

(C) INPLACE (MAINTAIN INPLACE) GROUND MOUNTED TRANSFORMER (SOP) (CONNEXUS)  
 F & I EXTEND TO SERVICE CABINET B:  
 2" CONDUIT  
 3-1/2"

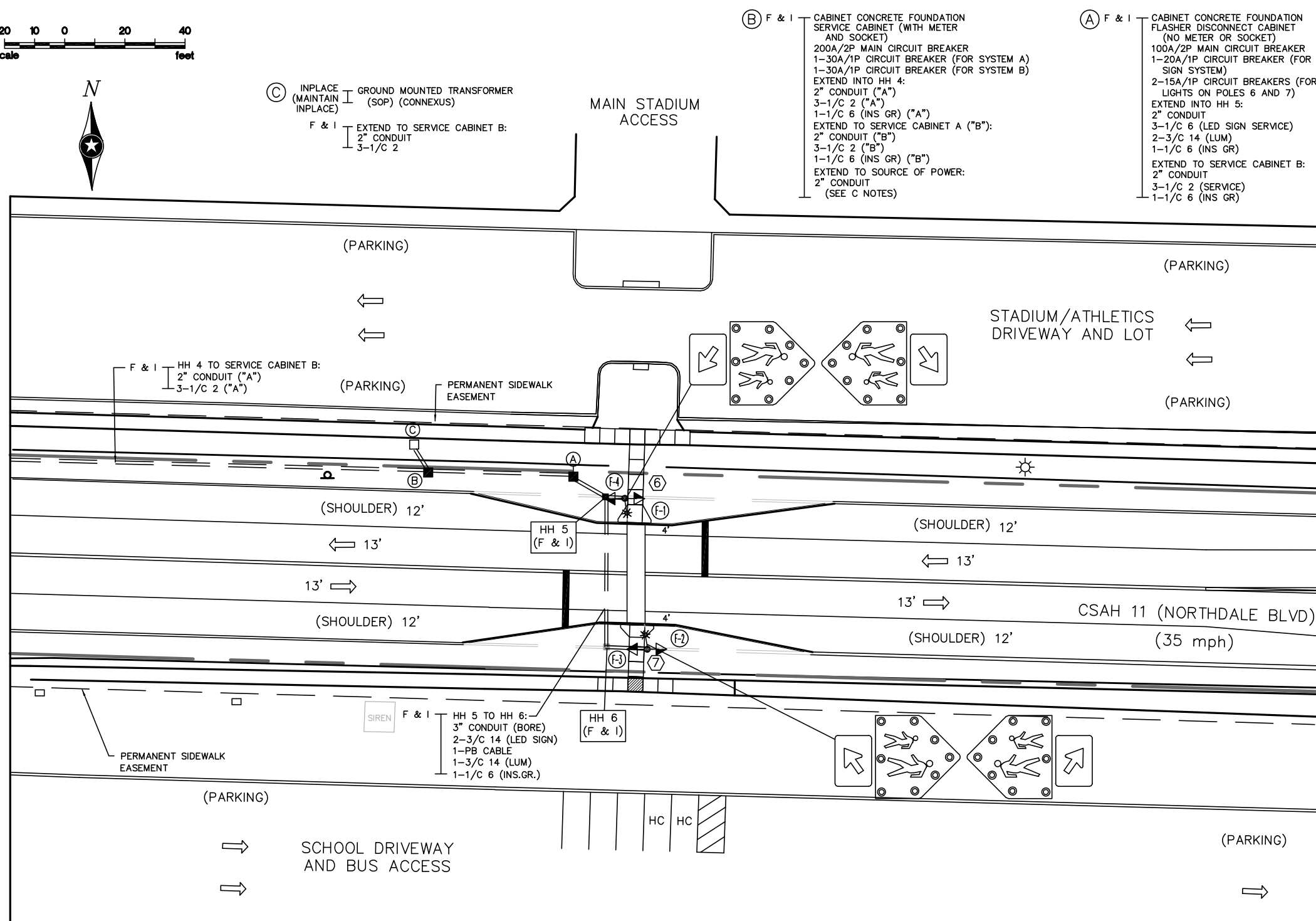
(B) F & I CABINET CONCRETE FOUNDATION SERVICE CABINET (WITH METER AND SOCKET)  
 200A/2P MAIN CIRCUIT BREAKER  
 1-30A/1P CIRCUIT BREAKER (FOR SYSTEM A)  
 1-30A/1P CIRCUIT BREAKER (FOR SYSTEM B)  
 EXTEND INTO HH 4:  
 2" CONDUIT ("A")  
 3-1/2 ("A")  
 1-1/2 6 (INS GR) ("A")  
 EXTEND TO SERVICE CABINET A ("B"):  
 2" CONDUIT ("B")  
 3-1/2 ("B")  
 1-1/2 6 (INS GR) ("B")  
 EXTEND TO SOURCE OF POWER:  
 2" CONDUIT  
 (SEE C NOTES)

(A) F & I CABINET CONCRETE FOUNDATION FLASHER DISCONNECT CABINET (NO METER OR SOCKET)  
 100A/2P MAIN CIRCUIT BREAKER  
 1-20A/1P CIRCUIT BREAKER (FOR LED SIGN SYSTEM)  
 2-15A/1P CIRCUIT BREAKERS (FOR STREET LIGHTS ON POLES 6 AND 7)  
 EXTEND INTO HH 5:  
 2" CONDUIT  
 3-1/2 6 (LED SIGN SERVICE)  
 2-3/4 14 (LUM)  
 1-1/2 6 (INS GR)  
 EXTEND TO SERVICE CABINET B:  
 2" CONDUIT  
 3-1/2 2 (SERVICE)  
 1-1/2 6 (INS GR)

NOTES:

- SEE SPECIAL PROVISIONS AND DETAILS FOR FURTHER INFORMATION REGARDING FLASHING BEACON SYSTEM INSTALLATION.
- CROSSWALK FLASHER SYSTEM SHALL BE SET UP TO OPERATE BY PUSH BUTTON ACTIVATION, BUT FLASHER CABINET SHALL ALSO HAVE ALL COMPONENTS NEEDED FOR TIME-OF-DAY OPERATION.
- LOCATION OF FOUNDATIONS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- PAVEMENT MARKINGS, POST MOUNTED SIGNING, CURB RAMP, AND SIDEWALK CONSTRUCTION WILL BE COMPLETED BY OTHERS AS PART OF COMPLETED PROJECT (SEE PROJECT SPECIFIC PLANS FOR THESE ITEMS).
- SEE DETAILS FOR FURTHER INFORMATION REGARDING MOUNTING OF ALL FLASHER POLE MATERIALS & ELECTRICAL EQUIPMENT.
- NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS PER DETAILS INCLUDED IN THE SPECIAL PROVISIONS, AND SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTACT WITH POWER COMPANY (CONNEXUS) FOR POWER CONNECTION.
- ALL NEW CONDUIT SHALL BE PVC-SCHEDULE 80 OR HDPE SCHEDULE 80 AND SHALL CARRY 1/C#6 GREEN INSULATING GROUNDING CONDUCTOR. NEW CONDUIT AND GROUNDING COMPONENTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. CONDUITS UNDER ANY EXISTING ROADWAYS, SIDEWALKS, OR DRIVEWAYS WILL REQUIRE BORING.
- ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
- ALL CABLES AND CONDUCTORS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. NO SPLICING IS ALLOWED ON ANY CABLE OR CONDUCTOR BETWEEN CABINETS AND EACH POLE MOUNTED COMPONENT.
- TYPE OF PUSH BUTTON CABLE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR THAT IS FULLY COMPATIBLE WITH THE APS PUSH BUTTON THAT IS FURNISHED AND INSTALLED BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE SOFTWARE AND PERSONNEL TO TRAIN CITY AND COUNTY STAFF IN THE SET-UP AND MAINTENANCE OF THE COMPLETE CROSSWALK FLASHER SYSTEM (INCIDENTAL).
- ALL ITEMS OF PEDESTRIAN CROSSWALK FLASHER SYSTEM "B" WILL BE MEASURED AND PAID FOR SEPARATELY FROM REMOVAL OF EXISTING WOOD POLE AND SPAN WIRE MOUNTED FLASHER SYSTEM. SEE SPECIAL PROVISIONS AND STATEMENT OF ESTIMATED QUANTITIES.
- (\*\*) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY AS PART OF REMOVE FLASHER SYSTEM PAY ITEM.

MATCH LINE "A" - SEE SHEET 38



SIGNS FOR FLASHER SYSTEM "B"				
POWERED SIGN PANELS (F & I) - POLE MOUNTED SIGNS				
SIGN PANEL	POLE NO.	NO. REQ.	SIZE (IN)	PANEL LEGEND
S1-1	6,6,7,7	4	36" P	School Crossing (Symbol) (LED Sign)
TOTAL QUANTITIES				4

SIGNS FOR FLASHER SYSTEM "B"						
SIGN PANELS - TYPE C (F & I) - POLE MOUNTED SIGNS						
SIGN PANEL	POLE NO.	NO. REQ.	SIZE (IN)	AREA/SIGN (SQ. FT.)	TOTAL AREA (SQ. FT.)	PANEL LEGEND
R10-25	6,7	2	9 x 12	0.75	1.50	Push Button To Turn On Warning Lights
R100-1	6,7	2	9 x 12	0.75	1.50	Warning Lights Do Not Require Traffic To Stop
W16-7PL	6,7	2	30 x 18	3.75	7.50	Down Arrow (Left)
W16-7PR	6,7	2	30 x 18	3.75	7.50	Down Arrow (Right)
TOTAL QUANTITIES				8	18.00	

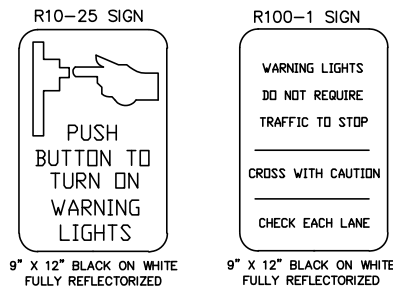
SIGNING NOTES:

- SEE CURRENT MnDOT STANDARD SIGNS AND MARKINGS MANUAL FOR STANDARD SIGN DESIGNS AND PUNCHING CODES.
- FOR NON-STANDARD SIGN DESIGNS, LAYOUTS ARE INCLUDED ELSEWHERE ON THIS PLAN SHEET. ALL SIGN DIMENSIONS ARE IN INCHES.
- SEE STANDARD PLAN 5-297.701 FOR STANDARD SIGN PLACEMENT.
- SEE STANDARD PLAN 5-297.730 FOR POLE MOUNTED SIGN DETAILS.
- MOUNTING HEIGHT OF POLE AND POST MOUNTED SIGN PANELS MUST BE 7 FOOT MINIMUM, MEASURED FROM BOTTOM OF SIGN PANEL TO THE SURFACE IMMEDIATELY BELOW THE SIGN PANEL.
- ALL TRAFFIC CONTROL, MOBILIZATION AND WORK RELATED TO THE INSTALLATION OF THE SIGNING SHOWN IN THE PLANS IS INCIDENTAL.
- COLOR FOR S1-1 AND W16-7P SIGN PANELS SHALL BE BLACK ON FLUORESCENT YELLOW-GREEN, FULLY REFLECTORIZED. COLOR FOR R10-25 AND R100-1 SIGN PANELS SHALL BE BLACK ON WHITE BACKGROUND, FULLY REFLECTORIZED.
- FURNISHING AND INSTALLING NEW TYPE C SIGN PANELS AND LED ENHANCED SIGNS SHALL BE INCLUDED AS PART OF EACH PAY ITEM NOTED IN THE PLANS.

LEGEND OF SYMBOLS	
POLE BASE NUMBER	①
INPLACE WOOD POLE/LIGHT POLE	○
STREET LIGHT POLE FOUNDATION	●
PEDESTAL POLE, BASE, FOUNDATION	■
STREET LIGHT	*
INPLACE STREET LIGHT	* (with circle)
LED ENHANCED SIGN OR 12" FLASHER HANDHOLE	▶
CONDUIT	—
INPLACE CONDUIT	— (with circle)
SERVICE DISCONNECT CABINET	(A)
SERVICE CABINET (POWER)	(B)
SOURCE OF POWER (SOP) LOCATION	(C)

ABBREVIATIONS	
F & I	FURNISH AND INSTALL
GR	GROUND
HH	HANDHOLE
PB	PUSH BUTTON
SOP	SOURCE OF POWER
MIN	MINIMUM

SEE SHEET 42 FOR POLE NOTES.



