

2022 EV Zoning Regulations Blueprint

Prepared for: Connecticut Municipalities

Prepared by: Live Green Connecticut/CT Southwestern Area Clean Cities Coalition

Audience: Community Leaders, Energy Task Force Members, Mayors, First Selectmen, Zoning Boards, Zoning Commissions



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When Will Electric Cars Really Take Off? Maybe We Should Ask a Horse

Jim Motavalli, Author, Fairfield, CT



A BUTCHER'S DELIVERY TRUCK, CIRCA 1910. COMMERCIALS WERE THE LAST TO MAKE THE TRANSITION TO GAS ENGINES. (PHOTO: THE NATIONAL MUSEUM OF WALES//FLICKR)

Introduction

The navigation of light duty electric vehicle adoption throughout the state, country, and world, is reminiscent, in some ways, of the transition between the horse and buggy to the internal combustion engine. As automakers announce that over the next decade, a large portion of their fleets will be electrified, share their detailed plans publicly, and in some cases announce goals for fully electrified lineups within five years, our municipalities are at a crossroads, a point at which crucial decisions must be made that will have far-reaching and important consequences for the future.

Automotive executives believe President Joe Biden's goal of fifty percent of new vehicles sold in the U.S. to be electric by 2030 is achievable, according to a new KPMG survey. In addition, Gabe Shenhar, Associate Director of Consumer Reports' Auto Test Center stated, "These more affordable models have the potential to sway a significant percentage of the car-buying public toward buying an EV with their efficiency, performance, and lower ownership costs." Although, like the last major transportation transition, it is going to take time, effort, and resources, it appears that ultimately, electric vehicles will reign the light duty market."

As climate change continues to disrupt and threaten every aspect of our global community and economy, it is critical to take swift action on the areas we can control in order to mitigate the effects of global warming that are now a part of everyday life. And though there are many complex and complicated issues regarding equitably transitioning our municipalities to electrification, it is necessary to start taking action, so as to avoid being left behind. In support of and response to the Memorandum of Understanding that Connecticut signed in 2013 with seven other states, to commit to 125,000 EVs by 2025 and in congruence with Connecticut DEEP's Electric Vehicle Roadmap, Connecticut Southwestern Area Clean Cities Coalition, in partnership with Live Green Connecticut and many partners, municipalities from across the state were invited to participate, at no charge, in the 2020 Municipal EV Readiness Toolkit 12- week program. Over 200 participants from over 60 municipalities took part in the program which included a module on EV Zoning Regulations. As a result of the feedback that was received from 2020 program participants, in 2021, the Municipal EV Readiness Toolkit – 9 Month Program was launched, in order to provide municipalities with an even deeper experience of EV readiness planning and implementation.

Of the twenty municipalities that participated in the 9-month program, during one-on-one Clarity Sessions, all identified EV zoning regulations as a priority.

In response to the Clarity Session feedback, the Municipal EV Zoning Regulations Blueprint – a practical guide on how to implement EV zoning regulations, was created. What makes this Blueprint different from other EV zoning regulation documents, is that instead of providing an exhaustive and extensive look at EV zoning regulations, it stands as a resource to help navigate the process of the practical aspects of implementing EV zoning regulations at the local level. It is intended for community leaders, energy task force groups, council of governments, planning

and zoning commissions/boards, planning and zoning staff, and economic and community development directors that are willing to take the leadership role of going through the process of identifying EV zoning regulations opportunities, and adopting new EV zoning regulations as a part of their existing regulations, to whatever degree suits that community. Although there are several considerations, some EV zoning regulations are more clear cut than others. In many cases, the EV zoning regulations that are implemented may reflect values and preferences of that town What is important to one town, may be of little or no consequence to another.

The Municipal EV Zoning Regulations Blueprint is part of Live Green/CT Southwestern Area Clean Cities Coalition's Municipal EV Readiness Toolkit, which is a process-oriented resource, meant for those who are committed to municipal EV readiness implementation. The EV Zoning Regulations Blueprint is intended to solve the problem of not knowing the practical steps and knowledge needed to implement EV zoning regulations, and to provide a clear path of action for those who want to see equitable EV Zoning Regulations adopted in their municipality. Planning and zoning boards and commissions that go through the process of implementing EV zoning regulations play a critical role in supporting EV readiness in their municipality. And their leadership in invaluable.

Executive Summary

Albert Einstein sums it up when he says, "The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking." Changing the way of thinking is exactly what planning and zoning commissions, and boards must do to help their municipalities usher in electric vehicle adoption.

According to Connecticut Department of Energy and Environmental Protection's Electric Vehicle Roadmap for Connecticut:

zoning ordinances, and permitting requirements enable state and municipal governments to set a foundation that supports EVSE deployment in new construction and parking facilities.

Widespread research has revealed that range anxiety is a top reason people avoid purchasing electric vehicles. To address that, as well as additional market barriers to widespread EV deployment, EV-friendly zoning ordinances encourage the development of infrastructure necessary, while increasing the percentage of charging station parking spaces. EV zoning ordinances reduce obstacles to EV scalability and are a powerful tool for municipalities seeking to enable EV adoption in their communities.

The problem is that there is insufficient charging infrastructure to sustain the level of electric vehicles that are forecasted. Even in the unlikely event that all EV owners could charge at home, there is still a need for public and destination charging. According to the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy's report, *National Plug-In Electric Vehicle Infrastructure Analysis*:

Cities are expected to have the greatest charging infrastructure requirements under both the coverage and demand assessments. About 8,000 DCFC stations would be required to provide a minimum level of coverage nationwide in cities and towns (based on uniform station spacing assuming BEVs are never more than 3 miles from a charging station). Such a network would provide consumer support for longdistance intra-city travel, serve as a safety net for emergency charging situations, and dampen range anxiety concerns.

To meet the demands of our municipalities, it's critical to address EV charging infrastructure at every level. The EV Zoning Regulations Blueprint is a practical implementation guide, intended

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to provide a process driven, actionable, EV zoning regulation plan. The Blueprint includes information on parking ordinances, provisions of the Americans with Disabilities Act (ADA) accessible standards, signage, and maintenance. Following the process outlines in the Blueprint and the guidance documents, the required percentage of EV ready charging spaces will increase.

The intended outcome of using this proven process, is to support planning and zoning boards and commissions to adopt EV zoning regulations that help municipalities meet the need for EV charging infrastructure. Once EV zoning regulations are in place, it will increase the percentage of electric vehicle supply equipment, which is essential to reduce range anxiety and scale light duty EVs.

Methodology

Our team used a blended approach of gathering information, conducting interviews and research, as well as using both our experience in the field along with previous program work. Practical information gathering served the purpose of identifying a proven EV zoning regulations process, that could be easily understood and followed. Our research addressed the more technical aspects of EV Zoning regulations and was coupled with expertise we gained from our Municipal EV Readiness Toolkits and various transportation experts we called upon.

- Interviews
- Research
- Experience
- Transportation Experts

We took a practical approach to the writing of the Municipal EV Zonng Regulations Blueprint and as much as possible, based our findings and recommendations off of the successful experiences of EV zoning regulations adoption as seen in Connecticut, as well as providing resources and tools that support action and implementation.

Our criteria for the data we used to document the EV Zoning Regulations Blueprint process was anchored by the experiences of successful municipal EV zoning regulations approvals, community outreach projects, and community building activities. In addition, we relied on the experience of participants who completed our Municipal EV Readiness Toolkit, who then. went through a thorough process of updating their EV zoning regulations. We Interviewed them on their proven process and used their successful experiences as the backbone of this blueprint.

We were able to validate the EV Zoning Regulations Blueprint process by confirming it with those who have successfully implemented EV Zoning Regulations in their community.

Modules

Module 1 The Impact of Zoning Regulations and the CT PURA Decision

The State of Connecticut Public Utilities Regulatory Authority (CT PURA) is working on their high priority Equitable Modern Grid initiative with multiple components. As part of this initiative, in July 2021, CT PURA issued a final decision that establishes a nine-year program to support the installation of electric vehicle charging infrastructure across the state, focusing on equity and inclusion. Complete text of the final approved docket is on file at the CT PURA portal as Program Authorization Decision: Docket No. 17-12-03RE04, 07/14/21 available in full. <u>https://portal.ct.gov/-/media/PURA/electric/PURA-Establishes-Statewide-Electric-Vehicle-Charging-Program.pdf</u>

To satisfy the Zero-Emission Vehicle Memorandum of Understanding, Connecticut has committed to adopting 125,000 EVs on the road by 2025. To foster this pace of EV adoption, towns and cities must update their zoning regulations to allow siting EVSE in appropriately identified places.

