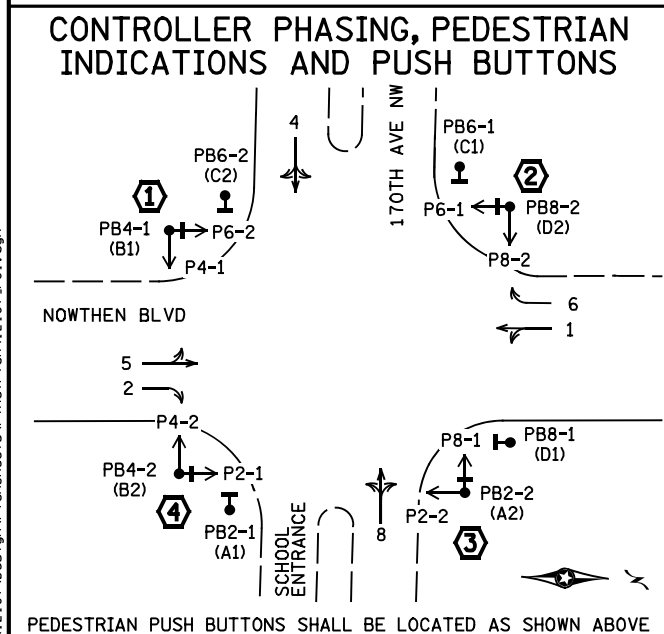
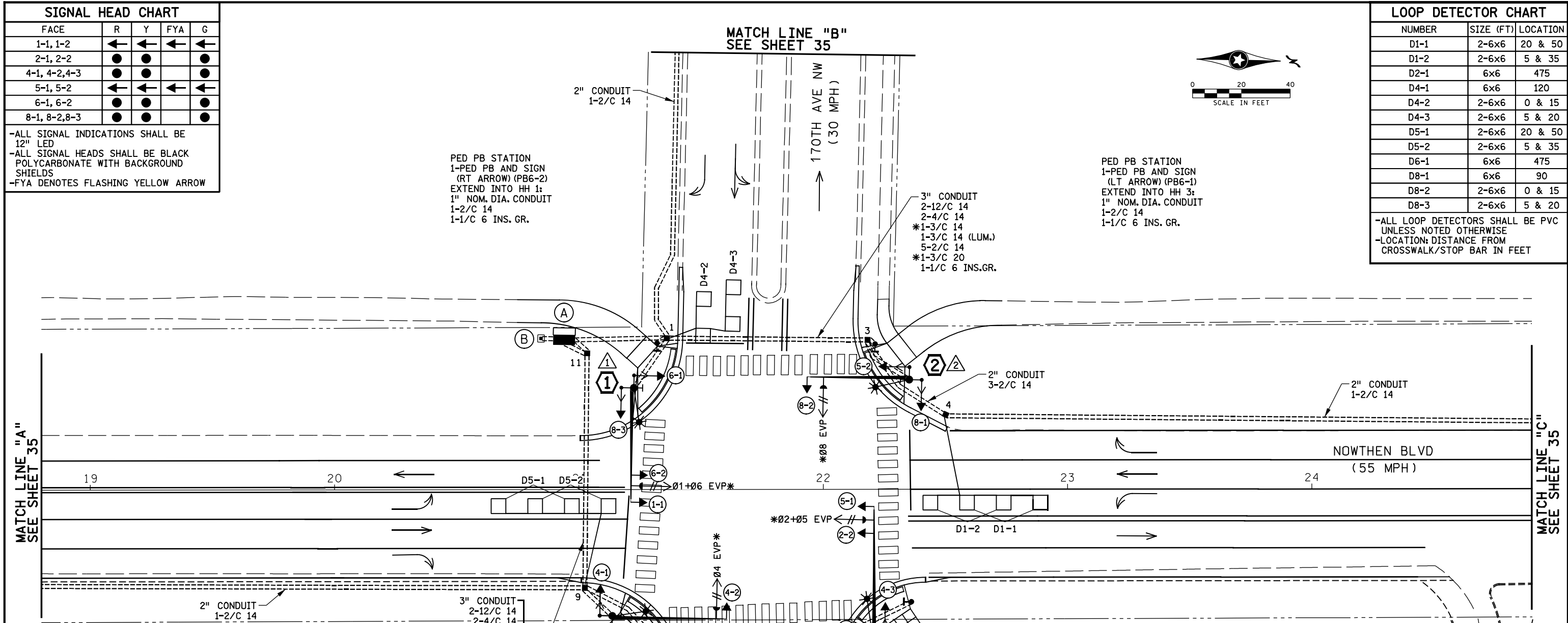


