

PVC LOOP DETECTORS				
NUMBER	SIZE (FT.)	LOCATION	FUNCTION	STATUS
D1-1	2-6x6	10' & 40'	1	INPLACE
D1-2	2-6x6	-5' & 25'	1	INPLACE
D2-1	6x6	475'	1	INPLACE
D2-2	6x6	475'	1	INPLACE
D2-3	2-6x6	5' & 20'	7	INPLACE
D2-4	2-6x6	5' & 20'	1	INPLACE
D2-5	2-6x6	5' & 20'	1	INPLACE
D3-1	2-6x6	10' & 40'	1	INPLACE
D3-2	2-6x6	-5' & 25'	1	INPLACE
D4-1	6x6	475'	3,8	INPLACE
D4-2	6x6	475'	3,8	INPLACE
D4-3	2-6x6	5' & 20'	7	INPLACE
D4-4	2-6x6	5' & 20'	1	INPLACE
D4-5	2-6x6	5' & 20'	1	INPLACE
D5-1	2-6x6	10' & 40'	1	INPLACE
D5-2	2-6x6	-5' & 25'	1	INPLACE
D6-1	6x6	400'	1	F & I
D6-2	6x6	400'	1	F & I
D6-3	2-6x6	5' & 20'	7	INPLACE
D6-4	2-6x6	5' & 20'	1	INPLACE
D6-5	2-6x6	5' & 20'	1	INPLACE
D7-1	2-6x6	10' & 40'	1	INPLACE
D7-2	2-6x6	-5' & 25'	1	INPLACE
D8-1	6x6	300'	3,8	INPLACE
D8-2	6x6	300'	3,8	INPLACE
D8-3	2-6x6	5' & 20'	7	INPLACE
D8-4	2-6x6	5' & 20'	1	INPLACE
D8-5	2-6x6	5' & 20'	1	INPLACE

- FUNCTIONS:
 1) CALL & EXTEND
 3) EXTEND ONLY
 7) DELAYED CALL, IMMEDIATE EXTEND
 8) DENSITY ONLY

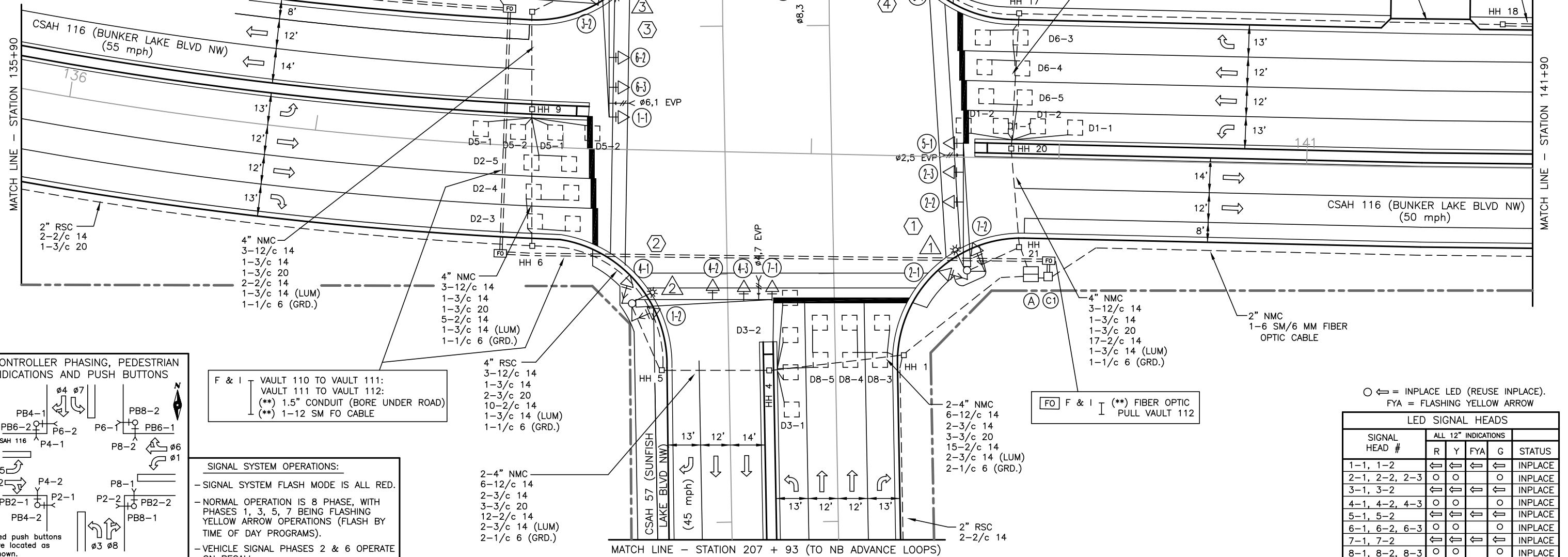
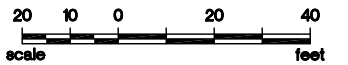
SEE NEXT SHEET FOR GENERAL NOTES AND DETAILED POLE NOTES.

25' OF 1-2/c14 CABLE IS COILED AND STORED HANDHOLES 1, 6, 11 (FOR FUTURE APS BY OTHERS).

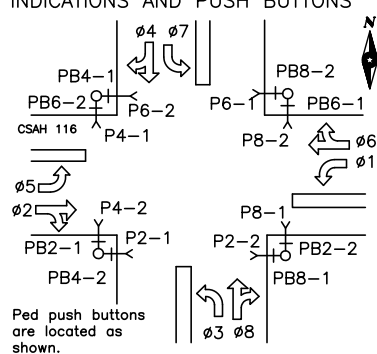
F & I VAULT 109 TO VAULT 110:
 (**) 1.5" CONDUIT
 (**) 1-12 SM FO CABLE

FO F & I (** FIBER OPTIC PULL VAULT 110

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



CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



F & I VAULT 110 TO VAULT 111:
 VAULT 111 TO VAULT 112:
 (**) 1.5" CONDUIT (BORE UNDER ROAD)
 (**) 1-12 SM FO CABLE

SIGNAL SYSTEM OPERATIONS:

- SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 8 PHASE, WITH PHASES 1, 3, 5, 7 BEING FLASHING YELLOW ARROW OPERATIONS (FLASH BY TIME OF DAY PROGRAMS).
- VEHICLE SIGNAL PHASES 2 & 6 OPERATE ON RECALL.

