

DATE: 12/2/2024 TIME: 11:44:35 AM
FILENAME: pw:\tkda-pw-bentley.com\fkda-pw-ON Documents\Projects\A-AnokaCounty\20837000\04_Production\01_CAD\Highway\Sheets\cd002602015_sgl.dgn

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

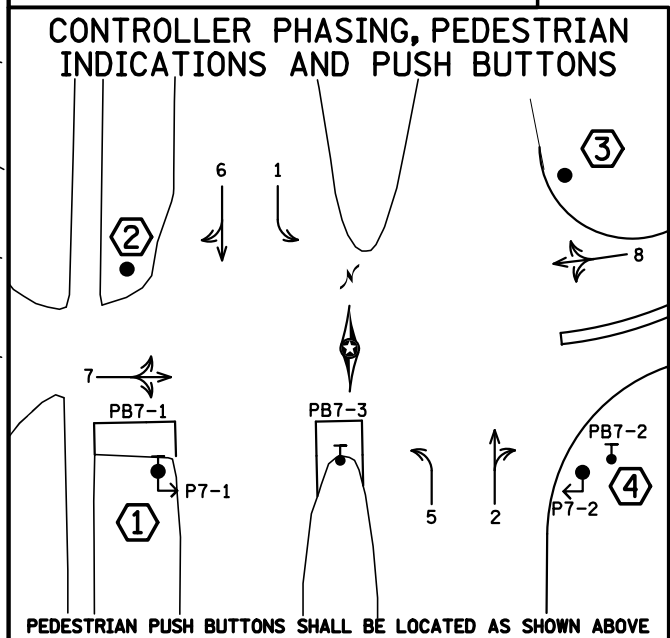
-ALL SIGNAL INDICATIONS SHALL BE 12" LED
-ALL SIGNAL HEADS SHALL BE BLACK POLYCARBONATE WITH BACKGROUND SHIELDS
-FYA DENOTES FLASHING YELLOW ARROW

LOOP DETECTOR CHART		
NUMBER	SIZE (FT)	LOCATION
D1-1, D5-1	3-6X6	20, 35, 50
D1-2, D5-2	6X6	5
D2-1, D2-2	6X6	625
D2-3, D2-4	6X6	20
D2-5	6X12	5
D2-6, D2-7	6X6	5
D6-1, D6-2	6X6	625
D6-3, D6-4	6X6	20
D6-5, D6-6, D6-7	6X6	5
D7-1	2-6X6	20, 35
D7-2	6X6	5
D8-1, D8-2	6X6	200
D8-3	2-6X6	5
D8-3	6X6	20
D8-4	6X6	20, 35, 50
D8-5	6X6	5