SIGNAL HEAD CHART				
FACE	R	Y	FYA	G
1-1, 1-2	←	←	←	←
2-1, 2-2	●	●		●
4-1, 4-2, 4-3	●	●		●
5-1, 5-2	←	←	←	←
6-1, 6-2	●	●		●
8-1, 8-2, 8-3	●	●		●

-ALL SIGNAL INDICATIONS SHALL BE 12" LED
 -ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS
 -FYA DENOTES FLASHING YELLOW ARROW

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1	2-6x6	20 & 50
D1-2	2-6x6	5 & 35
D2-1	6x6	475
D4-1	6x6	120
D4-2	2-6x6	0 & 15
D4-3	2-6x6	5 & 20
D5-1	2-6x6	20 & 50
D5-2	2-6x6	5 & 35
D6-1	6x6	475
D8-1	6x6	90
D8-2	2-6x6	0 & 15
D8-3	2-6x6	5 & 20

-ALL LOOP DETECTORS SHALL BE PVC UNLESS NOTED OTHERWISE
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING FLASHING YELLOW ARROWS BY TIME OF DAY.
- PHASES 2 AND 6 SHALL BE ON VEHICLE RECALL.

NOTES:

1. SEE SPECIAL PROVISIONS FOR COUNTY FURNISHED MATERIALS.
2. ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY COUNTY OFFICE PERSONNEL.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
4. FOR TYPE D SIGNS SEE DETAIL SHEET. ALL SIGNS REQUIRED ON SIGNAL SYSTEM ARE INCIDENTAL.
5. FOR PAVEMENT MARKINGS, SEE SIGNING AND PAVEMENT MARKING PLANS.
6. FOR CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK SEE DETAIL SHEET.
7. THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
8. USE PVC FOR ALL NEW CONDUIT.
9. CONDUIT SIZES ARE NOMINAL DIAMETER.
10. ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
11. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
12. SEE SHEET 34 FOR INTERSECTION NOTES.

INTERSECTION NOTES

① PA100 POLE FOUNDATION
 INSTALL—TYPE PA100-A-45-X25-9 (DAVIT AT 350 DEG)
 (SCHOOL DISTRICT FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 10'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEADS
 AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 1+6)
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 1-PED PB AND SIGN (LT ARROW) (PB4-1)
 1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 1:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.

② PA100 POLE FOUNDATION
 INSTALL—TYPE PA100-A-40-X25-9 (DAVIT AT 350 DEG)
 (SCHOOL DISTRICT FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C. D. PED HEADS
 AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 8)
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 1-PED PB AND SIGN (RT ARROW) (PB8-2)
 1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 3:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.

③ PA100 POLE FOUNDATION
 INSTALL—TYPE PA100-A-50-D30-9 (DAVIT AT 350 DEG)
 (SCHOOL DISTRICT FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 10'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C. D. PED HEADS
 AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASES 2+5)
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 1-PED PB AND SIGN (RT ARROW) (PB2-2)
 1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
 1-TYPE D SIGN (D-2) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 6:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.

④ PA100 POLE FOUNDATION
 INSTALL—TYPE PA100-A-45-D30-9 (DAVIT AT 350 DEG)
 (SCHOOL DISTRICT FURNISHED)
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG
 2-ANGLE MOUNT C.D. PED HEADS
 AT 90 AND 180 DEG
 * 1-ONE WAY EVP DETECTOR AND
 CONFIRMATORY LIGHT (PHASE 4)
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)
 1-PED PB AND SIGN (RT ARROW) (PB4-2)
 1-TYPE D SIGN (D-1) (SEE SIGN DETAILS)
 3" CONDUIT TO HH 9:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 14 (LUM)
 1-2/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.

