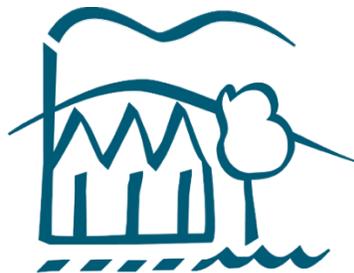




Planning for Transportation and
Climate Change:
Model Ordinances, Incentives,
and Other Resources

MARCH 2014



GENESEE/FINGER LAKES
Regional Planning Council



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En Español

El Consejo Genesee del Transporte asegura completa implementación del Título VI de la Ley de Derechos Civiles de 1964, que prohíbe la discriminación por motivo de raza, color de piel, origen nacional edad, género, discapacidad, o estado de ingresos, en la provisión de beneficios y servicios que sean resultado de programas y actividades que reciban asistencia financiera federal.

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The model ordinances on the following pages use a hyperlink that will connect readers to another part of the document. The hyperlink will show up as a group of words that will be marked as underlined and [blue](#) in color. Clicking on the hyperlink will take the reader to the ordinance’s exact placement within the document.

I. Executive Summary

Transportation sources such as cars, trucks, commercial aircraft, and railroads release greenhouse gases (GHG) that contribute to climate change. Climate change results principally from buildup of carbon dioxide and other greenhouse gas concentrations in the atmosphere. Climate change is altering the way people live, as the environment is becoming more variable and communities are forced to plan for the future like never before. More frequent flooding as a result of heavy precipitation events and more frequent heat waves are climate change impacts anticipated to be common to the Northeast Region.¹ Greenhouse gas emissions from transportation sources is one of the largest contributors—in 2011, transportation represented 27% of total U.S. GHG emissions.² Local governments are witnessing the physical and fiscal impacts of climate change. Precipitation intensity is projected to increase in many areas, resulting in flooding and other stormwater runoff problems. Fiscally, local governments are spending more on emergency response and retrofitting infrastructure. Long-term planning that accounts for climate change is needed to ensure that money spent today will reduce future risk.

New York is a “home rule” state and local governments possess significant land use authority, so developing a proactive response to climate change-induced hazards is feasible. Land use planning can be used to preemptively respond to the threats posed by increasing temperatures and precipitation and to adapt and retrofit the built environment, such as transportation infrastructure. Plans, regulations, and incentives are tools that can encourage more compact densities, mixed use zoning, and ‘transit-ready’ development patterns. Local governments, however, need not invent entirely new regulatory tools to address climate change adaptation and mitigation.

Planning for Transportation and Climate Change: Model Ordinances, Incentives, and Other Resources is a compendium of model regulatory tools for local governments in the Genesee-Finger Lakes Region about the actions they might take to increase the energy-efficiency of the transportation infrastructure for climate change adaptation and mitigation. Adapting to climate change means building resilience by addressing climate-induced flooding, precipitation, storm surge, and urban heat islands. This includes encouraging higher density development, reducing vehicle-miles-traveled (VMT), using green building techniques, and shifting development from flood-prone areas. Mitigating the impact of GHG emissions aims to reduce the extent of the future impact created by climate change, primarily through reduced fossil fuel consumption and sequestration of carbon that is emitted. Local laws that mandate or encourage renewable and alternative fuels, idle reduction, and retrofitting infrastructure are examples.

The goal of *Planning for Transportation and Climate Change* is to establish a starting point from which elected officials, municipal staff, and other stakeholders can address transportation policies that promote the integration of climate change adaptation and the reduction of GHG emissions into local and regional planning efforts. While this guidebook is not a one-size-fits-all approach, the regulatory

¹ American Planning Association, *Policy Guide on Planning and Climate Change*, adopted April 27, 2008 and updated April 11, 2011.

² U.S. Environmental Protection Agency, “Transportation and Climate Change: Basic Information,” <http://www.epa.gov/otaq/climate/basicinfo.htm> (accessed 4 December 2013).

tools selected for inclusion are particular to the communities which have adopted them and reflect local priorities. The guide is a framework, intended to empower local governments to mitigate the effects of climate change and to adapt to its impacts.

II. Introduction

Land use planning offers a significant opportunity to reduce greenhouse gas emissions associated with transportation. Through sustainable development and smart growth, many modes of transportation can serve a more compact urban form. Compact development patterns are an efficient way to provide public services and infrastructure. Energy consumption and its associated greenhouse gas emissions are reduced when pedestrians, bicyclists, and public transit are viable, convenient transportation choices. A more compact urban form has the potential to yield substantial dividends in climate change adaptation, in addition to pollution reduction, improved public health through promotion of pedestrian activity, greater service efficiency, housing affordability, and conservation of natural resources. On the other hand, modifying existing infrastructure and enhancing vehicle options are mitigation measures. The challenges of sustainability and climate change can affect the preservation and maintenance of existing infrastructure. Opportunities exist to include new materials and design elements into the transportation system that were not available when facilities such as highways and bridges were first built or last reconstructed. Municipalities should consider the ability of its critical transportation infrastructure to handle bluff/shoreline erosion and flooding that may occur as a result of climate change. Expanding the necessary infrastructure to facilitate the increased use of alternative fuel/electric and hybrid vehicles in public fleets (including school districts) and encouraging the expanded use of more energy efficient, alternative fuel/electric, hybrid, and retrofitted vehicles in public and private fleets (including school buses) are just a few recommendations of the *Long Range Transportation Plan for the Genesee-Finger Lakes Region 2035* (LRTP 2035) to address energy, air quality, climate change, and cost concerns.

LRTP 2035 and *Finger Lakes Regional Sustainability Plan* are two documents that recognize climate change in the nine-county Genesee-Finger Lakes Region. The LRTP 2035 sets the direction for transportation infrastructure and services over the next 25 years and provides the framework for future federally-funded planning and investments. It identifies several emerging opportunities and issues that will be areas of growing concern for the region's economy and quality of life, one of which includes the impacts of climate change.

The *Finger Lakes Regional Sustainability Plan* also outlines tangible actions for improving long-term sustainability in the region. In the Plan's "Guiding Principles," transportation and climate change is addressed through improvement to accessibility, connectivity and mobility; the preservation, protection and improvement to natural resources and acknowledgement of the link between natural systems; improvement to health; the promotion of robust, high-quality economic growth; the reduction of energy consumption; maintenance, protection and improvement between functionality and climate change/disaster resilience of existing infrastructure systems and acknowledgment of the link between these systems; building the capacity for sustainability and understanding through outreach and education; and the respect for local planning efforts and individual community character. Transportation, Land Use and Livable Communities, and Climate Change Adaptation are included in the Plan's "Subject Area Goals." The Plan's "Opportunities" include: Transportation (GHG emission reduction and educating policy makers and the public about the transportation-land use connection); climate change adaptation; more dynamic community centers and other local assets; ample

intellectual, social, financial, natural and economic resources; stronger relationships and networks resulting from community investment and resiliency pursuits; using educational institutions for research/education related to improved systems; re-purposing historic buildings to increase density and improve service delivery; and leveraging assets and sharing resources across municipal boundaries. Transportation (the total percentage of people commuting via walking, biking, transit, and carpooling; vehicles miles travelled per capita; transportation energy consumption per capita; and freight tonnage moved) and Climate Change Adaptation (the degree to which climate change and adaptation is discussed within required hazard mitigation plans; reduction in agricultural economic losses attributable to temperature, drought, flooding; and the reduction in the number of residents put at risk from loss of critical infrastructure services for more than one day) are addressed in the Plan's "Indicators and Targets."

This planning guidebook, *Planning for Transportation and Climate Change: Model Ordinances, Incentives, and Other Resources*, helps to achieve the short- and long-term sustainability goals for both the LRTP 2035 and the *Finger Lakes Regional Sustainability Plan*.

It is important to continue in advancing new and revised planning strategies that more thoroughly integrates all forms of transportation so that communities are empowered to make feasible choices to promote clean energy solutions and tackle climate change. *Planning for Transportation and Climate Change* provides a compendium of complete model ordinances that helps educate about climate change and the impact local government may have on sustainability. Ordinances are the regulatory vehicles that may be used to pursue a community's vision and goals. But vision and goals cannot be adequately addressed in the absence of a comprehensive set of policies and priorities. These should be established under a community planning process. The guiding principles behind zoning, subdivision, economic development, and environmental protection ordinances should be found in a community's comprehensive plan, associated resolutions, and related documents. Ordinances are merely one of several implementation tools a community can use to encourage sustainable development.

The guidebook is organized into seven sections. The main sections of the guide are Chapters III through VI. Chapter III is an overview about how comprehensive plans, known also as master plans or land use plans, can incorporate such elements as new precipitation circumstances and more extensive flooding effects from climate change and make recommendations for future siting of public infrastructure outside of vulnerable areas; Chapter IV provides model ordinance language from across the country, divided into *adaptation* policies and *mitigation* policies; Chapter V provides model ordinance language that incorporates *incentives* such as density bonuses and fee waivers for adaptation and mitigation; and Chapter VI is a generic site plan review model ordinance that incorporates sustainable transportation measures. The ordinances presented in this report are simply a selection of those that have been implemented in other areas and can inform future actions.

Data were gathered through a search of climate change adaptation and mitigation best practices literature conducted from August 2013 through December 2013. Follow-up research with municipal plans and codes was conducted to verify and gather more specific data on language structure. Regional priorities were established and reviewed by G/FLRPC's Planning Coordination Committee (PCC). This committee is composed of the planning directors from the region's nine member counties

(Genesee, Livingston, Monroe, Ontario, Orleans, Seneca, Wayne, Wyoming, and Yates), the City of Rochester, and Genesee Transportation Council.

The model ordinances in this guidebook are not linked to a particular type of jurisdiction. Instead, they represent a broad application, from the city to the countryside. Understanding the nuances of developing policies in various local government units is important. Below are a few tips for tailoring the model ordinances contained in this report for a particular community:

- Analyze existing policies and ordinances, and determine how they may unintentionally inhibit sustainable development.
- Research model ordinances and policies that address a topic that is of concern to the local government and residents. Topics may include water quality, land use, transportation, and clean energy siting and generation.
- Consult with legal counsel to determine if state law requires enabling legislation to adopt specific ordinances or policies.
- Tailor these ordinances to fit the demographic and socioeconomic trends in your community.
- Consider reviewing the proposed ordinance or policy with community residents, businesses, and other stakeholders to ensure that it will achieve its purpose. Provide a variety of outreach and involvement opportunities.

The intent of the model ordinances found in Chapters IV and V, in addition to the ordinance in Chapter VI adapted for sustainable development, is to produce “clean” examples that give local governments a great deal of operational and fiscal flexibility. These models are provided only for review, reference, and example purposes. They do not constitute legal documents or the provision of legal advice. For these models to be valid and legally enforceable, they must be modified, reviewed, and approved by the local government’s legislative body and their respective municipal attorney or other legal counsel.

III. Climate Change Adaptation and Mitigation Plans *Transportation Sector*

Comprehensive planning or other policy decision-making should always precede zoning, subdivision regulations, and other ordinances. A community's comprehensive plan or similar policy documents (e.g., hazard mitigation plan, transportation plan) lay the groundwork for the community's desired land uses, physical development, and programs. The plan's vision, goals, priorities, and objectives become the foundation upon which implementation tools such as ordinances rest. Incorporating climate change information into the planning process ensures a better quality of life for all residents while maintaining nature's ability to function over time by minimizing waste, preventing pollution, promoting efficiency, and developing local resources to revitalize the local economy.

As mentioned in the *Introduction*, comprehensive plans are policy-oriented and reflect the problems and opportunities provided by the community's resource base, the physical and social needs of the community, and the community's goals. This guidebook recommends that a community first utilize a planning process that reflects sustainable development principles using a public participation process. The subsequent regulatory tools are simply one set of tools among many for plan implementation. The ordinances in this guidebook may not address every adaptation or GHG reduction strategy that a local government will face—a community's unique situation will frequently call for modification. However, the ordinances can improve understanding of what climate change actions are happening and expand knowledge of effective and low-cost solutions to facilitate the transfer of these best practices from one community to another.

The following is a list of planning documents from communities across the country that have addressed the reduction of GHG emissions related to transportation as well as evaluating adaptation and mitigation strategies for climate-induced hazards:

□ **City of Grand Rapids, Michigan: Sustainability Plan, As Amended April 2013**

The City of Grand Rapids Sustainability Plan presents management planning goals for the economic, social, and environmental sectors of the City. The City planning goals for the environment include energy reduction, climate protection, improved environmental quality and natural systems, as well as smart sustainable land use, urban design, and transportation. In addition to greenhouse gas emission reduction targets and decreasing non-renewable energy usage, many adaptation measures are being implemented. Specific goals for the City's objectives of sustainability in environmental quality and natural systems include maintaining an adequate and safe water supply, improving the quality of the Grand River and its tributaries, and protecting and maintaining healthy ecosystems and habitat. The City's sustainability measures related to climate adaptation will be tracked and reported annually. This level of accountability ensures progress and creates transparency to the community. The City of Grand Rapids Office of Energy and Sustainability has completed the Progress Report for the second year under the Sustainability Plan, which illustrates the 2012 significant successes in the citywide initiative towards an economic, social, and environmental sustainability future.

□ City of Lewes, Delaware: Hazard Mitigation and Climate Adaptation Action Plan, *Approved August 2011*

The City of Lewes Hazard Mitigation and Climate Adaptation Action Plan was the first-ever community action plan that combines hazard mitigation and climate adaptation planning processes. It was developed with support from International Council for Local Environmental Initiatives (ICLEI) USA and Delaware Sea Grant, working with city officials, community members, and state, regional, and federal representatives. The overall goal of the project was to further the City's hazard mitigation work by incorporating climate change and adaptation responses. The plan identifies and details the natural hazards currently affecting Lewes, followed by an overview of regional climate change impacts. It also addresses Lewes' current and future vulnerability to natural hazards based upon self-assessments, including an inventory of critical facilities and roads at risk from flooding. Local officials and residents of Lewes were engaged through a series of workshops to determine the City's greatest existing and future vulnerabilities and to chart a course of action to reduce these vulnerabilities. These assessments resulted in the identification of two key vulnerabilities: (1) the water system and the combined threats of saltwater intrusion into the aquifer and destruction of water conveyance systems that it faces from sea level rise and (2) the destructive impacts on homes and City infrastructure from increased flooding. Based upon these two key vulnerabilities, an action selection process was developed which identified six actions presented in the form of recommendations for the City to begin implementing.

□ City of Medford, Massachusetts: Climate Action Plan (CAP), *Approved October 2001*

Medford's CAP addresses various pollution sources related to transportation. The CAP proposes several measures to reduce emissions from the municipal fleet, such as increasing fuel efficiency in vehicles, considering alternative fuels, supporting cleaner fuels, and enforcing strict no idling policies. The City of Medford has conducted an inventory of emissions generated through burning fossil fuels for energy within municipal buildings, in the municipal fleets, and for street and traffic lights. The information provided by this emissions inventory was key in determining which fleets would be the focus of Medford's Vehicle Emission Reduction Program (VERP). The City of Medford's VERP seeks to improve air quality by retrofitting not just one, but all of the major fleets with routes throughout Medford. These fleets consist of the City's municipal Department of Public Works (DPW) fleet, Waste Management's fleet of refuse haulers and recycling trucks, and the school bus fleet.

□ City of Newton, Massachusetts: Energy Action Plan, *Adopted February 2005*

Newton has published an Energy Action Plan which sought to reduce its greenhouse gas emissions by 7% from 1998 levels by the year 2010. Among many goals, it suggests the adoption of the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) standards for all new and renovated public buildings and purchasing 10% of city electricity from renewable power sources by 2010. Chapter Five focuses on "Strategies and Actions for Transportation," such as requiring the use of at least 20% biodiesel in contracts with waste management companies that collect Newton's solid waste and recyclables; updating zoning ordinances to allow for mixed-use, higher density developments at certain transportation nodes; and using incentives to promote bicycle use by city employees. The City of Newton is already committed to many transportation initiatives for the municipal vehicle fleet, as well as addressing community transportation needs. The City of Newton's

vehicle fleet includes a Toyota Prius hybrid sedan and two GM electric cars. The Director of Environmental Affairs is studying the use and purchase of more hybrids or alternative fuel vehicles. In addition, The Department of Public Works is experimenting with biodiesel, a vegetable based fuel that can be substituted for regular diesel in any diesel engine, to assess the costs and benefits of its use.

□ City of Pinole, California: General Plan Update, *Adopted October 2010*

Pinole's General Plan contains a separate "Sustainability Element," one of the first of its kind in California. While the General Plan will incorporate sustainable practices in all elements, the Sustainability Element provides the repository for all sustainable goals, policies and actions, and will serve as a guiding document to identify ways in which the City can have a positive impact on, and adapt to, climate change. Pinole is working with the Bay Conservation and Development Commission (BCDC) to implement strategies to adapt to Bay-related impacts of climate change and in developing a vulnerability analysis for its shoreline, while also addressing shoreline management issues that cross jurisdictional boundaries. The City will continue to implement the Municipal Code flood protection standards for development within a Federal Emergency Management Agency (FEMA)-designated Special Flood Hazard Area and will coordinate with FEMA and other agencies in the evaluation and mitigation of future flooding hazards that may occur as a result of sea level rise. Also, Pinole plans to pursue funding for adequate protection from sea level rise and continued subsidence and construction in areas threatened by sea level rise and/or settlement. A large part of the City's response to climate change will be reducing the City's GHG emissions from energy, waste, and transportation sources while embracing the expansion of the city's green infrastructure and green technology and industry. Pinole has identified programs to implement sustainable policies and practices to improve the quality of life and public health, increase energy efficiency and reduce waste by utilizing more sustainable and compact development patterns, encourage alternative forms of transportation, and establish programs to minimize the waste stream and improve water quality.

IV. Model Ordinances *to address the symptoms of climate change (adaptation)*

Adaptation for Increased Precipitation Hazards

Town of Elmira, Chemung County, New York:

Chapter 187: Stormwater Management, Article I, Beecher Creek Detention Facility

Town of Greenwich, Connecticut: Chapter 6: Land Use

Article 1, Building Zone Regulations, Division 2, Administrative Provisions

Sec. 6-5. Definitions, (26.1) Green Area Requirement

City of Lacey, Washington: Title 14 – Buildings and Construction

Chapter 14.31: Zero Effect Drainage Discharge

City of Milwaukee, Wisconsin: Code of Ordinances - Volume 1

Chapter 115: Street Construction and Work on Public Ways

Transit Supportive Zoning

Town of Huntersville, North Carolina:

Article 3, Zoning Districts, § 3.2.6 Town Center District (TC)

§ 3.2.13 Transit-Oriented Development – Residential (TOD-R), and

§ 3.2.14 Transit-Oriented Development – Employment (TOD-E)

Article 9, Condition for Certain Use

§ 9.49 Transit-Oriented Parking Lots as a Principal Use

City of Seattle, Washington: Subtitle III: Land Use Regulations

Division 3, Overlay Districts, Chapter 23.61 – Station Area Overlay District

Higher Regulatory Standards for Floodplain Development

City of Cedar Falls, Iowa: Chapter 29: Zoning

Article III, Districts and District Regulations, Division 2, Specific Districts

Sec. 29-155. - F-W floodway overlay district.

Sec. 29-156. - F-F floodway fringe overlay district.

Sec. 29-157. - F-P general floodplain overlay district.

City of Lewes, Delaware: Chapter 197: Zoning, Article V, Dimensional Regulations

§ 197-55. Building Height

Building Codes and Resilient Design

[City of Austin, Texas: Article 1, Building Code](#)
[Division 1, International Building Code and Local Amendments](#)
[Section 1612, Flood Loads](#)

[City of Chicago, Illinois: International Energy Conservation Code](#)
[Article 1, Administration, Section 18-13-101, Scope and General Requirements](#)
[18-13-101.5.3 Urban Heat Island Provisions](#)

Setbacks/Buffers

[Great Lakes Shoreline Protection Overlay Zone](#)

[Town of Poughkeepsie, Dutchess County, New York: Part II, General Legislation](#)
[Chapter 116, Aquatic Resource Protection](#)

[City of Chicago, Illinois: Title 17, Chicago Zoning Ordinance](#)
[Chapter 17-11, Landscaping and Screening](#)

Subdivisions and Cluster Development

[City of Mapleton, Utah: Title 18: Development Code, Part III; Zoning](#)
[Chapter 18.30, CE-1 Critical Environment Zone](#)

[City of Orlando, Florida: Chapter 60, Subdivision and Landscaping](#)
[Part 2, Landscaping and Vegetation Protection](#)
[2D. Shade Coverage Requirements](#)

Adaptation for Great Lakes Coastal Storm Hazards

[Model Coastal Floodplain Regulation](#)

[Collier County, Florida: Land Development Code, Chapter 3: Resource Protection](#)
[3.03 Coastal Zone Management](#)

[Town of East Hampton, Suffolk County, New York:](#)
[Chapter 255: Zoning, Article III, Overlay Districts](#)
[§ 255-3-80. Coastal Erosion Overlay District](#)

[Model Zoning Regulations for a Transferable Development Rights \(TDR\) Program:](#)
[Maryland Department of Planning](#)

Town of Brewster, Massachusetts: Chapter 179: Zoning, Article IV, Use Regulations
Township of Greenwich, New Jersey: Chapter 700: Zoning
Article XIV, C-D Conservation Areas

Miscellaneous

Town of Yorktown, Westchester County, New York:
Chapter 10: Boards and Commissions, Article VII, Town Traffic Board

Model Recovery Ordinance

Floating Zone for Green Neighborhood Development

Model Ordinances *to address the symptoms of climate change (adaptation)*

Adaptation for Increased Precipitation Hazards

Development in the area around Beecher Creek in the Town of Elmira has led to increased runoff. Many property owners along Beecher Creek and adjoining properties have experienced damage. The Beecher Creek Detention Pond was constructed on the Elmira Country Club property in 1999 to alleviate the flooding, erosion, and sediment problems in downstream areas. This structure was designed to detain flow from a 100-year storm without exceeding the capacity of downstream drainage structures. This local law incorporates utilization fees as a funding technique for drainage and stormwater programs.

Town of Elmira, Chemung County, New York

Chapter 187: Stormwater Management

Article I, Beecher Creek Detention Facility

[Adopted 5-1-2000 by L.L. No. 2-2000]

§ 187-1. Title.

This article shall be known as the "Local Law for Utilization of the Beecher Creek Detention Facility."

§ 187-2. Findings.

A. The Town of Elmira regulates stormwater runoff from developing areas in order to minimize the adverse effects that may result from changes in the land cover and grade. Policies have been adopted by the Town of Elmira for the express purpose of protecting public and private property from damages that may result from flooding, erosion, and water quality impairment. The management of stormwater runoff is the responsibility of the developer, who assumes the cost of implementing all necessary measures at the time of development.

B. The Town of Elmira has constructed the Beecher Creek Detention Facility on property owned by the Elmira Country Club. This facility was designed to protect existing development located downstream of the project from flood damages. The volume of water that can be contained by the Beecher Creek Detention Facility exceeds the volume necessary to provide downstream protection. This excess capacity can be utilized to detain increased stormwater discharges from upstream development sites.

§ 187-3. Purpose; anticipated benefits.

A. The purpose of this article is to provide a mechanism by which developers of property located upstream of the Beecher Creek Detention Facility can utilize the excess capacity of this facility to manage the increased stormwater runoff that results from their development activities. Permission to utilize the Beecher Creek Detention Facility will be granted by the Town of Elmira to developers who pay a utilization fee to the Town, as specified in this article. Participating developers will retain responsibility for preparing a stormwater management plan, meeting stormwater quality standards, implementing interior drainage, and managing stormwater flow into the Beecher Creek Detention Facility. Developers who chose not to utilize the excess capacity of the Beecher Creek Detention

Facility will be responsible for managing stormwater runoff in some other manner, as required by Chapter 217, Zoning, Chapter 198, Subdivision of Land, of the Town Code and other Town of Elmira local laws.

B. The anticipated benefits to upstream developers include:

- (1) Reduced costs for the design of stormwater management systems;
- (2) Reduced costs for construction of stormwater management structures;
- (3) Increased ability to utilize property since space need not be preserved for on-site retention/detention of stormwater; and
- (4) Reduced maintenance responsibilities since the Town of Elmira has assumed responsibility for maintenance of the Beecher Creek Detention Facility.

§ 187-4. Definitions.

As used in this article, the following terms shall have the meanings indicated:

Constructed Capacity - The actual volume of stormwater that can be contained by the Beecher Creek Detention Facility during the one-hundred-year, twenty-four-hour storm. The initial constructed capacity is 17.16 acre-feet or 747,490 cubic feet. This may be increased subsequent to project completion by expansion of the facility.

Design Capacity -The volume of stormwater that the Beecher Creek Detention Facility is designed to contain during the one-hundred-year, twenty-four-hour storm to avoid exceeding the design outflow volume of the facility. This is based on the land uses and runoff characteristics that exist at the time of project design.

Excess Capacity - The difference in volume between the constructed capacity and the design capacity of the Beecher Creek Detention Facility.

Impervious Area - Impermeable surfaces, such as pavement or rooftops, that prevent the percolation of water into the soil.

Increased Stormwater Volume - The calculated volume of additional stormwater runoff (in excess of the pre-development stormwater runoff) that will be released into the Beecher Creek Detention Facility during the one-hundred-year, twenty-four-hour design storm as a result of a development project.

Minor Development - Minor construction activities for which hydrologic computation of surface runoff volumes is not needed to ensure compliance with the stormwater management requirements of Chapter 217, Zoning, and Chapter 198, Subdivision of Land, of the Code of the Town of Elmira, Town of Elmira local laws, or New York State regulations [State Pollutant Discharge Elimination System (SPDES)].

Town Engineer - The person licensed as a professional engineer by the State of New York who is duly authorized by the Town of Elmira Town Board to act in the capacity specified in this article.

USDA SCS TR-55 Runoff Curve Number Procedure - The procedure for estimating surface water runoff volumes presented in Chapter 2 of Technical Release 55 (Urban Hydrology for Small Watersheds) by the United States Department of Agriculture, Soil Conservation Service. This method utilizes curve numbers that are determined based on the hydrologic soil group, cover type, treatment, hydrologic condition and degree to which impervious areas are connected to the drainage system.

Utilization Fee - A fee that will be paid to the Town of Elmira for utilization of the Beecher Creek Detention Facility to manage the increased stormwater volume resulting from a development project.

§ 187-5. Applicability.

This article applies to properties within the upper portions of the Beecher Creek Watershed from which surface runoff naturally drains into Beecher Creek upstream of the dam for the Beecher Creek Detention Facility. The tax parcel identification numbers (as identified on the date of this article) for parcels located partially or completely within this area are:

88.00-1-6.2	88.00-1-12.12	88.00-1-12.22
88.00-1-12.24	88.00-1-12.26	88.00-1-13.3
88.00-1-15	88.00-1-17.1	88.00-1-32
88.00-1-12.11	88.00-1-12.21	88.00-1-12.23
88.00-1-12.25	88.00-1-13.2	88.00-1-14
88.00-1-16	88.00-1-31.1	

§ 187-6. Basis for determining amount of excess capacity available.

A. The as-built drawings for the Beecher Creek Detention Facility indicate that the initial excess capacity of this facility is 1.4 acre-feet, which is equivalent to 60,984 cubic feet. The total utilization of the Beecher Creek Detention Facility for stormwater detention shall not exceed this excess capacity unless the facility is expanded. The Town of Elmira will retain records pertaining to the design and construction of the Beecher Creek Detention Facility and all subsequent increases in the stormwater discharge into this facility.

B. In the event that upstream development utilizes all of the excess capacity of the Beecher Creek Detention Facility and additional capacity is desired for further development, the Town of Elmira may choose to expand the facility. The increased capacity provided by such an expansion would be added to the excess capacity of the facility and would become available for utilization by upstream developers in accordance with the provisions of this article.

§ 187-7. Basis for determining increased stormwater volume for development projects.

A. Any developer who chooses to utilize the Beecher Creek Detention Facility for stormwater management must first determine the volume of increased stormwater that will be directed to this facility as a result of the proposed development. The design storm for these stormwater calculations will be the one-hundred-year, twenty-four-hour rainfall event. The developer may select either of the following procedures for calculating the increased stormwater volume that will be released into the Beecher Creek Detention Facility:

(1) An estimate of the increased stormwater volume may be computed using the following formula. It is anticipated that this procedure will be used for minor development projects to avoid the expense of hydrologic modeling.

Increased stormwater volume (cubic feet) = increased impervious area (square feet) x 100-year, 24-hour precipitation (feet)

Where: Increased impervious area = the increase in impervious area resulting from the development project; and 100-year, 24-hour precipitation = 0.458 feet (5.5 inches)

(2) The USDA SCS TR-55 runoff curve procedure can be used to calculate the increased stormwater volume that will be directed to the Beecher Creek Detention Facility as a result of the one-hundred-year, twenty-four-hour precipitation event (post-development runoff minus pre-development runoff). This calculation will be a part of the stormwater management plan for the proposed development and is the developer's responsibility.

B. The Town Engineer will review the calculation of increased stormwater volume for accuracy and to ensure that the volume of stormwater that is proposed to enter the Beecher Creek Detention Facility does not exceed the available excess capacity of the facility. The Town Engineer may also utilize hydrologic modeling to evaluate the structure's response to the increased stormwater volume. The Town Engineer will provide the Town of Elmira Code Enforcement Officer and Town of Elmira Town Board with recommendations concerning the acceptability of the proposed stormwater management plan. All costs incurred by the Town of Elmira for review shall be reimbursed to the Town by the developer before any building permit is issued.

§ 187-8. Basis for establishing utilization fee.

A. The Town of Elmira will collect a utilization fee from any developer whose stormwater management plan for a development project utilizes the Beecher Creek Detention Facility to manage increased stormwater runoff. This fee will be paid prior to issuance of a building permit by the Town.

B. The amount of the utilization fee for the Beecher Creek Detention Facility prior to any expansion is \$25,641 per acre-foot or \$0.59 per cubic foot of increased stormwater volume.

C. If the Beecher Creek Detention Facility is expanded, the utilization fee will be determined using the following formula:

$$\text{Utilization fee} = \frac{\text{Cost of facility} \times \text{increased stormwater volume}}{\text{Constructed capacity}}$$

Where: Cost of Facility = the cost of the Beecher Creek detention project. This includes design, construction, and expansion of the Beecher Creek Detention Facility. This cost is \$440,000 for initial design and construction of the facility plus the cost of any subsequent expansion.

Increased stormwater volume = the storage capacity that will be utilized by the development project, determined using one of the procedures specified in § 187-7 of this article.

Constructed capacity = the initial constructed capacity of the Beecher Creek Detention Facility of 17.16 acre-feet or 747,490 cubic feet (as specified in the as-built drawings for the Beecher Creek Detention Facility) plus the additional capacity enabled by any subsequent expansion of the facility.

§ 187-9. Enforcement; appeals.

This article shall be enforced by the Town of Elmira Code Enforcement Officer, in consultation with the Town Engineer. Decisions made by the Code Enforcement Officer can be appealed to the Town of Elmira Planning Board, which shall hear and decide any appeals.

The Town of Greenwich enacted a new green area ordinance in March 2012 to achieve the goal of the Comprehensive Plan “to remain a well-maintained residential community who protects and enhances water and land natural resources, pervious surfaces, open space, parklands, recreational facilities and areas in an environmentally sensitive manner.” The law expanded Greenwich’s previous regulations, which only covered commercial areas, to all zones in the town. The new law reverses the typical manner of regulating impervious coverage by instead requiring a certain percentage of green space on the lot. The law was intended to encourage retention of natural features and existing vegetation instead of relying on engineering solutions to stormwater management such as impervious pavers.

Town of Greenwich, Connecticut

Chapter 6: Land Use

Article 1, Building Zone Regulations

Division 2, Administrative Provisions

Sec. 6-5. Definitions.

(26.1) Green Area Requirement shall mean the required percentage of a residentially zoned property as noted under Section 6-205, that is naturally occurring such as a wooded area, a rock outcrop, or grassed, manicured or landscaped areas. (3/2/2012)

(A) The following is permitted within the Green Area Requirement subject to the restrictions of Section 6-128 regarding encroachments into yards: Synthetic turf playing fields for school or municipal uses only, rain gardens, patios, decks, small scale garden paths (stepping stones), and walkways less than 5’ wide, mechanical equipment and mechanical equipment pads, septic systems and underground drainage systems with the purpose of retention, infiltration or water quality treatment. Any underground structure or impermeable surface that is covered by at least 3 feet of friable fill is permitted in the Green Area Requirement. (3/2/2012)

(B) The following is not permitted within the Green Area Requirement: Surface development on a site or lot occupied by buildings, structures, parking areas, driveways, tennis courts, porches, swimming pools and pool coping, and patios and/or decks that are in some way covered by a second floor or roof, porous asphalt, porous concrete, permeable inter-locking concrete pavers, concrete grid pavers, plastic turf reinforcing grids and similar man-made materials and products. Any underground structure or impermeable surface that is covered by less than 3 feet of friable fill shall not be permitted in the Green Area Requirement. (3/2/2012)

(C) A class A-2 Zoning Location Survey or Improvement Location Survey is required to demonstrate compliance with this Section. A class T-2 Topographic Survey is also required to demonstrate compliance in those instances where an underground structure is involved. (3/2/2012)

Creating “zero” effective impervious surface is achieved by dispersing all stormwater runoff on site. This ordinance allows the developer to deviate from conventional design standards as long as the site incorporates low impact design practices. Designed to be flexible, the ordinance promotes performance standards instead of specific design standards. For example, the ordinance does not specifically outline how a developer will achieve near zero impervious surfaces. This is a voluntary ordinance that offers no additional incentives other than design flexibility.

City of Lacey, Washington

Title 14 – Buildings and Construction

Chapter 14.31: Zero Effect Drainage Discharge

14.31.010 Goal and purpose of chapter.

This chapter is enacted with a goal of retaining the critical functions of a forest including evapotranspiration and infiltration after site development such that near “zero effective impervious surface” is achieved. As part of meeting such goal, this chapter is intended to fulfill the following purposes:

- A. Provide those developing land the opportunity to demonstrate zero effective impervious surfaces.
- B. Improve the conditions of habitat and ground and surface waters within a watershed with innovative urban residential design and development techniques.
- C. Foster broad community acceptance of the use of significantly less impervious surface and greater natural habitat conservation on sites.
- D. Provide the opportunity to identify and evaluate potential substantive changes to land use development regulations which support and improve natural functions of watersheds. (*Ord. 1113 §1, 1999*).

14.31.020 Definitions.

As used in this chapter, the words hereinafter defined shall have the meaning set forth:

- A. “Drainage collection system” means a system for conveying, treating and detaining stormwater runoff swales, ponds, and outfalls.
- B. “Forested area” means a treed area which functions, or which over time will be restored to function, as a mature forest characterized by an undisturbed understory.
- C. “Innovative site design” means development techniques for development using creative approaches to site design, habitat and tree retention, significant reduction of impervious surfaces, changes in traditional site features such as roads and structures in favor of natural habitat features which result in zero or near-zero drainage discharge from the site after development.
- D. “Zero effective impervious surface” means impervious surface reduction to a small fraction of that resulting from traditional site development techniques such that usual manmade drainage collection systems are not necessary.
- E. “Zero effective impervious surface project” means those projects characterized by a reduction of total impervious surface to a small fraction of that which would result from traditional development. Such projects will place impervious surfaces in increments such that run off travel distance to a vegetative buffer is minimized and does not exceed a maximum of fifteen feet. Further, the landscaped areas within such projects will be minimized and buffered on the down-slope side by a forested area. A

forested area shall comprise at least 60 per cent of the land area upon which the project is located, shall be maintained in perpetuity and shall substitute for a traditional drainage system. It is preferred that the site for such projects be characterized by a predominance of Soils Conservation Service Class C or D soils. (*Ord. 1113 §1, 1999*).

14.31.030 Authorized deviations from engineering design and development guidelines and public works standards.

In order to accomplish the purposes and goal of Chapter 14.31, the site plan review committee may approve or for those projects requiring review and approval by either the hearings examiner or by the city council, recommend approval of deviations from engineering design and the provisions of Lacey's Development Guidelines and Public Works Standards in accordance with the requirements set forth in this chapter. Deviations shall be based on the following criteria:

A. The deviations contribute to and are consistent with the zero effective impervious surface goals of this chapter.

B. The proposed development project offers reasonable assurance that near zero effect impervious surface will be achieved and maintained.

C. The deviations do not threaten public health or safety.

D. The deviations are consistent with generally accepted engineering and design criteria, except as necessary to achieve the purposes set forth in this chapter.

E. The deviations promote one or more of the following:

1. Innovative site or housing design furthering the purposes of the program;
2. Increased on-site stormwater retention using a variety of native vegetation;
3. Retention of at least 60 per cent of natural habitat conditions over the site;
4. Improved on-site water quality beyond that required by current applicable regulations;
5. Retention or re-creation of pre-development and/or natural hydrologic conditions to the maximum extent possible;
6. The reduction of effective impervious surfaces to near zero.

F. The deviations do not allow density greater than what would otherwise be allowed under city regulations then in effect assurance of long term success. There shall be submitted in conjunction with each such project, covenants, conditions and restrictions which will be binding upon the property and which require forest retention, no net increases in impervious surface and such other critical features as the city may require. (*Ord. 1113 §1, 1999*).

14.31.040 Official approval.

All projects proposed under the terms of this chapter shall require approval of either a plat or an official site plan approved pursuant to the provisions of this code in recordable form which shall be binding upon the owners of the real property, their heirs and assigns. Such plat or official site plan shall include a specific land clearing and tree retention plan, which shall be referenced upon the face of the plat, or binding site plan. All development of the land, site design, landscaping, natural drainage features, habitat protection, stormwater design and the design, placement and size of housing or other buildings and any additional site features shall be consistent with the approved plat or site plan. Any changes will require a formal application and amendment of either the plat or the official adopted site plan pursuant to the provisions of the Lacey Municipal Code. (*Ord. 1113 §1, 1999*).

14.31.050 Evaluation and monitoring.

Each application for approval of a project pursuant to the terms of this chapter shall be accompanied by a proposed monitoring and evaluation process designed to measure the performance of specific elements addressed in the deviations sought for the project. After the approval of a project, the city shall, with such cooperation as may be required of the property owner, document project progress, and in particular, those innovations and code deviations granted as part of such project approval. Written progress evaluations shall be prepared by the staff of the Public Works Department and provided to the Site Plan Review Committee and City Council. An annual report on all such approved projects shall be prepared for the City Council including a summary description and evaluation of each selected project and any recommendations regarding substantive changes to the Lacey Municipal Code which are supported by such evaluation. (*Ord. 1113, §1, 1999*).

The City of Milwaukee is designing city streets to manage stormwater in the street right-of-way, which will improve the quality of lakes and rivers and help the City adapt to a changing climate. Green infrastructure has been incorporated into development, re-development, and street construction efforts. Examples of green technologies include porous pavement, median and roadside bio-retention projects, catch basin retrofits, vacant lot bio-retention, and increased tree canopy. As streets are scheduled to be repaired or replaced, the City is systematically evaluating opportunities to install new green infrastructure assets like bioretention basins in street medians and tree trenches near sidewalks to reduce stormwater runoff and increase on-site stormwater infiltration. Roadway runoff enters the bioretention facilities where vegetative plantings filter pollutants and stormwater evaporates or infiltrates into the ground.

City of Milwaukee, Wisconsin

Code of Ordinances - Volume 1

Chapter 115: Street Construction and Work on Public Ways

115-14. Street Design Standards.

The following design standards apply to the design, construction or reconstruction of new or existing streets by the commissioner of public works and by the city:

1. The commissioner shall employ street design standards to minimize street pavement width and to provide only the pavement width necessary to ensure safe movement of traffic. The pavement width for a local street, as defined in s. 295-201-643, shall be not less than 22 feet and not more than 36 feet unless otherwise approved by the common council.
2. The minimum radius for the paved portion of a cul-de-sac shall be 35 feet.
3. A landscaped island shall be created in any cul-de-sac having a paved-area radius greater than 35 feet. This requirement may be waived by the common council.
4. Alternatives to cul-de-sac turnaround design, including but not limited to hammerheads and loop roads, shall be permitted for residential streets.

5. Vegetated open channels shall be permitted along residential streets with openings in the curb face or other conveyance methods that maintain curb and gutter.
6. Flush curbs or curb cuts that direct runoff into landscaped islands shall be permitted.
7. The minimum width of a tree border on a local street, as defined in s.295-201-643, shall be 6 feet. This requirement may be waived by the common council.
8. The portion of the street right-of-way commonly known as the tree border and located between the curb and the outside line of the sidewalk closest to the curb may be designated and used for storm water treatment purposes.

115-24. Sidewalk Construction; Exceptions.

1. Sidewalks shall be constructed of concrete or permeable paving, as defined in s.200-08-68.5, and constructed in accordance with the specifications of the city. Provided further, that so much of the sidewalk area commonly known as the tree border and located between the curb and the outside line of the sidewalk closest to the curb, may be laid or constructed of permeable paving stone, brick or concrete pavers where the material and manner of laying are approved by the commissioner. The tree border may also be used for storm water treatment purposes.
2. Sidewalks shall be constructed and conform with established street grades or as otherwise determined by the city engineer where usage or unusual conditions require a change for the welfare and best interest of the city and abutting property owners. This section shall not apply under the following conditions:
 - a. Temporary sidewalks authorized by the commissioner.
 - b. Temporary repairs authorized by the commissioner.
 - c. Repaving of the surface of hollow sidewalks found by the commissioner to be structurally sound.
 - d. Where the sidewalk crosses a railroad track. Wood planking may be used between the rails and within 2 feet of the outside of said rails where approved by the commissioner.
 - e. On public bridges.
 - f. In tunnels.
 - g. Under other conditions with the approval of the commissioner.

Transit Supportive Zoning

The Town of Huntersville uses a suite of zoning ordinances to regulate growth that provides for the needs of all transportation users and modes, including people of all ages and abilities on bicycles, walking, waiting for and riding buses, driving cars, and delivering commercial goods. The code is design-based and has recently been modified to more accurately reflect the desires of the suburban and rural residents of the Huntersville area to maintain the town's rural character by incorporating pedestrian- and transit-friendly design.

Town of Huntersville, North Carolina

Adopted November 19, 1996; As Amended Through November 13, 2009.

Article 3, Zoning Districts

§ 3.2.6 Town Center District (TC)

§ 3.2.13 Transit-Oriented Development – Residential (TOD-R)

§ 3.2.14 Transit-Oriented Development – Employment (TOD-E)

Article 9, Condition for Certain Use

§ 9.49 Transit-Oriented Parking Lots as a Principal Use

§ 3.2.6 Town Center District (TC)

Intent: The Town Center District provides for revitalization, reuse, and infill development in Huntersville's traditional town center. A broad array of uses is expected in a pattern which integrates shops, restaurants, services, work places, civic, educational, and religious facilities, and higher density housing in a compact, pedestrian-oriented environment. The Town Center anchors the surrounding residential neighborhoods while also serving the broader community. The district is coded to accommodate the higher overall intensity of development required to support a rail transit station. It is to be expected that the Town Center District will be expanded over time through the zoning change process to an approximate ½ mile radius to meet growth in demand for downtown facilities and services.

a) Permitted Uses

Uses permitted by right:

- bed and breakfast inns
- boarding or rooming houses for up to six roomers
- civic, fraternal, cultural, community, or club facilities
- commercial uses
- congregate housing designed within the "civic" building type
- family care homes
- government buildings
- hotels
- indoor amusement
- multi-family homes
- nightclubs, music clubs, bars, and similar entertainment facilities
- single family homes

Uses permitted with conditions:

- automobile and/or motorcycle sales, automobile service and repair, up to 2 acres in size, with a principal building of at least 8,000 square feet, all damaged vehicles and auto parts to be screened opaque (9.25)
- cemeteries, (9.7)
- religious institutions, (9.8)
- essential services 1 and 2, (9.14)
- neighborhood gasoline stations, excluding major service and repair of motor vehicles (9.22)
- parking lot as principal use (9.28)

- parks, (9.29)
- schools, (9.35)
- temporary mobile food sales, (9.37)
- temporary outdoor sales of seasonal agricultural products and customary accessory products (example: farmers' markets, Christmas tree/pumpkin sales), (9.37)
- transit-oriented parking lots as a principal use, (9.49)
- transit shelters, (9.39)

Uses permitted with Special Use Permit:

- solar energy facility, minor residential, as follows: located on the facade elevation facing public street or common access; or located on the roof slope above the facade of the structure facing public street or common access (9.54)
- solar energy facility, minor freestanding non-residential, (9.54)
- solar energy facility, minor non-residential on a roof slope facing a street that is noticeable (9.54)
- wind energy facility, minor (accessory) (9.53)

b) Permitted Building and Lot Types.

- apartment
- attached house
- civic
- detached house
- mixed use³ up to 50,000 SF of first floor area; larger buildings may be permitted with a special use permit
- storefront up to 50,000 SF of first floor area; larger buildings may be permitted with a special use permit
- workplace up to 50,000 SF of first floor area; larger buildings may be permitted with a special use permit

c) Permitted Accessory Uses

- accessory dwelling, (9.1)
- day care home (small), (9.11)
- drive through windows, excluding those associated with restaurants, (9.12)
- home occupation, (9.19)
- solar energy facilities, minor non-residential; on a flat roof, roof slopes not facing a street and building integrated solar panels on roof slopes facing a street that are not noticeable (9.54)
- solar energy facilities, minor residential; located in the established rear or side yards or roof slopes (9.54)
- stalls or merchandise stands for outdoor sale of goods at street front (encroachment onto sidewalk may be permitted by agreement with town); outdoor storage expressly prohibited⁴

³ The mixed use building duplicates the shopfront building type and has at least two occupiable stories; at least 50% of the habitable area of the building shall be in residential use, the remainder shall be in commercial use. However, when an existing residential building is redeveloped to a mixed-use, at least 40% of the habitable area shall be in residential use.

- accessory uses permitted in all districts, (8.11)

d) General Requirements

- 1) Along existing streets, new buildings shall respect the general spacing of structures, building mass and scale, and street frontage relationships of existing buildings.
 - New buildings which adhere to the scale, massing, volume, spacing, and setback of existing buildings along fronting streets exhibit demonstrable compatibility.
 - New buildings which exceed the scale and volume of existing buildings may demonstrate compatibility by varying the massing of buildings to reduce perceived scale and volume. The definition of massing in Article 12 illustrates the application of design techniques to reduce the visual perception of size and integrate larger buildings with pre-existing smaller buildings.
- 2) On new streets, allowable building and lot types will establish the development pattern.
- 3) In major subdivisions and planned developments, the aggregate number of dwelling units contained in attached houses, apartment buildings, and mixed use buildings shall not exceed 30 percent of the total number of dwelling units in a project.
- 4) Notwithstanding the limitations of 3), above, in any portion of a major subdivision located within ¼ mile of a designated rail transit station, the percentage of dwelling units contained in attached houses, apartment buildings, and mixed use buildings is not limited. Higher overall density is encouraged within ¼ mile of rail transit stations. Rail transit stations are those locations designated by resolution adopted by the Board of Commissioners of the Town of Huntersville.
- 5) New construction favors retail on first floor, office and/or residential on upper floors.
- 6) Every building lot shall have frontage upon a public street or square.
- 7) Minimum Height. Mixed Use, Storefront and Workplace Buildings. New construction shall be a minimum of two stories for buildings fronting on the following roads:
 - Gilead Road- From Sherwood Drive to Old Statesville Road (NC 115)
 - Huntersville-Concord Road- From Old Statesville Road (NC 115) to Main Street
 - Old Statesville Road (NC 115) - From 400 feet north of the intersection of Gilead Road/Huntersville-Concord Road to Greenway Drive
 - Main Street- From Huntersville-Concord Road to Greenway Drive

§ 3.2.13 Transit-Oriented Development – Residential (TOD-R)

Intent: The transit-oriented residential district is established to support higher density residential communities that include a rich mix of retail, restaurant, service, and small employment uses within a pedestrian village format. Land consuming uses, such as large lot housing and large retail outlets are excluded from this district. The TOD-R may be located on developable and redevelopable parcels generally found within the ½ mile catchment area of designated rapid transit station sites. Nothing in these regulations shall preclude application of the TOD-R beyond the ½ mile radius when site-specific development plans demonstrate efficient resident access to a rapid transit station. The district establishes a primarily residential village within a 10-minute walk of a M.I.S. designated transit station that serves a residential population of sufficient size to constitute an origin and destination for purposes of rapid transit service.

⁴ Items for outdoor sales are returned to building at end of each business day; goods not brought in at close of business day are considered outdoor storage.

a) Permitted Uses

Uses permitted by right:

- bed and breakfast inns
- boarding or rooming houses for up to six roomers
- dormitories
- family care homes
- inns
- multi-family homes
- greenway
- single family homes
- transit stations

Uses permitted with a Special Use Permit:

- any non-residential use permitted by right or with conditions where size of first floor area exceeds 15,000 SF, (9.47)
- any permitted non-residential use or collection of non-residential uses that exceeds the maximum permitted in the district by paragraph e) 5) of this section, (9.47)
- parking lot or structure as principal use (9.47)
- schools, (9.47)
- solar energy facility, minor residential, as follows: located on the facade elevation facing public street or common access; or located on the roof slope above the facade of the structure facing public street or common access (9.54)
- solar energy facility, minor free-standing non-residential, (9.54)
solar energy facility, minor rooftop non-residential on a roof slope facing a street that is noticeable (9.54)
- wind energy facility, minor (accessory) (9.53)

Uses permitted with conditions:

- banks, up to 6,000 SF of gross floor area
- religious institutions up to 300 seats in the largest place of assembly, (9.8)
- civic, cultural, and neighborhood recreation facilities up to 15,000 SF of gross floor area, minimum FAR of .35
- conference centers, up to 15,000 SF of gross floor area, minimum FAR of .35
- day care centers up to 8,000 SF of gross floor area (9.4)
- essential services 1 and 2, (9.14)
- government buildings up to 8,000 SF of gross floor area, minimum FAR of .35
- indoor motion pictures, limited to one (1) screen
- offices, general, medical, professional, minimum FAR of .35
- personal, professional, and technical services up to 8,000 SF of gross area, minimum FAR of .35
- research and development services, minimum FAR of .35
- restaurants without drive-through windows, up to 8,000 SF of gross floor area, minimum FAR of .35
- retail establishments, up to 8,000 SF of gross area, minimum FAR of .35

- squares, plazas, or other formal open spaces not exceeding ½ acre in area
- stalls or merchandise stands for outdoor sale of goods at street front (encroachment onto sidewalk may be permitted by agreement with town); outdoor storage expressly prohibited.⁵
- taverns and bars, up to 6,000 SF of gross floor area, minimum FAR of .35
- transit shelters, (9.39)
- workshops and studios for the design and manufacture of art, craft and artisan products, up to 8,000 SF of gross area, minimum FAR of .35

b) Permitted Building and Lot Types

- apartment
- attached house
- civic
- detached house on lot of 5,000 SF or less
- mixed use⁶
- storefront
- workplace

c) Permitted Accessory Uses

- accessory dwelling, (9.1)
- day care home (small), (9.11)
- home occupation, (9.19)
- parking lot as an accessory to any permitted principal use, on the same lot or on an abutting lot, according to the standards of Article 6
- solar energy facilities, minor non-residential; on a flat roof, roof slopes not facing a street and building integrated solar panels on roof slopes facing a street that are not noticeable (9.54)
- solar energy facilities, minor residential; located in the established rear or side yards or roof slopes (9.54)
- accessory uses permitted in all Districts (8.11)

d) General Requirements

1) To integrate the larger scale of buildings in transit-oriented developments into the existing built fabric of the community, the edge conditions of paragraph f) 6), below shall be met.

2) Along existing streets, new buildings shall create a transition in spacing, mass, scale, and street frontage relationship from existing buildings to buildings in the Transit Oriented Residential district.

- New buildings are expected to exceed the scale and volume of existing buildings, but shall demonstrate compatibility by varying the massing of buildings to reduce perceived scale and volume. The definition of massing in Article 12 illustrates the application of design techniques to reduce the visual perception of size and integrate larger buildings with preexisting smaller buildings.

3) On new streets, allowable building and lot types will establish the development pattern.

⁵ Items for outdoor sales are returned to building at end of each business day; goods not brought in at close of business day are considered outdoor storage.

⁶ The mixed use building duplicates the shopfront building type and has at least two occupiable stories; at least 50% of the habitable area of the building shall be in residential use, the remainder shall be in commercial use. However, when an existing residential building is redeveloped to a mixed-use, at least 40% of the habitable area shall be in residential use.

4) Within a TOD-R zoning district, a minimum average density of 15 dwelling units per acre shall be achieved; residential density shall be calculated by dividing the total number of housing units planned by the number of acres designated for residential use, net of streets.

5) A master subdivision sketch plan shall be provided with any application for development approval. It shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area. The master plan shall include a topographic survey and shall show the location and hierarchy of streets and public open spaces, location of residential, commercial, and civic building lots, street sections and/or plans, approximate unit count, square footage on non-residential buildings and uses, proposed building heights, an outline of any additional regulatory intentions, phasing, and any other information, including building elevations, which may be required to evaluate the interior pedestrian environment and conditions at project edges. Phasing of development to provide for future horizontal and vertical intensification to meet the standards of this section is permitted. Notwithstanding the provisions of Section 6.320 of the Huntersville Subdivision Ordinance, approval of the master sketch plan will be administrative.

6) A single building on an existing lot shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area, but shall require zoning and building permits only.

e) Development Provisions

1) Minimum Development Size: None

2) Maximum Development Size: None

3) Residential Density: Within a TOD-R zoning district, a minimum average density of 15 dwelling units per acre (net of streets) shall be achieved; residential density shall be calculated by dividing the total number of housing units planned by the acreage of all lots that are designated for residential use. When designing the site, higher densities (18 du/a and greater) should be concentrated within approximately ¼ mile walking distance of the station site while lower densities (6 du/a and greater) may be placed beyond the approximate ¼ mile walking distance. The maximum density permitted on any lot in a TOD-R is 40 units per acre (net of streets).

4) Special parking provisions for residential development in the TOD-R:

	Minimum	Maximum
Efficiency Apartment	1 space/unit	2 spaces/unit
One or Two Bedroom Apartment/Attached House	1 space/unit	2 spaces/unit
Other Dwelling Units	1 space/unit	2 spaces/unit

5) Siting requirements for non-residential development: All non-residential development shall be oriented to provide direct pedestrian access from the transit station by way of the public street system, designated pedestrian paths, or any combination of the two. In addition, the locational standards below shall apply.

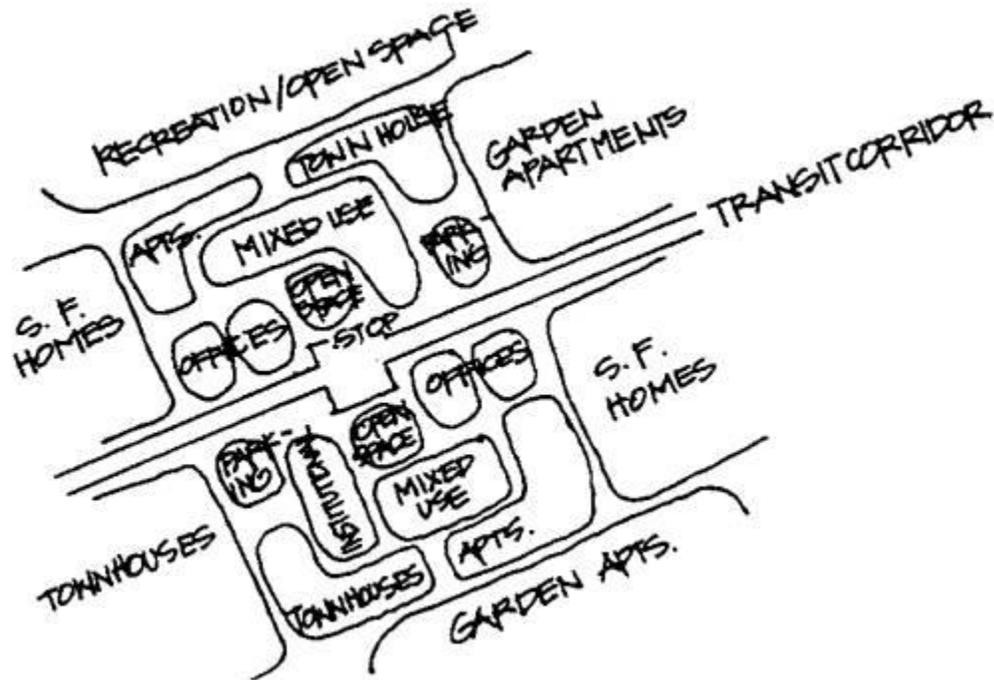
- Within a ¼ mile walking distance of the station site, a master subdivision sketch plan may include up to 10,000 square feet of retail/services/commercial/office development for each 250 dwelling units master planned in the ½ mile catchment area.

- If placed in a TOD-R district, religious institutions without shared parking, schools, and neighborhood recreation facilities, up to the maximum size permitted in the district, should be located between the ¼ mile and ½ mile walk of the station site.
- Without regard to station proximity, day care centers and religious institutions with shared parking provisions that meet the size provisions of the TOD-R are permitted.

f) Design Provisions

1) Neighborhood Form

- The illustration below shall guide the general arrangement and distribution of uses in the project.



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- The area of the project shall be divided into blocks, streets, lots, and open space.
- Similar land uses shall generally enfront across each street. Dissimilar categories shall generally abut at rear lot lines. Corner lots which front on streets of dissimilar use shall approximate the setback established on each fronting street.

2) Streets

- Public streets shall provide access to all tracts and lots.
- Streets and alleys shall, wherever practicable, terminate at other streets within the neighborhood and connect to existing and projected streets outside the development. Cul-de-sacs shall not exceed 250 feet in length, must be accessed from a street providing internal or external connectivity, shall be permanently terminated by a vehicular turnaround, and are permitted only where topography makes a street connection impracticable. In most instances, a “close” or “eyebrow” is preferred to a cul-de-sac. Vehicular turnarounds of various configurations are acceptable so long as emergency access is adequately provided.

- No block face may exceed 500 feet in length without a dedicated alley or pathway providing through access for pedestrians.
- Utilities shall run along alleys where alleys are provided.
- Streets shall be organized according to a hierarchy based on function, size, capacity, and design speed; streets and rights-of-way are therefore expected to differ in dimension. The proposed hierarchy of streets shall be indicated on the submitted master subdivision sketch plan. Each street type shall be separately detailed. Street types illustrated in Article 5 represent the array of elements that are combined to meet the purposes of neighborhood streets: building placement line, optional utility allocation, sidewalk, planting strip, curb and gutter, optional parallel parking, and travel lane(s). Alternative methods of assembling the required street elements will be considered to allow neighborhood street designs that are most appropriate to setting and use. Proposed routing for private vehicles and feeder buses entering and leaving the station area shall be shown.
- To prevent the buildup of vehicular speed, disperse traffic flow, and create a sense of visual enclosure, long uninterrupted segments of straight streets should be avoided. Methods: (1) a street can be interrupted by intersections designed to calm the speed and disperse the flow of traffic (Article 5) and terminate vistas with a significant feature (building, park, natural feature); (2) a street can be terminated with a public monument, specifically designed building facade, or a gateway to the ensuing space; (3) perceived street length can be reduced by a noticeable street curve where the outside edge of the curve is bounded by buildings or other vertical elements that hug the curve and deflect the view; (4) other traffic calming configurations are acceptable so long as emergency access is adequately provided.

3) Buildings and Lots

- Every building lot shall share a frontage line with a street, square, or other urban open space; lots fronting directly onto a formal open space (i.e., without intervening street) shall be provided rear alley access.
- Consistent build-to lines shall be established along all streets and urban open space frontages; build-to lines determine the width and ratio of enclosure for each public street or space. A minimum percentage build-out at the build-to line shall be established on the plan along all streets and urban open space frontages.
- Building and lot types shall comply with Article 4. However, notwithstanding the height restrictions of Article 4, Building and Lot Types, new buildings in the Transit Oriented Residential district are limited to thirteen (13) stories or one hundred eighty-two 182 feet in height, whichever is greater. New buildings in the Transit Oriented Residential District within one (1) mile of the Town Center Zoning District are limited to four (4) stories or forty six (46) feet in height, whichever is greater. Minimum building height is twenty six (26) feet, measured at the eave line.
- Large-scale, single use facilities (conference spaces, theaters, athletic facilities, for example) shall occur behind or above smaller scale uses of pedestrian orientation. Such facilities may exceed maximum first floor area standards if so sited.

4) Open Space

Open Space is defined as any area which is not divided into private or civic building lots, streets, rights-of-way, parking, or easements that diminish the utility or aesthetic quality of the space. Design of urban open space shall comply with Article 7.

5) Parking Lot Landscaping

Parking lot landscaping shall comply with Article 6.

6) District Edge Conditions

Along any boundary of a TOD-R district that abuts a pre-existing subdivision of 20 or more single-family detached homes, one of the following edge conditions shall apply to abutting lot boundaries, however no buffer or wall shall be allowed to block extension of a street from existing development into a planned TOD-R development.

a) A free-standing structure or the end unit of an attached structure on lots along the common boundary shall be limited to two stories or 26 feet in height, whichever is less, or

b) A semi-opaque buffer shall be constructed along the common boundary, on the site of the developing use. The width of the buffer shall at a minimum equal $\frac{1}{2}$ the height of the abutting building in the TOD-R district, or

c) A 6' masonry wall may be constructed by the developer along the common lot boundaries, in which case the width of the buffer may be reduced to the width of the wall.

§ 3.2.14 Transit-Oriented Development – Employment (TOD-E)

Intent: The transit-oriented employment district is established to accommodate general office uses and office support services in a highly pedestrianized setting. General office, characterized by 40 to 70 employees per acre, is the predominant use. Uses that employ relatively few workers, such as warehousing and distribution, are excluded from this district. The TOD-E may be located on developable parcels within the $\frac{1}{2}$ mile catchment area of rapid transit stations. The district establishes an employment node within a 10-minute walk of a M.I.S. designated transit station that serves a workforce of sufficient size to constitute a destination for purposes of rapid transit service.

a) Permitted Uses

Uses Permitted by Right:

- financial services
- greenways
- government offices
- inns
- offices
- professional, personal, and technical services
- transit stations

Uses Permitted with Conditions:

- conference centers, up to 15,000 SF of gross floor area
- day care center, (9.11)
- essential services 1 and 2, (9.14)
- multi-family homes in mixed use buildings
- squares, plazas, or other urban open spaces not exceeding $\frac{1}{2}$ acre in area
- single family attached homes in mixed use buildings
- workshops and studios for the design and manufacture of art, craft, and artisan products, up to 8,000 SF of gross area
- parking lot or structure as a principal use, (9.48)

Uses Permitted with a Special Use Permit:

- accessory warehousing exceeding 25% of the finished floor area of the principal use, (9.48)
- light manufacturing, on not more than 5 acres, (9.48)
- accessory warehousing exceeding 25% of the finished floor area of the principal use, (9.48)
- hospitals, (9.48)
- solar energy facility, minor residential, as follows: located on the facade elevation facing public street or common access; or located on the roof slope above the facade of the structure facing public street or common access (9.54)
- solar energy facility, minor free-standing non-residential, (9.54)
- solar energy facility, minor rooftop non-residential on roof slope facing a street that are noticeable (9.54)
- wind energy facility, minor (accessory) (9.53)

b) Permitted Building and Lot Types:

- civic building
- highway commercial (for conference facilities only), minimum FAR of .35
- mixed use⁷
- shopfront
- workplace, minimum F.A.R. of .35

c) Permitted Accessory Uses:

parking lot as an accessory to any permitted principal use, on the same lot or on an abutting lot according to the standards of Article 6

- parking lot as an accessory to any permitted principal use, on the same lot or on an abutting lot according to the standards of Article 6
- retail, restaurant, bars and taverns, personal services, clinics and similar workplace support uses up to 20 percent of first floor area of any building, or of a multi-building project taken as a whole
- solar energy facilities, minor non-residential; on a flat roof, roof slopes not facing a street and building integrated solar panels on roof slopes facing a street that are not noticeable (9.54)
- solar energy facilities, minor residential; located in the established rear or side yards or roof slopes (9.54)
- warehousing not to exceed 25% of the finished floor area of the principal use
- accessory uses permitted in all districts, (8.11)

d) General Requirements

1) Along existing streets, new buildings shall create a transition in spacing, mass, scale, and street frontage relationship from existing buildings to buildings in the Transit Oriented Employment district.

- New buildings are expected to exceed the scale and volume of existing buildings, but shall demonstrate compatibility by varying the massing of buildings to reduce perceived scale and

⁷ The mixed use building duplicates the shopfront building type and has at least two occupiable stories; at least 50% of the habitable area of the building shall be in residential use, the remainder shall be in commercial use. However, when an existing residential building is redeveloped to a mixed-use, at least 40% of the habitable area shall be in residential use.

volume. The definition of massing in Article 12 illustrates the application of design techniques to reduce the visual perception of size and integrate larger buildings with preexisting smaller buildings.

- 2) On new streets, allowable building and lot types will establish the development pattern.
- 3) A master subdivision sketch plan in compliance with this district shall be provided with any application for development approval. It shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area. The master plan shall include a topographic survey and shall show the location and hierarchy of streets and public open spaces, location of residential, commercial, and civic building lots, street sections and/or plans, approximate square footage of office/commercial buildings and uses, residential unit count, proposed building heights, an outline of any additional regulatory intentions, phasing, and any other information, including building elevations, which may be required to evaluate the interior pedestrian environment and conditions at project edges. Phasing of development to provide for future horizontal and vertical intensification to meet the standards of this section is permitted. Notwithstanding the provisions of Section 6.320 of the Huntersville Subdivision Ordinance, approval of the master sketch plan will be administrative.
- 4) A single building on an existing lot shall comply with the standards of this district and with the most detailed development policies and/or plans adopted by the Town Board for the station’s catchment area, but shall require zoning and building permits only.

e) Design Provisions

- 1) Every building shall share a frontage line with a street, square, or other urban open space; lots fronting directly onto a urban open space (i.e., without intervening street) shall be provided rear alley access.
- 2) New construction favors general office uses, with accessory retail, personal services, restaurant, and similar uses located at street level and residential uses permitted on third and higher floors.
- 3) Notwithstanding the height restrictions of Article 4, Building and Lot Types, new buildings in the Transit Oriented Employment district are limited to seven stories or 80 feet in height, whichever is greater. Minimum building height is 26 feet, measured at the eave line.
- 4) Minimum permitted Floor Area Ratio (FAR) is .35; preferred FAR will range from .5 to 1.5.
- 5) Special parking provisions for residential development in the TOD-E:

	Minimum	Maximum
Office/Commercial Uses	1 space/1000 SF	1 space/500 SF
Efficiency Apartment	1 space/unit	2 spaces/unit
One or Two Bedroom Apartment	1 space/unit	2 spaces/unit

6) District Edge Conditions

Along any boundary of a TOD-E district that abuts a pre-existing subdivision of 20 or more single-family detached homes, one of the following edge conditions shall apply to abutting lot boundaries, however no buffer or wall shall be allowed to block extension of a street from existing development into a planned TOD-E development.

- A free-standing structure or the end unit of an attached structure on lots along the common boundary shall be limited to two stories or 26 feet in height, whichever is less, or
- A semi-opaque buffer shall be constructed along the common boundary, on the site of the developing use. The width of the buffer shall at a minimum equal ½ the height of the abutting building in the TOD-E district, or
- A 6' masonry wall may be constructed by the developer along the common lot boundaries, in which case the width of the buffer may be reduced to the width of the wall.

Article 9, Condition for Certain Use

§ 9.49 Transit-Oriented Parking Lots as a Principal Use

Transit-oriented parking lot as a principal use shall be permitted in any zoning district subject to the following standards:

- 1) Transit-oriented parking lots shall adhere to the standards of Article 6, Off-Street Parking, except that in the NR district parking lots may be constructed up to the prevailing established setback line for structures within 300' in either direction on the same side of the street. The prevailing setback applies for both the fronting street and any abutting streets. In all other zoning districts, transit-oriented parking lots may be constructed up to 10 feet from street right-of-way.
- 2) Buildings associated with transit-oriented parking lots shall meet the standards of Article 9.39, Transit Shelters.
- 3) Transit-oriented parking lots in the Corporate Business (CB), Campus Institutional (CI), or Special Purpose (SP) Districts shall be exempt from the 80' buffer yard requirement along public streets. All other buffer yard standards of Article 8.20 apply.
- 4) Up to 50% of a transit-oriented parking lot may be unpaved.

The City Code of Seattle provides for a zoning area that works in tandem to promote transit-oriented development with mixed uses near the city's light rail stations: the Station Area Overlay District (SAOD). Under the Seattle zoning ordinance, the SAOD may be applied in mixed-use zones within 1,320 feet of the transit station. In addition to whatever the underlying zone prohibits, the SAOD further prohibits uses such as drive-in businesses and nonresidential long-term parking facilities. For years, Seattle has been putting tremendous effort into green initiatives and is currently ranked by Smarter Cities (a Natural Resources Defense Council project) as the most sustainable big city in America.

City of Seattle, Washington

Subtitle III: Land Use Regulations

Division 3, Overlay Districts

Chapter 23.61 – Station Area Overlay District

SMC 23.61.002

Purpose and intent.

The purpose and intent of this chapter is to regulate land use and development in a manner that supports transit-oriented development near light rail stations. (*Ord. 120452 §5(part), 2001.*)

SMC 23.61.004

Station Area Overlay District established.

There is hereby established pursuant to Chapter 23.59 of the Seattle Municipal Code, the Station Area Overlay District, as shown on the Official Land Use Map, Chapter 23.32. (*Ord. 120452 §5(part), 2001.*)
SMC 23.61.006

Application of Regulations

All land located within the Station Area Overlay District is subject to the regulations of the underlying zone unless specifically modified by the provisions of this chapter. In the event of a conflict between the provisions of the Station Area Overlay District and the underlying zone including Pedestrian-Designated Zones, the provisions of this chapter prevail. Where a conflict exists between the provisions of this chapter and the Shoreline Master Program, the provisions of the Shoreline Master Program prevail. (*Ord. 123020 , §11, 2009; Ord. 122043 §1, 2006; Ord. 120452 §5(part), 2001.*)

SMC 23.61.008

Prohibited Uses.

The following uses are prohibited within an underlying commercial zone as both principal and accessory uses, except as otherwise noted:

- A. Drive-in businesses, except as provided in 23.61.014, Nonconforming uses;
- B. Dry boat storage;
- C. General manufacturing;
- D. Heavy commercial services, except laundry facilities existing as of April 1, 2001;
- E. Sales and rental of large boats;
- F. Vessel repair (major or minor);
- G. Mini-warehouse;
- H. Principal use, nonresidential long-term parking;
- I. Outdoor storage;
- J. Heavy commercial sales;
- K. Sales and rental of motorized vehicles, except within an enclosed structure;
- L. Solid waste management;
- M. Recycling uses;
- N. Towing services;
- O. Principal use vehicle repair (major or minor);
- P. Wholesale showroom; and
- Q. Warehouse.

(*Ord. 122311 , §74, 2006; Ord. No. 122043 §2, 2006; Ord. 121245 §1, 2003; Ord. 120609 §15, 2001; Ord. 120452 §5(part), 2001.*)

SMC 23.61.012

Residential structures

Residential uses are permitted outright anywhere in a structure in C zones and NC zones, unless located on a lot in a pedestrian-designated zone, where they are limited to 20 percent of each street-level, principal pedestrian street-facing facade. (*Ord. 123020 , §12, 2009; Ord. 122311 , §76, 2006; Ord. 120452 §5(part), 2001.*)

SMC 23.61.014

Nonconforming uses.

A. Expansion. Uses listed in this subsection may be expanded or extended by an amount of gross floor area not to exceed twenty (20) percent of the existing gross floor area of the use provided that this exception may be applied only once to any individual business establishment.

1. The provisions of this subsection apply to the following station areas:
 - a. Henderson;
 - b. Othello;
 - c. Edmunds; and
 - d. McClellan.
2. The provisions of this subsection apply to the following nonconforming uses:
 - a. Automotive retail sales and services;
 - b. General manufacturing;
 - c. Heavy commercial services; and
 - d. Mini-warehouse and warehouse.

B. Relocation. In the University District Station Area, banks with a drive-in facility may be moved to another location within the station area provided:

1. The use was in existence on May 5, 2006;
2. This exception may be applied only once to any individual business establishment;
3. The new location is not within a pedestrian-designated zone;
4. The curb cut(s) at the new location will serve both the drive-in lane and access to parking for the use;
5. The use at the new location is limited to one drive-in lane; and
6. The drive-in lane may not be located between the structure containing the bank use and a street right-of-way. (*Ord. 122311 , §77, 2006; Ord. No. 122043 §3, 2006; Ord. 120452 §5(part), 2001.*)

SMC 23.61.016

Development agreements

A. The Director may recommend that the Council approve a development agreement pursuant to Chapter 36.70B RCW for real property within the Station Area Overlay District.

B. The Director's recommendation shall be informed by a coordinated development plan or urban design framework that the Director has developed through a community involvement process.

C. The Director may recommend a development agreement in the following Station Area Overlay Districts:

1. Capitol Hill Station Area Overlay District.
 - a. The proposed development agreement shall be for the development of real property that:
 - 1) Is owned by or under the control of a regional transit authority authorized under Chapter 81.112 RCW for the purpose of developing a light rail transit station; and
 - 2) Is contiguous or is bisected only by streets, alleys, or other public rights of way.

b. The proposed development agreement may set forth development standards that vary from otherwise applicable development regulations, subject to the following limitations:

- 1) Any additional structure height allowed may not exceed 85 feet, except, where the underlying zone designation is Neighborhood Commercial, structures may exceed 85 feet as provided for in subsection 23.47A.012.D;
- 2) Uses prohibited in the underlying zone shall not be permitted;
- 3) FAR requirements may be varied for an individual lot, however, the total FAR as calculated for all lots under the proposed development agreement shall not exceed six;
- 4) Variations of Green Factor requirements for an individual lot shall not result in a Green Factor ratio for the aggregated lots that is less than the ratio that would result from imposition of otherwise applicable Green Factor requirements to all individual lots; and
- 5) The provisions of Chapter 23.41 shall apply to development proposals within the scope of the development agreement, except that the recommendation of the Design Review Board shall be consistent with the development agreement, and if there is a conflict between a Design Review Board recommendation and the terms of the development agreement, the latter shall prevail.

D. The Director shall prepare a written report on a proposed development agreement. The Director shall submit the report and proposed development agreement to the Council after any applicable SEPA appeal period has lapsed without an appeal being initiated or, if a SEPA appeal is timely initiated, after the Hearing Examiner issues a decision affirming the Director's compliance with SEPA. The report shall include:

1. An evaluation of the proposed development agreement's consistency with any applicable coordinated development plan or urban design framework that the Director has developed through a community involvement process and any applicable Comprehensive Plan goals and policies;
2. Proposed development standards for the site; and
3. The Director's recommendation.

E. The Council shall hold a public hearing on the proposed development agreement. Notice of the hearing shall be provided at least 30 days prior to the hearing by inclusion in the Land Use Information Bulletin.

F. If the Council determines to approve a proposed development agreement, the Council may:

1. Set forth development standards that vary from otherwise applicable development regulations, subject to any applicable limitations in subsection 23.61.016.C; and
2. Set forth other provisions, unrelated to development standards, that the Council deems appropriate.

G. After its approval by the Council and after all parties to the development agreement approve and execute it, the City Clerk shall record the development agreement in the real property records of King County.

H. Nothing in this Section 23.61.016 limits the Council's authority to enter into a development agreement authorized by Chapter 36.70B RCW in situations other than those described in subsection 23.61.016.C. (*Ord. 123711, §1, 2011.*)

Higher Regulatory Standards for Floodplain Development

The City of Cedar Falls adopted a revised floodplain ordinance that exceeds FEMA requirements, which includes adopting the 500-year floodplain boundary as the “locally regulated floodplain” that requires structures located within the boundary to be elevated one foot above the 500-year flood elevation. The city also has three overlay districts pertaining to flooding in its zoning ordinance: floodway overlay district (F-W), floodway fringe overlay district (F-F), and general floodplain overlay district (F-P). Each overlay district has distinctive geographical boundaries on the floodplain map. Once it is determined which overlay the property is in, property owners can go to the appropriate section of the ordinance to determine permitted uses, conditional uses, and performance standards for the property.

City of Cedar Falls, Iowa

Chapter 29: Zoning

Article III, Districts and District Regulations

Division 2, Specific Districts

Sec. 29-155. - F-W floodway overlay district.

(a) Principal permitted uses. The following uses shall be permitted within the F-W floodway district to the extent they are not prohibited by other provisions of this chapter or of this Code, or the underlying zoning district, and provided they do not require placement of structures, factory-built homes, fill or other obstruction, the storage of materials or other equipment, excavation or alteration of a watercourse:

(1) Agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming and wild crop harvesting.

(2) Industrial-commercial uses such as loading areas, parking areas and airport landing strips.

(3) Private and public recreational uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas and hiking and horse riding trails.

(4) Residential uses such as lawns, gardens, parking areas and play areas.

(5) Other open space uses similar in nature to the uses listed in this subsection.

(b) Conditional uses. The following uses, which involve structures (temporary or permanent), fill, storage of materials or other equipment, may be permitted only upon issuance of a special exception permit by the board of adjustment, and then only to the extent they are not prohibited by other provisions of this section or of this Code or the underlying zoning district. Such uses must also meet the applicable provisions of the floodway district performance standards:

(1) Uses or structures accessory to open space uses.

(2) Circuses, carnivals and similar transient amusement enterprises.

(3) Drive-in theaters, new and used car lots, roadside stands, signs and billboards.

(4) Extraction of sand, gravel and other material.

(5) Marinas, boat rentals, docks, piers and wharves.

(6) Utility transmission lines and underground pipelines.

(7) Other uses similar in nature to the principal permitted and conditional uses described in this section which are consistent with the floodway district performance standards and the general spirit and purpose of this chapter.

(c) Performance standards. All floodway district uses allowed as a principal permitted or conditional use shall meet the following standards:

(1) No use shall be permitted in the floodway district that would result in any increase in the 100-year (1%) flood level. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for similarly situated lands.

(2) All uses within the floodway district shall:

- a. Be consistent with the need to limit flood damage.
- b. Use construction methods and practices that will limit flood damage.
- c. Use construction materials and utility equipment that are resistant to flood damage.

(3) No use shall affect the capacity or conveyance of the channel or floodway or any tributary to the main stream, drainage ditch or any other drainage facility or system.

(4) Structures, buildings and sanitary and utility systems, if permitted, shall meet the applicable performance standards of the floodway fringe district and shall be constructed or aligned to present the minimum possible resistance to flood flows.

(5) From and after January 1, 2010, there shall be no construction of any new building or structure (temporary or permanent) of any type whatsoever, anywhere within the floodway overlay district in the city, including but not limited to new detached garages, storage buildings, or other accessory structures.

(6) From and after January 1, 2010, there shall be no restoration or reconstruction of any previously existing nonconforming building or structure located in the floodway overlay district that suffers damage to the extent of fifty percent (50%) or more of its fair market value at the time of damage of any origin, including but not limited to, fire, flood, tornado, storm, explosion, war, riot or act of God, unless permitted upon issuance of a variance and a special exception permit by the board of adjustment, in accordance with the provisions of sections 29-34 and 29-35 of this chapter.

(7) Any restoration or reconstruction of any building or structure located in the floodway overlay district that suffers damage to the extent of less than fifty percent (50%) of its fair market value at the time of damage of any origin, including but not limited to fire, flood, tornado, storm, explosion, war, riot or act of God, may be restored or reconstructed without issuance of a variance or a special exception permit by the board of adjustment, and then only as follows:

[a.] May commence only upon issuance of a valid building permit issued by the city;

[b.] Must not allow any fill material to be used or placed on the lot in connection with the elevation and reconstruction of such building or structure; and

[c.] Must comply in all other respects with all applicable city building codes in effect at the time of reconstruction;

[d.] Such restoration, rebuilding or reconstruction shall not allow any building addition or expansion without obtaining a variance or special exception permit from the board of adjustment.

[e.] Any addition or expansion to an existing building or structure located in the floodway shall not be allowed, unless permitted upon issuance of a variance and special

exception permit by the board of adjustment, in accordance with Sections 29-34 and 29-35 of this chapter.

(8) Buildings, if permitted, shall have a low flood damage potential and shall not be utilized for human habitation.

(9) Storage of materials or equipment that is buoyant, flammable, explosive or injurious to human, animal or plant life is prohibited. Storage of other material may be allowed if readily removable from the floodway district within the time available after flood warning.

(10) Stream, watercourse, drainage channel or other water channel embankment stabilization, filling, alterations or relocations, including removal of vegetation, must be designed to maintain the flood-carrying capacity within the altered area, and shall not be allowed or undertaken without all required permits from and approvals by the state department of natural resources, and shall not proceed without approval of the city planner and oversight by the city engineer.

(11) Any fill allowed in the floodway must be shown to have some beneficial purpose and shall be limited to the minimum amount necessary.

(12) Pipeline river or stream crossings shall be buried in the streambed and banks or otherwise sufficiently protected to prevent rupture due to channel degradation and meandering or due to the action of flood flows.

(13) Recreational vehicles placed on sites within the Floodway District shall either:

- a. Be on site for fewer than 180 consecutive days.
- b. Be fully licensed and ready for highway use.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by disconnect type utilities and security devices, and has no permanent attached additions. (Ord. No. 2750, § 7, 7-11-11) *Editor's note— Ord. No. 2750, § 7, adopted July 11, 2011, repealed § 29-155, in its entirety and enacted new provisions to read as herein set out. Prior to amendment, § 29-155 pertained to similar subject matter. See Code Comparative Table for derivation.*

Sec. 29-156. - F-F floodway fringe overlay district.

(a) Except as otherwise expressly provided in this section, development shall be allowed in the floodway fringe overlay district only on lots of record as defined in this chapter which were in existence prior to January 1, 2010.

(b) The floodway fringe overlay district shall include and incorporate both the 100-year (1%) and 500-year (0.2%) flood boundaries as illustrated on the official flood plain zoning maps. The elevation of the regulatory flood shall be considered to be the 500-year (0.2%) flood elevation. Flood insurance policies and insurance rates may continue to be evaluated and established based on federal and state laws and regulations. For all other city flood regulatory purposes, however, the regulatory elevation shall be the 500-year flood elevation.

