ORDINANCE NO. CS-349

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARLSBAD, CALIFORNIA, AMENDING CARLSBAD MUNICIPAL CODE CHAPTER 18.21 REGARDING REQUIREMENTS FOR ELECTRIC VEHICLE CHARGING INFRASTRUCTURE FOR NEW AND EXISTING RESIDENTIAL BUILDING SITES AND NEW NONRESIDENTIAL BUILDING SITES.
PROJECT NAME: CLIMATE ACTION PLAN ORDINANCES
PROJECT NUMBER: MCA 17-0002 (PUB17Y-0013)

WHEREAS, on September 22, 2015, the City Council of the City of Carlsbad approved Resolution No. 2015-244, approving the Climate Action Plan (CAP) which aims to reduce communitywide greenhouse gas emissions (GHG); and

WHEREAS, in connection with approval of the CAP, the City Council certified a program environmental impact report (EIR 13-02) in compliance with the California Environmental Quality Act (CEQA), which evaluated the potential environmental effects of CAP implementation, including adoption and enforcement of various ordinances and programs intended to reduce GHG; and

WHEREAS, this ordinance fulfills a CAP requirement to address electric vehicle charging infrastructure measures for new and existing residential building sites and new nonresidential building sites (CAP measure L-5 and L-6); and

WHEREAS, the City Planner has determined that: 1) adoption of this ordinance is a subsequent activity of the CAP for which program EIR 13-02 was prepared; 2) a notice for the activity has been given, which includes statements that this activity is within the scope of the program approved earlier, and that program EIR 13-02 adequately describes the activity for the purposes of CEQA Section 15168(c)(2) and (e); 3) the project has no new significant environmental effect not analyzed as significant in the prior EIR 13-02; and 4) none of the circumstances requiring a subsequent or a supplemental EIR under CEQA Guidelines Sections 15162 or 15163 exist; and WHEREAS, CAP actions to reduce GHG require adoption of ordinances addressing alternative water heating systems for new residential buildings; and

WHEREAS, California Health and Safety Code section 17958 requires that cities adopt building regulations that are substantially the same as those adopted by the California Building Standards Commission and contained in the California Building Standards; and

WHEREAS, the California Green Building Standards Code is a part of the California Building Standards which contains mandatory green building provisions, including residential and nonresidential site planning and design requirements for electric vehicle charging; and,

WHEREAS. California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5 provide that the City may make changes or modifications to the building standards contained in the California Building Standards based upon express findings that such changes or modifications are reasonably necessary because of local climatic, geological or topographical conditions; and

WHEREAS, California Green Building Standards Code Section 101.7.1 provides that local climatic, geological or topographical conditions include environmental conditions established by a city, county, or city and county; and

WHEREAS, the City Council of the City of Carlsbad finds that each of the amendments, additions and deletions to the California Green Building Standards Code contained in this ordinance are reasonably necessary because of local climatic, geological or topographical conditions described in Attachment A to this ordinance; and

WHEREAS, the City of Carlsbad has performed a cost analysis which showed that installing electric vehicle charging infrastructure at the time of new construction or major renovation is cost effective when compared to a later retrofit.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Carlsbad, California, ordains as follows that:

1. The above recitations are true and correct.

2. Chapter 18.21 List of Sections is amended to add references to new sections as follows:

18.21.120 California Green Building Standards Code Chapter 2 amended - Definitions
18.21.140 California Green Building Standards Code Chapter 4 amended – Residential electric vehicle charging
18.21.150 California Green Building Standards Code Chapter 5 amended – Nonresidential electric vehicle charging

3. Section 18.21.010 is amended to read as follows:

18.21.010 Adoption.

The 2016 California Green Building Standards Code copyrighted by the California Building Standards Commission, together with those amendments, exceptions, additions and deletions incorporated into this chapter, is adopted by reference as the Green Building Standards Code of the City of Carlsbad.

4. Section 18.21.120 is added to read as follows:

18.21.120 California Green Building Standards Code Chapter 2 amended –

Definitions.

