15-482

Sonja Birr

From: Greg Minikel
Sent: Monday, April 13, 2015 2:40 PM
To: Sonja Birr
Subject: FW: Agenda Item
Attachments: FW: Questions; EVS Packet for Communities.pdf; Installation Guide.pdf; The Network.pdf

FYI:

From: Dan Koski
Sent: Monday, April 13, 2015 2:37 PM
To: Steve Bacalzo
Cc: Greg Minikel; Jim Muenzenmeyer
Subject: FW: Agenda Item

Hi Steve,

Please see attached.

I remember at one point you were looking into installing some of these around the city.

Is MPU still interested in this? If so, would the VIC be a good place to put one?

Thanks,
Dan

Dan Koski, PE
Director of Public Infrastructure
City of Manitowoc
900 Quay Street
Manitowoc, WI 54220

dkoski@manitowoc.org
Phone: (920) 686-6910
Fax: (920) 686-6906

www.manitowoc.org

From: Jim Muenzenmeyer
Sent: Tuesday, April 07, 2015 2:11 PM
To: David Soeldner
Cc: Dan Koski
Subject: Agenda Item

Hi Dave,
I received an email and other attached information from Jason Ring requesting permission to install an electric vehicle re-charging station at the Visitor Information Building. If willing, please place this item on the next DPI Committee agenda.
Thanks ~ Jim

DOOR COUNTY
VISITOR BUREAU

Electric Vehicle Charging Stations

Door County Visitor Bureau
Jack Moneypenny, President/CEO
jack@doorcounty.com
(920) 818-1131

DCVB Charging Stations

The new Gas Pump is an EV Charging Station

2014 DCVB Power Costs

Month	# Connections	Total Duration (in minutes)	Total kwh	Total Cost
May *	9	82	2.48725	0.263649
	6	379	44.1052	4.675151
June	3	596	67.2621	7.129783
July	11	973	68.8421	7.297263
August	6	1,300	106.662	11.30617
September	2	48	5.36334	0.568514
October	6	1,597	156.622	16.60193
	43	**4,975**	**451.344**	**$47.8425**

Total 2014 EVS Power Cost

* 9 connections occurred during the unveiling of the charging stations on May 21, 2014

5/21/14 = date of first charge in 2014
10/09/14 = date of last charge in 2014

DOOR COUNTY
VISITOR BUREAU

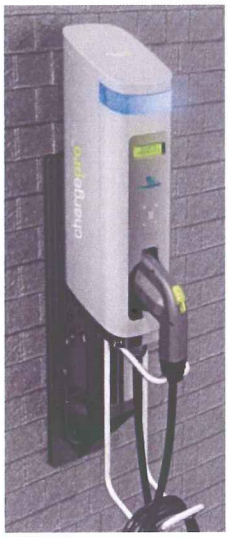
THANK YOU!

For more information, contact:

Door County Visitor Bureau
Jack Moneypenny, President/CEO
jack@doorcounty.com
(920) 818-1131

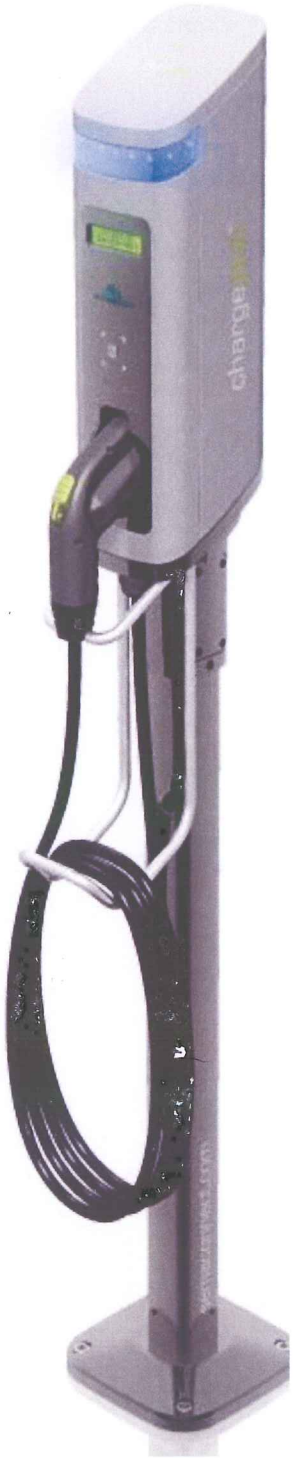
ChargePro
Electric Vehicle Charging Station
Installation Guide

Prepared By: SemaConnect, Inc.



