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Summary of Best Practices in Electric Vehicle Ordinances

BY CLAIRE COOKE AND BRIAN ROSS

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A nonpartisan, national, nonprofit organization, the Great Plains Institute (GPI) is transforming the energy system to benefit the economy and environment. We combine a unique consensus-building approach, expert knowledge, research and analysis, and local action to find and implement lasting solutions. Learn more at www.betterenergy.org.

For more information on this ordinance summary, please contact Brian Ross, Senior Program Director at bross@gpisd.net.

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Overview

This document is a summary guide to electric vehicle (EV) and electric vehicle supply equipment (EVSE) ordinances in the US.[1] The guide is sorted into best practice categories and provides a summary of typical provisions used by cities for each category. Each category includes a table with key points and text examples from actual ordinances, as well as recommendations from model codes for that topic, drawn from one of several model ordinances, or ordinance guidance documents that have been developed to inform cities on developing EV-ready zoning standards.

This summary is provided as a reference to cities seeking to develop EV zoning standards or development regulations. The summary does not address building or electric codes, only zoning ordinance language and associated tools. The examples are not intended to constitute recommendations, but rather to show the breadth of choices made by communities across the nation to integrate EVSE into development regulation.

The ordinance language in the following tables are drawn from the zoning ordinances of the following cities. To see the full context of each example, click on the links below and use the search function within the ordinance document to find the relevant example.

- Atlanta, GA
- Auburn Hills, MI
- Chelan, WA
- Des Moines, IA
- Douglas County, WA
- Duluth, MN
- Golden Valley, MN
- Howard County, MD
- Indianapolis, IN
- Kansas City, MO
- Methuen, MA
- Middletown, CT
- Montgomery County, MD
- Mountlake Terrace, WA
- New Orleans, LA
- Saint Paul, MN
- Salt Lake City, UT
- St. Louis Park, MN

The inventory of adopted ordinances also included a scan of model zoning ordinances and ordinance guidance documents for how local governments can use their zoning codes to help electrify transportation.

[1] This is not a complete inventory but rather a representative sample of ordinances from cities throughout the United States.

The guides and model ordinances are listed below, with links, along with their region of origin:

- Europe: Electric Vehicle Charging Infrastructure: Guidelines for Cities
- Georgia: Model Municipal Ordinance (click on the first hyperlink in Section II, A)
- Iowa: Leading the Charge: City Codes and Electric Vehicles
- Midwest: Principles for EV-Ready Communities
- New Jersey: Alternative Fuel Vehicle Readiness: A Guidebook for Municipalities
- New York: Literature Review Summary: Electric Vehicle Supply Equipment Signage Guidance
- New York: Promoting Electric Vehicle Charging Station Installations
- Northeast/Mid-Atlantic: Creating EV-Ready Towns and Cities: A Guide to Planning and Policy Tools
- Santa Clara County, CA: Plug-in Electric Vehicle Best Practices Compendium
- Washington: Electric Vehicle Infrastructure: A Guide for Local Governments in Washington State
- Washington: Plug-In Electric Vehicle Readiness Plan

1. Electric Vehicle Charging Station as Permitted Land Uses

Information related to where EV charging stations (or specific types of EV stations) are permitted. Charging stations are likely to be an accessory use but may also be a principal use in some instances. Ordinances clarify where these land uses are permitted to streamline the installation of infrastructure that serves a public purpose.

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
Treats different types of EVSE as different land uses and may distinguish between where different types of charging stations are allowed. • Charging station types are typically distinguished as different "levels" contingent on charging speed (see "definitions" p11-12). • Most often, levels 1 & 2 are allowed in all zones while level 3 stations are restricted to specific zoning districts. o May provide a table to delineate use permitted zoning districts for each station type. • May also allow for all three levels in all zoning districts.	Chelan, WA	"Level 1 and 2 electric vehicle charging stations are a permitted use in all zoning districts… Level 3 electric vehicle charging stations are a permitted use in the Warehouse and Industrial (WI), Highway Service Commercial (C-HS),…, zoning districts"
	Des Moines, IA	"Levels 1, 2, and 3 electric vehicle charging stations are allowed in all zoning designations."
May require a conditional or special use permit for charging stations in specific zones.	Auburn Hills, MI	"Installation shall be subject to permit approval administered by the Community Development Department."
	Chelan, WA	"Level 3 electric vehicle charging stations…require a conditional use permit in Downtown Mixed Use (DMU), Tourist Accommodation (T-A),…zoning districts."
May place restrictions on charging stations in the right of way.	New Orleans, LA	"No property or parcel may have more than one electric vehicle charger installed in the right-of-way adjacent to such property or parcel."
	Des Moines, IA	"Electric vehicle charging stations are not permitted within the city right-of-way"

