volta

WEGMANS - RALEIGH

1200 WAKE TOWNE DR.
RALIEGH, NC 27609
AHJ: CITY OF RALEIGH

ITEM	TASK	YES	NO	N/A
1	CONTACT 811 UTILITY PRIOR TO EXCAVATION WORK			
2	NOTIFY EVCIA OF ANY DISCREPANCIES W/ PLANS OR POTENTIAL CONFLICTS			
3	VERIFY ALL FIELD CONDITIONS PRIOR TO START OF CONSTRUCTION IN ACCORDANCE WITH THESE PLANS.			
4	INSTALL WORK AREA PROTECTION MEASURES.			
5	FIELD LOCATE EXISTING UTILITIES AND CROSSINGS & VERIFY NO CONFLICTS W/PROPOSED INFRASTRUCTURE.			
6	FIELD VERIFY ALL STALL DIMENSIONS AND EQUIPMENT LOCATIONS.			
7	CONFIRM ALL ADA AND LOCAL REQUIREMENTS ARE MET.			
8	ESTABLISH TEMPORARY CONSTRUCTION ACCESS(ES).			
9	IMPLEMENT AND MAINTAIN EPSC CONTROL MEASURES PER LOCAL REQUIREMENTS.			
10	LOCATE VERTICAL AND HORIZONTAL UTILITIES PRIOR TO BORING.			
11	PROVIDE PROPOSED LIMITS OF ASPHALT OVERLAY SKETCH TO EVCIA & VOLTA (IF NEEDED).			
12	SEED & STABILIZE ALL DISTURBED AREAS AFTER FINAL GRADING.			

CONTRACTOR VERIFICATION CHECKLIST

CODE REQUIREMENTS:

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE BUILDING/DWELLING, STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL, AND FIRE/LIFE SAFETY CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THE LOCAL GOVERNING AUTHORITIES CODES.

CODE BLOCK

VOLTA PROPOSES TO INSTALL:

(2) ELECTRIC VEHICLE (EV) CHARGING STATION FIXTURES TO BE LOCATED IN EXISTING PARKING AREAS THAT ARE WITHIN ON-SITE PARKING SPACES AND PART OF AN EXISTING PROPERTY.

THE EV FIXTURES ARE CUSTOMARY ACCESSORY AND INCIDENTAL TO THE EXISTING COMMERCIAL USE AND SOLELY FOR THE BENEFIT OF CUSTOMERS VISITING THE STORES. THE FIXTURES ARE LOCATED TO PROVIDE PRIORITY PARKING FOR PATRONS WITH EVS AND DISPLAY VISIBILITY ALONG THE INTERIOR CIRCULATION AISLE FOR SHOPPERS. THERE ARE NO PROPOSED CHANGES TO THE PARKING SPACES OR ANY OF THE EXISTING TRAFFIC CIRCULATION AT THE PROPERTY.

(2) ADDITIONAL STALLS WILL BE STRIPED OUT FOR VOLTA STATIONS. PARKING STALL COUNT MUST CONFIRM 1 STALL PER 400 SQUARE FEET.

PROJECT DESCRIPTION

APPLICANT:
EV CHARGING INSTALLERS OF AMERICA LLC.
1214 ROUTE 23, BLDG. B
WANTAGE, NJ 07461
CONTACT: CHRIS LEHR
PHONE #: 973-897-1697
EMAIL: chris.lehr@evchargerinstallers.com

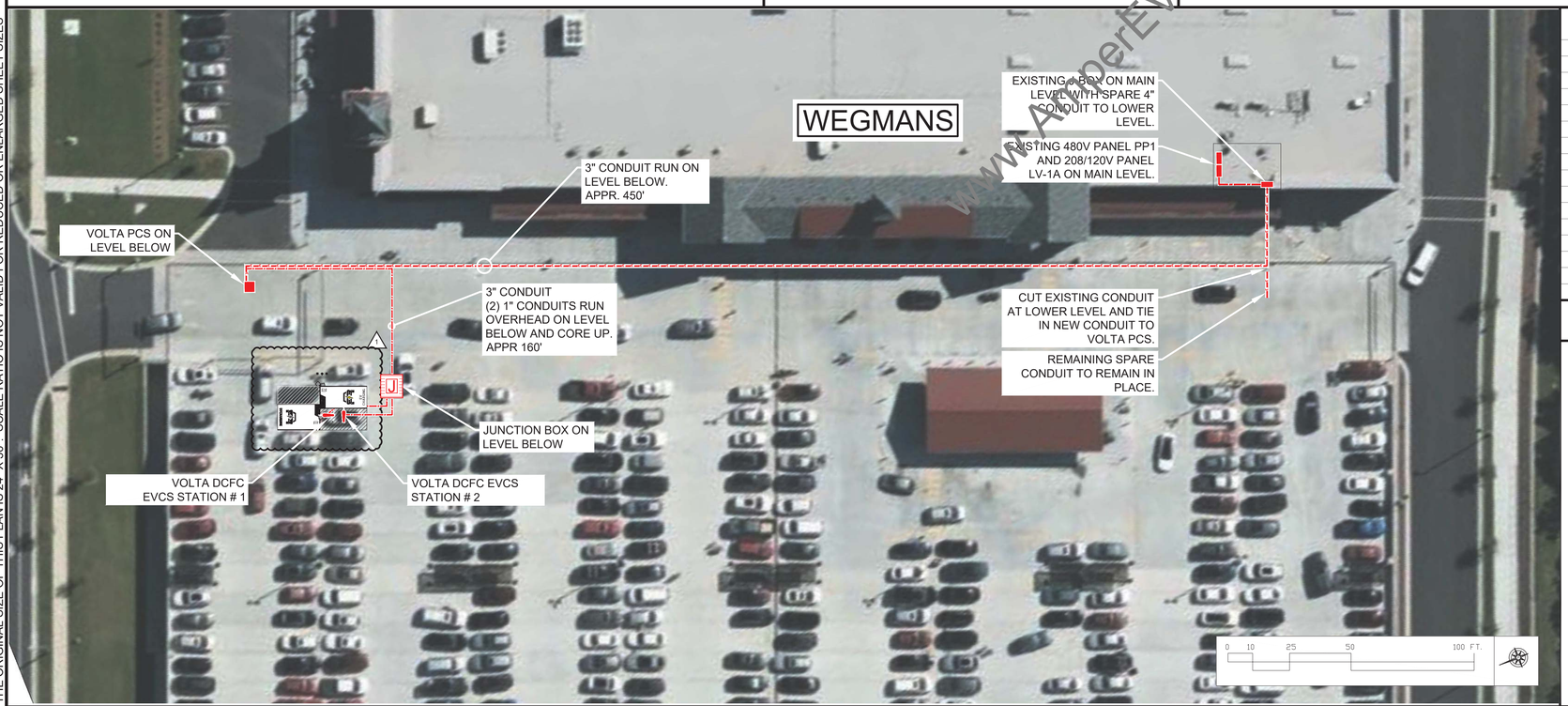
VOLTA REPRESENTATIVE
VOLTA, Inc.
155 DE HARO STREET
SAN FRANCISCO CA 94103
CONTACT: TIM NIES
PHONE #: 433-717-8206
EMAIL: timothy.nies@voltacharging.com

