Parking Lot & Public Access Areas Lighting Standards

Section: _____ Lighting Standards

Intent: To limit the potential negative effect of parking lot illumination and signage on adjoining properties and the public right-of-way; to provide adequate light levels to create a safe, secure environment; to minimize light pollution and energy consumption; and to incorporate lighting fixtures that are consistent in style to the overall development.

1. All onsite public parking areas, aisles and access ways for any non-residential use shall be provided with a minimum of one half {.5} foot candles of light at any point on the ground. Carry over illumination off-site shall not be greater than one {1} foot candle of light measured at a distance of ten {10} feet from any property line.

2. All Land Development applications shall provide an photometric plan reflecting compliance with the standard of this section.

3. Light standards {poles} within a parking area shall not be located more than 200 feet apart and are limited in height to no greater than twenty five {25} feet in height. {I would suggest that you consider light standards that are shorter in height on the smaller lots or lots that adjoin residential properties}. Light standards {pole} can be limited to as short as 12 feet, but the shortest that I have ever worked with is 18 feet in height.

4. All exterior lighting shall be installed in such a manner so as to not create direct glare onto adjoining properties.

5. All lighting shall be arranged so as to protect streets or highways from direct glare or create a hazard or interference of any kind within the right-of-way.

6. All light fixtures must have recessed bulbs and/or be equipped with a glare shielding device so that the point of light {bulb} is not visible from any location off the site.

7. Lighting permitted in connection with signage shall be equipped with shielding devices and/or hoods to concentrate the illumination upon the area of the sign and to prevent glare or illumination onto a street, highway or adjoining properties.

8. All exterior signage is required to be turned off one half hour {1/2} after the closing of the non-residential use. Signage that no longer represents a business in operation from the site must be removed. Free standing signage shall have the panels replaced with blank panels and must not be illuminated.

9. Non-Residential Developments greater than two {2} acres in total lot area shall have their parking lot lighting installed in a minimum of three circuits so that two/thirds {2/3} of the lighting can be turned off within one half {1/2} hour of closing. The lighting fixtures on these circuits will be divided evenly throughout the development.

10. Non-Residential Developments less than two {2} acres in total lot area shall have their parking lot lighting installed in a minimum of two circuits so that a minimum of one/half {1/2} of the lighting can be turned off within one half {1/2} hour of closing. The lighting fixtures on these circuits will be divided evenly throughout the development.

11. Exterior lighting installed for the purpose of security or safety must not have a light source {bulb} that is visible from any off-site location.

Draft 2: Revised 3/15/2023

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SCOTT FRANCE, AICP
EXECUTIVE DIRECTOR

February 7, 2025

SUBJECT: Electric Vehicle Charging Guidelines

TO: Mark Penecale, Director of Planning & Zoning
Springfield Township

FROM: Margaux Petruska, Community Planner II

As discussed, I've attached the County's Electric Vehicle Model Ordinance. I personally worked on this ordinance alongside two other planners, while working on a larger team of transportation and environmental planners. It hasn't been posted yet and we have a few graphics left to include, but it has undergone internal review at the County as well as external to planners at Upper Merion, Clean Transportation heads at DVRPC, as well as Engineer and Solicitor Review. Ultimately, it was a culmination of various Pennsylvania, MontCo, NJ Standards and additional research we compiled over the course of a few months.

If the Planning Commission chooses to use any of the below language for Springfield's SALDO, I'd recommend foregoing **Section 1. A. Word Usage** but taking **Section 1. Definitions. B. Defined Terms** and placing it into the existing Draft Definitions Article. **Section 2** and **3** we believe can either be in SALDO or Zoning but based on our discussions it seems the Planning Commission may lean to having standards within the SALDO, so these are the most important for review (pg 2-16). **Sections 4** and **5** are seen as more optional, but believe could be best suited in general code, rather than SALDO or Zoning, so those sections can be pushed to a later discussion if that is of interest to the Township. We hope these standards may be helpful to the Township for its future electric vehicle charging necessities.

ELECTRIC VEHICLE SUPPLY EQUIPMENT AND CHARGING STATION MODEL ORDINANCE

SECTION 1. DEFINITIONS

A. Word Usage.
   a. Words used in the present tense include the future.
   b. The singular number includes the plural and the plural includes the singular.
   c. The words "include" or "including" shall not limit the term to the specified examples, but are intended to extend the meaning to all other instances of like kind and character.
   d. The word "may" is permissive, and the word "shall" is always required.
   e. The names of organizations including government agencies shall be construed to include their successors.

B. Defined Terms

Accessible. A site, building, facility, or portion thereof that provides accommodation for those with physical disabilities and that is in compliance with the ADA Standards for Accessible Design (2010), the Architectural Barriers Act (ABA) Accessibility Guidelines (2005), and the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (2023).

Electric Vehicle (EV). A generic term for a vehicle that gets some or all of its power from an electric motor. For the purposes of this chapter, an electric vehicle may be a Battery Electric Vehicle (BEV), Plug-In Electric Vehicle (PEV), or Plug-In Hybrid-Electric Vehicle (PHEV), as defined herein.

Electric Vehicle, Battery (BEV). A plug-in EV that uses only a battery and electric motor to power the EV.

How to Use This Model Ordinance

This model ordinance is intended to provide a local framework for streamlined EVCS review and permitting but may not be one-size-fits-all. As a model, all recommended language is entirely optional. However, when text is noted in brackets (like so: [***borough or township***]), there is a specific need for the municipality to edit the text. Some of these situations are as simple as selecting 'borough' versus 'township,' whereas others will involve more thorough policy discussion and analysis of alternatives.

The sections of the model ordinance may be appropriate in a handful of local ordinances, such as the Zoning Ordinance or Subdivision and Land Development (SALDO), a Streets and Sidewalks Ordinance, or a standalone ordinance referenced in the Zoning Ordinance and/or SALDO. Example locations:

Section	Recommended Ordinance
1	Zoning; SALDO; Streets/Sidewalks; Vehicles; etc.
2	Zoning; SALDO
3	Zoning; SALDO
4	Streets/Sidewalks; Administrative Ordinances
5	Streets/Sidewalks; Administrative Ordinances

Electric Vehicle, Plug-In (PEV). An EV that plugs into an external source to charge an on-board battery that provides the electricity for the electric motor.

Electric Vehicle (PHEV), Plug-In Hybrid. An EV that uses both an internal combustion engine and an electric motor with a battery that recharges by plugging into an external source.

Electric Vehicle Charging Station (EVCS). Battery charging station equipment with an associated parking space that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an EV.

Electric Vehicle Charging Station, Level 1. An EVCS that operates through a 120 volt AC circuit, with typical power output of 1 kW

Electric Vehicle Charging Station, Level 2. An EVCS that operates through a 208 or 240 volt AC circuit, with typical power output of 7 to 19 kW.

Electric Vehicle Charging Station, Level 3. An EVCS that operates through a 400 to 1000 volt three-phase AC circuit, with typical power output of 50 to 350 kW. Level 3 chargers are also known as Direct Current Fast Chargers or DCFC.

Electric Vehicle Charging Station, Private. An EVCS that is owned by a private party. A private EVCS may be located on private property, or may be located in the right-of-way when duly approved in accordance with applicable provisions of this chapter.

Electric Vehicle Charging Station, Municipal. An EVCS that is owned, operated, or otherwise controlled by a municipality, and that is available for use by the general public. Municipal EVCS may rely upon a third-party owner/operator and may require payment for charging and/or parking.

Electric Vehicle Ready or EV-Ready. Pre-wired electrical infrastructure to facilitate future installation of an EVCS. EV-Ready includes service panels, junction boxes, conduit, wiring, and other components necessary to make a particular location able to accommodate EVCS.

Definitions

Definitions are an integral part of any ordinance, as it ensures that the prospective applicant and the reviewer understand industry-specific terms. This will promote uniform review of applications for electric vehicle infrastructure. These terms may be added to an existing definitions chapter within an ordinance, or may be included alongside other EVSE regulations.

Electric Vehicles include battery electric vehicles (BEV), plug-in electric vehicles (PEV), and plug-in hybrid-electric vehicles (PHEV), as defined in this section. All of these vehicle categories require plug-in charging, which contrasts to hybrid vehicles and, of course, internal combustion engine vehicles.

Electric vehicle charging stations (EVCS) come in three distinct categories: Level 1, Level 2, and Level 3 (also known as Direct Current Fast Charge or DCFC). Each of these categories varies in the amount of electrical capacity required and how fast they are able to charge a vehicle. The term Electric Vehicle Supply Equipment (EVSE) is used throughout the model ordinance to capture the various infrastructure needed to support an electric vehicle charging station.