(c) No new lots shall be established within the 500-year flood boundaries after January 1, 2010. All building lots which have been properly established under state law and this code, filed with the county recorder and approved by the county auditor, all prior to January 1, 2010, shall be considered to be lots of record. A lot of record which is in existence on January 1, 2010, may be diminished in size via subdivision if the newly-created lot being separated from the existing lot of record lies entirely outside the 500-year flood plain boundaries and, provided further, that the diminished original lot of record will not be permitted a replacement or new structure constructed thereon if that structure is located

within the 500-year flood plain boundaries. An existing structure located on the original lot of record, if located within the 500-year flood plain, will be allowed to be maintained and upgraded or enlarged in conformance with this section, but shall not be replaced with a new structure.

(d) Critical facilities shall be located outside the 500-year floodplain boundaries. Critical facilities shall include but not be limited to hospitals, municipal government buildings, schools and residential facilities for elderly or infirmed/handicapped persons. The restriction on critical facilities shall not apply to structures required to be located in low-lying areas such as streets and roadways, bridges, culverts, waste water treatment facilities or sanitary sewer lift stations.

(e) Performance standards. All uses must be consistent with the need to limit flood damage to the maximum practicable extent, and shall meet the following applicable performance standards:

(1) All new development on lots of record in existence prior to January 1, 2010, must comply with all required standard flood protection measures, and must meet the following requirements:

- a. May commence only upon issuance of a valid building permit issued by the city;
- b. Any open areas underneath the lowest floor shall be floodable in order to allow the unimpeded free flow of flood waters, in conformity with the requirements of subsections (e)(7)(a)(1) through (4), inclusive; and
- c. Must comply in all other respects with all applicable city building codes in effect at the time of reconstruction.

(2) Any existing building or structure located in the floodway fringe that suffers damage to the extent of less than fifty percent (50%) of its fair market value from any origin including, but not limited to, fire, flood, tornado, storm, explosion, war, or act of God, may be reconstructed at its existing elevation, without issuance of a variance or special exception permit, if the reconstructed structure meets the following requirements:

- a. May commence only upon issuance of a valid building permit issued by the city; and
- b. Must comply in all other respects with all applicable city building codes in effect at the time of reconstruction.

(3) Any existing building or structure that is substantially damaged, may be reconstructed if the reconstructed structure meets all required standard flood protection measures, including but not limited to elevating the structure to a level such that the lowest floor is established one (1) foot above the 500-year flood level, and is constructed either on elevated foundations, piers or similar elevated techniques that are in compliance with then applicable city building code requirements, or using fill which meets the requirements of this section, and which meets the following requirements:

- a. May commence only upon issuance of a valid building permit issued by the city;
- b. Any enclosed building areas underneath the lowest floor shall be floodable in order to allow the unimpeded free flow of flood waters, in conformity with the requirements of subsections (e)(7)(a)(1) through (4), inclusive; and
- c. Must comply in all other respects with all applicable city building codes in effect at the time of reconstruction.

(4) All structures shall be:

- a. Adequately anchored to prevent flotation, collapse or lateral movement of the structure.
- b. Constructed with materials and utility equipment resistant to flood damage to the maximum practicable extent.

c. Constructed by methods and practices that limit flood damage to the maximum practicable extent.

(5) Any new, substantially improved or substantially damaged residential structure, that is to be established or reconstructed as authorized in this chapter, shall have the lowest floor, including basement, elevated a minimum of one foot above the 500-year flood level. Construction may be upon limited amounts of compacted fill which shall, at all points, be no lower than one foot above the 0.2% (500-year) flood level unless the necessary amount of fill to satisfy this requirement exceeds allowable fill heights specified in subsection (e)(8)(b), and shall extend at such elevation at least 18 feet beyond the limits of any structure erected thereon. Alternate methods of elevating, such as piers or elevated foundations, may be allowed where existing topography, street grades or other compelling factors preclude elevating by the use of compacted fill material. In all such cases, the methods used for structural elevation must be adequate to support the structure as well as withstand the various forces and hazards associated with flooding as verified by a structural engineer.

(6) Any new, substantially improved or substantially damaged nonresidential structure, that is to be established or reconstructed as authorized in this chapter, shall have the lowest floor, including basement, elevated a minimum of one foot above the 500-year flood level. Construction may be upon limited amounts of compacted fill which shall, at all points, be no lower than one foot above the 0.2% (500-year) flood level or, together with attendance utility and sanitary sewerage systems, be flood-proofed to such a level. When utilizing fill material, the amount placed on the site shall be in conformance with subsection (e)(8)(b). When flood-proofing is utilized, a professional engineer registered in the state of Iowa shall certify that the flood-proofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the 100-year and 500-year flood event, and that the structure established below the 500-year flood elevation level, is watertight with walls substantially impermeable to the passage of water. A record of certification, indicating the specific elevation, in relation to the North American Vertical Datum of 1988, to which any structures are flood-proofed, shall be maintained by the zoning/ floodplain administrator.

(7) Any new, substantially improved or substantially damaged structure that is to be established or reconstructed as authorized in this chapter shall meet the following requirements:

a. Fully enclosed areas below the lowest floor, not including basements, that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. All said areas below the lowest floor shall be designed for low damage potential and shall not be habitable space. Such areas shall be used solely for parking of vehicles, building access and low damage potential storage. Machinery and service facilities (e.g. hot water heater, furnace, electrical service) contained in the enclosed area are located at least one (1) foot above the 500-year flood level.

Designs for meeting this requirement must either be certified by a registered professional engineer or meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above natural grade.
3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

4. Openings must be designed and installed so as to allow the natural entry and exit of floodwaters without the aid of any manual, mechanical or electrical systems either for operating the openings or assisting in the discharge of water from the lower area.

b. Any new, substantially improved or substantially damaged structure that is being established or reconstructed as authorized in this chapter, must be designed or modified and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

c. Any new, substantially improved or substantially damaged structure that is being established or reconstructed must be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and located so as to prevent water from entering or accumulating within the components during conditions of flooding. All such facilities including heating, cooling and ventilating systems or ducts shall be located or installed at least one foot above the (0.2%) 500-year flood level.

(8) Filling in the floodway fringe:

a. Fill activities may be permitted in the floodway fringe overlay district upon approval by the city planner and city engineer. All fill application permits shall be valid for a period of six (6) months from date of issuance, may be renewed only upon filing of an application for renewal with the city planner, and then may only be renewed upon a showing of demonstrated progress towards completion of the fill activity. All fill application permits must be accompanied by a detailed plan describing the area to be filled, the estimated amount of fill to be used and the purpose of the fill project. Elevation and topographic data must also be submitted by a professional engineer registered in the State of Iowa that illustrates changes in the topography and estimated impacts upon local flood flows. No fill project shall fill in or obstruct any local drainage channels without an alternative drainage plan design, and shall limit soil erosion and water run-off onto adjacent properties to the maximum practicable extent, and in compliance with the NPDES standards contained in Chapter 27 of this code. Except as provided in subsections (e)(8)(f) and (g), adjacent property owners shall be identified and notified of the fill project by the applicant with proof of notification provided to the city planner. Any fill project must be designed to limit negative impacts upon adjacent property owners during flood events to the maximum practicable extent.

b. The amount of allowable fill must not increase the existing natural grade of the property, by more than three (3) vertical feet at any point, and shall be placed on no more than 33.33% of the total three (3) vertical feet lot area.

c. Where fill is authorized under this chapter, any fill placed on a lot of record must be mitigated by removal of an equal volume of fill material from a comparable elevation within the 500-year flood plain, in order to provide the hydraulic equivalent volume of fill removal as compared to the placement of fill on any single property located in the flood plain.

d. The only portion of the property that may be filled is the area underneath the elevated structure, together with driveway access to the structure. In no case shall the maximum lot area of the property filled exceed 33.33 percent of the total area of the lot, and shall extend at least 18 feet from the outer foundation of the structure.

e. If a new or reconstructed structure is to be elevated utilizing fill material, any required building elevation standard exceeding the 3-foot fill limitation as referenced in

subsection (e)(8)(b) must be achieved through the use of elevated foundations, piers or similar structural elevation techniques that are in compliance with then applicable city building code requirements as certified by a structural engineer.

f. Fill is allowed for property maintenance purposes in the floodway fringe area upon approval of the city planner. For purposes of this subsection, the term, "property maintenance purposes," shall mean landscaping, gardening or farming activities, erosion control, and filling in of washed-out sections of land. Property maintenance purposes shall only include the placement of such quantities of fill not to exceed the limitations specified herein and that do not inhibit the free flow of water. Said limited amounts of fill for property maintenance purposes need not be compensated by an equivalent amount of excavation area as specified in subsection (e)(8)(c) above.

g. Filling on public property is prohibited in the floodway fringe district with the exception of property maintenance purposes of public facilities, upon approval of the city planner. Limited quantities of asphalt, concrete and yard waste may be temporarily stored in the floodway fringe district when said materials are being staged for further processing. Raw materials may be stockpiled in the floodway fringe district when said materials are mined or excavated from a site in the floodway or floodway fringe.

(9) No floodplain map revisions (Letter of Map Revision-fill or LOMR-f) involving placement of fill or involving land alterations in the floodway fringe overlay district, even if otherwise approved by FEMA, shall be allowed after January 1, 2010, provided, however, that owners of properties in the floodway fringe who have applied for a LOMR and which were in the process of being approved as of January 1, 2010, shall be exempt from this prohibition.

(10) Factory-built housing and factory-built structures shall meet the following requirements:

a. Factory-built homes, including those placed in existing factory-built home parks or subdivisions, shall be anchored to resist flotation, collapse or lateral movement.

b. Factory-built housing and factory-built structures, including those placed in existing factory-built home parks or subdivisions, shall be elevated on a permanent foundation such that the lowest floor of the structure is a minimum of one foot above the 500-year flood level.

c. Openings shall be established in the lower area to allow the natural entry and exit of floodwaters in compliance with subsections (e)(7)(a)(1) through (4).

(11) Subdivisions, including factory-built home parks and subdivisions, shall meet the following requirements. Subdivisions shall be consistent with the need to limit flood damage to the maximum practicable extent, and shall have adequate drainage provided to reduce exposure to flood damage. Development associated with subdivision proposals shall meet the applicable performance standards. Subdivision proposals intended for residential development shall provide all lots with a means of vehicular access that is above the (0.2%) 500-year flood level.

(12) Utility and sanitary systems shall meet the following requirements:

a. All new and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system as well as the discharge of effluent into floodwaters. Wastewater treatment facilities shall be provided with a level of flood protection equal to or greater than one foot above the 500-year flood elevation.

b. On-site waste disposal systems shall be located or designed to avoid impairment to the system or contamination from the system during flooding.

c. New or replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system. Water supply treatment facilities shall be provided with a level of protection equal to or greater than one foot above the 500-year flood elevation.

d. Utilities such as gas and electrical systems shall be located and constructed to minimize or eliminate flood damage to the system and the risk associated with such flood damaged or impaired systems.

(13) Storage of materials and equipment that are flammable, explosive or injurious to human, animal or plant life is prohibited unless elevated a minimum of one foot above the 500-year flood level. Other material and equipment must either be similarly elevated or:

a. Not be subject to major flood damage and be anchored to prevent movement due to floodwaters; or

b. Be readily removable from the area within the time available after flood warning.

(14) Flood control structural works such as levees and floodwalls, shall provide, at minimum, protection from a 1% (100-year) flood with a minimum of three feet of design freeboard and shall provide for adequate interior drainage, or at such higher elevation as may be mandated by the state or federal government. In addition, structural flood control works shall be approved by the state department of natural resources.

(15) No use shall affect the capacity or conveyance of the channel or any tributary to the main stream, drainage ditch or other drainage facility or system.

(16) Detached garages and storage sheds and other detached accessory structures shall be allowed in the floodway fringe district with no minimum elevation requirement provided that all the following criteria are satisfied:

a. The total combined floor areas of all such structures located on the lot does not exceed a total of 576 square feet in area.

b. The structures are not suitable for and shall not be used for human habitation.

c. The structures will be designed to have low flood damage potential.

d. The structures will comply with minimum required permanent openings as specified in subsections (d)(4)(a)(1) through (4).

e. The structures will be constructed and placed on the building site so as to limit resistance to the greatest practicable extent to the flow of floodwaters.

f. Structures shall be firmly anchored to prevent flotation, which may result in damage to other structures.

g. The structure's service facilities such as electrical, heating and ventilating equipment shall be elevated or floodproofed to at least one foot above the (.2%) 500-year flood level.

(17) Recreational vehicles, if permitted in the underlying zoning district, are exempt from the requirements of this chapter regarding anchoring and elevation of factory built homes when the following criteria are satisfied:

a. Be on site for fewer than 180 consecutive days.

b. Be fully licensed and ready for highway use.

(18) Pipeline river or stream crossings shall be buried in the streambed and banks or otherwise sufficiently protected to prevent rupture due to channel degradation or due to action of flood flows. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by disconnect type utilities and security devices, and has no permanent attached additions.

(Ord. No. 2750, § 8, 7-11-11) *Editor's note - Ord. No. 2750, § 8, adopted July 11, 2011, repealed § 29-156, in its entirety and enacted new provisions to read as herein set out. Prior to amendment, § 29-156 pertained to similar subject matter. See Code Comparative Table for derivation.*

Sec. 29-157. - F-P general floodplain overlay district.

(a) Principal permitted uses. The following uses shall be permitted within the F-P general floodplain district to the extent they are not prohibited by any other ordinance or underlying zoning district and provided they do not require placement of structures, factory-built homes, fill or other obstruction, the storage of materials or equipment, excavation or alteration of a watercourse:

(1) Agricultural uses such as general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming and wild crop harvesting.

(2) Industrial-commercial uses such as loading areas, parking areas and airport landing strips.

(3) Private and public recreation uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas and hiking and horseback riding trails.

(4) Residential uses such as lawns, gardens, parking areas and play areas.

(b) Conditional uses. Any use which involves placement of structures, factory-built homes, fill or other obstructions, the storage of materials or equipment, excavation or alteration of a watercourse may be allowed only upon issuance of a special exception permit by the board of adjustment. All such uses shall be reviewed by the state department of natural resources to determine:

(1) Whether the land involved is either wholly or partly within the floodway or floodway fringe; and

(2) The 100-year or 500-year flood level.

The applicant shall be responsible for providing the state department of natural resources with sufficient technical information to make the determination.

(c) Performance standards.

(1) All conditional uses or portions thereof to be located in the floodway, as determined by the state department of natural resources, shall meet the applicable provisions and standards of the floodway district.

(2) All conditional uses or portions thereof to be located in the floodway fringe, as determined by the state department of natural resources, shall meet the applicable standards of the floodway fringe district.

(d) Prohibited uses. No structure located within the designated floodplain district may be subdivided or converted for the purpose of establishing a separate dwelling unit either wholly or partially below the 500-year flood elevation. (Ord. No. 2750, § 9, 7-11-11) *Editor's note - Ord. No. 2750, § 9, adopted July 11, 2011, repealed § 29-157, in its entirety and enacted new provisions to read as herein set out. Prior to amendment, § 29-157 pertained to similar subject matter. See Code Comparative Table for derivation.*

The City of Lewes has a unique height limit exemption for properties within its coastal high hazard area flood zone. The height limit for residential structures in its R-2 and R-2(H) zones, formerly the LB - Lewes

Beach District, and the Coastal Flood Plain Area is permitted to 34 feet—3 feet higher than in the city's other zones. The purpose of this exemption is to allow homeowners a buffer so they can elevate their homes to FEMA base flood elevations without running afoul of regulated height limits.

City of Lewes, Delaware

Chapter 197: Zoning

Article V, Dimensional Regulations

§ 197-55. Building height.

A. In general.

(1) Measurement. The vertical distance of a building measured from a point where the center line of a building to be erected intersects with the center line of the street on which the building will face to the highest point of the highest roof.

(2) Exception. Chimneys, spires, towers, elevators, tanks and other similar projections shall not be included in calculating the "height."

B. Prior to September 14, 1987.

(1) Applicability:

(a) All buildings for which a building permit was issued prior to September 14, 1987.

(b) Subdivisions of more than two lots for which final approval was granted by the Planning Commission of the City prior to September 14, 1987.

(2) Measurement. The "height" of a building shall be defined as the vertical distance measured from grade, the average of the finished ground level adjoining the building at the side facing the nearest street to the highest point of the coping of a flat roof building or the highest point of the coping of the highest flat roof if the building has more than one flat roof level or to the highest point of a mansard, gable, hip or gambrel roof building.

(3) Exception. Chimneys, spires, towers, elevators, pent, tanks and other similar projections shall not be included in calculating the "height."

C. Flood-prone areas:

(1) Applicability:

(a) R-2 and R-2(H) Zones (formerly LB-Lewes Beach District) located within the coastal high hazard area.

(b) Coastal Flood Plain Area and situate on the northeast side of the Lewes and Rehoboth Canal.

(2) Measurement. The vertical distance of a building measured from a point where the center line of the building to be erected intersects with the center line of the street on which the building will face to the highest point of the highest roof shall not exceed 34 feet for all lots created prior to and after September 14, 1987; provided, however, that any roof in the R-2 and R-2(H) Zone (formerly LB-Lewes Beach District) northeast of the Lewes and Rehoboth Canal shall have a minimum pitch of five inches of vertical rise for each 12 inches of horizontal run to the ridge of the greatest height of the roof.

Building Codes and Resilient Designs

The City of Austin has incorporated flood hazard and flood load requirements into its building code, such as requiring that the foundation floor slabs must be a minimum of one foot above the 100-year floodplain elevation and that normal access to proposed buildings must be to areas a minimum of one foot above the 100-year floodplain.

City of Austin, Texas

Article 1, Building Code

Division 1, International Building Code and Local Amendments

Section 1612, Flood Loads

1612.1 General. Within flood hazard areas as established in Section 1612.3, (Establishment of flood hazard areas) all new construction of buildings, and alterations to buildings and structures, structures and portions of buildings and structures, including substantial improvements and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. All elevation requirements noted in this ordinance shall be documented using the Elevation Certificate, FEMA 81-31, and shall be certified by a registered professional engineer, surveyor, or architect, and shall be submitted to the Floodplain Administrator.

1612.2 Definitions. The following words and terms shall, for the purposes of this section, have the meanings shown herein.

Base Flood - A flood having a 1-percent chance of being equaled or exceeded in any given year (100-year flood).

Base Flood Elevation - The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM).

Basement - The portion of a building having its floor subgrade (below ground level) on all sides.

Design Flood - The flood associated with an area with a flood plain subject to a 1-percent or greater chance of flooding in any year (100-year flood) based on projected full development in accordance with the City of Austin Drainage Criteria Manual.

Design Flood Elevation - The elevation of the "design flood" relative to the City of Austin vertical datum standard.

Dry Floodproofing - A combination of design modifications that results in a building or structure, including the attendant utility and sanitary facilities, being water tight with walls substantially impermeable to the passage of water and with structural components having the capacity to resist loads as identified in ASCE 7.

Existing Construction - Any buildings and structures for which the "start of construction" commenced before September 2, 1981. "Existing construction" is also referred to as "existing structures."

Existing Structure - See "Existing construction."

Flood or Flooding - A general and temporary condition of partial or complete inundation of normally dry land from:

1. the overflow of inland waters; or

2. the unusual and rapid accumulation or runoff of surface waters from any source.

Flood Damage-Resistant Materials - Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

Flood Hazard Area - The greater of the following two areas:

1. an area within a flood plain subject to a 1-percent or greater chance of flooding in any year (100-year flood); or
2. an area with a flood plain subject to a 1-percent or greater chance of flooding in any year (100-year flood) based on projected full development in accordance with the City of Austin Drainage Criteria Manual.

Flood Insurance Rate Map (FIRM) - An official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

Flood Insurance Study - the official report provided by the Federal Emergency Management Agency containing the Flood Insurance Rate Map (FIRM), the Flood Boundary Map, the water surface elevation of the base flood and supporting technical data.

Floodway - The channel of the river, creek or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. An area with a flood plain subject to a 4-percent or greater chance of flooding in any year (25-year flood) based on projected full development in accordance with the City of Austin Drainage Criteria Manual.

Lowest Floor - The floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of this section.

New Construction - Structures for which the start of construction commenced on or after September 2, 1981, and includes any subsequent improvements to such structures and improvements to all existing construction.

Regulatory Flood Datum - An established plane of reference from which elevations and depth of flooding may be determined for specific locations of the floodplain. It is the water level of the design flood plus a freeboard factor of one foot. Design flood plus freeboard equals Regulatory Flood Datum.

Special Flood Hazard Area - The land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE or V1-30.

Start of Construction - The date of permit issuance for new construction and substantial improvements to existing structures provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns. Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a basement, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual "start of construction" means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Substantial Damage - Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement - For the purpose of determining compliance with the flood hazard management provisions of this code, substantial improvement means any repair, alteration, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the current market value of the structure before the improvement or repair is started or, if the structure has been damaged and is being restored, before the damage occurred. The cost used in the substantial improvement determination shall be cumulative cost of all previous additions or improvements for a specific building or structure occurring during the immediate 10-year period. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions;
2. any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure; or
3. an aesthetic improvement if the value of the improvement does not exceed 10 percent of the current market value of the building or structure.

1612.3 Establishment of flood hazard areas. Flood hazard areas are established to include the following:

1. the flood hazard areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Austin, Texas," dated September 26, 2008, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps (FIRM and FBFM) and related supporting data along with any amendments or revisions thereto are hereby adopted by reference and declared to be a part of this section; and
2. the 100-year and 25-year floodplains based on projected full development as specified in the Austin City Code and Drainage Criteria Manual are adopted by reference and declared to be part of this section.

1612.4 Design and construction. The design and construction of buildings and structures, and additions and alterations to buildings and structures located in flood hazard areas, shall be in accordance with ASCE 24, Flood Resistant Design and Construction.

1612.4.1 Freeboard. A minimum freeboard of one (1) foot shall be added where the design flood elevation or other elevation requirements are specified.

1612.4.2 Provisions of safe refuge.

1. Buildings or structures constructed in the flood hazard area where the ground surface is below the design flood elevation, or where flood water velocities at the building may exceed five feet per second, shall be provided with an enclosed refuge space one (1) foot or more above the design flood elevation of sufficient area to provide for the occupancy load with a minimum of

12 square feet per person. The refuge space shall be provided to an exterior platform and stairway not less than three feet wide.

2. Existing buildings and structures in flood hazard areas which are enlarged, extended, or altered, or where a change of use or occupancy is made, shall conform to the requirements of Subsection 1.
3. No floor level or portion of a building or structure that is lower than one (1) foot above the design flood elevation, regardless of the structure or space classification, shall be used residentially, or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.

1612.4.3 Means of egress. Normal access to the building shall be by direct connection with an area that is a minimum of one (1) foot above the design flood elevation, unless otherwise approved by the building official.

1612.5 Flood hazard documentation. The following documentation shall be prepared and sealed by a registered design professional and submitted to the building official:

1. for construction in flood hazard areas:
 - 1.1. the elevation of the lowest floor, including basement, as required by the lowest floor elevation inspection in Section 110.3.5 (Lowest floor elevation);
 - 1.2. for fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.6.1.1, ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2, ASCE 24; and
 - 1.3. for dry flood-proofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.

1704.1.1 Statement of special inspections. The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 107.1 (General) as a condition for permit issuance. This statement shall include a complete list of materials and work requiring special inspections by this section and the inspections to be performed. The owner or owner's agent shall submit, for the building official's review, a list of the individuals, agencies, or firms intended to be retained for conducting such inspections.

In January 2003, Chicago amended its energy code requirements for reflective roofs. This code applies to all buildings except: separated buildings that have a peak design rate of energy use less than 3.4 British thermal units an hour per ft² or 1.0 watts per ft² of floor area for all purposes; and unconditioned buildings (i.e., those that are neither heated nor cooled). The amended code states that roofing materials used in roofs with slopes of 2:12 inches or less must meet the following requirements: for roofs installed on or before December 31, 2008, a minimum solar reflectance (both initial and weathered) of 0.25, when tested in accordance with American Society for Testing and Materials (ASTM) standards E 903 and E 1918, or by testing with a portable reflectometer at near ambient conditions; and for roofs installed after December 31, 2008, at least the minimum criteria to qualify for an ENERGY STAR[®] label as designated by the ENERGY STAR[®] program.

City of Chicago, Illinois
International Energy Conservation Code
Article 1, Administration
Section 18-13-101, Scope and General Requirements

18-13-101.5.3 Urban Heat Island Provisions. The reflectance requirements of Section 18-13-101.5.3.1 through 18-13-101.5.4.3 are intended to minimize the urban heat island effect.

The following are exempt from the reflectance requirements:

1. The portion of the roof acting as a substructure for and covered by a rooftop deck, or vegetation associated with an extensive or intensive green roof as defined by the U.S. Environmental Protection Agency (“USEPA”), or by photovoltaic and solar thermal equipment.
2. A rooftop deck covering a maximum of 1/3 of the rooftop total gross area.

The remainder of the roof area must meet the reflectance requirements set forth in section 18-13-101.5.4.

18-13-101.5.4 Solar Reflectance. All roof exterior surfaces shall have a minimum solar reflectance as specified in Section 18-13-101.5.4.1 through Sections 18-13-101.5.4.3 when (i) tested in accordance with ASTM E903 or ASTM E1918, (ii) tested with a portable reflectometer at near ambient conditions, (iii) labeled by the Cool Roof Rating Council, or (iv) labeled as an Energy Star qualified roof product. Any product that has been rated by the Cool Roof Rating Council or by Energy Star shall display a label verifying the rating of the product.

18-13-101.5.4.1 Low-Sloped Roofs. Roofing materials used in roofs with slopes of a rise of 0 units in a horizontal length of 12 units (0:12 pitch) up to and including roofs with slopes of a rise of 2 units in a horizontal length of 12 units (2:12 pitch) (“low-sloped”) shall meet the following requirements:

1. Low-sloped roofs permitted on or after April 22, 2009 in conjunction with a new building or structure shall utilize roofing products that meet or exceed an initial reflectance value of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or by Energy Star.

Exception: Where more than 50% of the total gross area of the low-sloped roof is covered with vegetation associated with an extensive or intensive green roof as defined by the USEPA, the remainder of the roof shall have a reflectance value of a minimum of 0.30. The rooftop deck exception in 18-13-101.5.3 applies.

Exception: Ballasted roofs with a minimum of 15 lbs./sq. ft. of ballast over the entire roof surface may have a reflectance value of a minimum of 0.30. For purposes of this section, “ballast” shall mean river rock aggregate or larger, pavers or other means of weighing down a roofing membrane over a substrate to resist wind uplift.

2. Full or partial replacements or retrofits of existing low-sloped roofs originally permitted prior to April 22, 2009 by substituting the original materials or roofing system with new materials shall utilize roofing products that meet or exceed an initial reflectance value of 0.72 or a three-year installed

reflectance value of 0.5 as determined by the Cool Roof Rating Council or Energy Star. Insulation installation must be maximized per section 18-13-101.4.

Exception: Where more than 50% of the total gross area of the low-sloped roof is covered with vegetation associated with an extensive or intensive green roof as defined by the USEPA, the remainder of the roof shall have a reflectance value of a minimum of 0.30. The rooftop deck exception in 18-13-101.5.3 applies.

Exception: Where an existing ballasted roof is replaced with a ballasted roof, one of the following two sets of requirements must be met: (i) the reflectance value for the entire roof shall be a minimum of 0.30 and a minimum of 15 lbs./sq. ft. of ballast coverage over the entire roof shall be provided, or (ii) the reflectance value shall be a minimum of 0.72 or a three-year installed reflectance value of 0.5 as determined by the Cool Roof Rating Council or Energy Star.

Exception: When roof systems with a slope of a rise of a maximum 1/4 unit in a horizontal length of 12 units (114:12 pitch) are replaced with a built-up roofing system, the top layer aggregate must have a minimum reflectance of 0.3. The exposed top layer of aggregate must substantially cover the roof area, such that the maximum exposure of the underlying water-repellent layer is no more than 5% of the total area of the roof.

Exception: Where an existing low-sloped roof is repaired to mend, fix, patch, cure, refurbish or otherwise salvage a portion of an existing roof in order to maintain or extend the lifespan of such roof, the portion of the roof that is repaired shall meet or exceed the reflectance value in effect when the roof was originally permitted.

18-13-101.5.4.2 Medium-Sloped Roofs. Roofing materials used in roofs with slopes of over a rise of 2 units in a horizontal length of 12 units (2:12 pitch) up to and including roofs with slopes of a rise of 5 units in a horizontal length of 12 units (5:12 pitch) ("medium-sloped") shall have an initial solar reflectance of 0.15 or greater. Full replacement or partial replacement of 50% or more of the gross medium-sloped roof area over the preceding 36 months by substituting the original materials or roofing system with new materials must meet the required reflectance values in this section.

Exception: A repair of an existing roof to mend, fix, patch, cure, refurbish or otherwise salvage a portion of an existing roof in order to maintain or extend the lifespan of such roof must meet the required reflectance values in effect when the roof was originally permitted.

Exception: Partial replacement of an existing roof of less than 50% of the gross medium-sloped roof area within the preceding 36 months must meet the required reflectance value in effect when the roof was originally permitted.

18-13-101.5.4.3 Multiple-Sloped Roofs. Roofs with multiple slopes shall be subject to those requirements applicable to the slope which covers the largest area of the building footprint.

18-13-101.5.4.4 Steep Roofs. Roof with slopes greater than a rise of units in a horizontal length of 12 units (5:12 pitch) shall be exempt from any initial solar reflectance requirements.

Setbacks/Buffers

The model presented applies to legally defined shoreline zone to protect natural character, controlling erosion, and maintaining native vegetation and wildlife. Shoreline protection overlay is a set of special development considerations that does not alter the underlying zoning. The overlay simply sits on top of the existing ordinance's land use requirements. A shoreline overlay is a way for coastal communities to use existing zoning to: 1) protect coastal property values by maintaining the attractive natural character, 2) prevent water pollution and damage to buildings by controlling erosion, and 3) maintain the high quality of life on the shoreline by maintaining native vegetation and wildlife habitat.

Great Lakes Shoreline Protection Overlay Zone

Prepared by the Michigan Land Use Institute

Article I. Definitions

Ordinary High Water Mark - The ordinary high water is established legally by the U.S. Army Corps of Engineers for all of the Great Lakes. The 1986 lake level is generally considered the most reasonable high water mark to use for legal definitions.

Mature Forested Vegetation - This can be defined as trees, generally grouped or in a line, of a minimum diameter at breast height (dbh). A dbh of 4" is a reasonable minimum size for most mature forested vegetation.

Foredune Crest - A foredune is the first dune landward of the ordinary high water mark, generally not stabilized with mature vegetation. The crest of the foredune is the highest elevation, and frequently changes over time due to wind erosion.

Steep Bluff - A bluff is generally comprised of unsorted glacial till (sand, gravel, clay and cobbles) that rises from the beach. A minimum height for a bluff from the beach to the crest, is usually at least 10'. It may also be useful to define a minimum slope for a bluff to be considered steep. A slope of 25% may be a reasonable minimum, although bluffs are frequently much steeper.

Principle Structure - A principle structure is generally considered the structure necessary for the land use for which a permit is being requested, usually a house or commercial building. It is distinguished from accessory structures, which may include garages, sheds, storage buildings, or equipment structures.

Article II. 'Districts and Maps'

1. The Great Lakes shoreline protection overlay zone includes all land lying within 500 feet of the 1986 U.S. Army Corps of Engineers High Water Mark, and as depicted on the Official Zoning Map for (insert local government name). This boundary extends across all underlying zoning districts.

Or

The Great Lakes shoreline protection overlay zone includes all land lying within the boundary depicted on the Official Zoning Map for (insert local government name). This

boundary extends across all underlying zoning districts. The boundary was established based on a scientific inventory of coastal resources, which is available for review at the government office. The boundary is set at least 200' back from any sensitive resource, as delineated in the inventory.

Article III. Great Lakes Shoreline Protection Overlay Zone

Section 1.1 Purpose and Intent

1. The provisions of the Great Lakes shoreline protection overlay zone are intended to protect the unique and sensitive natural environment of the lake shore areas adjacent to the Great Lakes in (*insert local government name here*). Its purpose is based on the recognition that:

- a) The economic and environmental well-being and health, safety, and general welfare of (*insert local government name here*) is dependent on, and connected with the preservation of its Great Lakes shoreline areas;
- b) The shoreline zone has unique physical, biological, economic, and social attributes;
- c) Future land development and redevelopment should not be conducted at the expense of these attributes;
- d) Property values will be enhanced when the natural features of the shoreline zone are preserved;
- e) Pollution, impairment or destruction of the shoreline area and the adjacent bottomlands and waters of Lake should be prevented or minimized.

Section 1.2 General Requirements

Allowable Uses

The uses allowed by the underlying zoning districts are not altered by the overlay. All allowable uses that occur within the shoreline protection overlay zone shall also comply with the standards set forth in this section. These requirements shall be considered in addition to use restrictions or other applicable regulations for each zoning district. These requirements only apply to properties that fall within the shoreline protection overlay zone, as described in Article II and shown on the zoning districts map.

In the event that regulations imposed by this ordinance conflict with regulations of an underlying zoning district, the regulations established by this ordinance shall prevail to the extent of the conflict and no further.

Requirements to Receive Land Use Permit

Before conducting any construction, earth moving or removal of vegetation within the Great Lakes shoreline protection overlay zone, all of the following criteria must be met:

- a) A site plan meeting the requirements outlined in Section 1.3 shall be submitted to the Zoning Administrator;
- b) A land use permit shall be withheld pending verification that the applicant has received all required county, state or federal permits, including but not limited to septic and water well permits; soil erosion and sedimentation control permits; wetland permits; flood plain and culvert permits; driveway permits; or building permits.

c) This ordinance is intended to supplement, and not abrogate, the Michigan Department of Environmental Quality's authority over the review of applications and issuance of permits for construction activities under the provisions of the Sand Dune Protection and Management Act (Part 353, Natural Resources Environmental Protection Act, MCL 324.35301 et. seq.); the Shore Lands Protection and Management Act, (Part 323, Natural Resources Environmental Protection Act, MCL 324.32301 et. seq.), the Endangered Species Protection Act (Part 365, Natural Resources Environmental Protection Act, MCL 324.36501 et. seq.), and the Wetland Protection Act (Part 303, Natural Resources and Environmental Protection Act, MCL 324.30301 et. seq.). If a permit or approval has been issued by the State of Michigan for a building, structure, or any grading, filling, earth moving, clearing, or removal of vegetation within the jurisdiction and scope of regulations set forth above, a copy of such permit shall be filed with the Zoning Administrator, and such permits or approvals shall be attached to and made a condition of performance for any permit issued under this Ordinance;

If all of the conditions above are met, a land use permit for the proposed activity shall be approved according to the requirements and standards of this Ordinance.

1.3 Setback Requirements

1. All structures proposed to be built within the Great Lakes shoreline protection overlay zone shall be set back according to the requirements below, except for the following uses: pump houses, recreational docks, storm water and erosion control devices, picnic tables, benches, recreational watercraft, and stairways and walkways.

2. Within the shoreline protection overlay boundary, the following setback requirements apply:

- a) No principle structure shall be allowed within 75' of ordinary high water mark;
- b) No structure shall be constructed lakeward of any adjacent existing structure;
- c) On lots with a line of mature forested vegetation within 100' of the ordinary high water mark, the lakeshore side of the principal structure shall be set back at least 20 feet landward from the edge of predominantly forested vegetation;
- d) On lots lacking a line forested vegetation within 100' of the ordinary high water mark (rocky or sandy beaches), all structures except those specifically exempted above shall be set back 100 feet from the 1986 High Water Mark.
- e) On lots with a foredune, no structure shall be constructed within 25' of the crest of the first lakeward sand dune;
- f) On lots with a steep bluff which begins within 100 feet of the 1986 High Water Mark all structures shall be set back at least 50 feet from the top of the bluff;
- g) On lots with coastal wetlands, a setback of 75 feet shall be maintained from the wetland.

3. If a greater setback is required under the provisions of any state or federal law than is required by this section, then such greater setback requirement shall apply. Where the imposition of the setbacks in the above table precludes the location of a dwelling or other primary structure, the applicant may request a variance. Any variance must be obtained from the Zoning Board of Appeals in accordance with Article (*insert applicable number*). To obtain a variance, the applicant must show there is no feasible and prudent location or design on the property and that the dwelling or structure will

otherwise meet the intent and spirit of this Article. Conditions may be imposed as part of the variance where they are reasonably proportional to the risks regulated by this Article.

Section 1.4 Coastal Vegetative Buffer Zone Requirements

1. Vegetative buffer zones protect water quality and shoreline habitat, preserve scenic and aesthetic character, and control erosion and flooding. To preserve the fragile and transient nature of the coastal environment, a Coastal Vegetative Buffer Zone shall be maintained 100 feet landward of the 1986 Ordinary High Water Mark. The vegetated zone with native shoreline species shall serve as a natural transition between the shoreline and adjacent upland development.

2. Within the Coastal Vegetative Buffer Zone, natural vegetation shall be retained in a natural, undisturbed condition. Only minimal alteration of vegetation using selective pruning or thinning techniques necessary to obtain a view of the water shall be acceptable. Removal of trees, shrubs, ground cover and other native vegetation shall require review and approval of the Zoning Administrator to ensure impacts to the coastal resources are minimized.

The following standards apply to all uses within the vegetative buffer zone:

- a) Vegetation removal shall be limited to the amount necessary for the development of the site. Protection of tree crowns and root zones shall be required for all trees;
- b) Vegetation shall be restored in areas affected by construction activities. Vegetation must be indigenous to the Great Lakes shoreline. Temporary vegetation, sufficient to stabilize the soil, may be required on all disturbed areas as needed to prevent soil erosion. Stumps of trees cleared or harvested within the vegetative buffer zone must remain undisturbed in the ground;
- c) Tree removal shall be limited to removal of fallen, dead or dangerous trees and selective cutting of trees (trees must be at least 10 feet apart) to provide a filtered view of the water. Cutting of trees on the parcel is limited to 30 percent, but clearings must be limited to 30 feet per 100 feet of the shoreline width. Those trees to be removed shall be so identified and approved by the zoning administrator.

3. In cases where native vegetation does not exist within a buffer zone, the landowner is encouraged to replant the buffer zone with native plant species.

Article IV. Site Plan Review

Site Plan Approval Standards

In addition to site plan review standards set forth elsewhere in the (insert name of local government) Zoning Ordinance, the following standards shall be considered by the Zoning Administrator or Planning Commission when reviewing the site plan submission:

- 1. The site plan shall demonstrate that the impact to fish, birds, wildlife and native vegetation is minimized by preserving natural habitat;
- 2. The site plan shall demonstrate that erosion and sedimentation shall be prevented, and that the risk of structural loss due to future changes in lake levels is minimized;

3. The site plan shall demonstrate that the natural character and aesthetic values of the shoreline is maintained by minimizing the visual impact of the development;

4. Site development shall be fitted to the topography and soil so as to create the least potential for vegetation loss and site disturbance;

5. All structures shall be located to maintain an open and unobstructed view to the waterfront from adjacent properties, roadways and pedestrian ways, to the maximum extent possible

Site Plan Data Required

If a site plan is not required by the requirements of the underlying zoning district, one shall be submitted with an application for permit under this Ordinance. All applicants shall submit site plans that contain the following information:

a) Two complete sets of plans that show the placement of any buildings or other structures, delineates a perimeter line encompassing all proposed activities, and identifies the location and extent of the shoreline protection overlay zone boundary;

b) All shoreline types and coastal resources should be identified, including bluff ridges, wetland boundaries, dune crest, ordinary high water mark, and tree line (as defined by trees with a minimum of 4" dbh), first landward boundary of native grasses, etc.;

c) A description of outdoor lighting;

d) A plan for controlling traffic to the lakefront, detailing construction and maintenance of paths, stairs or boardwalks;

e) A grading plan that delineates areas of cut and fill, and identifies changes in topography and drainage. If the area to be graded exceeds 5,000 square feet the applicant shall submit a map showing the existing contours of the site and finished contours to be achieved by grading. Contours shall be sufficiently detailed to define the topography over the entire site (generally at two-foot intervals);

f) Detailed drawings and descriptions of all temporary and permanent soil erosion and sedimentation control measures, and bank stabilization measures as submitted to the Soil Erosion Control Enforcement Officer;

g) Detailed drawings delineating areas to be cleared of vegetation before and during development activities, with area calculations and descriptions of the vegetation to be removed, and detailed drawings and descriptions of proposed vegetation restoration for those same areas;

h) Detailed drawings that show the location of existing structures on the property, as well as dwellings on neighboring parcels which may be obstructed from a lakefront view by the proposed development;

i) The site plan shall identify the location of property, including a full tax identification number, location of the nearest public road intersection, a north arrow and map scale;

j) The site plan shall include the name, address, professional status, license number (if applicable), and phone number of the person who prepared the plan;

k) If the area to be cleared of vegetation exceeds 15,000 square feet) a Natural Features Inventory and Biological Survey of the area within a 25-foot buffer of the perimeter of proposed activity shall be required. The Survey shall include a summary of plant species, and especially identify any rare, threatened or endangered species, and identify the likelihood of any rare, threatened or endangered wildlife using the property. A qualified biologist shall prepare the survey.

Site Plan Review Procedures

1. On parcels with less than 120 feet of Great Lakes frontage, a permit for the construction of one single family dwelling, or accessory buildings or structures to a proposed or existing single family dwelling shall be subject to site plan review and approval by the Zoning Administrator. The Planning Commission shall review and approve permits for the construction of any commercial or industrial land use, or residential applications for more than one dwelling, or any other structure, or clearing and grading, or other earth removal activities on lots or parcels with more than 120 feet of Great Lakes frontage.

The Town of Poughkeepsie created this local law in order to protect the water resources and buffer zones adjacent to them. The law discusses: the activities that are permitted; activities that are banned; activities which are regulated; and the procedure for obtaining a permit to build on or around these sensitive areas. The amendments to this chapter on June 3, 2009 increased the fines for violations of the law. Previously, the first offense was punishable by a fine of not less than \$100 but not more than \$500. For each subsequent offense, the fine would not be less than \$500 but not more than \$5,000. Now the law reads that the first offense is punishable by a fine of not less than \$500 but not more than \$1,000. For each subsequent offense, the fine would not be less than \$1,000 but not more than \$10,000.

Town of Poughkeepsie, Dutchess County, New York

Part II, General Legislation

Chapter 116, Aquatic Resource Protection

[HISTORY: Adopted by the Town Board of the Town of Poughkeepsie 5-21-2003 by L.L. No. 5-2003.

Editor's Note: This local law superseded former Ch. 88, Freshwater Wetlands, adopted 8-25-1976 by L.L. No. 7-1976. Amendments noted where applicable.]

§ 116-1. Title.

This chapter shall be known as the "Aquatic Resource Protection Law" of the Town of Poughkeepsie.

§ 116-2. Legislative intent.

- A. It is the intent of the Town of Poughkeepsie to protect aquatic resources.
- B. It is the intent of this chapter to exercise concurrent jurisdiction with NYSDEC and USACOE over all aquatic resources within the Town.
- C. It is the intent of this chapter to incorporate the protection of aquatic resources, into the land use, development approval and construction inspection procedures of the Town.

§ 116-3. Findings.

- A. The Town of Poughkeepsie has determined that the public interest, health, safety, and general welfare of the residents of the Town will best be served by providing for the protection, preservation, proper maintenance, and use of the Town's aquatic resources from encroachment, spoiling, polluting, or elimination resulting from activities such as recreational or commercial development, housing, road construction, utility placement, and/or disregard for natural resources.
- B. The Town desires to prevent acts inconsistent with the protection of aquatic resources.

C. Aquatic resources in the Town are valuable natural resources that benefit the entire Town and the surrounding region by performing one or more of the following functions:

- (1) Providing common linkages between aquatic systems (aquifers, floodplains, wetlands, lakes, rivers, etc.).
- (2) Avoiding watershed diversion of ground or subsurface water.
- (3) Aid in controlling stormwater discharge.
- (4) Providing drainage and flood control through hydrologic absorption, natural storage, and flood conveyance.
- (5) Protecting subsurface water resources, watersheds, and groundwater recharge systems.
- (6) Providing critical living, breeding, nesting, and feeding environments for many forms of wildlife, including, but not limited to, mammals, wildfowl, shorebirds, rare species, especially endangered and threatened species, and other dependent plants and animals.
- (7) Reducing pollution through natural biological degradation and chemical oxidation.
- (8) Controlling erosion by serving as sedimentation areas and filter basins, capturing silt and organic matter.
- (9) Providing sources of nutrients in freshwater food cycles.
- (10) Serving as nursery grounds and sanctuaries for freshwater fish.
- (11) Providing recreation.
- (12) Serving as educational and research resources.
- (13) Preserving open space and aesthetic resources.

D. Areas adjacent to aquatic resources provide essential protection by reducing impacts from activities taking place on surrounding lands. For the purpose of this chapter, these adjacent areas are defined as buffers. In addition to those benefits listed above, buffers adjacent to aquatic resources perform one or more of the following functions:

- (1) Removing pollutants delivered from urban stormwater and infiltrating stormwater runoff.
- (2) Reducing erosion and sediment entering the aquatic resource.
- (3) Stabilizing stream banks.
- (4) Maintaining base flow of streams.
- (5) Providing tree canopy for shade to promote desirable aquatic life.

E. The protection of aquatic resources and buffers is a matter of concern to the entire Town. The establishment of regulatory and conservation practices for aquatic resources, and buffers serves to protect the Town by ensuring review and regulation of activity that might adversely affect the health, safety, and welfare of the citizens of the Town.

F. Aquatic resources in the Town and other areas form an ecosystem that is not confined to any one property or neighborhood. Experience has demonstrated that effective protection requires consistency of approach in preservation and conservation efforts throughout the Town.

G. The State of New York has enacted legislation entitled the "Freshwater Wetlands Act" found in Article 24 of New York State Environmental Conservation Law, which authorizes local governments to establish their own procedures for the protection and regulation of aquatic resources lying within their jurisdiction (6 NYCRR Part 665).

H. The Federal government, through the USACOE, in cooperation with the Environmental Protection Agency and the Fish and Wildlife Service, regulates certain activities affecting aquatic resources in the Town as part of its nationwide jurisdiction over such aquatic resources. It is the intent of this chapter to

provide for local protection of these aquatic resources without replacing, limiting, or conflicting with this federal jurisdiction.

§ 116-4. Definitions.

Except where specifically defined herein, all words used in this chapter shall carry their customary meanings. Words used in the present tense include the future and the plural includes the singular. The word "shall" is intended to be mandatory. As used in this chapter, the following terms shall have the meanings indicated:

Activity - Any act, action, deed, operation, or procedure by any individual or individuals, firm, partnership, association, corporation, company, organization, or other legal entity of any kind, including municipal corporations, governmental agencies, or subdivisions.

Agriculture/Agricultural Activity - All activities, as defined in the NYS Agriculture and Markets Law, directly related to the grazing, growing or raising of crops or livestock, including, but not limited to, horticulture and fruit production, on any property receiving Agricultural Value Assessment. Timber harvesting, clear-cutting, draining and permanent alteration of aquatic resources are not included in agricultural activities.

Alter - To change, move, or disturb any vegetation, soil, drainageway, or other natural material or system within an aquatic resource, as defined by this chapter.

Applicant - Any individual or individuals, firm, partnership, association, corporation, company, organization, or other legal entity of any kind, including municipal corporations, governmental agencies, or subdivisions thereof, who has a request for a permit to conduct a regulated activity before the approval authority.

Approval Authority - The administrative board, public official, or public employee empowered to grant or deny permits under this chapter, to require the posting of bonds as necessary, and to revoke or suspend a permit where lack of compliance is established. The approval authority shall be the Planning Board or the Building Inspector for the Town or as the Town Board may appoint.

Aquatic Resource - Any wetland, watercourse, or water body and associated buffers.

Buffer Area - Protective areas or upland areas surrounding or adjacent to any wetland, watercourse or water body that are subject to regulation. The size and extent of the buffers shall be as follows:

A. For aquatic resources of at least one acre but less than five acres, the buffer shall be 25 feet. For aquatic resources of at least five acres but less than nine acres, the buffer shall be 50 feet. For aquatic resources of at least nine acres but less than 12 acres, the buffer shall be 75 feet. For aquatic resources of 12 acres or greater, the buffer shall be 100 feet. The buffers cited above may be greater where designated by the approval authority. The buffers shall be measured horizontally and in a direction perpendicular to the aquatic resources boundary, thus the buffer boundary shall parallel the aquatic resources boundary.

B. The buffer for the Wappingers Creek shall be 50 feet beyond the streambank.

C. The buffer for all streams other than the Wappingers Creek shall be 25 feet from the streambank.

Clear-cutting - Any cutting of more than 30% of trees four inches or more in diameter breast height (4.5 feet), including cutting of trees which results in the total removal of one or more naturally occurring species, whether or not the cutting meets or exceeds the 30% threshold, over any ten-year cutting cycle as determined on the basis of wetland/buffer area per lot or group of lots under single ownership.

Code Enforcement Officer - The individual(s) designated by the Town Board and charged with the enforcement of the Town's building, fire, and zoning codes.

Dams and Water Control Devices - Barriers used to obstruct the flow of water to raise, lower, or maintain the water level in aquatic resources.

DCSWCD - Dutchess County Soil and Water Conservation District.

Deposit - To fill, place, discharge, or dump any material.

Discharge - The release of any water, substance, or material into an aquatic resource whether or not such substance causes pollution. The release of stormwater into an aquatic resource is excluded from the definition of "discharge."

Drain - To deplete or empty of water by drawing off by degrees or in increments; or to modify the hydrology so as to reduce the amount of water within an aquatic resource.

Dredge - To excavate or remove sediment, soil, mud, sand, shells, gravel, or other aggregate or artificial fill.

Enhancement - Activities conducted in existing aquatic resources which increase one or more aquatic functions.

Excavate - To dig out and remove any material.

Existing Land Use - A land use which, prior to the effective date of this chapter, is either:

- A. A completed project; or
- B. Ongoing, as in the case of agriculture; or
- C. Has received final approval which has not expired; or
- D. Under construction with appropriate permit(s).

Filling - The depositing of material in an area to change the grade.

Grading - To alter the natural elevation of the land greater than two feet, or the addition/removal of greater than 50 cubic yards of material from the project site.

Material - Liquid, solid, or gaseous substances, including, but not limited to, soil, silt, gravel, rock, sand, clay, peat, mud, debris, and refuse; any organic or inorganic compound, chemical agent, or matter, including sewage, sewage sludge, or effluent; and agricultural, industrial, or municipal solid waste.

Mitigation - The restoration, creation, and/or enhancement of an aquatic resource area for the purpose of compensating for unavoidable adverse impacts that remain after all appropriate and practicable avoidance and minimization has been achieved.

NYSDEC - The New York State Department of Environmental Conservation.

Permit/Aquatic Resources - That form of written Town approval required by this chapter for the conduct of a regulated activity.

Planning Board - The duly appointed Planning Board of the Town.

Pollution - The presence in the environment of human-induced conditions or contaminants in quantities or characteristics which are or may be injurious to human, plant, or animal life or to property.

Project - Any activity resulting in direct or indirect physical or chemical impact on an aquatic resource, including, but not limited to, any regulated activity. For the purpose of this chapter, a project is considered the total action proposed or accomplished by one owner/developer or partnership or other association of owners/developers.

Remove - To dig, dredge, suck, bulldoze, dragline, blast, mine, or otherwise excavate or regrade, or the act thereof.

Restoration - Reestablishment of the aquatic resource characteristics and function(s) at a site where they have ceased to exist or exist in a substantially degraded state.

State Environmental Quality Review Act (SEQRA) -The law pursuant to Article 8 of the New York Environmental Conservation Law providing for environmental quality review of actions which may have a significant effect on the environment.

Stream - Any watercourse which appears as a solid blue line on the 2003 Aquatic Resources Map of the Town.

Streambank - The outermost edge of a stream channel.

Stream Channel - The area of a stream that transports bankfull flow. Bankfull flow is the point at which flooding may just begin to escape the channel and enter the floodplain. On average, bankfull discharge will occur once every 1.5 years.

Structure - Anything constructed or erected, the use of which requires location on or in the ground or attachment to something having location on the ground. The term includes, but is not limited to, buildings, tennis courts and swimming pools.

Timber Harvesting - Any activity which may alter the physical characteristics of any forested land, including, but not limited to, any activity involving or associated with the cutting of trees, except that the following activities shall not be considered to be timber harvesting:

A. The routine maintenance of roads, easements, and rights-of-way and the clearing of farm fence lines; and

B. The clearing of approved subdivision roads, site plans, and public utility easements.

Town - Town of Poughkeepsie.

Town Board - The duly elected Town Board of the Town of Poughkeepsie.

Town Clerk - The duly elected Town Clerk of the Town of Poughkeepsie.

Town Engineer - Any person or firm employed by the Town of Poughkeepsie as the Town Engineer.

USACOE - United States Army Corp of Engineers.

Water Body - Any natural or artificial, permanent, ephemeral, or intermittent, public or private pond, lake, reservoir, or other area which usually or intermittently contains water and which has a discernible shoreline of a water body.

Watercourse - Any natural or artificial, permanent or intermittent, public or private water body or water segment, such as rivers, streams, brooks, waterways or natural drainage swales that is contained within, flows through, or borders the Town of Poughkeepsie.

Watercourse Boundary - The limit of the stream channel.

Wetland - All areas of 1/10 acre or greater in area that comprise hydric soils or soils that possess characteristics associated with reducing soil conditions, and/or are saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of hydrophytic vegetation as defined by The Federal Interagency Committee for Wetlands Delineation, 1987, in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, Washington, D.C., and adopted by the USACOE, United States Environmental Protection Agency, and the United States Fish and Wildlife Service, or as amended and updated. Hydric soils referenced above shall include Canandaigua(Ca), Carlisle(Cc), Fluvaquents(Ff), Halsey(Ha), Hydraquents(Hy), Livingston(Lv), Medisaprists(Hy), Palms(Pc), Sun(Su), Wayland(Wy), and potential hydric soils Kingsbury and Rhinebeck(Kn), Linlithgo(Ln), Massena A(MnA), Massena B(MnB), Punsit(Pz), Udorthents(Ue), Fredon(Fr), and Raynham Silt Loam(Ra), as listed in the revised Dutchess County Soil Survey Series or such revised, updated and adjusted soil surveys as may be completed.

Wetland Boundary - The outer limits of the environmental characteristics of a wetland, as defined under "wetland" in this section and as properly delineated, as defined under "wetland delineation" in this section.

Wetland Delineation - The process of determining wetlands and their boundaries. The boundaries of a wetland shall ordinarily be determined by field investigation, flagging and survey by qualified professionals such as Dutchess County Soil and Water Conservation District. A wetland delineation by the NYSDEC or USACOE shall constitute delineation for purposes of this chapter.

Wetlands Delineation Manual - Common name given to the 1987 manual produced by the USACOE referenced in the definition of "wetland" above, which presents approaches and methods for identifying and delineating wetlands for purposes of Section 404 of the Clean Water Act. It is designed to assist users in making wetland determinations using a multiparameter (soil, hydrology, and vegetation) approach.

ZBA - The duly appointed Zoning Board of Appeals of the Town.

§ 116-5. Regulated and permitted acts.

A. Regulated activities are not prohibited by this chapter, but no regulated activity shall be conducted in an aquatic resource without a written permit from the approval authority and full compliance with the terms of this chapter.

B. Permitted activities. The following activities are permitted without a permit within aquatic resources, provided they do not create a pollution or erosion hazard, interfere with proper drainage, adversely affect reasonable water use by others, and do not require grading, filling, draining or dredging for which a permit may be required. Such acts must conform to the Town Zoning Ordinance, Building Code, and any and all other applicable laws and statutes:

(1) Normal ground maintenance, including, but not limited to, mowing, trimming of vegetation, and removal of dead or diseased vegetation around a residence.

(2) Repair of existing walkways, walls, and driveways.

(3) Maintenance and repair of preexisting structures.

(4) Operation and maintenance of existing dams and water control devices.

(5) Public health activities, in emergencies only, of the New York State or Dutchess County Departments of Health.

(6) Agricultural activities as defined in § 116-4.

(7) Activities which qualify as Type II actions under the provisions of 6 NYCRR § 617.5(c) as the same may be amended from time to time.

C. Regulated activities which require an aquatic resource permit. Except as otherwise provided in § 116-5B of this chapter, a written permit from the approval authority is required for any of the following activities in an aquatic resource, if the activity impacts a portion greater than or equal to 1/10 acre:

(1) Place or construct any structure.

(2) Conduct any form of draining, dredging, excavation, or removal of material, either directly or indirectly.

(3) Conduct any form of filling or depositing any sort of material, either directly or indirectly.

(4) Install any service lines or cable conduits.

(5) Introduce any form of pollution, including, but not limited to, the installing of a septic tank, the running of a sewer outfall, or the discharging of sewage treatment effluent or other liquid wastes into, or so as to drain into, an aquatic resource.

(6) Alter or grade natural and/or existing man-made features and contours, alter drainage conditions, or divert any flow of an aquatic resource.

(7) Construct docks, bridges, pilings, dams, impoundments, or other water control devices (including swales) whether or not they change the ebb and flow of the water.

(8) Install any pipes or wells.

(9) Construct a driveway or road.

(10) Strip any area of vegetation, including clear-cutting.

(11) Conduct any other activity that impairs or may impair any of the functions that aquatic resources perform as described in § 116-3B of this chapter.

D. It shall be unlawful for any individual or entity to place or deposit chemical wastes or to introduce influents of sufficiently high thermal content as to cause deleterious ecological effects in any aquatic resource.

E. The provisions of this chapter shall not apply to any existing land use as defined in § 116-4.

§ 116-6. Permit issuance.

The approval authority of permits for regulated activities under this chapter shall be:

A. The Planning Board for any project where site plan approval, subdivision approval, major land contour permit, or floodplain development permit is required; or

B. The Building Inspector for any project where a building permit is required, other than in § 116-6A above, or any nonexempt project as required in § 116-5C; or

C. The Zoning Department for minor land contour permits.

§ 116-7. Permit applications, general procedures.

A. No individual or entity shall undertake a regulated activity within an aquatic resource without first obtaining a written permit as provided for in this chapter.

B. Any applicant proposing to conduct or causing to be conducted a regulated activity requiring a permit under this chapter shall file an application, in such form and with such information as the approval authority shall prescribe as provided for in § 116-6.

(1) For those applications not involving a site plan or subdivision, the following information shall be included, at a minimum:

(a) The name, address and telephone number of the owner;

(b) The street address and tax map designation of the property;

(c) A sketch plan including boundaries of the property parcel with the boundaries of any aquatic resources indicated on the sketch;

(d) A description of the proposed work and purpose, and a statement describing why the activity cannot be located outside the aquatic resource; and

(e) Those items set forth in § 116-8A.

(2) For those applications that include a site plan or subdivision, the following information shall be included, in addition to that required in § 116-8A:

(a) A statement of the impacts of the project on upstream and downstream areas where water retention capacity, water flow, or other drainage characteristics of any aquatic resource is affected; and

(b) A full environmental assessment form under SEQRA.

(3) Additional information may be required by the approval authority in order to make a determination on the application.

C. Single application required.

(1) Where an application has been made to the approval authority for an activity that is subsequently determined to require a permit pursuant to this chapter, a copy of said application may be considered as the permit application.

(2) Where a proposed activity is found to require a NYSDEC and/or USACOE permit, that permit shall serve as the application and permit, provided that such permit meets the requirements of this chapter. In any instance where the state or federal permit fails to include the buffer requirements as set forth in this chapter, then the approval authority may choose to add separate conditions to such permit in order to meet the requirements set forth in this chapter.

D. All permits issued pursuant to this chapter shall be affixed as conditions to the final approval issued by the Planning Board or affixed to the building permit as conditions to the issuance of a certificate of occupancy.

E. A public hearing shall be held on the completed application with notice being given by publication in the Town's official newspaper at least 10 days prior to the date of the hearing.

F. Waiver of requirements. Should the approval authority determine, after review of a completed application, that an activity proposed for a regulated area is insignificant, the approval authority shall have the power to:

(1) Waive any information requirements contained in § 116-7B.

(2) Waive any public hearing.

(3) Waive referrals to outside agencies.

(4) Waive any requirements for a performance bond.

(5) Suspend the permitting process for the action and authorize the immediate issuance of the permit, as in the case of a renewal in § 116-9A.

G. Where the approval authority finds that any waivers are appropriate, such waivers shall be set forth in a written decision filed with the application.

H. A filing fee, as provided in Chapter 105, Fees, shall be provided at the time the application is submitted. The fee shall be deemed a reasonable sum to cover the cost of administration and shall in no part be returnable to the applicant(s). In the event that an application requires the Town to incur additional expenses for technical assistance in the review of an application, the applicant shall pay the reasonable expenses incurred by the Town. The applicant shall be notified of the expenses and shall deposit the funds with the Town Comptroller prior to the cost being incurred.

§ 116-8. Information required and standards for permit decisions.

A. The approval authority shall consider the following information in reaching its determination to approve, approve with conditions, or deny an application for a permit under this chapter:

(1) A description of the existing conditions of the site on which the aquatic resource or resources is or are located.

(2) A description of the aquatic resource or resources in which the activity is proposed to take place.

(3) A description and analysis of the functions of the aquatic resource or resources for groundwater recharge, groundwater discharge, stormwater management, flood flow alteration, sediment stabilization, nutrient removal, habitat for flora, habitat for fauna, and recreational uses.

(4) A description and analysis of the impact or impacts that the proposed activity will have on the aquatic resource or resources, including the magnitude of the impact or impacts, the duration of the impact or impacts, including but not limited to a statement as to whether the duration is temporary, short-term, long-term or permanent, whether the impact or impacts are adverse to the functioning of the aquatic resource or resources or neutral or positive.

(5) A description and analysis of mitigation available to remedy negative impacts to the extent that such negative impacts are identified.

(6) Such other information as may be submitted to the approval authority by the applicant, the public, or other governmental agencies, to the extent that such information is relevant to the approval standards contained in this chapter.

B. Standards for permit decisions. The approval authority may grant, grant with conditions, or deny a permit. The approval authority shall grant the permit under this chapter upon making the following findings:

(1) The proposed activity will not have a significant adverse impact on the functioning of the aquatic resource or resources within which the activity is proposed to take place.

(2) In the event of negative impact or impacts, the mitigation proposed will mitigate adverse impact or impacts identified in a manner that will allow the aquatic resource or resources to function in a manner substantially equivalent to the functioning of such resource or resources prior to the proposed activity.

C. Compensatory mitigation. In the event that significant adverse impacts on the functioning of the aquatic resource or resources are identified, the applicant or the approval authority, in the form of conditions, may propose mitigation. "Mitigation" means a way to avoid, minimize or compensate adverse impacts. Without limiting the generality of the term, mitigation may include relocation of aquatic resources, in whole or in part, substitution of alternative aquatic resources, in whole or in part, or replacement of aquatic resources, in whole or in part, whether on the same parcel or another parcel within the Town.

§ 116-9. Expiration of permit; time extensions.

A. All permits issued pursuant to this chapter by the Building Inspector shall expire two years from the date of issue, unless the activity has been completed or substantial construction has taken place and is continuing. The Building Inspector may extend the expiration of said permit for an additional period of one year if the Building Inspector deems such extension is warranted by the particular circumstances of the project. No original permit issued by the Building Inspector shall be valid for a period of more than three years from the original date of issuance. Requests for extensions must be made, in writing, 30 days prior to the expiration date of the permit.

B. All permits issued pursuant to this chapter by the Planning Board shall follow all expiration periods as proscribed by the Planning Board and/or all applicable Town ordinances.

C. No extensions shall be granted to any permit issued pursuant to this chapter, if such permitted activity is in violation of any condition of said permit or any provision of this chapter, until such time that the violations have been corrected to the satisfaction of the Code Enforcement Officer, notwithstanding § 116-13 below.

D. The Town reserves the right to suspend or revoke any permit issued pursuant to this chapter for any permitted activity found to be in violation of any condition of said permit or any provision of this chapter.

§ 116-10. Penalties for offenses.

[Amended 6-3-2009 by L.L. No. 22-2009] Any observed violation by the Code Enforcement Officer shall subject the project to a stop-work order. Additionally, any person convicted of having violated any provision of this chapter or any condition attached by the approval authority in a permit issued pursuant to this chapter shall, for the first offense, be punishable by a fine of not less than \$500 but not more than \$1,000. For each subsequent offense, such person shall be punishable by a fine of not less than \$1,000 but not more than \$10,000. Each consecutive day of violation may be considered a separate offense. Payment of such penalty shall not preclude corrective action and/or the removal of conditions found to be in violation of this chapter.

§ 116-11. Enforcement.

A. This chapter shall be enforced by the Building Inspector or any other Town official as designated by the Town Board.

B. The Town is specifically empowered to seek injunctive relief restraining any violation, threatened violation or breach of any permit condition under the provisions of this chapter and/or to compel the restoration of the affected aquatic resource to its condition prior to the violation or breach of any permit condition. If the Town is successful in obtaining preliminary and/or injunctive relief, it shall be entitled to an award by the court of its reasonable attorney's fees.

C. In addition to any other remedies set forth herein authorizing the Town to enforce the provisions of this chapter, establishing penalties, and setting forth additional remedies, the person charged with the responsibility to enforce the provisions of this chapter may impose a civil fine or agree to a civil fine not to exceed \$1,000 per day for each day of the violation. If said civil fine is imposed, then the alleged violator may appeal to the Town Board of the Town of Poughkeepsie. [Added 6-3-2009 by L.L. No. 22-2009]

§ 116-12. Exceptions and appeals.

Where practical difficulties, unnecessary hardships and results inconsistent with the general purpose of the chapter or certain provisions thereof are encountered, the applicant may appeal to the Town Board for relief from any provision set forth herein.

§ 116-13. Performance bond.

The approval authority may require the posting of a performance bond or other collateral as a condition of approval. The amount of the performance bond or other collateral shall be computed by the Town Engineer, but no more than one performance bond for any one project need be posted, and the Town Engineer may include amounts necessary to ensure compliance with this chapter in any security given pursuant to the subdivision, site plan or other permitting regulations of the Town.

§ 116-14. Conflicting provisions.

Where this chapter imposes greater restrictions than are imposed by the provision of any law, ordinance, or regulation, this chapter shall control. Where greater restrictions are imposed by any law, ordinance, or regulation than are imposed by this chapter, such greater restriction shall control.

§ 116-15. Severability.

If any clause, sentence, paragraph, section or part of this regulation shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof but shall be confined in its operation to the clause, sentence, paragraph, section or part thereof directly involved in the controversy in which such judgment shall have been rendered or as determined by such judgment.

Established in 1991 and updated in 1999, the City of Chicago's landscape ordinance covers three categories of landscaping: planting trees or shrubs on parkways; landscaping to screen the perimeters of parking lots, loading docks, and other vehicular use areas; and landscaping within these same parking lots, loading docks, and other vehicular use areas. Parkway plantings are required in the construction of any principal building; any addition or enlargement to an existing building if the new construction exceeds 1,500 ft²; any repair or rehabilitation work of an existing principal building, including interior remodeling, if the expense of this work exceeds 50% of the structure's replacement cost; construction of any parking area containing five or more spaces; and repair or expansion of existing parking areas if the number of spaces is being increased by more than 25%. Residences of three living units or less are exempt. Parking lots, loading docks, or other vehicular use areas smaller than 1,200 ft² are exempt from screening landscaping.

City of Chicago, Illinois

Title 17, Chicago Zoning Ordinance

Chapter 17-11, Landscaping and Screening

17-11-0050 Guide to the Chicago Landscape Ordinance.

The regulations and standards of this chapter are further explained and clarified with explanatory text and illustrative guidelines in the *Guide to the Chicago Landscape Ordinance*.

17-11-0100 Parkway trees.

17-11-0101 Applicability. The standards of this section (17-11-0100) apply to all of the following, except as expressly exempted under Sec. 17-11-0102:

17-11-0101-A construction of any *principal building*;

17-11-0101-B any addition to or enlargement of an existing *principal building* when the addition or enlargement exceeds 1,500 square feet of gross floor area;

17-11-0101-C any existing *vehicular use area* that is accessory to an existing *principal building* if such building or any portion thereof is repaired or rehabilitated (including interior alteration and remodeling) and the cost of such repair or rehabilitation exceeds 150% of the property's assessed value or \$10,000, whichever is greater;

17-11-0101-D construction or installation of any surface parking area containing more than 4 parking spaces; and

17-11-0101-E repair, rehabilitation or expansion of any existing surface parking area containing more than 4 parking spaces, if such repair, rehabilitation or expansion would increase the number of existing parking spaces by more than 25% or 4 spaces, whichever is less.

17-11-0102 Exemptions. The standards of this section do not apply to:

17-11-0102-A restoration of any building or portion thereof damaged by fire, explosion, flood, casualty or other calamity of any kind;

17-11-0102-B construction, repair or rehabilitation of any *accessory buildings* or structures; and

17-11-0102-C construction, repair or rehabilitation of or upon any *detached house, two-flat* or three-flat (multi-unit building containing only 3 *dwelling units*).

17-11-0103 Standards.

17-11-0103-A Anyone undertaking or allowing the construction upon, improvement to, or use of any property that is subject to this section, must install and maintain *parkway trees* within that portion of the *public parkway* contiguous to the *zoning lot* in accordance with the provisions of Chapter 10-32 of the Municipal Code and the following requirements:

1. One *parkway tree* is required per 25 linear feet of *street frontage*.
2. *Parkway trees* must have a minimum caliper size of 4 inches within the Central Area and 2.5 inches outside the Central Area.
3. Tree grates are required when trees are planted in sidewalk openings.
4. Curbs and low railings to protect plantings are required on busy pedestrian retail and commercial *streets* within the Central Area consistent with recommendations in the *Guide to the Chicago Landscape Ordinance*. For the purpose of this provision "Central Area" means the area bounded by North Avenue; Lake Michigan; Cermak Road; and Ashland Avenue.

17-11-0103-B *Parkway trees* are not required to be installed or maintained in the following locations:

1. Above an area containing soil of a depth of less than 6 feet, not including sidewalk pavement;
2. Below or within 50 feet of an elevated rail structure; or
3. Any areas determined by the Deputy Commissioner of the Bureau of Forestry to be unsuitable or unsafe for *parkway trees*.

17-11-0103-C When *parkway trees* are not required pursuant to Sec. 17-11-0103-B, the Zoning Administrator must require alternative landscape treatments, in accordance with Sec. 17-11-0603.

17-11-0103-D The Zoning Administrator must receive the recommendation of the Bureau of Forestry regarding:

1. conformance of the plans and specifications for any required *parkway trees* with the provisions of Chapter 10-32 of the Municipal Code before issuance of any zoning certificate; and
2. conformance of the installation of such *parkway trees* with the approved plans and specifications before issuance of any certificate of occupancy or release of the performance bond or other security, whichever is applicable.

17-11-0200 Vehicular use areas.

17-11-0201 Applicability. Unless otherwise expressly stated, the standards of this section (17-11-0200) apply to all of the following in all zoning districts:

17-11-0201-A the construction or installation of any *vehicular use area*.

17-11-0201-B any existing *vehicular use area* that is accessory to an existing *principal building*, if: if such building or any portion thereof is repaired or rehabilitated (including interior alteration and

remodeling) and the cost of such repair or rehabilitation exceeds 150% of the property's assessed value;

17-11-0201-C the repair, rehabilitation or expansion of any existing *vehicular use area*, if such repair, rehabilitation or expansion would increase the number of existing parking spaces by more than 25% or 4 spaces, whichever is less;

17-11-0201-D any existing *vehicular use area* which is accessory to an existing *principal building*, if such building or any portion thereof is expanded or enlarged and the expansion increases the existing floor area on the *zoning lot* by 50% or 5,000 square feet, whichever is less; and

17-11-0201-E the excavation and reconstruction of an existing *vehicular use area* if such excavation and reconstruction involves the removal of 50% or more of the asphalt, concrete or other pavement devoted to vehicular use. This provision does not apply to the resurfacing of asphalt or concrete or to emergency work on underground storage tanks if such work is intended to maintain the integrity and safety of such tanks and is subject to review under other federal, state or local laws.

17-11-0201-F The provisions of Sections 17-11-0201-B, 17-11-0201-C, 17-11-0201-D, and 17-11-0201-E shall not apply to any existing accessory *vehicular use area*, as of the effective date of this amendatory ordinance of 2012, until June 15, 2014.

17-11-0202 Perimeter Landscaping, Screening and Fencing.

17-11-0202-A Screening from Abutting Residential and Institutional Uses.

1. The perimeter of all *vehicular use areas* larger than 1,200 square feet must be effectively screened from all abutting R-zoned property and from all abutting property that is improved with a *hospital, nursing home, religious assembly, community center, school, college* or other similar institutional use.

2. Such screening must consist of a wall, fence, or hedge not less than 5 feet in height and not more than 7 feet in height.

3. Screening fences must be masonry or wood and must be planted with vines. Chain-link fencing is prohibited.

17-11-0202-B Screening from Streets.

1. The perimeter of all *vehicular use areas* larger than 1,200 square feet must set back at least 7 feet from front and *street side (corner) property lines* and effectively screened from view of such *street*.

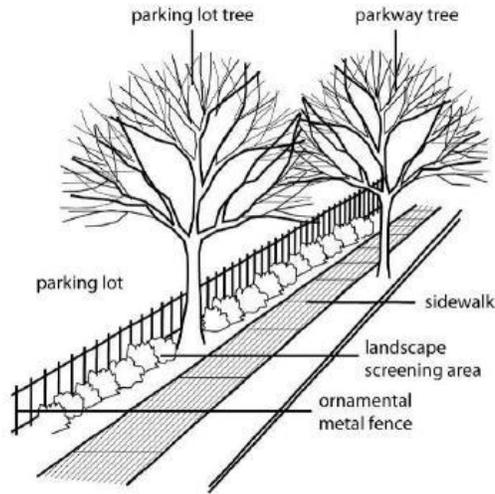
2. The view of such *vehicular use areas* from all abutting *streets* must be visually screened either by permitted buildings (other than fences or walls) or by a hedge, not less than 2.5 feet in height and not more than 4 feet in height, or by a combination of buildings and hedges.

(a) This screening requirement is not to be interpreted as prohibiting the installation of or provision for openings reasonably necessary for access drives and walkways.

(b) Visual screening must be located between the perimeter of the *vehicular use area* and the *front property line*.

(c) Hedges used to satisfy the standards of this section must consist of individual shrubs with a minimum width of 24 inches, spaced no more than 36 inches on center.

3. The remainder of the required 7-foot *vehicular use area* setback must be *landscaped* and must include at least one tree for every 25 linear feet of *street frontage*.



Trees must have a minimum caliper size of 4 inches within the Central Area and 2.5 inches outside the Central Area.

4. Notwithstanding the other provisions of this Zoning Ordinance, the front or rear bumper overhang of vehicles parked within the *vehicular use area* may encroach upon the required *front setback* up to a maximum distance of 2 feet. This allowed overhang area may be included in the calculation of the required depth of each abutting parking space.

Figure 17-11-0202-B

17-11-0202-C Fencing. *Ornamental fencing* is required to be installed along the perimeter of *vehicular use areas* along those lot lines adjacent to public *street* rights-of-way or abutting any existing *front yard* of property located within an R district.

1. The required *ornamental fencing* must be installed behind the required perimeter landscape area, at least 5 feet from abutting *property lines*.
2. Required fences are limited to a height of no more than 5 feet above *grade* unless the Zoning Administrator determines that the fence is necessary for security purposes in which case the fence may be a maximum of 6 feet in height.
3. Any pre-existing *vehicular use areas* must have *ornamental fencing* installed behind any existing hedges or, when no hedges exist, at the *property line* based on the following schedule:

Area	Size of Vehicular Use Area	Required Date of Compliance
Central Area	Any	January 1, 2002
Outside of Central Area	30,000 square feet or more	January 1, 2004
Outside of Central Area	8,000 to 29,999 square feet	June 15, 2014
Outside of Central Area	2,000 to 7,999 square feet	June 15, 2014

Note: for purposes of this provision, the Central Area is the area bounded by North Avenue, Lake Michigan, Cermak Road, and Ashland Avenue.

17-11-0203 Interior Landscaping. All lots containing *vehicular use areas* with an area 3,000 square feet or more must provide interior landscaping in accordance with the requirements of this section.

17-11-0203-A The area of interior landscaping must be equal to:

Area of Vehicular Use Area (square feet)	Minimum Interior Landscaped Area
3,000-4,500	5% of vehicular use area
4,501-30,000	7.5% of vehicular use area
More than 30,000	10% of vehicular use area

17-11-0203-B Required interior landscaping must comply with the following standards:

1. The area of setbacks and landscaping provided to comply with the perimeter landscape standards of Sec. 17-11-0202 may not be counted toward satisfying interior landscaping standards.
2. Interior *landscaped* areas must be designed to enhance the appearance and safety of the *vehicular use areas*. Such areas must be reasonably dispersed throughout *vehicular use area*.
3. Existing plant material may be counted towards satisfaction of this requirement.
4. One tree must be planted for each 125 square feet of required interior landscape area. Trees must have a minimum caliper size of 4 inches within the Central Area and 2.5 inches outside the Central Area.
5. Existing trees that have a minimum caliper size of 2.5 inches may be counted towards satisfying interior landscaping requirements if such trees are preserved and adequately protected through all phases of contraction. Each 2.5 caliper inches of any existing tree that is preserved will be deemed to be the equivalent of one 2.5-inch caliper tree.
6. Each separate *landscaped* island or area must contain a minimum of 165 square feet of area, have a minimum dimension of 8 feet in any direction and include at least one tree. Within *vehicular use areas* with an area of less than 4,600 square feet, required trees may be installed along the perimeter of the *vehicular use area* instead of within interior islands.
7. The trees required to be planted within interior landscaping areas must be canopy trees consistent with the species recommended in the *Guide to the Chicago Landscape Ordinance*.
8. The soil volume and composition for trees required within interior planting islands must have 2-foot minimum depth and topsoil must be backfilled and mounded as described in the *Guide to the Chicago Landscape Ordinance*. The soil composition (soil types, acidity and organic content) and soil percolation rates must follow the recommendations of the *Guide to the Chicago Landscape Ordinance*.

17-11-0204 Landscape and Tree Protection. All required landscaping area must be protected from vehicular encroachment by curbs or wheel stops. All trees must be installed and trimmed to ensure that no tree limb or portion thereof extends below the level of 6 feet above the ground.

17-11-0205 Sight Triangles.

17-11-0205-A No landscape material more than 12 inches in height may be installed or allowed to grow within any sight triangle.

17-11-0205-B A sight triangle is the triangular area bounded as follows:

1. at the intersection of a *street* and either an *alley* or a driveway, by the edges of the *alley* or driveway and the edge of the *street* right-of-way for a distance of 12 feet from the point of intersection and by a line connecting the ends of the two sides; or
2. at the intersection of two or more *streets*, by the edges of the *street* rights-of-way for a distance of 30 feet from the point of intersection and by a line connecting the ends of the two sides.

17-11-0206 Multi-level Parking Garages.

17-11-0206-A Purpose. The landscaping, screening and design standards for multi-level parking garages are intended to ensure that above-ground, multi-level parking structures are compatible with the building to which they are accessory and with other buildings in the immediate area. In the case of both accessory and non-accessory garages, parked cars must be concealed or screened from view from public *streets* and open spaces, as described below.

17-11-0206-B Accessory Parking Garages. The exterior elevations of any *accessory parking* structure must be designed to be architecturally integrated with the exterior elevation of any *accessory parking* structure and the *principal building* to which it is accessory. Architectural integration will be judged in terms of: building form and materials; the pattern, size, shape and number of window openings; the glazing and screening of window openings; and surface treatments such as cornices, moldings, reveals and sills.

17-11-0206-C Parking Garages as Principal Buildings.

1. The exterior elevations of any parking structure that is the *principal building* on a site must be designed so as to screen or conceal parked cars from view from public *streets* and open space on its first and second floors. In multi-level garages to be constructed in the Central Area and the Lakefront Protection District, openings above the second floor must be treated with glazing, screening panels or other architectural treatments that make the parking structure more architecturally compatible with surrounding buildings. For the purpose of this provision, "Central area" means the area bounded by North Avenue; Lake Michigan; Cermak Road; and Ashland Avenue.

2. The design of parking structures must minimize the appearance of sloped floors from the *street*.

17-11-0206-D Site Details. All parking garages must provide shielding of lighting so as to minimize glare on adjoining properties. New parking garages in R or DR zoning districts must install garage doors at *street* level when such doors would enhance the appearance or safety of the parking structure at the *street* level.

17-11-0206-E Traffic Standards. The location and design of the parking structure's entrances and exits should be planned so as to have the least impact on residential *streets* and busy intersections

and to minimize conflicts with pedestrians. Special paving materials should be used to help define the pedestrian walkways along garage openings when this definition would enhance pedestrian safety. Driveway widths should be kept to a minimum consistent with the standards of the Chicago Department of Transportation. Driveway review must be coordinated with the Chicago Department of Transportation's driveway permit processing.

17-11-0206-F Screening. The parking areas of multi-story garages must be screened or concealed by 1 or more of the following methods:

1. Ground-Floor Retail. When a parking structure is proposed for a *street* where the predominant use is retail or business services, the garage's ground-level *street frontage* (except for driveways and pedestrian entrances) must be improved with retail and business services. Ground-floor and second-floor spaces improved with retail, business service or other active uses must include display windows, lighting, architectural treatments or landscaping that enhances the pedestrian environment.

2. Ground-Floor Residential. Where permitted, ground-floor residential use may be used to screen a parking structure.

3. Landscaping.

- (a) Landscaping may be required for all parking garages (except fully enclosed garages) at ground-level or on each *street façade* above ground-level in the form of perimeter planters within openings, upper-level *landscaped* setbacks and/or the incorporation of hanging baskets, flower boxes or planting trellises.

- (b) A parking structure that does not incorporate ground-floor retail or residential use or is not otherwise screened or concealed at *street frontages* on the first and second levels, must provide a densely planted *landscaped yard* that is a minimum of 10 feet in depth for any garage 4 levels or less and 20 feet in depth for any garage 5 levels or more.

4. Upper-Level Screening. On upper levels of a parking garage, the parking may be screened by business or residential uses, glazing, metal grillwork, louvers and other architectural treatments.