Section 202 of the California Green Building Standards Code is amended to add the following definitions:

EVSE CAPABLE. An electric vehicle charging space (EV space) installed with a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV spaces. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

EVSE INSTALLED. An electric vehicle charging space (EV space) installed with a dedicated 208/240-volt branch circuit, including a listed raceway, electrical panel capacity, overcurrent protective device, wire, and receptacle. Receptacle shall be equipped with electric vehicle supply equipment (EVSE). The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter) and is required to be continuous at enclosed, inaccessible or concealed areas and spaces. The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including receptacle and EVSE, related to this section shall be installed in accordance with the California Electrical Code.

EVSE READY. An electric vehicle charging space (EV space) installed with a dedicated 208/240-volt branch circuit, including a listed raceway, electrical panel capacity, overcurrent protective device, wire, and termination point such as a receptacle or blank cover. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter) and is required to be continuous at enclosed, inaccessible or concealed areas and spaces. The termination point shall be in close proximity to the proposed location of an EV charger. The branch circuit and associated overcurrent protective device shall be rated at 40 amperes minimum. Other electrical components, including a receptacle or blank cover, related to this section shall be installed in accordance with the California Electrical Code.

MAJOR RESIDENTIAL RENOVATIONS. Alterations and additions to existing residential structures and construction sites where: (A) for one and two family dwellings and townhouses with attached private garages, alterations have a building permit valuation equal to or greater than $60,000 or include an electrical service panel upgrade; or (B) for multifamily dwellings (three dwelling units or more), alterations have a building permit valuation equal to or greater than $200,000, interior finishes are removed and significant site work and upgrades to structural and mechanical, electrical, and/or plumbing systems are proposed. Significant site work as used herein means site alterations that: require a grading permit pursuant to Carlsbad Municipal Code Chapter 15.16; rehabilitate or install 2,500 square feet or more of landscaping; or repave, replace or add 2,500 square feet or more of vehicle parking

and drive area.

5. Chapter 18.21.140 is added to read as follows:

18.21.140 California Green Building Standards Code Chapter 4 amended – Residential electric vehicle charging.

A. Section 4.102 of the California Green Building Standards Code is amended to read as follows:

SECTION 4.102 DEFINITIONS

4.102.1 Definitions. The following terms are defined in Chapter 2.

EVSE CAPABLE.
EVSE INSTALLED.
EVSE READY.
FRENCH DRAIN.
MAJOR RESIDENTIAL RENOVATIONS.
WATTLES.

B. Section 4.106.4 of the California Green Building Standards Code is amended to read as follows:

4.106.4 Electric vehicle (EV) charging for new construction and major residential renovations. New construction and major residential renovations shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3, to facilitate installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:

   1.1 Where there is no commercial power supply.

   1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per parking space.

2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

3. Where major residential renovations for one and two-family dwellings,

and townhouses with attached private garages, do not include an electrical service panel upgrade, the requirements of Section 4.106.4.1 shall apply to the maximum extent that does not require an electrical service panel upgrade.

4. In major residential renovations, where there is evidence substantiating that meeting the requirements of this section presents an unreasonable hardship or is technically infeasible, the Building Official may consider an appeal from the project sponsor to reduce the number of EV spaces required or provide for EV charging elsewhere.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages and major residential renovations. For each dwelling unit, install one EVSE Ready space.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device designated for future EV charging purposes as "EV READY" in accordance with the California Electrical Code. The receptacle or blank cover shall be identified as "EV READY".

4.106.4.2 New multifamily dwellings and major residential renovations. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site provided for all types of parking facilities shall be electric vehicle charging spaces (EV spaces) capable of supporting installed and future EVSE. Calculations for the required number of EV spaces and EVSE Installed spaces shall be rounded up to the nearest whole number.

Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. Except for EVSE Installed spaces, there is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EVSE Installed space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric vehicle charging stations (EVCS). When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2. The EV space shall be located on an accessible route, as defined

in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).

2. The minimum width of each EV space shall be 9 feet (2743 mm).

3. One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

    a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. When a single EV space is required, it shall be an EVSE Installed space.