Electric Vehicle Supply/Service Equipment (EVSE). Any device that enables the safe transfer of energy between the local power supply grid and an electric vehicle. EVSE includes, but is not limited, to all the components for EV charging stations, including: the conductors; the ungrounded, grounded, and equipment grounding conductors; EV connectors; attachment plugs, software and all other fittings, devices, power outlets, induction plates or apparatus installed specifically for the purpose of delivering energy from the electric supply grid to an EV. EVSE may deliver either alternating current or direct current electricity (consistent with fast-charging equipment standard). EVSE may also include alternative charging utilities, such as solar photovoltaic systems, to generate supplemental power for the EVSE/EVCS.

Internal Combustion Engine (ICE). Gasoline- and diesel-powered cars and trucks use an internal combustion engine to convert fuel to the motion that moves the vehicle.

Kilowatt-hour (kWh). A measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour.

Special Flood Hazard Area. A designation by the Federal Emergency Management Agency (FEMA) that includes those areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year.

Use Last Principle. A concept that permits the use of an accessible EVCS by any user, provided that all non-accessible EVCS are in use. The concept generally promotes the preservation of an accessible EVCS, but would permit for greater EVCS use in times of high charging demand. The "use last" principle contrasts to providing an accessible EVCS that may only be utilized by those with a disability placard, potentially limiting use.

SECTION 2. STANDARDS FOR ELECTRIC VEHICLE SUPPLY EQUIPMENT AND CHARGING STATIONS.

A. Intent. The intention of the ordinance provisions herein are to:
    1. Ensure the safe, efficient installation of EVCS;
    2. Provide reasonable standards for the installation, maintenance, and management of EVCS;
    3. Ensure equitable access to EVCS and avoid adverse impacts to any community or neighborhood;
    4. ***[Enable the shift from internal combustion engine vehicles to EV through the expansion of supportive infrastructure; and]***
    5. ***[Reduce greenhouse gas emissions from the transportation sector.]***
B. Applicability. The regulations of this section shall apply to all EV charging stations, whether located off-street on private or public property or along the curb of a public street.
C. Permitting.
    1. Permit required. Any person seeking a permit for the installation, operation, and/or maintenance of an EVCS shall file a written application with ***[applicable staff or department in accordance with applicable ordinance citation (e.g., zoning permit process)]*** on a form provided for such purpose.
        a. If the applicant is not the owner of the subject property, written authorization of the property owner shall be required as part of the application.
        b. The following shall be provided in order for an application to be deemed complete:
            1. A site plan shall be provided.
            2. An electrical utility plan shall be provided.
            3. Photographs of the site may be provided, if requested.
            4. An operation and maintenance plan shall be provided.

Intent

The legislative intent of an ordinance provides the rationale and justification for the regulations within the ordinance. The provided language is meant to act as a starting point for the municipality: Subsections 1-3 address the spirit of the ordinance, while Subsections 4 and 5 provide stronger policy statements. The intent should be modified to address the specific goals of the municipality. For example, a community with an adopted climate action plan may cite the ordinance as a way to begin implementing the plan.

Permitting

Just like any other electrical work, appropriate permits must be obtained by the applicant. Additional supporting documentation, such as site plan and electrical utility plan, ought to be required at the time of application submittal. The Municipal Zoning Ordinance and/or Subdivision and Land Development Ordinance should detail site plan requirements; however, without that, additional detail may be necessary for this section. Therefore, this is an area where a municipality may wish to modify the model according to their anticipated review and approval process. For example, creating a single, unified permitting process specific to EVCS, like Upper Merion Township has, can make the process more efficient for applicants and municipal staff.

5. ***[The application shall be accompanied by the permit fee, which shall be established in the Fee Schedule, as adopted and amended by [Borough Council/Township Board of Supervisors] from time to time.]***

2. Proof of insurance required.
    a. A permittee shall maintain an insurance policy that covers any risk for any injury or damage resulting from the installation, operation, and/or maintenance of the EV charger, and the property owner shall agree to indemnify and hold the municipality harmless from any claims arising from the installation, operation, and/or maintenance of the EVCS to the extent permitted by law. The insurance policy shall be submitted to the ***[Borough or Township]*** Solicitor for review before the application is approved, a copy of which shall be filed with the ***[Borough or Township***].
3. Concurrent review. The applicant may concurrently file for the required ***[building and/or electrical permit.]***

D. Installation standards.
1. Installation of EVSE shall meet the standards and requirements of the National Electrical Code Article 625, "Electrical Vehicle Charging and Supply Equipment Systems."
2. Equipment shall be certified to UL Standard 2202 by a nationally recognized testing laboratory (e.g., UL or ETL) and listed and approved for EV use.
3. Connectors for a Level 1 EVCS shall comply with the J1772 Charging Standard, as maintained by the Society of Automotive Engineers International. The applicant may be permitted to utilize an alternative charging standard when approved by the ***[Borough or Township Engineer, Code Enforcement Officer, or other applicable staff]***, provided that the standard is useable by a wide range of EV.
4. Connectors for a Level 2 EVCS shall comply with the J1772 or J3400 Charging Standard, as maintained by the Society of Automotive Engineers International. The applicant may be permitted to utilize an alternative

Installation Standards

The installation standards under subsection D ensure consistency with national standards for EVSE and EVCS. After some consternation, EV manufacturers have come together to adopt universal standards for EVCS connectors. These standard specifications are included in the model ordinance; however, in the event that new connector types enter the market, this section will need to be updated.

It is recommended that the municipality ensure that a qualified electrician install all EVSE and EVCS. Subsection D(6) requires that the installing electrician be certified under the Electric Vehicle Infrastructure Training Program (a national certification program that has trained thousands of electricians). The EVITP website provides a comprehensive list of all EVITP certified contractors within the Commonwealth.

Siting and Design Standards

A softer approach is recommended for siting and design standards, as EVCS are not anticipated to be an overly obtrusive land use (similar to parking meters). EVCS may be located on pedestals, lighting posts, bollards, walls of buildings/structures, or kiosks. The included siting standards promote a clear sidewalk and orderly operations.

charging standard when approved by the ***[Borough or Township]*** Engineer, provided that the standard is useable by a wide range of EV.

5. Connectors for a Level 3 EVCS shall comply with the J3400 Charging Standard, as maintained by the Society of Automotive Engineers International. The applicant may be permitted to utilize an alternative charging standard, such as CCS or CHAdeMO, when approved by the ***[Borough or Township]*** Engineer, provided that the standard is useable by a wide range of EV.
6. An EVCS shall be installed by a qualified electrician that has completed a State registered electrician apprenticeship program; is in compliance with all applicable State or municipality codes, regulations and ordinances regarding electricians; and holds a certification from the Electric Vehicle Infrastructure Training Program (EVITP).

E. Siting and design standards.

1. EVCS may be installed in standard parking spaces or accessible parking spaces.
    a. Standard parking spaces served by an EVCS shall meet the size and surfacing requirements for a standard parking space, pursuant to ***[citation]***.
    b. Accessible parking spaces served by an EVCS shall meet the size and surfacing requirements of the Americans with Disabilities Act (ADA) Standards for Accessible Design (2010).
2. EVCS shall be mounted on pedestals, lighting posts, bollards, walls of buildings/structures, or kiosks.
3. EVCS shall either be installed a minimum of 24 inches from the face of the curb or shall be protected by wheel stops, bollards, or the like.
4. EVCS outlets and connector devices shall be no less than 24 inches and no higher than 48 inches from the surface where mounted.
5. EVSE and EVCS shall be designed and located as to not impede a pedestrian clear pathway.

Accessibility

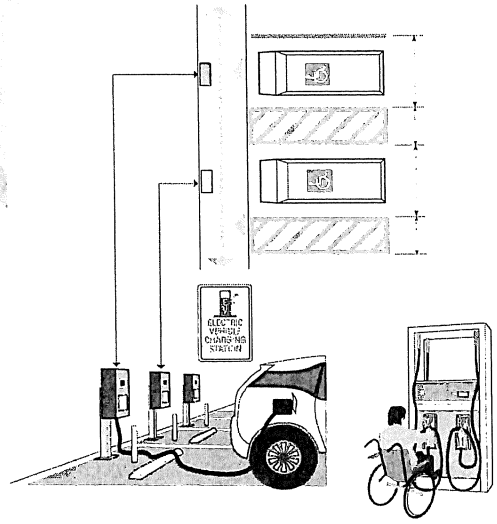
It is of the utmost importance that EVCS that are accessible for those with physical disabilities are provided throughout the county, but reserving accessible EVCS for only those with a disability placard may result in underutilized EVCS. With this in mind, the "use last" principle was selected for the model ordinance. This concept requires a fairly significant number of accessible EVCS, at 5% or a minimum of one, but would allow for the use of an accessible EVCS by those without a disability placard when all other EVCS are in use. The U.S. Access Board proposed making use of this concept in their *Design Recommendations for Accessible Electric Vehicle Charging Stations (2023)*.

