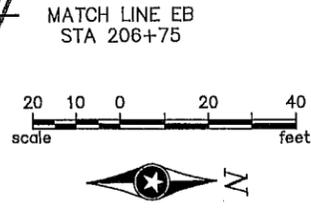


- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
 - 2) (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT "D"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 3) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR).
 - 4) NEW HANDHOLES REQUIRED TO BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF PROJECT SHALL BE PRE-CAST POLYMER CONCRETE STRUCTURES (QUAZITE). SEE DETAILS/SPECIAL PROVISIONS.
 - 5) SEE SPECIAL PROVISIONS FOR INFORMATION REGARDING LABOR AND MATERIALS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN EACH INPLACE TRAFFIC SIGNAL CONTROLLER CABINET AS PART OF THE "TRAFFIC CONTROL INTERCONNECT "D" PAY ITEM.
 - 6) FIBER OPTIC INTERCONNECT BETWEEN THIS SIGNAL SYSTEM AND SYSTEM TO THE SOUTH (EGRET BOULEVARD) IS INPLACE AND SHALL BE MAINTAINED INPLACE AND IN OPERATION.



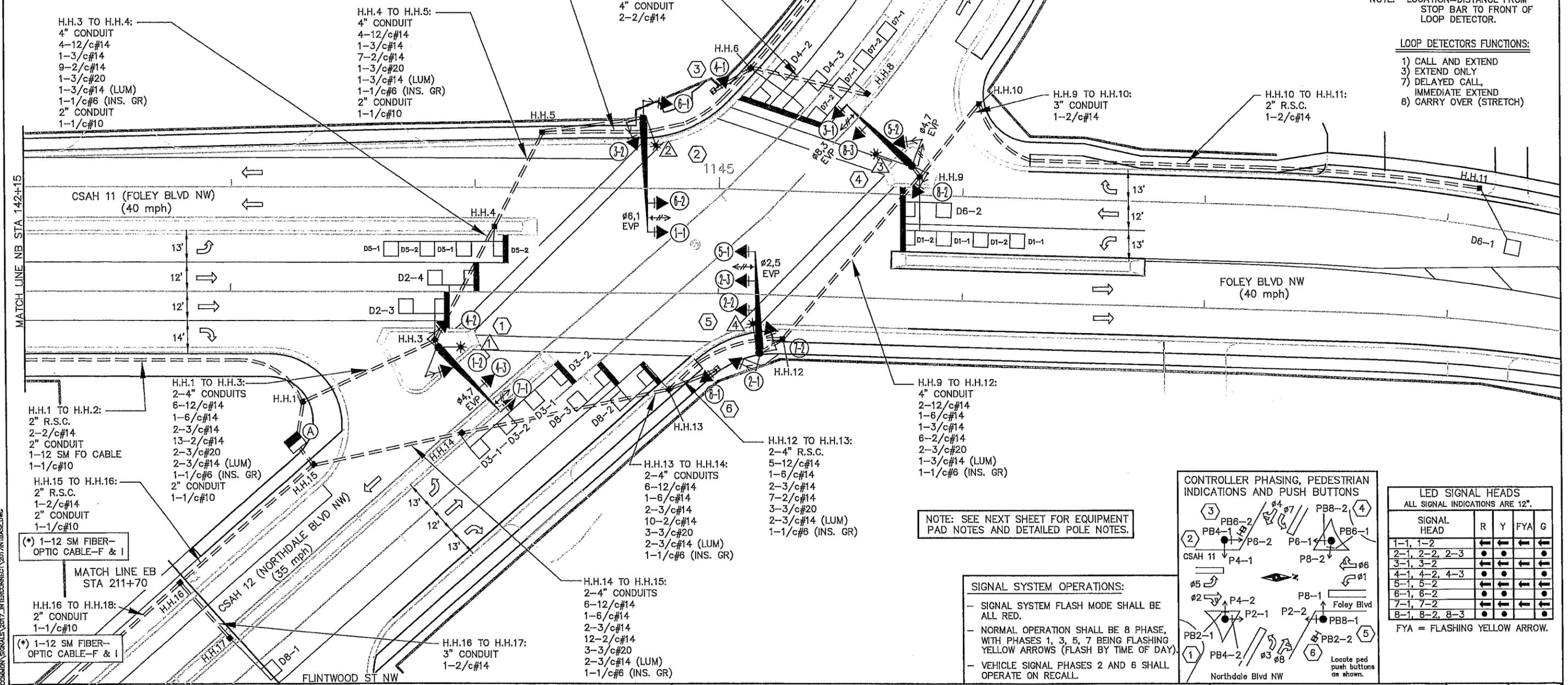
PVC LOOP DETECTORS

NUMBER	SIZE (FT.)	LOCATION	FUNCTION
D1-1	2-6x6	15' & 45'	1
D1-2	2-6x6	0' & 30'	1
D2-1	6x6	250'	1
D2-2	6x6	250'	1
D2-3	2-6X6	0' & 15'	1
D2-4	2-6X6	0' & 15'	1
D3-1	2-6x6	15' & 45'	1
D3-2	2-6x6	0' & 30'	1
D4-1	6x6	180'	3,8
D4-2	2-6x6	0' & 15'	7
D4-3	2-6x6	0' & 15'	1
D5-1	2-6x6	15' & 45'	1
D5-2	2-6x6	0' & 30'	1
D6-1	6x6	250'	1
D6-2	2-6X6	0' & 15'	1
D7-1	2-6x6	15' & 45'	1
D7-2	2-6x6	0' & 30'	1
D8-1	6x6	180'	3,8
D8-2	2-6x6	0' & 15'	7
D8-3	2-6x6	0' & 15'	1

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

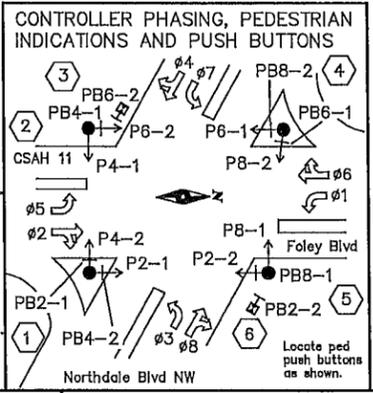
LOOP DETECTORS FUNCTIONS:

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



NOTE: SEE NEXT SHEET FOR EQUIPMENT PAD NOTES AND DETAILED POLE NOTES.

- SIGNAL SYSTEM OPERATIONS:**
- SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.
 - NORMAL OPERATION SHALL BE 8 PHASE, WITH PHASES 1, 3, 5, 7 BEING FLASHING YELLOW ARROWS (FLASH BY TIME OF DAY).