EV Guide and Model Code Recommendations

Model Code Document Name:	
Iowa Clean Cities Coalition, Leading the Charge: City Codes and Electric Vehicles	**Recommendation:** "Define what types of EVSE are allowable by land use type." **Reasoning:** "By establishing compatible charging stations according to land use types, cities can eliminate confusion about what is and isn't allowable while also affirming the desirability of EVSE within the community…"

2. Electric Vehicle Make-Ready Standards

Requirements and standards for installing the infrastructure to support EVSE (also known as "make-ready"), other than the installation of the EVSE equipment itself. Make-ready standards are to prepare, at the time of construction, for future installation of chargers. Make-ready requirements capture savings by avoiding future costly retrofits to install chargers and have minimal impacts on the construction or renovation costs for the parking facility.

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
May require or recommend the installation of appropriate electrical capacity and conduits to support future EVSE.	Howard County, MD	"For new occupancies subject to this section: at least 1 parking space for each 25 residential units shall feature energized outlets; and a residential unit with a garage, carport, or driveway shall feature appropriate electric vehicle supply equipment consisting of conductors, connectors,[…] so that an energized outlet may be added in the future."
	St. Louis Park, MN	"Multiple-Family Residential Land Uses: all new, expanded and reconstructed parking areas shall provide the electrical capacity necessary to accommodate the future hardwire installation of Level 2 EVCSs for a minimum of 10% of required parking spaces."
	St. Louis Park, MN	"Non-Residential Land Uses: all new, expanded and reconstructed parking areas shall provide the electrical capacity necessary to accommodate the future hardwire installation of Level 2 or DC

		EVCSs for a minimum of 10% of required parking spaces."
	Auburn Hills, MI	"In order to proactively plan for and accommodate the anticipated future growth in market demand for electric vehicles, it is strongly encouraged, but not required, that all new one-family and multiple-family homes with garages be constructed to provide a 220-240-volt / 40 amp outlet on a dedicated circuit and in close proximity to designated vehicle parking to accommodate the potential future hardwire installation of a Level-2 electric vehicle charging station."
	Auburn Hills, MI	"it is strongly encouraged, but not required, that all new and expanded non-residential development parking areas provide the electrical capacity necessary to accommodate the future hardwire installation of Level-2 electric vehicle charging stations. It is recommended that a typical parking lot (e.g., 1,000 or less parking spaces) have a minimum ratio of 2% of the total parking spaces be prepared for such stations."
May delineate zoning districts where EVSE is allowed.	Mountlake Terrace, WA	"Electric vehicle infrastructure shall be permitted in zoning districts of the city as identified in …"

EV Guide and Model Code Recommendations

Model Code Document Name:	
Model City Ordinance Relating to Electric Vehicle (EV) Charging Infrastructure	**Recommendation:** "Require that [the] main electrical switchgear be installed with sufficient space and capacity to support 20% of EV spaces at 208/240V and 40A per space, with a dedicated branch circuit and overcurrent protection device, per space." **Reasoning:** "Retrofitting parking structures can be 91%+ more expensive than outfitting garages during the initial construction phase." **Recommendation:** "Require that all parking spaces in a parking structure be made "EV-Capable" i.e. conduit be

installed throughout the structure and subpanels sized to accommodate 60A or 40A breakers for each."

Reasoning: "[if] at least 20% of stalls are "EV-Ready" … the total electrical capacity is able to be shared among the remaining 80% of EV parking stalls using load sharing technology. However, this is only possible if the electrical conduit (trunk line) and subpanels are preinstalled throughout the parking garage to allow Level-2 Charging Equipment to be connected in the future."

3. Electric Vehicle Supply Equipment Standards

Minimum standards or required design of charging equipment or charging station infrastructure. These standards are often combined with minimum requirements for EV charging installations (see best practice #5).