17-11-0206-G Site Plan Review. Multi-level parking garages are subject to site plan review, in accordance with Sec. 17-13-0800. In addition to the site plans and drawings required to be submitted as part of the site plan review application, all multi-level parking garages, except fully-enclosed garages, must submit a landscape plan to the Zoning Administrator illustrating all site landscaping as well as the proposed use of perimeter planters, hanging baskets, flower boxes, planting trellises and/or roof-top gardens. Consistent with the goal of screening and enclosing garages, the Zoning Administrator may require:

1. the planting of vines at the base of any multi-level garage;
2. the installation of perimeter planters on at least every other floor of garages using natural ventilation; and/or
3. the installation of perimeter planters on rooftops used for parking with such rooftop planters designed and constructed consistent with the standards illustrated in the *Guide to the Chicago Landscape Ordinance* and the *Guide to the Chicago Parking Garage Ordinance*.

17-11-0206-H Existing Garages.

1. By April 1, 2007, *property owners* of every pre-existing, multi-level, nonresidential parking garage located within the Central Area must submit a landscape plan to the Zoning Administrator illustrating compliance with the standards of this section and Sec. 17-11-0206.
2. If, before April 1, 2007, the *property owner* or operator of any pre-existing, multi-level, nonresidential parking garage located within the Central Area is required to obtain from the Department of Buildings a permit for the enlargement, alteration or repair of the garage and the estimated value of the building work is \$50,000 or more, as stated on the permit application, the *property owner* or operator of the garage must submit a landscape plan to the Zoning Administrator Planning and Development within 12 months of the date that such permit is issued.
3. Within 6 months of the date on which the landscape plan is approved by the Zoning Administrator the *property owner* or operator of the nonresidential parking garage must install and maintain landscaping consistent with the approved landscape plan.
4. Any landscape plan submitted pursuant to this subsection must:
 - (a) illustrate the proposed use of perimeter planters, hanging baskets, flower boxes, planting trellises and/or rooftop gardens to screen all garage openings visible from any public *street* or park; and
 - (b) screen at least one-half of all such openings with landscaping.
5. Consistent with the goal of screening and enclosing garages, the Zoning Administrator may require:
 - (a) the planting of vines at the base of any multi-level garage;
 - (b) the installation of perimeter planters on at least every other floor of garages using natural ventilation; and
 - (c) the installation of perimeter planters on rooftops used for parking with such rooftop planters designed and constructed consistent with the standards illustrated in the *Guide to the Chicago Landscape Ordinance*.
6. For purposes of this section 17-11-0206-H only, “nonresidential parking garage” means any parking structure licensed or required to be licensed under Chapter 4-232 of this Code where 45% or more of the parking spaces are available to the public for a fee.

17-11-0300 Trash storage area screening.

17-11-0301 Applicability. All of the following must provide for the enclosure and screening of dumpsters and trash collection bins:

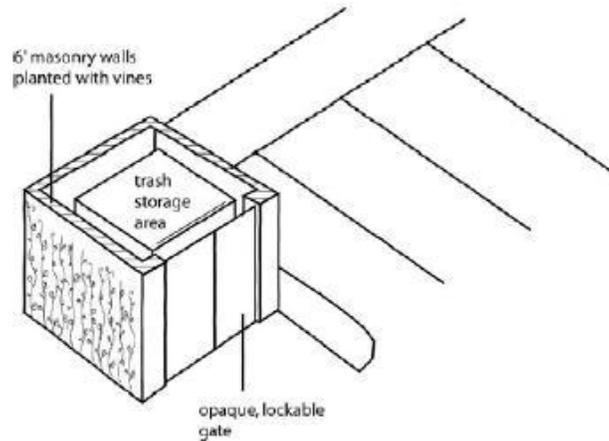
17-11-0301-A multi-unit buildings containing more than 6 *dwelling units*;

17-11-0301-B business, commercial, or manufacturing development; and

17-11-0301-C substantial rehabilitation of such developments, when the cost of such repair or rehabilitation exceeds 150% of the property's assessed value.

17-11-0302 Exemptions. Trash compactors are exempt from the enclosure and screening requirements. Trash compactors must be required for any new residential, business, commercial or manufacturing use that generates 50 or more cubic yards of garbage per week as provided in Title 7, Chapter 7-28, Section 7-28-225 of the Municipal Code.

17-11-0303 Screening Methods.



17-11-0303-A Required trash storage area screening may be achieved by designating an enclosed space for trash facilities within a *principal building* or within an *accessory structure* such as a garage.

17-11-0303-B When trash storage areas are not enclosed within a *principal building* or *accessory structure*, they must be screened on all sides by masonry walls with a minimum height of 6 feet. One side of the storage area must be furnished with an opaque, lockable gate.

Figure 17-11-0303-B

17-11-0303-C The screening walls required by this section must be planted with vines.

17-11-0400 Special (area-specific) landscaping standards.

In the event that the City Council or Plan Commission adopts plans, designs or guidelines addressing the establishment of area-specific landscaping standards applicable to a designated area of the city or to any specific *streets* and the area-specific landscaping requirements are inconsistent with the provisions of this chapter or with the provisions of Chapter 10-32 of the Municipal Code, then the area-specific landscaping standards and guidelines govern.

17-11-0401 Lake Calumet.

17-11-0401-A Purpose. The Lake Calumet Landscape Area guidelines are intended to:

1. act as a guide for developers, design professionals, city staff, and other city departments or public agencies;
2. coordinate site development, landscape design, storm water management and environmental issues;
3. provide sustainable landscapes for industrial sites that complement the city's *Calumet Land Use Plan* and *Calumet Open Space Reserve Plan*.

17-11-0401-B Boundaries and Descriptions. The boundaries of the Lake Calumet Landscape Area are set forth in the *Calumet Design Guidelines* adopted by the Chicago Plan Commission on March 11, 2004.

17-11-0401-C Applicability. All of the following are subject to the guidelines:

1. new construction of any principal building or vehicular use area on sites larger than 4 acres;
2. *new planned developments*.

17-11-0401-D Standards and Methods. The following standards and methods apply within the Lake Calumet Landscape Area.

1. Develop industrial sites to mitigate environmental impact through thoughtful design addressing soils, landscape design and management, and stormwater management.
2. Provide input and feedback early in the design process between the private and public sector in planning and layout of industrial sites according to the guidelines.
3. The lack of available sewers may require 100% of runoff volume to be retained on site.
4. Route surface water runoff through stormwater management systems incorporating best management practices (BMPs) improving water quality.
5. Reduce site runoff through infiltration techniques and on-site stormwater storage.
6. Stabilize riverbanks and shorelines to minimize erosion and sedimentation.
7. Minimize fragmentation of open space and increasing BMP efficiency by locating BMPs next to existing open space, natural areas, or stormwater facilities on adjacent lots.
8. Integrate BMPs into a sustainable landscape design that minimizes the use of turf grasses.
9. Create a natural landscape that blends in with the existing landscape character avoiding linear and repetitive installations of trees and shrubs with an emphasis on native plant species.

17-11-0500 Installation and maintenance.

17-11-0501 All landscape materials required by this chapter must be installed in accordance with standard practices of horticultural professionals and in good and workmanlike manner and must be maintained by the *property owner* in good condition.

17-11-0502 All applicants for landscape plan approval must file a maintenance schedule and a scope of maintenance work with the Zoning Administrator in a form consistent with the recommendations of the *Guide to the Chicago Landscape Ordinance*.

17-11-0503 Any damaged or dead trees, shrubs or ground cover must be promptly replaced.

17-11-0504 Maintenance of landscaping must include continuous operations of removal of weeds; mowing; trimming; edging; cultivation; reseeding; plant replacement; appropriate fertilization; spraying; control of pests, insects and rodents by nontoxic methods whenever possible; watering (a working hose bib connected to an active water supply must be available within 100 feet of perimeter landscape areas); and other operations necessary to assure normal plant growth.

17-11-0505 The obligation for continuous maintenance is binding on the applicant for landscape plan approval, to any subsequent *property owners* or any other parties having a controlling interest in the property.

17-11-0506 At the time the Zoning Administrator issues a zoning certificate for a land use, building or parking lot that requires the submission of a landscape plan or the planting of *street* trees, the Zoning Administrator must require the posting of a performance bond or other form of financial security

approved by the Zoning Administrator. The bond or other form of financial security must be in a form and amount as deemed adequate by the Zoning Administrator to ensure that the required landscape materials will be installed within 6 months or the next planting season.

17-11-0600 Administrative adjustments.

17-11-0601 Fencing Standards. The Zoning Administrator is authorized to approve an *administrative adjustment* waiving or modifying the fence standards of Sec. 17-11-0202-C when:

17-11-0601-A the *vehicular use area* is located within an M district, a Transportation district or a *planned manufacturing district*; and

17-11-0601-B the Zoning Administrator determines that the *vehicular use area* is isolated from R zoning districts and residential uses. (See the *administrative adjustment* provisions of Sec. 17-13-1000)

17-11-0601-C the Zoning Administrator is authorized to grant an *administrative adjustment* from the fencing requirements of Section 17-11-0202-C3 for any pre-existing *vehicular use area* with less than 31 feet of frontage and where the existing access is from a *street*.

17-11-0601-D the Zoning Administrator is authorized to grant an *administrative adjustment* from the fencing requirements of Section 17-11-0202-C3 for pre-existing *vehicular use areas* owned or operated by a nonprofit or charitable organization where the existing parking lot has less than 50 feet of frontage and where the existing access is from a *street*.

17-11-0602 Screening of Vehicular Use Areas from Streets.

17-11-0602-A The Zoning Administrator is authorized to approve an *administrative adjustment* allowing alternative landscape treatments to partially or wholly satisfy the standards of 17-11-0202-B that require the installation and maintenance of hedges as *vehicular use area* screening. (See the *administrative adjustment* provisions of Sec. 17-13-1000)

17-11-0602-B The Zoning Administrator is expressly authorized to approve such alternative landscape treatments as:

1. *landscaped* earth berms,
2. elevation changes,
3. vine-covered fences, walls or trellises; and
4. brick walls.

17-11-0602-C The Zoning Administrator may authorize such *administrative adjustment* only upon finding that the proposed alternative landscape treatment would:

1. provide an effective visual screen of the parking areas and parked automobiles;
2. promote the physical definition of a continuous *street* wall;
3. provide a visual effect which promotes and enhances the vehicular and pedestrian experience through the use of quality architectural and urban design; and
4. be appropriately designed and maintained to satisfy applicable building and/or landscape industry standards.

17-11-0603 Parkway Trees.

17-11-0603-A The Zoning Administrator is authorized to approve an *administrative adjustment* allowing alternative landscape treatments to partially or wholly satisfy the *parkway tree* planting standards of Sec. 17-11-0100.

17-11-0603-B The Zoning Administrator is expressly authorized to approve such alternative landscape treatments as:

1. *landscaped* earth berms;
2. raised planters;
3. hanging baskets;
4. flower boxes;
5. planting trellises;
6. roof-top gardens;
7. perimeter plantings on roof-tops, decks or balconies;
8. pedestrian lighting;
9. *flag or banner* poles;
10. benches and seating areas; and
11. additional landscaping and tree planting elsewhere on the site that will be visible

from public right-of-way.

17-11-0603-C Before approving an *administrative adjustment of parkway tree* planting standards, the Zoning Administrator must first obtain a written recommendation from the Bureau of Forestry.

17-11-0604 Hardships.

17-11-0604-A The Zoning Administrator is authorized to approve an *administrative adjustment* waiving or modifying the requirements of this Chapter, provided that the Zoning Administrator finds that the:

1. strict application of the provisions would deprive the applicant of the reasonable use of the land or would otherwise impose an unreasonable hardship upon the applicant;
2. conditions and circumstances upon which the waiver or modification is sought are not caused by the applicant; and
3. that alternative landscape treatments will be provided to off-set the waiver or reduction in otherwise applicable standards.

17-11-0604-B The Zoning Administrator is expressly authorized to approve such alternative landscape treatments as:

1. *landscaped* earth berms;
2. raised planters;
3. hanging baskets;
4. flower boxes;
5. planting trellises;
6. roof-top gardens;
7. perimeter plantings on roof-tops, decks or balconies;
8. pedestrian lighting;
9. *flag or banner* poles;
10. benches and seating areas;
11. vine-covered fences, walls or trellises; and
12. brick walls; and
13. additional landscaping and tree planting elsewhere on the site that will be visible from public right-of-way.

Subdivisions and Cluster Development

The Mapleton City Critical Environmental Zone includes an allowance for cluster zoning when such zoning will improve ridgeline protection, decrease or not increase environmental hazards, and decrease the cost of infrastructure to the city. While the overall allowed density is not increased, dwellings that have been approved for clustering are allowed an increase in density from one dwelling per three acres to one dwelling per acre. Designed open space in approved cluster development may be owned by the city or an approved non-profit.

City of Mapleton, Utah

Title 18: Development Code, Part III; Zoning

Chapter 18.30, CE-1 Critical Environment Zone

18.30.010: Legislative Intent:

The CE-1 zone includes those areas of the city which, as the result of the presence of steep slopes, soil characteristics, flood hazards, erosion, mudflow or earthquake potential, wildfire hazards or similar natural conditions or environmental hazards are considered environmentally sensitive and fragile.

The following is the intent and purpose of the city council in establishing the CE-1 zone:

A. To reflect the Utah County natural hazards overlay zone, to delineate environmentally sensitive and fragile areas within the city and to establish standards and guidelines for the uses and development activities occurring thereon which recognize and appropriately balance: 1) the need for the preservation of the natural environmental conditions, 2) the need for mitigation of potentially adverse or unsafe conditions arising from development activities, 3) the protection of the interests of subsequent purchasers and occupants, and 4) the rights of current owners to the reasonable use of their property.

B. To avoid or mitigate the effects of natural hazards from earthquakes, rockfall, debris flow, landslides, floods, fires and similar calamities and to reduce the potential for subsequent public involvement or expenditure in mitigation of such adverse or unsafe conditions occurring as a result of disruption of natural conditions from development activity.

C. To protect and conserve the watershed for the culinary water supply, sensitive vegetation, soil, wildlife habitat, viewsheds and other natural resources within the area.

D. To facilitate and encourage the location, design, and construction of uses, development projects and building sites in the zone area which provide maximum safety and human enjoyment consistent with the efficient and economical use of public services and facilities, the natural limitations and the need for protection of the environment.

E. To preserve the aesthetic appearance of the landscape. Because of the fragile nature of the land in this zone, special conditions and requirements are attached to developments occurring therein to promote the implementation of the purposes stated above and to mitigate the potential adverse

aspects of developments in the area. The requirements set forth in this chapter are considered the minimum required in order to accomplish the purpose and intent for which this zone was established.

F. To protect the health, safety and welfare of the residents of Mapleton City.

G. To place the liability and expense of evaluating the condition of potentially unstable land, and liability and expense for determining restrictions which should be placed on its development, upon geologists or engineers employed by the landowner.

H. To restrict the development of land to those uses which do not present unreasonable risks to persons or property because of geologic hazards.

I. To prevent fraud in land sales relating to the geologic conditions of real property.

J. To restrict development in areas difficult to provide city services, such as water, fire protection, garbage collection and snow removal.

With the enactment of this chapter, it is the intent of the city council to authorize a governmental function of regulation within the meaning of sections 63-30-3 and 63-30-10(1), (3) and (4) of the Utah code, as amended. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.020: Use Requirements:

A. Permitted Uses: The following uses of land shall be permitted upon compliance with the applicable standards and conditions set forth in this chapter:

- Agricultural uses that are conducted in a manner that does not destroy or alter the natural habitat of the land, including the removal of existing vegetation, or the grazing of animals in such a way that would cause erosion, or the plowing or turning of soil other than digging holes for the purpose of planting trees or building a fence.
- Municipal reservoir.
- One-family dwellings - conventional construction and modular homes, subject to compliance with the subdivision ordinance, the conditions of the zone and approval of a site plan in accordance with the provisions of section 18.84.320 of this title.
- Public parks.
- The keeping of customary household pets.

B. Conditionally Permitted Uses: The following buildings, structures and uses of land may be permitted upon compliance with the standards and conditions set forth in this chapter and after approval has been given by the designated review body:

- Buildings and other structures for the storage and keeping of agricultural products and machinery.
- Customary residential accessory structures which are an integral part of and incidental to an approved dwelling.
- Earth shelter home projects subject to the provisions of chapter 18.84 of this title.

- Golf courses or private parks.
- Home occupations, subject to the provisions of section 18.84.380 of this title.
- Keeping of livestock and associated structures in a manner that is not harmful to the environment due to overgrazing or ground water contamination. Animal units shall be based on the amount of building lots allowed using the criteria set forth in this chapter. There shall be one animal unit allowed for every possible building lot.
- Motor vehicle roads and rights of way subject to compliance with city standards for design and construction for such uses and upon approval of a site plan in accordance with the provisions of section 18.84.320 of this title.
- Residential subdivisions, subject to compliance with the applicable requirements for such developments. PUDs are specifically excluded from the CE-1 zone.
- Retention or detention basin.
- Water, sewer and utility transmission lines and facilities required as an incidental part of development within the zone, and subject to the approval of a site plan in accordance with the provisions of section 18.84.320 of this title. (*Ord. 2008-05, 3-19-2008, eff. 4-17-2008*)

18.30.030: Actions Prohibited:

It shall be unlawful to grade, plow, excavate, cut or fill with soil or other materials in any portion of property located in the CE-1 zone without first obtaining a permit to do so. Notwithstanding any other provision of this code it shall also be unlawful to grade, fill, or excavate any land in any manner which presents an unreasonable risk, as shown on the Utah County natural hazards map such as erosion, flooding, landslide, or any other unsafe condition, and it shall be unlawful to erect any structure which will not be reasonably safe for use as a human habitation because of:

- A. A high water table (water close to the surface);
- B. Surface water;
- C. Expansive soils;
- D. Collapsible soils;
- E. Proximity to a potential landslide area;
- F. Proximity to a secondary fault;
- G. Proximity to an alluvial fan;
- H. Proximity to a landslide;
- I. Proximity to a primary Wasatch fault zone;
- J. Steep slopes; or
- K. Any other unsafe conditions. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

CE-1 Zone 18.30.040: Lot Requirements:

A. Density, Area, Width, and Height Requirements: The maximum project density, and minimum lot area and width requirements of a zoning lot shall be set forth as follows:

1. When the lot is contained within an approved subdivision project:
 - a. Use: One-family dwellings.
 - b. Maximum project density: One lot for every three (3) acres of buildable area in project plus one lot for every twenty (20) acres of nonbuildable area in the project.

- c. Minimum lot area: Three (3) acres.
 - d. Minimum lot width: Two hundred fifty feet (250'), except as otherwise noted in this code.
- 2. When the lot is not included as part of an approved subdivision project and is legally exempt therefrom:
 - a. Use: One-family dwellings.
 - b. Minimum lot area: Three (3) acres.
 - c. Minimum lot frontage: Two hundred fifty feet (250'), all of which shall front a dedicated public right of way (city street).
- 3. Building Height: No lot or parcel of land in the CE-1 zone shall have a building or structure used for dwelling or public assembly which exceeds a height of two (2) stories with a maximum of forty feet (40') as defined in Chapter 18.08.170 of this code.

B. Access Requirements: Each lot shall abut upon and have direct access to a city maintained dedicated public street that meets all of the requirements as outlined in title 17 of this code. Each street shall be formally accepted by action of the city council. The distance of said abutting side shall not be less than the minimum lot width requirement of the zone except that the length of said abutting side may be reduced to not less than eighty feet (80') when the lot fronts upon a cul-de-sac or sharp curve in a designated city street and the side lot lines radiate in such a manner that the width of the lot, measured between the side lot lines at points one hundred sixty feet (160') from the front lot line, will meet or exceed the minimum width requirements of the zone.

C. Location Requirements:

- 1. Main Buildings: All dwellings and other main buildings and structures shall be set back in accordance with the following:
 - a. Front Setback: All dwellings and other structures shall be set back not less than fifty feet (50') from the front lot line, provided that on lots qualifying under the provisions of subsection B of this section, the front setback shall be the distance from the front lot line at which the minimum width requirements are met, but not less than fifty feet (50').
 - b. Side And Rear Setback: All dwellings and other structures shall be set back not less than fifty feet (50') from the side or rear lot line.
 - c. Bonneville Bench: All new buildings that are situated along a Bonneville bench ridgeline shall be set back two hundred fifty feet (250') from the crest of the Bonneville bench. The Bonneville bench line is at the approximate elevation of five thousand one hundred thirty five feet (5,135') above sea level as quoted by the United States geologic survey (USGS). However, where a snow avalanche hazard analysis, performed by an avalanche consultant, concludes that it would be in the interest of the health, safety, and welfare of the inhabitants of proposed lots in the CE-1 zone, the city council may permit a waiver of the two hundred fifty foot (250') setback to permit the proposed lots to be located outside the area of hazard as determined by the snow avalanche hazard analysis. The city council may place additional height limitations upon the lots that receive such a waiver in order to ensure that the visual integrity of the bench is preserved.

D. Utility Requirements:

1. Culinary Water: All structures to be used for human occupancy shall be served by the city's water system and shall be capable of providing water to the structure in volumes and under pressure sufficient for both culinary and firefighting purposes as determined by the city engineer.
2. City Sewage Disposal: All structures intended for human occupancy shall be served by the city sewer system. Septic systems or other means of sewage disposal shall not be permitted.

E. Buildable Area Required; All Buildings To Be Located On A Buildable Area: Each lot shall contain at least one area of not less than fourteen thousand five hundred (14,500) square feet which qualifies as a "buildable area" as defined in this title and which is accessible over a driveway having a width of not less than twelve feet (12') and which conforms to the minimum standards of subdivision streets with respect to slope, grading, drainage and design features. The site plan required pursuant to subsection 18.84.320B of this title shall delineate the location of the territory qualifying as buildable area and also the alignment of the proposed driveway access. All dwellings and other habitable structures and accessory buildings shall be located within the designated buildable area. All other areas within the designated buildable area shall be protected and preserved as open space. For purposes of determining compliance herewith, the toe of any slope greater than thirty percent (30%) shall not be cut to provide a building site.

F. Structural Requirements:

1. Location On Fault Traces Prohibited; Minimum Setbacks To Be Determined: No portion of any structure intended for human occupancy shall be located over any fault trace or zone of deformation identified in the geotechnical and geology report submitted as provided in this chapter. The minimum setback distance from any fault trace or zone of deformation, or from the base or crest or any potentially unstable slope shall be as established by the city engineer following the receipt of a recommendation on the subject from the geotechnical engineer as part of the technical reports.
2. Site Specific Geotechnical Study And Structural Calculations Required Before Building Permit: Prior to the issuance of a building permit, the city must receive a site specific geotechnical study conducted by an engineer licensed by the state of Utah, along with blueprints, which blueprints must be prepared by a registered structural engineer. The blueprints must take into consideration concerns stated in the geotechnical study.
3. Construction Standards: All structures intended for human occupancy shall be designed and constructed to the recommendation of the structural engineer, after his review of the site specific geotechnical study.
4. Architectural Design Standards:
 - a. Exterior Building Colors: The exterior of any building or structure shall blend with the natural materials and predominant colors and hues of the surrounding foothills. Colors permitted include grays, browns, greens, tans and other earth tones. White or bright colors shall be limited to window casings, doors, eaves and other trim areas.
 - b. Exterior Building Glass: Windows and other glass surfaces shall have an outdoor visible light reflective value no more than eighteen percent (18%) as defined and measured by ASTM E308-90 or its successor. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

- c. Roof Materials And Colors: Roof colors shall be earth tones consisting of grays, browns, greens, and tans which blend with the natural materials and predominant colors and hues of the surrounding foothills. White, bright and reflective materials are prohibited from roofs. Tile, slate, architectural asphalt shingles, metal, and fire retardant wood are permitted as roofing materials. (*Ord. 2011-15, 9-20-2011, eff. 10-20-2011*)
- d. Mechanical Equipment: Mechanical equipment including, without limitation, swamp coolers, air conditioning equipment, heat pumps, vents, blowers and fans shall be screened from view or painted to match the building color adjacent to the equipment. Roof mounted mechanical equipment shall not extend above the highest roof ridgeline. Roof mounted solar collection panels need not be screened or painted so long as they are mounted parallel to and flush with the roof slope and do not project above the ridgeline of the roof segment upon which they are mounted. Except as provided in the foregoing sentence, solar collection panels shall not be mounted upon any roof. Satellite antennas shall be painted nonreflective black or other dark earth tone colors.
- e. Building Height: No lot or parcel of land in the CE-1 zone shall have a building or structure used for dwelling or public assembly which exceeds a height of two (2) stories with a maximum of thirty feet (30') measured from the finished grade of the lot to the midpoint of the roof pitch. Measurement shall be taken on three (3) sides of the home. Finished grade shall be established thirty feet (30') away from the front of the home, top of the curb (if present), or the middle point of the street directly in front of the home. If the home is located more than thirty feet (30') from a city street, then the measurement shall be taken off of the established grade ten feet (10') from the home.
5. Exterior Lighting: Floodlighting of buildings and structures is prohibited. Exterior lighting shall be architecturally integrated decorative lighting. Yard areas may be lit only with "directional" lighting and no direct light beam may impact any other property, except for security lights intended to be activated only at limited times as necessary for immediate security.
6. Fence Restrictions: Fences and walls shall only be constructed after first obtaining a building permit subject to the standards of this section.
- a. Site Plan Submittal: As part of the site plan review process, a fencing plan shall be submitted which shall show:
- (1) Any specific subdivision approval conditions regarding fencing.
 - (2) Material specifications and illustrations necessary to determine compliance with specific approval limitations and the standards of this section.
- b. Field Fencing Of Designated Undevelopable Areas: Fencing on areas identified as undevelopable areas or transitional areas on any subdivision granted preliminary approval by the planning commission after December 6, 1994, or any lot previously platted which identifies undevelopable areas or transitional areas shall be limited to the following standards:
- (1) Low visibility see through fencing shall consist of flat black colored steel "T" posts and not more than four (4) strands of nonbarbed steel wire, strung at even vertical spacing between such "T" post, and erected to a height of not more than forty two inches (42") above the natural ground surface.
 - (2) When fencing lot boundary lines, vegetation or native brush shall not be cleared so as to create a visible demarcation from off site.

(3) The existing surface of the ground shall not be changed by grading activities when erecting boundary fences.

(4) Fence materials and designs must not create a hazard for big game wildlife species.

(5) No field fencing shall be erected in conflict with pedestrian easements dedicated to Mapleton City.

c. Buildable Area Fencing: Fencing on any portion of a lot identified as buildable area or required side yard on any subdivision granted preliminary approval by the planning commission after December 6, 1994, or any lot previously platted which identifies undevelopable area or transitional areas shall be limited to the following standards:

(1) Open, see through fencing constructed of tubular steel, wrought iron or similar materials, finished with a flat black, nonreflective finish constructed to a height of six feet (6') or less; or

2) Sight obscuring or privacy type fencing shall be of earth tone colors, or similar materials to the primary dwelling, and located in a way which screens private outdoor living spaces from off site view. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

G. Permissible Lot Coverage: All buildings, including accessory buildings and structures, shall cover not more than thirty percent (30%) of the lot. (*Ord. 2013-03, 1-15-2013, eff. 2-7-2013*)

18.30.050: Preliminary Determination by City Engineer:

All proposals to grade, fill, or excavate land or to erect a structure for human habitation shall be referred to the city engineer who shall make a preliminary determination by reference to the maps and materials maintained in his office, in order to coordinate data with the geotechnical engineering, if any of the unsafe physical conditions described in section 18.30.030 of this chapter appear to exist in relation to the real property which is included in the proposal. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.060: Presumption:

Conditions described on Utah County geologic hazard maps and aerial topographical maps maintained by the city engineer, together with explanatory material appurtenant thereto, shall be presumed to exist. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.070: Approval Procedures and Requirements:

A. Site Plan: Wherever the terms of this zone require submission and approval of a site plan, said plan shall conform with and be approved in accordance with the provisions of this chapter and section 18.84.320 of this title.

B. Technical Reports: In addition to other materials required for submission, the site plan shall be accompanied by copies of the following technical reports and plans. The following technical reports and plans shall be completed by an engineer licensed by the state of Utah:

1. Geotechnical And Geology Report: The report shall include, but is not necessarily limited to, identification and mapping of the location of major geographic and geologic features such as fault traces, surface ruptures, zones of deformation, potential slide and other high hazard areas such as mine shafts and avalanche paths, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, recommendations covering the

adequacy of sites proposed for development, and any potential adverse impact on the natural environment.

2. Soils Report: The report shall include, but is not necessarily limited to, information with respect to slope analysis, general soils classification, suitability for development, erosion potential, any recommendations for proposed methods of mitigating any constraints determined to be present as part of the development plan, and any adverse impact on the natural environment.

3. Grading And Drainage Plan: The plan shall include, but is not necessarily limited to, information on ground water levels, identification and mapping of drainage channels and systems, floodplains, existing details and contours where modification of terrain is proposed, the direction of proposed drainage flow, proposed plans and the location of all surface and subsurface drainage devices to be constructed as part of the proposed development, erosion control measures during the course of construction, identification of any grading and drainage problems such as the alteration of natural drainage patterns and any other problems of the proposed development, and a plan to mitigate or eliminate such problems, and any adverse impact to the natural environment.

4. Natural Conditions And Vegetation Analysis And Preservation Plan: This report and plan shall include a survey of existing trees, large shrubs and ground covers, a plan for the proposed revegetation of the site, detailing existing vegetation to be preserved, new vegetation to be planted and any modifications to existing vegetation, and the identification of any vegetation problems and recommendations as how to mitigate or eliminate such problems and avoid potential adverse impact on the natural environment.

5. Fire Protection Report: The report shall include, but not be limited to, identification of potential fire hazards, mitigation measures, access for fire protection equipment and proposed fire flow capability. The scope and content of these required technical reports and plans shall be in accordance with city standards. The planning commission, subject to the prior recommendation of the city engineer, may waive the necessity for submitting one or more of the technical reports or any elements of a report where, in its opinion, conditions associated with the proposed development do not require consideration of the subject matter covered. Also, where the lot is contained within an approved subdivision and the technical reports previously submitted as part of the subdivision approval process are sufficient in scope and detail to adequately address the issues required under this chapter, this requirement may be waived.

C. City Engineer To Review Technical Reports: The plans and technical reports required herein shall be reviewed by the city engineer for the purpose of making a determination as to the adequacy of the reports and recommendations relating to the proposed project. Prior to the time of action by the planning commission, the city engineer shall provide to the planning commission a written or oral report of the results and conclusions of the review together with any recommendation or amendment of the technical reports.

D. City Engineer Or Planning Director Requires Further Review By Qualified Professionals: If the city engineer concludes that the determinations required by this chapter require further review by professionals having qualifications not possessed by the city staff, he may designate a qualified person

to make the required determination. The city engineer or planning director, at his/her discretion, may ask the state geologist office of Utah to review all plans and technical reports required herein.

E. Project Evaluation Guidelines: The planning commission shall review the site plan, technical reports and recommendations of the city engineer and shall approve the application upon a finding that:

1. All the plan submissions and technical reports required for review and consideration have been submitted and in a form suitable for evaluation by the city, and the evaluation of conditions and the recommendations for mitigation provided by the technical reports are reasonably adequate to accomplish the purpose and intent of the CE-1 zone.
2. The plan conforms, in all respects, to applicable city requirements, standards and criteria.
3. The location and arrangement of the buildings, roadways, open areas and other elements of the development duly recognize and accommodate the natural conditions present, and construction of such elements will not result in the creation of an adverse or unsafe condition or visual impact.
4. The applicant provides sufficient information to establish that adequate public services and facilities in the area affected by the proposed development will have sufficient capacity available at the adopted level of service standards to accommodate the proposed development within a reasonable period of time following the issuance of final approval of a site plan and/or subdivision plat for the proposed development.
5. The development will accomplish and preserve the intent of the zone.

F. City May Require Changes To Plans: The city may require changes in the plan in order to more fully accomplish the intent of the zone. Such changes may include, but are not limited to, adjustments in the boundaries of the buildable area and changes in the location of roadways, structures, drain field and similar elements.

G. Full Disclosure Required: No subdivision in the CE-1 zone shall be approved without a note on the final plat, which shall read: "This subdivision lies within a critical environment zone with some potential hazards. Any building lot in this zone, must comply with chapter 18.30 of the Mapleton City Code." disclosing that the subdivision is in a geologically sensitive area with potential hazards present. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.080: Special Provisions:

A. Grading: No grading, filling, plowing, or excavation of any kind shall be commenced on land within the zone without first having obtained a grading permit from the city planning director, signed by the superintendent of public works, who shall not issue such permit until a grading plan, endorsed by a licensed civil engineer, following review and approval by the city engineer, shall have been approved in accordance with the provisions of section 18.30.070 of this chapter. Such a permit shall only be issued in relation with an approved development proposal for the property. Cutting roads, clearing vegetation, or otherwise disturbing the earth shall not be approved unless the applicant can show good cause to do so, as determined by the planning commission.

B. Slope Protection: All land surface having a slope of thirty percent (30%) or greater shall remain in its natural state and shall not be graded or otherwise disturbed except for the planting of additional

vegetation, the addition of sprinkler irrigation systems, the establishment of required firebreaks or required access easements, or when such disturbance is specifically provided for under an approved site plan. No disturbance shall be permitted on any slide area as depicted in the Utah County natural hazards overlay landslide zones map until recommended by the city engineer based on adequate documentation to show that sliding is not a potential hazard and then only after approval is gained through the city council.

C. Roads, Streets And Driveways: All roads, streets and driveways in this zone shall be set back at least fifty feet (50') from the edge of the Bonneville bench, except where the road must cross the Bonneville bench to access the top of the bench, and shall be approved by the city council, which approval shall be based on the recommendations of the city engineer, consistent with the purpose of this zone that such streets, roads and driveways will not have significant adverse visual, environmental or safety impacts. However, where a snow avalanche hazard analysis, performed by an avalanche consultant, concludes that it would be in the interest of the health, safety, and welfare of the inhabitants of proposed development in the CE-1 zone, the city council may permit a waiver of the fifty foot (50') setback to permit the proposed roads to be located outside the area of hazard as determined by the snow avalanche hazard analysis.

D. Cuts And Fills: Cutting and filling shall be held to a minimum and retaining walls employed to help provide planting areas conducive to revegetation. Revegetation plans will be required for all areas disturbed during road, street or driveway construction. All cuts and fills shall be approved by the city council, which approval shall be based on the recommendations of the city engineer, consistent with the purpose of this zone that such cuts and fills not have significant adverse visual, environmental or safety impacts.

E. Driveways: The design, construction and alignment of driveways shall not exceed twelve percent (12%) grade. Driveways shall include all private single-family dwelling accesses from a public right of way.

F. Vegetation, Preservation And Landscaping: Site plans and reports shall preserve existing vegetation to the extent possible and shall provide for prompt revegetation and erosion control measures where appropriate. Natural vegetative material shall not be removed except for those portions of the site to be committed to the dwelling and attendant yard area, required roadways, driveways and for firebreaks. All areas proposed for removal of vegetative materials shall be shown on the site plan. Every effort shall be made to conserve topsoil which is removed during construction for later use on areas requiring revegetation or landscaping (i.e., cut and fill slopes). Vegetation sufficient to stabilize the soil shall be established on all disturbed areas and shall be equivalent to or exceed the amount and erosion control characteristics of the original vegetation cover. The types and sizes of vegetation suitable for revegetation and soil stabilization shall be approved by the planning commission at the time of final plan approval.

G. Fire Protection: In order to minimize the potential for destruction due to fire, the following fire prevention and protection measures are required for all dwellings in this zone:

1. The installation of NFPA 13-D residential fire sprinkler systems in all new single-family

structures;

2. The addition of exterior fire sprinklers in all new structures where eaves, siding and projections are constructed of combustible materials. This requirement may be waived should noncombustible building materials be used;
3. All new structures shall be constructed with nonreflective, noncombustible roofing materials as approved by the Mapleton City fire marshal;
4. There shall be at least a thirty foot (30') clear area around all structures located in the CE-1 zone. This area shall be sprinkled and planted with fire resistant vegetation. This clear area shall be measured from each exterior wall. However, this requirement may be modified, subject to the current edition of the international wildland-urban interface code. Building permits for the CE-1 zone shall include a site plan showing existing and proposed vegetation, and shall be reviewed by the Mapleton City fire chief prior to approval.

H. Ridgeline Protection: All ridgeline areas, as seen along the entire length of Main Street from 2000 North to the southern city limits, in this zone shall be retained in a natural state, and development shall be sited in such a manner so that all structures are located away from areas that are visible against the sky or mountains along a ridgeline. No building, roof or other appurtenant device shall encroach or visually intrude upon a ridgeline area. However, this requirement may be waived by the city council for clustered CE-1 developments if it is determined that it would be in the best interest of the city to do so, based on other site considerations, such as slope and/or natural hazards.

I. Open Space Preservation: All developments in this zone shall be sited so as to maximize the protection and preservation of open space. Such open space, including, but not limited to, nonbuildable areas as defined in this title, shall be identified in the site plan and maintained as open space and may not be separately sold, subdivided or developed and shall not include roads, streets, rights of way, lots or buildings for dwelling purposes. Such open space areas shall be maintained so that their use and enjoyment as open space are not diminished or destroyed. Open space areas may be owned, preserved and maintained as approved as part of the site plan.

J. Wildlife Habitat Preservation: Any development shall take all reasonable efforts to maintain and preserve critical wildlife areas and floodplain corridor and shall take all reasonable steps to minimize impact upon these areas.

K. Clustering Of Single-Family Detached Dwellings: Based upon receipt of a recommendation from the planning commission and approval by the city council, a developer may be allowed to reduce the dimension requirements as set forth in subsection 18.30.040A1 of this chapter in accordance with the provisions of this title, provided the following conditions are met:

1. The maximum project density shall be one lot for every three (3) acres of area with less than thirty percent (30%) slope, regardless of geologic hazards.
2. The minimum lot size shall be one-half (1/2) acre with the remaining acreage of the required three (3) acres used as follows:
 - a. Dedicated as open space and being owned, preserved and maintained as outlined in subsection K7 of this section;
 - b. The generation of transferable development rights (TDRs) is not permitted; and

- c. Public streets may run through the dedicated open space to access the clustered lots.
3. Dedicated open space areas do not have to be contiguous with the clustered lots.
4. A clustered lot may not contain any geologic hazards within the designated building envelopes, in accordance with engineering studies and designs.
5. Areas including the clustered lots and the dedicated open spaces shall be noted on the zoning map.
6. The city council, based on the recommendation of the planning commission, makes the following findings:
 - a. That clustering enables structures to be placed on the land in such a manner that ridgeline protection is enhanced.
 - b. That the city's costs for operation and maintenance of the subdivision infrastructure improvements will not increase or will be reduced because of the clustering of the dwellings.
 - c. That the potential exposure of any proposed dwellings to hazards as identified in reports required in subsection 18.30.070B of this chapter will not be increased or will be reduced.
7. In accordance with subsection I of this section, the city council may require that all areas designated as open space on an approved site plan be owned, preserved and maintained by the city, another appropriate public or nonprofit entity approved by the city or a homeowners' association which assumes full responsibility for its maintenance.
8. The minimum frontage requirements may be reduced to a width of not less than one hundred feet (100') at the front setback line.
9. The front, rear, and side yard setbacks shall be no less than fifteen feet (15') from the lot lines. Notwithstanding a lesser setback for the main building, garages, whether attached or not, shall be set back at least twenty feet (20'), measured from the back of sidewalk.
10. Each clustered lot shall contain at least one area of not less than four thousand five hundred (4,500) square feet which qualifies as a "buildable area" as defined in this title and which is accessible over a driveway having a width of not less than twelve feet (12') and which conforms to the minimum standards of subdivision streets with respect to slope, grading, drainage and design features. The site plan required pursuant to subsection 18.84.320B of this title shall delineate the location of the territory qualifying as buildable area and also the alignment of the proposed driveway access. All dwellings and other habitable structures and accessory building shall be located within the designated buildable area. All other areas within the designated buildable area shall be protected and preserved as open space.

L. Grading, Filling, Or Excavation Compliance With Entire Code: In addition to the provisions of this chapter, all grading, filling, or excavation of land or erection of any structure shall comply with all other applicable provisions of this code.

M. Improvements Intended For Public Ownership Subject To City Council Approval: Those parts of any proposal to construct improvements such as roads, sewer lines, or water lines, or other improvements which are intended to be placed in public ownership shall be subject to the approval of the city council after recommendation by the city engineer. (*Ord. 2007-29, 12-4- 2007, eff. 1-4-2008*)

18.30.090: Engineer Geologist Qualifications and Certificate:

A. A geologic report shall be approved and signed by one of the following:

1. A geotechnical engineer who shall be a registered professional engineer in the state of Utah, qualified by training and experience in the application of the principles of soil mechanics to foundation investigation, slope stability, and site development; or
2. An engineering geologist who shall be a graduate in geology or engineering geology from an accredited university with at least five (5) years of professional geologic experience of which at least three (3) full years shall be in the field of engineering geology.

B. A geologic report shall contain the following certificate:

CERTIFICATE

I hereby certify that I am a geotechnical engineer or an engineering geologist. I have examined the geologic report to which this certificate is attached and the information and conclusions contained therein are, without any reasonable reservation not stated therein, accurate and complete. All procedures and tests used in said geologic report meet minimum applicable professional standards.

Signature

C. In addition to any applicable private civil remedies, it shall be unlawful to knowingly make a false, untrue, or incomplete statement in a geologic report or to sign the certificate described above knowing the same to be materially false or not true. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.100: Post Construction Inspection and Certification:

For any real property with respect to which development has proceeded on the basis of a geologic report which has been acknowledged by the city engineer, no final inspection shall be completed or certificate of occupancy issued or performance bond released until the engineer or geologist who signed and approved that geologic report shall further certify that the completed improvements and structures conform to the descriptions and requirements contained in said report. Provided, however, that improvements and structures may, with the consent of the city engineer, deviate from the descriptions and requirements contained in the geologic report because of conditions which are discovered after acknowledgment by the city engineer of the geologic report.

(*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.110: Appeal from Decision of City Engineer:

Any person dissatisfied with a decision of the city engineer may appeal the same within thirty (30) days thereof to the planning commission, which shall affirm or reverse, either in whole or in part. Any person dissatisfied with a decision of the planning commission may appeal that decision within thirty (30) days thereof to the city council. Appeals to the city council decision can be appealed within thirty (30) days to any court of competent jurisdiction for administrative and not a de novo review.

(*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.120: Scope of Application:

No subdivision or other development plat or plan shall be approved without compliance with the provisions of this chapter. Every proposal to grade, fill, or excavate land, and every proposal to erect a structure for human habitation shall be subject to this chapter, including proposals related to land in subdivisions or any other development plans which may have been approved prior to the adoption of this chapter. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.130: Restrictive Covenant Required:

Once a geologic report has been submitted to the city engineer, no subdivision or other development plat or plan shall be approved and no building permit shall be issued for construction of a structure until the owner(s) of the subject real property has signed and delivered to Mapleton City a restrictive covenant in a form suitable for recording containing not less than the following:

A. A complete description of the geologic condition of the subject real property, including references to relevant reports and studies;

B. A description of the grading, filling, or excavating or erection of a structure for human habitation approved in the geologic report which has been acknowledged by the city engineer, together with the requirements and restrictions imposed thereon. (*Ord. 2007-29, 12-4-2007, eff. 1-4-2008*)

18.30.140: Economic Hardship Relief Provisions:

A. Hardship Relief Petition: Any applicant for development in this zone, after a final decision on its development application is made, may file a hardship relief petition with the city recorder seeking relief from all or part of the regulations of this chapter on the basis that the denial of the application has created a substantial economic hardship to the extent of depriving the applicant of all reasonable use of their property.

B. Affected Property Interest: The hardship relief petition must provide information sufficient for the planning commission and the city council to determine that the petitioner possesses a protectable interest in property under article I, section 22 of the constitution of Utah and/or the fifth amendment to the United States constitution.

C. Economic Hardship Standard: For purposes of this section, a "substantial economic hardship" shall be defined as a denial of all reasonable use of the property. Upon a finding that the denial of the application has resulted in a denial of all reasonable use of the property, the Mapleton City council may provide the petitioner with relief from part of the CE-1 critical environment zone regulations.

D. Time For Filing Notice Of Petition: No later than fifteen (15) calendar days from final action by the city council on any development application, the applicant shall file a notice of petition in writing with the city recorder. Within thirty (30) calendar days of filing of a notice of petition, the applicant shall file a hardship relief petition with the city recorder. Upon planning commission approval, the time in which the hardship relief petition must be submitted may be extended up to an additional thirty (30) days.

E. Information To Be Submitted With Hardship Relief Petition:

1. The hardship relief petition must be submitted on a form acceptable to the city, shall be signed by the applicant and verified, and must be accompanied at a minimum by the following information:

- a. Name of the petitioner;
- b. Name and business address of the current owner of the property, form of ownership, whether sole proprietorship, for profit or not for profit corporation, partnership, joint venture, limited liability company, or other, and if owned by a corporation, partnership, joint venture, or limited liability company the name and address of all principal shareholders, members, or partners;
- c. Price paid and other terms of purchase of the property, the date of purchase, and the name of the party from whom purchased, including the relationship, if any, between the petitioner and the party from whom the property was acquired;
- d. Nature of the protectable interest claimed to be affected, such as, but not limited to, fee simple ownership, leasehold interest;
- e. Terms (including sale price) of any previous purchase or sale of a full or partial interest in the property in the five (5) years prior to the date of application;
- f. All appraisals of the property prepared for any purpose, including financing, offering for sale, or ad valorem taxation, within the five (5) years prior to the date of application;
- g. The assessed value of and ad valorem taxes on the property for the previous five (5) years;
- h. All information concerning current mortgages or other loans secured by the property, including name of the mortgagee or lender, current interest rate, remaining loan balance and term of the loan and other significant provisions, including, but not limited to, right of purchaser to assume the loan;
- i. All listings of the property for sale or rent, price asked and offers received, if any, within the previous five (5) years;
- j. All studies commissioned by the petitioner or agents of the petitioner within the previous five (5) years concerning feasibility of development or utilization of the property;
- k. For income producing property, itemized income and expense statements from the property for the previous five (5) years;
- l. Information from a title report or other source showing all recorded liens or encumbrances affecting the property as of the date of the petition;
- m. A specific description of the exact CE-1 critical environment zone regulations the application of which petitioner asserts to create a substantial economic hardship to the extent of depriving the petitioner of all reasonable uses of its property, together with the factual basis for said assertion; and
- n. A specific description of the modifications from the CE-1 critical environment zone regulations which petitioner asserts are necessary, to the minimal extent necessary prevent the petitioner from sustaining a substantial economic hardship to the extent of depriving the petitioner of all reasonable use of its property, together with the factual basis for said assertion.

2. The planning commission or the city council may request additional information reasonably necessary, in their opinion, to arrive at a conclusion concerning whether there has been a denial of all reasonable use constituting a substantial economic hardship.

F. Failure To Submit Information: In the event that any of the information required to be submitted by the petitioner is not reasonably available, the petitioner shall file with the petition a statement of the information that cannot be obtained and shall describe the reasons why such information is unavailable.

G. Hearing By The Planning Commission: Within thirty (30) calendar days of the filing of a completed hardship relief petition, together with all required and requested supporting information and documentation required by the city council or the planning commission, the planning commission shall schedule a public hearing with adequate notice consistent with the provisions of this code. The public hearing shall be held on or before thirty (30) days from the date of notice, unless a reasonable extension of time is agreed to by both the planning commission and the petitioner. At the public hearing, the petitioner shall be entitled to testify and to call witnesses and present facts and evidence.

H. Application Of The Economic Hardship Standard: In applying the economic hardship standard, the planning commission shall consider among other items the following information:

1. Any estimates from contractors, architects, real estate analysts, qualified developers, or other competent and qualified real estate professionals concerning the feasibility, or lack of feasibility, of construction or development on the property as of the date of the petition, and in the reasonably near future;
2. Any evidence or testimony of the market value of the property both considering and disregarding all or portions of the CE-1 critical environment zone requirements; and
3. Any evidence or testimony deemed relevant by the planning commission.

I. Burden Of Proof: The petitioner shall have the burden of proving that the denial of the application creates a "substantial economic hardship" as defined herein.

J. Findings Of The Planning Commission: The planning commission shall, on the basis of the evidence and testimony presented, make specific findings as part of its report and recommendations to the city council, which may include the following:

1. Whether the petitioner has complied with the requirements for presenting the information to be submitted with a hardship relief petition;
2. Whether the petitioner has a protectable interest in the property;
3. The market value of the property considering the CE-1 critical environment zone requirements;
4. The market value of the property disregarding all or specific provisions of the CE-1 critical environment zone requirements;
5. Whether it is feasible to undertake construction on or development of the property as of the date of the application, or in the reasonably near future thereafter;
6. Whether, in the opinion of the planning commission, the denial of the application would create a "substantial economic hardship" as defined herein.

K. Report And Recommendation Of The Planning Commission:

1. The planning commission, based upon the evidence and findings, shall make a report and recommendation to the city council concerning the hardship relief petition.
2. If the planning commission recommends that the city council approve the hardship relief petition, then the report of the planning commission shall discuss the type and extent of incentives necessary, in the opinion of the planning commission, to provide an appropriate increase in market value or other benefit or return to the petitioner sufficient to offset the substantial economic hardship. The types of incentives that the planning commission may consider include, but are not limited to, the following:
 - a. Modification or waiver of specific requirements of the CE-1 critical environment zone requirements to the minimal extent necessary to offset the substantial economic hardship;
 - b. A waiver of permit fees;
 - c. Approval of development on some portion of the property within the CE-1 critical environment zone; and
 - d. Acquisition of all or a portion of the property at market value.
3. The report and recommendation shall be submitted to the city council and mailed to the petitioner within thirty (30) calendar days following conclusion of the public hearing.

L. City Council Review And Consideration: Within sixty (60) calendar days following receipt of the planning commission's report, the city council shall hold a public hearing and provide adequate notice as provided by this code to review the report and recommendation of the planning commission. At the public hearing, the petitioner shall be entitled to testify and to call witnesses and present facts and evidence. At the public hearing, the city council may limit the testimony and evidence to new testimony and evidence not presented to the planning commission. The city council shall approve, in whole or in part, or disapprove, the hardship relief petition. The city council may modify or waive the requirements of the CE-1 critical environment zone, or may adopt any incentive, to the extent reasonably necessary to offset any "substantial economic hardship" as defined herein, and may condition such incentives upon approval of specific development plans. The city council may take such action without the necessity of resubmission of the petition to the planning commission.

M. Findings Of The City Council: The city council shall, on the basis of the report and recommendation of the planning commission and the evidence and testimony presented, make specific findings as part of its decision. The findings may adopt, change, or modify the findings of the planning commission.

N. Decision Of The City Council: The decision of the city council shall be mailed to the petitioner within thirty (30) calendar days following conclusion of the public hearing.

O. Time Limits/Transfer Of Incentives: Any modifications, waivers, or incentives adopted by the city council pursuant to this section may be transferred and utilized by successive owners of the property or parties in interest, but in no case shall the incentives be valid after one calendar year of the development approval.

P. Decision Final: The decision of the city council shall be final.

(Ord. 2007-29, 12-4-2007, eff. 1-4-2008)

18.30.145: Transferable Development Rights:

Property owners or developers who wish to forgo the development of property in the CE-1 zone, or find that the development process in the CE-1 zone is cost prohibitive, shall have the right to transfer the development rights as per chapter 18.76 of this title.

(Ord. 2007-29, 12-4-2007, eff. 1-4-2008)

18.30.150: Costs and Charges: All costs for processing the application and for conducting all regular and special reviews including, but not limited to, review of all plans and technical reports by the city engineer as required herein, shall be borne by the applicant. The city council may, by resolution, establish fees for the administration of this chapter and provide for the assessment and collection thereof. (Ord. 2007-29, 12-4-2007, eff. 1-4-2008)

18.30.160: Civil and Criminal Fraud:

It shall be unlawful for any person, including the seller or his representative, directly or indirectly in connection with the sale or offering for sale of real property located in Mapleton City, to make any untrue statement or withhold a material fact related to the geologic condition of the subject property. This section shall be construed to create private and public civil causes of action in addition to creating criminal liability. (Ord. 2007-29, 12-4-2007, eff. 1-4-2008)

18.30.170: Violation of Chapter:

It shall be unlawful for any person to violate any of the terms and requirements of this chapter. Any violation of the requirements of this chapter shall constitute a class B misdemeanor. In the event a person changes the natural state of any land surface having a slope of thirty percent (30%) or greater or, on any portion of land situated in the CE-1 zone grades, cuts slopes, begins development, or constructs in violation of the terms of this chapter, the person violating the terms, and the person at whose direction the actions were taken are required to immediately restore and revegetate the area disturbed consistent with a plan approved by the city engineer and shall bear all costs of restoration, including the costs of the city engineer's review of the plan, and the restoration process. No subdivision application shall be processed or approved, and no building or grading permits shall be issued to the person violating these terms, the person at whose direction the actions were taken, nor the owner, or subsequent owners of the property, until the disturbed land is restored and revegetated. A grading permit shall issue after proper application, for work to be performed to restore and revegetate the area disturbed. (Ord. 2007-29, 12-4-2007, eff. 1-4-2008)

Many local governments have enacted tree and landscape ordinances, which can ensure public safety, protect trees or views, and provide shade. Three types of ordinances, in particular, are most useful from a heat island perspective: tree protection, street trees, and parking lot shade. Tree protection ordinances prohibit the removal or pruning of trees without a permit. Often, these ordinances apply only to native trees or trees with historical significance. The effectiveness of this type of provision depends on enforcement and how strict the requirements are for granting tree removal permits. Street tree ordinances generally govern how to plant and remove trees along public rights-of-way and land that is privately owned but accessible by the public. At a minimum, these ordinances designate the numbers or types of trees that should be planted. More effective street tree policies include guidelines on tree selection, installation, and maintenance to lengthen a street tree's life and minimize problems

with pavement, electrical wires, and buildings. Several large cities, such as the City of Orlando, have developed programs to minimize health impacts from excessive heat events. These efforts provide an opportunity to educate communities about urban heat islands and promote heat island reduction strategies, particularly shade tree planting and cool roof applications, as a long-term mitigation or adaptation strategy.

City of Orlando, Florida

Chapter 60, Subdivision and Landscaping

Part 2, Landscaping and Vegetation Protection

2D. Shade Coverage Requirements

Sec. 60.240. Purpose of Shade Coverage Requirements.

The requirements of this Part are intended to promote the public health and welfare by protecting and enhancing to the maximum extent possible Orlando’s existing urban woodlands, and by fostering and encouraging new or increased urban woodlands and shade coverage. It is intended that these requirements will assist in the natural control of solar heat, flooding, air pollution and noise, soil conservation, and improve the appearance of the community. (Ord. of 9-16-1991, Doc. #25097)

Sec. 60.241. Minimum Shade Coverage Point Standards.

Each development site shall achieve a minimum level of shade coverage by meeting the minimum tree point standards of Figure 5. Any qualifying trees on the site may be counted toward these standards, including those installed or retained to meet the other landscaping and buffer requirements of this Chapter, such as:

- (a) Parking Lot Landscaping required by Chapter 60, Part 2E.
- (b) Bufferyard plantings required by Chapter 60, Part 2F.
- (c) Existing Trees protected in accordance with Chapter 60, Part 2B; provided that trees located within any retained wetland shall not be counted toward more than 50% of the tree point standard in any given tree size category (small, medium, large).
- (d) Street Trees installed as part of the development in accordance with Chapter 60, Part 2C.

Replacement of Removed Trees. Wherever the removal of trees on a development site would result in failure to meet these minimum tree points standards, replacement trees shall be required in sufficient number and size to meet these standards.

Figure 5. Minimum Shade Coverage Standards

A. Minimum Tree Points Required Per Acre. Each development site shall contain trees of a sufficient number, size and type to achieve the following minimum tree point standards per acre (excluding land dedicated for street rights-of-way):

Residential districts	(25) per acre
O-1, O-2, O-3, I-P districts	(20) per acre
AC-3A district	(8) per acre
All other districts	(15) per acre

Minimum Number of Small, Medium, and Large Trees. In order to ensure that each development site contains a desirable mixture of small, medium and large trees, a minimum number of trees in each size category shall be installed or retained on each development site in accordance with the following formulae:

Step 1: Determine the total trees (T) required on the development site as follows:

$$T = \# \text{ Acres} \times \text{Points Required Per Acre}$$

Step 2: Determine the minimum number of medium or large trees needed as follows:

$$\text{Minimum \# Medium Trees} = T \times 10\% \text{ (but not less than 1 tree)}$$

$$\text{Minimum \# Large Trees} = T \times 10\% \text{ (but not less than 1 tree)}$$

Step 3: Determine the minimum number of small trees needed as follows:

$$\text{Minimum \# Small Trees} = T \times 20\% \text{ (but not less than 1 tree)}$$

Exceptions. Where there are too few existing large trees (or no large trees) on the development site to meet this requirement, or where large trees meeting the tree removal standards of Chapter 65, Section 64.645 must be removed (resulting in too few retained large trees), the deficit shall be made up by installing or retaining additional medium trees in accordance with the following formulae:

Step 4: Subtract the number of large trees to be retained from the minimum number in Step 2 above:

$$D = \text{Minimum \#} - \text{Retained \#}$$

Step 5: Determine the number of additional medium sized trees needed as follows:

$$\text{Additional \#} = D/2 \text{ (Ord. of 9-16-1991, Doc. \#25097)}$$

Adaptation for Great Lakes Coastal Storm Hazards

The model presented applies hazard based regulations to promote the property rights of all in the community by preventing development that will cause harm to future occupants of that development; emergency workers who perform evacuations when disaster strikes; and the economic basis of a coastal community. Primary in the development of this bylaw, and one main purpose of the regulation itself, is the need to preserve and protect the natural beneficial functions of the coastal floodplain.

Model Coastal Floodplain Regulation

Woods Hole Sea Grant

Barnstable County, Cape Cod Commission, and Cape Cod Cooperative Extension

University of Hawaii Sea Grant

Article 1, Findings of Fact

(1) The flood prone areas within the jurisdiction of [community] are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(2) Flood losses are caused in part by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by development and occupancy in flood prone areas of uses and structures vulnerable to floods or other hazards.

(3) The topography, soil characteristics (e.g. composition, size, density, and shape of soil material), vegetation, erodibility and permeability of the land surface within the coastal floodplain are critical characteristics which determine how effective an area is in dissipating wave energy and floodwater flow and in protecting areas within and landward of flood zones from storm and flood damage. The more gentle and permeable a seaward-sloping land surface is, the more effective that land surface is at reducing the height and velocity of incoming storm waves and flood waters. Wave energy and flood water flow may be expended in eroding and transporting materials comprising the land surface of the coastal floodplain, as well as percolation or the downward movement of storm water through more permeable land surfaces, thereby lessening the effects of backwash, scour and erosion.

(4) Fill or the placement of structures within Coastal High Hazard Zones may cause the refraction, diffraction and/or reflection, of waves and moving flood water, thereby forcing floodwater onto adjacent property, natural resources and public or private ways potentially resulting in otherwise avoidable storm damage. When struck with storm wave, solid structures within Coastal High Hazard Zones may also increase localized rates of erosion and scour. An engineered beach nourishment project or dune enhancement may be exceptions to this rule, and if properly designed may reduce wave energy.

(5) In some cases, the placement of fill in hydraulically constricted portions of the coastal floodplain may increase flood levels in conjunction with heavy rain fall events.

(6) Velocity zones, AO-zones, and Coastal A-zones of Land Subject to Coastal Storm Flowage (a term of art denoting the 100-year coastal floodplain) are areas that are subject to hazardous flooding, wave impact, velocity flows, erosion, scour, and high winds, which can result in loss of life and property, increasing public expenditures for storm recovery activities, taxpayer subsidies for flood insurance and disaster relief, and increased risks for personnel involved in emergency relief programs. Alteration of land surfaces in A-zones could change drainage characteristics that could cause increased flood damage on adjacent properties. The FEMA Coastal Construction Manual recommends that construction in Coastal A-zones be subject to the same NFIP regulatory requirements as for V-zone construction.

(7) Those portions of coastal floodplains which are immediately landward of salt marshes, coastal beaches, coastal dunes, barrier beaches and coastal banks require special protection. These areas are likely to be in a state of transition as the entire complex of coastal wetland resource areas gradually migrates landward in response to relative sea level rise, resulting in inundation of more landward area. As sea level rises, the shoreline may retreat and areas are successively inundated more frequently by storm and tidal activity. Activities carried out in these 'special transitional areas' of coastal floodplains may interfere with or prohibit the natural landward migration of the adjacent coastal resource areas. Therefore, maintaining these special transitional areas in their natural state is necessary to allow these coastal resources to migrate and, thus, continue to exist and continue to provide the storm damage prevention and flood control beneficial functions of these coastal resources. The International Panel on Climate Change, among others, has predicted that the worldwide sea level rise rate will more than likely accelerate in the near future, making protection of these transition areas even more critical in order to prevent concomitant future flood damage acceleration.

Article 2. Purpose and Intent:

The primary purposes and intentions of these Coastal Floodplain District regulations are:

- (1) To protect public health, safety and welfare;
- (2) To restrict or prohibit development and uses on Land Subject to Coastal Storm Flowage (i.e. 100-year coastal floodplain) and its buffer zones in order to minimize potential loss of life, destruction of property, and environmental damage inevitably resulting from inappropriate development on land known to be subject to storms, flooding, erosion, relative sea level rise and other coastal zone hazards;
- (3) To prevent loss or diminution of coastal resources and their natural beneficial functions that contribute to storm and flood damage prevention or pollution prevention, including by allowing them to migrate landward in response to relative sea level rise;
- (4) To restrict or prohibit development in known hazard areas where the provision of public safety may be jeopardized or where public safety personnel may be endangered, thereby minimizing the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public and to enable safe access to and from coastal homes and buildings for homeowners and emergency response personnel in order to effectively provide public safety services;
- (5) To be fiscally responsible by minimizing expenditures of public funds for costly flood control and damage recovery projects;
- (6) To help maintain a stable tax base by providing for the sound use and development of flood prone areas, which could minimize prolonged business or economic losses and interruptions caused by structural damage and/or flooding;
- (7) To reduce or prevent public health emergencies resulting from surface and ground water contamination from inundation of or damage to sewage disposal systems and storage areas for typical household hazardous substances;
- (8) To minimize monetary loss and public health threats resulting from storm damage to public facilities and infrastructure (i.e. water and gas mains, electric, telephone and cable lines, sewer infrastructure, streets, bridges, etc.);
- (9) To maintain vegetative buffers to coastal wetlands and water bodies so as to reduce and/or eliminate runoff, and other non-point discharges of pollutants in order to protect coastal water quality and public health for reasons including the propagation of fish and shellfish, and for recreational purposes;
- (10) To preserve and enhance the community character and amenities of [community] and to conserve natural conditions, wildlife and open space for the general welfare of the public and the natural environment; and
- (11) To ensure that potential buyers are aware that property is located in a Special Flood Hazard Zone.

Article 3. District Location or Delineation

The following areas are included and defined as within the boundary of the Coastal Floodplain District (the District) and are subject to the provisions of this bylaw:

All lands within the 100-year floodplain as mapped and designated on the [community's] most recent Flood Insurance Rate Maps (FIRMs) that lie seaward of the State Coastal Zone Management program's regulatory boundary or if available, the documented landward inundation caused by the coastal storm of record (also termed land subject to coastal storm flowage or LSCSF). Therefore, where LSCSF has been documented and mapped the more inclusive boundary shall apply. This bylaw establishes two regulatory zones within the Coastal Floodplain District as follows:

(1) Coastal High Hazard Zone: For the purposes of this bylaw and its regulation the Coastal A-Zone, AO Zone, and all V-zones will together constitute the Coastal High Hazard Zone and shall be treated concurrently. Additionally, due to wave action and storm surge, coastal erosion, increasing flood elevations due to relative sea level rise, and flood elevation and inundation modeling uncertainty, the Coastal High Hazard Zone shall, absent a site specific analysis, also include a buffer landward of the V-zone delineated as:

- i) All land 200 feet landward from the landward boundary of FEMA designated V-zone, which is intended to capture the Coastal A-zone; unless,
- ii) An area landward of 200 feet landward of the V-zone can be delineated where buildings have been documented to have been structurally damaged by prior storm waves; unless,
- iii) FEMA has included the Limit of Moderate Wave Action (LiMWA) on the community FIRM. If FEMA has not already provided FIRMs depicting the 1.5-foot wave landward limit (LiMWA), as an alternative to the 200-foot landward V-zone buffer an applicant can conduct a site-specific analysis to determine the actual landward limit of the 1.5-foot breaking wave. If such analysis is conducted, that calculated landward limit of the 1.5-foot wave shall be the landward limit of the Coastal High Hazard Zone, as defined in this bylaw.

(2) Tidal A-Zone: For purposes of this bylaw and its regulation, Tidal A-Zone shall include all areas subject to inundation by the 100-year flood as designated on a community FIRM as A, AE, A1-30, AH, or AR, and is subject to some degree of tidal influence but is not within the Coastal High Hazard Zone as delineated above in (1). Additionally, the Tidal A-Zone shall also include a 100-foot landward buffer delineated from the landward boundary of FEMA designated A-zone.

Article 4, Scope of Authority

The Coastal Floodplain District is an overlay district and shall be superimposed on the other districts established by the town of _____. All regulations in the _____ Zoning Bylaw applicable to such underlying districts shall remain in effect. The Coastal Floodplain District is intended to be an overlay district, serving as an expansion of the regulatory scope of the underlying district. Where the overlaying district's regulations conflict with the underlying district's regulations, the more restrictive regulation(s) applies. If a building or structure is being proposed that crosses more than one designated flood zone the more restrictive standards shall apply to the entire building or structure.

Article 5, Use and Activity Regulations for the Coastal Floodplain District

Section A. Uses and Activities Prohibited in the District

Notwithstanding any other provision of this bylaw and unless allowed under this Article 5, Sections B and C below, the following uses, structures, and activities are prohibited in the Coastal Floodplain District:

(1) Residential dwelling unit(s),*[or the foundation for]*;

(2) If within the Coastal High Hazard Zone of the District no new building/structure shall be constructed, *[nor any new foundation for a building/structure placed]*, and no existing structure shall be enlarged, moved to a more vulnerable location, or altered except to upgrade for compliance with documented existing health and safety codes; New non-water dependent infrastructure or expansion of existing non-water dependent infrastructure, unless there is a documented and accepted overriding public benefit, and unless it is shown there is no feasible alternative location, and provided that the infrastructure will not promote new growth or development in the District;

(3) New non-water dependent infrastructure or expansion of existing non-water dependent infrastructure, unless there is a documented and accepted overriding public benefit, and unless it is shown there is no feasible alternative location, and provided that the infrastructure will not promote new growth or development in the District;

(4) Draining, excavating, dredging, dumping, filling, removing or transferring loam, peat, sand, soil or other material substance, which will reduce the natural storage capacity of the land, interfere with the landward migration of coastal resources (such as salt marshes) in response to relative sea level rise, interfere with the natural drainage or flow patterns of any watercourse, or degrade the water quality of surface or ground water within the district, except activities that are incidental to aquaculture, established agricultural uses, otherwise approved beach nourishment projects, or flood or mosquito control work;

(5) Alteration of a sand dune, unless demonstrated that its beneficial functions of storm damage and flood reduction characteristics are enhanced;

(6) New development on a coastal bank or coastal bluff;

(7) New discharge of hazardous substances;

(8) Construction of any pipeline designed to carry crude oil or unprocessed natural gas; and

(9) Use of land in any manner that will irreversibly or permanently destroy the natural vegetation, substantially alter the existing patterns of tidal flow, or otherwise alter or permit the alteration of the natural beneficial functions of land and resources within the district.

Section B. Uses and Activities Permitted by Adjudicative Permit in the District

(1) Notwithstanding any other provision of this bylaw, and upon issuance of a special permit by the [permit issuing authority] and subject to such special conditions and safeguards as are deemed necessary to fulfill the purposes of this bylaw, the following uses and structures can be permitted in the Coastal Floodplain District by [adjudicative permit]:

- (a) Municipal parks and municipal water supply facilities including reservoirs, wells and pumping stations;
- (b) Temporary storage of materials or equipment, provided such storage does not affect the water quality or the natural drainage patterns in the area;
- (c) Nonresidential structures used only in conjunction with fishing, shell fishing, or the growing, harvesting or storage of crops raised on the premises, that do not affect the water quality or natural drainage patterns in the area;
- (d) The construction of catwalks, piers, ramps, stairs, unpaved trails, boathouses, boat shelters, roadside stands, fences, wildlife management shelters, foot bridges, observation decks, and similar. Elevated structures, where appropriate, are preferred.

Burden of Proof. The applicant for an [adjudicative permit] shall have the burden of proving by a preponderance of credible evidence that the work proposed in the permit application will not have significant negative or cumulative effects upon the beneficial functions of storm damage prevention and flood control provided by coastal landforms, particularly the coastal floodplain, which serves the intent and purposes of this bylaw. Failure to provide adequate evidence to the [permit issuing authority] supporting this burden shall be sufficient cause for the [authority] to deny an adjudicative permit application.

(2) Uses and Activities Permitted in the District

Notwithstanding any other provisions of this bylaw, the following uses and activities are permitted as follows in the Coastal Floodplain District:

(a) Reconstruction shall be permitted where fire, storm, or similar disaster caused substantial damage of buildings. Reconstruction after substantial damage shall include all local, state and/or federal applicable code and regulatory requirements for the building, however, shall not increase floor area or the intensity of the use, and if located in the Coastal High Hazard Zone shall not convert a seasonal to a year-round use.

(b) For a water dependent use with no other alternative, development or redevelopment shall be permitted provided that the structure will not compromise the beneficial functions of coastal resources and that the applicant obtains permits from the appropriate authorities. If the development or redevelopment is >50% of the assessed value prior to work, the structure shall meet all existing requirements of this bylaw, including for example elevation including freeboard.

(c) Existing structures in Coastal High Hazard Zone and Tidal A-Zone of barrier beaches or coastal dunes may be reconstructed or renovated, provided there is no increase in floor area or intensity of use, or conversion from seasonal to year-round use. If the reconstruction or renovation is greater than 50% of the assessed value prior to work, the structure shall meet all existing requirements of Article 6 of this bylaw, for example elevating on open piles including freeboard.

(d) Outdoor recreation, including but not limited to play areas, nature study, boating, fishing and hunting where otherwise legally permitted, but excluding buildings and structures, unless allowed by other provisions of these regulations;

(e) Wildlife management or conservation areas, foot, bicycle, and/or horse paths and bridges, provided such uses do not affect the natural flow pattern of floodwaters or any water course;

(f) Agriculture or forestry uses;

(g) Accessory uses such as flower or vegetable gardens;

(h) Maintenance dredging of existing public and private channels and marine facilities;

(i) Repair or replacement of existing water and/or sewer systems in order to avoid impairment of or contamination from them during flooding.

Article 6, Development Standards for Use and Activity in the District

Section A. Development Standards for Use and Activity in the District

Any allowed use or activity within the boundaries of the Coastal Floodplain District shall meet the following standards in addition to all other applicable provisions of this bylaw:

(1) Setback from Coastal Beach, Coastal Dune, and Coastal Bank Resources

All new buildings and structures shall be setback from the landward edge of the landward most coastal resource (excluding Land Subject to Coastal Storm Flowage, aka 100-year floodplain) [*70 times*] the average annual erosion rate for buildings <5,000 square feet, and [*100 times*] the average annual erosion rate for buildings >5,000 square feet. The erosion rate shall be calculated over the longest time frame available, but not less than 50 years, unless it is demonstrated that a different time frame is more appropriate in reflecting current and future shoreline conditions. If other standards apply, the stricter of the standards shall be adhered to.

(2) Setback to Coastal Bank.

(a) New Development: The setback from the top of the coastal bank for all new non-water dependent development shall be at least 70 times the average annual erosion rate of the bank or 100 feet, whichever is greater. The average annual rate of erosion shall be determined by averaging the erosion over the previous 70-year period at a minimum or other time frame determined by the permit issuing authority to appropriately reflect current and future shoreline conditions.

(b) Reconstruction/Renovation: Redevelopment shall be designed to have no adverse effect on the height, stability, or the use of the coastal bank as a natural sediment source to beaches, dune, barrier beaches and sub-tidal areas. All coastal banks are sediment sources to one degree or another for beaches, dunes, barrier beaches, salt marshes and/or near- or off-shore areas. Every feasible effort shall be made to reduce impacts to the resource, such as to maintain the same footprint or relocate structures landward.

(c) Water-dependent marine infrastructure or public recreation facilities exception: The setback from the top of the coastal bank for all new water-dependent marine infrastructure [or public recreation facilities] shall be as far landward as feasible and shall be designed to minimize impacts to the greatest extent feasible.

(3) Setback to stable natural vegetation. All new construction and substantial improvements shall be located a minimum of 40 feet landward of the first line of stable natural vegetation.

(4) Accommodating relative sea level rise. Relative sea level rise and the landward migration of coastal resources in response to relative sea level rise shall be incorporated into the design and construction of structures and other activities allowed within the District. Based on coupling the average life of a residential building (70 years) and current conservative predictions of eustatic sea level rise over the life-expectancy of the building, freeboard shall be provided according to this Article 6, Sections B(1) and C(1) below.

(5) Accommodating the migration of coastal resources in response to relative sea level rise. Any activity within the 10-year coastal floodplain shall not have an adverse effect by impeding the landward migration of coastal resources in response to relative sea level rise, therefore:

(a) No new construction shall be allowed;

(b) No fill shall be placed; and,

(c) New development, redevelopment, and other activities shall be located and designed so as not to impede the landward migration of coastal resources.

(6) Flood water flow characteristics. Any activity shall not have an adverse effect by increasing the elevation or velocity of flood waters or by increasing flows due to a change in drainage or flow characteristics (e.g. change in direction) on the subject site, adjacent properties, or any public or private way.

(7) Inter-tidal aquatic vegetation. No destruction or impairment of inter-tidal aquatic vegetation is permitted.

(8) Fill. No fill is allowed in tidally restricted areas.

(9) Repair or Replacement of Existing Foundations. Existing foundations may be repaired, unless the work replaces the foundation in total, replaces the foundation so as to constitute new construction, or constitutes a substantial repair of a foundation, which is defined as a repair to greater than 50% of its total linear distance as measured around the foundation perimeter. In such events, the foundation shall be brought into compliance with the applicable provisions of the development standards for the flood zone within which the activity takes place.

(10) Datum. The most recent applicable datum available for the site shall be used to determine the base flood elevation, and all other construction required elevations.

Section B. Development Standards for Use and Activity in the Coastal High Hazard Zone

Coastal High Hazard Zones have special flood hazards associated with high velocity waves from storm surges and, therefore, any allowed use or activity shall meet the following provisions in addition to all other applicable provisions of this bylaw:

(1) Freeboard provision. Any structures and other activities proposed in the Coastal High Hazard Zone shall be designed to have their lowest horizontal structural member three feet above Base Flood Elevation (BFE) in order to accommodate relative sea level rise and the landward migration of coastal

resources in response to relative sea level rise, and to allow a margin for potential FEMA mapping uncertainties.

(2) Damage prevention and flood minimization. To maintain the storm damage prevention and flood control functions of land subject to coastal storm flowage:

(a) No activity shall increase the existing site elevations, except beach nourishment and/or dune enhancement; and

(b) No activity shall increase the velocity of flood waters or increase flows due to a change in drainage or flowage characteristics on the subject site, adjacent properties, or any public or private way; and

(c) Placement of fill in tidally restricted areas shall not be permitted.

(3) Use of open foundation or piles. For any new construction, substantial improvement, or lateral addition in a Coastal High Hazard Zone, or on a barrier beach or coastal dune located in any zone, the structure must be built on open pilings without breakaway walls and shall be adequately anchored to such pilings. Columns are allowed only when pilings cannot be driven. Pilings shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift) to which such piles are likely to be subjected during a flood to the base flood elevation. Pile embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling.

(4) Enclosures below the BFE. All new construction and substantial improvements shall have the space below the lowest horizontal structural member free of obstruction so as not to impede the flow of flood waters, and to help reduce the potential accumulation of debris below the building. Open wood latticework or insect screening may be permitted [*however, breakaway walls are prohibited.*]

(5) Existing structures that can be reconstructed or renovated, including water-dependent structures and uses and maintenance of marine infrastructure, shall minimize impacts to coastal resources and not compromise the beneficial functions of storm damage prevention and flood control provided by coastal resources.

Section C. Development Standards for Use and Activity in the Tidal A-Zone

(1) Freeboard provision. All new buildings, including substantial improvements to existing structures, shall be designed to have their lowest horizontal structural member a minimum of three feet above Base Flood Elevation (BFE) in order to accommodate relative sea-level rise and the landward migration of coastal resources in response to relative sea level rise, and to allow a margin for potential FEMA mapping uncertainties.

(2) Damage prevention and flood minimization. To maintain the storm damage prevention and flood control functions of land subject to coastal storm flowage no activity shall increase the velocity of flood waters or increase flows due to a change in drainage or flowage characteristics on the subject site, adjacent properties, or any public or private way; and the placement of fill in hydraulically constricted areas shall not be permitted.

(3) Enclosures below base flood elevation in a flood-hazard zone. Enclosed spaces below the base flood elevation shall not be used for human occupancy with the exception of structural means of egress, entrance foyers, stairways and incidental storage. Fully enclosed spaces shall be designed to equalize automatically hydrostatic forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement shall either be certified by a registered design professional or conform to the [State Building Code] or NFIP standards.

Article 7, Reconstruction, Expansion, or Alteration of Pre-existing, Nonconforming Uses and Structure
Seek legal advice as to the laws applicable to pre-existing, non-conforming uses in your state/municipality and the statutes governing vested rights. The goal of any provision in this section would be to remove inventory from the coastal floodplain by not allowing for the reconstruction, expansion, or alteration of preexisting, nonconforming uses and structures, or by setting a time limit on rebuilding (often referred to as a sunset clause) after damage from a disaster. Typically, there are few opportunities to do this, short of purchasing property and/or development rights. It is suggested that communities take this opportunity if possible.

Article 8, Effect on Outstanding Floodplain Development Permits

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by _____ before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of the ordinance.

Article 9, Definitions

The following words and terms shall, for the purposes of this bylaw have the meanings shown herein:

A-Zone: A-, AE-, A1-30 and A-99 zones are those portions of Land Subject to Coastal Storm Flowage (LSCSF) which are subject to inundation by types of 100-year flooding where waves <3 feet can occur but stillwater flooding predominates; AO-Zone is the area subject to inundation by moving water (usually sheet flow on sloping terrain) where average depths are between one and three feet.

Barrier Beach: A narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends.

Base Flood Elevation (BFE): The flood having a 1% chance of being equaled or exceeded in any given year and shall be used to define areas prone to flooding, and describe at a minimum, the depth or peak elevation of flooding.

Breakaway Wall: A wall that is not part of the structural support of the building and intended, through its design and construction, to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

Coastal A-Zone: Flood hazard areas inland of and contiguous to flood hazard areas subject to high velocity wave action. Areas subject to this classification are those where the still water depth is greater than or equal to 2 feet, and the breaking wave heights are greater than or equal to 1.5 feet. ASFPM

(2007): areas where the resulting wave run-up elevations above storm surge are between 1.5 and 3 feet.

Coastal Bank: The seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

Coastal Beach: Unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bank line or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.

Coastal Dune: Any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal Dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.

Coastal Floodplain: Coastal resource managers use certain terms interchangeably to reference the area considered to be the coastal floodplain. The following terms and resource areas are synonymous and equal the coastal floodplain:

- Land Subject to Coastal Storm Flowage
- The sum of V-Zone, Coastal A-zones, AO-Zones, and tidally influenced A-Zones

Coastal High Hazard Zone: For the purposes of this bylaw and its regulation the Coastal A zone, AO Zone, and all V-zones will together constitute the Coastal High Hazard Zone. Additionally, due to wave action and storm surge, coastal erosion, increasing flood elevations due to relative sea level rise, and potential map errors the Coastal High Hazard Zone shall include all land 200 feet landward from the landward boundary of all FEMA V-zones, unless the LiMWA has been delineated on the community FIRM. As an alternative to the 200-foot landward buffer from the landward edge of all V-zones (considered Coastal A-Zone), if FEMA has not mapped the Coastal A-zone on recent community FIRMs, an applicant can conduct an analysis to determine the actual landward limit of the 1.5-foot breaking wave (see definition of Coastal A-Zone). If such analysis is conducted, that landward limit of the 1.5-foot wave shall be the landward limit of the Coastal High Hazard Zone for regulatory purposes.

Coastal Wetland Resource Area/Coastal Resource: Coastal Wetland Resource Areas (also referred to as Coastal Resources within this bylaw) include barrier beaches, coastal beaches, coastal dunes, rocky intertidal shores, tidal flats, land subject to 100 year coastal storm flowage, coastal banks, land containing shellfish, lands subject to tidal action, and lands under an estuary, salt pond or certain streams, ponds, rivers, lakes or creeks within the coastal zone that are anadromous/catadromous fish runs.

Elevation: The placement of a structure above flood level to minimize or prevent flood damages or to preserve the flood control and storm damage prevention functions of a coastal resource.

Flood Zones: Areas of flood hazard designated by FEMA to represent the potential extent of flooding based on 100-year storms. Various zones are determined by topographical analysis done under a Flood Insurance Study. Areas of minimal flood hazard are outside of the Special Flood Hazard Area (A- and V-zones).

Floodproofing: Any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to new or substantially improved structures.

FEMA: Federal Emergency Management Agency

Flood Insurance Rate Map/FIRM: Flood insurance rate map (FIRM) means an official map of a community, which delineates both the special hazard zones and the risk premium zones applicable to the community published by the Federal Emergency Management Agency.

Freeboard: The height added to the Base Flood Elevation (BFE) to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as relative sea level rise, wave action, blockage of bridge openings, and the hydrological effect of urbanization of the watershed. The BFE plus the freeboard establishes the Design Flood Elevation.

High-hazard zones: See definition of Coastal High Hazard Area/Zone.

Land Subject to Coastal Storm Flowage (LSCSF): Land subject to inundation caused by coastal storms from the seaward limit at mean low water up to and including that resulting in a 100-year flood, surge of record, or flood of record, whichever is greater. The 100-year flood (or the base flood as it is also referred to) means the flood having a one-percent chance of being equaled or exceeded in any given year. LSCSF is considered significant to storm damage prevention, flood control, the protection of wildlife habitat and the prevention of pollution.

Lateral Addition: an addition that expands the footprint of a building or structure including a manufactured home.

Lowest Floor: The lowest floor of the lowest enclosed area (including basement/cellar). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or incidental storage in an area other than a basement/cellar with appropriate hydrostatic openings as required in 780CMR 120.G.501.4 is not considered a building's lowest floor.