Wall Mount

Pole Mount



Pedestal Mount

Contents

4961 Telsa Drive, Suite A * Bowie, Maryland 20715
301-352-3730 * www.semaconnect.com

ChargePro Pedestal Mount Installation

Key Electrical Requirements

- Each EV charging station should be on a **dedicated electrical circuit**
- Each station should be protected with a **40 Amp 2-pole common trip circuit breaker**
- Each station is designed to draw a maximum of 30Amps
- Each station can operate on either a **240V or 208V circuit**
- Each station requires **three electrical supply wires** (two hot, one ground, no neutral)
- All data communication is wireless, so there is **no data cabling** to install

Key Mechanical/Civil Requirements

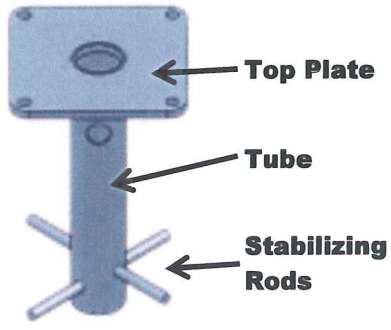
- Rough-in shall include pouring a concrete pad with a manufacturer provided anchor plate
- The anchor plate includes a 3/8" steel plate welded to an 18" long steel pipe
- Four sacrificial bolts (supplied by manufacturer) shall be installed in anchor plate
- Prior to concrete pour, conduit can be run through bottom of anchor plate or through hole in side
- The Pedestal and head unit assembly is then bolted to anchor plate

Primary Parts

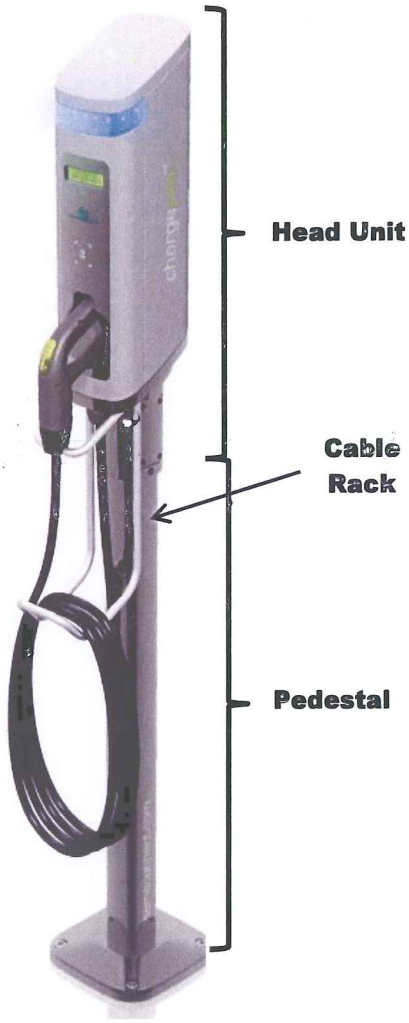
Head Unit (includes main unit, neck, cable and J1772 plug)
Cable Rack
Pedestal (includes base and tube)
Anchor Plate

Key Dimensions

Total Station Height Above Grade:	56"
Head Unit (including neck):	24.5"x6"x6"
Pedestal (including base):	32"x8"x8"
Anchor Plate	
Top Plate:	3/8"x8"x8"
Tube:	18" x 2.5" diam
Stabilizing Rods:	8" end to end



Anchor Plate



ChargePro, EV Charging Station Pedestal Mount

ChargePro Pedestal Mount Installation (cont)