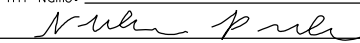
Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
 SERVICE CABINET (SSB)
 INSTALL—CONTROLLER AND CABINET (COUNTY FURNISHED)
 3" CONDUIT TO HH 1:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 3" CONDUIT TO HH 1:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 1-3/C 20
 1-1/C 6 INS. GR.
 3" CONDUIT TO HH 1:
 10-2/C 14
 3" CONDUIT TO HH 11:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.
 3" CONDUIT TO HH 11:
 2-12/C 14
 2-4/C 14
 * 1-3/C 14
 * 1-3/C 20
 1-1/C 6 INS. GR.

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
 2-3" AND 1-1" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)
 CONTROLLER CABINET TO SERVICE CABINET:
 2" CONDUIT
 3-1/C 6
 CONTROLLER CABINET TO SERVICE CABINET (COMMS):
 2" CONDUIT
 1-6PR 19
 SERVICE CABINET TO GROUND MOUNTED TRANSFORMER:
 2" CONDUIT
 3-1/C 2
 SERVICE CABINET TO HH 1:
 1 1/4" CONDUIT
 2-3/C 14 (LUM)
 SERVICE CABINET TO HH 11:
 1 1/4" CONDUIT
 2-3/C 14 (LUM)
 SERVICE CABINET TO EXTERNAL GR. RD.:
 1-1/C 6 INS. GR.
 (SEE EQUIPMENT PAD LAYOUT)

Ⓑ SOP-GROUND MOUNTED
 TRANSFORMER
 2" CONDUIT TO SERVICE CABINET:
 3-1/C 2

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NO	DATE	BY	CKD	APPR	REVISION