The regulatory foundation for accessible design is quite strong. The U.S. Access Board states that, under the Americans with Disabilities Act and Architectural Barriers Act Accessibility Standards, EV charging stations must comply with the technical requirements for floor and ground surfaces (§302), clear floor or ground space (§305), reach ranges (§308), operable parts (§309), accessible routes (§402), and other provisions when needed, such as some of the provisions in parking (§502), signs (§703), and fare machines (§707). The provided regulations comply with these standards, but they are not exhaustive. The applicable legislation and guidelines should be reviewed by the design professional on the project.

6. EVCS cords shall be retractable or shall be provided a place to be coiled and neatly stored.
7. No portion of an EVCS, including but not limited to cords, shall cross a driveway, sidewalk, pathway, or passenger unloading area.
8. Only EVSE and EVCS that are designed to be floodproof shall be permissible within a Special Flood Hazard Area. The applicant shall provide floodproofing specifications at the time of application submittal.
9. ***[When located within a historic district created pursuant to the Historic Districts Act (Act 167 of 1961), the Historical Architectural Review Board (HARB) having jurisdiction shall follow their regular review procedure. The applicant shall be notified at the time of application submittal if HARB review is required.]***

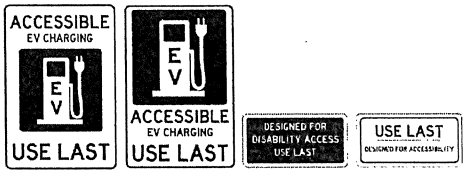
F. Universal design.
   1. Applicability.
      a. When only one EVCS is provided, it shall be accessible for people with disabilities in accordance with the standards of this section.
      b. When more than one EVCS is provided, at least one and no less than 5% of the EVCS provided shall be accessible to those with disabilities.
   2. Use last principle.
      a. An accessible EVCS, being reserved for use by an EV, shall not count towards the meeting the minimum number of accessible spaces as required by the Americans with Disabilities Act (ADA) Standards for Accessible Design (2010).
      b. An accessible EVCS shall be preferred for those with a handicap placard; however, an accessible EVCS may be used when all other EVCS are occupied. This "use last" principle shall be indicated by signage stating, "USE LAST – DESIGNED FOR ACCESSIBILITY." Alternative language may be utilized, provided that it adequately describes this usage limitation.
   3. Compliance required.

Accessible EVCS Design



Source: International Building Code

"Use Last" Signage Examples



Source: United States Access Board

a. An accessible parking space served by an EVCS shall comply with the minimum requirements of the ADA Standards for Accessible Design (2010), the Architectural Barriers Act (ABA) Accessibility Guidelines (2005), and the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (2023).

4. Location.
    a. When accessible EVCS are provided along the curb of a street, they shall not be located within the middle 50% of a block, unless a mid-block curb ramp is provided, and shall connect to an accessible route to the EVCS.
    b. When accessible EVCS are provided in a parking lot or parking structure, they shall be located on the shortest accessible route to the accessible entrance of the principal building served.
5. Physical design.
    a. An accessible parking space served by an EVCS shall include the provision of a 5 foot wide access aisle on three (3) sides of the parking space, which shall provide an accessible route to the EVCS.
    b. EVCS shall provide a 30 inch by 48 inch minimum clear floor or ground space at the interactive side(s) of an EVCS that connects to an accessible route.
    c. For on-street EVCS, interactive side(s) of the EVCS shall face the sidewalk and shall not face the curb, to allow unobstructed access.
6. Operable/interactive parts.
    a. Operable/interactive parts shall be designed for use by one hand with no tight grasping, pinching, or twisting of the wrist, and no more than 5 pounds of force to operate.
    b. Operable/interactive parts shall be tactically discernable.

G. Safety.
1. The installation shall comply with construction codes, safety standards, and any federal, state, or local rule or regulation concerning EVSE and EVCS.
2. In order to promote the safety of emergency responders and promote efficient emergency response, the ***[Township or Borough]*** shall notify local emergency response agencies of the location and specifications of EVCS following installation thereof. Furthermore, an emergency disconnect shall be provided that allows emergency responders to terminate electrical power supply to the EVCS(s). The emergency disconnect shall be located a minimum of 25 feet from the EVCS(s) being controlled, and shall have signage stating, "Fire Department Use Only – Emergency Shutoff." The municipal ***[Fire Code Official]*** shall be provided an opportunity to review the specifications of the disconnect system.
3. ***[All applicants are recommended to have their electrical system inspected by a professional electrician and/or fire safety official before pursuing the installation of EVSE/EVCS.]***
4. Adequate site lighting shall be provided in the EVCS location, unless facility is limited to daytime use. Such lighting shall comply with ***[Citation to Lighting Code].***

5. EVCS pedestals shall be designed to minimize their potential damage by accidents and vandalism and to be safe for use in inclement weather.

H. Signage and display screens.
   1. An EVCS shall be identified with signage in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 11th Edition (2023).
   2. The following information shall be provided at every EVCS:
      a. Contact information, such as the phone number/TTY or text message support number, for the appropriate party to be notified if the EVCS is inoperable, inaccessible, or unsafe that is available 24/7.
      b. The address of the EVCS for emergency response purposes.
      c. Installation date, model number, and the voltage and amperage levels of the EVCS.
      d. The hours of operation and/or time limit restrictions.
      e. Parking and charging payment methods/options and fees/rates.
      f. A statement indicating that the space is only for EV parking and/or charging purposes.
      g. Enforcement warnings (e.g., monetary fine, towing provisions).
      h. A statement reading "In case of an emergency, dial 911."
   3. Display Screens. When display screens are used to relay information or purchase, the following standards shall apply:
      a. EVCS may have electronic informational screens displaying the operational information up to 64 square inches in area. Screens larger than 64 square inches shall be considered a sign and must comply with all applicable sign regulations of ***[Citation to Sign Ordinance].***
      b. Display screens shall be visible from a point located 40 inches above the clear floor or ground space at an EVCS.
      c. Display screens shall not flash more than 3 times per second.
      d. The user shall be provided with a text size option, which in no case shall permit a minimum character height less than 3/16 inch.

Safety

One of the principal concerns with electric vehicle safety is the potential for lithium-ion fires, which are extremely rare but also extremely dangerous and difficult to extinguish. These fires occur within the battery of electric vehicles, so the concerns lie with the vehicles rather than the charging infrastructure. Because of this concern, it is recommended that local emergency response agencies be notified of the installation of new EVCS. Furthermore, an emergency power shutoff for EVCS is recommended to allow first responders to mitigate the spread of electrical fires.

The potential for vandalism is another concern for EVCS, particularly due to their high cost to install. To address this and to promote increased personal safety, all EVCS should be illuminated at night. It is recommended that municipalities require a minimum illumination level for all parking areas that will be utilized at night and, where this standard exists, it should apply to EVCS. If such a standard does not exist, the municipality may establish an illumination standard or siting standard for EVCS, such as requiring that the EVCS is located nearest the entrance of the building served.

e. There shall be an option for display screens to provide speech output that is capable of full and independent use by individuals with vision impairments.
    1) Braille instructions for initiating text-to-speech output shall be provided.
    2) Speech output must be coordinated with information displayed on the display screen.
    3) Speech output shall offer volume control by the user, which shall have a maximum decibel limit in compliance with ***[Citation to Noise Ordinance]***.
    4) If a timed response is required, audible cues warning of such time limit and the ability to request additional time shall be provided.

l. Fees.
1. A property owner is not restricted from collecting a reasonable service fee for the use of an EVCS made available to residents, tenants, employees, customers, and/or visitors to the private property on which it is located. Such fees shall be established in an amount to cover costs of installation, supervision, operation, maintenance, inspection, control, and use of electric charging stations and the electric energy supplied.
2. The fee for municipally-owned/operated EVCS shall be established in the Fee Schedule, as adopted and amended by [Borough Council/Township Board of Supervisors] from time to time. Such fees shall be established in an amount to cover costs of installation, supervision, operation, maintenance, inspection, control, and use of electric charging stations and the electric energy supplied.
3. Payment Methods.
    a. All EVCS payment systems shall provide for contactless payment methods.

Signage

The signage standards promote transparency for users of EVCS, and also provide certain design standards. Every EVCS must provide a support system that enables users to get assistance and report malfunction. The required information will ensure that the user has access to important information, and will also promote better emergency response.

Display screens are limited to 64 square inches, which will ensure they fit into a streetscape without adverse impact. The other standards promote accessibility and, in many cases, are based upon the requirements of the ADA or ABA (e.g., 3/16 inch minimum character height, no rapid flashing).

Fees

A public or privately-owned EVCS may be fee-based. Any fee for use of an EVCS should reflect the actual costs of installation, maintenance, management, use, and administration of the EVCS. To promote accessibility, it is recommended that any payment systems be contactless (e.g., tap to pay, Apple Pay, Google Pay, etc.). These systems require either a bank account or smart phone, which adversely impacts those who rely on cash; however, cash or coin collection is more difficult to administer.

b. All EVCS payment systems shall provide a tactically discernable location for contactless payment, such as a raised card reader or by a location indicated by braille or another tactile method.

c. Visual and audible feedback shall be provided at all EVCS payment systems.