Scouring: The erosion or washing away of soil and/or the reduction of slope angles by velocity waters.

Special Flood Hazard Areas (SFHA): This is the term given to the Land Subject to Coastal Storm Flowage (LSCSF) and is comprised of the V-zones plus A-zones. SFHA is an area having special flood, and/or flood-related erosion hazards and shown on a Flood Hazard Boundary Map or FIRM as Zone A, AO, A1-30, AE, A99, AH, VO, V1-30, VE, V.

SLOSH Zone: The SLOSH, or Sea, Lake and Overland Surges by Hurricanes, is a computer model developed by the National Weather Service designed to forecast surges that could occur from wind and pressure forces of hurricanes. The SLOSH maps show surge limits that represent potential flooding that may occur from critical combinations of hurricane track direction, forward speed, landfall location, and high astronomical tide, which are tailored to likely Hurricane scenarios in a particular geographic region.

Structure: A walled and roofed building, including a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home.

Substantial Damage: Damage of any origin sustained by a building or structure including a manufactured home whereby the cost of restoring the building or structure to its before damaged condition would equal or exceed 50 percent of the assessed value of the building or structure before the damage occurred.

Substantial Improvement: Any combination of repairs, reconstruction, rehabilitation, addition,

or other improvement of a structure, taking place during any one-year period for which the cost⁸ equals or exceeds 50 percent of the [assessed] value of the structure before the “start of construction” of the improvement. When and if discrete building or structure improvements made over a consecutive five-year period cumulatively exceed 50% of the structure or buildings assessed value, the proposed improvement will be considered a substantial improvement, and the entire building or structure must meet all applicable performance standards for the flood zone within which the building or structure is located.

Substantial Improvement includes structures that have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

(a) any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or

(b) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Exception: If a substantial improvement consists exclusively of a lateral addition that does not rely on the support of the existing structure, only the lateral addition must be erected in accordance with the applicable provisions for the flood zone within which the building is taking place.

Substantial Repair of a Foundation: Work to repair and/or replace a foundation that results in the repair or replacement of the portion of the foundation walls with a perimeter along the base of the foundation that equals or exceeds 50% of the perimeter of the base of the entire foundation measured in linear feet. The term “substantial repair of a foundation” also includes a building or structure including a manufactured home that has incurred a failure of a foundation regardless of the actual work done to repair or replace the foundation.

Tidal A-Zone: Tidal A-Zones are the area of the 100-year coastal floodplain landward of the Coastal A-zone, where tidally-influenced stillwater flooding predominates.

Tidal Flat: Any nearly level part of a coastal beach that usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach.

Velocity Zone/V-Zone: Area extending from the mean low water line to the inland limit within the 100-year floodplain supporting waves greater than three feet in height. V-Zones are mapped on a FEMA Flood Insurance Rate Map (FIRM), but also include all land area extending to the landward toe of the frontal dune (which area is often not depicted on the FIRM but defined as V-Zone by FEMA). V-zones are subject to hazardous flooding, wave impact, and in some cases significant rates of erosion as a result of storm wave impact and scour. V-Zone is synonymous with High-hazard Zone, and for purposes of this bylaw constitutes part of the Coastal High Hazard Area/Zone.

Article 10, Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or sections or parts of any section or sections of this bylaw shall not affect the validity of the remainder of this bylaw.

⁸ The following items can be excluded from the cost of improvement or repair: plans, specifications, survey, permits, and other items which are separate from or incidental to the repair of the damaged or improved building. i.e. debris removal/cartage.

In order to protect, conserve, and appropriately use its coastal areas, the Collier County Coastal Zone Management ordinance requires planning consistence, site development prioritization, and impact planning that considers potential impacts of sea level rise. The law requires that all new and existing development in the coastal zone furthers the goals, objectives, and policies of the Growth Management Plan's Conservation and Coastal Management Element, preserving native vegetation and limiting development densities for sites within undeveloped coastal barriers. The ordinance establishes a hierarchy of preferred site development that discourages development on unaltered wetlands. Additionally, when environmental impact statements are required for shoreline development plans, these assessments must consider effects of six inches of projected sea level rise.

Collier County, Florida

Land Development Code, Chapter 3: Resource Protection

3.03 Coastal Zone Management

3.03.01 Purpose

The purpose of this section is to manage and conserve the habitats, species, natural shoreline, and dune systems in the County's coastal zone, as defined in the Collier County Growth Management Plan (GMP) and herein, through the identification, protection, conservation, and appropriate use of native vegetative communities and wildlife habitats.

3.03.02 Applicability

A. New and existing development in the coastal zone shall be in compliance with the goals, objectives, and policies of the Conservation and Coastal Management Element (CCME) of the Collier County GMP and with this LDC until the formal adoption by the County of all land development regulations, ordinances, policies, and programs which implement the Coastal Zone Management Plan—1991, as adopted by the BCC, and as prescribed by the conservation and Coastal Management Element of the Collier County GMP.

B. In addition to these coastal zone regulations, all land development activities on shorelines, and/or undeveloped and developed coastal barriers, shall comply with the County's environmental land development regulations, including, but not limited to: section 2.03.07(D)(1), Special Treatment Overlay district (ST); procedural requirements in Chapter 10; section 3.05.00, Vegetation Removal, Protection and Preservation; section 3.04.03, Sea Turtle Protection; section 3.04.00, Endangered, Threatened or Listed Species Protection; Chapter 10, Coastal Construction setback line variance; and as required by Vehicle on the beach Regulations in the County Code of Ordinances.

3.03.03 Priority for Location of Structures, Development, or Site Alterations

A. Any proposed structure or site alteration on a shoreline shall be located within the boundaries of the subject parcel with the most impacted coastal habitats existing on the subject parcel receiving the highest priority for siting of the proposed structure or site alteration. The following categories of impacts, 1 through 7, shall be used to determine the priority for location of development or site alteration:

1. Areas presently developed.
2. Disturbed uplands.

3. Disturbed freshwater wetlands.
4. Disturbed brackish water and marine wetlands.
5. Viable unaltered uplands.
6. Viable unaltered freshwater wetlands.
7. Viable unaltered brackish water and marine wetlands.

B. If “1. Areas presently developed” exists on the subject parcel, it shall be the preferred site for the proposed structure or site alteration. If “1” is not present, and “2. Disturbed uplands” exists on the subject parcel, “2” shall be the preferred site for development or site alteration. This siting process shall continue in the same manner through “7,” until a specific area is identified as an appropriate location for the proposed structure or site alteration on the subject parcel.

C. In the event that the proposed development or site alteration requires a larger area than is available in the highest category of impacted habitat, then any adjoining land in the next highest category of impacted habitat shall, in addition, be allocated for location of the proposed development or site alteration. Where there is a mixture of categories of impacted habitat, and it is not possible to follow the priorities noted above, the proposed development or site alteration shall be planned to maximize the use of land for development in the highest ranked categories and to minimize the use of land in the lowest ranked categories. The burden of proof shall be on the applicant to establish that a higher ranked category of impacted habitat is not feasible for siting the proposed development or site alteration.

3.03.04 Procedures

Proposed development shall be shown on preliminary or final plats or on site development plans. Requirements for plats, site development plans, and review are described in Chapter 10.

3.03.05 Sea Level Rise

An analysis shall be required demonstrating the impact of a six (6) inch rise in sea level for development projects on a shoreline. This requirement shall be met by inclusion of this analysis in an environmental impact statement (EIS). This requirement shall be waived when an EIS is not required. This analysis shall demonstrate that the development will remain fully functional for its intended use after a 6 inch rise in sea level. In the event that the applicant cannot meet this requirement, a list shall be provided by the applicant of the changes necessary in order for the development to meet the standard. (Ord. No. 06-63, § 3.M)

3.03.06 Native Vegetation Retention on Coastal Barriers

Native vegetation retention or revegetation shall be in compliance with the requirements of section 3.05.00, and shall incorporate, at a minimum, the preservation and revegetation standards as follows:

A. Native vegetation shall be preserved to the maximum extent possible. To the extent that native vegetation cannot be retained on-site, and the remaining native vegetation can be supplemented without degrading or damaging its natural function, then the existing native vegetation shall be supplemented with compatible vegetation on-site.

B. All beachfront land development projects shall be required to revegetate the dune where the dune is devoid of coastal dune vegetation.

C. All land development projects shall provide 100 percent native Southern Floridian species within their required landscaping and buffering standards as established within section 4.06.00.

D. Appropriate coastal dune or strand vegetation shall be required as the only stabilizing medium in any coastal barrier dune or strand vegetation restoration program.

3.03.07 Undeveloped Coastal Barriers

In addition to the regulations contained in section 3.03.02, the following standards shall apply to any proposed structure or site alteration within all undeveloped coastal barriers:

A. The County shall not approve any plan of development of an undeveloped coastal barrier which would exceed a density of 1 structure per 5 acres of fastland, except for legal nonconforming lots of record , either individually or in combination with adjacent developments.

B. The following land development activities shall be prohibited:

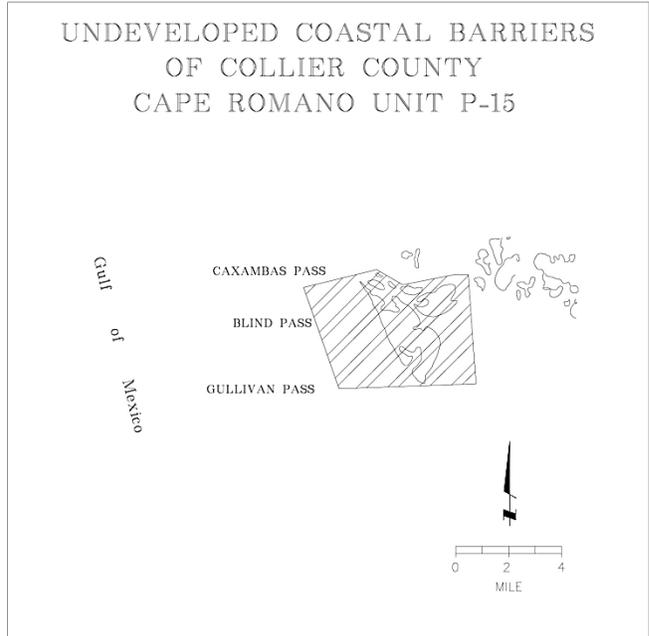
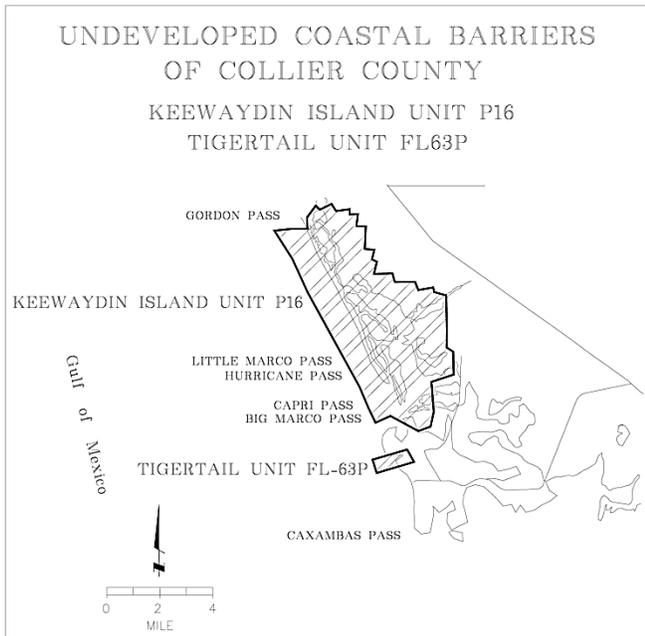
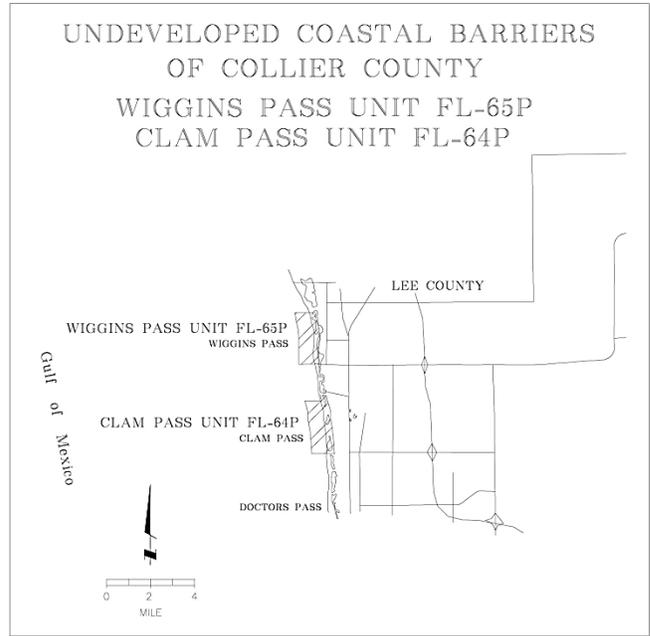
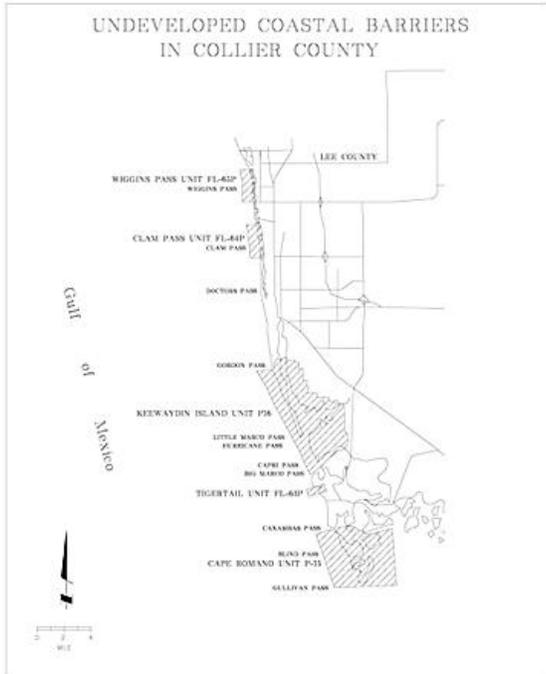
1. Bridges and causeways to or on undeveloped coastal barrier islands;
2. Paved roads;
3. Commercial marinas; and
4. Shore-hardening structures.

C. Filling and excavation are prohibited on undeveloped coastal barriers, except as follows:

1. When part of a dune or beach restoration program, as permitted by governmental agencies having jurisdiction.
2. When part of a wastewater treatment system, as permitted by governmental agencies having jurisdiction.
3. When part of a public development plan, as permitted by governmental agencies having jurisdiction.

D. The undeveloped coastal barriers of Collier County are depicted by the following illustrations:

1. Undeveloped Coastal Barriers in Collier County
2. Undeveloped Coastal Barriers in Collier County – Wiggins Pass / Clam Pass
3. Undeveloped Coastal Barriers in Collier County – Keewaydin Island Unit / Tigertail Unit
4. Undeveloped Coastal Barriers in Collier County – Cape Romano Unit



By enacting the coastal flooding and erosion control recommendations of the Local Waterfront Revitalization Program (adopted 1999, approved 2007), Policies #11-17, the Town of East Hampton's Coastal Overlay District (COD) is intended to improve protection of coastal resources. The COD establishes four overlay zones, adopted from the Town's Use District Map. Protective measures in the COD include requirements that all structures—except coastal structures—be located and constructed to minimize property damage and risk to human life. Regulations on erosion control measures vary by zone. Generally, construction of erosion control structures is prohibited in all zones except Zone 4, where new erosion control structures may be installed if a Natural Resources Special Permit is obtained. Additionally, the COD amendment authorizes limited emergency actions that are exempt from the Natural Resource Special Permit review process where immediate action is needed to prevent substantial damage to private property, authorizing (1) moving the threatened structure landward; (2) making structural repairs; (3) depositing sand in front of the structure; or (4) installing temporary geotextile or sandbag erosion control structures.

Town of East Hampton, Suffolk County

Chapter 255: Zoning

Article III, Overlay Districts

§ 255-3-80. Coastal Erosion Overlay District. [Added 4-13-2007 by L.L. No. 14-2007]

§ 255-3-81. Purpose. [Added 4-13-2007 by L.L. No. 14-2007]

The purpose of the Coastal Erosion Overlay District is the protection of the Town's natural shoreline and coastal resources. These features require protection because of their important flooding and erosion prevention functions, their scenic qualities, their value for public recreation and water access, and their value as wildlife habitat. The overlay district is divided into four coastal erosion zones, each of which covers sections of the Town's coast which have similar features, characteristics, and storm exposures. The district establishes rules and standards for erosion control structures and projects, which may differ from one zone to the next.

§ 255-3-82. Boundaries. [Added 4-13-2007 by L.L. No. 14-2007]

The Coastal Erosion Overlay District shall encompass all lands, including underwater lands, which are located within any of the following areas: (i) landward of the mean high water line of any tidal waters within the Town, to a line which is 200 feet landward of said mean high water line, (ii) seaward of said mean high water line, to a line which is 1,000 feet seaward of the mean low water line of any tidal waters within the Town, or (iii) seaward of the mean high water line, to the contour line at which mean low water depth is 15 feet. The overlay district shall consist of four coastal erosion zones as shown on the Use District map. The coastal erosion zones constituting the Coastal Erosion Overlay District shall be identified as follows:

A. Coastal Erosion Overlay Zone 1: Ocean coastal zone, including bluffs, dunes, beaches, and nearshore areas. This zone is predominantly free of erosion control structures.

B. Coastal Erosion Overlay Zone 2: Bay coastal zone, including bluffs, dunes, beaches, and nearshore areas, which is predominantly free of erosion control structures.

C. Coastal Erosion Overlay Zone 3: Bay coastal zone, including bluffs, dunes, beaches, and nearshore areas, which contains erosion control structures which are isolated and discontinuous, or which have no substantial flooding or erosion protection function.

D. Coastal Erosion Overlay Zone 4: Bay coastal zone, including any remaining bluffs, dunes, beaches, and nearshore areas, which contains numerous erosion control structures. Within this zone the loss of natural resources and features such as bluffs, dunes, and beaches means that in many cases erosion control structures provide the only remaining protection against flooding and erosion.

§ 255-3-85. Regulations. [Added 4-13-2007 by L.L. No. 14-2007]

In addition to any other provisions of this chapter which may apply to them, lots, lands, buildings, structures, uses, and activities within the Coastal Erosion Overlay District shall be subject to the following restrictions and regulations:

A. Coastal Erosion Overlay Zones, generally.

(1) All buildings and other structures, except coastal structures, shall be located and constructed so as to minimize the damage to property and risk to human life which may be caused by flooding and erosion.

(2) All construction and related activities, including the clearing and grading of land, shall be undertaken in a manner which minimizes the damage caused to wetlands, beaches, bluffs, dunes, and vegetation growing thereon by flooding and erosion.

B. Regulation of erosion control structures.

(1) In Coastal Erosion Overlay Zone 1:

(a) The construction, placement, or installation of new erosion control structures is prohibited.

(b) The repair, reconstruction, or alteration of all lawfully existing erosion control structures shall require the issuance of a natural resources special permit.

(c) Notwithstanding the provisions of the foregoing Subsection B(1)(b), the repair, reconstruction, or alteration of existing erosion control structures which are constructed perpendicular to the shoreline, such as groins and jetties, is prohibited. The construction, placement, or installation of any such new erosion control structure built perpendicular to the shoreline is also prohibited.

(d) Notwithstanding the provisions of the foregoing Subsection B(1)(c), the alteration or removal of groins, jetties, or other existing erosion control structures constructed perpendicular to the shoreline is permitted upon issuance of a building permit when such alteration would result in a reduction of the size or length of the structure and a public or environmental benefit. The Building Inspector may consult with other Town agencies and the Town Trustees to ensure that the alteration would result in a public or environmental benefit.

(2) In Coastal Erosion Overlay Zone 2:

(a) The construction, placement, or installation of new erosion control structures is prohibited.

(b) Subject to the exception set forth in Subsection B(2)(c) below, the repair, reconstruction, or alteration of existing erosion control structures is prohibited. This prohibition shall not apply to erosion control structures installed to ensure the safe navigability of boat

channels; the construction, repair, reconstruction, or alteration of any such structure shall require the issuance of a natural resources special permit.

(c) Notwithstanding the provisions of the foregoing Subsection B(2)(b), the alteration or removal of groins, jetties, or other existing erosion control structures constructed perpendicular to the shoreline is permitted upon issuance of a building permit when such alteration would result in a reduction of the size or length of the structure and a public or environmental benefit. The Building Inspector may consult with other Town agencies and the Town Trustees to ensure that the alteration would result in a public or environmental benefit.

(3) In Coastal Erosion Overlay Zone 3:

(a) The construction, placement, or installation of new erosion control structures is prohibited.

(b) Subject to the exception set forth in Subsection B(3)(c) below, the repair, reconstruction, or alteration of existing erosion control structures which are constructed perpendicular to the shoreline, such as groins and jetties, is prohibited. This prohibition shall not apply to erosion control structures installed to ensure the safe navigability of boat channels; the construction, repair, reconstruction, or alteration of any such structure shall require the issuance of a natural resources special permit.

(c) Notwithstanding the provisions of the foregoing Subsection B(3)(b), the alteration or removal of groins, jetties, or other existing erosion control structures constructed perpendicular to the shoreline is permitted upon issuance of a building permit when such alteration would result in a reduction of the size or length of the structure and a public or environmental benefit. The Building Inspector may consult with other Town agencies and the Town Trustees to ensure that the alteration would result in a public or environmental benefit.

(d) The repair, reconstruction, or alteration (including enlargement or reduction in size) of all other lawfully preexisting erosion control structures shall require the issuance of a natural resources special permit.

(4) In Coastal Erosion Overlay Zone 4:

(a) Subject to the exception set forth in Subsection B(4)(d) below, the construction, placement, or installation of new erosion control structures shall require the issuance of a Natural Resources Special Permit.

(b) Subject to the exception set forth in Subsection B(4)(d) below, the alteration (including enlargement or reduction in size) of existing erosion control structures shall require the issuance of a Natural Resources Special Permit.

(c) Subject to the exception set forth in Subsection B(4)(d) below, the repair or reconstruction of existing erosion control structures shall require the issuance of a Natural Resources Special Permit. If such structures are lawfully preexisting, repair or reconstruction may be authorized by means of an expedited administrative Natural Resources Special Permit, pursuant to § 255-4-28 hereof.

(d) Notwithstanding the provisions of the foregoing Subsection B(4)(a) through (c) and subject to the exception set forth in Subsection B(4)(e) below, the repair, reconstruction, or alteration of existing erosion control structures which are constructed perpendicular to the shoreline, such as groins and jetties, is prohibited. The construction, placement, or installation of any such new erosion control structure built perpendicular to the shoreline is also prohibited. These prohibitions shall not apply to erosion control structures installed to ensure

the safe navigability of boat channels, but work on any such structure shall require the issuance of a Natural Resources Special Permit.

(e) Notwithstanding the provisions of the foregoing Subsection B(4)(d), the alteration or removal of groins, jetties, or other existing erosion control structures constructed perpendicular to the shoreline is permitted upon issuance of a building permit when such alteration would result in a reduction of the size or length of the structure and a public or environmental benefit. The Building Inspector may consult with other Town agencies and the Town Trustees to ensure that the alteration would result in a public or environmental benefit.

Where authorized by state law to do so, localities can provide for the transfer of the right to develop property under current zoning provisions from one part of a community or region to another. Voluntary, market-based transfer of development rights (TDR) programs offer protection for sensitive coastal resources and hazard areas by directing needed development away from the resource, designated the "sending" area, and siting it in an appropriate "receiving" area, where increased density of development can be accommodated.

Model Zoning Regulations for a TDR Program

Adapted from Maryland Department of Planning, 1995

Section 100

Definitions

Bonus Density: The right to develop property at a higher density/ intensity than normally permitted, through compliance with optional procedures established in these regulations.

Receiving Area: Any zoning district where optional procedures have been established for additional bonus density through transfer of development rights.

Sending Area: Any zoning district where, according to the procedures of Section 130, owners of property are eligible to obtain certification of ownership of transferable development rights and to transfer such ownership.

Transferable Development Right: The right to create a residential building lot or construct a dwelling unit, which right may be severed from a property in the sending area and transferred to a property in the receiving area in the form of bonus density according to procedures established in these regulations.

Section 110

Coastal High-Hazard Sending Area (CHHSA) District 1

A. Purpose

The purpose of the CHHSA is to minimize residential development density within the Coastal High-Hazard Area and to help implement the Comprehensive Plan goal of directing growth away from the Coastal High-Hazard Area.

B. Uses permitted as a matter of right

1. One single-family detached dwelling unit per lot.
2. Recreational and open space activities.

C. Accessory uses [see any zoning ordinance with “coastal” district regulations]

D. Development standards

1. The following maximum limitations shall apply:
 - a. height [omitted]
 - b. lot coverage [omitted]
 - c. density – overall for residential subdivisions....1 unit per 50 acres
2. The following minimum requirements shall be observed:
 - a. lot size.....50 acres
 - b. lot width at building restriction line [omitted]
 - c. building setbacks [omitted]

3. Cluster option

For subdivisions for which a cluster sketch plan has been submitted to the Planning Commission for approval, the following less restrictive minimum standards shall apply in lieu of Section 110.D.2. a. and b.:

- a. lot size.....1 acre
- b. lot width at building restriction line [omitted]

In a cluster subdivision, land not used for residential lots, rights-of-way, or storm water management facilities and not required to be dedicated to the County or State under the provisions of the Subdivision Regulations, shall be placed under a permanent easement restricting its use to agriculture or open space use.

E. Transfer of development rights

1. If development rights are transferred from the CHHSA District pursuant to Section 130 of these regulations, or if development rights are sold from the CHHSA District pursuant to applicable County or State programs for the acquisition of development rights, then the number of development rights eligible for such transfer or sale shall be calculated at the rate of one development right per five gross acres [or a figure corresponding to the density under the prior zoning], minus one development right for each existing dwelling unit and minus the number of development rights previously transferred or sold.
2. Land that is encumbered with easements that entirely restrict the development of the property for residential use and land in public ownership shall not be eligible for transfer of development rights.

Section 120

Residential Receiving Area (RRA) District

A. Purpose

The purpose of the residential receiving area district is to help implement the goals of the Comprehensive Plan by providing suitable areas where development may be concentrated. To minimize residential development density within the Coastal High-Hazard Area, this district is intended to provide a preferred location for growth that might otherwise take place in coastal areas, via a transfer of development rights from the CHHSA District.

B. Uses permitted as a matter of right

1. One single-family detached dwelling unit per lot.

- 2. Single-family attached dwelling units.
- 3. Duplexes.
- 4. Apartments.
- 5. Government buildings, facilities, and uses including public schools and colleges.

C. Accessory uses [see regulations for residential districts in any zoning ordinance]

D. Development standards

- 1. The following maximum limitations shall apply:
 - a. height [omitted]
 - b. lot coverage [omitted]
 - c. density (except as provided in Section 120 E. of these regulations for bonus density).....2 units per acre
 - d. units per structure [omitted]
- 2. The following minimum requirements shall be observed:
 - a. lot size [omitted]
 - b. lot width at building restriction line [omitted]
 - c. building setbacks [omitted]
 - d. distances between buildings other than single-family detached units [omitted]
 - e. open space including landscaped areas [omitted]

E. Bonus Density

- 1. Eligibility – properties within the RRA District are eligible to receive bonus density under these regulations provided that public facilities are adequate to serve the development and that all other requirements of this subsection are met.
- 2. Maximum density permitted – Density may be increased under this subsection up to limits determined for each parcel according to the land use designation of the parcel on the future land use map of the Comprehensive Plan as follows:

Comprehensive Plan Designation	Maximum Density Permitted
low density	4 units per acre
medium density	8 units per acre
high density	16 units per acre

- 3. Density may be increased up to the maximums established in Section 120 E. 2. provided that for every additional dwelling unit (bonus unit) awarded under this provision a development right is transferred to the project, pursuant to procedures of Section 130 of these regulations.
- 4. No subdivision plans or site plans for any project involving bonus density will be approved until a sketch plan of the project has been approved by the Planning Commission. The Planning Commission, before acting on the sketch plan, shall give consideration to the following:
 - a. the Comprehensive Plan for _____;
 - b. the proposed density of the development;
 - c. the adequacy of public facilities in the area including, but not limited to, water and sewerage facilities, roads and schools;
 - d. the highway plans of the municipality, county, and state; and

e. compatibility of the development with surrounding land uses. After carefully considering the above, the Planning Commission shall approve, approve with modifications and conditions attached, or disapprove the sketch plan stating the reasons for its action.

Section 130

Transfer of Development Rights

A. Eligibility

1. Development rights may be severed from land within a sending area and transferred to land within a receiving area for transferable development rights according to procedures established in these regulations. As it applies here, a sending area is:

a. any property within the CHHSA District with development rights available for transfer, or
b. land surrounding a structure listed on the inventory of historic sites of _____ in any zoning district except the CHHSA District provided that:

(1) such land is under the same ownership as the historic structure;

(2) no more than fifteen acres adjoining any historic structure shall qualify as a sending area; and

(3) development rights shall be assigned as follows:

Acreage	Development Rights
5 or more acres	3
>10 but <15 acres	2
less than 10 acres	1

2. Receiving areas for transferable development rights are those areas within the RRA District are eligible for bonus density.

B. Certification of Transferable Development Rights

1. The legal title holder of property in a sending area may apply to the Department of Planning and Zoning for certification of ownership of transferable development rights. The application shall contain:

a. the exact name and address of the legal title holder and a reference to the liber and folio of the Land Records of _____ at which the deed conveying the property to the applicant is recorded.

b. a metes and bounds description of the property, a copy of the deed or survey showing the acreage of the property upon which the number of transferable development rights will be calculated.

c. the number of development rights proposed to be certified.

d. an easement, in a recordable form approved by the Department of Planning and Zoning and conveyed to the Commissioners [or Mayor and Council] of _____, restricting and reducing future

subdivision for residential purposes and construction of dwellings

on the property by an amount equal to the number of transferable development rights to be certified.

2. After review of the application for conformity to these regulations, the Department of Planning and Zoning will record the easement in the Land Records of _____ and issue to the applicant a certificate of ownership of transferable development rights. The certificate may be sold and a new certificate issued in the name of the new owner.

C. Transfer of Rights to Receiving Area

1. The legal title holder, tenant under a lease having a term of not less than 75 years, or contract purchaser of property in a receiving area, at the time of application for subdivision or site development plan approval, may apply to the Department of Planning and Zoning for approval to use the bonus density provisions of these regulations.

The application shall contain:

- a. the exact name and address of the legal title holder of the property and, if the applicant is not the legal title holder, the written assent to the application signed by the legal title holder.
- b. the number of development rights proposed to be transferred to the receiving property.
- c. a sketch plan of the property approved by the Planning Commission for use of bonus density.
- d. a certificate of ownership of transferable development rights issued to the applicant documenting ownership of at least as many development rights as proposed to be transferred to the receiving property.

2. The Department of Planning and Zoning shall review the application for conformity to these regulations and shall provide written approval to the applicant to increase the number of dwelling units in the development by the number of development rights proposed for transfer to the property.

3. The Final Record Plat for a subdivision or approved site development plan shall contain a statement setting forth the number of transferable development rights used to qualify for bonus density and the recordation reference of the conveyance required by Section 130 B.2.

The Town of Brewster set a town-wide minimum lot size of 60,000 sq. ft. of buildable uplands for any lots subdivided after the date of effectiveness of the bylaw. This bylaw has effectively limited further subdividing of land and reduced development in the town. The code also prohibits new temporary housing and bans all mobile homes not in trailer parks or camps. This has implications for affordability, but is also a significant coastal resilience measure, since such structures are much more vulnerable to the effects of wind and floods.

Town of Brewster, Massachusetts

Chapter 179: Zoning

Article IV, Use Regulations

§ 179-13. Regulations effective in all districts.

A. No premises in the Town of Brewster shall be used for the following purposes: residing in (i.e., occupying) any tents, trailers, mobile units, except in commercial trailer parks or camps.

B. No lot in the Town of Brewster shall be used for residential building purposes unless there is at least 60,000 square feet of contiguous buildable uplands as defined in the Zoning Bylaw or unless the lot existed as a lot on May 1, 1986, and satisfied the May 1, 1986, requirements for a buildable lot. June 30, 1987, shall be set as the effective date for all aspects of this subsection. [Amended 5-12-1986 ATM, Art. 34; 5-11-1987 ATM, Art. 83]

C. No lot in Brewster shall be used for septage transfer, whether septage transfer would be a principal use or an accessory use, nor shall any lot in Brewster be used for a septage transfer station, whether such use would be a principal use or an accessory use. [Added 11-15-1999 FYTM, Art. 24]

D. When two lots are in common ownership, any new structure proposed after the effective date of this bylaw that encroaches on a setback on either lot shall seek a variance from the Board of Appeals. In a case where any new, altered or extended structure proposed after the effective date of this bylaw is proposed to be constructed over a lot line common to both lots, the two lots shall be combined by plan or deed, and such plan or deed shall be recorded at the Barnstable County Registry of Deeds. Copies of the recorded information shall be submitted with any building permit application. [Added 5-3-2010 ATM, Art. 28]

Over one-third of Greenwich Township is protected by a conservation easement, the majority of which is coastal wetlands. The Conservation District (CD) zoning category includes tidal marshes, floodplains, and wetlands. Conservation Areas are established to recognize and conserve environmentally sensitive areas from inappropriate development or uses. It prescribes that land in the CD district can only be used for compatible activities such as farming, nurseries, recreation, forestry, game farms, fisheries, wildlife sanctuaries, and arboretums. Parking, dumping, sewage treatment, and the application of pesticides is prohibited without approval. The Township also instituted its own environmental impact statement requirement.

Township of Greenwich, New Jersey

Chapter 700: Zoning

Article XIV, C-D Conservation Areas

[Amended 12-28-2000 by Ord. No. 34-2000]

§ 700-42. Intent and procedures.

Conservation Areas are established to recognize and conserve environmentally sensitive areas from inappropriate development or uses which would endanger the health, safety, welfare and general well-being of the citizens of Greenwich Township. The C-D area includes tidal marsh areas, floodplains, and wetlands as mapped by the U.S. Department of the Interior and the U.S. Department of Housing and Development.

§ 700-43. Use regulations.

A. Permitted uses are subject to the New Jersey Department of Environmental Protection review and approval and may include:

- (1) Farming.
- (2) Plant nurseries.
- (3) Recreation.
- (4) Forestry.
- (5) Game farms, fisheries.
- (6) Wildlife sanctuaries.
- (7) Arboretums.

B. Prohibited uses.

- (1) Paved parking areas.
- (2) Dumping.
- (3) Sewer discharge.
- (4) Any applications of pesticides without appropriate approval.

§ 700-44. General regulations.

A. The following items should be part of any application for development in a conservation area:

(1) A detailed environmental impact statement establishing the exact limits of environmentally sensitive areas.

(2) Buffer requirements in accordance with the requirements under the State of New Jersey.

B. Any landowner with development adjacent to a conservation overlay area shall submit an environmental impact statement.

C. Any development to take place adjacent to a conservation overlay district should include illustrations of access and view opportunities in the design of the development.

Miscellaneous

This article, known as the "Advisory Committee on Traffic Act," creates the Advisory Committee on Traffic Improvement in the Town of Yorktown. The committee is charged with several responsibilities and powers under § 10-24, such as recommend strategies and actions to the Town Board and the Planning Board for pedestrian, vehicular, and bicycle safety enhancement signage and to encourage public education concerning transportation safety issues.

Town of Yorktown, Westchester County, New York

Chapter 10: Boards and Commissions

Article VII, Town Traffic Board

[Former Art. VII, Town Traffic Board, adopted 2-17-2009 by L.L. No. 3-2009, was repealed 3-2-2010 by L.L. No. 2-2010.]

§ 10-19. Short title; applicability.

This article shall be known as the "Advisory Committee on Traffic Act." This article shall apply to the creation of an Advisory Committee on Traffic Improvement and to the appointment, terms, functions and powers of the members appointed to serve on the Committee.

§ 10-20. Legislative findings; intent and purpose.

The Town Board hereby finds and determines that the management of vehicular traffic within the Town's borders has long been a vital concern to the Town Board, Town residents, emergency services providers, business operators, planners, engineers, and other interested parties. Proper attention to the issue is an essential and critical aspect of preserving the quality of life within the Town. In order to protect and safeguard the health, safety, welfare and quality of life of the Town of Yorktown and its residents, and to protect and enhance the community character of residential neighborhoods and the utility of commercial areas, it is necessary and proper to establish a continuing protocol for the identification and consideration of traffic issues. In endeavoring to accomplish said goal, the Town Board finds that it will be most beneficial to have the advice and assistance of a committee of residents from throughout the Town who can adopt such a protocol, identify and prioritize traffic calming, mitigation and improvement opportunities, form tactical plans, draft or recommend new legislation, and generally provide advice regarding such matters to the Town Board.

§ 10-21. Statutory authority.

This article is enacted under the authority of § 10 and § 22 of the Municipal Home Rule Law and § 51 of the Town Law.

§ 10-22. Creation; composition; terms of office; vacancies; Secretary; compensation.

A. There is hereby created an "Advisory Committee on Traffic Improvement," which hereinafter is referred to as "the Committee" or as "ACTI."

B. The Committee shall be a committee comprised of nine members, who shall serve without compensation. The members will be appointed by the Town Board. Members must be 18 years of age or older and, except as noted below (with respect to the Public Safety Officer), shall be residents of the Town. At all times, the person who is the Yorktown Police Department's Public Safety Officer shall be one of the members of the Committee. The Public Safety Officer need not be a resident of the Town. It is desirable, though not mandatory, that at least one member of ACTI shall be a licensed civil engineer or planner. A person otherwise qualified shall not be disqualified from membership by virtue of being an employee or appointed officer of the Town of Yorktown. Notwithstanding the foregoing, no more than one active member of any other single, appointed board or employee of any Town department (including the Yorktown Police Department), agency, or office shall serve on ACTI at any one time. At least one member of the Board shall be a Town Board member.

C. The Chair of the Committee shall be appointed by the Town Board.

D. Vacancies shall be filled by the Town Board for the unexpired term of any member whose place has become vacant, whether by expiration, resignation, removal for cause, or otherwise.

E. ACTI shall elect from its membership a Secretary, whose term of office shall be fixed by the Committee.

F. The members shall receive no salary for their services as members of ACTI.

§ 10-23. Meetings.

A. ACTI shall hold meetings at such times and places as its members shall determine from time to time, but no less frequently than once per calendar quarter. Notice of such meeting shall be posted and published in accordance with the Open Meetings Law of the State of New York. A majority of ACTI, as constituted at the time of any meeting of same, shall constitute a quorum for the transaction of business.

B. Except as set forth herein as to the Chairperson, each of the members shall be allowed one vote, which vote shall be cast in person at a meeting. Determinations and actions by ACTI shall be made by majority vote of those members voting. The concurring vote of at least three members of ACTI shall be necessary to carry any motion or act of ACTI. The Chairperson shall not have a vote in any matter considered by ACTI, except in order to break ties in voting.

C. The Secretary shall take minutes of the meetings and proceedings of the Committee and shall make a record of all resolutions and actions of the Committee. The records of the Committee shall set forth every determination made by the Committee. The Secretary shall file the records and minutes of the Committee in the Town Clerk's office.

§ 10-24. Powers and duties.

A. Specifically, but without limitation, ACTI shall have the following powers and duties, consistent with the goals identified in § 10-20 of this article:

(1) Adopt such policies, take such action and authorize such actions as in its discretion it deems appropriate to carry out the intent of this article and its duties hereunder

(2) Formulate proposals and recommend for approval such funding as may be necessary to implement the actions approved in Subsection A(1) immediately above, where approval of such expenditures is required by law;

- (3) In consultation with the Town Board, the Planning Board and other appropriate boards, develop a general traffic management policy and protocol, identify and set priorities for traffic calming, mitigation and improvement opportunities, and draft or recommend new legislation;
- (4) Recommend strategies and actions to the Town Board and the Planning Board which, in the review of matters within the jurisdiction of those boards, it finds will further the goals of this article;
- (5) Evaluate specific roadways/intersections to recommend improvements.
- (6) Recommend signage for pedestrian, vehicular and bicycle safety enhancement.
- (7) Hear citizen concerns and submit recommendations to the board.
- (8) Solicit input and coordinate its activities with those of the Town's emergency services providers.
- (9) Encourage and facilitate public education concerning transportation safety issues.
- (10) Consider proven solutions from other communities in achieving the goals of Yorktown's traffic strategy.
- (11) Report to the Town Board on its activities at least twice per year.
- (12) All matters dealt with by ACTI shall be advisory in nature. The Committee shall report to and be solely responsible to the Town Board.

The model presented applies to a foundation on which a community can organize in advance of a declared disaster to efficiently manage short- and long-term recovery. The Model Recovery Ordinance focuses on actions found necessary to facilitate recovery; provides a structured format for capturing essential recovery requirements; and offers adaptable language for unique local circumstances. Although reflecting the council-manager form, the Model Recovery Ordinance can be tailored to the mayor-council form through appropriate substitution of terms. The Model Recovery Ordinance emphasizes a recovery management process operated in conjunction with administrative powers of local government under the policy-making and/or executive powers of the governing body. It acknowledges the distinction between the more routine administrative actions reflected in short-term recovery provisions and the policy process more common to long-term recovery, directed through formal action by the governing body, and often marked by public hearings and controversy.

Model Recovery Language

Prepared by America Planning Association

An ordinance establishing a recovery organization, authorizing preparation of a recovery plan, and granting emergency powers for staff actions which can ensure timely and expeditious post-disaster recovery for the City (or equivalent), and amending Section(s) __ of the Municipal Code (or equivalent).

Chapter __. Disaster Recovery

[Insert here: listing of all section and subsection titles]

WHEREAS, the City is vulnerable to various natural hazards such as earthquakes, flooding, landslides, wildfires, and severe storms causing substantial loss of life and property resulting in declared local, state, or federal level disasters;

WHEREAS, the city is authorized under state law to declare a state of local emergency and take actions necessary to ensure the public safety and well-being of its residents, visitors, business community, and property during and after such disasters;

WHEREAS, it is essential to the well-being of the City after disasters to expedite recovery, mitigate hazardous conditions threatening public safety, and improve the community;

WHEREAS, disaster recovery can be facilitated by establishment of an ongoing Recovery Management Organization within the city government to plan, coordinate, and expedite recovery activities;

WHEREAS, preparation of a pre-event Recovery Plan can help the city organize to expedite recovery in advance of a declared disaster and to mitigate hazardous conditions before and after such a disaster;

WHEREAS, post-disaster recovery can be facilitated by adoption of a pre-event ordinance authorizing certain extraordinary staff actions to be taken to expedite implementation of recovery;

WHEREAS, it is mutually beneficial to identify in advance of a declared disaster the necessity to establish and maintain cooperative relationships with other local, state, and federal governmental agencies in order to facilitate post-disaster recovery;

WHEREAS, it is informative, productive, and necessary to consult with representatives of business, industry, citizens, and community stakeholder organizations regarding the most suitable and helpful means to facilitate post-disaster recovery;

The City Council [or equivalent] does hereby ordain:

Section

1. Authority. This ordinance is adopted by the City Council [or equivalent] acting under authority of the [authorizing legislation], [State Emergency Management Act or equivalent], and all applicable federal laws and regulations.
2. Purposes. It is the intent of the City Council [or equivalent] under this chapter to:
 - a. Authorize, in advance of a disaster, the establishment and maintenance of an ongoing Recovery Management Organization within the City [or equivalent] to plan, prepare for, direct, and coordinate orderly and expeditious post-disaster recovery;
 - b. Direct, in advance of a declared disaster, the preparation of a pre-event Recovery Plan for short-term and long-term post-disaster recovery, to be adopted by the City Council [or equivalent] and amended periodically, as necessary;
 - c. Establish, in advance of a disaster, powers to be implemented upon declaration of a local emergency by which staff of building, planning, public works, and other departments can take extraordinary action to reasonably assure safe and healthy post-disaster recovery;
 - d. Identify methods by which the City [or equivalent] may take cooperative action with other governmental entities to facilitate recovery;
 - e. Specify means by which the City [or equivalent] may consult with and assist citizens, businesses and community organizations during the planning and implementation of recovery procedures.

3. Definitions. As used in this ordinance, the following definitions shall apply:
- 3.1 Development Moratorium shall mean a temporary hold, for a defined period of time, on the issuance of building permits, approval of land-use applications or other permits and entitlements related to the use, development, and occupancy of private property in the interests of protection of life and property.
- 3.2 Director shall mean the Director of the Recovery Organization or an authorized representative.
- 3.3 Disaster shall mean a locally declared emergency also proclaimed as a state of emergency by the Governor of the State and declared a disaster by the President of the United States.
- 3.4 Emergency shall mean a local emergency, as defined by the Municipal Code, which has been declared by the City Council for a specific disaster and has not been terminated.
- 3.5 Flood Insurance Rate Map (FIRM) shall mean a map showing the outer boundaries of the floodway and floodplain as determined by the FEMA Flood Insurance Administration through the Flood Insurance Rate Map program.
- 3.6 Hazard Mitigation Grant Program. A program for assistance to federal, state, and local agencies whereby a grant is provided by FEMA as an incentive for implementing mutually desired mitigation programs, as authorized by the Stafford Act and related federal regulations, plans, and policies.
- 3.7 Historic Building or Structure shall mean any building or structure included on the national, state, or municipal register of historic places, and structures having historic significance within a recognized historic district.
- 3.8 Individual Assistance Program. A program for providing small grants to individuals and households affected by a disaster to offset loss of equipment, damage to homes, or the cost of relocation to another home, as authorized under the Stafford Act and related federal regulations.
- 3.9 In-Kind shall mean the same as the prior building or structure in size, height and shape, type of construction, number of units, general location, and appearance.
- 3.10 Interim Recovery Strategy shall mean a post-disaster strategic program identifying major recovery initiatives and critical action priorities either in the Recovery Plan or necessitated by specific post-disaster conditions.
- 3.11 Local Hazard Mitigation Plan. A plan prepared for governing board adoption and FEMA approval, which, among other things, assesses the type, location, and extent of natural hazards affecting the City; describes vulnerability of people, structures, and infrastructure facilities to such hazards and estimates potential losses, and includes a mitigation strategy that provides the City's blueprint for reducing potential losses identified.
- 3.12 Multi-Agency Hazard Mitigation Team. A team of representatives from FEMA, other federal agencies, state emergency management agencies, and related state and local agencies, formed to identify, evaluate, and report on post-disaster mitigation needs.
- 3.13 Natural Hazards/ Safety Element [or equivalent] shall mean an element of the comprehensive plan that addresses protection of the community from unreasonable risks associated with earthquakes, landslides, flooding, wildland fires, wind, coastal erosion, and other natural, technological, and human-caused hazards.
- 3.14 Public Assistance Program. A program for providing reimbursement to federal, state, and local agencies and non-profit organizations for repair and replacement of facilities lost or damaged in a disaster, as authorized under the Stafford Act and related federal regulations, plans, and policies.

- 3.15 Redevelopment shall mean the rebuilding of permanent replacement housing, construction of large-scale public or private infrastructure damaged or destroyed in a major disaster, addition of community improvements, and restoration of a healthy economy.
- 3.16 Recovery shall mean the process by which most private and public buildings and structures not severely damaged or destroyed in a major disaster are repaired and most public and commercial services are restored to normal.
- 3.17 Recovery Management Organization shall mean an interdepartmental organization that coordinates city staff actions in planning and implementing disaster recovery and reconstruction functions.
- 3.18 Recovery Plan shall mean a pre- or post-disaster plan for recovery, comprising policies, plans, implementation actions, and designated responsibilities related to expeditious and orderly post-disaster recovery and rebuilding, as well as long-term mitigation.
- 3.19 "Stafford Act" shall mean the Robert T. Stafford Disaster Relief and Emergency Act (Public Law 93-288, as amended).

4. Recovery Management Organization. There is hereby created the Recovery Management Organization [or equivalent] for the purpose of planning, organizing, coordinating, and implementing pre-event and post-disaster disaster recovery actions.

4.1 Powers and Duties. The Recovery Management Organization shall have such powers as needed to carry out the purposes, provisions, and procedures of this chapter.

4.2 Officers and Members. The Recovery Management Organization shall be comprised of the following officers and members:

- a. The City Manager [or equivalent] who shall be Director;
- b. The Assistant City Manager [or equivalent] who shall be Deputy Director in the absence of the City Manager;
- c. The City Attorney [or equivalent] who shall be Legal Adviser;
- d. Other members include [list titles, such as chief building official, city engineer, director of community development or planning, fire chief, emergency management coordinator, general services director, historic preservation director, police chief, director of public works, director of utilities], and representatives from such other departments as deemed necessary by the Director for effective operations;

4.3 Relation to Emergency Management Organization. The Recovery Management Organization shall include all members of the Emergency Management Organization [or equivalent] as follows: [list titles, such as emergency management coordinator, fire chief, police chief, etc.]

4.4 Operations and Meetings. The Director shall be responsible for overseeing Recovery Management Organization operations and for calling meetings, as needed. After a declaration of an emergency, and for the duration of the emergency period, the Recovery Management Organization shall meet daily, or as frequently as determined by the Director.

4.5 Succession. In the absence of the Director, the Deputy Director shall serve as Acting Director and shall be empowered to carry out the duties and responsibilities of the Director. The Director shall name a succession of department managers to carry on the duties of the Director and Deputy Director, and to serve as Acting Director in the event of the unavailability of the Director and Deputy Director.

4.6 Organization. The Recovery Management Organization may create such standing or ad hoc committees as determined necessary by the Director.

5. Recovery Plan. The Recovery Management Organization shall prepare a Recovery Plan addressing pre-event and post-disaster recovery policies, strategies, and actions; if possible, the Recovery Plan shall be adopted by the City Council [or equivalent] before a disaster, and amended after a disaster, as needed.

5.1 Plan Content. The Pre-Disaster Recovery Plan shall be composed of pre- and post-event policies, strategies, and actions needed to facilitate post-disaster recovery. The Recovery Plan will designate lead and back-up departmental action responsibilities to facilitate expeditious post-disaster recovery as well as hazard mitigation actions. The Recovery Plan shall address short-term and long-term recovery subjects, including but not limited to: business resumption, damage assessment, demolitions, debris removal, expedited repair permitting, hazards evaluation and mitigation, historical buildings, moratorium procedures, nonconforming buildings and uses, rebuilding plans, restoration of infrastructure, temporary and replacement housing, and such other subjects as may be appropriate to expeditious and wise recovery.

5.2 Coordination with Other Organizations. The Recovery Plan shall identify relationships of planned recovery actions with those of local, state, federal, mutual aid, and nonprofit organizations involved with disaster recovery, including but not limited to: the Federal Emergency Management Agency (FEMA), the American Red Cross, the Department of Housing and Urban Development (HUD), the Small Business Administration (SBA), the Environmental Protection Agency (EPA), the Department of Transportation (DOT), the State Emergency Management Agency [or equivalent] and other organizations that may provide disaster assistance. Prior to adoption or amendment of the Recovery Plan by the City Council [or equivalent], such organizations shall be notified of its proposed content, and comments shall be solicited in a timely manner.

5.3 Consultation with Citizens. Prior to adoption or amendment of the Recovery Plan by the City Council [or equivalent], the Recovery Management Organization shall organize and distribute public announcements, schedule and conduct community meetings, or convene advisory committees composed of representatives of homeowner, business, and community organizations, or implement other means to provide information and consult with members of the public regarding preparation, adoption, or amendment of the Recovery Plan, and their comments shall be solicited in a timely manner.

5.4 Adoption. Following preparation, update, or revision, the Recovery Plan shall be transmitted to the City Council [or equivalent] for review and approval. The City Council shall hold at least one legally noticed public hearing to receive comments from the public on the Recovery Plan. Following public hearing(s), the City Council may adopt or amend the Recovery Plan by resolution, or transmit the plan back to the Recovery Management Organization for further modification prior to final action.

5.5 Amendments. The Recovery Management Organization shall address key issues, strategies, and information bearing on the orderly maintenance and periodic amendment of the plan. In preparing amendments, the Recovery Management Organization shall consult in a timely manner with the City Council [or equivalent], City departments, businesses and community organizations, and other government entities to obtain information pertinent to possible Recovery Plan amendments.

5.6 Implementation. Under policy direction from the [Mayor and/or] City Council [or equivalent] the Recovery Management Organization shall be responsible for Recovery Plan implementation. Before a declaration of emergency, the Director shall prepare and submit reports at least annually to fully advise the City Council [or equivalent] on the progress of preparation, update, or implementation of the Recovery Plan. After a declaration of emergency, the Director shall report to the City Council [or

equivalent] as often as necessary on actions taken to implement the plan in the post-disaster setting, identify policy issues needing City Council [or equivalent] direction, and receive authorization to proceed with interim plan modifications necessitated by specific circumstances.

5.7 Training and Exercises. The Recovery Management Organization shall organize and conduct periodic training and exercises annually, or more often as necessary, in order to develop, communicate, and update the contents of the Recovery Plan. Such training and exercises will be conducted in coordination with similar training and exercises related to the Emergency Operations Plan.

5.8 Coordination with Related Plans. The Recovery Plan shall be coordinated with the Comprehensive General Plan, the Emergency Operations Plan, the Local Hazard Mitigation Plan, and such other related plans as may be pertinent, to avoid inconsistencies between plans. Such related plans shall be periodically amended by the City Council to be consistent with key provisions of the Recovery Plan, and vice versa.

6. Interim Recovery Strategy. At the earliest possible time following a declaration of local emergency, the Recovery Management Organization shall prepare an Interim Recovery Strategy.

6.1 Content. The Interim Recovery Strategy shall identify and describe recovery initiatives and action priorities anticipated or underway that are necessitated by specific post-disaster circumstances.

6.2 Critical Action Priorities. The Interim Recovery Strategy shall identify critical action priorities, including but not limited to those actions identified under Section 9.0 Temporary Regulations of this chapter, describing for each action its objective, urgency, affected individuals and organizations, funding sources, department responsible, and likely duration. The Interim Recovery Strategy shall separately identify those recovery initiatives and action priorities that are not covered by the adopted Recovery Plan, but which in the judgment of the Director are essential to expeditious fulfillment of victims' needs, hazard mitigation imperatives, critical infrastructure restoration, and rebuilding needs, and without which public health, safety, and welfare might otherwise be impeded.

6.3 Short-Term Hazard Mitigation Program. The Interim Recovery Strategy shall include a short-term hazard mitigation program comprised of high-priority actions. Such measures may include urgency ordinances dealing with mitigation and abatement priorities identified under Section 9. Temporary Regulations, or requiring special land-use and development restrictions or structural measures in areas affected by flooding, urban/wildland fire, wind, seismic, or other natural hazards, or remediation of known technological hazards such as toxic contamination.

6.4 Review and Consultation. The Interim Recovery Strategy shall be forwarded to the City Council [or equivalent] for review and approval following consultation with FEMA, other governmental agencies, businesses, and other citizen and stakeholder representatives. The Director shall periodically report to the City Council regarding Interim Recovery Strategy implementation, and any adjustments that may be required by changing circumstances.

6.5 Coordination with Pre-Disaster Recovery Plan and Other Plans. The Interim Recovery Strategy shall form the basis for periodic amendments to the Recovery Plan, and such other related plans as may be pertinent. It shall identify needed post-disaster amendments to the Pre-Disaster Recovery, Comprehensive Plan, Emergency Operations Plan, or other plans, codes, or ordinances.

7. Hazard Mitigation Program. Prior to a major disaster, the Recovery Management Organization, with City Council concurrence, shall establish a hazard mitigation program by which natural hazards, risks,

and vulnerability are addressed for prioritized short-term and long-term mitigation actions leading to reduced disaster losses. The hazard mitigation shall include preparation and adoption of a Local Hazard Mitigation Plan, amendment of the Comprehensive Plan to include a Safety Element [or equivalent], together with emergency actions dealing with immediate hazards abatement, including hazardous materials management.

7.1 Local Hazard Mitigation Plan. The Recovery Management Organization shall prepare for City Council adoption and FEMA approval a Local Hazard Mitigation Plan qualifying the City for receipt of federal Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Grants (FMAG), and Severe Repetitive Loss (SRL) grants, under the provisions of the Disaster Mitigation Act of 2000, as amended. The Local Hazard Mitigation Plan, shall include, among other items specified in federal law (44 CFR 201.6): a risk assessment describing the type, location, and extent of all natural hazards that can affect the City, vulnerability to such hazards, the types and numbers of existing and future buildings, infrastructure, and critical facilities located in identified hazard areas, and an estimate of the potential dollar losses to vulnerable structures; and a mitigation strategy that provides the City's blueprint for reducing the potential losses identified in the risk assessment. The Local Hazard Mitigation Plan shall be adopted as part of the Safety Element of the Comprehensive Plan.

7.2 Natural Hazard/Safety Element [or equivalent]. The Recovery Management Organization shall prepare for City Council adoption an amendment to the Comprehensive Plan known as the Natural Hazards/Safety Element [or equivalent] including proposed long- and short-term hazard mitigation goals, policies, and actions enhancing long-term safety against future disasters. The Natural Hazard/Safety Element [or equivalent] shall determine and assess the community's vulnerability to known hazards such as: severe flooding; wildland fires; seismic hazards, including ground shaking and deformation, fault rupture, liquefaction, and tsunamis; dam failure; slope instability, mudslides, landslides, and subsidence; coastal surge and erosion; hurricanes, tornadoes, and other high winds; and technological hazards, such as oil spills, natural gas leakage and fires, hazardous and toxic materials contamination, and nuclear power plant and radiological accidents.

7.3 New Information. As new information is obtained regarding the presence, location, extent, location, and severity of natural or technological hazards, or regarding new mitigation techniques, such information shall be made available to the public, and shall be incorporated as soon as possible as amendments to the Local Hazard Mitigation Plan and the Comprehensive Plan through City Council action.

8. General Provisions. The following general provisions shall be applicable to implementation of this chapter:

8.1 Emergency Powers and Procedures. Following a declaration of local emergency and while such declaration is in force, the Recovery Management Organization shall have authority to exercise powers and procedures authorized by this chapter, including temporary regulations identified below, subject to extension, modification or replacement of all or portions of these provisions by separate ordinances adopted by the City Council [or equivalent].

8.2 Post-Disaster Operations. The Recovery Management Organization shall coordinate post-disaster recovery operations, including but not limited to: business resumption, damage assessment, demolitions, debris removal, expedited repair permitting, hazards evaluation and mitigation, historical buildings, moratorium procedures, nonconforming buildings and uses, rebuilding plans, restoration of

infrastructure, temporary and replacement housing, and such other subjects as may be appropriate, as further specified below.

8.3 Coordination with FEMA and Other Agencies. The Recovery Management Organization shall coordinate recovery actions identified under this and following sections with those of state, federal, local, or other mutual organizations involved in disaster recovery, including but not limited to the Federal Emergency Management Agency (FEMA), the American Red Cross, the Department of Housing and Urban Development (HUD), the Small Business Administration (SBA), the State Emergency Management Agency [or equivalent], and other organizations that provide disaster assistance. Intergovernmental coordination tasks including but not limited to the following: providing information and logistical support; participating in the Multi-Agency Hazard Mitigation Team; cooperation in joint establishment of one-stop service centers for victim support and assistance; such other coordination tasks as may be required under the specific circumstances of the disaster.

9.0 Temporary Regulations. The Recovery Management Organization shall have the authority to administer the provisions of this section temporarily modifying provisions of the Municipal Code [or equivalent] dealing with building permits, demolition permits, and restrictions on the use, development, or occupancy of private property, provided that such action, in the opinion of the Director, is reasonably justifiable for protection of life and property, mitigation of hazardous conditions, avoidance of undue displacement of households or businesses, or prompt restoration of public infrastructure.

9.1 Duration. The provisions of this section shall be in effect subject to review by the City Council for a period of 90 days from the date of a local emergency declaration following a disaster, or until such time as they are extended, modified, replaced, or terminated in whole or in part by action of the City Council through separate ordinance.

9.2 Environmental Clearances. The provisions of this section enable actions that in the judgment of the Director are justifiable for protection of public health and safety and, therefore, can be reasonably declared to qualify under statutory exemptions of environmental regulations contained in other chapters of the Municipal Code, and within state and federal law. The Director shall provide ongoing monitoring reports to the City Council on environmental issues arising in relation to the Interim Recovery Strategy, the Pre-Event Recovery Plan, and the statutory exemptions.

9.3 Debris Clearance and Hazard Abatement. The Director shall have the emergency authority to undertake the following actions:

- a. Debris Removal—Remove from public rights-of-way and/or private property adjoining such rights-of-way any debris, rubble, trees, damaged or destroyed cars, trailers, equipment, or other items of private property, posing a threat to public health or safety;
- b. Hazardous Materials—Remove and/or abate hazardous and toxic substances threatening public health and safety;
- c. Temporary Setbacks—Create and maintain such additional temporary building setbacks to assure emergency and through movement of vehicles and pedestrians essential for recovery management;
- d. Prohibition of Access—Prohibit public access to areas damaged and/or hazardous to public health;
- e. Other—Take such other actions, which, in the judgment of the Director, are reasonably justified for protection of public health and safety, provision of emergency ingress and egress,

assurance of firefighting or ambulance access, restoration of infrastructure, and mitigation of hazardous conditions.

9.4 Damage Assessment and Placarding. The Director shall direct damage assessment teams having authority to conduct field surveys of damaged structures and post placards designating the condition and permitted occupancy of such structures as follows:

a. Inspected—Lawful Occupancy Permitted is to be posted on any building in which no apparent structural hazard has been found. This does not mean other forms of damage that may not temporarily affect occupancy.

b. Restricted Use is to be posted on any building in which damage has resulted in some form of restriction to continued occupancy. The individual posting this placard shall note in general terms the type of damage encountered and shall clearly and concisely note the restrictions on continued occupancy.

c. Unsafe—Do Not Enter or Occupy is to be posted on any building that has been damaged to the extent that continued occupancy poses a threat to life safety. Buildings posted with this placard shall not be entered under any circumstances except as authorized in writing by the department that posted the building or by authorized members of damage assessment teams. The individual posting this placard shall note in general terms the type of damage encountered. This placard is not to be considered a demolition order. This chapter and section number, the name of the department, its address, and phone number shall be permanently affixed to each placard. Once a placard has been attached to a building, it shall not be removed, altered, or covered until done so by an authorized representative of the department or upon written notification from the department. Failure to comply with this prohibition will be considered a misdemeanor punishable by a \$500 fine.

9.5 Development Moratorium. The Director shall have the authority to establish a moratorium on the issuance of building permits, approval of land use applications or other permits and entitlements related to the use, development, and occupancy of private property authorized under other chapters and sections of the Municipal Code and related ordinances, provided that, in the opinion of the Director, such action is reasonably justifiable for protection of life and property and subject to the following:

a. Posting—Notice of the moratorium shall be posted in a public place and on the Internet, and shall clearly identify the boundaries of the area(s) in which moratorium provisions are in effect, and shall specify the exact nature of the development permits or entitlements that are temporarily held in abeyance;

b. Duration—The moratorium shall be in effect subject to review by the City Council at the earliest possible time, but no later than 90 days, at which time the Council shall take action to extend, modify, replace, or terminate such moratorium through separate ordinance.

9.6 Temporary Use Permits. The Director shall have the authority to issue permits in any zone for the temporary use of property that will aid in the immediate restoration of an area adversely impacted by a major disaster, subject to the following provisions:

1. Critical Facilities--Any police, fire, emergency medical, or emergency communications facility that will aid in the immediate restoration of the area may be permitted in any zone for the duration of the declared emergency.

2. Other Temporary Uses--Temporary use permits may be issued in any zone, with conditions, necessary, provided written findings are made establishing a factual basis that the proposed temporary use: 1) will not be detrimental to the immediate neighborhood; 2) will not adversely

affect the Comprehensive General Plan or any applicable specific plan; and 3) will contribute in a positive fashion to the reconstruction and recovery of areas adversely impacted by the disaster. Temporary use permits may be issued for a period of one year following the declaration of local emergency and may be extended for an additional year, to a maximum of two years from the declaration of emergency, provided such findings are determined to be still applicable by the end of the first year. If, during the first or the second year, substantial evidence contradicting one or more of the required findings comes to the attention of the Director, then the temporary use permit shall be revoked.

9.7 Temporary Repair Permits. Following a disaster, temporary emergency repairs to secure structures and property damaged in the disaster against further damage or to protect adjoining structures or property may be made without fee or permit where such repairs are not already exempt under other chapters of the Municipal Code. The building official must be notified of such repairs within 10 working days, and regular permits with fees may then be required.

9.8 Deferral of Fees for Repair and Rebuilding Permits. Except for temporary repairs issued under provisions of this chapter, all other repairs, restoration, and reconstruction of buildings damaged or destroyed in the disaster shall be approved through permit under the provisions of other chapters of this Code. Fees for such repair and reconstruction permits may be deferred until issuance of certificates of occupancy.

9.9 Nonconforming Buildings and Uses. Buildings damaged or destroyed in the disaster that are legally nonconforming as to use, yards, height, number of stories, lot area, floor area, residential density, parking, or other provisions of the Municipal Code may be repaired and reconstructed in-kind, provided that:

- a. The building is damaged in such a manner that the structural strength or stability of the building is appreciably lessened by the disaster and is less than the minimum requirements of the Municipal Code for a new building;
- b. The cost of repair is greater than 50 percent of the replacement cost of the building;
- c. All structural, plumbing, electrical, and related requirements of the Municipal Code are met at current standards;
- d. All natural hazard mitigation requirements of the Municipal Code are met;
- e. Reestablishment of the use or building is in conformance with the national Flood Insurance Rate Map requirements and procedures;
- f. The building is reconstructed to the same configuration, floor area, height, and occupancy as the original building or structure;
- g. No portion of the building or structure encroaches into an area planned for widening or extension of existing or future streets as determined by the comprehensive general plan or applicable specific plan;
- h. Repair or reconstruction shall commence within two years of the date of the declaration of local emergency in a major disaster and shall be completed within two years of the date on which permits are issued.
- i. Nothing herein shall be interpreted as authorizing the continuation of a nonconforming use beyond the time limits set forth under other sections of the Municipal Code that were applicable to the site prior to the disaster.

10.0 One-Stop Service Center for Permit, Economic, and Housing Assistance. The Recovery Management Organization shall coordinate the establishment of a one-stop center, staffed by representatives of pertinent City departments, and staff of cooperating organizations, for the purpose of providing coordinated services and assistance to disaster victims for purposes including but not limited to: permit processing to expedite repair of buildings, provision of housing assistance, and encouragement of business resumption and industrial recovery. The Director shall establish such center and procedures in coordination with other governmental entities that may provide services and support, such as FEMA, SBA, HUD, or the State Emergency Management Agency (or equivalent).

11.0 Emergency Contractor and Volunteer Certification. The Recovery Management Organization shall have authority to establish a standard certification process for all contractors and volunteers seeking to provide clean-up, repair, or construction services within areas that have experienced disaster damage. In order to be eligible, contractors and volunteers must obtain the proper certification using the following process.

1. Application for Contractor Certification. Contractors must apply for Contractor Certification at a one-stop center with the location and hours identified by the City. An application processing fee of \$25.00 is required for each contractor firm and may be paid in cash or by check made payable to the City.
2. Application Requirements. Contractors seeking certification must meet the following minimum insurance and background check requirements.
 - a. Staff will verify that contractors are properly registered and/or licensed with the state contractors' licensing agency of the state within which their business is headquartered.
 - b. The Police Department will conduct a criminal background check on each worker that will be performing services for the contractor's firm.
 - c. Contractors must be licensed for their respective trades through the state contractors' licensing agency within which their business is headquartered and meet minimum insurance required by that state. All other contractor firms seeking to perform projects with a scope of work that exceeds a cost of \$2,000 must provide proof of a general liability insurance policy for an amount not less than \$1,000,000.
3. Certification Enforcement. Contractors are subject to the following certification enforcement requirements.
 - a. Proof of certification will be a City-issued photo identification badge for each worker performing clean-up, repair, or construction services within disaster-damaged areas. This must be displayed by each worker at all times within the designated area. Replacement badges will be issued at a cost of \$10.00.
 - b. Individuals without an identification badge will not be permitted to perform cleanup, repair, or construction services.
 - c. Contractors failing to register will be subject to a fine of \$100.00 per day or be subject to imprisonment for not more than 30 days. Each day a violation occurs will constitute a separate offense.
 - d. The City retains the right to suspend or revoke the Contractor Certification.
4. Volunteer Certification. Persons volunteering their efforts without compensation for disaster clean-up, repair, or construction services must also apply for emergency certification as a volunteer at a one-stop center and receive a photo identification badge. No application

processing fee is required for a Volunteer Certification. However, volunteers certified to assist with clean-up, repair, or construction services must be affiliated with a charitable, non-profit organization meeting all preceding Contractor Certification insurance and enforcement requirements.

12.0 Temporary and Permanent Housing. The Director shall assign staff to work with FEMA, SBA, HUD, the State Emergency Management Agency (or equivalent), and other appropriate governmental and private entities to identify special programs by which provisions can be made for temporary or permanent replacement housing which will help avoid undue displacement of people and businesses. Such programs may include deployment of mobile homes and mobile home parks under the temporary use permit procedures provided in Section 9.6 of this chapter, use of SBA loans and available Section 8 and Community Development Block Grant funds to offset repair and replacement housing costs, and other initiatives appropriate to the conditions found after a major disaster.

13.0 Demolition of Damaged Historic Buildings. The Director shall have authority to order the condemnation and demolition of buildings and structures damaged in the disaster under the standard provisions of the Municipal Code, except as otherwise indicated below:

13.1 Condemnation and Demolition. Within days after the disaster, the building official [or equivalent] shall notify the State Historic Preservation Officer that one of the following actions will be taken with respect to any building or structure determined by the building official to represent an imminent hazard to public health and safety, or to pose an imminent threat to the public right of way:

- a. Where possible, within reasonable limits as determined by the building official, the building or structure shall be braced or shored in such a manner as to mitigate the hazard to public health and safety or the hazard to the public right-of-way;
- b. Whenever bracing or shoring is determined not to be reasonable, the building official shall cause the building or structure to be condemned and immediately demolished. Such condemnation and demolition shall be performed in the interest of public health and safety without a condemnation hearing as otherwise required by the Municipal Code. Prior to commencing demolition, the building official shall photographically record the entire building or structure.

13.2 Notice of Condemnation. If, after the specified time frame noted in Subsection 8.1 of this chapter and less than 30 days after the disaster, a historic building or structure is determined by the building official to represent a hazard to the health and safety of the public or to pose a threat to the public right of way, the building official shall duly notify the building owner of the intent to proceed with a condemnation hearing within business days of the notice in accordance with Municipal Code Section ; the building official shall also notify FEMA, in accordance with the National Historic Preservation Act of 1966, as amended, of the intent to hold a condemnation hearing.

13.3 Request to FEMA to Demolish. Within 30 days after the disaster, for any historic building or structure that the building official and the owner have agreed to demolish, the building official shall submit to FEMA, in accordance with the National Historic Preservation Act of 1966, as amended, a request to demolish. Such request shall include all substantiating data.

13.4 Historic Building Demolition Review. If after 30 days from the event, the building official and the owner of a historic building or structure agree that the building or structure should be demolished,

such action will be subject to the review process established by the National Historic Preservation Act of 1966, as amended.

14.0 Severability. If any provision of this chapter is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect the remaining provisions, which can be implemented without the invalid provision, and, to this end, the provisions of this ordinance are declared to be severable.

The model presented establishes a new zoning district—the Neighborhood Development Floating Zone (NDFZ)—drawing on the prerequisites and credits of the LEED-ND rating system as green development standards. Communities may use this flexible zoning technique to memorialize LEED-ND or other green neighborhood development standards in a single zoning district by incorporating them as eligibility conditions and district regulations, which can be affixed to appropriate locations. The existence of this district within the code allows a municipality to pave the way for smarter decisions, more integrated infrastructure, and a greener community. Under this approach, developers who propose projects that they intend to certify under LEED-ND or other such standards may apply to the local legislative body for this new zoning district to be mapped to their parcels, thereby removing barriers to certification within the applicable local zoning code. The application is referred to the local planning board for a full review, and the planning board then sends its detailed recommendations to the local legislative body, which may then map the zone to the applicant’s property.

Floating Zone for Green Neighborhood Development
Land Use Law Center (Center) at Pace Law School,
in conjunction with the U.S. Green Building Council (USGBC)

Section 101: Purpose & Intent

A. The purpose of the Neighborhood Development Floating Zone (NDFZ) is to create a new zoning district to further the [City/Town/Village] of []’s commitment to enhancing the public welfare and assuring that further development in certain locations is consistent with the [City/Town/Village]’s desire to create a more sustainable community by incorporating green development standards into the design, construction, and maintenance of buildings. This zoning district seeks to encourage projects in locations that are most appropriate for green development.

B. The NDFZ district is created to secure the benefits of green neighborhood development, which include energy conservation; reduction in fossil fuel and potable water usage; preservation of existing natural resources including habitat, water bodies, wetlands, agricultural lands, steep slopes, and floodplains; increased local food production, tree canopies, and quality of neighborhood design; health benefits associated with more walkable and bikeable streets and paths; increased access to transit, neighborhood schools, recreational facilities, and civic and public places; reductions in impervious surfaces, stormwater runoff, light pollution, and the heat island effect; recycling of solid waste, building materials, and waste water; redevelopment of brownfields; promotion of renewable energy, district heating and cooling, and the adaptive reuse of existing buildings, historic preservation, and infill development; and the use of existing infrastructure. These needed benefits are consistent with the [City/Town/Village] of []’s commitment to enhancing public health, safety, and welfare, and they constitute the comprehensive planning rationale for the adoption of the NDFZ district.

Section 102: Definitions

1. "Applicant" – Any person or entity having a legal interest in a Proposed Project applying for a rezoning under this district, or the authorized agent of any such person or entity.
2. "LEED-ND" – The Leadership in Energy and Environmental Design (LEED) for Neighborhood Development Rating System, created by the U.S. Green Building Council (USGBC) for its use in certifying projects that constitute green neighborhood developments.
3. "Proposed Project" – The land and buildings subject to a proposal submitted by an Applicant for a rezoning under this district.
4. "Smart Location and Linkage" – The LEED-ND credit category dealing with the locational requirements of the rating system (such as, for example, selection of a "Smart Location" near exiting communities and public transit infrastructure, avoidance of "Imperiled Species and Ecological Communities," "Wetland and Water Body Conservation," "Agricultural Land Conservation," and "Floodplain Avoidance").
5. "GBCI" – The Green Building Certification Institute, which is the third-party organization charged with administering project certification under the USGBC's LEED rating systems.

Section 103: Applicability

- A. This zoning district applies to Proposed Projects for which Applicants plan to seek certification under the LEED-ND rating system and who can demonstrate to the satisfaction of the Planning Board⁸ and Local Legislative Body⁹ that they can satisfy all LEED-ND Smart Location & Linkage prerequisites.
- B. Projects that comply with Section 105 of this law are subject to modified and expedited site plan and subdivision review (as provided in Section 108) following rezoning and map amendment.

Section 104: Pre-Application Process

- A. Prior to submitting an application for rezoning under this district, the Applicant must participate in a preliminary conference with [insert appropriate planning and development staff] in order to discuss the nature of the Proposed Project, desired results, and submittal requirements.
- B. During the preliminary conference, the parties must review, at a minimum, the LEED-ND credits the Proposed Project is expected to earn, and the documentation necessary to demonstrate that the Proposed Project will meet applicable LEEDND prerequisites, pursuant to Section 105(B).

Section 105: District Standards

- A. The Applicant will submit with the petition for rezoning the current version (as of the time of Application) of the LEEDND rating system¹⁰ under which the project will seek certification and proof of project registration with GBCI.
- B. The Applicant must submit documentation demonstrating to the satisfaction of the Planning Board and the Local Legislative Body that its Proposed Project can meet all LEED-ND Smart Location & Linkage prerequisites. Documentation under this requirement should constitute a Smart Location & Linkage Prerequisite Review from GBCI¹¹ or proof of Stage 1 LEED-ND certification. In the event that the Applicant does not wish to request Smart Location & Linkage Prerequisite Review from GBCI or has not achieved Stage 1 certification, then sufficient documentation should be determined during the Pre-Application process set forth in Section 104.

C. District Standards include all prerequisites and credits contained within the LEED-ND rating system, with the exception of those excluded from adoption (pursuant to Section 107(A)(ii)) at the time of rezoning of the Proposed Project.

Section 106: Planning Board Review and Recommendation

A. The Planning Board may require the Applicant to submit any information necessary to determine the compatibility of the Proposed Project to conditions in the surrounding neighborhood, such as density, height, site conditions, building form, and area requirements.

B. The Planning Board shall review these materials and the Applicant's documentation that the Proposed Project conforms to the Smart Location & Linkage prerequisites of the LEED-ND rating system (as submitted pursuant to Section 105(A)).

C. The Applicant may also submit any information necessary for the Planning Board, in consultation with legal counsel and [insert appropriate local building official], to determine that specific LEED-ND prerequisites and credits, as applied to the Proposed Project, would conflict with a local, state, or federal legal requirement.

D. The Planning Board shall, based upon its review of these materials and documentation, advise the Local Legislative Body as to whether the proposal furthers the purposes of this law, whether the Proposed Project meets LEED-ND Smart Location & Linkage prerequisites, whether to take action to enable the Proposed Project to meet the remaining LEED-ND prerequisites, and whether to exclude particular prerequisites or credits from applicable District Standards based upon incompatibility with the surrounding neighborhood.

Section 107: Rezoning and Map Amendment

A. The Local Legislative Body shall, following its review of the Planning Board's report and Applicant's petition and supporting documentation:

i. Determine whether the Applicant's Proposed Project is eligible for the NDFZ. If the Proposed Project cannot meet a LEED-ND Smart Location and Linkage prerequisite, the Local Legislative Body may deem the project ineligible.

ii. Determine what, if any, LEED-ND prerequisites and credits to exclude from the required District Standards. The Local Legislative Body may elect to exclude from District Standards any LEED-ND prerequisite or credit that it finds is inappropriate for the location of the Proposed Project or is overly burdensome, with the exception of the Smart Location & Linkage prerequisites.

B. After this review by the Planning Board, the Local Legislative Body shall in its discretion rezone the property as NDFZ subject to conditions it believes are necessary to achieve the purposes of this law, to protect the character of the affected neighborhood, and to prevent any adverse environmental impacts.

Section 108: Final Project Review by the Planning Board

A. The Planning Board is instructed to review each project that has been rezoned NDFZ expeditiously in light of its thorough review during the rezoning process and the importance of green neighborhood developments as declared in the purpose and intent provisions of this law.

- B. The Planning Board is hereby authorized to establish a streamlined site plan and subdivision review process for Proposed Projects rezoned pursuant to this district. Additional materials and documentation may be required by the Planning Board to conduct this review.
- C. During this review, the Planning Board shall apply only those site plan and subdivision standards not inconsistent with the District Standards adopted through this NDFZ.

Model Ordinances *to address transportation policies, services, and programs that can reduce GHG (mitigation)*

Low Emission Vehicle (LEV) Standards

[Rockland County, New York: Chapter 137: Pollution Control
Article II, Fuel-Efficient Vehicles](#)

[San Francisco Environment Code:
Chapter 4: Healthy Air and Clean Transportation Program.
Sec. 400. Healthy Air and Clean Transportation Program.
Sec. 401. Definitions.
Sec. 403. Reducing the Municipal Fleet.
Sec. 404. New or Replacement Motor Vehicles.](#)

[Green Fleet Policy Ordinance](#)

Vehicle Acquisition

[San Francisco Environment Code:
Chapter 4: Healthy Air and Clean Transportation Program.
Sec. 425. San Francisco Municipal Railway Buses.](#)

[City of Albuquerque, New Mexico: Executive Instruction No. 26
Subject: Vehicle Acquisition Policy and Procedures](#)

Idle Reduction

[City of New Rochelle, Westchester County, New York: Chapter 312: Vehicles and Traffic
Article II. Traffic Regulations, § 312-33. Idling.](#)

[City of Atlanta, Georgia: Chapter 150: Traffic and Vehicles
Article IV, Stopping, Standing and Parking, Division 1, Generally](#)

[City of Maple Heights, Ohio: Part Four: Traffic Code, Title Six - Operation and Vehicles
Chapter 432: Operation Generally, 432.42 Idle Reduction, Exemptions, Penalty](#)

Increasing the Infrastructure for Renewable Fuels *Public and private fleets*

[San Francisco Environment Code:](#)

[Chapter 4: Healthy Air and Clean Transportation Program.](#)

[Sec. 406. Infrastructure for Alternative Fuels with Low Carbon Intensity.](#)

[Arizona Revised Statutes: Title 49 - The Environment , Article 7, Emissions Control](#)

[City of Ferndale, Michigan: Chapter 18: Traffic and Motor Vehicle Code](#)

[Article VIII – Hybrid-High Mileage Vehicle Parking](#)

[Sec. 18-90. - Hybrid-High Mileage Vehicle Parking.](#)

Parking Requirements

[Smart Parking Model Bylaw](#)

Electric Vehicle Charging Infrastructure

[Chapter IX of the Los Angeles Municipal Code: Article 9, Green Building Code](#)

[City of Auburn Hills, Michigan: Amendment to the Zoning Ordinance](#)

[Section 1834. Electric Vehicle Infrastructure.](#)

Transit, Bicycle and Pedestrian Facilities *Older adults, economically disadvantaged families, and persons with disabilities*

[City of Lenexa, Kansas: Chapter 4-1: Zoning](#)

[Article 4-1-C, General Development Standards](#)

[§ 4-1-C-7. Pedestrian Oriented Design Standards](#)

[Town of Yorktown, Westchester County, New York: Chapter 300: Zoning](#)

[Article XIII, Age-Oriented Community](#)

[City of Cleveland, Ohio: Title VII - Zoning Code, Chapter 343: Business Districts](#)

[§ 343.23 Pedestrian Retail Overlay \(PRO\) District](#)

[Model Bicycle Parking Ordinance](#)

Complete Streets

[Model Local Ordinance on Complete Streets](#)

[Model Street Connectivity Standards Ordinance](#)

[City of Lacey, Washington: Title 16: Zoning, Chapter 16.59: Village Center Zone
16.59.070 Pedestrian Circulation and Streets](#)

[City of Rochester, Monroe County, New York:
Chapter 104: Streets and Street Encroachments
Article I - Streets and Sidewalks, § 104-29. Complete Streets Policy](#)

Adequate Public Facilities *Streets*

[Model Adequate Public Facilities Ordinance](#)

Travel Demand Management

[City of Cambridge, Massachusetts: Chapter 10: Vehicles and Traffic
Chapter 10.18, Parking and Transportation Demand Management Planning;
Parking Space Registration](#)

[City of Bloomington, Minnesota: Chapter 21. Zoning and Land Development
Article III. Development Standards, Division A. General Standards
Sec. 21.301.09. Transportation Demand Management \(TDM\).](#)

[Model Travel Demand Management Performance Standard](#)

Lighting Standards

[Borough of Eatontown, New Jersey: Chapter 89: Land Use
Article VII. Area, Bulk and Use Requirements, § 89-48. Outdoor lighting.](#)

[Hunterdon County, New Jersey: Model Municipal Outdoor Lighting Ordinance
7. Roadway Lighting](#)

Transportation-Related Green Building

[Town of Epping, New Hampshire: Zoning Ordinances
Article 22, Energy Efficiency and Sustainable Design](#)

[Township of Cranford, New Jersey: Chapter 106: Energy Efficiency
Article I. Sustainable Building Standards](#)

Model Ordinances *to address transportation policies, services, and programs that can reduce GHG (mitigation)*

Low Emission Vehicle (LEV) Standards

The most effective way to ensure reducing energy use in municipal vehicles and converting to efficient vehicles or fleets (“green fleets”) is to pass a resolution, local law, or executive order. Rockland County initiated the greening of its municipal fleet with Local Law 4 of 2006, which included a timeline for converting the entire fleet to hybrids or alternative fuel vehicles by 2010. The county also prohibits idling of all vehicles for more than three minutes.