LED SIGNAL HEADS

SIGNAL HEAD #	ALL 12" INDICATIONS				STATUS
	R	Y	FYA	G	
1-1, 1-2	←	←	←	←	INPLACE
2-1, 2-2, 2-3	○	○	○	○	INPLACE
3-1, 3-2	←	←	←	←	INPLACE
4-1, 4-2, 4-3	○	○	○	○	INPLACE
5-1, 5-2	←	←	←	←	INPLACE
6-1, 6-2, 6-3	○	○	○	○	INPLACE
7-1, 7-2	←	←	←	←	INPLACE
8-1, 8-2, 8-3	○	○	○	○	INPLACE

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

NO.	BY	DATE
1	JMG	8/2022

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: July 7, 2021

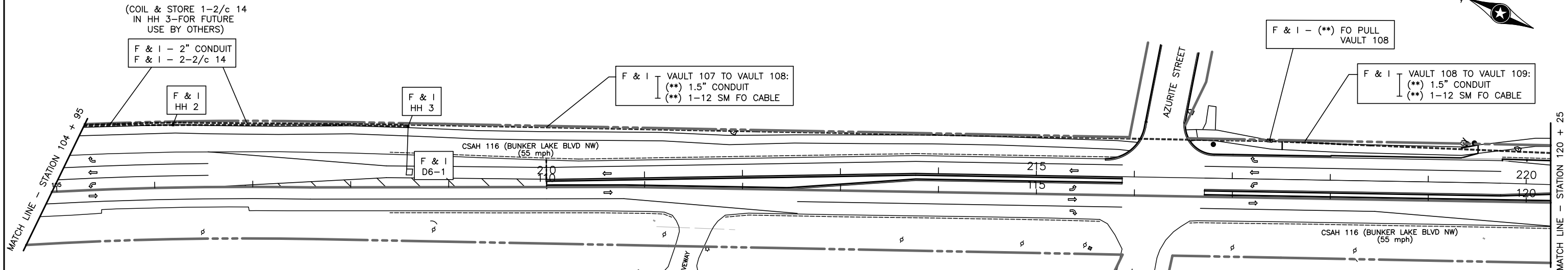
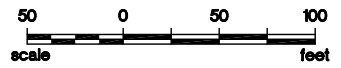


ANOKA COUNTY, MN
 CITY OF RAMSEY
 SAP 002-716-021
 SAP 199-104-014

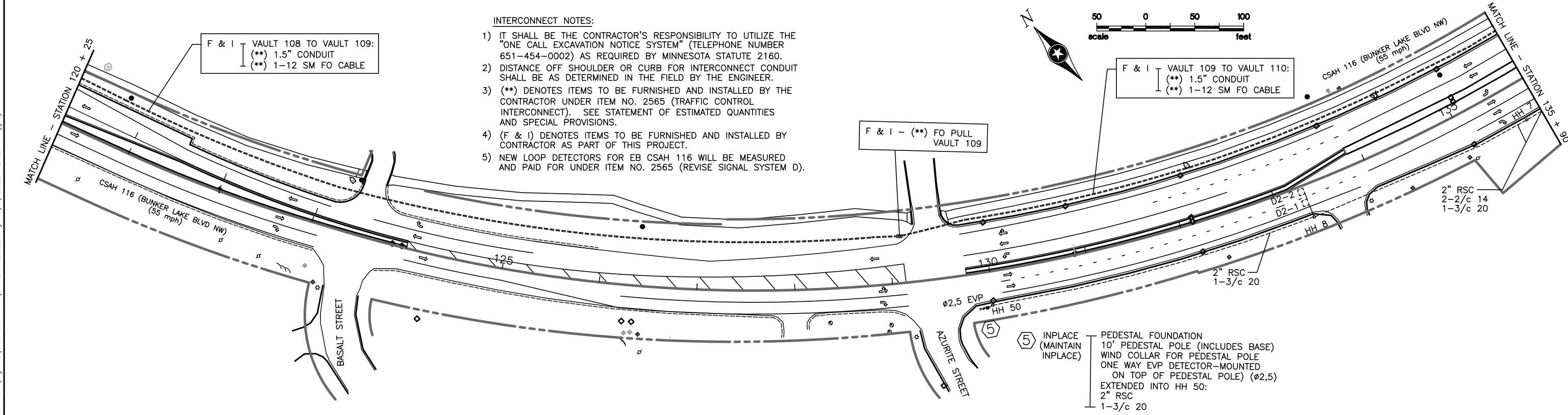
REVISE SIGNAL SYSTEM 'D'
 INTERSECTION LAYOUT
 CSAH 116 (BUNKER LAKE BLVD NW)
 AT CSAH 57 (SUNFISH LAKE BLVD NW)

FILE NO.	ANOKC 159572	201
SIGNAL SHEET	22 OF 25	259

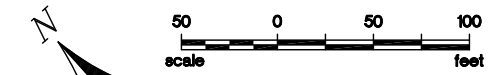
NOTE SCALE CHANGE ON THIS SHEET.



- 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) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE AS DETERMINED IN THE FIELD BY THE ENGINEER.
 - 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) (F & I) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR AS PART OF THIS PROJECT.
 - 5) NEW CONDUIT, HANDHOLES 2 AND 3, AND LOOP DETECTOR D6-1 WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 2565 (TRAFFIC CONTROL SIGNAL SYSTEM C).



- 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) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE AS DETERMINED IN THE FIELD BY THE ENGINEER.
 - 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) (F & I) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR AS PART OF THIS PROJECT.
 - 5) NEW LOOP DETECTORS FOR EB CSAH 116 WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 2565 (REVISE SIGNAL SYSTEM D).

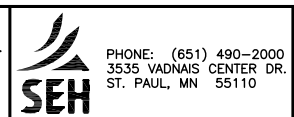


DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG
 DESIGN TEAM

1	JMG	8/2022	RECORD DRAWING
REVISIONS			
NO.	BY	DATE	

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: July 7, 2021



ANOKA COUNTY, MN
 CITY OF RAMSEY
 SAP 002-716-021
 SAP 199-104-014

SIGNAL SYSTEMS 'C-D'/INTERCONNECT
 INTERSECTION LAYOUT
 CSAH 116 (BUNKER LAKE BLVD NW)
 (SUNWOOD DRIVE TO CSAH 57)

FILE NO. ANOKC 159572
 SIGNAL SHEET 21 OF 25
 200
 259

S:\AE\A\Anokc\Common_signals\116-Sunwood\SIGREC082022.dwg 12/5/2022 12:32 PM jgray

REVISE SIGNAL SYSTEM D NOTES:

- 1) ALL ITEMS OF THIS SIGNAL SYSTEM ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, UNLESS OTHERWISE NOTED ON PLANS.
- 2) CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING PVC HANDHOLES (WITH METAL FRAMES AND COVERS) IN THE VICINITY OF CONSTRUCTION, EXCEPT AS FOLLOWS (ALL INCIDENTAL):
 - CONTRACTOR SHALL REMOVE AND DISPOSE OF HANDHOLE 19 AND SHALL FURNISH AND INSTALL NEW HANDHOLE 19A (PVC HANDHOLE WITH METAL FRAME AND COVER - SEE DETAILS IN SPECIAL PROVISIONS).
 - CONTRACTOR SHALL ADJUST HANDHOLES 7, 8, 19A, AND 50 TO MATCH FINISHED SURROUNDING GRADE AFTER ROAD WORK HAS BEEN COMPLETED (SEE SPECIAL PROVISIONS).
- 3) LOCATION OF HANDHOLE, FIBER VAULT, AND LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 4) SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
- 5) ALL LOOP DETECTORS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE AND OPERATIONAL, EXCEPT AS FOLLOWS: CONTRACTOR SHALL FURNISH AND INSTALL NEW LOOP DETECTORS D6-1 AND D6-2 IN PVC AS PER THE DETAILS INCLUDED ELSEWHERE IN THESE PLANS. LOOP DETECTOR WIRES FOR NEW LOOP DETECTORS SHALL BE CROSS-LINKED POLY-ETHYLENE (XLP) #12 AWG IN 3/4" NMC. SEE SPECIAL PROVISIONS.
- 6) ANY DAMAGE TO INPLACE TRAFFIC SIGNAL FACILITIES (CONDUIT, CABLES, HANDHOLES, SIGNAL POLES, ETC.), DUE TO TRAFFIC SIGNAL OR ROAD WORK, SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF THE ENGINEER, AT NO EXPENSE TO THE COUNTY.
- 7) CONTRACTOR SHALL MAINTAIN OPERATION OF THE SIGNAL SYSTEM AT ALL TIMES, EXCEPT AS OTHERWISE APPROVED BY ENGINEER.
- 8) ALL VEHICULAR HEADS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE (ALL HAVE BACKGROUND SHIELDS).
- 9) F & I = NEW, FURNISH AND INSTALL.
S & I = INPLACE, SALVAGE AND INSTALL.
- 10) ALL CABLES AND CONDUCTORS, CONDUIT, HANDHOLES, AND LOOP DETECTORS ARE INPLACE AND SHALL BE REUSED AND MAINTAINED INPLACE, EXCEPT WHERE BOXED IN AND DENOTED OTHERWISE.
- 11) (**) 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.
- 12) SEE SPECIAL PROVISIONS REGARDING WORK TO RAISE OVERHEAD SIGNAL HEADS ON MAST ARMS 3 AND 4 (INCLUDED AS PART OF PAY ITEM FOR ITEM NO. 2565-REVISE SIGNAL SYSTEM D).