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
May require that EVSE meet standards found in the National Electric Code.	Atlanta, GA	"Installation of EVSE shall meet National Electric Code article 625…"
Often specifies that EVSE must be mounted. • May specify on what EVSE should be mounted. • Often specify at what height EVSE should be mounted. • Often specify that EVSE should be installed so as not to be a tripping hazard. • May require a retraction device or place to mount cords. • May specify that cords should not cross walkways.	Montgomery County, MD	"Battery charging station outlets and connector devices shall be no less than 36 inches and no higher than 48 inches from the surface where mounted."
	Chelan, WA	"Equipment mounted on pedestals, lighting posts, bollards, or other devices for on-street charging station shall be designed and located as to not impede pedestrian travel or create trip hazards within the right-of-way"
	New Orleans, LA	"Cords shall be retractable or have a place to hang the connector and cord sufficiently above the pedestrian surface. Any cords connecting the charger to a vehicle shall be configured so that they do not cross a driveway, sidewalk, or passenger unloading area."
May specify other standards that EVSE should comply with.	St. Louis Park, MN	"EVCS pedestals shall be designed to minimize potential damage by accidents,

• May specify that EVSE be installed in compliance with a specific state code. • Often specify that EVSE be installed in compliance with the Americans with Disabilities Act.		vandalism and to be safe for use in inclement weather."
	St. Louis Park, MN	"Battery charging station outlets and connector devices shall be mounted to comply with state code and must comply with all relevant Americans with Disabilities Act (ADA) requirements."
May specify the distance of the charging station from the curb.	Mountlake Terrace, WA	"Charging station equipment…shall be a minimum of 24 inches clear from the face of the curb."
May specify under what circumstances a parking space must adhere to these standards.	Des Moines, IA	"Electric vehicle charging stations utilizing parking stalls located in parking lots, or parking garages shall comply with the following requirements…"
	Douglas County, WA	"Design criteria for electric vehicle charging stations or battery exchange stations within commercial, industrial and mixed-use zoning districts…"

EV Guide and Model Code Recommendations

Model Code Name:	
Iowa Clean Cities Coalition, Leading the Charge: City Codes and Electric Vehicles	**Recommendation:** Design criteria should be created for EVSE installations. **Reasoning:** "By articulating standards for EVSE design and installation, including setbacks and pedestal height for freestanding units, a community can facilitate a smooth construction permitting process."

4. Electric Vehicle Parking Space Design and Location

Information related to EV parking space design and location. Design and location decisions will affect installation cost (length of conduit from electric source) and use (location of the space relative to the building).

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
May specify parking space size.	Atlanta, GA	"The installation of an EVSE should not reduce the electric vehicle charging station's length to below the size and standards required under section 16-28.014"
	Methuen, MA	"Where provided, spaces should be standard size parking stalls but designed in a way that will discourage non-electric car vehicles from using them."
	Montgomery County, MD	"The minimum width for a parking space for charging electric vehicles is 9 feet."
May specify the location of parking spaces on a street or within a parking lot.	Atlanta, GA	"Criteria for electric vehicle parking and charging on private streets…For the purpose of reducing cable management issues and placing the…charging station closer to crosswalks and curb ramps, such charging stations shall be installed to use the last space on a block face in the direction of travel."
	Methuen, MA	"Parking spaces for electric vehicles must not be located in the most convenient spots because this will encourage use by non-electric vehicles."
	Salt Lake City, UT	"The electric vehicle parking space shall be located in the same lot as the principal use."
	St. Louis Park, MN	"The EVCSs shall be located in desirable and convenient parking locations that will serve as an incentive for the use of electric vehicles."
	St. Louis Park, MN	"General Requirements for Single-Family Residential Zoning Districts…EVSE shall be located in a garage, or on the exterior wall

		of the home or garage adjacent to a parking space."
May provide specifications about parking space and location fit.	Methuen, MA	"Design should be appropriate to the location and use. Facilities should be able to be readily identified by electric cars users but blend into the surrounding landscape/architecture for compatibility with the character and use of the site."
May require the parking space to have features that protect charging equipment.	Chelan, WA	"Equipment shall be protected by wheel stops or concrete filled bollards."
	Montgomery County, MD	"Adequate battery charging station protection, such as concrete-filled steel bollards shall be used. Curbing may be used in lieu of bollards, if the battery charging station is setback a minimum of 24 inches from the face of the curb."
May simply specify an entity with the authority to create standards for EV charging stations.	Des Moines, IA	"The city manager or designee is authorized to develop and maintain standards for the design and construction of electric vehicle charging stations."