SITE PARTNER:
WEGMANS - REAL ESTATE AND SITE DEVELOPMENT
1500 BROOKS AVENUE
ROCHESTER, NY 14624
CONTACT: TYRESE BRYANT
PHONE #: 585-452-1168
EMAIL: tyrese.bryant@wegmans.com

PROGRAM MANAGER:
EV CHARGING INSTALLERS OF AMERICA LLC.
1214 ROUTE 23, BLDG. B
WANTAGE, NJ 07461
CONTACT: GREG COX
PHONE #: 862-312-9700
EMAIL: greg.cox@evchargerinstallers.com

PROFESSIONAL ENGINEERING:
DURAK EVRIM ERCAN, P.E.
P.O. BOX 35
LIVINGSTON, NJ 07039
CONTACT: DURAK EVRIM ERCAN, P.E.
PHONE #: 201-920-2899
EMAIL: evrim@amperengineering.com

PROJECT TEAM



OVERALL SITE PLAN

SHEET	DESCRIPTION
G-1.0	COVER SHEET
G-2.0	NOTES AND LEGENDS
G-4.0	PLAN SUMMARY
C-3.1	FOUNDATION LAYOUTS
C-3.3	DETAILS
C-4.0	STRIPING DETAILS
E-1.1	ELECTRICAL DETAILS
E-1.4	ELECTRICAL NOTES AND RISER

SHEET INDEX

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

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING LOCATIONS, CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

DO NOT SCALE DRAWINGS

volta
155 DE HARO STREET
SAN FRANCISCO, CA 94103

EV CHARGING INSTALLERS OF AMERICA, LLC
1214 Rte 23, Bld B
Wantage, NJ 07461
Phone: 855-373-9566

DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

REV	DATE	DESCRIPTION	DRN BY	CHK BY
A	04/18/22	CD50	MM	GC
B	05/13/22	CD100	MM	GC
1	07/08/22	AHJ Compliance	MM	GC

ISSUE DATE
08/05/22

ISSUED FOR
CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 047956 08/05/2022 ENGINEER DURAK EVRIM ERCAN

ELECTRIC VEHICLE CHARGING STATIONS

WEGMANS
RALIEGH, NC

EVCIA PROJECT # 1741

SHEET TITLE
COVER SHEET

SHEET NUMBER
G-1.0

1741-NC-Wegmans-108-080522.dwg
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36" SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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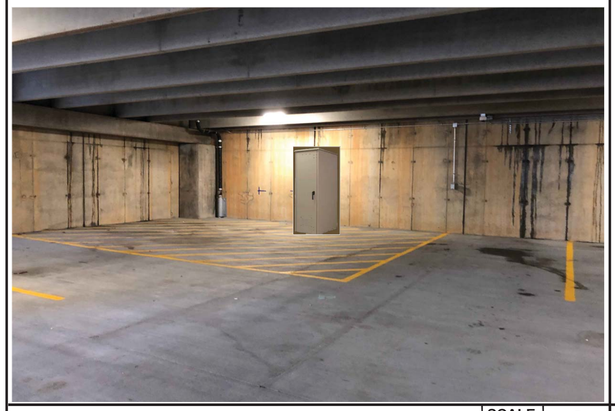
EVCIA #1741 - WEGMANS - RALEIGH NC - (2) DCFC EV STATIONS

