

PLOTTED/REVISED: 31-JUL-2020

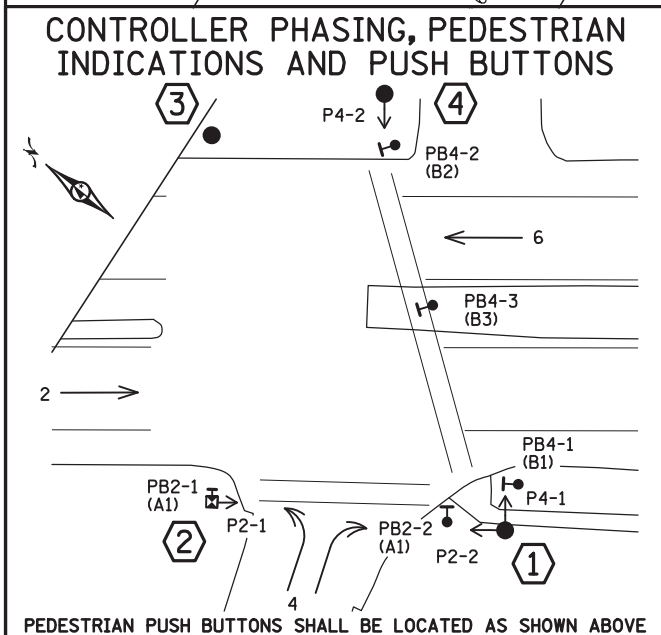
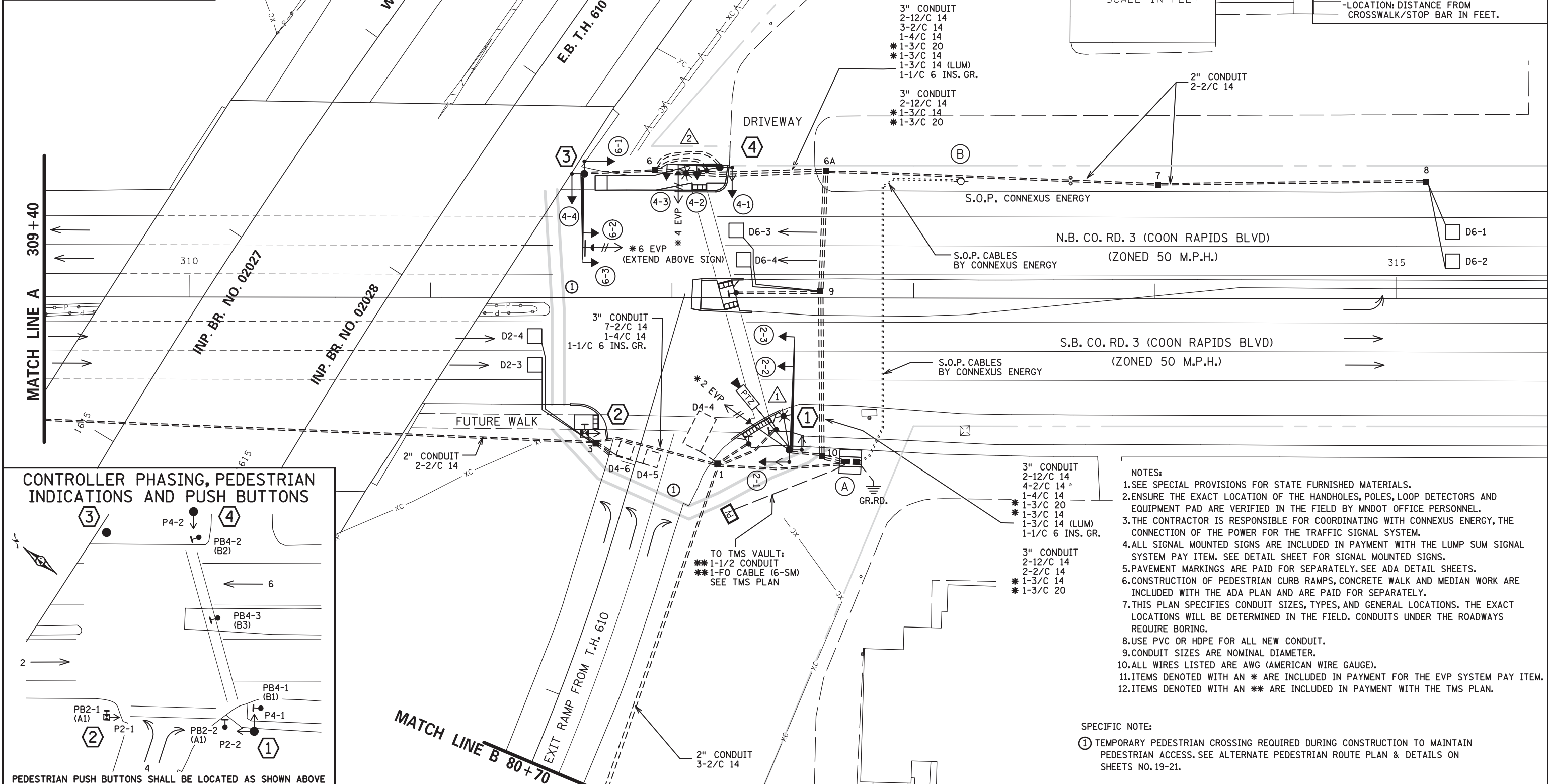
DISTRICT #: Metro  
IPLOT NAME: 1173586sg1030  
PATH & FILENAME: Projects\DM\_R05\610\0000\Traffic\Signals\21729\_Coon Rapids Blvd\PENDMG\1173586sg1.dgn