Specifically, Connecticut needs 789 Destination Level 2 charging ports and 137 DCFC ports by 2025. To satisfy this docket, we must support municipalities in updating their municipal zoning regulations to allow and mandate siting of EVSE to service an expanding number of electric vehicles in operation around our state.

We note three distinct challenges to be addressed in considering distribution of EVSE infrastructure:

- We need to allocate clean energy vehicle resources in areas currently plagued disproportionately with excess air pollutants from vehicle exhaust. This is a public health equity mandate we need to take seriously in Connecticut. Because we are creating a new system of fueling transportation, we have an opportunity to redress past inequities by addressing concerns from distressed communities at the outset of creating this process.
- 2) As importantly, we need to understand how "driving electric" differs behaviorally from "driving ICE." Siting considerations will need to address EV drivers' and operators' behavioral needs in response to the difference between EV and ICE technologies and infrastructure.
- 3) Municipalities need to have clear regulations for siting, using, and supporting delivery of EV Service infrastructure within their public service boundaries, in full accordance with ADA accessibility regulations; in alignment with traffic and parking enforcement practices and imperatives; and with a clear eye towards equitable access to this infrastructure in all neighborhoods.

Blueprint objectives:

1) To provide step-by-step communication and coaching on EVSE zoning regulations required to facilitate rapid deployment of EVSE infrastructure in support of rapid adoption of EV's.

2) To provide model zoning regulations consistent with Connecticut state regulations, to cities and towns statewide.

3) To increase the pool of experienced advisors, partners and EVSE champions available to rapidly spread adoption of updated zoning regulations statewide.

4) To engage policy advocates focused on equitable opportunities for access to electrified transportation with concomitant improvements in air quality, specifically in underserved and minority neighborhoods.

5) To increase understanding of how urban densities afford opportunities for multimodal electrification of transportation.

Module 1 - Tools and Resources:

- Utility programs mandated by CT PURA provide incentives to residential customers (4 units or fewer) and non-residential/commercial customers.
- Residential customer incentives include financial rebates on EV and EVSE equipment and installation, along with Managed Charging incentives that include Demand Reduction "response" requirements.
- Commercial/non-residential (including municipalities) customer incentives include support for "make-ready" infrastructure, rebates for EVSE (with required networking to provide usage data), and in some cases, include a requirement to participate in a managed charging program.
- Municipalities within Connecticut Southwestern Area Clean Cities Coalition will also receive a municipal-specific EVSE planning map, identifying existing EVSE locations, prime opportunities for EVSE installation, as well as areas of opportunity.
- The Alternative Fuels Data Center provides easy access for municipalities to identify how many existing EVSE are installed in their municipality as well as to EVSE locations nationwide.

https://afdc.energy.gov/stations/#/find/nearest

Utility Resources

The State of Connecticut is served by two electric utilities: United Illuminating and Eversource. Both entities provide informational resources distinctly written for residential or commercial applicants—program guides, qualified products lists, applications—as well as hosting capacity maps for CT towns and cities in their respective service areas. Access to both utilities' information resources are included in a summary table at the CT-PURA portal: <u>https://portal.ct.gov/pura/electric/office-of-utility-programs-and-initiatives/clean-energy-programs/electric-vehicle-charging-program</u>

Additional guidance in FAQ format is readily available for CT Residential and Commercial customers at the CT-PURA portal: <u>https://portal.ct.gov/-/media/PURA/electric/OUPI/Electric-Vehicle-Charging-Program-Frequently-Asked-Questions.pdf</u>

Module 2 Building the EV Zoning Regulations Core Team

People, and the passion they bring to this exciting municipal development, will ensure that EV zoning regulations are in place for the 21st Century! One way to look at your team is to consider individuals with clear interests in EV infrastructure that cover all three "sectors" of community influence:

PUBLIC SECTOR: local government concern is with regulations and policies adopted and enforcement of those:

- Elected/appointed officials as above: Mayor/First Selectmen/Senior Staff, Planning/Zoning Department; Planning/Zoning Commission; Sustainability/Energy Taskforce.
- Also consider Traffic/Parking Authority (signage and parking enforcement), Energy Commission (design engineering and advocacy); Conservation/Recreation Land Use Commission (advocacy); Public Works (maintenance); Human Rights Commission (equitable access); and more. Think about how your town government is organized around various functions and interests.

PRIVATE SECTOR: concern with infrastructure and incentives for new and ongoing business operations.

- Note: Engage your Economic Development Director in this part of the conversation.
- Businesses
 - established businesses with large parking areas or dependence on adequate public on-street or off-street parking, including employee and customer parking access;
 - developers interested in additional commercial, industrial, or multi-unit dwelling complexes on available open spaces.
- Business Organizations—Chamber of Commerce, Rotary Club, and others.

CIVIC SECTOR: concern with gaps in attention to important consumer/citizen interests

• Neighborhood groups; land conservation and environmental groups; climate change mitigation interest groups; underserved communities interest groups.

• Non-profit Sector may include local professional associations; civic associations; land trusts; houses of worship with community action focus; social justice groups focused on transportation equity.

Key Team Functions:

- Leadership: convene meetings; assign tasks; track overall progress; report out
- <u>Regulations review</u>: key professional expertise required
- <u>Outreach:</u> public meetings and public inputs to be organized and managed
- <u>Writing/Drafting:</u> summarizing, collating, systematizing information gathered
- Advocating: active, outspoken support at critical points in process

Often one or more team members can wear multiple "hats" so the team can cover bases without becoming too large.

Model 2 Resources US Department of Transportation Planning Checklist

This comprehensive guide to the EVSE ecosystem of partner organizations for planning and implementing EVSE services clearly describes how planning, zoning, and land-use regulations related to EVSE are embedded in larger social systems. The iterative project planning checklist encourages dialogue and flexibility as your local process unfolds. Enjoy!



More at: <u>https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-planning/project-planning-checklist</u>

Module 3 Reviewing Existing EV Zoning Regulations in CT and Analyzing Current Zoning Regulations to Identify EV Zoning Opportunities

Good News: Your well-comprised Team has ample resources to guide your work in reviewing your existing zoning regulations!

- 1) Look at sample Connecticut municipal zoning regulations Hartford, Middletown, South Windsor. These regulations align with CT state requirements and the complete regulations are included in the Appendix.
 - Investigate how your municipal needs are similar or how they are different.
 - Notice what is standard, such as dimensions of parking spaces to include EVSE equipment and safety barrier, and signage to reserve spaces for EV's only.
 - Notice what else seems beneficial for your town as modeled by other towns: Requirements for spaces in new developments; EVSE installations on municipal properties.
 - Notice the variety of approaches—a short policy statement, a few paragraphs appended to existing regulations, or a deep-dive modification throughout the regulations.

2) **Investigate incentives offered through Eversource and United Illuminating** so your municipality can access the **financial assistance** offered. Review carefully the application form **and process** for your utility—there are specific requirements for municipalities who want to enroll in these incentive programs. For more information, please visit:

https://portal.ct.gov/pura/electric/office-of-utility-programs-and-initiatives/clean-energy-programs/electric-vehicle-charging-program

3) Make a list of the scope, priorities and needs for your community based on the investigations above. What format will create success in your community?

- A simple policy to get started?
- A short addendum to zoning regulations?
- A deep dive into the whole array of zoning regulations?
- Something else?

4) Now review your existing zoning regulations to see how the scope selected in (3) above is required to be moved consistently through your governing process to support the EVSE infrastructure development for your town.

5) **Create a list of opportunities** to share with elected and appointed officials, with department heads impacted by proposed changes, and with interest groups in the business and civic community.

Following, please see Hartford, Middletown, and South Windsor EV Zoning Regulation's Case Studies. See Appendices for complete EV Zoning Regulations for Hartford, Middletown, and South Windsor and for a draft of West Haven's EV administrative policy.

