



PLANNING COMMISSION MEETING AGENDA SPECIAL/STUDY MEETING

500 W. Big Beaver
Troy, MI 48084
(248) 524-3364
www.troymi.gov
planning@troymi.gov

Michael W. Hutson, Chair, and Mark Maxwell, Vice Chair
Donald Edmunds, Philip Sanzica, Robert Schultz, Thomas Strat
John J. Tagle, Lon M. Ullmann and Mark J. Vleck

October 26, 2010

7:30 P.M.

Council Board Room

1. ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES – October 12, 2010 Regular Meeting
4. PUBLIC COMMENTS – For Items Not on the Agenda
5. BOARD OF ZONING APPEALS (BZA) REPORT
6. DOWNTOWN DEVELOPMENT AUTHORITY (DDA) REPORT
7. PLANNING AND ZONING REPORT

STUDY ITEM

8. COMPREHENSIVE ZONING ORDINANCE REWRITE (ZOTA 236) – Discussion with Representatives from Carlisle/Wortman Associates, Inc.

OTHER BUSINESS

9. PUBLIC COMMENTS – Items on Current Agenda
10. PLANNING COMMISSION COMMENTS

ADJOURN

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

The Regular Meeting of the Troy City Planning Commission was called to order by Chair Hutson at 7:30 p.m. on October 12, 2010, in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:

Donald Edmunds
Michael W. Hutson
Mark Maxwell
Philip Sanzica
Robert Schultz
Thomas Strat
John J. Tagle
Lon M. Ullmann
Mark J. Vleck

Also Present:

R. Brent Savidant, Acting Planning Director
Christopher Forsyth, Assistant City Attorney
Zachary Branigan, Carlisle/Wortman Associates, Inc.
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Mr. Savidant requested to add discussion on the Comprehensive Zoning Ordinance Rewrite (ZOTA 236) and Zoning Ordinance Map to the Agenda as item 6. A., under Other Business.

Resolution # PC-2010-10-068

Moved by: Schultz
Seconded by: Edmunds

RESOLVED, To approve the Agenda as revised.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF MINUTES

Resolution # PC-2010-10-069

Moved by: Edmunds
Seconded by: Maxwell

RESOLVED, To approve the minutes of the September 28, 2010 Special/Study meeting as prepared.

Yes: All present (9)

MOTION CARRIED

4. PUBLIC COMMENTS – Items not on the Agenda

There was no one present who wished to speak.

SPECIAL USE REQUESTS

5. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU 383) – Proposed Clawson-Troy Elks Lodge, Northeast Corner of Elliott and Minnesota (2549 Elliott), Section 36, Currently Zoned M-1 (Light Industrial) District

Mr. Branigan presented a summary of the proposed Special Use and Preliminary Site Plan application. He specifically addressed parking calculations and a parking analysis provided by the applicant with respect to the proposed parking reduction. Mr. Branigan and the City's Traffic Engineer are supportive of the petitioner's request to modify the number of parking spaces, based on the fact that the proposed parking exceeds comparable facilities in neighboring communities.

Mr. Branigan reported the project meets the minimum requirement for Preliminary Site Plan approval and satisfies the conditions of Special Use approval. It is recommended that the Planning Commission grant Preliminary Site Plan and Special Use approval, conditional upon the proposed parking modification from 126 spaces to 104 spaces.

Mr. Savidant addressed the following:

- Written correspondence received from Timothy Tapert of Apex Manufacturing, 243 Minnesota, distributed to members prior to the beginning of tonight's meeting. Mr. Tapert's concern relates to potential truck and forklift traffic conflicts.
- Modified proposed Resolution, wherein parking reduction reflects 105 parking spaces as indicated on the site plan.

James Butler of Professional Engineering Associates of 2430 Rochester Court, Troy, was present to represent the petitioner.

The petitioner, Jerry McCorkle of 46270 Schimmel, Utica, was also present. Mr. McCorkle addressed activities, membership and hours of operation of the Lodge. The Lodge would be open from 4 pm to 10 pm, Tuesday through Thursday, and from 4 pm to 11 pm, Friday and Saturday. Mr. McCorkle said on a few occasions the Lodge might open on a Sunday for a charitable function. He reassured the Board that the Lodge would not hold charity casino events.

Chip Faudie, project architect, of Professional Engineering Associates, 2430 Rochester Court, Troy, was also present.

Mr. Savidant confirmed a licensed architect appropriately sealed the original architectural plans submitted to the Planning Department. He said at the time the Planning Department requested an additional 16 copies for distribution to members, the project architect was out of town and not available to seal the plans.

There was discussion on the concern for potential traffic conflicts, as addressed in written correspondence from Apex Manufacturing. It was determined that:

- Public streets are for the movement and parking of traffic.
- Public streets should not be used for loading and unloading of trucks.
- Hours of operation of the Lodge would most likely not impose conflict with loading and unloading.

Mr. Schultz briefly addressed the two curb cuts on Elliott. He said it would be his preference to have only one curb cut.

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

Resolution # PC-2010-10-070

Moved by: Schultz

Seconded by: Ullmann

RESOLVED, The Planning Commission hereby approves a reduction in the number of required parking spaces for the proposed Clawson-Troy Elks Lodge to 105 when a total of 126 spaces are required on the site based on off-street parking space requirements, as per Article XL. This 21-space reduction is justified through a comparison of parking spaces provided for similar uses in the area, as outlined in the Parking Analysis prepared by PEA.

BE IT FURTHER RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the Clawson-Troy Elks Lodge, located on the northeast corner of Elliott and Minnesota (2549 Elliott), Section 36, within the M-1 zoning district, be granted.

Yes: All present (9)

MOTION CARRIED

6. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (File Number SU 315-B) – Proposed Pro Car Wash West, West side of Rochester and South of Wattles (3785 Rochester), Section 22, Currently Zoned H-S (Highway Service) District

Mr. Branigan presented a summary of the proposed Special Use and Preliminary Site Plan application. He noted the project requires relief from the Zoning Board of Appeals for rear yard setback and landscaping deficiencies; therefore no action is requested or required. He specifically addressed parking and stacking requirements, site access and circulation.

There was a brief discussion on the following:

- Handicapped spaces.
- Zero lot line.
- Dumpster.
- Designated planting areas.

The petitioner, Robert Waldron of 3785 Rochester Road, Troy, was present. Mr. Waldron briefly addressed landscaping and remodeling issues in relation to the Rochester Road widening.

PUBLIC HEARING OPENED

No one was present to speak.

PUBLIC HEARING CLOSED

There was discussion on the coordination of scheduling meetings for applications that require variances from the Board of Zoning Appeals.

OTHER BUSINESS

6.A. COMPREHENSIVE ZONING ORDINANCE RE-WRITE (ZOTA 236) AND ZONING ORDINANCE MAP

Mr. Branigan introduced the draft versions of Article 11, Sustainable Design and Environmental Standards, and Article 13, Site Design Standards. He indicated the Articles would be discussed in depth at the next study meeting.

Mr. Branigan addressed the new Zoning Ordinance map. Maps were distributed to members.

7. PUBLIC COMMENTS – Items on Current Agenda

There was no one present who wished to speak.

8. PLANNING COMMISSION COMMENTS

There was discussion on the aesthetics of the recently approved cell tower located at Troy Lanes, 1950 E. Square Lake.

Mr. Maxwell addressed the upcoming library millage.

Mr. Ullmann addressed the perception of some developers to locate projects in Troy with respect to the City's regulations and Zoning Ordinance requirements.

Mr. Edmunds complimented the staff for placing study items on a light agenda.

The Regular Meeting of the Planning Commission adjourned at 8:52 p.m.

Respectfully submitted,

Michael W. Hutson, Chair

Kathy L. Czarnecki, Recording Secretary

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Date: October 21, 2010
To: Planning Commission
From: R. Brent Savidant, Acting Planning Director
Subject: COMPREHENSIVE ZONING ORDINANCE REWRITE (ZOTA 236) – Discussion with Representatives from Carlisle/Wortman Associates, Inc.

Representatives of Carlisle/Wortman Associates, Inc. (CWA) will attend the October 26, 2010 Regular meeting to discuss the following information related to the Comprehensive Zoning Ordinance rewrite:

1. Article 4 District Regulations
2. Article 5 General Provisions
3. Article 9 Development Options
4. Article 11 Sustainable Design and Environmental Standards
5. Article 13 Site Design Standards
6. Zoning District Map

This is the first review of Articles 4, 5 and 9 by the Planning Commission. Articles 11 and 13 were revised based on comments from the Planning Commission. A copy of the draft Zoning District Map was distributed to all Planning Commission members at the October 12, 2010 Regular meeting, but was not discussed at the meeting.

The following is a summary of the Articles to be reviewed:

Article 4 District Regulations:

- This Article went from approximately 150 pages to 21 pages.
- All the repetitive specific use regulations were removed and are being incorporated into Article 8.
- All the uses permitted with special conditions were removed, and are now either permitted or special.
- All uses were removed from the district sections and placed in a large, three page table with simplified, consolidated use listings.
- The individual district sections will ultimately have a small, simple graphic like the ones we will have for Article 20 (Form Based Codes).
- The number of districts has been reduced and simplified.
- Location requirements and most of the district specific development regulations were made redundant by the new Site Design Standards and were therefore removed entirely.

Article 5 General Provisions:

This is the first time this Article has been presented to the Planning Commission. Note, provisions related to accessory buildings and structures and commercial vehicles in residential districts are proposed to remain.

Article 9 Development Options:

This is the first time this Article has been presented to the Planning Commission. These options are presently located after the Schedule of Regulations. Options have been updated.

Article 11 Sustainable Design and Environmental Standards:

Some revisions were made to wind energy conversion systems (WECS) and sustainable design project (SDP) provisions based on Planning Commission input.

Article 13 Site Design Standards:

Some revisions were made to landscaping, parking and lighting based on Planning Commission input.

Zoning Map:

1. What to do with the P-1 Vehicular Parking District?
Off-street parking is the only permitted use in the district. Historically it was used as a buffer between incompatible uses. If the district is eliminated, what should be done with the remaining property that is zoned P-1? Should it revert to the zoning of the property that uses the parking area?
2. Depth of the Form Based Code zones along Big Beaver and Maple Road?
The depth is relatively shallow along the north side of Big Beaver in Section 22, and the north side of Maple in Section 27. This depth limits redevelopment potential in these corridors. However, protection of single family residential neighborhoods is an important goal of the Master Plan. If it is left as proposed, developers could apply to rezone property on a case-by-case basis, and each application could be considered on its own.
3. How to treat PUD's that have expired?
Should these be abandoned and changed to a different zoning district? It seems a better approach may be to continue to delineate them as PUD to encourage their eventual development, since a significant amount of design work has been invested into each property. Furthermore, the Big Beaver Road Form Based Zone should be expanded slightly to the north, to include that portion of PUD #4 that extends into the R-1B district.

Note, the only two Articles yet to be presented to the Planning Commission are Specific Use Regulations and Definitions. These will be presented to the Planning Commission in November.

Please be prepared to discuss these items at the October 26, 2010 Regular meeting.

Attachment:

1. Draft Articles 4, 5, 9, 11, 13

cc: Richard Carlisle, Carlisle/Wortman Associates, Inc.

ARTICLE IV

ZONING DISTRICTS AND MAP

SECTION 4.01 DISTRICTS

For the purpose of this Chapter, the City of Troy is hereby divided into the following Districts:

R-1A	One-Family Residential District
R-1B	One-Family Residential District
R-1C	One-Family Residential District
R-1D	One-Family Residential District
R-1E	One-Family Residential District
CR-1	One-Family Residential-Cluster District
R-1T	One-Family Attached Residential District
MFR	Multiple-Family Residential District
UR	Urban Residential District
C-F	Community Facilities District
E-P	Environmental Protection District
C-B	Community Business District
G-B	General Business District
IIBD	Integrated Industrial and Business District
O-1	Office Building District
OMU	Office Mixed Use District
P-1	Vehicular Parking District
R-C	Research Center District

SECTION 4.02 MAP

The boundaries of the districts set forth in Section 4.01, Establishment of Districts are shown upon the map attached hereto and made a part of this Ordinance which map is designated as the Official Zoning Map of the City of Troy. The Zoning Map, along with all notations, references and other explanatory information, are available at the City of Troy offices.

SECTION 4.03 INTERPRETATION OF DISTRICT BOUNDARIES

Where uncertainty exists with respect to the boundaries of any district indicated on the Official Zoning Map, the following rules shall apply:

- A. Except where reference on the Official Zoning Map to a street or other designated line by the dimensions shown on said Map, the district boundary lines follow lot lines or the centerlines of the street, alleys, railroads, or such lines extended and the corporate limits of the City as they existed at the time of the adoption of this Ordinance.

- B. Where a district boundary line, as established at this Section or as shown on said Map, divides a lot which was in a single ownership and of record at the time of enactment of this Ordinance, the use authorized thereon and the other district requirements applying to the least restricted portion of such lot, under this Ordinance, shall be considered as extending to the entire lot, provided that the more restricted portion of such lot is entirely within twenty-five (25) feet of said dividing district boundary line. The use so extended shall be deemed to be conforming.
- C. A boundary indicated as following a shoreline shall be construed as following such shoreline, and in the event of change in the shoreline shall be construed as following the shoreline existing at the time the interpretation is made. The boundary indicated as following the centerline of a stream or river, canal, lake or other body of water shall be construed as following such centerline.
- D. Where a physical or cultural feature existing on the ground varies from that shown on the Official Zoning Map or any other circumstances not covered by A through C preceding, the Zoning Board of Appeals shall interpret the location of the zoning district boundary.

SECTION 4.04 ZONING OF VACATED AREAS

Whenever any street, alley or other public way within the City of Troy shall have been vacated by action of the City Council, and when the lands within the boundaries thereof attach to and become a part of lands adjoining such street, alley or public way, such lands formerly within such vacated street, alley or public way automatically, and without further action of the City Council, thenceforth acquire and be subject to the same zoning regulations as are applicable to lands to which same shall attach, and the same shall be used for the same use as is permitted under this Chapter for such adjoining lands.

SECTION 4.05 DISTRICT REQUIREMENTS

- A. The Districts set forth herein guide the establishment of district boundaries to further the objectives of the City of Troy Master Plan. The intent of each district defines interrelationships between conflicting and compatible land uses and between land uses and resources such as transportation, utilities, cultural and institutional facilities and the natural environment.
- B. Except as hereinafter provided, district regulations shall be applied in the following manner:
 - 1. Permitted Uses. Permitted uses shall be permitted by right only if specifically listed as permitted uses in the various zoning districts or are similar to such listed uses.
 - 2. Accessory Buildings, Structures, and Uses. Accessory buildings, structures, and uses are permitted only if such uses are clearly incidental to the permitted principal uses. Accessory buildings, structures, and uses shall not be established or constructed prior to construction of the principal building or establishment of the principal use to which it is accessory. Accessory buildings, structures, and uses are subject to the provisions of Section 5.03.
 - 3. Special Uses. Special land uses are permitted as listed, subject to the procedures set forth in Article 7.
- C. If a proposed use is not explicitly listed, the Zoning Administrator shall make a determination as to which listed use the proposed use is most similar to and compatible with, and in which district(s) said use shall be permitted. In making this determination, the Zoning Administrator shall consider factors such as

peak hourly and average daily traffic generation, noise, light, demands on public utility systems and potential environmental impacts. The Zoning Administrator may refer any proposed use to the Planning Commission for determination of the appropriate district(s) in which said use may be permitted.

SECTION 4.06 PERMITTED USES

A. In all Districts, no building or land shall be used and no building shall be erected except for one or more of the following specified uses, unless otherwise provided in this Chapter.

Table 4.06.01: Uses Permitted by District
P=Permitted, S=Special Use, NP=Not Permitted, A=Accessory

Uses	R-1A - R-1E	R-1T	MFR	UR	C-F	E-P	CB	GB	IIBD	O-1	OMU	R-C
Residential												
Accessory buildings and uses	A	A	A	A	A	NP	A	A	A	A	A	A
One-family dwellings	P	P	P	P	P	NP	NP	NP	NP	NP	NP	NP
Two-family dwellings	NP	P	P	P	NP	NP	NP	NP	NP	NP	NP	NP
One-family attached dwellings	NP	P	P	P	NP	NP	NP	NP	NP	NP	NP	NP
Home occupations	A	A	A	A	A	NP	A	A	A	NP	A	NP
Multiple-family dwellings (2-8 stories)	NP	NP	P	P	NP	NP	NP	NP	P	NP	NP	NP
Multiple-family dwellings (9+ stories)	NP	NP	NP	P	NP	NP	NP	NP	P	NP	NP	NP
Multiple-family dwellings (on upper floors only in a mixed use building)	NP	NP	NP	NP	NP	NP	P	P	P	NP	P	NP
Independent housing for elderly (age restricted housing)	P	P	P	P	P	NP	P	P	P	NP	P	NP
Residential care facilities for elderly	NP	S	P	P	NP	NP	P	P	P	NP	P	NP
Recreation												
Publicly owned and operated parks, parkways, and recreational facilities	P	P	P	P	P	NP	P	P	P	P	P	P
Conserved open space	P	P	P	P	P	P	P	P	P	P	P	P
Forestry / non-commercial nurseries	P	P	P	P	P	P	P	P	P	P	P	P
Passive outdoor recreation facilities	P	P	P	P	P	P	P	P	P	P	P	P
Active outdoor recreation facilities	S	S	S	S	P	P	P	P	P	P	P	P
Golf courses	S	S	S	S	S	NP	S	S	S	NP	NP	NP
Swimming pool clubs	S	S	S	S	S	NP	S	S	S	NP	NP	NP
Commercial indoor recreation	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Institutional												
Schools	S	S	S	S	P	NP	P	P	P	P	P	P
Childcare Centers, Nursery Schools, Day Nurseries	S	S	S	S	P	NP	P	P	P	A	A	A
Places of worship	S	S	S	S	S	NP	S	S	P	S	S	S
Utility and Public Service Buildings and facilities (without storage yards)	S	S	S	S	P	NP	P	P	P	P	P	P
Utility and Public Service Buildings and facilities (with outdoor storage yards)	NP	NP	NP	NP	S	NP	NP	NP	S	S	S	S

Uses	R-1A – R-1E	R-1T	MFR	UR	C-F	E-P	CB	GB	IIBD	O-1	OMU	R-C
Publicly owned/operated offices, public safety facilities, libraries, post offices, museums	S	S	S	S	P	NP	P	P	P	P	P	P
Fine and performing arts facilities	NP	NP	NP	NP	P	NP	P	P	P	NP	S	NP
Conference, meeting, and banquet facilities	NP	NP	NP	NP	S	NP	P	P	P	NP	P	S
Hospitals	NP	NP	NP	NP	S	NP	NP	S	S	NP	NP	NP
College, universities and higher learning facilities	NP	NP	NP	NP	S	NP	P	P	P	P	P	P
City and school district buildings	S	S	S	S	P	NP	P	P	P	P	P	P
Bus / transit passenger stations, taxicab offices, dispatching centers	NP	NP	NP	NP	P	NP	P	P	P	P	P	P
Social service facilities	NP	NP	NP	NP	P	NP	P	P	P	P	P	P
Retail and Service												
Restaurants	NP	NP	NP	A	NP	NP	P	P	P	NP	A	NP
Outdoor dining areas	NP	NP	NP	A	NP	NP	A	A	A	NP	A	NP
Retail	NP	NP	NP	A	NP	NP	P	P	P	NP	A	NP
Open air businesses, as a primary use	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Open air businesses, as subordinate to primary use and structures	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Motel, hotel, extended stay or all-suite residences	NP	NP	NP	NP	NP	NP	P	P	P	NP	S	NP
Personal service establishments for individual service – beauticians, self service laundry, dry cleaners, optical etc.	NP	NP	NP	A	NP	NP	P	P	P	NP	A	A
Service establishments of showroom or workshop in nature – electrician, decorator, tailor, baker, painter, upholsterer or establishment doing radio or home appliance repair, photo studios and similar service establishments	NP	NP	NP	NP	NP	NP	P	P	P	NP	A	A
Financial institutions	NP	NP	NP	A	NP	NP	P	P	P	P	P	P
Commercial kennels	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Commercial greenhouse facilities	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Drive-up windows and service facilities as an accessory to principal uses	NP	NP	NP	NP	NP	NP	S	S	A	S	S	NP
Theatres and assembly halls	NP	NP	NP	NP	NP	NP	P	P	P	NP	NP	NP
Office												
Professional and medical offices	NP	NP	NP	NP	NP	NP	P	P	P	P	P	P
Medical clinics	NP	NP	NP	NP	NP	NP	P	P	P	P	P	P
Veterinary clinics or hospitals	NP	NP	NP	NP	NP	NP	P	P	P	P	P	P
Industrial												
Prototype or experimental product research and development	NP	NP	NP	NP	NP	NP	NP	NP	P	P	P	P
Any use of basic research, design and pilot or experimental product development	NP	NP	NP	NP	NP	NP	NP	NP	P	P	P	P

Uses	R-1A – R-1E	R-1T	MFR	UR	C-F	E-P	CB	GB	IIBD	O-1	OMU	R-C
Food processing	NP	NP	NP	NP	NP	NP	NP	NP	P	NP	NP	NP
Manufacturing and assembly	NP	NP	NP	NP	NP	NP	NP	NP	P	NP	NP	NP
Laboratories	NP	NP	NP	NP	NP	NP	NP	NP	P	P	P	P
Warehouse and wholesale establishments and truck terminal facilities	NP	NP	NP	NP	NP	NP	NP	NP	P	NP	NP	NP
Central dry cleaning plants or laundries that do not deal directly with consumers	NP	NP	NP	NP	NP	NP	NP	NP	P	NP	NP	NP
Outdoor storage facilities	NP	NP	NP	NP	NP	NP	NP	NP	S	NP	NP	NP
Mini Warehouse or self-storage	NP	NP	NP	NP	NP	NP	NP	NP	P	NP	NP	NP
Automotive												
Sales, showrooms, offices, and incidental repair of new and/or used automobiles, trucks, recreational vehicles	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Auto repair and service garages within an enclosed building	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Auto service stations for the sale of fuel, oil, minor accessories, and accessory retail and restaurant uses	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Auto washes	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Auto auctions	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Antique and classic auto sales agencies	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP
Ambulance facilities	NP	NP	NP	NP	NP	NP	S	S	S	NP	NP	NP
Auto rental establishments including, trucks, trailer and recreational vehicles	NP	NP	NP	NP	NP	NP	S	S	S	NP	NP	NP
Miscellaneous												
Agriculture	P	P	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Cemeteries	P	P	P	P	P	NP	NP	NP	NP	NP	NP	NP
Mortuary Establishments	NP	NP	NP	NP	P	NP	P	P	P	NP	NP	NP
Family Day Care Homes	P	P	P	P	P	NP	NP	NP	NP	NP	NP	NP
Adult Foster Care Facilities	P	P	P	P	P	NP	NP	NP	NP	NP	NP	NP
Group Care Homes	P	P	P	P	P	NP	NP	NP	NP	NP	NP	NP
Private Clubs, Fraternal Organizations and Lodge Halls	NP	NP	NP	NP	S	NP	S	S	P	S	S	NP
Parking garages and off-street parking areas as a principal use	NP	NP	NP	NP	S	NP	S	S	P	S	S	S
Adult Use Businesses	NP	NP	NP	NP	NP	NP	NP	S	S	NP	NP	NP

SECTION 4.07 ONE-FAMILY RESIDENTIAL DISTRICTS R-1A THROUGH R-1E

A. **Intent.** The R-1A through R-1E One-Family Residential Districts are designed to be the most restrictive of the residential Districts as to use. The intent is to provide for environmentally sound areas of predominantly low-density, single family detached dwellings, through the varying of lot sizes and the development options which will accommodate a broad spectrum of house sizes and designs appealing to the widest spectrum of the population.