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

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

LOOP DETECTOR CHART			
STATUS	NUMBER	SIZE (FT)	LOCATION
F&I	D2-1, D2-2	6x6	300
F&I	D2-3, D2-4	6x6	4
INP.	D4-4	8x15	5
INP.	D4-5, D4-6	6x6	5
INP.	D4-1, D4-2, D4-3	6x6	300
F&I	D6-1, D6-2	6x6	300
F&I	D6-3, D6-4	6x6	4

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

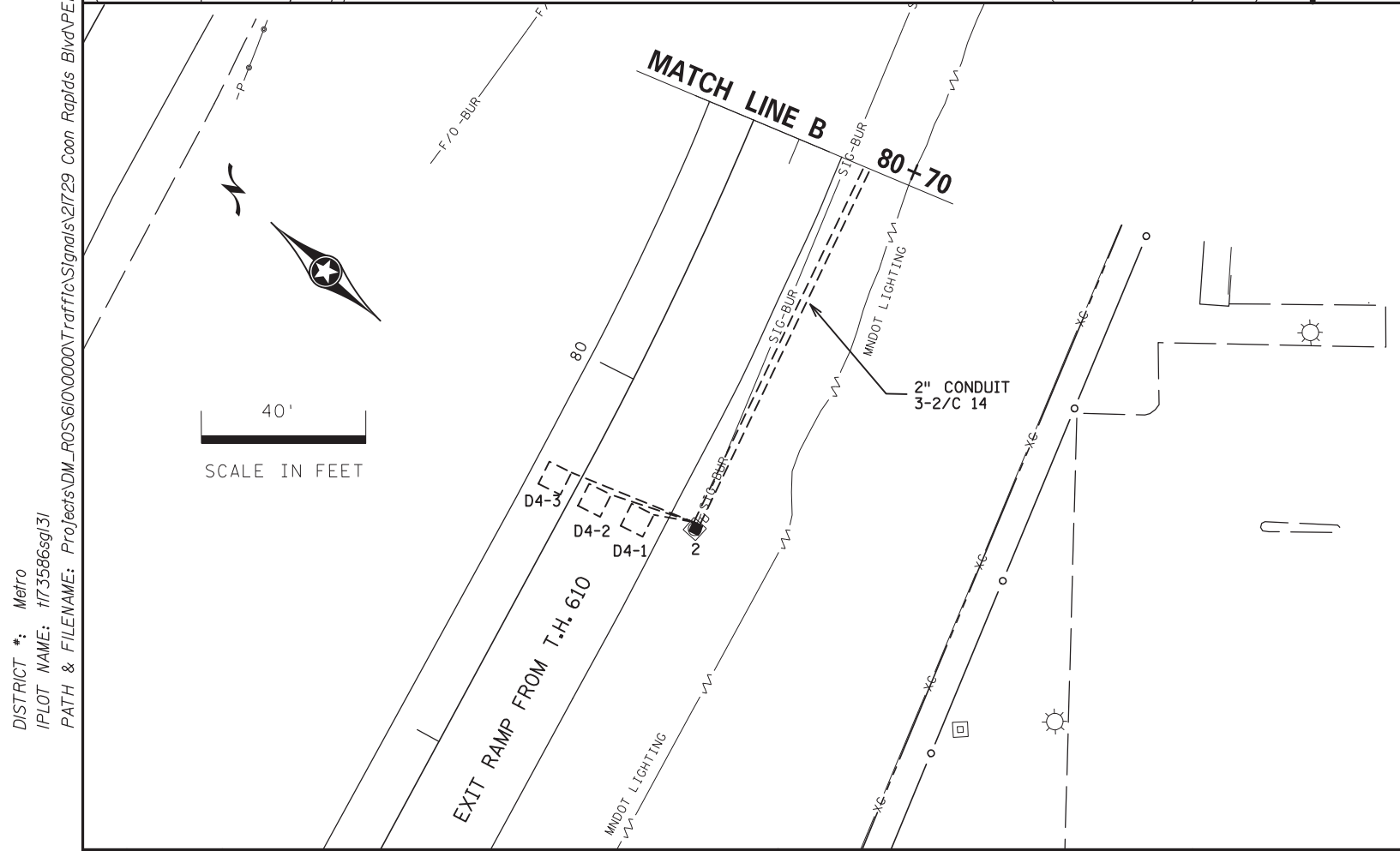
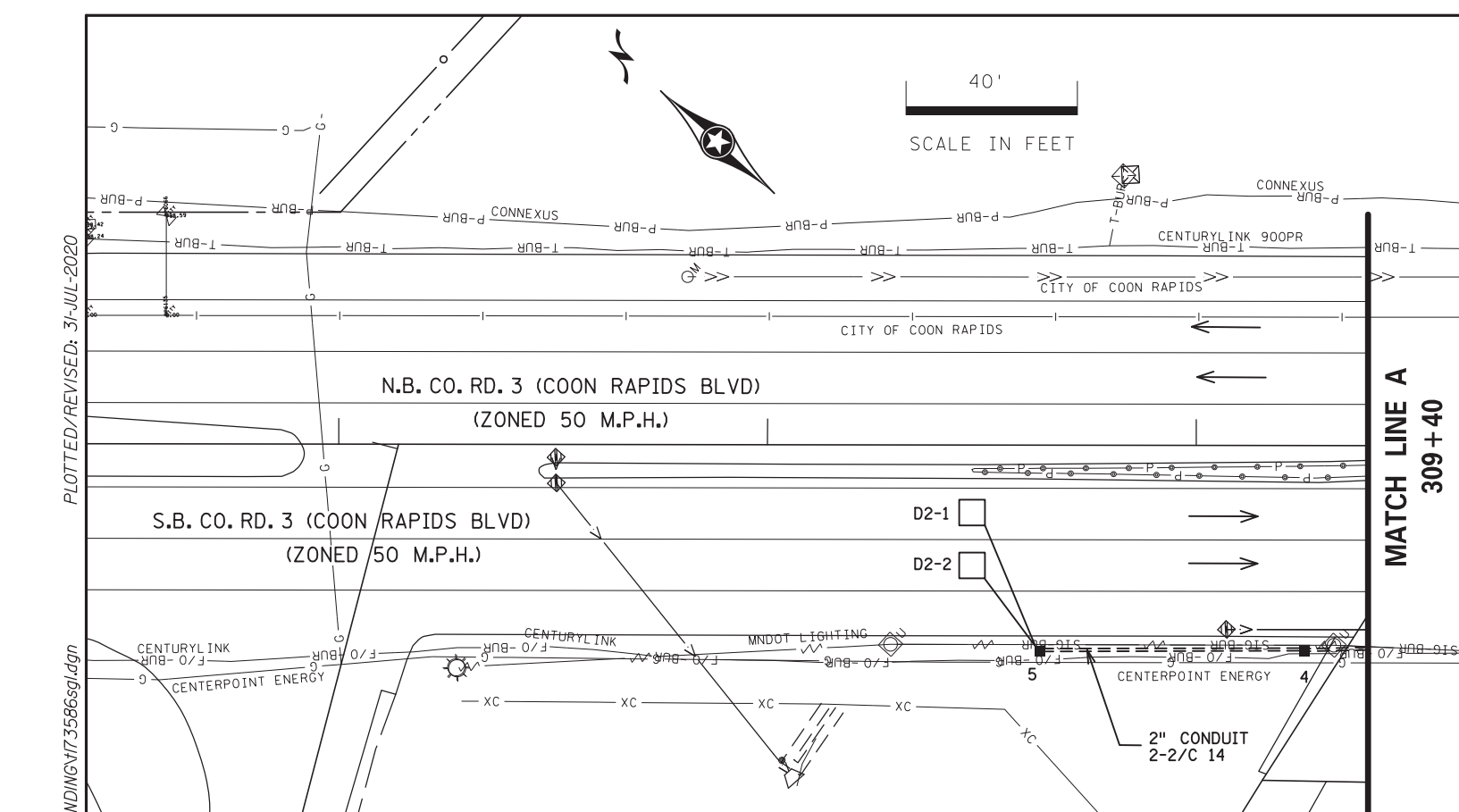