SEH Project COONR 168367  
 Drawn By JMG  
 Designed By JMG  
 Checked By JMG

Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	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.  
 SEH  
 Name: John M. Gray, PE  
 Date: December 12, 2022 Lic. No. 22457

**NORTHDALE BOULEVARD (CSAH 11) SRTS IMPROVEMENTS**  
 ANOKA COUNTY, MINNESOTA  
 CITY OF COON RAPIDS

**PEDESTRIAN CROSSWALK FLASHER SYSTEM B INTERSECTION LAYOUT**  
 CSAH 11 (NORTHDALE BOULEVARD) - MID BLOCK CROSSING

SAP 114-020-060  
 CITY PROJECT 22-6

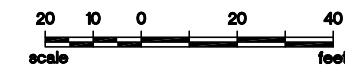
NOTES:

- SEE SPECIAL PROVISIONS AND DETAILS FOR FURTHER INFORMATION REGARDING SPEED FEEDBACK SIGN SYSTEM INSTALLATION.
- SPEED FEEDBACK SIGNS AND 12" YELLOW FLASHERS SHALL BE SET UP TO OPERATE BY TIME-OF-DAY OPERATION.
- LOCATION OF FOUNDATIONS AND HANDHOLES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- PAVEMENT MARKINGS, POST MOUNTED SIGNING, CURB RAMP, AND SIDEWALK CONSTRUCTION WILL BE COMPLETED BY OTHERS AS PART OF COMPLETED PROJECT (SEE PROJECT SPECIFIC PLANS FOR THESE ITEMS).
- ALL YELLOW FLASHERS SHALL BE LED.
- SEE DETAILS FOR FURTHER INFORMATION REGARDING MOUNTING OF ALL FEEDBACK SIGN POLE MATERIALS & ELECTRICAL EQUIPMENT.
- NEW HANDHOLES SHALL BE PVC HANDHOLES WITH METAL FRAMES AND COVERS PER DETAILS INCLUDED IN THE SPECIAL PROVISIONS, AND SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTACT WITH POWER COMPANY (CONNEXUS) FOR POWER CONNECTION.
- ALL NEW CONDUIT SHALL BE PVC-SCHEDULE 80 OR HDPE SCHEDULE 80 AND SHALL CARRY 1/C#6 GREEN INSULATING GROUNDING CONDUCTOR. NEW CONDUIT AND GROUNDING COMPONENTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. CONDUITS UNDER ANY EXISTING ROADWAYS, SIDEWALKS, OR DRIVEWAYS WILL REQUIRE BORING.

- ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
- ALL CABLES AND CONDUCTORS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. NO SPLICING IS ALLOWED ON ANY CABLE OR CONDUCTOR BETWEEN CABINETS AND EACH POLE MOUNTED COMPONENT.
- CONTRACTOR SHALL PROVIDE SOFTWARE AND PERSONNEL TO TRAIN CITY AND COUNTY STAFF IN THE SET-UP AND MAINTENANCE OF THE COMPLETE SPEED FEEDBACK SIGN SYSTEM (INCIDENTAL).
- ALL ITEMS OF VEHICLE SPEED FEEDBACK SIGN "B" WILL BE MEASURED AND PAID FOR SEPARATELY. SEE SPECIAL PROVISIONS & STATEMENT OF ESTIMATED QUANTITIES.

SIGNING NOTES:

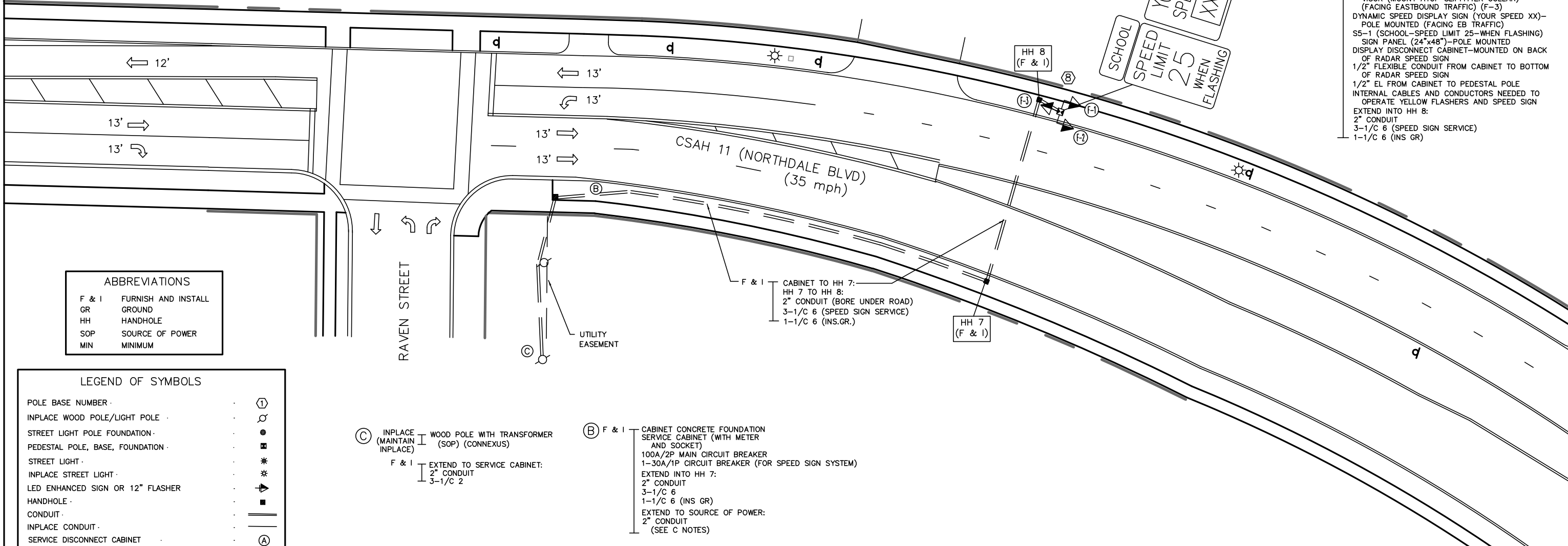
- SEE CURRENT MnDOT STANDARD SIGNS AND MARKINGS MANUAL FOR STANDARD SIGN DESIGNS AND PUNCHING CODES.
- FOR NON-STANDARD SIGN DESIGNS, LAYOUTS ARE INCLUDED ELSEWHERE ON THIS PLAN SHEET. ALL SIGN DIMENSIONS ARE IN INCHES.
- SEE STANDARD PLAN 5-297.701 FOR STANDARD SIGN PLACEMENT.
- SEE STANDARD PLAN 5-297.730 FOR POLE MOUNTED SIGN DETAILS.
- MOUNTING HEIGHT OF POLE AND POST MOUNTED SIGN PANELS MUST BE 7 FOOT MINIMUM, MEASURED FROM BOTTOM OF SIGN PANEL TO THE SURFACE IMMEDIATELY BELOW THE SIGN PANEL.
- ALL TRAFFIC CONTROL, MOBILIZATION AND WORK RELATED TO THE INSTALLATION OF THE SIGNING SHOWN IN THE PLANS IS INCIDENTAL.
- COLOR FOR SPEED VEHICLE FEEDBACK SIGNS SHALL BE BLACK ON YELLOW BACKGROUND, FULLY REFLECTORIZED.
- FURNISHING AND INSTALLING NEW TYPE C SIGN PANELS AND VEHICLE SPEED FEEDBACK SIGNS SHALL BE INCLUDED AS PART OF EACH PAY ITEM NOTED IN THE PLANS.