① INPLACE (MAINTAIN INPLACE) PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350 DEG)
 LUMINAIRE-250 W HPS
 3-ONE WAY SIGNALS-OVERHEAD AT 0', 11', 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90/180 DEG
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90/180 DEG
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
 R10-X12 SIGN PANEL-ADJACENT TO 5-1
 TYPE D SIGN PANEL-OVERHEAD AT 30'
 ONE WAY EVP DETECTOR AND LIGHT AT 6' (ø2,5)
 EXTENDED INTO HH 21:
 3" RSC
 3-12/c 14
 1-3/c 14
 1-3/c 20
 2-2/c 14
 1-3/c 14 (LUM)
 1-1/c 6 (GRD.)

② INPLACE (MAINTAIN INPLACE) PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 LUMINAIRE-250 W HPS
 3-ONE WAY SIGNALS-OVERHEAD AT 0', 11', 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90/180 DEG
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90/180 DEG
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
 R10-X12 SIGN PANEL-ADJACENT TO 7-1
 TYPE D SIGN PANEL-OVERHEAD AT 28'
 ONE WAY EVP DETECTOR AND LIGHT AT 6' (ø4,7)
 EXTENDED INTO HH 5:
 3" RSC
 3-12/c 14
 1-3/c 14
 1-3/c 20
 2-2/c 14
 1-3/c 14 (LUM)
 1-1/c 6 (GRD.)

③ INPLACE (MAINTAIN INPLACE) PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 LUMINAIRE-250 W HPS
 3-ONE WAY SIGNALS-OVERHEAD AT 0', 11', 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90/180 DEG
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90/180 DEG
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
 R10-X12 SIGN PANEL-ADJACENT TO 1-1
 TYPE D SIGN PANEL-OVERHEAD AT 28'
 ONE WAY EVP DETECTOR AND LIGHT AT 6' (ø6,1)
 EXTENDED INTO HH 10:
 3" RSC
 3-12/c 14
 1-3/c 14
 1-3/c 20
 2-2/c 14
 1-3/c 14 (LUM)
 1-1/c 6 (GRD.)

F & I ADJUST MAST ARM/POLE SO THAT ALL OVERHEAD SIGNAL HEADS ARE 17 FEET ABOVE GROUND LINE TO BOTTOM OF BACKGROUND SHIELD (CURRENTLY AT 16.8 FEET ABOVE GROUND LINE) (SEE SPECIAL PROVISIONS).

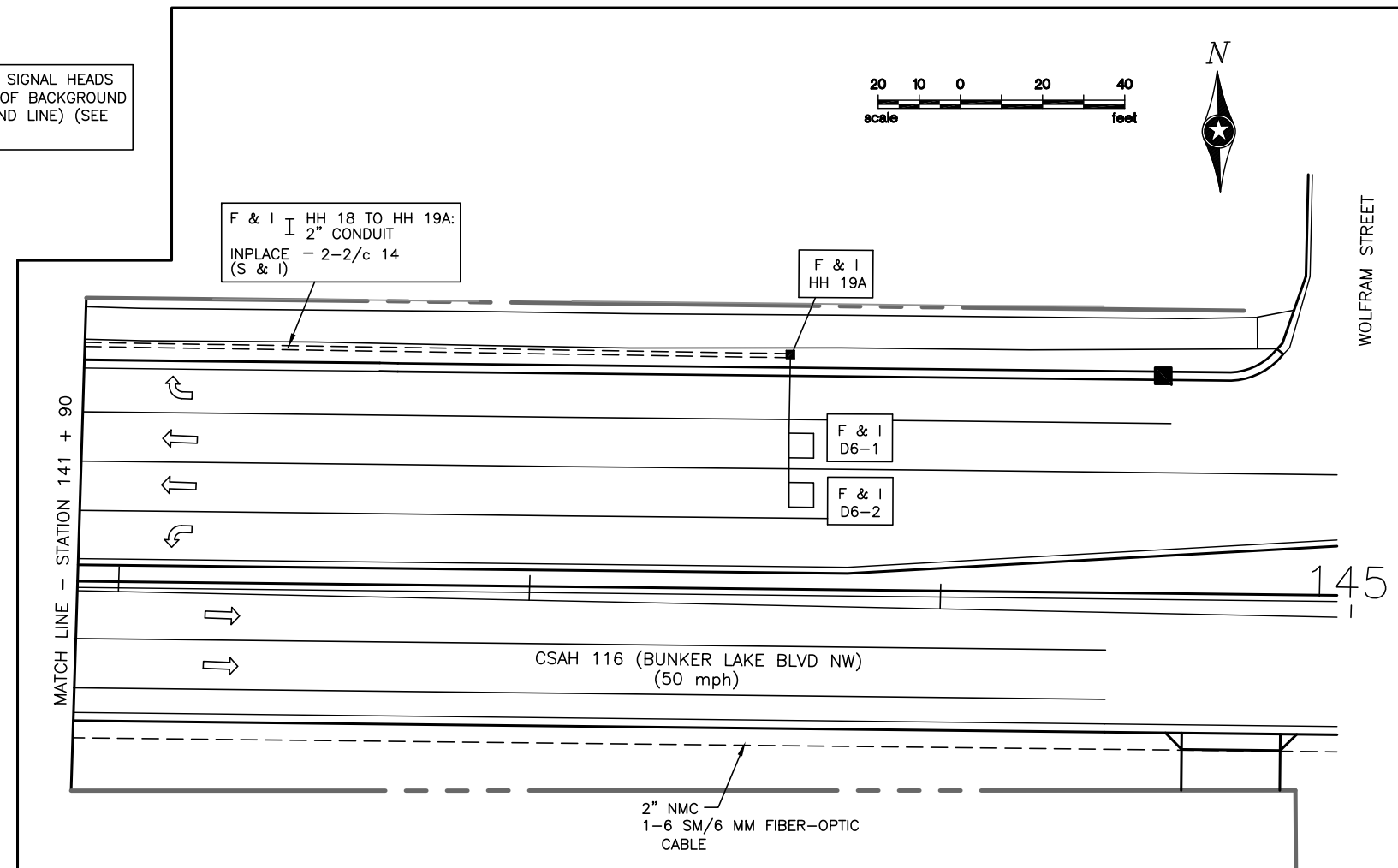
④ INPLACE (MAINTAIN INPLACE) PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350 DEG)
 LUMINAIRE-250 W HPS
 3-ONE WAY SIGNALS-OVERHEAD AT 0', 11', 23'
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 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90/180 DEG
 2-PEDESTRIAN PUSH BUTTONS & SIGNS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0/180 DEG
 R10-X12 SIGN PANEL-ADJACENT TO 3-1
 TYPE D SIGN PANEL-OVERHEAD AT 28'
 ONE WAY EVP DETECTOR AND LIGHT AT 6' (ø8,3)
 EXTENDED INTO HH 16:
 3" RSC
 3-12/c 14
 1-3/c 14
 1-3/c 20
 2-2/c 14
 1-3/c 14 (LUM)
 1-1/c 6 (GRD.)