- NOTES:
- SEE SPECIAL PROVISIONS FOR STATE FURNISHED MATERIALS.
  - ENSURE THE EXACT LOCATION OF THE HANDHOLES, POLES, LOOP DETECTORS AND EQUIPMENT PAD ARE VERIFIED IN THE FIELD BY MNDOT OFFICE PERSONNEL.
  - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH CONNEXUS ENERGY, THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM.
  - ALL SIGNAL MOUNTED SIGNS ARE INCLUDED IN PAYMENT WITH THE LUMP SUM SIGNAL SYSTEM PAY ITEM. SEE DETAIL SHEET FOR SIGNAL MOUNTED SIGNS.
  - PAVEMENT MARKINGS ARE PAID FOR SEPARATELY. SEE ADA DETAIL SHEETS.
  - CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK ARE INCLUDED WITH THE ADA PLAN AND ARE PAID FOR SEPARATELY.
  - THIS PLAN SPECIFIES CONDUIT SIZES, TYPES, AND GENERAL LOCATIONS. THE EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD. CONDUITS UNDER THE ROADWAYS REQUIRE BORING.
  - USE PVC OR HDPE FOR ALL NEW CONDUIT.
  - CONDUIT SIZES ARE NOMINAL DIAMETER.
  - ALL WIRES LISTED ARE AWG (AMERICAN WIRE GAUGE).
  - ITEMS DENOTED WITH AN \* ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.
  - ITEMS DENOTED WITH AN \*\* ARE INCLUDED IN PAYMENT WITH THE TMS PLAN.

SPECIFIC NOTE:  
 ① TEMPORARY PEDESTRIAN CROSSING REQUIRED DURING CONSTRUCTION TO MAINTAIN PEDESTRIAN ACCESS. SEE ALTERNATE PEDESTRIAN ROUTE PLAN & DETAILS ON SHEETS NO. 19-21.

BY	DATE	REVISIONS	SYSTEM ID: 4056614	T.E. 24768	S.A.P. NO. 114-116-011	DRAWN BY:RV	CKD BY:CDB	DATE:7/12/20
			METER ADDRESS:		CERTIFIED BY: <i>Michael P. Gubinsky</i>	LIC. NO. 19863	DATE: 7/31/20	
			OLD SYSTEM ID: 21729, 1735862		STATE PROJ.NO. 0217-27 (T.H.610)		SHEET NO. 30 OF 37 SHEETS	

**INTERSECTION LAYOUT  
 T.H. 610 AT CO. RD. 3  
 (COON RAPIDS BLVD) SOUTH RAMP  
 IN COON RAPIDS, ANOKA COUNTY**



③

PA100 POLE FOUNDATION  
 TYPE PA100-A-35  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'(6-3)  
 1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 11'(6-2)  
 2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG (4-4,6-1)  
 \*1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)  
 (EXTEND EVP ABOVE SIGN)  
 1-TYPE D SIGN (SEE SIGN DETAILS)  
 1-SIGN R9-3 (NO PEDS) ON POLE FACING POLE 2  
 3" CONDUIT TO HH 6:  
 2-12/C 14  
 1-3/C 14 (EVP LT)  
 1-3/C 20 (EVP)  
 1-1/C 6 INS. GR.

④

PA85 POLE FOUNDATION  
 TYPE PA85-A-20-D40-9 (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'(4-3)  
 1-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11'(4-2)  
 1-ANGLE MOUNT SIGNAL AT 180 DEG (4-1)  
 1-ANGLE MOUNT C.D. PED HEADS AT 180 DEG (P4-2)  
 \*1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 4)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 1-SIGN R6-1L (ONE WAY LEFT) MOUNTED ON POLE  
 3" CONDUIT TO HH 6:  
 3-12/C 14  
 1-4/C 14  
 1-3/C 14 (EVP LT)  
 1-3/C 14 (LUM)  
 1-3/C 20 (EVP)  
 1-1/C 6 INS. GR.

