

ELECTRIC VEHICLE CHARGING SYSTEM INSTALLATION

SUNNYLAND EVSE INSTALLATION

14140 SUNNYLAND LN, SUNNYVILLE, JO 44444



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ABBREVIATIONS	
(E)	DENOTES EXISTING SYSTEM
(N)	NEW
(R)	RELOCATED
AFG	ABOVE FINISH GRADE
NEMA	NATIONAL ELECTRIC MANUFACTURES ASSOCIATION
NEC	NATIONAL ELECTRIC CODE
SQFT	SQUARE FEET
TYP	TYPICAL OR COMMON ELEMENTS OF A SELECTION
A	AMPS
AC	ALTERNATING CURRENT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
CU	COPPER
DC	DIRECT CURRENT
KW	1,000 WATTS
M	METER
V	VOLTAGE
VA	VOLT-AMP (AC)
W	WATTS
DAS	DATA ACQUISITION SYSTEM
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METAL TUBING
FMC	FLEXIBLE METAL CONDUIT
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND
IG	ISOLATED GROUND
J-BOX / JB	JUNCTION BOX
MSP	MAIN SERVICE PANEL
PNL	PANEL BOARD OR PANEL
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
UON	UNLESS OTHERWISE NOTED
WP	WEATHER PROOF
XFMR	TRANSFORMER

SYMBOL LEGEND	
	WALL MOUNT CHARGING STATION
	PEDESTAL MOUNTED CHARGING STATION
	MAIN SERVICE PANEL
	AC DISCONNECT
	ABOVE GROUND CONDUIT
	UNDERGROUND CONDUIT
	CABLE CONCEALED IN WALL OR CEILING
	SURFACE MOUNTED JUNCTION BOX
	UNDERGROUND PULL-BOX
	CONCEALED JUNCTION BOX

- ### NOTES
- INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, ETC. OF ALL AUTHORITIES HAVING JURISDICTION IN EFFECT AT THE TIME OF THE BUILDING PERMIT.
 - WHERE CONFLICTS EXIST BETWEEN CODES, STANDARDS OR THIS SPECIFICATION, THE HIGHER REQUIREMENT SHALL APPLY.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF HIS WORKERS, ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR COORDINATING THE WORK UNDER THIS CONTRACT.
 - CONTINUOUSLY MAINTAIN THE CONSTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION. DAMAGE TO FINISHES SHALL BE PROPERLY RESTORED.
 - EVSE ENCLOSURE SHALL BE NEMA RATED
 - EVSE CORD LENGTH SHALL NOT EXCEED 25'
 - EVSE CONNECTOR SHALL BE MOUNTED AT A HEIGHT BETWEEN 36" AND 48" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
 - MECHANICAL AND ELECTRICAL SUPPORT COMPONENTS, INCLUDING STRUT AND HARDWARE, SHALL BE HOT DIPPED GALVANIZED OR EQUIVALENT ELECTROPLATED FINISH.
 - ALL GROUNDED CONDUCTORS ARE WHITE AND EQUIPMENT GROUNDING CONDUCTORS ARE GREEN OR BARE PER (NEC 200-6 (A), EX 5)
 - LIQUID TIGHT FLEXIBLE METAL CONDUIT IS GENERALLY SUITABLE FOR INSTALLATION IN WET AND DRY LOCATIONS. SHOULD IT BE EMPLOYED, SUPPORTS WILL BE NO MORE 12 INCHES FROM BOXES (JUNCTION BOX, CABINETS, OR CONDUIT FITTING) AND NO MORE THAN 54 INCHES APART PER NEC
 - ALL CONDUCTORS BELOW 100A SHALL BE COPPER, UNLESS OTHERWISE NOTED
 - SURFACE CONDUIT SHALL BE E.M.T., USE IMC OR GRC WHERE EXPOSED TO PHYSICAL DAMAGE
 - UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40

SHEET INDEX	
G-001	TITLE SHEET NOTES AND SYMBOLS
E-100	SITE PLAN AND SLD
EVSE CHARGING EQUIPMENT	
CHARGING LEVEL	2
CHARGING KW CAPACITY	7.4
EVSE MOUNTING	WALL
EVSE LOCATION	GARAGE
EVSE QUANTITY:	1
SCOPE OF WORK	
INSTALL NEW WALL MOUNTED ELECTRIC VEHICLE SERVICE EQUIPMENT (EVSE) USED FOR ELECTRIC VEHICLE CHARGING. THE EVSE IS CONNECTED TO THE EXISTING MAIN SERVICE PANEL.	
APPLICABLE CODES	
ALL WORK SHALL COMPLY WITH: (CURRENT YEAR) BUILDING CODE (CURRENT YEAR) ELECTRICAL CODE (CURRENT YEAR) MECHANICAL CODE (CURRENT YEAR) PLUMBING CODE (CURRENT YEAR) FIRE CODE	
VICINITY MAP	