PLAN SUMMARY AND DETAILS G-4.0

REVISION LEVEL: REV. B - CD100

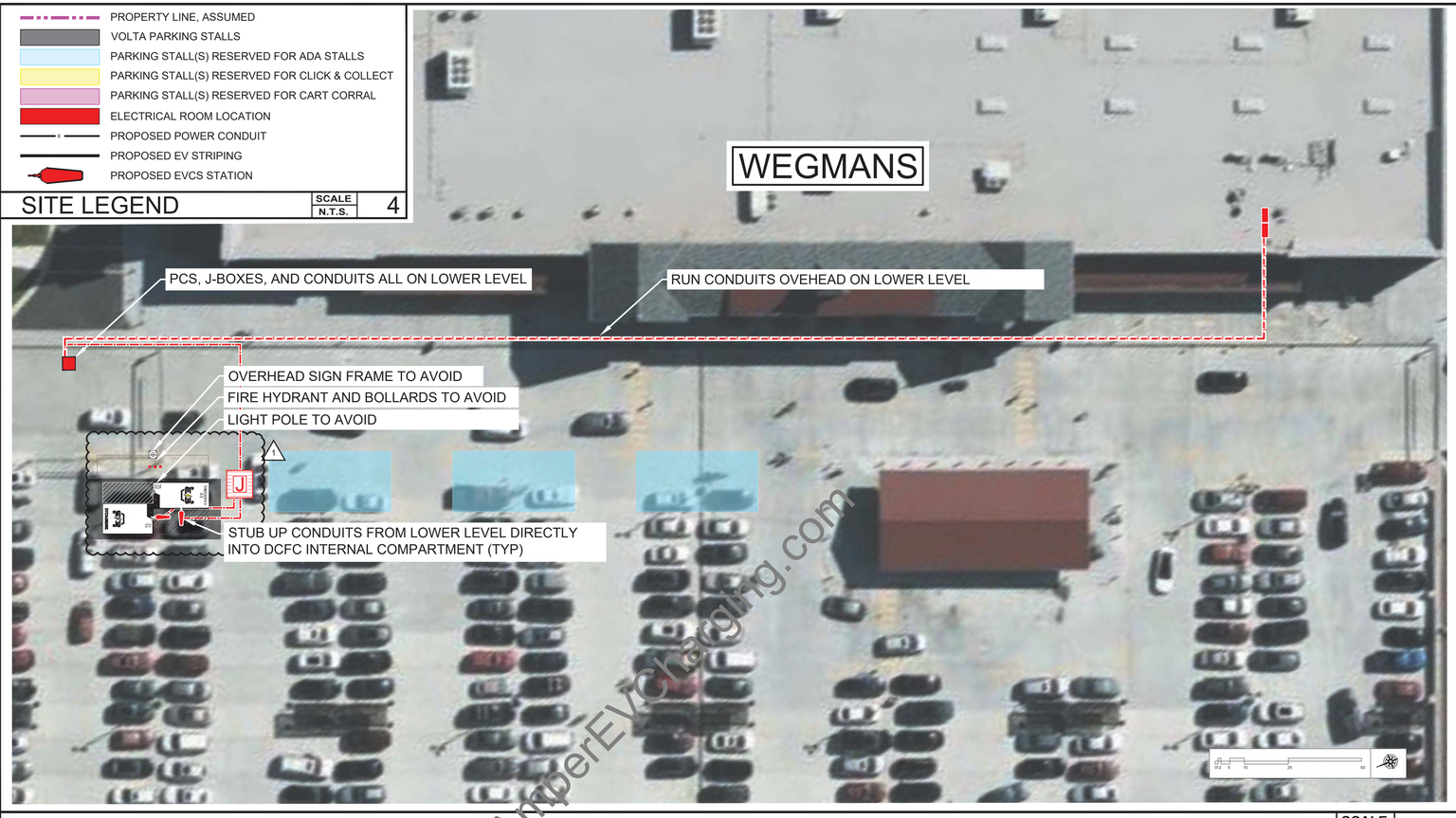
(NOT USED) SCALE N.T.S. 1



PCS LOCATION SCALE N.T.S. 2

- PROPERTY LINE, ASSUMED
- VOLTA PARKING STALLS
- PARKING STALL(S) RESERVED FOR ADA STALLS
- PARKING STALL(S) RESERVED FOR CLICK & COLLECT
- PARKING STALL(S) RESERVED FOR CART CORRAL
- ELECTRICAL ROOM LOCATION
- PROPOSED POWER CONDUIT
- PROPOSED EV STRIPING
- PROPOSED EVCS STATION

SITE LEGEND SCALE N.T.S. 4



ENLARGED SITE PLAN - DCFC 01 & 02 SCALE N.T.S. 3

EVCS PLACEMENT INFORMATION PROVIDED BY VOLTA

PLACEMENTS:
(2) CHARGING STATIONS AS SHOWN ON PLANS.

EVCS 01 & 02:
(4) STALLS USED
LOCATION - CONCRETE DECK PARKING AREA
REMOTE HANDLE - NO
BOLLARDS - YES
TREES - NONE
SHRUBS - NONE
PRE-EXISTING SIGNS - NONE
FIRE HYDRANTS - YES
LIGHT POSTS - YES

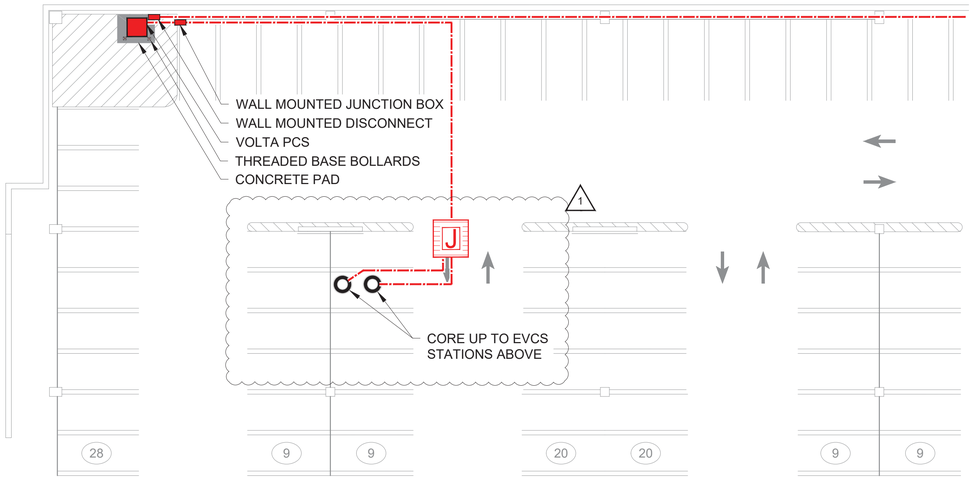
OTHER: STRIPE OUT FIRST TWO STALLS FOR STATIONS

PCS:
(1) STALLS USED
LOCATION - LOWER LEVEL PARKING AREA
REMOTE HANDLE - N/A
BOLLARDS - YES
TREES - N/A
SHRUBS - N/A
PRE-EXISTING SIGNS - N/A
FIRE HYDRANTS - N/A
LIGHT POSTS - N/A

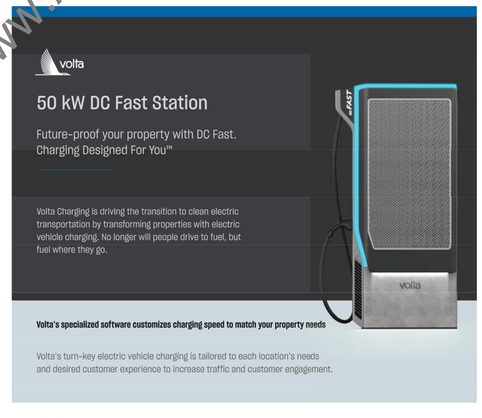
ELECTRICAL AND CONDUIT:

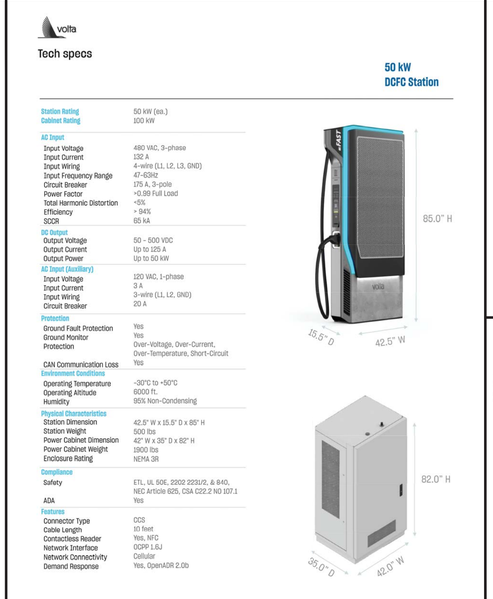
- FEED FROM EXISTING PANELS TO NEW PCS EQUIPMENT AREA
- INTERIOR SURFACE MOUNTED
- EXACT CONDUIT RUN TO BE VERIFIED DURING BID WALK

DCFC NOTES SCALE N.T.S. 4

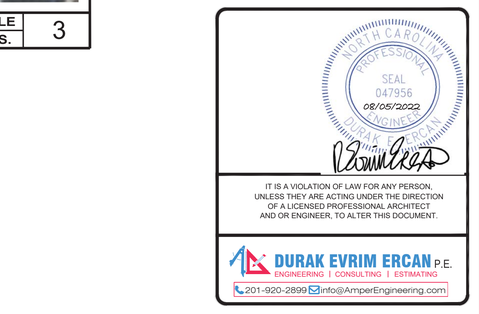


LOWER LEVEL FLOOR PLAN (PARTIAL) SCALE N.T.S. 5





SYSTEM SPECIFICATIONS



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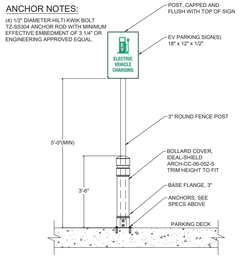
201-920-2899 info@AmperEngineering.com

SIGN INSTALLATION HEIGHT:
FROM FINISH GRADE TO BOTTOM OF SIGN, INSTALL AT 60".
IF WITHIN AN ACCESSIBLE ROUTE, INSTALL AT 80"

ANCHOR NOTES:
(4) 1/2" DIAMETER HILTI KWIK BOLT TZ-SS304 ANCHOR ROD WITH MINIMUM EFFECTIVE EMBEDMENT OF 3 1/4" OR ENGINEERING APPROVED EQUAL.



SIGN DETAILS SCALE N.T.S. 6

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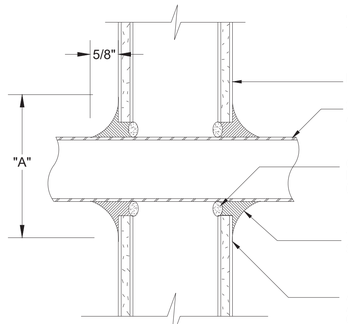


"A" = DIA. OF CROWN CROWN DIAMETER TO BE THE DIAMETER OF THE WALL OPENING PLUS 1"

FIRE-RATED GYPBD/STUD WALL ASSEMBLY

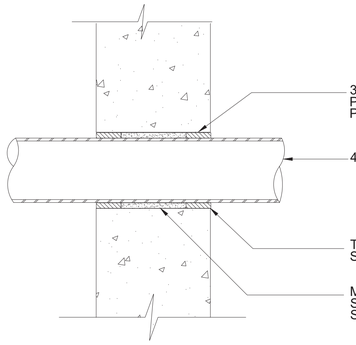
3" MAX. DIA. MTL. PIPE. PROVIDE NOM. 1" ANNULAR SPACE AROUND PIPE

OPTIONAL FORMING MATERIAL - RECESSED 1/2" FROM THE SURFACE FOR FS900 MATERIAL (MINERAL WOOL, POLYSTYRENE,..ETC.)

TREMCO THROUGH-PENETRATION FIRE-STOP SYSTEMS, ICBO #3198

ADD. MATERIAL ADDED TO FORM 5/8" CROWN AROUND CONDUIT AND LAPPING 1" BEYOND OPENING

FRAMED WALL PENETRATION



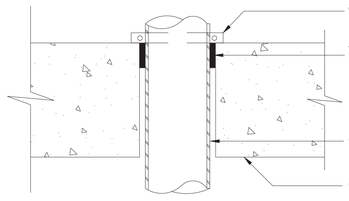
3 1/4" MIN. CONC. WALL OR CMU. OPENING TO PROVIDE 3/4" MAX. ANNULAR SPACE AROUND PIPE

4" MAX. DIAM. METAL PIPE

TREMCO THROUGH-PENETRATION FIRE-STOP SYSTEMS, ICBO #3198

MINERAL WOOL (4 PCF) PACKED INTO ANNULAR SPACE AND RECESSED 1/2" FROM WALL SURFACES

CONCRETE WALL PENETRATION



CONDUIT FLOOR CLAMP, TYP.

TREMCO THROUGH-PENETRATION FIRE-STOP SYSTEMS, ICBO #3198

CONDUIT PER PLAN (4"~ MAX.)

(E) CONCRETE FLOOR

CONCRETE FLOOR PENETRATION

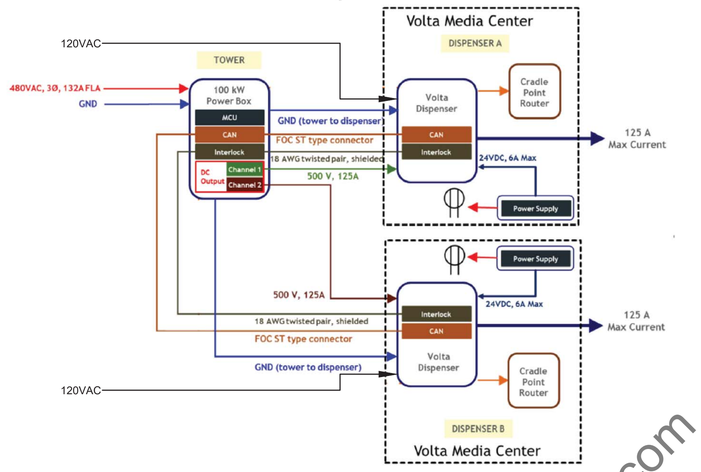
NOTES:

1. CONTRACTOR TO X-RAY PRIOR TO DRILLING OR CORING TO LOCATE (E) RE-BAR. DO NOT CUT RE-BAR.
2. PENETRATIONS THRU WALLS SHALL COMPLY WITH T24, CBC SECTION 709.6.
   F RATING - PENETRATIONS 4" ~ OR LESS
   T RATING - PENETRATIONS LARGER THAN 4" ~, PENETRATIONS @ CORRIDOR CLGS. WHICH ARE NOT RATED, BELOW
3. PENETRATIONS THRU FLOORS/ CEILINGS SHALL COMPLY WITH T24, CBC SECTION 710.3.
   F RATING - PENETRATIONS 4" ~ OR LESS
   T RATING - PENETRATIONS LARGER THAN 4" ~, PENETRATIONS NOT CONTAINED WITHIN A WALL.

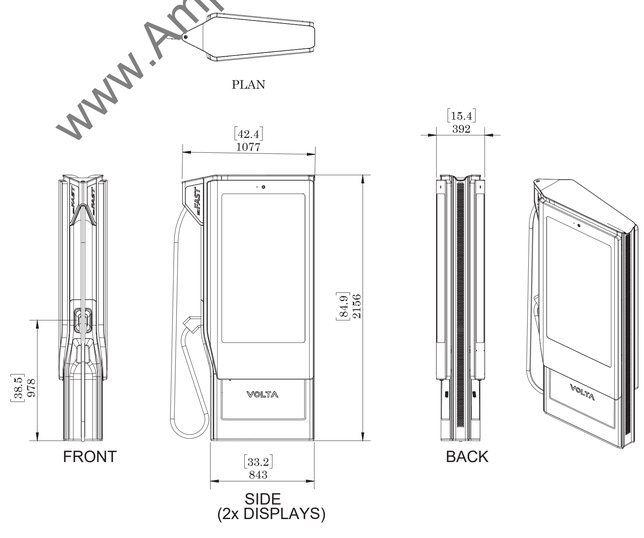
PENETRATION DETAIL

SCALE N.T.S. 1

1 Tower, 2-Dispenser Configuration System



TYPICAL WIRING DIAGRAM 2



FAST CHARGING STATION SPECIFICATIONS

SCALE N.T.S. 3

(NOT USED)

CHARGER SPECIFICATIONS:

SIZE: H 85.0" x W 42.5" x D 15.5"
CORD LENGTH: 12.5'
POWER OUTPUT: 0-500VDC, 125A(MAX)
60 kW MAX
PLUG: CCS1 COMPLIANT CONNECTOR
LISTINGS: UL 1741

POWER REQUIREMENTS:

CHARGING UNIT: 132A/3P 480Y/277V
175A BREAKER
STATION AUX POWER:
MEDIA STATIONS: 6A/1P 120V
NON-MEDIA STATIONS: 3A/1P 120V
20A BREAKER

NOTES:

THE GRIP RANGE FOR THE CHARGE CABLE BEGINS AT 38.5" ABOVE PARKING SURFACE.

volta
155 DE HARO STREET
SAN FRANCISCO, CA 94103

EV charging Installers Of America
EV CHARGING INSTALLERS OF AMERICA, LLC
1214 Rte 23, Bld B
Wantage, NJ 07461
Phone: 855-373-9566

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REV	DATE	DESCRIPTION	DRN BY	CHK BY
A	04/18/22	CD50	MM	GC
B	05/13/22	CD100	MM	GC
1	07/08/22	AHJ Compliance	MM	GC

ISSUE DATE
08/05/22

ISSUED FOR
CONSTRUCTION

ELECTRIC VEHICLE CHARGING STATIONS

WEGMANS
RALIEGH, NC

EVCIA PROJECT # 1741

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-1.1

1741-NC-Wegmans-108-080522.dwg
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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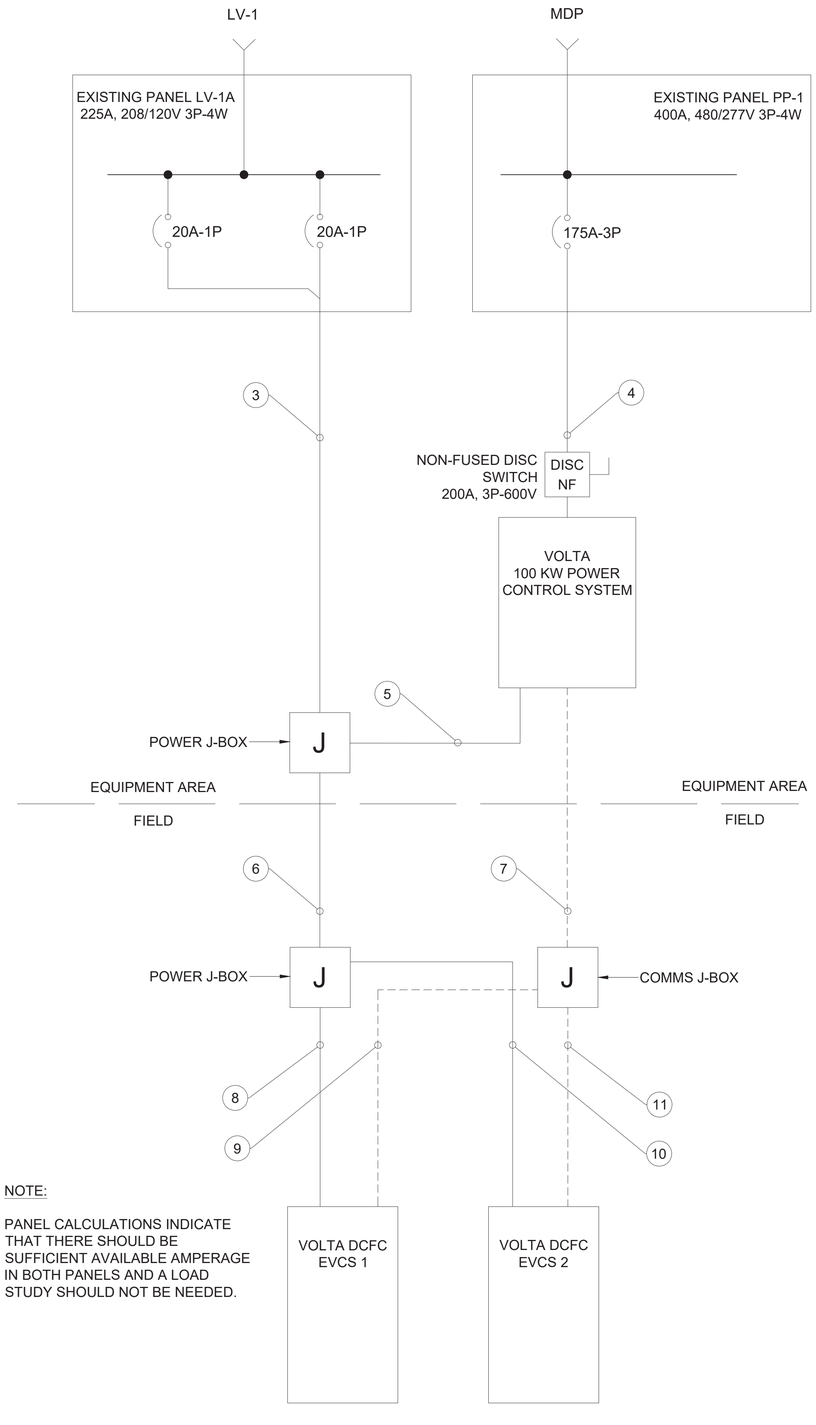