Rough-In Steps

A. Install circuit breaker, run electrical conduit
B. Construct concrete form (typical footprint for one station: 24" x 24")
C. Place anchor plate (with sacrificial bolts installed) and run conduit through anchor plate
    a. Note: Sacrificial bolts keep threads clean and create pocket for finish anchor bolts
D. Embed anchor plate in concrete with finish hex drive stainless steel anchor bolts

Final Assembly Steps

A. Attach cable rack to head unit (4 set screws)
B. Attach Pedestal to Anchor plate (4 anchor bolts)
C. Align Pedestal for Plumb (4 set screws)
D. Attach Head Unit to Pedestal (4 tamper resistant screws)
E. Connect three electrical supply wires via access plate
F. Power up charging station by turning on circuit breaker
G. Station will automatically communicate with network and initialize itself (using cellular signal)
H. Successful power-up is indicated by a steady blue LED light and welcome message on LCD

Example Installation

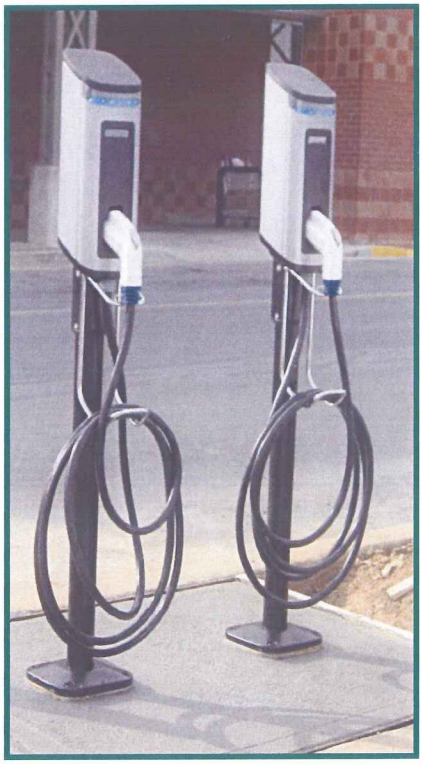
Prep for Concrete Pour

Finished Concrete Pad

Aligning Pedestal

Connecting Wires

Final Installation



ChargePro Wall/Pole Mount Installation

Key Electrical Requirements

- Each EV charging station should be on a **dedicated electrical circuit**
- Each station should be protected with a **40 Amp 2-pole common trip circuit breaker**
- Each station is designed to draw a maximum of 30Amps
- Each station can operate on either a **240V or 208V circuit**
- Each station requires **three electrical supply wires** (two hot, one ground, no neutral)
- All data communication is wireless, so there is **no data cabling** to install

Key Mechanical/Civil Requirements

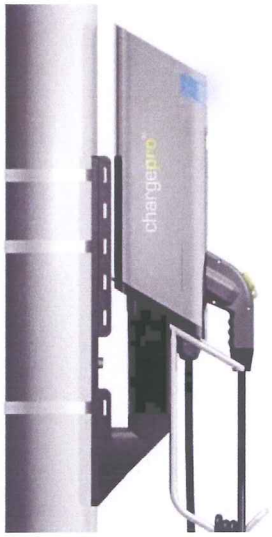
- Rough-in includes:
    - If Wall-Mount - Attaching Wall/Pole Mount Bracket to Wall with Four Bolts
    - If Pole-Mount – Attaching Wall/Pole Mount Bracket to Pole with Three Straps
- Conduit can either attach to side of bracket though pre-cut 1.0" hole, or
- Conduit can enter though wall hole into back of bracket

