

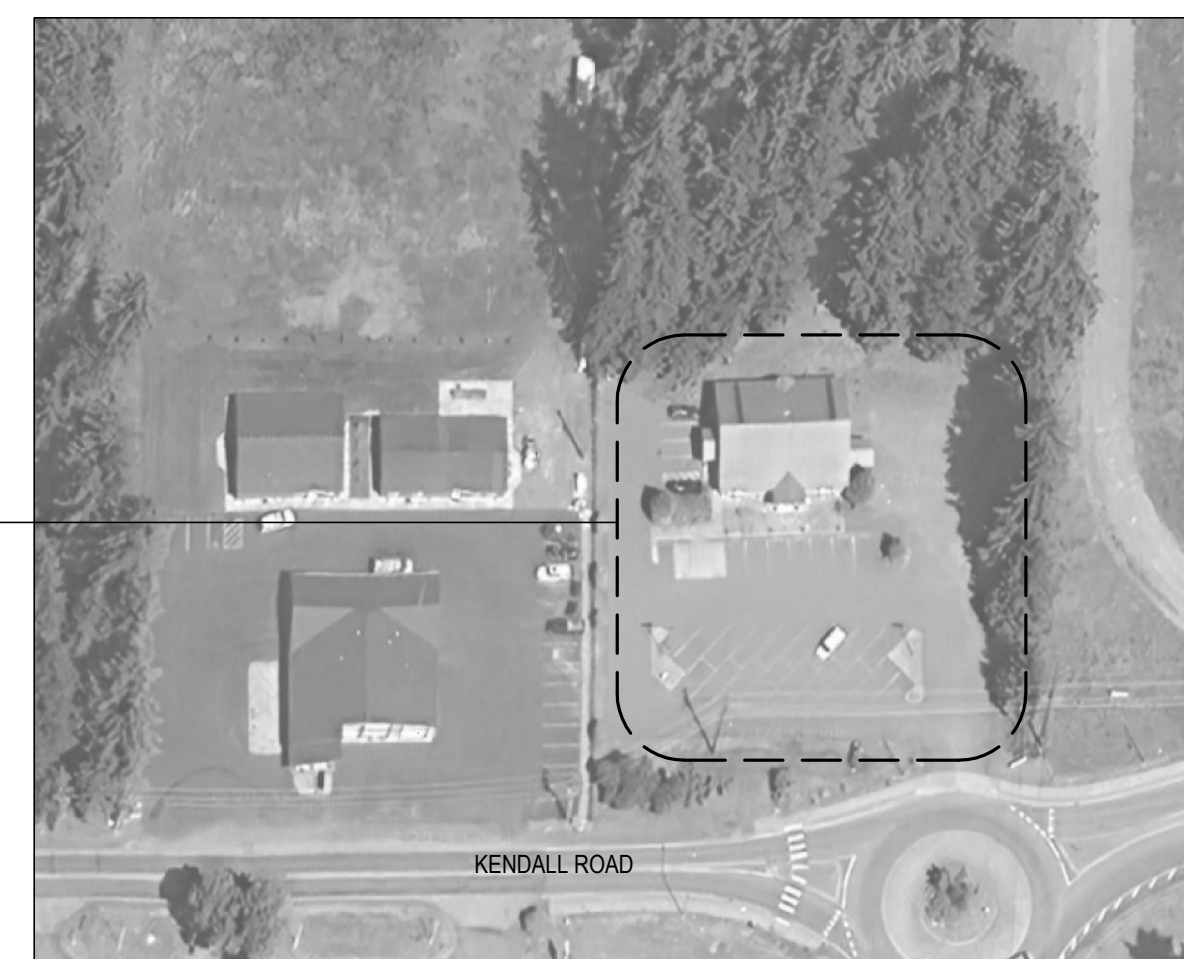
# WHATCOM COUNTY LIBRARY SYSTEM EV CHARGERS FOR ADMIN. SERVICES & NORTH FORK FACILITIES

**K ENGINEERS INC.**  
208 Third Street  
Lynden, WA. 98264  
Bus. (360) 354-4757  
FAX (360) 354-6794




ADMIN SERVICES FACILITY  
5205 NORTHWEST DRIVE, BELLINGHAM  
(SEE E2 SERIES DRAWINGS)

 VICINITY MAP - ADMIN. SERVICES FACILITY  
NOT TO SCALE





NORTH FORK LIBRARY  
1506 KENDALL RD., MAPLE FALLS  
(SEE E3 SERIES DRAWINGS)



 VICINITY MAP - NORTH FORK LIBRARY  
NOT TO SCALE

## ELECTRICAL LEGEND

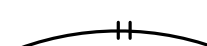
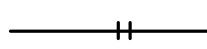

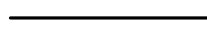
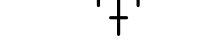

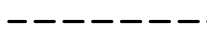



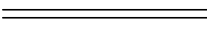







### OUTLETS

-  DUPLEX OUTLET
-  TELECOMMUNICATIONS OUTLET, FLUSH MOUNTED  
(2C = 2 CAT6A CABLES, TYPICAL)  
(W = WALL PHONE TYPE OUTLET)