SIGN PANELS FOR SPEED FEEDBACK SIGN "B"					
POWERED SIGN PANELS (F & I) - POLE MOUNTED SIGNS					
SIGN PANEL	POLE NO.	NO. REQ.	SIZE (IN)	PANEL LEGEND	
-	8	1	30 x 41 (approx)	Your Speed XX (Speed Feedback Sign)	
TOTAL QUANTITIES		1			

SIGN PANELS FOR SPEED FEEDBACK SIGN "B"						
SIGN PANELS - TYPE C (F & I) - POLE MOUNTED SIGNS						
SIGN PANEL	POLE NO.	NO. REQ.	SIZE (IN)	AREA/SIGN (SQ. FT.)	TOTAL AREA (SQ. FT.)	PANEL LEGEND
SS-1	8	1	24 x 48	8.00	8.00	School Speed Limit 25 When Flashing
TOTAL QUANTITIES		1			8.00	

RAVEN STREET  
 MAINTAIN SIGNAL, PUSH  
 BUTTONS, AND CROSSWALKS



**(B) F & I** MODIFIED PEDESTAL FOUNDATION (60" DEPTH, WITH 5/8" x 15' GROUND ROD)  
 14" PEDESTAL POLE AND BASE  
 WIND COLLAR FOR PEDESTAL POLE  
 2-12" LED YELLOW FLASHERS WITH VISORS, BRACKETING, AND SLIPFITTER COLLAR (FACING WESTBOUND TRAFFIC) (F-1, F-2)  
 1-12" LED YELLOW FLASHER WITH VISOR (MOUNT ATOP SLIPFITTER COLLAR) (FACING EASTBOUND TRAFFIC) (F-3)  
 DYNAMIC SPEED DISPLAY SIGN (YOUR SPEED XX)-POLE MOUNTED (FACING EB TRAFFIC)  
 SS-1 (SCHOOL-SPEED LIMIT 25-WHEN FLASHING) SIGN PANEL (24"x48")-POLE MOUNTED DISPLAY DISCONNECT CABINET-MOUNTED ON BACK OF RADAR SPEED SIGN  
 1/2" FLEXIBLE CONDUIT FROM CABINET TO BOTTOM OF RADAR SPEED SIGN  
 1/2" EL FROM CABINET TO PEDESTAL POLE  
 INTERNAL CABLES AND CONDUCTORS NEEDED TO OPERATE YELLOW FLASHERS AND SPEED SIGN  
 EXTEND INTO HH 8:  
 2" CONDUIT  
 3-1/C 6 (SPEED SIGN SERVICE)  
 1-1/C 6 (INS GR)

**ABBREVIATIONS**

F & I	FURNISH AND INSTALL
GR	GROUND
HH	HANDHOLE
SOP	SOURCE OF POWER
MIN	MINIMUM

**LEGEND OF SYMBOLS**

POLE BASE NUMBER	(1)
INPLACE WOOD POLE/LIGHT POLE	(2)
STREET LIGHT POLE FOUNDATION	(3)
PEDESTAL POLE, BASE, FOUNDATION	(4)
STREET LIGHT	(5)
INPLACE STREET LIGHT	(6)
LED ENHANCED SIGN OR 12" FLASHER	(7)
HANDHOLE	(8)
CONDUIT	(9)
INPLACE CONDUIT	(10)
SERVICE DISCONNECT CABINET	(A)
SERVICE CABINET (POWER)	(B)
SOURCE OF POWER (SOP) LOCATION	(C)

**(C)** INPLACE WOOD POLE WITH TRANSFORMER (SOP) (CONNEXUS)  
**F & I** EXTEND TO SERVICE CABINET:  
 2" CONDUIT  
 3-1/C 2

**(B) F & I** CABINET CONCRETE FOUNDATION SERVICE CABINET (WITH METER AND SOCKET)  
 100A/2P MAIN CIRCUIT BREAKER  
 1-30A/1P CIRCUIT BREAKER (FOR SPEED SIGN SYSTEM)  
 EXTEND INTO HH 7:  
 2" CONDUIT  
 3-1/C 6  
 1-1/C 6 (INS GR)  
 EXTEND TO SOURCE OF POWER:  
 2" CONDUIT  
 (SEE C NOTES)

SEH Project	COONR 168367	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JMG						
Designed By	JMG						
Checked By	JMG						

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.