F & I ADJUST MAST ARM/POLE SO THAT ALL OVERHEAD SIGNAL HEADS ARE 17 FEET ABOVE GROUND LINE TO BOTTOM OF BACKGROUND SHIELD (CURRENTLY AT 16.8 FEET ABOVE GROUND LINE) (SEE SPECIAL PROVISIONS).

Ⓐ INPLACE (MAINTAIN INPLACE) CONTROLLER AND CABINET
 EQUIPMENT PAD FOUNDATION
 BATTERY BACK-UP SIGNAL SERVICE CABINET
 BETWEEN CONTROLLER CABINET AND SERVICE CABINET:
 METERED SIGNAL SERVICE
 2" RSC
 3-1/c 6
 CONTROLLER CABINET TO HH 1:
 4" RSC 4" RSC
 3-12/c 14 3-12/c 14
 1-3/c 14 1-3/c 14
 1-3/c 20 2-3/c 20
 9-2/c 14 10-2/c 14
 1-1/c 6 (GRD) 1-1/c 6 (GRD)
 CONTROLLER CABINET TO H.H.21:
 4" RSC 4" RSC
 3-12/c 14 3-12/c 14
 1-3/c 14 1-3/c 14
 1-3/c 20 1-3/c 20
 2-2/c 14 17-2/c 14
 1-1/c 6 (GRD) 1-1/c 6 (GRD.)

INPLACE (MAINTAIN INPLACE) SERVICE CABINET TO HH 1:
 2" RSC
 UNMETERED STREET LIGHT SERVICE
 2-3/c 14 (LUM)
 SERVICE CABINET TO HH 21:
 2" RSC
 UNMETERED STREET LIGHT SERVICE
 2-3/c 14 (LUM)
 SERVICE CABINET TO SOURCE OF POWER:
 2" RSC
 POWER CABLES BY CONNEXUS
 1" RSC STUBBED OUT FROM CONTROLLER CABINET (FOR FUTURE PHONE LINE BY OTHERS)
 3" RSC STUBBED OUT FROM CONTROLLER CABINET TO NORTH (BOTH ENDS THREADED AND CAPPED-FOR FUTURE USE)

INPLACE (MAINTAIN INPLACE) CONTROLLER CABINET TO FO ENCLOSURE:
 2" RSC
 1-6 SM/6 MM FIBER OPTIC CABLE
 F & I - (**) 1-12 SM FO CABLE



S:\AE\A\Anok\Common_signals\116-Sunwood\SIGREC082022.dwg 12/5/2022 12:32 PM jgray