Module 3 Resources - Accessibility, Enforcement, Signage

ADA accessibility requirements: https://adata.org/factsheet/parking

Summary of Best Practices in Electric Vehicle Ordinances, by Claire Cooke and Brian Ross. (Great Plains Institute, June 2019) https://www.betterenergy.org/wpcontent/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf Chapter 4: Electric Vehicle Parking Space Design and Location (pages 11-12) Chapter 5: Required EV Parking Capacity & Minimum Parking Requirements (pages 13-17) Chapter 6. Electric Vehicle-Designed Parking Use Standards and Protections (pages 17-18) Chapter 7. Signage, Safety, and Other Standards (pages 19-21)

Sample signage available at: MyParkingSigns.com

https://www.myparkingsign.com/Parking-Signs/Electric-Vehicle-ParkingSigns.aspx?engine=adwords&keyword=electric+vehicle+parking+signs&gclid=Cj0KCQ jw3v6SBhCsARIsACyrRAnyih1Kr9ZPX35JLXdFdMpVK2iGcmhsFW11UFM9wNMo2QhrC8 zyX8MaAsILEALw_wcB

Harford EV Zoning Regulations Case Study





Hartford, CT, EV Zoning Regulations

Hartford, CT, Zoning Regulations, As Amended, Effective June 5, 2020

· The siting and setbacks

same as the parking

are associated.

for stations shall be the

facility within which they

Accessibility

- At least one accessible station shall be provided for every 20 electric vehicle charging stations.
- Such accessible stations shall be located in proximity to the building's entrances and shall be connected to a barrier-free accessible route of travel.

Location

Except when located in one, 2-, and 3-unit dwelling locations, stations shall be reserved for parking and charging of electric vehicles only, with designated signage.

Siting and Setbacks Maintenance

 Electric Vehicle Charging Stations must be maintained in all respects, including the functioning of the equipment.

Signage

- 1. Voltage and amperage levels
- Hour of operations if time limits or towaway provisions are to be enforced by the property owner
- 3. Usage Fees
- Safety Information
 Contact information for reporting
- problems with equipment

Equipment

- Equipment mounted on pedestals, lighting posts, bollards, or other devices for on-street charging cannot impede pedestrian travel or create trip hazards within the right-of-way.
- Charging station outlets and connector shall be no less than 36 inches or no higher than 48 inches from the top of the surface where mounted and shall contain a retraction device to hang cords and connectors about the ground surface.
- 3. Equipment shall be protected by wheel stops or concrete-filled bollards.
- Stations located within parking lots or garages may be included in the calculation of minimum required parking spaces required.

Design

- 1. Safe for use during inclement weather.
- 2. Tamper-resistance to prevent injury,
- particularly to children.
- Resistant to potential damage by vandalism.
 Equipped with a mechanism to prevent theft
- of electricity by an unauthorized user. 5. Equipped with complete instructions and
- warnings in an unobstructed location next to each station.
- Vehicle charging equipment must not impede pedestrian, bicycle, or wheelchair movement, or create safety hazards on sidewalks.

All information has been gathered from the Town of Hartford, CT's Planning and Zoning Commission

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Middletown EV Zoning Regulations Case Study



Electric Vehicle Off Street Parking Requirements

- Any new development that requires 25 or more parking space as calculated by Section 40.04 of these regulations, shall have a minimum of 1 charging space of 3% of the total number of spaces allocated to Electric Vehicles and must have a Level 2 or 3 charging station/connection per EV parking space
- · Parking spaces shall be well lit and shall be for public use.
- Applicants may request a waiver or reduction of electric vehicle parking requirements from the Planning and Zoning Commission during site plan approval.

Electric Vehicle Charging Station Requirements

- Electric Vehicle Charging Stations shall be regularly maintained to ensure proper functionality.
- Electric Vehicle Charging Stations shall have clear legible signage stating the volt and amp levels, hours of operation, safety information, usage fees, and contact information for maintenance department.

All information has been gathered from the Town of Middletown, CT's Planning and Zoning Commission, Article IV Supplementary Regulations of Planning and Zoning Code

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South Windsor EV Zoning Regulations Case Study



EV Zoning Regulations Toolkit Case Study





South Windsor, CT, EV Zoning Regulations

Approved December 6, 2021 |

South Windsor EV Zoning Regulations Hightlight

Highlights

- All assigned covered or garage parking spaces shall be provided Level 2 EV Ready circuits and outlets in MUDs
- MUD management shall contract with an EVSE supplier to provide chargers for billing usage to residents
- EV Ready (Wired) required in 10% of parking spaces
- · Destination charging permitted in business zones
- · EV charging permitted as accessory use in all zones

*Further language about construction of EVSE in regard to MUDs were taken out as of December 6, 2021. *

Section 11.8 Appendix H Electric Supply Equipment (EVSE) (Other Provisions)

- Appropriate safety provisions (bollards, wheel stops, cord storage, etc.)
- Required spaces must support all brands, not just Tesla
- Appropriate signage (EV only, directions, rates, etc.)
- · Advertising (TV screens) permitted if not visible from roadway/homes
- May be restricted (e.g. condo/apartment residents, club/gym members)
- · ADA spaces- ensure access to equipment
- · Fleet parking areas not required- when needed by business

All information has been gathered from the Town of South Windsor, CT's South Windsor Energy Committee, during their Electric Vehicle Charging Public Hearing on March 23, 2021

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Module 4 How to Develop and Execute Your Public Outreach Plan, Gathering Feedback and Collaborating with Team Members, Town Leaders, and Business Leaders

Outreach planning is "all hands-on deck" for team members! Plan. Create timeline. Allocate tasks.

PLAN

When you assembled your team with an eye to diversity of representation across sectors and organizations, you created your first step of the outreach plan. Each team member has their network of associates OR an idea of who has such a network and can be asked to use it for this outreach purpose.

Now review with all team members their lead contacts for:

1) Productive input to the list of ideas you have generated and leadership support for moving the process forward.

2) Identifying possible sources of objection, clarifying those objections, and discerning how best to respond and incorporate OR simply counter with other voices of support.3) Prospective "converts" willing to participate at this stage, yet did not want to join the team at the beginning of the process. Some people want to join the project once it is taking off—welcome them!

CREATE TIMELINE

You are ready to create a timeline for outreach that includes:

1) consulting town officials and leaders for feedback

2) gathering ideas from business leaders and other organizational leaders in town

3) clarifying how your proposed list of ideas translates into proposed zoning regulations

4) setting dates for **public events with time to make changes as needed before** presenting to P&Z Commission

Be sure you understand the process for getting an item on the P & Z Agenda. Consult your calendar of dates for P & Z meetings; your list of P & Z Commissioners; and your information on procedure for getting on the P & Z Agenda for a target date.

ALLOCATE TASKS

- Circle back to Town Planner if they are not a member of the core team.
- Note team members who volunteer to schedule feedback conversations with important advocates and/or opponents. Your team is on a timeline!
- Recruit team members to employ social media to distribute a short survey to residents and create outreach messages for wide distribution in your community.
- Coordinate overall with community leaders for one or more informational sessions hosted by key organizations—this will support turnout at these events.

See Guidance Document #1: Developing an Outreach Event

Module 4 Resources - Information for Public Charging Station Hosts

Plug-In Electric Vehicle Handbook for Public Charging Station Hosts. (Clean Cities, US Department of Energy, April 2012)

https://afdc.energy.gov/files/pdfs/51227.pdf

Communication for audience of leaders and officials who are not-yet EV users/owners. This brief handbook will start the conversation on the basics:

- Electric Vehicles
- Electric Vehicle Service Equipment (EVSE)/ Charging Stations
- Benefits of Hosting Charging Stations
- Location Considerations
- Ownership and Payment Models
- Installing and Maintaining EVSE
- Why This Matters

Reducing EV Charging Infrastructure Costs by Chris Nelder and Emily Rogers. (Rocky Mountain Institute, December 2019)

https://rmi.org/ev-charging-costs

Executive summary introduces this professional analysis of cost considerations, including tabular exhibits, on these chapter topics:

- 1. The Cost Conundrum
- 2. Procurement
- 3. Requirements (for the system)
- 4. Soft Costs
- 5. Opportunities for Cost Reduction
- 6. Recommendations for Further Study

Module 5 Consulting Town Leaders, and Gathering Feedback from Business, Community, and Organizational Leaders

Review the notes you created in Module 2 from the process of reviewing current zoning regulations and analyzing your town's regulations to identify opportunities.