J. Violations and enforcement. Any violation of this Chapter shall be subject to ***[Citation to general Violations, Penalties, and Remedies Section].***

SECTION 3. OFF-STREET ELECTRIC VEHICLE CHARGING STATIONS

A. Applicability.
    1. Off-street EVCS shall be permitted in all zoning districts as an accessory use.
    2. The provision of off-street EVCS requirements shall apply in ***[all]*** zoning districts.

B. ***[Required or recommended charging levels]***. Varying levels of EV charging capabilities shall be ***[encouraged/required]*** based upon the land use context and anticipated parking duration:
    1. At destinations such as shopping centers, downtowns, recreational facilities, cultural attractions, or entertainment venues, it is ***[required or recommended]*** to implement either Level 2 or Level 3 EVCS.
    2. At workplaces such as office buildings, office parks, industrial buildings, industrial parks, or other employment centers, it is ***[required or recommended]*** to implement Level 2 or Level 3 EVCS.
    3. Residential land uses are ***[required or recommended]*** to implement Level 1 or Level 2 EVCS.

C. Design and safety standards. All off-street EVCS shall comply with ***[Section 2, Standards for Electric Vehicle Supply Equipment and Charging Stations].***

D. Minimum parking requirement.
    1. Any fraction of a required parking space or required EVCS equal to or exceeding 0.5 shall be rounded up to the nearest whole number.
    2. Parking spaces served by an EVCS shall count towards meeting a minimum parking requirement. [***Each Level 2 or Level 3 EVCS provided shall count as two parking spaces per each for the purposes of meeting the minimum parking requirement, up to a 10% reduction in total parking requirement.]***

E. ***[The requirements of subsections F, G, and H shall be separate and distinct, except that the requirements for residential parking (subsection F) may satisfy the***

Applicability

EVCS should be permissible in all zoning districts as an accessory use. EVCS should not have substantial aesthetic or safety concerns that would suggest limiting their location. That said, a municipality may wish to focus their efforts in a specific area (e.g., downtown), which is enabled by subsection 2.

Required Charging Levels

The Level of EVCS provided should align with the land use context and the anticipated parking period. For example, a customer at a convenience store may only be inside for a few minutes. Level 1 or Level 2 charging would provide little utility in this case, while Level 3 would provide a meaningful amount of charge. Instead of using broad land use categories described in the model, a municipality may list specific land uses.

Min. Parking Requirements

It is recommended that a parking space served by an EVCS should be counted towards meeting a minimum parking requirement. Subsection D.2. provides an optional incentive to allow each EV-served parking space to count as two parking spaces, permitting up to a 10% reduction in the parking requirement. This provision has the duel benefit of promoting EVCS and lowering parking requirements, allowing for a potential reduction in impervious surfacing. This will need to be carefully considered where parking is an issue, such as busy downtown entertainment district.

requirements for EV-ready spaces in a surface parking lot (subsection G.2.) or parking structure/garage (subsection H.3.).]

F. Residential parking.
   1. Any new single-family dwelling unit (including single-family detached, single-family semi-detached, and single-family attached dwellings) with garages are required to install a dedicated 40 amp branch circuit capable of powering a 32 amp Level 2 EVCS in a convenient location within the garage, and install an associated 220-240 volt/40 amp outlet. ***[This may satisfy the requirement of subsection 2.]***
   2. ***[A minimum of one EV-ready parking space shall be required for a residential dwelling, including those within a mixed-use or multifamily property.]***

G. Surface parking lots.
   1. Any new or substantially redeveloped (i.e., full-depth reconstruction) surface parking lot with a minimum of ***[25]*** parking spaces shall require at least ***[5%]*** to be EV parking spaces, served by either Level 1 or Level 2 EVCS connection.
   2. To ensure future EV infrastructure is supported, any new or substantially redeveloped (i.e., full-depth reconstruction) surface parking lot with a minimum of ***[25]*** parking spaces shall provide at least ***[10%]*** of all provided parking spaces as EV-ready spaces.

H. Parking structure/garage.
   1. Any required EVCS or EV-ready parking space shall primarily be located on the ground floor of the parking structure/garage to provide a convenient location for users and to allow for more efficient emergency response.
   2. Any new parking structure/garage with a minimum of ***[25]*** parking spaces shall require at least ***[5%]*** of all provided parking spaces to be EV parking spaces, served by either Level 1 or Level 2 EVCS connection.
   3. To ensure future EV infrastructure is supported, any new parking structure/garage with a minimum of ***[25]*** parking spaces shall provide at least ***[10%]*** of all provided parking spaces as EV-ready parking spaces.

Residential Parking

Most EV charging occurs at home, where a car is parked for several hours at a time. Given this, it is recommended that infrastructure for EV-readiness be provided at the time of initial construction (when it is most cost-efficient to do so). The EV-ready outlet should be located either in a garage, if one is proposed, or at a required parking space.

Parking Lots & Garages

It is recommended that a certain portion of new parking spaces be EV-ready or include an EVCS. To avoid adverse impact on smaller or less impactful developments, a threshold of 25 parking spaces is recommended before EVCS requirements applies. This threshold could be increased or removed. For all large-scale parking areas, it is recommended that 5% of provided parking spaces include EVCS and another 10% are EV-ready.

Certain safety standards should be required where EVCS is provided within a building. This is generally less burdensome for new construction than retrofits. The model language included provides a minimum sprinkler system and smoke evacuation system. This section should be vetted by the municipal fire official prior to adoption.

4. ***[It is encouraged, but not required, that new parking garages be GBCI ParkSmart Certified, a third-party certification program for high performing, sustainable garages. If ParkSmart certification is not pursued, it is strongly recommended that the best practices of certification be utilized by the parking structure operator.]***
5. When an EVCS is proposed within a parking structure/garage, an automatic fire sprinkler system deemed acceptable by the ***[Borough or Township Fire Chief or Fire Marshal*** shall be provided for. Furthermore, when a parking structure/garage is underground, an automatic smoke evacuation system shall be provided that automatically activates when smoke is detected. A control panel shall be accessible by the Fire Department, and the design requirements shall be approved by the ***[Borough or Township Fire Chief or Fire Marshal].***

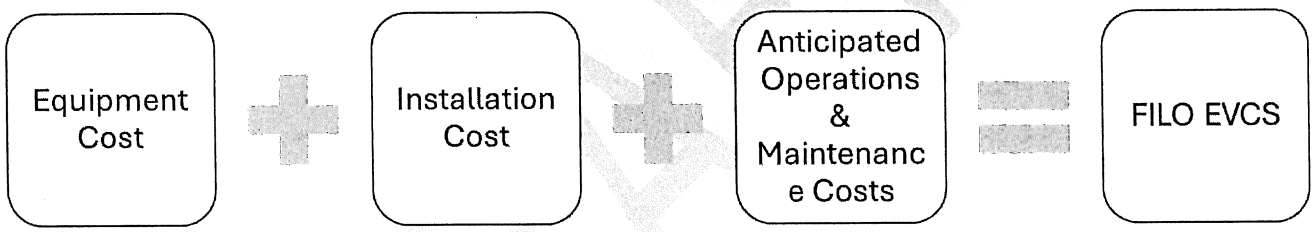
I. Fee in lieu of EVCS.

1. In lieu of installing a required EVCS, an applicant may instead opt to pay a fee to the municipality that provides the capital necessary to install the minimum number of EVCS at public location within the ***[Borough or Township].***
2. The fee per EVCS shall be established in the Fee Schedule, as adopted and amended by ***[Borough Council/Township Board of Supervisors***] from time to time.
3. Any municipal EVCS funded by this section shall be in accordance with ***[Citation to Municipal Electric Vehicle Charging Stations***].

Fee in-Lieu Option

As an alternative to on-site installation of a required EVCS, a municipality may wish to allow an applicant to instead pay a fee to cover the costs of installation of a public, municipal EVCS. The Fee-in-Lieu-of (FILO) concept is utilized by many municipalities for a wide range of requirements. For example, many Subdivision and Land Development Ordinance provide for a FILO recreation land. In these instances, the fee goes into the parks budget for improvements to existing or future parks. Importantly, and fee exacted must be used for the specified purpose. Furthermore, any fee must be tied to the actual costs associated with the requested item.

