

# RIDGEDALE APARTMENTS EV CHARGING STATION INSTALLATION

14111 SE 6TH ST,  
BELLEVUE, WA 98007

## SCOPE OF WORK

- A. INSTALL (16) WALLBOX CHARGERS IN A GARDEN STYLE CONDOMINIUM & ALL ASSOCIATED ELECTRICAL EQUIPMENTS. THESE ALSO INCLUDES SWITCH NETWORKING GEAR.  
B. REMOVED AND REPLACED (2) EXISTING CT4000 EV CHARGER WITH NEW WALL BOX PEDESTALS

## APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED TO BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING ADOPTED BY THE LOCAL GOVERNING AUTHORITIES:

- WASHINGTON STATE EXISTING BUILDING CODE 2021
- WASHINGTON STATE COMMERCIAL ENERGY CODE 2021
- NEC 2023

## SHEET INDEX

SHEET NO.	TITLE
EV01	COVER SHEET
EV02	NOTES, LEGEND & SYMBOLS
EV03	ELECTRICAL SITE PLAN
EV04	SINGLE LINE DIAGRAM & VOLTAGE DROP CALCULATION
EV05	PANEL SCHEDULES & PRODUCT DATA SHEET
EV06	INSTALLATION DETAILS

## UNDERGROUND UTILITIES

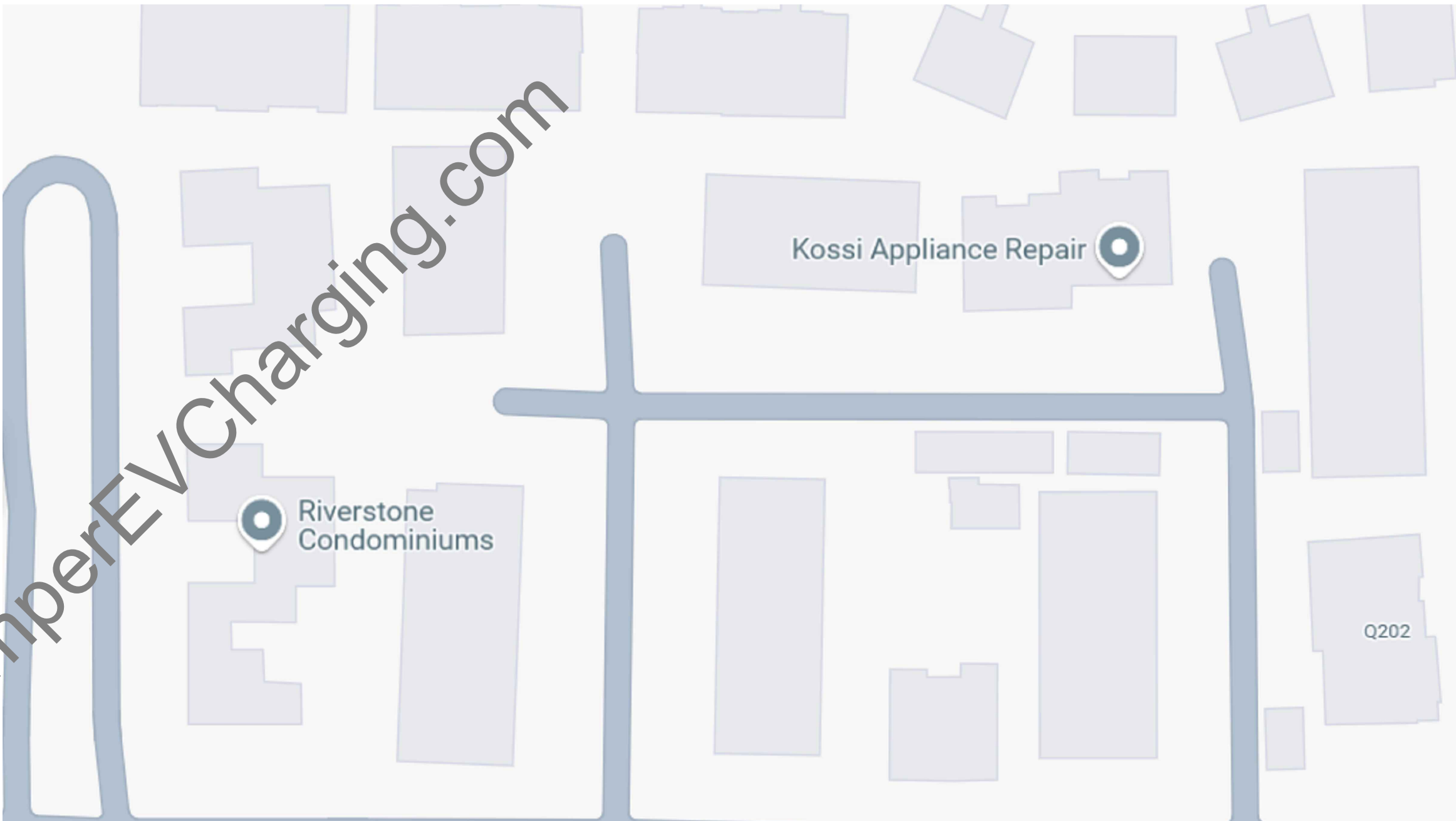


Know what's below.  
CALL before you dig.  
**DIG ALERT**

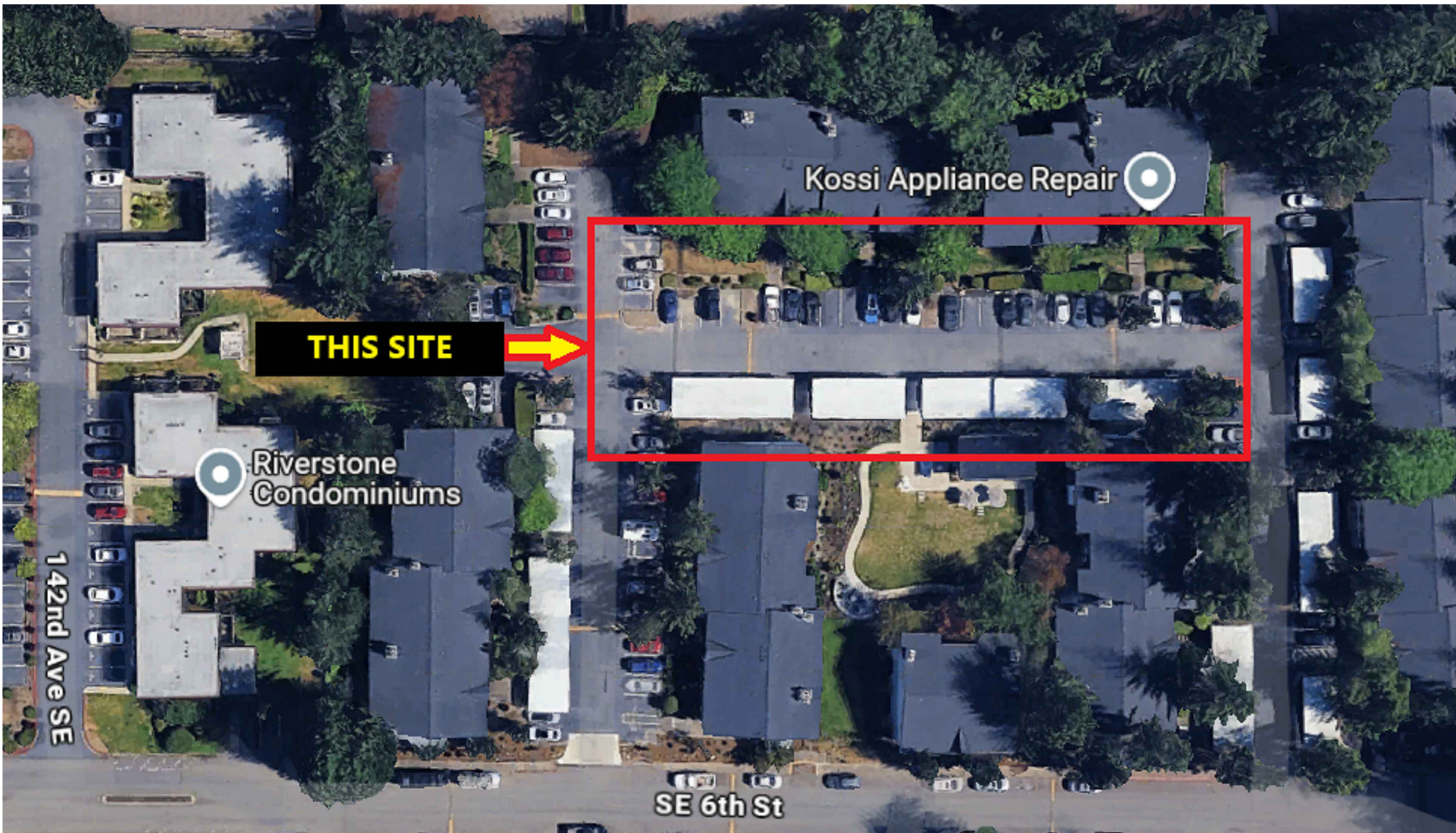
CALL AT LEAST TWO WORKING  
DAYS BEFORE YOU DIG

EXISTING UNDERGROUND FACILITIES ARE SHOWN ON THESE PLANS FROM RECORD INFORMATION AND ARE INFORMATION ONLY. OTHER UNDERGROUND FACILITIES NOT SHOWN ON THE PLANS MAY EXIST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY A ONE-CALL SERVICE CENTER, TOLL FREE AT 811, NO LESS TWO DAYS PRIOR TO ANY EXCAVATION.

## VICINITY MAP



## SATELLITE VIEW



COORDINATING PROFESSIONAL:



ENGINEER OF RECORD SEAL & STAMP:



AMPER JOB NUMBER: 2013B-WA

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REV	DATE	DESCRIPTION
0	03/18/2025	ISSUED FOR PLAN REVIEW

CLIENT:



PROJECT:

RIDGEDALE  
APARTMENTS  
EVCS  
INSTALLATION

ADDRESS:  
14111 SE 6TH ST,  
BELLEVUE, WA  
98007

SHEET SIZE:  
24X36

DESIGNED BY:  
AC

DRAWN BY:  
IB

CHECKED BY:  
DEE

SHEET TITLE:  
COVER SHEET

SHEET NO:

**EV01**



NOTES:

1. THIS DRAWING WERE PRODUCED WITHOUT THE BENEFIT OF A CURRENT LAND SURVEY. LAYOUT IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
2. ALL CHARGERS MUST BE DAISY CHAINED TOGETHER WITH 1/2" PVC CNDT FOR POWER SHARING. REFER SHEET EV04, FOR POWER SHARING WIRING DIAGRAM.
3. REFER SHEET EV06 & EV07 FOR THE INSTALLATION DETAILS.

COORDINATING PROFESSIONAL:

**DURAK EVRIM ERCAN** P.E.  
ENGINEERING | CONSULTING | ESTIMATING  
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ENGINEER OF RECORD SEAL & STAMP:

STATE OF WASHINGTON  
57496  
REGISTERED PROFESSIONAL ENGINEER  
EXP: 07/16/2026

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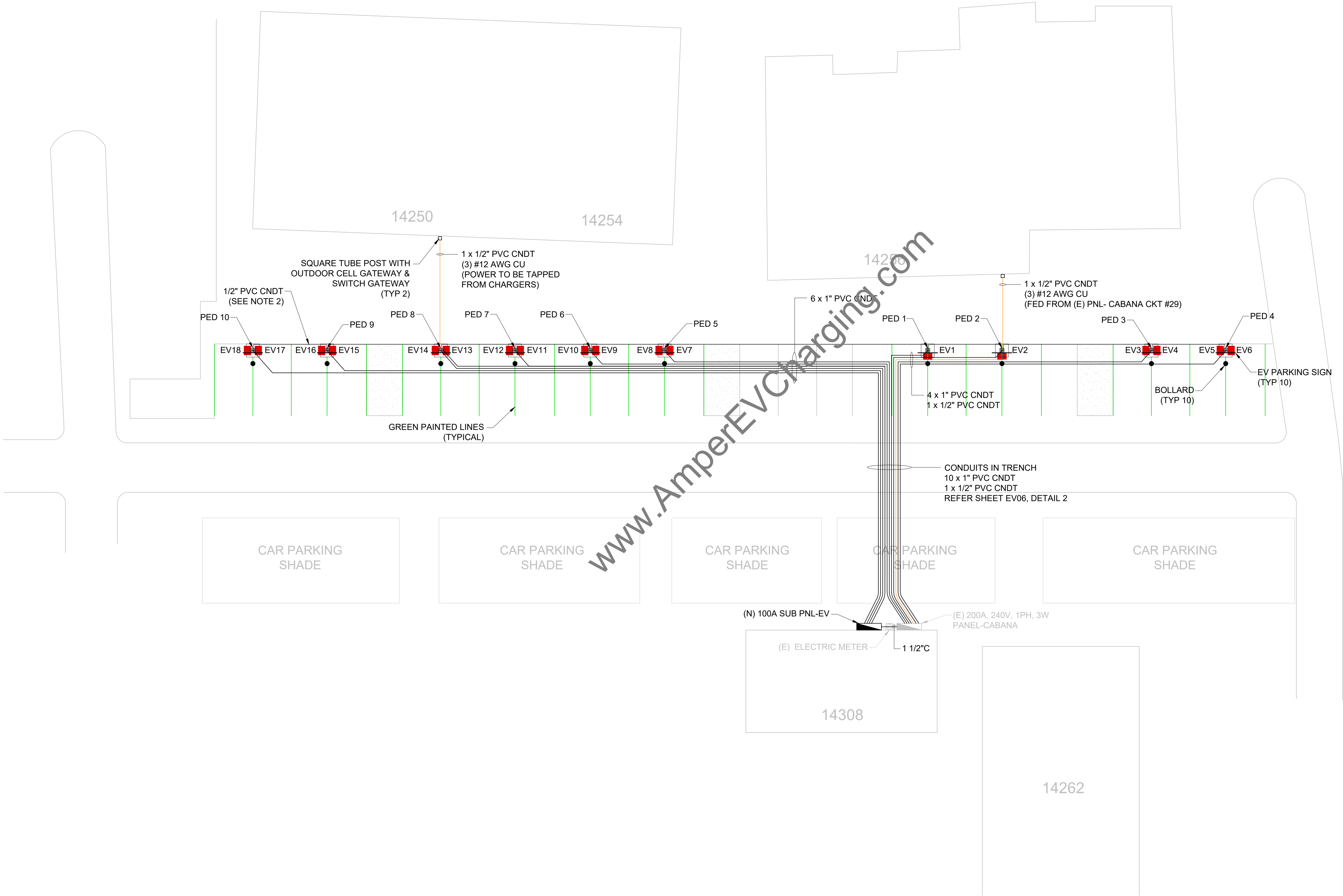
SHEET SIZE: 24X36	DRAWN BY: IB
DESIGNED BY: AC	CHECKED BY: DEE

SHEET TITLE:

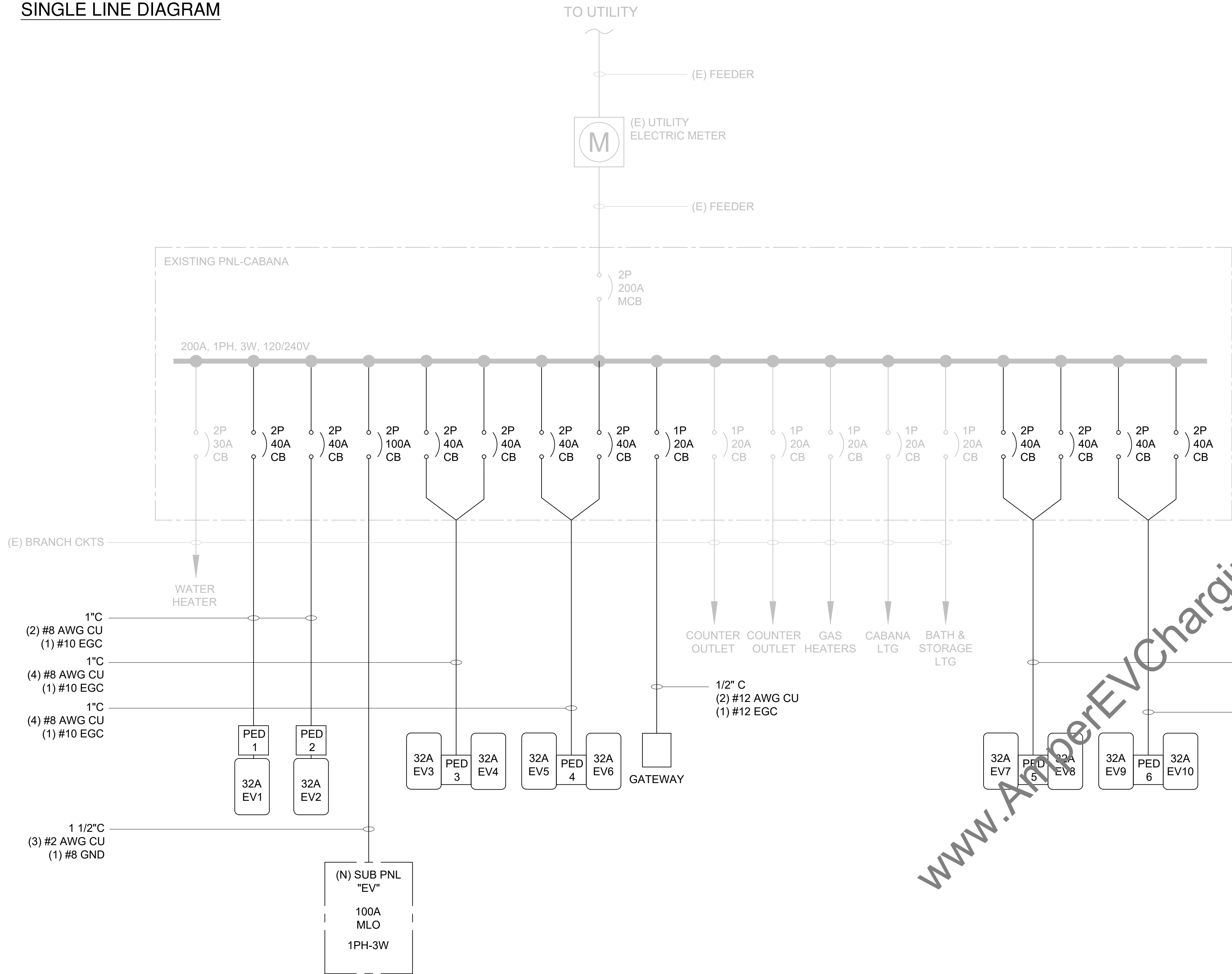
**ELECTRICAL SITE PLAN**

SHEET NO:

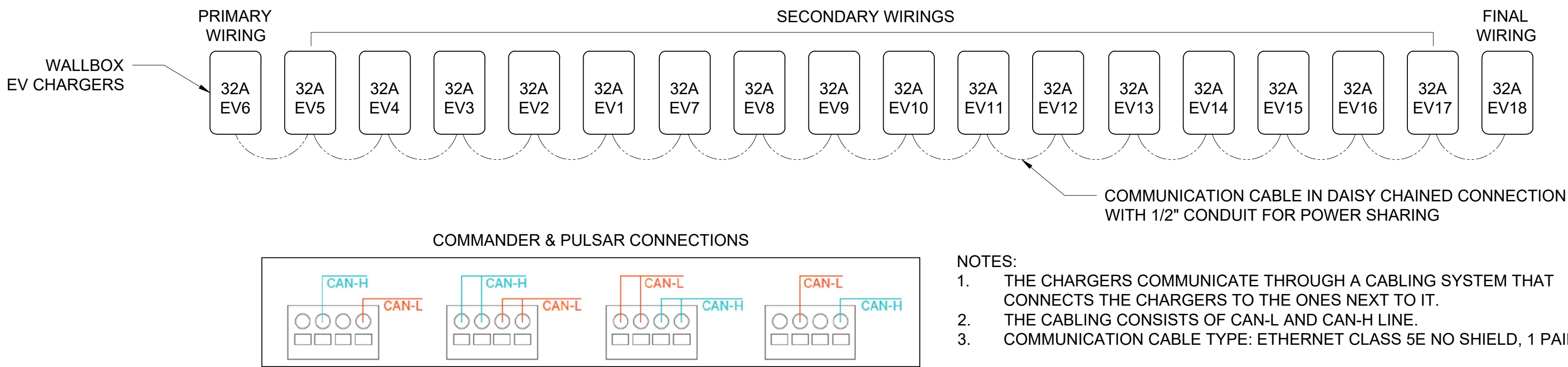
**EV03**



SINGLE LINE DIAGRAM



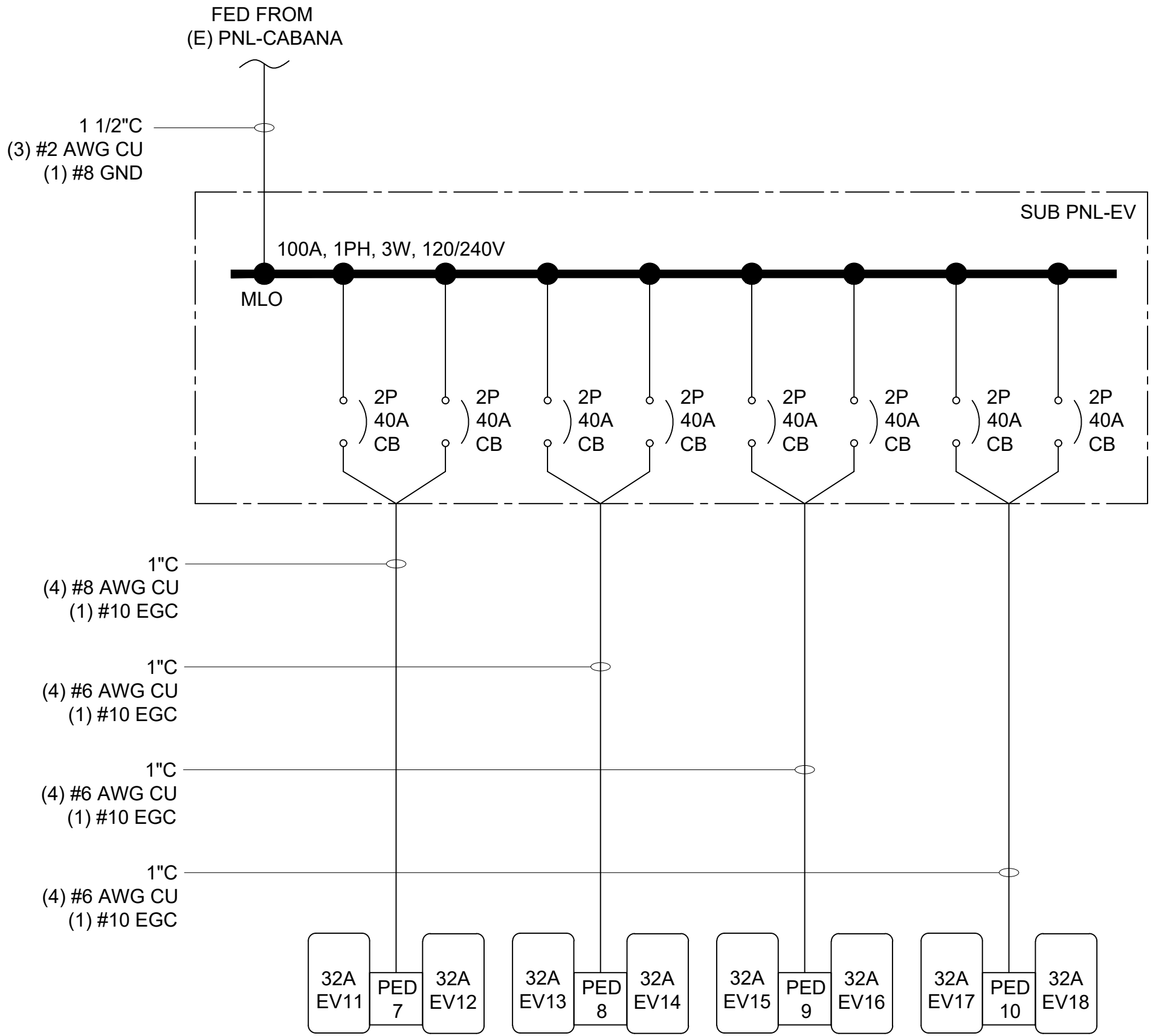
POWER SHARING WIRING DIAGRAM



- NOTES:
- THE CHARGERS COMMUNICATE THROUGH A CABLING SYSTEM THAT CONNECTS THE CHARGERS TO THE ONES NEXT TO IT.
  - THE CABLING CONSISTS OF CAN-L AND CAN-H LINE.
  - COMMUNICATION CABLE TYPE: ETHERNET CLASS 5E NO SHIELD, 1 PAIR.

