

PARKING AND LIGHTING STANDARDS

Parking standards facilitate safe and efficient traffic flow by providing adequate off-street parking for public access to each land use. Parking requirements are dependent on the type of land use. There are several issues to consider when establishing parking standards. Businesses must have sufficient parking available to adequately serve their customers and remain viable. Typically the amount of off-street parking for various land uses is based on the peak demand — the amount needed to accommodate parking during the busiest time of the day or the season. However, such standards should also be based on the intensity of the land use, its location, accessibility, availability of transit, and socio-economic and demographic characteristics of the area.

Lighting standards are important in providing secure and safe streetscapes and parking areas, but must also prevent lighting from being a nuisance to adjacent properties. Adequate lighting must be provided for a given street or parking area to meet the needs but without creating a hazard for motorists or a nuisance for adjacent property owners. Many ordinances have detailed standards for the height, location, and orientation of on-site lighting, especially for parking lot lighting. Shielding and direction of illumination can dramatically reduce ambient light reflection. Along transportation corridors, location and scale of lighting, landscaping and other site materials utilized to buffer parking lots are significant design considerations. Parking standards should be flexible enough to balance parking needs with these other design objectives.



On-street parking in a commercial development in Novi.

KEEPING IT CONNECTED

When reviewing design plans for parking areas, remember to consider storm water management. Reducing the amount of impervious surface of parking lots reduces storm water runoff.

Bioretention areas, swales, sand filters, and filter strips are all effective in treating storm water within the parking lot.

Planning and Regulatory Considerations

Parking regulations should be an integral part of a community's site plan review and should be enforced through detailed regulations. Regulations should establish minimum and maximum standards for the stall sizes and number of parking spaces. It is also important to create standards for parking lot lighting, including height restrictions, landscaping requirements, and storm water guidelines. Standards are typically based on categories of land use types and a specified number of parking spaces per unit of measure such as each dwelling unit, number of seats, number of beds, square feet of usable floor space, and per employee.

The basic mechanism of regulating outdoor lighting is the local zoning ordinance, which includes regulations for various aspects of development. The types of outdoor lighting installations that communities may wish to regulate include parking lot lighting, street lighting, lighting of exterior sales areas, lighting of sports or performance facilities, security lighting, illuminated building facades and landscaping, illuminated signs, and illuminated walkways and park areas.

Tools for Parking Lot Design

Communities should evaluate their parking codes and design requirements to ensure that maximums and minimums are enforced in order to curb excess parking construction, which can have a number of positive environmental and redevelopment impacts. Parking requirements can be an effective land use management tool using the following objectives:

- Conduct surveys of parking lot utilization rates for different land uses. Set parking ratios that detail the number of parking spaces that must be provided for each land use.
- Require a greater sharing or joint use of parking facilities. In mixed-use developments, shared parking should be encouraged as an effective method for in-

creasing the efficiency of land use and controlling access to major roads. Common parking facilities must be close enough to all relevant land uses to facilitate use. If there is a change in land use or ownership within a mixed-use development, the new owner should be required to demonstrate that the existing parking will be adequate.

- Provide flexibility in parking standards to allow for reducing parking if a traffic analysis demonstrates that less parking is needed than that required by an ordinance.
- Reduce the amount of required parking in those areas where quality public transit is an alternative means of travel to and from businesses. Avoid excessive parking requirements that would discourage the use of transit.
- Offer reduction in the amount of parking as an incentive to businesses that encourage employees to take transit or rideshare with co-workers.
- Provide for deferred parking or land banking to allow flexibility in meeting changing parking needs. The land for additional parking should be identified in the approved site plan and should be part of the landscaped area.
- Require certain design elements to make parking lots safe for pedestrian use and visually attractive. Parking standards should allow for flexibility to place parking in the front, rear, or side of the site.
- Landscaped islands control traffic flow within the lot and provide visual relief to the otherwise open expanse of pavement. Minimum size of landscaped islands should be established to consolidate open space into large blocks, to avoid fragmentation of landscape spaces, and to enhance plant survival rates.
- Provide storm water treatment for parking lot runoff using bioretention areas, filter strips, and/or other prac-

tices that can be integrated into required landscaping areas and traffic islands.

- Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas.

(Note: Sport Utility Vehicles are typically less than seven feet wide and can comfortably fit into a standard parking space. Most of the “size” of SUVs is vertical; they stand taller than sedans, but are often not much wider or longer than a full-size car).