Factors for Determining the Fee



SECTION 4. RESIDENTIAL ON-STREET ELECTRIC VEHICLE CHARGING STATIONS

A. Applicability. Residential property owners, including owners of mixed-use and multifamily properties, may seek a permit to install EVCS in the right-of-way adjacent to their property when in compliance with the provisions of this section.
B. Design and safety standards. All residential on-street EVCS shall comply with ***[Section 2, Standards for Electric Vehicle Supply Equipment and Charging Stations]***.
C. Maximum number of EVCS. A maximum of one EVCS per dwelling unit served shall be permissible, provided that ***[22 feet (parallel parking space length)]*** of street frontage per parking space served is available.
D. Permissible charging levels. Level 1, Level 2 or Level 3 DCFC EVCS shall be permissible when approved in accordance with this section. Extension cords and other ad-hoc EVSE shall be prohibited from occupying the right-of-way.
E. Standards for site suitability.
    1. A residential property owner may only site an EVCS in the right-of-way when they prove to the Zoning Officer, by way of financial estimates or site design drawings with limiting features noted, that it would be infeasible to do so on the private property to be served by the EVCS. The burden of proof shall rest solely on the applicant, and the applicant shall be afforded the ability to dispute the Zoning Officer's interpretation to the Zoning Hearing Board, as provided for in ***[Citation to ZHB Regulations.]***
    2. The right-of-way width shall be of sufficient width to accommodate the proposed EVCS while maintaining a clear path of travel that is at least 4 feet in width.
    3. Clearance of at least 15 feet shall be maintained between any EVCS and a fire hydrant or fire department sprinkler/standpipe connection.

Residential On-Street EVCS

Many residents in Montgomery County, such as those in historic neighborhoods or in townhome communities, may lack dedicated off-street parking, making it infeasible to charge an EV at home. To address the charging needs of this population, it is recommended that an on-street EVCS option be afforded to residential property owners. It is important to remember that the municipality would be giving up a portion of their right-of-way, so the standards must ensure that conflicts are avoided from the outset.

Before a permit to install an on-street EVCS is granted, is strongly encouraged that the property owner prove that it is infeasible to install the EVCS on their property. This may be as simple as an aerial image showing that an on-site parking space is impossible, or a cost estimate from a qualified contractor showing the dissonance between the on and off-street installation costs. Once this is substantiated by the applicant, certain other site suitability standards must be met (e.g., separation distance from a fire hydrant). By applying for use of the right-of-way, the applicant is accepting certain limitations. Apart from the EVCS, no other alterations to the right-of-way are permitted without express approval from the municipality.

4. A clearance of at least 20 feet shall be maintained between any EVCS and an intersection or crosswalk.
5. A clearance of at least five feet shall be maintained between any EVCS and a street tree, utility pole, and driveway or other curb cut.

F. Limitations.
1. The permittee shall accept the prevailing site conditions including, but not limited to, passenger zones, loading zones, obstructions within the right-of-way, active residential permit parking zone restrictions and permitting requirements, street cleaning parking restrictions, no-parking zones, and automobile traffic.
2. EVCS are restricted to the area immediately adjacent to the property being served and may not project in front of neighboring properties.
3. No area of the right-of-way shall be obstructed, painted, modified, or altered in any way without prior written approval of the ***[Director of Public Works].***
4. EVCS and EVSE operations, maintenance, and enforcement shall be the responsibility of the permittee and may only be utilized for private, non-commercial use.
5. The parking space associated with an approved residential on-street EVCS shall be reserved for exclusive use of the property owner/tenant. Any paint or signage indicating such restrictions shall be reviewed and approved by the ***[Director of Public Works]*** prior to installation. The cost of any signage or paint and installation shall be the sole responsibility of the permittee.

G. Permissible use.
1. Use of an on-street EVCS shall be exclusively for the property owner or tenant. An on-street EVCS may be secured to ensure that it may not be operated by anyone other than those expressly permitted to do so, whether by keycard/fob, lock, or other method.

Private Use of On-Street Parking

The model recommends that an on-street EVCS and associated parking space be reserved for exclusive use by the property owner when it is infeasible to charge an EV on private property. As previously discussed the standards for site suitability, (Subsection E) are designed to avoid permitting an on-street EVCS when it is feasible on private property.

While having an on-street parking space could be considered an incentive to install an on-street EVCS, there would be significant financial burden on a property owner to pursue this route. Furthermore, a municipality could associate the reserved parking space with a specific parking permit or vehicle to ensure that the property owner is in fact charging their vehicle in the parking space. All that to say: abusing this system is unlikely, but not impossible.

All of this, however, brings up the issue of enforcement for vehicles occupying the parking space without permission. If the municipality has a parking authority, they may be leveraged as a way to enforce the parking restriction. Regardless, it would generally be recommended that private enforcement be provided for. If private enforcement is pursued, signage with the following information could be required by the ordinance:

> *Parking by permit only (Permit #). Unauthorized vehicles will be towed at vehicle owner's expense...*

2. EVCS permitted under this section shall not be permitted to collect fees, except that the landlord of a residential property and their tenant(s) may enter into an agreement for compensation for use of an EVCS. Any such agreement(s) shall be provided to the ***[Borough or Township]*** upon request.

H. Removal or abandonment.
   1. The EVCS shall be removed by and at the expense of the property owner of the associated property if the permittee no longer owns the property. If a subsequent owner of the property desires to take possession of the EVCS, they must notify the ***[Borough or Township]*** in writing of their intent to do so before the property is sold.
   2. EVCS shall be removed by and at the expense of the property owner of the associated property, either at the will of the property owner or when notified by the ***[Borough or Township]*** that the right-of-way must be vacated pursuant to [***Citation to Municipal Control of Right-of-Way].***

SECTION 5. MUNICIPAL ELECTRIC VEHICLE CHARGING STATIONS

A. Authority granted. ***[The Township Board of Supervisors or Borough Council]*** may authorize the installation of publicly accessible EV charging stations within the right-of-way or on municipal property at their discretion.
B. Design and safety standards.
   1. All municipal EVCS shall comply with ***[Section 2, Standards for Electric Vehicle Supply Equipment and Charging Stations.]***
   2. Siting of public on-street EVCS.
      a. The right-of-way width (sidewalk) shall be of sufficient width to accommodate the proposed EVCS while maintaining a clear path of travel that is at least four feet in width.
      b. Clearance of at least 15 feet shall be maintained between any EVCS and a fire hydrant or fire department sprinkler/standpipe connection.
      c. A clearance of at least 20 feet shall be maintained between any

Municipally-Owned EVCS

Eventually, municipalities will need to take an active role in electric vehicle charging. It is therefore recommended that the municipality study how to best provide a public charging network. There are two viable options: one where the municipality acts as the owner-operator, and another where the municipality contracts with a third party for some or all responsibilities (e.g., maintenance, enforcement, fee collection). A municipality may follow the RFP, RFI, or RFQ process to discern the best course of action.

The Municipal Electric Vehicle Charging Stations regulations are meant to provide broad latitude to the governing body in authorizing the installation of public EVCS. The fees for use of an EVCS should be set annually as part of the municipal fee schedule, and these should be based upon the costs associated with the installation and management of infrastructure. Municipal EVCS will likely be Level 2 (and should never be Level 1). Priority sites are:

- Municipal, County, State, or National Parks;
- Municipal properties having public access;
- On-Street; and
- Other public facilities, like libraries or schools.

EVCS and an intersection or crosswalk.

d. A clearance of at least five feet shall be maintained between any EVCS and a driveway or other curb cut.

C. Charging levels. All municipal EVCS shall be Level 2 or Level 3.

D. Fees. The fee for municipal EVCS use shall be established in the Fee Schedule, as adopted and amended by ***[The Township Board of Supervisors or Borough Council]*** from time to time.

SPRINGFIELD TOWNSHIP
ENVIRONMENTAL ADVISORY COMMISSION

January 27, 2025

To: Springfield Township Planning Commission

From: Springfield Township Environmental Advisory Commission

Subject: EAC Recommendations on EV Charging in Public Parking Lots

On January 22, 2025, the Planning Commission provided a request for input from the Environmental Advisory Commission ("EAC") on electric vehicle ("EV") charging in public parking lots. The EAC appreciates the Planning Commission's outreach on this issue, and looks forward to coordinating on other issues going forward.

In its request, the Planning Commission provided the following:

"The Planning Commission is in the process of reviewing and revising the Township's Subdivision & Land Development Ordinance. During that review, a question has been raised concerning Vehicle Charging Stations within a parking lot undergoing development or redevelopment here in Springfield Township. The Planning Commission would like the EAC's input {recommendation} on the number and type of charging stations that should be required within a parking lot. There have been several options brought forward at this point. They are as follows:

1. *The number of charging station should be directly related to the total number of parking spaces within the parking lot. Example being 1 charging station for every 25 parking stalls, up to 200 parking spaces, and then 1 charging station per 100 parking spaces or fraction thereof.*

2. *The number of charging stations required is a set percentage of the total number of parking stalls within the parking lot.*

3. *The number of charging stations required should be directly related to the type or phase of charging station proposed to be installed"*

Below, the EAC offers some national context on what approaches have been adopted across the country, and then several suggestions and recommendations for the Planning Commission to consider when revising the Subdivision & Land Development Ordinance ("SALDO"), and any other related planning documents. Specifically, first, we provide a background of existing regulations/ordinances and a description of relevant considerations when making choices on revisions to the parking requirements. Second, we provide a description of what the EAC would recommend regarding changes to the SALDO. While this letter may provide more information than contemplated by the Planning Commission, the EAC strongly

recommends that this issue be carefully considered in any planning documents moving forward.