B. **Development Standards.** In order to maintain the physical and economic stability of One-Family residential areas, the following standards shall apply:

1. **Setbacks from major thoroughfares:** Whenever a lot or acreage parcel abuts a major thoroughfare as established by the Master Thoroughfare Plan adopted in accordance with Act 285, Public Acts of 1931, as amended, the yard setback abutting said major thoroughfare shall be at least fifty (50) feet from the existing or Master Thoroughfare Plan right-of-way line, whichever is greater. This ordinance does not prohibit expansion behind the fifty (50) foot setback. This requirement shall not apply to subdivisions for which Tentative Approval was granted prior to January 1, 1976.
2. **Variation in appearance:** In any One-Family residential District, there shall be variation in the appearance of the One-Family detached residential dwellings, according to the following standards:
 - a. A dwelling's front elevation shall not re-occur in the same or a substantially similar structural form on another dwelling, within the same street frontage, without there being at least one other dwelling with a different elevation between the dwellings that repeat the frontage elevation.
 - b. Different colors alone will not constitute different front elevations.
 - c. The Section shall not apply to any dwelling for which a building permit was issued before June 2, 1983.
3. **Screening from freeways:** Developments involving two or more one-family dwellings on parcels abutting a freeway shall include a landscaped berm at least five (5) feet in height along any property line abutting the freeway. Said berms shall be landscaped with a minimum of a double row, ten (10) feet apart, of upright coniferous evergreens, five (5) to six (6) feet in height, twenty (20) feet on center, staggered ten (10) feet on center.

In instances where the grade of the freeway is more than six (6) feet above the grade of the adjacent property, a dense planting screen of upright evergreen species, at least six (6) feet in height at the time of planting, may be permitted in lieu of the described berm, in accordance with a plan approved by the Zoning Administrator.

C. **Dimensional Requirements.** For all developments in the R-1A through R-1E Districts, the following dimensional requirements shall apply:

Table 4.07.1: Dimensional Requirements

Minimum Lot Size Per Dwelling Unit			Maximum Height		Minimum Yard Setback (R) (Per Lot in Feet)				Minimum Floor Area Per Unit (Square Feet)	Maximum % of Lot Area Covered by Buildings
Use District	Area in Sq. Ft.	Width In Ft.	In Stories	In Feet	Front	Sides		Rear		
						Least One	Total Two			
R-1A			2½	25	40	15	30	45	1,400	30%
No Sewer	30,000	150								
Sewer	21,780	120	2½	25	40	15	30	45	1,400	30%
R-1B			2½	25	40	15	30	45	1,400	30%
No Sewer	21,780	110								
Sewer	15,000	100	2½	25	40	10	25	45	1,400	30%
R-1C			2	25	30	15	30	40	1,200	30%
No Sewer	21,780	110								
Sewer	10,500	85	2	25	30	10	20	40	1,200	30%
R-1D			2	25	25	15	30	40	1,000	30%
No Sewer	21,780	110								
Sewer	8,500	75	2	25	25	8	20	40	1,000	30%
R-1E			2	25	25	15	30	35	1,000	30%
No Sewer	21,780	110								
Sewer	7,500	60	2	25	25	5	15	35	1,000	30%

1. The side yard abutting upon a street shall not be less than the greater of the side yards required for the District in which located when there is a common rear yard relationship in the block and a common side yard relationship with the block directly across the common separating street. In the case of a rear yard abutting a side yard or when a side yard is adjacent to a front yard across a common separating street, the side yard abutting a street shall not be less than the minimum front yard of the District in which located, and shall be considered as a front yard.

SECTION 4.08 R-1T ONE-FAMILY ATTACHED RESIDENTIAL DISTRICT

- A. **Intent.** The intent of the R-1T, One-Family Attached Residential District is to provide medium density residential areas, with open space elements, typically developed in accordance with the provisions of the Condominium Act, in those areas where alternate forms of residential development with medium density would help achieve the objectives of the Master Plan. The District is designed primarily to accommodate the development of attached residential dwelling units so as to provide a zone of transition between high intensity or non-residential use areas and lower density residential land use areas, and to provide medium density residential development in compact areas so as to encourage walkability.
- B. **Development standards.**
1. All units that abut a major thoroughfare shall have a rear or side yard relationship to said thoroughfare, and such yards shall not be less than fifty (50) feet in depth as measured from the right-of-way line of the thoroughfare as indicated on the Master Thoroughfare Plan. The Planning Commission may modify the dwelling unit orientation, or relationship to a major thoroughfare, when they determine that the parcel size and configuration are such that the rear or side yard relationship would be impractical or overly restrictive, and a more desirable residential environment can be created by permitting a front yard relationship to the thoroughfare.
 2. All units that abut a freeway shall have a yard setback of not less than seventy-five (75) feet in depth as measured from the right-of-way line of the freeway.
 3. All units that abut a secondary thoroughfare shall have a yard setback of not less than fifty (50) feet in depth as measured from the right-of-way line of the thoroughfare as indicated on the Master Thoroughfare Plan.
 4. In the course of reviewing plans for development, the Planning Commission may require that the dwelling unit elevations and orientation be modified or varied in order to minimize the repetitive visibility of garage entrances from the street at the front of the units. This may include requiring rear entry for residential units.
- C. **Dimensional Requirements.** For all developments in the R-1T District, the following dimensional requirements shall apply:

Table 4.07.1: Dimensional Requirements

Minimum Lot Size Per Dwelling Unit				Maximum Height		Minimum Yard Setback			Minimum Floor Area Per Unit (Square Feet)	Maximum % of Lot Area Covered by Buildings	
Use District	Area in Sq. Ft.	Width in Ft. Per Lot Or Unit In Platted Subdivisions or Site Condominiums	Frontage Per Dwelling Unit in Ft. for Traditional Condominium Projects (or multiple buildings on one parcel)	In Stories	In Feet	Front	Sides				Rear
							Least One	Total Two			
R-1T											
No Sewer	15,000	75	NA	2½	25	25	15	30	35	1,000	30%
Sewer	5,000	40	20	2½	25	25	10	20	35	1,000	30%

1. The side yard abutting upon a street shall not be less than the greater of the side yards required for the District in which located when there is a common rear yard relationship in the block and a common side yard relationship with the block directly across the common separating street. In the case of a rear yard abutting a side yard or when a side yard is adjacent to a front yard across a common separating street, the side yard abutting a street shall not be less than the minimum front yard of the District in which located, and shall be considered as a front yard.
2. In an R-1T District, front, side, or rear yards need not refer to spacing between buildings for a planned development of two (2) or more buildings on the same parcel. In such cases the minimum distance between any two (2) buildings shall be twenty (20) feet.
3. In an R-1T District with sewer service, regardless of whether it is developed as a site condominium, subdivision, or as a project with multiple buildings on a single parcel, as in a traditional condominium, the Planning Commission, in its sole discretion, may reduce or waive the front yard setback in cases where the project is oriented towards street side pedestrian connectivity in a townhouse configuration.

SECTION 4.09 MFR MULTIPLE FAMILY RESIDENTIAL DISTRICT

A. **Intent.** The intent of the MFR, Multiple Family Residential District, is to provide for alternative forms of residential development within a variety of ranges. This District can provide significant open space elements necessary to establish environmental transitions which will enhance the residential desirability and stability of the subject properties and adjacent low density residential areas. Alternatively, this District can allow higher-density projects designed to complement and support mixed-use areas of the City, the form-based districts of the City, or one another.

Development in the MFR District can offer an urban character while serving as transitional zones between areas of higher and lower intensity of development. The MFR District is further provided to accommodate the older multiple-family areas of the City, which were developed to serve the need for a variety of housing types in an otherwise predominantly low-density, single-family community.

The MFR District also provides an opportunity for high density multiple family dwellings in mid-rise structures adjacent to and more compatible with the high intensity development occurring in the major office, commercial and civic development areas.

B. **Dimensional Requirements.** For all developments in the MFR District, the following dimensional requirements shall apply:

Table 4.09.1: Dimensional Requirements

Maximum Density	Maximum Height		Minimum Yard Setback				Minimum Floor Area Per Unit (Square Feet)	Maximum % of Lot Area Covered by Buildings
	In Stories	In Feet	Front	Rear	Sides	Between buildings		
24	8	100	equal to the height of the structure				Efficiency or 1-BR-600 2-BR-800 3-BR-1000 4-BR-1200	35%

1. In MFR Districts, the site area shall contain a minimum open space area (apart from buildings, parking and drives or loading areas) equivalent to 450 square feet of land area per dwelling unit within the development.
2. In the MFR District, the maximum length of any building up to four stories in height shall not exceed one hundred eighty (180) feet, measured along any exterior elevation. The length of a building five to eight stories in height shall not exceed four times its height.

SECTION 4.10 UR URBAN RESIDENTIAL DISTRICT

- A. **Intent.** The intent of the UR, Urban Residential District is to provide sites for high density multiple family dwellings in high rise structures to nurture an urban character to support the Master Plan, especially when density of this scope will support high intensity office, commercial, transit, or civic developments within a reasonable walking distance. The UR District requires no formal setbacks, to permit development of an urban character.
- B. **Dimensional Requirements.** For all developments in the UR District, the following dimensional requirements shall apply:

Table 4.10.1: Dimensional Requirements

Maximum Density	Maximum Height		Minimum Yard Setback				Minimum Floor Area Per Unit (Square Feet)	Maximum % of Lot Area Covered by Buildings	
	In Stories	In Feet	Front	Rear	Sides	Between buildings			
35	No limit		0				30	Efficiency or 1-BR-600 2-BR-800 3-BR-1000 4-BR-1200	35%

1. In UR Districts, the site area shall contain a minimum open space area (apart from buildings, parking and drives or loading areas) equivalent to 450 square feet of land area per dwelling unit within the development.
2. In the UR District, the maximum length of any building up to four stories in height shall not exceed one hundred eighty (180) feet, measured along any exterior elevation. The length of a building five to eight stories in height shall not exceed four times its height. The maximum length of a building of nine stories or greater in height shall not exceed three times its height.

SECTION 4.11 C-F COMMUNITY FACILITIES DISTRICT

A. **Intent.** The C-F, Community Facilities, District is intended to provide for those public, quasi-public, or private institutional and service uses necessary to serve the cultural, educational, and, to some extent, the physical needs of the community. The unique nature and requirements of the uses contained within this District, and their need for a location within the residential portion of the community, warrant the establishment of a separate zoning classification which contains land use controls to insure that such uses will be fully compatible with adjacent land uses and not contrary to the spirit and purpose of this ordinance.

B. **Dimensional Requirements.** For all developments in the C-F District, the following dimensional requirements shall apply:

Table 4.11.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Maximum % of Lot Area Covered by Buildings
In Stories	In Feet	Front	Rear	Sides	Between buildings	
2	25	50 or equal to that of the abutting single-family zoning district			30	30%

1. In C-F Districts, parking shall not be permitted in the front yard.

SECTION 4.12 E-P ENVIRONMENTAL PROTECTION DISTRICT

- A. **Intent.** The City of Troy, whose natural features and open space areas constitute important physical, aesthetic, recreation and economic assets, finds that the rapid growth and spread of development has had the effect of encroaching upon, despoiling and eliminating many of these natural resource areas. Further, the City of Troy finds that these natural resource areas:
- A. Constitute an important component of the general welfare by maintaining open space, natural beauty and an irreplaceable heritage for the existing and future residents of the City of Troy;
 - B. Provide for the public safety through the prevention of damage from erosion, siltation and flooding;
 - C. Protect the mental health through the reduction of excessive noise and the physical damage associated with noise pollution; and,
 - D. Protect the public health through the generation of oxygen as well as through the absorption of air pollutants and contaminants.

Therefore, the City of Troy has enacted a series of development options and Zoning Districts which have, as a portion of their intent, the conservation, preservation and provision of open space and natural resource areas. A series of areas such as flood plain areas also exist wherein the limitation or prohibition of alteration or development is essential to the public health, safety and welfare. The intent of the E-P, Environmental Protection, District is to act in concert with these development options and Zoning Districts and to recognize other areas warranting preservation, conservation, or protection, in such a manner as to:

- A. Provide for the protection, preservation, use and maintenance of natural resource areas, minimizing disturbance to them and to prevent damage resultant from their loss;
 - B. Protect these natural resource and open space areas for their economic support of property values when allowed to remain in an undisturbed natural state;
 - C. Provide for the paramount public concern for these natural resource areas in the interest of health, safety and the general welfare of the residents of the City of Troy; and,
 - D. Promote public health, safety and general welfare by preventing or minimizing loss or damage to property, and personal injury, due to flooding.
- B. **Location standards.** In order to achieve the intent of this District, the E-P, Environmental Protection District, may be applied to the following types of property:
- 1. Privately or publicly owned property containing significant natural assets or features.

2. Privately owned property consisting of those portions of a development area which are or will be established as open space or natural preserves under the terms of development requirements contained herein or through private actions achieving the same purpose.
3. Flood plains or flood way areas designated or specified by related City, County or Federal standards or programs.
4. Wetlands, determined by engineering and/or soil surveys, whose inherent conditions preclude development in a normal manner.
5. Privately owned property committed for use for non-commercial outdoor recreation purposes.

C. District Standards.

1. Lands zoned in the E-P, Environmental Protection classification, which are provided in conjunction with residential developments, shall be permitted to be used in the calculation of density for such projects, subject to applicable provisions of this Chapter. The conservation and protection of irreplaceable natural resource areas from pollution, impairment, or destruction shall remain a paramount factor in the design and implementation of such projects.
2. General maintenance of the lands and waters contained within this zoning classification shall be the responsibility of the titleholder, unless otherwise provided for by a recorded document acceptable to the City and the titleholder.
3. The City may make reasonable entry upon such areas included in this District for the purpose of making any survey, investigation or other study contemplated by this ordinance. Any investigation of any natural or artificial impairment or hazard may be made by the City, either on its own initiative, or on the written request of any three (3) titleholders of land having a real estate interest in the land wherein the impairment or potential hazard is located, or on the written request of a related property owner's association.
4. No building or structure, either permanent or temporary, shall be erected on land zoned in the Environmental Protection classification, except as otherwise provided in this Article. Any existing structure or use existing at the time of establishment of the E-P District, which is not in conformity with the provisions of the Article, may be continued subject to the general provisions for non-conforming uses or structures.
5. It is the intent of this section that trees, shrubs, undergrowth and the like, shall remain in their natural state, or shall be maintained in accordance with a plan as approved by the Zoning Administrator or his designated representative, and shall be cut or removed only when such is determined to be dangerous or diseased, or when removal is necessary to carry out normal maintenance or to implement a use approved under the provisions of this Ordinance. No permit shall be required for the removal of dead, diseased, and/or other damaged trees or woody vegetation,

provided that such removal or trimming is accomplished through the use of standard forestry practices and techniques.

6. Any plan proposing the removal of healthy plant materials or alteration, grading, filling or utility installation shall be subject to the approval of the Zoning Administrator or his designated representative. The plant material removal and site alteration actions referred to herein are not intended to include normal placement, maintenance and removal of landscape materials. The provisions of this section are not intended to preclude grading or site alterations necessary to eliminate drainage problems or other problems or nuisance site conditions. In their consideration of such proposals or site alterations, the approving authority specified herein shall make every effort to minimize the negative effects of such actions on the related natural features, in keeping with the intent of this section.
7. Actions to remove healthy plant materials in a manner not consistent with this section, in areas where E-P Zoning has been applied for the purpose of natural feature preservation, shall constitute a violation of this Ordinance and shall be subject to prosecution in accordance with established procedures.

SECTION 4.13 CB COMMUNITY BUSINESS DISTRICT

A. **Intent.** The CB, Community Business Districts, as herein established, are designed to meet the day-to-day convenience, shopping and service needs of persons in the immediate residential areas, as well as a larger consumer population. The CB Districts are the least intense of the predominantly commercial Districts within the City, but they contain a wide variety of potential uses and development types from small, single-tenant buildings to integrated or planned clusters of establishments on large sites served by common parking areas and generating large volumes of vehicular and pedestrian traffic. The Role of the CB District is to protect and enhance existing traditionally commercial areas of the City where non-residential uses are and ought to be the almost exclusive use of the property. The CB District is unique in this more exclusive purpose, as the form based and other business districts within the City, as well as higher-density residential districts, also allow and encourage the on-site integration of business and service uses with office and residential uses.

B. **Dimensional Requirements.** For all developments in the CB District, the following dimensional requirements shall apply:

Table 4.13.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Minimum Floor Area in Feet
In Stories	In Feet	Front	Rear	Sides: Least	Sides: Total	
2	30	0	30	20	40	500

1. In CB Districts, no building shall be closer than 75 feet from the outer perimeter (property line) of such District, when such abuts a residential District. No side yards are required along the interior side lot lines of the District or along side lot lines in common with the GB or IIBD Districts if all related conditions of this Chapter are complied with. If walls of structures facing such interior or common side lot lines contain windows, or other openings, side yards of not less than ten (10) feet shall be provided.

2. When rear yards include parking, loading or property maintenance facilities, necessary access to same shall be provided by means of at least one side yard drive. Such drives shall have a minimum width of twenty-two (22) feet for two-way service or fifteen (15) feet for one-way service, and shall be kept free of any obstruction.

SECTION 4.14 GB GENERAL BUSINESS DISTRICT

- A. **Intent.** The GB General Business Districts are designed to provide sites for more diversified business types requiring a City-wide or regional market area and/or arterial exposure. The General Business Districts are thus typically mapped along major thoroughfares and/or adjacent to Community Business Districts. They also permit an opportunity for higher-density mixed-use developments in support of the Master Plan.
- B. **Dimensional Requirements.** For all developments in the GB District, the following dimensional requirements shall apply:

Table 4.14.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Minimum Floor Area in Feet
In Stories	In Feet	Front	Rear	Sides: Least	Sides: Total	
5	75	0	30	20	40	500

1. In GB Districts, no building shall be closer than 75 feet from the outer perimeter (property line) of such District, when such abuts a residential District. No side yards are required along the interior side lot lines of the District or along side lot lines in common with the CB or IIBD Districts if all related conditions of this Chapter are complied with. If walls of structures facing such interior or common side lot lines contain windows, or other openings, side yards of not less than ten (10) feet shall be provided.
2. When rear yards include parking, loading or property maintenance facilities, necessary access to same shall be provided by means of at least one side yard drive. Such drives shall have a minimum width of twenty-two (22) feet for two-way service or fifteen (15) feet for one-way service, and shall be kept free of any obstruction.

SECTION 4.15 IIBD INTEGRATED INDUSTRIAL AND BUSINESS DISTRICT

A **Intent.** The IIBD Districts are designed to build on traditional industrial uses by offering an open environment of investment by permitting the broadest range of uses of any District within the City. It is the intent of the IIBD District to empower widespread reinvestment of buildings and sites no longer suited to evolving manufacturing uses, and to embrace the innovative adaptive reuse of these buildings and sites for a diverse, mixed, unique combination of uses.

The IIBD District, however, is also structured to continue and to support the manufacturing and business-to-business sectors and build on successful projects in Troy by supporting those projects and their Districts by opening the potential of the District overall.

B. **Dimensional Requirements.** For all developments in the IIBD District, the following dimensional requirements shall apply:

Table 4.15.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Maximum % of Lot Area Covered by Buildings
In Stories	In Feet	Front	Rear	Sides: Least	Sides: Total	
4	50	50	20	10	20	40

1. The front yard shall remain as open space, unoccupied and unobstructed from the ground upward except for landscaping, plant materials, or vehicle access drives. Off-street parking spaces, aisles, loading areas, and maneuvering lanes shall not be located in such yards. All yards abutting upon a public street or freeway shall be considered as front yards for setback and open space purposes.
2. No building shall be located closer than fifty (50) feet to the outer perimeter (property line) of such District when said property line abuts any residential District, public street or freeway right-of-way.
3. When rear yards include parking, loading, property maintenance, or vehicular building access facilities, necessary access to same shall be provided by means of at least one side yard drive. Such drives shall have a minimum width of twenty-two (22) feet for two-way service or fifteen (15) feet for one-way service, and shall be kept free of any obstruction.