**SEH**

Name: John M. Gray, PE  
 Lic. No. 22457  
 Date: December 12, 2022

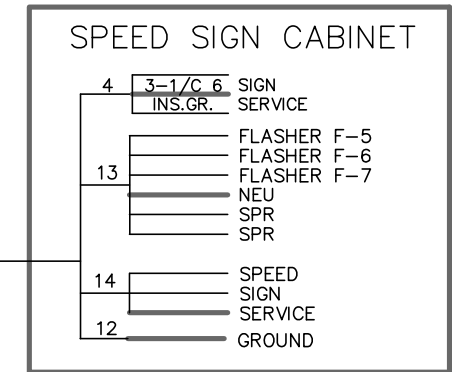
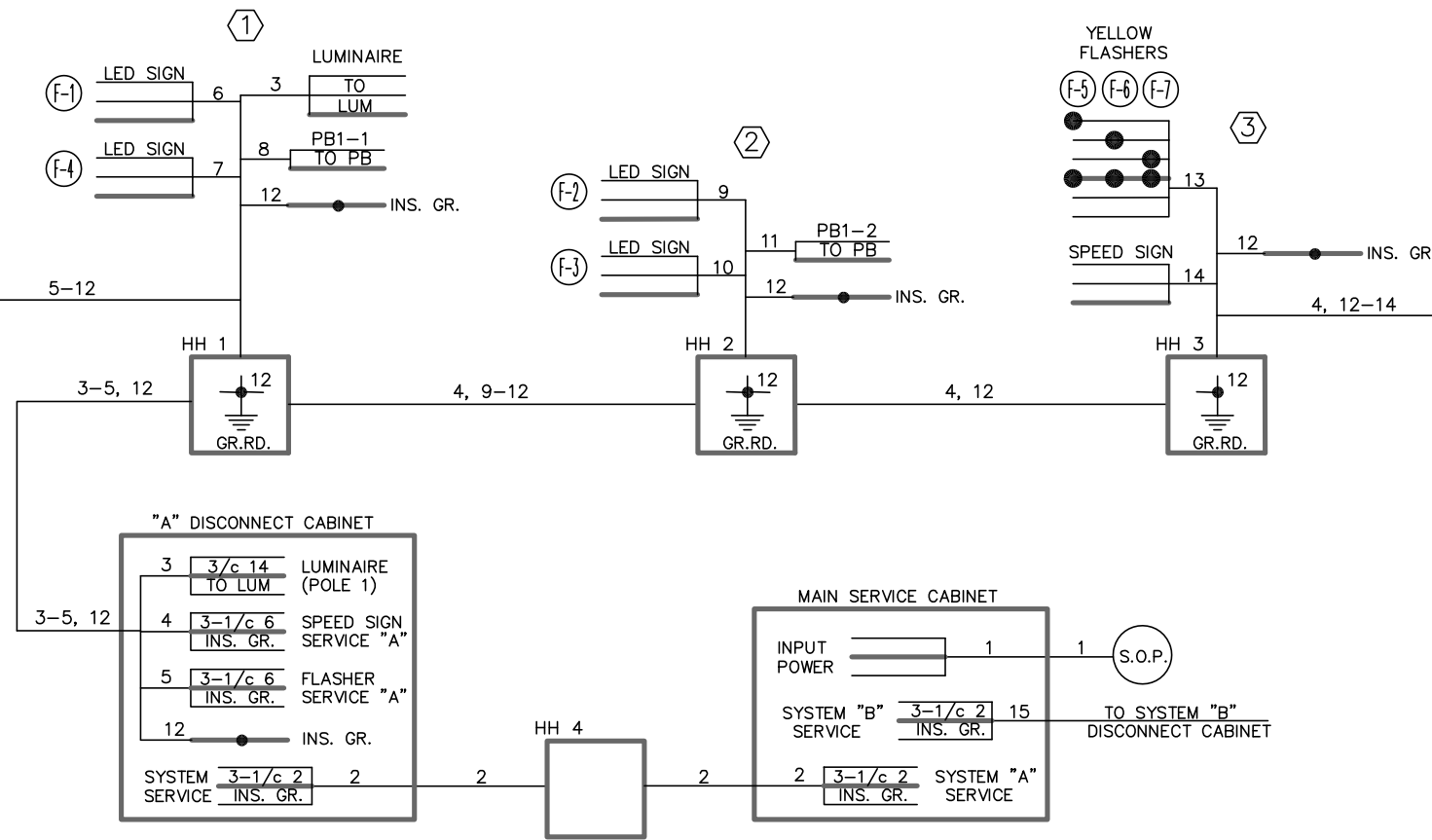
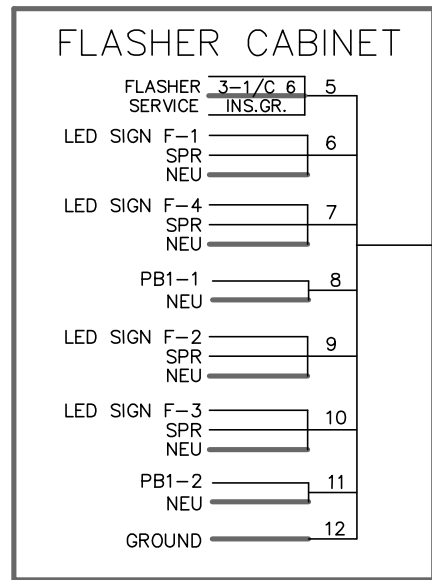
**NORTHDALE BOULEVARD (CSAH 11)  
 SRTS IMPROVEMENTS**  
 ANOKA COUNTY, MINNESOTA  
 CITY OF COON RAPIDS