### ANCILLARIES

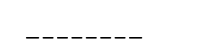
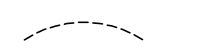
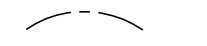
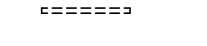





-  ACCESS CONTROLS SYSTEM CARD READER
-  ACCESS CONTROLS SYSTEM ELECTRIC STRIKE

### MISCELLANEOUS

-  BRANCH CIRCUIT, ABOVE GRADE, CONCEALED (OR SIMILAR, SLASHES + NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
-  BRANCH CIRCUIT, ABOVE GRADE, EXPOSED (OR SIMILAR, SLASHES + NO. OF CIRCUIT CONDUCTORS WHERE APPLICABLE)
-  HOMERUN TO LOCATION INDICATED, CONCEALED (TYPICAL)
-  HOMERUN TO LOCATION INDICATED, EXPOSED (TYPICAL)
-  BRANCH CIRCUIT, CONDUIT BODY
-  CONDUIT STUB-UP INTO CEILING SPACE OR ONTO CABLE TRAY
-  BELOW GRADE CONDUIT
-  GROUND CABLE
-  CABLE RUN "OPEN" IN ACCESSIBLE CEILING SPACE (SLASHES + NO. 4 TYPE OF CABLES WHERE APPLICABLE)
-  EXISTING CONDUIT, NEW CABLE
-  SURFACE METAL RACEWAY (SMR)
-  JUNCTION BOX
-  PANELBOARD
-  WEATHER PROOF
-  EXISTING TO REMAIN
-  REPLACE EXISTING WITH NEW
-  REPLACE EXISTING WITH EXISTING
-  RELOCATE EXISTING

### DEMOLITION

(DASHED INDICATES EXISTING TO BE REMOVED)

-  BRANCH CIRCUIT CONDUIT, SURFACE MTD.
-  BRANCH CIRCUIT CONDUIT, CONCEALED
-  EXISTING CONDUIT, REMOVE CABLE
-  SURFACE MOUNTED RACEWAY
-  FIRE ALARM COMBINATION HEAT/SMOKE DETECTOR
-  FIRE ALARM RELAY
-  FIRE ALARM HORN WITH STROBE LIGHT
-  FIRE ALARM CONTROL MODULE
-  FIRE ALARM MONITOR MODULE

REVISIONS	BY



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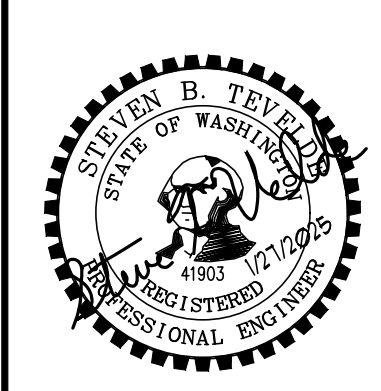
WHATCOM COUNTY  
LIBRARY SYSTEM  
EV CHARGERS FOR ADMIN. & NORTH FORK