First round feedback:

- Town Planner
- Planning and Zoning Commissioners
- Economic Development Director and Economic Development Commission
- Council of Governments (COG) official(s)
- Important: collect names for additional people to contact from each above source of input

Identify the 'scope of action" your team thinks works best for achieving success at this time.

Success may look like adding minor EV regulation updates, overhauling the current regulations, and drafting new ones that integrate EV zoning into every aspect of the municipality or something in between. Whatever EV Zoning Regulations actions that are implemented will be a victory.

Second round feedback:

- Civic association leaders
- Social equity group leaders
- EV driver/user group leaders

In each conversation with a local leader, identify how they will help you convene the meeting to present a proposed draft to members of the public. Share your proposed timeline with them so they understand clearly what you are asking for. Use your time allocation for this process effectively, then meet as team to aggregate feedback. Summarize sources of objection.

Evaluate as a team:

- specific content suggestions from both rounds of feedback.
- adequacy of "scope of action" decision, and any need to reconsider.
- specific pieces of feedback that must be added to the "list of opportunities" for regulation

Now you can move to your Drafting Process! Send Draft to COG and have them approve it. Now you can set the date for your Public Meeting!

Module 5 Resources - Zoning Regulation Updates

Summary of Best Practices in Electric Vehicle Ordinances, by Claire Cooke and Brian Ross. (Great Plains Institute, June 2019) <u>https://www.betterenergy.org/wp-</u> content/uploads/2019/06/GPI EV Ordinance Summary web.pdf

Overview, coverage of Topics 1-7 with Model Code Recommendations, and Definition of Terms:

- 1. Electric Vehicle Charging Station as Permitted Land Uses
- 2. Electric Vehicle Make-Ready Standards
- 3. Electric Vehicle Supply Equipment Standards
- 4. Electric Vehicle Parking Space Design and Location
- 5. Required EV Parking Capacity & Minimum Parking Requirements
- 6. Electric Vehicle-Designed Parking Use Standards and Protections
- 7. Signage, Safety, and Other Standards
- 8. Definition of Terms (with sample language for each)

From another source comes the guidance to ask three initial questions...

- 1. Are Electric Vehicles and EVSE defined in Zoning Code?
- 2. Is EVSE listed in Zoning Use Tables?
- 3. Is EVSE explicitly permitted in logical locations?

...and consider three recommendations:

- Adopt zoning language that specifically defines the terms associated with EV charging and does not necessarily restrict the installation of EVSE.
- Establish EVSE-Ready building regulations that require the installation of EVSE in new developments and/or require the installation of EV provisions to reduce the cost and increase the ease of future EVSE installation.
- Establish a standardized, low-cost permitting process for residential and commercial EVSE installations.

Source: *Town of Colonie Enhanced Development Regulations: Electric Vehicle Zoning Guidance & Best Practices.* (CDTC & CDRPC Technical Assistance Program, NY, March 24, 2021, white paper)

Contact Daphne@LiveGreenCT.org for complete text of this white paper.

Module 6 Developing the EV Zoning Regulations Draft

You have now collected a list of ideas drawn from:

- existing updated regulations from other CT towns
- an analysis of opportunities in your regulations
- ideas from rounds of feedback

You also have these parameters:

- "scope of action" to guide your drafting process
- deadline for making your presentation to the public
- date for making your presentation to P & Z Commission with support from Planner

You want to assure inclusion of priority items in collaboration with Traffic and Parking Authority, Public Works and other enforcing authorities. These priorities include:

- Specify number of spaces designed and located to comply with Americans with Disabilities Act (ADA), in addition to compliance with any specific state codes; may specify circumstances in which the space must adhere to these standards.
- Specify signage design and messaging related to restricted parking for EV charging only, any time limits on parking and limits for unique vehicle remaining in the space for charging (others need to use the EVSE); monetary charges for EVSE connectivity and any overtime charges; and specify consequences of non-compliance (towing and/or ticketing) in cases of EV overtime and/or non-EV parking.
- Specify maintenance requirements and responsibility for routine maintenance; also specify legal timeframe for service restoration with specific requirements by zone or type of location of EVSE, along with consequences for failure to maintain equipment or restore service within legal timeframe.

Create your draft

REMEMBER: From the most current inventory of Connecticut's greenhouse gas emissions, Connecticut is not on track to meet our statutory emissions reduction targets, due mainly to emissions from the transportation sector. Work on the transition to EV's with adequate EVSE infrastructure directly addresses adverse air quality standards in Connecticut.

Borrow from regulations already in place in Connecticut—you do not need to start from scratch! When you have questions, talk with those friendly sources in Connecticut municipalities with whom you have a natural alliance in this process.

Honor your Timeline for drafting with an eye to next steps:

- Presenting at the public meeting
- Making edits in response to feedback from public meeting

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• Presenting the Draft to P&Z Commission

Be proud of what you draft—you are co-creating something that has never yet existed in your town!

Module 6 Resources

If you would like to learn more on how you can implement parking ordinances in your municipality, please review Module 4: Parking and Enforcement from the CT Southwestern Area Clean Cities Coalition/Live Green Connecticut 12-Month Municipal EV Readiness Toolkit Program: <u>https://youtu.be/Fp168ISJq-0</u>

NEAR						
PLATE		STATE	COLOR			
MAKE	MODEL		CASE #			
	\$25.00	VIOLATIONS				
1 Overtime	\$20.00	9. Within	25 Ft of Stop Sign			
2. No Parking		10. Bus S	top			
3. Within 25 Ft of Crosswa	lk	11. On Sid	lewalk			
4. Within 10 Ft of Hydrant		12. On a (Curve or Top of Grade			
5. Within 25 Ft of Intersect	ion	13. Over 1	13. Over 12 in. from Curb			
6. Obstructing Driveway		14. Outsid	14. Outside Designated Space			
7. Wrong Side of Street		15. Parkin	15. Parking On Grass			
8. Double Parked		16. Failure	16. Failure to Properly Display Permit/Plate			
17. Non-Electric Vehicle Parke	ed in Electric (Charging Station	Designated Space			
	\$35.00	VIOLATIONS		•		
18. Restricted Zone		19. Emplo	19. Employee Permit Parking Area			
20. Failure to Pay Day Parkin	g Fee at RR	21. Railro	ad Permit Parking Area	_		
22. Violation of Parking Auth	ority Regulation	ons				
	\$50.00	VIOLATIONS				
23. Tow-Away Zone	£150.00	24. Fire La	ane	-		
25. Handisanned Area	\$150.00	VIOLATIONS	unting Handiaganad Curb			
25. Handicapped Area		20. Obstri	Marke			
	\$200.00	VIOLATIONS	WICINS			
27. No Parking Beach Area	WEGOIO	28. Restri	cted Beach Permit Area			
FINES DOUBLE IF NO	OT PAID WITH	IN 10 BUSINES	SS DAYS OF ISSUE DATE	_		
APPEALS MUST BE MADE WITHIN 10 BUSINESS DAYS OF ISSUE DATE APPEALS CAN BE MADE ONLINE AT WWW.FAIRFIELDCTCITATIONS.RMCPAY.COM						
Payment can be made (631-459-4400; IN PER money order in this en	DNLINE www. RSON at Policy	fairfieldctcitati e Headquarter	ons.rmcpay.com; by PHONE s or by MAIL with check or			

Sample EVSE Planning Map



Module 7 Sharing Draft EV Zoning Regulations with Public

The public meeting is an opportunity to befriend and enroll public voices of support for this change to town infrastructure and town zoning regulations. Be sure you are prepared for public interest issues related to infrastructure:

1) Equity of access for historically under-served communities.

2) Provision for ADA accessibility.

3) Parking requirements, locations, enforcement possibilities (though not part of zoning, these issues are likely to come up!)

3) Make the clear case for public need to develop EVSE infrastructure—including economic development; cleaner air from fewer vehicular pollutants; access to cost-savings from EV use for households, businesses, and government; competitive appeal to travelers and shoppers—whatever is crucial to align charging stations with your town's values and the way your town prides itself on being uniquely attractive!

Your well-facilitated public meeting will result in:

- clarity about public support and public resistance
- identification of supporters you might recruit to give testimony to P & Z Commission, as needed
- detailed fine-tuning you may need to do before presenting to the P & Z Commission

Regardless of how the public meeting goes, hold fast to your plan to present to the P & Z Commission if you have a date. Getting this on their agenda for consideration is a major accomplishment for your team!