**VEHICLE SPEED FEEDBACK SIGN B  
 INTERSECTION LAYOUT**  
 CSAH 11 (NORTHDALE BOULEVARD) - EAST OF RAVEN STREET

SAP 114-020-060  
 CITY PROJECT 22-6

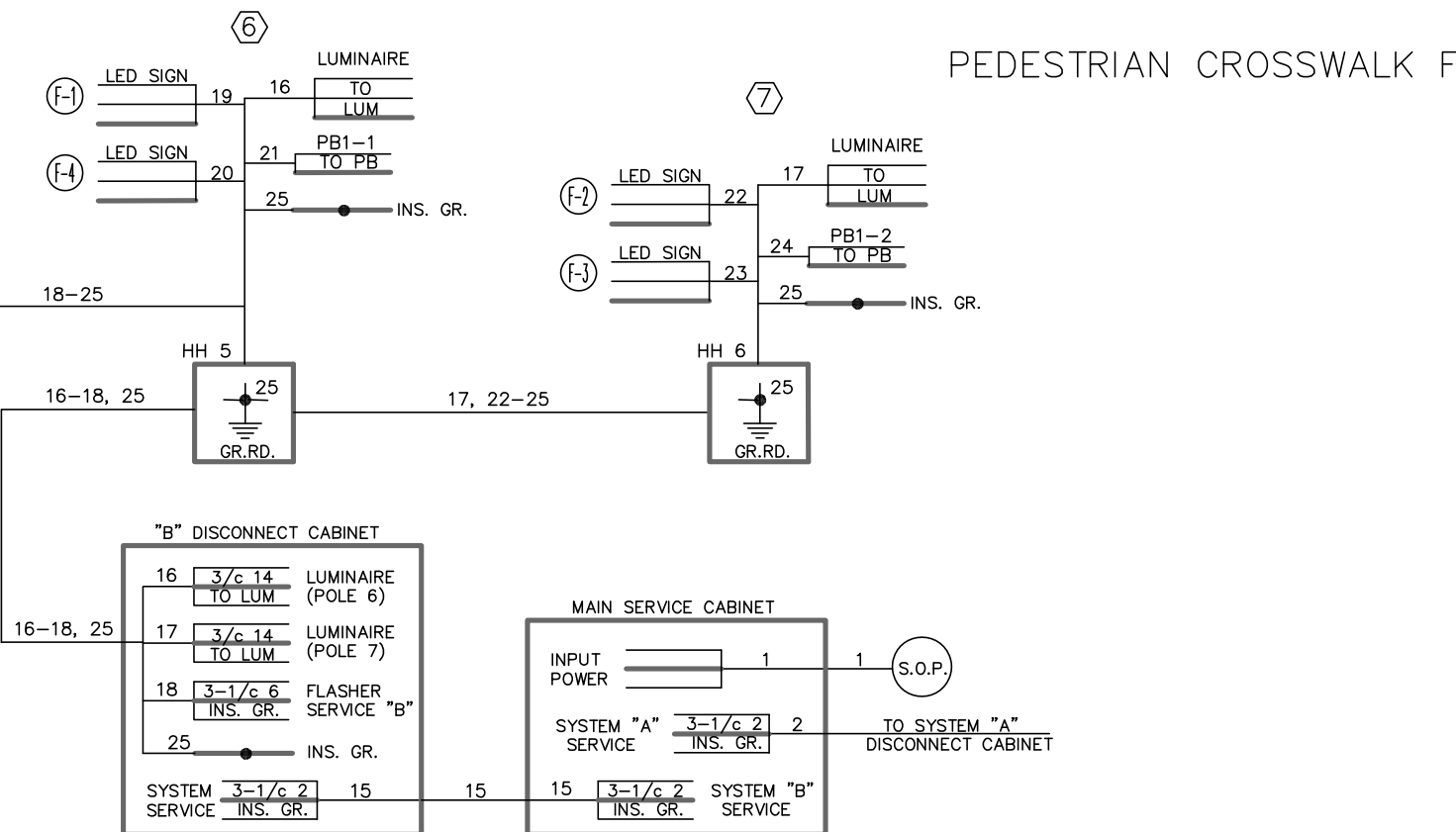
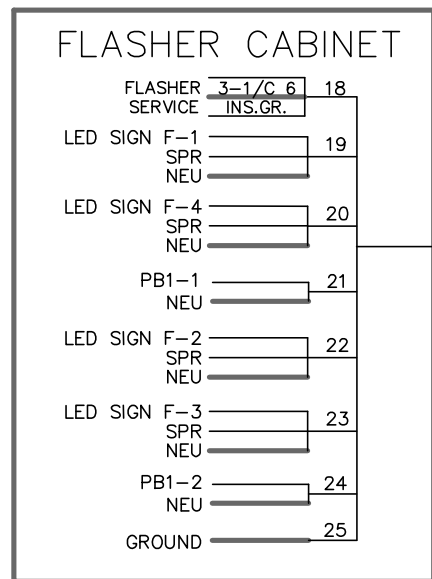
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- NOTES:
- 1) RUN ALL CABLES DIRECTLY TO EACH LED SIGN, YELLOW FLASHER, STREET LIGHT, VEHICLE SPEED SIGN, AND PUSH BUTTON WITH NO SPLICES.
  - 2) FLASHER AND SPEED SIGN SYSTEMS SHALL BE METERED.
  - 3) ALL CABLES AND CONDUCTORS SHALL BE NEW (FURNISHED AND INSTALLED BY THE CONTRACTOR).

PEDESTRIAN CROSSWALK FLASHER SYSTEM "A"/SPEED FEEDBACK SIGN "A" WIRING DIAGRAM



- NOTES:
- 1) RUN ALL CABLES DIRECTLY TO EACH LED SIGN, STREET LIGHT, AND PUSH BUTTON WITH NO SPLICES.
  - 2) FLASHER SYSTEM SHALL BE METERED.
  - 3) ALL CABLES AND CONDUCTORS SHALL BE NEW (FURNISHED AND INSTALLED BY THE CONTRACTOR).