CONTRACTOR		
<i>Logo</i>		
STREE ADDRESS CITY, STATE ZIP PHONE NUMBER WWW.WEBSITE.BIZ		
X LIC # XXXXXXXX EXP. XX/XX/XX		
PROJECT NAME: SUNNYLAND EVSE INSTALLATION		
PROJECT ADDRESS: 14140 SUNNYLAND LN SUNNYVILLE, JO 44444		
REV	DESCRIPTION	DATE
0	REVIEW	01/01/18
1	----	----
2	----	----
DRAWN BY: RB		CHECKED BY: KG
SHEET SIZE: ANSI "B" 11" X 17" (279 x 432)		
SHEET NAME: TITLE SHEET		
SHEET NUMBER: G-001		

CONTRACTOR

Logo

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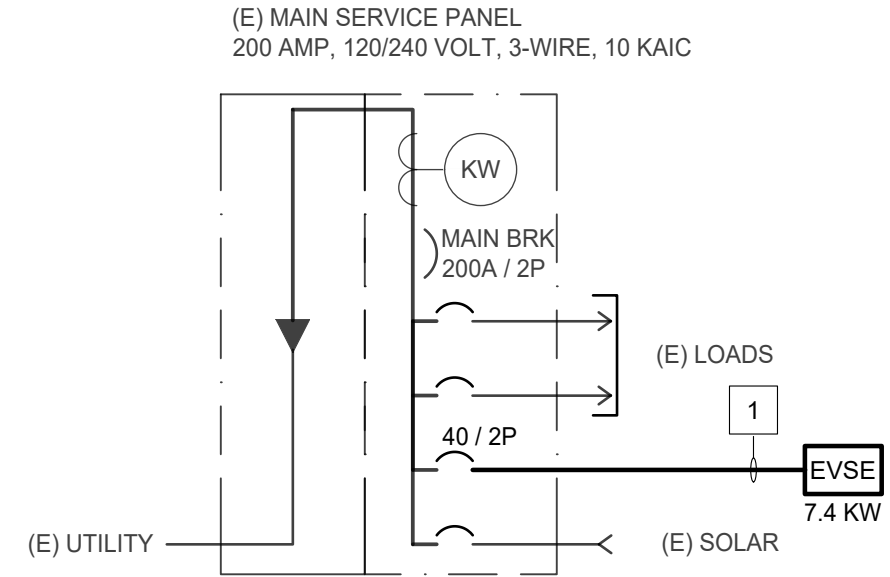
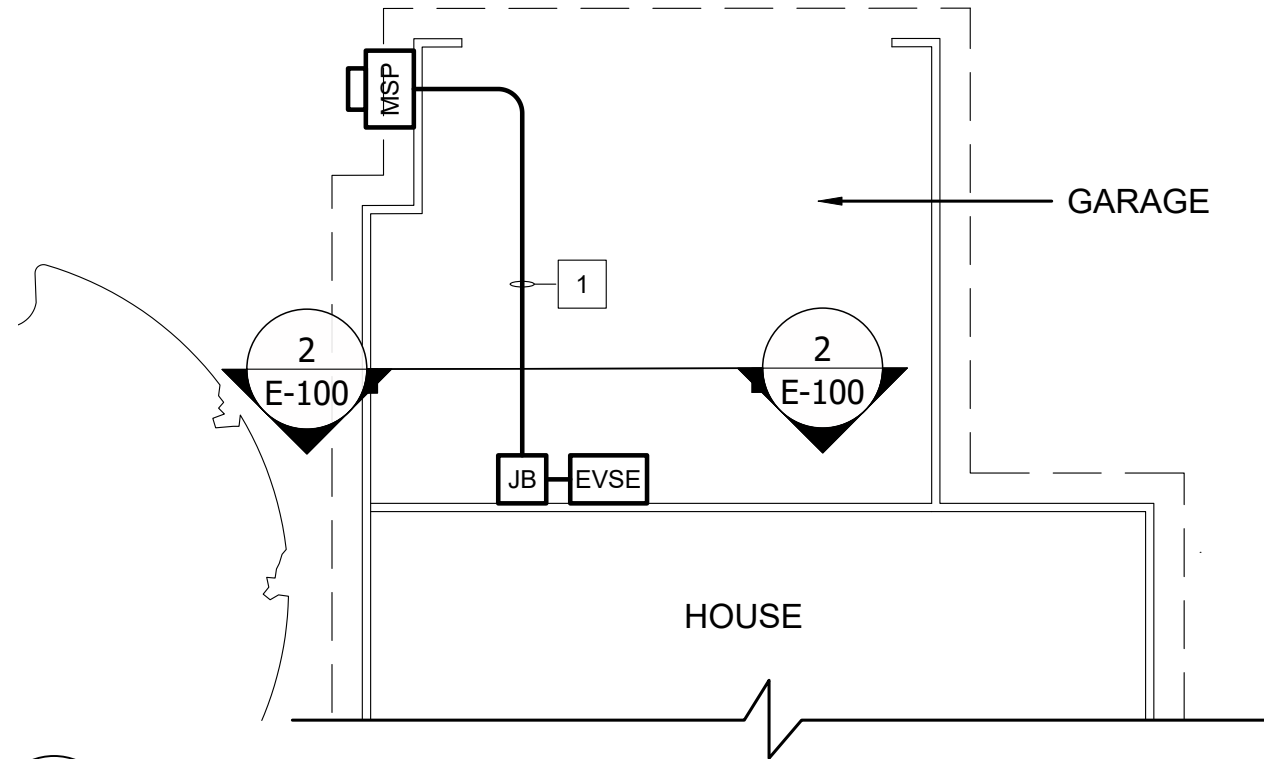
ELECTRICAL PLAN

