

ARTICLE 11**ACCESS MANAGEMENT, PARKING AND CIRCULATION**

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SECTION 11.01 INTENT

These regulations are intended to create and maintain off-street parking and loading that is adequate in size and sufficient in the number of parking spaces for a particular use prior to the issuance of a certificate of occupancy. These regulations are also intended to address safe vehicular and pedestrian access to and within sites. Shared parking within a development will be utilized along with parking lots that are properly designed to meet the range of parking needs and demands associated with the existing and future land uses within the Township.

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SECTION 11.02 OFF-STREET PARKING**A. General Requirements.**

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1. *Single Family Residential and Duplex Parking.* Off-street parking spaces for single family detached units or duplexes on individual lots shall consist of a parking strip, driveway, garage or combination thereof, and shall be located on the premises they are intended to serve.

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2. *Parking for All Other Uses.* Parking areas for uses other than single-family detached units or duplexes on individual lots shall be approved and constructed as part of a site plan. Minor changes to the parking layout, as determined by the Zoning Administrator, shall require a submittal of a parking plan.

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3. Off-street parking shall be provided for a principal use erected, altered, or expanded after the effective date of this Ordinance. Required off-street parking shall be maintained so long as the principal use remains, unless an equivalent number of such spaces are provided elsewhere in conformance with this Ordinance.

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4. No off-street parking which exists at the time this Ordinance becomes effective which is provided for the purpose of complying with provisions of this Ordinance shall thereafter be reduced below the requirements established by this Ordinance.

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5. The requirements of this section are not intended to apply to farms and farming operations.

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6. Within non-residential districts, off-street parking for continuous periods of more than twenty-four (24) hours shall be prohibited with the following exceptions:

- a. Parking in conjunction with an automobile sales and service facility, major and minor automobile repair facility, and automobile towing service, as permitted and regulated by this Ordinance.
- b. Automobiles and commercial vehicles owned and operated in conjunction with the principal use of the property.

B. Parking Location and Setbacks.

1. Parking spaces shall be provided either on the same lot, within lots under the same ownership or where a shared parking easement is provided on an adjacent lot within three hundred (300) feet of the building it is intended to serve, measured from the nearest public building entrance to the nearest parking space of the off-street parking lot.
2. Off street parking is allowed in all yards and must be setback a minimum of twenty five (25) feet from the ordinary high water mark and must be maintained.
3. Paved areas shall be ten (10) feet from any side or rear lot lines that abut an adjacent residentially zoned or used property and five (5) feet from any side or rear lot lines that abut an adjacent non-residentially zoned or used property. Paving setbacks between non-residentially zoned or used property may be waived by the Planning Commission for cross-access and joint parking with an approved joint parking easement agreement.

C. Units and Methods of Measurement. For the purpose of determining off-street parking requirements, the following units of measurement shall apply:

1. **Floor Area.** Where floor area is the unit for determining the required number of off-street parking spaces, said unit shall mean the net floor area, as defined by this Ordinance.
2. **Employees.** For requirements stated in terms of employees, the calculation shall be based upon the maximum number of employees likely to be on the premises during the largest shift.
3. **Places of Assembly.** In stadiums, sports arenas, auditoriums and other places of assembly, seating capacity shall be based upon the building code requirements currently in effect. In cases where a place of assembly has both fixed seats and open assembly areas, requirements shall be computed separately for each type and added together.

D. Shared Parking.

1. The developed parking for adjacent ~~zoning lots~~ parcels may be shared provided ~~an approved joint parking easement agreement signed agreement is provided by the property owners,~~ and the applicant(s) demonstrates that the peak usage will occur at different periods of the day. Each ~~zoning lot~~ parcel must include adequate space to allow for development of the required parking.
2. Side or rear parking lot setbacks may be reduced or waived by the Planning Commission where a shared access driveway, connected parking lots, and/or internal service drives are provided.

