



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Bonifacio Drive, Port Area Manila



097.13 DPWH
06.18.2025

JUN 17 2025

DEPARTMENT ORDER)
NO. 105)
Series of 2025)

**SUBJECT: DPWH Standard Specification for
Item 1112 – Electric Vehicle
Charging Station (EVCS)**

on 6/18/2025

In support of the national transition to sustainable transportation, as mandated by existing laws such as Republic Act No. 11697 or the Electric Vehicle Industry Development Act (EVIDA), the attached **DPWH Standard Specification for Item 1112 – Electric Vehicle Charging Station (EVCS)** is hereby prescribed for adoption and implementation in applicable DPWH infrastructure projects. This specification aims to provide a uniform and well-defined framework for the integration of EV charging facilities in public works.

This standard specification shall form part of the DPWH Standard Specifications for Public Works Structures, Volume III. Likewise, the new pay item subscripts are now included in the Standard Pay Item List and Project and Contract Management Application (PCMA).

This Order shall take effect immediately.


MANUEL M. BONOAN
Secretary

Department of Public Works and Highways
Office of the Secretary



WIN5U02161

Encl.: DPWH Standard Specification for Item 1112 – Electric Vehicle Charging Station (EVCS)

14.1 JDV/AGC

DPWH Standard Specification for Item 1112 - Electric Vehicle Charging Station (EVCS)

1112.1 Description

This Item shall consist of furnishing, installing, testing and commissioning of Electric Vehicle Charging Station (EVCS) in accordance with the Plans, this Specification and to the latest codes, requirements and guidelines.

1112.2 Material Requirements

1112.2.1 Electric Vehicle Charging System

1112.2.1.1 General Requirements

The Electric Vehicle Charging System shall consist of electric vehicle charging equipment and accessories. All components shall bear the Philippine Standards (PS) Certification Mark or the Import Commodity Clearance (ICC) Certification Mark for imported products.

The system shall support charging modes 1, 2, 3, and 4, whichever is applicable and shall include the following features, in accordance with the latest Government standards, codes, and regulatory guidelines on EVCS:

Safety and Protection Features

1. Overcurrent protection devices shall be incorporated to protect the charging equipment, connected Electric Vehicles (EVs), and operator from hazards due to short circuit and overload.
2. Ground fault protection shall be included to detect and prevent leakage currents.
3. The EVCS shall be provided with manual and automatic emergency shutdown mechanisms to ensure safety during fault conditions.
4. Surge Protection Device (SPD) shall be provided to shield the system from voltage spikes due to power quality disturbances.

Interconnectivity Features

1. The system shall be equipped with a stable internet connection to support real-time system monitoring, remote diagnostics, and backend integration.
2. The required minimum bandwidth for EVCS Modes 2 and 3 shall be 5 mbps and 10 mbps for EVCS Mode 4 to ensure reliable connectivity, seamless data transmission, and efficient system operation.
3. Communication protocol for the EVCS shall be adopted to facilitate the connection to the EV Industry Portal, providing consolidated public data and information on the EVCS.

1112.2.1.2 Electric Vehicle Charging Equipment

The Electric Vehicle Charging Equipment shall comply with PNS IEC 61851-1, Electric vehicle supply equipment for charging electric road vehicles including Plug-in Hybrid Electric Vehicle (PHEV) and PNS IEC 61851-23, DC electric vehicle charging stations. Charging equipment shall be compatible with the existing nominal voltage of the structure to provide sufficient power output to meet the needs of various Electric Vehicle models.

1112.2.1.3 Accessories

Plugs, socket-outlet, vehicle connectors and vehicle inlets with pins and contact tubes shall be in accordance with PNS IEC 62196-1, Plugs and socket-outlets vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 1: General requirements.

1112.2.1.4 EVCS Shed/ Canopy

1. Concrete Structures

Materials for the construction of concrete structures shall conform to the requirements of Item 900, Structural Concrete.

2. Reinforcing Steel

Reinforcing steel shall conform to the requirements of Item 902, Reinforcing Steel.

3. Metal Structures and Accessories

Metal structures to be used such as angles bars, tubular steel pipes, base plates and bolts shall be in accordance with Item 1047, Metal Structures.

4. Roofing and Accessories

Roofing materials shall conform to the requirements Item 1014, Pre-painted Metal Sheets.

Downspouts and accessories shall conform to the requirements of Item 1013, Corrugated Roofing.

5. Ceiling Works

Materials for ceiling shall conform to the requirements of Item 1041, Gypsum Board and Item 1003, Carpentry.

6. Paint

Painting materials shall conform to the applicable requirements of Item 1032, Painting, Varnishing and Other Related Works.

7. Electrical Works

Wires, cables and switches shall conform to the requirements of Item 1101, Wires, Cables and Wiring Devices.

Conduits, boxes and fittings shall conform to the requirements of Item 1100, Conduits, Boxes and Fittings.

Lighting fixtures shall conform shall conform to the requirements of Item 1103, Lighting Fixtures.

Panel boards and circuits shall conform with the applicable requirements of Item 1102, Powerload Center, Switch Gear, and Panel Boards and Other Overcurrent Devices.

1112.3 Construction Requirements

1112.3.1 Delivery, Handling, and Storage

Electric vehicle charging equipment and accessories delivered on site shall have protective packaging for freight and handling purposes. It shall be handled carefully to prevent damage, breaking or denting. Prior to storage, all damaged components shall be rejected. It shall be stored in a clean and dry place, and protected from dirt, fumes, construction debris, and physical damage.

1112.3.2 Installation

The installation of the Electric Vehicle Charging System shall be carried out in accordance with the approved instructions and recommendations provided by the duly accredited EVCS Service Provider. All installation activities shall be conducted under the supervision of the Engineer and shall comply with the latest applicable Government standards, codes, and regulatory guidelines.

The construction of the EVCS shed or canopy shall conform to the relevant specifications outlined under the applicable Items of Work.

1112.3.3 Testing and Commissioning

After installation, testing and commissioning of the Electric Vehicle Charging System shall be conducted to ensure that the system is fully operational and compliant with all applicable Government standards, codes, and regulatory guidelines.

1112.4 Method of Measurement

The work under this Item shall be measured in Lump Sum of furnished, installed and accepted Electric Vehicle Charging Station (EVCS) as indicated on the Plans.

1112.5 Basis of Payment

The accepted quantity, measured as prescribed in Section 1112.4, Method of Measurement, shall be paid for at the Contract Unit Price which price and payment shall be full compensation for furnishing all materials, including all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this Item.

Payment shall be made under:

| Pay Item Number | Description | Unit of Measurement |
|----------------------------|--|--------------------------------|
| 1112 (1) | Electric Vehicle Charging Station (EVCS) | Lump Sum |