SECTION 4.16 O-1 OFFICE BUILDING DISTRICT

- A. **Intent.** The O-1 Office Building Districts are designed to accommodate office buildings and restricted related retail and service establishments in a variety of settings from very small properties to larger properties in proximity to areas of major commercial development or high density residential or mixed-use development. These districts are mapped typically along commercial corridors in the City, or on the periphery of regionally prominent retail and service centers. The O-1 District is predominantly intended to accommodate professional employment centers and some accessory uses, so as to serve as a base of employment in the City. It is not so diverse as to include prominent retail or other commercial components, which are more broadly available in the similar, but more intense OMU, Office Mixed Use District, which is specifically designed for that purpose. Consequently, due to its less intense nature, the O-1 District is suited to serve as a conventional transitional zone or in support of more regionally prominent areas and districts with a more intense concentration of uses.
- B. **Dimensional Requirements.** For all developments in the O-1 District, the following dimensional requirements shall apply:

Table 4.16.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Minimum Floor Area in Feet
In Stories	In Feet	Front	Rear	Sides: Least	Sides: Total	
3	36	30	20	20	40	500

SECTION 4.17 OMU OFFICE MIXED USE DISTRICT

- A. **Intent.** The OMU Office Mixed Use District is designed and intended to accommodate large office buildings and restricted retail and service establishments which serve large numbers of people, as well as the retail, service, restaurant, lodging, and residential options that should be provided to support such large employment centers. A major purpose of this District is to provide areas for buildings of greater height and more intensive land use activity in an otherwise low-density community, while providing amenities on-site or within the same immediate area to foster a walkable, compact, dense urban environment. While this District does promote larger, more intense projects, due to the possibility of mixed uses and residential components, it is not always required that the OMU District be limited to its traditional situation in proximity to areas of major commercial or civic development, and near major thoroughfares or freeways. Rather, the OMU District is intended to encourage the development of uses and services that will support and enhance the marketability of the City of Troy as a vibrant and desirable place to work where a high quality of life can be offered for both workers and residents. As such, it is a primary role of the OMU District, along with the IIBD, R-C, CB and GB Districts to preserve the economic vitality of the area.
- B. **Dimensional Requirements.** For all developments in the OMU District, the following dimensional requirements shall apply:

Table 4.17.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Minimum Floor Area in Feet
In Stories	In Feet	<u>Front</u>	<u>Rear</u>	<u>Sides: Least</u>	<u>Sides: Total</u>	
5	75	30	30	30	60	500

SECTION 4.18 R-C RESEARCH CENTER DISTRICT

- A. **Intent.** The R-C (Research Center) District is designed to provide for industrial-research and office uses in planned developments. Such districts are to be located and developed so as to complement the significant light industrial character of the community, while at the same time providing for the necessary related non-manufacturing uses such as corporate office and research facilities. The R-C District is intended to encourage the development of uses and services that will support and enhance the marketability of office buildings in the R-C District, and to preserve the economic vitality of the area through the development of uses and services for the benefit of tenants and local residents. Further, the Research Center District is intended to provide for those major industrial-research, and office, and training uses which require proximity to major non-residential areas, rather than for smaller local-serving uses such as medical offices, real estate offices, etc., which could reasonably be located in local commercial and service areas elsewhere in the community.
- B. **Dimensional Requirements.** For all developments in the R-C District, the following dimensional requirements shall apply:

Table 4.18.1: Dimensional Requirements

Maximum Height		Minimum Yard Setback				Minimum Floor Area in Feet
In Stories	In Feet	Front	Rear	Sides: Least	Sides: Total	
3	40	50	20	20	40	500

1. The front yard shall remain as open space, unoccupied and unobstructed from the ground upward except for landscaping, plant materials, or vehicle access drives. Off-street parking spaces, aisles, loading areas, and maneuvering lanes shall not be located in such yards. All yards abutting upon a public street or freeway shall be considered as front yards for setback and open space purposes.
2. In the R-C, Research Center District, when front yards abut a freeway, the Zoning Administrator may permit a reduction in the depth of the landscaped portion of such yards to a minimum of 20 feet, when it determines that the nature and orientation of the subject building is such that screening through the use of a fully landscaped yard is not necessary, and that a serious development constraint would be created as a result of the standard landscaped yard requirement.

ARTICLE 5

GENERAL PROVISIONS

5

SECTION 5.01 INTENT

The intent of this Article is to provide regulations that generally apply to all users regardless of the particular zoning district.

10

SECTION 5.02 LOT USE AND AREA ALLOCATION

~~1.A. General Lot Requirement. No portion of a lot used to comply with the yard, lot area per unit, residential density, percentage of lot occupancy, or other site requirement of this Ordinance shall be counted toward the yard, lot area per unit, residential density, percentage of occupancy, or other site requirement for any other existing building or structure.~~

~~20 B.Main Building and Principal Use. Except as otherwise specifically provided in this Ordinance, no lot may contain more than one (1) main building or principal use, except for groups of multiple family buildings, retail business buildings, or other groups of buildings contained within an integrated complex with an approved site plan.~~

~~25 C.Integrated Complex. An integrated complex may share parking, signs, access, and other similar features which together form a unified function and appearance that the Zoning Administrator deems to collectively be a principal use.~~

~~30 D.B. Wireless Communication Facilities. Wireless communication facilities may be located on a lot that contains another use, except one family and two family dwellings.Number of Buildings per Lot.~~

~~35 1. There shall be only one (1) single-family dwelling and one (1) two-family dwelling permitted per lot, provided all other requirements of this Ordinance are met.~~

~~40 2. For all development subject to site plan review, more than one (1) principal building per lot may be permitted, provided all other requirements of this Ordinance are met.~~

SECTION 5.03 ACCESSORY BUILDINGS, STRUCTURES, AND USES

45 A. General Requirements.

~~A.1.~~ Accessory buildings, structures, and uses shall be supplemental or subordinate to the principal building on a parcel of land; and shall be on the same parcel of land as the principal building, structure, or use they serve.

5 ~~B.2.~~ Construction, erection, installation, or placement shall be in accordance with the requirements of the applicable Building Code. Permits shall be required for buildings greater than thirty-six (36) square feet in area and/or greater than four (4) feet in height. Electrical service for ground-mounted antennas shall be provided only through underground lines.

10 ~~C.3.~~ Detached buildings and structures may be prefabricated or built on the site, and shall have ratwalls or other acceptable foundations not less than twenty four (24) inches in depth, or be built so that the floor and walls are located a minimum of six (6) inches above the underlying ground. Trailer-mounted buildings and structures are prohibited.

15 ~~D.4.~~ Accessory buildings, structures, and uses shall not be located within a dedicated easement or right-of-way.

20 ~~E.5.~~ Permits shall be required for all ground-mounted and roof-mounted antennas.

B. Accessory Buildings in Residential Zoning Districts

25 ~~a.1.~~ Attached Accessory Buildings

~~A.a.~~ Where the accessory building or structure is structurally attached to a main building, it shall be subject to, and must conform to, all regulations of this Ordinance applicable to a main building in addition to the requirements of this Section.

30 ~~B.b.~~ The area of attached accessory buildings shall not exceed seventy-five percent (75%) of the ground floor footprint of the living area of the dwelling. This requirement shall apply only to attached accessory buildings that have not been granted a valid building permit from the City of Troy Building Department prior to July 21, 2005.

35 ~~C.c.~~ The size of any door to an attached accessory building shall not exceed ten (10) feet in height. This requirement shall apply only to attached accessory buildings that have not been granted a valid building permit from the City of Troy Building Department prior to July 21, 2005.

40 ~~b.2.~~ Detached Accessory Buildings

45 ~~i.a.~~ Detached accessory buildings shall not be erected in any yard, except a rear yard.

~~ii.b.~~ Detached accessory buildings and detached accessory supplemental buildings shall occupy not more than twenty-five percent (25%) of a required rear yard.

5

~~iii.c.~~ The combined ground floor area of all detached accessory buildings shall not exceed four hundred and fifty (450) square feet plus two percent (2%) of the total lot area. However, in no instance shall the combined floor area of all detached accessory buildings and detached accessory supplemental buildings exceed the ground floor footprint of the living area of the dwelling, or six hundred (600) square feet, whichever is greater.

10

~~iv.d.~~ No detached accessory building shall be located closer than ten (10) feet to any main building, nor closer than six (6) feet to any side or rear lot line. A detached accessory building shall not exceed one (1) story or fourteen (14) feet in height.

15

~~e.3.~~ Accessory Supplemental Buildings

~~i.a.~~ The total floor area of all detached accessory supplemental buildings on a parcel of land shall not exceed two hundred (200) square feet.

20

~~ii.b.~~ An accessory supplemental building shall not be located in any front yard.

25

~~iii.c.~~ No detached accessory supplemental building shall be located closer than six (6) feet to any side or rear lot line.

~~iv.d.~~ A detached accessory supplemental building shall not exceed one (1) story or fourteen (14) feet in height, except as noted below.

30

~~d.4.~~ Private Swimming Pools. Except as otherwise permitted in this Zoning Ordinance, all private swimming pools (above or below ground) shall be subject to the following:

~~1.a.~~ Swimming pools shall be permitted only in the rear or side yard, behind the front of the principal building.

35

~~2.b.~~ No swimming pool shall be located within five (5) feet of any building.

~~3.c.~~ There shall be a distance of not less than ten (10) feet between the adjoining property line and the outside of the pool wall.

40

C. Accessory Buildings in Non-Residential Zoning Districts. All accessory buildings shall be subject to the same placement and height requirements applicable to principal structures in the district in which located.

45

D. Agricultural Buildings.

- 5 •1. The provisions of Section 5.03.A.2-4 shall be applicable to all agricultural buildings or uses, regardless of whether such buildings are classified as principal or accessory buildings.
- 10 •2. Where an agricultural building is structurally attached to a residence or any other non-agricultural building, the provisions of Section 5.03.B.1 shall be applicable to all such buildings.

E. Antenna Structures. No more than two (2) antenna structures (no more than one (1) of which may be ground-mounted and thus detached from the main building) shall be permitted for each lot or parcel, with the following exception:

- 15 1. On non-residential parcels, two (2) antenna structures shall be permitted for the first twenty thousand (20,000) square feet of gross building area, with one (1) additional antenna structure permitted for each additional twenty thousand (20,000) square feet of gross building area, or major portion thereof.
- 20 2. The numerical limits of this Section shall not apply in the following situations:
- 25 a. Panel-type antennas which are visually integrated with the building surface on which they are mounted (similar color, not extending above wall, equipment penthouse or enclosure surface).
- b. Pole, mast, whip, or panel-type antennas mounted on or adjacent to the roof of residential or non-residential buildings sixty (60) feet or more in height.

30 F. Amateur Radio and Satellite Dish Antennas.

- 35 •1. Amateur radio antennas are permitted up to a height of seventy-five (75) feet if used in accordance with the terms of a valid Amateur Radio Service License issued by the Federal Communications Commission or permitted under Federal Regulation by a reciprocal agreement with a foreign country. Other pole, mast type antennas may, however, be permitted to be constructed to a height equal to the permitted maximum height of structures in the District. Other pole, mast, whip, or panel type antennas that are roof-mounted or attached to a building shall not extend more than twelve (12) feet above the highest point of a roof.
- 40 2. –Satellite dish antennas in Residential Districts, which extend more than fourteen (14) feet in height or fourteen (14) feet above grade, shall not exceed twenty-four (24) inches in diameter.
- 45 •3. –Satellite dish and amateur radio antennas shall be placed so that rotation can occur

without encroachment into the required setback.

5 2.4. No more than two (2) antenna structures, which shall include no more than one (1) which may be ground-mounted, and thus detached from the main building, shall be permitted for each lot or parcel, with the following exception:

10 a. On non-residential parcels, two (2) antenna structures shall be permitted for the first twenty thousand (20,000) square feet of gross building area, with one (1) antenna structure permitted for each additional twenty thousand (20,000) square feet of gross building area, or major portion thereof.

b. The numerical limits of this Section shall not apply in the following situations:

15 i. Panel-type antennas which are visually integrated with the building surface on which they are mounted (similar color, not extending above wall, equipment penthouse, or enclosure surface).

20 ii. Pole, mast, whip, or panel-type antennas mounted on or adjacent to the roof of residential or non-residential buildings sixty (60) feet or more in height.

25 **SECTION 5.04 CORNER CLEARANCE**

No fence, wall, shrubbery, sign, or other obstruction to vision above a height of thirty (30) inches from the established street grades shall be permitted within the triangular area formed at the intersection of any street right-of-way lines by a straight line drawn between said right-of-way lines at a distance along each line of twenty-five (25) feet from their point of intersection.

30 **SECTION 5.05 FENCES**

35 A. Approval Required: The construction of fences in all Districts shall meet the requirements set forth in Chapter 83 – Fences.

B. Visibility at Intersections: All fences in the front yards must comply with the requirements of Section 5.04, Corner Clearance.

40 **SECTION 5.06 VOTING PLACE**

45 The provisions of this Ordinance shall not interfere with or prevent the temporary use of any property as a voting place in connection with a public election.

SECTION 5.07 ESSENTIAL SERVICES AND OTHER PUBLIC PROPERTY

5 It is the intent of the Ordinance to regulate essential services and property owned, leased, or operated by public agencies, including local, state, federal, or any other public or governmental body or agency, as follows:

- A. Essential services shall be permitted in any district.
- 10 B. Buildings constructed in conjunction with an essential service shall ~~constitute and be treated as uses in any zoning district, pursuant to the requirements of _____ of this chapter~~ require site plan approval in accordance with the requirements set forth in Article 6, Site Plan Review.
- 15 C. Property owned, leased, or operated by the state or the United States shall be exempted from the provisions of this chapter, only to the extent that said property may not be constitutionally regulated by the City.

20 **SECTION 5.08 GENERAL EXCEPTIONS**

- A. Height Exceptions. No building shall be erected, converted, enlarged, reconstructed, or structurally altered to exceed the height limit hereinafter established for the district in which the building is located, except as set forth herein.
 - 25 1. Roof structures and screening devices for the housing of elevators, stairways, tanks, ventilating fans, solar panels, or similar equipment required to operate and maintain the building shall not exceed by more than ten (10) feet the height limit of the district in which the use is located.
 - 30 2. Fire or parapet walls and skylights shall not exceed by more than five (5) feet the height limit of the district in which the use is located.
 - 35 3. Steeples, chimneys, smokestacks, or similar structures shall not exceed by more than fifteen (15) feet the height limit of the district in which the use is located.
 - 40 4. A structure which is permitted by this Section to exceed height limits shall have a total area no greater than ten percent (10%) of the roof area of the building; nor shall such structure be used for any residential, commercial, or industrial purpose whatsoever other than a service use incidental to the main use of the building.
 - 5. The provisions of this Section shall not apply to wireless communication facilities regulated by Section _____, Wireless Communication Facilities.

B. Lots Adjoining Alleys. In calculating the area of a lot that adjoins an alley or lane, for the purpose of applying lot area requirements of this Chapter, one half (1/2) the width of such alley abutting the lot shall be considered as part of such lot.

5 C. Decks, Porches, and Patio Structures. An open, unenclosed, and uncovered porch, raised deck, or patio structure, or paved terrace may project into a required front yard for a distance not to exceed ten (10) feet. Such facilities may project into a required rear yard for a distance not to exceed fifteen (15) feet, subject further to the requirement that the distance remaining between the encroaching facility and the rear lot line shall in no
10 instance be less than twenty-five (25) feet. Porch, deck, patio, or terrace facilities encroaching into required front or rear yards shall not include fixed canopies, gazebos or permanent enclosures, and shall be at a grade no higher than that of the first or main floor of the building to which they are attached.

15 D. Projections Into Yards. Architectural features, not including vertical projections, may extend or project into a required side yard not more than two (2) inches for each one (1) foot of width of such side yard; and may extend or project into a required front yard or rear yard not more than three (3) feet.

20

SECTION 5.09 HEIGHT CONTROLS ADJACENT TO AIRPORTS

A. The height of buildings and structures in the vicinity of publicly owned airport and heliport facilities, ~~as established on the enclosed Airport Location and Height Control Map, shall be controlled by the provisions of this Section, or of the applicable shall be controlled by the Airport Approach Plan approved by the Michigan Aeronautics Commission and the underlying~~ Zoning District, whichever is more restrictive. ~~Additionally, no building or other structure hereafter constructed or any existing building or other structure hereafter relocated, enlarged, or reconstructed shall project so as to penetrate airport approach, transitional or horizontal surfaces, whichever is more restrictive; provided that in no instance shall any building or structure exceed the height limitation of the Zoning District in which it is located.~~

35 B. Unless the Federal Aviation Administration has issued a Determination of No Hazard and a Michigan Tall Structure Permit has been issued by the Michigan Aeronautics Commission, no building or structure shall be constructed, relocated, or expanded in a manner that does not conform to the height restrictions of the Airport Approach Plan.

40 B.C. Appeals from this Section shall be considered by the Board of Zoning Appeals. However, pPrior to making any decision, the Board shall notify the Federal Aviation Administration and the Michigan Aeronautics Commission of the appeal and of the time and place of the Public Hearing. The Board of Zoning Appeals and shall receive a report from one or both of these agencies, and shall give due consideration to same in making their decisions on such matters. The Board of Zoning Appeals shall not grant an appeal that is inconsistent with the Airport Approach Plan.

45

SECTION 5.10 HOME OCCUPATIONS

- 5 A. A home occupation must be clearly incidental and secondary to the primary use of the dwelling unit used for dwelling purposes.
- B. A home occupation shall not change the character or appearance of the structure or the premises, or other visible evidence of conduct of such home occupation. There shall be
10 no external or internal alterations not customary in residential areas or structures.
- C. A home occupation use shall not create a nuisance or endanger the health, safety, welfare, or enjoyment of any other person in the area, by reason of noise, vibrations, glare, fumes, odor, electrical interferences, unsanitary or unsightly conditions, fire hazards, or the like,
15 involved in or resulting from such home occupation. Any electrical equipment processes that create visual or audible interferences with any radio or television receivers off the premises or which cause fluctuations in line voltages off the premises shall be prohibited.
- D. A home occupation shall not generate sewage or water use in excess of what is normally
20 generated from a single-family dwelling in a residential area.
- E. No employees shall be permitted other than members of the immediate family residing in the dwelling unit.
- 25 F. A home occupation shall be conducted within the dwelling unit or within a building accessory thereto. There shall be no outside display of any kind, or other external or visible evidence of the conduct of a home occupation.
- G. There shall be no vehicular traffic permitted for the home occupation, other than as is
30 normally generated for a single-family dwelling unit in a residential area, both as to volume and type of vehicles.
- H. No signs shall be used to advertise the business.
- 35 I. No article shall be sold or offered for sale on the premises except as is prepared within the dwelling or accessory building or is provided as incidental to the service or profession conducted therein.
- J. The exterior storage of material, equipment, or refuse associated with or resulting from a
40 home occupation, shall be prohibited.

SECTION 5.11 STORAGE OF RECREATIONAL VEHICLES AND EQUIPMENT

5 A. Single-Family Residential Districts. The outdoor storage or parking of any ~~airplane, antique or racing automobile, boat, float, trailer, trailer coach, camping trailer, motorized home, demountable travel equipment of the type adaptable to light duty trucks, and other equipment~~ recreational vehicle or vehicles of a similar nature, shall be prohibited for a period greater than forty-eight (48) hours in all single-family residential districts, except where expressly permitted by other provisions of this Ordinance, unless the following minimum conditions are met:

10 ~~a.1.~~ 1. All such vehicles or equipment shall be placed within a completely enclosed building or located behind the front face of the principal building, but no closer than three (3) feet to any side or rear lot line.

15 ~~b.2.~~ 2. Storage or parking shall be limited to a lot or parcel of land upon which is located an inhabited dwelling unit and the vehicle or equipment is owned by the occupant.

20 ~~e.3.~~ 3. Trailer coaches and other vehicles or equipment intended or adaptable for sleeping purposes shall remain unoccupied and shall not be connected to sanitary sewer facilities, or have a fixed connection to electricity, water, or gas.

25 ~~d.4.~~ 4. Recreational vehicles and equipment may not be stored or parked in residential districts for the purpose of making major repairs (i.e. engine rebuilding, reconditioning of motor vehicles, body work, etc.), refurbishing, or reconstruction of the recreational vehicle or equipment.

30 B. Multiple-Family Districts. In any multiple family residential district the property owner or the controlling association shall only allow parking or storing in a designated area, approved by the ~~Planning Commission~~ Zoning Administrator. Parking spaces required to meet parking requirements shall not be used for the parking and storage of recreational vehicles and equipment.

35 C. Non-Residential Districts. The storage of recreational vehicles and equipment in non-residential districts when it is not associated with the business of the property, shall be prohibited.

SECTION 5.132 OUTDOOR PARKING OF COMMERCIAL VEHICLES IN RESIDENTIAL DISTRICTS

40 Outdoor parking of commercial vehicles is prohibited in residential districts, with the following exception:

A. The outdoor parking of one (1) commercial vehicle of one (1) of the following two (2) types is permitted for each dwelling unit on a residential lot or parcel:

45 1. A Commercial Vehicle: Pick-up Truck, as defined in Article 2.0; or

2. A Commercial Vehicle: Passenger/Cargo-Style Van, as defined in Article 2.0.

5 **SECTION 5.143 TEMPORARY BUILDINGS, STRUCTURES AND USES**

10 ~~1.A. Purpose. This Section allows for the establishment of Intent. e~~Certain temporary buildings, structures, or uses ~~or special events~~ of limited duration, ~~provided that such uses comply with the standards in this Section and are discontinued upon the expiration of an approved time period~~ shall be permitted, subject to the standards set forth in this Section. Temporary buildings, structures, uses, ~~and special events~~ shall not involve the construction or alteration of any permanent building or structure, ~~and are discontinued and removed upon expiration of an approved time period.~~ The Zoning Administrator may issue a permit for temporary structures and uses based upon receipt of an application, plot plan, compliance with permit requirements of this Section, and a permit fee as applicable.