Primary Parts

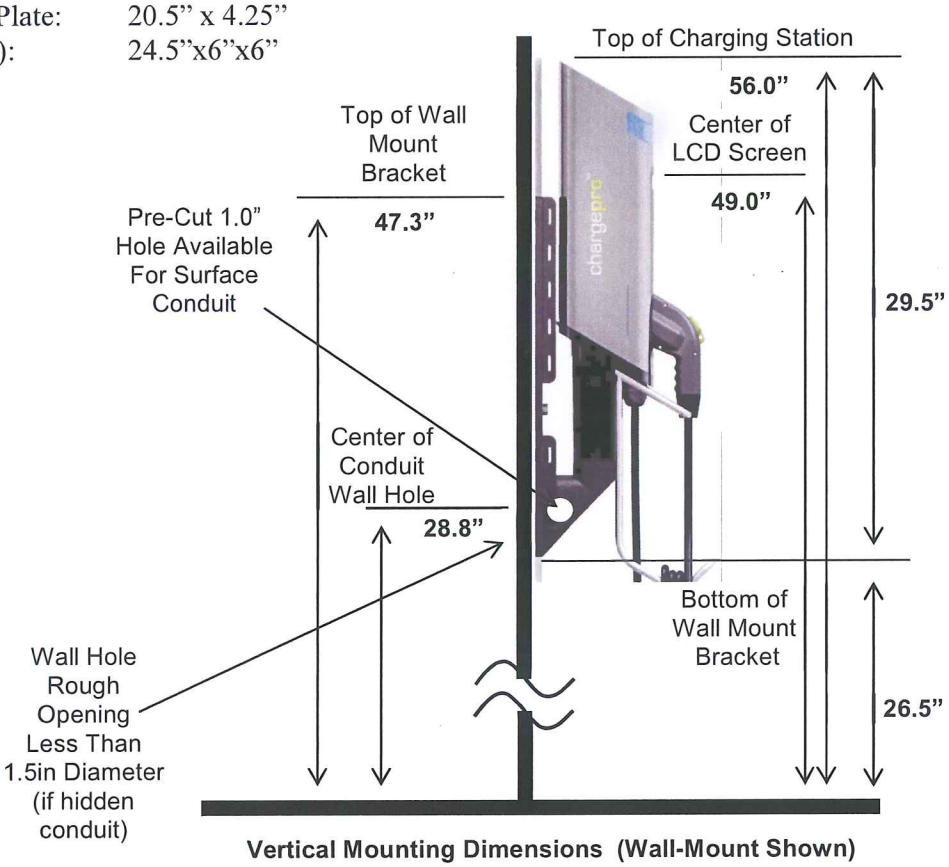
Head Unit (includes main unit, neck, cable and J1772 plug)
Cable Rack
Wall/Pole Mount Bracket

Key Dimensions

Total Station Height Above Grade: 56"
Wall/Pole Mount Bracket Plate: 20.5" x 4.25"
Head Unit (including neck): 24.5"x6"x6"



Pole-Mount Configuration



Vertical Mounting Dimensions (Wall-Mount Shown)

ChargePro Wall/Pole Mount Installation (cont)

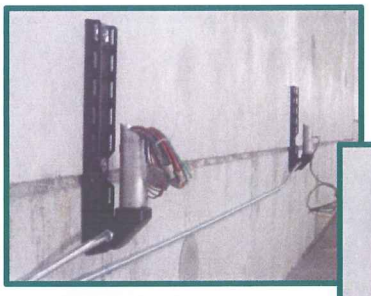
Rough-In Steps

A. Attach Wall/Pole Mount Bracket
   a. If Wall-Mount-Attach Wall/Pole Mount Bracket to wall with 4 bolts
   b. If Pole-Mount-Attach Wall/Pole Mount Bracket with three straps
B. Install circuit breaker, run electrical conduit