E. **Flexibility in Application.**

1. The Township recognizes that, due to the specific requirements of any given development, inflexible application of the parking standards may result in development with inadequate parking or parking far in excess of that which is needed. The former situation may lead to traffic congestion or unauthorized parking on adjacent streets or neighboring sites. The latter situation may result in excessive paving and stormwater runoff and a waste of space which could be left as open space.
2. The Planning Commission may permit deviations from off-street parking requirements and shall require more or less parking based upon a finding that such deviations are more likely to provide a sufficient number of parking spaces to accommodate the specific characteristics of the use in question. The Planning Commission may attach conditions to the approval of a deviation from the off-street parking requirements that bind such approval to the specific use in question. Where a deviation results in a reduction of parking, the Planning Commission shall further impose conditions which ensure that adequate usable reserve area is set aside for future parking, if needed. Where an area is set aside for reserve parking, it shall be easily developed, not devoted to a use other than open space, and shall be designed to accommodate attendant facilities such as maneuvering lanes and drainage.
3. In circumstances where the Planning Commission allows a reduction in parking, the owner shall agree to construct the additional parking at the direction of the Planning Commission based on observed usage within six (6) months of being informed of such request in writing by the Zoning Administrator. The site plan shall note the reserve area with dimensions and dotted parking lot layout.
4. It is the intent of this Ordinance to minimize excessive areas of pavement which reduces aesthetic standards and contributes to high rates of storm water runoff. Exceeding the minimum parking space requirements by more than twenty percent (20%) shall only be allowed with approval by the Planning Commission. In granting such additional space, the Planning Commission shall determine that

such parking will be required, based on documented evidence, to accommodate the use on a typical day.

F. Fractional Requirements.

5 When the number of required parking or loading spaces result in a fractional space, then the fraction shall be counted as one (1) additional space.

G. Schedule of Required Off-Street Parking Spaces.

10 The minimum number of off-street parking spaces shall be determined by the type of use in accordance with Table 11.1. For uses not specifically listed below, the required parking shall be in accordance with that of a similar use as determined by the Zoning Board of Appeals with a recommendation Administrator, or determined by the Planning Commission, during site plan review based on documentation regarding the specific parking needs of the use.

**Table 11.1
Schedule of Required Off-Street Parking Spaces**

Residential	
Single-family and two-family residential	2 spaces for each dwelling unit
Multiple-family residential	1 space per each efficiency dwelling unit
	2 spaces per each dwelling unit
Bed and Breakfast	2 spaces for dwelling and 1 space for each double occupancy room
Mobile home park	2 spaces per each mobile home unit or site and 1 space for each 3 mobile homes for visitor parking
Housing for the Elderly	
Convalescent and nursing facilities	1 space per each 3 beds or 2 rooms, whichever is less plus employee parking
Housing for the Elderly	1.5 spaces for each dwelling unit
Institutional	
Churches and similar places of worship	1 space for each 3 seats or 6 feet of pews in the main unit of worship in addition to the requirements for separate auditorium seating and Section 11.02.C.3, Places of Assembly
Elementary and middle schools	1 space for each 1 teacher, employee, or administrator in addition to the requirements for separate auditorium or stadium seating
Senior high schools, colleges and commercial schools	1 space for each 1 teacher, employee, or administrator and 1 for each 10 students, in addition to the requirements for auditorium or stadium

Social clubs, fraternal organizations and other similar uses	1 space for each 3 persons allowed within the maximum occupancy load as established by the fire or building codes
Places of Assembly and Auditoriums	1 space for each 3 seats, also see Section 11.02.C.3, Places of Assembly
Table 11.1 Schedule of Required Off-Street Parking Spaces:	
Child and adult care centers	2 spaces plus 1 additional space for each 8 children of licensed authorized capacity
Group and family day care	1 space per 4 clients plus employee parking
Office	
Banks, credit union of savings and loans, including drive-through facilities	1 space for each 200 square feet of gross floor area, plus 2 spaces for each ATM. Drive-up windows shall be provided 4 stacking spaces for each window
Office or professional buildings except medical offices	1 space for each 250 square feet of gross floor area
Medical and dental offices including clinics and medical laboratories	1 space for each 150 square feet of gross floor area
Medical clinics, outpatient centers, 24 hour urgent care centers, etc.	2 spaces per exam or outpatient procedure/operating room. Plus, 1 space per laboratory or recovery room, plus employee parking
Hospitals	2 spaces per inpatient bed plus 1 space per each 200 square feet of office or outpatient area
General Commercial/Retail	
All Commercial/retail	1 space for each 200 square feet of gross floor area
Commercial/retail centers	As follows: <50,000 square feet; 1 space for each 200 square feet of gross floor area. 50,000 to 450,000 square feet of gross floor area; 1 space for each 250 square feet and >450,000 square feet of gross floor area; 1 space for each 300 square feet. Non-retail uses such as restaurants, bars and theaters shall be calculated separately based upon their respective requirements
Vehicle dealership, sales and service	1 space for each 200 square feet of net floor area, plus 3 spaces per each auto service bay
Recreational vehicles, boat, mobile home and similar sales	1 space for each 500 square feet of net floor area plus 2 spaces per each vehicle sales service bay
Restaurants and Cafés	
Standard restaurant and tavern	1 space for each 2 seats, based on maximum seating capacity as determined by the building code in effect in the Township