Rockland County, New York

Chapter 137: Pollution Control

Article II, Fuel-Efficient Vehicles

[Adopted 2-21-2006 by L.L. No. 4-2006]

§ 137-10. Title.

This article shall be known as “The Rockland County Fuel-Efficient Vehicle Act.”

§ 137-11. Legislative findings and intent.

A. The cost of fuel in the United States, especially in New York State and Rockland County, continues to rise.

B. It is well-documented that fossil fuel consumption by motor vehicles is one of the greatest contributing factors to many environmental problems facing us today.

C. One of the ways that government can help reduce costs and help the environment at the same time is through the purchase and use of hybrid and alternative fuel motor vehicles.

D. Hybrid gas-electric and alternative fuel motor vehicles, including electric only, ethanol, and compressed natural gas, are already available and being commercially marketed.

E. With rising fuel costs and better technology in the near future, such purchases of alternative fuel motor vehicles will become cost effective as estimated miles-per-gallon for these vehicles greatly exceeds gasoline-only vehicles.

F. It is important that Rockland County remains committed to saving the environment and taxpayer dollars.

G. Governor George Pataki's Executive Order 111 requires 50% of light-duty vehicles purchased by agencies and authorities to be cleaner fueled vehicles by 2005, increasing to 100% by 2010, with the exception of specialty, police or emergency vehicles. There is no reason for Rockland County not to aspire to those goals.

H. As of July 2005, there are 19 hybrid or alternative fuel motor vehicles in service in the Rockland County light-duty fleet of approximately 240 motor vehicles. This article mandates that County government formulate a plan that requires the County to purchase highly efficient fuel vehicles for its light-duty fleet.

I. Therefore, the Legislature of Rockland County wishes to express its concrete desire to pursue hybrid and alternative fuel motor vehicle purchases as soon as such become feasible, so that by 2008 50% of

light-duty and medium-duty vehicles purchased by the County are cleaner fueled vehicles, increasing to 100% by 2010, with the exception of specially equipped vehicles.

§ 137-12. Definitions.

As used in this article, the following terms shall have the meanings indicated:

Alternative Fuel - A substantially nonpetroleum fuel, such as compressed or liquefied natural gas, liquefied petroleum gas (propane), hydrogen, coal-derived liquid fuels, electricity (including electricity from solar energy), mixtures containing by volume 85% or more of alcohol fuel (including, singly or in combination, methanol, ethanol, or any other alcohol or ether), and any other fuels derived from biological (nonpetroleum) materials other than alcohol.

Alternative Fuel Motor Vehicle - A motor vehicle that is propelled using solely an alternative fuel or is propelled using solely an alternative fuel in combination with gasoline or diesel fuel, and shall not include bi-fuel motor vehicles.

Average Fuel Economy - The sum of the fuel economies of all motor vehicles in a defined group divided by the number of motor vehicles in such group.

Bi-Fuel Motor Vehicle - A motor vehicle that is capable of being propelled by both an alternative fuel and gasoline or diesel fuel, but may be propelled exclusively by any one of such fuels.

County Agency - A department, division, bureau, board, commission or agency of County government, the expenses of which are paid in whole or in part from the County treasury.

Fuel Economy - The United States Environmental Protection Agency City mileage published label value for a particular motor vehicle, pursuant to Section 32908(b) of Title 49 of the United States Code.

Gross Vehicle Weight Rating - The value specified by the manufacturer of a motor vehicle model as the maximum design loaded weight of a single vehicle of that model.

Hybrid - Any motor vehicle that combines two or more fuels or sources of energy or power that can directly or indirectly provide propulsion power.

Light-Duty Vehicle - Any motor vehicle having a gross vehicle weight rating of 8,500 pounds or less.

Medium-Duty Vehicle - Any motor vehicle having a gross vehicle weight rating of more than 8,500 pounds but not more than 14,000 pounds.

Motor-Vehicle - A vehicle propelled or driven upon a public highway which is propelled by any power other than muscular power, except electrically driven mobility assistance devices propelled or driven by a person with a disability; provided, however, that this term shall not include specially equipped vehicles.

Purchase - Buy, lease, borrow, obtain by gift, or otherwise (except by forfeiture) acquire.

Specially Equipped Vehicle - A motor vehicle defined as specially equipped pursuant to rules and regulations developed and approved by an appropriate County agency designated by the County Executive, and adopted by the Legislature of Rockland County.

§ 137-13. Purchase of cleaner light- and medium-duty vehicles.

A. Except as provided for in Subsections B and C of this section, beginning January 1, 2006, each light-duty vehicle and medium-duty vehicle that the County purchases shall achieve the highest of the following ratings, with Subsection A(1) of this subsection being the highest vehicle rating, applicable to motor vehicles certified to California LEV II standards [as set forth in New York State's revised state implementation plan contained in Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York and approved on January 31, 2005, by the United States Environmental

Protection Agency at pages 4773 to 4775 of Volume 70, Number 19 of the Federal Register (and as may from time to time hereafter be amended)] and available within the applicable model year for a light-duty vehicle or medium-duty vehicle that meets the requirements for the intended use by the County of such vehicle:

- (1) Zero emission vehicle (ZEV).
- (2) Advanced technology partial zero emission vehicle (ATPZEV).
- (3) Partial zero emission vehicle (PZEV).
- (4) Super ultra-low emission vehicle (SULEV).
- (5) Ultra low emission vehicle (ULEV).
- (6) Low emission vehicle (LEV).

B. The County shall not be required to purchase a zero emission vehicle (ZEV), advanced technology partial zero emission vehicle (ATPZEV), or partial zero emission vehicle (PZEV) in accordance with Subsection A of this section if the only available vehicle or vehicles that achieve such a rating cost greater than 50% more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the County of such vehicle.

C. Notwithstanding the requirements of Subsection A of this section, such requirements need not apply to a maximum of 5% of the light-duty vehicles and medium-duty vehicles purchased within each fiscal year.

D. Each light-duty vehicle and medium-duty vehicle purchased by Rockland County shall be a hybrid or alternative fuel motor vehicle. This shall be accomplished in accordance with the following purchase schedule:

Compliance Date	Percentage of Vehicles to be in Compliance
By May 1, 2006	10%
By October 1, 2006	20%
By May 1, 2007	30%
By January 1, 2008	50%
By January 1, 2009	70%
By January 1, 2010	90%
By July 1, 2010	100%

§ 137-14. Purchase of bi-fuel vehicles.

The County shall not purchase additional bi-fuel motor vehicles.

§ 137-15. Increase in average fuel economy.

As practicable, using an appropriate fuel economy inventory process, the County shall achieve the following minimum percentage increases in the average fuel economy of all light-duty vehicles purchased by the County during the following fiscal years, relative to the average fuel economy of all such vehicles purchased by the County during the fiscal year beginning January 1, 2005:

Compliance Date	Percentage of Vehicles to be in Compliance
Fiscal year beginning January 1, 2006	5%
Fiscal year beginning January 1, 2007	8%
Fiscal year beginning January 1, 2008	10%
Fiscal year beginning January 1, 2009	12%
Fiscal years beginning January 1, 2010, and January 1, 2011	15%
Fiscal years beginning January 1, 2012, January 1, 2013, and January 1, 2014	18%
Subsequent fiscal year beginning on or after January 1, 2015	20%

§ 137-16. Waivers.

During any fiscal year beginning on or after January 1, 2006, the County Executive, having determined at the request or recommendation of any County agency or on his own initiative that good cause exists to do so, may issue a waiver from the purchase schedule requirements of § 137-15 of this article for such fiscal year; provided that no such waiver shall become effective, and no purchases pursuant to such waiver shall be permitted, unless and until such waiver and the reasons constituting good cause to issue such waiver shall have been submitted in writing to, and by resolution approved by, the legislature of Rockland County.

§ 137-17. Report to County Executive and Legislature.

Not later than January 1, 2007, and not later than January 1 of each year thereafter, the fleet manager shall submit a report to the County Executive and to the Legislature of Rockland County regarding, among other things, the use of hybrid and alternative fuel motor vehicles in the County fleet. The information contained in this report shall include, but not be limited to, for each department of County government:

- A. The total number of light-duty vehicles and medium-duty vehicles purchased in the year to which the report pertains;
- B. The total number of light-duty vehicles and medium-duty vehicles owned or operated by each department at the end of the year to which the report pertains;
- C. The total number of such light-duty vehicles and medium-duty vehicles purchased in the year to which the report pertains that are hybrid vehicles and the total number that are alternative fuel motor vehicles (including a breakdown of the types of alternative fuel used);
- D. The total number of such light-duty vehicles and medium-duty vehicles owned or operated by each department at the end of the year to which the report pertains that are hybrid vehicles and the total number that are alternative fuel motor vehicles (including a breakdown of the types of alternative fuel used); and
- E. All waivers (including related determinations of good cause, and renewals of such determinations of good cause) issued pursuant to this article.

The Clean Transportation Program functions within the framework of several San Francisco policies—

most notably San Francisco's Transit First policy, the Healthy Air and Clean Transportation Ordinance (Chapter 4 of San Francisco's Environmental Code), and the City's Climate Action Plan. Since 2000, the Healthy Air and Clean Transportation Ordinance (originally named Healthy Air and Smog Prevention Ordinance) has, among other objectives, provided the basis for the Department of the Environment (SFE) to make San Francisco's municipal fleet the cleanest of any major city in the country and to aggressively pursue TDM strategies. In the years since it was first put into place, the objectives of the Healthy Air and Clean Transportation Ordinance have been further advanced by mayoral Executive Directives specifying requirements for alternative fuel vehicles for city fleet purchases (2005) and for use of biodiesel by the municipal fleet (2006), by adoption of the San Francisco Green Taxi Policy (2008) resulting in the City's taxi fleet rapidly transitioning to hybrid and natural gas vehicles in order to meet GHG targets by 2012, and enactment of San Francisco's Commuter Benefits Ordinance (effective in 2009) requiring employers to make programs available to their employees to minimize single occupancy commuting. Amendments to the Healthy Air and Clean Transportation Ordinance in 2010 updated and further strengthened the program by, among other things, specifically linking the purposes of the ordinance to greenhouse gas reduction goals and requiring City departments to include Transit First policies within their annual operating plans.

San Francisco Environment Code

Chapter 4: Healthy Air and Clean Transportation Program.

Healthy Air and Clean Transportation Program.

Sec. 400. Healthy Air and Clean Transportation Program.

Sec. 401. Definitions.

Sec. 403. Reducing the Municipal Fleet.

Sec. 404. New or Replacement Motor Vehicles.

(a) Title. Sections 400 through 424 of this Chapter shall be known as the Healthy Air And Clean Transportation Ordinance.

(b) Purpose. The Healthy Air And Clean Transportation Ordinance is intended to assist the City in achieving its air pollution and greenhouse gas reduction goals by: promoting the use of vehicles that have zero or super ultra-low emissions, achieve high energy efficiency and use alternative fuels with a low carbon impact; implementing policies to minimize the use of single occupancy vehicles and reduce the total number of passenger vehicles and light-duty trucks in the municipal fleet; maximizing the use of outside sources to fund such programs; encouraging the creation, expansion, and maintenance of alternative fueling infrastructure in the City and at City facilities; encouraging trip reduction, carpooling, and public transit, and to increase bicycle commuting by providing cyclists with the opportunity to securely park their bicycles in or close to their workplaces.

(c) Findings.

(1) Air pollution endangers public health. According to the California Air Resources Board (CARB), the levels and concentrations of smog forming, lung-clogging pollutants in the Bay Area, such as ozone and particulate matter (soot particles), not only exceed California's existing health-based standards, but also are often times measured at levels that are two to three times the standards. According to the Bay Area Air Quality Management District (BAAQMD), emissions from motor vehicles

are the leading cause of air pollution in the Bay Area. Furthermore, during the summer of 2006, the San Francisco Bay Area endured more days where emissions of ozone-forming pollutants exceeded Federal and State health-based air quality standards than it has experienced in nearly ten years.

(2) According to the American Lung Association of California, high levels of air pollution cause premature death, and aggravate lung illnesses such as acute respiratory infections, asthma, chronic bronchitis, emphysema, and lung cancer. Coughing, wheezing, chest pain, eye irritation, and headaches are common reactions to air pollution. Sensitive groups, like children, the elderly, athletes, and people with compromised immune systems, are even more susceptible to the detrimental health effects caused by air pollution. In these sensitive groups, poor air quality causes more significant health impacts such as breathing difficulties and weakening of the body's ability to resist disease.

(3) According to the California Air Resources Board, the annual health impacts of exceeding state health-based standards for ozone and particulate matter include: 8,800 premature deaths; 8,200 hospital admissions for respiratory disease; 340,000 asthma attacks; 3,000 asthma-related emergency room visits; 3,000 hospital admissions for cardiovascular disease; 4.7 million school absences due to respiratory conditions, including asthma; 2.8 million lost workdays; and, reduced lung function growth rates in children.

(4) Emissions from motor vehicles are a major source of greenhouse gas emissions. Statewide, the California Air Resources Board has found that 41 percent of carbon dioxide emissions, a major greenhouse gas, stem from the transportation sector. In San Francisco, the inventory of greenhouse gas emissions in the City's Climate Action Plan shows that vehicles belonging to San Francisco residents or otherwise traveling in and out of San Francisco contributed 51 percent of all greenhouse gases generated in the City in 1990. In 2002, the Board of Supervisors adopted Resolution 158-02, "Reducing Greenhouse Gas Emissions," to support efforts to curb global warming and set greenhouse gas emission reduction goals for the City and County of San Francisco. The City's Climate Action Plan establishes the goal of reducing carbon and other greenhouse gas emissions from transportation and other sources in the City to 20 percent below 1990 levels by the year 2012.

(5) Near-total reliance on petroleum for transportation fuel jeopardizes San Francisco's economic security. The San Francisco region and the State of California rely on petroleum for 96 percent of all transportation fuel. Diversifying the supply of transportation fuels available in the San Francisco region, and particularly increasing supplies of alternative fuels that have low carbon impact and are sustainable, will help provide a more stable and secure base for the region's economy by making it less vulnerable to interruptions in petroleum supplies while also improving air quality and reducing greenhouse gas emissions.

(6) Urban Environmental Accords commit San Francisco to take actions to achieve clean transportation. In 2005, San Francisco became a signatory participant in the Urban Environmental Accords, established on the occasion of the United Nations Environmental Program's World Environment Day in San Francisco. The Accords call on participating cities around the world to reduce smog-forming and other polluting emissions from public fleets by 50 percent in seven years, to expand the availability of affordable public transportation, and to reduce single-occupancy commute trips by 10 percent in seven years.

(7) In 1997, the Board of Supervisors approved the Sustainability Plan for the City and County of San Francisco. The Sustainability Plan states, "[a]chieving and maintaining good air quality is crucial to the public health and economic vitality of San Francisco."

(8) The City and County of San Francisco's fleet includes more than eight hundred (800) clean passenger vehicles and light-duty trucks. These include compressed natural gas, hybrid electric and battery electric vehicles.

(9) Creating a safe, secure place for cyclists to store their bicycles while at work will help to promote alternative modes of transportation and contribute to the City's effort to cut emissions, improve air quality, maximize public transportation and ease congestion, thus reaping tremendous environmental, public health, and quality of life benefits for the City and its residents. Allowing bicycles in office buildings is an effective way to encourage cycling. (Added by Ord. 278-10, File No. 101009, App. 11/18/2010; amended by Ord. 46-12, File No. 111029, App. 3/16/2012, Eff. 4/15/2012)

Sec. 401. Definitions.

(a) "Alternative Fuel With Low Carbon Intensity" means any transportation fuel that is less polluting than gasoline or petroleum diesel fuel, as determined by the California Air Resource Board and that is shown to have lower lifecycle carbon emissions than gasoline or petroleum diesel. Alternative Fuels with Low Carbon Intensity may include, but are not limited to: natural gas; propane; biofuels from low carbon, sustainable and preferably local sources; hydrogen produced from low carbon and/or renewable sources; and electricity.

(b) "Alternative Fuel Vehicle" means any motor vehicle powered by alternative fuel with low carbon intensity.

(c) "Bus" means any passenger vehicle with a seating capacity of more than fifteen (15) persons.

(d) "City" means City and County of San Francisco.

(e) "Department" means any officer, board, commission, department or other division of the City and County of San Francisco. Department does not include the San Francisco Unified School District, the San Francisco Community College District, the San Francisco Redevelopment Agency, or the San Francisco Housing Authority or any other local, State, or Federal agency.

(f) "Director" means the Director of the Department of the Environment, or his or her designee.

(g) "Emergency Vehicle" means any vehicle publicly owned and operated that is used by a public safety officer for law enforcement purposes, fighting fires or responding to emergency fire calls, or used by emergency medical technicians or paramedics for official purposes.

(h) "Greenhouse gas or greenhouse gas emissions" means and includes all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

(i) "Light-Duty Truck" means any motor vehicle, with a manufacturer's gross vehicle weight rating of 8,500 pounds or less, that is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.

(j) "Motor Vehicle" means a self-propelled vehicle.

(k) "Online Green Vehicle Purchase Criteria Document" means a document issued by the Department of the Environment which provides emissions data for general purpose sedans, light duty pickup trucks, and vans with a gross vehicle weight under 10,000 pounds. In order to be listed in the Purchase Criteria Document and approved for purchase by the City under this Chapter, vehicles must have a smog score of 9 or higher and a global warming score of 8 or higher, as reported by the California Air Resources Board (CARB) and listed on its driveclean.ca.gov website.

- (l) "Passenger Vehicle" means any motor vehicle designed primarily for transportation of persons and with a design capacity of twelve (12) persons or less.
- (m) "Public Safety Department" means the San Francisco Police Department, the San Francisco Sheriff's Department, and the San Francisco Fire Department.
- (n) "Purchase" means to buy, lease, or otherwise acquire the right to use.
- (o) "Remove from service" means to complete filings with the California Department of Motor Vehicles either to remove the City as the motor vehicle owner permanently, or to register the motor vehicle as non-operational for the relevant fiscal year. (Added by Ord. 278-10, File No. 101009, App. 11/18/2010)

Sec. 403. Reducing the Municipal Fleet.

(a) Implementing Transit-First.

(1) No later than March 1, 2011, all officers, boards, commissions and department heads responsible for departments that require transportation to fulfill their official duties, and other City officials assigned City motor vehicles, shall implement the City's voter-approved Transit-First Policy (San Francisco Charter Section 8A.115) by adopting and implementing written policies that

- (A) maximize the use of public transit, including taxis, vanpools, and car-sharing;
- (B) facilitate travel by bicycle, or on foot; and,
- (C) minimize the use of single-occupancy motor vehicles, for travel required in the performance of public duties.

(2) The Department of the Environment shall provide technical assistance to departments and City officials subject to this requirement in developing complying policies and implementation procedures and in coordinating policies and procedures among City departments.

(3) No later than July 1, 2011, and every year thereafter, each department and City official subject to this requirement shall submit its written policies to the Department of the Environment and the Controller.

(4) No later than July 1, 2012, and every year thereafter, each department and City official subject to this requirement shall, in a form approved by the Department of the Environment, include with its written policies a report on its success in substituting transit-first modes of transportation for single-occupancy motor vehicle transportation. Such reports shall be subject to audit by the Controller.

(5) Notwithstanding any other provision of this Ordinance or other City law, the Controller shall refuse to certify any expenditure by the City for the purchase of any passenger vehicle or light duty truck by any officers, boards, commissions or departments subject to this requirement for so long as the Controller finds, in his or her sole discretion, that such officers, boards, commissions, or departments have failed to adopt a satisfactory transit-first policy, or to implement the policy adopted, or failed to justify the purchase of a new or replacement vehicle in lieu of driving alternatives as identified in Section 403(a)(1).

(b) Reducing the Number of Passenger Vehicles and Light-Duty Trucks in the Municipal Fleet.

(1) Beginning July 1, 2011, and each year thereafter through July 1, 2015, the City Administrator and each Department head or other City official with jurisdiction over passenger vehicles and light-duty trucks used for City business shall remove from service without replacement at least 5 percent of the existing total number of passenger vehicles and light-duty trucks in the portion of the municipal fleet under his or her jurisdiction.

(2) Beginning no later than July 1, 2015, and each year thereafter, the City Administrator and each Department head or other City official with jurisdiction over passenger vehicles and light-duty trucks used for City business shall remove from service all passenger vehicles and light-duty trucks in the municipal fleet that are 12 years old or older, which removal may be included in the reductions required by subsection (1) above. No later than July 1, 2014, the City Administrator and each Department head or other City official subject to this subsection shall submit to the Director and the City Administrator, in a format specified by the Director, a written plan for implementing this requirement.

(3) Monitoring Fleet Reductions. No later than July 1, 2011 and every year thereafter, the City Administrator and each Department head or other City official with jurisdiction over passenger vehicles and light-duty trucks used for City business shall submit to the Board of Supervisor's Budget Analyst, in a format specified by the Director, in consultation with the Controller, a report of that official's progress in meeting the annual fleet reduction requirements of Section 403(b)(1) and (2).

(c) Waivers. The Director of the Department of Environment may waive the requirements of Section 403(b)(1) and (2) in whole or in part where the Director finds that the mandated fleet reductions would unduly interfere with the department's ability to discharge its official functions. In that case, the Director, in consultation with the City Administrator, may require the department to implement an alternative plan to reduce the department's fleet greenhouse gas emissions.

(d) Capital Projects. In determining and implementing required reductions to the municipal fleet for purposes of subsection (b), the City Administrator or a Department head or other City official with jurisdiction over passenger vehicles and light-duty trucks used for City business may, with the prior written approval of the Director, exclude for the duration of a capital project any new vehicles required for that project. Those vehicles must have the lowest emission and highest efficiency ratings available and suitable for their intended use. (Added by Ord. 278-10, File No. 101009, App. 11/18/2010)

Sec. 404. New or Replacement Motor Vehicles.

(a) Unless granted a waiver under Section 404(b) or exempt under subsection 404(c), City officials may not purchase or authorize the purchase of any motor vehicle unless the purchase complies with each of the following:

- (1) The purchase complies with the Transit-First policy required under Section 403(a) and adopted by the department or City official for whose use the vehicle is principally intended;
- (2) A passenger vehicle or light-duty truck requested for purchase is an approved make and model under the applicable Online Green Vehicle Purchase Criteria Document; and,
- (3) The motor vehicle requested for purchase meets all applicable safety standards and other requirements for the intended use of the vehicle.

(b) Waivers. The Director of the Department of Environment may waive the requirements of Section 404(a) where the Director finds that

- (1) there is no passenger vehicle or light-duty truck approved by the Online Green Vehicle Criteria Document that meets all applicable safety standards and other requirements for the intended use of the motor vehicle; or

(2) the passenger vehicle or light-duty truck will be used primarily outside of the geographic limits of the City and County of San Francisco in location (s) which lack required fueling or other infrastructure required for a complying motor vehicle.

(c) Exemptions. This Section shall not apply in the following circumstances:

(1) To the purchase of emergency vehicles where the Public Safety Department concludes, after consultation with the Department of the Environment, that the purchase of a complying vehicle is not feasible or would otherwise unduly interfere with the Department's public safety mission.

(2) To the acquisition of buses by the San Francisco Municipal Transportation Authority for public transportation purposes.

(3) To any purchase necessary to respond to an emergency that meets the criteria set in Administrative Code Sections 21.15(a) or 6.60. In such cases, the department shall, to the extent feasible under the circumstances, acquire the noncomplying vehicles only for a term anticipated to meet the emergency need. Any City department invoking this exemption shall promptly notify the City Administrator and the Director, in writing, of the purchase and the emergency that prevented compliance with this section.

(4) Wherever the purchase of a passenger vehicle or light-duty truck is exempt from the requirements of this section, City departments and officials shall select a vehicle with as low emissions and high efficiency ratings as possible. (*Ord. 278-10, File No. 101009, App. 11/18/2010*)

The model "Green Fleet" policy incorporates, at a minimum, the purchase of low emitting fuel-efficient vehicles for vehicle fleet replacement and the use of alternative fuels (biodiesel, natural gas, ethanol) in fleet operations. A low emitting fuel-efficient vehicle is any vehicle that has been classified as either a Zero Emission Vehicle by the California Air Resources Board or has achieved a minimum green score of 40 on the American Council for an Energy Efficient Economy (ACEEE) annual vehicle rating guide. Clean Air Counts is a northeastern Illinois regional initiative to reduce ozone-causing emissions, thereby improving air quality and enabling economic development.

Green Fleet Policy Ordinance

Clean Air Counts

I. Basis for Ordinance

(a) The total energy bill in ____ for the City and/or County of _____ was \$_____ and is projected to increase by ___ percent to about \$ by _____.

(b) Public agencies and/or departments in the City and/or County of _____ operate vehicle fleets that account for about _____ percent of the City and/or County's total energy bill.

(c) The City and/or County of _____ recognizes that energy use associated with the operation of its motor vehicle fleets exacerbates local air quality problems and results in greenhouse gas emissions that contribute to global climate change.

(d) The City and/or County of _____ recognizes that its agencies and/or departments have a significant role to play in improving local air quality and reducing greenhouse gas emissions by improving the energy efficiency of its fleets and reducing emissions from fleet operations.

(e) The City and/or County of _____ recognizes that by improving the energy efficiency of its fleets significant monetary savings will result in the long term.

(f) The City and/or County of _____ wishes to exercise its power as a participant in the marketplace to ensure that purchases and expenditures of public monies are made in a manner consistent with the policy of improving local air quality and reducing greenhouse gas emissions.

(g) The City and/or County of _____ wishes to establish a "Green Fleets" policy addressing the management, operation, and procurement of fleet vehicles under the control of the City and/or County of _____ in order to improve the energy efficiency of its fleets and reduce emissions from its fleets.

II. Definitions

(a) "Passenger Vehicle" " means any motor vehicle designed primarily for the transportation of persons and having a design capacity of twelve persons or less.

(b) "Light Duty Truck" means any motor vehicle, with a manufacturer's gross vehicle weight rating of 6,000 pounds or less, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.

(c) "Medium Duty Vehicle" means any vehicle having a manufacturer's gross vehicle weight rating of 14,000 pounds or less and which is not a light-duty truck or passenger vehicle.

(d) "Heavy Duty Vehicle" means any motor vehicle, licensed for use on roadways, having a manufacturer's gross vehicle weight rating greater than 14,000 pounds.

(e) "Zero-Emission Vehicle" means (i) any motor vehicle that produces zero exhaust emissions of all criteria pollutants, as defined by 17 California Code of Regulations §90701(b), (or precursors thereof) under any and all possible operational modes and conditions or (ii) any vehicle that has been certified by the California Air Resources Board as a zero-emission vehicle.

(f) "Super Ultra-Low Emission Vehicle" means any motor vehicle that meets or exceeds the standards set forth in 13 California Code of Regulations § 1960.1 for Super Ultra-Low Emission Vehicles (SULEV).

(g) "Ultra-Low Emission Vehicle" means any motor vehicle that meets or exceeds the standards set forth in 13 California Code of Regulations § 1960.1 for Ultra-Low Emission Vehicles (ULEV).

(h) "Low Emission Vehicle" means any motor vehicle that meets or exceeds the standards set forth in 13 California Code of Regulations § 1960.1 for Low Emission Vehicles (LEV).

(i) "Electric Drivetrain Vehicle" means any vehicle that employs an electric drivetrain and motor as its primary means of motive force. The vehicle can be powered by fuel cells, electric batteries, petroleum- or alternatively-fueled electric generators, or any combination thereof.

(j) "Alternative Fuel" means any fuel that is substantially non-petroleum in nature, is not gasoline or diesel, and is defined as an alternative fuel by the U.S. Department of Energy through the authority granted it by the Energy Policy Act of 1992.

(k) "Bi-Fuel Vehicle" means any motor vehicle designed to operate on two (2) fuels, one of which is an alternative fuel, but not on a mixture of fuels.

III. Fleet Inventory

(a) In order to establish a baseline of data so that the "Green Fleets" policy can be established, implemented, and monitored each department and/or agency fleet manager shall develop an inventory and analysis of the fleet vehicles within that department or agency as of the close of fiscal year _____. This inventory shall include:

1) Number of vehicles classified by the model year, make, model, engine size, vehicle identification number (VIN), and drivetrain type (2-wheel drive or 4-wheel drive), and the rated vehicle weight and classification (light-duty, medium-duty, heavy-duty); 2) Miles per gallon (or gallon equivalent) per vehicle; 3) Type of fuel (or power source, e.g., electricity) used; 4) Average cost per gallon (or gallon equivalent) of fuel; 5) Average fuel cost per mile; 6) Annual miles driven per vehicle; 7) Total fuel (or power) consumption per vehicle; 8) Vehicle function (i.e., the tasks associated with the vehicle's use); 9) Estimated emissions per mile for each pollutant by vehicle type/class based on EPA tailpipe standards for the following: Carbon Monoxide (CO), Nitrogen Oxides (NOX), and Particulate Matter (PM). 10) Carbon Dioxide (CO₂) calculations based on gallons (or gallon equivalent) of fuel consumed. (b) Fleet managers from City and/or County departments and/or agencies shall be responsible for providing these baseline data in a reliable and verifiable manner. The data will be submitted to the "Green Fleets" Committee established in Section VI for use in measuring progress toward the goals outlined in Section IV below.

IV. The "Green Fleets" Policy

- (a) It shall be the policy of the City and/or County of _____ to purchase, lease, or otherwise obtain the most energy efficient vehicles possible that meet the operational needs of the department or agency for which the vehicles are intended.
- (b) It shall be the policy of the City and/or County of _____ to manage and operate its fleets in a manner that is energy efficient and minimizes emissions.
- (c) The City and/or County of _____ shall decrease energy expenditures for its vehicle fleets by a total of _____ percent by the year _____, adjusted for inflation and relative to the baseline data established for year ____ through the fleet inventory taken in compliance with Section III above.
- (d) The City and/or County of _____ shall reduce the emission of carbon dioxide (CO₂) from its fleet by a total of _____ percent by the year _____, relative to the baseline data established for year ____ in the fleet inventory taken in compliance with Section III above.

V. "Green Fleets" Policy Strategies

- (a) In order to accomplish the goals stated in Section IV above, the City and/or County of _____ shall modify procurement procedures, implement policies, conduct reviews, and take other actions as outlined in sub-sections (b) through (m) below. (b) Include a minimum efficiency standard in miles per gallon (or gallon equivalent) for each vehicle class for which the City and/or County has a procurement specification for and include such a standard in any new vehicle procurement specification.
- (c) Include a minimum emissions standard for each vehicle class for which the City and/or County has a procurement specification for and include such a standard in any new vehicle procurement specifications. This emission standard shall be based on the California Air Resources Board (CARB) designations of LEV, ULEV, SULEV, and ZEV.
- (d) Ensure that a minimum of ____ percent of the passenger vehicles purchased, leased, or otherwise obtained within a fiscal year by the City and/or County of _____ are zero-emission vehicles. Zero-emission vehicles purchased, leased, or otherwise obtained that qualify in another vehicle weight class may, for the purposes of this requirement, qualify as a passenger vehicle ZEV on a one vehicle for one vehicle basis. (e) Review all vehicle procurement specifications and modify them as necessary to ensure that the specifications are written in a manner flexible enough to allow the purchase or lease of alternatively fueled or electric drivetrain vehicles.

- (f) Review every new vehicle purchase request and modify them as necessary to ensure that the vehicle class to which the requesting vehicle belongs is appropriate for the duty requirements that the vehicle will be called upon to perform.
- (g) Review the fleet inventory taken in Section III above to identify older vehicles that are used infrequently (or not at all), as well as those vehicles that are disproportionately inefficient, and schedule their elimination or replacement.
- (h) Implement an anti-idling policy prohibiting City or County employees from idling City or County-owned or operated vehicles for an excessive period of time.
- (i) Implement an incentive program for City or County employees to drive efficiently and utilize efficient vehicle operating techniques.
- (j) Implement an employee fleet trip reduction program by purchasing transit passes for all City or County employees and establishing reimbursement procedures for City or County employees that use transit or bike instead of using fleet vehicles for work-related travel.
- (k) Prohibit the use of non-alternative fuels in bi-fuel vehicles for more than __ percent of the time that they are operated within the City or County.
- (l) Maintain vehicles at optimal efficiency by reviewing current maintenance schedule for all fleet vehicles and increasing maintenance wherever cost-effective benefits will accrue as a result.
- (m) Purchase route optimization computer software and train City or County employees to use the software to utilize City or County vehicles in the most efficient manner possible.

VI. Monitoring of the “Green Fleets” Policy

- (a) In order to ensure compliance with the goals outlined in Section IV above, as well as to monitor the actions outlined in Section V above, a “Green Fleets” Review Committee is to be formed. The Office of the Mayor/County Executive will appoint the members of this review committee, with one representative from each of the following Departments and/or Agencies: 1) Budget/Fiscal Planning Department/Agency 2) Energy Department/Agency 3) Public works Department/Agency 4) Transportation Department/Agency 5) Public health Department/Agency 6) Purchasing Department/Agency 7) Environmental Department/Agency 8) Public Safety Department/Agency
- (b) The “Green Fleets” Review Committee shall also include a City or County Council Member, as determined by the City or County Council. The Council Member will be a non-voting member of the Review Committee.
- (c) On an annual basis, Departmental or Agency fleet managers shall submit a draft “Green Fleets” plan to the Green Fleets Review Committee detailing how vehicle procurement, fleet operations, and employee travel activity are intended to conform to the “Green Fleets” policy and the “Green Fleets” strategies outlined in Section V. The “Green Fleets” plan will also include, as an appendix or addendum, an updated fleet vehicle inventory list in the same format as the fleet vehicle inventory completed in Section III.
- (d) Each “Green Fleets” plan shall be reviewed by the Review Committee for overall conformity with the "Green Fleets" policy and for completeness in addressing the "Green Fleets" strategies outlined in Section V. Inadequate plans shall be returned to the submitting Department or Agency for revision and discussion with the Review Committee.
- (e) Any appeal of the Review Committee's decisions must be made in writing to the Committee accompanied by appropriate documentation. Valid reasons for an appeal include unavailability of appropriate fleet vehicles, incremental costs in excess of the full life-cycle savings that would accrue

from the acquisition of a given vehicle, and the primacy of a given vehicle's mission to public safety or a similar area judged to be applicable by the Review Committee.

(f) Approval of vehicle procurement requests for each Department or Agency is contingent upon a satisfactory recommendation from the "Green Fleets" committee as to the merit of the Departments or Agency's "Green Fleets" plan.

(g) The most innovative "Green Fleets" plan implemented shall receive recognition in an annual award to the Department or Agency submitting the winning plan. The "Green Fleets" review committee shall determine the recipient of the award during the annual "Green Fleets" plan review process.\

Vehicle Acquisition

The San Francisco County Transportation Authority (SFCTA) is aggressively pursuing replacement and rehabilitation programs on all buses, light rail vehicles, and historic streetcars. Within the next two years, SFCTA expects to purchase 60 articulated trolley buses to replace current 20-year-old vehicles. These programs directly support the agency's two-year budget, focusing on maintenance and infrastructure improvement.

San Francisco Environment Code

Chapter 4: Healthy Air and Clean Transportation Program.

Sec. 425. San Francisco Municipal Railway Buses.

Acquisition of Clean Muni Buses.

Muni shall replace all pre-1991 diesel buses on or before January 1, 2007.

Phase Out of Highly Polluting Muni Diesel Buses. Muni shall remove from active or reserve service and shall no longer operate any diesel bus that exceeds its 12 year useful life based on the following schedule:

(1) All diesel buses that were purchased on or before December 31, 1988 shall be removed from active or reserve service on or before December 31, 2004;

(2) All diesel buses that were purchased on or before December 31, 1989 shall be removed from active or reserve service on or before December 31, 2005;

(3) All diesel buses that were purchased on or before December 31, 1990 shall be removed from active or reserve service on or before December 31, 2006.

Extensions. If replacement buses are not commercially available or unforeseen circumstances prevent Muni from procuring new buses on a timely basis, Muni may seek a one-time extension of up to twelve months from the San Francisco Transportation Authority (TA) for any of the aforementioned deadlines.

Approval for such extensions shall require eight or more votes by the Transportation Authority Board of Commissioners. Extension requests shall be submitted in writing at least sixty days prior to the deadline and shall include a detailed accounting of why Muni is unable to meet its obligations under this measure. Extension requests shall also include a list of specific actions that Muni will undertake to offset the emission reductions that would have resulted if no extension were granted. Proposed emission reductions should benefit Muni passengers or residents living near diesel bus routes or diesel bus yards. All extension requests shall be evaluated by the Department of the Environment to determine the validity of proposed emission reductions. The Department of the Environment shall

report its findings to the Board of Commissioners at least one week prior to the extension request hearing date.

Notwithstanding Section 404(c)(2), the provisions of Section 404 shall apply to the acquisition of buses by Muni for its fleet. (*Ord. 278-10, File No. 101009, App. 11/18/2010*)

All motor vehicles purchased by the City of Albuquerque must be dedicated, flexible fuel, or dual-fuel alternative fuel vehicles. Alternative fuels are defined as fuels other than gasoline and 100% petroleum diesel and may include ethanol, biodiesel, natural gas, electricity, propane, or other alternative fuels approved by the City's Chief Administrative Officer.

City of Albuquerque, New Mexico

Executive Instruction No. 26 (*October 17, 2008*)

Subject: Vehicle Acquisition Policy and Procedures

Purpose

To establish a policy governing the purchase of City of Albuquerque vehicles to realize cost savings through fuel conservation and to protect the public health by lowering emissions. This policy establishes vehicle replacement criteria, that limits the use of Sport Utility Vehicles (SUVs) to work assignments where they are essential and encourages the purchase of Alternative Fuel Vehicles (AFVs) or Hybrid technology (gasoline/electric) vehicles to increase their percentage of the total vehicle fleet to 100% by the year 2015.

As a public agency responsible for both the public health and the expenditure of public funds, this Administration is committed to making decisions that protect air quality and conserve public funds. Both of these goals can be achieved by purchasing fuel-efficient, low-emission vehicles. Today, those vehicles are Alternate Fuel Vehicles (AFVs) and Hybrid technology vehicles (gasoline/electric), which in FY 2008 comprise a little more than 46% (49% including hybrid/electric vehicles) of the City-owned fleet.

Policy

It is the policy of the City Of Albuquerque that:

- All vehicles purchased for the City Of Albuquerque's fleet will be:
 - Consistent with the approved program to standardize fleet vehicles;
 - Fuel-efficient with the lowest emissions within the vehicle class/type;
 - Commercially available, practical and reasonably cost-competitive for the class/type of vehicles needed for specific assignments;
 - AFV or Hybrid.
- The "most fuel-efficient vehicles" are those with a fuel economy rating (combined average of city and highway mileage) determined by the U.S. Environmental Protection Agency that is within 10% of the highest rated vehicle meeting the criteria above.'

- If more than one vehicle model meets the criteria above or if fuel economy ratings have not been established for the candidate vehicles based on their Gross Vehicle Weight (GVW) rating, preference will be given to the make and model that is certified to be in the most stringent emissions standard category. Currently, in order of decreasing stringency, these emission categories are:
 - ZEV (Zero Emission Vehicles),
 - AT PZEV (Advanced Technology Partial Zero Emission Vehicle),
 - PZEV (Partial Zero Emission Vehicle),
 - SULEV (Super Ultra Low Emission Vehicles),
 - ULEV (Ultra Low Emission Vehicles) and
 - LEV (Low Emission Vehicle).
- Sport Utility Vehicles (SUVs) will not be purchased unless justified based on a verified work assignment. Such work assignments will include rough terrain/off-road travel, passenger/cargo requirements, and/or trailer towing requirements on a routine basis.
- The Department of Finance and Administrative Services will work with City departments to identify opportunities to replace fleet vehicles with lower emissions, more fuel-efficient All Departments will set a goal to increase Alternative Fuel Vehicles (AFVs) and/or Hybrid vehicles to 100% of the current fleet by the year 2015. The goal will be predicated on the availability of AFV or Hybrid vehicles and funding availability.
- Departments that request other than a standard vehicle, mid-sized or smaller sedan, must provide justification by the Director of the requesting department and be approved by the Chief Administrative Officer (CAO).
- Exceptions to this policy may be approved by the CAO on a case-by-case basis, based upon the intended use, application, vehicle specifications and/or over-riding cost considerations. Fuel economy and vehicle emissions shall be taken into account when requesting other vehicle types.
- Department Directors and the Department of Finance and Administrative Services will, on an ongoing basis, evaluate the most economical time to replace City vehicles. Factors to be used in evaluating replacement vehicles will include a life cycle cost analysis including (but not limited to) vehicle age, accumulated usage, condition, maintenance/cost history, and suitability of assignment. The base age/mileage criteria to be used in evaluating City vehicles for replacement will be:
 - Standard Sedan – 10 years / 100,000 miles
 - Patrol Sedan – 7 years / 100,000 miles
 - Patrol SUV – 7 years / 100,000 miles
 - Light Trucks/Vans/SUV – 12 years / 125,000 miles
 - Medium/Heavy Trucks – 12 years / 150,000 miles
 - Construction/Specialty Equipment – To be determined based on operational needs

Enterprise Funds – Aviation, Solid Waste and Transit

All specifications developed for vehicle and equipment purchases will be approved by the Alternative Fuel Committee prior to release. To ensure compliance with this policy, all requisitions for these procurements will be submitted to the Alternative Fuel Committee for review and approval.

Each requisition submitted must include the following;

1. Name and phone number of a contact person.
2. Proposed specifications, GSA or State contract numbers. Fleet Management Division will assist user departments with bid specifications or other purchase methods.

All Other City Vehicles

All specifications developed for vehicle and equipment purchases will be approved by the Alternative Fuel Committee. To ensure compliance with this policy, all requisitions for these procurements will be reviewed by Fleet Management and submitted to the Alternative Fuel Committee for approval.

Each requisition submitted must include the following:

1. Name and phone number of a contact person.
2. Fund and activity numbers from which the vehicle will be purchased.
3. Fund and activity numbers from which maintenance costs will be paid.
4. Proposed specifications, GSA or State contract numbers. Fleet Management Division will assist user departments with bid specifications or other purchase methods.
5. Unit number to be replaced or authorization to add to fleet.
6. A complete listing of all up-fitting (equipment modification) after the City takes delivery.
7. A copy of each requisition with fund and activity numbers from which the up-fitting will be purchased. (Vehicles and equipment shall be purchased completely up-fitted whenever possible)
8. Approval by the Budget Department or CIP, as appropriate.
9. Authorized Department Signature.

The Fleet Management Division will meet with user departments to review the specifications for the following;

1. Appropriateness for application.
2. Maintainability in City facilities by City personnel.
3. Warranty meets the City's needs.

The Fleet Management Division will forward specifications and requisition to the Alternative Fuel Committee for approval.

Vehicle specifications and/or requisitions that do not meet the requirements of the Alternative Fuel Policy will be returned to the requesting department without approval. Specific and unique vehicle and/or technology demonstration requests outside of the normal vehicle equipment list may be considered upon submission to the Fleet Management Division and review by the Alternative Fuel Committee. This would also include vehicles and/or equipment offered to the City for use in their fleet under a demonstration offer by a manufacturer(s).

Approved requisitions will be forwarded to the Purchasing Division for processing. The Purchasing Division will not permit departments to change the specifications without written approval of Alternative Fuel Committee. Purchasing will provide the Fleet Management Division with a complete copy of the request for bids at the time bids are let. After bids have been mailed to vendors, all addenda that affect the vehicle specifications will require Alternative Fuel Committee approval.

Evaluation of bids as they relate to technical specifications will be the responsibility of the Fleet Manager or his designee. The recommendation resulting from the evaluations will be signed by the Fleet Manager or his designee and forwarded to the Purchasing Division for appropriate action.

A copy of all purchase orders issued for the purchase of vehicles or equipment as defined herein will be forwarded to the Fleet Management Division by the Purchasing Division. It is the responsibility of the Fleet Management Division to insure that vehicles received meet the approved specification.

Exemptions

Written requests for exemption from this Administrative Instruction shall be reviewed by the Alternative Fuel Committee and forwarded with a recommendation to the Chief Administrative Officer for approval.

This Administrative Instruction excludes Police Special Investigations Division vehicles.

Idle Reduction

The purpose of this local law in the City of New Rochelle is to protect public health and the environment by reducing emissions while conserving fuel and maintaining adequate rest and safety of all drivers. No person operating a vehicle covered by this rule is permitted to idle for a period greater than 3 consecutive minutes when the motor vehicle is not in motion. The owner and/or operator of the vehicle that is in violation of this law is responsible for penalties as stated in § 312-68. Penalties for offenses.

City of New Rochelle, Westchester County, New York

Chapter 312: Vehicles and Traffic

Article II. Traffic Regulations

§ 312-33. Idling.

[Added 9-21-2004 by L.L. No. 8-2004; amended 11-9-2011 by Ord. No. 187-2011]

A. Definitions. As used in this section, the following terms shall have the meanings indicated:

Electric Vehicle - A vehicle powered by electricity, usually provided by batteries.

Hybrid-Electric Vehicle - A motor vehicle which operates by combining an internal combustion engine powered by gasoline or diesel fuel with a battery-powered electric motor.

Motor Vehicle - Any vehicle that is self-propelled by an engine, including but not limited to automobiles, vans, motorcycles and construction vehicles.

B. Restrictions.

(1) No person shall operate, allow, or permit the engine of any motor vehicle to idle for more than three consecutive minutes when the motor vehicle is not in motion, subject to the following exceptions:

(a) The heavy-duty vehicles exceptions set forth in Section 217-3.3 of Title 6 of the State of New York Codes, Rules, and Regulation;

(b) A motor vehicle that is forced to remain motionless because of traffic conditions over which the operator thereof has no control;

(c) A hybrid-electric vehicle idling for the purpose of providing energy for the battery or other form of energy storage recharging;

(d) The motor vehicle is an electric vehicle; and

(e) The motor vehicle is not powered by a diesel engine and the ambient air temperature is 32° F. (0° C.) or less.

C. Application. This section shall apply to any person who owns, operates, leases, supervises or who otherwise has charge, supervision or control of such vehicle and to any person who owns, leases or occupies land and has actual or apparent domain or control over such vehicle or engine which is present on such land.

D. Penalties. Penalties for violations of this section shall be as set forth in § 312-68.

E. Severability. If any section, subsection, sentence, clause, phrase or other portion of this section is, for any reason, declared unconstitutional or invalid, in whole or in part, by any court of competent jurisdiction such portion shall be deemed severable, and such unconstitutionality or invalidity shall not affect the validity of the remaining portions of this section, which remaining portions shall continue in full force and effect.

The City of Atlanta prohibits the idling of a truck or bus for more than 15 minutes on any street or public place. Exceptions include emergency vehicles, utility company, construction, maintenance vehicles that require the engines to run to perform needed work, or vehicles that are forced to remain motionless because of traffic conditions. If the ambient temperature is less than 32 degrees Fahrenheit, idling is limited to a maximum of 25 minutes. Any vehicle that uses electricity or compressed natural gas as its primary fuel source is exempt from idling limitations.

City of Atlanta, Georgia

Chapter 150: Traffic and Vehicles

Article IV, Stopping, Standing and Parking

Division 1, Generally

Sec. 150-97. Restrictions for trucks, buses.

(a) Time limit for trucks. No person shall park or stand any truck or other freight-carrying vehicle, including any truck tractor, in excess of one-half ton capacity upon any public street or highway for longer than one hour at any time during the day or no person shall park any truck or other freight-carrying vehicle, including any truck tractor or their cabs, in excess of one-half ton capacity upon any public street or highway from 6:00 p.m. to 8:00 a.m. during standard time and from 8:00 p.m. to 7:00 a.m. during day light savings time.

(b) Attendant required for certain trucks, buses. No person shall stop or stand any truck or bus with a body more than eight feet wide or ten feet high on any street or public place without the driver or chauffeur being actually present and in charge thereof.

(c) Time limit for idling. No person shall stop or stand any truck or bus on any street or public place and idle for more than 15 minutes. A violation of this subsection shall, upon conviction, be punishable by a minimum fine of \$500.00. This limitation shall not apply under the following conditions:

(1) Emergency vehicles, utility company, construction and maintenance vehicles where the engines must run to perform needed work;

(2) Truck or bus is forced to remain motionless because of traffic conditions;

(3) Truck or bus is being used to supply heat or air conditioning necessary for passenger safety or comfort, and such truck or bus is being used for commercial passenger transportation or is a transit authority bus or school bus, in which idling shall be limited to a maximum of 25 minutes;

(4) If the ambient temperature is less than 32 degrees Fahrenheit, idling shall be limited to a maximum of 25 minutes; or

(5) Any vehicle, truck, bus, or transit authority bus in which the primary source of fuel is Natural Gas (CNG) or electricity shall be exempt from the idling limitations set forth in this section.

(Code 1977, § 13-2238; Ord. No. 2001-8, § 1, 2-13-01; Ord. No. 2002-84, § 1, 11-26-02)

The City of Maple Heights has enacted a 5-minute idling regulation limit in any 60-minute period, punishable by a \$150 fine.

City of Maple Heights, Ohio

Part Four: Traffic Code

Title Six - Operation and Vehicles

Chapter 432: Operation Generally

432.42 Idle Reduction, Exemptions, Penalty

(a) Purpose. The purpose of this section is to protect public health and the environment by reducing emissions while conserving fuel, maintaining adequate rest and safety of all drivers, and removing barriers to economic development imposed by the region's air quality status under the Federal Clean Air Act.

(b) Applicability. As used in this section, "vehicle" has the same meaning as in Ohio R.C. 4511.01, and Section 402.53 of the Codified Ordinances of Maple Heights.

(c) General Requirement. Except as provided in division (d) of this section:

(1) The owner or operator of a vehicle shall not cause or allow a vehicle to idle for more than five minutes in any 60-minute period.

(2) The owner or operator of a vehicle that is loading or unloading at a loading dock or loading/unloading area, and the owner or operator of the loading dock or loading/unloading area, shall not cause or allow a vehicle to idle in that loading /unloading area for more than ten minutes in any 60-minute period.

(d) Exemptions. Division (c) of this section does not apply when:

(1) The outdoor temperature is below 32°F or above 85° F. However, idling is limited to ten minutes in any 60-minute period.

- (2) To prevent a safety or health emergency, a vehicle idles when operating defrosters, heaters, air conditioners, or when installing equipment.
- (3) A vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
- (4) A police, fire, ambulance, public safety, military, other emergency or law enforcement vehicle, or any vehicle being used in an emergency capacity, idles while in an emergency or training mode, or to maintain communications, and not solely for the convenience of the vehicle operator.
- (5) The primary propulsion engine idles for maintenance, servicing, repair, or diagnostic purposes if idling is required for such activity, or idles as part of a State or Federal inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
- (6) Idling of the primary propulsion engine is necessary to power work-related mechanical or electrical operations other than propulsion (e.g. mixing or processing cargo or straight truck refrigeration). This exemption does not apply when idling for cabin comfort or to operate nonessential on-board equipment.
- (7) An armored vehicle idles when a person remains inside the vehicle to guard the contents, or while the vehicle is being loaded or unloaded.
- (8) An occupied vehicle with a sleeper berth compartment idles for purposes of air conditioning or heating during a required rest or sleep period.
- (9) A vehicle idles due to mechanical difficulties over which the driver has no control.
- (10) A vehicle is only operating an auxiliary power unit, generator set, or other mobile idle reduction technology as a means to heat, air condition, or provide electrical power as an alternative to idling the main engine.
- (11) A vehicle is actively engaged in work upon the surface of a street or highway, including construction, cleaning, and snow removal activities, and the operator is in the vehicle.

(e) Penalty. Whoever violates this section shall be guilty of a minor misdemeanor. (*Ord. 2009-16. Passed 3-18-09.*)

Increasing the Infrastructure for Renewal Fuels *Public and private fleets*

The San Francisco Department of the Environment, in consultation with other departments, must facilitate and seek funds for the development of alternative fueling facilities, including electric vehicle supply equipment; participate in pilot and demonstration projects for clean vehicles and related technologies; and coordinate grant applications to support clean vehicle and alternative fuel programs.

San Francisco Environment Code

Chapter 4: Healthy Air and Clean Transportation Program.

Sec. 406. Infrastructure for Alternative Fuels with Low Carbon Intensity.

(a) Alternative Fuel Infrastructure. The Department of the Environment, in consultation with other interested City departments, shall facilitate the development of fueling facilities for alternative fuels with low carbon intensity for municipal and privately owned vehicles, including, but not limited to,

infrastructure for electric transportation, including recommending necessary legislation to the Board of Supervisors.

(b) The Department of Environment shall seek funding sources for developing public and private alternative fueling facilities and other products and services to support the operation of alternative fuel vehicles with low carbon intensity. (Ord. 278-10, File No. 101009, App. 11/18/ 2010)

Sec. 407. Demonstration Pilot Programs for New Technologies.

(a) The Department of Environment shall seek funding for the City to participate in demonstration and other pilot programs designed to test promising clean vehicle or related technologies where the Director of the Department of the Environment concludes that the City's participation in such programs may establish the viability of the technologies and/or advance their commercial availability.

(b) Contracts and grants or awards in furtherance of such demonstration or other pilot programs with a duration of no more than two years are not subject to the contracting requirements of the Administrative Code or Environment Code, but shall be subject to the requirements of the San Francisco Sunshine Ordinance, Administrative Code Chapter 67. (Ord. 278-10, File No. 101009, App. 11/18/2010)

To the extent practical, an Arizona state agency or political subdivision that operates an alternative fueling station must allow vehicles other state agencies or political subdivisions own or operate to fuel at the station. For the purpose of this requirement, alternative fuels include propane, natural gas, electricity, hydrogen, and a blend of hydrogen with propane or natural gas.

Arizona Revised Statutes

Title 49 - The Environment

Article 7, Emissions Control

49-572. Joint use of clean burning or alternative fuel refueling stations

To the extent practicable, a state agency or political subdivision that operates a clean burning fuel or alternative fuel refueling station shall permit the refueling of vehicles owned or operated by any state agency or political subdivision at the refueling station.

The City of Ferndale's Hybrid-High Mileage Vehicle Parking Ordinance encourages the use of hybrid-high mileage technology by granting free on-street parking on all city streets and free parking in municipal parking lots to hybrid vehicles and high mileage vehicles.

City of Ferndale, Michigan

Chapter 18: Traffic and Motor Vehicle Code

Article VIII – Hybrid-High Mileage Vehicle Parking

Sec. 18-90. - Hybrid-High Mileage Vehicle Parking.

(a) The city shall encourage the use of newly available hybrid-high mileage technology by granting free on-street parking on all city streets and free parking in municipal parking lots to hybrid vehicles and

high mileage vehicles, which shall be limited to motor vehicles as defined in the Michigan Motor Vehicle Code and which shall not include motorcycles as defined in the Michigan Motor Vehicle Code being MCL § 25731, as amended.

(b) Such qualifying vehicles shall be hybrid vehicles, which shall be vehicles that use at least two fuel sources for propulsion and which are identified as qualifying vehicles on a list approved from time to time by council, or high mileage vehicles, which shall be vehicles with an estimated manufacturer city estimate of not less than 30 miles per gallon. A registered owner will be granted a non-transferable annual permit from the city treasurer, or such other department as may be designated by council, upon application and presentation of registration of the vehicle and, if applicable, the vehicle's manufacturer's city estimate of miles per gallon and payment of a \$8.00 fee for a vehicle registered to a city resident, or a \$25.00 fee for a non-resident registered vehicle, which amount may be adjusted by council from time to time by resolution. The permit is to be hung from the qualifying vehicle's rear-view mirror identifying such vehicle as eligible for free parking at any legal on-street city parking space or municipal parking lot spaces in compliance with all time and other posted restrictions. The permit will expire on December 31st of each year after this section takes effect, but may be renewed by providing a valid current registration of the vehicle and payment of the application fee.

Parking Requirements

The model presented applies to the implementation of smart parking strategies designed to address three distinct issues relative to off-street parking: 1) reducing the standards for required parking; 2) providing innovative solutions for shared and off-site parking; and 3) parking area design. The language for reducing parking requirements relies on two strategies. The first is to establish maximum parking requirements that closely mirror or are slightly less than what many communities use as their minimum parking requirements. The second strategy is to provide a minimum parking requirement that is anywhere from 20-80% of the maximum depending on the associated use. Using a minimum and maximum effectively creates a range of acceptable parking requirements thereby providing the development community a chance to be more flexible and efficient in their design. The language provided in this model for shared parking uses three strategies. Parking lot design considerations are divided into two categories with the thought that some communities would be primarily interested in aesthetic improvements while others would be more interested in implementing aesthetic improvements along with Low Impact Development (LID) techniques to reduce stormwater runoff and associated water contamination. In the parking lot design provisions, this model uses Site Plan Review as the primary review mechanism.

Smart Parking Model Bylaw

Smart Growth/Smart Energy Toolkit

Commonwealth of Massachusetts

1. Purpose

The purpose of this Article is to establish standards ensuring the availability and safe use of parking areas. It is intended that any use of land involving the arrival, departure, or temporary storage of

motor vehicles, and all structures and uses requiring the delivery or shipment of goods as part of their function, be designed and operated to:

- A. Promote traffic safety by assuring adequate places for storing of motor vehicles off the street, and for their orderly access and egress to and from the public street;
- B. Prevent the creation of surplus amounts of parking spaces contributing to unnecessary development and additional generation of vehicle trips, resulting in traffic congestion and traffic service level deterioration on roadways;
- C. Reduce hazards to pedestrians and increase pedestrian connectivity between and within sites;
- D. Reduce unnecessary amounts of impervious surface areas from being created;
- E. Protect adjoining lots and the general public from nuisances and hazards such as:
 - 1) noise, glare of headlights, dust and fumes resulting from the operation of motor vehicles;
 - 2) glare and heat from parking lots; and
 - 3) lack of visual relief from expanses of paving.
- F. Increase the mobility and safety for bicyclists; and
- G. Reduce other negative impacts such as carbon output.

2. Applicability

No building permit or certificate of occupancy shall be issued for the erection of a new building, the enlargement or increase in the net floor area of an existing building, the development of a use not located in a building, or the change from one type of use to another, unless off-street parking spaces, loading bays and bicycle parking are provided in accordance with this bylaw.

3. Definitions

Angled Parking: Any parking space that is not parallel or perpendicular to the curb or aisle.

Bikeway: Any road, street, path, or way, all of a portion of which is in some manner specifically designated for bicycle travel, regardless of whether such facilities are designed for the exclusive use of bicycles or are to be shared with other transportation modes.

Large Scale Retail: Single retail sales facility that has greater than 20,000 square feet of gross floor area and is contained in a single building.

BMPs (Best Management Practices): structural, vegetative, or managerial practices designed to treat, prevent, or reduce degradation of water quality due to stormwater runoff and snow-melt.

Free Standing Retail: Single retail sales facility of up to 20,000 square feet in size that is situated independently on a building lot and for which associated parking serves exclusively that facility.

Greenscapes: a developed landscape that incorporates a compilation of practices to reduce water usage, encourage groundwater recharge, protect water supplies and reduce stormwater pollution.

Gross Floor Area: The total floor area of a building.

Impervious Surface: A ground cover such as cement, asphalt, or packed clay or rock through which water cannot penetrate.

Indoor Recreation Facilities: Uses such as bowling alleys, billiard parlors, and skating rinks.

Industrial Plant: Structure or complex of structures used for manufacturing, assembling, fabricating, warehousing, and related activities.

Low Impact Development: An approach to environmentally friendly land use planning. It includes a suite of landscaping and design techniques that attempt to maintain the natural, pre-developed ability of a site to manage rainfall. LID techniques capture water on site, filter it through vegetation, and let it

soak into the ground where it can recharge the local water table rather than being lost as surface runoff.

Mixed Use: A development that provides multiple compatible uses in close proximity to one another. It also refers to a land use pattern that seeks to increase concentrations of population and employment in well-defined areas with a mix of diverse and compatible land uses.

Off-Street Parking: Parking spaces provided outside of the right-of-way of a street or highway.

On-Street Parking: Parking spaces provided within the right-of-way of a street or highway.

Outdoor Recreation Facilities: Uses such as golf courses, amusement parks, miniature golf courses, and water slide parks.

Parking Area: That portion of a lot set aside, marked, posted, or intended for parking. This includes circulation areas, loading and unloading areas, parking spaces and aisles, landscaped areas, bikeways, and walkways.

Parking Stall or Space: A space in which a single car may be parked.

Personal Services: Establishments primarily engaged in providing services involving the care of a person or a person's personal goods or apparel. This category includes uses such as barber shops, beauty salons, shoe repair shops, and dry cleaners.

Pervious Surface: Ground cover through which water can penetrate at a rate comparable to that of water through undisturbed soils.

Shared Parking: When parking spaces are shared among different structures or uses, or among mixed uses, and can include properties with different owners.

Sight Distance: The distance visible to a driver from his/her position to other objects or vehicles, when at a point of turning or when stopping a vehicle.

Travel Lane: The driving portion of the parking area. The aisle provides access to each space.

Walkway: Any path or way, which is specifically designated primarily for pedestrian travel.

4. Off-Street and On-Site Parking Calculations

Calculations for off-street parking requirements may involve two basic calculations. First, a baseline number of parking spaces shall be calculated in accordance with the parking schedule found in Section 6. Second, the number of off-street parking spaces and/or on-site spaces required under Section 6 may be reduced through any individual technique or combination of techniques found in Section 7.

Proposed reductions in the baseline number of spaces to be provided off-street and/or on-site may be approved or required by the Planning Board in connection with the approval of a Site Plan under *[insert local site plan review section reference]* and Section 5.

5. Site Plan Review Standards for On-Site Parking

To ensure the overall efficiency of parking development in *[city/town/district]* Applicants proposing more than *[ten (10)]* spaces associated with non-residential, residential or mixed-use developments shall include with their applications for Site Plan Approval under *[insert local site plan review section reference]* an analysis of the opportunities to reduce parking requirements using any of the applicable reduction strategies in Section 7, the design specifications in Section 8, and landscaping design standards pursuant to Section 9. The Planning Board may approve these submittals according to the following provisions:

A. The Planning Board shall require the maximum reduction available under Section 7.A. unless it determines that:

- 1) A surplus of spaces on a particular site will benefit the District as a whole by providing off-site sharing opportunities for other sites in the District; or
- 2) The techniques for reduction of the number of off-street or on-site parking spaces available to the applicant are infeasible or would impose an undue hardship on the applicant.

B. The Planning Board shall require that all applicable design criteria are followed for LID Parking Area Design as defined in Sections 9.B of this bylaw unless it determines, upon petition from the applicant, that the successful implementation of a LID Parking Area Design is infeasible or would impose an undue hardship on the applicant. Where the Planning Board determines that LID Parking Area Design is infeasible, applicant shall comply with those specifications for Conventional Parking Area Design listed in Subsection 9.A. Evidence that may be used by an applicant to demonstrate the infeasibility of implementing LID techniques on a site may include, without limitation:

- 1) The presence of subsurface geologic conditions such as ledge or large quantities of poor fill;
- 2) Applicant does not own existing lot to be used for off-site parking allowances;
- 3) The presence of soil contamination; and/or
- 4) Existing topography or site geometry

6. Baseline Number of Required Parking Spaces

Parking requirement calculations shall be made in the amounts specified in the Parking Schedule per 1,000 square foot (sf) of Gross Floor Area (GFA) unless otherwise indicated. Where mixed use developments are proposed, the baseline parking requirement shall be calculated as the sum of the requirements for each use. Reductions in the overall number of required off-street on-site spaces can be calculated using the standards in Section 7 of this bylaw.

Parking Schedule

Land Use	Maximum	Minimum
Bank	3	2
Large Scale Retail	4	2
Drive-Thru Restaurant	6	2
Free Standing Retail	3	1
General Office Building	4	2
Industrial Plant	2	1
Medical Office Building	8	2
Nursing Home	3	2
Restaurants	10	6
Shopping Centers	4	3
Bed and Breakfast	1.2 spaces per guest room or suite	1 space per guest room or suite
Personal Services	3	2
Day Care Centers	1 space per 4 children at max. capacity	1 space per 8 children at max. capacity
Churches and Places of Worship	1 space per 3 seats in portion of the building used for	1 space per 5 seats in the portion of the building used

	services	for services
Museums and Libraries	2	1
Social, Fraternal Clubs and Organizations	4	3
Public and Private Educational Institutions	1 space per 3 seats in the classroom	1 space per 5 seats in the classroom

Provision of all off-street parking areas shall comply with the latest standards associated with the Americans with Disabilities Act (ADA).

7. Special Off-Street Parking Provisions

A. Shared Parking

1) Shared On-Site Parking

To implement shared on-site parking, the applicant shall provide analyses as part of Site Plan Review to demonstrate that proposed uses are either competing or non-competing.

a) Non-competing Uses. In mixed-use developments, applicants may propose a reduction in parking requirements based on an analysis of peak demands for non-competing uses. Up to [75%] of the requirements for the predominant use may be waived by the Planning Board if the applicant can demonstrate that the peak demands for two uses do not overlap. An applicant may use the latest peak demand analyses published by the Institute of Traffic Engineers (ITE) or other source acceptable to the [Planning Board].

b) Competing Uses. In mixed-use developments, applicants may propose a reduction in parking requirements where peak demands do overlap. In these cases, the Planning Board may reduce the parking requirements of the predominant use by up to [30%].

2) Off-Site Parking

Separate from, or in conjunction with Shared Parking provisions, an applicant may use off-site parking to satisfy their parking requirements. As part of Site Plan Review, the applicant shall provide the necessary information to comply with the following standards:

a) Off-site parking shall be within [five hundred (500)] feet of the property for which it is being requested.

b) Off-site parking may only be provided if the off-site lot has an excess number of spaces or if the applicant can demonstrate that the on-site and off-site uses have non-competing peak demands.

c) The amount of required parking spaces being reduced on-site shall be equal to the amount being provided off-site and can account for up to 100% of the minimum required on-site parking.

d) Off-site parking spaces provided by a separate private property owner shall be subject to a legally binding agreement that will be presented to the Planning Board during the Site Plan Review process or as a condition of approval. If the conditions for shared parking become null and void and the shared parking arrangement is discontinued, this will constitute a zoning violation for any use approved expressly with shared parking. The applicant or property owner must then provide written notification of the change to the Zoning Enforcement Official and, within 60 days of that notice, provide a remedy satisfactory to the Commission to provide adequate parking.

- e) Off-site parking provided by means of a public parking facility shall be limited to [50%] of the overall parking requirement [*for daytime peak uses*].
- f) On-street parking spaces that [*intersect or*] are completely contained within the frontage of the property may be counted toward the minimum parking requirements.
- g) Uses sharing a parking facility shall provide for safe, convenient walking between uses and parking, including safe, well-marked pedestrian crossings, signage, and adequate lighting.

B. Fees-In-Lieu of Parking

If the [*city/town/district*] has established a Reserve Account or Revolving Fund to be used for expenses (land acquisition, design/engineering services and construction costs, but not maintenance costs) related to adding parking spaces, improving the utilization of existing parking spaces, or reducing the need for new parking to serve the [*city/town/district*], an applicant may pay a fee-in-lieu of parking space development for a portion or all off-street on-site parking. The fee to be paid shall be [\$2,000] per parking space, and shall be paid into such Fund.

8. Parking Lot Design

A. Compact Cars

Applicant may design up to 30% of their parking spaces for compact cars in accordance with the dimensions listed in Section 8.B of this bylaw. Compact car spaces shall be grouped together to the greatest possible extent in areas clearly designated for compact cars. Parking lots shall have a system of signs beginning at the entrance that clearly indicates the location of compact car spaces.

B. Parking Space and Travel Lane Dimensions

For the purposes of this bylaw, minimum parking space width shall be measured perpendicular to the center line of the parking space. For standard cars the minimum parking space width shall be nine (9) feet. For compact cars, the minimum parking space width shall be eight (8) feet. Travel lanes and associated module widths shall conform to the following minimum standards;

Parking Angle	Parking Stall Width ¹		Travel Lane (one way)		Travel Lane (two way)	
	Standard Space	Compact Car	Standard Space	Compact Car	Standard Space	Compact Car
Parallel	9'	8'	12'	12'	24'	22'
45°	18'	16'	14'	12'	24'	22'
60°	21'	17.5'	16'	14'	24'	22'
75°	22'	19'	19'	16'	24'	22'
90°	20'	17'	22'	19'	24'	22'

¹ Measured from the inner most point on the parking space centerline perpendicular to the edge of the Travel Lane.

9. Landscaping Standards for Parking Lot Stormwater Management:

Landscaping is required for all parking lots and may be designed in one of two ways as related to stormwater management pursuant to the requirements in Section 5: 1) Low Impact Development (LID) Parking Area Design; or 2) Conventional Parking Area Design. LID Landscaping Plans shall denote a

drainage design where [75% or more] of the [*first half inch*] of stormwater runoff from impervious surfaces is treated for water quality by a combination of LID techniques in accordance with the most recent version of the *Massachusetts DEP Stormwater Management Manual*. Conventional Parking Area Design shall denote a parking lot landscape design that does not meet the criteria for LID Parking Area Design.

Acceptable LID techniques shall include vegetated swales, rain gardens or bioretention facilities, permeable pavers, infiltration facilities and constructed wetlands. Cisterns and grey water systems that recycle stormwater runoff may also be included in these calculations.

For parking areas that will contain fewer than [*ten (10)*] spaces, compliance with the design standards set forth in this bylaw shall be determined by the Zoning Enforcement Officer.

A. Conventional Parking Area Design Standards

The landscaping requirements in this section are intended to provide a baseline set of standards toward reducing the visual impacts of large areas of pavement, improving the overall environment or parking areas by providing areas for shade and heat reduction, and enhancing the overall aesthetic appeal of parking areas. The following standards shall apply to all Conventional Parking Lot Design as defined in this bylaw.

- 1) Amount. Developments with proposed parking areas of [*ten (10)*] spaces or more shall provide a minimum of 10% of the total parking area as landscaped open space.
- 2) Buffers. Landscaping shall be required between non-residential uses or mixed use developments and existing or future residential development areas. Buffer zones shall be a minimum of [*twelve (12) feet*] in width and shall substantively screen the site from view through the use of evergreen vegetation at least six feet in height. Fences may be used as part of screening but shall not include chain link fences. These requirements shall not apply to non-residential or mixed use development that are designed to integrate existing or future neighboring residences into the site through the use of walkways, bicycle paths or other pedestrian amenities.
- 3) Parking Lot Entrances. Parking lot entrances shall be landscaped minimally with a combination of trees and shrubs. These areas may also be used for signage in compliance with [*insert reference to signage section of bylaw*]. No trees or shrubs shall be planted in a way to obstruct sight lines of motorists.
- 4) Parking Aisles. The ends of parking aisles that are more than [*fifteen (15) spaces*] in length shall incorporate landscape islands at either end of the row. Where the length of parking aisles exceeds [*twenty-five (25)*] spaces, an intermediary landscaped island shall be installed at regular intervals. This interval shall not be more than every [*thirteen (13)*] spaces. Landscape islands used at the end of parking aisles shall enclose. The width of landscaped islands at their ends shall not be less than [*four (4)*] feet and not less than [*eight (8)*] feet at their midpoint.
- 5) Plant Selection. No tree, shrub or plant shall be proposed for use within a parking area that has been identified as an Invasive Species by the Massachusetts Plant Advisory Group in the latest version of *The Evaluation of Non-Native Plant Species for Invasiveness in Massachusetts (with annotated list)*, has been identified as invasive or banned on the *Massachusetts Prohibited Plant List* as periodically updated by the Massachusetts Department of Agricultural

Resources, or in any other reputable scientific publication that may be acceptable to the Board. All size and location design elements shall comply with the following specifications:

- a) Shade or canopy trees shall be three (3) inches DBH with a height of not less than twelve (12) feet above grade;
- b) Small or minor shade trees shall be two and one-half (2.5) inches DBH with a height of not less than nine (9) feet above grade;
- c) Ornamental or flowering fruit trees shall be two (2) inches DBH with a height of not less than seven (7) feet above grade;
- d) Evergreen trees used for screening shall be not less than six (6) feet in height above grade. Fencing may be used in conjunction with vegetated screening [but chain link fence shall not be allowed];
- e) Shrubs shall be not less than one and one-half (1.5) feet in height above grade.
- f) Turf may be used but shall not be installed in strips less than six (6) feet in width.

B. LID Parking Area Design Standards

The purpose of these standards is provide the Zoning Enforcement Officer or the parties involved with Site Plan Review the opportunity to review plans for a lower impact approach to managing Stormwater in parking areas. The following information is therefore required of an applicant choosing to treat any portion of a parking lot with LID stormwater management techniques. This information shall be prepared by a Massachusetts registered Professional Engineer and shall comply with the design and implementation guidelines provided in the latest version of the *Massachusetts DEP Stormwater Management Manual*. Where portions of the parking lot are not using acceptable LID techniques, the standards for Conventional Parking Lot Design in Section 8.A shall apply.

- 1) Delineation of all drainage areas inclusive of areas outside of the parking envelope that will contribute stormwater runoff to the parking area;
- 2) Proposed topography at two-foot contour intervals;
- 3) Site Plan showing drainage pathways and locations of proposed BMPs;
- 4) Typical profiles of BMPs;
- 5) Sizing calculations for BMPs that demonstrate adequate conveyance and/or water quality treatment of the [*first half inch of stormwater runoff from impervious surfaces*];
- 6) Sizing calculations for BMPs that illustrating proposed management of runoff resulting from 2-year, 10-year, and 100-year event;
- 7) List of plantings associated with vegetated BMPs;
- 8) Location of areas reserved for snow storage;
- 9) Location of any screening between residential and non-residential properties. Buffer zones shall be a minimum of [six (6) feet] in width and shall substantively screen the site from view through the use of evergreen vegetation at least six feet in height. Fences may be used as part of screening but shall not include chain link fences. These requirements shall not apply to non-residential or mixed use development that are designed to integrate existing or future neighboring residences into the site through the use of walkways, bicycle paths or other pedestrian amenities.
- 10) Location of test pits, depth to seasonal high ground water and soil percolation rates for those areas designated for recharge;
- 11) Schematic diagrams of any gray water or cistern systems proposed for the parking area;

12) An Operation and Maintenance (O&M) Plan shall be submitted by the applicant to the Zoning Enforcement Officer or the [*Planning Board*] that conforms to the standards for O&M Plans detailed in the most recent version of the *Massachusetts DEP Stormwater Management Manual*.

10. Severability

If any provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby.

Electric Vehicle Charging Infrastructure

Newly constructed buildings in Los Angeles must provide the necessary hardware for plug-in electric vehicle charging. One- and two-family dwellings and townhouses must be equipped with at least one PEV charging outlet, which is a 208/240 volt, 40 ampere, grounded alternating current outlet, or panel capacity and conduit for such outlet installation. Other residential buildings that have a common parking area must be equipped with PEV charging outlets in at least 5% of the total parking spaces or panel capacity and conduit for these upgrades in the future. The parking area of new high-rise residential and non-residential buildings must include PEV charging outlets in at least 5% of the total parking spaces.

Chapter IX of the Los Angeles Municipal Code

Article 9, Green Building Code

Article 9, Division 4

Mandatory Measures for Newly Constructed Low-Rise Residential Buildings

99.04.106.6. Electric Vehicle Supply Wiring.

1. For one- or two- family dwellings and townhouses, provide a minimum of:
 - a. One 208/240 V 40 amp, grounded AC outlet, for each dwelling unit; or
 - b. Panel capacity and conduit for the future installation of a 208/240 V 40 amp, grounded AC outlet, for each dwelling unit. The electrical outlet or conduit termination shall be located adjacent to the parking area.
2. For other residential occupancies where there is a common parking area, provide one of the following:
 - a. A minimum number of 208/240 V 40 amp, grounded AC outlets equal to 5 percent of the total number of parking spaces. The outlets shall be located within the parking area; or
 - b. Panel capacity and conduit for future installation of electrical outlets. The panel capacity and conduit size shall be designed to accommodate the future installation, and allow the simultaneous charging, of a minimum number of 208/240 V 40 amp, grounded AC outlets, that is equal to 5 percent of the total number of parking spaces. The conduit shall terminate within the parking area; or
 - c. Additional service capacity, space for future meters, and conduit for future installation of electrical outlets. The service capacity and conduit size shall be designed to accommodate the future installation, and allow the simultaneous charging, of a minimum number of 208/240 V 40 amp,

grounded AC outlets, that is equal to 5 percent of the total number of parking spaces. The conduit shall terminate within the parking area. When the application of the 5 percent results in a fractional space, round up to the next whole number.

Article 9, Division 5

For Newly Constructed Nonresidential and High-Rise Residential Buildings

99.05.106. Site Development.

99.05.106.5.2. Designated Parking. Provide designated parking, by means of permanent marking or a sign, for any combination of low-emitting, fuel- efficient, and carpool/van pool vehicles as follows:

Table 5.106.5.2

Total Number of Parking Spaces	Number of Required Spaces
0-9	0
10-25	1
26-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 and over	At least 8 percent of total ¹

¹ When the application of this regulation results in the requirement of a fractional space, round up to the next whole number.

99.05.106.5.3.1. Electric Vehicle Supply Wiring. Provide a minimum number of 208/240 V 40 amp, grounded AC outlet(s), that is equal to 5 percent of the total number of parking spaces, rounded up to the next whole number. The outlet(s) shall be located in the parking area.

Article 9, Division 12

Voluntary Measures for Newly Constructed Nonresidential and High-Rise Residential Buildings

99.12.101. Intent. This section shall set forth the Voluntary Measures for Newly Constructed Low-Rise Residential Buildings.

AS.106.S.1. Designated Parking for Fuel-Efficient Vehicles. Provide designated parking, by means of permanent marking or a sign, for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as shown in Table A5.106.5.1.1 or A5.1 06.5.1.2.

Table AS.106.S.1.1
Tier 1

Total Number of Parking Spaces	Number of Required Spaces
0-9	1
10-25	2
26-50	4
51-75	6
76-100	9
101-150	11
151-200	18
201 and over	At least 10 percent of total ¹

¹When the application of the ten percent results in a fraction of a space, round up to the next whole number.

Table AS.106.S.1.2
Tier 2

Total Number of Parking Spaces	Number of Required Spaces
0-9	1
10-25	2
26-50	5
51-75	7
76-100	9
101-150	13
151-200	19
201 and over	At least 12 percent of total ¹

¹ When the application of the 12 percent results in a fraction of a space, round up to the next whole number.

AS.106.S.3.2. Additional Electric Vehicle Supply Wiring. Provide a minimum number of 208/240 V 40 amp, grounded AC outlet(s), that is equal to ten percent, rounded up to the next whole number, of the total number of parking spaces.

AS.106.6. Parking Capacity. Design parking capacity to meet but not exceed minimum local zoning requirements.

AS.106.6.1. Reduce Parking Capacity. With the approval of the Department of City Planning, employ strategies to reduce on-site parking area or number of stalls by 20 percent.

The City of Auburn Hills has been at the forefront in raising awareness about the fueling needs of plug-in electric vehicle (PEV) owners. In July 2011, Auburn Hills was the first municipality in Michigan to adopt a comprehensive Electric Vehicle Infrastructure Ordinance. The City's ordinance encourages—but does not require—developers, builders, homeowners and business owners to make PEV charging stations a regular part of construction.

City of Auburn Hills, Michigan

Amendment to the Zoning Ordinance

Section 1834. Electric Vehicle Infrastructure.

1. Intent

The intent of this section is to facilitate and encourage the use of electric vehicles and to expedite the establishment of a convenient, cost-effective electric vehicle infrastructure that such use necessitates.

2. Definitions

For the purposes of this Section, the following definitions shall apply.:

A. Accessible electric vehicle charging station means an electric vehicle charging station where the battery charging station is located within accessible reach of a barrier-free access aisle and the electric vehicle.

B. Battery charging station means an electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles.

C. Battery electric vehicle means any vehicle that operates exclusively on electrical energy from an offboard source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating.

D. Charging levels means any vehicle that operates exclusively on electrical energy from an offboard source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating.

1. Level-1 is considered slow charging. Voltage including the range from 0 through 120. means the standardized indicators of electrical force, or voltage, at which an electric vehicle's battery is recharged. The terms 1, 2, and 3 are the most common charging levels, and include the following specifications:

2. Level-2 is considered medium charging. Voltage is greater than 120 and includes 240.

3. Level-3 is considered fast or rapid charging. Voltage is greater than 240.

E. Electric vehicle means any vehicle that is licensed and registered for operation on public and private highways, roads, and streets; either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board via a battery for motive purpose. "Electric vehicle" includes: (1) a battery electric vehicle; and (2) a plug-in hybrid electric vehicle.

F. Electric vehicle charging station means a public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle. An electric vehicle charging station equipped with Level-1 or Level-2 charging equipment is permitted outright as an accessory use to any principal use.

G. Electric vehicle charging station – private restricted use means an electric vehicle charging station

that is (1) privately owned and restricted access (e.g., single-family home, executive parking, designated employee parking) or (2) publicly owned and restricted (e.g., fleet parking with no access to the general public).