Module 7 Tools and Resources US Department of Transportation Planning Checklist

This comprehensive guide to the EVSE ecosystem of partner organizations for planning and implementing EVSE services clearly describes how planning, zoning, and land-use regulations related to EVSE are embedded in larger social systems. The iterative project planning checklist encourages dialogue and flexibility as your local process unfolds. Enjoy!



More at: <u>https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-planning/project-planning-checklist</u>

Information for Public Charging Station Hosts

Plug-In Electric Vehicle Handbook for Public Charging Station Hosts. (Clean Cities, US Department of Energy, April 2012)

https://afdc.energy.gov/files/pdfs/51227.pdf

Communication for audience of leaders and officials who are not-yet EV users/owners. This brief handbook will start the conversation on the basics:

- Electric Vehicles
- Electric Vehicle Service Equipment (EVSE)/ Charging Stations
- Benefits of Hosting Charging Stations
- Location Considerations
- Ownership and Payment Models
- Installing and Maintaining EVSE
- Why This Matters

Reducing EV Charging Infrastructure Costs by Chris Nelder and Emily Rogers. (Rocky Mountain Institute, December 2019)

https://rmi.org/ev-charging-costs

Executive summary introduces this professional analysis of cost considerations, including tabular exhibits, on these chapter topics:

- The Cost Conundrum
- Procurement
- Requirements (for the system)
- Soft Costs
- Opportunities for Cost Reduction
- Recommendations for Further Study

EVSE Pricing for Users

These sources offer a variety of pricing considerations applicable to local businesses and municipalities who own or host EVSE amenities for clients, residents, citizens, employees, and customers.

EV Connect.com: <u>Are Car Charging Stations Profitable?</u> <u>https://www.evconnect.com/blog/electric-car-charging-stations-profitable</u>

ESource.com: <u>EV Charging and Pricing</u>: <u>What Are Consumers Willing to Pay</u> https://www.esource.com/429201ebtf/ev-charging-and-pricing-what-are-consumers-willingpay

J.D. Power: <u>What Is Range Anxiety with Electric Vehicles?</u> https://www.jdpower.com/cars/shopping-guides/what-is-range-anxiety-with-electric-vehicles

UtilityDive.com: <u>Retail co-location may prove key to sustainable funding for EV</u> <u>charging, panel finds</u> <u>https://www.utilitydive.com/news/retail-co-location-may-prove-key-to-sustainable-funding-for-ev-charging-pa/578744/</u>

Module 8 Presenting Proposed EV Zoning Regulations to the Zoning Commission

You have built into your timeline this date. You have a lot of information about supporters, resisters, leadership voices, and more. Your Town Planner will need to "have your back" for this presentation, so review what you have garnered from all sources, share that with Planner, and find out how they want team members to be involved.

- How distribute the draft regulations to Commissioners and to the public in advance?
- How to brief members of the public who want to give testimony if needed?
- How to listen to P&Z Commissioners for objections your team may need to answer if the resolution fails?

Have a draft press release available to:

1) Laud the Commission lavishly for passing the regulations, OR

2) Laud the Commission lavishly for providing great insights into changes and agreeing to take this up again at their next meeting.

Module 8 Resources - EVSE Equipment

ENERGY STAR Certified Electric Vehicle Chargers

https://www.energystar.gov/products/other/ev_chargers

Federal Energy Star Product Finder for EVSE and EV's with section devoted to Vehicle Charging Resources for Businesses and Government:

- For Business/Property Managers
- For Fleet Managers
- For Electric Utilities
- For Government Agencies
- For Homebuilders

FAQ's on all things EVSE <u>https://juicebarcharger.com/faqs/</u>

- Charging Station details
- Charging process

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- Electrical details
- Installation
- Service and Maintenance
- Rebates and Incentives
- 3G Shutdown
- Network Connections

Guidelines on EVSE size and advertising options

- 1) EVSE Hardware manufacturers vary in technological neutrality. Please be sure to make specific inquiries into software options that meet your installation needs as you interview contractors for EVSE hardware installations.
- 2) Aesthetic considerations should be included as desired. Design variability in EVSE hardware allows for selection in keeping with your community needs and may vary by location.
- 3) Some EVSE/Charging Station producers prefer to offset hosts' costs with advertising displayed on the hardware as it sits in the parking area. Zoning regulations may need to address allowances/prohibitions on advertising in some EVSE/charging station locations.

Module 9 Managing Setbacks and Obstacles

P & Z Commissioners may not all agree that these regulatory changes OR the scope you have proposed are right for your municipality.

- Regulations may not be approved the first time they are presented to the P&Z Commission.
- Be prepared to view the presentation process as another stage of feedback.

Remember:

- You have identified your strong bases of support and your team is the leadership group they look to for the final step.
- Persevere in the knowledge that your team is on the right side of history for your municipality.
- Work with the Planner and the friendly members of P&Z Commission to address required changes.
- Mark your calendar with the date for the P&Z Commission meeting to which this resolution has been "continued".

Conclusion

From the most current inventory of Connecticut's greenhouse gas emissions, Connecticut is not on track to meet statutory emissions reduction targets, which is due mainly because of emission from the transportation sector. Connecticut currently has about 21,000 registered EVs, with the goal of 125,000 by 2025 to reach jurisdictional compliance. As far as percentages of registered EVs, Connecticut is lagging behind its New England neighbors. It's imperative that Connecticut cuts its emissions at a faster rate than previously attempted. Achieving Connecticut's 2030 and 2050 targets will require transitioning to light duty EVs quickly.

Range anxiety has been documented as one of the greatest obstacles to EV adoption. It makes sense then, that increasing the percentage of EV charging stations is critical to EV scalability, which will reduce greenhouse emissions. Access to EV charging needs to be ubiquitous and equitable. In order to address the "right to charge" at MUDs, as well a public and destination charging, municipalities need solutions that work.

Our team has conducted Interviews with municipalities that have confirmed the steps of their proven EV zoning regulations process and have used their successful experiences as the backbone of this blueprint. We also conducted research on topics that are related to EV zoning regulations that enhance the regulations.

By following the direction provided in the Municipal EV Zoning Regulations Blueprint, municipalities will be able to adopt and implement EV zoning regulations which will inevitably increase the percentage of charging station parking spaces

EV zoning regulations support electric vehicle adoption by helping to reduce range anxiety. The purpose of the EV Zoning Regulations Blueprint is to provide a practical guide for implementing EV zoning regulations. The blueprint is a solution-oriented tool available to all municipalities, community members and supports the reduction of greenhouse gas emissions.

A coordinated and effective education and outreach plan is essential to achieving the EVSE deployment targets established across the Program portfolio.

Public Utilities Regulatory Authority

Guidance Documents

Guidance Document I

Email Template to send to P & Z Commissioners, Mayor/First Selectperson, Energy Task Forces Members, Town P & Z Department

DRAFT 1 Draft Email to _____,

I recently attended an Electric Vehicle Zoning Regulations workshop which featured Stephen Wagner, Chair of South Windsor's Energy Committee. I was very impressed by the work that Stephen completed with the support of his town's Zoning Board, and I would like to know if we could set up a brief call to discuss EV zoning regulation options in Fairfield.

Below you will find a link to Mr. Wagner's Zoning Regulations presentation as well as a link to the EV Zoning Regulations Workshop. 8/4- EV Zoning Regulations Workshop - YouTube

We are also reaching out to the Town Plan and Zoning Department in Fairfield, First Selectwoman Kupchick, and Sustainable Fairfield Task Force to discuss EV zoning regulations.

I would like to invite you into a discussion to discuss opportunities our municipality has regarding EV zoning regulations.

Please let me know days/times that are most convenient for you.

Best regards,

Guidance Document 2

DRAFT 2 Hello Town Plan and Zoning Commission,

I hope this email finds you well. My name is Sean McQuade and I am the Legislative Liaison and Research Analyst for CT Southwestern Area Clean Cities Coalition. We are reaching out to you to discuss updating the town of Fairfield's zoning regulations.