4.106.4.2.4 Multiple EV spaces required. When multiple EV spaces are required, fifty (50) percent, but in no case less than one, shall be EVSE Installed spaces. The remainder of the required EV spaces may be EVSE Installed, EVSE Ready, or EVSE Capable spaces.

4.106.4.2.4.1 Construction Documents. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting installed and future installation of EVSE. The construction documents shall identify the location of the EV spaces.

Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. Except for EVSE Installed spaces, there is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.3.1 Number of required EV spaces. The number of required EV spaces and EVSE Installed spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces and EVSE Installed spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES	NUMBER OF REQUIRED EVSE INSTALLED SPACES
0–9	1	1
10–25	2	1
26–50	4	2
51–75	6	3
76–100	9	5
101–150	12	6
151–200	17	9
201 and over	10 percent of total	50 percent of required EV spaces

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).

2. The minimum width of each EV space shall be 9 feet (2743 mm).

4.106.4.3.3 Single EV space required. When a single EV space is required, it shall be an EVSE Installed space.

4.106.4.3.4 Multiple EV spaces required. When multiple EV spaces are required per Table 4.106.4.3.1, the corresponding number of EVSE Installed spaces are required to be installed at the time of construction. The remainder of the EV spaces required per Table 4.106.4.3.1 may be EVSE Installed, EVSE Ready, or EVSE Capable spaces.

4.106.4.3.4.1 Construction documents. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide

information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.3.5 Identification. The service panels or subpanels shall be identified in accordance with Section 4.106.4.2.5.

4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for EV charging stations in the California Building Code, Chapter 11B.

Notes:

1. The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives Number 13-01. Website: http://www.dot.ca.gov/ trafficops/policy.html.

2. See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor' s Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and businesses. Website: https://opr.ca.gov/docs/ZEV_Guidebook.pdf.

4. The Governor's Interagency Working Group on Zero-Emission Vehicles, 2016, "2016 ZEV Action Plan, An Updated Roadmap toward 1.5 Million Zero-Emission Vehicles on California Roadways by 2025." https://www.gov.ca.gov/ docs/2016_ZEV_Action_Plan.pdf.

6. Section 18.30.150 is added to read as follows:

18.21.150 California Green Building Standards Code Chapter 5 amended – Nonresidential electric vehicle charging.

A. Section 5.102 of the California Green Building Standards Code is amended to read as follows:

SECTION 5.102 DEFINITIONS

5.102.1 Definitions. The following terms are defined in Chapter 2.

CUTOFF LUMINAIRES.
EVSE CAPABLE.
EVSE INSTALLED.
EVSE READY.
LOW-EMITTING AND FUEL EFFICIENT VEHICLES.
NEIGHBORHOOD ELECTRIC VEHICLES.
TENANT-OCCUPANTS.
VANPOOL VEHICLE.
ZEV.

B. Section 5.106.5.3 of the California Green Building Standards Code is amended to read as follows:

5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate installation and future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, one EVSE Installed space shall be installed in accordance with the California Electrical Code.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple EV spaces are required per Table 5.106.5.3.3, the corresponding number of EVSE Installed spaces are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. The remainder of the EV spaces required per Table 5.106.5.3.3 may be EVSE Installed, EVSE Ready, or EVSE Capable spaces.

5.106.5.3.2.1 Construction documents. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.

2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.

3. Plan design shall be based upon 40-ampere minimum branch

circuits.

4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.

5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the installation and future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.

2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV SPACES	NUMBER OF REQUIRED EVSE INSTALLED SPACES
0-9	1	1
10-25	2	1
26-50	4	2
51-75	6	3
76-100	9	5
101-150	12	6
151-200	17	9
201 and over	10 percent of total[1]	50 percent of required EVSE Installed spaces[1]

1. Calculation for EV spaces and EVSE Installed spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as

described in Section 5.106.5.2 Designated parking for clean air vehicles.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01.www.dot.ca.gov/hq/traffops/policy/13-01.pdf.