 - VEHICLE SIGNAL PHASES 2 AND 6 SHALL OPERATE ON RECALL.



LED SIGNAL HEADS
ALL SIGNAL INDICATIONS ARE 12".

SIGNAL HEAD	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2, 2-3	•	•	•	•
3-1, 3-2	←	←	←	←
4-1, 4-2, 4-3	•	•	•	•
5-1, 5-2	←	←	←	←
6-1, 6-2	•	•	•	•
7-1, 7-2	←	←	←	←
8-1, 8-2, 8-3	•	•	•	•

FYA = FLASHING YELLOW ARROW.

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

NO.	BY	DATE	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.

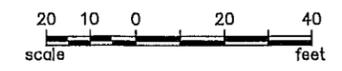
Date: July 6, 2018 Name: John M. Gray, PE Lic. No. 22457

SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

ANOKA COUNTY, MN
CITY OF COON RAPIDS
SAP 002-030-010

TRAFFIC SIGNAL INTERCONNECT "D"
INTERSECTION LAYOUT
CSAH 11-12 (NORTHDALE BOULEVARD)
AT CSAH 11 (FOLEY BOULEVARD)

FILE NO. ANOKC 142312
66
115



- (A) CONTROLLER AND CABINET EQUIPMENT PAD FOUNDATION BATTERY BACK-UP SIGNAL SERVICE CABINET BETWEEN CONTROLLER CABINET AND SERVICE CABINET: METERED SIGNAL SERVICE 2"R.S.C. 3-1/c#6
- CONTROLLER CABINET TO H.H.1: 4"R.S.C. 4"R.S.C. 2-12/c#14 4-12/c#14 1-6/c#14 1-3/c#14 1-3/c#14 6-2/c#14 1-3/c#20 1-1/c#6 (GRD)
- CONTROLLER CABINET TO H.H.15: 4"R.S.C. 4"R.S.C. 4-12/c#14 2-12/c#14 1-3/c#14 1-8/c#14 7-2/c#14 1-3/c#14 1-3/c#20 6-2/c#14 1-1/c#6 (GRD)
- CONTROLLER CABINET TO H.H.1: 2"R.S.C. 1-12 SM FIBER OPTIC CABLE 1-1/c#10
- CONTROLLER CABINET TO H.H.15: 2"R.S.C. 1-1/c#10

- SERVICE CABINET TO H.H.1: 1 1/4"R.S.C. UNMETERED STREET LIGHT SERVICE 2-3/c#14 (LUM)
- SERVICE CABINET TO H.H.15: 1 1/4"R.S.C. UNMETERED STREET LIGHT SERVICE 2-3/c#14 (LUM)
- STUB OUT 2"R.S.C. FROM SERVICE CABINET TO EAST (FOR SERVICE BY CONNEXUS)
- STUB OUT 3"R.S.C. FROM CONTROLLER CABINET TO EAST (THREAD AND CAP-FOR FUTURE USE)