EV Guide and Model Code Recommendations

Model Code Document Name:	
Plug-in Electric Vehicle Best Practices Compendium (County of Santa Clara, CA)	**Recommendation:** Information be given concerning "Parking configurations, including guidance on whether it is preferable to locate chargers in perpendicular, parallel, or angled parking spaces, and on the location of wheel stops, guard posts and signage."

5. Required EV Parking Capacity & Minimum Parking Requirements

Information on minimum EV parking standards and on how EV charging spaces/parking spots are accounted for as part of minimum parking space requirements (parking minimums already in place in the ordinance). Cities requiring EV parking minimums are capturing the public value in this infrastructure, like non-EV parking minimums, and to landscaping, stormwater management, accessibility, and other design elements that are routine elements of parking standards.

<table>
<tr><th>Typical Ordinance Includes

Specification:</th><th colspan="2">Language Example

City, State: Text:</th></tr>
<tr><td rowspan="4">Often recommends or requires that a proportion of parking spaces be EV charging stations, designated for EV parking, or be EVSE ready.
These are often specified as a percent or a ratio.
May also be based on land uses such as the number of residential units in a development.
May be based on land use type.
May limit the number of chargers that can be installed in the right-of-way.
May include incentives for higher level charging stations through variations in space requirements.</td><td>Montgomery County, MD</td><td>“The minimum number of electric vehicle charging stations required is 1 electric vehicle charging station per 50 parking spaces.”</td></tr>
<tr><td>Howard County, MD</td><td>“For new occupancies subject to this section: at least 1 parking space for each 25 residential units shall feature energized outlets.”</td></tr>
<tr><td>Mountlake Terrace, WA</td><td>“The first column in Table 1 shows the type of land use for which electric vehicle charging stations shall be provided, pursuant to this section. The second column shows the minimum percentage of the facility’s parking spaces that shall provide a connection to electric vehicle charging stations.”
<table>
<tr><th>Land Use Type</th><th>Percent Parking Spaces</th></tr>
<tr><td>Multi-household Res</td><td>10%</td></tr>
<tr><td>Lodging</td><td>3%</td></tr>
<tr><td>Retail, eating and drinking</td><td>1%</td></tr>
<tr><td>Office, medical</td><td>3%</td></tr>
<tr><td>Industrial</td><td>1%</td></tr>
<tr><td>Institutional, Municipal</td><td>3%</td></tr>
<tr><td>Recreation/Entertainment/Cultural</td><td>1%</td></tr>
<tr><td>Other</td><td>3%</td></tr>
</table></td></tr>
<tr><td>St. Louis Park, MN</td><td>“All new or reconstructed parking structures or lots with at least 50 parking spaces, or expanded parking structures or lots that result in a parking lot with 50 or more parking spaces, shall install EVSE as required below.

1. Multiple-family residential land uses shall have 10% of required parking as Level 1 stations for</td></tr>
</table>

<table>
<tr><td></td><td></td><td>resident parking, and one Level 2 station for guest parking. At least one handicapped accessible parking space shall have access to an EVCS.

2. Non-residential land uses with parking spaces available for use by the general public shall have at least 1% of required parking as Level 2 stations with a minimum of two spaces served by Level 2 charging, with at least one station adjacent to an accessible parking space. In non-residential zoned districts, DC charging stations may be installed to satisfy the EVCS requirements described above on a one-for-one basis.”</td></tr>
<tr><td></td><td>Indianapolis, IN</td><td>“Two electric vehicle charging stations shall be required for developments that provide 500 or more off-street parking spaces.”</td></tr>
<tr><td></td><td>Middletown, CT</td><td>“Any new development that requires 25 or more parking spaces, as calculated by Section 40.04 of these regulations, shall have a minimum of 1 charging space or 3% of the total number of spaces allocated to Electric Vehicles (EVs) (whichever is greater) and must have a Level 2 or 3 charging station/connection per EV parking space.”</td></tr>
<tr><td></td><td>Salt Lake City, UT</td><td>“The number of required minimum parking spaces is determined after applying any applicable reductions and exemptions. The number of required EV parking spaces shall be as follows:”