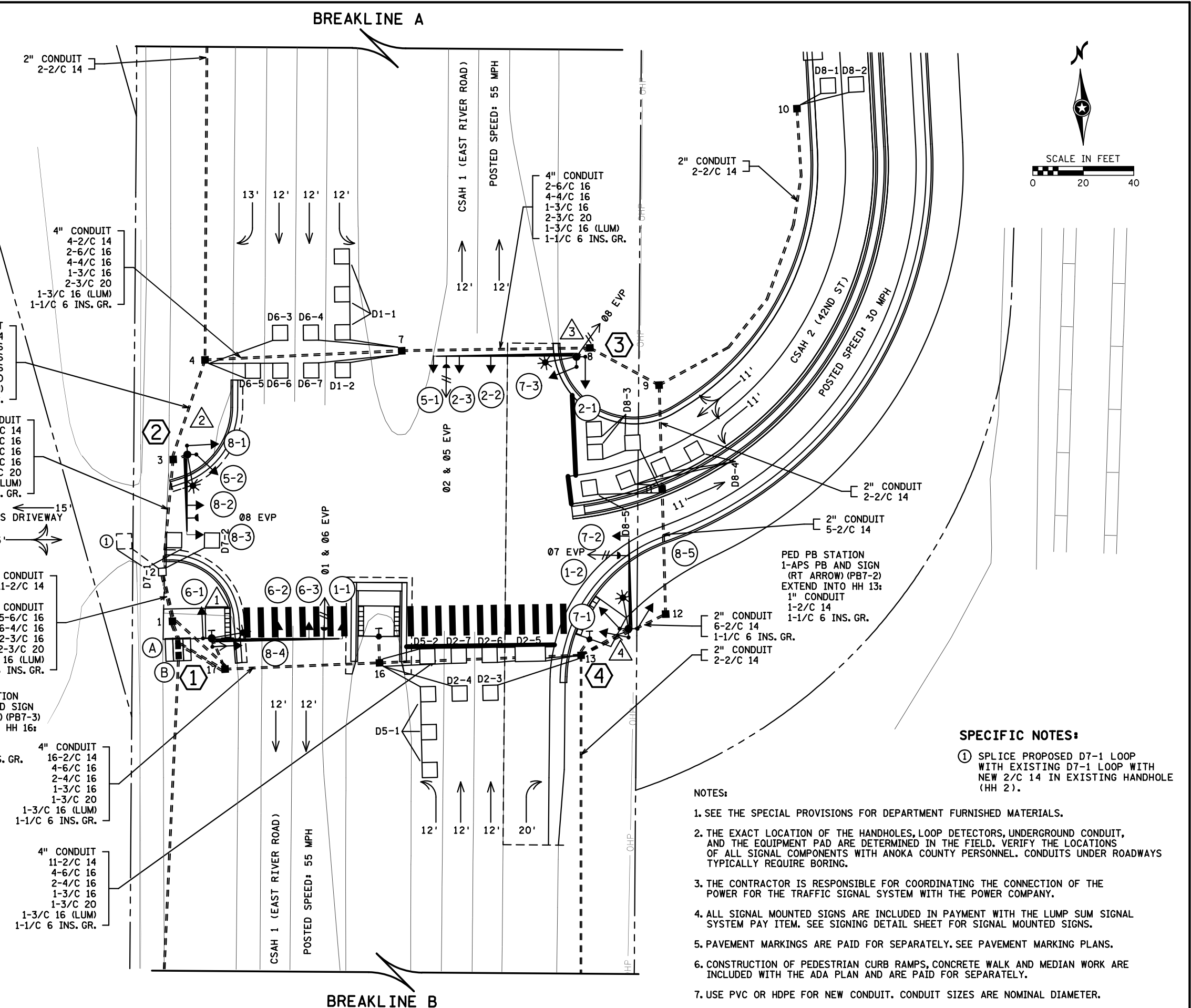
-ALL LOOP DETECTORS SHALL BE NMC UNLESS NOTED OTHERWISE
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

SIGNAL SYSTEM OPERATION

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



NO.	DATE	BY	DESCRIPTION OF REVISIONS



SPECIFIC NOTES:

① SPLICE PROPOSED D7-1 LOOP WITH EXISTING D7-1 LOOP WITH NEW 2/C 14 IN EXISTING HANDHOLE (HH 2).

- NOTES:**
1. SEE THE SPECIAL PROVISIONS FOR DEPARTMENT FURNISHED MATERIALS.
 2. THE EXACT LOCATION OF THE HANDHOLES, LOOP DETECTORS, UNDERGROUND CONDUIT, AND THE EQUIPMENT PAD ARE DETERMINED IN THE FIELD. VERIFY THE LOCATIONS OF ALL SIGNAL COMPONENTS WITH ANOKA COUNTY PERSONNEL. CONDUITS UNDER ROADWAYS TYPICALLY REQUIRE BORING.
 3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF THE POWER FOR THE TRAFFIC SIGNAL SYSTEM WITH THE POWER COMPANY.
 4. ALL SIGNAL MOUNTED SIGNS ARE INCLUDED IN PAYMENT WITH THE LUMP SUM SIGNAL SYSTEM PAY ITEM. SEE SIGNING DETAIL SHEET FOR SIGNAL MOUNTED SIGNS.
 5. PAVEMENT MARKINGS ARE PAID FOR SEPARATELY. SEE PAVEMENT MARKING PLANS.
 6. CONSTRUCTION OF PEDESTRIAN CURB RAMPS, CONCRETE WALK AND MEDIAN WORK ARE INCLUDED WITH THE ADA PLAN AND ARE PAID FOR SEPARATELY.
 7. USE PVC OR HDPE FOR NEW CONDUIT. CONDUIT SIZES ARE NOMINAL DIAMETER.