H.H.15 TO H.H.16:
2" CONDUIT
1-2/c#14
2" CONDUIT
1-1/c#10

H.H.16 TO H.H.17:
3" CONDUIT
1-2/c#14

H.H.16 TO H.H.18:
2" CONDUIT
1-1/c#10

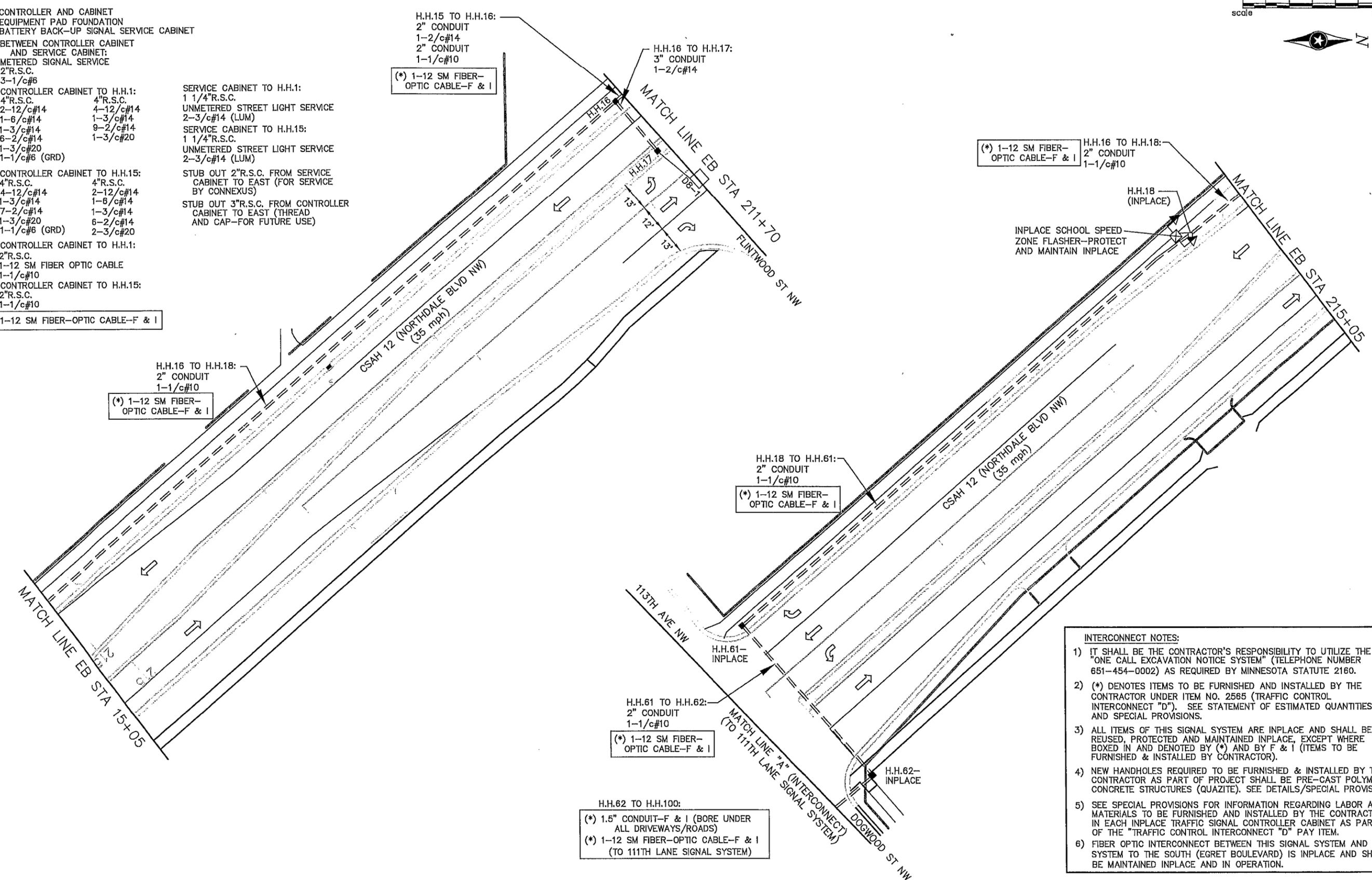
H.H.16 TO H.H.18:
2" CONDUIT
1-1/c#10

H.H.18 TO H.H.61:
2" CONDUIT
1-1/c#10

H.H.61 TO H.H.62:
2" CONDUIT
1-1/c#10

H.H.62 TO H.H.100:
(* 1.5" CONDUIT-F & I (BORE UNDER ALL DRIVEWAYS/ROADS)
(* 1-12 SM FIBER-OPTIC CABLE-F & I (TO 111TH LANE SIGNAL SYSTEM)

(* 1-12 SM FIBER-OPTIC CABLE-F & I



- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
 - 2) (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2585 (TRAFFIC CONTROL INTERCONNECT "D"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
 - 3) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED, PROTECTED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED BY (*) AND BY F & I (ITEMS TO BE FURNISHED & INSTALLED BY CONTRACTOR).
 - 4) NEW HANDHOLES REQUIRED TO BE FURNISHED & INSTALLED BY THE CONTRACTOR AS PART OF PROJECT SHALL BE PRE-CAST POLYMER CONCRETE STRUCTURES (QUAZITE). SEE DETAILS/SPECIAL PROVISIONS.
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 - 6) FIBER OPTIC INTERCONNECT BETWEEN THIS SIGNAL SYSTEM AND SYSTEM TO THE SOUTH (EGRET BOULEVARD) IS INPLACE AND SHALL BE MAINTAINED INPLACE AND IN OPERATION.