We at CT Southwestern Area Clean Cities Coalition. want to work directly with the Town Plan and Zoning Commission to update the zoning regulations in the town of Fairfield. We will be working directly with the Town Plan and Zoning Department to develop a list of updated zoning regulations that will be beneficial for the town of Fairfield. We are seeking your support in this endeavor as we firmly believe that your involvement in this process will provide us with the proper feedback and assistance to develop appropriate zoning regulations.

We look forward to hearing from you. Please let us know if you have any questions about your involvement in this process.

Best,

Sean McQuade

GUIDANCE DOCUMENT III

Developing an Outreach Event:

Create Marketing Materials

- o Develop promotional material using sites such as Canva, or Vengage
 - Include Event Title, Date, Time, Brief Overview of Event (Speakers or Featured Guests, Link to Event), and Logo

Contact Partners

- Partner invitation
 - Let them know we're planning a special workshop for example, encouraging municipalities to update their zoning regulations
 - We would like to invite you to join us as a workshop partner
 - If you would like to be a partner, we would like to include your logo on our workshop invitation
 - We will acknowledge you at the beginning of the workshop on the opening slide and announce you as our partner
 - We would like to encourage you to reach out to members/stakeholders and encourage them to join too
 - We appreciate all that your organization does, and we look forward to hearing back from you regarding your interest in partnering with us in this workshop
 - Thank you, _____

Marketing Material Email to Potential Participants

- 1. Create email to registrants
- 2. Email content
 - a. Invite participants to join the event
 - b. Agenda
 - i. Use a template agenda and update the banner
 - ii. Include date, time, title, and Zoom link at the top
 - iii. Include speakers name, title, organization
 - c. Use marketing material to promote events
 - d. Attach any necessary files (agenda, tools, etc.)
 - e. Include speakers and short summary (a sentence or two) about the event topic
 - f. Include email and ask participants to RSVP for event
- 3. Schedule emails (including reminder email)
 - a. One sent the day before the event
 - b. One sent 1-2 hours before the event

Follow-up Emails

- 1. Create email to registrants
 - a. Use event template and customize for event
- 2. Email content
 - a. Thank participants for attending
 - b. Include Zoom recording and presentation link
 - c. Include presentations from any speakers
 - d. Registration link for next module (if applicable)

Presentation

- 1. Using existing event template, create a custom presentation
- 2. Create opening slide with banner, event date, title
- 3. Speaker introduction slides
 - a. Include name, title, organization
 - b. Include a separate slide for each person we're introducing unless they're speaking together
- 4. The final slide includes all of our names and contact informatio

Speakers

- 1. Identify speakers
- 2. Coordinate speaker content
- 3. and add contact information to spreadsheet in folder
- 4. Send reminder emails to speakers
 - a. Include agenda and Zoom link
 - b. Send the day before and the hour before the module
 - c. Ask if they'd be willing to share the presentation, and if so if they can send a copy
- 5. Send thank you after the module
 - a. Include the recording link

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Presentation Preparation

- 1. Review and Run Through Presentation
- 2. Meet with speakers to go over format of session, presentation time, and ensure they are comfortable with screen sharing their presentation

Event Facilitation

- 1. Share introduction slide, and music as participants join the zoom link
- 2. Welcome and Introductions
- 3. Overview
- 4. Speaker Presentation
- 5. Questions and Answers
 - a. Continually answer questions in chat throughout the session
- 6. Final Remarks

Follow- Up

- Email
 - o Zoom Link
 - Presentations
 - Presentation
 - Speaker Presentation
 - Workshop Resources (Links to Studies)
 - Chat Roll Question Answers

Appendix

Draft Administrative Policy for EVSE Use

West Haven

Electrical Vehicle Supply Equipment ("EVSE") — commonly known as charging stations, and associated Eco-Commuter/Electric Vehicle parking spaces are available on a first come, first serve basis for all employees and visitors to City Hall with plug-in electric vehicles ("EV") in accordance with the following Use Policy and Guidelines at their own risk. By using the EVSE, you agree to abide by these policies.

FREE USE PILOT

On a pilot basis and at the Mayor's discretion, at present there is no fee for EV charging, as the electrical usage is offset by a solar system on the Arts Center. This will change as usage increases and the Arts Center is remodeled and occupied. The City intends to migrate to a user fee model in the near future.

USE POLICY

Qualifying vehicles that are permitted to park in the charging stalls are battery electric vehicles, and plug in/hybrid electric passenger vehicles.

Vehicles parking in the EVSE spaces must limit charging times to no more than 3 hours per day. City Fleet Cars with municipal plates have priority and are permitted to stay plugged in overnight.

By using the City of West Haven EVSE, the EV owner consents for their vehicle to be unplugged when the EVSE indicates their vehicle is fully charged. This will better enable vehicles parked adjacent to existing EVSE the opportunity to charge. Authorized City of West Haven personnel may disconnect your vehicle at any time.

Cars found violating the time limit policy may be towed at the vehicle owner's expense. Persons damaging the EVSE equipment will be financially responsible for repairs or replacement.

The City of West Haven is not responsible for any damages to an EV using the EVSE whatsoever.

GUIDELINES

Do not count on the availability of City of West Haven EVSE as a primary justification in your decision to purchase plug-in electric vehicles. Your purchase decision should be based on your ability to charge at home and convenience of publicly available EVSE.

When your charge is complete, move your vehicle so other employees can use EVSE.

The charging cord is automatically unreeled and retracted. Please avoid having charge cables on the ground, and never extend a charge cord where it may become a tripping hazard.

Neatly allow the reel to coil in the charging cords when finished. Keeping the cord dry and dirt free will extend its life. Cords left on the ground are safety hazards. The electricity powering the EVSE can be disconnected by the Utility during peak demand. The City has no control over this feature.

PAY STATIONS

Payment services are provided by third party vendors, and you assume any risk of using such services normally associated with other automated vending services, including card security. Rates are posted on the EVSE device.

EV Zoning Regulations

Brookfield - Pending

Hartford

Electric Vehicle Charging Stations

An electric vehicle charging station is a public or private parking space that is served by battery charging equipment with the purpose of transferring electric energy to a battery or other energy storage device in an electric vehicle.

(1) Types

(a) Level 1, slow charging, operates on a 15 to 20 amp breaker on a 120 volt AC circuit.(b) Level 2, medium charging, operates on a 40 to 100 amp breaker on a 208 volt or 240 volt AC circuit.

(c) Level 3, fast or rapid charging, operates on a 60 amp or higher breaker on a 480 volt or higher 3-phase circuit with special grounding equipment.

(2) Siting & Setbacks. The siting and setbacks for stations shall be the same as the parking facility within which they are associated.

(3) Design

(a) Except when located in one, 2-, and 3-unit dwelling locations, stations shall be reserved for parking and charging of electric vehicles only, with signage as described in 4.20.7.B.(3) (b), below.

(b) Signage. Each station shall be marked with signage indicating the space is only for electric vehicle charging purposes. Signage shall include the following items:

(i) Voltage and amperage levels

(ii) Hour of operations if time limits or towaway provisions are to be enforced by the property owner

(iii) Usage fees

(iv) Safety information

(v) Contact information for reporting when the equipment is not operating or other problems.

(c) Accessibility. At least one accessible station shall be provided for every 20 electric vehicle charging stations. Such accessible stations shall be located in proximity to the buildings or facility entrances and shall be connected to a barrier-free accessible route of travel.

(d) Equipment.

(i) 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.

(ii) Charging station outlets and connector shall be no less than 36 inches or no higher than 48 inches from the top of the surface where mounted and shall contain a retraction device or a place to hang cords and connectors above the ground surface.

(iii) Equipment shall be protected by wheel stops or concrete-filled bollards.

(iv) Stations located within parking lots or garages may be included in the calculation of the minimum required parking spaces required.

(e) The station shall be designed to be:

(i) Safe for use during inclement weather,

(ii) Tamper-resistant to prevent injury, particularly to children,

(iii) Resistant to potential damage by vandalism, and

(iv) Equipped with a mechanism to prevent the theft of electricity by an unauthorized user.

(f) The station shall have complete instructions and appropriate warnings posted in an unobstructed location next to each station.

(g) Vehicle charging equipment must be designed and located so as to not impede

pedestrian, bicycle or wheelchair movement, or create safety hazards on sidewalks.

(4) Maintenance. Electric vehicle charging stations must be maintained in all respects, including the functioning of the equipment.