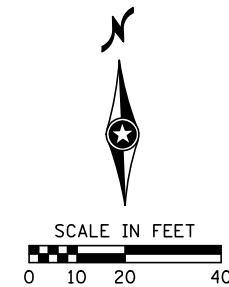
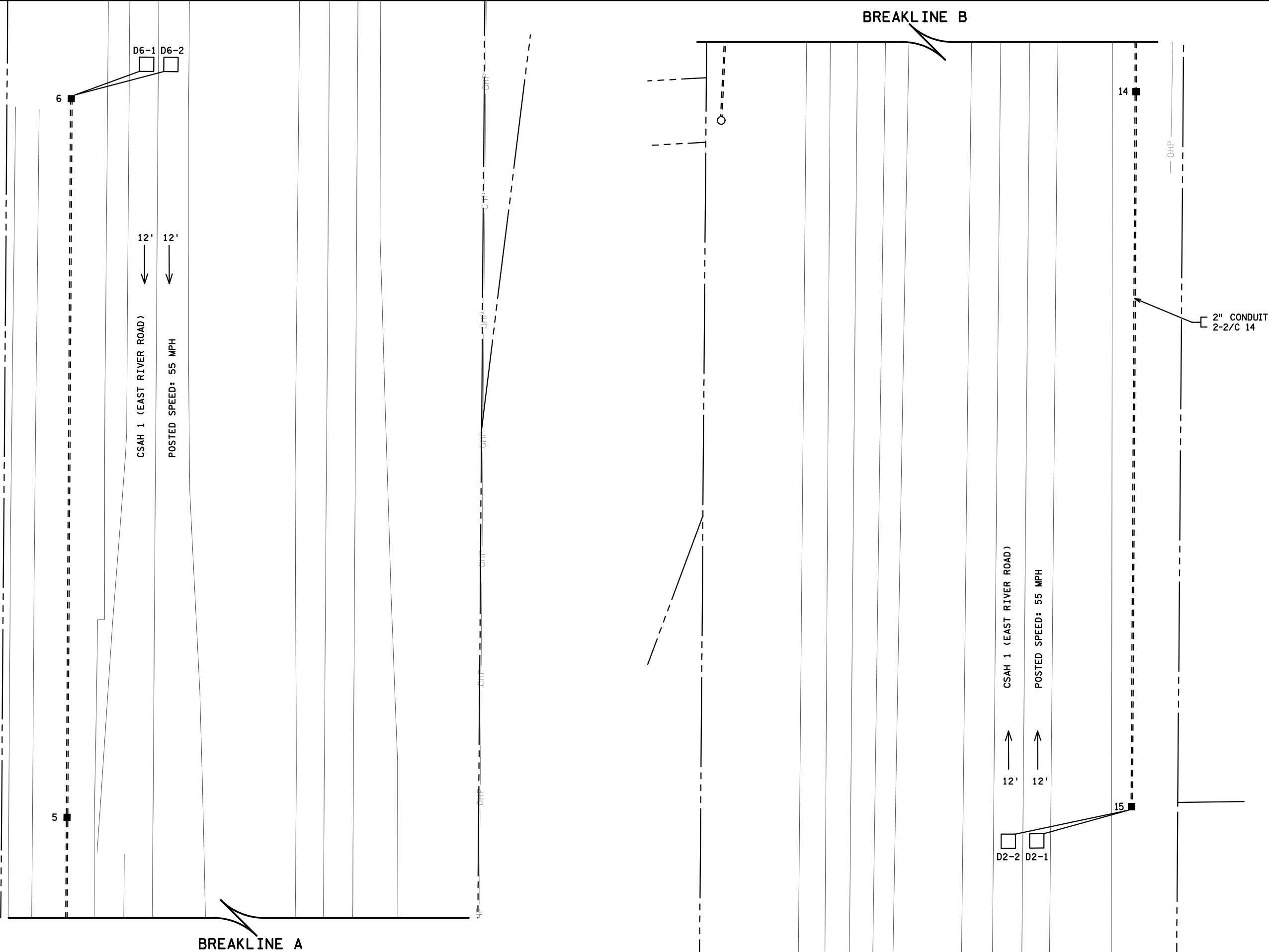
DES: DAF
DRW: DAF
CHK: JAH

I HEREBY CERTIFY THAT THIS SHEET 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