H. Electric vehicle charging station – public use means an electric vehicle charging station that is (1) publicly owned and publicly available (e.g., Park & Ride parking, public library parking lot, on-street parking) or (2) privately owned and available to visitors of the use (e.g., shopping center parking).

I. Electric vehicle infrastructure means conduit/wiring, structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations and rapid charging stations.

J. Electric vehicle parking space means any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

K. Non-electric vehicle means any motor vehicle that does not meet the definition of electric vehicle.

L. Plug-in hybrid electric vehicle means an electric vehicle that (1) contains an internal combustion engine and also allows power to be delivered to drive wheels by an electric motor; (2) charges its battery primarily by connecting to the grid or other off-board electrical source; (3) may additionally be able to sustain battery charge using an on-board internal-combustion-driven generator; and (4) has the ability to travel powered by electricity.

3. Permitted Locations

A. Level-1 and Level-2 electric vehicle charging stations are permitted in every zoning district, when accessory to the primary permitted use. Such stations located at one-family, multiple-family, and mobile home park dwellings shall be designated as private restricted use only. Installation shall be subject to permit approval administered by the Community Development Department.

B. Level-3 electric vehicle charging stations are permitted in the B-2, T&R, I-1, and I-2 districts, when accessory to the primary permitted use. Installation shall be subject to permit approval administered by the Community Development Department.

C. If the primary use of the parcel is the retail electric charging of vehicles, then the use shall be considered a gasoline service station for zoning purposes. Installation shall be subject to Special Land Use approval and located in zoning districts which permit gasoline service stations.

4. Readiness Recommendations

A. Residential

In order to proactively plan for and accommodate the anticipated future growth in market demand for electric vehicles, it is strongly encouraged, but not required, that all new one-family and multiple family homes with garages be constructed to provide a 220-240-volt / 40 amp outlet on a dedicated circuit and in close proximity to designated vehicle parking to accommodate the potential future hardwire installation of a Level-2 electric vehicle charging station.

B. Non-Residential

In order to proactively plan for and accommodate the anticipated future growth in market demand for electric vehicles, it is strongly encouraged, but not required, that all new and expanded nonresidential development parking areas provide the electrical capacity necessary to accommodate the future hardwire installation of Level-2 electric vehicle charging stations. It is recommended that a typical parking lot (e.g., 1,000 or less parking spaces) have a minimum ratio of 2% of the total parking spaces be prepared for such stations.

It is noted and understood that large-sized parking areas (e.g., Chrysler Group, LLC Headquarters, Great Lakes Crossing Outlets, The Palace of Auburn Hills, Oakland University, etc.) may require less electric vehicle charging stations than recommended above to accommodate the anticipated market demand.

5. General Requirements for Multi-Family Residential and Non-Residential Development

A. Parking

1. An electric vehicle charging station space may be included in the calculation for minimum required parking spaces required in accordance with Section 1804.

2. Public electric vehicle charging stations are reserved for parking and charging electric vehicles only. Electric vehicles may be parked in any space designated for public parking, subject to the restrictions that would apply to any other vehicle that would park in that space.

B. Accessible Spaces

It is strongly encouraged, but not required, that a minimum of one (1) accessible electric vehicle charging station be provided. Accessible electric vehicle charging stations should be located in close proximity to the building or facility entrance and connected to a barrier-free accessible route of travel. It is not necessary to designate the accessible electric vehicle charging station exclusively for the use of disabled persons.

C. Lighting

Site lighting shall be provided where an electric vehicle charging station is installed, unless charging is for daytime purposes only.

D. Equipment Standards and Protection

1. Battery charging station outlets and connector devices shall be no less than 36 inches and no higher than 48 inches from the surface where mounted. Equipment mounted on pedestals, lighting posts, bollards, or other devices shall be designed and located as to not impede pedestrian travel or create trip hazards on sidewalks.

2. Adequate battery charging station protection, such as concrete-filled steel bollards, shall be used. Curbing may be used in lieu of bollards, if the battery charging station is setback a minimum of 24 inches from the face of the curb.

E. Usage Fees

The property owner is not restricted from collecting a service fee for the use of an electric vehicle charging station made available to visitors of the property.

F. Signage

1. Information shall be posted identifying voltage and amperage levels and any time of use, fees, or safety information related to the electric vehicle charging station.

2. Each electric vehicle charging station space shall be posted with signage indicating the space is only for electric vehicle charging purposes. For purposes of this subsection, "charging" means that an electric vehicle is parked at an electric vehicle charging station and is connected to the battery charging station equipment. Restrictions shall be included on the signage, if removal provisions are to be enforced by the property owner pursuant to Chapter 70. Traffic and Vehicles, Article III. Uniform Traffic Code of the Auburn Hills City Code.

G. Maintenance

Electric vehicle charging stations shall be maintained in all respects, including the functioning of the equipment. A phone number or other contact information shall be provided on the equipment for

reporting when it is not functioning or other problems are encountered.

Section 70-63(2.5d) of Chapter 70. Traffic and Vehicles Regulations

Sec. 2.5d. Vehicle removed by police.

(1) A police agency or a governmental agency designated by the police agency may provide for the immediate removal of a vehicle from public or private property to a place of safekeeping at the expense of the registered owner of the vehicle in any of the following circumstances:

(a) If the vehicle is in such a condition that the continued operation of the vehicle upon the highway would constitute an immediate hazard to the public.

(b) If the vehicle is parked or standing upon the highway in such a manner as to create an immediate public hazard or an obstruction of traffic.

(c) If a vehicle is parked in a posted tow-away zone.

(d) If there is reasonable cause to believe that the vehicle or any part of the vehicle is stolen.

(e) If the vehicle must be seized to preserve evidence of a crime, or when there is reasonable cause to believe that the vehicle was used in the commission of a crime.

(f) If removal is necessary in the interest of public safety because of fire, flood, storm, snow, natural or manmade disaster or other emergency.

(g) If the vehicle is hampering the use of private property by the owner or person in charge of that property or is parked in a manner which impedes the movement of another vehicle.

(h) If the vehicle is stopped, standing or parked in a space designated for handicapped parking and is not permitted by law to be stopped, standing or parked in a space designated for handicapped parking.

(i) When a sign provides notice that a parking space is a publicly designated electric vehicle charging station, no person shall park or stand any non-electric vehicle in a designated electric vehicle charging station space. Further, no person shall park or stand an electric vehicle in a publicly designated electric vehicle charging station space when not electrically charging or parked beyond the days and hours designated on the regulatory signs posted. For purposes of this subsection, "charging," means an electric vehicle is parked at an electric vehicle charging station and is connected to the charging station equipment.

Transit, Bicycle and Pedestrian Facilities *Older adults, economically disadvantaged families, and persons with disabilities*

The City of Lenexa provides for Pedestrian Oriented Design Standards in order to encourage people to walk, rather than drive, for short trips. The design standards establish guidelines for sidewalks, crosswalks, and mandatory public spaces. Sidewalks must be connected to all main entrances of buildings. There are also width requirements for sidewalks that service parking lots (presumably in order to accommodate increased pedestrian flow out of the lot). The ordinance requires retail, office, and multi-family dwelling units to provide for public space with amenities such as seating, sculptures, and water features.

City of Lenexa, Kansas
 Chapter 4-1: Zoning
 Article 4-1-C, General Development Standards
 § 4-1-C-7. Pedestrian Oriented Design Standards

A. Purpose.

The intent of these standards is to enhance the pedestrian experience and encourage more people to consider walking for short trips. These standards are specifically intended to:

(1) Provide for pedestrian connections between private buildings, and to the public sidewalk and trail system, and

(2) Provide for pedestrian-scale public spaces and amenities at the entrance to buildings. It is intended that these standards apply to new development, but that these concepts be applied to redevelopment, expansion projects or previously approved plans whenever possible. Due to the unique design characteristics of the CC, Planned City Center District, adherence to the specific guidelines of this Section may be waived by the Planning Commission.

B. Sidewalks within Development Sites.

Each main entrance to a principal building shall be connected by a sidewalk to the main entrance of other principal buildings on the site, and to the adjacent public sidewalk network.

(1) Location and Width: Connections should be a reasonably direct path, and sized based on the number of parking spaces serving the building entrance(s), off-site pedestrian draw based on use, alternate or multiple routes, and other measures of anticipated usage. Where feasible, these sidewalks can be routed through landscaped islands in parking lots to serve both the public sidewalk and parking areas. As a general guideline, sidewalks should be sized as follows:

No. of Parking Spaces Served	Minimum Width of Sidewalk
Under 50	5 feet
50-200	6 feet
201-500	8 feet
Over 500	10 feet

(2) Provision of Crosswalks: Crosswalks shall be provided where sidewalks cross streets and drives. Crosswalks adjacent to building entrances that service over 50 parking spaces shall be of a contrasting pavement treatment. Other crosswalks may be painted, preferably with longitudinal bars.

C. Provision of Pedestrian-Scale Public Space.

Every principal retail, office, or single entrance multifamily building shall provide a public space, such as a plaza, courtyard, or garden within the vicinity of the main pedestrian entrance(s) to the building.

(1) Size: The minimum amount of all public spaces within a site shall be 10 square feet for each parking stall provided, or 200 square feet, whichever is greater. The public space will be defined by the combination of paved areas, associated plantings, and architectural features.

(2) Amenities: Each public space shall include seating in the form of benches or ledges and accent and seasonal plantings. In addition, the public space should include at least one of the following:

- (a) A fountain, pond, or other water feature.
- (b) Upgraded textured paving, such as brick or stone.
- (c) Sculpture or other artwork.
- (d) A portico, trellis, or other architectural shade feature covering part of the seating area.

(3) Design: On larger or multiple building sites, public space may also be located at key points along major pedestrian paths, or aggregated at a central location. In retail locations, it is strongly encouraged that public spaces include areas specifically designed for seasonal outdoor sales and/or restaurant seating, and that specific layout for these activities be reflected on the plans.

The purpose of the age-oriented community in the Town of Yorktown is to permit the establishment of a specialized residential development for older persons within residential areas. Specialized residential development is permitted via certain accessory uses, necessary to the mode of living and age group of residents.

Town of Yorktown, Westchester County, New York

Chapter 300: Zoning

Article XIII, Age-Oriented Community

§ 300-123. Background and purposes.

A. The Town of Yorktown, New York, has provided in its Development Plan, as amended to June 1961, and as implemented by its this chapter, as amended to July 1964, ample lands for sale to and use and occupancy by persons of all ages, financial circumstances and family conditions, as well as sufficient and suitable lands for nonresidential purposes and for the population contemplated in said Development Plan for years still to come. The establishment of a special classification for the age-oriented community will leave ample lands available in the Town for other types of housing accommodations for those not yet qualifying under this classification. Without even considering the land zoned in such manner as to be available for general residence use in neighboring Towns within this county, the immigration to the Town of Yorktown of citizens of more modest means or those desiring space to raise their families will in no way be detrimentally affected.

B. The purpose of the age-oriented community is to permit the establishment, within residential areas, of a specialized residential development for older persons, in which development certain accessory uses requisite to the mode of living and age of, or desirable and convenient for use by, a group of residents having the characteristics of those qualified by definition to inhabit the structures constituting such specialized residential development are permitted. There is an increasing demand by persons of or nearing retirement age for dwelling accommodations in a developed, separate residential section in which a greater degree of tranquility is assured through the zoning classifications, which will be inhabited by persons similarly circumstanced and which have been designed and developed for such age group. It is further provided that such age-oriented community be considered and made part of a larger, overall residential neighborhood. Not only is it considered the duty of a municipal government to provide space within its boundaries for this group of citizens which, as the science of geriatrics advances, grows larger daily, but it is to the benefit of the Town and its other residents to do so.

C. Such persons form a stable part of the community. In contrast to young families which are often compelled to move as their families grow or jobs change, retired persons set their roots fast in the community, usually for the rest of their span of life. They have no need for schools and related services, nor do they require, in the aggregate, as many municipal services and facilities. The taxes paid by them, directly or indirectly, help to stabilize the tax base required to provide schools and other public services in those areas and for those land uses which require them. Usually having a greater-than-average purchasing power, they bolster the local economy and aid in the expansion and development of local business districts. The manner in which they use the physical premises where they reside is less apt to disturb the peace and tranquility of the neighborhood than the use of property by younger persons with families, with greater outdoor activity, greater social activity taking place on the premises and greater traffic at all times on and onto the premises.

D. Moreover, it has been determined that a minimum amount of retail trade and services, professional and other, may be carried on in such specialized development for the convenience of its inhabitants, some of whom will, by reason of age or reduced physical fitness, be unable to travel beyond the development itself without difficulty and some of whom will have no means of individual transportation. Such accessory uses and others permitted hereby will, it is likely, diminish the amount of vehicular movement within and to and from such community, thereby promoting its tranquility and the public health, safety and general welfare. The more stringent requirement of site approval than that required elsewhere and the age and composition of the residents therein give ample assurance that such accessory uses in such specialized residential development community will have no adverse effect upon neighboring properties or land uses and warrant their inclusion as permitted accessory uses and sufficiently distinguish such community from other residentially zoned districts.

§ 300-124. Permitted uses. [*Amended 7-5-1994 by L.L. No. 21-1994; 7-17-1986 by L.L. No. 22-1986*] In any specialized age-oriented community district, no building(s) or premises shall be used, and no building(s) or part of a building or structure shall be erected, constructed, enlarged, altered, arranged or designed to be used, in whole or in part, except for one or more of the following uses, and further, provided that a site plan of development is approved by the Planning Board, after public notice and hearing, as being in conformity with the provisions of this article:

- A. One-family dwellings.
- B. Two-family dwellings.
- C. Row houses and multifamily dwellings.
- D. Accessory uses, structures or facilities for:
 - (1) Health care.
 - (2) Indoor and outdoor recreation.
 - (3) Religious services.
 - (4) Living and dining areas for common use of residents.
 - (5) Central kitchens for food served in dining areas or distribution to individual dwelling units, but not to be used by residents for preparation of individual meals.
 - (6) Medical-dental service, provided that only one assistant shall be employed in each separate office.
 - (7) Small retail shops for the sale of goods or rendering of personal services only to residents of the project.

- (8) Living quarters for medical doctor, nurse, custodian or caretaker.
- (9) Temporary accommodations for guests of residents of a project, provided that occupancy by any guests shall be limited to not more than 30 days in any ninety-day period.
- (10) Off-street parking areas and garages for cars.
- (11) Garages for storage of project-owned or community-owned maintenance vehicles and equipment.
- (12) Utility shops for upkeep and repair of buildings and structures within the project.
- (13) Central heating or sanitation plants.
- (14) Signs and outdoor lighting standards.
- (15) Central radio or television receiving antennas.
- (16) Surface water impounding basins.

E. All dwelling units and accessory units shall be occupied or used solely by:

- (1) Single individuals 55 years of age or older;
- (2) Married couples, at least one of which is 55 years of age or older; or
- (3) Guests of such persons listed in Subsection E(1) and (2) as indicated in Subsection D(9).

F. The prohibition listed in this section shall not preclude the occupying of these premises by persons under 55 years of age, provided that the presence of such persons is required for the physical care or support of a persons listed in Subsection E(1) or (2) (namely, a nurse, practical nurse, resident companion or inservant).

G. All of said persons listed in this section shall be residents of the age-oriented community.

§ 300-125. Residence density standards.

A. The maximum number of dwelling units within a site shall be computed in accordance with the following site area per type of dwelling unit, averaged over the entire site:

Type of Unit	Allotted Site Area
One-family dwelling	10,000
Two-family dwelling	14,000
Row houses or multiple dwellings:	
One-room living unit	2,500
Two-room living unit	3,500
Three-room living unit	5,500
Four-room living unit	7,000
Five-room living unit	10,000
Row houses or multiple dwellings when the total development contains no more than three-room living units (two-bedroom apartments)	3,630

B. In determining the number of rooms in each living unit for the purpose of computing the required site area for each said living unit, any floor space completely enclosed, except for doorways, by walls having a height from the floor of four feet or more shall be counted as a separate room. However, a bathroom, toilet room, vestibule or similar small passage or storage area or a cooking space having an area less than 75 square feet shall not be counted as a separate room.

§ 300-126. Site standards.

Each site used or to be used for a specialized age-oriented community shall:

- A. Have a total frontage of not less than 300 feet on a state or county highway or a Town highway, if approved by the Planning Board as adequate for the estimated traffic requirements of the particular project. *[Amended 7-5-1994 by L.L. No. 21-1994]*
- B. Have a total area of not less than 15 acres. Land separated by a road, easement, right-of-way or publicly owned lands, with a width of not more than 60 feet, may be counted as part of a site in computing said minimum area. Land within any existing or proposed public road shall not be counted as part of the site area.
- C. Be held and maintained in single or common ownership, except that any section thereof containing a minimum of 15 acres may be held and maintained in single or common ownership different from that of any or all other sections containing such minimum of 15 acres.

§ 300-127. Building standards.

- A. The maximum length of buildings shall be in accordance with the following:
 - (1) Ten percent of all buildings may not exceed 160 feet in length.
 - (2) Forty percent of all buildings may not exceed 140 feet in length.
 - (3) Forty percent of all buildings may not exceed 100 feet in length.
 - (4) Ten percent of all buildings may not exceed 80 feet in length.
- B. The maximum height of any building shall not exceed 35 feet.
- C. No row of row houses shall consist of more than six dwellings.
- D. The minimum usable floor area of each living unit in a one- or two-family dwelling shall not be less than 750 square feet and in a row house or multiple dwelling, not less than 500 square feet.
- E. All accessory buildings or structures shall be appropriate in location, nature, number and size to the location, nature, number and size of residence buildings within the site or adjoining sites. Small retail and personal service shops, as permitted, may be located in one or more multiple-dwelling buildings, provided that the aggregate amount of floor space of all such shops upon a site shall not exceed a sum equal to 1,000 square feet for each five acres of land within the site. For each proposed dwelling unit, there shall be a minimum of 40 square feet of floor space constructed for accessory uses, as set forth in § 300-124D. Of the required minimum accessory floor space, not more than 1/2 of such space may be composed of private garage space, and such required minimum accessory floor space may be reduced by a sum equal to 1/3 of the area of the outdoor accessory recreational facilities provided.
- F. All buildings shall conform to the following minimum setbacks:
 - (1) From any main or collector street: 50 feet.
 - (2) From any interior or local street: 40 feet.
 - (3) From any driveway, parking area, easements for public utilities (excluding service connections) and rights-of-way (except such as are used solely for pedestrian travel): 20 feet.
 - (4) From any property line which is any R1 District boundary: 100 feet.
 - (5) From any other property line: 50 feet.
- G. All buildings shall conform to the following minimum distance between buildings:
 - (1) Between two adjacent buildings, both 20 feet or less in height: 20 feet plus 1/2 foot for each foot that the sum of the horizontal dimensions of their opposite wall faces exceeds 50 feet.

(2) Between two adjacent buildings, one of which is more than 20 feet in height: 30 feet plus 1/4 foot for each foot that the sum of the horizontal dimensions of their opposite wall faces exceeds 50 feet.

(3) Between two adjacent buildings, both more than 20 feet in height: 20 feet plus 1/4 foot for each foot that the sum of the horizontal dimensions of their opposite wall faces exceeds 50 feet. Opposite wall faces shall be deemed to be that part of a wall which faces toward a wall of another building and in which the planes of such walls are either parallel or, if extended, would make an angle of less than 80°. Where wall faces are at such different elevations that the wall face of one building, when projected horizontally, covers 1/2 or less of the opposite wall face, the Planning Board may permit the distances between buildings to be reduced to 75% of the required minimum. [*Amended 7-5-1994 by L.L. No. 21-1994*]

H. Not less than 10% of the aggregate floor area of all residence buildings proposed to be erected upon each site, as defined herein, shall be in one-story buildings, and not less than 1/3 of all such one-story buildings shall be wholly detached one- or two-family dwellings.

I. Maximum building coverage of all buildings on any site shall not exceed 20%.

§ 300-128. Provision of open spaces on site plan.

A. Usable open spaces for recreational or other outdoor living uses, appropriate in location, nature and size to the type of residential development and the prospective density thereof, and having characteristics which made such open spaces usable for the designated purposes shall be provided and designated on the site plan. For each row house or multiple dwelling, such outdoor space or spaces shall be located generally adjacent thereto and shall, in their aggregate, have a minimum area of 300 square feet per living unit. For each one-family or two-family dwelling, such outdoor space or spaces shall be located directly adjacent to each dwelling and shall have a minimum area of 1,000 square feet per living unit and shall be for the exclusive use of the occupants of such living unit.

B. In addition to required adjacent open spaces, there shall be provided elsewhere within the site other recreation or open space which in its aggregate shall not be less than 25% of the total area of the site. In computing such nonadjacent recreation or open space, credit may be given for the area of improved outdoor recreation facilities shown on the site plan; provided, however, that no more than 2/3 of any such recreation space devoted to a single recreation use shall be included in the computation of such minimum required open space.

§ 300-129. Open spaces not designated for building purposes.

All open space on a site not designated on the site plan for present or future building purposes shall be deemed to be required open space on such site and shall not thereafter be built on or encroached on in any manner, except as hereinafter provided.

§ 300-130. Location of buildings, roads, driveways and site improvements.

The location of buildings, roads, driveways, parking areas, utility lines and other site improvements shall be laid out in such manner as to cause the least disturbance to existing natural growth and the least change to existing topography and slopes.

§ 300-131. Prominent natural features.

All prominent existing natural features, such as large rock outcrops, large trees, tree groves, ponds, streams, glens and wildlife and plant conservation areas, shall be preserved, maintained or enhanced wherever possible. Such natural features shall be considered to be a desired asset and integral part of the site.

§ 300-132. Approved natural screening areas detailed.

Where required for the protection of adjacent properties and to safeguard the residential character of the proposed development or adjoining residential uses, or both, approved natural screening areas shall be shown in complete detail and shall be regarded as an integral part of the site.

§ 300-133. Landscape planting.

A. Landscape planting shall be shown for the areas around and between all buildings, around the perimeter of and within parking areas and along streets and driveways. Pedestrian site improvements, such as sidewalks, paths, benches and statuary, shall be provided for the use and enjoyment of the residents.

B. The maximum slope of any sidewalk shall not exceed 5%. Where steps are used, there shall not be more than 10 steps in a single run. In all cases where there are more than four steps in a run, approved-type handrails shall be provided on both sides. Medium-height sidewalk lighting standards shall be provided along all sidewalks at intervals of not less than 75 feet, unless adequately illuminated by streetlighting or other light sources.

§ 300-134. Construction standards.

Any proposed public road shall be laid out and constructed in accordance with the standards and procedures of Chapter 195, Land Development, applicable to road layout and the minimum road specifications, as amended, and shall conform to the adopted Town Development Plan, where applicable. *Editor's Note: Said Plan is on file in the Town offices.* A notation shall be placed on the site plan indicating which roads, if any, are to be offered for public dedication. The Town, as part of the site plan, may require any road or vehicular way shown on the plan to remain and continue in private ownership and maintenance, and provided that a notation to this effect covering all such roads and ways is placed upon the site plan.

§ 300-135. Private accessways, parking areas and paved surfaces.

All private accessways, parking areas and any other paved surfaces for use by motor vehicles shall be constructed in accordance with the minimum driveway and parking area specifications for site and parking plans, as established by this chapter.

§ 300-136. Off-street parking for multiple dwellings. [*Amended 7-5-1994 by L.L. No. 21-1994*]

Provisions shall be made for off-street parking in the ratio of 1 1/2 spaces for each dwelling unit contained in a row house or multiple dwelling. No parking shall be developed, provided for or maintained within 10 feet of any lot line or public or private road. Such parking space shall be so located that maximum horizontal distance for pedestrian travel from the garage or open-air parking area to the nearest entrances of the residential structure involved, or to a paved walkway leading to such entrance, shall not exceed 100 feet. The Planning Board, upon a finding that, under the conditions

presented to it, the requirement of such number of parking spaces is excessive for multiple dwellings proposed, may waive the requirement of actual construction of a number of such required parking spaces, provided that in no case shall the number of parking spaces actually provided and maintained be less than one parking space for each dwelling unit and that appropriate space be reserved and set aside for the balance of the parking spaces required to be provided as set forth above.

§ 300-137. Off-street parking for one- and two-family dwellings. [*Amended 7-5-1994 by L.L. No. 21-1994*] Parking spaces in the ratio of two spaces to each dwelling unit shall be provided, developed and maintained for each one- and two-family dwelling unit; provided, however, that where parking spaces are provided in a garage or open-air parking area for common use of residents of more than one such one- or two-family dwelling, such garage or open-air parking area shall be so located that the maximum horizontal distance for pedestrian travel therefrom to the farthest of the residential structures to which it pertains shall not exceed 200 feet. Upon a finding that, under the conditions presented to it, the requirement of such number of parking spaces when provided in a garage or open-air parking area for common use of residents, as aforesaid, is excessive for the one- and two-family dwellings proposed, the Planning Board may waive the requirement of actual construction of a number of such spaces, provided that in no case shall the number of parking spaces actually provided and maintained be less than one parking space for each dwelling unit contained in such one- and two-family residences and that appropriate space be reserved and set aside for the balance of the parking spaces required to be provided as set forth above.

§ 300-138. Off-street parking for accessory uses and facilities. [*Amended 7-5-1994 by L.L. No. 21-1994*] Parking spaces in the ratio of 1/2 space to each dwelling unit proposed for the site shall be provided, developed and maintained for the accessory uses set forth in § 300-124D and for the accommodation of automobiles of maintenance and other employees of the project or community. Such parking spaces shall be located adjacent to or in reasonable proximity of the uses and structures which they are intended to serve. Upon a finding that, under the conditions presented to it, the requirement of such number of parking spaces, if provided, would be excessive at this time, the Planning Board may waive the actual construction of a number of such spaces, provided that in no case shall the number of spaces actually provided and maintained be less than 1/4 space to each facility proposed and that appropriate space be reserved and set aside for the balance of the parking spaces required to be provided as set forth above.

§ 300-139. Parking site requirements. [*Amended 7-5-1994 by L.L. No. 21-1994*] Off-street parking sites shall conform to the requirements of §§ 300-182, 300-183 and 300-185 of this chapter and to such reasonable conditions as may be imposed by the Planning Board with respect to landscaping, turnarounds and grades thereof. The locations of access drives, driveways and parking areas and their relationship to adjacent streets and to buildings shall be such as to eliminate hazardous conditions and promote the safety of vehicular and pedestrian travel within the site and between the site and abutting streets. Such features shall be shown in detail on the site plan.

§ 300-140. Waiver of requirements. [*Amended 7-5-1994 by L.L. No. 21-1994*] In any case in which the Planning Board has waived actual construction of a portion of required parking spaces, after field investigation and ascertainment of the adequacy of such reduced number of parking spaces under

conditions of actual use, the Planning Board may, by resolution, require all or part of such reserved space to be completed for parking purposes.

§ 300-141. Water and sewer service.

All buildings shall be served by a common water supply and a common sanitary sewer system.

§ 300-142. Refuse disposal containers; collection.

Approved containers or receptacles for refuse disposal must be provided for all dwelling units. Daily collection of refuse from all dwelling units shall be provided by the site management, and said refuse shall be placed in central collection area(s) which shall meet applicable standards of the Westchester County Health Department, plus standards as may be prescribed by the Town Engineer.

§ 300-143. Sign specifications.

One sign per street frontage, not exceeding six square feet in area, shall be permitted. Within the site, directional signs and identification signs shall be only such as may be permitted by the Planning Board, which shall specify the number, size and type of such signs, the legend thereon and the style of such signs and legends, upon considerations of necessity and appropriateness to the area and structures.

§ 300-144. Site approval application; site plan information. [*Amended 7-5-1994 by L.L. No. 21-1994*]

The owner shall file with the Planning Board an application in quadruplicate for site approval, which said application shall be accompanied by the proposed site plan on which shall be shown the following information:

- A. The site or tract upon which the proposed retirement village development is to be located, with boundaries, courses and distances and total land area and with contours shown at intervals not greater than five feet.
- B. The relation of such site or tract to existing abutting streets or highways, rights-of-way, general easements and to those within 500 feet thereof.
- C. Land uses of adjoining lands within 500 feet from each boundary of the proposed site.
- D. The areas within the site upon which structures are proposed to be located, the height and spacing of buildings, including any existing buildings or structures to be retained, open spaces and their landscaping, off-street open and enclosed parking areas, general utility or drainage easements, existing trees having a diameter of eight inches or more and the location of groups of trees containing five or more trees of such diameter and all other natural physical features existing or intended to be placed therein, including those set forth in §300-128 through §300-133 above.
- E. Such other information relative to the proposed plan as may be required by the Town Board or Planning Board in its review of said plan.

§ 300-145. Improvement plan and profile.

Such site plans shall be accompanied by a separate improvement plan and profile showing construction details and grades of all proposed roads, private accessways, parking areas and general utility and drainage lines within the proposed site. All such proposed roads, private accessways, parking areas and general utility and drainage lines shall be constructed in accordance with applicable Town standards.

§ 300-146. Referral to and action by Planning Board. [*Amended 7-5-1994 by L.L. No. 21-1994*]

A. Within 10 days after the application and proposed site plan shall have been filed, the Planning Board shall refer such application to the Advisory Board on Architecture and Community Appearance (ABACA) of the Town of Yorktown for review and report. ABACA shall review the proposed site plan with respect to the items and time period set forth in the ordinance establishing such Board and shall transmit to the Planning Board a copy of any report thereon for the Planning Board's consideration as part of its review. The Planning Board shall study the application and all accompanying information and consult with other agencies of government as appropriate in the case to determine the general acceptability of the proposed site plan. In the course of such preliminary considerations, the Planning Board may request, and the applicant shall supply, additional material needed to make specific determinations. Following such study, the Planning Board or its staff shall hold a conference or conferences with the applicant to discuss desirable changes in the first or succeeding drafts of the proposed site plan.

B. Thereafter, the Planning Board shall give at least 10 days' notice of public hearing upon said proposed site plan and upon the proposed changes to the Official Map of the Town. Where approval of any department, board, bureau or officer of the County of Westchester or the State of New York is required for any aspect of the proposed development or by reason of any part of the design thereof or any provision with respect to streets, highways, drainways or sanitation, then, and in that event, prior to final review and action by the Board on the proposed site plan, approval by such department, board, bureau or officer above referred to shall be endorsed upon a copy of such site plan or otherwise satisfactorily evidenced or, in the alternative, conditional approval may be given.

§ 300-147. Supporting agreements and covenants. [*Amended 7-5-1994 by L.L. No. 21-1994*] The Planning Board shall, as a condition to site approval, require that the applicant execute and deliver the following supporting agreements and covenants:

A. A declaration of covenants running with the land and binding upon the heirs, administrators, executors, successors and assigns of the applicant which shall be included in every conveyance from the applicant, whether by deed, lease or otherwise, in recordable form, satisfactory as to form and content to the Planning Board and Town Board, covenanting that the property shall be held, sold, conveyed, transferred, occupied and improved only and strictly in accordance with the and provisions of a certain ordinance enacted by the Town Board of the Town of Yorktown on the 20th day of April 1965, which ordinance created a zoning district known as "RSP-1," and any amendments or modifications thereto, and further covenanting that any owner or owners of the property shall accept title thereto subject to all covenants, restrictions, easements and conditions set forth in said ordinance, and that if any owner or person claiming title under or through said owner shall at any time violate or attempt to violate or shall omit to perform or observe any of the covenants, restrictions, easements and conditions of the declaration, it shall be lawful and proper for the Town of Yorktown, the developer or any other owner of the property which is subject to the same covenants, restrictions, easements and conditions in which the breach or default is made to institute and prosecute appropriate proceedings at law or in equity concerning the wrong done or attempted. Nothing in this section or in any other provision of this Zoning Ordinance is intended to, or shall be construed to, give the Planning Board the authority or the power to apply or remove the RSP-1 or any other zoning designation or classification to any area, district, zone, lot or parcel of land within the Town of Yorktown. [*Amended 6-15-2004 by L.L. No. 17-2004*]

B. A declaration of covenants running with the land and binding upon the heirs, administrators, executors, successors and assigns of the applicant, in favor of the Town, satisfactory as to form and content to the Planning Board and Town Board, covenanting that all open space upon the site required by this chapter shall permanently remain open space and shall not be developed in any manner or degree or by any means, except as said covenant may be released or modified by the Town.

C. An easement running with the land conferring upon the Town the right and privilege to enter upon the site for the purpose of constructing, maintaining or repairing roads, sewerage or drainage lines, water, gas and electric lines and other public utilities or to do any acts reasonably required in the public interest to preserve and protect the public health, safety or general welfare.

D. An easement running with the land in favor of the Town over all lands adjacent to and within 100 feet of existing major streams, for the purpose of access thereon and such stream control, clearance or other work as may be necessary in connection therewith and the construction of pedestrian ways or general utility lines over the same as may be necessary or expedient for the use of said ways or lines. An easement, as may be required by the Town, for future drainage or utility lines within or across the property and necessary for the future connection with or between existing public lines.

E. A performance bond sufficient in amount as determined by the Planning Board to cover the full cost of installation of all roads and improvements, private accessways, parking areas, sidewalks, on-site water mains or on-site sanitary sewers and on-site storm sewers, all in accordance with the standards, specifications and procedures provided for herein, as estimated by appropriate Town departments and approved by the Town Board. In the event that the owner shall be authorized to develop the project in sections, approval may be granted upon the installation of the required improvements in the section or sections designated as the first to be constructed or upon filing of a performance bond to cover the cost of the above-named improvements, but in any other section, the owner shall not be permitted to commence construction of buildings until the required work has been completed in such other section or a sufficient performance bond has been furnished to cover the cost of such improvements. Such performance bond shall be issued either by a bonding or surety company approved by the Board or by the owner with security acceptable to the Town Board as to form, sufficiency and manner of execution. Such performance bond shall run for a term to be fixed by the Town Board, but in no case for a longer term than three years; provided, however, that the term of such performance bond may be extended by the Town Board with the consent of the parties thereto.

§ 300-148. Matters considered in reviewing proposed site plan.

[Amended 7-5-1994 by L.L. No. 21-1994]

A. In reviewing and passing upon the proposed site plan, the Planning Board shall take into consideration its conformity with the minimum requirements hereinabove set forth; the purposes for which such district was created; the arrangement of the buildings and uses with respect to compatibility, light, air and other amenities; the compatibility of the proposed buildings, structures, recreational areas, utility areas, off-street parking facilities and accessory uses to adjoining properties and land uses; the topography and physical character and existing natural growth of the land in relation to the use intended to be made thereof; the character of the land in relation to its suitability

for building purposes without danger to health or peril from fire, flood or other menace; and the provision of fences, walls and landscaping, all in the furtherance of the purposes of this chapter.

B. In reviewing and passing upon the proposed site plan, the Planning Board may vary the provisions of § 300-127A through D and F through H upon findings by the Board that the site plan submitted, including the architectural treatment of the building, building location, parking layout, provisions for developed usable open space, parking egress and ingress and appurtenant facilities as shown on the plan, will achieve a development that is consistent with the Town Development Plan and harmonious with the existing and proposed development in the surrounding area.

§ 300-149. Modifications. [*Amended 7-5-1994 by L.L. No. 21-1994*] In approving a site plan, the Planning Board may require such modifications as may be necessary to conform to the conditions and standards set forth above and may attach such conditions as may be reasonably required to assure conformity to the purposes hereof and the standards herein set forth. The site plan, as finally approved, shall be endorsed as approved by the Planning Board Chairman, and a copy, so endorsed and bearing or accompanied by a statement of all conditions attached thereto, shall be filed with the Building Inspector. Another copy, so endorsed, shall be filed with the Town Clerk; a third copy, so endorsed, shall be filed in the office of the Clerk of Westchester County; and a fourth copy, so endorsed, shall be delivered to the applicant. Such copy so filed shall be notice of all matters set forth thereon.

§ 300-150. Permit for special residential development.

A. A permit for a specialized residential development granted under the provisions hereof shall automatically lapse if substantial construction, in accordance with the plans for which such permit was granted, has not been completed within two years from the date of granting such permit or, if appeals to the Board of Appeals or to a court shall be instituted to review the grant of such permit or any order of the Board of Appeals with relation thereto, from the date of entry of the final order in such proceedings, including all appeals.

B. The applicant may apply for a permit or permits relating to one or more buildings at any time; provided, however, that a permit for the construction of at least one main building shall be applied for in each year until all of the buildings contemplated to be erected, as shown on the approved site plan, shall have been so constructed. The Board of Appeals shall have the power to extend the time for application for a building permit, as above set forth, or for completion of a structure, in the case of practical difficulty or undue hardship.

§ 300-151. Plans subject to amendments.

Any site plan may be subsequently amended in accordance with the same procedure and requirements specified for the initial approval, either with respect to the site originally proposed and presented for approval or with respect to contiguous lands similarly classified, at the time of such amendment, regardless of the size of such additional tract, provided that, upon approval of such amended plan respecting such additional land, it shall be construed as part of the original site and subject to all requirements thereof. An application for an insubstantial change or modification of a plan presented

for approval or for a ruling or clarification relating to an incidental matter may be determined by the Town Board at a regular meeting thereof.

The City Planning Commission has been working to create mixed-use neighborhoods that are pedestrian friendly, bicycle friendly, and transit-oriented to make Cleveland a more competitive place to live, work, and visit. A major portion of that work has been amending the City's zoning code to promote sustainable development ("smart zoning"). The Pedestrian Retail Overlay District has been created to preserve the pedestrian-oriented character of the unique shopping districts, accomplished through regulatory tools addressing building placement, use, and reduced parking requirements.

City of Cleveland, Ohio

Title VII - Zoning Code

Chapter 343: Business Districts

§ 343.23 Pedestrian Retail Overlay (PRO) District

(a) Purpose. The Pedestrian Retail Overlay (PRO) District is established to maintain the economic viability of older neighborhood shopping districts by preserving the pedestrian-oriented character of those districts and to protect public safety by minimizing conflicts between vehicles and pedestrians in neighborhood shopping districts.

(b) Mapping. The PRO District is an overlay district which shall be mapped only in an area where at least seventy-five percent (75%) of the underlying zoning is either Local Retail or General Retail. In every PRO District, any street frontage to be considered a "Pedestrian Retail Street Frontage," as defined in this section, shall be marked on the Zoning Map, with either one (1) or both sides of a street designated as such.

(c) Applicability. The PRO District regulations shall apply only in those portions of a PRO District in which the underlying zoning is either Local Retail or General Retail. In the relevant portions of a PRO District, the regulations of the underlying zoning district shall govern except where in conflict with the regulations of the PRO District, in which case the regulations of the PRO District shall govern.

(d) Definitions. As used in this section, the following terms shall be defined as stated below:

(1) "Pedestrian Retail Street Frontage" means that side or sides of a public street frontage where pedestrian-oriented retail shopping activity exists or is expected to exist and such street frontage is specifically designated on the Zoning Map.

(2) "Pedestrian Retail Space" means that portion of a building or property located at or closest to the level of the public sidewalk and within forty (40) feet of a Pedestrian Retail Street Frontage.

(3) "Open Sales Lot" means a property or portion of a property used for the sale of merchandise stored in outdoor, unenclosed locations.

(4) "Institutional Use" means, for purposes of this section, a school, day care center, place of worship, place of assembly, hospital, nursing home, residential treatment facility, or similar use.

(5) "Non-Retail Office" means an office use whose primary activity does not involve service to customers or clients on the premises.

(e) Use Regulations. All uses permitted in the underlying retail zoning district shall be permitted in the PRO District, except that the use of Pedestrian Retail Spaces, as defined in this section, shall be further limited as follows.

(1) Prohibited Uses. For Pedestrian Retail Spaces, as defined in this section, the following uses shall be prohibited:

- A. Open sales lots, as defined in this section;
- B. Filling and service stations;
- C. Car washes; and
- D. Any business served by a drive-through lane providing access to windows or other facilities at which food or merchandise can be ordered or picked up, or business can be transacted by a person in a motor vehicle.

(2) Conditional Uses. For Pedestrian Retail Spaces, as defined in this section, the following uses shall be permitted as Conditional Uses, as approved by the City Planning Commission under the approval criteria provided in this section:

- A. Off-street parking or loading areas;
- B. Driveways extending across a public sidewalk;
- C. Residential, institutional and non-retail office uses, as defined herein, except that ground-floor entrances and lobbies serving such uses located on upper floors or in a basement level shall be permitted without the requirement for conditional approval;
- D. Any building-enclosed use that does not have a public pedestrian entrance from the Pedestrian Retail Street Frontage;
- E. Any use with more than forty (40) feet of frontage along the Pedestrian Retail Street Frontage; and
- F. A building with an interior side yard more than four (4) feet in width and located within forty (40) feet of a Pedestrian Retail Frontage.

(f) Criteria for Conditional Uses. The City Planning Commission shall approve a Conditional Use application if it determines that the application meets the following criteria:

(1) In the case of a proposed residential, institutional or non-retail office use, one (1) or more of the following conditions apply:

- A. The subject building space was designed specifically for the type of use proposed and, as such, occupancy by an allowed use is an unreasonable expectation;
- B. Denial of the application for occupancy by a conditional use would result in a long-term vacancy of the subject property, as demonstrated by the applicant;
- C. It has been determined that the proposed use is needed in the immediate area and that suitable alternative locations are unavailable.

(2) In the case of a proposed off street parking or loading area or driveway, one (1) or both of the following conditions apply.

- A. The size, shape or layout of the subject property does not permit placement of the parking, loading or driveway in a more suitable location.
- B. It has been demonstrated by the applicant that placement of the parking, loading or driveway in an allowed location would jeopardize the continued occupancy of the subject property by uses suited to the PRO District.

(3) In the case of a building enclosed use that does not have an entrance from the Pedestrian Retail Street Frontage, one (1) or both of the following conditions apply:

A. The proposed use will occupy an existing building that lacks such pedestrian entrance, and the addition of a conforming pedestrian entrance is made infeasible by the configuration of the interior space or other factors related to the design and placement of the building.

B. Placement of the pedestrian entrance in a location other than on the Pedestrian Retail Street Frontage will result in more suitable pedestrian access.

(4) In the case of a proposed use with more than forty (40) feet of frontage along the Pedestrian Retail Street Frontage, the subject space was designed for use at such size and the proposed use, in the determination of the City Planning Commission, will not have adverse impacts on the functioning of nearby pedestrian-oriented retail uses.

(5) In the case of an interior side yard more than four (4) feet in width and located within forty (40) feet of a Pedestrian Retail Frontage, the subject building will be occupied by residential units which require the greater side yard area to allow for desirable levels of light and air.

(g) Maximum Setbacks. Notwithstanding the provisions of the underlying zoning district, properties in PRO Districts shall conform to the following regulations with respect to maximum setbacks.

(1) Front Street Yard. No main building on a lot abutting a Pedestrian Retail Street Frontage shall be set back more than five (5) feet from the Pedestrian Retail Street Frontage unless the City Planning Commission has approved establishment of a surface parking lot in such location as a Conditional Use. Such building features as entrances and display windows may be set back up to an additional five (5) feet as long as these features occupy no more than fifty percent (50%) of the building's total frontage. These setback regulations shall not apply to portions of buildings above the first-story level.

(2) Interior Side Yard. No portion of an interior side yard located within forty (40) feet of a Pedestrian Retail Street Frontage shall exceed four (4) feet in width on the ground floor level, unless the City Planning Commission has approved a driveway or a residential side yard in such location as a Conditional Use.

(3) Exceptions for Outdoor Cafes. A building may be set back a maximum of fifteen (15) feet from the Pedestrian Retail Street Frontage in order to accommodate a permanent outdoor café. If use of such café is discontinued for a period of two (2) years or more, the setback area shall be landscaped or otherwise improved in accordance with a plan approved by the City Planning Commission.

(h) Window Areas. For any nonresidential building or storefront facing a Pedestrian Retail Street Frontage, not less than sixty percent (60%) of the front facade between two and one-half (2-1/2) and seven and one-half (7-1/2) feet in height shall be composed of transparent windows or doors. In addition, not more than twenty-five percent (25%) of such window or door area on a building or storefront shall be covered with permanent signs.

(i) Parking. In recognition of the expected greater use of public transit, bicycles and walking by customers and employees traveling to PRO Districts, the minimum number of parking spaces otherwise required by the Zoning Code shall be reduced by thirty-three percent (33%) for retail business uses in the districts. The Board of Zoning Appeals may further reduce parking requirements where it has been demonstrated that additional parking is available in common or shared parking facilities or in on-street

parking areas located within a reasonable walking distance of the use, given the nature of the use and the district. The Board shall also consider factors as the number of bicycle racks available in proximity to a use. In making its determination, the Board shall be guided by an up-to-date analysis of parking supply and demand and other relevant factors submitted by or on behalf of the applicant. The City Planning Commission shall maintain a file of all such parking analyses submitted for properties in each PRO District.

(j) Signs in the Public Street Right-of-Way. An ordinance to map a PRO District in a particular location may include permission to place private signs in the public street right-of-way under the regulations of Chapter 512 of the Codified Ordinances. Such provision shall be included in the PRO designation only if it is determined, on the basis of a survey and analysis conducted by the City Planning Commission, that the particular PRO District is characterized by a preponderance of restaurants and small independent stores for which signs placed near the street curb would provide useful information to pedestrians seeking goods and services and would enhance the pedestrian-oriented image of the district. Any PRO District designated for display of signs in the street right-of-way shall be shown on the Zoning Map as a "PRO-S" District, with "S" noting the presence of special sign provisions. No sign permitted by these provisions shall be displayed without design approval of the sign's structure and permanent elements by the City Planning Commission, or where applicable, by the Landmarks Commission.

(k) Variances. The Board of Zoning Appeals may grant variances to requirements of this section under the applicable criteria stated in Chapter 329 of this code. In the case of an appeal for a variance to permit a drive-through business in a PRO District, the Board shall consider the following factors based, in part, on a traffic study performed by the applicant:

(1) The anticipated volume of vehicular use of the proposed drive-through facility, with higher volumes considered to detract from the pedestrian character of the district;

(2) The anticipated proportion of drive-through customer transactions to all transactions at the business, with over fifty percent (50%) of drive-through transactions indicating that the business is an inappropriate use for a Pedestrian Retail District.

(3) The impact of the drive-through facility on the pedestrian character of the designated Pedestrian Retail Street Frontage;

(4) The impact on traffic safety and pedestrian safety in the vicinity of the drive-through business.

(l) Appeals. Appeals from the decision of the City Planning Commission to approve or disapprove Conditional Uses in Pedestrian Retail Spaces shall be made to the Board of Zoning Appeals.

(Ord. No. 1648-12. Passed 11-26-12, eff. 11-28-12)

This model bicycle parking ordinance, developed by Change Lab Solutions, allows local communities to increase the availability and quality of bicycle parking, creating a bike friendly environment. The law contains three parts, and a community can choose to adopt just one or all three. Section One: New Development and Major Renovations requires that new commercial and multifamily developments, as well as major renovations, provide short- and long-term bicycle parking. A side benefit for developers is that they don't have to create as many expensive parking spaces for cars as they would have otherwise. Section Two: Parking Facilities requires licensed parking facilities to provide parking for bikes in

addition to cars. Section Three: Large Public Events requires street festivals and other large events involving street closures to provide monitored bicycle parking. This requirement ensures that there is secure bike parking at large events and decreases congestion.

Model Bicycle Parking Ordinance

ChangeLab Solutions

An Ordinance of [Jurisdiction (e.g. the City of _____)] Providing for Bicycle Parking and Adding to the [Jurisdiction] [Zoning/Planning/Municipal/County] Code.

The [Adopting Body] does ordain as follows:

Section I. Findings. The [Adopting Body] hereby finds and declares as follows:

1. Whereas, the [Adopting Body] has a goal of improving the health of its residents and the air quality of the community;
2. Whereas, both obesity and insufficient physical activity are creating significant health problems for Americans, leading to increased risk of heart disease, diabetes, endometrial, breast, and colon cancers, high blood pressure, high cholesterol, stroke, liver and gallbladder disease, sleep apnea, respiratory problems, and osteoarthritis;
3. Whereas, a primary contributor to obesity is lack of sufficient physical activity;
4. Whereas, bicycling is a safe, low-impact aerobic activity, enjoyed by millions of Americans, and provides a convenient opportunity to obtain physical exercise while traveling to work, shops, restaurants, and many other common destinations;
5. Whereas, bicycling frequently provides a practical alternative to driving, since 28 percent of all car trips are to destinations within 1 mile of home, 40 percent of all trips are two miles or less from home, and around 30 percent of commuters travel 5 miles or less to work;
6. Whereas, bicycling can greatly increase access to important services and provide more range of travel for people who do not own or cannot operate a car, including our increasing aging population, children and youth, people who are low-income, and those with disabilities or medical restrictions on driving due to issues like seizure disorders or vision impairments;
7. Whereas, replacing car trips with bicycle trips improves air quality by reducing the amount of carbon dioxide emissions, in light of the fact that transportation sources account for nearly one third of all such emissions in the United States, an average motor vehicle emits 8.8 kilograms of carbon dioxide per gallon of gasoline that it burns, and biking emits essentially none;
8. Whereas, asthma rates are at their highest levels ever, with nearly one in 10 children and almost one in 12 Americans of all ages suffering from asthma, and replacing motor vehicle trips with bicycle trips reduces the pollutants that directly contribute to asthma in both children and adults;
9. Whereas, replacing car trips with bicycle trips reduces congestion and wear and tear on roads, improving quality of life for residents and providing a financial benefit for [Jurisdiction];
10. Whereas, providing safe, convenient, and adequate bicycle parking is necessary to encourage increased use of bicycles as a form of transportation;
11. Whereas, cities that have improved bicycle infrastructure, including parking, have seen a measurable increase in bicycle trips;

12. Whereas, in light of the foregoing, [Adopting Body] desires to add new bicycle parking requirements to increase the availability of safe and convenient bicycle parking; and
13. Whereas, it is the intent of the [Adopting Body] in enacting this Ordinance to (1) encourage healthy, active living, (2) reduce traffic congestion, air pollution, wear and tear on roads, and use of fossil fuels, and (3) improve safety and quality of life for residents of [Jurisdiction] by providing safe and convenient parking for bicycles;

Section II. [Article/Chapter] of the [Jurisdiction] [Zoning/Planning/Municipal/County] is hereby added to read as follows: "Bicycle Parking Requirements for New Development and Major Renovations."

§ 1. Purpose: The purpose of this section is to provide sufficient safe and convenient bicycle parking in New Developments and Major Renovations to encourage bicycling as a form of transportation, reducing traffic congestion, air pollution, wear and tear on roads, and use of fossil fuels, while fostering healthy physical activity.

§ 2. Definitions: Unless the context clearly requires otherwise, the following terms shall have the following meanings:

- (A) "Bicycle Parking Space": A physical space that is a minimum of [2.5] feet in width by [6] feet in length with a vertical clearance of at least [7] feet that allows for the parking of one bicycle, and if located outside, is hard surfaced and well drained.
- (B) "Bike Locker": A lockable enclosure consistent with industry standards that (i) can hold one bicycle, (ii) is made of durable material, (iii) is designed to fully protect the bicycle against [insert specific local weather concerns, e.g.: rain, snow, ice, high winds], (iv) provides secure protection from theft, (v) opens sufficiently to allow bicyclists easy access, and (vi) is of a character and color that adds aesthetically to the immediate environment.
- (C) "Bike Rack": A device consistent with industry standards that (i) is capable of supporting a bicycle in a stable position, (ii) is made of durable materials, (iii) is no less than [36] inches tall (from base to top of rack) and no less than [1.5] feet in length, (iv) permits the securing of the bicycle frame and one wheel with a U-shaped lock, and (v) is of a character and color that adds aesthetically to the immediate environment.
- (D) "In-Street Bicycle Parking": A portion of a vehicle parking lane or other area on a roadway that is set aside for the parking of bicycles.
- (E) "Long-Term Bicycle Parking": Bicycle parking that is primarily intended for bicyclists who need bicycle parking for more than 3 hours and is fully protected from the weather.
- (F) "Long-Term Bicycle Parking Space": A Bicycle Parking Space that provides Long-Term Bicycle Parking.
- (G) "Major Renovation": Any physical improvement of an existing building or structure, excluding single-family dwellings and multi-family dwellings with 4 or fewer units, that requires a building permit and has an estimated construction cost equal to or exceeding [\$250,000], excluding cost of (1) compliance with accessibility requirements for individuals with disabilities under governing federal, state, or local law, and (2) seismic or other structural safety retrofit.
- (H) "New Development": Any construction of a new building or facility that requires a building permit, excluding single-family dwellings and multi-family dwellings with 4 or less units.
- (I) "Short-Term Bicycle Parking": Bicycle parking primarily intended for bicyclists who need bicycle parking for 3 hours or less.

(J) “Short-Term Bicycle Parking Space”: A Bicycle Parking Space that provides Short-Term Bicycle Parking.

§ 3. Bicycle Parking Space Required: Short-Term and Long-Term Bicycle Parking Spaces shall be required for all New Development and Major Renovations.

(A) Required Number of Bicycle Parking Spaces: All New Development and Major Renovations shall provide at least the number of Short-Term and Long-Term Bicycle Parking Spaces identified in the table in this subsection [Section II, § 3(A)]; however, the number shall not fall below a minimum of [2] Short-Term and [2] Long-Term Bicycle Parking Spaces, regardless of other provisions herein, except that multi-family dwellings that have private garages (or equivalent separate storage space for each unit) are not required to provide any Long-Term Bicycle Parking Spaces. Where the calculation of total required spaces results in a fractional number, the next highest whole number shall be used. Up to half of the required Short-Term Bicycle Parking Spaces may be replaced with Long-Term Bicycle Parking Spaces.

General Use Category	Specific Use	Number of Short-Term Bicycle Parking Spaces Required	Number of Long-Term Bicycle Parking Spaces Required
Residential	Multi-Family Dwelling with more than 4 units: (a) <i>without</i> private garage or equivalent separate storage space for each unit (b) <i>with</i> private garage or equivalent separate storage space for each unit	[.05] per bedroom <i>or</i> [1] per [20] units [.05] per bedroom <i>or</i> [1] per [20] units	[.5] per bedroom <i>or</i> [1-4] per [4] units None
Commercial	Office Building General Retail Grocery Restaurant Parking Garage Outdoor Parking Lot	[1] per each [20,000] sq.ft. of floor area [1] per each [5,000] sq.ft. of floor area [1] per each [2,000] sq.ft. of floor area [1] per each [2,000] sq.ft. of floor area [2] spaces [1] per [20] motor vehicle	[1-1.5] per [10,000] sq.ft. of floor area [1] per [10,000-12,000] sq.ft. of floor area [1] per [10,000-12,000] sq.ft. of floor area [1] per [10,000-12,000] sq.ft. of floor area [1] per [20] motor vehicle spaces [2] spaces

		spaces	
Civic	Non-assembly cultural (e.g., library, government buildings)	[1] per each [8,000 - 10,000] sq. ft. of floor area	[1 -1.5] per each [10-20] employees
	Assembly (e.g., church, theater, stadiums, parks)	Spaces for [2-5] per cent of maximum expected daily attendance	[1- 1.5] per each [20] employees
	Schools (K-12)	[1] per each [20] students of planned capacity	[1] per each [10-20] employees and [1] per each [20] students of planned capacity for grades 6-12
	Colleges and Universities	[1] per each [10] students of planned capacity	[1] per each [10-20] employees and [1] per each [10] students of planned capacity <i>or</i> [1] per each [20,000] sq. feet of floor area, whichever is greater
Industrial	Manufacturing and Production, Agriculture	[2] spaces (Can be increased at discretion of Planning/Zoning Administrator)	[1] per 20 employees

(B) If the New Development or Major Renovation is for a use not listed in the above table, the number of Bicycle Parking Spaces required shall be calculated on the basis of a similar use, as determined by the [Planning Director/Zoning Administrator].

(C) If the Major Renovation has an estimated construction cost of between [\$250,000] and [\$1,000,000], excluding the cost of (1) compliance with accessibility requirements for individuals with disabilities under governing federal, state, or local law, and (2) seismic or other structural safety retrofit, the number of Bicycle Parking Spaces required by subsections [Section II, § (3)(A)-(B)], shall be reduced by 50 percent; however, the minimum requirement of [2] short-term and [2] long-term bicycle parking spaces shall still apply.

§ 4. Building Permits and Certificates of Occupancy: Prior to issuance of a building permit for New Development or a Major Renovation, the submitted plans must include specific provisions for bicycle parking that are consistent with the requirements of this Ordinance. No certificate of occupancy for

said building permit shall issue at the conclusion of the project until [Jurisdiction] finds that the applicable provisions of this Ordinance have been complied with.

§ 5. Existing Bicycle Parking Affected By Construction: In the event that the [Jurisdiction] has authorized a permit holder to remove existing bicycle parking in the public right-of-way due to construction, the permit holder shall replace such bicycle parking no later than the date of completion of the construction. At least [7] days prior to removal of such bicycle parking, the permit holder shall post, in the immediate vicinity of the bicycle parking area, a weather-proof notice, with a minimum type size of [1] inch, specifying the date of removal. In the event that any bicycles remain parked on the date of the removal, such bicycles shall be stored for a reasonable period, not less than [45] days, and a conspicuous, weather-proof notice shall be placed as close as feasible to the site of the removed bicycle parking containing information as to how to retrieve a removed bicycle.

If bicycle parking is likely to be removed, pursuant to this section, for more than [120] days, it shall, to the extent possible, be temporarily re-sited, in coordination with [insert appropriate department, such as Department of Public Works], to a location as close to the original site as feasible, pending completion of the construction. If the temporary site is not clearly visible from the original site, the permit holder shall post a conspicuous, weather-proof notice in the immediate vicinity of the original site informing bicyclists of the location of the temporary site.

§ 6. Bicycle Parking Standards – General:

(A) All Bicycle Parking Spaces shall be:

- (1) well lit if accessible to the public or bicyclists after dark;
- (2) located to ensure significant visibility by the public and building users, except in the case of Long-Term Bicycle Parking that is located in secured areas;
- (3) accessible without climbing more than one step or going up or down a slope in excess of [12] percent, and via a route on the property that is designed to minimize conflicts with motor vehicles and pedestrians.

(B) All In-Street Bicycle Parking and Bicycle Parking Spaces located in a parking facility shall be:

- (1) clearly marked; and
- (2) separated from motor vehicles by some form of physical barrier (such as bollards, concrete or rubber curbing or pads, reflective wands, a wall, or a combination thereof) designed to adequately protect the safety of bicyclists and bicycles.

(C) All Bike Racks shall be located at least [36] inches in all directions from any obstruction, including but not limited to other Bike Racks, walls, doors, posts, columns, or exterior or interior landscaping.

(D) Unless Bicycle Parking Spaces are clearly visible from an entrance, a sign indicating their location shall be prominently displayed outside the main entrance to the building or facility, and additional signs shall be provided as necessary to ensure easy way finding. A “Bicycle Parking” sign shall also be displayed on or adjacent to any indoor room or area designated for bicycle parking. All outdoor signs required by this subsection [Section II, § 6(D)] shall be no smaller than [12] x [18] inches and utilize a type size of at least [2] inches. All indoor signs required by this subsection [Section II, § 6(D)] shall be no smaller than [8] x [10] inches and utilize a type size of at least [5/8] inch.

§ 7. Additional Requirements Applicable to Short-Term Bicycle Parking Only: All Short-Term Bicycle Parking Spaces shall contain Bike Racks and shall meet the following requirements, in addition to the requirements in [Section II, § 3] above:

(A) Location:

(1) Short-Term Bicycle Parking must be located either (a) within [50] feet of the main public entrance of the building or facility, or (b) no further than the nearest motor vehicle parking space to the main public entrance (excluding parking for individuals with disabilities), whichever is closer. If the New Development or Major Renovation contains multiple buildings or facilities, the required Short-Term Bicycle Parking shall be distributed to maximize convenience and use.

(2) Short-Term Bicycle Parking Spaces may be located either (a) on-site or (b) in the public right-of-way (e.g., sidewalk or In-Street Bicycle Parking), provided that an encroachment permit is obtained for the installation and the installation meets all other requirements of [indicate the law governing encroachments on public rights-of-way]. If Bike Racks are located on public sidewalks, they must provide at least [5] feet of pedestrian clearance, and up to [6] feet where available, and be at least [2] feet from the curb.

(B) Bike Rack Requirements: Bike Racks used for Short-Term Bicycle Parking must be securely attached to concrete footings, a concrete sidewalk, or another comparably secure concrete surface, and made to withstand severe weather and permanent exposure to the elements.

§ 8. Additional Requirements Applicable to Long-Term Bicycle Parking Only: Long-Term Bicycle Parking shall be provided in either (1) Bike Lockers or (2) indoor rooms or areas specifically designated for bicycle parking (including designated areas of an indoor parking facility), and shall satisfy the following requirements, in addition to those set forth in [Section II, § 3] above:

(A) Location: Long-Term Bicycle Parking may be located either on- or off-site. If located off-site, it shall be no more than [300 feet] from the main public entrance.

(B) Requirements for Indoor Long-Term Bicycle Parking: Long-Term Bicycle Parking located in designated indoor rooms or areas shall contain Bike Racks or comparable devices. Such rooms shall be designed to maximize visibility of all portions of the room or designated area from the entrance. Supplemental security measures (such as limiting access to a designated indoor bike parking room to persons with a key, smart card, or code) are optional.

§ 9. Motor Vehicle Parking Space Credits:

(A) For every [6] Bicycle Parking Spaces provided, the number of required off-street motor vehicle parking spaces (excluding parking spaces for individuals with disabilities) on a site shall be reduced by [1] space.

(B) To encourage the installation of showers at non-residential sites, the number of required off-street motor vehicle parking spaces for such sites shall be reduced as follows: A credit of [1] space shall be provided for the first shower installed, with additional off-street motor vehicle parking credits available at a rate of [1] space for each additional shower provided per [25] required Bicycle Parking Spaces. In order to claim these credits, which shall be in addition to the bicycle parking credits provided for in [Section II, § 9(A)], shower facilities must be readily available for use by all employees of the New Development or Major Renovation.

§ 10. (optional) Modification of Requirements: In the event that satisfying all of the requirements of [Section II] would be (a) infeasible due to the unique nature of the site, or (b) cause an unintended consequence that undermines the purpose of this Ordinance, a property owner (or designee) may submit a written request to the [Planning Director/Zoning Administrator/other Local Administrator or designee] for a modification of the requirements of [Section II]. The request shall state the specific reason(s) for the request, provide supporting documentation, and propose an alternative action that will allow the purposes of this Ordinance to be fulfilled as much as possible.

Section III. [Article/Chapter] of the [Jurisdiction] [Zoning/Planning/Municipal/County Code] is hereby added to read “Bicycle Parking Requirements for Parking Facilities.”

§ 1. Purpose: The purpose of [Section III] is to provide sufficient safe and convenient bicycle parking in parking facilities so as to encourage bicycling as a form of transportation, which in turn reduces traffic congestion, air pollution, wear and tear on roads, and use of fossil fuels, while fostering healthy physical activity.

§ 2. Definitions: The definitions set forth in [Section II, § 2] shall apply to [Section III], unless the context clearly requires otherwise. § 3. LICENSING CONDITIONS: As a condition of the issuance or renewal of a license required by the [Jurisdiction] for a parking facility, parking facilities shall provide [1] Bicycle Parking Space per each [20] vehicle parking spaces provided, with a minimum of [6] Bicycle Parking Spaces. Where the calculation of total required spaces results in a fractional number, the next highest whole number shall be used.

§ 3. Licensing Conditions: As a condition of the issuance or renewal of a license required by the [Jurisdiction] for a parking facility, parking facilities shall provide [1] Bicycle Parking Space per each [20] vehicle parking spaces provided, with a minimum of [6] Bicycle Parking Spaces. Where the calculation of total required spaces results in a fractional number, the next highest whole number shall be used.

§ 4. Location: All Bicycle Parking Spaces required by [Section III] shall be located in an area, preferably on the ground floor, that (i) can be conveniently and safely accessed by bicycle and by foot in a way that minimizes conflicts with motor vehicles, (ii) is not isolated, and (iii) maximizes visibility by parking facility patrons and attendants. If the licensed parking facility has multiple entrances, the required Bicycle Parking Spaces may be spread out among the multiple entrances. Bicycle Parking Spaces shall be accessible without climbing more than one step or going up or down a slope in excess of [12] percent.

§ 5. Bike Racks: All Bicycle Parking Spaces required by [Section III] shall contain Bike Racks and shall be well lit if accessible to the public or bicyclists after dark or if in an interior or darkened location. All Bike Racks shall also provide a clearance of at least [36] inches in all directions from any obstruction (including but not limited to other bike racks, walls, doors, posts, columns or landscaping), and shall be separated from vehicles by some form of physical barrier (such as bollards, concrete or rubber curbing or pads, reflective wands, a wall, or a combination thereof) designed to adequately protect the safety of bicyclists and bicycles. All Bike Racks located outdoors shall also be securely attached to concrete footings and made to withstand severe weather and permanent exposure to the elements.

§ 6. Signage: Parking facilities shall also install prominent signs, no smaller than [12] x [18] inches and utilizing a type size of at least [2] inches, in or near each entrance that advertise the availability of bicycle parking, and the location, if it is not visible from the entrance.

§ 7. Contractual Limits on Liability [Section III] shall not interfere with the rights of a parking facility owner (or designee) to enter into agreements with facility users or take other lawful measures to limit the parking facility's liability to users, including bicycle users, with respect to parking in the parking facility, provided that such agreements or measures are otherwise in accordance with the requirements of [this Ordinance] and the law.

Section IV. [Article/Chapter] of the [Jurisdiction] [Zoning/Planning/Municipal/County] is hereby added to read as follows: "Bicycle Parking Requirements for Special Events Involving Street Closures."

§ 1. Purpose: The purpose of [Section IV] is to provide sufficient safe and convenient bicycle parking at special events involving street closures to encourage bicycling as a form of transportation, which in turn reduces traffic congestion, air pollution, wear and tear on roads, and use of fossil fuels, while fostering healthy physical activity.

§ 2. Conditions on Street Closure Permits: As a condition of a permit for the closure of a street for a special event in which the daily number of participants is projected to be [1,000] or more, monitored bicycle parking shall be provided by the event sponsor (or a designee) for at least [1] % of expected daily participants beginning [½ hour] before and ending [½ hour] after the time of the event each day of the event.

§ 3. Requirements for Monitored Parking: Monitored bicycle parking shall include the presence, at all times, of one attendant, or more as needed, to receive bicycles, dispense claim checks, return bicycles, and provide security for all bicycles.

§ 4. Location: All monitored bicycle parking shall be located within [500] feet of at least one regular entrance or access point to the event.

§ 5. Publicity and Signage: All publicity, including signs, for the event shall state the availability of monitored bicycle parking, its location, and cost, if any. All event maps shall include the location of monitored bicycle parking. If monitored bicycle parking is not within eyeshot of each entrance, signs shall be provided to ensure easy way finding.

§ 6. Insurance Coverage and Fees: The event sponsor or designee must provide insurance coverage for the monitored bicycle parking in case of damaged or stolen bicycles, and may charge users a fee to cover the cost of providing the monitored parking.

Section V. [Article/Chapter] of the [Jurisdiction] [Zoning/Planning/Municipal/County] is hereby added to read as follows: "Removal of Abandoned Bicycles."

§ 1. Purpose: The purpose of [Section V] is to ensure the reasonably prompt removal of bicycles abandoned in Bicycle Parking Spaces so as to encourage bicycling as a form of transportation, which in turn reduces traffic congestion, air pollution, wear and tear on roads, and use of fossil fuels, while fostering healthy physical activity.

§ 2. Definitions: The definitions set forth in [Section II, § 2] of this Ordinance shall apply to [Section V], unless the context clearly requires otherwise.

§ 3. Removal Requirements: On [a quarterly basis], owners of property (or a designee) subject to [Sections II or III of this Ordinance] shall remove, from all Bicycle Parking Spaces associated with their property, including those located on the public right-of-way, bicycles that have been abandoned. A bicycle shall be deemed to be abandoned if it has not been removed after having been tagged with a notice of removal for [2] weeks for Short-Term Bicycle Parking Spaces or [4] weeks for Long-Term Bicycle Parking Spaces. However, a bicycle shall not be deemed to be abandoned if the bicyclist and property owner (or designee) have a written agreement regarding provision of long term storage covering the time period in question. Abandoned bicycles may be donated to non-profits that reuse bicycles or may be disposed of in any lawful manner.

Section VI. [Article/Chapter] of the [Jurisdiction] [Zoning/Planning/Municipal/County] is hereby added to read as follows: "Implementation of Ordinance."

§ 1. Regulations and Procedures: The [Planning Director/Zoning Administrator and/or other relevant local administrator(s)] [is/are] authorized to promulgate new and amend existing rules, regulations, procedures or forms as necessary or appropriate to implement the provisions of [this Ordinance].

§ 2. Training: [Jurisdiction] shall periodically make trainings or training materials available to planners and other employees involved in the implementation and enforcement of [this Ordinance].

§ 3. Reporting: The [Planning Director/Zoning Administrator] shall provide an annual report to the [Adopting Body] regarding the implementation of this Ordinance that shall, at a minimum, include the following information relevant to the preceding year: (1) the number of Short and Long-Term Bicycle Parking Spaces created pursuant to [Sections II and III], and the number of events for which special event bicycle parking was provided under [Section IV] ; (2) (if applicable) a brief summary of each request for modification received and action taken in response thereto; and (3) any other information learned that would improve future implementation of [this Ordinance] and its goals.

Section VII. Statutory Construction:

(A) All ordinances or parts thereof that conflict or are inconsistent with this Ordinance are repealed to the extent necessary to give this Ordinance full force and effect.

(B) If any section or portion of this Ordinance is judicially invalidated for any reason, that portion shall be deemed a separate and independent provision, and such ruling shall not affect the validity of the remaining portions of this Ordinance.

Section VIII. Effective Date: This Ordinance shall be effective [upon passage (insert other date if desired)] ("Effective Date"), except that:

(A) [Section II, § 3] ("Bicycle Parking Spaces Required"), and [Section II, § 4] ("Building Permits and Certificates of Occupancy") shall only apply to New Development and Major Renovations for which a building permit is issued on or after [120] days from the Effective Date.

(B) [Section III] ("Bicycle Parking Requirements for Parking Facilities") shall apply to Parking Facilities that were licensed prior to the Effective Date, and have less than [180] days remaining on their license,

as follows: [1/2] of the required number of Bicycle Parking Spaces shall be provided no later than [120] days from the expiration of the parking facility’s license, with full implementation required no later than [180] days from the expiration of the parking facility’s license.

(C) [Section IV] (“Bicycle Parking Requirements for Special Events Involving Street Closures”) shall not apply to events for which the temporary street closure was authorized pursuant to an application submitted prior to the Effective Date.

Complete Streets

“Complete Streets” allow people to get around safely on foot, bicycle, or public transportation. Streets designed only for cars are dangerous for everyone else, and contribute to the obesity epidemic, by making it difficult for children and adults to get regular physical activity during their daily routine. In contrast, complete streets are safer, more convenient, and comfortable not only for drivers but also for pedestrians, bicyclists, children, and people with disabilities. The National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN) developed this Model Local Ordinance on Complete Streets to assist localities in making streets safe, comfortable, and convenient for everyone. This model was developed by thoroughly surveying existing law, conducting extensive legal research, and consulting legal and policy experts.

Model Local Ordinance on Complete Streets

Developed by the National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN), a project of Public Health Law & Policy (PHLP)

Section I. Findings. The [Adopting body] hereby finds and declares as follows:

Now therefore, it is the intent of the [Adopting body (e.g., city council)] in enacting this ordinance to encourage healthy, active living, reduce traffic congestion and fossil fuel use, and improve the safety and quality of life of residents of [Municipality] by providing safe, convenient, and comfortable routes for walking, bicycling, and public transportation.

Section II. [Article / Chapter] of the [Municipality] Municipal Code is hereby amended to read as follows:

Sec. [____ (*1)]. Purpose. The purpose of this [article / chapter] is to enable the streets of [Municipality] to provide safe, convenient, and comfortable routes for walking, bicycling, and public transportation that encourage increased use of these modes of transportation, enable convenient travel as part of daily activities, improve the public welfare by addressing a wide array of health and environmental problems, and meet the needs of all users of the streets, including children, older adults, and people with disabilities.

Sec. [____ (*2)]. Definitions. The following words and phrases, whenever used in this [article / chapter], shall have the meanings defined in this section unless the context clearly requires otherwise:

(a) “Complete Streets Infrastructure” means design features that contribute to a safe, convenient, or

comfortable travel experience for Users, including but not limited to features such as: sidewalks; shared use paths; bicycle lanes; automobile lanes; paved shoulders; street trees and landscaping; planting strips; curbs; accessible curb ramps; bulb outs; crosswalks; refuge islands; pedestrian and traffic signals, including countdown and accessible signals; signage; street furniture; bicycle parking facilities; public transportation stops and facilities; transit priority signalization; traffic calming devices such as rotary circles, traffic bumps, and surface treatments such as paving blocks, textured asphalt, and concrete; narrow vehicle lanes; raised medians; and dedicated transit lanes [, as well as other features such as insert other accommodations if desired] [, and those features identified in insert name of Municipality's Pedestrian/Bicycle Master Plan if it exists].

(b) "Street" means any right of way, public or private, including arterials, connectors, alleys, ways, lanes, and roadways by any other designation, as well as bridges, tunnels, and any other portions of the transportation network.

(c) "Street Project" means the construction, reconstruction, retrofit, maintenance, alteration, or repair of any Street, and includes the planning, design, approval, and implementation processes [, except that "Street Project" does not include minor routine upkeep such as cleaning, sweeping, mowing, spot repair, or interim measures on detour routes] [and does not include projects with a total cost of less than \$[]].

(d) "Users" mean individuals that use Streets, including pedestrians, bicyclists, motor vehicle drivers, public transportation riders and drivers, [insert other significant local users if desired, e.g. drivers of agricultural vehicles, emergency vehicles, or freight] and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

Sec. [] (*3)]. Requirement of Infrastructure Ensuring Safe Travel.

(a) [Insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning] shall make Complete Streets practices a routine part of everyday operations, shall approach every transportation project and program as an opportunity to improve public [and private] Streets and the transportation network for all Users, and shall work in coordination with other departments, agencies, and jurisdictions to achieve Complete Streets.

(b) Every Street Project on public [or private] Streets shall incorporate Complete Streets Infrastructure sufficient to enable reasonably safe travel along and across the right of way for each category of Users; provided, however, that such infrastructure may be excluded, upon written approval by [insert senior manager, such as City Manager or the head of an appropriate agency], where documentation and data indicate that:

(1) Use by non-motorized Users is prohibited by law;

(2) The cost would be excessively disproportionate to the need or probable future use over the long term;

(3) There is an absence of current or future need; or(4) Inclusion of such infrastructure would be unreasonable or inappropriate in light of the scope of the project. c) As feasible, [Municipality] shall incorporate Complete Streets Infrastructure into existing public [and private] Streets to improve the safety and convenience of Users, construct and enhance the transportation network for each category of Users, and create employment.

(d) If the safety and convenience of Users can be improved within the scope of pavement resurfacing, restriping, or signalization operations on public [or private] Streets, such projects shall implement Complete Streets Infrastructure to increase safety for Users.

(e) [Insert appropriate agencies, such as Department of Transportation, Department of Public Works, Department of Planning] shall review and either revise or develop proposed revisions to all appropriate plans, zoning and subdivision codes, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including [insert name of Municipality's comprehensive plan equivalent as well as all other key documents by name], to integrate, accommodate, and balance the needs of all Users in all Street Projects on public [and private] Streets.

(f) In design guidelines, [insert appropriate agencies] shall coordinate templates with street classifications and revise them to include Complete Streets Infrastructure, such as bicycle lanes, sidewalks, street crossings, and planting strips.

(g) Trainings in how to integrate, accommodate, and balance the needs of each category of Users shall be provided for planners, civil and traffic engineers, project managers, plan reviewers, inspectors, and other personnel responsible for the design and construction of Streets.

Sec. [____ (*4)]. Data Collection, Standards, and Public Input.

(a) [Insert appropriate agency or agencies] shall collect data measuring how well the Streets of [Municipality] are serving each category of Users.

(b) [Insert appropriate agency or agencies] shall put into place performance standards with measurable benchmarks reflecting the ability of Users to travel in safety and comfort. (

c) [Insert appropriate agency or agencies] shall establish procedures to allow full public participation in policy decisions and transparency in individual determinations concerning the design and use of Streets.

(d) [Insert appropriate agency, agencies, or official] shall implement, administer, and enforce this [article / chapter]. [Agency] is hereby authorized to issue all rules and regulations consistent with this [article / chapter] and shall have all necessary powers to carry out the purpose of and enforce this [article / chapter]

(e) All initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by [Municipality] shall: (1) evaluate the effect of the proposed project on safe travel by all Users, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

Sec. [____ (*5)]. Further Steps.

(a) The head of each affected agency or department shall report back to the [Adopting body] [annually/within one year of the date of passage of this Ordinance] regarding: the steps taken to implement this Ordinance; additional steps planned; and any desired actions that would need to be taken by [Adopting body] or other agencies or departments to implement the steps taken or planned.

(b) A committee is hereby created, to be composed of [insert desired committee composition] and appointed by [the Mayor / President of adopting body / other], to forward [Municipality]'s implementation of Complete Streets practices by: (i) addressing short-term and long-term steps and planning necessary to create a comprehensive and integrated transportation network serving the needs of all Users; (ii) assessing potential obstacles to implementing Complete Streets practices in [Municipality]; (iii) if useful, recommending adoption of an [ordinance / internal policy / other document] containing additional steps; and (iv) proposing revisions to the [insert name of Municipality's comprehensive plan equivalent], zoning and subdivision codes, and other applicable law to integrate, accommodate, and balance the needs of all Users in all Street Projects. The committee

shall report on the matters within its purview to the [Adopting body] within one year following the date of passage of this Ordinance.

(c) [The committee shall also consider requiring incorporation of Complete Streets modifications and Complete Streets Infrastructure in Street Projects, as well as requiring all initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for infrastructure projects requiring funding or approval by [Municipality] to: (1) evaluate the effect of the proposed project on safe travel by all Users, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.]

Section III. Statutory Construction & Severability.

(a) This Ordinance shall be construed so as not to conflict with applicable federal or state laws, rules, or regulations. Nothing in this Ordinance authorizes any City agency to impose any duties or obligations in conflict with limitations on municipal authority established by federal or state law at the time such agency action is taken.

(b) In the event that a court or agency of competent jurisdiction holds that a federal or state law, rule, or regulation invalidates any clause, sentence, paragraph, or section of this Ordinance or the application thereof to any person or circumstances, it is the intent of the Ordinance that the court or agency sever such clause, sentence, paragraph, or section so that the remainder of this Ordinance remains in effect.

(c) In undertaking the enforcement of this Ordinance, [Municipality] is assuming only an undertaking to promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an obligation through which it might incur liability in monetary damages to any person who claims that a breach proximately caused injury.

Street connectivity ordinances are designed to increase the number of street connections in a neighborhood and to improve the directness of routes. The purpose is to achieve an open street network that provides multiple routes to and from destinations. Such a network is key to supporting walking and bicycling as a convenient, safe, and healthy form of transportation. It also discourages the proliferation of limited access street designs where residential subdivisions have but one or two points of entry and exit, and where commercial developments have access only onto arterial streets with no connections to adjacent properties.

Model Street Connectivity Standards Ordinance

Model Smart Land Development Regulations

American Planning Association

101. Purpose

(1) The purpose of this ordinance is to support the creation of a highly connected transportation system within the [municipality name] to:

- (a) provide choices for drivers, bicyclists, and pedestrians;
- (b) promote walking and bicycling;
- (c) connect neighborhoods to each other and to destinations, such as schools, parks, shopping, libraries, and post offices, among others; \

- (d) provide opportunities for residents to increase their level of physical activity each day by creating walkable neighborhoods with adequate connections to destinations;
- (e) reduce vehicle miles traveled and travel time to improve air quality and mitigate the effects of auto emissions on the health of residents;
- (f) reduce emergency response times;
- (g) increase effectiveness of municipal service delivery; and
- (h) restore arterial street capacity to better service regional long-distance travel needs.

102. Definitions

As used in this ordinance, the following words and terms shall have the meanings specified herein:

“Arterial street” means a street that primarily accommodates through-traffic movement between areas and across the local government, and that secondarily provides direct access to abutting property.

“Connectivity” means a system of streets with multiple routes and connections serving the same origins and destinations.

“Development” means a subdivision, resubdivision, planned unit development, [insert name of any other type of development], or any other type of land-use change that results in the creation of public or private streets.

“Local Street System” means the interconnected system of collector and local streets providing access to a development from an arterial street.

“Resubdivision” means [cite to definition of resubdivision in local subdivision regulations].

“Subdivision” means [cite to definition of “subdivision” in subdivision regulations].

103. Relationship to other Adopted Plans and Ordinances

The design and evaluation of vehicular, bicycle, and pedestrian circulation systems built in conjunction with new residential and nonresidential development and the application of the street connectivity requirements to those developments shall conform to [list all applicable ordinances and plans].

104. General Standards

(1) A proposed development shall provide multiple direct connections in its local street system to and between local destinations, such as parks, schools, and shopping, without requiring the use of arterial streets. Each development shall incorporate and continue all collector or local streets stubbed to the boundary of the development plan by previously approved but unbuilt development or existing development.

(2) To ensure future street connections to adjacent developable parcels, a proposed development shall provide a local street connection spaced at intervals not to exceed [660] feet along each boundary that abuts potentially developable or redevelopable land.

(3) A proposed development shall provide a potentially signalized, full-movement intersection of a collector or a local street with arterial street at an interval of at least every 1,320 feet or one-quarter mile along arterial streets. A proposed development shall provide an additional nonsignalized, potentially limited movement, intersection of a collector or local street with an arterial street at an interval not to exceed 660 feet between the full movement collector and the local street intersection.

(4) The [local government] engineer may require any limited movement collector or local street intersections to include an access control median or other acceptable access control device.

(5) The requirements of paragraphs (1), (2), and (3) above may be waived if, in the written opinion of the [local government] engineer, they are infeasible due to unusual topographic features, existing development, or a natural area or feature.

(6) Gated street entryways into residential developments are prohibited.