②

PEDESTAL FOUNDATION  
 TYPE 4A - 1-C.D. PED HEAD (P2-1)  
 8' PEDESTAL POLE PLUS BASE  
 1-APS PB AND SIGN (LT ARROW) (PB2-1)  
 AND APS PB MOUNTING SPACERS  
 3" CONDUIT TO HH 3:  
 1-4/C 14  
 1-2/C 14  
 2-1/C 6 INS. GR.

PED PB STATION  
 1- APS PB AND SIGN  
 (RT ARROW) (PB2-2)  
 EXTEND INTO HH 1:  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C 6 INS. GR.

PED PB STATION  
 1- APS PB AND SIGN  
 (LT AND RT ARROW) (PB4-3)  
 EXTEND INTO HH 9:  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C 6 INS. GR.

PED PB STATION  
 1- APS PB AND SIGN  
 (LT ARROW) (PB4-1)  
 EXTEND INTO HH 1:  
 1" NOM. DIA. CONDUIT  
 1-2/C 14  
 1-1/C 6 INS. GR.

Ⓐ

EQUIPMENT PAD (SEE DETAIL SHEET)  
 SERVICE CABINET (SSB) NO BATTERY BACKUP SYSTEM OR BATTERIES  
 CONTROLLER AND CABINET (STATE FURNISHED)

3" CONDUIT TO HH 1:  
 1-4/C 14  
 12-2/C 14  
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 10:  
 2-12/C 14  
 1-4/C 14  
 \*1-3/C 14  
 1-3/C 14 (LUM)  
 \*1-3/C 20  
 6-2/C 14  
 1-1/C 6 INS. GR.

3" CONDUIT TO HH 10:  
 4-12/C 14  
 \*2-3/C 14  
 1-3/C 14 (LUM)  
 \*2-3/C 20  
 1-COMM CABLE (CAT 5E)

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD  
 2-2" AND 1-3" CONDUIT STUBBED OUT (CAPPED BOTH ENDS)

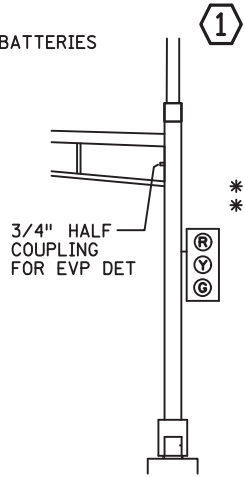
1-1/2" CONDUIT STUBBED OUT:  
 \*\*1-1/2" CONDUIT TO TMS VAULT: (SEE TMS PLAN)  
 \*\*1-FO PIGTAIL (6-SM)

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 POLE MOUNTED TRANSFORMER:  
 2" CONDUIT STUB OUT:  
 CABLES FROM TRANSFORMER AND HOOKUP BY CONNEXUS ENERGY

SERVICE CABINET TO EXTERNAL GR. RD.:  
 1" CONDUIT  
 1-1/C 6 INS. GR.



①

PA100 POLE FOUNDATION  
 TYPE PA100-A-45-X6-350/CAM (DAVIT AT 350 DEG)  
 1-ANGLE MOUNT SIGNAL OVERHEAD AT 0'(2-3)  
 1-STRAIGHT MOUNT SIGNALS OVERHEAD AT 11'(2-2)  
 1-ANGLE MOUNT SIGNAL AT 180 DEG (2-1)  
 2-ANGLE MOUNT C.D. PED HEADS AT 90 AND 180 DEG (P2-2, P4-1)  
 \*1-EVP CONFIRMATORY LIGHT (PHASE 2) AT 6' FROM END OF MAST ARM  
 \*1-ONE WAY EVP DETECTOR (PHASE 2) ON POLE AT 0 DEG  
 3/4" HALF COUPLING - (CENTERED BETWEEN UPPER AND LOWER MAST ARM BRACKET)  
 LUMINAIRE-LED (FOR 40' MOUNTING HEIGHT)  
 1-PTZ CAMERA WITH MOUNT (STATE FURNISHED)  
 3" CONDUIT TO HH 10:  
 2-12/C 14  
 1-4/C 14  
 1-3/C 14 (EVP LT)  
 1-3/C 14 (LUM)  
 1-3/C 20 (EVP)  
 1-COM CABLE (CAT 5E) (FOR PTZ CAMERA)  
 1-1/C 6 INS. GR.