<table><tr><td>Required Minimum Number of Parking Spaces</td><td>Number of EV Parking Spaces</td></tr><tr><td>0 to 49</td><td>0</td></tr><tr><td>50 to 99</td><td>1</td></tr><tr><td>100+</td><td>2, plus 1 for each additional 100 stalls</td></tr></table></td></tr>
<tr><td></td><td>New Orleans, LA</td><td>“No property or parcel may have more than one (1) electric vehicle charger installed in the right-of-way adjacent to such property or parcel.”</td></tr>
</table>

	Salt Lake City, UT	"A reduction in the minimum number of required electric vehicle parking stalls may be reduced by 25% if a Level 2 station is installed or by 50% if a Fast Charge station is installed. For each additional Level 2 or Fast Charge station installed, the additional reduction will be based on the already reduced number."
May include EV parking space proportion requirements as part of optional financing or a flexible code. • May be part of a sustainability points system (Duluth, MN). • May be one of several required amenities to choose from as part of a Planned Unit Development (Golden Valley, MN). • May be tied to public funding or financial partnership by the city (Saint Paul, MN)	Duluth, MN	"A minimum of 2% of required automobile parking spaces are signed and reserved for hybrid/electric/low energy vehicles in preferred locations near the primary building entrance."
	Golden Valley, MN	(include) "An electric vehicle charging station accessible to residents, employees, and/or the public."
	Saint Paul, MN	*Work in Progress* In their city code under *Chapter 81. - Sustainable Building,* Saint Paul has an "Overlay" that is required for "construction projects receiving more than $200,000 in public assistance, as well as certain rehab projects." This overlay specifies different requirements including "Electric vehicle charging capability." However, specifications regarding this requirement are yet to be worked out. - City of Saint Paul Website - Sustainable Building Policy - Sustainable Building Policy Guidebook
May include flexibility on minimum requirements to reduce cost burden.	St. Louis Park, MN	"When the cost of installing EVSE required by this Chapter would exceed five percent of the total project cost, the property owner or applicant may request a reduction in the EVSE requirements and submit cost estimates for city consideration. When City Council approval of the project is not required, the Zoning Administrator may administratively approve a reduction the required amount of EVSE to limit the EVSE installation costs to not more than five percent of the total project cost."
	Middletown, CT	"Applicants may request a waiver or reduction of electric vehicle parking requirements from the

<table>
<tr><td></td><td></td><td>Planning and Zoning Commission during site plan approval.”</td></tr>
<tr><td rowspan="2">May require that a proportion of EV charging stations also be made accessible.</td><td>Chelan, WA</td><td>“Accessible vehicle charging stations shall be provided based on the following table:”<table><tr><th>Number of EV Charging Stations</th><th>Min. Accessible EV Stations</th></tr><tr><td>3-50</td><td>1</td></tr><tr><td>51-100</td><td>2</td></tr></table></td></tr>
<tr><td>Montgomery County, MD</td><td>“A minimum of one accessible electric vehicle charging station is required in any parking facility that is required to have one electric vehicle parking space. For parking facilities required to have 51-75 electric vehicle parking spaces the number of accessible spaces will increase to two (2). Between 76 – 100 electric vehicle parking spaces increases to three (3) and each thereafter increment of 25 electric charging station shall increase by one additional accessible electric vehicle charging space.”</td></tr>
<tr><td rowspan="4">May count electric vehicle charging stations towards meeting existing minimum parking requirements for developments (despite being simultaneously restricted to EVs only).</td><td>Kansas City, MO</td><td>Electric vehicle charging stations may be counted toward satisfying minimum off-street parking space requirements.”</td></tr>
<tr><td>Methuen, MA</td><td>“An electric vehicle charging space may count for ½ of a space in the calculation for minimum parking spaces that are required…”</td></tr>
<tr><td>Indianapolis, IN</td><td>“For each electric vehicle charging station provided, the minimum number of required off-street parking spaces may be reduced by two. Each charging station counts toward the minimum number of required parking spaces.”</td></tr>
<tr><td>Chelan, WA</td><td>“Electric vehicle charging stations located within parking lots or garages may be included in the calculation of the minimum required parking spaces required pursuant to the Development Standards…”</td></tr>
<tr><td></td><td>Middletown, CT</td><td>“Requests for reduction of general parking spaces in exchange for additional EV parking: For any development that exceeds the minimum number of EVCs as required … The reduction of parking cannot be greater than 10% of the total amount of parking for the proposed development.”</td></tr>
</table>

EV Guide and Model Code Recommendations

Model Code Name:	
Action Items for EV-Ready Communities (NYSERDA Fact Sheet, Energetics)	**Recommendation:** Require "Set numerical or percentage-based goals … for EV infrastructure in new construction."
Creating EV-Ready Towns and Cities: A Guide to Planning and Policy Tools (NYSERDA, Transportation and Climate Initiative of the Northeast and Mid-Atlantic States, 2012)	**Recommendation:** Create an "incentive zoning [that] provides a bonus, such as in the form of additional floor area, in exchange for the provision of a public amenity or community improvements…In the case of EVSE, a developer incentive would be exchanged for EVSE pre-wiring or charging station installation."