NOTE:

PANEL CALCULATIONS INDICATE THAT THERE SHOULD BE SUFFICIENT AVAILABLE AMPERAGE IN BOTH PANELS AND A LOAD STUDY SHOULD NOT BE NEEDED.

CONDUIT SCHEDULE

Conduit Number	Length Ft.	Conduit Size In.	Conductors	Conduit Fill %
3	450	1	4 #6-1kV, 1 #6G	29
4	450	3	3 #2/0, 1 #1G	25
5	10	3	4 #1/0-1kV, 1 #6G	11
6	160	3	4 #1/0-1kV & 1#6G, 4 #6-1kV & 1 #6G	14
7	160	(2) 1-1/2	2 #18 AWG CU SHIELDED TP, 4-PR OM3 MULTIMODE-50/125µ, W/ST CONNECTORS	--
8	20	3	2 #1/0-1kV & 1 #6G, 2 #6-1kV & 1 #6G	37
9	20	(2) 1	1 #18 AWG CU SHIELDED TP, 2-PR OM3 MULTIMODE-50/125µ, W/ST CONNECTORS	--
10	20	3	2 #1/0-1kV & 1 #6G, 2 #6-1kV & 1 #6G	37
11	20	(2) 1	1 #18 AWG CU SHIELDED TP, 2-PR OM3 MULTIMODE-50/125µ, W/ST CONNECTORS	--

PANEL SCHEDULES

PANEL PP-1

VOLTAGE: 277/ 480
3 PHASE, 4 WIRE

LOCATION: Main Level Electrical
BUS (A): 400
MAIN (A): MLO

No.	CIRCUIT DESCRIPTION	LOAD (KVA) CONT	RCPT	MTR	A/C	KITCH	MISC	BREAKER TRIP	POLE	PHASE A	B	C	BREAKER POLE	TRIP	LOAD (KVA) MISC	KITCH	A/C	MTR	RCPT	CONT	CIRCUIT DESCRIPTION	No.
1	LIGHTING - F.E.OFFICES/RESTROOMS	0.60						20	1	0.60			1	20							SPARE	2
3	LIGHTING - WINDSCREEN	0.70						20	1		0.70		1	20							SPARE	4
5	LIGHTING - FINE WINE ROOM TRK LTS	0.10						20	1			0.10	1	20							SPARE	6
7	VOLTA POWER SUPPLY PCS2							20	1	0.00			1	20							SPARE	8
9	SPARE							20	1		0.00		3	60							(1) AC-6 ROOF	10
11	SPARE							20	1			0.00	X	X							X	12
13	SPARE							20	1	0.00			X	X							X	14
15	SPARE							20	1		0.00		3	30							(1) AC-12 ROOF	16
17	SPARE							20	1			0.00	X	X							X	18
19	**VOLTA POWER SUPPLY PCS**	**36.60**						**175**	**3**	36.60			X	X							X	20
21	**X**	**36.60**						**X**	**X**		36.60		1	20							SPARE	22
23	**X**	**36.60**						**X**	**X**			36.60	1	20							SPARE	24
25	BLANK									0.00			1	20							SPARE	26
27	BLANK										0.00		1	20							SPARE	28
29	BLANK											0.00	1	20							SPARE	30
31	BLANK									0.00											BLANK	32
33	SPARE							20	1		0.00										BLANK	34
35	SPARE							20	1			0.00									BLANK	36
37	SPARE							20	1	0.00											BLANK	38
39	SPARE							20	1		0.00										BLANK	40
41	SPARE							20	1			0.00									BLANK	42
	LOADS W/ NEC 220 DEMAND FACTORS (KVA)							**TOTAL**		**37.20**	**37.30**	**36.70**			0.00	0.00	0.00	0.00	0.00	111.20	**CONNECTED KVA 111.2**	
		CONT	RCPT	MTR	A/C	KITCH	MISC															
	A PHASE	46.50	0.00	0.00	0.00	0.00	0.00	46.50														
	B PHASE	46.63	0.00	0.00	0.00	0.00	0.00	46.63														
	C PHASE	45.88	0.00	0.00	0.00	0.00	0.00	45.88														
	DEMAND PER LOAD TYPE (KVA)	139.00	0.00	0.00	0.00	0.00	0.00	139.00														
	CONNECTED LOAD LARGEST PHASE (KVA)							46.63														
	CONNECTED LOAD LARGEST PHASE (AMP)							56														
	TOTAL DEMAND LOAD FOR PANEL (KVA)							139.00														
	TOTAL DEMAND LOAD FOR PANEL (AMP)							167														
	MINIMUM FEEDER AMPACITY SELECTION (AMP)							**167**														