SIGNATURE: *Jeffrey A. Hilden* LIC. NO. 20781 DATE: 12/2/2024

JEFFREY A. HILDEN

FILENAME: pw:\kda-pw\Documents\Projects\A-F\AnokaCounty\20837000\04_Production\01_CAD\Highway\Sheets\cd002602015_sgm.dgn



			DES: DAF	I HEREBY CERTIFY THAT THIS SHEET 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 SIGNATURE: <u>Jeffrey A. Hilden</u> LIC. NO. <u>20781</u> DATE: <u>12/2/2024</u>		SIGNAL LAYOUT		SIGNAL PLAN	
			DRW: DAF			S.P. 002-602-015, S.P. 127-020-037			
			CHK: JAH			S.A.P. 002-602-015, S.A.P. 127-020-037			
NO.	DATE	BY	DESCRIPTION OF REVISIONS	SHEET NO. 144 OF 148 SHEETS					

DATE: 12/2/2024 TIME: 11:44:42 AM
FILENAME: pw:\tkda-pw-bentley.com\tkda-pw-ON Documents\Projects\A-F\AnokaCounty\20837000\04_Production\01_CAD\Highway\Sheets\cd002602015_sgn.dgn

② X= 497716.0823
Y= 102796.7821
PA85 POLE FOUNDATION
TYPE PA85-A-30-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0' (8-3)
1-STRAIGHT MOUNT SIGNAL OVERHEAD AT 12' (8-2)
2-ANGLE MOUNT SIGNALS AT 180 AND 270 DEG (8-1, 5-2)
1-ONE WAY CONFIRMATORY LIGHT (PHASE 8)
1-LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R6-1(L) "ONE WAY" MOUNTED ON POLE FACING POLE 3
1-R9-3 SIGN MOUNTED ON POLE FACING POLE 3
1-SIGN (EAST RIVER RD) (SEE SIGN DETAILS)
3" CONDUIT INTO HH 3:
3-6/C 16
2-4/C 16
1-3/C 16
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

① X= 497722.3149
Y= 102723.5032
PA100 POLE FOUNDATION
TYPE PA100-A-50-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0' (1-1)
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24' (6-3, 6-2)
2-ANGLE MOUNT SIGNALS AT 90 AND 180 DEG (8-4, 6-1)
1-ANGLE MOUNT C.D. PED HEAD AT 90 DEG (P7-1)
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 1+6)
1-LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-APS PB AND SIGN (LT ARROW) (PB7-1)
1-R6-1(R) "ONE WAY" MOUNTED ON POLE FACING WEST
1-R6-1(L) "ONE WAY" MOUNTED ON POLE FACING POLE 4
1-R10-X12 SIGN ADJACENT TO HEAD (1-1)
1-SIGN (42ND ST) (SEE SIGN DETAILS)
3" CONDUIT INTO HH 17:
2-6/C 16
5-4/C 16
1-2/C 14
1-3/C 16
1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

③ X= 497871.9533
Y= 102828.3416
PA100 POLE FOUNDATION
TYPE PA100-A-55-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL OVERHEAD AT 0' (5-1)
2-STRAIGHT MOUNT SIGNALS OVERHEAD AT 12' AND 24' (2-3, 2-2)
1-ANGLE MOUNT SIGNAL AT 180 DEG (2-1)
1-ANGLE MOUNT SIGNAL AT 270 DEG (7-3)
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASES 2+5)
1-ONE WAY EVP DETECTOR (PHASE 8)
1-LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R6-1(L) "ONE WAY" MOUNTED ON POLE FACING POLE 2
1-R6-1(R) "ONE WAY" MOUNTED ON POLE FACING EAST
2-R9-3 SIGNS MOUNTED ON POLE FACING POLE 2 AND POLE 4
1-R10-X12 SIGN ADJACENT TO HEAD (5-1)
1-SIGN (42ND ST) (SEE SIGN DETAILS)
3" CONDUIT INTO HH 8:
2-6/C 16
4-4/C 16
1-3/C 16
2-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