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

NO.	BY	DATE	REVISIONS
1	JMG	8/2022	RECORD DRAWING

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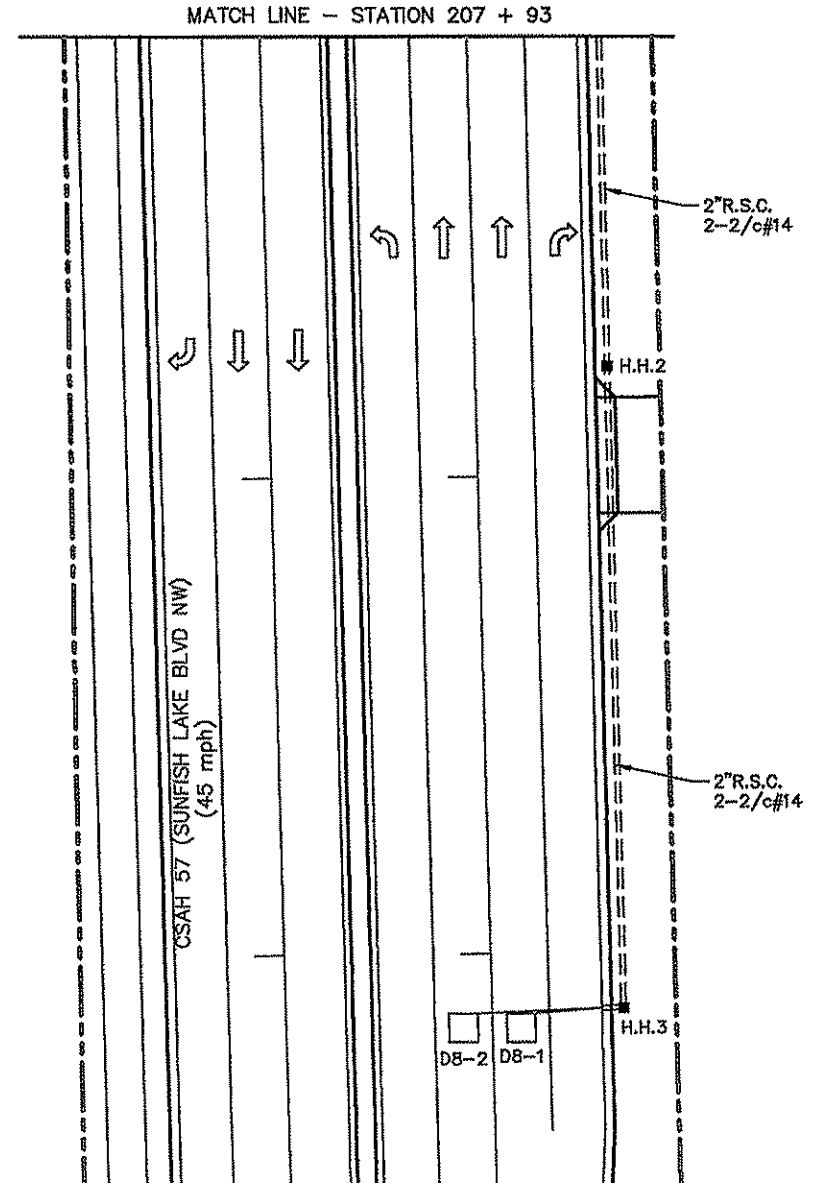
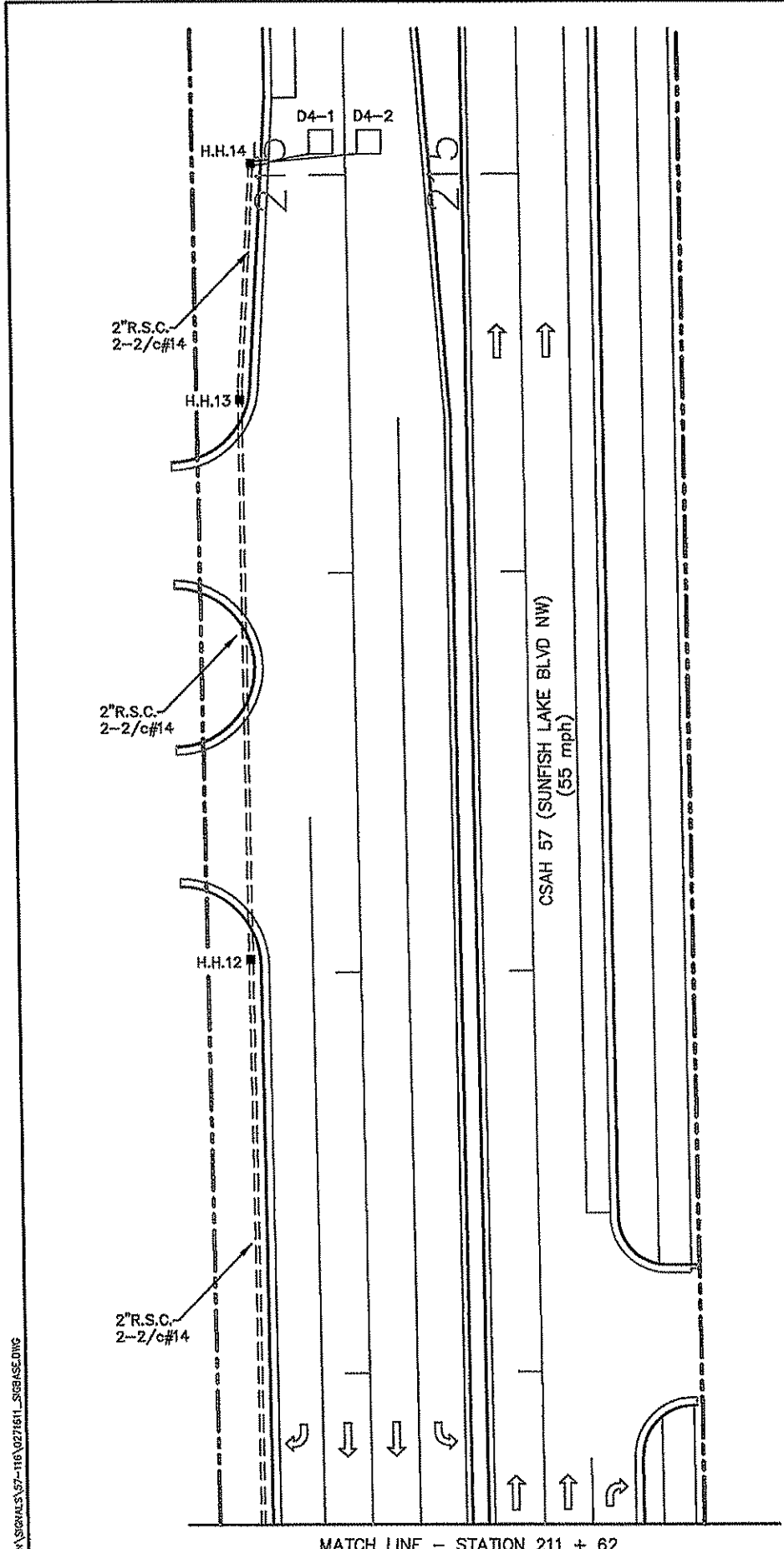
ANOKA COUNTY, MN
 CITY OF RAMSEY
 SAP 002-716-021
 SAP 199-104-014

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

SEH

REVISE SIGNAL SYSTEM 'D'
 SIGNAL SYSTEM NOTES
 CSAH 116 (BUNKER LAKE BLVD NW)
 AT CSAH 57 (SUNFISH LAKE BLVD NW)

FILE NO.	ANOKC 159572	202
SIGNAL SHEET	23 OF 25	259



- ① PA100 POLE FOUNDATION
 TYPE PA100-A-50-D40-9 (DAVIT AT 350')
 LUMINAIRE-250 W HPS
 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' & 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180'
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180'
 2-PEDESTRIAN PUSH BUTTONS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180'
 TYPE D SIGN PANEL-OVERHEAD (D-1)
 ONE WAY EVP DETECTOR AND LIGHT (Ø2,5) (EVP)
 EXTEND INTO H.H.21:
 3\"/>

- ② PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350')
 LUMINAIRE-250 W HPS
 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' & 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180'
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180'
 2-PEDESTRIAN PUSH BUTTONS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180'
 TYPE D SIGN PANEL-OVERHEAD (D-2)
 ONE WAY EVP DETECTOR AND LIGHT (Ø4,7) (EVP)
 EXTEND INTO H.H.5:
 3\"/>

- ③ PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350')
 LUMINAIRE-250 W HPS
 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' & 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180'
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180'
 2-PEDESTRIAN PUSH BUTTONS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180'
 TYPE D SIGN PANEL-OVERHEAD (D-3)
 ONE WAY EVP DETECTOR AND LIGHT (Ø6,1) (EVP)
 EXTEND INTO H.H.10:
 3\"/>

- ④ PA100 POLE FOUNDATION
 TYPE PA100-A-55-D40-9 (DAVIT AT 350')
 LUMINAIRE-250 W HPS
 1-ANGLE MOUNT SIGNAL-OVERHEAD AT 0'
 2-STRAIGHT MOUNT SIGNALS-OVERHEAD AT 11' & 23'
 2-ANGLE MOUNT SIGNALS-POLE MOUNTED 90° & 180'
 2-ANGLE MOUNT C.D. PED INDICATIONS-POLE MOUNTED 90° & 180'
 2-PEDESTRIAN PUSH BUTTONS
 2-R6-1 SIGN PANELS-POLE MOUNTED 0° & 180'
 TYPE D SIGN PANEL-OVERHEAD (D-4)
 ONE WAY EVP DETECTOR AND LIGHT (Ø8,3) (EVP)
 EXTEND INTO H.H.16:
 3\"/>

MATCH LINE - STATION 211 + 62

MATCH LINE - STATION 207 + 93

CSAH 57 (SUNFISH LAKE BLVD NW)
(55 mph)

CSAH 57 (SUNFISH LAKE BLVD NW)
(45 mph)

DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

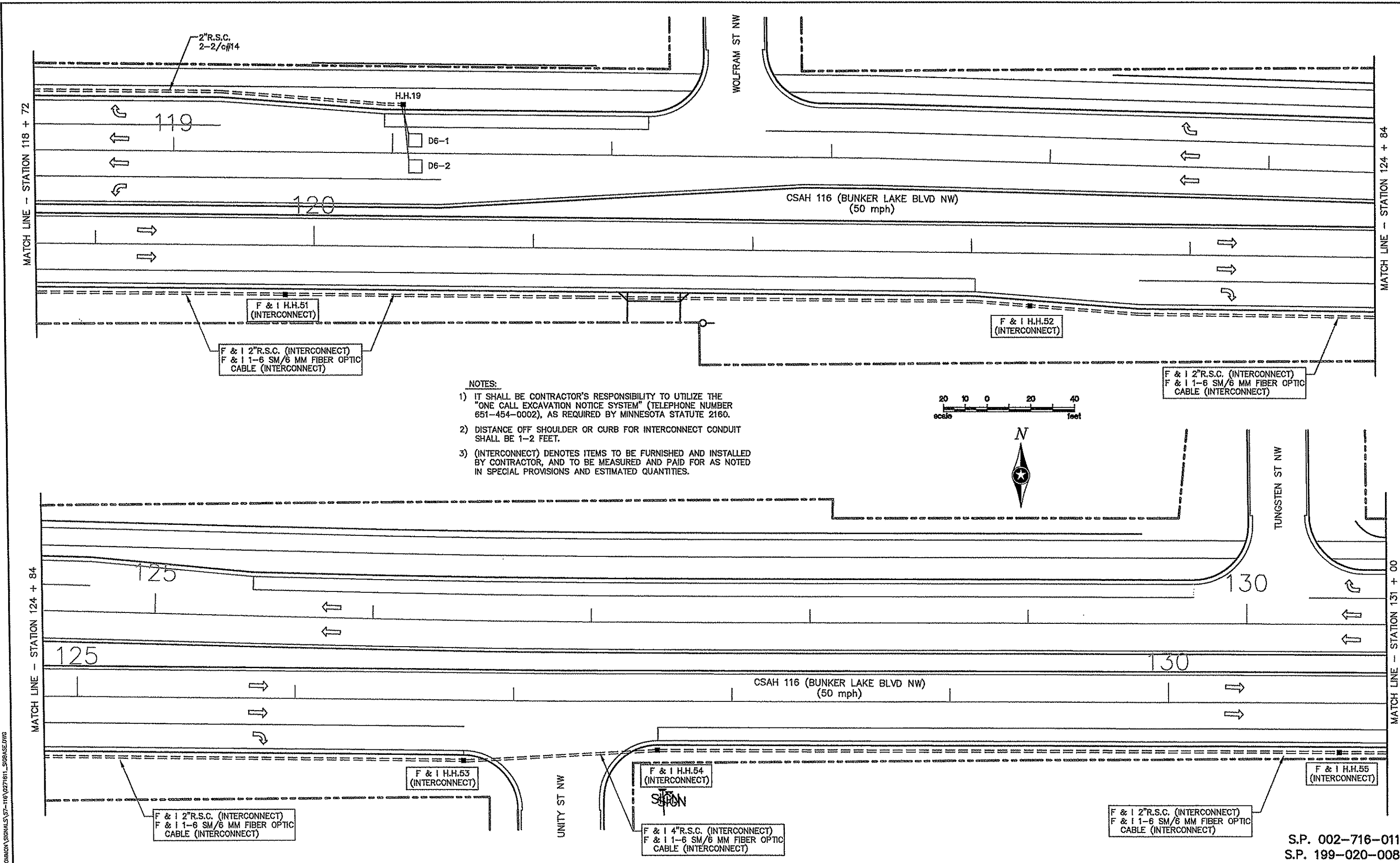
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Date: April 5, 2011 Name: John M. Gray, PE Lic. No. 22457

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

ANOKA COUNTY,
 MINNESOTA
 CITY OF RAMSEY

TRAFFIC SIGNAL SYSTEM
 INTERSECTION LAYOUT
 CSAH 116 (BUNKER LAKE BLVD)
 AT CSAH 57 (SUNFISH LAKE BLVD)

FILE NO. ANOKC 110096
 SHEET 264
 S.P. 002-716-011
 S.P. 199-020-008



- NOTES:**
- 1) IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002), AS REQUIRED BY MINNESOTA STATUTE 2160.
 - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
 - 3) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR AS NOTED IN SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.



DRAWN BY: JMG
 DESIGNER: JMG
 CHECKED BY: JMG

DESIGN TEAM	NO.	BY	DATE	REVISIONS

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 3536 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

ANOKA COUNTY, MINNESOTA
CITY OF RAMSEY

TRAFFIC SIGNAL SYSTEM + INTERCONNECT
INTERSECTION LAYOUT
CSAH 116 (BUNKER LAKE BLVD)
AT CSAH 57 (SUNFISH LAKE BLVD)

S.P. 002-716-011
 S.P. 199-020-008

FILE NO. ANOKC 110096
 SHEET 599 OF 5618

187
264

MATCH LINE - STATION 131 + 00

MATCH LINE - STATION 137 + 13

MATCH LINE - STATION 137 + 13

MATCH LINE - STATION 142 + 00

135

135

CSAH 116 (BUNKER LAKE BLVD NW)
(50 mph)

F & I H.H.56
(INTERCONNECT)

F & I H.H.57
(INTERCONNECT)

F & I 2"R.S.C. (INTERCONNECT)
F & I 1-6 SM/6 MM FIBER OPTIC
CABLE (INTERCONNECT)

NOTES:

- 1) IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002), AS REQUIRED BY MINNESOTA STATUTE 2160.
- 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
- 3) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR AS NOTED IN SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.



140

140

CSAH 116 (BUNKER LAKE BLVD NW)
(50 mph)

F & I H.H.58
(INTERCONNECT)

F & I 2"R.S.C. (INTERCONNECT)
F & I 1-6 SM/6 MM FIBER OPTIC
CABLE (INTERCONNECT)

S:\A\A\A\A\COMMON\SIG\157-116\0271611_1581845.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.