15 ~~B. Exception.~~ This Section shall not apply to any uses regulated by Chapter 6 – Temporary Merchant Businesses.

20

Table 5.14 Temporary Structures and Uses			
Structure or Use	Section	Duration	Permit Required
Construction Related Temporary Structures	5.14.3	1 year	Temporary Use Permit
Temporary Dwelling	5.14.4	1 year	Temporary Use Permit
Temporary Storage in a Portable Commercial Shipping Container	5.14.5	30 days per calendar year	None
Temporary Portable Residential Storage Container	5.14.6	30 days, 3 times per year	None
Assembly and Fundraising Activities	5.14.7	4 days, 4 times per year	Temporary Use Permit

25 ~~2.C. Application Requirements and Standards for Review.~~

25 ~~a.1.~~ Application. An application for approval of any temporary use, building, or structure shall be filed ~~by the owner of the property or his or her designated representative~~ with the Zoning Administrator. The request shall include, at a minimum, the following information:

30 ~~i.a.~~ The name, address, and telephone number of the applicant.

~~ii.b.~~ The location of the property.

35 ~~iii.c.~~ A complete explanation of the proposed temporary use, building, or structure.

~~iv.d.~~ A plot plan in sufficient detail to ~~allow review of the items listed in Section 5.14.B.3 or 5.14.B.4, whichever is applicable~~determine the applicable standards of this Section are met.

5 ~~v.e.~~ Any other information requested by the Zoning Administrator and deemed necessary to make the necessary findings for approval.

~~b.2.~~ Application Approval.

10 ~~i.a.~~ The Zoning Administrator may refer the application to any City Department for review and comment.

15 ~~ii.b.~~ The Zoning Administrator may approve, approve with conditions, or deny a temporary ~~use, building, or structure~~building, structure, or use based upon review of the items required pursuant to the requirements of this Section.

20 ~~iii.c.~~ Conditions for approval of the temporary ~~use, building, or structure~~building, structure, or use may include a time limit for the expiration of the temporary use, building, or structure permit, and may require the posting of a performance bond or insurance to ensure prompt termination and removal of the use, building, or structure, and clean-up.

25 ~~3.3.~~ General Standards. ~~Temporary uses or special events that occur in the public right-of-way or other land shall be governed by the applicable City policies. In the review of Temporary uses, structures, or events, on private property shall comply with the following requirements:~~

30 ~~a.~~Compatible with the principal uses taking place on the site;

~~b.~~Not be detrimental to property or improvements in the surrounding area;

35 ~~e.a.~~ The proposed temporary activity shall be compatible with and shall Not have substantially adversely effects or noise impacts on nearby residential neighborhoods ~~or to the public health, safety, or general welfare;~~

~~d.b.~~ Not includeThere shall be no permanent alterations to a structure or the site;

40 ~~e.c.~~ Not maintainThere shall be no temporary signs associated with the use or structure after the activity ends;

45 ~~f.~~Not violate the applicable conditions of approval that apply to a site or use on the site;

~~g.d.~~ The proposed temporary activity shall be compatible with and shall not interfere with the normal operations of any permanent use located on the property; and

5 ~~h.e.~~ Contain—There shall be sufficient land—area to allow the temporary use, structure, or special event to occur as well as adequate land—area to accommodate the parking and traffic movement associated with the temporary use.

10 ~~i.~~ Except as provided in Chapter 61—Temporary Merchant Businesses, transient merchant activities or temporary seasonal retail sales shall not be conducted on a vacant lot.

15 ~~4.D.~~ Construction-Related Temporary Construction Buildings, Structures, and Uses. The following—Temporary construction-related buildings, structures, and uses related to construction, including construction trailers, trash containers, storage containers, and portable toilets, are permitted, subject to the following requirements:

20 ~~a.1.~~ Incidental and Necessary Use.—Temporary office building or construction buildings, structures, and uses shall be clearly yard—incidental to and necessary to for construction at the site which has received all necessary building and/or applicable permits.

25 2. Temporary construction buildings, structures, and uses shall be removed within fifteen (15) days of completion of the project.

~~E.~~ Temporary Sales Offices or Model Homes. Temporary sales offices are permitted, subject to the following requirements:

30 ~~b.1.~~ Maximum Duration. Temporary sales office or model home shall be incidental to and necessary for the sale or rental of real property in a new subdivision or housing project. In any case, t

35 2. The temporary office or model home shall be removed when fifty-ninety percent (5090%) of the lots or units have been sold or leased.

40 ~~5.F.~~ Temporary Dwellings. Temporary housing, in the form of a manufactured house, may be placed upon a site previously occupied by a detached single family or two family dwelling—dwellings are permitted, subject to the following requirements:

45 ~~a.1.~~ Construction.—The formerA temporary dwelling shall be permitted only when a principal dwelling has been destroyed or rendered uninhabitable by fire, flood, wind, or other natural disaster, and the dwelling is being either reconstructed or a new structure built.

b.2. ~~Allowed Use.~~—The Zoning Administrator ~~shall not issue a permit for a temporary dwelling until a building permit has approved-been issued for~~ the reconstruction or new construction of a permanent replacement dwelling on the subject property.

5 e.3. ~~Building Codes.~~—The type and condition of the temporary ~~housing-dwelling~~ is permitted under applicable building or housing code requirements.

10 d.4. ~~Location.~~—The ~~Zoning Administrator shall approve the location of a~~ temporary ~~housing-dwelling which shall be restricted to~~is located in the rear yard ~~only~~.

e.5. ~~Maximum Duration.~~—~~The duration of the~~A temporary ~~housing-dwelling~~ shall be for one (1) year or less. An extension of up to three (3) months may be granted by the Zoning Administrator, provided the extension is needed due to circumstances beyond the immediate control of the applicant.

15 6.G. Temporary Storage in a Portable Commercial Shipping Container. Temporary storage in a portable commercial shipping container shall be permitted to serve an existing use, subject to the following requirements:

20 a. ~~Location.~~—1. The container ~~is shall not be~~ located:

i. ~~In the front yard, nor~~

25 ii. ~~Within no closer than~~ ten (10) feet ~~of from~~ any lot line or structure.

b.1. ~~Access.~~—2. The container is ~~not~~ located in a manner that impedes ingress, egress, or emergency access.

30 e.2. ~~Maximum Duration.~~—~~The maximum duration of use~~3. ~~Such~~ temporary ~~storage~~ shall not exceed thirty (30) total days over a period of twelve (12) consecutive months.

35 7.H. Temporary Portable Residential Storage Containers. ~~The following requirements shall apply to Temporary~~ portable residential storage containers ~~shall be permitted to serve an existing single-family dwelling, subject to the following requirements:~~

a.1. ~~Maximum Size.~~—The maximum allowable size is one hundred fifty (150) square feet with an overall length not to exceed sixteen (16) feet.

40 b.2. ~~Clear Vision.~~—Clear vision areas shall be maintained at all times, and portable storage containers shall not obstruct the flow of pedestrian or vehicular traffic.

45 e.3. ~~Location.~~—Portable storage containers shall be placed on a concrete or asphalt surface no closer than ten (10) feet from the front lot line.

~~d.4. Condition.~~ All portable storage containers in use on a lot shall be in a condition free from rust, peeling paint, and other visible forms of deterioration.

5 ~~e. Number of Containers.~~ ~~Two (2) containers may be on the same lot at the same time, provided the maximum square footage and overall length in Subsection F.1 above is not exceeded.~~

10 ~~f.5. Maximum Duration.~~ The maximum duration of use shall be a total of ~~thirty (30)~~ seven (7) days, ~~not exceeding three (3) times~~ over a period of twelve (12) consecutive months.

15 ~~8.I. Assembly and Fundraising Activities.~~ ~~Assembly activities (e.g. carnivals, fairs, rodeos, sports events, concerts, and shows)~~ Outdoor Special Events. Outdoor special events, such as grand openings and corporate, institutional, and community celebrations and fundraising activities ~~(e.g. car washes, bake sales, auctions)~~ that benefit a community service group or non-profit organization are permitted in any ~~non-residential~~ district, ~~and residential districts and on properties approved for an educational or institutional use,~~ subject to the following requirements:

20 1. The outdoor special event must be short-term in nature and clearly incidental to the principal use of the property.

25 ~~a.2. Parking and Access.~~ Adequate parking and emergency vehicle access shall exist, and a designated off-street parking area shall be provided that does not interrupt the flow of traffic on public streets, or impeded access to the primary use or pedestrian movements.

30 ~~b.3. Hours of Operation.~~ Hours of operation shall start no earlier than 8:00am and end no later than 8:00pm in all residential districts, except on Fridays and Saturdays the hours may extend to 10:00pm. All other districts shall operate within the hours of 8:00am to 11:00pm unless otherwise approved by the Zoning Administrator.

35 ~~e.4. Maximum Duration.~~ The maximum duration of use shall be four (4) consecutive days for any one (1) event, including setup and takedown, not to exceed four (4) events within a period of twelve (12) calendar months.

40 5. Outdoor special events shall also be subject to other applicable Ordinances and requirements, including, but not limited to, noise, signs, health, and sanitation.

~~d. Tents.~~ A building permit shall be required for any tent, per the City's building codes.

45 ~~e. Fundraising Agreement.~~ ~~Goods or services being sold by a commercial entity for the purposes of a fundraising event shall provide evidence of an event agreement with the community service group or non-profit organization.~~

~~9. Temporary Use Permit Requirements. Approval of a temporary use permit is subject to the following requirements and conditions:~~

- 5 ~~a. Proof of Ownership. Proof of ownership or a signed letter from either the property owner or responsible person shall be included in the temporary permit application.~~
- 10 ~~b. Temporary Structures. All temporary structures including, but not limited to, greenhouses, trailers, mobile homes, etc. shall conform to the Zoning District setback requirements unless otherwise specified in the approval.~~
- 15 ~~c. Sanitary Facilities. Sanitary facilities, either portable or permanent, shall be made available to all employees, attendants, and participants during hours of operation. If portable, they shall be maintained to minimize odors and to remain fully functional.~~
- 20 ~~d. Parking. The number of additional parking spaces required for the temporary use or building shall be determined by the Zoning Administrator. Required parking spaces for a permanent use or building located on the proposed site shall be considered in the parking calculation.~~
- 25 ~~e. Encroachment Permit. Any use of public rights of way shall require an encroachment permit from the City Engineer.~~
- 30 ~~f. Clean Up. All sites shall be completely cleaned of debris and temporary structures including, but not limited to trash receptacles, signs, stands, poles, electrical wiring, or any other fixtures and appurtenances or equipment connected therewith within five (5) days of the termination of the temporary use.~~
- 35 ~~g. Conditions of Approval. In granting the approval, the Zoning Administrator may attach conditions to the permit that would minimize disturbance to and compatibility with the area and surrounding land uses, and/or protect the public health, safety, and welfare.~~
- 40 ~~h. Performance Guarantee. As a condition of approval, the Zoning Administrator may require a performance guarantee or surety acceptable to the City to ensure compliance with this Chapter and all other applicable City ordinances, standards, rules, and regulations.~~
- 45 ~~i. Fees. The fees to be charged for the issuance of the permit and for inspections by the City shall be set by resolution of the City Council.~~
- ~~j. Other Requirements. This permit shall be in addition to other licenses, permits, or approvals otherwise required by any governmental entity.~~

SECTION 5.15 TEMPORARY COVERING OF STRUCTURES AND USES

5 ~~1.A.~~ Permanent Structures/Uses. The covering or enclosure of permanent structures or uses by means of air-supported, tent-type or other temporary or readily removable covering shall be subject to the following ~~regulations~~requirements:

10 ~~a.1.~~ Covering or enclosure of permanent structures or uses by means of air-supported, tent-type, or other temporary or readily removable covering shall be prohibited in all ~~commercial, office, industrial, or research center zoning~~non-residential ~~D~~Districts.

15 ~~b.2.~~ Covering or enclosure of permanent structures or uses by means of air-supported, tent-type or other temporary or readily removable covering may be permitted in ~~R~~Zoning ~~D~~Districts only in relation to the following ~~kinds of uses or areas~~:

a. Recreation uses.

20 b. Porch, patio, terrace, or entranceway areas.

25 ~~In no instance shall~~ ~~the area encompassed~~covered or enclosed, together with ~~main principal~~ and accessory buildings ~~exceed~~shall meet the setback and lot area coverage provisions ~~indicated~~set forth in Section _____, "Schedule of Regulations-~~Residential~~". ~~Such covering or enclosure must also comply with the main building setback requirements included in Section _____.~~ Porch, patio, terrace, or entranceway covers may be permitted to encroach into such yards in accordance with Section ____.

30 B. Temporary Structures/Uses. The covering or enclosure of a temporary structure, for short-term use or activity by means of an air-supported, tent-type or other temporary or readily removable covering may be permitted in any District, subject to the following requirements: ~~and procedure as established by the Zoning Administrator, and subject further to the following conditions~~:

35 1. The short-term events eligible for the use of such temporary covering are intended to be activities including, but not limited to, special events such as grand openings, corporate, institutional, or community celebrations.

40 2. The short-term events must be clearly accessory or secondary to the principal uses or activities occurring within a permanent building on the same site. These provisions are not intended for the purpose of providing additional space for the principal uses on the site.

3. The use of such temporary covering shall be limited to a maximum of five (5) consecutive days, and shall not occur more than four (4) times per year on any individual site.

ARTICLE 9

RESIDENTIAL DEVELOPMENT OPTIONS

5

SECTION 9.01 INTENT

The intent of this Article is to permit a variety of residential development options which an applicant may elect to pursue. In general, the residential development options set forth in this Article are intended to:

- A. Allow greater flexibility;
- B. Encourage a more creative approach to the development of single family residential areas;
- C. Encourage a more efficient aesthetic and desirable use of the land;
- D. Provide a more desirable living environment through the preservation and conservation of natural features such as topography, wetlands, woodlands, bodies of water, and other natural assets;
- E. Encourage the provision of open space so that benefits may accrue directly to the residents of the development;
- F. Provide for optimum setbacks from major thoroughfares and/or freeways;
- G. Provide for the sound physical development and handling of site situations where a conventional subdivision approach would be unnecessarily restrictive.

SECTION 9.01 AVERAGE LOT SIZES

A. **Intent.** The intent of this Section is to permit lot sizes and lot widths to be adjusted to average the minimum lot size as required in Article ____, Schedule of Regulations. This option is permissible in all One-Family Residential Districts.

- B. **Standards.**
 1. In meeting the average minimum lot size, no lot area or width shall be reduced by more than ten percent (10%) of that area or width required in Article ____, Schedule of Regulations.
 2. The number of residential lots shall be no greater than if the land area to be subdivided were developed in the minimum square foot lot area required for the

District under Article ____, Schedule of Regulations. In this regard, the following maximum gross densities (including roads) shall not be exceeded:

- R-1A = 1.6 dwelling units per acre
- R-1B = 2.2 dwelling units per acre
- R-1C = 3.1 dwelling units per acre
- R-1D = 3.8 dwelling units per acre
- R-1E = 4.2 dwelling units per acre

SECTION 9.02 CONDOMINIUM PROJECT REGULATIONS

A. **Intent.** The intent of this Section is to regulate condominium projects to ensure compliance with this Ordinance and other applicable standards of the city, to provide procedures and standards for review and approval or disapproval of such developments, and to insure that such project will be consistent and compatible with other developments in the community.

B. **General Standards.**

- 1. All condominium projects shall comply with the use, area, setback, and other applicable requirements of the zoning district in which the project is located.
- 2. In a site condominium project, each condominium lot shall be considered equivalent to a single lot as defined by this Ordinance, and shall meet all the minimum use, area, setback, and other applicable requirements of the zoning district in which the project is located.

C. **Plan Review and Approval Procedure.** The review and approval of plans for a condominium project shall comply with the standards and procedures set forth in Article 6, Site Plan Review and the following additional requirements:

- 1. The Preliminary Site Plan shall include the street pattern and fully dimensioned residential parcel layout, including proposed building configurations. A preliminary sanitary sewer, storm sewer, and water main layout shall also be submitted.
- 2. Final Site Plans shall indicate the corners of all proposed residential parcels, and such other points as may be necessary to determine that the potential parcel and building configurations will conform with applicable Ordinance requirements. Final Plans shall be accompanied by the following materials or information:
 - a. Construction plans for all utilities and street improvements, prepared in accordance with City Engineering Design Standards.
 - b. Floor Plans and Elevations of the proposed residential units.

c. Proposed condominium documents shall be reviewed and approved by the City Attorney prior to approval of the final site plan.

5 d. Warranty Deeds and Easement documents, in recordable form, for all rights-of-way and easements which are to be conveyed to the public in conjunction with implementation of the proposed Final Plan.

10 3. Following review and approval of construction plans for utilities and street improvements, and approval of the related elements of the Final Site Plan, the City Engineer shall prepare and submit a detailed summary of required financial guarantees to insure the construction of required improvements, and the placement of proper property and parcel monuments and markers. Such financial guarantees shall then be furnished by the petitioner, in a form acceptable to the City Manager. The City Engineer's certification of construction plan approval and evidence of the required financial guarantees shall then be submitted with the Final Site Plan to the Planning Department for their review, approval, conditional approval, or disapproval.

20 D. **Construction.**

1. Construction of utilities, streets, and other site improvements can begin only after Planning Department approval of the Final Plan for an Unplatted One-Family Residential Development.

25 2. No building permits for residential structures may be granted until permanent residential parcel monuments or markers acceptable to the City Engineer and Chief Building Inspector are in place.

30 3. No occupancy permits for residential structures may be granted until all utility and street improvements and related rights-of-way or easements have been accepted by the City, in accordance with Engineering Division procedures.

35 **SECTION 9.03 PLANNED NEIGHBORHOOD DEVELOPMENT**

A. **Intent.** The intent of this Section is to preserve to the citizens of Troy who are property owners in the area of the City commonly known as the "Northfield Hills Development", the owners of the land known as Northfield Hills Development, and to the City of Troy all rights and regulations inherent in the heretofore rescinded ordinance known as the Planned Neighborhood Development, being Sections 35.50.01 through 35.54.00(?), and to recognize that the subject development is the only development heretofore approved under the terms and conditions of said ordinance, and said development is not completed as of the date of Chapter 39 - Zoning Ordinance 39-235 the rescission of the Planned Neighborhood Development Ordinance.

45

5 B. **Retention of Deleted Language.** The provisions of Sections 35.50.00 through 35.54.00 shall remain within Section 39 of this Code(?) and shall remain in effect for the purposes of preservation of the vested rights of the property owners of and within the development heretofore approved and the City of Troy, and for enforcement of those regulations contained within the rescinded Ordinance necessary to the final completion of the planned neighborhood development known as Northfield Hills as approved by the Troy City Council, it being the intent hereof that Sections 35.50.00 through 35.54.00(?) shall continue to apply to the Northfield Hills developments.

10 **SECTION 9.04 OPEN SPACE PRESERVATION OPTION**

15 A. **Intent.** An applicant may elect to apply for an open space preservation option in the R-1A and R-1B One-Family Residential zoning districts, provided the standards set forth in this Section are met. ~~The following is the intent of the~~ Open Space Preservation Option is intended to:

- 20 1. ~~Provide~~ Provide a more desirable living environment by preserving the natural character of the property, such as mature trees, wetlands, floodplains, topography, and open space for enjoyment by residents of the Open Space Preservation development.
- 25 2. ~~Encourage~~ Encourage developers to use a more creative approach in the development of residential areas.
- 30 3. ~~Encourage~~ Encourage a more efficient, aesthetic and desirable use of the land while recognizing a reduction in development costs and by allowing the developer to bypass natural obstacles.
- 35 4. ~~Encourage~~ Encourage the provision of open space so benefits may accrue directly to residents of the Open Space Preservation development and to further encourage the development of recreational facilities; and
5. Ensure an Open Space Preservation development shall result in a recognizable and substantial benefit to residents of the property and to the overall quality of life in the City.

B. **Eligibility Criteria.** To be eligible for the Open Space Preservation Option, property must be zoned R-1A or R-1B, and meet each of the following standards:

- 40 1. The percentage of land area specified in Section 9.04.F below must remain in a perpetually undeveloped state.
- 45 2. The Open Space Preservation site shall be under the control of one owner or group of owners acting jointly and shall be capable of being planned and developed as one integral unit.

3. The option has not previously been exercised on the parcel.

C. **Application Information Requirements.** The Open Space Preservation Plan shall contain the following, in addition to the information required on a complete site plan:

1. A complete description of the land proposed to be dedicated to the City or to the common use of lot owners (herein called dedicated open space) shall be provided, including the following:

a. Legal description of dedicated open space, including dedicated easements.

b. Topographical survey of dedicated open space.

c. Types of soil in dedicated open space.

d. Description of natural features on dedicated open space.

e. Other relevant information necessary to show that the proposed development qualifies for approval as an Open Space Preservation development.

2. The proposed plan of development of the dedicated open space shall be submitted with the application and shall include the following:

a. The proposed manner in which the title to land and facilities is to be held by the owners of land in the Open Space Preservation development.

b. The proposed manner of regulating the use of the common facilities and areas so as to eliminate possible nuisances to other property owners and cause for enforcement by the City.

c. The proposed uses of dedicated open space and the proposed improvements to be constructed by the proprietor.

~~D. **Eligibility Criteria.** To qualify for the Open Space Preservation Option, property must be zoned R-1A or R-1B, and meet each of the following standards:~~

~~1. The percentage of land area specified in Section 9.05 F below must remain in a perpetually undeveloped state.~~

~~2. The Open Space Preservation site shall be under the control of one owner or group of owners acting jointly and shall be capable of being planned and developed as one integral unit.~~

~~3. The option has not previously been exercised on the parcel.~~

E. **Dwelling Unit Density.** The number of dwelling units allowable within the Open Space Development shall be determined through the preparation of a “parallel plan”.