Tools for Lighting Regulation

A lighting section can be incorporated into a community’s zoning ordinance to cover lighting in all or in portions of the community. The section regulates the types, styles, construction, installation, and uses of outdoor electrically powered illuminating devices, lighting practices, and systems, while maintaining safety, security, and aesthetics of a community. Typically, the key components of a lighting regulation ordinance or plan include the following:

- A requirement that a lighting plan be included in the site plan review and permitting process. The plan should detail light levels, evenness, patterns of light distribution, lamp type, and wattage.
- General design questions to address can include: Is the applicant clear about the lighting needs of the project? What are the outdoor tasks to occur on site in the evening? What area of the site is proposed to be lit? What light levels are appropriate and how will the proposed plan meet those needs? How does the proposed plan relate to lighting in the surrounding area? Is security lighting proposed?

Table 16
Street Lighting Standards

	Industrial/ Commercial	Town Center	High-Density Residential	Rural
Suggested Mounting Height	15-20 feet	15-20 feet	30 feet maximum	Discouraged
Spacing	600 feet at intersections	Main Street: 300 feet Elsewhere: 600 feet and at intersections	At intersections only	Discouraged

Source: Outdoor Lighting Manual For Vermont Municipalities, Chittendon County Planning Commission.

- Light levels should be appropriate for the proposed use of the site. It is important to know the maximum, minimum, and average levels that will be generated.
- Light levels should be compatible with the neighborhood.
- Exterior lighting should be a key component of the architectural and landscape design. Fixture style and design should be compatible with the building design.
- Site lighting “trespass” onto adjacent residential zones should be minimized.
- Site lighting should minimize light spill into the night sky.
- Pole heights should be compatible with the scale of the surrounding architecture and scale of the site.
- Lighting installations should include timers, dimmers, or sensors to turn lights off during daylight hours or when lighting is not needed.

Illuminate walkways and park areas

In some cases, communities may want to illuminate walkways or bikeways and portions of parks that are to be used after dark. These areas should be illuminated sufficiently to allow identification of hazards on the walkway surface. Lighting should be provided at specific hazardous locations such as sharp turns and intersections. In order to prevent glare, fixtures should be shielded or mounted relatively low at a pedestrian scale. Walkways along streets may be illuminated by street lights, although small fixtures at low mounting heights, such as bollards, might make the area seem more pedestrian friendly.

Incorporate illuminated signs into regulations

Illuminated signs are one way in which light is used for advertising. Externally illuminated signs may be too bright so that the reflection from the sign surface causes glare and illuminates surrounding areas. The lights might be improperly aimed and/or shielded so that they may radiate directly into the eyes of drivers and pedestrians.

Local sign regulations can include standards that limit the vertical illuminance of externally illuminated sign surfaces. In addition, standards can be established requiring that the lights to be properly aimed and shielded.



Utilize pedestrian-scale lighting along paths and walkways, such as this park in St. Clair Shores.

CASE EXAMPLE

Revision of Office and Retail Parking Standards

Community: City of Ann Arbor

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The City of Ann Arbor changed its parking requirements for office and retail uses in an attempt to reduce the environmental impacts of auto-oriented development patterns, increase redevelopment opportunities, and improve pedestrian access. Prior to the 2001 revision, Ann Arbor required a minimum of four parking spaces per 1,000 gross square feet of office space. The revised code now requires a minimum of three spaces per 1,000 gross square feet and, for the first time, establishes a maximum of four spaces per 1,000 gross square feet. The maximum requirement is intended to prevent an excessive amount of impervious surface.

With regard to retail parking, prior to the revisions, Ann Arbor required five parking spaces per 1,000 gross square feet of retail space. Parking counts were taken at various retail centers in the area at various times of the year. No retail center came close to needing five spaces per 1,000 feet, even during the holiday season. The City then revised its retail parking standards to require a minimum of 3.25 spaces and a maximum of 3.75 spaces for retail centers under 300,000 square feet. Retail centers between 300,000-600,000 square feet have a range of 3.5-4, while centers above 600,000 square feet must provide between 3.75 to 4.25 spaces per 1,000 square feet.

The revised code allows developers to provide more than four spaces per 1,000 if the additional spaces do not increase imperviousness beyond that which would be provided by meeting the maximum required (i.e., providing extra spaces in the form of structured or understructure parking). Overall, the revisions to the parking standards achieve a balance between minimizing negative environmental impacts and the desire to ensure that an adequate amount of parking is provided.

Additional Resources

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