I. Background and Survey of Existing Rules and Regulations

Localities across the country have begun adopting ordinances and other requirements for EV charging in parking lots. As EV adoption is expected to grow to be roughly 50% of vehicle sales in the United States by 2030,[1] for these policies to be effective they must be forward looking so as not to result in significant upgrade costs in the future. Here, we offer background information that provides context for the recommendations that we provide below.

A review of these provisions provides good context for the scope and breadth of what the Township should adopt. Below is a chart from a technical brief authored by the Pacific Northwest National Laboratory,[2] that highlights and summarizes sample EV infrastructure code provisions that are currently implemented across North America. This summary provides context for what other localities have chosen to do with EV charging parking infrastructure requirements. Note that the technical brief is from 2021, but much of its data and recommendations are still relevant.

Table 1. Cities with EV Charging Infrastructure Requirements

Municipality	Year	Type	One- or Two-family Dwellings	Multifamily Unit Dwellings	Commercial
Avon, CO	2021	Ordinance	1 EV-Ready Space per dwelling Unit	5% EV-Installed, 10% EV-Ready, 15% EV-Capable (7+ spaces)	5% EV-Installed, 10% EV-Ready, 15% EV-Capable (10+ spaces)
St. Louis, MO	2021	Ordinance	1 EV-Ready Space per dwelling Unit	2% EV-Installed, 5% EV-Ready (increases to 10% in 2025)	2% EV-Installed, 5% EV-Ready
Madison, WI	2021	Ordinance	-	2% EV-Installed, 10% EV-Ready (increases by 10% every 5 years)	1% EV-Installed (increases by 1% every 5 years), 10% EV-Ready (increases by 10% every 5 years)
Washington D.C.	2021	Legislation	-	20% EV-Ready (3+ spaces)	20% EV-Ready (3+ spaces)
Summit County, CO	2020	IBC / IRC	1 EV-Ready Space per dwelling Unit	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (10+ spaces)	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (25+ spaces)
Dillon, CO	2020	IBC / IRC	2 EV-Ready Space per dwelling Unit	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (10+ spaces)	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (25+ spaces)
Breckenridge, CO	2020	IBC / IRC	3 EV-Ready Space per dwelling Unit	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (10+ spaces)	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (25+ spaces)
Frisco, CO	2020	IBC / IRC	4 EV-Ready Space per dwelling Unit	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (10+ spaces)	5% EV-Installed, 10% EV-Ready, 40% EV-Capable (25+ spaces)

[1] *See* https://iea.blob.core.windows.net/assets/a9e3544b-0b12-4e15-b407-65f5c8ce1b5f/GlobalEVOutlook2024.pdf

[2] V.R. Salcido, et al., *Pacific Northwest National Laboratory, Technical Brief: Electric Vehicle Charging for Residential and Commercial Energy Codes*, available at: https://www.energycodes.gov/sites/default/files/2025-01/TechBrief_EV_Charging.pdf (July 2021), at 9-10.

Municipality	Year	Type	One- or Two-family Dwellings	Multifamily Unit Dwellings	Commercial
Salt Lake City, UT	2020	Ordinance	-	20% EV-Ready (5+ spaces)	-
City of Boulder, CO	2020	IBC / IRC	1 EV-Ready Space per dwelling Unit	5% EV-Installed, 15% EV-Ready, 40% EV-Capable (25+ spaces)	5% EV-Installed, 10% EV-Ready, 10% EV-Capable
Denver, CO	2020	IBC / IRC	1 EV-Ready Space per dwelling Unit	5% EV-Installed, 15% EV-Ready, 80% EV-Capable	5% EV-Installed, 10% EV-Ready, 10% EV-Capable
Honolulu, HI	2020	Ordinance	1 EV-Capable Space per dwelling unit	25% EV-Ready (6+ spaces)	25% EV-Ready (12+ spaces)
Chicago, IL	2020	Ordinance		20% EV-Ready (5+ spaces)	20% EV-Ready (30+ spaces)
Lakewood, CO	2019	Zoning Ordinance	1 EV-Capable Space per dwelling unit	2% EV-Installed, 18% EV-Capable (10+ spaces)	2% EV-Installed, 13% - 18% EV-Capable (10+ spaces)
Flagstaff, AZ	2019	IBC / IRC	1 EV-Ready Space per dwelling Unit	3% EV-Ready	3% EV-Ready
Massachusetts	2019	-	-	-	1 EV-Ready space (15+ spaces)
Seattle, WA	2019	Ordinance	1 EV-Ready Space per dwelling Unit	100% EV-Ready up to 6 space, 20% for parking lots with 7+ spaces	10% EV-Ready
Sedona, AZ	2019	Appendix	1 EV-Capable Space per dwelling Unit	-	5% EV-Capable
Golden, CO	2019	Ordinance	-	1 EV-Installed Space per 15 parking space, 15% EV-Capable	
San Jose, CA	2019	Ordinance	1 EV-Ready Space per dwelling Unit	10% EV-Installed, 20% EV-Ready, 70% EV-Capable	10% EV-Installed, 40% EV-Capable
Fort Collins, CO	2019	IBC / IRC	1 EV-Capable Space per dwelling Unit	10% EV-Capable	-
Vancouver, BC	2019	IBC / IRC	1 EV-Ready Space per dwelling Unit	100% EV-Ready	10% EV-Ready
Oakland, CA	2018	IBC / IRC	-	10% EV-Ready, 80% "Raceway Installed", 20% total panel capacity	10% EV-Ready, 10% "Raceway Installed", 20% total panel capacity
Atlanta, GA	2017	Code of Ordinances	1 EV-Capable Space per dwelling Unit	20% EV-Capable	
Aspen, CO	2017	IBC / IRC	1 EV-Capable Space per dwelling Unit	3% EV-Capable (240V individual circuit branch with EV CAPABLE labelling)	-
San Francisco, CA	2017	IBC / IRC	1 EV-Ready Space per dwelling Unit	10% EV-Ready, Panel Capacity for 20%, Raceway for 100%	
Palo Alto, CA	2017	IBC / IRC	1 EV-Capable Space per dwelling Unit	1 EV-Ready Space per Unit, 20% EV-Capable for Guest Parking with 5% EV-Installed	20% EV-Capable, 5% EV-Installed
Oregon	2017	IBC / IRC	-	5% EV-Ready	
Boulder County, CO	2015	IBC / IRC	1 EV-Ready Space per dwelling Unit	2% EV-Ready (for new construction and 50% or 5,000 SF additions)	
Washington	2015	State Building Code	-	For Group B, Group R-1 hotel and motel only, Group R-2 occupancies: 5% of parking spaces shall be EV Capable. Size electrical room to serve 20% of spaces.	
New York City, NY	2013	IBC / IRC	-	20% EV-Capable	-
California (CALGreen)	2010	IBC / IRC	1 EV-Capable Space per dwelling Unit	10% EV-Capable	

Source – Southwest Energy Efficiency Project 2020

As can be seen from the chart above, a number of localities have gone beyond identifying a static number for the percentage of parking spaces for installed Electric Vehicle Supply Equipment ("EVSE") equipment, and instead, have forward looking provisions for EV-Capable and EV-Ready spaces.

An EV-Capable stall requires just the infrastructure (conduit, breaker space, junction box, etc.) for the future installation of an EV charging station. These types of spaces do not require any charging equipment to be installed at the time of permit. The benefit of EV-Capable stalls is that it allows for the simple installation of a charging station in the future if needed. Rather than a 100% retrofit job, the contractor would simply need to just pull wire through the conduit and connect to

the charger. This can save the owner thousands of dollars as they would avoid work like concrete or asphalt cut and patch. In fact, per the City and County of San Francisco, the cost of a retrofit charging station is nearly four times the cost of a new construction job. With EV-Capable, the installation cost would be around the same cost as a new construction job since a lot of the pre-work has been completed.

An EV-Ready space goes a few steps beyond EV-Capable, however, there still is no EV charger installed. With EV-Ready, all required infrastructure is installed, including the wires and circuit breakers. The circuit may be terminated in a junction box or to a receptacle. Essentially, EV Ready includes everything needed to power an EV charger just without the charger itself.