VOLTAGE DROP CALCULATION

CABLE ROUTE		LOAD VOLTAGE	WIRE SIZE	DISTANCE (FT)	LOAD (AMP)	VOLTAGE DROP (%)	PARALLELS (SETS)
FROM	TO						
PNL-CABANA	PED 1	240V	#8	73	32	1.41	1
PNL-CABANA	PED 2	240V	#8	80	32	1.54	1
PNL-CABANA	PED 3	240V	#8	121	32	2.33	1
PNL-CABANA	PED 4	240V	#8	140	32	2.70	1
PNL-CABANA	PED 5	240V	#8	117	32	2.26	1
PNL-CABANA	PED 6	240V	#8	134	32	2.58	1
PNL-CABANA	PED 7	240V	#8	153	32	2.95	1
SUB PNL-EV	PED 8	240V	#6	171	32	2.12	1
SUB PNL-EV	PED 9	240V	#6	198	32	2.45	1
SUB PNL-EV	PED 10	240V	#6	216	32	2.67	1



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**SINGLE LINE DIAGRAM & VOLTAGE DROP CALCULATION**

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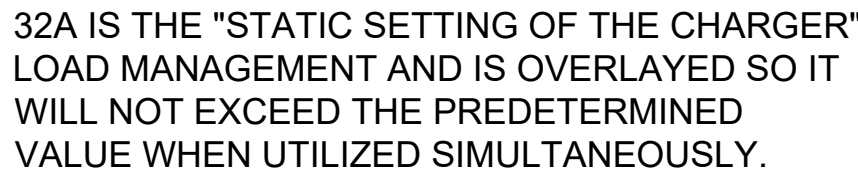
**EV04**



NEW SUB PNL-EV																						LOCATION: CABANA			
VOLTAGE: 120/240																		BUS (A): 100							
1 PHASE, 3 WIRE																		MAIN (A): MLO							
No.	CIRCUIT DESCRIPTION	LOAD (KVA)						BREAKER		PHASE		BREAKER		LOAD (KVA)						CIRCUIT DESCRIPTION	No.				
		CONT	RCPT	MTR	A/C	KITCH	MISC	TRIP	POLE	A	B	POLE	TRIP	MISC	KITCH	A/C	MTR	RCPT	CONT						
1	EV11	3.84						40	2	3.84			2	40						EV15	2				
3	X	3.84						X	X	3.84			X	X						X	4				
5	EV12	3.84						40	2	3.84			2	40						EV16	6				
7	X	3.84						X	X	3.84			X	X						X	8				
9	EV13	3.84						40	2	3.84			2	40						EV17	10				
11	X	3.84						X	X	3.84			X	X						X	12				
13	EV14	3.84						40	2	3.84			2	40						EV18	14				
15	X	3.84						X	X	3.84			X	X						X	16				
17	BLANK									0.00										BLANK	18				
19	BLANK																			BLANK	20				
v14 - 01/17/2024		LOADS W/ NEC 220 DEMAND FACTORS (KVA)						TOTAL		15.36	15.36			0.00	0.00	0.00	0.00	0.00	30.72	CONNECTED KVA 30.72					
										CONTINUOUS LOAD: 125% LOAD				PANEL NOTES											
										RECEPTACLES: 100% 1ST 10kW+50% REMAINING				1) IF PANEL EXISTING AND ACTUAL CONNECTED KVA ARE NOT KNOWN, ASSUMPTIONS ARE MADE AS:											
										MOTORS: 125% LARGEST MTR+100% REMAINING				CONTINUOUS & NON-CONTINUOUS CONNECTED LOADS ASSUMED TO BE 80% OF THE OCPD RATING.											
										A/C OR HEAT: 100% LOAD				2) DESIGN IS BASED ON NEC TABLE 310.15(B)(16) COPPER THIN CONDUCTORS. EXISTING CONDUCTORS AND WIRING MAY NEED TO BE INSPECTED AND VERIFIED BY ELECTRICAL CONTRACTOR.											
										KITCHEN: 65% LOAD				3) EVCS ARE CONSIDERED CONTINUOUS LOADS AND ACTUAL NAME PLATE VALUES ARE USED.											
										MISC: 100% LOAD				4) ALL CONDUCTORS ON THE PANEL SCHEDULE ARE COPPER UNLESS OTHERWISE NOTED.											