Drive-in and drive-through restaurant	1 space for each 70 square feet of net floor area, plus 10 stacking spaces for drive-through service which do not conflict with use of required spaces, plus 2 longer spaces designated for recreational vehicles, buses and semi-trucks
Carry-out restaurant	6 spaces for each service or counter station plus employee parking
Table 11.1 Schedule of Required Off-Street Parking Spaces:	
Commercial Services	
Vehicle gas filling station	1 space for each 125 square feet of net floor area, plus 2 parking spaces per fueling station
Vehicle oil changing station	2 stacking spaces for each service stall, rack or pit plus employee parking
Vehicle repair	2 spaces for each service bay, plus 1 space for each tow truck, plus adequate spaces for overnight parking, plus employee parking
Vehicle wash	2 spaces, plus 15 stacking spaces per bay for a semi or fully automatic wash, 3 stacking spaces per bay for a self-serve wash plus employee parking
Barber shop/beauty salons	3 spaces for each barber chair or station
Funeral home and mortuary	1 space for each 50 square feet of service parlors, chapels and reception area, plus 1 space for each funeral vehicle stored on premise
Motel / hotel with restaurant or lounge	1 space for each guest room plus 12 spaces for each 1000square feet of restaurant / lounge
Banquet halls or conference rooms and similar uses without fixed seats	1 space for every 2 persons of capacity authorized by the fire or building code or 1 space for each 100 square feet of net floor area, whichever is greater, plus any required parking for other uses, such as restaurants, gift shops, etc.
Self-storage mini-warehouse	1 space for each 100 storage units with a minimum of 6 spaces
Video rental establishments	1 space for each 150 square feet of net floor area
Recreational	
Health fitness centers, athletic clubs, martial arts studios and other similar uses	1 space for each 200 square feet of net floor area
Bowling Alleys	5 spaces for each lane plus 25% of the required parking for any restaurant or lounge
Commercial outdoor recreational facilities such as archery ranges, batting cages, miniature golf courses, etc.	2 spaces for each archery range, batting cage, miniature golf hole or similar activity
Dance or pool halls, ice or roller skating rinks	1 space for each 3 persons allowed within the maximum occupancy load as established by the fire or building codes or 1 space for each 200 square feet of net floor area, whichever is greater
Golf course driving ranges	2 spaces for each 3 tees

Golf courses	3 spaces for each course hole, plus any required parking for other uses such as banquet hall, gift shop or lounge
Public swimming pools	1 space for each 3 persons of capacity authorized by the fire or building code
<p>Table 11.1 Schedule of Required Off-Street Parking Spaces:</p>	
Indoor racquetball / tennis facilities	1 space for each 1000 square feet of net floor area or 6 spaces per court, whichever is greater
Theaters, auditoriums, gymnasiums and similar uses	1 space for each 3 seats or 6 feet of bleachers
Electronic gaming arcades	1 space for each 50 square feet of net floor area, with a minimum of 6 spaces required
Industrial	
Light industrial, manufacturing, testing labs, research and development centers and related accessory offices	1 space for each 550 square feet of gross floor area
Warehousing	1 space for each 1500 square feet net floor area plus employee parking

H. Off-Street Parking Lot Design Standards and Requirements.

- 5 1. **Barrier Free Parking.** Off-street parking lots are required to provide Barrier Free Parking spaces in accordance with the Michigan Department of Labor, Construction Code Commission Barrier Free Design Division. Table 11.2 below is the minimum number of accessible spaces required per the total number of parking spaces provided.

