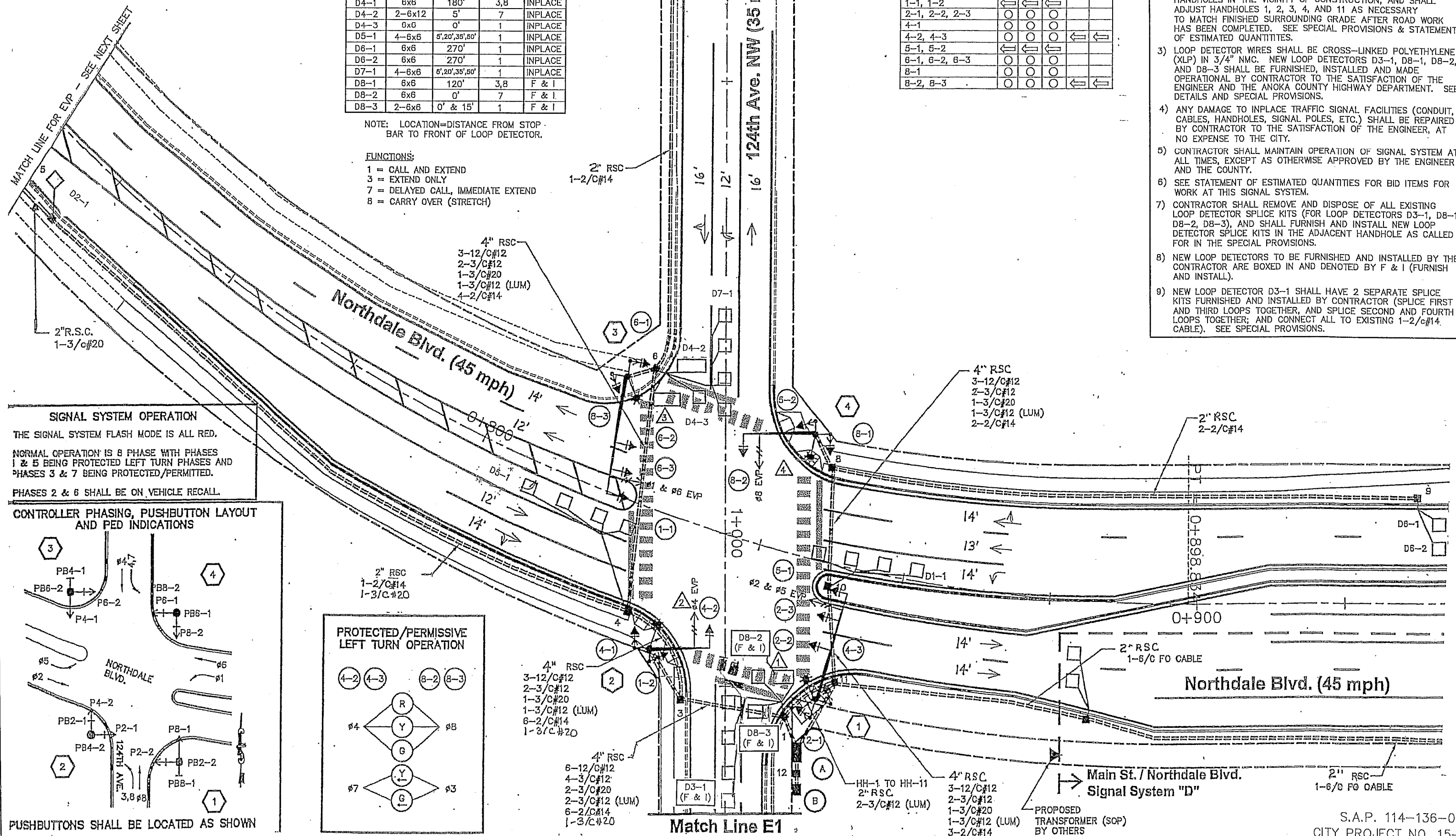
PVC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	4-6x6	5',20',35',50'	1	INPLACE
D2-1	6x6	300'	1	INPLACE
D3-1	4-6x6	5',20',35',50'	1	F & I
D4-1	6x6	180'	3,8	INPLACE
D4-2	2-6x12	5'	7	INPLACE
D4-3	6x6	0'	1	INPLACE
D5-1	4-6x6	5',20',35',50'	1	INPLACE
D6-1	6x6	270'	1	INPLACE
D6-2	6x6	270'	1	INPLACE
D7-1	4-6x6	5',20',35',50'	1	INPLACE
D8-1	6x6	120'	3,8	F & I
D8-2	6x6	0'	7	F & I
D8-3	2-6x6	0' & 15'	1	F & I