ELECTRICAL - NOTES,  
LEGEND & VICINITY MAP

DATE: JANUARY 27, 2025
SCALE: NONE
DRAWN: KL
DESIGNED: STV
JOB No: 2412
SHEET <b>E1.0</b> OF SHEETS

CALL 811  
BEFORE YOU DIG

REVISIONS	BY

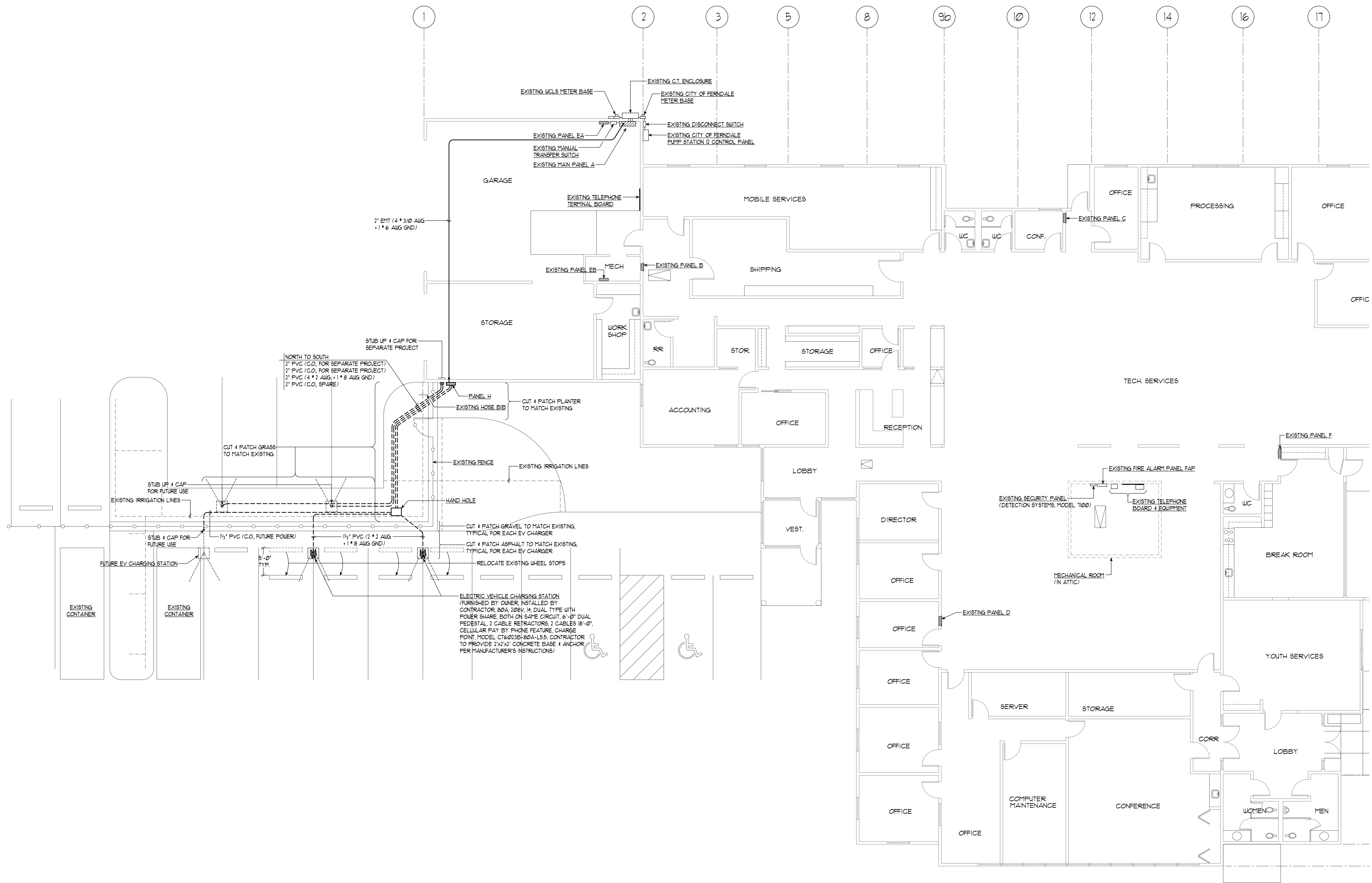


**K ENGINEERS INC.**  
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 Fax (360) 354-6794

**WHATCOM COUNTY  
 LIBRARY SYSTEM**  
 EV CHARGERS FOR ADMIN. & NORTH FORK

**ELECTRICAL -  
 ADMIN. SERVICES  
 POWER PLAN**

DATE: JANUARY 27, 2025
SCALE: 1/8" = 1'-0"
DRAWN: KL
DESIGNED: STV
JOB No: 242
SHEET <b>E2.1</b> OF SHEETS



**ELECTRICAL - ADMIN. SERVICES BUILDING POWER PLAN**  
 SCALE: 1/8" = 1'-0"

CALL 811  
 BEFORE YOU DIG

REVISIONS	BY

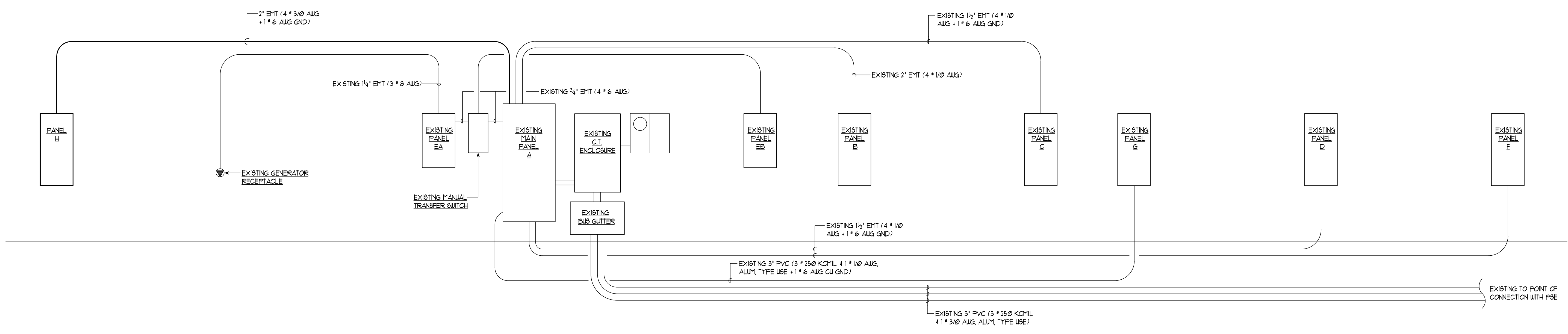


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WHATCOM COUNTY  
 LIBRARY SYSTEM  
 EV CHARGERS FOR ADMIN. & NORTH FORK