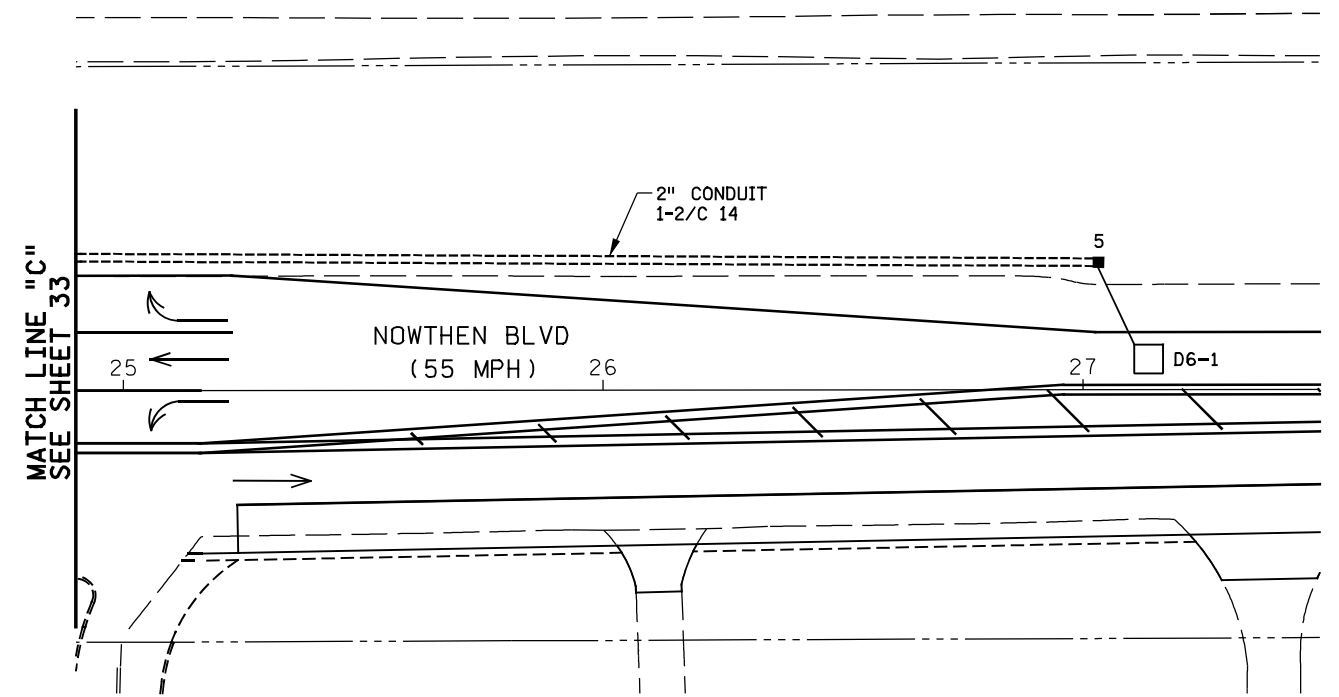
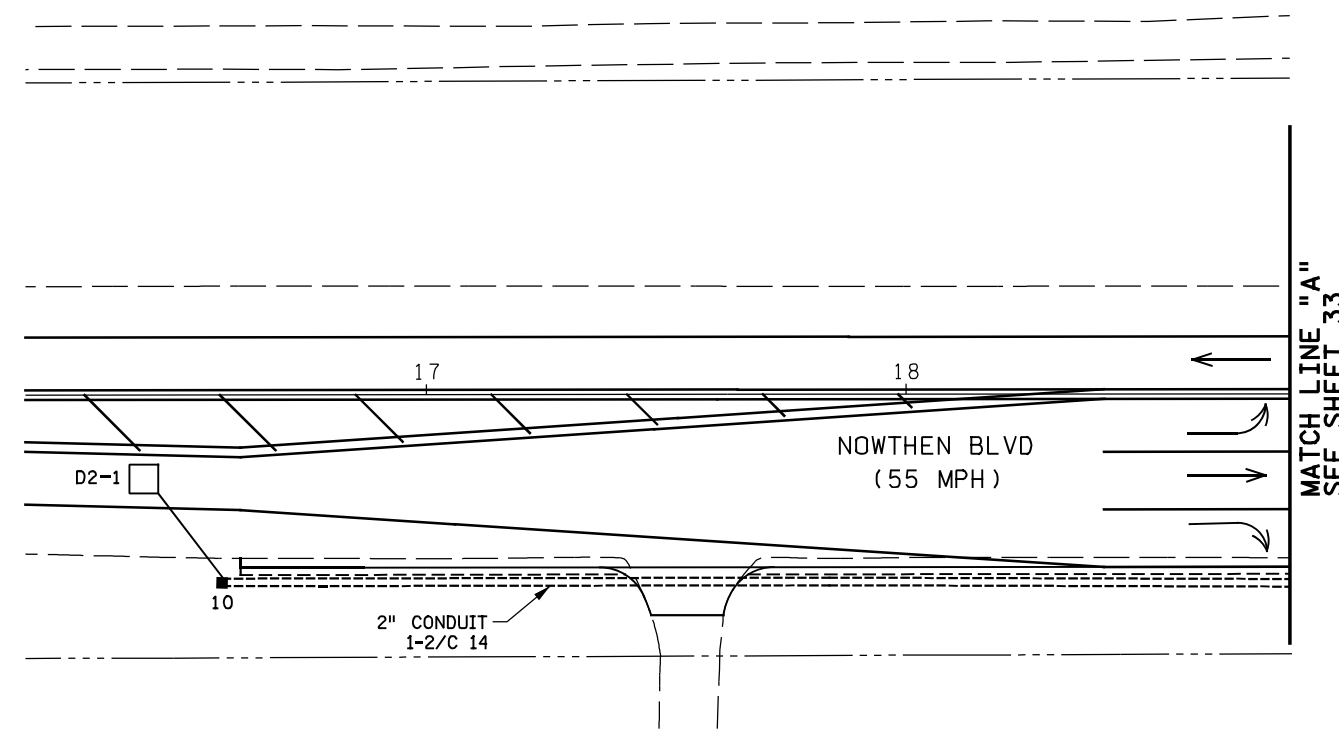
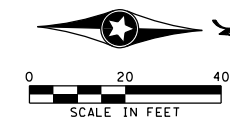
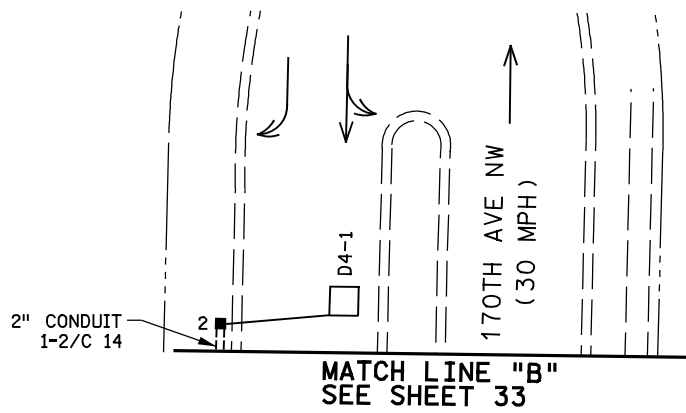
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: NATHAN A. POOLE

