DEPARTMENT OF PERMITTING, INSPECTIONS AND ENFORCEMENT (DPIE)

REVISED GUIDELINES FOR PERMITTING ELECTRIC VEHICLE CHARGING STATIONS

(September 22, 2022)

General Requirements for Electric Vehicle Charging Stations

- Outdoor and indoor installations of electric vehicle supply equipment (EV charging stations) must be permanently connected and fastened in place with no exposed live parts.
- Charging stations must be listed by an approved product listing agency, rated for outdoor/indoor use, and installed in accordance with the manufacturer's specifications and the County's permit conditions.
- All other utility infrastructure existing and new utilities and laterals must be shown on the site plan for the permit.
- EV charging station installation shall be at least 6 feet from fire hydrants.
- EV charging station cords must not cross over sidewalks, walkways, or driveways when not in use.
- Each outlet installed for the purpose of charging electric vehicles shall be supplied by an individual branch circuit. Each circuit shall have no other outlets.
- Position the EV charging station such that the stored connector is at a height of not less than 18 inches above the parking surface for indoor locations or not less than 24 inches above the parking surface for outdoor locations (Electrical Code, Article 625.50).

General Requirements for Residential Curbside Electric Vehicle Charging Stations

Residential curbside EV charging stations may be either Level 1 (120 volt) or Level 2 (240 volt) and meet all the requirements of the Electrical Code. DPIE will consider an electric vehicle charging station in the public right-of-way when there is not an existing driveway, garage, or parking pad with adequate space for charging an electric vehicle or when there is inadequate space on the property for installing a new parking pad. In this case, a zoning review, a right-of-way permit, and an electrical permit will be required. The curbside EV charging station shall be connected to the owner’s electrical service via an underground conduit. All conduits must be underground in the public right-of-way, including under the sidewalk.

Level 1 Electric Vehicle Charging System — EV1

Standard equipment provided by the manufacturers of electric vehicles for connecting to a common grounded 120 Volt electrical receptacle (NEMA 5-15R or 5-20R). The maximum load on the receptacle is 12 Amp/1.4 KVA (5-15R) or 16 Amp/1.9 KVA (5-20R). May also be installed as an additional or backup power source. Only an electrical permit may be needed if a new dedicated circuit is to be installed.

Level 2 Electric Vehicle Charging System — EV2

Level 2 charging station at both public and private facilities requires either 240 Volt or 208 Volt. The maximum load is 32 Amp/7.7 KVA @ 240 Volt or 6.7 KVA @ 208 Volt with minimum overcurrent rating of 40 Amp. Refer to section NEC Article 625.41 for sizing the Overcurrent Protection Device (OCPD).

Residential:

Indoor/outdoor single family dwelling installation of an EV2 charging station device would require only an electrical trade permit for both a residential EV2 device that is hardwired into a 240 Volt circuit and a plug-in version that requires a new 240 Volt outlet.

Commercial:

Applicant indicates "Misc. Commercial" for type of building permit and provides a brief work description. The DPIE Permitting staff then designates the case type as "DPIE EV2." Staff does screening and provides task to applicant to upload supporting documents to EPLAN (ProjectDox)[1]. EV2 devices proposed in the City of Laurel do not require a permit from Prince George's County.

All EV2 commercial applications must, at a minimum, include the following information with the application:

- Site plan or construction plan showing property location, EV2 locations, property boundaries, and limits and area of disturbance (note: aerial images are not an acceptable replacement for a site plan)
- Footing/foundation dimensions (size, height, and depth)
- Electrical conduit (location, size, and depth)
- Equipment mounting pedestal
- Concrete wheel stops and protective bollards
- Signage
- ADA layout that provides reasonable access for a person in a wheelchair on an accessible path, with the EVSE device(s) not encroaching into adjoining parking spaces or access aisles.
- EVSE manufacturer installation details and specifications

[1] EV2 devices to be located on publicly-owned sites are subject to Mandatory Referral (MR) review by M-NCPPC. This requires submission of a completed Mandatory Referral Intake Questionnaire to the Prince George' County Planning Department, including project name, address, property owner, and project description. http://pgparks.com/DocumentCenter/View/761/Mandatory-Referral-Intake-Questionnaire-PDF?bidId=
Any other approvals or permission that may be required by M-NCPPC (example, MR), incorporated municipalities, State, universities, commercial REIT etc. will be the applicant's responsibility to secure.

Whenever the area of disturbance is at or over 5,000 square feet, the Site/Road plan review staff will review the EV2 application, the site or construction plan, the site development concept plan, SWM concept, Fine Grading Permit application, and required design checklist (see Exhibit 1). For EV2 sites with area of disturbance under 5,000 square feet, DPIE does not require site development concept plan nor Fine Grading permit. Only submit the site or construction plans showing the location of the EV2 devices, the property boundaries, and the limits and area of disturbance.

Applicant pays the applicable permit fees through the County's online payment system Govolution via credit card or eCheck. Applicant may also make payment by cash or check at the DPIE Cashier's Office on 9400 Peppercorn Place in Largo, MD.