④ X= 497887.5655
Y= 102719.6357
PA90 POLE FOUNDATION
TYPE PA90-A-35-D30-9 (DAVIT AT 350 DEG)
1-ANGLE MOUNT SIGNAL APARTOR OVERHEAD AT 0' (7-2)
1-ANGLE MOUNT SIGNAL AT 90 DEG (8-5)
1-ANGLE MOUNT SIGNAL AT 180 DEG (7-1)
1-ANGLE MOUNT SIGNAL AT 270 DEG (1-2)
1-ANGLE MOUNT C.D. PED HEAD AT 180 (P7-2)
1-ONE WAY EVP DETECTOR AND CONFIRMATORY LIGHT (PHASE 7)
1-LUMINAIRE-LED (FOR 30' MOUNTING HEIGHT)
1-R6-1(L) "ONE WAY" MOUNTED ON POLE FACING POLE 1
1-SIGN (EAST RIVER RD) (SEE SIGN DETAILS)
3" CONDUIT INTO HH 13:
4-6/C 16
2-4/C 16
1-3/C 16
1-3/C 20
1-3/C 16 (LUM)
1-1/C 6 INS. GR.

Ⓐ EQUIPMENT PAD (SEE DETAIL SHEET)
SERVICE CABINET (SSB) WITH BATTERY BACKUP SYSTEM AND BATTERIES
CONTROLLER AND CABINET (ANOKA COUNTY FURNISHED)
4" CONDUIT TO HH 17: 4" CONDUIT TO HH 1:
17-2/C 14 11-2/C 14

4" CONDUIT TO HH 17: 4" CONDUIT TO HH 1:
6-6/C 16 5-6/C 16
7-4/C 16 6-4/C 16
2-3/C 16 2-3/C 16
2-3/C 20 2-3/C 20
1-1/C 6 INS GR. 1-1/C 6 INS. GR.

GROUND WIRE AND GROUND ROD - MIN 8' OUT FROM PAD
2-2" AND 1-3" 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 POLE MOUNTED SOP:
2" CONDUIT
3-1/C 2

SERVICE CABINET TO HH 17:
2" CONDUIT
4-3/C 16 (LUM)
SERVICE CABINET TO EXTERNAL GR. RD.:
1" CONDUIT
1-1/C 6 INS. GR.
(SEE EQUIPMENT PAD LAYOUT)
HH 17 TO HH 1:
2" CONDUIT
2-3/C 16 (LUM)