ELECTRICAL - POWER  
 SYSTEM RISER DIAGRAM  
 & PANEL SCHEDULES

DATE: JANUARY 27, 2025  
 SCALE: NONE  
 DRAWN: KL  
 DESIGNED: STV  
 JOB No: 242  
 SHEET  
**E2.2**  
 OF SHEETS

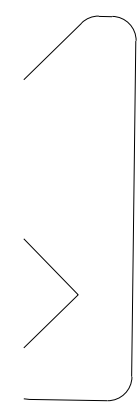


**ELECTRICAL - ADMIN. SERVICES POWER SYSTEM RISER DIAGRAM**  
 SCALE: NONE

EXISTING MAIN PANEL A (MODIFY)										GARAGE			
VOLTAGE:		208Y/120V, 3 PH, 4 W		FEEDER-BRANCH CIRCUIT DEVICES:		ELECTRICAL LOAD		CONN. LOAD (VA)		DEMAND		DEMAND	
TYPE:		PANELBOARD		BOLT-ON CIRCUIT BREAKERS		CALCULATION		EXIST.		NEW		TOTAL	
ENCLOSURE:		WESTINGHOUSE PRL-4B		FULL AIC RATING:		Lighting		0.0		0.0		1.25	
MOUNTING:		SURFACE		SERIES AIC RATING:		Gen. Purpose Outlets (First 10 kVA)		0.0		0.0		1.00	
BUSING:		MANUFACTURER'S STANDARD		NONE		Gen. Purpose Outlets (Remainder)		0.0		0.0		0.50	
CONTINUOUS RATING:		800 A		SPECIAL PROVISIONS:		Special Purpose Outlets		0.0		0.0		1.00	
FULL AIC RATING:		30,000 A		MASTER NAMEPLATE		Mechanical Equipment		0.0		0.0		1.00	
SERIES AIC RATING:		NONE		GROUND BAR		Kitchen Equipment & Appliances		0.0		0.0		1.00	
MAIN:		CIRCUIT BREAKER		SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT		Miscellaneous		38400.0		38400.0		1.00	
CONTINUOUS RATING:		800 A		METER # P173 581 434		25% Largest Motor		0.0		0.0		4899.8	
FULL AIC RATING:		50,000 A		Existing Load per PSE Billing		TOTAL LOAD		89333.3		89333.3		1.25	
SERIES AIC RATING:		NONE		History = 80.4 KW @ 0.9 P.F.		TOTAL AMPS		248.0		106.6		354.6	
LOCATION:		TOP		TOTAL LOAD		TOTAL AMPS		89333.3		38400.0		127733.3	
												154966.4	
												430.1	
CONN. LOAD (VA)	FEEDER-BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/PP	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/PP	FEEDER-BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)			
MAIN CIRCUIT BREAKER													
3002.3	ATTIC HVAC EQUIPMENT		125/3	1	A	2	SPACE			0.0			
3002.3				3	B	4				0.0			
3002.3				5	C	6				0.0			
13120.0	PANEL B - NORTHWEST		150/3	7	A	8	150/3	PANEL F - LOUNGE		18334.7			
9656.0				9	B	10				16759.7			
10500.0				11	C	12				15506.7			
14206.2	PANEL C - NORTH		150/3	13	A	14	150/3	PANEL D - SOUTHWEST		12713.6			
13063.2				15	B	16				15429.8			
11726.2				17	C	18				15656.3			
15618.7	PANEL G - OUTDOOR		200/3	19	A	20	SPACE			0.0			
15618.7				21	B	22				0.0			
15618.7				23	C	24				0.0			
18200.0	PANEL H - SOUTH GARAGE EXTERIOR	(2)	200/3	25	A	26	SPACE			0.0			
9600.0				27	B	28				0.0			
9600.0				29	C	30				0.0			
4914.0	PANEL EA & EB		60/3	31	A	32	SPACE	FUTURE EV CHARGER		0.0			
4456.0				33	B	34				0.0			
3166.0				35	C	36				0.0			