S:\VIEW\ANOKA\CONTRACTS\SIGNALS\2017\INTERCONNECT\2017\BASE.DWG

DRAWN BY: JMG
DESIGNER: JMG
CHECKED BY: JMG

NO.	BY	DATE	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.

Name: John M. Gray, PE
Date: July 6, 2018
Lic. No. 22457

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PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

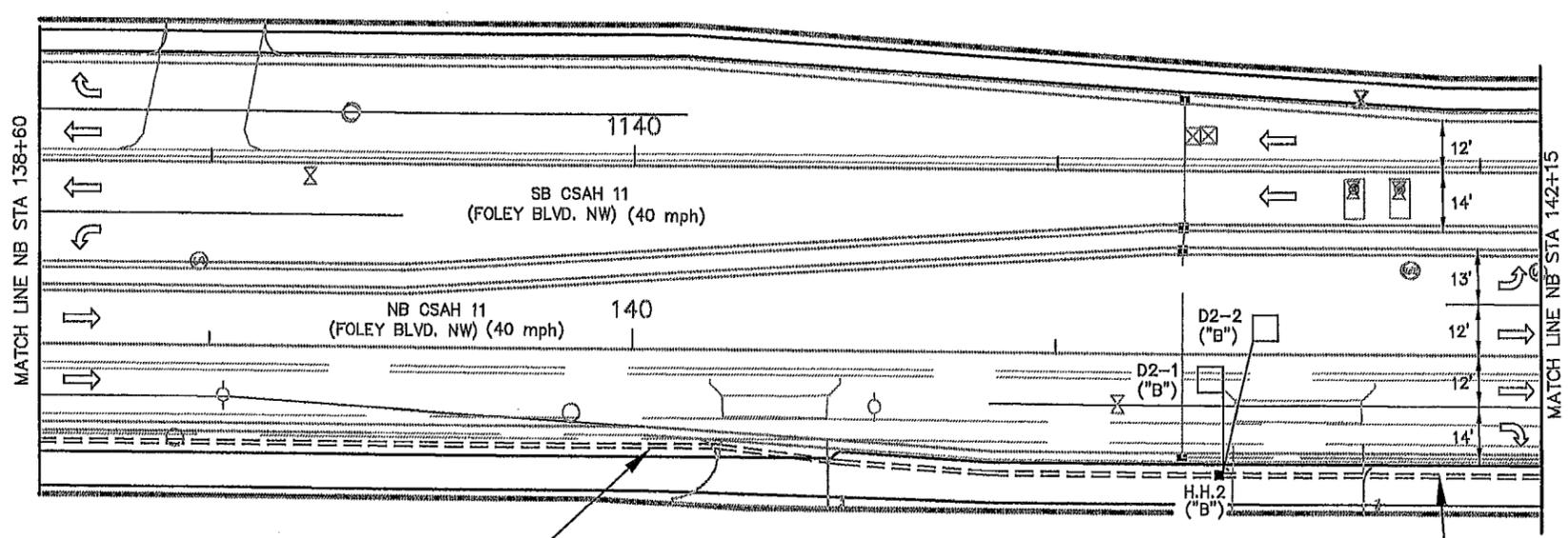
ANOKA COUNTY, MN
CITY OF COON RAPIDS
SAP 002-030-010

TRAFFIC SIGNAL INTERCONNECT "D"
INTERSECTION LAYOUT
CSAH 11-12 (NORTHDALE BOULEVARD)
AT CSAH 11 (FOLEY BOULEVARD)

FILE NO.
ANOKC 142312

67
115

7112



H.H.5B TO H.H.2 ("B"):
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#10

H.H.1 TO H.H.2:
 2" R.S.C. ("B")
 2-2/c#14 ("B")
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#10

INTERCONNECT NOTES:

- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2180.
- 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
- 3) (**) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) ITEMS DENOTED BY "B" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM B".