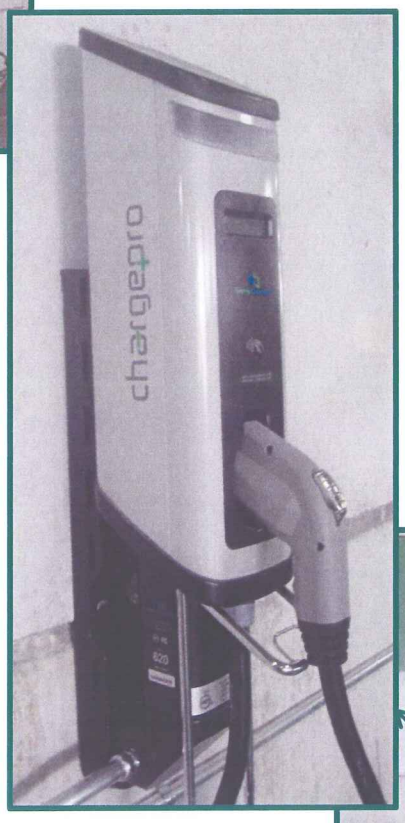
Final Assembly Steps

A. Attach cable rack to head unit (4 set screws)
B. Attach Head Unit to Wall/Pole-Mount Bracket (4 tamper resistant screws)
C. Connect three electrical supply wires via access plate
D. Power up charging station by turning on circuit breaker
E. Station will automatically communicate with network and initialize itself (using cellular signal)
F. Successful power-up is indicated by a steady blue LED light and welcome message on LCD

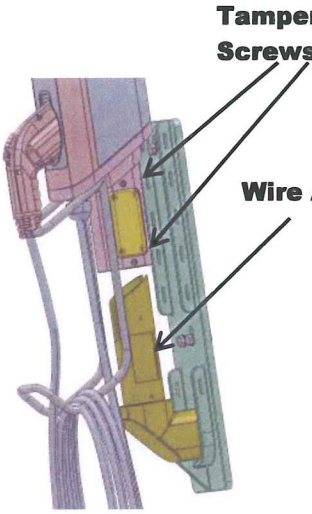
Example Installation



Rough-In Complete



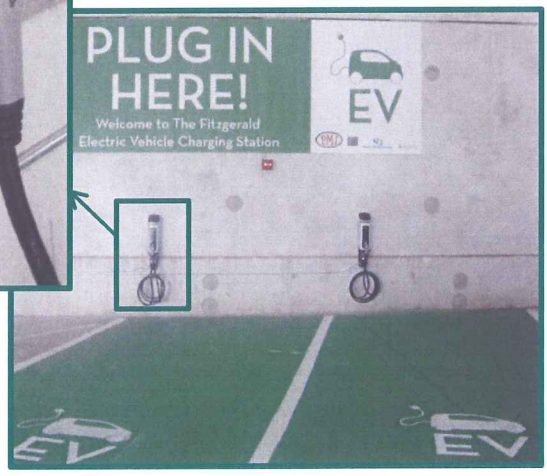
Finished Installation



Tamper Resistant Screws (2 each side)

Wire Access

Attaching Head Unit to Wall/Pole-Mount Bracket



SemaConnect

ChargePro™

Electric Vehicle Charging Station

The electric vehicle generation is happening now. With the ChargePro, you won't be a part of the green movement.

You'll lead it.

Wireless Technology

The Station communicates with the software and produces real-time data.

Rugged Aluminum Enclosure

Prevents damage from nature and natural elements.

Built-In Electricity Metering

Manage your electricity cost.

Pay with PlugShare

Find stations, start and pay for charging through the most widely used EV app.

Convenient Access Panel

Easy installation and connectivity.

Interactive LED Lights

Quickly identify the station status with blue meaning available, green is charging in use, and red signals a ground fault detection.

2-Line Backlit LCD Screen

Easy reading for costs and station status.

Smart Card Authentication

Open or closed access available for EV Drivers.