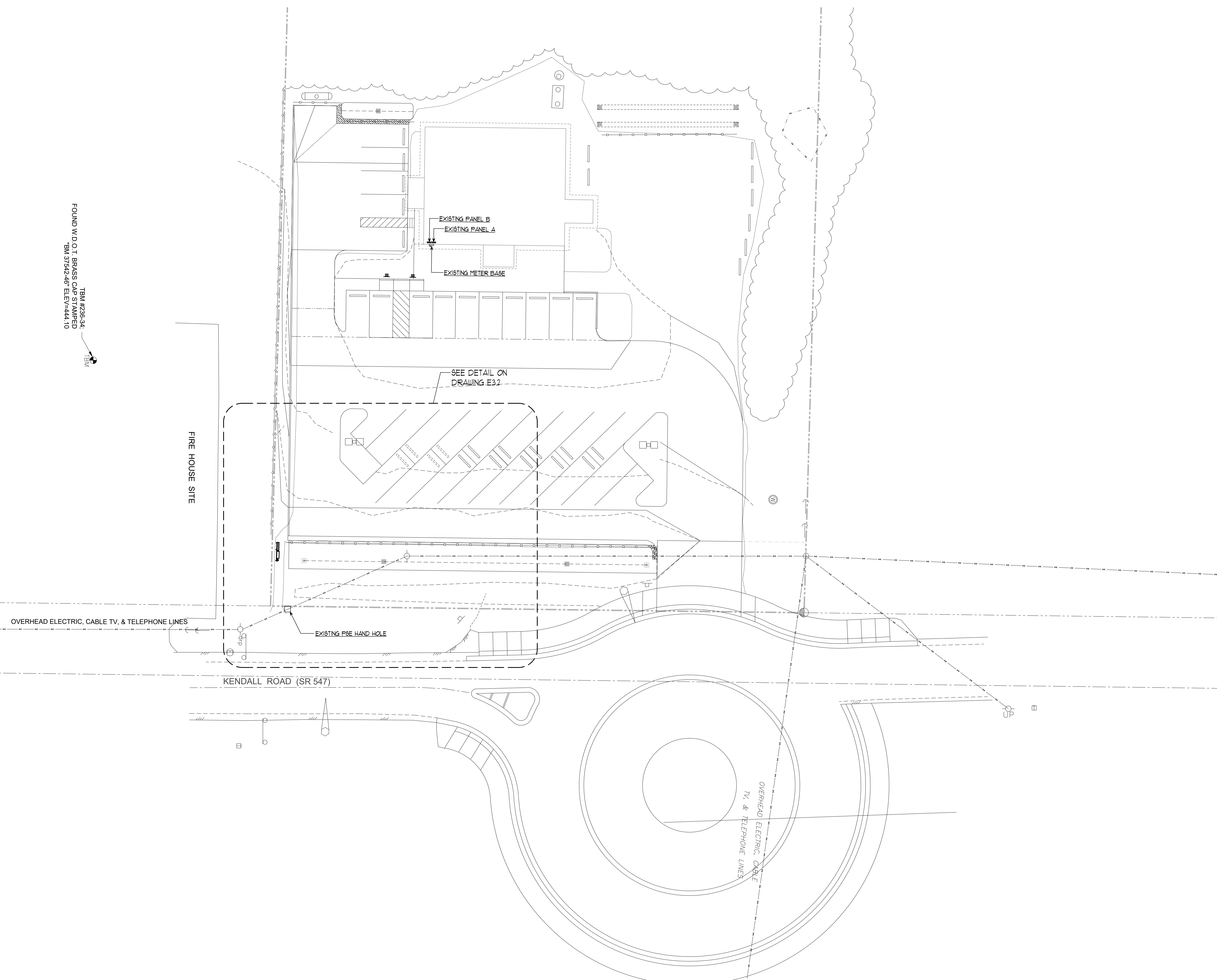
NOTES:  
 (1) PEAK LOAD AS RECORDED BY PSE DEMAND METER FROM 11/9/2022 THROUGH 12/9/2024. PEAK OCCURRED IN 1/2024.  
 (2) PROVIDE NEW CIRCUIT AND CIRCUIT BREAKER IN EXISTING SPACE.

NEW PANEL H										SOUTH GARAGE EXTERIOR			
VOLTAGE:		208Y/120V, 3 PH, 4 W		FEEDER-BRANCH CIRCUIT DEVICES:		ELECTRICAL LOAD		CONN. LOAD (VA)		DEMAND		DEMAND	
TYPE:		PANELBOARD		BOLT-ON CIRCUIT BREAKERS		CALCULATION		EXIST.		NEW		TOTAL	
ENCLOSURE:		NEMA 3R		FULL AIC RATING:		Lighting		0.0		0.0		0.0	
MOUNTING:		SURFACE		SERIES AIC RATING:		Gen. Purpose Outlets (First 10 kVA)		0.0		0.0		1.00	
BUSING:		MANUFACTURER'S STANDARD		SPECIAL PROVISIONS:		Gen. Purpose Outlets (Remainder)		0.0		0.0		0.50	
CONTINUOUS RATING:		200 A		MASTER NAMEPLATE		Special Purpose Outlets		0.0		0.0		1.00	
FULL AIC RATING:		22,000 A		GROUND BAR		Mechanical Equipment		0.0		0.0		1.00	
SERIES AIC RATING:		NONE		PROVIDE HANDLE TIES FOR ALL MULTIWIRE BRANCH CIRCUITS		Kitchen Equipment & Appliances		0.0		0.0		1.00	
MAIN:		LUGS ONLY		LOCATION:		Miscellaneous		0.0		38400.0		38400.0	
LOCATION:		TOP				25% Largest Motor		0.0		0.0		0.0	
						TOTAL LOAD		0.0		38400.0		38400.0	
						TOTAL AMPS		0.0		106.6		106.6	
CONN. LOAD (VA)	FEEDER-BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/PP	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/PP	FEEDER-BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)			
MAIN LUGS													
0.0	SPARE		20/1	1	A	2	100/2	EV CHARGER #1 - PARKING LOT		9600.0			
0.0	SPARE			3	B	4				9600.0			
0.0				5	C	6	100/2	EV CHARGER #2 - PARKING LOT		9600.0			
0.0				7	A	8				9600.0			
0.0				9	B	10	100/2	SPARE (FUTURE EV CHARGER #3)		0.0			
0.0				11	C	12				0.0			
0.0				13	A	14	SPACE			0.0			
0.0				15	B	16	SPACE			0.0			
0.0				17	C	18	SPACE			0.0			
0.0				19	A	20	SPACE			0.0			
0.0				21	B	22	SPACE			0.0			
0.0				23	C	24	SPACE			0.0			