S.P. 002-611-034
 S.P. 114-020-050
 CITY PROJ. 13-10

DRAWN BY: <u>LD</u>			
DESIGNER: <u>JMG</u>			
CHECKED BY: <u>JMG</u>			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

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John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: April 4, 2016

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 ST. PAUL, MN 55110

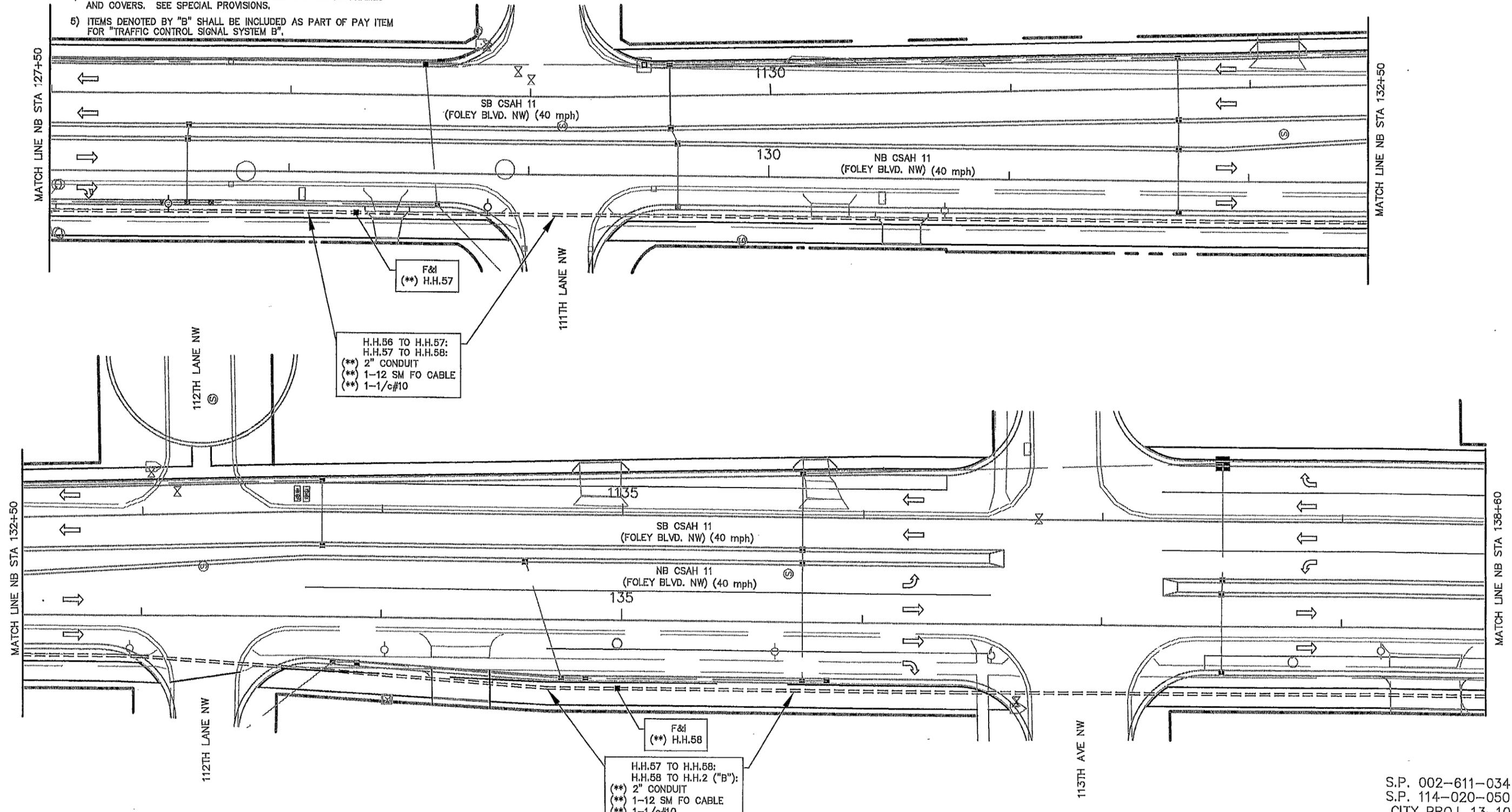
ANOKA COUNTY
CITY OF COON RAPIDS

SIGNAL SYSTEM 'B'/INTERCONNECT
INTERSECTION LAYOUT
 CSAH 11 (FOLEY BLVD NW) AT
 CSAH 11/12 (NORTHDALE BLVD NW)

FILE NO.	181
ANOKA 132239	
SIGNAL SHEET	298
19 OF 29	



- INTERCONNECT NOTES:**
- 1) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002) AS REQUIRED BY MINNESOTA STATUTE 2160.
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 - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
 - 5) ITEMS DENOTED BY "B" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "TRAFFIC CONTROL SIGNAL SYSTEM B".