 Date: 05-20-19 License #: 56071

STATE AID PROJECT NO. X
 STATE PROJECT NO. X
 COUNTY PROJECT NO. X
 CITY PROJECT NO. X
 DRAWN BY M. BRESSLER
 DESIGNED BY M. BRESSLER
 CHECKED BY N. POOLE
 COMM. NO. 0012107



ANOKA-HENNEPIN SCHOOL DISTRICT
 TRAFFIC SIGNAL PLANS
NOWTHEN BOULEVARD IMPROVEMENT
 INTERSECTION NOTES

SHEET
34
 OF
48



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Nathan A. Poole

Date: 05-20-19 License #: 56071

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ANOKA-HENNEPIN SCHOOL DISTRICT

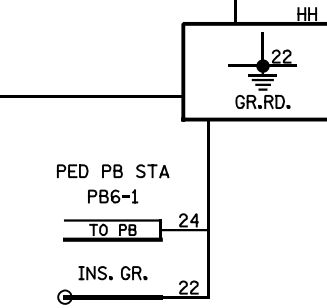
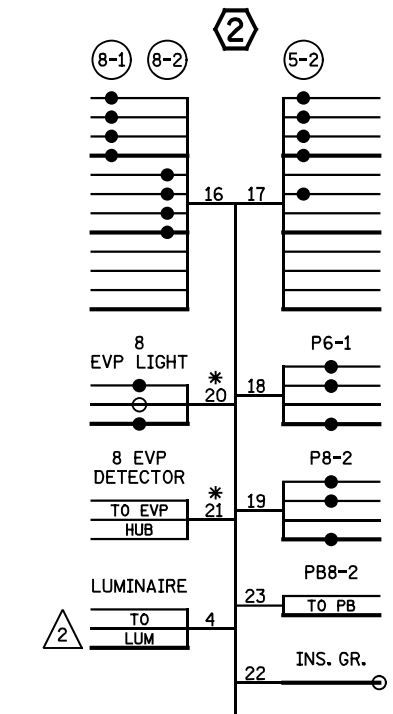