Additionally, many localities have requirements for ADA accessibility for at least some of the spots. According to the Centers for Disease Control and Prevention, 12% of Pennsylvanians have mobility-related disabilities. As these spaces are not reserved for disabled individuals, many localities choose to maintain a relatively high percentage of EVSE spaces as ADA accessible. For example, the Borough of West Chester, PA requires "the ratio of EV Parking Spaces that shall be handicap-accessible shall be the same as the ratio of handicap-accessible parking spaces to the total number of parking spaces, with a minimum of one EV Parking Space being handicap-accessible."[3]

Lastly, most ordinances recommend the installation of Level 2 EVSE equipment. Level-2 charging operates on a forty (40) to one hundred (100) amp breaker on a two hundred eight (208) or two hundred forty (240) volt AC circuit. This type of charging typically allows 15-30 miles per hour of charging, or roughly 7-11kW. Level-3 charging on the other hand operates on a sixty (60) amp or higher breaker on a four hundred eighty (480) volt or higher three phase circuit with special grounding equipment. Level-3 stations can also be referred to as rapid charging stations that are typically characterized by industrial grade electrical outlets that allow for faster recharging of electric vehicles. These units charge significantly faster than Level-2 chargers at anywhere from 100-1400 miles per hour, or from 30-350kW, and are typically located on major travel corridors.

Locally, there are several examples of localities that have EV charging parking lot requirements. For example, at least one township in Montgomery County has adopted such provisions – Whitemarsh Township. Whitemarsh Township requires 2 installed EVSE units for parking lots 20-50 spaces, 5 EVSE

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[3] *See* https://west-chester.com/DocumentCenter/View/23907/EV-Ready-Ordinance; *see also* https://www.a2gov.org/departments/planning/Documents/Planning/UDC%20Fifth%20Edition-B%20Effective%202-14-21.pdf; ttps://www.a2gov.org/departments/planning/Documents/Planning/UDC%20Fifth%20Edition-B%20Effective%202-14-21.pdf.

units for parking lots 50-100, and 1 additional EVSE unit for every 50 spaces above 100.[4]

Bucks County has adopted requirements as well. Specifically, Bucks County requires the following:[5]

Parking lot size	Less than 50	51-75	76-100	101-150	150+
Required spaces	1	2	3	4	4%

However, the EAC **would not** recommend modelling the Township's provisions after either Whitemarsh Township or Bucks County. Their requirements are on the low-end of the spectrum for EV parking infrastructure as a percentage, and also provide no guidance regarding future expansion of EV charging capabilities within the parking lots, which will likely result in significant costs for retrofits in the future.

Charging connector standard is another important consideration for future-proofing these provisions. Beginning in 2023, nearly all major automotive manufacturers have announced their plans to adopt the North American Charging Standard ("NACS") for their upcoming EVs, with some making the change as early as 2025 model year vehicles. This replaces the Combined Charging Standard ("CCS") standard connector that many current EVs and EV chargers use. There are adaptors available for CCS vehicles to use NACS EVSE charging equipment.

II. EAC Recommendations

Based on an aggregated review of existing EV charging parking lot requirements and recommendations from various trade organizations and studies, the EAC would recommend the following:

1) For RESIDENTIAL one- and two-family dwellings, there must be at least one EV-ready parking space.

2) For RESIDENTIAL new garages and carports, there must be at least one EV-ready parking space.

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[4] *See* https://ecode360.com/38034208?highlight=electric%20vehicle&searchId=19421110057269201#38034208.

[5] *See* https://buckscounty.gov/DocumentCenter/View/12835/EV-Charging-Stations-Best-Practices-and-Standards---March-2023.

3) For RESIDENTIAL lots with 9-100 spaces, 10% percent must be Level-2 EV-Installed, 25% percent must be Level-2 EV-Ready, and 50% percent must be Level-2 EV-Capable.

4) For RESIDENTIAL lots with 101 and above spaces, 10% percent must be Level-2 EV-Installed, 50% percent must be Level-2 EV-Ready, and 75% percent must be Level-2 EV-Capable.

5) For COMMERCIAL lots with 10 spaces or less, 1 EVSE unit must be a Level-2 EV-Installed.

6) For COMMERCIAL lots with 11-100 spaces, 10% percent must be Level-2 EV-Installed, 20% percent must be Level-2 EV-Ready, and 40% percent must be Level-2 EV-Capable.

7) For COMMERCIAL lots with 101 and above spaces, 15% percent must be Level-2 EV-Installed, 30% percent must be Level-2 EV-Ready, and 50% percent must be Level-2 EV-Capable.

8) For COMMERCIAL and RESIDENTIAL Level 2 EV-Installed spaces, charging spaces shall have a minimum rated power output of 6kW, with a recommended rated power output of at least 8kW.

9) For COMMERCIAL buildings, developers may substitute up to five Level-2 charging spaces with one Level-3 space (with a minimum rated power output of at least 30kW and a recommended rated power output of at least 50kW).

10) Building alterations where the work area exceeds 50 percent of the original building area or where more than 10 parking spaces are substantially modified, are subject to the EV infrastructure requirements for both residential and commercial buildings.

11) The ratio of EVSCs that shall be handicap-accessible shall be the same as the ratio of handicap-accessible parking spaces to the total number of parking spaces, with a minimum of one EVSE being handicap-accessible. The user-interface for these units should also handicap-accessible.

12) That the Planning Commission adopt the model language contained in the National Laboratory technical brief for providing various definitions (i.e. "EV-Capable," "EV-Ready," "EV-installed" etc).

13) The Planning Commission should consider requiring one of the EV-Capable slots in lots with 101 spots and larger (COMMERCIAL or RESIDENTIAL) to be capable of Level-3 charging.

14) To the extent the parking lot is located within a half-mile or less from the Church Road or Paper Mill exit from Route 309, the Planning Commission should consider requiring that any new construction include the installation of Level-3 charging EVSE units. Currently there are no Level-3 charging options in the Township as of January 2025. This provision can be sunset once one Level-3 charging EVSE option has been installed.

15) EV-Installed spaces must include signage or painted markings indicating that the parking space is to be exclusively used for electric vehicle charging.

16) Free-standing EV charging stations require bollards, bumper blocks or raised curbs to protect the charging device.

17) The Level-2 and Level-3 EVSE charging equipment installed should be required to use the NACS charging connector that has been widely adopted by the automotive industry starting in 2023.

18) Lastly, the EAC would recommend that the Planning Commission use the model ordinance toolkit provided on the pa.gov website.[6] While this toolkit is somewhat dated it is still a helpful resource.

Thank you for this opportunity to comment on the Planning Commission's ongoing work. To the extent the Planning Commission has additional questions, please feel free to reach out to the EAC's Chairperson, Aaron Stemplewicz.

Very Truly Yours,

/s/ Aaron Stemplewicz

Aaron Stemplewicz Chairperson
ENVIRONMENTAL ADVISORY COMMISSION
OF SPRINGFIELD TOWNSHIP

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[6] *See* https://www.pa.gov/agencies/penndot/research-planning-and-innovation/electric-vehicles-and-alternative-fuels/electric-vehicle-model-ordinance-toolkit.html.

Chapter 65. Planning Commission

[HISTORY: Adopted by the Board of Commissioners of the Township of Springfield 8-9-1972 by Ord. No. 614. Amendments noted where applicable.]

GENERAL REFERENCES
Subdivision of land — See Ch. **95**.
Zoning — See Ch. **114**.

§ 65-1. Creation; membership and compensation.

The Board of Commissioners of Springfield Township, Montgomery County, Pennsylvania, (hereinafter referred to as the "Board"), pursuant to Article II, Section 201, of Act 247,[1] does hereby create the Springfield Township Planning Commission. Such Commission shall have nine members, who shall serve without compensation but may be reimbursed for necessary and reasonable expenses.

[1] *Editor's Note: Act 247, as used in this chapter, refers to the Pennsylvania Municipalities Planning Code (Act 247 of 1968), as amended and supplemented.*

§ 65-2. Appointment, term and vacancy.

A. The Board shall appoint all members of the Planning Commission.

B. The term of each of the members of the Commission shall be for four years, or until his successor is appointed and qualified, except that the terms of the members first appointed pursuant to this chapter shall be such that no more than three shall be reappointed or replaced during any future calendar year.

C. The Chairman of the Planning Commission shall promptly notify the Board concerning vacancies in the Commission, and such vacancies shall be filled for the unexpired term by the Board.

§ 65-3. Members of existing Commission.

The members of the existing Township Planning Commission, which was established under former laws, shall continue in office until the end of the term for which they are appointed, but their successors shall be appointed as provided by this chapter. If a vacancy shall occur otherwise than by expiration of term, it shall be filled by appointment for the unexpired term, according to the provisions of this chapter.

§ 65-4. Membership qualifications.

All of the members of the Planning Commission shall be residents of the township. An officer or employee of the township may be a member of the Planning Commission, but at least six of the nine members of the Commission shall be citizen members.

§ 65-5. Officers; rules and regulations; reports.

A. The Commission shall elect its own Chairman and Vice Chairman and create and fill such other offices as it may determine. Officers shall serve annual terms and may succeed themselves.

B. The Commission may make and alter bylaws and rules and regulations to govern its procedures consistent with the ordinances of the township and the laws of the commonwealth.