Permitting staff will process the application(s) and issue the permit(s) with a condition: "Subject to Final approval in the Field/3rd Party Certification," after payment of permit fees.

An EV2 system and all associated work must be installed in compliance with NFPA 70, National Electric Code, Article 625, and all applicable Electrical Codes currently adopted and enforced under Prince George's County Subtitle 9.

All inspections are to be completed and certified by 3rd party inspectors. EV2 certification shall be provided using Attachment #6EV (see following page). Electrical trade permit is to be obtained on-line by the licensed master electrician.

ATTACHMENT #6EV

ELECTRICAL VEHICLE SUPPLY EQUIPMENT
THIRD-PARTY INSPECTION PROGRAM CERTIFICATION FORM

Date: _____

To: ☐ Building Code Official
☐ Electrical Code Official

From: _____

Project Address / Project Location: _____

Case Number / Utility Co. Tracking Number: _____

This transmittal is to advise and certify that the following actions are in accordance with the provisions contained within the Prince George's County Department of Permitting, Inspections and Enforcement (DPIE) Third-Party Inspection Program (TPIP) and associated Statement of Third-Party Inspections for the above-referenced project, as follows (check all applicable boxes):

By the Inspector of Record (IR)

- ☐ Site Accessibility Certification that the construction project meets the Maryland Accessibility Code.
- ☐ Pedestal construction – including but not limited to foundation dimensions, electrical conduit, equipment mounting pedestal, concrete wheel stops, protective bollards, and signage.

By the Electrical System(s) Inspector of Record (EIR)

- ☐ Construction project is built according to the construction document(s) and electrical permit(s) issued by Prince George's County and the Electrical Code, as listed in Subtitle 9 of the County Ordinance.
- ☐ Certification as to the electrical systems readiness for the closing of the structure before the closing begins.
- ☐ Completion of the electrical system(s) in accordance with the approved plan(s) and document(s) and requirements of the Prince George's County Building Code, that the electrical system(s) is ready for the power company to make the service "hot," and all work has been performed under an electrical permit.
- ☐ Compliance with the EVSE manufacturer installation details and specifications.
- ☐ Compliance with NFPA 70, National Electric Code, Article 625, and all applicable Electrical Codes currently adopted and enforced under Prince George's County Subtitle 9.
- ☐ Electrical system(s) installation(s) has valid permit(s).

To the best of my information, knowledge and belief, the inspections specified for this project, have been completed. In my professional opinion, the inspections have been found to follow County-approved plans and the Prince George's County Building Code.

Certified By: _____ *affix signature & seal*

Printed Name: _____

MD Reg. No.: _____

Company Name: _____

Name of agents/technicians acting on behalf of above:

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LEVEL 3 Charging Station/Direct Current Fast Charge System (EV3 or DCFC)

Level 3 EV charging station is a high-speed, high-power method for charging electric vehicles. The maximum load is 400 Amp with 240 KW of continuous power supply. EV3 or DCFC charging station can require 208/240/480 Volt, 3-phase voltage. The applicant provides the building demand load calculations, as per NEC Article 220.87 to determine the existing incoming service adequacy.

Step 1 — Applicant applies for the following permits online through ePermits:

- DCFC permit for structural, electrical and fire review using "Misc. Commercial" for type of building permit and a brief work description. The DPIE Permitting staff then designates the case type as "DPIE DCFC".
- Site/road permit for Storm Water Management (SWM) concept application and grading plan **only when the size of the area of disturbance is 5,000 square feet or more.**
- Utility permit from DPIE or municipal permitting office if the EVSE will be in the public right-of-way.
- Electrical trade permit should be obtained on-line by the licensed master electrician responsible for installing the appropriate electrical wiring and panel expansion if needed

DCFC devices proposed in the City of Laurel do not require a permit from Prince George's County.

Step 2 — Applicant submits the following supporting documents online through ePlan:

- Site documents:
  - Whenever the area of disturbance is at or over 5,000 square feet, the Site/Road plan review staff will review the DCFC application, the site or construction plan, the site development concept plan, SWM concept, Fine Grading Permit application, and required design checklist (see Exhibit 1). For DCFC sites with area of disturbance under 5,000 square feet, DPIE does not require site development concept plan nor Fine Grading permit. Only submit the site or construction plan showing the location of the DCFC devices, the property boundaries, and the limits and area of disturbance (note: aerial images are not an acceptable replacement for a site plan).
  - ADA layout that provides reasonable access for a person in a wheelchair on an accessible path, with the EVSE device(s) not encroaching into adjoining parking spaces or access aisles.
- Structural plans for installation of the mounting pedestal, protective pylons, conduit, canopy, signage, and supporting pad/foundation if proposed, showing foundation details and structural calculations:
  - Size, height, and depth of foundation
  - Reinforcing steel used in foundation
- Electrical requirements:
  - Electrical wiring diagram

- Power riser diagram
- Load calculation sheet to determine whether the existing electrical panel will need to be upgraded
- See Exhibit 2 for more details

- EVSE manufacturer installation details and specifications

Step 3 — Applicant pays the applicable permit fees through the County's online payment system Govolution via credit card or eCheck. Applicant may also make payment by cash or check at the DPIE Cashier's Office on 9400 Peppercorn Place in Largo, MD.