PEDESTRIAN CROSSWALK FLASHER SYSTEM "B" WIRING DIAGRAM

SAP 114-020-060  
CITY PROJECT 22-6

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Drawn By	JMG
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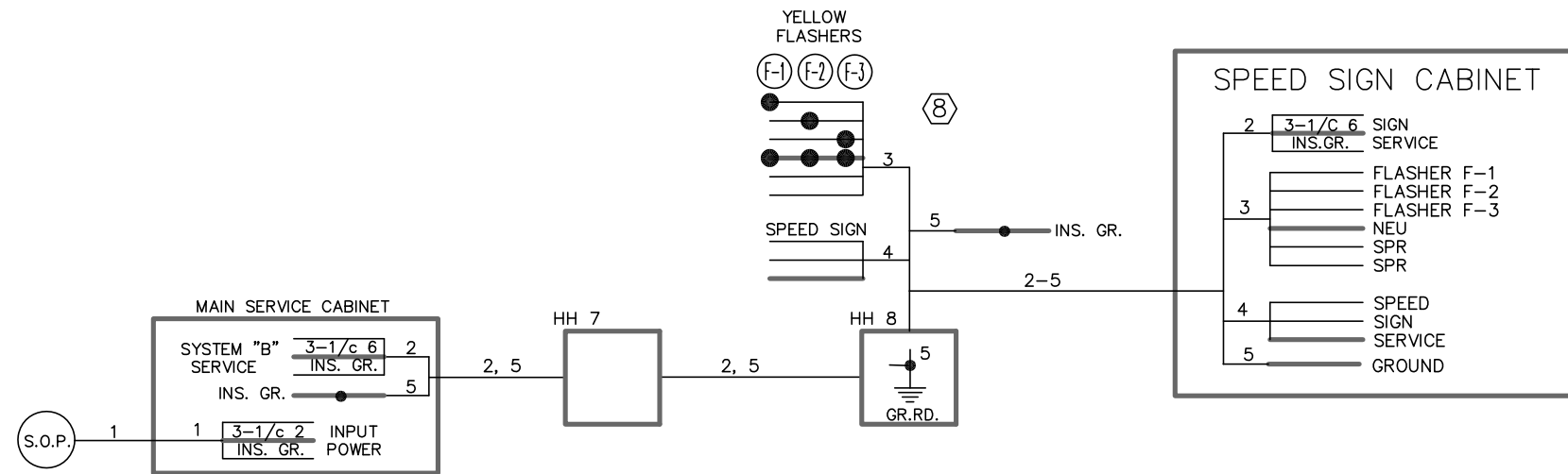
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**NORTHDALE BOULEVARD (CSAH 11)  
SRTS IMPROVEMENTS**  
ANOKA COUNTY, MINNESOTA  
CITY OF COON RAPIDS

**CROSSWALK FLASHERS "A-B" AND SPEED SIGN "A"**  
NOTES AND WIRING DIAGRAMS  
CSAH 11 (NORTHDALE BOULEVARD) - WREN STREET AND MID-BLOCK



- NOTES:**
- 1) RUN ALL CABLES DIRECTLY TO EACH YELLOW FLASHER AND VEHICLE SPEED SIGN WITH NO SPLICES.
  - 2) SPEED SIGN SYSTEM SHALL BE METERED.
  - 3) ALL CABLES AND CONDUCTORS SHALL BE NEW (FURNISHED AND INSTALLED BY THE CONTRACTOR).

SPEED FEEDBACK SIGN "B" WIRING DIAGRAM

CROSSWALK FLASHER/SPEED SIGN SYSTEM A POLE NOTES

- ① F & I LIGHT FOUNDATION-DESIGN E (CAST IN-PLACE) TYPE D30-9 STREET LIGHT POLE AND DAVIT ARM WITH SIGNAL FITTINGS ON EACH SIDE OF POLE LUMINAIRE-LED  
 2-LED ENHANCED S1-1 SIGNS (36" PENTAGON)- FACING EB AND WB TRAFFIC (F-1, F-4)  
 2-W16-7P STATIC SIGNS (30" x 18")-MOUNT BELOW LED ENHANCED SIGNS (ARROW VARIES)  
 POLE MOUNTING BRACKETING AND HARDWARE (FOR MOUNTING LED SIGNS/STATIC SIGNS ON POLE)  
 APS PEDESTRIAN PUSH BUTTON AND R10-25 SIGN (MOUNTED ON CROSSWALK SIDE OF POLE)  
 R100-1 SIGN ("WARNING LIGHTS DO NOT REQUIRE TRAFFIC TO STOP") SIGN (MOUNT ABOVE R10-25 SIGN)  
 LED SIGN/APS SYSTEM NEMA CABINET ENCLOSURE (WITH PUSH BUTTON ACTIVATION EQUIPMENT AND ALL INTERNAL CABINET EQUIPMENT CAPABLE OF OPERATING PUSH BUTTONS, AND LED SIGNS) - POLE MOUNTED ON EAST SIDE OF POLE (BELOW W16-7P SIGN)  
 PROVIDE ALL INTERNAL CABLES AND CONDUCTORS NEEDED FROM FLASHER CABINET TO PUSH BUTTON AND LED ENHANCED SIGNS ON POLE 1  
 EXTEND INTO HH 1:  
 3" CONDUIT  
 2-3/C 14 (LED SIGNS)  
 1-PB CABLE  
 1-3/C 14 (LUM)  
 3-1/C 6 (LED SIGN SERVICE)  
 1-1/C 6 (INS GR)

- ② F & I MODIFIED PEDESTAL FOUNDATION (60" DEPTH, WITH 5/8" x 15" GROUND ROD)  
 14' PEDESTAL POLE AND BASE  
 WIND COLLAR AND POLE CAP FOR POLE  
 2-LED ENHANCED S1-1 SIGNS (36" PENTAGON)- FACING EB AND WB TRAFFIC (F-2, F-3)  
 2-W16-7P STATIC SIGNS (30" x 18")-MOUNT BELOW LED ENHANCED SIGNS (ARROW VARIES)  
 POLE MOUNTING BRACKETING AND HARDWARE (FOR MOUNTING LED SIGNS/STATIC SIGNS ON POLE)  
 APS PEDESTRIAN PUSH BUTTON AND R10-25 SIGN (MOUNTED ON CROSSWALK SIDE OF POLE)  
 R100-1 SIGN ("WARNING LIGHTS DO NOT REQUIRE TRAFFIC TO STOP") SIGN (MOUNT ABOVE R10-25 SIGN)  
 EXTEND INTO HH 2:  
 3" CONDUIT  
 2-3/C 14 (LED SIGNS)  
 1-PB CABLE  
 1-1/C 6 (INS GR)

- ④ INPLACE (REMOVE) (\*\*)  
 30' WOOD POLE  
 1-DOWN GUY, GUARD, ANCHOR  
 SPAN WIRE TO WOOD POLE 5  
 OVERHEAD CROSSWALK FLASHER SIGN (4 YELLOW FLASHERS, 108" x 24" SIGN HOUSING AND OVERHEAD MOUNTING BRACKETS/HARDWARE)  
 CABLE FROM OVERHEAD SIGN TO FLASHER CABINET  
 FLASHER CABINET-WOOD POLE MOUNTED  
 1.25" RSC BELOW FLASHER CABINET TO SOP  
 POWER CABLES TO SOP

- ⑤ INPLACE (REMOVE) (\*\*)  
 30' WOOD POLE  
 1-DOWN GUY, GUARD, ANCHOR  
 SPAN WIRE TO WOOD POLE 4

(\*) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY AS PART OF VEHICLE SPEED FEEDBACK SIGN "A" PAY ITEM.  
 (\*\*) DENOTES ITEMS TO BE MEASURED AND PAID FOR SEPARATELY AS PART OF REMOVE FLASHER SYSTEM PAY ITEM.