Middletown

40.02.01 ELECTRIC VEHICLE OFF STREET PARKING REQUIREMENTS 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.

Parking spaces shall be well lit and shall be for public use. Applicants may request a waiver or reduction of electric vehicle parking requirements from the Planning and Zoning Commission during site plan approval. (Added effective 2/9/18)

40.02.02 ELECTRIC VEHICLE CHARGING STATION REQUIREMENTS Electric Vehicle Charging Stations (EVCs) shall be regularly maintained to ensure proper functionality. EVCSs shall have clear legible signage stating the volt and amp levels, hours of operation, safety information, usage fees and contact information for maintenance department. (Added effective 2/9/18)

40.02.03 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 by Section 40.02, the applicant may ask the approving authority for a reduction in required parking spaces equal to the number of EV parking spaces above the minimum required 3%. The reduction of parking cannot be greater than 10% of the total amount of parking for the proposed development. (Added effective 2/9/18)

ARTICLE 4 - COMMERCIAL AND INDUSTRIAL ZONES

Table 4.1.1A Permitted Commercial and Industrial Uses								
SE = Special Exception SP = Site Plan ZP = Zoning Permit Blank = Not Permitted	Zones DC = Design Commercial GC = General Commercial I = Industrial RC = Restricted Commercial RO = Restricted Office TS = Route 5 Travel Services					Additional Provisions		
Use	DC	GC	I	RC	RO	TS		
Convention Facilities	SE							
Day Care Facilities	SE	SE	SE	SE	SE		See Article 7 Special Regulations.	
Dog Grooming Facilities		SE	SE	SE			See Article 7 Special Regulations for Dog Grooming Facilities in the Industrial Zone	
Dry cleaning, laundry, and dyeing establishments		SP						
Entertainment (live) at hotels and restaurants, taverns, grills and cafes	SP	SP	SE*				*Industrial zone in conjunction with permit- ted indoor recreational use. See Article 7 Special Regulations	
Equipment sales, service and rentals, including farm equipment		SP	SE					
(EVSE) AC Level 1, AC Level 2, and DC Fast Charging Electric Vehicle Charging Equipment	SE	SE	SE	SE			As a primary use (destination charging) for sale of EV Charging services to the public, similar in intent to internal combustion engine fueling (e.g. gasoline or diesel) See Appendix H – Electric Vehicle Supply Equipment	
Financial Services, institutions and agencies	SP	SP	SP	SP		SP		
Fitness Facilities		SP	SE	SP		SP	See Article 7 Special Regulations for indoor recreational facilities	
Freezer lockers and incidental processing of food for human consumption		SP						
Garages - public		SP		SE				
Hotels (and motels)	SP	SP		SP		SP		
Hotels, exclusive of entertainment		SP		SP				
Manufacture of bricks, cement products, tile and terra cotta			SE					
Manufacture, processing, packaging and assembly of components or goods			SP					
Microbrewery, Brewpub		SP		SE			No more than 15,000 barrels manufactured per year; wholesale and retail sales allowed; tasting rooms allowed; outside tasting al- lowed in conformance with Section 7.15 Outdoor Dining. Hours of operation may be determined by the PZC	

Table 4.1.1A Permitted Commercial and Industrial Uses

14. All parking lots must be designed to provide safe and convenient pedestrian and bicycle access as part of any parking lot and site design, including safe and convenient pedestrian and bicycle movement to and from public walkways, bikeways, or streets, and between developed lots, consistent with Section 6.7 of these regulations. Bicycle parking shall be in accordance with

guidelines of the Association of Pedestrian and Bicycle Professionals (APBP) for shortterm parking. Bus shelters shall be required in appropriate locations.

15. Parking shall be provided at a minimum overall rate of 1.7 spaces per dwelling unit. However, if commercial parking areas adjacent to the residential buildings are available for shared parking, than parking shall be provided at a minimum rate of 1.75 spaces per twobedroom dwelling unit, 1.25 spaces per one-bedroom unit, and 1.0 space per studio /efficiency unit. Parking may be designated in attached or detached garages, in carports, or in surface parking lots. Parking for all commercial uses shall be as required by the zoning regulations. (see Table 6.4.3B). Unenclosed parking of recreational vehicles, boats, or trailers shall be prohibited within a proposed residential community, but may be provided within a well screened area adjacent to the SAMUD's commercial uses, e.g. to the rear of a principal commercial building. EVSE Ready Spaces and EV Installed Spaces shall be provided as described in 6.4.10. Minimum Number of EVSE Parking Spaces and Appendix H Electric Vehicle Supply Equipment. All garages and assigned covered spaces shall be wired as EV Ready Spaces.

16. Infrastructure improvements such as utilities, roadways, and related improvements shall conform to Town standards. Twenty-four foot pavement width for private streets and driveways is acceptable. Parking spaces, landscaped islands, dumpsters, lighting, and common drives may be place in locations which straddle or are in close proximity to internal SAMUD property lines. In limited areas, residential and commercial parking may be allowed contiguous to a perimeter circulation road. Standards may be reduced or waived as deemed appropriate and approved by the Commission. All utilities shall be underground. Any solid waste stations (dumpsters) shall be placed on a concrete pad, appropriately screened, and maintained. The location and design of the screening or enclosure shall be shown on the site plan.

17. Maximum property size is twenty (20) acres. Minimum property size is fifteen (15) acres, however, SAMUD's may be subdivided into no more than two contiguous parcels independently meeting the minimum lot and are requirements of the General Commercial Zoning District (see Table 4.1.6A), provided all necessary easements for cross travel (motor vehicle, bicycle, and pedestrian), drainage, grading, and utility services are established, and the overall SAMUD, including all parcels, is developed in a coordinated fashion.

18. Roadways and utilities: All roads and utilities within the site development shall be owned and maintained by the owner(s) of the SAMUD, an association or other entity formed to carry out maintenance, a utility company, or a combination of same, but not the Town of South Windsor.

19. Except along public streets, required buffers, in accordance with Section 6.2, shall be provided between the overall SAMUD site and any adjacent residentially zoned or commercially zoned property which is not in common ownership with the SAMUD, or any lot therein. Buffers are not required between residential and commercial uses within the SAMUD. Buffers are not required between parcels within the SAMUD development. Minimum buffer width is fifty (50) feet. Yards are in addition to buffers.

20. Maximum stories in a building shall be three (3), maximum commercial or commercial / residential (buildings containing both uses) impervious coverage shall be 65%, maximum residential impervious coverage shall be 60%, maximum lot coverage shall be 40%, and maximum building height shall be 45 feet. Residential buildings adjacent to a single-family zone or development shall not exceed 2 $\frac{1}{2}$ stories.

21. Maintenance and operation agreements addressing the long-term maintenance shall be provided.

6.4.10 Minimum Number of EVSE Parking Spaces

A. In all districts, the minimum number of parking spaces shall be provided in accordance with the following tables and apply to new construction, expansion of parking spaces or significant change in use resulting rehabilitation of existing property with 50 or more parking spaces.

The applicant may request to modify and/or defer the number of EV Charging spaces required based on site conditions at the time of the application.

B. EV Capable Spaces may be installed in addition to the required EV Ready and EV Installed spaces.

C. Table 6.4.10A defines the generally required EV Ready Spaces in each site. Tables 6.4.10C and D establish the applicability of Table 6.4.10A to specific uses.

D. Of these EV Ready Spaces, Table 6.4.10A determines the minimum number which shall be EV Installed Spaces.

E. Handicapped Accessible vehicle charging stations shall be provided based on Table 6.4.10B. See Appendix H for information regarding Accessible EV Charging Station design.

F. For each five (5) or more EV Ready Spaces at a site, the Commission may reduce total required parking by one (1) space.

Total Number of Parking Spaces*	Number of Required Level 2 EV Ready or Charging Stations*	EV Ready Spaces installed with EVSE* as a percent of required parking, based on calendar year of site plan application				
		2012 to 2023	2024 to 2027	2028 and later		
1 - 15	None required					
16 or more	10 percent of total rounded up to the nearest whole number	3 percent	7 percent	10 percent		

Table 6.4.10A – Level 2 EV Ready Parking Space Wiring Requirements

*Truck and equipment parking spaces are not included in the above calculation.