Lacey's "Village Center Zone" is a suburban model that, while perhaps reducing car dependence, does not link with much transit. The ordinance aims to alleviate use-segregated development, reduce sprawl that results in car dependence, and to promote the development of places with a pedestrian emphasis, connectivity, mixed-uses, and centralized public spaces. Bicycle paths and pedestrian connections are encouraged where possible and the use of cul-de-sacs and other roadways with a single point of access are minimized. While parking is limited on smaller streets, the larger streets are still permitted to have parking on both sides. Bikeways are required on collector and arterial streets. The ordinance requires that bike racks be provided to internal open space areas and recreation areas in the peripheral open space—in addition to providing for other pedestrian and bicycle amenities in commercial and residential areas. Bus stops are to be located along major streets ("collectors and arterials") and are to be designed to make transit services accessible to all residents of the village center. While aiming to reduce car dependence, the ordinance still requires a minimum of 2 parking spots for single-family homes but requires a minimum of 1.5 spots per dwelling unit in multi-family housing. In addition, multi-family housing must have 1 bike spot per 10 automobile parking spots.

City of Lacey, Washington

Title 16: Zoning

Chapter 16.59: Village Center Zone

16.59.070 Pedestrian Circulation and Streets

A. Streets

1. The street layout shall be a modified grid street pattern with alleys adapted to the topography, unique natural features, environmental constraints of the tract, and peripheral open space areas. The street layout shall take into consideration the location of the community focus, other internal open space areas, gateways, vistas, pedestrian pathways and transit services. Refer to Table 16T-56. A minimum of two interconnections with the existing public street system rated as an arterial or collector shall be provided where possible. Linkages to adjacent developments and neighborhoods with pedestrian and bicycle paths shall be required where possible.

2. The street layout shall form an interconnected system of streets primarily in a rectangular grid pattern with alleys. However, the grid should be modified to avoid a monotonous repetition of the basic street/block pattern and to conform to topographical constraints. The use of cul-de-sacs and other roadways with a single point of access shall be minimized. However, if cul-de-sacs are unavoidable because of topography or environmental features, pedestrian connections between cul-de-sacs and adjacent uses shall be developed to the extent possible.

To the greatest extent possible, streets shall be designed to have a range from two hundred to five hundred feet, from intersection to intersection, and, to the greatest extent possible, shall either

continue through an intersection, or terminate in a “T” intersection directly opposite the center of a building, an internal open space area, or a view into a peripheral open space area. Refer to Table 16T-57.

3. Table 16T-58 sets forth the relationship of the various street types as listed below.

The street layout shall incorporate a hierarchy of street types as specified:

a. Type 1 Lane or alley. Refer to Table 16T-59.

(1) A lane may be a private street or easement and need not be dedicated to the city. Such streets or easements may be dedicated to the property owners’ association of the village center or may be dedicated as common easements across the rear portions of lots.

(2) Minimum paved width: twelve feet

(3) Width of easement: twenty feet

(4) Buildings or fences set back a minimum of three feet

(5) No parking permitted on either side of the paved portion of the lane.

(6) Curbing shall not be required except at corners of intersections with other street types. At such corner locations, curbing shall be required for the entire corner radius and five feet preceding same. Such curbing shall not extend more than six inches above the finished pavement.

(7) Lane or alley lighting shall be provided on all garages or on poles adjacent to parking areas. Lighting fixtures and poles shall be of consistent architectural style and shall complement the predominant architectural theme.

(8) Design speed shall not exceed ten m.p.h.

b. Type 2 Two-way residential street (parking on one side). Refer to Table 16T-60.

(1) Right-of-way width: forty-four feet. Paved width: twenty-four feet

(2) Curbside parking shall be permitted on one side of the road.

(3) Five-foot sidewalk with a minimum five-foot wide planter strip shall be provided on both sides of the road.

(4) Cement concrete barrier curb shall be required.

(5) Street trees shall be planted in the five-foot planter strips on both sides of the street at a minimum spacing of thirty-five feet on-center.

(6) Design speed shall not exceed twenty-five m.p.h.

(7) Average daily traffic limited to four thousand.

(8) Bicycles can use streets without a separate path.

c. Type 3 Two-way residential street (parking on two sides). Refer to Table 16T-61.

(1) Right-of-way width: fifty-four feet. Paved width: thirty-four feet

(2) Curbside parking is permitted on both sides of the street, except within twenty-five feet of any intersection.

(3) Five-foot sidewalk with a minimum five-foot wide planter strip shall be provided on both sides of the street.

(4) Cement concrete barrier curb shall be required.

(5) Street trees shall be planted in the five-foot planter strips on both sides of the street at a minimum spacing of thirty-five feet on-center.

(6) Design speed shall not exceed twenty-five m.p.h.

(7) Average daily traffic limited to approximately six thousand.

d. Type 4 Commercial mixed-use street (main street). Refer to Table 16T-62.

- (1) Right-of-way width: sixty-four feet. Paved width: thirty-four feet
- (2) Parallel parking shall be provided on both sides of the street. Diagonal head-in parking may be permitted along the front of commercial uses and/or the community green. If diagonal parking on both sides is used, the paved width of the street shall be increased to provide the minimum eighteen feet of drive lanes.
- (3) Planter strips with a minimum width of five feet shall be provided. Along commercial uses, brick pavers may be substituted for vegetative ground cover typically found in parkways of residential areas. Provided adequate space shall be left for street trees. Sidewalks shall have a minimum width of five feet, except along commercial uses where the sidewalk shall generally be ten feet in width dependent upon the site's relationship to pedestrian traffic. At corners, handicapped ramps shall be provided and sidewalks shall be continued across street surfaces using paving materials to delineate crosswalks.
- (4) Cement concrete barrier curb shall be required with a curb radius not to exceed eight feet.
- (5) Street trees, with a minimum of two and one-half inch caliper shall be planted at a minimum of thirty-five foot intervals. Street trees shall be planted on both sides of the street, in the landscape strip between the curb and the sidewalk if such exists. Existing trees shall be used where possible and practical.
- (6) Design speed shall not exceed twenty-five m.p.h.

e. Type 5 Collector with bike lane

The main street (Type 5) shall be used for the primary commercial and civic streets within the small community. The residential street Type 4 is a collector street, while the residential streets Type 2 and 3 are local streets. Lanes or alleys (Type 1) are generally required and may be used to provide service access; they may be treated as private streets and any lot having access from a lane shall additionally front upon one of the other types of streets. All streets shall generally conform to one of the following street categories.

B. Pedestrian and Bicyclist Use of Streets. All streets shall be pedestrian-friendly and usable by pedestrians. Streets shall generally utilize a full range of innovative traffic-calming techniques to promote slow speeds throughout the village.

C. Pedestrian Circulation and Design

1. A pedestrian sidewalk network shall be provided throughout the development that interconnects all dwelling units with other units, non-residential uses, common open space, bus stops and sensitive area tracts. Mid-block crossings shall be utilized where necessary to promote more efficient or strategic interconnections with pedestrian corridors or trail systems. Sidewalk systems shall be separate and distinct from motor vehicle circulation to the greatest extent possible, provide a pleasant route for users, promote enjoyment of the development, and encourage incidental social interaction among pedestrians. Sidewalks shall be of barrier-free design.

The pedestrian circulation system shall include gathering/sitting areas and provide benches, landscaping, and other street furniture where appropriate. Sidewalks shall promote pedestrian activity within each site and throughout the development.

2. Sidewalks shall be a minimum of five feet in width, expanding to six feet along major pedestrian routes; sidewalks in commercial areas shall normally be ten to fifteen feet in width depending upon location of major pedestrian routes and significance of the sidewalk considering pedestrian use.

Standard material for sidewalk construction is acceptable, provided however, key pedestrian intersections shall use special materials. See Section C7 below.

3. Walkways shall be raised and curbed along buildings and within parking lots, where suitable. Pedestrian street crossings shall be clearly delineated by a change in pavement color, white paint and reflective materials and/or texture.

4. Bikeways shall be provided, where possible, to link internal open space areas with peripheral open space areas and continuing on routes through peripheral open space areas. Bikeways do not have to be marked on local residential streets with low average daily traffic. Bikeways are required on collectors and arterials. Bikeways shall be a minimum of six feet wide and may use asphalt paving. Bike racks shall be provided to internal open space areas and recreation areas in the peripheral open space.

5. Clearly delineate pedestrian pathways early in the design stage of development to avoid conflicts with vehicles.

6. Include pedestrian and bicycle amenities such as the following in commercial and residential areas:

- a. bike racks in accessible locations;
- b. seating so that nearby activities can be observed;
- c. a variety of seating locations to allow for sun, shade or rain protection;
- d. fountains, gazebos or other amenities in open space areas;
- e. planter boxes that incorporate seating.

Elements of street furniture, such as benches, waste containers, drinking fountains, planters, phone booths, bus shelters, bicycle racks, and bollards should be carefully selected to ensure compatibility with the architecture of surrounding buildings, the character of the area, and with other elements of street furniture. Consistency in the selection and location of the various elements of street furniture is critical for maximum effect and functional usage. All key pedestrian intersections should have street furniture as well as other significant pedestrian areas.

7. At key pedestrian intersections and other areas of special significance to pedestrians, such as main street or areas of transition, sidewalks shall be constructed of brick, colored/textured concrete pavers, concrete containing accents of brick, or some combination thereof that is compatible with the style, materials, colors, and details of the surrounding buildings. The functional, visual, and tactile properties of the paving materials shall be appropriate to the proposed functions of pedestrian circulation. Such techniques are also recommended for public or semi-public plazas, courtyards, or open spaces. Refer to Table 16T-63.

D. Bus Stops

1. Bus stops shall be located along collectors and arterials in consultation with Intercity Transit and North Thurston School District and shall be integrated as part of the pedestrian network. Bus stops may also be provided along strategic sections of local access streets if the

city of Lacey, North Thurston and Intercity Transit determine such location will provide the most convenient coverage for residents. Locations for bus stops shall be designed to make transit services accessible to all residents of the village center.

a. Transit pads and shelters: Transit passenger pads and shelters shall be provided at focal points in the village center such as the commercial area and key pedestrian intersections. Transit pads and shelters shall also be provided at bus stops along bus routes that serve the village center. Design and size of shelters and pads will be determined in consultation with Intercity Transit.

b. Lighting: Every effort shall be made to ensure that bus stops are illuminated at night to enhance passengers' safety and sense of security.

E. Lighting

1. Decorative human scale lighting shall be provided on all streets, pedestrian walkways, sidewalks, courtyards, community greens and internal open spaces at intervals adequate to provide pedestrians with safe and comfortable lighting. Light poles may use a staggered pattern when measured and spaced using both sides of the street. Lighting fixtures and poles shall generally be between twelve to twenty-four feet in height and constructed from steel, cast iron, or aluminum, with poles and fixtures complementing the human scale and architectural character of the village center.

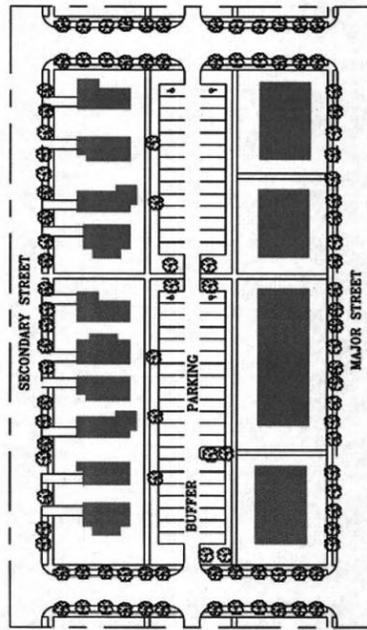
2. Street lights shall be decorative and blend with the architectural style of the village center. (See Design Vocabulary)

3. Streets and sites shall provide adequate lighting, while minimizing adverse impacts, such as glare and overhead sky glow, on adjacent properties and the public right-of-way.

4. Use of minimum wattage metal halide or color-corrected sodium light sources is encouraged. Non-color corrected low pressure sodium and mercury vapor light sources are prohibited.

5. Light fixtures attached to the exterior of a building shall be architecturally compatible with the style, materials, colors, and details of the building and shall comply with local building codes. The type of light source used on the exterior of buildings, signs, pedestrian walkways, and other areas of a site, shall provide adequate light quality.

6. Light fixtures shall be of a pedestrian scale, provided lights within the interior of a parking lot may be at a greater height for security purposes. Facades shall be lit from the exterior, and, as a general rule, lights should be concealed through shielding or recessed behind architectural features. The use of low pressure sodium, fluorescent, or mercury vapor lighting either attached to buildings or to light the exterior of buildings shall be prohibited. Mounting brackets and associated hardware should be inconspicuous. Refer to Table 16T-64. (*Ord. 1098 §17, 1999; Ord. 1024 §47, 1995*).



Off street parking areas must be located to promote a pedestrian emphasis. Usually this will result in parking located to the rear of buildings and appropriately landscaped, buffered, and screened.

Table 16T-65

A complete street is one that accommodates all users, including pedestrians, bicyclists, transit users and persons with disabilities. Rochester's Complete Streets Policy went into effect December 1, 2011. A good example of a complete street in Rochester is South Avenue through the South Wedge neighborhood. While serving as the neighborhood's "main street," South Avenue boasts complete street features, such as convenient two way travel, wide sidewalks, bike lanes, street lighting, signalized crosswalks, ADA sidewalk ramps, curb bump-outs to shorten crossing distances, on-street parking, bike racks and benches at bus stops. Rochester's Complete Streets Policy ensures that all future street design efforts will fully consider the needs of pedestrians, bicyclists, transit users and persons with disabilities.

City of Rochester, Monroe County, New York

Chapter 104: Streets and Street Encroachments

Article I - Streets and Sidewalks

§ 104-29. Complete Streets Policy. *[Added 11-15-2011 by Ord. No. 2011-356]*

A. Purpose. The City seeks to create an interconnected network of transportation facilities which accommodate all modes of travel in a manner that is consistent with neighborhood context and supportive of community goals by establishing a Complete Streets Policy to incorporate active transportation into the planning, design, and operation of all future City street projects, whether new construction, reconstruction, rehabilitation, or pavement maintenance. Active transportation attempts to better integrate physical activity into our daily lives through increased emphasis on walking, bicycling, and public transportation. Active transportation improves public health, reduces traffic congestion, enhances air quality, and supports local economic development. Complete streets are

streets that are planned, designed, operated, and maintained to enable safe access for all users and upon which pedestrians, bicyclists, transit users, persons with disabilities, and motorists of all ages and abilities are able to safely move along and across.

B. The City Engineer shall include bicycle, pedestrian and transit facilities in all street construction, reconstruction, rehabilitation and pavement maintenance projects conducted by or on behalf of the City, as appropriate, subject to the exceptions contained herein.

C. The City shall plan, design, build and maintain all bicycle, pedestrian, and transit facilities in accordance with accepted federal, state and local standards and guidelines, but will consider innovative and/or nontraditional design options, as appropriate.

D. The incorporation of bicycle, pedestrian, and transit facilities shall be mandated in all street construction, reconstruction, rehabilitation and pavement maintenance projects undertaken by or on behalf of the City, except under one or more of the following conditions:

(1) The City Engineer determines there is insufficient space within the right-of-way to safely accommodate such new facilities.

(2) The City Engineer determines that establishing such new facilities would require an excessive and disproportionate cost.

(3) The City Engineer determines that inclusion of such new facilities would create a public safety risk for users of the public right-of-way.

(4) The project is limited to routine or seasonal maintenance activities such as mowing, sweeping, or spot pavement repairs, including chip and seal and crack seal activities.

(5) Bicyclists and pedestrians are prohibited by law from using the facility.

E. The Traffic Control Board shall review all street construction, reconstruction, rehabilitation and pavement maintenance projects for consistency with this policy.

F. The City Council shall receive an annual report from the City Engineer on the City's consistency with this policy with respect to all street construction, reconstruction, rehabilitation and pavement maintenance projects under design or construction by or on behalf of the City.

G. Planning studies and/or engineering reports for street projects prepared by or on behalf of the City shall include documentation of compliance with this policy.

An adequate public facilities ordinance is a growth management approach that ties or conditions development approval to the availability and adequacy of public facilities and services, thus ensuring that new development does not take place unless the infrastructure is available to support it. An Adequate Public Facilities Ordinance is an ordinance adopted by the local government that allows it to defer the approval of developments based upon a finding by the governing body that public facilities would not be adequate to support the proposed development at build out.

Model Adequate Public Facilities Ordinance

Funded by a Minnesota Pollution Control Agency Sustainable Communities Grant

I. Purpose and Intent

- A. To ensure that public facilities needed to support new development meet or exceed the adopted level of service standards established by the Model Community Comprehensive Plan and this ordinance;
- B. To ensure that no rezonings are approved that would cause a reduction in the levels of service for any public facilities below the adopted level of service established in the Model Community Comprehensive Plan;
- C. To ensure that adequate public facilities needed to support new development are available concurrent with the impacts of such development;
- D. To establish uniform procedures for the review of rezoning applications subject to the concurrency management standards and requirements;
- E. To facilitate implementation of goals and policies set forth in the Model Community Comprehensive Plan relating to adequacy of public facilities, level of service standards and concurrency, including:
 - 1. Goal 1 - Avoid sprawling or leapfrog development as an inefficient use of Model Community's infrastructure and services.
 - 2. Goal 2 - Give priority to development opportunities that do not require the construction of new public infrastructure.
- F. To ensure that all applicable legal standards and criteria are properly incorporated in these procedures and requirements.

II. Applicability

- A. This Section shall not apply to any use, development, project, structure, fence, sign, or activity which does not result in a new residential dwelling unit.
- B. The provisions of this Section shall apply to all applications for development approval requesting a residential use, or those portions of applications for development approval requesting a residential use, within the unincorporated area of Model Community. No Development Order shall be granted, approved, or issued unless accompanied by a Concurrency Data Form that has received a positive concurrency determination or a positive concurrency determination subject to conditions
- C. No application for development approval shall be approved unless it has received a positive concurrency determination as set out in Section VII.A, or a positive concurrency determination subject to conditions, as set out in Section VII.C.

D. Vested Rights

1. Nothing in this ordinance shall limit or modify the rights of an applicant to complete any development authorized by an approved Site Specific Development Plan for a period extending three (3) years following the approval thereof or the expiration date set forth in the Site Specific Development Plan.
2. If a developer has, by his actions in reliance on prior regulations, obtained vested rights that by law would have prevented Model Community from changing those regulations in a manner adverse to his interests, nothing in this ordinance authorizes Model Community or any official thereof to abridge those rights.

E. The determination of concurrency shall not affect the otherwise operable and applicable provisions of the Model Community Zoning Code or the Model Community Subdivision Ordinance all of which shall be operative and remain in full force and effect without limitation.

F. A Concurrency Data Form shall not be required for proposed residential development in municipalities in Model County unless the municipality and the County have mutually executed an intergovernmental agreement providing for the County to undertake this function on behalf of the municipality.

III. General Provisions-Monitoring

A. Concurrency Information Database - Model Community Staff shall develop, maintain, and update a Concurrency Information Database that shall provide support to Model Community officials and departments responsible for concurrency review, monitoring, and planning for public facilities. At a minimum, the database shall contain the following information:

1. Existing dwelling units and nonresidential development;
2. Committed development;
3. The capacity of existing public facilities provided by Model Community, based on adopted level of service; and
4. The capacity created by the completion of public facilities to be provided by Model Community, and that are included in the capital improvements program.

B. Annual Review - Model Community Staff shall, not less frequently than annually, prepare and submit to the Council an annual Concurrency Management Report. The report shall include:

1. Growth trends and projections;
2. Proposed changes to the boundaries of impact areas for any public facility,
3. Proposed changes to existing or adopted level of service standards;
4. Proposed changes in concurrency analysis methodologies;
5. Recommendations on amendments to the Adequate Public Facilities Ordinance if appropriate; and
6. Other data, analysis, or recommendations as the Director may deem appropriate, or as may be requested by the Council.

C. Effect of Annual Review - The Annual Review may, in whole or in part, form the basis for recommendations to the Council or Council actions to repeal, amend, or modify this Section. Other data, reports, analyses, and documents relevant to such decisions as may be available may also be used.

D. Amendments - Nothing herein precludes the Council or limits its discretion to amend this Section at such other times as may be deemed necessary or desirable.

IV. Procedures for the Processing of Concurrency Data Form

A. Submittal Requirements -All applications for development approval shall be accompanied by a Concurrency Data Form that includes sufficient information to allow Model Community to determine the impact of the proposed development on public facilities pursuant to the concurrency determination procedures. The Concurrency Data Form shall be a form prepared by the Department. The information required shall include, but shall not be limited to:

1. The total number, type of dwelling units, and gross density of proposed development;
2. The location of the proposed development;
3. An identification of the public facilities impacted by the proposed development; and
4. Any other appropriate information as may be required by Model Community consistent with the provisions herein.

B. Fee for Review of Concurrency Data Form - Each application for development approval shall be accompanied by the required Concurrency review fees, as may be established by the Council.

V. Procedures for Concurrency Review and Recommendation by Department

A. Department Review - The Department (acting by and through the staff planner) shall determine whether the Concurrency Data Form complies with the submittal requirements set forth in section IV.A. If the Concurrency Data Form is incomplete or the submittal requirements have not been complied with, the Department shall so notify the applicant, specifying the deficiencies. If the Concurrency Data Form is complete and the submittal requirements have been complied with, the Department shall evaluate the proposed development for compliance with the adopted levels of service and shall submit a Concurrency Recommendation pursuant to subsection V.B.

B. Department Recommendation - If the Department concludes that each public facility will be available concurrent with the impacts of the proposed development at the adopted levels of service, the Department shall make a positive Concurrency Recommendation in its staff report. If the Department determines that any public facility will not be available concurrent with the impacts of the proposed development at the adopted levels of service based upon existing public facilities, the Department shall make a negative Concurrency Recommendation in the staff report or a positive Concurrency Recommendation with appropriate conditions consistent with the criteria set forth in subsections X.B and VII.C of this Section. If the Department recommends that the application be conditionally approved, the staff report shall recommend conditions or stipulations that may address the density of the proposed development, the timing and phasing of the proposed development, the provision of public facilities by the applicant or any other reasonable conditions to ensure that all public facilities will be adequate and available concurrent with the impacts of the proposed development. The staff report shall, at a minimum, include the following, based upon staff and referral agency concurrency management recommendations:

1. The number of residential dwelling units proposed by the applicant, by type, and the resulting number of residential dwelling units served by each public facility;
2. The timing and phasing of the proposed development, if applicable;
3. The specific public facilities impacted by the proposed development;
4. The extent of the impact of the proposed development in the applicable impact areas;
5. The capacity of existing public facilities in the impact areas which will be impacted by the proposed development, based on adopted level of service;

6. The demand on existing public facilities in the impact areas from all existing and approved development;
7. The availability of existing capacity to accommodate the proposed development; and
8. If existing capacity is not available, planned capacity and the year in which such planned capacity is projected to be available to serve the proposed development.

VI. Withdrawal of Concurrency Data Form - The applicant may withdraw the Concurrency Data Form at any time by submitting a written request to the Department. Withdrawal may result in the forfeiture of some or all fees paid by the applicant for the processing of the Concurrency Data Form.

VII. Concurrency Determination by Council-Criteria - A proposed rezoning or special review that could result in a range of potential impacts shall be reviewed as if the greatest impact would result. The concurrency review shall compare the capacity of public facilities to the maximum projected demand that may result from the proposed rezoning or special review based upon the maximum potential density of the affected area pursuant to the rezoning or special review. Nothing herein shall authorize a rezoning or an allowance by special review that would otherwise be inconsistent with the Model Community Comprehensive Plan or the Model Community Land Use Map. Upon receipt of the staff report, and subject to compliance with all other applicable standards of approval for a Development Order, the Council may determine:

A. A positive Concurrency Determination

B. A negative Concurrency Determination

C. A positive Concurrency Determination subject to one or more of the following conditions:

1. Deferral of further Development Orders until all public facilities are available and adequate if public facilities in the impact area are not adequate to meet the adopted levels of service for the development proposal, consistent with the requirements of subsection X.B herein.
2. Reduction of the density or intensity of the proposed development, including phasing of development, to a level consistent with the available capacity of public facilities.
3. Provision by the applicant of the public facilities necessary to provide capacity to accommodate the proposed development at the adopted levels of service and at the time that the impact of the proposed development will occur.

VIII. Expiration of Concurrency Determination

A. A Concurrency Determination issued pursuant to subsection VII of this Section shall be deemed to expire when the Development Order to which it is attached expires, lapses, or is waived or revoked, or if the applicant has not complied with conditions attached to its issuance.

B. If a Concurrency Determination attached to a rezoning expires, Model Community may initiate proceedings to rezone the property.

IX. Effect of Positive Concurrency Determination

A. A Positive Concurrency Determination for a Development Order shall be deemed to indicate that public facilities are available as determined in subsection X.B herein at the time of issuance of the Concurrency Determination.

B. The Concurrency Determination shall expire and become null and void upon the expiration of the Development Order to which it is attached or the time frame for submitting a subsequent application for approval, unless an application for a subsequent Development Order is submitted within the time

frames set forth in the Model Community Zoning Code. If no expiration date is provided in the Model Community Zoning Code in the conditions of the Concurrency Determination or in the conditions of permit approval, the Concurrency Determination shall expire within two (2) years after approval of the Development Order.

C. A Concurrency Determination shall not be deemed as evidence supporting a request for a Model Community Comprehensive Plan amendment changing designated land use from one category to another, nor shall it affect the need for the applicant for a rezoning to meet all other requirements as set forth in this ordinance.

D. Advancement of Capacity - No advancement of capacity for public facilities needed to avoid a deterioration in the adopted levels of service shall be accepted by the Council unless the proposed public facility is a planned capital improvement or appropriate conditions are included to ensure that the applicant will obtain all necessary approvals for such planned capital improvement from any governmental agency having jurisdiction over such planned capital improvement prior to or concurrent with the issuance of a final residential subdivision plat or, if subdivision approval is not required, a building permit. If such planned capital improvement requires the approval of a governmental agency, such approval shall authorize the full capacity upon which the Concurrency Determination was rendered. The commitment to construction of public facilities prior to the issuance of a building permit shall be included as a condition of the Concurrency Determination and shall contain, at a minimum, the following:

1. For planned capital improvements, a finding that the planned capital improvement is included within the capital improvements program of the applicable service provider;
2. An estimate of the total funding needed to construct the planned capital improvement and a description of the cost participation associated therewith;
3. A schedule for commencement and completion, of construction of the planned capital improvement with specific target dates for multi-phase or large-scale capital improvement projects;
4. A statement, based on analysis, that the planned capital improvement is consistent with the Model Community Comprehensive Plan; and
5. At the option of Model Community, and only if the planned capital improvement will provide capacity exceeding the demand generated by the proposed development, reimbursement to the applicant for the pro rata cost of the excess capacity.

X. Methodology and Criteria for Determining Availability and Adequacy of Public Facilities

A. Level of Service Standards - Compliance with level of service standards shall be measured in accordance with the standards set forth in Appendix A, as the same may be amended from time to time, and which are incorporated by reference as if set forth in its entirety herein.

B. Availability of Public Facilities - Public facilities shall be deemed to be available within the applicable impact area if they meet the following standards:

1. Water Facilities, Wastewater Facilities, and Fire Protection Facilities
 - a. The public facilities are currently in place or will be in place when the Development Order is granted; or
 - b. Provision of the public facilities are a condition of the Development Order and are guaranteed to be provided at or before the approval of a final plat or issuance of a building permit for proposed development on the subject property; or

c. The public facilities are under construction and will be available at the time that the impacts of the proposed development will occur; or d. The public facilities are guaranteed by an enforceable development agreement ensuring that the public facilities will be in place at the time that the impacts of the proposed development will occur.

2. Regional Parks and Public Schools

- a. One of the criteria set forth in subsection 10.B.1 is met, or
- b. The public facilities are the subject of a written agreement or an enforceable development agreement that provides for the commencement of construction of the required Regional Parks or Public Schools, or
- c. The public facilities are planned capital improvements.

3. Streets

- a. One of the criteria set forth in subsections 10.B or 10.B.2, above, is met, or
- b. Proposed development is located in a traffic impact area in which the streets or intersections needed to achieve the adopted level of service are included in the capital improvements program, and the Council makes the following specific findings:
 - i. The streets identified in this subsection are financially feasible; and
 - ii. The capital improvements program provides for the construction of public facilities or improvements to streets within the traffic impact area that are necessary to maintain the adopted level of service standards; and
 - iii. The capital improvements program contains a financially feasible funding system based on currently available revenue sources that are adequate to fund the streets required to serve the development authorized by the Development Order; and
 - iv. The applicable provisions of the capital improvements program show (1) the estimated date of the commencement of construction and (2) the estimated date of project completion for needed streets; and
 - v. The concurrency information database includes sufficient data to ensure that proposed developments approved subject to this subsection do not cause a reduction of the level of service below the adopted level of service.

C. Adequacy of Public Facilities - Public facilities shall be deemed to be adequate if it is demonstrated that they have available capacity to accommodate the demand generated by the proposed development in accordance with the following calculation methodology, unless otherwise indicated herein:

- 1. Calculate capacity for each public facility within an impact area by adding together:
 - a. The capacity of water facilities, wastewater facilities, and fire protection facilities consistent with subsection X.B.1 herein;
 - b. The capacity of public schools and regional parks consistent with subsection X.B.2 herein; and
 - c. The capacity of streets consistent with subsection X.B.3 herein.
- 2. Calculate available capacity by subtracting from the capacity the sum of:
 - a. The existing demand for each public facility; and
 - b. The demand for each public facility created by the anticipated completion of committed development; and

c. The demand for each public facility created by the anticipated completion of the proposed development under consideration for concurrency determination.

D. Public Facilities Affecting Areas Outside of Model Community General - Availability and adequacy of streets shall be determined only with respect to streets located within Model Community.

If part of the applicable traffic impact area lies in an adjacent county or in a municipality within Model Community, absent an intergovernmental agreement with the county or municipality, availability and adequacy may be determined only with respect to that portion of the streets located within Model Community.

E. Intergovernmental Agreement - If Model Community has entered into an intergovernmental agreement with an adjacent county or with a municipality to evaluate public facilities in such areas, an applicant will be subject to the evaluation of the level of service standard for the facility as adopted by the adjacent county or municipality. Prior to the determination of concurrency, Model Community shall require that the adjacent county or municipality certify that issuance of a Development Order for the proposed development will not cause a reduction in the level of service standards in Model Community with respect to those public facilities lying within the adjacent county or the municipality.

F. Available capacity for fire protection facilities, water facilities, wastewater facilities, and public schools shall include municipally based demand and municipally based facilities

XI. Administration

A. Rules and Regulations - The Council may adopt, by resolution, any necessary rules, regulations, administrative guidelines, forms, worksheets and processes to efficiently and fairly administer and implement this Section.

B. Fees - The Council may establish, by resolution, a fee schedule for each of the procedures, determinations, approvals and certifications required by this ordinance.

XII. Conflict - To the extent of any conflict between other Model Community codes or regulations and this Section, the more restrictive is deemed to be controlling. This Section is not intended to amend or repeal any existing Model Community code or regulation.

XIII. Severability - If any provision of this Section is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such provision shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining provisions of this Section.

Travel Demand Management

The Parking and Transportation Demand Management Ordinance is a national model for improving mobility and access, reducing congestion and air pollution, and increasing safety by promoting walking, bicycling, public transit, and other sustainable modes. The ordinance was adopted in 1998 and made permanent in 2006. Participation is triggered when an owner of non-residential property proposes to add parking above the registered number.

City of Cambridge, Massachusetts

Chapter 10: Vehicles and Traffic

Chapter 10.18, Parking and Transportation Demand Management Planning; Parking Space Registration

A. It is the purpose of this Chapter to regulate and control atmospheric pollution from motor vehicles by formalizing parking and transportation demand management planning, programs, and coordination which have been ongoing for a number of years. This Chapter will reduce vehicle trips and traffic congestion within the City, thereby promoting public health, safety, and welfare and protecting the environment. This Chapter requires parking and transportation demand management (PTDM) plans for commercial parking facilities and other types of non-residential parking facilities over a specified size as set forth in 10.18.050 and 10.18.070. This Chapter also establishes a process whereby City officials will be able to track the number, use and location of off-street parking spaces in the City.

B. A Parking and Transportation Demand Management Planning Officer will be designated by the City Manager with the responsibility for reviewing, conditioning, approving and/or denying PTDM plans. Any project subject to the requirements of this Chapter shall not be qualified to receive a permit from the Planning Board, a commercial parking permit from the Commercial Parking Control Committee, a special permit or variance from the Board of Zoning Appeal, a building permit from the Commissioner of Inspectional Services, a certificate of occupancy from the Commissioner of Inspectional Services, or an operating license from the License Commission absent written approval of its PTDM plan from the PTDM Planning Officer or evidence of registration of its parking spaces with the Department of Traffic, Parking, and Transportation. (1211, Added, 11/16/1998)

10.18.020 - Definitions.

Commercial Parking Space means a parking space available for use by the general public at any time for a fee. The term shall not include (i) parking spaces which are owned or operated by a commercial entity whose primary business is other than the operation of parking facilities, for the exclusive use of its lessees, employees, patrons, customers, clients, patients, guests or residents but which are not available for use by the general public; (ii) parking spaces restricted for the use of the residents of a specific residential building or group of buildings; (iii) spaces located on public streets; or (iv) spaces located at a park-and-ride facility operated in conjunction with the Massachusetts Bay Transportation Authority.

Commercial Parking Facility means a parking facility owned or operated by a commercial entity whose primary business is the operation of a parking facility and at which there are at least five (5) Commercial Parking Spaces.

Commercial Parking Permit means a (i) permit issued under chapter 10.16 of the Cambridge Municipal Code, authorizing the use of a designated number of parking spaces at a specified location as Commercial Parking Spaces; (ii) a permit or approval issued prior to the effective date of this Chapter pursuant to the Procedures, Criteria, and Memorandum of Agreement dated November 15, 1984; (iii) a Controlled Parking Facility Permit that expressly authorizes use of the parking facility for Commercial Parking Spaces; or (iv) a letter from the Director confirming the number of spaces at a specified location that were in existence and being used as Commercial Parking Spaces as of October 15, 1973.

Controlled Parking Facility Permit (CPFP) means a permit issued by the Director prior to the effective date of this Chapter, which authorized the construction or operation of a parking space or the construction, operation, or modification of a parking facility.

Determination of Exclusion means a determination made by the Director that a parking facility or a parking space did not require a controlled parking facility permit.

Director means Director of the Cambridge Department of Traffic, Parking, and Transportation.

Effective Date means November 16, 1998, the original date of final adoption of this Chapter of the Cambridge Municipal Code.

Existing Parking Facility shall mean a parking facility for which (i) a certificate of occupancy was issued by the Commissioner of Inspectional Services; (ii) an operating license was issued by the License Commission; or (iii) the Director issued a letter confirming the number of spaces at that location which spaces were in existence and being used as commercial parking spaces as of October 15, 1973 (a "Director's Letter").

New Project means a project to construct or operate parking spaces within a new facility or an existing parking facility which will cause such facility to have a net increase in the number of spaces for which a certificate of occupancy, operating license, variance, special permit, or Director's Letter has not been issued as of the effective date of this Chapter and which is not a park-and-ride facility operated in conjunction with the Massachusetts Bay Transportation Authority.

Parking Facility means any lot, garage, building or structure or combination or portion thereof, on or in which motor vehicles are parked, except any such facility used in association with or by a municipal police or fire station, and in the case of university or college campuses, the stock of parking spaces maintained within the City by the university or college which supports university or college activities within the City.

Person means and includes a corporation, firm, partnership, association, executor, administrator, guardian, trustee, agent, organization, any state, regional or political subdivision, agency, department, authority or board, and any other group acting as a unit, as well as a natural person.

Planning Officer means the City official responsible for PTDM plan reviews.

PTDM means Parking and Transportation Demand Management.

Small Project means a project to construct or operate five (5) to nineteen (19) non-commercial, non-residential parking spaces within a new facility or an existing parking facility which will cause such Facility to have a net increase in the number of spaces for which a certificate of occupancy, operating license, variance, special permit, or Director's Letter has not been issued as of the effective date of this Chapter. To qualify as a Small Project, the total number of non-commercial, non-residential parking spaces at the parking facility must remain at or below nineteen (19). (Ord. 1287, Amended, 09/12/2005; 1252, Amended, 09/24/2001; 1211, Added, 11/16/1998)

10.18.030 - PTDM Planning Officer.

Within thirty (30) days of the effective date of this Chapter, the City Manager shall designate a Parking and Transportation Demand Management Planning Officer who shall have responsibility for reviewing, conditioning, approving, and/or denying PTDM plans and who shall report to the City Manager. Said officer shall be a Cambridge resident within six months of employment in this position. Prior to rendering his/her determination(s), the Planning Officer shall consult with the PTDM plan applicant, the Director and the Assistant City Manager for Community Development. (1211, Added, 11/16/1998)

10.18.040 - Registration of All Parking Spaces.

A. No person shall build, expand, or reconfigure a parking facility for non-residential parking spaces resulting in a net increase in the number of parking spaces or a change in the use of such spaces based on the categories of use listed below at paragraphs b(v) and (vi), without first submitting a parking registration form to, and obtaining acceptance from, the Director.

B. The registration form shall be prepared by the Director and shall be available at the offices of the Department of Traffic, Parking and Transportation. The form will require the following information:

- (1) name and address of parking facility owner;
- (2) name and address of parking facility operator;
- (3) address of parking facility;
- (4) total number of existing parking spaces;
- (5) number of existing parking spaces in each of the following categories:
 - (a) residential
 - (b) commercial
 - (c) non-commercial
 - (d) customer
 - (e) employee
 - (f) patient
 - (g) student
 - (h) client
 - (i) guest
- (6) number of parking spaces proposed to be added to the parking facility in each of the following categories:

- (a) residential
 - (b) commercial
 - (c) non-commercial
 - (d) customer
 - (e) employee
 - (f) patient
 - (g) student
 - (h) client
 - (i) guest
- (7) identification of any existing parking permits for the parking facility; and
- (8) explanation of any enforcement actions against the parking facility.

C. The Director shall accept or return a registration form to the registrant with a request for additional information within thirty (30) days after the form was filed.

D. The License Commission shall not issue a license and the Commissioner of Inspectional Services shall not issue a building permit or certificate of occupancy for a parking facility subject to this section without evidence (i) that the registration form has been accepted by the Director; and (ii) if required, that the facility has a PTDM Plan approved by the Planning Officer.
(1252, Amended, 09/24/2001; 1211, Added, 11/16/1998)

10.18.050 - Parking and Transportation Demand Management Plans.

A. No person shall build, expand, or operate a parking facility subject to the Parking and Transportation Demand Management (PTDM) Plan requirements of this Chapter absent a PTDM Plan approved by the Planning Officer.

B. The PTDM requirements of this Chapter shall apply to each of the following:

- (1) any commercial parking facility for which a certificate of occupancy or operating license, variance or special permit was not obtained prior to the effective date of this chapter;
- (2) an existing commercial parking facility at which the number of parking spaces is increased after the effective date of this chapter;
- (3) any parking facility at which the use of existing or permitted parking spaces is changed to commercial use after the effective date of this chapter;
- (4) any new project to build or create by change of use twenty or more non-residential parking spaces; and
- (5) any new project to expand an existing parking facility resulting in a total number of non-residential parking spaces of twenty (20) or more.

C. The PTDM Plan shall be designed to minimize the amount of parking demand associated with the project and reduce single-occupant vehicle trips in and around Cambridge. The PTDM Plan shall be based on the following facts, projections and commitments:

- (1) Facts and Projections:
 - (a) nature of development and property use;

- (b) proximity of project to public transit and other non-Single-Occupant Vehicle facilities;
- availability of and accessibility to offsite parking spaces which could serve the project;
- (c) number of employees and their likely place of origin; and
- (d) type and number of patrons/users of proposed parking supply and their likely place of origin.
- (e) number of vehicle trips expected to be generated by the project and description of measures to reduce associated traffic impacts on Cambridge streets; and other factors published by the Planning Officer.

(2) Commitments:

- (a) commitment to work with the Cambridge Office of Work Force Development;
- (b) commitment to implement vehicle trip reduction measures including some or all of the following:

[1] subsidized MBTA passes and other incentives; shuttle services; ride-sharing services; bicycle and pedestrian facilities; flexible working hours; preferential parking for Low Emission Vehicles/Zero Emission Vehicles/bicycles/carpools/vanpools (Note: this list is not meant to preclude implementation of other types of vehicle trip reduction measures). This commitment must be accompanied by a detailed description of the measures proposed to be implemented; and

[2] commitment to establish and make reasonable efforts to achieve a specified, numeric reduction (or percent reduction) in single-occupant vehicle trips in and around Cambridge. The percent reduction will be based on PTDM practices successfully implemented in reasonably comparable environments and as identified in professional and academic literature and based on analysis of existing trip reduction measures in Cambridge.

[3] Each PTDM Plan shall identify the total number of existing and proposed parking spaces at the facility and specify how many existing and proposed spaces fall within each of the following categories (explain how many spaces are used for multiple purposes):

- [a] residential
- [b] commercial
- [c] non-commercial
- [d] customer
- [e] employee
- [f] patient
- [g] student
- [h] client
- [i] guest

[4] Where the parking facility includes or proposes a combination of commercial and non-commercial parking spaces, the Plan shall specify how the parking facility will prevent commercial use of the non-commercial parking spaces.

[5] Each PTDM Plan shall contain the following certification signed by an authorized corporate officer: "I hereby certify that a commercial parking permit has been obtained for each space being used for commercial parking. None of the other

existing or proposed parking spaces at this parking facility have been or will be available as commercial parking spaces until a commercial parking permit therefor has been obtained."

D. The Planning Officer shall review, condition, approve and/or deny the PTDM Plan based on the above-listed facts, projections, and commitments. The Planning Officer shall issue his/her decision in writing within 60 days of receipt of the proposed PTDM Plan. The required time limit for action by the Planning Officer may be extended by written agreement between the proponent and the Planning Officer. Failure by the Planning Officer to take final action within said sixty (60) days or extended time, if applicable, shall be deemed to be approval of the proposed PTDM plan. If the project proponent elects to make a request pursuant to 10.18.060, the decision of the Planning Officer shall be expanded to include a recommendation about whether offsite parking should be allowed at distances greater than those allowed in the Zoning Ordinance and/or whether fewer parking spaces than the minimum required in the Zoning Ordinance should be allowed. Decisions of the Planning Officer may be appealed by the project proponent to a review committee composed of the City Manager, or his designee, and two other City staff members designated by the City Manager none of whom may have participated in the initial review of the Plan.

E. The Planning Officer shall also make available sample PTDM plans which a project proponent may adapt for their project, such to approval by the Planning Officer.

F. No permit, commercial parking permit, special permit, variance, building permit, certificate of occupancy, or operating license shall be issued for any project subject to 10.18.050 by the Planning Board, Commercial Parking Control Committee, Board of Zoning Appeal, Commissioner of Inspectional Services, or License Commission absent a written decision indicating approval from the Planning Officer of the project proponent's PTDM Plan. Any such permit or license shall be consistent with, and may incorporate as a condition, the decision of the Planning Officer and shall include written notice of the requirements of 10.18.050 (g) and (h), below. Nothing in this ordinance shall be construed to limit the power of the Planning Board or Board of Zoning Appeal to grant variances from or special permits under the provisions of the Zoning Ordinance. No project proponent shall be required by the Planning Officer to seek such relief under the Cambridge Zoning Ordinance.

G. Approvals issued by the Planning Officer shall be automatically transferrable by and among private parties, provided that the proposed new owner (the "Transferee") shall continue to operate under the existing PTDM Plan and shall submit to the Planning Officer within thirty (30) days of the title transfer a certification that the existing PTDM plan will remain in effect. The certification shall be submitted on a form issued by the Planning Officer and shall certify that such Transferee commits to implement the existing PTDM plan, as approved; and acknowledges that failure to implement the plan is subject to the enforcement provisions of this Chapter. Where such certification is submitted, the approved plan shall remain in effect as to the Transferee. The Transferee may elect instead to and consult with the Planning Officer within thirty (30) days of title transfer regarding appropriate revisions to the existing plan. Based on such consultation, the Planning Officer may require information from the Transferee concerning proposed changes in use of the parking facility and associated buildings and the relevant facts and projections regarding the proposed changes. Within thirty (30) days of receipt of such information, the Planning Officer may issue a written approval of the revised plan and obligations to

the Transferee, or the Planning Officer may require submittal of a new PTDM Plan from the Transferee for review, condition, approval and/or denial. Until such time as a new or revised plan has been approved, the existing PTDM plan shall remain in effect.

H. Each PTDM Plan approval issued by the Planning Officer shall contain, at a minimum, the following conditions:

(1) The parking facility owner and operator each commit to implement all elements of the PTDM Plan, as approved, including annual reporting requirements, and to maintain records describing implementation of the Plan;

(2) The City shall have the right to inspect the parking facility and audit PTDM implementation records; and

(3) The parking facility owner and operator each commit to notify and consult with the Planning Officer thirty (30) days prior to any change in ownership, use or operation of the facility. (1252, Amended, 09/24/2001; 1211, Added, 11/16/1998)

10.18.060 - Reduction in Minimum Parking and Maximum Distance Requirements.

A. A project proponent may elect to request that the Planning Officer include as an element of its PTDM Plan a plan for fewer parking spaces than the minimum set forth in the Zoning Ordinance. Upon the written request of the project proponent, based on an evaluation of the facts, projections, and commitments listed at 10.18.050 (c), the Planning Officer may make a written recommendation about the maximum number of parking spaces for the project. This recommendation shall remain subject to review and approval by the Planning Board or Board of Zoning Appeal as appropriate.

B. A project proponent may elect to request that the Planning Officer include as an element of its PTDM Plan a plan for utilizing off-site parking spaces that are farther from the project site than the maximum distance requirements set forth in the Zoning Ordinance. Upon the written request of the project proponent, based on an evaluation of the facts, projections, and commitments listed at 10.18.050 (c), the Planning Officer may make a written recommendation about how many parking spaces serving the project may be appropriately located at an off-site location and at what distance from the project site. This recommendation shall remain subject to review and approval by the Planning Board or Board of Zoning Appeal as appropriate.

(1211, Added, 11/16/1998)

10.18.070 - Requirements Applicable to Small Projects.

The owner or operator of each Small Project shall implement at least three (3) PTDM measures and maintain records of such implementation. A list of acceptable types of measures may be obtained from the Traffic, Parking and Transportation Department, the Inspectional Services Department, the Community Development Department, or the License Commission. The Planning Officer shall create and periodically update this list, which shall include: T-pass subsidies; bicycle parking; changing facilities; carpools/vanpools; financial incentives not to drive alone; or other similar measures. (1252, Amended, 09/24/2001; 1121, Added, 11/16/1998)

10.18.080 - Enforcement.

A. The Director shall enforce the provisions of this Chapter. If the Director has reason to believe that any provision of this Chapter is being violated, the Director shall investigate the possible violation. If

after investigation the Director determines that any provision of this Chapter is being violated, s/he shall provide a first written notice of violation to the person charged with the violation, or the duly authorized representative thereof, of the determination of violation and shall order that the violation cease within thirty (30) days of the issuance of the first written notice. If the violation is not cured within the thirty (30) days after issuance of the determination of violation, the Director may proceed to assess the fines established in this chapter as well as any other remedies available to the city. In addition to all other remedies, if the violation has not ceased within thirty (30) days after the first written notice, then the Director may order shutdown of the parking facility. Second or subsequent written notices to a facility for the same violation shall be immediately effective and shall not provide the thirty (30) day opportunity to cure contained in the first written notice. A determination and order of the Director may be appealed to the City Manager by the person charged with the violation within thirty (30) days of issuance of the Director's determination and order.

B. In addition to other remedies available to the City, any person who builds or modifies a parking facility without complying with the provisions of this Chapter shall be subject to a fine of up to \$10.00 per day per parking space for every day that such parking space was operated without a registration accepted by the Director or without a PTDM Plan approval issued by the Planning Officer or in non-compliance with an approved PTDM Plan. On a determination, after investigation, by the Director that this Chapter is being violated, and the exhaustion of any appeal to the City Manager in accordance with (a) above, the Director shall take steps to enforce this chapter by causing complaint to be made before the district court and/or by applying for an injunction in the superior court.

C. In addition to other remedies available to the City, a determination that a facility is operating in violation of the provisions of this Chapter shall be ground for revocation by the Director of the facility's parking permit or other form of approval.

D. The Planning Officer shall have independent authority to inspect a parking facility and audit its records to determine whether it is in compliance with its PTDM Plan. The Planning Officer shall issue a finding of non-compliance in writing and provide copies to the parking facility owner and operator and to the Director. (1211, Added, 11/16/1998)

10.18.090 - Evaluation.

The PTDM Planning Officer shall prepare a report annually on the status and effectiveness of the implementation of this Ordinance.

The purpose of Transportation Demand Management (TDM) is to promote more efficient use of existing transportation facilities, reduce traffic congestion and mobile source pollution, and to ensure that new developments are designed in ways to maximize the potential for alternative transportation usage. TDM is a combination of services, incentives, facilities and actions that reduce single occupancy vehicle trip to help relieve traffic congestion, allow parking flexibility, and reduce air pollution. Recognizing that development size and land use directly affect traffic generation, the City of Bloomington has proposed two levels of TDM program applicability: Tier 1 being a "binding" program that will be required for larger, office, industrial, and institutional development and Tier 2 being a "non-binding"

program (primarily an awareness effort) that will be required for all new non-residential development (including retail and commercial) that doesn't meet the threshold for the Tier 1 program.

City of Bloomington, Minnesota

Chapter 21. Zoning and Land Development

Article III. Development Standards, Division A. General Standards

Sec. 21.301.09. Transportation Demand Management (TDM).

(a) Purpose and intent. The purpose of Transportation Demand Management (TDM) is to promote more efficient utilization of existing transportation facilities, reduce traffic congestion and mobile source pollution, and to ensure that new developments are designed in ways to maximize the potential for alternative transportation usage. TDM is a combination of services, incentives, facilities and actions that reduce single occupancy vehicle (SOV) trips to help relieve traffic congestion, allow parking flexibility, and reduce air pollution.

(b) Applicability. Recognizing that development size and land use type directly affect traffic generation, the City has established two levels of TDM program applicability:

(1) A Tier 1 TDM program is required for all new development and/or redevelopment consisting of:

(A) New developments where the City Code requires the provision of more than 350 parking spaces attributable to office, institutional, industrial, and warehouse uses;

(B) New non-residential developments seeking flexibility from the standard parking requirements in accordance with City Code Section 21.301.06 (e) (3);

(C) Redevelopment and/or additions to existing non-residential development that result in a 25 percent or greater increase in parking spaces attributable to office, institution, industrial, and warehouse uses, and the total amount of required parking attributable to office, institution, industrial, and warehouse uses is 350 or more spaces; or

(D) Other development as required by City Council condition.

(2) A Tier 2 TDM program is required for new non-residential development, non-residential redevelopment, and/or additions to existing development over 1,000 square feet in floor area, provided a Tier 1 TDM program is not required.

(3) The following uses shall be exempt from Tier 1 TDM program requirements:

(A) Places of assembly;

(B) Schools (K-12);

(C) Parks and recreational facilities; and

(D) Other institutional uses that are not customarily in operation between the peak weekday traffic period (6:30-9:00 AM and 3:00-6:00 PM)

(c) TDM Plan Requirements. Mandatory TDM Plan requirements for the two levels include:

(1) Tier 1 TDM Program.

(A) A TDM study prepared by a qualified traffic consultant that includes:

(i) A description of the projected transportation and parking impacts of the development at full site development, forecasts of SOV trips generated and the likely timing of those trips, and anticipated parking demand. The TDM study must be

conducted in accordance with accepted methodology approved by the Director of Public Works or the Director's designee. If determined to be a Special Study subject to the requirements of City Code Section 19.14 (b) (5), the traffic study must be prepared by an independent traffic engineering professional under the supervision of the Director of Public Works or the Director's designee, and paid for by the applicant.

(B) A TDM plan prepared by the property owner that includes:

(i) A description of the TDM goals, including peak hour SOV trip reduction goals;

(ii) Description of TDM strategies and implementation measures and the anticipated SOV trip reduction associated with each strategy. The TDM measures may include, but are not limited to: on-site transit facilities, preferential location of car and van pool parking, telecommuting, on-site bicycle and pedestrian facilities and employer subsidized transit passes;

(iii) Description of the evaluation measures and process that will be used to determine the effectiveness of the TDM strategies used and progress toward achieving the SOV trip reduction goals; and

(iv) Proposed total expenditures to implement the TDM strategies for at least three years following the issuance of the Certificate of Occupancy.

(C) A TDM agreement prepared by the City Attorney's office, executed by the property owner and the City, and filed by the property owner with the records for that property in the Registrar of Titles' or Recorder's Office of Hennepin County with proof thereof presented to the Issuing Authority prior to issuance of a building permit;

(D) A financial guarantee in the amount established by the TDM program schedule set forth in the TDM Policies and Procedures Document maintained by the Director of Public Works; and

(E) An annual status update report in the format specified in the TDM Policies and Procedures Document maintained by the Director of Public Works, or otherwise approved by the Director or the Director's designee, hereinafter referred to as the "Annual Status Report".

(2) Tier 2 TDM Program.

(A) A basic Tier 2 TDM Plan describing the TDM strategies the property owner agrees to implement to reduce peak SOV trip generation that is prepared in the format specified in the TDM Policies and Procedures Document maintained by the Director of Public Works or otherwise approved by the Director or the Director's designee.

(d) Financial Guarantee. The property owner must provide a financial guarantee prior to the issuance of the Certificate of Occupancy to ensure implementation of TDM strategies and progress towards meeting the approved TDM Plan goals when a Tier 1 TDM plan is required. The financial guarantee rate is established by the TDM program schedule set forth in the TDM Policies and Procedures Document maintained by the Director of Public Works. The financial guarantee may be provided in the form of cash, bond or a letter of credit at the discretion of the property owner. The City will retain the cash payment, bond or letter of credit for two years from the date the property owner verifies that occupancy of the leasable area of the development has reached 30 percent. This date shall hereinafter be referred to as the "Initial TDM Plan Implementation Date."

(e) Administration. The Director of Public Works or the Director's designee will administer Tier 1 and Tier 2 TDM plans, including, but not limited to:

- (1) Review and approval of TDM plans;
- (2) Maintenance of files for approved TDM plans;
- (3) Monitoring progress toward implementation of TDM strategies and evaluating success of efforts to achieve TDM plan goals;
- (4) Holding and releasing TDM financial guarantees; and
- (5) Determining compliance in implementing TDM strategies as that relates to the release or forfeiture of TDM financial guarantees.

(f) Compliance. A property owner or its successors and assigns must demonstrate a good faith effort to implement strategies described in an approved Tier 1 TDM Plan by submitting an Annual Status Report within 30 days of the one year and two year anniversary dates of the Initial TDM Plan Implementation Date. The Director of Public Works or the Director's designee will review the Annual Status Reports, within 30 days of receipt, to determine if a good faith effort has been made to implement the strategies described in an approved Tier 1 TDM Plan or otherwise achieve the approved TDM Plan goals. The Annual Status Report must include at least the following:

- (1) Results of the survey questions included in the TDM Annual Status Report model specified in the TDM Policies and Procedures Document maintained by the Director of Public Works, compiled using the model format or a format otherwise approved by the Director of Public Works or the Director's designee, to determine the effectiveness and participation in TDM strategies;
- (2) Documentation of annual expenditures made to implement TDM strategies; and
- (3) Documentation of the implementation of TDM strategies listed in the approved Tier 1 TDM Plan and an evaluation of the success of each strategy based on the survey results, as well as, at the option of the property owner, any other verifiable method of measurement such as a follow-up traffic study.

(g) Release of the TDM Financial Guarantee. If the property owner or its successors and assigns demonstrates a good faith effort to implement the strategies set forth in the approved Tier 1 TDM Plan as demonstrated by the data contained in the consecutive Annual Status Reports, the TDM financial guarantee will be released to the property owner within seven working days of that determination by the Director of Public Works or the Director's designee.

(h) Forfeiture of the TDM Financial Guarantee. Failure to comply with the provisions of an approved Tier 1 TDM plan constitutes a violation of this Section of the City Code.

- (1) If the property owner or its successors or assigns fails to submit timely Annual Status Report that document a good faith effort to implement the strategies set forth in their approved Tier 1 TDM Plan, the Director of Public Works or the Director's designee may direct that the TDM financial guarantee continue to be held for a period of up to another 12-months at the end of which an additional Annual Status Report must be submitted. The TDM financial guarantee at the end of the additional period will be either released or forfeited based upon the Director of Public Works or the Director's designee's determination of whether or not the property owner has demonstrated a good faith effort to implement the TDM strategies set forth in the approved TDM Plan or otherwise achieve the TDM Plan goals.

(2) If the Director of Public Works or the Director's designee determines on the basis of the Annual Status Reports that the failure to implement the strategies set forth in the Tier I TDM Plan or otherwise achieve the TDM Plan goals is attributable to inexcusable neglect on the part of the property owner or its successors and assigns, the financial guarantee will be immediately forfeited to the City.

(i) Appeals. The property owner or its successors or assigns may appeal the forfeiture or continued holding of the TDM financial guarantee or imposed sanctions to the City Council within 30 days following the mailing of the notice of forfeiture, continued holding or sanctions. The City will provide the appellant with at least ten days notice of the time and place of the hearing before the City Council.

Travel Demand Management (TDM) ordinance or Trip Reduction Ordinance (TRO) mitigates the effects of new or expanding development along highway corridors, in downtown areas, or any large development by mandating or encouraging management of the demand side of traffic growth. Rather than responding to increasing demand by building more road and parking infrastructure, or by restricting development until infrastructure is adequate, the community (or developer) can invest in infrastructure and programs that get people out of their cars.

Model Travel Demand Management Performance Standard

Funded by a Minnesota Pollution Control Agency Sustainable Communities Grant

I. Travel Demand Management Plan

A. All development that includes any of the following criteria shall conduct a travel demand management plan (TDM) that addresses the transportation impacts of the development on air quality, parking and roadway infrastructure:

1. Any development in the downtown zone or in the suburban office park zone needing 75 or more additional parking spaces under the Model Community site design standards;
2. Any development in any zone containing one hundred thousand (100,000) square feet or more of new or additional gross floor area, or one hundred (100) or more new or additional parking spaces;
3. Any new commercial or industrial concern that will employ 100 or more people at the new location.

B. Application for Plan Approval - Any person having a legal or equitable interest in land which requires submission of a TDM may file an application for approval of such plan on a form approved by the zoning administrator.

C. Administrative Review - The planning director, in consultation with the city engineer, shall conduct the administrative review of the TDM. The planning director shall recommend to the zoning administrator any mitigating measures deemed reasonably necessary, who shall include such recommendation as a condition of the issuance of any building permit, zoning certificate or other approval required by this zoning ordinance or other applicable law. All findings and decisions of the planning director shall be final, subject to appeal to the planning commission, as specified in Chapter XX, Administration and Enforcement.

D. Content of Plans - Any TDM shall contain at least the following:

1. A description of the goals of the TDM and its relationship to applicable Model Community transportation policies and programs.

2. A description of the transportation impacts of the development, including but not limited to forecasts of overall and peak period employment, forecasts of trips generated and mode splits, parking demand and parking supply available, and transit demand and transit supply available.

3. A description of mitigating measures designed to minimize the transportation impacts of the development, including but not limited to on-site transit facilities, transit use incentives, preferential location of car pool and van pool parking, on-site bicycle facilities including secure storage areas and amenities, staggered starting times and telecommuting opportunities.

E. Required Implementation of TDM Plan, and Performance Standards

1. Any new development or existing business expanding its operation, and requiring a conditional use permit, rezoning, or that is receiving tax or funding assistance from Model Community, shall implement a TDM plan. The plan shall meet the following performance standards:

a. Fifteen percent of employees on any given day should travel to the location using a mode other than single occupancy vehicle. Alternative modes include transit, bicycle, walking, carpooling, and telecommuting.

b. The average vehicle ridership (AVR) for employees shall be 10% lower than the AVR for the entire Downtown District in Model Community.

c. The AVR shall decrease over the first five years of active use in the new or expanded development.

Lighting Standards

The initial model outdoor lighting ordinance for the Borough of Eatontown was adopted in 1993. In February 2006, a standard for replacement and new lighting was developed that more clearly defined the regulation of electric utility floodlights. A second ordinance applicable to all existing outdoor lighting had a March 2006 adoption date. Eatontown has an approach that is appropriate for other small city and suburban areas. Its anti-light pollution regulations align with recommendations provided by the New Jersey Light Pollution Study Commission and the Illuminating Engineering Society (IES) of North America. Areas that are more rural may want to consider alternatives.

Borough of Eatontown, New Jersey

Chapter 89: Land Use

Article VII. Area, Bulk and Use Requirements

§ 89-48. Outdoor lighting. [Amended by Ord. No. 16-93; 3-97; 2-22-2006 by Ord. No. 4-2006]

A. Purpose. The governing body of the Borough of Eatontown does herein find that regulation of outdoor lighting in the Borough of Eatontown is necessary to prevent misdirected or excessive artificial light, caused by inappropriate or misaligned light fixtures that produce glare, light trespass (nuisance light) and/or unnecessary sky glow; and also that such regulation is necessary to discourage the waste of electricity and to improve or maintain nighttime public safety, utility and security.

B. All outdoor light fixtures installed and thereafter maintained, other than those serving one- and two-family dwellings, shall comply with the requirements as specified below:

(1) Where used for security purposes or to illuminate walkways, roadways and parking lots, only shielded light fixtures shall be used.

(2) Where used for commercial and industrial purposes, such as in merchandise display areas, work areas, platforms, signs, architectural, landscape or sports or recreational facilities, all light fixtures shall be equipped with automatic timing devices and comply with the following:

(a) Light fixtures used to illuminate flags, statues or any other objects mounted on a pole, pedestal or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.

(b) Other upward-directed architectural, landscape or decorative direct light emissions shall have at least 90% of their total distribution pattern within the profile of the illuminated structure.

(c) Recreational and sports facility lighting shall be shielded whenever possible. Such lighting shall have directional and glare control devices, when necessary, to comply with Subsection C.

(d) Externally illuminated signs, including commercial billboard, building identification or other similar illuminated signs, shall comply with the following:

[1] Top-mounted light fixtures shall be shielded and are preferred.

[2] When top-mounted light fixtures are not feasible, illumination from other positioned light fixtures shall be restricted to the sign area. Visors or other directional control devices shall be used to keep spill light to an absolute minimum.

(e) All other outdoor lighting shall use shielded light fixtures.

(3) All floodlight-type fixtures, once properly installed, shall be permanently affixed in the approved position.

(4) Foundations supporting lighting poles not installed four feet behind the curb shall not be less than 24 inches above ground.

(5) When 50% or more of existing outdoor light fixtures are being replaced or modified, then all lighting must be made to conform with the requirements of this section.

C. Light trespass (nuisance light). All light fixtures, except street lighting and those used on one- or two-family dwellings, shall be designed, installed and maintained to prevent light trespass, as specified in Subsection C(1) and (2) below.

(1) At a height of five feet above the property line of the subject property, illuminations from light fixtures shall not exceed 0.1 footcandle in a vertical plane on residentially zoned property.

(2) Outdoor light fixtures installed and thereafter maintained shall be directed so that there will not be any objectionable direct glare source visible above a height of five feet from any property or public roadway.

D. Illuminance and luminance requirements. Illuminance and luminance requirements shall be as set forth in the current editions of the IESNA Lighting Handbook and other IESNA publications, and this chapter shall adopt those standards.

(1) Streetlighting. Average IESNA illuminance recommendations should not be exceeded. IESNA average-to-minimum illuminance uniformity ratios are to be used as a guide for designing safe and adequate roadway lighting.

(2) Outdoor parking facilities. Outdoor parking lot illuminance shall be based on certain illuminance specifications recommended by the IESNA, as contained in Schedule A. Editor's Note: Schedule A is included at the end of this section.

(3) All other illuminance uses shall not exceed IESNA recommendations.

(4) Internally illuminated signs shall not exceed IESNA luminance recommendations.

E. Electric utility floodlights. No electric utility floodlight intended for property illumination shall be located within the public right-of-way on any public roadway or on any property unless:

(1) The luminaire is sufficiently shielded and aimed so that no objectionable direct glare source is visible at any point on the roadway where the viewing height is five feet or greater and when the distance from the mounting pole is 70 feet or greater.

(2) The property being illuminated does not exceed the maximum maintained illuminance levels to perform the lighting task prescribed in Subsection D, Illuminance and luminance requirements, of this section.

(3) All electric utility floodlights shall be subject to the requirements in Subsection C, Light trespass (nuisance light).

Schedule A
Maintained Illuminance for Parking Lots

	Basic	Enhanced Security
Horizontal illuminance		
Minimum	0.2 fc	0.5 fc
Average	1.0 fc	2.5 fc
Uniformity ratios		
Average-to-minimum	5:1	5:1
Maximum-to-minimum	20:1	15:1
Minimum vertical illuminance	0.1 fc	0.25 fc

Notes:

1. Minimum horizontal illuminance shall be no lower than 0.2 fc.
2. Average horizontal illuminance shall not exceed 2.5 fc.
3. Uniformity ratios are to be used as a guide.
4. Minimum vertical illuminance shall be measured at 5.0 feet above parking surface at the point of lowest horizontal illuminance, excluding facing outward along boundaries.
5. For typical conditions: During periods of nonuse, the illuminance of certain parking facilities should be turned off or reduced to conserve energy. If reduced lighting is to be used only for the purpose of property security, it is desirable that the minimum (low point) not be less than 0.1 hfc in susceptible areas of the property. Reductions should not be applied to facilities subject to intermittent night use, such as apartments, hospitals and active transportation areas.
6. If personal security or vandalism is a likely and/or severe problem, an increase above the basic level may be appropriate.
7. High vehicular traffic locations should generally require the enhanced level of illumination. Exits, entrances, internal connecting roadways and such would be some examples.
8. Increasing the above illuminance is not likely to increase safety and security. Variance requests for higher levels will generally be for "retail" reasons and should not be granted unless shown to be necessary and at an average illuminance not to exceed 3.6 fc.

The Hunterdon County ordinance provides outdoor lighting standards necessary to prevent the negative impacts of misdirected or excessive light caused by inappropriate or misaligned light fixtures producing glare, light trespass, and skyglow. Such regulation is necessary to encourage energy conservation, to improve nighttime public safety, and to prevent annoying and destructive light pollution.

Hunterdon County, New Jersey
Model Municipal Outdoor Lighting Ordinance
7. Roadway Lighting

7. A. Roadway lighting will occur at the discretion of the designated municipal entity when it provides a valid public benefit. Roadways shall only be illuminated after demonstration that passive devices (reflective signs, shoulder markers, center/shoulder lines, etc.) are insufficient.

7.B. Streetlight Types: All new and replacement streetlights, including decorative streetlights, shall be shielded light fixtures. Many manufacturers now offer shielded/cutoff roadway lighting, in both “highway style cobra-head” lighting and decorative/antique/reproduction fixtures.

7.C. Illuminance Levels:

1. Partial Streetlighting: Partial streetlighting shall not exceed IESNA levels for average illumination.
2. Continuous streetlighting: Average IESNA illuminance recommendations shall not be exceeded. IESNA average to minimum illuminance uniformity ratios shall be used as a guide for designing safe and adequate roadway lighting.

More rural municipalities may opt for no roadway lighting at all or minimal/partial lighting at only the most hazardous areas. The Hunterdon County Department of Roads, Bridges and Engineering first considers passive devices before turning to lighting.

Granted most roads in Hunterdon are controlled either by NJDOT or the county. However there may be instances where a resident requests a streetlight on a local street, or a developer proposes streetlighting in a new development. In those instances the ordinance should be employed.

Further, the ordinance may even be employed for state and county roads if the municipality advises the NJDOT/county that a local roadway lighting ordinance exists and requests NJDOT/county to adhere to its requirements. NJDOT has a “cutoff lighting first choice in design” policy that can complement a local roadway lighting ordinance. Communication is the key to having NJDOT and/or the county cooperate with the municipality on roadway lighting.

Transportation-Related Green Building

Motivated by the New Hampshire Carbon Coalition’s Climate Change resolution, the Town of Epping joined ICLEI—Local Governments for Sustainability USA (ICLEI) in 2007. The Town agreed to reduce their greenhouse gas emissions by 25 percent by the year 2025. In New Hampshire, buildings are a greater source of greenhouse gas emissions than the transportation sector due to the large stock of older buildings and high seasonal temperature fluctuations. The Town Planning Board examined its role and asked what effect they could have to aid this commitment. As a result, Epping decided to draft a new ordinance that would require all new buildings to implement energy efficiency, conservation, and sustainable design principles in its construction, called Article 22 - Energy Efficiency and Sustainable Design.

Town of Epping, New Hampshire

Zoning Ordinances

Article 22, Energy Efficiency and Sustainable Design

Pursuant to RSA 672:1(III-a), 155-A:2(VI), RSA 674:17(I) and RSA 674:21, applicable developments are required to implement energy efficiency and production, energy conservation, and sustainable design principles as found in this Article. This article is intended to implement the Epping Master Plan by

adopting more stringent building code requirements, zoning requirements, and authorize appropriate regulatory changes by the Planning Board.

22.1 Purpose In accordance with the State of New Hampshire’s policy on energy production and conservation, this section is adopted as in the public interest to provide for small scale and diversified sources of supplemental electrical power and to lessen the state's dependence upon other sources which may, from time to time, be uncertain and result in increased pollution and greenhouse gas emissions. It is also found to be in the public interest to encourage and support diversified electrical production that uses indigenous and renewable fuels that have beneficial impacts on the economy, the environment, and the public health. It is further found that this ordinance assists the Town of Epping citizens in providing a reasonable opportunity for small customers to choose interconnected self-generation, encourage private investment in renewable energy resources, stimulate in-state commercialization of innovative and beneficial new technology, enhance the future diversification of the Town’s and the state's energy resource mix, and encourage sustainable building design. It is the intent of this ordinance to enhance and supplement existing federal and state incentives for tax treatment and other benefits related to alternative energy production, energy efficiency and sustainable design. Interpretations by the Planning Board shall be made so far as possible to preserve the intent of the ordinance and the developer and home owner’s ability to benefit from these programs as well. This includes but is not limited to, NH RSA 362-A, the Internal Revenue Code Section 179(D), the Energy Policy Act of 2005, and the Energy Star program.

22.2 Residential Development requirements for Energy Production shall be adopted by the Planning Board as part of the Subdivision Regulations in accordance with RSA 674:35 and 674:36(II)(k) and (III).

22.3 Non-residential Development. 22.3.1 The Planning Board shall require that non-residential developments achieve EP & SD benchmarks in accordance with the following table:

Square footage in development.	Required EP & SD score
0-5,000	5
5,001-10,000	10
10,001-20,000	15
20,001-50,000	20
50,001 and up	25

22.3.2 Requirements for EP & SD. Under this section, each development must meet one or both of the following subsections:

A) Energy Production Requirements.

1) Renewable Energy Production. For this requirement, eligible generation installations shall be limited to wind, PV (photovoltaic) solar, biomass.

a) Wind - The nameplate rated generation capacity of a wind generation system shall be equal to or greater than 5.0 kW at a rated wind speed of 20 mph and may be met by more than one turbine.

b) PV Solar – An installed PV system shall have a rating equal to a range of 10% -50% of the estimated base load or as a full peak shaving installation. (10 – 15 points). 10 points for minimum compliance and additional points for larger generation capabilities or shared/combined systems (points for shared systems shall be awarded to each unit connected to the system).

c) Identification and recording of height limitations and solar easements pursuant to 674:17(I)(j) and 674:36(II)(k) in conjunction with other lots that are subject to this ordinance and have achieved compliance through the installation of solar technologies or have existing solar installations. (2 points per lot/structure affected).

2) Combined Heat and Power / Cogeneration.

a) The facility shall have a manufacturers certified electrical efficiency of 25% or greater and an overall efficiency of 65% or greater.

b) The nameplate installation shall be equal to a range of 30% - 100% of the estimated base load. (10 – 15 points). 10 points for minimum compliance and additional points for larger generation capabilities or shared/combined systems (points for shared systems shall be awarded to each unit connected to the system).

3) Innovative Technologies.

a) The Planning Board may approve on a case-by-case basis the use of one of the following innovative technologies:

- Fuel Cell based co-generation (all kinds).
- Stirling engine co-generation (external combustion engines).
- Small-scale biomass and bio-synthetic oil co-generation installations.

b) The Planning Board shall make a finding based upon sufficient evidence presented to the Board that the following requirements are met. The Board may consider lower efficiency ratings to promote the use and exploration of innovative technologies:

a) That sufficient security is in place to secure the operation and maintenance of the installation for a period of five years.

b) That the rated output of electrical generation is larger than 2.5 kW in a continuous operational mode.

c) That there are sufficient environmental, economic, and experimental benefits to be gained from the installation.

(10 – 15 points). 10 points for minimum compliance and additional points for larger generation capabilities or shared systems (points for shared systems shall be awarded to each unit connected to the system).

B) Sustainable Design Requirements.

1) Building Site and Materials.

a) Orientation

- Buildings shall be oriented on the site to optimize passive solar heating and cooling opportunities.

- Buildings shall be oriented so as to minimize wind loads on structures.
- Windows shall be placed to maximize solar penetration during the winter months and minimize solar penetration during the summer months.

(1 point). Lot layout shall be shown on an approved plan to insure that structures can comply with this requirement. Directions and orientations shall be noted on the recorded plan for the lot to alert the builder/lot owner of the optimal orientation.

b) Reuse of Existing Materials and Recycled Content

- Demonstration that the applicant will use recycled content materials in the site development and construction.
- The project must provide adequate storage and collection of recyclables both during and post construction. Post construction recyclable areas must be easily accessible to all building occupants/users and be sufficiently sized for storage and collection of non-hazardous materials including at a minimum paper, corrugated cardboard, glass, plastics, and metals.

(1 – 3 points). Increased points are for achieving multiple components as listed above and/or increased percentages related to the project cost. Prior to the issuance of the Certificate of Occupancy, the developer shall insure compliance with a filing to the Board listing the required elements.

c) Use of Local and Regional Materials

- In order to reduce the environmental impact of materials shipping, the project should use building materials that provide long-term durability and decreased maintenance costs; are extracted, processed and manufactured within New Hampshire; and are made from renewable resources or materials wherever possible.

(1 – 3 points). For local construction materials, the higher point value results from New Hampshire products, lower points are for other products from other states that are within 500 miles of the building site. Relative values of local materials to overall materials cost shall also be considered for assignment of values with the range. Prior to the issuance of the Certificate of Occupancy, the developer shall insure compliance with a filing to the Board listing the required elements

d) Construction Waste Management.

Promote efficient use of solid waste by diverting construction, demolition and land clearing debris from landfill disposal, and by redirecting resources for recycling and reuse.

- Develop and implement a construction waste management plan as part of the Planning Board approval process that quantifies material diversion goals and the procedures for achieving them. Such a plan shall indicate the required containers for the site and provide an inspection process to allow the Town to inspect the process and insure compliance (such as contracts and manifests for recycling materials and facilities).
- Recycle and/or salvage, demolition, and land clearing waste generated through site preparation.

(1 – 2 points). Points shall be assigned based on the completeness of the plan and the percentage amount of materials that are diverted, re-used, or recycled above the minimum requirements.

2) Construction Envelope Energy Conservation.

Increase the amount of energy saved through conservation programs to include but not limited to:

- Any mechanism for insulation that exceeds the NH Energy Code.
- Successful completion of air leakage tested to comply with Best Practices of Technical Standard 1 of the Air Tightness Testing and Measurement Association:

Type	Air Permeability	
	m ³ /(h.m ²) at 50 pascals	
	Best Practice	Normal
Offices		
<i>Naturally ventilated</i>	3	7
<i>Mixed mode</i>	2.5	5
<i>Air conditioned/low energy</i>	2	5
Factories/warehouses	2	6
Superstores	1	5
Schools	3	9
Hospitals	5	9
Museums and archival stores	1	1.5
Cold Store	0.2	0.35
Dwellings		
<i>Naturally ventilated</i>	3	9
<i>Mechanically ventilated</i>	3	5

- Additional items may be considered provided they are also eligible for the federal tax credit for energy efficiency and exceeds the NH Energy Code.

(1 - 4 points). The Planning Board shall consider a range of points based on their impact to the estimated GHG emission reduction and life-cycle cost reduction for energy usage. The maximum point value shall only be eligible for this section provided the air leakage criteria are met in conjunction with several other elements.

3) Heating and Cooling.

a) Installation of a solar water heating system rated at 1000 watts of thermal power per 450 gallons per day of usage projection as determined the NH DES rules for the facility.

b) Geothermal systems with a sufficient capacity and efficiency as projected by the manufacturer to save the average energy costs for conventional heating and cooling units by 30%.

c) Wood-pellet and other biomass heating systems in sufficient output to provide over 50% of the base heating load for the entire structure.

d) The installation of a hydronic radiant heating system for the structure.

e) Reduce the building's heat load by either using roofing materials with a minimum Solar Reflectance Index (SRI) of 78 for roof slopes less than or equal to 2:12 or a minimum

SRI of 29 for slopes greater than 2:12; or install a vegetated roof for at least 50 percent of the roof area.

f) Ductwork insulated to a minimum of R-6 if located in an unconditioned space, including attics, basements, and exterior walls. Exceptions include insulation for exhaust air ducts or ducts within HVAC equipment.

g) HVAC piping in unconditioned spaces conveying fluids at temperatures above 120 degrees or chilled fluids at less than 55 degrees must be insulated to a minimum of R-5. (1-5 points [up to 7 points only for a solar hot water or geothermal system]). The Planning Board shall consider the range of points based on the installation of one or more of the above elements. If solar, geothermal, or cogeneration systems are used in conjunction with a hydronic radiant heating system, the project shall be eligible for 7 points.

4) Innovative Technologies.

a) The Planning Board may approve on a case-by-case basis the use of innovative building technologies.

b) The Planning Board shall make a finding based upon sufficient evidence presented to the Board that the following requirements are met.

d) That sufficient security is in place to secure the operation and maintenance of the installation for a period of five years.

e) The manufacturer's specifications and estimates for energy or design efficiency has been reviewed and found to be a reasonably accurate to a licensed professional engineer in the field of the equipment.

f) That there are sufficient environmental, economic, and experimental benefits to be gained from the installation.

(1 - 3 points). The Planning Board shall consider a range of points based on their impact to the estimated GHG emission reduction and life-cycle cost reduction for energy usage.

5) Operational Requirements

a) No idling policy

b) On-site fleet usage of B20 or above.

c) Reduced lighting after hours using LED light fixtures.

d) Smart Panels installed as a Demand Side Management program.

(1 - 3 points). The Planning Board shall consider a range of points based on their impact to the estimated GHG emission reduction and life-cycle cost reduction for energy usage for each element and its implementation.

6) Mandatory Requirement for Gasoline Stations. For any existing gasoline station that has more than 4 pumping stations (meaning one nozzle location), that adds additional uses to its existing site, or adds pumping stations shall insure that at least one pump on site provides one or more of the following.

a) E85 or other bio-synthetic fuel that can be used in vehicles that is reasonably available.

b) Bio-diesel at B20 or above.

Cranford's Green Building Ordinance, adopted in November 2005, requires all township-funded facilities projects and township-owned facilities to meet LEED Silver certification. The Township also adopted LEED for Existing Buildings (LEED-EB).

Township of Cranford, New Jersey

Chapter 106: Energy Efficiency

Article I. Sustainable Building Standards

§ 106-1. Adoption of codes by reference.

The "Leadership in Energy & Environmental Design Rating System for New Construction & Major Renovations (LEED — NC)," Version 2.1, adopted November 2002, revised March 14, 2003, and the "Leadership in Energy & Environmental Design — EB Green Building Rating System for Existing Buildings, Upgrades, Operations and Maintenance," Version 2, adopted October 2004, updated July 2005, both promulgated by the United States Green Building Council (USGBC), are hereby adopted by reference and incorporated into this chapter.

§ 106-2. Cranford Township facility projects and existing buildings.

A. The Township supports the use of green building practices and adopts the use of the USGBC's Leadership in Energy Design (LEED) Rating System for the design and construction of new buildings and major renovations and additions to Township funded facility projects. In addition, the Township adopts LEED-EB for its existing buildings.

B. The Township will incorporate life-cycle and total cost accounting in the design, construction and maintenance of all Township-owned and -financed buildings.

C. The Township adopts a policy that Township funded facility projects and Township-owned facilities meet a minimum LEED Silver rating.

D. The first LEED project will be viewed as a pilot for this initiative and will be evaluated to make further recommendations to the Township Committee.

§ 106-3. Redevelopment projects.

A. The Township of Cranford encourages redevelopers seeking redeveloper status through redevelopment agreements to adopt the LEED Rating System. To encourage projects to achieve formal LEED certification from the USGBC, Cranford Township has established a Green Building Density Incentive Program. Redevelopers shall be permitted to request an incentive, such as a slightly larger building than would normally be allowed if the project receives official LEED certification from the USGBC at one of the four LEED award levels. The incentive allowed will vary depending on the project and on the LEED award sought. The use of the program shall be incorporated in redevelopment agreements adopted by the Township.

B. Redevelopers must submit the following information to the Township for each project:

(1) Name of the LEED accredited professional working on the project. Each project must include a LEED accredited professional as part of the project team. This team member advises the project team on LEED issues and ensures that the specific LEED credits for the project are achieved.

(2) LEED scorecard. A LEED scorecard must be submitted as part of its plan. The scorecard must be accompanied by an explanation of how each credit will be achieved or why the credit cannot be achieved for the project. Prior to issuance of specific permits, reports must be submitted outlining

progress on achieving LEED credits. A specific number of LEED credits will be negotiated and included in the project.

(3) Construction waste management plan. Prepare and implement a construction waste management plan. The plan must outline where waste will be sent for recycling, reuse, reprocessing or disposal. Letter from each of the recipient facilities must be included.

(4) Energy star. For multifamily residential projects, appliances and fixtures must meet United States EPA's energy star standards. Projects must include energy star compliant clothes washers, dishwashers, refrigerators, ceiling fans, ventilation fans (including kitchen and bathroom fans), light fixtures (halls and common areas) and exit signs. To enhance energy efficiency further, the project must also choose and install two of the following energy star components: programmable thermostats (in residential units); residential light fixtures; windows and doors; and HVAC systems.

C. Redevelopers applying for the Cranford Green Building Density Incentive Program must register their projects with the USGBC. Proof of registration must be submitted to the Township, followed by quarterly updates that identify the progress of the project and points achieved. Projects must be certified by the USGBC at the agreed upon level.