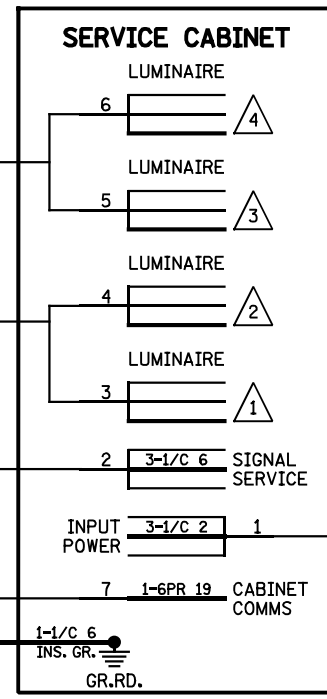
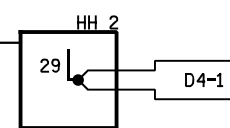
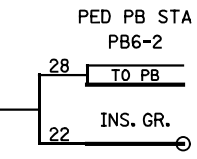
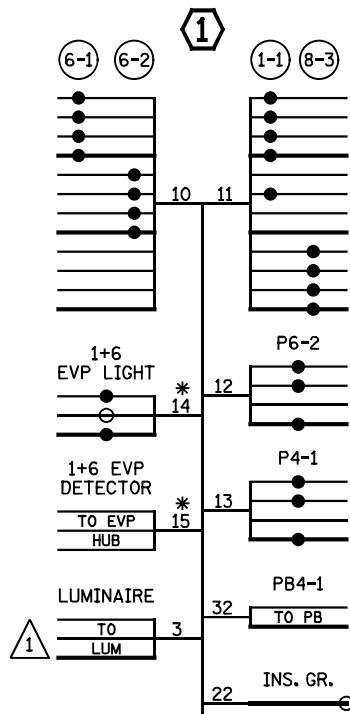
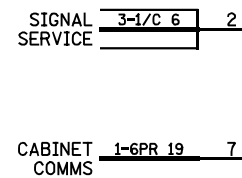
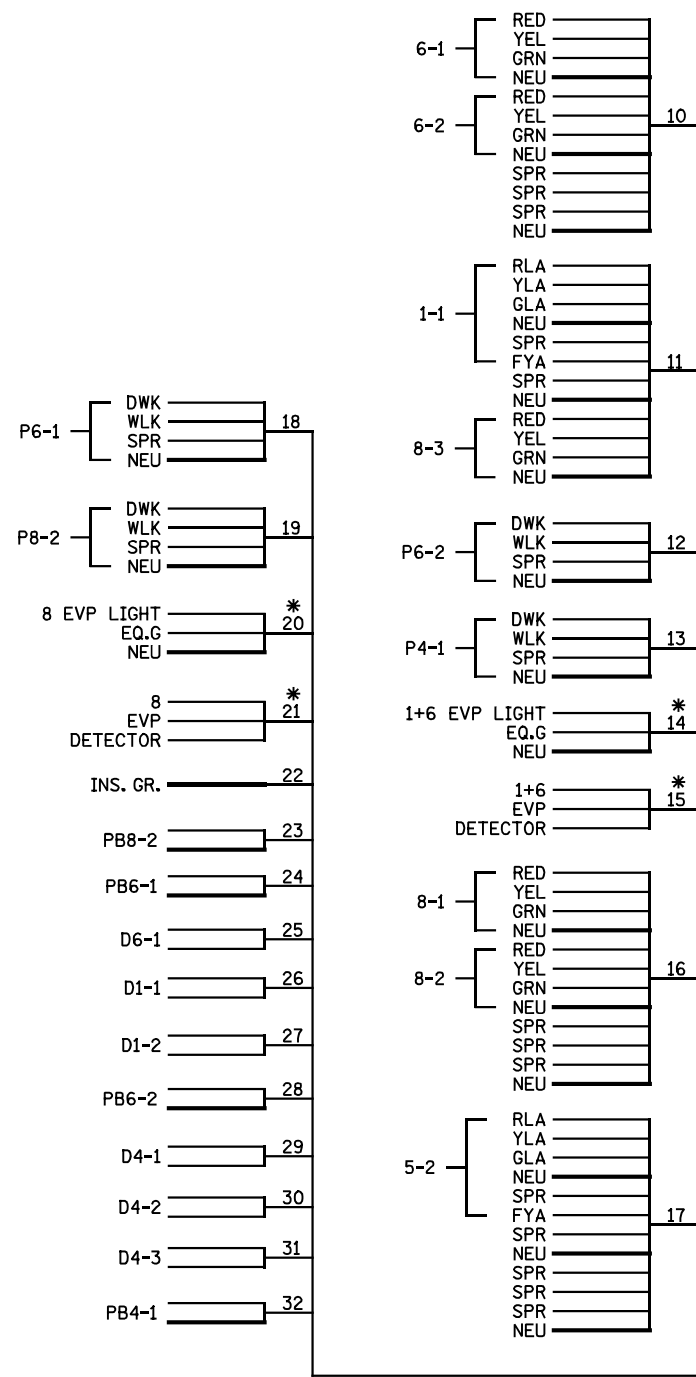
TRAFFIC SIGNAL PLANS

NOWTHEN BOULEVARD IMPROVEMENT

MATCH LINE LAYOUT

SHEET
35
OF
48

CONTROLLER CABINET



- NOTES:**
1. SIGNAL SYSTEM INCLUDES BATTERY BACKUP SERVICE CABINET (WITH BATTERIES & UPS).
 2. FOR CONDUCTOR COLOR CODE, SEE TRAFFIC SIGNAL POLE WIRING DETAIL.
 3. ITEMS DENOTED WITH AN * ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.