CONTINUOUS:125% LOAD
RECEPTACLES:100% 1ST 10 KW + 50% REMAINING
MOTORS:125% LARGEST MOTOR + 100% REMAINING
A/C or HEAT:100% LOAD
KITCHEN:65% LOAD
MISC:100% LOAD

PANEL NOTES

1) IF PANEL EXISTING AND ACTUAL CONNECTED KVA ARE NOT KNOWN, ASSUMPTIONS ARE MADE AS:
1A) FOR CONTINUOUS LOADS CONNECTED LOAD ASSUMED TO BE %80 OF THE OCPD RATING.
1B) FOR NON-CONTINUOUS LOADS CONNECTED LOAD ASSUMED TO BE %100 OF THE OCPD RATING.
2) DESIGN IS BASED ON NEC TABLE 310.15(B)(16) COPPER THHN CONDUCTORS. EXISTING CONDUCTORS AND WIRING MAY NEED TO BE INSPECTED AND VERIFIED BY ELECTRICAL CONTRACTOR.
3) EVCS ARE CONSIDERED CONTINOUS LOADS AND ACTUAL NAME PLATE VALUES ARE USED.

PANEL LV-1A

VOLTAGE: 120 208
3 PHASE, 4 WIRE

LOCATION: MAIN LEVEL ELECTRICAL
BUS (A): 225
MAIN (A): MLO

No.	CIRCUIT DESCRIPTION	LOAD (KVA) CONT	RCPT	MTR	A/C	KITCH	MISC	BREAKER TRIP	POLE	PHASE A	B	C	BREAKER POLE	TRIP	LOAD (KVA) MISC	KITCH	A/C	MTR	RCPT	CONT	CIRCUIT DESCRIPTION	No.
1	RECEPTACLES - FROZEN FOOD		0.40					20	1	2.90			2	25			2.50				VAV-12-01 CUSTOMER SERVICE	2
3	CORD DROPS - HBC		0.40					20	1		2.90		X	X			2.50				X	4
5	CORD DROPS - FRZN FOODS CASE		0.40					20	1			0.40	1	20							SPARE	6
7	CORD DROPS - FRZN FOODS CASE		0.40					20	1	0.40			1	20							SPARE	8
9	CORD DROP - FRONT END		0.40					20	1		2.00		2	20					1.60		PLUGMOLD - HBC	10
11	SPARE		0.00					20	1			1.60	X	X					1.60		X	12
13	COLUMN RECPT - REGISTER #24		0.40					20	1	1.60			1	20					1.20		PLUGMOLD - HBC	14
15	SPARE							20	1		1.20		1	20					1.20		X	16
17	SPARE							20	1			1.20	2	25			1.20				VAV-12-09 FE SVC MDSE OFFICE	18
19	**VOLTA CHARGING STATION 1 AUX**	**0.36**						**20**	**1**	1.56			X	X			1.20				X	20
21	**VOLTA CHARGING STATION 2 AUX**	**0.36**						**20**	**1**		0.36		1	20							SPARE	22
23	SPARE							20	1			0.00	1	20							SPARE	24
25	CORD DROPS		0.40					20	1	0.40			1	20							SPARE	26
27	CORD DROPS		0.40					20	1		0.40		1	20							SPARE	28
29	SPARE							20	1			0.00	1	20							SPARE	30
31	SPARE							20	1	0.00			1	20							SPARE	32
33	CORD REELS - GROC MDSE		0.40					20	1		0.80		1	20					0.40		CORD DROP - WINE	34
35	SPARE							20	1			0.40	1	20					0.40		CORD REEL - WINE	36
37	SPARE							20	1	0.00			1	20							SPARE	38
39	SPARE							20	1		0.00		1	20							SPARE	40
41	SPARE							20	1			0.10	1	20						0.10	LCP1 CONTROL CIRCUIT	42
v12 - 07/19/2022	**LOADS W/ NEC 220 DEMAND FACTORS (KVA)**							**TOTAL**		**6.86**	**7.66**	**3.70**			0.00	0.00	7.40	0.00	10.00	0.82	**CONNECTED KVA 18.22**	
		CONT	RCPT	MTR	A/C	KITCH	MISC															
	A PHASE	0.45	2.80	0.00	3.70	0.00	0.00	6.95														
	B PHASE	0.45	4.80	0.00	2.50	0.00	0.00	7.75														
	C PHASE	0.13	2.40	0.00	1.20	0.00	0.00	3.73														
	DEMAND PER LOAD TYPE (KVA)	1.03	10.00	0.00	7.40	0.00	0.00	18.43														
	CONNECTED LOAD LARGEST PHASE (KVA)							7.75														
	CONNECTED LOAD LARGEST PHASE (AMP)							65														
	TOTAL DEMAND LOAD FOR PANEL (KVA)							18.43														
	TOTAL DEMAND LOAD FOR PANEL (AMP)							51														
	MINIMUM FEEDER AMPACITY SELECTION (AMP)							**65**														

CONTINUOUS:125% LOAD
RECEPTACLES:100% 1ST 10 KW + 50% REMAINING
MOTORS:125% LARGEST MOTOR + 100% REMAINING
A/C or HEAT:100% LOAD
KITCHEN:65% LOAD
MISC:100% LOAD

PANEL NOTES

1) IF PANEL EXISTING AND ACTUAL CONNECTED KVA ARE NOT KNOWN, ASSUMPTIONS ARE MADE AS:
1A) FOR CONTINUOUS LOADS CONNECTED LOAD ASSUMED TO BE %80 OF THE OCPD RATING.
1B) FOR NON-CONTINUOUS LOADS CONNECTED LOAD ASSUMED TO BE %100 OF THE OCPD RATING.
2) DESIGN IS BASED ON NEC TABLE 310.15(B)(16) COPPER THHN CONDUCTORS. EXISTING CONDUCTORS AND WIRING MAY NEED TO BE INSPECTED AND VERIFIED BY ELECTRICAL CONTRACTOR.
3) EVCS ARE CONSIDERED CONTINOUS LOADS AND ACTUAL NAME PLATE VALUES ARE USED.