NOTE: LOCATION=DISTANCE FROM STOP BAR TO FRONT OF LOOP DETECTOR.

FUNCTIONS:
 1 = CALL AND EXTEND
 3 = EXTEND ONLY
 7 = DELAYED CALL, IMMEDIATE EXTEND
 8 = CARRY OVER (STRETCH)

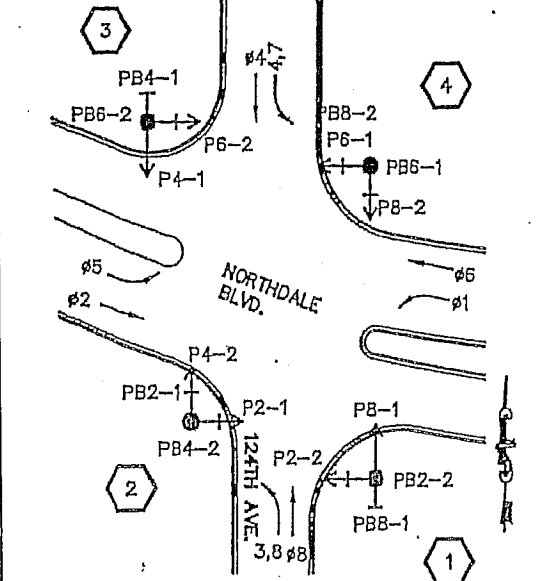
LED SIGNAL FACES					
SIGNAL FACE	ALL 12"				
	R	Y	G	Y	G
1-1, 1-2	←	←	←		
2-1, 2-2, 2-3	○	○	○		
4-1	○	○	○		
4-2, 4-3	○	○	○	←	←
5-1, 5-2	←	←	←		
6-1, 6-2, 6-3	○	○	○		
8-1	○	○	○		
8-2, 8-3	○	○	○	←	←

- LOOP DETECTOR REPLACEMENT NOTES:
- 1) ALL ITEMS OF SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS OTHERWISE NOTED ON PLANS.
 - 2) CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING HANDHOLES IN THE VICINITY OF CONSTRUCTION, AND SHALL ADJUST HANDHOLES 1, 2, 3, 4, AND 11 AS NECESSARY TO MATCH FINISHED SURROUNDING GRADE AFTER ROAD WORK HAS BEEN COMPLETED. SEE SPECIAL PROVISIONS & STATEMENT OF ESTIMATED QUANTITIES.
 - 3) LOOP DETECTOR WIRES SHALL BE CROSS-LINKED POLYETHYLENE (XLP) IN 3/4" NMC. NEW LOOP DETECTORS D3-1, D8-1, D8-2, AND D8-3 SHALL BE FURNISHED, INSTALLED AND MADE OPERATIONAL BY CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND THE ANOKA COUNTY HIGHWAY DEPARTMENT. SEE DETAILS AND SPECIAL PROVISIONS.
 - 4) ANY DAMAGE TO INPLACE TRAFFIC SIGNAL FACILITIES (CONDUIT, CABLES, HANDHOLES, SIGNAL POLES, ETC.) SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE CITY.
 - 5) CONTRACTOR SHALL MAINTAIN OPERATION OF SIGNAL SYSTEM AT ALL TIMES, EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER AND THE COUNTY.
 - 6) SEE STATEMENT OF ESTIMATED QUANTITIES FOR BID ITEMS FOR WORK AT THIS SIGNAL SYSTEM.
 - 7) CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING LOOP DETECTOR SPLICE KITS (FOR LOOP DETECTORS D3-1, D8-1, D8-2, D8-3), AND SHALL FURNISH AND INSTALL NEW LOOP DETECTOR SPLICE KITS IN THE ADJACENT HANDHOLE AS CALLED FOR IN THE SPECIAL PROVISIONS.
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 - 9) NEW LOOP DETECTOR D3-1 SHALL HAVE 2 SEPARATE SPLICE KITS FURNISHED AND INSTALLED BY CONTRACTOR (SPLICE FIRST AND THIRD LOOPS TOGETHER, AND SPLICE SECOND AND FOURTH LOOPS TOGETHER; AND CONNECT ALL TO EXISTING 1-2/c#14 CABLE). SEE SPECIAL PROVISIONS.

