Accelerating the Transportation Revolution
About PISO

- Founded in 2011
- Offices in NY Capital Region, Long Island, and West Palm Beach Florida
- Servicing NY, NJ, PA, MA, CT, RI, VT, DE, NH, ME, and FL
- Specialize in sales, installation, and service of EV charging Equipment
- Offering Turn-Key services
- Supplying a wide variety of EV charging options ChargePoint, EVbox, ABB, BTC, Tritium and more
- Over 700 ports installed
Automakers Investing Billions in EV Development

- **Tesla**: Double Model 3 production and reveal the Model Y this year
- **GM**: 20 all-electric cars by 2023
- **Mercedes-Benz** (Daimler): 30 BEV and PHEV models by 2025
- **Hyundai Motor Group**: 10+ new all-electric vehicles by 2022 and plans to electrify entire Mercedes-Benz portfolio
- **Ford**: 16 fully electric vehicles and 40 electrified vehicles through 2022
- **Porsche**: First all-electric compact SUV (Macan) and third EV after Taycan and Cross Turismo (planned for 2019, 2020)
- **Jaguar and Land Rover**: Every Jaguar and Land Rover launched from 2020 will be electrified
- **Volvo Cars**: Almost 70 new electric models by 2028
- **Volvo Cars**: 50% of Volvo Cars’ sales volume to be fully electric by 2025 and plans a hybrid or full-electric powertrain for all models
More Than 50,000 EVs on New York Roads and Growing!

Highest Concentration of EVs are in Suburban Areas
Building Codes and Planning

Considerations:

- Level 2 vs. DCFC
- Accessibility
- Visibility/Signage
- Safety and Security
- Impact on Parking Space
- Hardware Quality
- Permit Requirements
- ADA
- Electrical Capacity
- Station protection
First Step - Develop a List of Project Requirements

- Definitions
- Charging Level (Level 2, DCFC etc.)
- Uses
- Permitted Locations
- Design Standards
- Equipment Specifications
Types of Charging Solutions

Level 1
120V
- Standard 120V outlet
- Adds 5 miles per hour of charge*
- Residential use

Level 2
240V
- 240V outlet, can also be hardwired
- Adds 20-60 miles per hour of charge*
- Residential & commercial use

Level 3
480V
- DC Fast Charger
- Adds 60-100 miles per 20 minutes of charge*
- Commercial use

*Estimated. Actual charge times may vary.
Site Design: Recommendations on Documentation
Site Plan

- Satellite Image with Markups is Sufficient for most Municipalities
- Charger Location(s)
- EV Parking Spaces
- Conduit/Conductor Path
- Power Source

*Avoid requiring stamped site drawings for typical Level 2 charging scenarios*
Electrical Design - Don’t Reinvent the Wheel

- Follow typical electrical code requirements for similar equipment (e.g. parking payment kiosk)
- Line drawing of circuitry
- Follow standard pre/post inspection practices.
Electrical Design - Typical Line Drawing

NOTES:
1. INSTALLATION SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, NFPA 70-2014.
2. EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER’S INSTRUCTIONS.
Station
Accessibility & ADA

• Are the stations publicly accessible?
• Charge for use?
• Payment collection?
• Safety
• Signage
• Not intended for public use, how is access managed?
Station Accessibility & ADA

- Are the stations publicly accessible?
- Are stations restricting access to walkways, ramps or entrances?
- Are stations accessible by handicap drivers?
Station
Accessibility & ADA
Signage

- EV Charger Visibility
- Easy to Read Signage
- Lot Striping vs. or in Addition to Signage
Station Protection and Mounting

- Parking Bollards
- Wheel Stops
- Station Footings
TYPICAL MOUNTING SPEC’

EVSE CHARGING STATION

(3) 3/8” HEADED CIP ANCHORS, F1554 GR 36, GALV, 10” EMBED, LOCATION DIMENSIONS IN PLAN TO BE CONFIRMED w/ MANUF

4” Ø SCH 40 STEEL PIPE BOLLARD EMBEDDED IN PIER AS SHOWN

APPROX FINISHED GRADE, TYP

1” Ø RIGID CONDUIT, 18” EMBED, EXISTS OUT BACK OF PIER

3”

(4) #4 VERT BARS, TYP

#3 REINF TIES/HOOPS Ø 12” OC w/(2) #3 TIES Ø TOP, TYP

1  S101 EVSE CHARGING STATION FDN DETAIL

3/4”=1’-0”
THANK YOU!

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