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Table 11.2 Schedule of Barrier-Free Parking			
Total Parking Spaces Provided	Minimum Number of Accessible Spaces Required	Total Parking Spaces Provided	Minimum Number of Accessible Spaces Required
1 to 25	1	151 to 200	6
26 to 50	2	201 to 300	7
51 to 75	3	301 to 400	8
76 to 100	4	401 to 500	9
101 to 150	5	501 to 1,000	2% of total

		1,001 and over	20 plus 1 for each 100 over 1,000
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2. **Pavement.** All driveways and parking lots, shall be hard surfaced with concrete or asphalt and shall have concrete curbing on all sides. Bumper blocks shall not be used in parking lots except where the Planning Commission may approve alternative paving materials, such as permeable grass pavers, for overflow, seasonal or low usage parking, based upon the review and recommendation of the Township Engineer.

3. **Drainage.** All parking lots shall be graded or drained to dispose of stormwater runoff. The Planning Commission may permit openings in the curbing for drainage purposes. No surface water shall be permitted to drain directly onto adjoining property unless a drainage easement has been obtained. Discharge of drainage into a public right-of-way, County Drain or Municipal storm sewer shall require written approval from the, the appropriate local, County or State agency.

4. **Dimensions.**

a. All parking spaces and maneuvering aisles shall be designed in accordance to the Barrier Free standards adopted by the State of Michigan and shall adhere to the following:

i. The minimum size for all parking spaces shall be one hundred eighty (180) square feet or nine (9) feet by twenty (20) feet. The minimum size may be increased based on parking angles, **SEE FIGURE**.

b. All spaces shall be provided adequate access by means of maneuvering lanes. All maneuvering lane widths shall permit one way traffic movement, except that the ninety (90) degree pattern may permit two (2) way movements.

i. The minimum width for all maneuvering lanes shall be twelve (12) feet for a one-way lane and twenty four (24) feet for a two-way lane.

c. Required stacking spaces shall be a minimum ten (10) feet wide and twenty (20) feet in length.

I. **Illumination.** All illumination of parking lots or display areas shall be designed and installed to comply with the requirements of Article 13, Lighting.

J. **Landscaping.** The parking area shall provide screening, greenbelts, buffers and parking lot landscaping in accordance with Article 12, Landscaping. Parking spaces adjacent to required landscaping or open space areas shall be curbed to prevent any vehicle overhang into those landscaped or open space areas.

K. **Parking Abutting Sidewalks.** Where a parking space overhangs a sidewalk, the minimum sidewalk width shall be seven (7) feet.

5 L. **Construction and Maintenance.**

1. Plans and specifications for parking areas shall be submitted and approved following the site plan review requirements of Article 5, Site Plan Review.

10 2. Required parking lots shall be installed and completed before issuance of an occupancy permit.

15 3. Any area once designated as required off-street parking shall not be changed to any other use unless and until equal facilities meeting the standards of this Article are provided elsewhere or the parking requirements of the site are changed.

4. Pavement shall be maintained in good condition. The visibility of pavement markings delineating parking spaces and directional control shall be maintained.

20 5. All off-street parking and loading facilities required by this Article shall be maintained free of accumulated snow, debris or other materials which prevent full use and occupancy of such parking facilities, except for temporary periods of no more than five (5) days in the event of heavy rainfall or snowfall.

25 6. The storage of and/or the repair of merchandise, materials, equipment or vehicles are prohibited on required off-street parking or loading spaces.

30 **SECTION 11.03 TRAFFIC IMPACT ANALYSIS**

The Planning Commission may require a traffic impact analysis to analyze the effect of development upon existing street traffic. The traffic impact analysis shall be paid for by the applicant and shall examine existing and proposed traffic flow, trip generation studies, impacts on major intersections, turning movement analysis, roadway capacity, parking generation and site ingress / egress. The traffic impact analysis shall be prepared by a registered professional engineer or transportation planner.

40 **SECTION 11.04 ACCESS MANAGEMENT**

A. **General Requirements.**

45 1. Adequate ingress and egress to the parking facility shall be provided by clearly defined driveways. Access to public roads shall be controlled in the interest of public safety. Each building or group of buildings used for non-residential

purposes, and its parking or service area, shall be physically separated from public roads by a greenbelt, curb, or other suitable barrier against unchanneled motor vehicle access or egress, except for access ways authorized herein.