5 1. The applicant shall prepare a parallel plan for the project that is consistent with State, County and City requirements and design criteria for a tentative preliminary plat or unplatted site condominium. The parallel plan shall meet all standards for lot/unit size, lot/unit width and setbacks as normally required for the applicable One-Family zoning district.

10 2. The City shall review the design and determine the number of lots that could be developed following the parallel plan. This number shall be the maximum number of dwelling units allowable in the Open Space Preservation development.

F. **Regulatory Flexibility.** To comply with the open space preservation provisions of the Michigan Zoning Enabling Act, the City may permit specific departures from the requirements of the Zoning Ordinance for yards and lots as a part of the approval process. The applicant may cluster the dwellings on smaller lots, provided the following:

20 1. Overall density shall not exceed the number determined in the parallel plan.

2. Setback provisions shall be as follows:

25 a. Setback requirements for main buildings at the perimeter of the development shall be equal to existing, underlying zoning.

30 b. Setback requirements for main buildings on the interior of the development shall be provided to newly created streets, an interior property line, or from the open space preservation area. If property lines do not exist between buildings, the setbacks shall be measured to an imaginary line between the buildings.

The minimum setbacks shall be as follows:

35 Front 25'
Rear 35'
Sides 10'

40 3. All regulations applicable to parking and loading, general provisions, and other requirements shall be met.

4. The permitted uses shall be restricted to single family detached residential development, residential accessory structures, and non-commercial recreation uses.

G. **Open Space Requirements.**

1. Minimum Requirements: An Open Space Preservation development shall maintain a minimum of twenty percent (20%) of the gross area of the site as dedicated open space which shall remain perpetually in an undeveloped state by means of one of the tools included in Section E below. Land in an undeveloped state may be, but is not required to be, dedicated to the use of the public. Except as noted in Section 9.05.F.5, any land area maintained in an undeveloped state within the boundaries of the site meeting the open space standards herein may be included as required open space. The required open space shall be accessible to all residents of the Open Space Preservation development or the City of Troy.
2. Common Open Space: Common open space, other common properties and facilities, individual properties, and all other elements of a Open Space Preservation district shall be so planned that they will achieve a unified open space, community green or plaza and recreation area system, with open space and all other elements in appropriate locations, suitably related to each other, the site and surrounding lands. All land within a development that is not devoted to a residential unit, an accessory use, vehicle access, vehicle parking, a roadway, or an approved land improvement, shall be permanently set aside as common land for community use, recreation or conservation.
3. Areas Not Considered Open Space: The following land areas are not included as dedicated open space for the purposes of this Section:
- a. Area proposed as single-family residential lots.
 - b. Area proposed as limited common elements of condominium developments, or land within a condominium development, which is convertible to general common elements that will not remain in a perpetually undeveloped state or land convertible to limited common elements.
 - c. The area of any street right-of-way or equivalent private road easement.
4. Location of Open Space: Common open space shall be planned in locations accessible to all residing within the Open Space Development. The common open space may be centrally located along the road frontage of the development, located to preserve significant natural features, or located to connect open spaces.
5. Protection of Open Space:
- a. The dedicated open space shall be set aside by the developer through an irrevocable conveyance that is found acceptable to the City, such as: recorded deed restrictions, restrictive covenants, or conservation easements, plat dedication, or other legal means that run with the land. As used in this section, the phrase “conservation easement” means an interest

in land that provides limitation on the use of land or a body of water or requires or prohibits certain acts on or with respect to the land or body of water, whether or not the interest is stated in the form of a restriction, easement, covenant, or condition in a deed, will or other instrument executed by or on behalf of the owner of the land or body of water or in an order of taking, which interest is appropriate to retaining or maintaining the land or body of water, including improvements on the land or body of water, predominantly in its natural, scenic, or open condition, or in an agricultural, farming, open space, or forest use, or similar use or condition.

b. Such conveyance shall assure that the open space will be protected from all forms of development, except as shown on an approved site plan, and shall never be changed to another use. Such conveyance shall:

(1) Indicate the proposed allowable use(s) of the dedicated open space.

(2) The dedicated open space shall forever remain open space, subject only to uses authorized by state law and approved by the City on the approved site plan or subdivision plat. Open space may include a recreational trail, children's play area, greenway or linear park.

SECTION 9.05 ONE-FAMILY CLUSTER OPTION

A. **Intent.** The One-Family Cluster Option is offered as an alternative to traditional residential development. ~~The following is the intent of the One-Family Cluster Option is~~ intended to:

1. ~~Encouraging~~ Encourage the use of property in accordance with its natural character;

2. ~~Assuring~~ Assure the permanent preservation of open space and other natural features;

3. ~~Providing~~ Provide recreational facilities and/or open space within a reasonable distance of all residents of the One-Family Cluster development;

4. ~~Allowing~~ Allow innovation and greater flexibility in the design of residential developments;

5. ~~Facilitating~~ Facilitate the construction and maintenance of streets, utilities and public services in a more economical and efficient manner;

6. ~~Ensuring~~ Ensure compatibility of design and use between neighboring property; and

7. ~~Encouraging~~ Encourage a less sprawling form of development, thus preserving open space as undeveloped land.

5 B. **Eligibility Criteria.** To be eligible for One-Family Cluster consideration, property must be zoned R-1A, R-1B, R-1C, R-1D, or R-1E and meet each of the following standards:

10 1. **Recognizable Benefits:** One-Family Cluster shall result in a recognizable and substantial benefit, both to the residents of the property and to the overall quality of life in the City. The recognizable and substantial benefits can be provided through site design elements that are in excess of the requirements of this Ordinance, such as extensive landscaping, the inclusion of a transition area from adjacent residential land uses, and preservation of individual trees, wetlands (regulated and non-regulated), woodland areas and open space.

15 2. **Open Space:** The proposed development shall provide at least one (1) of the following open space benefits:

20 a. **Significant Natural Features:** Preservation of significant natural features contained on the site, as long as it is in the best interest of the City to preserve these natural features which might be negatively impacted by conventional residential development. The determination of whether the site has significant natural features shall be made by the Planning Commission after review of a Natural Features Analysis, prepared by the applicant, that inventories these features.

30 b. **Recreation Facilities:** If the site lacks significant natural features, it can qualify with the provision of usable recreation facilities to which all residents of the development shall have reasonable access. Such recreation facilities include areas such as a neighborhood park, passive recreational facilities, soccer fields, ball fields, bike paths, or similar facilities that provide a feature of community-wide significance and enhance residential development. Recreational facilities that are less pervious than natural landscape shall not comprise more than fifty percent (50%) of the open space. The determination of whether the site has significant natural features shall be made by the Planning Commission after review of a Site Analysis Plan, prepared by the applicant, that inventories these features.

40 c. **Creation of Natural Features:** If the site lacks significant natural features, a proposed development may also qualify if the development will create significant natural features such as wetlands. The determination of whether the site has significant natural features shall be made by the Planning Commission after review of a Site Analysis Plan, prepared by the applicant, that inventories these features.

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3. Guarantee of Open Space: The applicant shall provide documentation to guarantee to the satisfaction of the Planning Commission ~~and City Council~~ that all open space portions of the development will be maintained as approved and that all commitments for such maintenance are binding on successors and future owners of the subject property. All such documents shall be subject to approval by the City Attorney. This provision shall not prohibit a transfer of ownership or control, provided notice of such transfer is provided to the City, and that the continued maintenance guarantees remain satisfactory to the City, and the land uses continue as approved in the One-Family Cluster development.

4. Cohesive Neighborhood: The proposed development shall be designed to create a cohesive community neighborhood through common open space areas for passive or active recreation and resident interaction. All open space areas shall be reasonably accessible to all residents of the development.

5. Unified Control: The proposed development site shall be under single ownership or control, such that there is a single person or entity having proprietary responsibility for the full completion of the project. The applicant shall provide sufficient documentation of ownership or control in the form of agreements, contracts, covenants, and/or deed restrictions that indicate that the development will be completed in its entirety as proposed. All documents shall be subject to the review and approval by the City Attorney.

6. Density Impact: The proposed type and density of use shall not place an unreasonable impact on the subject and/or surrounding land and/or property owners and occupants and/or the natural environment. An unreasonable impact shall be considered an unacceptable significant adverse effect on the quality of the surrounding community and the natural environment in comparison to the impacts associated with conventional development.

C. **Application Information Requirements.** In addition to the information required by the City of Troy for all other site plans, any development proposing to utilize the One-Family Cluster Plan shall contain the following:

1. A complete description of the land proposed to be dedicated for the common use of lot owners in the association or to the City, including the following:
 - a. A legal description of dedicated open space required by Section 9.05.C.2 including dedicated easements.
 - b. A topographical and boundary survey of dedicated open space.
 - c. An identification of the types of soil in dedicated open space.

dedicated open space held in common ownership. In addition, projects qualifying for a density bonus shall include at least one (1) of the following elements:

5 a. Use of sustainable design methods, as set forth in Section 11.01, Sustainable Design Incentives.

b. A perimeter transition areas of at least one hundred fifty (150) feet in width around all borders of the development.

10 c. Donation or contribution of land or amenities in order to provide a significant community benefit, such as for a school, park, fire hall, etc.

d. Other similar elements that the City Council, after recommendation from the Planning Commission, determined to be of exceptional quality.

15 E. **Regulatory Flexibility:** The City shall permit specific departures from the dimensional requirements of the Zoning Ordinance for yards and units as a part of the approval process. The applicant may cluster the dwellings on smaller lots, as long as the following requirements are satisfied:

20 1. Overall density shall not exceed the number of residential cluster units determined in Section 9.04.D, unless a density bonus has been granted by City Council.

25 2. Use of sustainable design methods, as set forth in Section 11.01, Sustainable Design Incentives.

3. Setback provisions shall be as follows:

30 a. Setback requirements for principal structures from all of the borders of the development shall be equal to the rear yard setback requirement for the underlying zoning district of the property directly adjacent to each border. The required open space areas may be located partially or completely within the required setback.

35 b. Setback requirements for principal structures on the interior of the development shall be as follows: If property lines do not exist between houses, the setbacks shall be measured to an imaginary line of equal distance between the houses. A duplex shall be treated as a single-detached residence for the purpose of determining required setbacks. The minimum setbacks shall be as follows.

40 Front: 20'. There shall be at least twenty-five (25) feet between the garage door and the closest edge of the sidewalk to allow for an automobile to be parked in the driveway without obstructing the sidewalk.

Rear: 25'.

Side: 7.5'. For detached units with "rear-to-side" relationships, the required setback shall be fifteen (15) feet for each unit, for a total of thirty (30) feet.

4. All regulations applicable to parking, loading, general provisions, and other requirements shall be met.

5. The permitted uses shall be restricted to single family detached residential development, duplex residential development, residential accessory structures, non-commercial recreation uses and open space.

F. Open Space Requirements.

1. All land within a development that is not devoted to a residential unit, accessory structures, vehicle access, vehicle parking, a roadway, or an approved improvement, shall be set aside as common land for recreation, conservation, or preserved in an undeveloped state.

2. A One-Family Cluster development shall maintain a minimum of thirty percent (30%) of the gross area of the site as dedicated open space held in common ownership. A minimum of twenty-five percent (25%) of the open space shall be upland area, which does not include any MDEQ-regulated or non-regulated wetlands that are accessible to all residents of the development.

3. The following land areas are not included as dedicated open space for the purposes of the One-Family Cluster development option:

a. The area of any street right-of-way or private drive.

b. The submerged area of any lakes, rivers, ponds or streams.

c. The required setbacks surrounding a residential structure, except as otherwise provided.

d. Storm water detention or retention facilities, with the exception of Bio-retention areas that provide an active or passive recreation function, which can be considered open space.

4. The common open space may be centrally located along the road frontage of the development, located to preserve significant natural features, or located to connect open spaces throughout the development. The open space along the exterior public roads shall have a depth of at least one hundred (100) feet, either

landscaped or preserved in a natural wooded condition. In its discretion, the City Council, after recommendation from the Planning Commission, may permit either minor reductions in width or variations in width of the open space along exterior roads to accommodate taking into consideration topographic and/or other natural resource conditions, as long as the density of existing vegetation to be preserved, and size and shape of the development area are taken into consideration. The open space along the exterior public roads shall be landscaped with a minimum of one (1) deciduous canopy tree (3 to 3 ½ inches in diameter) for each ten (10) feet of road frontage. Such plantings shall be planted in staggered rows or clustered into groupings to provide a natural appearance, and shall be planted so as to have minimal impact on the future usability of sidewalks and trails. Preservation of existing trees shall be credited towards meeting the frontage-landscaping requirement.

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- 5. Principal access to the development shall be provided by twenty-eight (28) foot wide public streets constructed to City standards that are located within sixty (60) foot wide rights-of-way or by twenty-eight (28) foot wide streets constructed to City public street standards that are located, within forty (40) foot private easements for public access.

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Sidewalks shall be constructed across the frontage of all dwelling unit parcels in accordance with City standards. Public utilities shall be placed within street rights-of-way, or within easements approved as to size and location by the City Engineer.

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- 6. Connections between the dedicated open space of the development and adjacent open space, public land or existing or planned safety paths is preferred and may be required by the City Council, after recommendation from the Planning Commission.

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- 7. The dedicated open space shall be set aside by the developer through an irrevocable conveyance, such as deed restrictions, restrictive covenants, conservation easements, plat dedication, or other legal documents that are subject to review and approval by the City Council, after review and recommendation by the City Attorney. These irrevocable conveyance documents shall be approved prior to final approval of the development (final site plan approval), and the developer shall record such documents with the Oakland County Register of Deeds. The City of Troy or the common owners shall be specifically identified as beneficiary of its provisions. The irrevocable conveyance documents shall address the following:

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- a. The dedicated open space shall be perpetually maintained by parties that have an ownership interest in the open space.
- b. Standards for scheduled maintenance of the open space.

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9. Any structures or buildings accessory to a recreation or conservation use may be erected within the dedicated open space. These accessory structures or buildings shall not exceed one percent (1%) of the required open space area.

ARTICLE 11

SUSTAINABLE DESIGN AND ENVIRONMENTAL STANDARDS

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SECTION 11.01 SUSTAINABLE DESIGN OPTIONS

- 10 A. **Intent.** It is the intent of this Section to promote environmentally sustainable and energy efficient design and development practices for the construction of new and the rehabilitation of existing buildings and sites within the City. Pursuant to the sustainability initiatives set forth in the City of Troy Master Plan, the purpose of these regulations are to provide various incentives that will achieve the following:
- 15 1. Encourage the reuse of existing buildings and redevelopment of existing sites.
 2. Conserve natural resources.
 3. Reduce the use of energy in both construction and daily operations.
 - 20 4. Foster a mix of uses and pedestrian, bicycle, and public transit use.
- 25 B. **Eligibility.** Any project for which site plan review is required, including subdivisions and site condominiums, may apply for qualifications as a Sustainable Design Project (SDP).
- 30 C. **Effect of Qualifications as a Sustainable Design Project.** There are provisions identified throughout the Zoning Ordinance where the use of sustainable design measures may be used to satisfy, modify, or replace a specific requirement. Once qualified as a SDP, the use of a sustainable design measure to satisfy a specific Ordinance requirement is approved.
- D. **Procedure.**
- 35 1. An application for a SDP may be obtained from the Zoning Administrator. An applicant seeking qualification as a SDP shall submit a complete SDP application, accompanied by a complete SDP checklist and supportive narrative which verifies how specific measures will be achieved, to the Zoning Administrator.
 - 40 2. Qualification as a SDP is based upon a point rating system. The SDP checklist identifies the number of achievable points for each specific sustainable design measure.
 - 45 3. Applications for a SDP shall be reviewed by the Sustainable Design Review Committee, which shall consist of the Planning Director, City Engineer, Building Official, and two (2) members of the Planning Commission designated by the City Manager. The Sustainable Design Review Committee may request the

review of a SDP application by consultants with specific expertise in sustainable design.

- 5 4. Upon completion of the review, the Sustainable Design Review Committee shall make a determination whether a project meets the qualifications as a SDP.

SECTION 11.02 STORMWATER MANAGEMENT

- 10 A. **Intent.** The intent of this Ordinance is to encourage the use of structural, vegetative or managerial practices, commonly referred to as best management practices (BMP's), designed to treat, prevent, or reduce degradation of water quality due to storm water runoff. All development projects subject to site plan review shall use best management practices (BMP's) to prevent flooding, protect water quality, reduce soil erosion,
15 maintain and improve wildlife habitat, and contribute to the aesthetic values of the project. The particular facilities and measures required onsite shall reflect and incorporate existing grade, natural features, wetlands and watercourses on the site to the maximum extent feasible.
- 20 B. **Sustainable Design.** While stormwater management is required to meet the City Engineering Design Standards, certain BMP's may be used to satisfy qualification as a Sustainable Design Project, as set forth in Section 11.01.
- 25 C. **Stormwater Management.** All stormwater management plans shall meet the Engineering Design Standards adopted by the City, and shall utilize nonstructural control techniques to the maximum extent feasible, including, but not limited to:
1. Limitation of land disturbance and grading;
 - 30 2. Maintenance of vegetated buffers and natural vegetation;
 3. Minimization of impervious surfaces;
 4. Use of terraces, contoured landscapes, runoff spreaders, grass or rock-lined
35 swales; and
 5. Use of infiltration devices.
- 40 D. **General Standards.**
- 45 1. Sites shall be designed and managed utilizing Low Impact Development techniques to emulate the natural water cycle, and maintain local and regional hydrologic patterns. The Low Impact Development Manual for Michigan, published by the Southeast Michigan Council of Governments (SEMCOG) provides guidance for the designer and developer.

2. Stormwater management systems shall be designed to prevent flooding and the degradation of water quality related to stormwater runoff and soil erosion from proposed development.
- 5 3. All new development and redevelopment of properties shall include on-site storage of stormwater. Facilities shall be designed to provide a volume of storage and discharge rate which meets the standards of the City.
- 10 4. Priority shall be placed on site design which maintains natural drainage patterns and watercourses. Alternations to natural drainage patterns shall not create flooding or degradation of water quality for adjacent or downstream property owners.
- 15 5. The use of swales and buffer strips vegetated with desirable native materials is encouraged as a method of stormwater conveyance so as to decrease runoff velocity, allow for bio-filtration, allow suspended sediment particles to settle and to remove pollutants. Tolerance for water saturation, sunlight, pesticides, metals, and salts shall be required in determining appropriate plantings in these areas.
- 20 6. Where large amounts of grease and oil may accumulate, as in the case of commercial/industrial developments and large areas of impervious surfaces for parking, oil separators shall be required.
- 25 7. For sites that store or use chemicals, a spill response plan shall be submitted and approved by the City.

E. **Use of Wetlands.** Wetlands may be used for stormwater management ~~if all the following conditions are met;~~ provided applicable permits are obtained from the Michigan Department of Natural Resources and Environment and/or the appropriate federal agency.

~~1. Wetlands shall be protected from impairment due to the discharges of stormwater. Measures shall be taken to reduce erosive velocities of stormwater and to remove sediment and other pollutants prior to discharge to a wetland.~~

~~2. Wildlife, fish or other beneficial aquatic organisms and their habitat within the wetland will not be impaired.~~

~~3. The wetland has sufficient holding capacity for stormwater, based upon calculations prepared by the proprietor and reviewed and approved by the City.~~

~~4. On-site erosion control shall be provided to protect the natural functioning of the wetland.~~

~~5. Provisions approved by the City shall be established so as to insure that the wetland is not disturbed or impaired in the future relative to the needed storage capacity.~~

~~6. Applicable permits shall be obtained from the Michigan Department of Environmental Quality or appropriate federal agency.~~

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SECTION 11.03 CONSTRUCTION WITHIN DESIGNATED FLOOD PLAIN AREAS

10 A. **Intent.** It is the intent and purpose of this Section to establish those standards necessary to significantly reduce hazards to persons and damage to property as a result of flood conditions in the City of Troy; and, further, to comply with the provisions and requirements of the National Flood Insurance Program.

15 B. **Delineation of the Flood Hazard Area.**

~~1. The boundaries of Flood Hazard Areas shall initially be determined by reference to the Flood Insurance Rate Maps and the Flood Boundary and Floodway Maps, and any amendments thereto, as provided by the National Flood Insurance Program.~~

20 ~~2. Where there are disputes as to the location of a Flood Hazard Area boundary, the City Manager shall make a final determination of the questioned boundary after a report by the City Engineer. The City Engineer shall consult the Flood Insurance Rate Maps and the Flood Boundary and Floodway Maps, and other City-maintained topographic data. It shall be the responsibility of the property owner or permit applicant to submit to the City Engineer any other data, field measurements, etc. which said owner or applicant wishes to have considered.~~

25 C. **Development Requirements.**

30 ~~1. In cases of conflict, the Flood Hazard area development requirements shall take precedence over the standards and requirements of the existing Zoning District. Compliance with the requirements of this article shall be necessary for all development occurring within Flood Hazard Areas.~~

35 ~~2. Chapter 79 (General Building Regulations), Section 8.1 of the City Code sets forth applicable standards and regulations pertaining to designated flood plain areas.~~

D. **Uses Permitted.**

40 1. Within Flood Hazard Areas, no land shall be used except for one (1) or more of the following uses:

a. Grazing, agriculture, and pastureland.

45 b. Parks, picnic areas, playgrounds, playfields, athletic fields, golf courses, nature paths and trails, and wildlife preserves.

c. Required open space or lot area for uses in compliance with the Zoning District requirements of contiguous property not within the Flood Hazard Area.

d. Off-street parking, streets, drives, roads, and outdoor play equipment or structures, provided that such equipment and/or structures would not cause an increase in water surface elevation, obstruct flow, or reduce impoundment capacity. Such equipment and/or structures shall be anchored to prevent flotation and lateral movement.