474

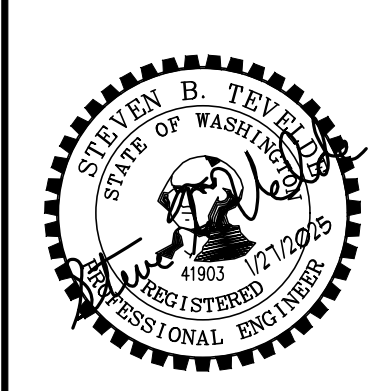
FOUND W.D.O.T. BRASS CAP STAMPED  
"EM 37542-40" ELEV.=444.10  
TM #238-34  
TM



**ELECTRICAL - NORTH FORK SITE PLAN**

SCALE: 1" = 20'-0"

REVISIONS	BY



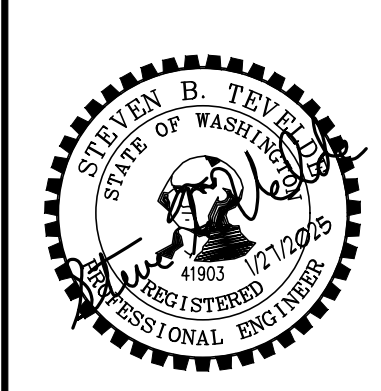
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**WHATCOM COUNTY  
LIBRARY SYSTEM**  
EV CHARGERS FOR ADMIN. & NORTH FORK