- ③ F & I (\*) MODIFIED PEDESTAL FOUNDATION (60" DEPTH, WITH 5/8" x 15" GROUND ROD)  
 14' PEDESTAL POLE AND BASE  
 WIND COLLAR FOR PEDESTAL POLE  
 2-12" LED YELLOW FLASHERS WITH VISORS, BRACKETING, AND SLIPFITTER COLLAR (FACING EASTBOUND TRAFFIC) (F-5, F-6)  
 1-12" LED YELLOW FLASHER WITH VISOR (MOUNT ATOP SLIPFITTER COLLAR) (FACING WESTBOUND TRAFFIC) (F-7)  
 DYNAMIC SPEED DISPLAY SIGN (YOUR SPEED XX)- POLE MOUNTED (FACING EB TRAFFIC)  
 S5-1 (SCHOOL-SPEED LIMIT 25-WHEN FLASHING) SIGN PANEL (24"x48")-POLE MOUNTED  
 DISPLAY DISCONNECT CABINET-MOUNTED ON BACK OF RADAR SPEED SIGN  
 1/2" FLEXIBLE CONDUIT FROM CABINET TO BOTTOM OF RADAR SPEED SIGN  
 1/2" EL FROM CABINET TO PEDESTAL POLE  
 INTERNAL CABLES AND CONDUCTORS NEEDED TO OPERATE YELLOW FLASHERS AND SPEED SIGN  
 EXTEND INTO HH 3:  
 2" CONDUIT  
 3-1/C 6 (SPEED SIGN SERVICE)  
 1-1/C 6 (INS GR)

CROSSWALK FLASHER SYSTEM B POLE NOTES

- ⑥ F & I LIGHT FOUNDATION-DESIGN E (CAST IN-PLACE) TYPE D30-9 STREET LIGHT POLE AND DAVIT ARM WITH SIGNAL FITTINGS ON EACH SIDE OF POLE LUMINAIRE-LED  
 2-LED ENHANCED S1-1 SIGNS (36" PENTAGON)- FACING EB AND WB TRAFFIC (F-1, F-4)  
 2-W16-7P STATIC SIGNS (30" x 18")-MOUNT BELOW LED ENHANCED SIGNS (ARROW VARIES)  
 POLE MOUNTING BRACKETING AND HARDWARE (FOR MOUNTING LED SIGNS/STATIC SIGNS ON POLE)  
 APS PEDESTRIAN PUSH BUTTON AND R10-25 SIGN (MOUNTED ON CROSSWALK SIDE OF POLE)  
 R100-1 SIGN ("WARNING LIGHTS DO NOT REQUIRE TRAFFIC TO STOP") SIGN (MOUNT ABOVE R10-25 SIGN)  
 LED SIGN/APS SYSTEM NEMA CABINET ENCLOSURE (WITH PUSH BUTTON ACTIVATION EQUIPMENT AND ALL INTERNAL CABINET EQUIPMENT CAPABLE OF OPERATING PUSH BUTTONS, AND LED SIGNS) - POLE MOUNTED ON WEST SIDE OF POLE (BELOW W16-7P SIGN)  
 PROVIDE ALL INTERNAL CABLES AND CONDUCTORS NEEDED FROM FLASHER CABINET TO PUSH BUTTON AND LED ENHANCED SIGNS ON POLE 6  
 EXTEND INTO HH 5:  
 3" CONDUIT  
 2-3/C 14 (LED SIGNS)  
 1-PB CABLE  
 1-3/C 14 (LUM)  
 3-1/C 6 (FLASHER SERVICE)  
 1-1/C 6 (INS GR)

- ⑦ F & I LIGHT FOUNDATION-DESIGN E (CAST IN-PLACE) TYPE D30-9 STREET LIGHT POLE AND DAVIT ARM WITH SIGNAL FITTINGS ON EACH SIDE OF POLE LUMINAIRE-LED  
 2-LED ENHANCED S1-1 SIGNS (36" PENTAGON)- FACING EB AND WB TRAFFIC (F-2, F-3)  
 2-W16-7P STATIC SIGNS (30" x 18")-MOUNT BELOW LED ENHANCED SIGNS (ARROW VARIES)  
 POLE MOUNTING BRACKETING AND HARDWARE (FOR MOUNTING LED SIGNS/STATIC SIGNS ON POLE)  
 APS PEDESTRIAN PUSH BUTTON AND R10-25 SIGN (MOUNTED ON CROSSWALK SIDE OF POLE)  
 R100-1 SIGN ("WARNING LIGHTS DO NOT REQUIRE TRAFFIC TO STOP") SIGN (MOUNT ABOVE R10-25 SIGN)  
 EXTEND INTO HH 6:  
 3" CONDUIT  
 2-3/C 14 (LED SIGNS)  
 1-PB CABLE  
 1-3/C 14 (LUM)  
 1-1/C 6 (INS GR)

SAP 114-020-060  
 CITY PROJECT 22-6

SEH Project COONR 168367  
 Drawn By JMG  
 Designed By JMG  
 Checked By JMG

Rev.#  
 Revision Issue Description  
 Date

Rev.#  
 Revision Issue Description  
 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.  
 Name: John M. Gray, PE  
 Lic. No. 22457  
 Date: December 12, 2022

**NORTHDALE BOULEVARD (CSAH 11)  
 SRTS IMPROVEMENTS**  
 ANOKA COUNTY, MINNESOTA  
 CITY OF COON RAPIDS

**SPEED SIGNS "A-B" / CROSSWALK FLASHERS "A-B"**  
 NOTES AND WIRING DIAGRAMS  
 CSAH 11 (NORTHDALE BOULEVARD)