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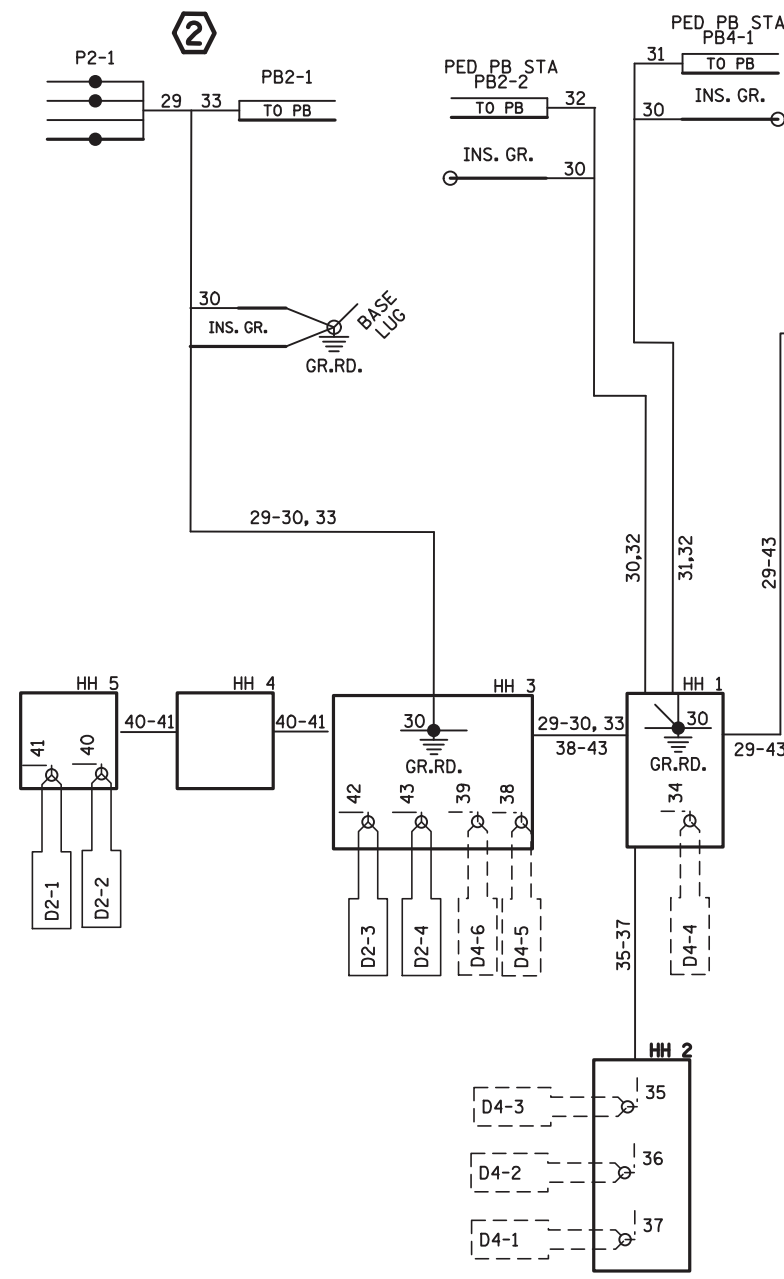
SOP-POLE MOUNTED 120/240V TRANSFORMER (CONNEXUS ENERGY)  
 POWER INTO SERVICE CABINET  
 BY CONNEXUS ENERGY:  
 3-1/C 2

NOTE: THE EXISTING SIGNAL CABINET IS ON A SHARED PAD WITH A LIGHTING CABINET. THE LIGHTING CABINET REQUIRES 240/480V POWER. THE EXISTING S.O.P. PROVIDES 240/480V POWER TO THE SHARED PAD. A RACK MOUNTED STEP DOWN TRANSFORMER PROVIDES 120/240V POWER FOR THE EXISTING SIGNAL CABINET. THE LIGHTING CABINET WILL REMAIN AS IS AND THE EXISTING SIGNAL CABINET WILL BE REMOVED. THE PROPOSED SIGNAL CABINET WILL BE IN A NEW LOCATION AND CONNEXUS ENERGY WILL PROVIDE A NEW 120/240V POLE MOUNTED TRANSFORMER AND POWER TO THE NEW SIGNAL SERVICE CABINET.