2. New and/or substantially improved residential structures shall be permitted, provided that such residential structures comply with the standards and requirements of Sections 612.2.1, 612.2.2, or 612.2.3 of the Army Corps of Engineers "Flood Proofing Regulations." Such structures shall be prohibited in Flood Hazard Areas in the EP ~~(Environmental Protection)~~ Zoning Districts.

3. New and/or substantially improved non-residential structures permitted by the applicable Zoning District shall be permitted, provided that such non-residential structures comply with the standards and requirements of Sections 612.2.1, 612.2.2, or 612.2.3 of the Army Corps of Engineers "Flood Proofing Regulations." Such structures shall be prohibited in Flood Hazard Areas in the EP ~~(Environmental Protection)~~ Zoning Districts.

E. **Permits.** No building or structure shall be erected, converted, or substantially improved or placed, and no land filled or used in a Flood Hazard Area without the granting of an applicable permit by the City of Troy Building Department ~~of~~ and Engineering Department.

SECTION 11.04 WIND ENERGY CONVERSION SYSTEMS

A. **Intent.** It is the intent of the City to permit the effective and efficient use of Wind Energy Conversion Systems (WECS) by regulating the siting, design, and installation of such systems to protect the public health, safety, and welfare, and to ensure compatibility of land uses in the vicinity of WECS. This Ordinance does not establish or guarantee air or light or wind rights or establish access to the air, light, or wind.

B. **Applicability.** It shall be unlawful to construct, erect, install, alter, or locate any WECS or TMT within the City except in compliance with the section. A building permit is required for any WECS or TMT pursuant to this Section.

C. **On-Site WECS Permitted.** On-site WECS or Temporary Meteorological Towers shall be considered a permitted use in all zoning districts, subject to the provisions of this Section. Applications for an on-site WECS shall include the following:

1. Applicant Information. Name, address and contact information.
2. Project Description. A general description of the proposed project as well as a legal description (property identification number) of the property on which the project would be located.
3. Plot Plan and Documentation. The Plot Plan shall include maps showing the physical features and land uses of the project area, both before and after construction of the proposed project. The plot plan shall include:
 - a. The project area boundaries.
 - b. The location, height and dimensions of all existing and proposed structures and fencing.
 - c. Distance of proposed structure from all property lines and permanent structures.
 - d. The location, grades and dimensions of all temporary and permanent On-site access roads.
 - e. Existing topography.
 - f. Water bodies, waterways, wetlands, and drainage ditches (county drains).
 - g. All new above ground infrastructure related to the project.
 - h. The location of all overhead utility wires.
4. Additional Documentation.
 - a. Insurance: Proof of the applicant's appropriate liability insurance.
 - b. Sound Pressure Level: Documentation of the manufacturers designed sound pressure levels (decibels) for unit to be installed.
 - c. Certifications: Certification that applicant has complied or will comply with all applicable state and federal laws and regulations.
 - d. Grant of Authority: The applicant shall provide evidence of ownership of the land which the WECS or Temporary Meteorological Tower is to be located and the written consent of the land owner if different from the applicant. If the applicant is leasing land the applicant shall provide a copy of the lease agreement and the land owner's written authorization for the applicant to construct the structure.

e. Compliance with Laws and Regulations. The Applicant, operator of the WECS or TMT, and owner of the land on which the WECS or TMT is located are each responsible for ensuring that the installation, operation, use and removal of the WECS or TMT complies with all applicable state, federal and local laws, ordinances and regulations, and shall submit proof of such compliance to the City upon request. Further, such Applicant, operator and owner shall each defend, indemnify and hold harmless the City from and against any and all loss, liability, cost or expense incurred by the City as a result of any failure of the WECS or TMT to comply with applicable laws, ordinances or regulations.

D. **Commercial WECS permitted.** Commercial WECS and TMT shall be considered a special land use in all zoning districts and shall be subject to the provisions of this Section and Article VI. Applications for a commercial WECS or TMT shall require a complete special land use permit application in accordance with Article VI, including a complete site plan in accordance with Article V.

E. **Planned Unit Development.** A proposed WECS or TMT as part of an initial application for a Planned Unit Development shall be subject to approval as part of the PUD petition, and the standards and requirements of Section XXX and this Section, except that no special land use permit application shall be required for any commercial WECS or TMT. For a proposed WECS or TMT in an existing PUD, compliance with this Section including submitting a special land use application shall be required in lieu of a petition for amendment to the approved PUD.

F. **Standards and Requirements.** All On-site WECS, Commercial WECS and Temporary Meteorological Towers shall meet the following additional standards and requirements:

1. Setbacks.

a. The distance between a WECS or TMT and the nearest property line shall be at least the 1.5 times the height of the WECS or TMT for all zoning districts except R1-A, R1-B, R1-C, R1-D, R-1E, CR-1 and R-1T Districts. For R1-A, R1-B, R1-C, R1-D, R-1E, CR-1 and R-1T Districts, the distance between a WECS or TMT and the nearest property line shall be at least the 2 times the height of the WECS or TMT. This shall include property lines that abut a public right-of-way.

b. No part of the WECS or TMT structure, including guy wire anchors, may extend closer than ten (10) feet to the owner's property line.

~~e. The distance between a WECS or Temporary Meteorological Tower and a road or a public right of way shall be at least 1.5 times the height of the WECS or TMT.~~

~~d.c.~~ The distance between a WECS and any other On-site or Commercial

WECS shall be at least three (3) times the height of the taller of the two WECS.

2. Height.

a. ~~The height of On-site WECS and TMTs shall be less than thirty five (35) feet in height as follows:~~

~~a.1.~~ In R1-C, R1-D, R-1E, CR-1 and R-1T Districts, on-site WECS and TMTs shall not exceed 25 feet in height.

~~a.2.~~ In R1-A, R1-B and MFR Districts, on-site WECS and TMTs shall not exceed 35 feet in height.

~~a.3.~~ In all other districts not otherwise mentioned above, on-site WECS and TMTs shall not exceed 45 feet in height.

b. Commercial WECS and TMT shall be less than two hundred (200) feet in height.

c. Height shall be measured from the existing grade to the tip of the turbine blade at its highest point for a horizontal axis turbine, and to the highest point of a vertical axis turbine.

d. Height for on-site WECS mounted to a structure shall ~~also~~ be measured from grade to the tip of the turbine blade at its highest point for a horizontal axis turbine, and to the highest point of a vertical axis turbine.

~~a.e.~~ The applicant shall demonstrate compliance with all FAA regulations and the Michigan Tall Structures Act as part of the approval process, if applicable.

3. Noise; Sound Pressure Level.

a. Audible noise or the sound pressure level of an On-site WESC or Commercial WECS shall not exceed fifty (50) dB(A) (A-weighted Decibels) at the property line closest to the WECS. For Commercial WECS, modeling and analysis of sound pressure shall be required in accordance with Section 11.04.H.8 below.

b. This sound pressure level shall not be exceeded by more than five (5) dB(A) for more than three minutes in any hour of the day.

4. Lighting.

a. No WECS or TMT shall be artificially lighted.

5. Construction codes, towers, and interconnection standards.

- 5
- a. Every WECS and TMT shall comply with all applicable State construction codes and local building permit requirements.
- 10
- b. Every WECS and TMT shall comply with Federal Aviation Administration requirements, the Michigan Airport Zoning Act (PA 23 of 1950), The Michigan Tall Structures Act (PA 259 of 1959), and any other applicable State or Federal laws or regulations.
- 15
- c. An On-site WECS or Commercial WECS that is tied to the electrical grid shall comply with Michigan Public Service Commission and utility interconnection requirements. Off-grid WECS are exempt from this requirement.

6. Safety.

- 20
- a. Design Safety Certification. The safety of the design of every WECS or TMT shall be certified by the applicant's professional engineer registered in the State of Michigan and reviewed by the City. The standard for certification shall be included with the permit application. If WECS or TMT construction is approved, the professional engineer shall certify that the construction and installation of the WECS or TMT meets or exceeds the manufacturer's construction and installation standards, and any applicable State and Federal laws and regulations prior to operation.
- 25
- b. Controls and Brakes. Every WECS or TMT shall be equipped with manual and automatic controls to limit rotation of blades to a speed not to exceed the designed limits of the WECS or TMT. The applicant's professional engineer must certify that the rotor and overspeed control design and fabrication conform to applicable design standards. No changes or alterations from certified design shall be permitted unless accompanied by a professional engineer's statement of certification approved by the City.
- 30
- c. Lightning. Every WECS or TMT shall have lightning protection.
- 35
- d. Guy Wires. If an On-site WECS or TMT is supported by guy wires, the wires shall be clearly visible to a height of a least six (6) feet above the guy wire anchors. Every Commercial WECS must be of a freestanding monopole design and guy wires shall not be used.
- 40
- e. Grade Clearance. The minimum vertical blade tip clearance from grade shall be twenty-five (25) feet for any horizontal-axis WECS or from any moving component of a vertical-axis wind energy conversion system.
- 45

5 f. Electromagnetic Interference. No WECS or TMT shall be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems or emergency broadcast systems would produce electromagnetic interference with signal transmission or reception unless the applicant provides a replacement signal to the affected party that will restore reception to at least the level present before operation of the wind energy system. No WECS or TMT shall be installed in any location within the line of sight of an existing microwave communications link where operation of the wind energy system is likely to produce electromagnetic interference in the link's operation unless the interference is insignificant.

10 g. Color. Towers and blades shall be painted a non-reflective neutral color designated on the application and approved by the City or as otherwise required by law.

15 h. Climb Prevention. Every WECS or TMT must be protected by anti-climbing devices twelve (12) feet from base of pole.

20 G. **Removal of Abandoned On-Site WECS or Temporary Meteorological Towers.** In the event an On-Site WECS or Temporary Meteorological Tower is abandoned or unused for a period of one hundred and eighty (180) days, or if a WECS or Temporary Meteorological Tower is damaged, the owner of the tower or the land shall promptly remove the tower and all related equipment. Failure to remove the tower and related equipment in accordance with the foregoing shall subject the tower owner and land owner to fines established by the City Council. In addition, by accepting a permit for the On-Site WECS or TMT, the applicant and land owner agree that in the event the tower and equipment is not removed as required, after thirty (30) days notice from the City, the City may undertake such removal and bill the costs to the applicant and land owner plus an administrative fee of fifteen percent (15%) which if not paid within thirty (30) days shall be assessed against the land on which the tower and equipment is located and collected in the same manner as delinquent taxes.

30 H. **Additional Requirements for Commercial WECS.** The following standards and requirement shall apply to every Commercial WECS:

35 1. Warnings. A visible warning sign of High Voltage shall be placed at the base of every Commercial WECS. The sign must have at least six (6") inch letters with 3/4-inch stroke. Such signs shall be located a maximum of three hundred (300) feet apart and at all points of site ingress and egress.

40 2. Signage. In addition to warning signs and signs required by law, every Commercial WECS shall be equipped with a sign containing owner identification and contact information. No other signs or advertising are permitted.

3. Liability Insurance. The owner or operator of a Commercial WECS shall maintain a current commercial liability and property damage insurance policy with coverage limits acceptable to the City pertaining to installation and operation of the Commercial WECS. The amount and terms of the policy shall be established as a condition of conditional use permit approval. The City and land owner shall be named as additional insured. Certificates of insurance shall be provided to the City annually.
4. Security. The application shall include a description of security to be posted at the time of receiving a building permit for the WECS to ensure removal of the WECS when it has been abandoned or is no longer needed, as provided in subsection 10 below. The security shall be the form of: (i) cash; (ii) letter of credit; or, (iii) an escrow agreement, in an amount approved by the City engineer and in a form approved by the City Attorney providing for timely removal of the Commercial WECS as required under this Section, and payment of any costs and attorney fees incurred by the City in connection with such removal.
5. Visual Appearance; Powerlines. The design of the WECS buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend WECS components with the natural setting and existing environment. The electrical collection system shall be placed underground within the interior of each parcel at a depth designed to accommodate any existing land use to the maximum extent practicable. The collection system may be placed overhead adjacent to public roadways, at points of interconnection to the electric grid or in other areas as necessary.
6. Threatened and Endangered Species. The applicant shall submit an endangered and threatened species survey conducted by a qualified professional, such as an ecologist or zoologist, describing the potential impact of the WECS on any species listed as threatened or endangered by the federal government or the state of Michigan, including but not limited to migratory birds or bats. Permits shall not be issued unless the study determines that there shall be no negative effect on such species. Alternatively, the applicant may submit an endangered species permit from the State of Michigan to fulfill this requirement.
7. Annual Inspection; Maintenance. The WECS and surrounding area shall be maintained in accordance with industry standards including painting and landscaping. Every Commercial WECS must be inspected annually by an authorized factory representative or professional engineer to certify that the WECS is in good working condition and is not a hazard to persons or property. Certification records shall be submitted annually to the City.
8. Sound Pressure Level. As part of the application and prior to installation of any Commercial WECS, the applicant shall provide modeling and analysis to the City that will confirm that the Commercial WECS will not exceed the maximum

permitted sound pressure levels. Modeling and analysis shall conform to IEC (International Electrotechnical Commission) 61400, which establishes structural and performance safety provisions for wind energy conversion systems, and ISO (International Organization for Standardization) 9613, which describes a method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. After installation of the Commercial WECS, sound pressure level measurements shall be done by a third party, qualified professional according to the procedures in the most current version of ANSI S12.18, which provides an alternative method of measurement of sound pressure levels in the outdoor environment, considering the effects of the ground, the effects of refraction due to wind and temperature gradients, and the effects due to turbulence. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type II sound meter. Documentation of the sound pressure level measurements shall be provided to the local government within sixty (60) days of the operation of the project.

9. Shadow Flicker. The applicant shall conduct a four-season analysis of potential shadow flicker. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall identify all areas where shadow flicker may affect occupants or users of the structures or properties. The analysis shall describe measures that will be taken to eliminate or mitigate adverse effects.

10. Removal. A Commercial WECS shall be removed by the owner of the WECS or land when the Commercial WECS has been abandoned or unused for one hundred and eighty (180) days (“Non-Use Period”). For purposes of this section, the damage, destruction or removal of any part of WECS equipment, or the cessation of operations shall be considered as the beginning of a Non-Use Period. The WECS owner or applicant shall notify the City of the beginning of any Non-Use Period or any removal of equipment. The end of the Non-Use Period may be sooner than one hundred eighty (180) days after commencement if the WECS or any portion of the facility becomes a nuisance or is dangerous to the public health, safety and welfare.

a. At the end of the Non-Use Period, the owner of the WECS or the land shall immediately apply for and obtain any applicable demolition or removal permit, and shall immediately proceed with and complete the demolition and removal of the WECS and restoration of the land to the condition existing prior to installation, to the extent reasonably feasible.

b. If the required demolition, removal and restoration of the WECS has not been lawfully completed within sixty (60) days after the end of the Non-Use Period, then after fifteen (15) days prior written notice to the land owner and the WECS owner, the City may remove or secure the removal of the WECS and related equipment and the City’s costs, expenses,

attorneys fees and consultants fees, plus a fifteen percent (15%) administrative charge may be drawn and collected from the security described in (4) above, and any costs and fees in excess of the amount of the security shall constitute a lien on the land on which the WECS is located and may be collected in the same manner as delinquent taxes.

5

SECTION 11.05 SOLAR STRUCTURES

10 A. **Permitted.** Active and passive solar energy devices, systems or structures shall be permitted in all zoning classifications by right, subject to administrative approval, except when such solar devices or architectural features project into required front or side yards, or are free- standing elements in a required front or side yard. When a proposed solar energy device is located within a required yard it shall be subject to the review and approval of the Planning Commission in accordance with the preliminary and final site plan review requirements of Article XI.

15

20 B. **Maximum Height of Structures.** Passive solar energy structures, such as flat plate collectors, photovoltaic cells, etc., which are roof-mounted or integrated otherwise into the roof structure shall not be included in the calculation of maximum height. Active solar energy structures, when mounted on either freestanding structural elements or integrated architecturally with a principal or accessory building shall not exceed a height of forty (40) feet.

20

25 C. **Lot Coverage.** Solar energy structures, regardless of type, when abutting the principal or any accessory structure, or freestanding, shall not be counted in the determination of maximum allowable lot coverage.

25

30 D. **Greenhouses:** Solar greenhouses and similar heat traps, when designed to be habitable spaces integrated into the primary structure, shall be included in the calculation of lot coverage at one-third (1/3) of their actual square foot area provided that not more than twenty (20) percent of their thermal mass, or transferring medium, is obscured from the radiant energy of the sun by other architectural elements. Such obscuration being calculated at a solar declination of twenty-two (22) degrees, due south.

30

35

SECTION 11.06 SOLAR EASEMENTS

40 A. **Permitted.** A landowner may enter into an easement, covenant, condition or other property interest in any deed or other instrument, to protect the solar skyspace of an actual, proposed or designated solar energy structure at a described location by forbidding or limiting activities, land uses, structures and/or trees that interfere with access to solar energy. The solar skyspace must be described as the three (3) dimensional space in which obstruction is prohibited or limited. Any property owner may give or sell his right to access to sunlight. Such Solar Access Easements shall be recorded and copies shall be kept on file with the Troy Building Department.

45

5 B. **Process.** A typical form of Solar Access Easement Agreement will be available in the Troy Planning Department, although alternate forms accomplishing the same purpose may be acceptable. These Agreements shall be entered into by and between private parties. All Solar Access Easement Agreements are to be accompanied by a Plot Plan, prepared by a registered Civil Engineer or Land Surveyor, indicating all structures, trees or other vertical elements by type and height elevation.

10 **SECTION 11.07 ENVIRONMENTAL PERFORMANCE STANDARDS**

15 A. **Intent.** No use, unless otherwise allowed, shall be permitted within any district which does ~~not already~~ conform to the following ~~standards~~ minimum requirements of use, occupancy, and operation, ~~which standards are hereby established as the minimum requirements to be maintained within said area.~~

20 B. **Airborne Emissions.**

25 1. ~~**Smoke and Air Contaminants.** It shall be unlawful for any person, firm or corporation to permit the emission of any smoke or air contaminant from any source whatsoever to a density greater than that permitted by Federal or State standards. There shall not be discharged from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment or nuisance to the public or which endanger the comfort, repose, health or safety of persons or which cause injury or damage to business or property.~~ All airborne emissions shall at a minimum comply with the applicable Federal and State standards.

30 2. **Smoke.**

35 a. It shall be unlawful for any person, firm, or corporation to permit the emission of any smoke from any source whatever to a density greater than that density described as No. 1 of the Ringlemann Chart; provided that the following exceptions shall be permitted: smoke, the shade or appearance of which is equal to but not darker than No. 2 of the Ringlemann Chart for a period or periods aggregating four (4) minutes in any thirty (30) minutes.

40 b. For the purpose of grading the density of smoke, the Ringlemann Chart, as now published and used by the United States Bureau of Mines, which is hereby made a part of this Ordinance, shall be the standards. However, the umbrascope readings of smoke densities may be used when correlated with the Ringlemann Chart.

45 2.3. **Dust, Dirt, and Fly Ash.**

a. No person, firm, or corporation shall operate or cause to be operated,

maintain or cause to be maintained, any process for any purpose, or furnace or combustion device for the burning of coal or other natural or synthetic fuels, without maintaining and operating while using said process or furnace or combustion device, recognized and approved equipment, means, method, device, or contrivance to reduce the quantity of gas-borne or airborne solids shall not exceed two-tenths (0.2) grains per cubic foot of the carrying medium at a temperature of five hundred (500) degrees Fahrenheit.

~~a.b. Method of Measurement.~~ For the purpose of determining the adequacy of such devices, these conditions are to be conformed to when the percentage of excess air in the stack does not exceed fifty percent (50%) at full load. The foregoing requirement shall be measured by the A.S.M.E. Test Code of dust-separating apparatus. All other forms of dust, dirt, and fly ash shall be completely eliminated insofar as escape or emission into the open air is concerned. The building official may require such additional data as is deemed necessary to show that adequate and approved provisions for the prevention and elimination of dust, dirt, and fly ash have been made.

~~3.4.~~ **Odors.** Any condition or operation which results in the creation of odors of such intensity and character as to be detrimental to the health and welfare of the public or which interferes unreasonably with the comfort of the public shall be removed, stopped, or so modified as to remove the odor. This requirement is not intended to interfere with the operation of a farm, as defined by this Ordinance, which is lawful pursuant to the Michigan Right to Farm Act, as amended.

C. Noise.

1. Noise which is objectionable as determined by the City due to volume, frequency, or beat shall be muffled, attenuated, or otherwise controlled, subject to the following schedule of maximum noise levels permitted:

Octave Band in Cycles per Second	Along Residential District Boundaries Maximum Permitted Sound Level in Decibels	Along All Non-Residential District Boundaries Maximum Permitted Sound Level in Decibels
0 to 150	70	70
150 to 300	60	66
300 to 600	52	60
600 to 1200	46	53
1200 to 2400	40	47
Above 2400	34	41

2. In addition, objectionable sounds of an intermittent nature, or sounds characterized by high frequencies, even if falling below the aforementioned decibel readings, shall be so controlled so as not to become a nuisance to adjacent uses.

3. Air-raid sirens and related apparatus used solely for public purposes are exempt from this requirement.

5 4. Earth moving, land balancing, earth clearing and other similar land development activities shall be restricted to the hours between 7:00 am and 8:00 pm Monday through Saturday and prohibited on Sunday and legal holidays. Farming activities and customary repairs and maintenance associated with individual dwellings shall be exempt from this requirement.

10 5. Outdoor speakers which can be heard beyond the property boundaries of any use shall be prohibited.

15 6. Use of outdoor commercial and industrial truck loading and unloading spaces within two hundred (200) feet of a residential district shall be prohibited between the hours of 11:00 pm and 6:00 am.

D. Vibration.

20 1. No use shall generate any ground transmitted vibration in excess of the limits set forth in (4) below. Vibration shall be measured at the nearest adjacent lot line.