V. Model Incentives *to address the symptoms of climate change (adaptation)*

Adaptation for Increased Precipitation Hazards

[Model Site Plan Regulations: New Hampshire Department of Environmental Services](#)

Transit Supportive Zoning

[City of Vancouver, Washington: Chapter 20.550: Transit Overlay District
Section 20.550.050 Incentives.](#)

[City of Tampa, Florida: Chapter 27: Zoning and Land Development
Article II, Administration and General Procedures
Division 6, Site Plan Zoning District Procedures
Sec. 27-140. Bonus provisions.](#)

Subdivisions and Cluster Development

[Model Conservation Subdivision Ordinance: NC State University Department of Forestry
and Environmental Resources](#)

[9-501 Land-Use Incentives for Affordable Housing, Community Design, and Open Space
Dedication; Unified Incentives Ordinance](#)

Adaptation for Great Lakes Coastal Storm Hazards

[Town of Hull, Massachusetts: Article X - Nantasket Beach Overlay District
12. Incentives for constructing buildings that are adapted to and resilient to the
impacts of climate change on coastal communities in designated floodplain
districts.](#)

V. Model Incentives *to address the symptoms of climate change (adaptation)*

Adaptation for Increased Precipitation Hazards

The model presented is designed to assist communities with striking a balance between preserving existing resources (i.e. vegetation, topography, and soil) and establishing requirements for selection, design, installation, and maintenance of new landscaping features. The model language addresses a combination of landscaping functions that provide a variety of environmental, economic, and social benefits to communities. Due to the unique characteristics presented with each site, the applicability of landscaping standards should be considered on a site-specific basis. Including comprehensive landscaping requirements within a community's site plan regulations, rather than the zoning ordinance, provides greater flexibility for considering the unique characteristics of each site. Incentive bonuses are included for parking lots and trees.

Model Site Plan Regulations

Innovative Land Use Planning Techniques Handbook

New Hampshire Department of Environmental Services

Section _____: Landscaping

A landscaping plan designed to preserve existing resources and features, promote wildlife habitat, and support on-site stormwater control shall be submitted with an application for site plan review. Due to the variation of each site, creativity and diversity in landscaping is encouraged. The landscaping plan shall be prepared by a licensed landscape architect, professional landscape designer, or nursery professional.

The landscaping plan must address and comply with the requirements set forth herein:

I. General Requirements

- A. Existing vegetation shall be preserved wherever possible. Existing natural features of special interest, such as those having historic relevance, shall be delineated and located on the landscaping plan. A note should be added to the site plan indicating that identified feature(s) shall be protected during site clearing and construction through the use of construction fencing or other adequate protective barriers. Maximum effort should be made to preserve small stands of trees, rather than individual trees, to minimize the potential for serious damage due to wind, grade changes and soil compaction. No construction materials, equipment, vehicles, or temporary soil deposits shall be located within the dripline of existing trees. Before commencement of work, protective barriers shall be installed and maintained around each plant and/or groups of plants that are to remain on site until completion. Snow fence installed around the dripline of the tree canopy is an example of an acceptable barrier.
- B. Vegetation planted in accordance with the requirements of this section shall be non-invasive species selected for their adaptability to the climatic, geologic and topographical conditions of the site.
- C. Shrubs and hedges shall be a minimum of 24 inches in height when measured immediately after planting. Groundcovers and perennials may be less.

D. Effective use and preservation of natural berms, existing topography and existing vegetation is encouraged.

E. Landscaped beds shall be used to separate parking areas from the portion of a building providing access to the building.

F. Vegetated Buffer: Plants or a combination of plants and other landscaping material shall be used to form a buffer between non-residential and residential uses. The buffer shall be at least 20 feet wide, densely planted (or equivalent natural growth), and form a year-round dense screen at least 6 feet high within 3 years. A minimum of one tree per 35 feet or portion thereof, with a combinations of shrubs, perennials, vines, and groundcovers shall be planted enmasse among the trees. Spacing between individual trees shall not be more than 35 feet, not more than 6 feet apart for individual shrubs, and not more than 3 feet between individual perennials and groundcovers. A combination of evergreens and deciduous plants are encouraged. As an alternative, a fence or wall of uniform appearance not more than 6-feet high (concrete block cannot be used) and extending to within six inches of ground level may be used in conjunction with the above plant materials with a minimum 15 foot vegetative buffer.

G. Plants, or a combination of plants and a solid visual barrier such as wooden fencing, or berms, shall be used to screen loading, waste disposal, material storage and other areas that are likely to generate noise, dust, or other potentially disruptive conditions.

H. Landscaping shall be used to establish and/or maintain an attractive streetscape adjacent to roadways. A minimum of one tree per 35 linear feet or portion thereof.

I. To promote on-site water retention and filtration, landscaped areas shall be designed in a manner that guides stormwater from on-site impervious streets, parking areas, sidewalks and walkways to vegetated areas or approved retention areas.

J. Curbing or equivalent barriers shall be required to protect vegetation from vehicular damage. Barriers shall be designed with openings that allow stormwater to flow into vegetated areas.

K. The type and location of vegetation shall not interfere with utilities or the safe and efficient flow of street traffic.

L. No trees or shrubs shall obstruct the view between the street and the access drives and parking aisles near entries and exits. Plantings within 25 feet of an intersection shall not exceed a maximum mature height of 30 inches.

M. When irrigation systems are proposed, a temporary watering plan/ schedule, or low volume (drip) irrigation system shall be required. Permanent irrigation systems are prohibited, except as noted below. Temporary irrigation systems shall be designed and installed for efficient and effective water use to the landscaped area for a limited period of time determined by the plant material and site conditions. (See margin note.) For those exceptions when permanent irrigation is considered necessary, such as an athletic field, permanent irrigation shall utilize water saving technologies, including rain sensors, flow meters, and management systems that monitor current weather conditions.

N. A maintenance plan shall be provided with the site plan application. All landscaped areas shall receive regular maintenance and upkeep. Severely injured, diseased, or dead plant material shall be replaced in kind in perpetuity (avoid replacing landscape materials in the period from November to March.) Best practices to minimize environmental impacts such as the use of low phosphorous fertilizer and slow release nitrogen, shall be included in the management plan. If ownership of a site is

conveyed to a new property owner the new owner shall be responsible for maintaining all landscaping in accordance with the approved final landscaping plan.

II. Parking Lots

A. Interior landscaped beds shall be required for all parking lots with multiple adjacent parallel parking rows. Required interior landscaping shall be a minimum of 10 percent of the total area of driveways and parking. The maximum number of continuous parking spaces permitted shall be twenty. Interior landscaping shall be in addition to any required perimeter landscaping as specified below, and shall include trees, along with shrubs, perennials, and/or groundcovers planted enmasse among the trees. Plant materials shall be suitable for site conditions including location, soil conditions, and exposure to environmental factors.

B. Bare soil is not acceptable. The introduction of groundcovers and/or perennials planted enmasse and the use of mulch as a soil covering is acceptable. However, no more than 20 percent of the minimum landscaped area may be covered with non-living landscaping material such as bark mulch, woodchips, or leaf litter.

C. In order to break up the visual expansiveness of parking lots, interior landscaped beds shall be installed in the form of landscape strips and/or landscape islands. Depressed vegetated landscaped beds are encouraged to infiltrate stormwater.

D. Landscape strips shall be a minimum of 15 feet in width.

E. Landscape islands shall be a minimum of 20 feet in width. F. Parking lots with more than 50 parking spaces shall have landscape islands serving as end-caps to each row.

G. The interior of parking lots shall have no less than one tree for every 10 parking spaces. The trees may be clustered together in landscape islands with shrubs, perennials, and ground covers planted enmasse among the trees. This requirement is in addition to any trees required in Article __.V.J.b of the Town of _____ Zoning Ordinance.

H. Snow storage shall not be permitted on any landscape area.

I. Incentive Bonuses:

1. Each existing healthy and native or non-invasive tree, with a caliper of three inches or greater, preserved using proper protection methods within the interior parking lot area may be substituted for one tree required for every 10 parking spaces.

2. Where an applicant proposes leaving a significant portion of healthy noninvasive trees and other vegetation within the proposed construction area, the planning board will consider alternative landscaping designs.

J. Perimeter Landscaping for Parking Areas: Along the perimeter of parking lots with ten or more spaces a buffer of perimeter landscaping is required along at least 75% of the length of right-of-way. The buffer width shall be a minimum of 20 feet, though the planning board may require a wider buffer when the use, building or site conditions dictate that a larger buffer would better serve the intent of these regulations. The vegetated buffer shall include existing non-invasive plant material, where appropriate, in combination with new trees, shrubs, perennials and groundcovers of suitable type, characteristics to meet site-specific requirements in order to provide longevity of the landscape. The buffer shall include one or more of the following options:

1. A minimum of one tree per 35 linear feet or portion thereof excluding curb cuts, with a combination of shrubs, perennials, vines, and groundcovers planted en masse. The trees may be clustered together with

shrubs, perennials, and groundcovers planted en masse among the trees. A combination of both deciduous plants and evergreens are encouraged.

2. A wall, or fence of uniform appearance 6 feet high of brick, stone or finished concrete (cannot be concrete block) may be used in conjunction with plant materials with a minimum 10 foot-buffer between the fence and the street. A minimum of one tree per 35 linear feet or portion thereof with a combination of shrubs, perennials, vines, and groundcovers planted en masse per 35 linear feet excluding curb cuts. A combination of both deciduous plants and evergreens are encouraged.

3. Spacing between individual trees shall not be more than 35 feet, not more than 6 feet apart for individual shrubs, and not more than 3 feet between individual perennials and groundcovers.

4. If the area abutting the street is existing woodland, a 25-foot woodland buffer may be left in lieu of landscaping if approved by the planning board.

III. Trees

A. Trees shall be salt and drought-tolerant, native or non-invasive species, and have a structure and growth form which prevents them from obstructing sidewalks and walkways.

B. Trees shall have a caliper of no less than 2-21/2 inches when planted.

C. Trees located under utility wires should be a low-growing species.

D. To foster biological diversity trees planted along a given street shall use the "10-20-30 Rule" (No more than 10% of the trees shall be of the same species, no more than 20% in the same genus, and no more than 30% in the same family.)

E. Trees shall be located no more than 35 feet apart.

F. Trees should be located to avoid obstruction for driver visibility, and to avoid interference between root systems and utilities. Trees may be planted individually or clustered.

G. All newly planted trees, shrubs and other vegetation shall have a watering plan during the establishment period (for trees, one-year-per-inch in caliper at planting, shrubs and other vegetation generally establish within one growing season). Mulching trees, shrubs, and plants helps retain soil moisture, moderates temperature fluctuations, provides protection from mechanical damage by mowers and trimmers, and serves as temporary covering of exposed soil until understory plants and ground covers fill in. However, thick applications of mulch (such as "volcano mulching") will kill trees and other vegetation. Mulch shall be no greater than 3 inches in depth and shall not be in contact with the bark or stems of plants.

H. Incentive Bonuses:

1. Each existing healthy and non-invasive tree, with a caliper of 3 inches or greater, preserved using proper protection methods within the required planting area may be substituted for one required tree.

2. Where an applicant proposes leaving a significant portion of healthy trees within the construction area, alternative landscaping designs will be considered.

IV. Plan Requirements

A. Landscaping plans shall include dimensions and distances and clearly delineate the existing and proposed parking spaces, or other vehicular uses, access, aisles, driveways, and the location, and description of all landscape materials, including the quantity and common and botanical names of all plants.

- B. Landscape plans shall be provided at the same scale as the engineering drawings unless otherwise required by the planning board for review purposes.
- C. Snow storage areas shall be clearly shown on the plan and are not permitted on any landscaped areas. In accordance with NH DES Best Management Practices snow storage areas and snow dumps shall be located so that snow melt runoff is directed to vegetated swales or filter strips created for that purpose.
- D. A planting plan shall provide specifications regarding the plant placement, type, size and spacing, and other features as required by this section. Trees and shrubs shall be specified according to the American Standard for Nursery Stock by the American Nursery and Landscape Association.
- E. Depending on the nature and scale of the proposed use, a temporary watering plan, or low volume (drip) irrigation system shall be required. When required, irrigation systems shall be designed and installed for efficient and effective use of water to the landscaped area. Permanent irrigation systems are generally prohibited.
- F. A maintenance plan shall be provided with the site plan application. All landscaped areas shall receive regular maintenance and upkeep. Severely injured, diseased, or dead plant material shall be replaced in kind in perpetuity (avoid replacing landscape materials in the period from November to March.) Best practices to minimize environmental impacts such as the use of low phosphorous fertilizer and slow release nitrogen, shall be included in the management plan.
- G. The Planning Board may seek an advisory opinion regarding the submitted landscape plan at the expense of the applicant.
- H. The Planning Board will seek an advisory opinion of the conservation commission or other municipal board or committee regarding the landscape plan, if deemed necessary.

V. Security/Performance Bond

- A. To ensure that landscaping is installed in accordance with the final approved landscaping plan, a performance guarantee shall be provided as a condition of approval in an amount determined by the planning board. The performance guarantee shall be released following and inspection by the Town of ____ Code Enforcement Officer.
- B. To ensure that landscaping functions as designed and all plants remain healthy, a performance guarantee shall be required, as a condition of approval, which will be held a minimum of 24 months after an approved inspection as required in Section __.IX.1.

VI. Maintenance

- A. The property owner, or owners association if applicable, is responsible, in perpetuity, for maintaining all landscaping in good condition. Landscaping shall be kept free of refuse and debris, and shall be replaced as necessary to the standards herein.
- B. If the ownership of a site is conveyed to a new property owner, the new owner shall be responsible for maintaining all landscaping in accordance with the approved final landscaping plan.
- C. Proposed modifications of an approved landscaping plan shall be submitted to the planning board for review and approval. The planning board shall notify the owner of acceptance of the modified plan or request additional information within 60 days of receipt of proposed modifications. The currently approved plan shall remain in effect until notification of approval has been issued, or the 60 day period has lapsed.

VII. Enforcement

- A. An inspection of all plantings to ensure compliance with the submitted landscape plan shall be conducted prior to the issuance of a certificate of occupancy.
- B. Ongoing inspections of landscapes shall be conducted to ensure compliance of landscape maintenance in perpetuity.

Transit Supportive Zoning

The City of Vancouver awards residential density bonuses and reductions in the transportation impact fee in exchange for transportation improvements, including transportation demand management (TDM) measures. The program identifies bonus points/intensity percentage increases for various amenities, awarding bonuses only if at least five amenities are provided. The objective is to encourage development within the Transit Overlay District.

City of Vancouver, Washington

Chapter 20.550: Transit Overlay District

Section 20.550.050 Incentives.

- A. Purpose. The below incentives are intended to encourage development within the Transit Overlay District that is in keeping with the guidelines of this section.
- B. Applicability. These incentives shall only be made available to any development which meets the use provisions of section 20.550.040(A) and the minimum design standards of sections 20.550.040 (B) Pedestrian Access, (C) Landscaping and Walls, Hedges and Fences, (D) Building Orientation, (E) Building Frontage, (F) Setbacks, (G) Blank Walls, and (H) Parking.
- C. Transportation Impact Fee Reduction. In recognition of the potential reduction in vehicle trip demand that may result from the implementation of transportation demand management measures, a reduction of the transportation impact fee (TIF) may be granted pursuant to this Section with the implementation and maintenance of the corresponding action in Table 20.550.050-1.
 - 1. The maximum reductions identified in Table 20.550.050-1 are based on nationally-accepted relationships between transportation demand management measures and traffic generation.
 - 2. For actions which require regular maintenance, as noted in Table 20.550.050–1, the TIF reduction granted shall be revoked and the amount of the reduction shall become due if the regular maintenance is discontinued in whole or in part during the six years following the granting of the TIF reduction.

Table 20.550.050-1 Traffic Impact Fee Reduction Action TIF Reduction		
	Action	TIF Reduction
1	Construction of direct walkway connection to the nearest arterial	1%
2	Installation of pedestrian-convenient information kiosk, with maintained information ¹	2%
3	Installation of on-site sheltered bus-stop (with current or planned service) or bus stop within 1/4 mile of site with adequate walkways if approved by C-TRAN	1%
4	Installation of bike lockers	1%
5	Commercial development which would be occupied by employer subject to Commute Trip Reduction Ordinance	4%
6	Voluntary compliance with Commute Trip Reduction Ordinance ¹ , where compliance is not required	5%
7	Connection to existing or future regional bike trail (either directly, or by existing, safe access)	1%
8	Direct walk/bikeway connection to destination activity (such as a commercial/retail facility, park, school, etc.) if residential development, or to origin activity (such as a residential area) if commercial/retail facility	2%
9	Construction of on-site internal walk/bikeway network	2%
10	Installation of parking spaces which will become paid parking (by resident or employee) ¹	3%
11	Installation of preferential carpool/vanpool parking facilities ¹	1%
12	Regular distribution of Transportation Demand Management information packet to all new tenants ¹	1%
	Total if all strategies were to be implemented	24%

¹ Requires regular maintenance of program.

D. Density Bonus. Any development within Tier 1 of the Transit Overlay District shall receive a density bonus equal to the percentage shown in Table 20.550.050-2 if five or more of the actions listed in Table 20.550-.050-1 are implemented. These bonuses are in addition to base zoning bonuses, if the required criteria are met. Any development within Tier 2 of the Transit Overlay District shall be entitled to this incentive provided that the requirements of Section 20.550.040(D) Building Orientation, Section 20.550.040(E) Frontage and Section 20.550.040(F) Maximum setback are met.

Table 20.550.050-2 Density Bonus	
Residential	125% of maximum density requirement
Non-residential	N/A
Mixed-use (residential and non-residential)	Determine bonus separately for each use according to this Table

E. Redevelopment of Parking Spaces. The minimum number of parking spaces required by Section 20.550.040(H) may be reduced by 10% to allow any structure existing prior to the adoption of this ordinance to be expanded.

The City of Tampa awards bonus intensity (FAR) for development in planned development (PD) districts (Sec. 27-328) and the Central Business District (CBD) (Sec. 27-329) in exchange for the provision of community amenities, including transit stops, pedestrian and streetscape improvements, and public facilities/services. The calculation method for bonuses in the CBD is based on development costs. The zoning administrator determines compliance with the program and reports findings to the City Council for consideration. Tampa has also adopted provisions for negotiating amenities and bonuses for the PD districts through developer agreements. Under this procedure, which is not described below, the applicant proposes the nature and timing of the amenities proposed, desired density/intensity increase and penalty for noncompliance.

City of Tampa, Florida

Chapter 27: Zoning and Land Development

Article II, Administration and General Procedures

Division 6, Site Plan Zoning District Procedures

Sec. 27-140. Bonus provisions.

(a) Purpose. The YC-9, PD and PD-A Districts, may be eligible for the density/intensity bonuses provided in the Tampa Comprehensive Plan. In order to qualify for such bonuses, the project is required to provide a combination of at least three (3) of the bonus provisions prescribed in subparagraph (c) below.

(b) Developer agreement. The developer shall prepare a draft developer agreement describing the nature and timing of the amenity or amenities proposed, desired density/intensity increase and penalty for noncompliance. The agreement, which meets the requirements of F.S Ch. 163.3220, and Ordinance No. 88-144, shall be entered into between the developer and the city simultaneous with the site plan district public hearing.

(c) Criteria realizing maximum achievable bonus. The City of Tampa recognizes the need for and the desirous nature of certain amenities; therefore, if at least three (3) of the following are provided, the maximum achievable bonus shall be realized, provided that all other land development regulations are met:

(1) Provision of ten (10) percent of the project's dwelling units as affordable housing. Those units shall be affordable to those buyers or renters who earn no more than eighty (80) to one hundred twenty (120) percent of the area median income (AMI) for the City of Tampa, for a minimum of thirty (30) calendar years from the date of the issuance of the certificate of occupancy for each individual unit deemed affordable. Financial parameters shall be set forth in the developer's agreement for this provision, as reviewed and agreed to by housing and community development, land development coordination and the city attorney for sufficiency.

(2) Preservation and designation of contributing historic structures which are located outside of historic districts.

(3) Provision of public facility sites (i.e. park, library, school, emergency services) deemed acceptable by the receiving agency or city department.

(4) Provision, construction and maintenance of public access to water resources, by way of connecting to planned riverwalks, trails, marina facilities, etc.

(5) Provision of structured parking dressed with architectural features or elements with seventy-five (75) percent of the proposed or required parking, whichever is more, located within the principal building.

(6) Provision of compatible, mixed-use redevelopment or infill residential development located in areas of chronic economic stress and/or urban homesteading areas.

(7) Adaptation or replacement of a grossly incompatible use with a use that is compatible with the predominant use(s) of an area; or adaptation or replacement of a use which is of lesser intensity than the existing use. Adaptive use or replacement with a use in a less intense use group in section 27-156(b), Table 4-1, Schedule of Permitted Uses by District. (Example: Existing use is Use Group C; proposed use is Use Group B.)

(8) Child care center. The achievable bonus shall be based on the percentage of need satisfied by the proposed child care center. Need is based on the estimated number of children generated by the project multiplied by eighty-five (85) square feet per child which determines the required square footage reserved for the center. The percentage of that total requirement provided shall be equal to the bonus (maximum limit is one hundred (100) percent).

(9) Transit stop. Improvements such as shelters, benches, waste containers, and enhanced landscape materials that provide shade and weather protection for the transit stop area.

(10) Pedestrian/streetscape. Improvements which create a high quality pedestrian experience through the provision of benches, planters, drinking fountains, waste containers, median landscaping, street trees, underground utilities in the public right-of-way, etc. Said improvements shall be on all public or publicly-used through streets adjacent to the subject property. Credit will not be allowed for streetscape on parking areas or private streets with limited access.

Subdivisions and Cluster Development

The section presented is from the model contained in "Open Space Design Guidebook: Ablemarle-Pamlico Estuarine Region," published by the North Carolina Association of County Commissioners in 1996. It contains incentives for developers to encourage conservation subdivisions, such as density bonuses.

Model Conservation Subdivision Ordinance

Conservation Subdivision Handbook

NC State University Department of Forestry and Environmental Resources

Section 6 Density Bonuses

The maximum number of building lots or dwelling units in an Open Space Development shall not exceed the number that could otherwise be developed by the application of the minimum lot size requirement and/or density standard of the zoning district or districts in which the parcel is located. However, increases in the number of building lots or dwelling units are permitted through one or more of the following options:

6.1 To Encourage Additional Open Space

A. A density increase is permitted where more than fifty percent (50%) of the unconstrained land area in an Open Space Development is designated as permanent, undivided open space. The amount of the density increase shall be based on the following standard: For each additional acre of protected open space provided in the Open Space Development, one (1) additional building lot or dwelling unit is permitted.

B. In lieu of providing additional open space in the Open Space Development, the applicant may purchase in fee simple or less than fee (e.g., development rights) land separate from the Open Space Development which is comprised of Primary and/or Secondary Conservation.

C. For land purchased in less than fee, a conservation easement shall be recorded which restricts the development potential of the land. The conservation easement shall be dedicated to the County, another unit of local government, the State of North Carolina, or a private non-profit land conservancy.

6.2 To Encourage Public Access

Dedication of land for public use (including trails, active recreation, municipal spray irrigation fields, etc.), in addition to any public land dedication authorized under the state enabling statutes, may be encouraged by the County, which is herein authorized to offer a density bonus for this express purpose. This density bonus, for open space that would be in addition to the basic public land dedication mentioned above, shall be computed on the basis of one dwelling unit per three acres of publicly accessible open space. The decision whether to accept an applicant's offer to dedicate open space for public access shall be at the discretion of the County, which shall be guided by recommendations contained in existing and future recreation plans, particularly those sections dealing with trail connections, greenway networks, and/or recreational facilities.

6.3 To Encourage Maintenance Endowments

The County may allow a density bonus to generate additional income to the applicant for the express purpose of endowing a permanent fund to offset continuing open space maintenance costs. Spending from this fund would be restricted to expenditure of interest, in order that the principal may be preserved. Assuming an average interest rate of five (5) percent, the amount designated for the Endowment Fund should be twenty (20) times the amount estimated to be needed on a yearly basis to maintain the open space. On the assumption that additional dwellings, over and above the maximum that would ordinarily be permitted on the site, are net of development of development costs and represent true profit, 75 percent of the net selling price of the lots should be donated to the Open Space Endowment Fund for the conservation lands within the subdivision. Such estimates should be prepared by an agency or organization with experience in open space management acceptable to the County. This fund shall be transferred by the developer to the designated entity with ownership and maintenance responsibilities, such as a homeowners' association, a land trust, or a unit of local government.

6.4 To Encourage Affordable Housing

A. A density increase is permitted where the Open Space Development provides on-site or off-site housing opportunities for low or moderate-income families. The amount of the density increase shall be based on the following standard: For each affordable housing unit provided in the Open

Space Development, one (1) additional building lot or dwelling unit is permitted Affordable housing is defined as units to be sold or rented to families earning 70 to 120 percent of the County median income, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development.

B. In lieu of providing affordable housing units in the Open Space Development, the applicant may donate to the County land separate from the Open Space Development with suitable soils or access to public water and sewer for the purpose of developing affordable housing. The donated land shall contain at a minimum the land area needed to develop the total number of bonus units in accordance with the zoning requirements of the district in which the donated land is located, together with a minimum of twenty (20) percent open space land, at least half of which is suitable for active recreation.

The model presented requires local governments to grant density bonuses of at least 25 percent, plus an additional incentive(s) or equivalent financial incentives to developers of affordable housing. It also gives discretion to local governments to differentiate between the types or categories of affordable housing (i.e., low-income, very-low-income, and senior citizens housing). The developer is required to enter into a development agreement with the local government that will formalize the manner in which the affordable housing is to be kept affordable and other administrative details relating to the project. The model statute also authorizes development incentives for increased nonresidential floor area for provision of "public benefit amenities" such as plazas, parks, and open space, access to transit stations, and overhead weather protection and street arcades. A public benefit amenity may also include provision of affordable housing as part of a nonresidential development, for which a density bonus may be granted. A local government may also adopt a "uniform incentives ordinance" that addresses both provision of affordable housing and dedication of open space and/or provision of community design amenities.

9-501 Land-Use Incentives for Affordable Housing, Community Design, and Open Space Dedication; Unified Incentives Ordinance American Planning Association

(1) The legislative body of a local government, in the manner for the adoption and amendment of land development regulations pursuant to Section [8-103 or cite to some other provision, such as a municipal charter or state statute governing the adoption of ordinances]:

(a) shall adopt and amend an ordinance that authorizes incentives for the provision of affordable housing; and

(b) may adopt and amend an ordinance that authorizes incentives for open space dedication and provision of public benefit amenities.

(2) The purpose of this Section is to authorize the adoption and amendment of:

(a) an affordable housing incentives ordinance in order to respond to and accommodate present and future needs for affordable housing;

(b) a community design and open space incentives ordinance to provide additional amenities for public use or benefit in new development that carry out goals and policies of a local government identified in its local comprehensive plan; and

(c) a unified incentives ordinance that incorporates subparagraphs (a) and (b) above.

(3) As used in this Section:

(a) "Affordable Housing" means housing that has a sales price or rental amount that is within the means of a household that may occupy moderate- or low-income housing. In the case of dwelling units for sale, housing that is affordable means housing in which annual housing costs constitute no more than [28] percent of such gross annual household income for a household of the size which may occupy the unit in question. In the case of dwelling units for rent, housing that is affordable means housing for which the affordable rent is no more than [30] percent of such gross annual household income for a household of the size which may occupy the unit in question.

(b) "Affordable Housing Development" means any housing development that is subsidized by the federal, state, or local government, or any housing development in which at least [20] percent of the dwelling units are subject to covenants or restrictions which require that such dwelling units be sold or rented at prices that preserve them as affordable housing pursuant to this Section.

(c) "Affordable Housing Incentives" mean a density bonus and other development incentives granted under an affordable housing incentive ordinance pursuant to this Section.

(d) "Affordable Rent" means monthly housing expenses, including a reasonable allowance for utilities, for affordable housing units that are for rent to low- or moderate-income households.

(e) "Affordable Sales Price" means a sales price at which low- or moderate-income households can qualify for the purchase of affordable housing, calculated on the basis of underwriting standards of mortgage financing available for the housing development.

(f) "Bonusable Area" means space that is occupied by a public benefit amenity and that is determined by the local government to satisfy requirements under its land development regulations for additional gross floor area or dwelling units.

(g) "Bonus Ratio" means the ratio of additional square feet of nonresidential floor area granted per square foot of bonusable area.

(h) "Density Bonus" means the percentage of density increase granted over the otherwise maximum allowable net density under the applicable zoning ordinance as of the date of the application to the local government for incentives by a developer. The density bonus applicable to affordable housing shall be at least a 25 percent increase, and shall apply to the site of the affordable housing development.[242]

(i) "Development Agreement" means a development agreement authorized by Section [8-701].

(j) "Development Incentives" mean any of the following:

1. reductions in building setback requirements;
2. reductions or waivers of impact fees, application fees for development permits, utility tap-in fees, or other dedications or exactions;
3. reductions in minimum lot area, width, or depth;
4. reductions in required parking spaces per dwelling unit or per square foot of floor area;
5. increased maximum lot coverage;
6. increased maximum building height and/or stories;
7. reductions in minimum building separation requirements, provided that such reductions do not conflict with building code requirements of the state or the local government, as applicable;
8. reductions or waivers of public or nonpublic improvements;

9. approval by the legislative body of a local government of mixed use zoning in conjunction with the housing project if commercial, office, industrial or other land uses will contribute significantly to the economic feasibility of the housing development and if the mixed use zoning is consistent with the local comprehensive plan;

10. authorization for the affordable housing development to include nonresidential uses, provided such uses or such authorization is consistent with the local comprehensive plan;

12. authorization for the affordable housing to be located in a nonresidential zoning district, provided such authorization is consistent with the local comprehensive plan; or

13. other incentives proposed by the developer of an affordable housing project or by the local government that result in identifiable cost reductions for affordable housing, including direct financial aid by the local government in the form of a loan or grant to subsidize or provide low interest financing for on- or off-site improvements, land, or construction costs.

(k) "Floor Area Ratio" means the ratio of the maximum gross floor area on a lot or parcel to the area of the lot or parcel that is permitted pursuant to the land development regulations of a local government.

(l) "Housing Costs" mean the sum of actual or projected monthly payments for any of the following associated with for-sale affordable housing units: principal and interest on a mortgage loan, including any loan insurance fees; property taxes and assessments; fire and casualty insurance; property maintenance and repairs; homeowner association fees; and a reasonable allowance for utilities.

(m) "Housing Development" means construction, including rehabilitation, projects consisting of five or more residential units, including single-family, two-family, and multiple-family residences for sale or rent.

(n) "Incentives" mean one or more of the following:

1. affordable housing incentives;
2. bonus ratio; and
3. density bonus.

(o) "Low-Income Housing" means housing that is affordable, according to the federal Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that does not exceed 50 percent of the median gross household income for households of the same size within the housing region in which the housing is located.

(p) "Moderate-Income Housing" means housing that is affordable, according to the federal Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that is greater than 50 percent but does not exceed 80 percent of the median gross household income for households of the same size within the housing region in which the housing is located.

(q) "Public Benefit Amenity" means one or more features for public use or benefit within or in the vicinity of a development that will entitle the development to a bonus ratio or a density bonus, as applicable, including, but not limited to:

1. shopping atriums;
2. plazas, parks, and other open spaces;
3. overhead weather protection and street arcades;
4. bicycle parking and storage facilities;

5. performing arts theaters;
6. museums;
7. access to transit stations and transit easements;
8. provision of child day-care centers;
9. provision of affordable housing as part of a nonresidential development; and
10. [other].

(r) "Unified Incentives Ordinance" means an ordinance that provides incentives for both:

1. provision of affordable housing; and
2. dedication of open space and/or provision of community design amenities; and that

complies with all requirements of this Section for both an affordable housing incentives ordinance and a community design and open space incentives ordinance.

(4) The legislative body of a local government may adopt and amend an affordable housing incentives ordinance only after it has adopted a local comprehensive plan that contains:

- (a) a housing element pursuant to Section [7-207]; and
- (b) a policy in written and/or mapped form that encourages affordable housing incentives.

(5) The legislative body of a local government may adopt and amend a community design and open space incentives ordinance only after it has adopted a local comprehensive plan that contains:

(a) if a density bonus for residential development for the public benefit amenity of a plaza, park, or other open spaces is authorized, a housing element pursuant to Section [7-207]; and

(b) if any other type of bonus ratio is authorized, a community design element pursuant to Section [7-214]; and

(c) a policy in written and/or mapped form that describes the relationship between the applicable public benefit amenities and the density bonus or bonus ratio and supports the granting of such density bonus or bonus ratio.

(6) An affordable housing incentive ordinance, a community design and open space incentives ordinance, or a unified incentives ordinance shall include the following minimum provisions:

- (a) a citation to enabling authority to adopt and amend the ordinance;
- (b) a statement of purpose consistent with the purposes of land development regulations

pursuant to Section [8-102(2)] and with the purposes of this Section;

(c) a statement of consistency with the local comprehensive plan that is based on findings made pursuant to Section [8-104];

(d) definitions, as appropriate for such words or terms contained in the affordable housing incentive ordinance. Where this Chapter or Section defines words or terms, the ordinance shall incorporate those definitions, either directly or by reference;

(e) procedures for the review of applications for incentives;

(f) a requirement that every developer that is to receive incentives shall enter into a development agreement with the local government;

(g) designation of an officer or body to review and approve applications for incentives; and

(h) provisions for enforcement, including the issuance of certificates of compliance.

(7) An affordable housing incentives ordinance or a unified incentives ordinance shall also include the following minimum provisions:

(a) a requirement that, where a developer proposes a housing development within the jurisdiction of the local government, the local government shall provide the developer with affordable

housing incentives for the production of affordable housing within the development if the developer meets the requirements set forth in paragraphs (11) and (12) below; and

(b) provisions to ensure that once affordable housing is built through subsidies or other means as part of a housing development, its availability will be maintained through measures that establish income qualifications for affordable housing renters or purchasers, promote affirmative marketing measures, and regulate the price and rent, including resale price, of affordable housing units.

(8) A community design and open space incentives ordinance or a unified incentives ordinance shall also include the following minimum provisions:

(a) a statement of the types or categories of public benefit amenities for which a bonus ratio or density bonus shall be authorized, the amount of the respective bonus ratio or density bonus, and the zoning use district or overlay district to which public benefit amenity and the respective bonus ratio or density bonus apply;

(b) locational and other development standards for the public benefit amenities, including a statement of the minimum bonusable area that a public benefit amenity must contain in order to be eligible for a bonus ratio or a density bonus; and

(c) requirements for permanent public access to the public benefit amenity, including signage indicating the nature of the public access, secured by either:

1. a conveyance of the plaza, park, or other open space, or access to transit stations or transit easements, to the local government or appropriate governmental unit as a public use as a condition of approval of the development permit, provided that the conveyance is in a form approved by the attorney of the local government or governmental unit; or

2. where the public benefit amenity will not be owned by the local government or another governmental unit, provisions in the development agreement requiring permanent maintenance by the property owner, except that permanent public access may be limited to normal business hours.

(9) An affordable housing incentives ordinance or a unified incentives ordinance may require that any new housing development within the jurisdiction of the local government contain at least [15] percent affordable housing if such a requirement is consistent with a policy contained in the local comprehensive plan. The incentives offered to the developer, whether density bonuses, development incentives, or both, shall be of at least equivalent financial value to the cost of making the affordable housing units affordable.

(10) A community design and open space incentives ordinance or a unified incentives ordinance may:

(a) include a manual of graphic and written design guidelines to assist developers in the preparation of applications for community design and open space incentives, but such guidelines shall be advisory only;

(b) include a statement of the maximum bonusable area that a public benefit amenity may contain in order to be eligible for a bonus ratio or a density bonus;

(c) include a provision that allows the developer to provide the public benefit amenity offsite as a condition of receiving a bonus ratio or density bonus, including standards of proximity of the development to the offsite public benefit amenity; and

(d) be adopted as an overlay district to all or portions of existing zoning use districts. The boundaries of the overlay district shall be shown on the zoning map pursuant to Section [8-201(3)(o)].

(11) Where a developer proposes a housing development that is to be an affordable housing development, the local government shall either:

(a) grant a density bonus and at least one development incentive, unless the local government makes a written finding that the development incentive is not necessary to reduce the price or rent of the dwelling units in order to ensure that they are affordable housing; or

(b) provide, in lieu of subparagraph (a) above, development incentives of equivalent financial value based upon the land cost per dwelling unit. The value of such equivalent development incentives shall at least equal the land cost per dwelling unit that would result from a density bonus and shall contribute significantly to the economic feasibility of providing the affordable housing units.

(12) The development agreement entered into between the developer of a housing development that is to be an affordable housing development and the local government shall include provisions to ensure the availability of affordable housing for sale or rent.

(a) The development agreement shall provide for a period of availability for affordable housing as follows:

1. Newly constructed low- and moderate-income sales and rental dwelling units shall be subject to affordability controls for a period of not less than [15] years, which period may be renewed pursuant to the development agreement;

2. Rehabilitated owner-occupied single-family dwelling units that are improved to code standard shall be subject to affordability controls for at least [5] years.

3. Rehabilitated renter-occupied dwelling units that are improved to code standard shall be subject to affordability controls on re-rental for at least [10] years.

4. Any dwelling unit created through the conversion of a nonresidential structure shall be considered a new dwelling unit and shall be subject to affordability controls as delineated in subparagraph (a) 1 above.

5. Affordability controls on owner- or renter-occupied accessory apartments shall be applicable for a period of at least [5] years.

6. Alternatives not otherwise described in this subparagraph shall be controlled in a manner deemed suitable to the local government and shall provide assurances that such arrangements will house low- and moderate-income households for at least [10] years.

(b) In the case of for-sale housing developments, the development agreement shall include the following affordability controls governing the initial sale and use and any resale:

1. All conveyances of newly constructed affordable housing dwelling units subject to the affordable housing incentives ordinance that are for sale shall contain a deed restriction and mortgage lien, which shall be recorded with the county [recorder of deeds or equivalent official]. Any restrictions on future resale shall be included in the deed restriction as a condition of approval enforceable through legal and equitable remedies.

2. Affordable housing units shall, upon initial sale, and resale in the period covered by the development agreement, be sold to eligible low- or moderate-income households at an affordable sales price and housing cost.

3. Affordable housing units shall be occupied by eligible low- or moderate- income households during the period covered by the development agreement.

(c) In the case of rental housing developments, the development agreement shall include the following affordability controls governing the use of affordable housing units during the use restriction period:

1. rules and procedures for qualifying tenants, establishing affordable rent, filling vacancies, and maintaining affordable housing rental units for qualified tenants;

2. requirements that owners verify tenant incomes and maintain books and records to demonstrate compliance with the agreement and with the ordinance;

3. requirements that owners submit an annual report to the local government demonstrating compliance with the agreement and with the ordinance.

(d) The development agreement shall include a schedule that provides for the affordable housing units to be built or rehabilitated concurrently with the units that are not subject to affordability controls.

(13) The approval of incentives shall constitute a development permit. The incentives shall be part of the unified development permit review process established pursuant to Section [10-201].

(14) This Section does not limit or require the provision of direct financial aid by the local government, the provision of publicly-owned land, or the waiver or reduction of fees, including impact fees pursuant to Section [8-602], or of dedication or exaction requirements pursuant to Section [8-601].

(15) The [state planning agency or state department of development] shall by [date] prepare and distribute a model affordable housing incentives ordinance and related guidelines to assist local governments in complying with this Section.

Adaptation for Great Lakes Coastal Storm Hazards

The Town of Hull passed the Nantasket Beach Overlay District zoning on May 7, 2013 (Hull Town Code, Art. X). Section 12.2. lays out the incentives the town provides to encourage resilient buildings, including the \$500 freeboard rebate (12.2.1), and the savings on insurance from NFIP (12.2.2); and provides that the planning board may allow building heights up to 40 feet above a non-habitable lowest floor; provided that the space serves as a “market hall.” The section allows up to 6 feet of freeboard (12.2.3). In order to receive the incentives, the projects must meet certain requirements, including that they not allow any habitable space on the ground floor. Instead, it requires a “market hall,” which is defined as a traditional-open market, for temporary commercial uses, that contribute to the economic and social activity of the district (12.3.2.). Suggested uses include farmers markets, art exhibition or performance spaces, and outdoor cafes. Parking is allowed provided it does not occupy more than 50 percent of the space. The section also prohibits mechanical, HVAC equipment, and generators on the lowest floor and requires that they be elevated on the roof or upper stories.

Town of Hull, Massachusetts

Article X - Nantasket Beach Overlay District

12. Incentives for constructing buildings that are adapted to and resilient to the impacts of climate change on coastal communities in designated floodplain districts.

12.1. The purpose of this section is to encourage construction that will withstand increased flood elevations and frequency and intensity of storm events for new buildings and those being substantially improved (costs equal or exceed 50 % of the appraised market value).

12.2. This Section provides the following incentives:

12.2.1. The Planning Board will permit projects under S. 12 through the Special Permit procedures (S. 3 of the NBOD). Projects permitted under this Section will be eligible for a rebate of up

to \$500 on the building permit fees through the Town's established administrative process for "freeboard" rebate.

12.2.2. Buildings will be eligible for insurance savings from the National Flood Insurance Program based on their elevation above the National Flood Insurance Program (NFIP) minimum height requirements. Projects proposed under S.12 must determine and report on their potential insurance savings allowed from NFIP due to their proposed "freeboard".

12.2.3. In order to provide storm and flood protection for new and existing buildings within a Special Flood Hazard Area, as defined by the latest edition of 780 CMR, the Planning Board may allow building heights up to a maximum of fifty (50) feet above a non-habitable lowest floor (as defined in S. 42 of this Bylaw) which must be a "Market Hall". The height of the "Market Hall" will be calculated by adding the required flood elevation plus up to six (6) feet of freeboard. Therefore the total building height is calculated by adding the flood elevation plus the allowed freeboard up to six (6) feet and up to the maximum allowed fifty (50) feet of habitable space. Buildings cannot exceed the elevation required to comply with 780 CMR by more than six (6) feet.

12.3. In order to receive these incentives, the project must incorporate the following elements into the proposed development:

12.3.1. All buildings must comply with existing Floodplain Regulations as set forth in S. 42 of this Zoning Bylaw.

12.3.2. The lowest floor or story of a building shall not contain habitable space, regardless of the property's location within the Floodplain Districts set forth in S. 37 and 42 of this Zoning Bylaw and the property's designation within special flood hazard areas by the Plymouth County Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program. Instead, open commercial lowest floor space will be used for temporary non-habitable uses as inspired by the traditional Market Hall that provide utility and ideally, contribute to economic and social activity of the NBOD.

12.3.3. Lowest floor uses may include but are not limited to:

12.3.3.1. Farmer's markets, vendor stalls.

12.3.3.2. Art exhibition and performance art.

12.3.3.3. Beach Reservation Visitors' Center and historic exhibits.

12.3.3.4. Temporary outdoor eating spaces, such as café tables for seasonal restaurants.

12.3.3.5. Parking, provided that the space allotted to parking does not occupy more than 50 percent of the total lowest floor square footage and is screened from other uses by three (3) to five (5) feet height screening with minimum 50% opacity.

12.3.3.6. Facilities to access the habitable floors of the structure, including enclosed stairways, foyers, elevators and similar facilities.

12.3.4. Mechanical, electrical service and HVAC equipment shall not be located on the lowest floor, but rather shall be located on roof or upper stories and screened or enclosed as an integral part of the building design and not an add on feature.

12.3.5. Generators sized to meet the emergency electrical demands of the building are located on roof or upper stories.

12.3.6. Underground utility lines and submersible electrical transformers are required where appropriate and feasible.

12.3.7. To the greatest extent possible buildings will be constructed to the highest storm and flood resistant standards for the A Zone, as described in 780 CMR 120 G Flood Resistant Construction and Construction in Coastal Dunes.

12.3.8. To the greatest extent possible, proponents shall incorporate in their buildings and developments the standards for building construction, architecture and site design for “Green Building” as defined in S. 4 of the NBOD.

12.3.9. To the greatest extent possible built landscape features that function to provide storm and flood protection shall be constructed and maintained.

Model Incentives *to address transportation policies, services, and programs that can reduce GHG (mitigation)*

Alternative Fuel Vehicles

City of Aspen, Colorado: Title 24: Traffic and Motor Vehicles

Chapter 24.24: Hybrid Vehicle Registration Fee Rebate and Parking Relief Program

City of New Haven, Connecticut: Chapter 29 – Traffic and Motor Vehicles

Article III, Parking, Stopping and Standing, Division 1, Generally
Sec. 29-56. Free on-street parking for hybrid vehicles and other authorized alternative fuel vehicles.

Town of Huntington, Suffolk County, New York: Chapter TC4, Parking Fields

§ TC4-3. Town parking fields. (2) Hybrid or alternative fuel vehicles.

City of Parkland, Florida: Chapter 4.5: Environment

Article I, In General, Sec. 4.5-1. Environmentally conscious purchases.

Parking Strategies

City of San Diego, California:

§142.0527 Parking Regulations for Reduced Parking Demand Housing.

Transit, Bicycle and Pedestrian Facilities

City of Carmel, Indiana: Chapter 10: Zoning & Subdivisions, Article 1: Zoning Code

Chapter 23B: U.S. Highway 31 Corridor Overlay Zone, 23B.01 District Boundaries.

Transportation-Related Green Building

City of Bothell, Washington:

Chapter 12.16: Parking, Loading, Transit Access and Pedestrian Circulation
12.16.110 Transit and rideshare provisions.

Model Incentives *to address transportation policies, services, and programs that can reduce GHG (mitigation)*

Alternative Fuel Vehicles

Hybrid vehicles registered in the City of Aspen are eligible for a \$100.00 rebate on license registration. They are also permitted to park with impunity in the city's residential and carpool zones. Owners must register the vehicle with the Parking Department.

City of Aspen, Colorado

Title 24: Traffic and Motor Vehicles

Chapter 24.24: Hybrid Vehicle Registration Fee Rebate and Parking Relief Program

Sec. 24.24.010. Hybrid Vehicle Registration Fee Rebate Program.

There is hereby created a Hybrid Vehicle Registration Fee Rebate Program within the City to encourage the ownership of low emission vehicles in the City. (Ord. No. 37-2003, § 1)

Sec. 24.24.020. Qualifications, administration and rebate amount.

(a) For purposes of this Chapter, the following terms shall have the following meanings: Hybrid vehicle shall mean a vehicle that meets the then-applicable definition of the Super Ultra Low Emission Vehicle (SULEV) Standards or better, promulgated by the California Air Resource Board (CARB) and that meets the definition of hybrid vehicle per the U.S. Department of Energy (www.ott.doe.gov/hev). Resident of the City shall mean any person who resides in the City during the calendar year for which a Hybrid Vehicle Registration Fee Rebate is sought.

(b) Any resident of the City who is the owner of a hybrid vehicle that meets the then-applicable SULEV standards and pays an annual motor vehicle registration fee to the State, within the same calendar year following the payment of a motor vehicle registration fee so long as this Chapter shall be in force, may apply, on such forms as provided by the Director of Parking, for an annual SULEV Hybrid Vehicle Registration Fee Rebate from the City in the amount of one-hundred dollars (\$100.00.)

(c) The application for a rebate shall be reviewed by the City's Transportation and Parking Department to determine the ownership and type of vehicle for which an application is made. The Director of Parking shall further review the application for completeness and to verify residence eligibility. All applicants may prove their resident status by evidence that they were registered voters of the City for the full calendar year for which the rebate applies. Any resident who is barred from registering to vote due to noncitizenship or due to other disqualification shall provide alternative proof of residency, as may be required by the Parking Director.

(d) The Director of Parking shall administer this Chapter 24.24 and shall prepare such forms and adopt such regulations consistent with this Chapter, as he or she deems necessary to implement the same. (Ord. No. 37-2003, § 1)

Sec. 24.24.030. Hybrid Vehicle Parking Program.

There is hereby created a Hybrid Vehicle Parking Program within the City to encourage the ownership and use of low emission vehicles in the City. (Ord. No. 37-2003, § 1)

Sec. 24.24.040. Qualifications, administration and parking privileges.

(a) Any person who is the owner of a hybrid vehicle that meets the then-applicable SULEV standards, may apply for an Aspen Hybrid Vehicle Parking Program Permit every year so long as this Chapter shall be in force on such forms as provided by the Director of Parking. The Hybrid Vehicle Parking Program Permit shall allow qualifying hybrid vehicles to park in any Residential Permit Zone or High Occupancy Vehicle (HOV) Zone space. Vehicles that display a valid hybrid vehicle permit will be exempt from the two-hour parking restriction in Residential Permit Zones and will not be required to display an additional permit in High Occupancy Vehicle (HOV) Zone spaces.

(b) The application for a Hybrid Vehicle Parking Program Permit shall be reviewed by the City's Transportation and Parking Department to determine the SULEV hybrid status of the type of vehicle for which an application is made. Qualifying SULEV hybrid vehicles will be issued Hybrid Vehicle Parking Program Permits. Such permits are not transferable and will only be valid on hybrid vehicles that meet Super Ultra Low Emission Vehicles Standards or better. (*Ord. No. 37-2003, § 1*)

Sec. 24.24.050. No exemption created.

Display of a Hybrid Vehicle Parking Program Permit shall not exempt a vehicle from the provisions of Title 24 of this Code. Display of a permit on a qualifying vehicle does not convey any privileges other than that of exceeding the posted time limit in Residential Permit Zones or of parking in High Occupancy Vehicle (HOV) parking areas without a valid HOV parking permit. It does not authorize parking in any other restricted or prohibited zone or parking space. It does not authorize exemption from the seventy-two-hour parking limitation (Section 24.08.010[5]), nor any other parking limitation or prohibition posted on an official sign (Section 24.08.010[4]). (*Ord. No. 37-2003, § 1*)

The City of New Haven provides free parking on all city streets for HEVs and AFVs registered in New Haven that have a U.S. Environmental Protection Agency city or highway fuel economy rating of at least 35 miles per gallon. HEV and AFV vehicle owners must obtain a non-transferable pass from the Department of Traffic and Parking to place on the vehicle's dashboard or hang from the rearview mirror. AFVs and HEVs are otherwise subject to all time and other posted parking restrictions.

City of New Haven, Connecticut

Chapter 29 – Traffic and Motor Vehicles

Article III, Parking, Stopping and Standing

Division 1, Generally

Sec. 29-56. Free on-street parking for hybrid vehicles and other authorized alternative fuel vehicles.

(a) The City of New Haven shall encourage the use of hybrid/AFV technology by granting free on-street parking to New Haven hybrid/AFVs earning over thirty-five (35) miles per gallon in USEPA fuel testing for either highway or city driving, as well as manufacturer authorized alternative fuel vehicles.

(b) Qualifying vehicles shall be alternative fuel or hybrid vehicles registered in New Haven where the owner does not owe back taxes or parking tickets. Owners will be granted a non-transferable pass from the department of traffic and parking to be placed on the qualifying vehicle's dash-board or to be hung from the rear-view mirror identifying their vehicle as eligible for free parking. The one (1) year pass shall expire annually on a fixed date, initially one (1) year after this ordinance takes effect. The pass is

valid only in legal on-street parking spaces, in compliance with all time and other posted restrictions. This ordinance amendment [Ord. No. 1424] reauthorizing the pilot program shall need to be reauthorized three (3) years from the date it first takes effect.

The Town of Huntington will allow hybrids and alternative-fuel vehicles, affixed with special "Keep Huntington Green" window stickers, free parking at town meters, free access to all Huntington beaches, and free commuter parking at any of the town's four Long Island Rail Road stations.

Town of Huntington, Suffolk County, New York

Chapter TC4, Parking Fields

§ TC4-3. Town parking fields.

(2) Hybrid or alternative fuel vehicles.

(a) No application fee shall be required for the parking of any hybrid or alternative fuel vehicle which is registered or leased to a resident of the Town of Huntington. All applicants shall present a copy of the vehicle registration card, proper proof of residency and proof to the satisfaction of the Town that the vehicle is a hybrid or alternative fuel vehicle. Motorists who lease a hybrid or alternative fuel vehicle shall present a copy of the lease and any other proof required by the Town before a permit will be issued by the Huntington Town Clerk. Such permits are not transferable to another vehicle and shall be valid from the date of issuance to 12:00 midnight on December 31st of the year next following the date of issue.

(b) The Director of Public Safety shall provide the Huntington Town Clerk with an undated list of hybrid and alternative fuel vehicles once every three (3) months or sooner if requested by the Town Clerk. In the event a question arises as to whether a vehicle qualifies as a hybrid or alternative fuel vehicle, the decision of the Director of Public Safety shall control and be final.

(c) All such permits shall be securely affixed to the right, rear passenger-side window of the vehicle and shall be unobstructed at all times so as to be clearly visible.

On February 18, 2009, the Parkland City Commission amended an ordinance creating incentives for environmentally conscious purchases made by residents and businesses—which includes the purchase of a hybrid vehicle. The program rewards these residents and businesses for taking extra steps to be environmentally conscious. Residents and businesses are eligible to receive incentive awards after meeting specific program criteria and submitting an application.

City of Parkland, Florida

Chapter 4.5: Environment

Article I, In General

Sec. 4.5-1. Environmentally conscious purchases.

(a) The city intends to implement a program to reward Parkland residents for taking extra steps to be environmentally conscious. Funds for this purpose are limited, and the city reserves the right to discontinue the program at any time, or to limit the payments made under this program when determined to be in the best interest of the city. Inasmuch as this program is funded by the city, no person or entity shall be eligible for a payment under this program unless that person or entity pays ad

valorem taxes on property within the city or resides in or owns a business located in the city; persons or entities leasing property within the city shall qualify.

(b) The city hereby adopts a program for energy conscious incentives (hereinafter referred to as incentive payments) as set forth on the attached Exhibit A (the criteria) (Exhibit A is available in the environmental resource department at city hall). No one will be eligible for incentive payments unless they meet the criteria. The city manager is authorized to provide appropriate application forms and require information as necessary to implement this program. No person or entity will be eligible for an energy incentive or incentive payment unless they have fully completed the application requirements as approved by the city manager. Only purchases after the effective date of this section shall qualify. Only completed applications received by May 1 of each year shall qualify for payment, which payment shall be made during the next fiscal year. The city reserves the right to reject any application, to limit payments made pursuant to this program, or altogether suspend said payments when determined to be in the best interests of the city by the city commission. The limitations set forth in the criteria shall be binding. Exhibit A may be revised by the city commission in the future by resolution. The city manager or his/her designee may provide for additional categories and incentives where in his/her opinion the new category and incentive serves the purposes of this section and program. The city commission shall be given notice of such proposed category and incentive.

(c) Each fiscal year the city manager shall set up a separate account to finance the incentive payments. The first payments shall be made during the 2008-2009 fiscal year. The account shall be funded from revenues or payments from the following sources: cellular tower revenue; these funds shall be placed in a separate budget line item. The maximum funding for any fiscal year shall be fifty thousand dollars (\$50,000.00); provided that the city commission may increase this amount by resolution. When the funds from that line item are exhausted, the program will be suspended for that fiscal year unless additional non-ad valorem funds are deposited in the line item account. No payments in excess of that amount shall be made. No payments shall be made from ad valorem revenues. If no funds are placed in the account, then no incentive payments shall be made. (Ord. No. 2007-29, §§ 2—4, 1-16-2008; Ord. No. 2008-17, § 2, 6-4-2008; Ord. No. 2009-02, § 2, 2-18-2009)

Parking Strategies

The San Diego Municipal Code permits reduced minimum parking requirements for residential, office, retail, institutional, and industrial uses in designated transit areas and for residential uses in designated very low income areas. With respect to residential uses, the minimum parking requirements can be reduced in multiple dwelling unit developments, depending on the multiple dwelling unit type (number of bedrooms). With respect to nonresidential uses, the reduction in minimum parking requirements for developments in transit varies based on use. In general, the minimum parking requirement for nonresidential uses in transit areas is about 85% percent of the minimum requirement for development outside transit areas.

City of San Diego, California

§142.0527 Parking Regulations for Reduced Parking Demand Housing.

The minimum number of parking spaces for multiple dwelling units residential development that includes Reduced Parking Demand Housing shall be determined as set forth below.

(a) Definitions. For the purposes of Section 142.0527, the following definitions apply:

(1) Civic Uses means cultural facilities, libraries, museums and art galleries, post offices, public parks, recreation centers, or social service agencies.

(2) Family Housing means a development where 50 percent or more of the dwelling units contain two or more bedrooms.

(3) Reduced Parking Demand Housing means development where:

(A) All or a portion of the dwelling units are rental units reserved for a period of at least 30 years for low income or very low income households in which the tenants do not pay more than 35 percent of gross household income toward gross rent (including utilities). These provisions shall be included in a written agreement with the San Diego Housing Commission; and

(B) The development falls into at least one of the following categories:

(i) Family Housing;

(ii) Housing for Senior Citizens, meeting the criteria of Section 141.0310(a);

(iii) Housing for disabled persons;

(iv) SRO hotel; or

(v) Studio (up to and including 400 square feet) or 1 bedroom (greater than 400 square feet), provided the studio or 1 bedroom is not within a development for Family Housing or Housing for Senior Citizens.

(b) Parking Demand. The minimum required automobile parking spaces for Reduced Parking Demand Housing shall be determined using the following indexes (See the Land Development Manual: Calculating Reduced Parking Demand Housing Parking Requirements for guidance on calculating the Walkability and Transit Indexes.):

(1) Walkability Index

The Walkability Index shall be determined by assigning one point for each of the following criteria, for a maximum Walkability Index of 4 points.

(A) Retail, theater, or assembly and entertainment uses present within one-half mile of the Reduced Parking Demand Housing.

(B) More than 120 lots developed with retail, theater, or assembly and entertainment uses within one-half mile of the Reduced Parking Demand Housing.

(C) Office, nonresidential day care, nursery school, kindergarten through grade 12, hospitals, healthcare uses, or Civic Uses within one-half mile of the Reduced Parking Demand Housing.

(D) More than 50 lots developed with office, nonresidential day care, nursery school, kindergarten through grade 12, hospitals, or healthcare uses, or Civic Uses within one-half mile of the Reduced Parking Demand Housing.

(2) Transit Index

The Transit Index shall be determined by assigning points for the number of peak hour trips within a defined distance from the Reduced Parking Demand Housing. For bus transit, the distance is one-quarter mile from the Reduced Parking Demand Housing for each bus transit stop. For fixed rail and bus rapid transit, the distance is one-half mile from the Reduced Parking Demand Housing for each fixed stop. Inbound/outbound stops for the same route are calculated as one stop.

- (A) 0-15 peak hour trips/hour (1 point)
- (B) 16-30 peak hour trips/hour (2 points)
- (C) 31-45 peak hour trips/hour (3 points), or
- (D) 46 or greater peak hour trips/hour (4 points)

(3) Determination of Parking Demand

(A) The Walkability/Transit Index is the sum of the Walkability Index and the Transit Index divided by two.

(B) The Walkability/Transit Index shall determine the parking demand as follows:

- (i) 0.0 – 1.99: High parking demand
- (ii) 2.0 – 3.99: Medium parking demand
- (iii) 4.0: Low parking demand

(c) Alternative compliance may be used to determine the Walkability Index in accordance with the following:

(1) A project shall be deemed to have alternatively complied with Section 142.0527(b)(1)(B) when it is demonstrated to the satisfaction of the City Manager that there are more than 120 retail, theater, or assembly and entertainment uses within one-half mile of the Reduced Parking Demand Housing.

(2) A project shall be deemed to have alternatively complied with Section 142.0527(b)(1)(D) when it is demonstrated to the satisfaction of the City Manager that there are more than 50 office, nonresidential day care, nursery school, kindergarten through grade 12, hospitals, or healthcare uses, or Civic Uses within one-half mile of the Reduced Parking Demand Housing.

(d) Reduced Parking Demand Housing Parking Ratios. Table 142-05D provides the parking ratios required for Reduced Parking Demand Housing.

Legend for Table 142-05D

Symbol in Table 142-05D	Description of Symbol
H	High parking demand
M	Medium parking demand
L	Low parking demand
-	Section 142.0527 does not apply to housing of this type

**Table 142-05D
Reduced Parking Demand Housing Parking Ratios**

Bedrooms	Family Housing			Housing for Senior Citizens			Studio ¹ or 1 Bedroom ¹			Housing for Disabled Persons			SRO Hotel		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Studio	0.5	0.2	0.1	0.5	0.3	0.1	0.5	0.2	0.1	0.5	0.2	0.1	0.5	0.3	0.1
1 BR	1.0	0.6	0.33	0.75	0.6	0.15	0.75	0.5	0.1	0.75	0.5	0.1	-	-	-
2BR	1.3	1.1	0.5	1.0	0.85	0.2	-	-	-	-	-	-	-	-	-
3 BR	1.75	1.4	0.75	-	-	-	-	-	-	-	-	-	-	-	-
Accessory															
Visitor ²	0.15			0.15			0.15			0.15			0.15		
Staff ²	0.05			0.05			0.05			0.1			0.05		
Assigned spaces ³	0.1			0.1			0.1			0.1			0.1		

Footnotes for Table 142-05D

¹ See Section 142.0527(a)(3)(B)(v).

² Visitor and staff parking spaces are calculated by multiplying the ratio by the total number of Reduced Parking Demand Housing dwelling units.

³ For assigned parking, the number of additional parking spaces is calculated by multiplying the total parking spaces required for the Reduced Parking Demand Housing dwelling units, visitor, and staff parking by 0.1. For unassigned parking, no additional parking spaces are required.

(e) Supplemental Regulations.

(1) All required parking shall be provided in non-tandem parking spaces.

(2) Reduced Parking Demand Housing shall not be subject to the parking regulations of the Transit Overlay Zone and shall not be entitled to parking reductions provided for in Section 142.0550 (Parking Assessment District Calculation Exception).

(3) The number of accessible parking spaces provided in accordance with Title 24 of the California Code of Regulations (California Building Standards Code) for Housing for Senior Citizens and housing for disabled persons shall be the number of spaces required in accordance with the basic parking ratio for multiple dwelling units in Table 142-05C.

(4) An applicant that demonstrates compliance with Section 142.0527 shall receive a determination of substantial conformance with respect to the parking requirements specified in Section 142.0527 when such a determination is requested in accordance with Section 126.0112, provided that the applicant enters into a shared parking agreement with respect to the spaces determined to be surplus as a result of the substantial conformance review, pursuant to Section 142.0545. (*"Parking Regulations for Reduced Parking Demand Housing" added 11-16-2012 by O-20216 N.S.; effective 12-16-2012.*)

Transit, Bicycle and Pedestrian Facilities

The City of Carmel will grant development review waivers for proposals in the U.S. 31 Corridor that include provisions for bicycles and/or mass transit.

City of Carmel, Indiana

Chapter 10: Zoning & Subdivisions

Article 1: Zoning Code

Chapter 23B: U.S. Highway 31 Corridor Overlay Zone

23B.01 District Boundaries.

C. Zoning Waiver

(1) The proposal shall be in harmony with the purposes and the land-use standards contained in this Chapter. The Commission may, after a public hearing, grant a Plan Commission Waiver of certain Development Requirements of this Chapter, so noted within. Any approval to permit such a waiver shall be subject to the following criteria:

(2) The proposal shall enhance the overall Development Plan, the adjoining streetscapes and neighborhoods, and the overall U.S. 31 Corridor.

(3) The proposal shall not produce a Site Plan or street/circulation system that would be impractical or detract from the appearance of the Development Plan and the U.S. 31 Corridor, and shall not adversely affect emergency vehicle access or deprive adjoining properties of adequate light and air.

(4) The proposal exhibits extraordinary site design characteristics, including, but not limited to: Increased landscape treatment, tree preservation, public art, provisions for bicycles and/or mass transit, reduced surface parking coupled with provisions for above or below ground parking facilities. In granting a waiver, the Commission may impose such conditions that will, in its judgment, secure the purposes of this Chapter. This Paragraph does not affect the right of an applicant under Indiana law to petition the Board for a variance from development standards, as provided in IC 36-7-4-918.5 and this Zoning Ordinance.

Transportation-Related Green Building

LEED Certified buildings may reduce the number of on-site parking stalls as required in Bothell Municipal Code. Building officials for such projects are also authorized to approve alternative materials, design, and methods of construction to account for new green building technologies.

City of Bothell, Washington

Chapter 12.16: Parking, Loading, Transit Access and Pedestrian Circulation

12.16.110 Transit and rideshare provisions.

A. All land uses for which the majority of the parking demand is generated by employees who remain on-site for at least six hours each day shall be required to reserve one parking space for rideshare parking for every 20 required parking spaces, up to a maximum of 20 rideshare spaces, as follows:

1. The parking spaces shall be located convenient to the primary employee entrance;
2. Reserved areas shall have markings and signs indicating that the space is reserved between the hours of 6:00 a.m. and 9:00 a.m., 12:00 noon and 1:00 p.m., and at all other shift changes; and
3. Parking in reserved areas shall be limited to vanpools and carpools established through rideshare programs and to vehicles meeting minimum rideshare qualifications set by the employer.

B. The community development director may reduce the number of required off-street parking spaces when one or more scheduled transit routes provide service within 660 feet of the site. The amount of reduction shall be based on the number of scheduled transit runs between 7:00 a.m. and 9:00 a.m. and 4:00 p.m. and 6:00 p.m. each business day up to a maximum reduction as follows:

1. Six percent for buildings attaining at least minimum green building certification under the Leadership in Energy and Environmental Design (LEED), National Green Building Standard, Built Green (Three Star level or higher), or other certification program as approved by the community development director, and four percent for other buildings for each run serving land uses of the type described in subsection A of this section up to a maximum of 48 percent for green certified buildings and 40 percent for other buildings; and

2. Four percent for buildings attaining at least minimum green building certification under LEED, National Green Building Standard, Built Green (Three Star level or higher), or other certification program as approved by the community development director, and two percent for other buildings for each run serving land uses up to a maximum of 24 percent for green certified buildings and 20 percent for other buildings.

C. All uses which are located on an existing transit route and are required under the computation for required off-street parking spaces in BMC 12.16.030 to provide more than 200 parking spaces may be required to provide transit shelters, bus turnout lanes or other transit improvements as a condition of permit approval. Uses which reduce required parking under subsection B of this section shall provide transit shelters if transit routes adjoin the site. Adjoining uses which meet these criteria may coordinate in the provision of transit shelters.

D. Any development application to which this section applies shall complete and submit to the city all necessary agreements with transit agencies, rideshare programs, or other information required by this section prior to the issuance of any building permits associated with the development.

E. Any applicant for a development permit for other than a short plat or construction of a single-family residence shall inquire of the transit agency for the area in which the development would be located as to whether the agency desires a transit stop on the street or streets immediately adjacent to the development, or within the development itself. The applicant shall provide to the community development department a letter from the agency stating whether or not a transit stop is desired, and if so, whether the agency desires to construct and maintain a shelter at the stop. When a transit agency determines that a transit stop is warranted, the development shall incorporate the transit stop into the overall site design, including construction of a direct pedestrian connection from the transit stop to the development; construction of a pull-out, if desired by the transit agency; designation of land for a shelter, if the transit agency desires to construct a shelter; and installation of landscaping adjacent to the transit stop, in accordance with the transit agency's landscaping standards. (*Ord. 2028 § 1 (Exh. B), 2009; Ord. 1815 § 1, 2000; Ord. 1798 § 1, 2000; Ord. 1629 § 1, 1996*).

VI. Modified Model Ordinance

This modified law outlines the application procedures required for general site plan approval incorporated into a local zoning law. It is modeled on the Town of Guilderland in Albany County, New York using the Pace Land Use Law Center's Gaining Ground Information Database. This database features methods used by government to control the use of land in the public interest and includes a collection of exemplary federal, state, and local ordinances; commentaries; research papers; and research aids. The topics covered by the local law include: authorization to grant or deny site plan approval; time of submittal; preapplication sketch; application for preliminary site plan approval; factors for consideration; modification; action on preliminary application; application for final detailed site plan approval; and action on the final detailed site plan application. Transportation-related adaptation and mitigation measures to climate change have been included in Section F. Factors for Consideration in red. These measures, taken from the New York State Department of Environmental Conservation's "Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement," are examples that can increase energy efficiency, reduce energy demand, and reduce GHG emissions from proposed projects.

§ 280-53. Site plan approval.

- A. Purpose. The purpose of site plan approval is to determine that a proposed development subject to site plan approval is in compliance with the objectives of this chapter, creates no unhealthful or unsafe conditions and does not adversely impact on adjacent land uses or the health, safety or general welfare of the community.
- B. Authorization to grant or deny site plan approval. The power to approve or approve with conditions site plans as required by this section is vested in the Planning Board. Prior to issuing a building permit for the construction of any townhouse or mobile dwelling unit; or before any permit for erection of a permanent building in a planned unit development shall be granted; or before any subdivision plat or any part thereof may be filed in the office of the Albany County Clerk, the Chief Building Inspector and Zoning Coordinator shall refer the site plan and supporting documentation of such project to the Planning Board. All site plan information shall be prepared by a licensed architect, engineer, surveyor or landscape architect. All site plans shall show the seal and signature of said architect, engineer, surveyor or landscape architect. In addition, such professional shall submit to the Town a signed affidavit that the plans for the project were prepared by said professional, his employees or by an agency of the federal, state or local government. No building permit shall be issued except in accordance with standards and procedures set forth in this section.
- C. Time of submittal.
 - (1) A site plan shall be submitted to the Planning Board only when the land on which the proposal is situated is in the proper zoning district to allow the intended use(s), except for proposals submitted pursuant to § 280-17. The Planning Board shall determine which of the following stages and/or date requirements are necessary and completely document its reasons for its actions on these matters as part of the information on an application.
 - (2) Prior to issuing a building permit for the construction of a building on a parcel of land for any

permitted use in any district, except single-family dwellings and their customary accessory structures and farm-related structures, the owner, developer, agency or Chief Building Inspector and Zoning Coordinator shall refer the site plans for such parcel of land to the secretary of the Planning and Zoning Department. Such plans shall be placed on the agenda of the Planning Board for its review and approval.

D. Preapplication sketch.

- (1) The developer should arrange with the Planning Board secretary for an informal discussion with the Planning Board prior to submission of a preapplication sketch of the site plan, to determine any or all of the data to be included in the preapplication sketch.
- (2) The secretary schedules informal discussion for the next convenient public Planning Board meeting or, otherwise, at the convenience of the Board, but in no event shall such informal discussion take place less than seven days from the date of filing the preapplication sketch.
- (3) The preapplication sketch shall include:
 - (a) Title of drawing, North arrow, date and scale. North arrow shall point to the top of the plan sheet.
 - (b) Location of site with respect to existing and proposed rights-of-way and intersections.
 - (c) Internal street pattern, if any, of the proposed development.
 - (d) Location of all existing structures on the site and future use of the same.
 - (e) Existing zoning classification(s) of the property and all adjacent properties, and any restrictions on land use of the site.
 - (f) Existing natural features on the site and future use of the same.
 - (g) Contour intervals at 10 feet, including 200 feet of adjacent property.
 - (h) Names of owners of adjacent properties.
- (4) The Planning Board may, at this state, suggest changes in the preapplication sketch involving street layout, traffic patterns, lot size or shape, preservation of natural features or other matters which, in its opinion, will improve the layout in keeping with the best interest of the Town.
- (5) The Planning Board shall be permitted to have a reasonable time to review the plan but in no instance longer than 45 days unless provided for elsewhere in this chapter.
- (6) The Planning Board shall notify the applicant, in writing, of its decision. A copy of the minutes of the meeting at which the decision was made shall suffice.

E. Application for preliminary site plan approval. Any preliminary application for site plan approval shall be made in writing. The preliminary application and required information shall be submitted to the Chief Building Inspector and Zoning Coordinator at least 15 days prior to the date for the public hearing. Ten copies of the preliminary application and required information as set forth below shall be submitted. The preliminary application shall be accompanied by any or all of the

following information, as required by the Planning Board, prepared by a licensed engineer, architect, landscape architect or surveyor, and certified by the seal and signature of such professional.

- (1) An area map showing that portion of the applicant's property under consideration, the applicant's entire adjacent holdings and all properties, subdivisions, streets and easements within 500 feet of the applicant's property.
- (2) A tracing overlay showing existing contour intervals of not more than five feet of elevation, and shall include 200 feet of adjacent property.
- (3) A tracing overlay showing proposed finished contour intervals of not more than five feet of elevation and direction of drainage with arrows. Data required here may be placed on the same tracing as required in Subsection E(2) above, provided that the proposed finished contours are illustrated by solid lines.
- (4) A preliminary site plan, including the following information:
 - (a) Title of drawing, including name and address of applicant.
 - (b) North arrow pointing to the top of the plan sheet, scale and date.
 - (c) Boundaries of the property plotted to scale.
 - (d) Existing watercourses.
 - (e) A plan showing the location of all buildings; location and size of off-street loading facilities, with access and egress drives thereto; location and size of outdoor storage, if any, and the method of screening the storage area from public view; location of all existing or proposed site improvements, including drains, culverts, retaining walls and fences; description of method of sewage disposal and location of such facilities, and any proposed changes in existing stream channels; location and size of all signs; location and proposed development of buffer areas; location and design of lighting facilities; and any existing and proposed easements and the location, if any, of waste storage and the method of screening from public view, air-conditioning units and other facilities located on roof tops of buildings, and location of exhaust fans for use in relationship to adjacent residential areas.
 - (f) A tracing overlay showing all soil areas and their classification, and those areas, if any, with moderate to high susceptibility to flooding, and moderate to high susceptibility to erosion. For areas with potential erosion problems, the overlay shall also include an outline and description of existing vegetation.

F. Factors for consideration.

- (1) The Planning Board's review of a preliminary site plan shall include, but is not limited to, the following considerations:
 - (a) Full conformance of the site plan with the provisions of this chapter.
 - (b) Adequacy and arrangement of vehicular traffic access and circulation, including intersections, road widths, drainage channelization structures and traffic controls.

Consideration will also be given to the project's impact on the overall traffic circulation system of the neighborhood and the Town.

- i. Locate new buildings in or near areas designated for transit-oriented development.
 - ii. Provide new transit service or support extension/expansion of existing transit (buses, trains, shuttles, water transportation).
 - iii. Support expansion of parking at Park-n-Ride Lots and/or transit stations.
 - iv. Develop or support multi-use paths to and through site.
- (c) Adequacy of fire lanes and other emergency zones, traffic circulation and system of fire hydrants.
- (d) Adequacy and arrangement of pedestrian traffic access and circulation, including, but not solely limited to, separation of pedestrians from vehicular traffic, control of intersections and overall pedestrian convenience; where appropriate, consideration of access and facilities for bicycles.
- i. Provide bicycle storage and showers/changing rooms.
 - ii. Improve traffic flow and support pedestrian and bicycle safety with traffic signalization and coordination.
 - iii. Provide bike spaces for multi-family dwellings, retail, office, schools, churches, parks and entertainment uses.
 - iv. Include design and siting requirements for bike parking areas.
 - v. Include flexibility by allowing racks in the public right-of-way where space is available.
- (e) Location, arrangement, site, design and general site compatibility of buildings, lighting and signs. As much as it is possible, consideration should be given to noise sources, privacy, prevailing wind directions and seasonal sun movements when locating structures, patios and open spaces on parcels, exhaust fans and outdoor waste disposal locations.
- (f) Location, arrangement and setting of off-street parking and loading areas.
- i. Encourage semi-pervious materials for parking lot and driveway paving, such as permeable pavers, grass-crete and gravel-crete.
 - ii. Promote shared driveways in commercial and residential districts and cross-access easements for shared driveways.
 - iii. Pursue opportunities to minimize parking supply through shared or land banked parking.
 - iv. Provide compact spaces for the parking areas that provide stations/spaces for the charging of electric vehicles (120-volt lines or 240-volt lines) and for compact, fuel efficient vehicles.
- (g) Adequacy, type and arrangement of trees, shrubs and other landscaping constituting a visual and/or noise deterring buffer between these adjoining properties.

- (h) In the case of an apartment house or multiple-dwelling complex, the adequacy of usable open space for playgrounds and informal recreation.
 - (i) Adequacy of provisions for the disposal of stormwater and drainage, sanitary waste and sewage, water supply for both fire protection and general consumption, solid waste disposal and snow removal storage areas.
 - (j) Adequacy of structures, roadways and landscaping in areas with moderate to high susceptibility to flooding and ponding and/or erosion.
 - (k) Protection of adjacent properties against noise, glare unsightliness or other objectionable features.
 - (l) Retention of existing trees and vegetation for protection and control of soil erosion, drainage, natural beauty and unusual or valuable ecology.
- (2) In its review, the Planning Board is encouraged to consult with the Town Engineer and other Town officials and boards, as well as with representatives of federal and state agencies, including the Soil and Water Conservation District, the United States Army Corps of Engineers or the New York State Department of Environmental Conservation. The Planning Board may require that interior design of all structures be made by or under the direction of a registered architect whose seal shall be affixed to the plans.
- G. Modification. The Planning Board may require such additional provisions and conditions that appear necessary for the public health, safety and general welfare.
- H. Action on preliminary application.
- (1) Within 60 days of the receipt of the application for preliminary site plan approval, the Planning Board shall act on it. The Planning Board's action shall be in the form of a written statement to the applicant stating whether or not the preliminary site plan is conditionally approved. A copy of the appropriate minutes of the Planning Board shall be a sufficient report. The Planning Board's statement may include recommendations as to desirable revisions to be incorporated in the final site plan, conformance with which shall be considered a condition of approval. If the preliminary site plan is disapproved, the Planning Board's statement will contain the reasons for such findings. In such a case, the Planning Board may recommend further study of the site plan and resubmission of the preliminary site plan to the Planning Board after it has been revised or redesigned.
 - (2) No modification of existing stream channels, filling of lands with a moderate to high susceptibility to flooding, grading or removal of vegetation in areas with a moderate to high susceptibility to erosion, or excavation for and construction of site improvements shall begin until the developer has received final site plan approval and met any conditions thereof. Failure to comply shall be construed as a violation of this chapter, and, when necessary, final site plan approval may require the modification or removal of unapproved site improvements.
- I. Application for final detailed site plan approval.
- (1) After receiving conditional approval from the Planning Board in a preliminary site plan and

approval for all necessary permits and curb cuts from state and county officials, the applicant may prepare his final detailed site plan and submit it to the Planning Board for approval; except that if more than six months has elapsed between the time of the Planning Board's report on the preliminary site plan and if the Planning Board finds that conditions have changed significantly in the interim, the Planning Board may require a resubmission of the preliminary site plan for further review and possible revision prior to accepting the proposed final site plan for approval.

- (2) The final detailed site plan shall conform substantially to the preliminary site plan that has received preliminary site plan approval. It shall incorporate any revision or other features that may have been recommended by the Planning Board at the preliminary review. In addition to that provided elsewhere in the law, the Planning Board may require a letter of credit, bond or maintenance bond for any facility or improvement that is indicated as part of the plan, such as parking areas and buffer and screen devices. All such compliances shall be clearly indicated by the applicant on the appropriate submission.

J. Action on the final detailed site plan application.

- (1) Within 60 days of the receipt of the application for final site plan approval, the Planning Board shall render a decision to the Chief Building Inspector and Zoning Coordinator.
- (2) Upon approving an application, the Planning Board shall endorse its approval on three copies of the final site plan and shall forward one copy to the Chief Building Inspector and Zoning Coordinator who may then issue one or more building permits to the applicant if the project conforms to all other applicable requirements of this chapter. The second copy shall be filed with the Planning Board, and it shall be considered the legally approved plan with which all development on the respective site must conform. The third copy shall be forwarded to the applicant.

VII. Conclusion

Local governments in New York State can be at the forefront of responding to climate change due to their authority for managing land resources and the built environment. A proactive response to climate change involves planning for and mitigating the negative consequences of GHG emissions from transportation sources. By engaging in proactive planning, such as land use strategies, local governments can facilitate the use of non-structural solutions to protect against risks. But they face tough legal and policy questions when developing plans and carrying out implementation actions, such as amending zoning and subdivision ordinances. In order to implement these measures, local governments must navigate overlapping and sometimes conflicting state and federal laws. In addition to legal barriers, local governments face tough policy questions when deciding on the best options for their community. Communities must consider the economic and political feasibility of implementing new or updated regulations, in addition to the administrative and technical capacity of their staff. Fortunately, local governments already use a multitude of tools to manage development in their communities. These tools have been used to effectively address other land use concerns, such as sign control and open space protection.

Incorporating climate change adaptation and mitigation into planning documents such as comprehensive, transportation, and hazard mitigation plans is an essential first step for nearly all local governments to ensure storm surge, flooding, erosion, and other climate-induced risks are considered now and into the future. The budgets for such plans are usually in place, as municipalities prepare and update these documents. Simple measures to incorporate climate change are very cost-effective when led by municipal staff or citizen volunteers, but more sophisticated planning requires funding, technical assistance, and various partnerships. Genesee/Finger Lakes Regional Planning Council (G/FLRPC) provides hazard mitigation planning to the Genesee-Finger Lakes Region, which encourages municipalities to take proactive measures in reducing hazard exposure and vulnerability.

Laws and planning tools that enforce shoreline setbacks, infrastructure requirements, or cluster development can be considered no-cost or very low cost. But while codes and laws are essential adaptation and mitigation tools, they are prospective and do not completely solve the problem. Of equal importance and value is community outreach and engagement. The educational process is essential; both to build support for enforcing new regulations and codes and to build awareness for the actions residents can take to reduce their climate-related risks.

Numerous tools already exist to assist local governments in responding to climate-induced risks such as increased precipitation and flooding. Other resources support development patterns that minimize the emission of greenhouse gases. For example, Genesee Transportation Council's *Bicycle and Pedestrian Supportive Code Language* identifies examples of noteworthy zoning code and site planning language and guidance that enhances accessibility and safety for bicyclists and pedestrians. Various publications, toolkits, and websites also describe a broad range of legal, policy, and regulatory tools on how to increase the use of low GHG fuels, improve vehicle technologies, and reduce the number of VMT. The U.S. Environmental Protection Agency devotes many online resources to "Transportation and Air Quality."

Planning for Transportation and Climate Change offers a menu of model ordinances that address both climate change adaptation and mitigation strategies. Although some adaptation and mitigation strategies do not require extensive modeled data, many municipalities are constrained by a lack of climate information. For example, all communities need accurate flood maps provided by FEMA. Additional information and data will help communities adopt and implement adaptation and mitigation tools.

While sustainable transportation planning is nearly always a voluntary endeavor, communities have it within their reach to make it a reality. Local tools, from using transfer of development rights and the dedication of vulnerable areas as open-space and flood buffers to set-back development from a shoreline, are within the capacity and grasp of almost every municipality in the Genesee-Finger Lakes Region. Wider adoption of these local initiatives, with support from state and federal government and other partners, can provide for a more resilient and sustainable future.

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