6. Electric Vehicle-Designed Parking Use Standards and Protections

Information related to parking restrictions, protections, and penalties for EV-designated spaces. Restricting use of EV charging parking stalls to EVs protects the public benefit being provided, like limiting use of accessible parking stalls.

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
May state restrictions on what type of vehicle may park in an EV charging station parking space. May specify the ramifications for parking unauthorized vehicles in EV charging spaces.	Atlanta, GA	"Each electric vehicle charging station and parking space for which any parking incentive was granted shall be reserved for use as an electric vehicle charging station or as electric reserved parking."
	Auburn Hills, MI	"A police agency or a governmental agency…may provide for the immediate removal of a vehicle…in any of the following circumstances…When a sign provides notice that a parking space is a publicly designated electric vehicle charging station, no person shall park or stand any non-electric vehicle in a designated electric vehicle charging station space. Further, no person shall park or stand an electric vehicle in a publicly designated electric vehicle charging station space when not electrically charging or parked beyond the days and hours designated on the regulatory signs posted."

	Chelan, WA	“Except when located in conjunction with single-family residences, electric vehicle charging stations shall be reserved for parking and charging of electric vehicles only.”
	Kansas City, MO	“Public electric vehicle charging stations must be reserved for parking and charging electric vehicles only. Electric vehicles may be parked in any space designated for public parking, subject to the restrictions that apply to any other vehicle.”

EV Guide and Model Code Recommendations

Model Code Name:	
Alternative Fuel Vehicle Readiness: A Guidebook for Municipalities (North Jersey Transportation Planning Authority, 2017)	**Recommendation:** Municipalities should create enforcement policies for EV parking and charging stations that “specify towing of vehicles in violation of the restriction or impose a fine.” **Reasoning:** “It is important to define how restrictions and time limits will be enforced. Without an enforcement policy, there is no incentive to follow the restrictions.”

7. Signage, Safety, and Other Standards

Information related to signage, road markings, notifications, lighting, usage fees, and maintenance. Signage helps all drivers understand appropriate use of this new form of parking infrastructure, and other standards similarly attempt to protect or enhance the public value of the infrastructure and minimize risks.

Typical Ordinance Includes Specification:	**Language Example** City, State:	Text:
Often includes signage and road marking requirements. • May include photo examples of signage.	Atlanta, GA	"Way finding signs, if installed, shall be placed to effectively guide the motorists to the electric vehicle parking space and/or charging station. Private regulatory signage shall be placed in a manner that shall not interfere with any parking space, drive lane or exit."
	Douglas County, WA	"Each electric vehicle charging station shall be posted with signage indicating the space is only for electric vehicle charging purposes."
Often includes lighting requirements.	St. Louis Park, MN	"Site lighting shall be provided where an electric vehicle charging station is installed, unless charging is for daytime purposes only."
	Chelan, WA	"Lighting. Adequate site lighting shall be provided, which shall also comply with Chapter 17.62…"
Often includes information about charging usage fees.	Kansas City, MO	"Property owners are not restricted from collecting a service fee for the use of an electric vehicle charging station."
Often includes information about general operations and maintenance.	Atlanta, GA	"Electric vehicle charging stations and parking spaces for which any parking incentive was granted shall be operational at all times. When an electrical vehicle parking station is not operational for 14 consecutive days, it shall be considered to have been removed from service. The failure to maintain the number of electric vehicle charging stations and parking spaces shall be cause to require the