John M. Gray
 Name: John M. Gray, PE
 Lic. No. 22457
 Date: April 5, 2011

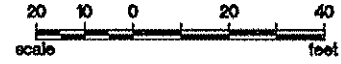
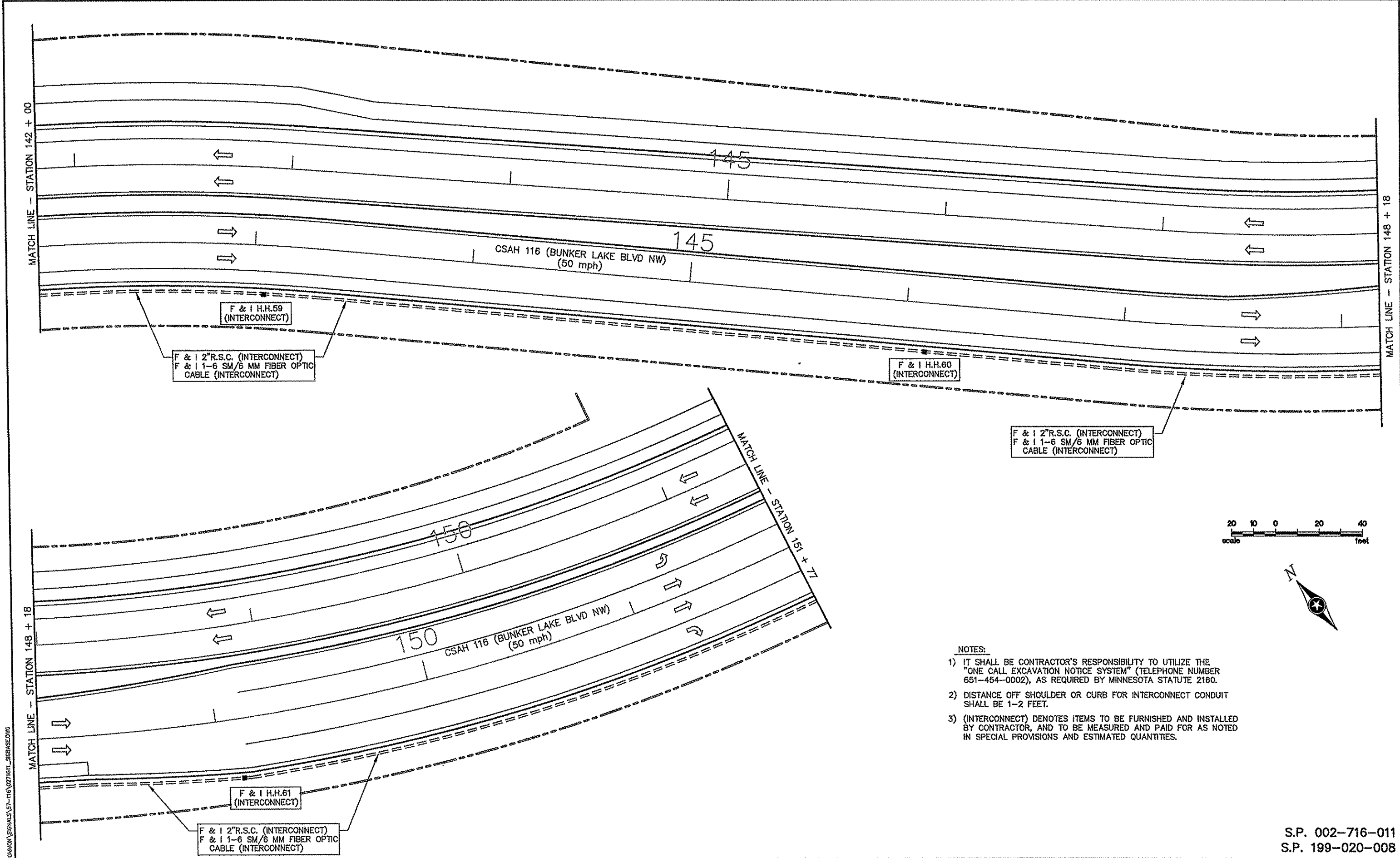
SEH
 PHONE: (851) 490-2000
 3535 VADNAIS CENTER DR.
 ST. PAUL, MN 55110

**ANOKA COUNTY,
 MINNESOTA
 CITY OF RAMSEY**

**TRAFFIC SIGNAL INTERCONNECTION
 INTERSECTION LAYOUT
 CSAH 116 (BUNKER LAKE BLVD)
 (CSAH 57 TO DYSPROSIUM/THURSTON)**

FILE NO. ANOKC 110096
 SHEET SG12 OF SG18
190
264

S.P. 002-716-011
 S.P. 199-020-008



- NOTES:
- 1) IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002), AS REQUIRED BY MINNESOTA STATUTE 2160.
 - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
 - 3) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR AS NOTED IN SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.

S.P. 002-716-011
S.P. 199-020-008

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

NO.	BY	DATE	REVISIONS

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Date: April 5, 2011 Name: John M. Gray, PE Lico. No. 22457

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

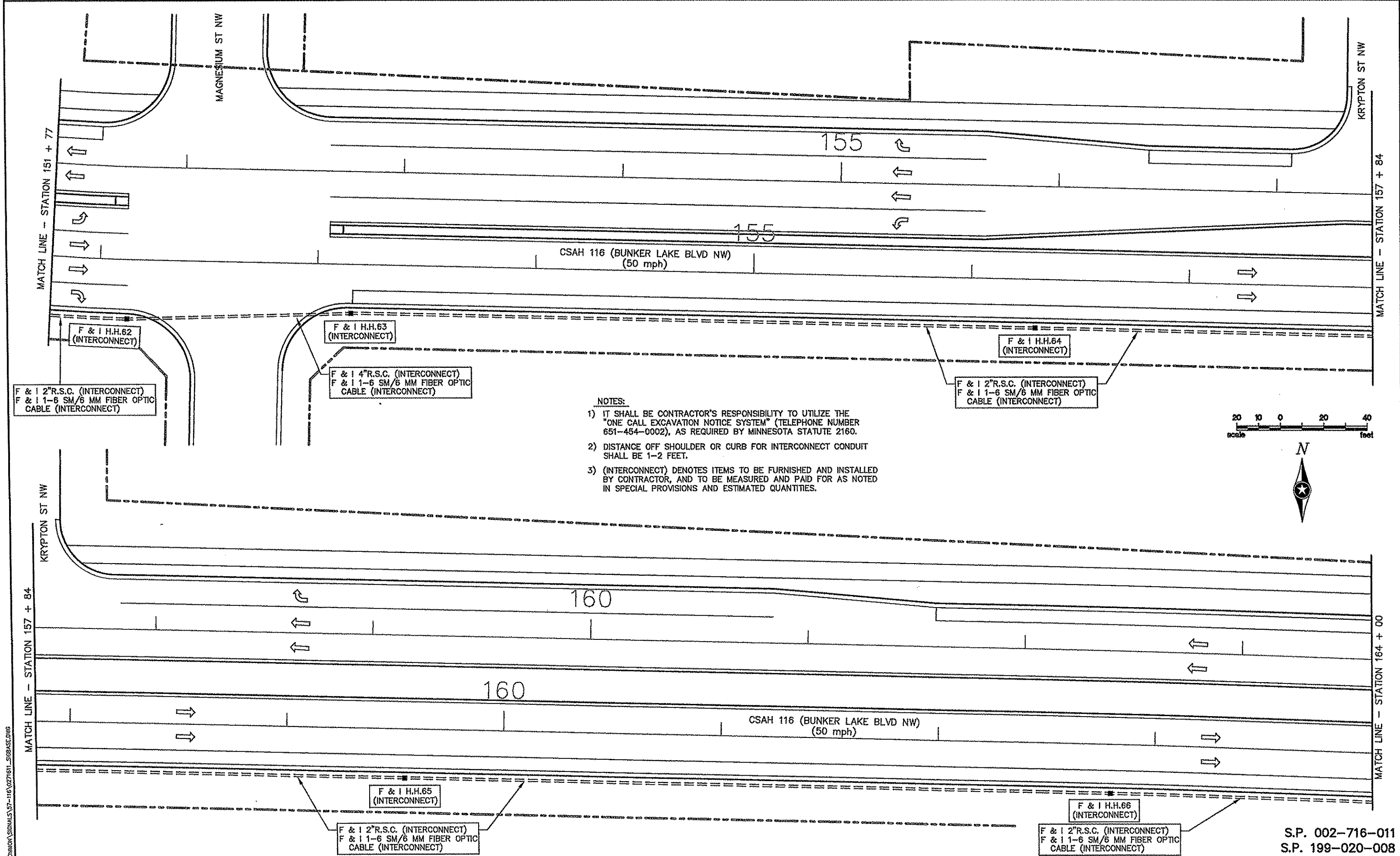
**ANOKA COUNTY,
MINNESOTA
CITY OF RAMSEY**

**TRAFFIC SIGNAL INTERCONNECTION
INTERSECTION LAYOUT
CSAH 116 (BUNKER LAKE BLVD)
(CSAH 57 TO DYSPROBIUM/THURSTON)**

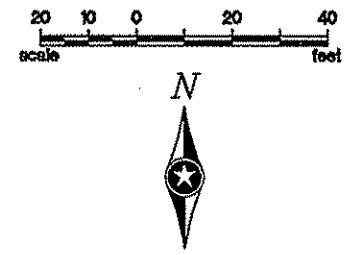
FILE NO.
ANOKC 110096
SHEET
SG13 OF SG18

191
264

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- NOTES:**
- 1) IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002), AS REQUIRED BY MINNESOTA STATUTE 2160.
 - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
 - 3) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR AS NOTED IN SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.