25 2. The instrument used to measure vibrations shall be a three (3) compartment measuring system capable of simultaneous measurement of vibration in three (3) mutually perpendicular directions.

30 3. The vibration maximums set forth in (4) below are stated in terms of particle velocity, which may be measured directly with suitable instrumentation or computed on the basis of displacement and frequency. When computed, the following formula shall be used:

$$PV = 6.28 FV \times D$$

PV = Particle velocity, inches per second

FV = Vibration frequency, cycles per second

35 D = Single amplitude displacement of the vibration, inches

The maximum velocity shall be the vector sum of the three components recorded.

40 4. Table of Maximum Ground Transmitted Vibration

Particle Velocity, Inches per Second	
Along Non-Residential District Boundaries	Along Residential District Boundaries
0.10	0.02
0.20	0.02

5. The values stated in (4) may be multiplied by two (2) for impact vibrations, i.e. discrete vibration pulsations not exceeding one (1) second in duration and having a pause of at least one (1) second between pulses.

5 6. Vibrations resulting from temporary construction activity shall be exempt from the requirements of this section.

E. **Waste Disposal.** All solid, liquid, and sanitary wastes shall be treated and disposed of in accordance with the standards of Oakland County and the State of Michigan. Treatment or disposal of waste shall not create a hazard or nuisance to neighboring uses.

F. **Electrical Disturbance, Electromagnetic, or Radio Frequency Interference.** No use shall:

15 1. Create any electrical disturbance that adversely affects any operations or equipment other than those of the creator of such disturbance.

20 2. Cause, create, or contribute to the interference with electronic signals (including television and radio broadcasting transmission) to the extent that the operation of any equipment not owned by the creator of such disturbance is adversely affected.

G. **Hazardous Substances.** Use, storage and handling of hazardous substance; storage and disposal of solid, liquid and sanitary wastes shall comply with the following:

25 1. It shall be unlawful for any person, firm, corporation or other legal entity to pollute, impair or destroy the air, water, soils or other natural resources within the City through the use, storage and handling of hazardous substances and/or wastes or the storage and disposal of solid, liquid, gaseous and/or sanitary wastes.

30 2. Any person, firm, corporation or other legal entity operating a business or conducting an activity shall disclose the use, storage or generation of hazardous substances, in conjunction with the following:

35 a. Upon submission of a site plan;

b. Upon any change of use or occupancy of a structure or premise; or

c. Upon any change of the manner in which such substances are handled, and/or in the event of a change in the type of substances to be handled.

40 3. Prior to City approval of a business or activity which uses, stores, or generates hazardous substances, the site plan and manner of storage shall be reviewed by the City Fire Department. All businesses and facilities which use, store, or generate hazardous substances in quantities greater than one hundred (100) kilograms per month shall comply with the following standards:

a. **Above-Ground Storage.**

- i. Hazardous substances shall be stored only in product-tight containers within locations approved by the Zoning Administrator and Fire Department.
- ii. Secondary containment of hazardous substances shall be provided for all facilities. Secondary containment shall be sufficient to store the substance for the maximum anticipated period of time necessary for the recovery of any released substance.
- iii. Outdoor storage of hazardous substances is prohibited except in product-tight containers which are protected from weather, leakage, accidental damage and vandalism through secondary containment. Secondary containment shall be sufficient to store the substance for the maximum anticipated period of time necessary for the recovery of any released substance, including an allowance for the expected accumulation of precipitation.
- iv. Facilities for above-ground storage shall be screened in accordance with the standards set forth in Section _____. Such screening shall be designed to ensure access by the Fire Department and permit the circulation of air around the storage facility.
- v. State and federal agency requirements for storage, leak detection, record keeping, spill prevention, emergency response, transport and disposal shall be met.

b. **Underground Storage.** State and federal agency requirements for storage, leak detection, record keeping, spill prevention, emergency response, transport and disposal shall be met.

H. **Glare and Radioactive Materials.** Glare from any process (such as or similar to arc welding or acetylene torch cutting) which emits harmful ultraviolet rays shall be performed in such a manner as not to be seen from any point beyond the property line, and as not to create a public nuisance or hazard along lot lines, radioactive materials and wastes, and including electromagnetic radiation such as X-ray machine operation, shall not be emitted to exceed quantities established as safe by the U.S. Bureau of Standards when measured at the property line.

I. **Fire and Explosive Hazards.** The storage and handling of flammable and combustible liquids, liquefied petroleum gases, and explosives shall comply with the applicable State of Michigan requirements as established by Public Act No. 207 of 1941 as amended, Chapters 79 and 93 of the City of Troy City Code, and Section 40.70.00 of this Chapter.

ARTICLE 13

SITE DESIGN STANDARDS

SECTION 13.01 INTENT

The intent of this Article is to promote the public health, safety, and welfare and improve the site design and visual appearance of the City by requiring consistent standards for such site elements as landscaping, lighting, parking, loading, and site access.

SECTION 13.02 LANDSCAPING

A. **Where Required.** A separate, detailed landscape plan shall be submitted as part of the site plan review and tentative preliminary plat review.

1. **Plan Requirements.** The landscape plan shall be drawn to the same scale as required in Article 6, Site Plan Review, shall demonstrate that all requirements of this Section are met, and shall include, but not necessarily be limited to, the information set forth in this Section. The Zoning Administrator shall have the authority to waive the requirements for certain information set forth below if it is determined that such information does not affect compliance with this Ordinance.
 - a. The professional seal of the registered landscape architect who prepared the plan for sites of one (1) acre or greater;
 - b. Topographic and grading information, as required in Article 6, Site Plan Review;
 - c. The location, spacing, size, and root type (bare root (BR) burlapped (BB) or container (C)) and species and common name for each plant type proposed for use within the required landscape area;
 - d. Typical straight cross section including slope, height, and width of berms and type of ground cover, or height and type of construction of wall, including footings;
 - e. Construction and grading details to resolve specific site conditions, such as tree wells to preserve existing trees or culverts to maintain natural drainage patterns;
 - f. Details in either text or drawing form to ensure proper installation and establishment of proposed plant materials;
 - g. Identify existing trees and vegetative cover to be preserved;

-
- h. Identify a landscape maintenance program including a statement that all diseased, damaged, or dead materials shall be replaced in accordance with the standards of this Ordinance.
2. **Composition.**
- a. Plant materials shall be of generally acceptable varieties and species, free from insects and diseases, hardy to Oakland County, conform to the current minimum standards for nursery stock of the American Nursery and Landscape Association and shall have proof of any required governmental regulations and/or inspections.
 - b. A mixture of live plant material, such as evergreen and deciduous trees and shrubs, is required as a protective measure against insect and disease infestation. Artificial plant materials are prohibited. A limited mixture of hardy species is recommended rather than a large quantity of different species to produce a more aesthetic, cohesive design and avoid a disorderly arrangement. Additionally, native species of trees and shrubs shall constitute at least fifty percent (50%) of the total proposed plantings in accordance with the standards set forth in Section B.6.
3. **Berms.** Berms shall be constructed with slopes not to exceed a one to three (1:3) gradient. Berm slopes shall be protected with sod, seed, or other form of natural ground cover.
4. **Coordination with Utilities.** Provision shall be made to coordinate landscaping with existing and proposed underground and overhead utility lines so as to avoid interference with plant growth.
5. **Existing Trees.** The preservation and incorporation of existing trees in a landscape plan is encouraged. Where existing trees are used to satisfy the requirements of this Section, the following requirements shall apply:
- a. Paving, or other site improvements, shall not encroach upon the dripline of the existing tree(s) to be preserved.
 - b. If existing plant material is labeled "To Remain" on site plans by the applicant or required by the City, protective techniques, such as, but not limited to, fencing or barriers placed at the dripline around the perimeter of the plant material shall be installed during construction. No vehicle or other construction equipment shall be parked or stored within the dripline of any plant material intended to be saved. Other protective techniques may be used provided such techniques are approved by the City.
 - c. In the event that healthy trees which are used to meet the minimum requirements of this Ordinance or those labeled to remain are cut down, destroyed, damaged, or excavated at the dripline, as determined by the

City, the applicant shall replace them with trees which are either equivalent in size or replace the total d.b.h. of the trees which have been removed.

6. **Stormwater Retention and Detention Ponds.** The integration of stormwater management systems, including bio-swales, rain, gardens, retention and detention ponds in the overall landscape concept shall be required. Stormwater management systems that replicate a natural design and appearance shall be encouraged.
7. **Use of Native Plants in Landscaping.**
 - a. Native plant species chosen for a development should be based on the native species currently growing on the site, if any.
 - b. The arrangement of native plant species can be designed in both “natural” arrangements and more conventional arrangements.
 - c. Natural arrangements emulate the arrangements found in nature, and have a less manicured appearance. Natural arrangements should incorporate a wide mix of species. This landscape style should be used for landscaping open space, surface stormwater systems, street tree plantings, and/or parks. If natural arrangements are used, plant spacing requirements can be waived as long as the function the plants are to serve is accomplished.
 - d. Conventional, more formal arrangements are generally used close to buildings or heavily used areas of a site. Native species can be used in these areas just as any other commercially-available landscape material. As with any landscape design, the plant’s ultimate size, soil and site requirements, and other characteristics must be considered to ensure they do not overwhelm a space, encroach into walkways, or impede sight distance or visibility of motorists. In entryways, where aesthetics is of primary importance, cultivars of native plant species may be considered to ensure the plant’s appearance.
 - e. Plantings installed in areas used for stormwater management should be planted with native species that specifically perform the necessary runoff attenuation, filtration, water uptake, and purification functions needed in such areas. Both herbaceous and woody species should be incorporated into the mix where the desired function dictates.
8. **Installation, Maintenance, and Completion.**
 - a. All landscaping required by this Ordinance shall be planted before obtaining a certificate of occupancy or the appropriate financial surety as required in Article 3, Administration and Enforcement.
 - b. All landscaping and landscape elements shall be planted, and earth

moving or grading performed, in a sound workmanlike manner, according to accepted planting and grading procedures.

- c. Landscaping required by this Ordinance shall be maintained in a reasonably healthy condition, free from refuse and debris. All unhealthy and dead material shall be replaced within one (1) year of damage or death or the next appropriate planting period, whichever comes first. All landscaped areas shall be provided with irrigation or a readily available and acceptable water supply.
- d. Failure to install and maintain approved landscaping shall be considered a violation of this Ordinance.

B. Screening Between Land Uses.

1. **Where Required.** The use of physical barriers or screens is considered a necessary requirement to allow for the transition from one zoning district or land use to another contrasting zoning district or land use. This promotes compatibility with existing uses and helps to protect the value of buildings and property. The purpose of this section is to create varying degrees of visual and physical separation between divergent land uses based upon the similarity and/or compatibility of the uses.

2. **Screen Requirements.**

- a. A landscape buffer shall be constructed to create a visual screen at least six (6) feet in height along all adjoining boundaries when a proposed use is either more intense or incompatible with an adjoining property, as set forth in Table 13.02-A. A landscape buffer shall consist of berms and living materials so as to maintain a minimum opacity of at least eighty percent (80%). Opacity shall be measured by observation of any two (2) square yard area of landscape screen between one (1) foot above the established grade of the area to be concealed and the top or the highest point of the required screen. The plantings must meet this standard based upon reasonably anticipated growth over a period of three (3) years.
- b. The width of the screen area, location and density of plantings shall be based upon the specific characteristic of the proposed use and adjacent land uses.
 - i. Plants shall be arranged in a staggered pattern to create a continuous screen.
 - ii. Existing vegetation which is located on the property to be developed within the area of the proposed screen, is in good condition, and meets the size and type requirements in the various screening alternatives may be counted toward meeting screening

requirements.

- iii. Screening shall be located along all adjoining boundaries. However, the width and location of the screening may be modified due to site conditions, provided the intent of screening requirements are met.
- iv. Three (3) landscape screening alternatives as set forth below are applied to Table 13.02-A:

(a) Screen No. 1:

Minimum Quantity	Type/Size
1 tree per three lineal feet	Narrow evergreen tree

(b) Screen No. 2:

Minimum Quantity	Type/Size
1 tree per 10 lineal feet	Large evergreen tree

(c) Screen No. 3:

Minimum Quantity	Type/Size
1 tree per 10 lineal feet	Large evergreen tree
1 tree per five lineal feet	Narrow evergreen tree

(d) Landscape Screening Schedule: Screening shall be provided in the manner set forth in Table 13.02-A, Landscape Screening Schedule. Table 13.02-A describes the required screening on the lot of the use indicated in the left column of the schedule where it is contiguous to land used or zoned as indicated across the top of the schedule. The numbers in the middle columns refer to the landscape screening alternatives described above.

**Table 13.02-A
Landscape Screening Schedule**

Screening Required on These Land Uses:	When Contiguous with these land uses:						
	Use Group 1: Residential Uses	Use Group 2: Residential / Lodging Uses	Use Group 3: Office / Institution Uses	Use Group 4: Auto / Transportation Uses	Use Group 5: Retail / Entertainment Uses	Use Group 6: Misc. Commercial Uses	Use Group 7: Industrial Uses
Use Group 1: Residential Uses One-family dwellings Two-family dwellings							
Use Group 2: Residential / Lodging Uses Multiple-family dwellings Live-work units Senior assisted / independent living Group day care Child care centers	1 or 2						
Use Group 3: Office / Institution General office Professional office Hospitals Medical office Primary / secondary schools Colleges Places of worship Data centers Technology centers / office research Experimental research & testing labs Public service buildings Funeral homes Veterinary clinics	1 or 2	1 or 2	1 or 2				
Use Group 4: Auto / Transportation Uses Auto sales Auto service station Auto repair station Auto body repair Auto wash	3 and/ or wall	3 and/ or wall	3 and/ or wall		1 and/ or wall		
Use Group 5: Retail / Entertainment Uses Financial institutions General retail Retail, large format Multi-tenant shopping centers Fitness centers Theaters Indoor recreation establishments Restaurant Personal service Dry cleaning Hair care	2 or 3 and/ or wall	2 or 3 and/ or wall	2 or 3 and/ or wall	1 or 2			

**Table 13.02-A
Landscape Screening Schedule**

Screening Required on These Land Uses:	When Contiguous with these land uses:						
	Use Group 1: Residential Uses	Use Group 2: Residential / Lodging Uses	Use Group 3: Office / Institution Uses	Use Group 4: Auto / Transportation Uses	Use Group 5: Retail / Entertainment Uses	Use Group 6: Misc. Commercial Uses	Use Group 7: Industrial Uses
Use Group 6: Misc. Commercial Uses Building & lumber supply Garden centers, nurseries Outdoor recreation Golf driving ranges, mini-golf Commercial outdoor storage Mini / Self-storage Commercial kennels Pet day care	3 and/ or wall	2 or 3 and/ or wall	2 or 3 and/ or wall	2 or 3	1 or 2		
Use Group 7: Industrial Uses Contractor's equipment storage Food products Manufacturing, processing, etc. Metal plating Plastics Printing Tool & die, gauge & machine shops Truck / trailer rental Warehousing / wholesale	3 and/ or wall	3 and/ or wall	3 and/ or wall	2 or 3	2 or 3	2	

3. **Solid Wall or Fence.** Where a land use activity creates noise, light, dust or other similar nuisance that cannot be effectively screened by a landscape buffer, a solid wall or fence may be required. Such wall or fence shall be a minimum of six (6) and a maximum of eight (8) feet in height as measured on the side of the proposed wall having the higher grade. A required wall shall be located on the lot line, except alternate locations may be approved where underground utilities interfere, where this Ordinance requires conformity with front yard setback requirements, or where an alternate location provides more effective screening. The construction materials of the wall or fence may include masonry, stone, or wood.

4. **Combinations.** A combination of landscaping and a solid wall or fence may be approved where such a combination provides more effective screening.

C. Parking Lot Landscaping.

1. **Where Required.** Separate landscape areas shall be provided within and at the perimeter of parking lots so as to break up the broad expanse of pavement, guide the circulation of vehicular and pedestrian traffic, and moderate the changes to the micro climate which results from additional pavement.
2. **Landscaping Standards within Parking Lots.**
 - a. There shall be a minimum of one (1) tree for every eight (8) parking spaces.
 - b. Landscaping shall be arranged in curbed islands within the parking lot which shall not be less than two hundred (200) square feet in area. Modifications in curbing may be permitted when islands are used as part of the stormwater management system.
 - c. A minimum distance of three (3) feet from the backside of the curb and the proposed landscape plantings shall be provided. Where vehicles overhang a landscape island or strip, a minimum distance of five (5) feet from the backside of the curb and the proposed landscape plantings shall be provided.
 - d. An equivalent amount of landscape plantings at the perimeter of parking lots may be approved where landscaping within parking lots would be impractical due to the size of the parking lot, detrimental to safe and efficient traffic flow, or would create an unreasonable burden for maintenance and snowplowing, provided all other landscaping requirements are met.
3. **Landscaping Standards at the Perimeter of Parking Lots.**
 - a. Parking lots that serve uses set forth in 13.02.A shall meet the screening requirements set forth in Section 13.02.B, Screening Between Land Uses, where such screening is needed to promote a compatible relationship with an adjacent use.
 - b. Parking lots shall be screened by a landscaped berm at least three (3) feet in height along the perimeter of those sides that are visible from all road rights-of-way. Alternative landscape plantings or a solid wall that does not exceed three (3) feet in height may be approved, where it is found that space limitations or visibility for vehicular circulation prevent construction of a landscape berm.

D. Greenbelts.

1. **Where Required.** Except as otherwise required by this Ordinance, a greenbelt shall be provided along all public streets upon which a site has frontage, in accordance with the standards set forth in this Section.
2. **Greenbelt Standards.**
 - a. The greenbelt shall be a minimum of ten (10) feet in width.
 - b. The greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way. Deciduous trees within a greenbelt shall be a minimum caliper of two and a half (2 1/2) inches or greater and evergreen trees shall be a minimum of five (5) to six (6) feet in height.
 - c. Creative placement of the trees, such as staggering, clustering and/or other methods, is encouraged in an effort to eventually achieve a canopy.
 - d. In addition to the required trees within the greenbelt, the remainder of the greenbelt shall be landscaped with grasses, ground covers, shrubs and other natural landscape materials.
 - e. Access drives from public rights-of-way through required greenbelts shall be permitted, but such drives shall not be subtracted from the lineal dimension used to determine the minimum number of trees.

E. Site Landscaping.

1. **Where Required.** In addition to any landscape, screening, greenbelt, and parking lot landscaping required by this Section, a minimum amount of the site area shall be landscaped.
2. **Site Landscaping Standards.**
 - a. A minimum of twenty percent (20%) of the site area, including landscape screening, greenbelt, and parking lot landscaping, shall be landscaped.
 - b. Site area landscaping may include a combination of the preservation of existing tree cover, planting of new trees and plant material, landscape plazas, gardens and building foundation planting beds.
 - c. Site area landscaping shall be provided to screen potentially objectionable site features such as, but not limited to, retention/detention units, loading areas, and trash areas.
 - d. The landscaping design shall promote compatibility, and preserve the character of the site, in relation to the immediately surrounding area and in

relation to the general area in which the property is situated.

F. Subdivision and Site Condominium Landscaping.

1. **Where Required.** Landscaping for subdivisions and site condominiums shall be provided in accordance with the standards set forth in this Section.
2. **Standards.**
 - a. The frontage of all internal public or private streets shall be landscaped with the equivalent of one (1) tree for every fifty (50) lineal feet, or fraction thereof. Such street trees shall meet the minimum size, spacing and species requirements set forth in Sections 13.02.H, Minimum Size and Spacing Requirements, and 13.02.I, Prohibited Species.
 - b. Where a subdivision or site condominium contains uses which are more intense or incompatible with an adjoining property, the screening requirements set forth in Section 13.02.B, Screening Between Land Uses, shall be met. The preservation of existing trees along perimeter boundaries is encouraged regardless of whether screening is required.
 - c. Where a subdivision or site condominium abuts a public road right-of-way located outside of the proposed subdivision or site condominium, the screening requirements set forth in Section 13.04, Screening Between Land Uses shall be met.

[Note: This may conflict with the Subdivision Ordinance]

- d. A landscape plan for a subdivision or site condominium development shall also include landscaping details of the entrance to the development, stormwater retention and/or detention areas, community buildings and other recreational areas, and any other site improvement which would be enhanced through the addition of landscaping.
- G. Sustainable Design Techniques.** Modification of the standards in Sections 13.02 may be considered when sustainable design methods, set forth in Section 11.01 Sustainable Design Incentives, are implemented.
- H. Minimum Size and Spacing Requirements.** Where landscaping is required, the following minimum size and spacing requirements set forth in Table 13.02-B for representative landscape materials shall be applicable, unless otherwise specified in this Section:

**TABLE 13.02-B
Minimum Size and Space of Landscape Planting**

	MINIMUM SIZE ALLOWABLE							MAXIMUM ON-CENTER SPACING**											
	Height			Caliper Spread				Feet											
	5'-6'	3'-4'	2'-3'	2"	2.5"	18"-2'	2 gal.	30	25	15	10	6	5-6	5	4	3	2	1	
Large Evergreen Trees:																			
Fir (Abies)																			
Spruce (Picea)																			
Pine (Pinus)																			
Hemlock (Tsuga)																			
Douglas Fir (Pseudotsuga)																			
Tamarack; Larch (Larix)																			
Narrow Evergreen Trees:																			
Red Cedar (Juniperus)																			
Arborvitae (Thuja)																			
Juniper (Juniperus)																			
Large Evergreen Shrubs:																			
Hicks Yew (Taxus)																			
Upright Yew (Taxus)																			
Spreading Yew (Taxus)																			
Upright Juniper (Juniperus)																			
Spreading Juniper (Juniperus)																			
Mugho Pine (Pinus)																			
Small Evergreen Shrubs:																			
Spreading Yew																			
Dwarf Spreading Juniper																			
Dwarf Mugho Pine																			
Euonymous varieties*																			
Vines:																			
Euonymous varieties*																			
Virginia Creeper																			
Wisteria																			
Riverbank Grape																			
American Bittersweet																			
Large Deciduous Trees:																			
Oak (Quercus)																			
Maple* (Acer)																			
Beech (Fagus)																			
Linden or Basswood (Tilia)																			
Sweetgum (Liquidambar)																			
Ginkgo (Male Only) (Ginkgo)																			
Honeylocust (Gleditsia)																			
Birch (Betula)																			
Sycamore (Plantanus)																			
Hickory (Carya)																			
Black Cherry (Prunus)																			
Tulip Tree (Liriodendron)																			
Blackgum (Nyssa)																			
* Refer to prohibited exotic invasive species list.																			