		installation of the number of parking spaces required by the district regulations."
	Model Code – Electric Vehicle Infrastructure. Guide for Local Governments (Washington State)	"Charging station equipment shall be maintained in all respects, including the functioning of the charging equipment. A phone number or other contact information shall be provided on the charging station equipment for reporting when the equipment is not functioning, or other problems are encountered."
	St. Louis Park, MN	"The EVCS must be operational during the normal business hours of the use(s) that it serves. EVCS may be de-energized or otherwise restricted after normal business hours of the use(s) it serves."
Often includes requirements for contact information for instances where a charging station is damaged or out of order.	Atlanta, GA	"A phone number or other contact information shall be provided when the station is not functioning in a manner that allows electric vehicles to be charged."
	St. Louis Park, MN	"A phone number or other contact information shall be provided on the equipment for reporting problems with the equipment or access to it."
Often includes information about required notices.	Chelan, WA	"The following information shall be posted at all electric vehicle charging stations: 1. Voltage and amperage levels; 2. Hour of operations if time limits or tow-away provisions are to be enforced by the property owner; 3. Usage fees; 4. Safety information; 5. Contact information for reporting when the equipment is not operating or other problems."
May include time limits and hours of operation.	Mountlake Terrace, WA	"Time limits may be placed on the number of hours that an electric vehicle is allowed to charge, prohibiting indefinite charging /parking. If applicable, warnings shall be posted to alert charging station users about

		hours of use and possible actions affecting electric vehicle charging stations that are not being used according to posted rules."
	St. Louis Park, MN	"The EVCS must be operational during the normal business hours of the use(s) that it serves. EVCS may be de-energized or otherwise restricted after normal business hours of the use(s) it serves."
May include information on landscaping requirements.	Atlanta, GA	"Minimum landscaping requirements for surface electric vehicle parking and charging station lots…(a) All parking shall be terminated with a landscape strip a minimum width of five feet and equal to the length of the parking bay. (b) All required landscaped areas shall be planted with evergreen groundcover or shrubs with a maximum mature height of 30 inches…"

EV Guide and Model Code Recommendations

Model Code Document Name:	
Plug-in Electric Vehicle Best Practices Compendium (Santa Clara County)	**Recommendation:** "Local governments should …consider reducing EVSE permitting costs … by waiving or subsidizing the fees to residents and/or businesses."
Action Items For EV-Ready Communities (NYSERDA)	**Recommendation: "**Simplify and streamline permit processes."
Literature Review Summary: Electric Vehicle Supply Equipment Signage Guidance. (NYSERDA, Energetics, 2013)	**Recommendation:** All sign types should be considered when writing an EV ordinance. "There are three different types of signage applicable to EVSE: General Service or Guidance Signs, Regulatory or Enforceable Signs, and Special or Information/Trailblazer Signs."

8. Definition of Terms

Defining terms is a best practice for any ordinance, particularly when ordinance users and staff may be unfamiliar with the specifics of the land use and the policies being implemented via the ordinance requirements. Several EV or EVSE terms used in or pertinent to an EV-ready ordinance are defined below. Not all terms are used by each city. Terms used in an ordinance should be pertinent to the specific language and regulations found in each city's ordinance.

Typical Ordinance Includes Term:	**Language Example** City, State:	 Text:
Accessible electric vehicle charging station	Auburn Hills, MI	"an electric vehicle charging station where the battery charging station is located within accessible reach of a barrier-free access aisle and the electric vehicle."
Battery charging station	St. Louis Park, MN	"an electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles."
Battery Electric Vehicle	Electric Vehicle Infrastructure: Guide for Local Governments (Washington State)	"any vehicle that operates exclusively on electrical energy from an off-board source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating."
Battery exchange station	Des Moines, IA	"a fully automated facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charged battery through a fully automated process, which meets or exceeds any standards, codes, and regulations set forth by chapter …"
Charging Levels • Level 1 • Level 2 • Level 3	Auburn Hills, MI	"the standardized indicators of electrical force or voltage, at which an electric vehicle's battery is recharged. The terms 1,2, and 3 are the most common charging levels, and include the following specifications:

*This is in some instances paired with the definition for *electric vehicle charging station**		1. Level-1 is considered slow charging. Voltage including the range from 0 through 120. 2. Level-2 is considered medium charging. Voltage is greater than 120 and includes 240. 3. Level-3 is considered fast or rapid charging. Voltage is greater than 240. ”
	Chelan, WA	“Level 1 is considered slow charging and operates on a fifteen to twenty amp breaker on a one hundred twenty volt AC circuit. Level 2 is considered medium charging and operated on a forty to one hundred amp breaker on a two hundred eight or two hundred forty volt AC circuit. Level 3 is considered fast or rapid charging and operated on a sixty amp or higher breaker on a four hundred eighty 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.”
	Des Moines, IA	“the standardized indicators of electrical force, or voltage, at which an electric vehicle's battery is recharged. The terms Level l, 2, and 3 are the most common EV charging levels, and include the following specifications: Level l is considered slow charging and operates on a 15 to 20 amp breaker on a 120 volt AC circuit. Level 2 is considered medium charging and operates on a 40 to 100 amp breaker on a 208 or 240 volt AC circuit. Level 3 is considered "fast" or "rapid" charging and typically operates on a 60 amp or higher breaker on a 480 volt or higher three phase circuit with special grounding equipment. Level 3 stations are primarily for commercial and public

		applications and are typically characterized by industrial grade electrical outlets that allow for faster recharging of electric vehicles."
Electric capacity	St. Louis Park, MN	"at minimum: 1. Panel capacity to accommodate a dedicated branch circuit and service capacity to install a 208/240V outlet per charger; 2. Conduit from an electric panel to future EVCS location(s)."
Electric vehicle	Auburn Hills, MI	"any vehicle that is licensed and registered for operation on public and private highways, roads, and streets; either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board via a battery for motive purpose. "Electric vehicle" includes: (1) a battery electric vehicle; (2) a plug-in hybrid electric vehicle"
	Des Moines, IA	"any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose. "Electric vehicle" includes: (a) A battery electric vehicle; (b) A plug-in hybrid electric vehicle; (c) A neighborhood electric vehicle; (d) A medium-speed electric vehicle.
	Howard County, MD	"a vehicle that uses electricity for propulsion."
Electric vehicle, plug-in hybrid	Kansas City, MO	"an electric vehicle that (1) contains an internal combustion engine and also allows power to be delivered to drive wheels by an electric motor; (2) charges its battery primarily by connecting to the grid or other off-board electrical source: (3) may additionally be able to sustain battery charge using an on-board internal

		combustion-driven generator; and (4) has the ability to travel powered by electricity."
Electric vehicle charging station	Electric Vehicle Infrastructure: Guide for Local Governments (Washington State)	"a public or private parking space that is served by battery charging station equipment 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 electric vehicle. An electric vehicle charging station equipped with Level 1 or Level 2 charging equipment is permitted outright as an accessory use to any principal use."
	Des Moines, IA	"a public or private parking space that is served by battery charging station equipment for the purpose of transferring electric energy to a battery or other energy storage device in an electric vehicle."
Electric vehicle charging station – private restricted use	Auburn Hills, MI	"an electric vehicle charging station that is (1) privately owned and restricted access (e.g., single-family home, executive parking, designated employee parking) or (2) publicly owned and restricted (e.g., fleet parking with no access to the general public)."
	Kansas City, MO	"an EV charging station that is not available for use by the general public. Examples include electric vehicle charging stations that serve residential homeowners or renters, executive parking areas, designated employee parking areas and fleet parking areas."
Electric vehicle charging station – public use	Auburn Hills, MI	"an electric vehicle charging station that is (1) publicly owned and publicly available (e.g., Park & Ride parking, public library parking lot, on-street parking) or (2) privately owned and available to visitors of the use (e.g., shopping center parking)."
	Kansas City, MO	"an EV charging station that is accessible to and available for use by the public."

Electric vehicle supply equipment	St. Louis Park, MN	“any equipment or electrical component used in charging electric vehicles at a specific location. EVSE does not include equipment located on the electric vehicles themselves.”
Electric vehicle infrastructure	Kansas City, MO	“conduit/wiring, structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations and rapid charging stations.”
	Des Moines, IA	“structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.”
Electric vehicle parking space	Auburn Hills, MI	“any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.”
Energized outlet	Howard County, MD	“a connected point in an electrical wiring installation at which current is taken to charge an electric vehicle.”
Neighborhood electric vehicle	Mountlake Terrace, WA	“a self-propelled, electrically powered four-wheeled motor vehicle whose speed attainable in one mile is more than 25 miles per hour but not more than 35 miles per hour and other wise meets or exceeds the federal regulations…”
Non-electric vehicle	Auburn Hills, MI	“any motor vehicle that does not meet the definition of electric vehicle.”
Rapid charging station	Methuen, MA	“an industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels…”