Total Number of EVSE Spaces	Number of EV Spaces required to comply with ADA requirements						
at Site	Van Accessible Restricted to EV Charging (Note 1)	Van Accessible Restricted to EV Charging and Handicap Parking					
1 to 4	1	0					
5 to 25	1	1					
26 to 50	0	2					
51 to 75	0	3					
76 to 100	0	4					
101 or more		4 plus 1 for each 60 or fraction thereof over 100					

Table 6.4.10B - ADA requirements for EV Charging

Note 1: In order to ensure that all EV users have access to charging equipment if only 1 to 4 EVSE Stations are installed, the van accessible space shall meet the van accessible design requirements, including wheelchair aisle and ramp providing access to EVSE, but not be restricted to handicapped parking, provided sufficient handicapped restricted spaces are provided in accordance with Paragraph 6.4.4.G.

Use - RESIDENTIAL	Minimum Required EV Charging Facilities			
Multi-family Dwellings and Multi-family Dwellings / SAMUD-OZ	See Tables 6.4.10A and 6.4.10B All assigned covered or garage parking spaces shall be provided Level 2 EV Ready circuits and			
Assisted Living	outlets. Remaining parking spaces are used in Tables 6.4.10A and 6.4.10B to determine the shared EV Ready and EV Installed Spaces.			
Elderly Housing	MUD management shall contract with an EVSE supplier to provide chargers and means for billing usage to residents.			
Independent Living	If garages are adjacent to the associated dwelling, connection may be through the dwelling panel and meter. MUD management may require the occupant to purchase or lease approved EVSE.			

Table 6.4.10C - Minimum Required EVSE Parking Spaces - Residential Uses

ARTICLE 6 - SITE DEVELOPMENT REGULATIONS

Table 6.4.10D - Minimum Required Parking Spaces - Commercial and Industrial Uses

Use – COMMERCIAL INDUSTRIAL	Minimum Required Parking Spaces
Bar, Nightclub, Lounge	
Bowling Alley	
Business Offices	
Hotel, Motel, Tourist Home	
Hospital, Sanitarium, Convalescent or Nursing Home	See Tables 6.4.10A and 6.4.10B
Industrial and Manufacturing	
Library	
Places of Assembly, Amusement, Recreation, and Education	
Research	
Restaurants, Taverns, Cocktail Lounges	
Theater	
Park and Ride Lots	See Tables 6.4.10A and 6.4.10B. In addition, all light
Charging Lots	poles may have EV Level 1 outlets
Municipal Parks and Recreation Areas	None required. Allowed as an accessory use.
Retail Stores	
Car Wash	
Fast Food	
Financial Institution	Calculation based on employee parking estimated at the time of site plan application. See Tables 6.4.10A
Library	and 6.4.10B. Plus one.
Schools	
Medical and Dental Offices	
Personal Service Shops	
Day Care and Pre-Schools	
Warehouse	
Shopping Center	Calculation based on sum of requirements for various uses therein (e.g. retail stores, restaurants, etc.) with rounding applied to sum. See Tables 6.4.10A and 6.4.10B.
Church, Synagogue	Recommended. Calculations should consider anticipated parking lot occupancy when religious services are not taking place. See Tables 6.4.10A and 6.4.10B.

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Section 11.8 APPENDIX H

Electric Vehicle Supply Equipment (EVSE)

11.8.1 Purpose

The purpose of this appendix is to provide for and promote the use of Electric Vehicles (EVs) subject to reasonable conditions that will protect the environment, public health, safety, and welfare. Because EV charging requires more time than internal combustion engine (ICE) refueling, charging facilities will be widely distributed to allow vehicle operators to engage in other nearby activities such as home life, shopping, dining or recreation while their EVs are being charged.

11.8.2 Electric Vehicle Definitions

- ELECTRIC VEHICLE: A motor vehicle capable of being driven by a battery powered electric motor.
- ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) OR EV CHARGING STATION: The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the Electric Vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the Electric Vehicle.
 - AC LEVEL 1 EVSE: 110 to 120-Volt, alternating current (AC) EVSE connected to a 20 Ampere electrical outlet.
 - b. AC LEVEL 2 EVSE: 208 to 240 Volts AC EVSE connected to a 40 Ampere circuit.
 - c. DC FAST CHARGING (DCFC) EVSE: also known as LEVEL 3 EVSE: 208-480 Volt direct current (DC) chargers with 70 Ampere or higher capacity.

3. ELECTRIC VEHICLE PARKING SPACES:

- EV INSTALLED SPACE: A designated parking space with Electric Vehicle Supply Equipment (EVSE) installed and operational.
- b. EV READY SPACE: A designated parking space which is provided with a minimum AC Level 2 EVSE or higher capacity sufficient to serve DC Rapid Charge EVSE.
- c. EV CAPABLE SPACE: Electrical panel capacity, breaker service, and raceways or conduits to support eventual installation of AC Level 2 EVSE.

11.8.3 Provisions

- AC Level 1 and AC Level 2 Electric Vehicle Supply Equipment (EVSE) shall be permitted as an
 accessory use by right in all zoning districts and by Special Exception as primary use. Direct
 Current Fast Charging (DCFC or Level 3) EVSE are permitted as an accessory use and by Special
 Exception as primary use in all Commercial and Industrial Zones as defined in Article 4 of these
 regulations. Site plan approval is required for all uses except single and two-family dwellings.
- The sale of electric energy through EVSE to the public or to appropriately restricted occupants, guests, customers, members, etc. is permitted in all zones except at single and two-family dwellings. Any access restrictions shall be incorporated in the site plan and approved by the Commission.

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- EVSE connections shall meet current standards designed to be capable of serving all brands of EVs. Proprietary EVSE systems capable of serving only specific vehicle brands are permitted where otherwise allowed but may not be used to meet the minimum EV parking space requirements of Section 6.4.10.
- 4. The main electrical switchgear shall be installed with sufficient space and capacity to support 10% of spaces whether EV Installed or EV Ready at 208/240V and 40A per space. In an EV Ready or EV Capable Space, the circuit shall terminate in a suitable termination point such as a receptacle, junction box, or an EVSE, and be located in close proximity to the proposed location of the EV parking spaces.
- EV Load Management Systems are permitted with shared or publicly accessible Level 2 EVSE, provided a minimum of 20 Amperes are delivered to each connected vehicle.
- 6. EVSE may be wall or pole mounted. EVSE may be shared among two or more spaces.
- 7. Signage and parking space paint shall be consistent with applicable standards and shall clearly identify EV Installed Spaces as well as any restrictions regarding users and time limits. Where public or shared access is permitted, rates shall be posted with sufficient size and visibility to be read before entering the parking space. Directional signage leading to EV charging spaces is permitted in addition to any other directional signage.
- EVSE may include electronic displays that provide advertising, entertainment and other programming provided such displays are not visible from public roadways, residential buildings or sites where residential buildings are permitted.
- 9. Location and safety considerations:
 - a. The EVSEs shall be located in desirable and convenient parking locations that will serve as an incentive for the use of electric vehicles. Placement may consider separate needs of customer and employee parking areas. Appropriate sharing of parking among EV users, ADA users and others should be considered in allocating spaces.
 - Electric vehicle charging stations are not permitted within the Town or State right-of-way except at municipal sites and adjacent to designated on-street parking.
 - c. The installation of EVSE shall not reduce the vehicle's parking area dimensions below the size and standards required for parking spaces under Section 6.4.5. This applies to EV Installed Parking Spaces as well as EV Ready Parking Spaces and EV Capable Parking Spaces.
 - d. Equipment shall be protected by wheel stops or concrete-filled bollards. Curbing may be used in lieu of bollards and wheel stops if the charging station is set back a minimum of 24 inches from the face of the curb.
 - Equipment mounted on pedestals, lighting posts, bollards, or other devices shall be designed and located so as not to impede pedestrian travel or create injury hazards for pedestrians.
 - f. 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.
 - g. As established in Section 6.4, enough EV Charging Stations shall meet ADA Handicapped Accessible standards as defined in Paragraph 6.4.4G Handicapped Parking. In addition to the usual requirement for handicapped parking, Accessible EV Charging Stations shall ensure access to equipment and cords. This is illustrated in Figure 11.8A.
 - h. Electric outlets to support Level 1 charging is permitted on streetlight poles and does not require parking restrictions.

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Figure 11.8A - EV Charging Station Design, including Accessible EV Charging Stations

Note: Not to scale.

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