H.H.56 TO H.H.57:
H.H.57 TO H.H.58:
(**) 2" CONDUIT
(**) 1-12 SM FO CABLE
(**) 1-1/c#10

F&I
(**) H.H.58
H.H.57 TO H.H.58:
H.H.58 TO H.H.2 ("B"):
(**) 2" CONDUIT
(**) 1-12 SM FO CABLE
(**) 1-1/c#10

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

NO.	BY	DATE	REVISIONS

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ST. PAUL, MN 55110

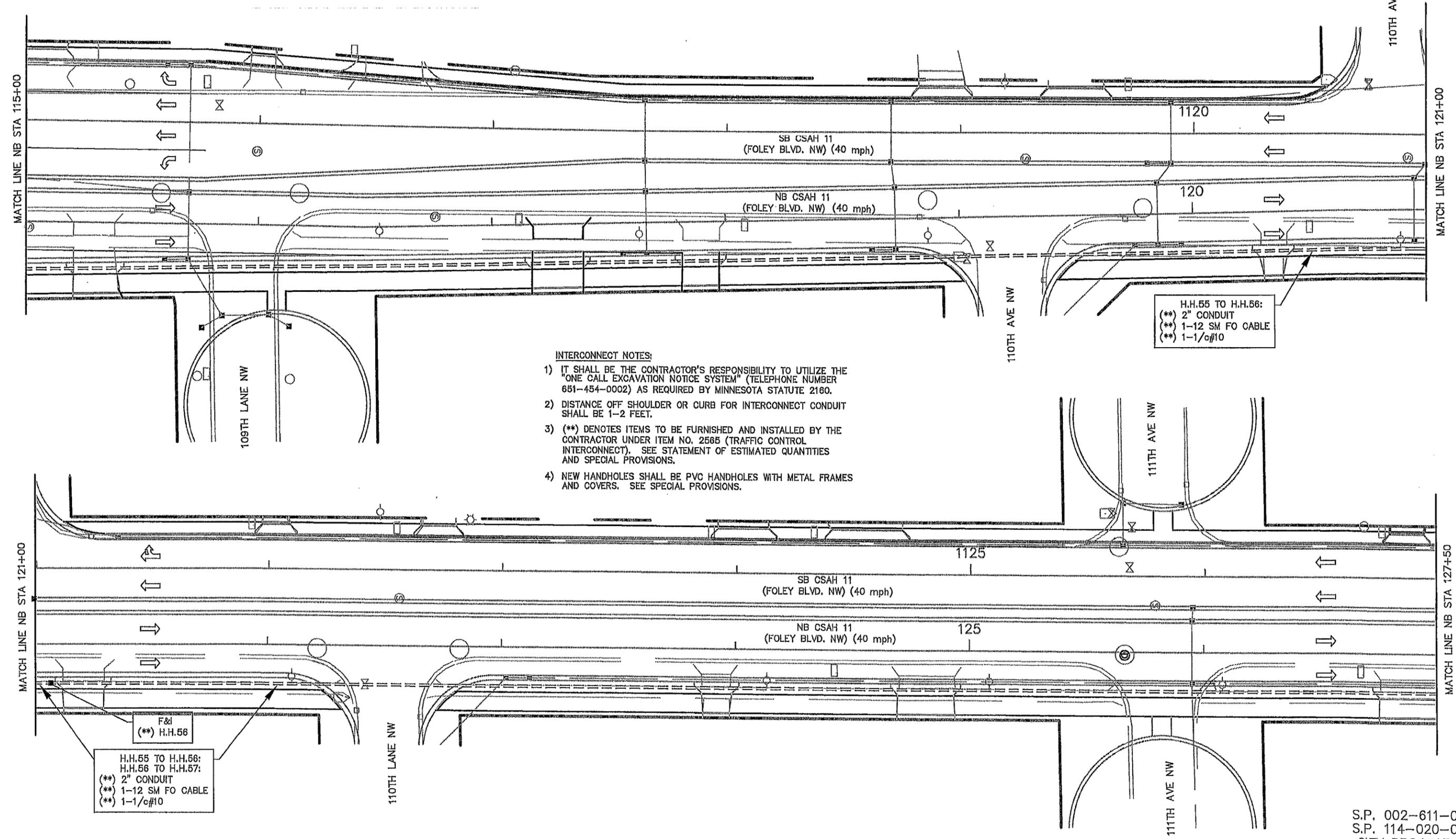
**ANOKA COUNTY
CITY OF COON RAPIDS**

**TRAFFIC CONTROL INTERCONNECTION
INTERSECTION LAYOUT**
CSAH 11 (EGRET BLVD TO NORTHDALDA BLVD)

S.P. 002-611-034
S.P. 114-020-050
CITY PROJ. 13-10

FILE NO. ANOKC 132239	180
SIGNAL SHEET 18 OF 29	298

7112



- INTERCONNECT NOTES:**
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 - 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.