**ELECTRICAL -  
NORTH FORK  
SITE PLAN**

DATE: JANUARY 27, 2025
SCALE: 1" = 20'-0"
DRAWN: KL
DESIGNED: STV
JOB No: 242
SHEET <b>E3.1</b> OF SHEETS

REVISIONS	BY

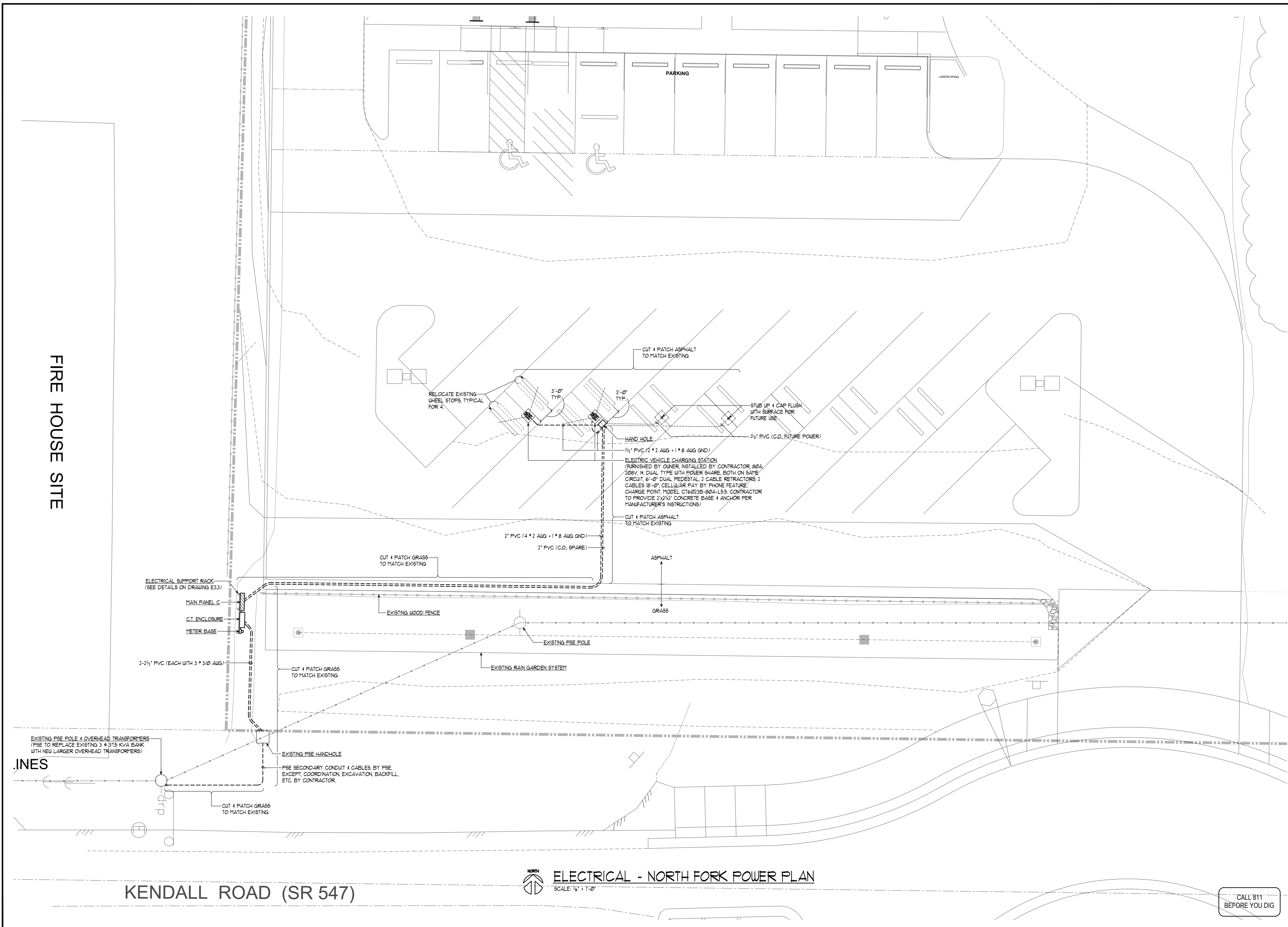


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**WHATCOM COUNTY  
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 EV CHARGERS FOR ADMIN. & NORTH FORK

**ELECTRICAL -  
 NORTH FORK  
 POWER PLAN**

DATE: JANUARY 27, 2025
SCALE: 1/2" = 1'-0"
DRAWN: KL
DESIGNED: STV
JOB No: 242
SHEET <b>E3.2</b> OF SHEETS



FIRE HOUSE SITE

KENDALL ROAD (SR 547)

**ELECTRICAL - NORTH FORK POWER PLAN**  
 SCALE: 1/2" = 1'-0"

CALL 811  
 BEFORE YOU DIG

REVISIONS	BY

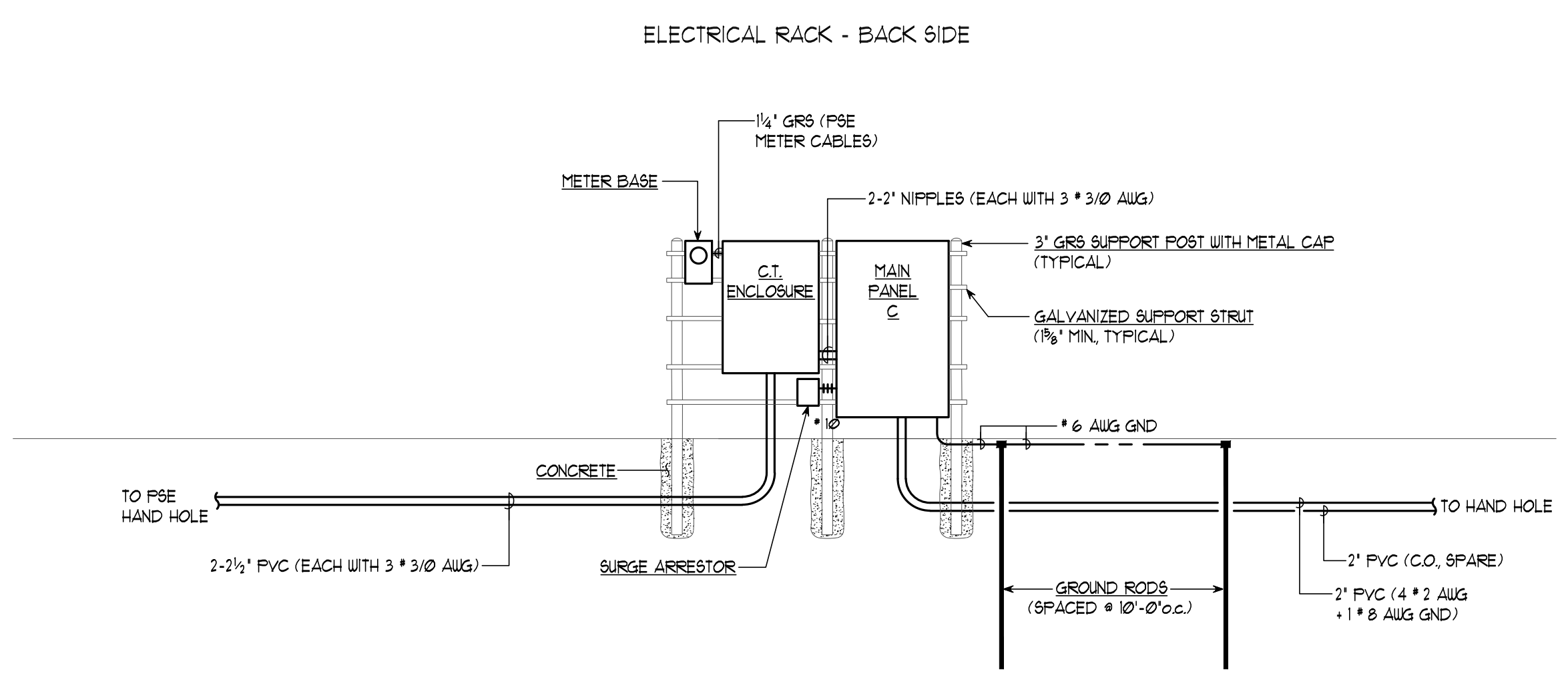


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WHATCOM COUNTY  
 LIBRARY SYSTEM  
 EV CHARGERS FOR ADMIN. & NORTH FORK