- 5 2. Driveway design and placement must be in harmony with internal circulation and parking design such that the entrance can absorb the maximum rate of inbound traffic during a normal peak traffic period. Parking lots shall be designed to prevent vehicles from backing into the street or requiring use of the street for maneuvering between parking rows.
- 10 3. Marginal access is required and shall be located to provide a direct connection with the existing or future marginal access of the abutting non-residential properties. The Planning Commission may approve a site plan without marginal access when it can be demonstrated that there are either physical limitations or functional circumstances that would prevent such access from being installed.
- 15 4. There must be sufficient on-site storage to accommodate at least three (3) queued vehicles waiting to park or exit without using a portion of the public right-of-way obstructing exiting vehicle sight distance, or otherwise interfering with street traffic.
- 20 5. Driveways shall be designed to accommodate all vehicle types having occasion to enter and exit the site, including delivery vehicles. There shall be clear delineation and / or separation, where appropriate, of entry and exit lanes within driveways.
- 25 6. Ingress and egress to an off-street parking lot for all uses other than single-family residential shall not cross land zoned for single-family.

30 B. **Location and Spacing.**

- 35 1. Ingress and egress from an off-street parking lot located in an area zoned for all uses other than single-family residential shall be at least twenty-five (25) feet from adjacent property zoned single-family residential.
- 40 2. The number of access points shall be limited to the minimum needed to provide reasonable access. Access points shall be designed and located to minimize conflicts with traffic operations along the street and be placed as far from intersections as practical, but no closer than one hundred twenty-five (125) feet as measured from centerline to centerline. The minimum separation between driveways shall be based upon the posted speed limit of the street,

45 **SECTION 11.05. CLEAR VISION AREA**

In any district, no fence, wall, shrubbery, sign or other obstruction of vision above a height of thirty-six (36) inches from the established road or street grade shall be permitted within a triangular area formed at the intersection of the right-of-way lines by drawing a straight line between such right-of-way lines along each line twenty-five (25) feet from the point of intersection. Clear Vision Area shall also apply to the intersection of driveways and shall require a ten (10) foot line to form the triangle.

SECTION 11.06 OFF-STREET LOADING AND UNLOADING REQUIREMENTS

- A. **Where Required.** On premise space for standing, loading and unloading vehicles shall be provided for each use involving the receipt or distribution of goods. The Planning Commission may permit central loading areas to be shared by multiple uses, such as in a retail shopping center or office park.
- B. **Traffic Flow Location.** The location of the loading area shall be sufficient to prevent undue interference with adjacent, required parking spaces, maneuvering aisles, or traffic flow. ~~and no u Loading and unloading is not permitted in on~~ public ~~streetsroads or right-of-ways.~~ Loading/unloading areas and docks shall not be provided in the front yard. Where possible, loading areas shall be integrated into the design of the building to minimize visibility.
- C. **Alleys.** Where an alley exists at the rear of the building, the required loading area may be computed from the centerline of the alley.
- D. **Size.** The size of all required loading/unloading spaces shall be at least ten (10) feet by fifty (50) feet or five hundred (500) square feet in area, with a clearance of at least fourteen (14) feet in height. The Planning Commission may modify this requirement for uses that will involve smaller delivery trucks such as offices.
- E. **Pavement.** Loading dock approaches shall be constructed of an asphalt or concrete with a base sufficient to accommodate expected vehicle weight.
- F. **Number.** The minimum number of loading spaces shall be provided in accordance with the following Table 11.3:

Table 11.3 Off-Street Loading Requirements	
Institutional, Commercial and Office Uses	
Up to 5,000 sq. ft. GFA	1 space
5,001 - 60,000 sq. ft. GFA	1 space, plus 1 space per each additional 20,000 sq. ft. GFA
60,001 sq. ft. GFA and over	3 spaces, plus 1space per each additional 50,000 sq. ft. GFA