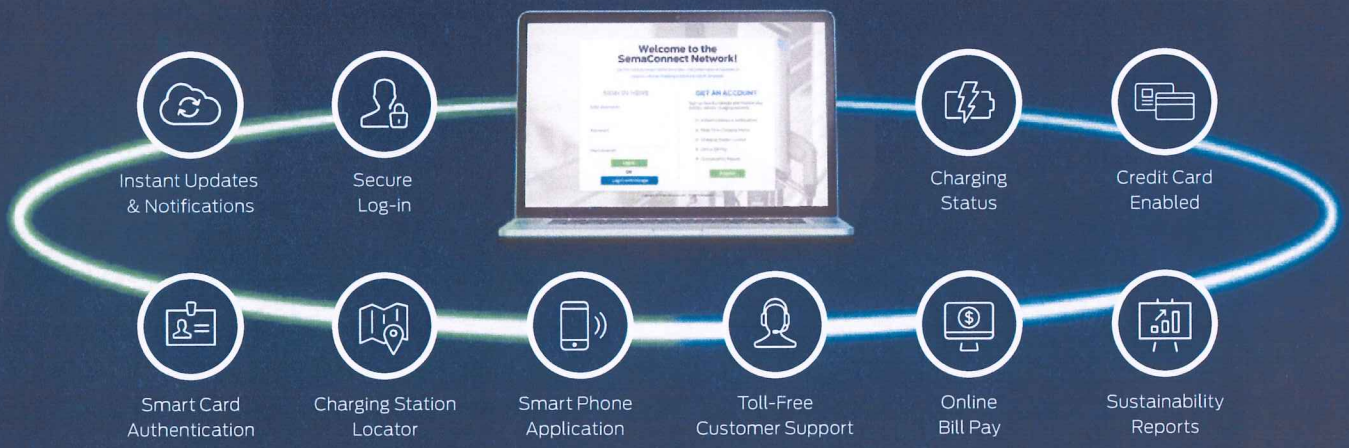
J1772™ Plug

Charge all new electric or plug-in hybrid electric vehicles including Volt, Tesla, BMW, Leaf, Focus and more.

semaconnect.com | 1(800) 663 - 5633

The Network. It's what makes the **ChargePro** smart.

Google play | Available on the App Store

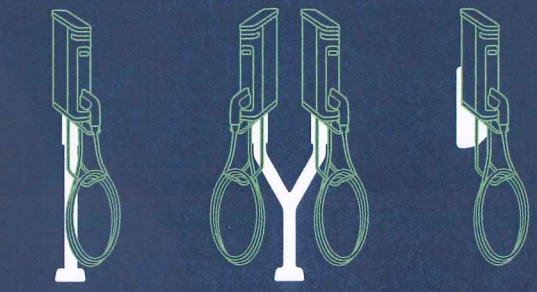


Designing the ChargePro charging station came with one goal in mind:

To create the perfect electric vehicle charging station suitable for commercial applications

such as multifamily, office, hotel, retail, fleet, municipality and urban garages. It's compact form factor, ease of installation and comprehensive online management system make it the best choice for charging electric vehicles.

Multiple mounting options:



single pedestal | double pedestal | wall mount

Power Specification

AC Power Source	208/240V, center grounded, 60Hz supply
Power to Electric Vehicle	30A maximum, 7.2kW@240VAC
Branch Circuit Protector	2-pole, common trip, 40AMP
Vehicle-to-Charger Connection	SAE J1772™ EV Connector via 18ft Cable
Energy Metering Accuracy	1% at 5min intervals; 0.5% capable
Standby Power	5 mA typical

Safety Specification

Personnel Protection System	Charging Circuit Interrupting Device (CCID) Trip Threshold 5mA, CCID 5 per UL2231-2, Auto reset with 15min delay
Automotive Unplug Detection	Charger output voltage terminated
Codes and Stadards Compliance	UL 2231-1, 2231-2 and UL2594 compilant, NEC Article 625 compliant

Network Specification

Wide Area Network	Commercial CDMA or GPRS cellular network
Network Security	128-bit AES Encryption
Smart Card Reader	ISO 15693 (iCLASS), ISO14443 (MIFARE, DESFIRE)

Charger Status Displays

LED Array	270° visibility, multi-color visual status indicator
LCD Screen	2 lines, 16 charecters per line, backlit

Environmental Specs

Outdoor Rated	NEMA 3R
Operating Humidity	Up to 95% non-condensing
Operating Temperature	-22 °F to 122 °F (-30 °C to +50 °C)

Other Specifications

Surge Protection	6kV@ 3,000A per UL 2231-2,
EMC Compliance	FCC Part 15 Class A, IC RSS-210
Approx. Shipping Weights	Head unit and cable: 35 lbs, Bollard pedestal: 22lbs, Wall mount bracket: 8lbs
Dimensions	18in high x 6in wide x 6in deep

SemaConnect semaconnect.com | 1(800) 663 - 5633