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 PLOTTED/REVISED: 31-JUL-2020

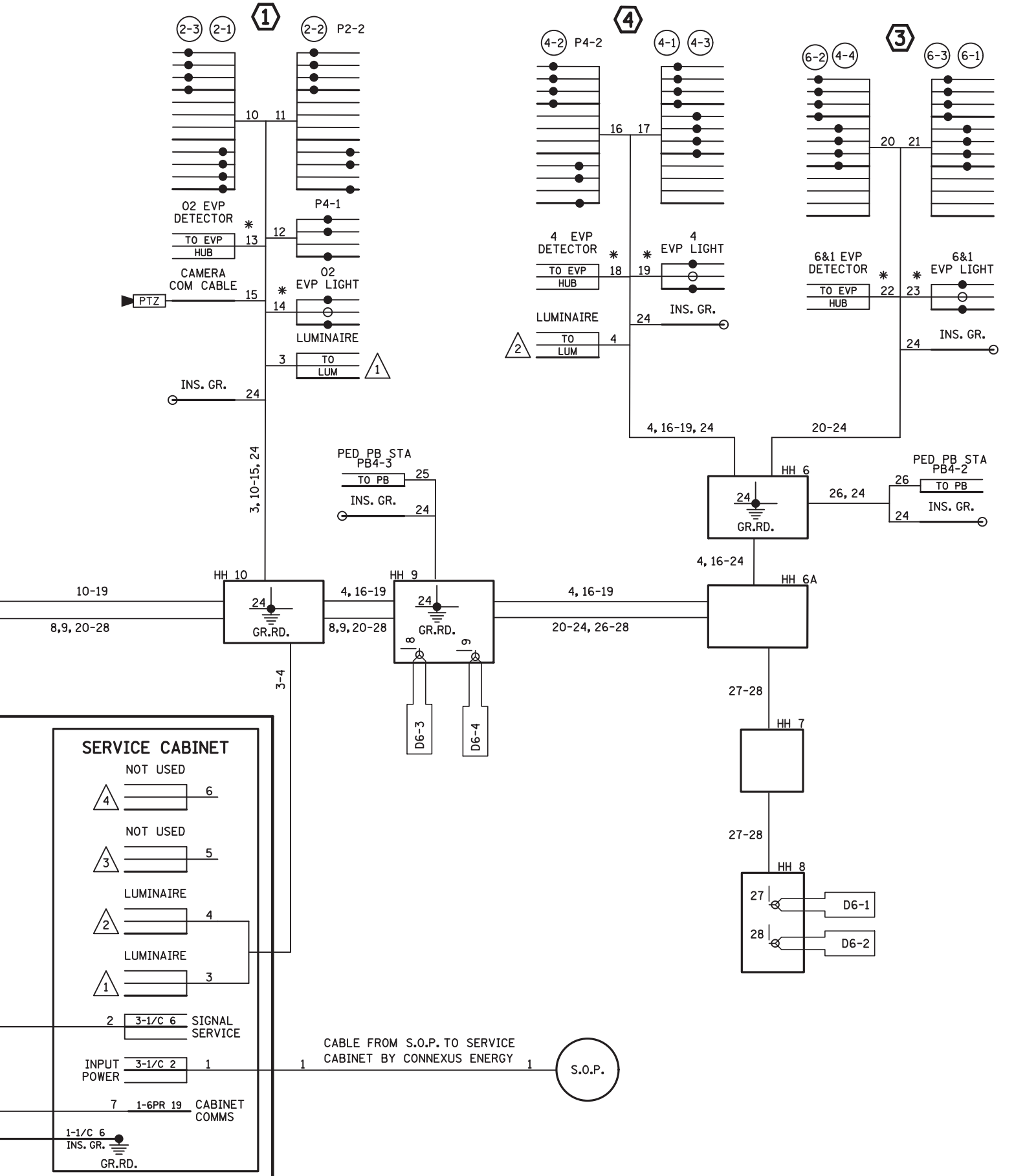
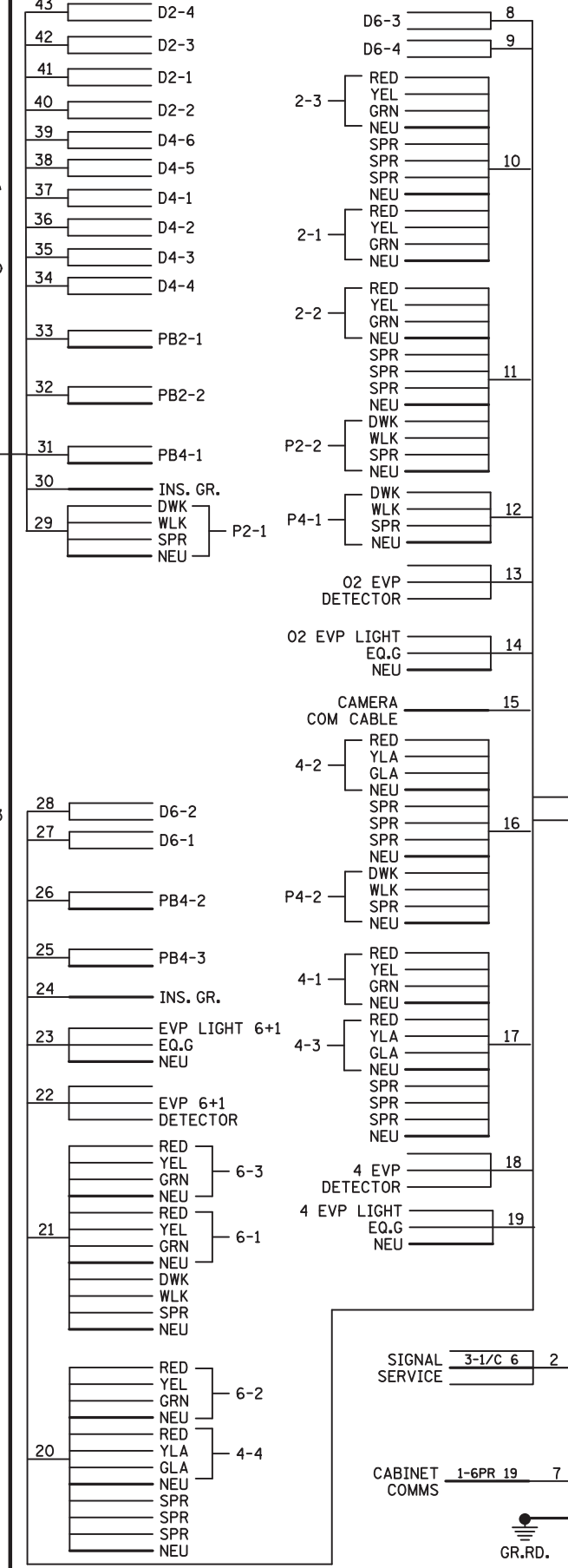
BY	DATE	REVISIONS	SYSTEM ID: 4056614	T.E. 24768	MATCH LINE LAYOUT / INTERSECTION NOTES	S.A.P. NO. 114-116-011	DRAWN BY:RV	CKD BY:CDB	DATE:7/12/20
			METER ADDRESS:		T.H. 610 AT CO. RD. 3	CERTIFIED BY: <i>Michael P. Lubinsky</i>			
			OLD SYSTEM ID: 21729, 1735862		(COON RAPIDS BLVD) SOUTH RAMP	LIC. NO. 19863			DATE: 7/31/20
					IN COON RAPIDS, ANOKA COUNTY	STATE PROJ. NO. 0217-27 (T.H.610)			SHEET NO. 31 OF 37 SHEETS