F&I
(**) H.H.56

H.H.55 TO H.H.56:
H.H.56 TO H.H.57:
(**) 2" CONDUIT
(**) 1-12 SM FO CABLE
(**) 1-1/c#10

S.P. 002-611-034
S.P. 114-020-050
CITY PROJ. 13-10

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

NO.	BY	DATE	REVISIONS

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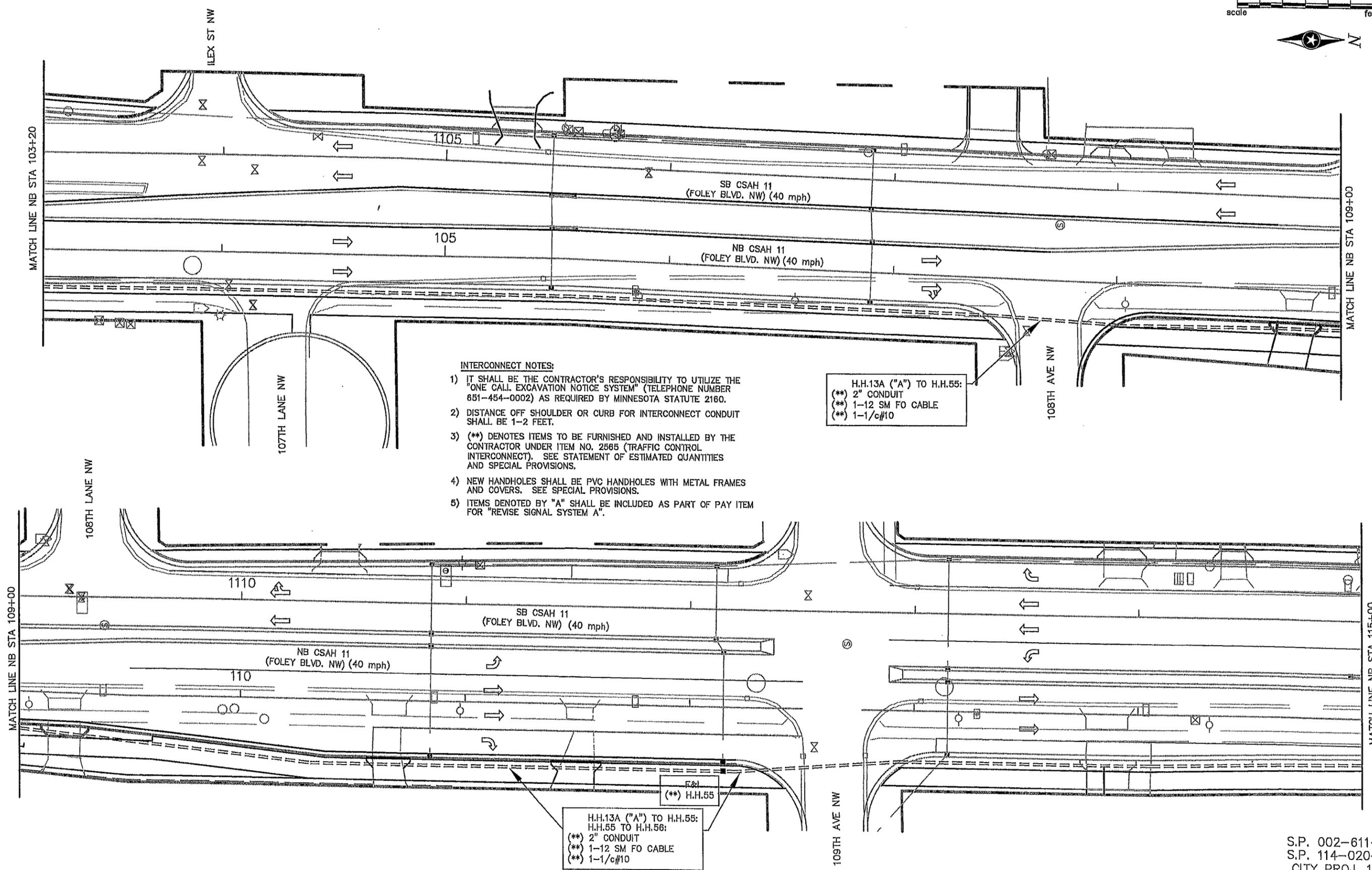
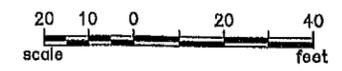
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**ANOKA COUNTY
CITY OF COON RAPIDS**

**TRAFFIC CONTROL INTERCONNECTION
INTERSECTION LAYOUT**
CSAH 11 (EGRIET BLVD TO NORTHDAL BLVD)

FILE NO.	ANOKC 132239	179
SIGNAL SHEET		298
		17 OF 29



INTERCONNECT NOTES:

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- 4) NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS. SEE SPECIAL PROVISIONS.
- 5) ITEMS DENOTED BY "A" SHALL BE INCLUDED AS PART OF PAY ITEM FOR "REVISE SIGNAL SYSTEM A".