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Nathan A. Poole

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DRAWN BY M. BRESSLER

DESIGNED BY M. BRESSLER

CHECKED BY N. POOLE

COMM. NO. 0012107



ANOKA-HENNEPIN SCHOOL DISTRICT

TRAFFIC SIGNAL PLANS

NOWTHEN BOULEVARD IMPROVEMENT

FIELD WIRING DIAGRAM

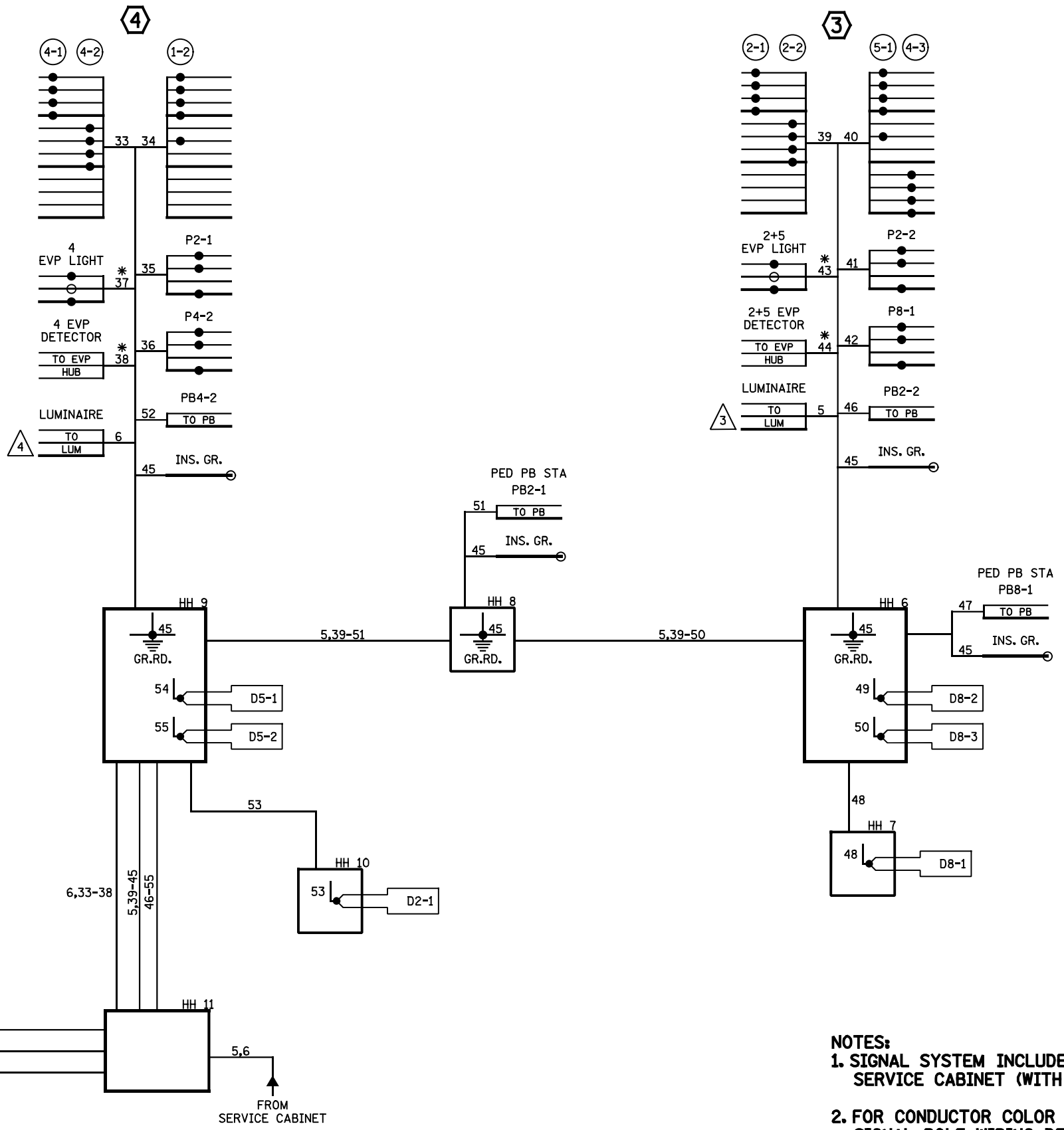
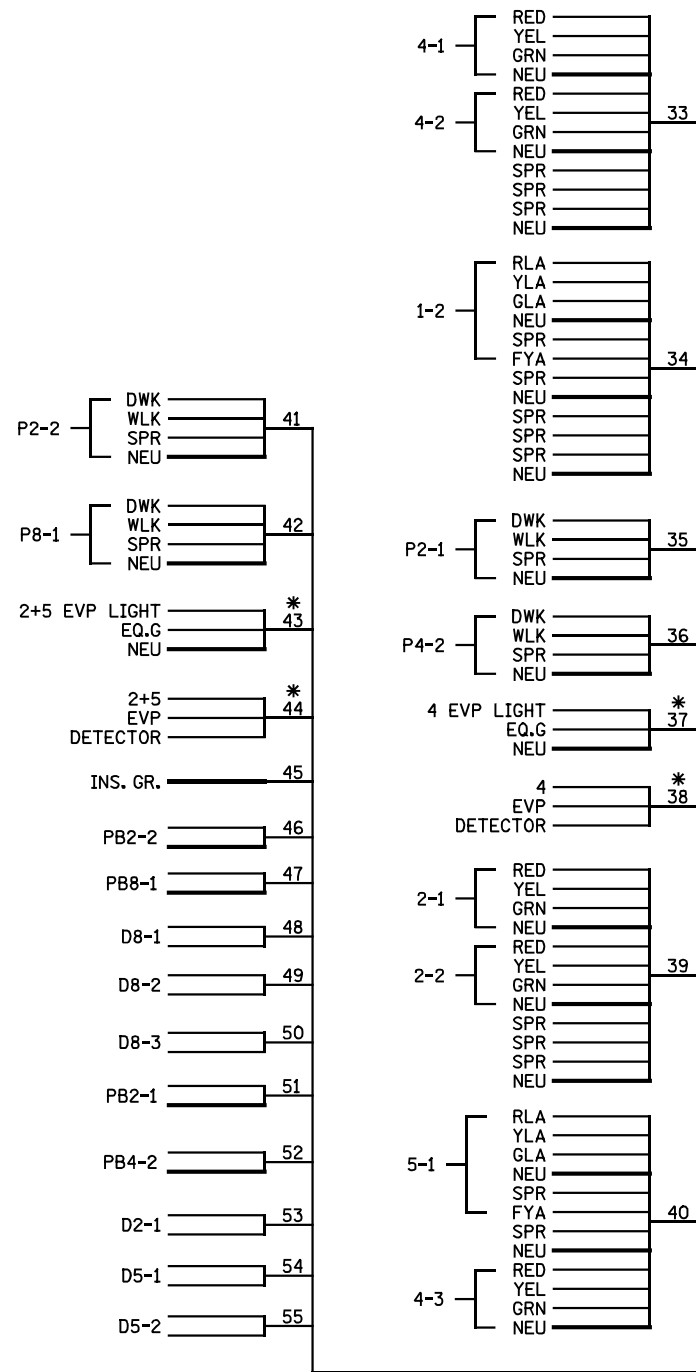
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OF

48

CONTROLLER CABINET



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ANOKA-HENNEPIN SCHOOL DISTRICT
 TRAFFIC SIGNAL PLANS
 NOWTHEN BOULEVARD IMPROVEMENT
 FIELD WIRING DIAGRAM

SHEET 37 OF 48