DISTRICT \*: Metro  
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 PLOTTED/REVISED: 14-JUL-2020



- NOTES:**
1. SIGNAL SYSTEM INCLUDES BATTERY- BACKUP SERVICE CABINET WITHOUT BATTERIES OR BACKUP EQUIPMENT.
  2. FOR CONDUCTOR COLOR CODE SEE TRAFFIC SIGNAL POLE WIRING CONNECTOR DETAIL.
  3. ITEMS DENOTED WITH AN \* ARE INCLUDED IN PAYMENT FOR THE EVP SYSTEM PAY ITEM.

**CONTROLLER CABINET**



BY	DATE	REVISIONS

SYSTEM ID: 4056614 T.E. 24768  
 METER ADDRESS:  
 OLD SYSTEM ID: 21729,1735862

**WIRING DIAGRAM**  
**T.H. 610 AT CO. RD. 3**  
**(COON RAPIDS BLVD) SOUTH RAMP**  
**IN COON RAPIDS, ANOKA COUNTY**

S.A.P. NO. 114-116-011  
 DRAWN BY:RV CKD BY:CDB DATE:7/12/20  
 CERTIFIED BY: *Michael P. Subrsky* LIC. NO. 19862 DATE: 7/16/20  
 STATE PROJ.NO. 0217-27 (T.H.610) SHEET NO. 32 OF 37 SHEETS