Ⓑ SOP-POLE MOUNTED (XCEL ENERGY)
2" CONDUIT INTO SERVICE CABINET:
3-1/C 2

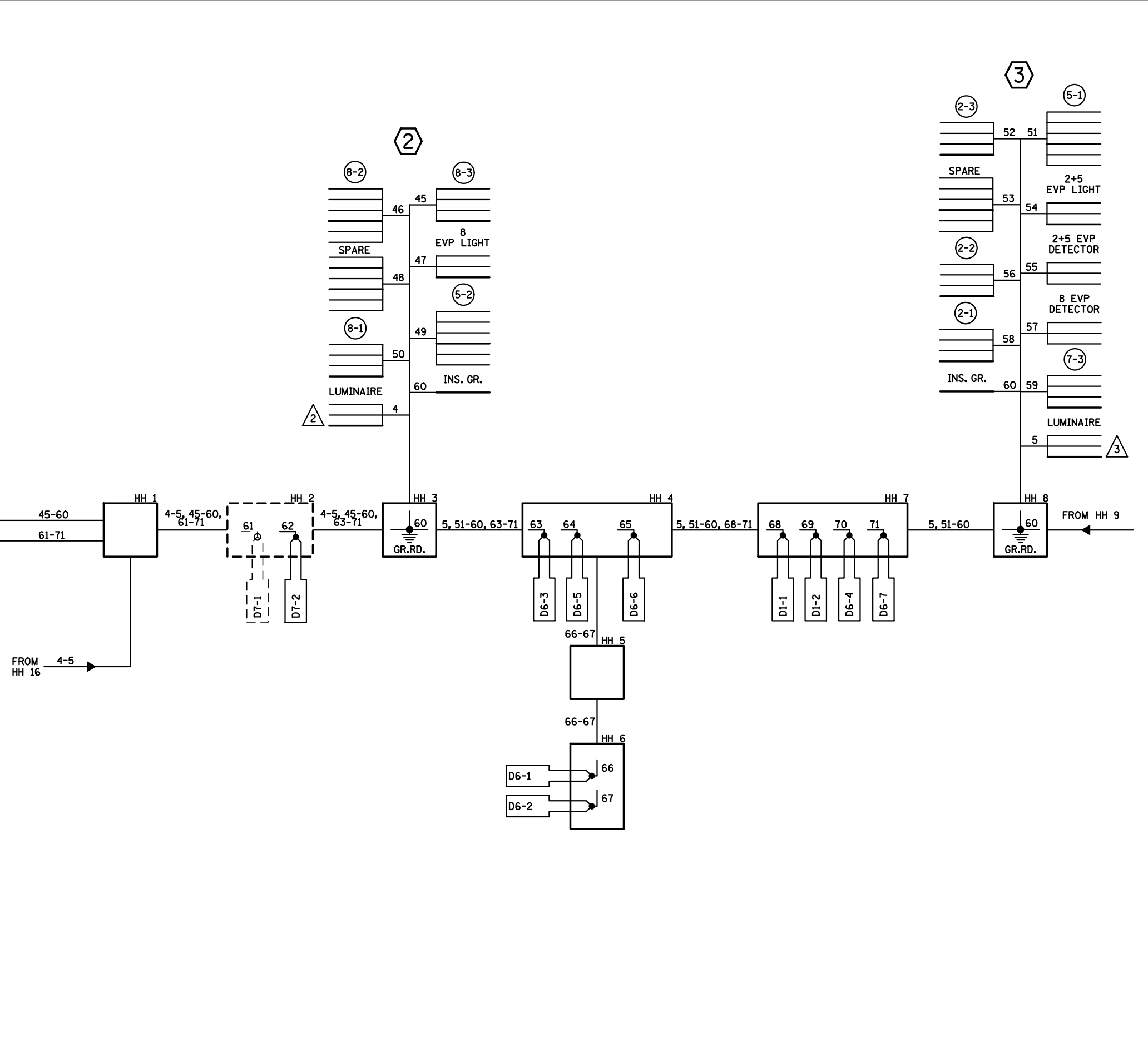
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				DRW: DAF			S.P. 002-602-015, S.P. 127-020-037		SHEET NO. 145 OF 148 SHEETS	
NO. DATE BY DESCRIPTION OF REVISIONS				CHK: JAH			S.A.P. 002-602-015, S.A.P. 127-020-037			



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				DRW: DAF			S.P. 002-602-015, S.P. 127-020-037		S.P. 002-602-015, S.P. 127-020-037		SHEET NO. 146 OF 148 SHEETS	
				CHK: JAH			S.A.P. 002-602-015, S.A.P. 127-020-037		S.A.P. 002-602-015, S.A.P. 127-020-037		SHEET NO. 146 OF 148 SHEETS	
NO.	DATE	BY	DESCRIPTION OF REVISIONS									

CONTROLLER CABINET

7-3	RLA	59
	YLA	
	GLA	
	NEU	
INS. GR. 60		
D7-1		61
D7-2		62
D6-3		63
D6-5		64
D6-6		65
D6-1		66
D6-2		67
D1-1		68
D1-2		69
D6-4		70
D6-7		71
8-3	RLA	45
	YLA	
	GLA	
	NEU	
8-2	RED	46
	YEL	
	GRN	
	NEU	
	YLA	
	GLA	
8 EVP	LIGHT	47
	EQ.G	
	NEU	
SPARE	SPR	48
	SPR	
	SPR	
	NEU	
	SPR	
	SPR	
5-2	RLA	49
	YLA	
	GLA	
	NEU	
	FYA	
	SPR	
8-1	RED	50
	YEL	
	GRN	
	NEU	
5-1	RLA	51
	YLA	
	GLA	
	NEU	
	FYA	
	SPR	
2-3	RED	52
	YEL	
	GRN	
	NEU	
SPARE	SPR	53
	SPR	
	SPR	
	NEU	
	SPR	
	SPR	
2+5 EVP	LIGHT	54
	EQ.G	
	NEU	
2+5	EVP	55
DETECTOR		
2-2	RED	56
	YEL	
	GRN	
	NEU	
8	EVP	57
DETECTOR		
2-1	RED	58
	YEL	
	GRN	
	NEU	



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			DRW: DAF			S.P. 002-602-015, S.P. 127-020-037			
			CHK: JAH			S.A.P. 002-602-015, S.A.P. 127-020-037			
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