Step 4 — Building Plan Review Division and Maryland-National Park & Planning Commission (M–NCPPC) review the applicable plan submissions and provide any comments until approved, which may take up to ten working days[2] [3]. The Site/Road Plan Review Division reviews applicable plan submissions only for projects with area of disturbance at or over 5,000 square feet. The EVSE plans will be reviewed for compliance with applicable sections of the National Electrical Code, as appropriate (see Exhibit 2 for a sample list of electrical code considerations).

The applicant may submit the building, electrical and (if appropriate) site/road plan documents to qualified Peer Plan Reviewers for expedited review and approval. Alternatively, the applicant may submit only the building and electrical plan documents to qualified Third-Party Plan Reviewers for expedited review and approval. There are no Third-Party Plan Reviewers available to review site/road plans at DPIE.

Step 5 — Permit Center issues applicable DCFC permit (and grading and utility permits, if required) after the applicant pays any remaining permit fees. The licensed master electrician can obtain the electrical trade permit online by referring to the DCFC building permit number, after which the applicant can begin installation of the EVSE based on the approved plans.

Step 6 — The DCFC system and all associated work must be installed in compliance with NFPA 70, National Electric Code, Article 625, and all applicable Electrical Codes currently adopted and enforced under Prince George's County Subtitle 9. Applicant schedules initial, interim, and final inspections of the EVSE installation with a qualified Third-Party Inspector. When using a DPIE-certified Third-Party Inspector, the applicant needs to submit Attachment #6EV adapted from the DPIE Third-Party Inspection Program Manual after checking all applicable boxes.

Step 7 — Upon passing the final inspection, the station is ready for use and the owner or owner's representative activates the EV3/DCFC device(s).

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[2] M-NCPPC review not required if the EVSE device installation is entirely inside a structure, classified as an interior renovation.

[3] DCFC devices to be located on publicly-owned sites are subject to Mandatory Referral (MR) review by M-NCPPC. This requires submission of a completed Mandatory Referral Intake Questionnaire to the Prince George' County Planning Department, including project name, address, property owner, and project description. http://pgparks.com/DocumentCenter/View/761/Mandatory-Referral-Intake-Questionnaire-PDF?bidId=
Any other approvals or permission that may be required by M-NCPPC (example, MR), incorporated municipalities, State, universities, commercial REIT etc. will be the applicant's responsibility to secure.

EXHIBIT 1 — SITE/ROAD SWM CONCEPT APPLICATION AND GRADING PLAN REQUIREMENTS FOR EV2 AND EV3/DCFC DEVICES WHERE AREA OF DISTURBANCE IS 5,000 SQUARE FEET OR MORE

- Applicant submits the following documentation:
  - Signed and sealed Site SWM Site Development Concept plan(s), SWM Concept application, and SWM Concept design checklist
  - Approved Natural Resource Inventory (NRI)
  - Affidavit notification
- Applicant pays applicable permit fees.
- DPIE reviews and approves the SWM Concept Letter with the condition that a site development fine grading permit is required.
- Applicant files site development fine grading permit application for review and approval prior to building permit approval by DPIE, to include but not limited to the following information:
  - Plan view showing proposed location of EVSE device(s) on site
  - Site information, including owner name, property address, tax account number, district number, map grid number and parcel number
  - Linear perspective and site overview
  - Limits of land disturbance and calculation
  - If available, request current site plan from Maryland-National Capital Park and Planning Commission (M-NCPPC) by submitting a request form via: https://www.mncppc.org/DocumentCenter/View/6884/Online-Information-Request-Form?bidId=

EXHIBIT 2 — SAMPLE LIST OF ELECTRICAL CODE CONSIDERATIONS FOR DCFC DEVICES

- Charging stations should have protection safety measures as mentioned in NEC 2017 Sections 625.18 Interlock, 625.19 Automatic De-Energization of Cable, 625.22 Personnel Protection System, 625.46 Loss of Primary Source, 625.48 where applicable interactive systems, 625.52 Ventilation where applicable, 625.41 Rating
- Charging stations require disconnect – lockable open as per NEC 2017 Section 110.25 in readily accessible location, if the equipment is rated more than 60 amps and 150V to Ground, as per NEC 2017 Section 625.42
- Where ungrounded conductors are increased in size, from the minimum size that has enough ampacity for the intended installation, wire type equipment conductors shall be increased in size proportionately per NEC 2017 Section 250.122 (B)
- Overcurrent protection for charging station shall be sized per NEC 2017 Section 625.41
- Panel location with required clearances per NEC 2017 Section 110.26
- System grounding detail for main incoming service switch including the size of grounding electrode conductor and size of bonding jumpers
- Electrical vehicle supply equipment marking shall comply with NEC Sections 625.15(A) through (C)
- Panel schedule, including demand and connecting load calculations.