SHEET NUMBER:

E-100

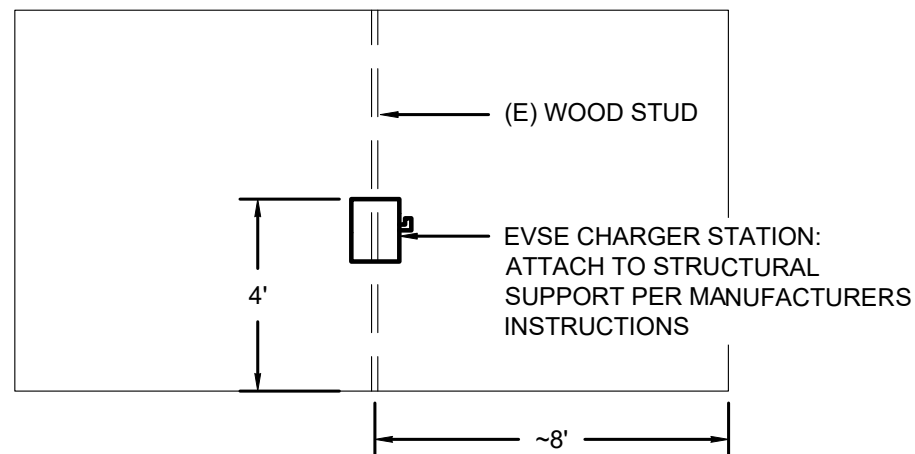
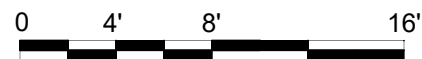
CABLE AND CONDUIT SCHEDULE

CIRCUIT PARAMETERS					CONDUCTOR PROPERTIES			NEC	90C	RACEWAY	VOLTAGE DROP		
ID	DESCRIPTION	LOAD AMP	LOAD AMP X 125%	OCPD	SIZE	GROUND	TYPE	110.14(C)(1)(a) RATING	ADJUSTED RATING	SIZE & TYPE	APPROX. LENGTH (FT)	VOLT DROP	VD %
1	EVSE-1	30.00	37.50	40	8-CU	10-CU	THWN	40	53	3/4" EMT / LFNC	40	1.88	0.78%



SINGLE LINE DRAWING

1 EQUIPMENT LAYOUT
 E-100 1/8" = 1'



2 WALL MOUNTING DETAIL
 E-100 1/4" = 1'



LOAD SUMMARY BASED ON NEC 220.83(A)		
EXISTING LOADS		
DESCRIPTION OF LOAD	QTY	KVA LOAD
LIVING SPACE (SQFT)	2565	8.00
KITCHEN CIRCUITS	2	3.00
ELECTRIC OVEN	1	12.00
ELECTRIC STOVE TOP	1	7.30
MICROWAVE	1	1.50
GARBAGE DISPOSAL	1	1.00
DISHWASHER	1	2.20
GARBAGE COMPACTOR	1	0.80
LAUNDRY CIRCUIT	1	1.50
ELECTRIC CLOSE DRYER	1	4.50
CENTRAL HEATER	1	6.00
ELECTRIC WATER HEATER	1	4.50
GARAGE DOOR OPENER	1	0.50
SWIMMING POOL PUMP	1	3.00
NEW LOADS		
EVSE	1	7.40
TOTAL:		63.20
FIRST 8 KVA AT 100%		8.00
REMAINDER AT 40%		22.10
TOTAL CALCULATED:		30.10
30100 VA / 240 VOLT = 126 AMPS ON 200 AMP PANEL		