H.H.13A ("A") TO H.H.55:
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#10

H.H.13A ("A") TO H.H.55;
 H.H.55 TO H.H.56:
 (**) 2" CONDUIT
 (**) 1-12 SM FO CABLE
 (**) 1-1/c#10

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 Date: April 4, 2018 Name: John M. Gray, PE Lic. No. 22457

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 3835 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

**ANOKA COUNTY
 CITY OF COON RAPIDS**

**TRAFFIC CONTROL INTERCONNECTION
 INTERSECTION LAYOUT
 CSAH 11 (EGRET BLVD TO NORTHDAL BLVD)**

FILE NO. ANOKC 132239
 SIGNAL SHEET 18 OF 29
178
298

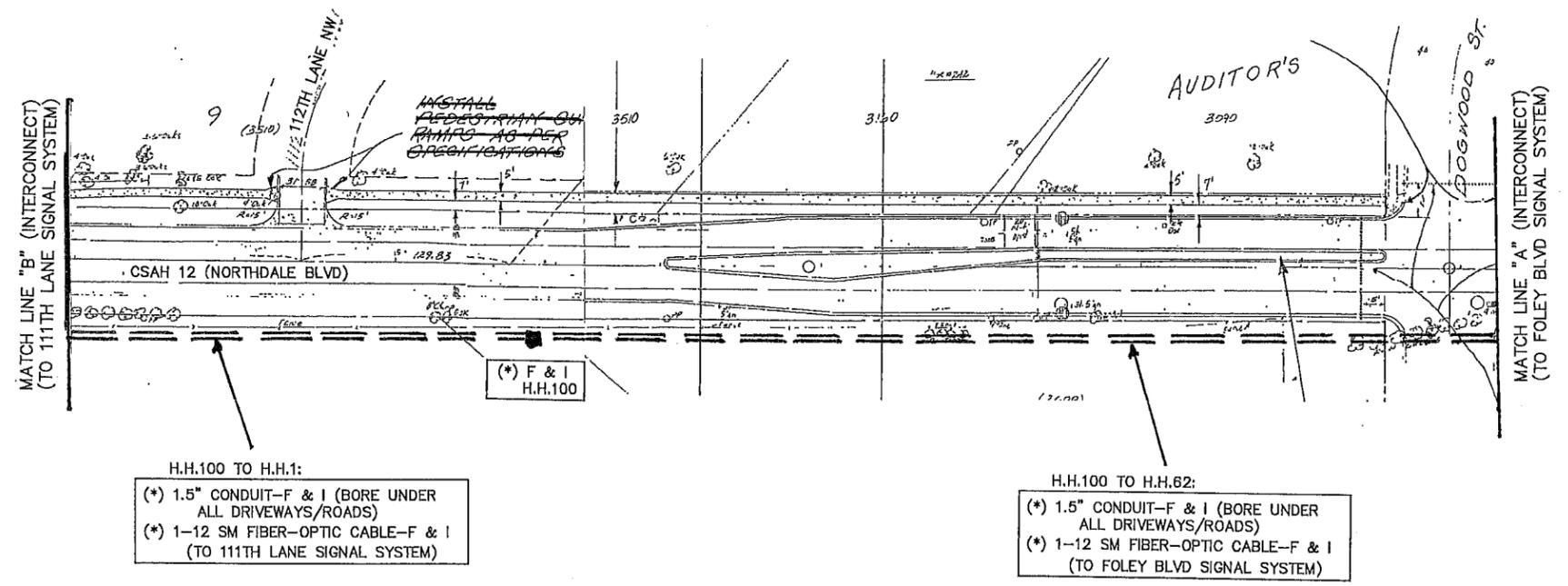
DRAWN BY: <u>LG</u>				
DESIGNER: <u>JMG</u>				
CHECKED BY: <u>JMG</u>				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

S.P. 002-611-034
 S.P. 114-020-050
 CITY PROJ. 13-10



INTERCONNECT NOTES:

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- 2) (*) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL INTERCONNECT "D"). SEE STATEMENT OF ESTIMATED QUANTITIES AND SPECIAL PROVISIONS.
- 3) NEW HANDHOLE 100 REQUIRED TO BE FURNISHED & INSTALLED BY CONTRACTOR AS PART OF PROJECT SHALL A BE PRE-CAST POLYMER CONCRETE STRUCTURE (QUAZITE). SEE DETAILS/SPECIAL PROVISIONS.



S:\EV\ANOKA\COMMON SIGNALS\2017_INTERCONNECT\2017INBASE.DWG

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DESIGNER: JMG			
CHECKED BY: JMG			
DESIGN TEAM	NO.	BY	DATE
			REVISIONS

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ANOKA COUNTY, MN
CITY OF COON RAPIDS
 SAP 002-030-010

TRAFFIC SIGNAL INTERCONNECT 'D'
INTERSECTION LAYOUT
CSAH 12 (NORTHDALE BLVD)
(FOLEY BLVD TO 111TH LANE NW)

FILE NO.
 ANOKC 142312

69
115