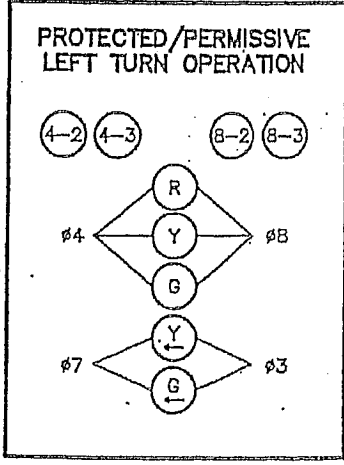


SIGNAL SYSTEM OPERATION
 THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
 NORMAL OPERATION IS 8 PHASE WITH PHASES 1 & 5 BEING PROTECTED LEFT TURN PHASES AND PHASES 3 & 7 BEING PROTECTED/PERMITTED.
 PHASES 2 & 6 SHALL BE ON VEHICLE RECALL.

CONTROLLER PHASING, PUSHBUTTON LAYOUT AND PED INDICATIONS



PUSHBUTTONS SHALL BE LOCATED AS SHOWN



DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

NO.	BY	DATE
1	JMG	11/2015

RECORD DRAWING

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457

Date: February 12, 2015

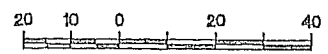
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COON RAPIDS, MINNESOTA

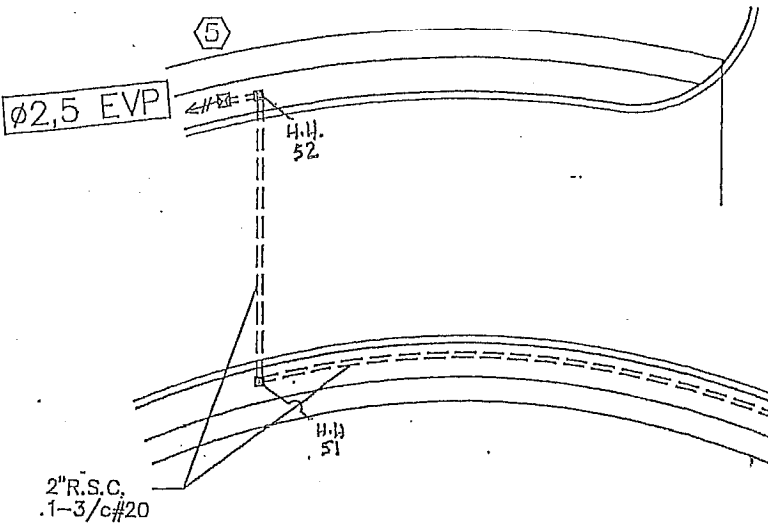
LOOP DETECTOR REPLACEMENT INTERSECTION LAYOUT
 NORTHDALE BOULEVARD AT 124TH AVE NW

FILE NO. COONR 116823
 SIGNAL SHEET 12 OF 17

S.A.P. 114-136-004
 CITY PROJECT NO. 15-2



Match-Line E1



5 SCREW-IN PEDESTAL FOUNDATION
10' PEDESTAL POLE (INCLUDES BASE)
WIND COLLAR FOR PEDESTAL POLE
ONE WAY EVP DETECTOR-MOUNT ON TOP
OF PEDESTAL POLE (#2,5)
EXTEND INTO H.H.52:
2\"/>

SHOPPING CENTER
DRIVEWAY

NORTHDALE BLVD (45 mph)

124th Ave. (30 mph)