ELECTRICAL - POWER  
 SYSTEM RISER DIAGRAM  
 & PANEL SCHEDULES

DATE: JANUARY 27, 2025  
 SCALE: NONE  
 DRAWN: KL  
 DESIGNED: STV  
 JOB No: 242  
 SHEET  
**E3.3**  
 OF SHEETS



**ELECTRICAL - NORTH FORK POWER SYSTEM RISER DIAGRAM**  
 SCALE: NONE

NEW CURRENT TRANSFORMER ENCLOSURE		PARKING LOT					
VOLTAGE: 120/240V, 1 PH, 3 W	SPECIAL PROVISIONS:	ELECTRICAL LOAD CALCULATION			DEMAND FACTOR	DEMAND LOAD (VA)	
		EXIST.	NEW	TOTAL			
ENCLOSURE: NEMA 3R SURFACE	HINGED DOOR PER PSE REQUIREMENTS.	Lighting	0.0	0.0	0.0	1.25	0.0
CONTINUOUS RATING: 400 A	C.T. MOUNTING BASE PER PSE REQUIREMENTS.	Gen. Purpose Outlets (First 10 kVA)	0.0	0.0	0.0	1.00	0.0
	SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT	Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
		Mechanical Equipment	0.0	0.0	0.0	1.00	0.0
		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
		Miscellaneous	0.0	38400.0	38400.0	1.00	38400.0
		25% Largest Motor	0.0	0.0	0.0	1.00	0.0
		<b>TOTAL LOAD</b>	0.0	38400.0	38400.0		38400.0
		<b>TOTAL AMPS</b>	0.0	160.0	160.0		160.0

NEW MAIN PANEL C		PARKING LOT					
VOLTAGE: 120/240V, 1 PH, 3 W	SPECIAL PROVISIONS:	ELECTRICAL LOAD CALCULATION			DEMAND FACTOR	DEMAND LOAD (VA)	
		EXIST.	NEW	TOTAL			
TYPE: PANELBOARD	FEEDER BRANCH CIRCUIT DEVICES: BOLT-ON CIRCUIT BREAKERS	Lighting	0.0	0.0	0.0	1.25	0.0
ENCLOSURE: NEMA 3R SURFACE	FULL AIC RATING: 42,000 A	Gen. Purpose Outlets (First 10 kVA)	0.0	0.0	0.0	1.00	0.0
	SERIES AIC RATING: 10,000 A	Gen. Purpose Outlets (Remainder)	0.0	0.0	0.0	0.50	0.0
		Special Purpose Outlets	0.0	0.0	0.0	1.00	0.0
		Mechanical Equipment	0.0	0.0	0.0	1.00	0.0
		Kitchen Equipment & Appliances	0.0	0.0	0.0	1.00	0.0
		Miscellaneous	0.0	38400.0	38400.0	1.00	38400.0
		25% Largest Motor	0.0	0.0	0.0	1.00	0.0
		<b>TOTAL LOAD</b>	0.0	38400.0	38400.0		38400.0
		<b>TOTAL AMPS</b>	0.0	160.0	160.0		160.0

CONN. LOAD (VA)	FEEDER BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/P	CKT NO	BUS (PHASE)	BKR AMP/P	FEEDER BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)
0.0	SPARE		201	1	A	2	EV CHARGER #1 - PARKING LOT		9600.0
0.0	SPARE		201	3	B	4	EV CHARGER #2 - PARKING LOT		9600.0
0.0			SPACE	5	A	6	EV CHARGER #3 - PARKING LOT		9600.0
0.0			SPACE	7	B	8	EV CHARGER #4 - PARKING LOT		9600.0
0.0			SPACE	9	A	10	SPARE (FUTURE EV CHARGER #5)		0.0
0.0			SPACE	11	B	12	SPARE (FUTURE EV CHARGER #6)		0.0
0.0			SPACE	13	A	14	SPARE (FUTURE EV CHARGER #7)		0.0
0.0			SPACE	15	B	16	SPARE (FUTURE EV CHARGER #8)		0.0
0.0			SPACE	17	A	18	SPACE		0.0
0.0			SPACE	19	B	20	SPACE		0.0
0.0			SPACE	21	A	22	SPACE		0.0
0.0			SPACE	23	B	24	SPACE		0.0
							<b>MAIN CIRCUIT BREAKER</b>		