S:\VIA\ANOKA\COMMON SIGNALS\57-116\0271611_SIBBASE.DWG

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

NO.	BY	DATE	REVISIONS

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John M. Gray
 Name: John M. Gray, PE
 Date: April 5, 2011
 Lic. No. 22457

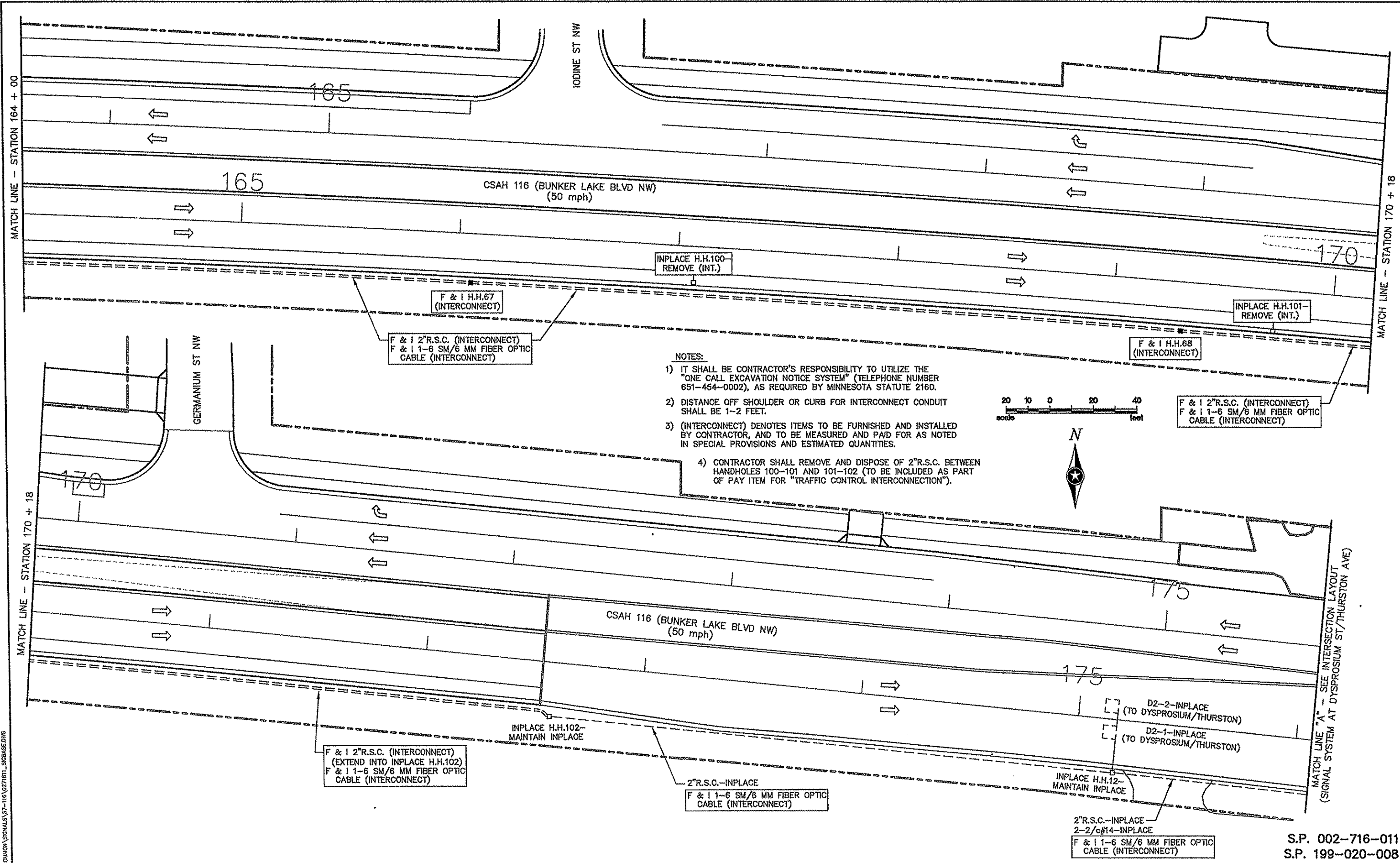
SEH
 PHONE: (651) 490-2000
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 ST. PAUL, MN 55110

**ANOKA COUNTY,
 MINNESOTA
 CITY OF RAMSEY**

**TRAFFIC SIGNAL INTERCONNECTION
 INTERSECTION LAYOUT
 CSAH 116 (BUNKER LAKE BLVD)
 (CSAH 57 TO DYSPROSIUM/THURSTON)**

S.P. 002-716-011
 S.P. 199-020-008

FILE NO. ANOKC 110095	192
SHEET SG14 OF SG18	264



- NOTES:**
- 1) IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THE "ONE CALL EXCAVATION NOTICE SYSTEM" (TELEPHONE NUMBER 651-454-0002), AS REQUIRED BY MINNESOTA STATUTE 216D.
 - 2) DISTANCE OFF SHOULDER OR CURB FOR INTERCONNECT CONDUIT SHALL BE 1-2 FEET.
 - 3) (INTERCONNECT) DENOTES ITEMS TO BE FURNISHED AND INSTALLED BY CONTRACTOR, AND TO BE MEASURED AND PAID FOR AS NOTED IN SPECIAL PROVISIONS AND ESTIMATED QUANTITIES.
 - 4) CONTRACTOR SHALL REMOVE AND DISPOSE OF 2\"/>



MATCH LINE - STATION 164 + 00

MATCH LINE - STATION 170 + 18

MATCH LINE - STATION 170 + 18

MATCH LINE "A" - SEE INTERSECTION LAYOUT (SIGNAL SYSTEM AT DYSPROSIUM ST/THURSTON AVE)

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

NO.	BY	DATE	REVISIONS

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John M. Gray
 Name: John M. Gray, PE
 Date: April 5, 2011
 Lic. No. 22457

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

ANOKA COUNTY, MINNESOTA
CITY OF RAMSEY

TRAFFIC SIGNAL INTERCONNECTION INTERSECTION LAYOUT
CSAH 116 (BUNKER LAKE BLVD)
(CSAH 57 TO DYSPROSIUM/THURSTON)

S.P. 002-716-011
 S.P. 199-020-008

FILE NO. ANOKC 110096
 SHEET 193
 SG15 OF SG18
 264