MATCH LINE FOR EVP - SEE PREVIOUS SHEET

2 TYPE PA85 POLE FOUNDATION
TYPE PA85-A-25-X30
LUMINAIRE ARM AT 350'
(SEE SPECIAL PROVISIONS)
LUMINAIRE 250 WATT METAL HALIDE
WITH P.E.C. AND CHECK SWITCH
(SEE SPECIAL PROVISIONS)
ONE WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
2 - TYPE 10B POLE MOUNTED AT 90° & 180°
2 - PEDESTRIAN PUSHBUTTONS
TYPE "D" SIGN PANEL OVERHEAD (D-6)
TYPE R10-12 (36" x 48") - SIGN NEXT
TO SIGNAL FACE 4-2
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(#4)
EXTEND INTO HH 3:
3" RSC
3-12/C#12
2-3/C#12
1-3/C#20
1-3/C#12 (LUM)

3 TYPE PA100 POLE FOUNDATION
TYPE PA100-A-50-X30
LUMINAIRE ARM AT 350'
(SEE SPECIAL PROVISIONS)
LUMINAIRE 250 WATT METAL HALIDE
WITH P.E.C. AND CHECK SWITCH
(SEE SPECIAL PROVISIONS)
3 - ONE WAY SIGNALS OVERHEAD (0'
11' AND 23' FROM END OF MAST ARM)
2 - TYPE 10B POLE MOUNTED AT 90° & 180°
2 - PEDESTRIAN PUSHBUTTONS
TYPE "D" SIGN PANEL OVERHEAD (D-7)
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(#1 & #5)
EXTEND INTO HH 11:
3" RSC
3-12/C#12
2-3/C#12
1-3/C#20
1-3/C#12 (LUM)

4 TYPE PA90 POLE FOUNDATION
TYPE PA90-A-30-X30
LUMINAIRE ARM AT 280'
(SEE SPECIAL PROVISIONS)
LUMINAIRE 250 WATT METAL HALIDE
WITH P.E.C. AND CHECK SWITCH
(SEE SPECIAL PROVISIONS)
ONE WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
2 - TYPE 10B POLE MOUNTED AT 90° & 180°
2 - PEDESTRIAN PUSHBUTTONS
TYPE "D" SIGN PANEL OVERHEAD (D-6)
TYPE R10-12 (36" x 48") - SIGN NEXT
TO SIGNAL FACE B-2
ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT
(#8)
EXTEND INTO HH 8:
3" RSC
3-12/C#12
2-3/C#12
1-3/C#20
1-3/C#12 (LUM)

B SERVICE CABINET
CABINET FOUNDATION
EXTEND INTO HH 12:
METERED SIGNAL SERVICE
1 1/4" RSC
3-1/C#6
EXTEND INTO HH 1:
UNMETERED STREET LIGHT SERVICE
1 1/4" RSC
4-3/C#12 (LUM)
STUB OUT 1-2" RSC TO NORTH
(FOR POWER BY CONNEXUS)

A CONTROLLER AND CABINET
CABINET FOUNDATION
EXTEND INTO HH 11:
4" RSC
6-12/C#12
4-3/C#12
2-3/C#20
3-2/C#14
1-6/C FO CABLE
EXTEND INTO HH 1:
4" RSC
6-12/C#12
4-3/C#12
2-3/C#20
10-2/C#14
1-3/C#20
EXTEND INTO HH 12:
METERED SIGNAL SERVICE
1 1/4" RSC
3-1/C#6

STUB OUT 1-3" RSC FROM CABINET TO SOUTH
(THREAD AND CAP BOTH ENDS)

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SEAL COON RAPIDS, MINN. 55110

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG
DESIGN TEAM

NO.	BY	DATE
1	JMG	11/2015

RECORD DRAWING
REVISIONS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
Date: February 12, 2015 Lic. No. 22457

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Lic. No. 22457

COON RAPIDS,
MINNESOTA

LOOP DETECTOR REPLACEMENT
INTERSECTION LAYOUT
NORTHDALE BOULEVARD AT 124th AVE NW

FILE NO.
COONR 116823
SIGNAL SHEET
13 OF 17

S.A.P. 114-136-004
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