2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.

EFFECTIVE DATE: This ordinance shall be effective thirty days following its adoption; and the City Clerk shall certify the adoption of this ordinance and cause the full text of the ordinance or a summary of the ordinance prepared by the City Attorney to be published at least once in a newspaper of general circulation in the City of Carlsbad within fifteen days after its adoption.

INTRODUCED AND FIRST READ at a Regular Meeting of the Carlsbad City Council on the 26th day of February 2019, and thereafter

PASSED, APPROVED AND ADOPTED at a Regular Meeting of the City Council of the City of Carlsbad on the 12th day of March 2019, by the following vote, to wit:

AYES: Hall, Blackburn, Bhat-Patel, Schumacher, Hamilton.

NOES: None.

ABSENT: None.

APPROVED AS TO FORM AND LEGALITY:

CELIA A. BREWER, City Attorney

MATT HALL, Mayor

for BARBARA ENGLESON, City Clerk

(SEAL)

FINDINGS FOR LOCAL AMENDMENTS TO
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE

California Health and Safety Code Section 17958 provides that the city may make changes to the provisions in the uniform codes that are published in the California Building Standards Code. Health and Safety Code Sections 17958.5, 17958.7 and 18941.5 require that for each proposed local change to those provisions in the uniform codes and published in the California Building Standards Code which regulate buildings used for human habitation, the city council must make findings supporting its determination that each such local change is reasonably necessary because of local climatic, geological, or topographical conditions. Furthermore, California Green Building Standards Code Section 101.7.1 provides that local climatic, geological or topographical conditions include environmental conditions established by a city, county, or city and county.

California Green Building Standards Code				
Section	**Title**	**Add**	**Amend**	**Justification**
202	Definitions	✓		C, T, E
4.102.1	Definitions		✓	C, T, E
4.106.4	Electric vehicle (EV) charging for new construction and major residential renovations		✓	C, T, E
5.102.1	Definitions		✓	C, T, E
5.106.5.3	Electric vehicle charging		✓	C, T, E

Key to Justification for Amendments to Title 24 of the California Code of Regulations

C This amendment is justified on the basis of a local **climatic** condition. Carlsbad has many brush-covered hillsides and protected natural open space areas adjacent to developed areas. Though relatively moderate compared to inland portions of the region, the seasonal climatic conditions during the late summer and fall in Carlsbad are characterized by frequent Santa Ana weather patterns. Santa Ana conditions are dry, hot, strong and gusty winds that produce extreme dryness and some of the highest winds in San Diego County, have fanned the region's most catastrophic wildfires and can impact public health in the populated coastal zone by the extreme heat and occasional smoke.[1]

Carlsbad has experienced larger increases in annual temperature than other parts of the state. Compared to the first six decades of the 20th century, annual

[1] Kalansky, Julie, Dan Cayan, Kate Barba, Laura Walsh, Kimberly Brouwer, Dani Boudreau. (University of California, San Diego). 2018. ***San Diego Summary Report***. California's Fourth Climate Change Assessment, p.27.

temperatures have increased by more than 1°F in many parts of the state, with some areas (including the San Diego region) exceeding 2°F.[2] This heating is expected to continue well into the future, with estimates ranging between 4-6°F and 7-9°F by the end of the century.[3]

T This amendment is justified on the basis of a local **topographical** condition. Carlsbad has six and a half miles of beaches, three lagoons, several creeks and other low-lying areas prone to flooding. The San Diego Multi-jurisdictional Hazard Mitigation Plan ranks coastal storm, erosion and flooding among the top five hazards for Carlsbad, with potential property loss exposure approaching $200 million dollars.[4] There is broad scientific consensus that the earth will continue to warm and that sea levels will rise as a result of thermal expansion of the oceans and increased contributions from melting glaciers. By the end of the century, sea level could rise by 1.7 to 6.6 feet, inundating beaches and impacting miles of roads and public accesses, the state campgrounds, hundreds of properties, and more than 1,000 acres of environmentally sensitive lands in Carlsbad.[5]

E This amendment is justified on the basis of local **environmental** conditions. Sustainability is a core value of the Community Vision, and an intrinsic part of the Carlsbad General Plan. Energy efficiency enhances the public health and welfare by promoting the environmental and economic health of the city through incorporating green practices into the design, construction, maintenance and operation of new and existing buildings. Providing charging infrastructure for electric vehicles will reduce air pollution and GHG emissions by facilitating increased use of zero emission vehicles.