Industrial Uses	
Up to 1,400 sq. ft. GFA	0
1,401 – 20,000 sq. ft. GFA	1 space
20,001 – 100,000 sq. ft. GFA	1 space, plus 1 space per each additional 20,000 sq. ft. GFA in excess of 20,000 sq. ft.
100,001 sq. ft. GFA and over	5 spaces

SECTION 11.07 PEDESTRIAN ACCESS

- 5 A. **General Standards.** The parking and circulation system within each development shall accommodate the movement of vehicles, bicycles, pedestrians and transit, throughout the proposed development and to and from surrounding areas, safely and conveniently, and shall contribute to the attractiveness of the development. The on-site pedestrian system must provide continuity, street crossings, visual interest and security as defined by the standards in this Section.
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- B. **General Requirements.** External public pedestrian walkways shall be required for all developments that require site plan review. Such walkways may also be required under a land use permit or special land use review. All walkways shall be constructed in accordance to the Engineering Design Standards as adopted by Highland Township.
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1. **Residential.** The size, type and location of pedestrian walkways shall be determined by the Planning Commission during site plan review. **(REFERENCE BOARD LAND DIVISION ACT)**
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 2. **Non-Residential.** For new development the size, type and location of pedestrian walkways shall be determined by the Planning Commission during site plan review. For existing developments the Zoning Administrator shall require installation of pedestrian walkways in accordance with the approved site plan of record.
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 3. **Required Easements.** All public pedestrian walkways not within a road right-of-way shall be placed in a permanent easement for the construction, operation maintenance, repair and/or replacement of the walkway, and will allow pedestrian and non-motorized traffic access to adjacent properties.
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- C. **Safety Considerations.** To the maximum extent feasible, pedestrians shall be separated from vehicles.
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1. **Minimizing Pedestrian/Vehicular Conflicts.** Physical separation of pedestrian and vehicular access is the most effective means of avoiding conflicts and unsafe conditions. Where complete separation of pedestrians and vehicles is not

possible, potential hazards shall be minimized by the use of techniques such as special paving, grade separations, pavement marking, signs or striping, bollards, pedestrian safety island, landscaping, lighting or other traffic calming measures to clearly delineate pedestrian areas, for both day and night use.

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2. **Multi-Use Paths.** Where bicycle paths are required or are specifically part of a site plan and pedestrians and bicyclist share walkways, the pedestrian/bicycle system shall be designed to be wide enough to easily accommodate the amount of pedestrian and bicycle traffic volumes that are anticipated. A minimum width of
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- eight (8) feet shall be required and shall meet American Association of State Highway and Transportation Officials (AASHTO) guidelines and applicable Township Engineering design standards.

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Additional width of up to four (4) feet may be required to accommodate higher volumes of bicycle and pedestrian traffic.

3. **Curb Cuts and Ramps.** Curb cuts and ramps shall be located at convenient, safe locations for the physically disabled, for bicyclists and for people pushing strollers or carts. The location and design of curb cuts and ramps shall meet the requirements of the Michigan Barrier Free Code and the American With Disabilities Act and, to the extent possible, shall avoid crossing or funneling pedestrian traffic through loading areas, drive-through lanes and outdoor trash storage / collection areas.
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4. **Site Amenities.** Development plans shall include site amenities that enhance safety and convenience and promote walking or bicycling as an alternative means of transportation. Site amenities may include bike racks, drinking fountains, canopies and benches. However, all sites with parking of ten (10) spaces or greater shall provide a bike rack for at least two (2) bicycles within fifty (50) feet of the building entrance.
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5. **Internal Walkways.**

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- a. Walkways within the site shall be located and aligned to directly and continuously connect areas or points of pedestrian origin and destination. Such walkways shall not be located and aligned solely based on the outline of a parking lot configuration that does not provide such direct pedestrian access. Such connecting walkways shall either be grade separated from the parking lot or clearly delineated as to avoid pedestrian/vehicular conflicts with a paved surface not less than six (6)
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- feet in width. Drive aisles leading to main entrances shall have walkways on at least one (1) side of the drive aisle.

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- b. Where it is necessary for the pedestrian access to cross maneuvering aisles or internal roadways, the crossings shall emphasize and place priority on

pedestrian access and safety. The pedestrian crossings must be well-marked, using such measures as pavement treatments, signs, striping, signals, lighting, pedestrian safety islands, landscaping and other traffic calming techniques.

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