C. The Commission shall keep a full record of its business and shall annually make a written report by March 1 of each year of its activities to the Board. Interim reports may be made as often as may be necessary, or as requested by the Board.

§ 65-6. Powers and duties.

A. The Planning Commission shall, at the request of the Board, have the power and shall be required to:

(1) Prepare amendments to the comprehensive plan for the development of the township as set forth in Act 247, as amended and supplemented, and present such amendments for the consideration of the Board.

(2) Maintain and keep on file records of its action. All records and files of the Planning Commission shall be in the possession of the Board.

B. The Planning Commission, at the request of the Board, may:

(1) Make recommendations to the Board concerning the amendment of an Official Map.

(2) Make recommendations to the Board on proposed amendments to the Zoning Ordinance,[1] as set forth in Act 247.

[1] *Editor's Note: See Ch. **114**, Zoning.*

(3) Prepare, recommend and administer subdivision and land development and planned residential development regulations, as set forth in Act 247.

(4) Prepare and present to the Board a Building Code[2] and a Housing Code, and make recommendations concerning proposed amendments thereto.

[2] *Editor's Note: See Ch. **13**, Building Construction.*

(5) Do such other acts or make such studies as may be necessary to fulfill the duties and obligations imposed by Act 247.

(6) Prepare and present to the Board an environmental study.

(7) Submit to the Board a recommended capital improvements program.

(8) Promote public interest in and understanding of the comprehensive plan and planning.

(9) Make recommendations to governmental, civic and private agencies and individuals as to the effectiveness of the proposals of such agencies and individuals.

(10) Hold public hearings and meetings.

(11) Require from other departments and agencies of the township such available information as relates to the work of the Planning Commission.

(12) In the performance of its functions, enter upon any land to make examinations and surveys with the consent of the owner.

C. In the performance of its powers and duties, any act or recommendation of the Planning Commission which involves engineering consideration shall be subject to review and comments of the Township Engineer, which comments shall be incorporated and separately set forth in any report, written act or recommendation of the Planning Commission.

Approved
7/12/06

SPRINGFIELD TOWNSHIP PLANNING COMMISSION
BYLAWS

1. Purpose of the Planning Commission. The Springfield Township Planning Commission is created to protect the health, safety and general welfare of Township residents by undertaking planning studies and for making recommendations to the Board of Commissioners in the areas of land use, structures, access, community services, and transportation with a view to the quality of life, economic, social, cultural, environmental, and governmental needs.

2. Legal Basis for the Township Planning Commission. The Planning Commission, as presently constituted, was established by the Township Commissioners and exists under Ordinance 614 adopted August 9, 1972 pursuant to Article II, Section 201, of Act 247, the Pennsylvania Municipalities Planning Code of 1968, As Amended.

3. Members of the Planning Commission.

    a. Number. The Planning Commission shall have 9 members who serve without compensation although they may be reimbursed for necessary and reasonable expenses. Planning Commission members must be residents of the Township.

    b. Term of Office. The term of each of the members of the Commission shall be 4 years or until a successor is appointed and qualified.

    c. Appointment of New Members, Vacancies. Members of the Planning Commission are appointed by the Board of Commissioners. The Chairperson of the Planning Commission shall promptly notify the Board concerning vacancies in the Commission, and such vacancies shall be filled for the un-expired term by the Board. For Commissioners who are up for reappointment, the Chairperson shall give a full appraisal of their performance to the Board of Commissioners and for the filling of vacancies, the chairperson shall indicated the skills that would be helpful to the Commission. The Township Commissioner Liaison is responsible to draw to the attention of the Board of Commissioners when a member of the agency has missed three consecutive meetings or four meetings annually. The Board of Commissioners shall determine of the commission member should be replaced.

    d. Advisory Staff. In addition to the appointed members, the commission may also include the Township Commissioners Liaison, Staff Liaison, and Community Planner, who shall serve in an advisory capacity with no voting privilege.

4. Officers. The Officers of the Planning Commission shall consist of a Chairperson, Vice Chairperson, and Secretary.

   a. Duties

      The Chairperson. The Chairperson shall serve as official representative of the Planning Commission, transmitting at the request of the Commission proposed amendments to the Comprehensive Plan and proposed amendments to ordinances to the Board of Commissioners, serve as official spokesperson for the Commission at public hearings or on other occasions when authorized by the Commission and conduct such direct contacts or correspondence as may be necessary to the work of the Commission. Chairperson shall also preside at Commission meetings, in conjunction with Staff Liaison, prepare meeting agendas, make assignments to individual Commissioners, inform Commissioners of correspondence, invite non-members to meetings, and carry out other necessary and proper functions.

      Vice Chairperson. The Vice Chairperson shall act for the Chairperson in his absence.

      Secretary. The Secretary shall take minutes and arrange for their distribution. The official minutes shall be in the custody of the Township Manager.

      Staff Liaison. The Staff Liaison shall annually prepare a written report by March 1st of each year of its activities for submission to the Board.

   b. Term of Office. Officers shall serve annual terms and may succeed themselves.

   c. Election. The Commission elects its own Chairperson, Vice Chairperson and Secretary. Nominations shall take place at the first meeting in December. Elections will be held at the first meeting in January with election by a majority of Planning Commissioners present. Officers will then assume their posts at the first meeting in January.

5. Powers and Duties. The Planning Commission shall, at the request of the Board of Commissioners, have the powers and shall be required to perform the duties outlined in Chapter 65, Section 65-6 of the Code of the Township of Springfield.

6. Meetings.

   a. Frequency. Regular meetings will be held on the first and third Tuesday of each month with special meetings held as necessary. Meetings will be held in the Township Building starting at 7:00 P.M.

b. Quorum. A quorum shall consist of a majority of the current standing membership. A meeting, for purposes of discussion, may be held with less than a quorum, but not less than three sitting members of the Planning Commission.

c. Agenda and Minutes. Agendas of the upcoming meeting and minutes of the past meeting shall be disseminated to Planning Commission members before each meeting.

d. Attendance by Non-Members. The Chairperson of the Planning Commission may invite any non-member having business before the Planning Commission to attend Commission meetings.

e. Public Meetings. All Commission meetings shall be public.

f. Voting on Planning Commission Resolutions. Procedures will follow normal rules of order. Only appointed members of the Commission shall have voting privileges. Any member may call for a vote on any issue. All votes will be open. Decision will be by simple majority. Minority members may prepare minority reports on recommendations to the Board of Commissioners and such reports will be transmitted by the Chairperson along with the majority report. However, considerable efforts shall be made in every instance to develop consensus.

7. Conflict of Interest and Disclosure.

a. Disclosure. It shall be the duty of each member of the Commission to disclose on the records of the Commission, any actual or apparent conflict of interest.

b. Withdrawal. Any Commissioner experiencing a conflict of interest shall declare their interest to members of the Board; abstain from voting on the matter and keep out of deliberations on the matter. He/she shall not discuss the matter privately with the Township staff or with any other Commission member.

c. Policy and Procedure. This code is adopted as a voluntary act on the part of the 9 Commissioners constituting the Board of the Springfield Township Planning Commission. It is self-enforcing and self-determining code on the part of each Planning Commissioner and collectively as a board. When a Commissioner has doubt as to the applicability of a provision of this code to a particular situation, then that Commissioner should apply to the fellow board members for an advisory opinion.

8. Planning Commissioners and Public Statements.

a. When Planning Commission is Considering an Issue. Planning Commission members shall at all times make it expressly clear when they are not speaking as members of the Planning Commission. In the midst of deciding any issue, to be

defined case by case by the Planning Commission, members should refrain from outside discussion until decisions are finalized.

b. When Planning Commission is Not Considering an Issue. Planning Commission members should seek to clarify planning goals in frequent outside contacts, should seek to elicit ideas, facts, and feelings about community planning problems from interested citizens, and should at no time impugn the views of other members of the Planning Commission with whom they disagree.

9. Relationship with Montgomery County Planning Commission.

a. Professional Assistance. The County Planning Commission, as a professional organization may supply guidance as to the "hows" of planning, sources of information, information on what is happening at the county level or in other communities in the county that might be helpful in planning for Springfield Township.

b. Budget. The Springfield Township Planning Commission shall each year send a report to the Board of Commissioners detailing the expected use of the resources of the Montgomery County Planning Commission and other research needs in time for inclusion in the Township Budget.

c. Informational Exchange. On many issues both the Township and the County Planning Commission are required to prepare recommendations. In these cases while each group must prepare its own conclusion/recommendations there should be an exchange of information so that all members are fully informed and can make intelligent decisions.

10. Relationship to the Township Engineer. In the performance of its powers and duties, any act or recommendation of the Planning Commission which involves engineering consideration shall be subject to review and comments of the Township Engineer, which comments shall be incorporated and separately set forth in any report, written act or recommendation to the Planning Commission.

11. Amendments. These bylaws shall be reviewed annually at the first January meeting, and may be amended by a majority vote of the current standing membership of the Planning commission.