VOLTAGE DROP CALCS

VOLTAGE DROP CALCULATIONS						
Station	Length	Voltage	Current	Cond. Size	Voltage Drop %	Voltage Drop Volts
1	540	120	6	6	1.19%	1.43
	180	500	125	#1/0	0.99%	4.95
2	550	120	6	6	1.21%	1.45
	180	500	125	#1/0	0.99%	4.95
	NOTE: ALL POWER CONDUCTORS TO BE 1,000 VOLT RATED					

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK AND RELATED ACTIVITIES PERFORMED ON-SITE SHALL BE DONE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE (NEC) STANDARDS BEING ENFORCED BY ALL APPLICABLE JURISDICTIONAL REQUIREMENTS AT THE TIME OF CONSTRUCTION.
2. UTILITY EQUIPMENT INSTALLATIONS AND PREP WORK SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY ENGINEER AT TIME OF PRECONSTRUCTION MEETING TO ENSURE ACCURACY OF INSTALLATIONS.
3. CONDUIT PATHS ARE REPRESENTATIVE ONLY. EXACT CONDUIT PLACEMENT TO BE DETERMINED ON SITE BASED ON FIELD CONDITIONS.
4. A NATIONALLY RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH NEC ARTICLE 110.3
5. ALL EXTERIOR EQUIPMENT SHALL BE RAIN TIGHT AND APPROVED FOR USE IN WET CONDITIONS.
6. ALL CONDUCTORS TO BE COPPER
7. ALL CONDUCTORS WITHIN A COMMON CONDUIT SHALL BE RATED FOR THE HIGHEST VOLTAGE WITH THE CONDUIT.
8. ALL CONDUCTORS AND CABLES SHALL BE PROVIDED WITH STRAIN RELIEF UPON ENTRY INTO ENCLOSURES
9. EACH UNGROUNDED CONDUCTOR SHALL BE IDENTIFIED BY PHASE AND SYSTEM PER NEC 210.5
10. ALL UNDERGROUND CONDUIT TO BE HDPE SDR11 (OR BETTER), UL RATED, MINIMUM 24" DEEP.
11. WIRING FOR VOLTA CHARGING STATIONS TO BE INSTALLED PER MANUFACTURER'S DIRECTIONS AND SPECIFICATIONS.
12. CHARGING UNITS ARE EQUIPPED WITH AN INTEGRATED CONTACTOR TO PREVENT BACK FEEDING OF POWER TO THE SOURCE.
13. SHORT CKTS RATING OF NEW PANELS AND EVCS EQMT SHALL MATCH THE EXISTING POWER SYSTEM RATING AND TO BE FIELD VERIFIED BY THE CONTRACTOR BEFORE STARTING INSTALLATION
14. CONTRACTOR IS RESPONSIBLE TO VERIFY DESIGN, ENGINEERING ASSUMPTIONS AND EXISTING FIELD CONDITIONS. REPORT ANY INSUFFICIENCIES TO ENGINEER OF RECORD PRIOR TO ANY WORK BEING PERFORMED.
15. WHERE A STEP-DOWN TRANSFORMER IS USED, IF THE DISTANCE FROM THE TRANSFORMER SECONDARY TERMINALS TO THE PANEL IS MORE THAN 25 FEET, AN ADDITIONAL OCPD MUST BE INSTALLED WITHIN 25 FEET OF THE TRANSFORMER SECONDARY TERMINALS. NEC 240.21(C)(3).
16. THE CONTRACTOR SHALL INSTALL 75°C RATED TERMINAL CIRCUIT BREAKERS IN PANEL.
17. THE CONTRACTOR SHALL INSTALL ALL EV EQUIPMENT PER NEC ART. 625 AND 110.25 TO PROVIDE EASY ACCESS TO OCPD DEVICES.
18. ALL METALLIC COMPONENTS SHALL BE GROUNDED VIA ELECTRICAL GROUNDING CONDUCTORS.
19. THE GROUND SYSTEM SHALL BE INSTALLED AS PER NEC ART. 250.

ABBREVIATIONS:

1KV	1000V RATED CONDUCTOR
A	AMPERE
AC	ALTERNATING CURRENT
ART	ARTICLE
AUX	AUXILIARY
BLDG	BUILDING STRUCTURE
CONC	CONCRETE
COND	CONDUCTOR
CU	COPPER
DC	DIRECT CURRENT
DCFC	DIRECT CURRENT FAST CHARGER
DISC	DISCONNECT
EGC	EQUIPMENT GROUNDING CONDUCTOR
(E)	EXISTING
EMT	ELECTRIC METALLIC TUBING
EV	ELECTRIC VEHICLE
EVCS	ELECTRIC VEHICLE CHARGING SYSTEM
GALV	GALVANIZED
GND	GROUND
HDG	HOT DIPPED GALVANIZED
I	CURRENT
KVA	KILOVOLT AMPERE
M	METER
MBJ	MAIN BONDING JUMPER
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MAX	MAXIMUM
MIN	MINIMUM
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NTS	NOT TO SCALE
(N)	NEW
OC	ON CENTER
PCS	POWER CONTROL SYSTEM
PH	PHASE
PVC	POLYVINYL CHLORIDE
RMC	RIGID METALLIC CONDUIT
SCH	SCHEDULE
SP	SPARE
TP	TWISTED PAIR
TYP	TYPICAL
V	VOLT
W	WATT
XFMR	TRANSFORMER

volta
155 DE HARO STREET
SAN FRANCISCO, CA 94103

EV charging Installers of America
EV CHARGING INSTALLERS OF AMERICA, LLC
1214 Rte 23, Bld B
Wantage, NJ 07461
Phone: 855-373-9566

DURAK EVRIM ERCAN P.E.
ENGINEERING | CONSULTING | ESTIMATING
201-920-2899 info@AmperEngineering.com

REV	DATE	DESCRIPTION	DRN BY	CHK BY
A	04/18/22	CD50	MM	GC
B	05/13/22	CD100	MM	GC
1	07/08/22	AHJ Compliance	MM	GC

ISSUE DATE
08/05/22

ISSUED FOR
CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 047956 08/05/2022 ENGINEER DURAK EVRIM ERCAN

ELECTRIC VEHICLE CHARGING STATIONS

WEGMANS
RALIEGH, NC

EVCIA PROJECT # 1741

SHEET TITLE
ELECTRICAL NOTES & RISER

SHEET NUMBER
E-1.4

1741-NC-Wegmans-108-080522.dwg
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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