The amendments to the California Green Building Standards Code are reasonably necessary to achieve the following goals of the General Plan Sustainability Element and Carlsbad Climate Action Plan:

- Promote energy efficiency and conservation in the community;
- Pursue the use of sustainable energy sources;
- Reduce the community's greenhouse gas emissions and foster green development patterns;
- Maintain a long-term balance among environmental, social and economic concerns, to ensure a vibrant, healthy and prosperous community.

The above-listed conditions within the city pose local hazards for which amendments to the California Green Building Standards Code are required. Human activities that release heat-trapping greenhouse gases into the atmosphere (such as through fossil fuel combustion) are the primary driver of climate change.[6] Failure to address and

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[2] Bedsworth, Louise, Dan Cayan, Guido Franco, Leah Fisher, Sonya Ziaja. (California Governor's Office of Planning and Research, Scripps Institution of Oceanography, California Energy Commission, California Public Utilities Commission). 2018. ***Statewide Summary Report***. California's Fourth Climate Change Assessment, p. 22.

[3] ***San Diego Summary Report,*** p. 19.

[4] 2017 San Diego Multi-jurisdictional Hazard Mitigation Plan, Table 5.3-1.

[5] City of Carlsbad. December 2017. Sea Level Rise Vulnerability Assessment, Table 7, p. 44.

[6] U.S. Global Research Program. Fourth National Climate Change Assessment,

significantly reduce GHG emissions could result in increased extreme heat events, dry weather conditions and risk of wildfire. Rises in sea level, including in the city's lagoons, could put at risk Carlsbad homes and businesses, public facilities, public roads (especially Carlsbad Boulevard) and accessways.

According to the Carlsbad Climate Action Plan, community-wide GHG emissions need to be reduced 49 percent by 2035 to help achieve statewide reduction targets necessary to reduce impacts from climate change. Cars and light trucks account for 39 percent of Carlsbad's GHG emissions. Providing electric vehicle charging infrastructure will facilitate increased use of plug-in hybrid and battery electric vehicles, thereby reducing GHG emissions from this sector. For example, the California Air Resources Board estimates that each installed electric vehicle charging station could reduce GHG emissions by 8 to 17 metric tons (CO_2 equivalent gases) per year.[7]

https://www.globalchange.gov/climate-change. Accessed on 12/28/18.

[7] CARB. April 13, 2018. Electric Vehicle (EV) Charging Infrastructure: Multifamily Building Standards, Appendix H.

STATE OF CALIFORNIA)
COUNTY OF SAN DIEGO) ss.

I, Sherry Freisinger, Deputy City Clerk of the City of Carlsbad, County of San Diego, State of California, hereby certify that I have compared the foregoing copy with the original ORDINANCE NO. CS-347, AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARLSBAD, CALIFORNIA, AMENDING CARLSBAD MUNICIPAL CODE CHAPTERS 18.21 AND 18.30 REGARDING REQUIREMENTS FOR ENERGY EFFICIENCY MEASURES AND PHOTOVOLTAIC SYSTEMS IN NEW OR EXISTING RESIDENTIAL AND NON-RESIDENTIAL BUILDINGS, AND WATER HEATING SYSTEMS IN NEW NONRESIDENTIAL BUILDINGS, PROJECT NO. MCA 17-0002 (PUB17Y-0013), on file in the Office of the City Clerk of the City of Carlsbad; that the same contains a full, true and correct transcript therefrom and of the whole thereof.

Witness my hand and the seal of said City of Carlsbad, this 13TH day of March 2019.

SHERRY FREISINGER
Deputy City Clerk

(SEAL)