1. INSTALL EV CHARGING STATIONS AND EQUIPMENT AS PER NEC ART. 625 & 750. THESE CHARGERS ARE USING A LOAD MANAGEMENT SYSTEM (LMS) PURSUANT TO 2023 NEC 625.42(b) AND 750.30(c).
2. THE DEMAND CURRENT AT THE EXISTING PNL-CABANA & NEW SUB PNL-EV NOT TO EXCEED 200A & 100A. WHEN USING SPARE BREAKERS MAKE SURE UPDATED DEMAND CURRENT IS BELOW OR EQUAL TO THE FEEDER AND PANEL BUS RATING.
3. KAIC RATING OF THE NEW PANEL AND CBs TO BE SAME OR HIGHER THAN FAULT CONTRIBUTION FROM THE UTILITY.
4. WIRING FOR ELECTRICAL VEHICLE CHARGING STATIONS TO BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND SPECIFICATIONS.
5. GROUNDING INSTALLATION AS PER NEC ART. 250.

- THE WALLBOX EV CHARGER SYSTEM WILL BE CONFIGURED TO NOT EXCEED 80% OF THE AVAILABLE POWER, REGARDLESS OF THE NUMBER OF WALLBOX 40A CIRCUIT BREAKERS IN THE EXISTING PNL-CABANA & NEW SUB PNL-EV.



# PULSAR PLUS

## Technical Datasheet

### General Specifications

Model	Pulsar Plus
Colour	White or black
Cable length	5 m (7 m optional) <sup>(1)</sup>
Charging Mode (IEC 61851-1)	Mode 3
Dimensions	166x163x62 mm (without cable)
Weight	1 kg (without cable)
Operating Temperature	-25 °C to +40 °C
Storage Temperature	+40 °C to 70 °C
Standards	CE mark (LVD 2014/35/EU, EMC 2014/53/EU) IEC 61851-1, IEC 61851-22, IEC 62196-2, BS 7671:2018 <sup>(2)</sup>

### User Interface & Communications

Connectivity	Wi-Fi, Bluetooth
User Identification	myWallbox App & Portal
User Interface	myWallbox App & Portal <sup>(3)</sup>
Charger Status Information	Blue RGB LED, myWallbox App & Portal
Included Features	Power Sharing Smart
Optional Features	PowerBoost, Dynamic Power Sharing

### Electrical Specifications

Charging Power	7.4 kW	11 kW	22 kW
Rated Voltage AC ± 10%	230 V	400 V	400 V
Rated Current	32 A (IP)	16 A (3P)	32 A (3P)
Connector Type (IEC 62196-2)	Type 1 / Type 2	Type 2	Type 2
Cable Width	up to 3x 10 mm <sup>2</sup>	up to 5x 10 mm <sup>2</sup>	up to 5x 10 mm <sup>2</sup>
Earthing Protection <sup>(4)</sup>	According to BS 7671:2018 requirements		
Configurable Current	from 6 A to rated current		
Rated Frequency	50 Hz / 60 Hz		
Protection Rating	IP54 / IK08		
Surge Category	CAT III		
Residual Current Detection	AC 30mA / DC 6mA <sup>(4)</sup>		
RCB	External RCB required <sup>(5)</sup>		

### Dimensions


### Part Number Structure




	Code	Definition
<b>A</b> Model	PLP1	Pulsar Plus
<b>B</b> Cable	0	5 m
	M	7 m
<b>C</b> Connector	1	Type 1
	2	Type 2
<b>D</b> Power	2	7.4 kW
	3	11 kW
	4	22 kW
<b>E</b> Additional Feature	9	Residual current detection (AC 30mA/DC 6mA)
	F	Residual current detection (AC 30mA/DC 6mA + Earthing protection)
<b>F</b> Custom	XX1	White
	XX2	Black

(1) Only available for Type 2 connectors.  
 (2) Only for 7.4 kW chargers.  
 (3) Only for chargers sold in the UK region.  
 (4) Internal RCD: 30 means tripping time characteristics according to IEC 62055.  
 (5) Type A or Type B according to local regulations.  
 (6) IEC 60958 compliance.

www.wallbox.com

sales@wallbox.com

wallbox 

COORDINATING PROFESSIONAL:	
<div><div><div>DURAK EVRİM ERCAN ENGINEERING   CONSULTING   ESTIMATING 201-920-2899 info@AmperEngineering.com</div></div><div>P.E.</div></div>	
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