	MINIMUM SIZE ALLOWABLE							MAXIMUM ON-CENTER SPACING**											
	Height			Caliper Spread				2 gal.	(Feet)										
	5'-6'	3'-4'	2'-3'	2"	2.5"	18"-2'	30		25	15	10	6	5-6	5	4	3	2	1	
Small Deciduous Trees (Ornamental):																			
Dogwood																			
Flowering Cherry, Plum, Pear																			
Hawthorn																			
Redbud																			
Magnolia																			
Flowering Crabapple																			
Mountain Ash																			
Hornbeam																			
Sassafras																			
Ironwood																			
Serviceberry; Juneberry																			
Ground Cover:																			
Euonymus varieties*																			
Wild Strawberry																			
Wild Ginger																			
Large Deciduous Shrubs:																			
Lilac																			
Sumac																			
Pyracantha																			
Weigela																			
Flowering Quince																			
Cotoneaster*																			
Sargent Crabapple																			
Dogwood (Red Osier, Grey, Silky)																			
Euonymus varieties*																			
Viburnum varieties																			
Witch-hazel																			
Ninebark																			
Vaccinium (Blueberry)																			
Holly																			
Spicebush																			
Hazelnut																			
Chokeberry																			
Chokecherry																			
Buttonbush																			
American Elder																			
Small Deciduous Shrubs:																			
Fragrant Sumac																			
Cotoneaster*																			
Potentilla																			
Meadowsweet																			
Leatherleaf																			
Rubus/Rubus varieties																			
* Refer to prohibited exotic invasive species list.																			
** "Maximum on-center" spacing refers to the largest space allowed between <i>the centers</i> of plants of the same species/variety.																			

- I. **Prohibited Species.** As of the effective date of this ordinance, the following species set forth in Table 13.02-C shall not be newly planted in landscaping. These plants are not native to the area, reproduce profusely and have potentially harmful effects on natural ecosystems.

**Table 13.02-C
Prohibited Species**

Trees

<u>Common Name</u>	<u>Scientific Name</u>
White Ash *	<i>Fraxinus americana</i>
Green Ash *	<i>Fraxinus pennsylvanica</i>
American Elm	<i>Ulmus Americana</i>
Norway Maple	<i>Acer platanoides</i>
Amur Maple	<i>Acer ginnala</i>
Tree of Heaven	<i>Ailanthus altissima</i>
European Alder	<i>Alnus glutinosa</i>
Goldenraintree	<i>Koelreuteria paniculata</i>
Amur Cork Tree	<i>Phellodendron amurense</i>
White Poplar	<i>Populus alba</i>
Black Locust **	<i>Robinia pseudocacia</i>
Siberian Elm	<i>Ulmus pumila</i>

* A native species, but prohibited due to Emerald Ash Borer.

**A native species, but tends to be invasive.

Shrubs and Vines

<u>Common Name</u>	<u>Scientific Name</u>
Porcelainberry	<i>Ampelopsis brevipedunculata</i>
Japanese barberry	<i>Berberis thunbergii</i>
Common barberry	<i>Berberis vulgaris</i>
Oriental Bittersweet	<i>Celastrus orbiculatus</i>
Autumn Olive	<i>Eleagnus umbellata</i>
Russian Olive	<i>Eleagnus angustifolia</i>
Burningbush	<i>Euonymus alatus</i>
Wintercreeper	<i>Euonymus fortunei</i>
English Ivy	<i>Hedra helix</i>
Privet	<i>Ligustrum vulgare</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Amur Honeysuckle	<i>Lonicera maackii</i>
Morrow Honeysuckle	<i>Lonicera morrowi</i>
Tartarian Honeysuckle	<i>Lonicera tatarica</i>

Common Buckthorn *Rhamnus cathartica*

Shrubs and Vines (cont')

<u>Common Name</u>	<u>Scientific Name</u>
Glossy Buckthorn	<i>Rhamnus frangula</i>
Multiflora Rose	<i>Rosa multiflora</i>
Guelder Rose	<i>Viburnum opulus var. opulus</i>

Grasses and Grass-Like Plants

<u>Common Name</u>	<u>Scientific Name</u>
Chinese Silver Grass	<i>Miscanthus sinensis</i>
Giant Reed	<i>Phragmites communis</i>
Reed Canary Grass	<i>Phalaris arundinacea</i>

Flowers and Groundcovers

<u>Common Name</u>	<u>Scientific Name</u>
Garlic Mustard	<i>Alliaria officinalis</i>
Spotted Knapweed	<i>Centaurea maculosa</i>
Crown Vetch	<i>Coronilla varia</i>
Queen Ann's Lace	<i>Daucus carota</i>
Foxglove	<i>Digitalis purpurea</i>
Japanese Knotweed	<i>Fallopia japonica</i>
Dame's Rocket	<i>Hesperis matronalis</i>
Purple Loosestrife	<i>Lythrum salicaria</i>

J. Private Naturally Landscaped Lots.

1. **Where Applicable.** Where a landowner decides to use a landscape style that emulates nature, and such style is not prohibited by deed restriction, Master Deed and Bylaws, or other restrictive covenant, these provisions are intended to ensure that this landscape style does not intrude on the adjoining properties or impair site distances for pedestrians and motorists.
2. **Standards.**
 - a. A private "naturally landscaped" lot is a privately-owned lot which is naturally landscaped so as to exhibit the deliberate and conscious decision to plant, cultivate, and maintain native plant species. A naturally landscaped lot often has a significantly different character than a traditionally landscaped lot, as it generally includes a limited amount of mown lawn, and is made up of relatively tall plants, often in an arrangement that emulates nature. This landscape style does not allow for the simple neglect of maintaining plantings on a property.

- b. Naturally landscaped lots must be maintained so that herbaceous plants are mown or cut to eighteen (18) inches or less at least once prior to June 1st of each calendar year.
- c. Natural landscaping on private lots shall not be located within two (2) feet of the front property line or at corner side property lines of lots having a public sidewalk, or within four (4) feet of any other property line. The two (2) foot or four (4) foot buffer shall be made up of short vegetation such as mown turf grass or other non-vegetative materials such as stones. No rear or side yard setback shall be required where the natural landscaping material is separated from adjacent lots by fencing or shrubs, or where the natural landscaping material abuts permitted natural landscaping material on an adjacent lot. An intervening path or sidewalk shall not be deemed to prevent natural landscape materials from “abutting” for purposes of this section.

SECTION 13.03 TRASH CONTAINERS

- A. **Where Required.** The standards set forth in this Section shall apply to all uses that have refuse disposal service by collective trash container.
- B. **Standards.**
 - 1. Containers used to dispose of trash, grease, recyclables, and similar materials shall be screened on all sides with an opaque fence or wall, and gate at least as high as the container, but no less than six (6) feet in height, and shall be constructed of durable material and construction which is compatible with the architectural materials used in the site development.
 - 2. Containers shall be consolidated to minimize the number of collection sites, located in close proximity to the building they serve, and easily accessed by refuse vehicles without potential damage to parked vehicles.
 - 3. Containers and enclosures shall be located in a side or rear yard, screened from public view.
 - 4. Containers and enclosures shall be situated so that they do not cause excessive nuisance or offense to occupants of nearby buildings.
 - 5. Concrete pads and aprons of appropriate size and construction shall be provided.

SECTION 13.04 EQUIPMENT SCREENING

- A. **Where Required.** The standards set forth in this Section shall apply to all uses for which mechanical equipment including, but not limited to, heating, ventilation, and air conditioning, is placed upon a roof of any building or on the ground outside of the building.
- B. **Screening Requirements.** All equipment shall be screened as follows:
1. Rooftop screening
 - a. Rooftop equipment shall be screened with architectural materials matching or harmonious with the building.
 - b. Screens provided to obscure mechanical equipment shall be an opaque barrier at least as high as the equipment being screened.
 - c. Rooftop equipment shall be located on the side or rear of a pitched-roof building, screened from public view.
 - d. Rooftop equipment shall be situated so that they do not cause excessive nuisance or offense to occupants of nearby buildings.
 2. At grade equipment
 - a. At grade equipment shall be screened with architectural and/or landscape materials matching or harmonious with the building or landscape materials provided elsewhere on site.
 - b. Landscape materials shall be evergreen species so as to provide a screen year-round.
 - c. Walls provided to screen mechanical equipment shall be an opaque fence or wall, with a gate at least as high as the equipment being screened.
 - d. At grade equipment shall be located in a side or rear yard, screened from public view.
 - e. At grade equipment shall be situated so that they do not cause excessive nuisance or offense to occupants of nearby buildings

SECTION 13.05 LIGHTING

- A. **Where Required.** The standards set forth in this Section shall apply to all uses for which exterior lighting is provided.

B. Lighting Plan Requirements. The following information must be provided on all site plan submissions:

1. Location of all free-standing, building-mounted and canopy light fixtures on the site plan and/or building elevations.
2. Photometric grid overlaid on the proposed site plan, indicating the overall light intensity throughout the site (in foot-candles) and ten feet beyond the parcel lines. The Zoning Administrator may waive the requirement for small sites with parking lots of ten (10) spaces or less, if the site is not adjacent to residentially zoned property.
3. Specifications and details for the type of fixture being proposed, including the initial lumen rating, type of lamp, method of shielding, type of lens and all applicable accessories. The details shall include a depiction of the lighting pattern and light levels applicable for the proposed pole height.

C. Freestanding Pole Lighting.

1. Fixture Design.

- a. Exterior lighting shall be a full cut-off fixture or a fully shielded fixture, downward directed with a flat lens to prevent glare.
- b. Decorative or historic light fixtures may be approved as an alternative to shielded fixtures when it can be shown that there will be no off-site glare through the use of low wattage lamps and the proposed fixtures will be more consistent with the character of the site.

2. Lighting Levels.

- a. The intensity of light at the base of a light fixture pole shall not exceed twenty (20) foot-candles during business hours and ten (10) foot-candles after business hours.
- b. Light shall not exceed one-tenth (0.1) foot-candle along any boundary adjacent to residentially zoned or used property, and one (1) foot-candle along all nonresidential property boundaries.
- c. Light levels shall be measured on the horizontal plane at grade level within the site, and on the vertical plane of any property line boundary or street right-of-way line at a height of five (5) feet above grade level.

3. **Height.** The maximum height of a base, a pole and fixtures shall be twenty-five (25) feet. A maximum height of thirty (30) feet may be permitted in an industrial

district where fixtures are no closer than two hundred (200) feet to any residential district.

4. **Duration.** All outdoor lighting fixtures, existing or hereafter installed and maintained upon private property, shall be turned off or reduced in lighting intensity between 11:00 p.m. and sunrise. The following exceptions may be approved:

- a. Where greater lighting levels are necessary for security or safety purposes; or
- b. Where permissible commercial or industrial uses such as sales, assembly and repair operate after 11:00 p.m., in which case the lighting levels shall be turned off or reduced after the use ceases for that day.

- D. **Building-Mounted Lighting.** Building-mounted lighting for the purpose of lighting entrances, adjacent sidewalks, parking areas and loading areas is permitted subject to the following restrictions:

1. Building-mounted lighting shall be a full cutoff fixture or fully shielded and directed downward to prevent glare. The intensity of light shall not exceed twenty (20) foot-candles during business hours and ten (10) foot-candles after business hours at the ground level for any fixture mounted up to a maximum height of twenty (20) feet.
2. Light shall not exceed one-tenth (0.1) foot-candle along zoned or existing residential property lines and one (1) foot-candle along non-residential property lines.
3. Decorative or historic light fixtures may be approved as an alternative to shielded fixtures when it can be proven that there will be no off-site glare through the use of low wattage lamps and the proposed fixtures will be more consistent with the character of the site.

- E. **Architectural Lighting of Building Façades.** The lighting of a building façade for architectural, aesthetic, or decorative purposes is permitted subject to the following restrictions:

1. All building façade lighting shall be low intensity, with a fixture rating of less than nine hundred (900) lumens. All building façade lighting shall be fully shielded and fully confined from projecting into the sky by eaves, roofs or overhangs, and mounted as flush to the wall as possible.
2. Luminaries with fixture ratings exceeding nine hundred (900) lumens shall be downward directed and fully shielded, mounted as flush to the wall as possible.

3. The maximum illumination of any vertical surface or angular roof surface shall not exceed five (5) foot-candles.
4. Luminous tube and exposed bulb florescent lighting may be permitted as an architectural detail on all buildings, such as along the roof line and eaves, and around windows. Internally illuminated architectural bands or external lighting directed on buildings may be approved where it can be shown that the treatment will serve a legitimate function and will not adversely impact neighboring properties.

F. Sign/Canopy Lighting.

1. Sign lighting may be directed upward, downward or may be internal to the sign.
2. Sign lighting shall illuminate only the sign and meet the following conditions:
 - a. Light levels shall not exceed one-tenth (0.1) foot-candle along any boundary adjacent to residentially zoned or used property, and one (1) foot-candle along non-residential property lines.
 - b. The intensity of light on the sign shall not exceed ten (10) foot-candles.
 - c. The light source shall not be more than ten (10) feet from the sign.
 - d. Shields or other techniques to focus the light and prevent glare may be required.
3. All internal sign lighting shall illuminate the sign only. Reflected sign illumination intensity shall not exceed one and five-tenths (1.5) foot-candles as measured ten (10) feet from the face of the sign.

G. Flagpole Lighting. A flagpole may be illuminated by one of the following methods:

1. With one (1) upward-aimed spotlight fixture, fully shielded and directed away from streets, shining only on the flag and minimizing light spill into the dark night sky. The fixture rating shall not exceed three thousand five hundred (3,500) lumens. The fixture shall be placed as close to the base of the flagpole as reasonably possible.
2. With one (1) downward-aimed light fixture, fully shielded and directed away from streets, shining only on the flag and minimizing light spill into the dark night sky. The fixture rating shall not exceed three thousand five hundred (3,500) lumens.

H. Prohibited Lighting Types. The following lighting types are prohibited:

1. The use of search lights or any similar high intensity light for outdoor advertisement or entertainment.
2. Flashing, moving or intermittent type lighting.
3. Exterior exposed luminous tube lighting except neon lighting used for signage or lighting approved by the Zoning Administrator as an element of the building façade under Section 13.02.D of this Ordinance.

I. **Exemptions.** The following are exempt from the lighting requirements of this Section, except that the Zoning Administrator may require a lighting and photometric plan when deemed necessary to protect the public health, safety and welfare.

1. Sports fields.
2. Swimming pools serving the public or private club members.
3. Holiday decorations.
4. Three (3) foot high, shielded pedestrian walkway lighting.
5. Ornamental low voltage lighting (twelve (12) volts or less), low wattage ornamental landscape lighting fixtures, and solar operated light fixtures having self-contained rechargeable batteries, where any single light fixture does not exceed one hundred (100) lumens.
6. Street lights or lights within a public or private road right-of-way.

J. **Lamp or Fixture Substitution.** Should any light fixture or the type of lamp therein regulated under this Article be changed after the permit has been issued, a request must be submitted to the Zoning Administrator for administrative approval, together with adequate information to assure compliance with the Zoning Ordinance, which must be received prior to substitution. Fixtures and lamps that match the original fixture type and number as part of regular maintenance are not required to submit this request.

SECTION 13.06 PARKING AND CIRCULATION

A. **Where Required.** The standards set forth in this Section shall apply to all uses for which off-street parking and circulation is provided.

B. **General Off-Street Parking Requirements.**

1. There shall be provided in all districts at the time of erection or enlargement of any main building or structure, automobile off-street parking with adequate access to all spaces. The number of off-street parking spaces, in conjunction with all

land or building uses shall be provided, prior to the issuance of a certificate of occupancy as hereinafter prescribed.

2. Off-street parking for uses in all districts shall be on the same lot as the use or building served by the parking, unless joint parking with abutting properties and uses is provided in a form acceptable to the City Attorney and executed and recorded by the parties sharing the parking.
3. 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.
4. Parking areas for uses other than single-family detached units or duplexes on individual lots shall be approved 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.
5. 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.
6. 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.
7. 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.
8. The storage of merchandise, motor vehicles for sale, trucks, or the repair of vehicles is prohibited.
9. For those uses not specifically mentioned, the requirements for off-street parking facilities shall be in accord with a use which the Planning Commission considers is similar in type.
10. Off-street parking areas shall be designed to provide for removal and storage of snow.

C. 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 required and non-required yards, provided all other standards of this Ordinance are met.
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.

D. 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.
4. **Fractional Requirements.** 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.

E. Shared Parking.

1. The developed parking for adjacent zoning lots may be shared provided a signed agreement is provided by the property owners, and the applicant(s) is provided, and the applicant can demonstrate that the peak usage will occur at different periods of the day.

2. To demonstrate shared parking compatibility, the applicant shall use the methodology for calculating shared parking established by the most recent edition of the Urban Land Institute Shared Parking book, although underlying parking space requirements for each use shall be based on the City of Troy parking requirements noted herein or as otherwise modified by the provisions of this Article.
3. Side or rear parking lot setbacks may be reduced or waived where a shared access driveway, connected parking lots, and/or internal service drives are provided.

F. Flexibility in Application.

1. The City 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, in its sole discretion, may grant deviations from off-street parking requirements. These deviations may 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. In the event that a deviation is granted, the following shall apply:
 - a. An applicant may request a parking deviation at any time, as part of a current site plan, special land use, or rezoning application, or may request a parking deviation as a separate and distinct action with no other concurrent request.
 - b. The applicant shall provide a parking study with adequate detail and information to assist the Planning Commission of the appropriateness of the request.
 - c. A parking deviation may be included in an action on a concurrent request or be made separately by resolution.
 - d. 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.
 - e. The Planning Commission may require the applicant to set aside area for reserve parking (landbanking) that can be constructed as needed, although this is not a prerequisite for the approval or a deviation. 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. 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.

G. Schedule of Required Off-Street Parking Spaces. The minimum number of off-street parking spaces shall be determined by the type of use in accordance with Table 13.04-A. For uses not specifically listed below, the required parking shall be in accordance with that of a similar use as determined by the Zoning Administrator, or determined by the Planning Commission during site plan review based on documentation regarding the specific parking needs of the use.

Table 13.06-A 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 employee on the largest typical shift.
Housing for the Elderly	
Convalescent and nursing facilities	1 space per each 3 beds or 2 rooms, whichever is less plus 1 space for each employee on the largest typical shift.
Housing for the Elderly	1 spaces for each 0.65 dwelling units plus 1 space for each employee on the largest typical shift.
Institutional and Places of Gathering	
Churches and similar places of worship	1 space for each 3 seats or 6 feet of pews in the main unit of worship
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 or 6 feet of bleacher seating, in public, private, recreational, or theater settings.
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 300 square feet of gross floor area
Medical and dental offices including clinics and medical laboratories	1 space for each 200 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 250 square feet of gross floor area
Commercial/retail centers	As follows: <50,000 square feet; 1 space for each 250 square feet of gross floor area. 50,000 to 450,000 square feet of gross floor area; 1 space for each 300 square feet and >450,000 square feet of gross floor area; 1 space for each 350 square feet. Non-retail uses such as restaurants, bars and theaters shall be calculated separately based upon their respective requirements. The square footage of restaurants, bars, and theaters shall not be counted against the square footage for the overall commercial/retail center square footage, but shall be added to that total.
Vehicle dealership, sales and service	1 space for each 250 square feet of net floor area, plus 2 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 City
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
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 repair and oil change	2 spaces for each service bay, plus 1 space for each tow truck if applicable, plus adequate spaces for overnight parking, plus employee parking
Vehicle wash	2 spaces, plus 12 stacking spaces per bay for a semi or fully automatic wash, 1 stacking space per bay for a self-serve wash plus employee parking
Barber shop/beauty salons	2 spaces for each barber chair or station
Funeral home and mortuary	1 space for each 70 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 any additional spaces required for dining establishments, calculated separately as noted herein.
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
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
Indoor and outdoor recreational uses of public or private ownership or use	1 space for each 1,000 square feet of enclosed recreational space, plus 1 space for each employee on the largest typical shift, 2 spaces for each court (tennis, racquetball, etc., 6 for each hole of golf, or 1 for each member of a private club.
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 1 space for each employee on the largest typical shift

H. **Mixed Use Parking.** Parking for mixed-use development shall be determined applying the shared parking methodology established by the most recent edition of the Urban Land Institute Shared Parking book. This methodology shall be applied by compiling the required parking for all the proposed uses within the development as they would be required if developed separately, and then incorporating the shared parking calculations to realize efficiencies in complementary used can then allow for an overall reduction in required parking. As with traditional shared-parking projects, underlying parking space

requirements for each use shall be based on the City of Troy parking requirements noted herein or as otherwise modified by the provisions of this Article.

I. Parking Structure Design Standards and Requirements.

1. Providing of parking within structures or buildings shall serve to increase the value and convenience of related development, and to enhance, rather than detract from, the appearance of the overall development. Structured parking shall be designed and operated in a manner which does not negatively impact the safety and security of the public.
2. The exterior treatment of the parking structure element of a building complex shall be substantially the same in appearance to that of the main building element, and shall further be designed so that all architectural and vehicular lighting is shielded or screened from view from adjacent properties.
3. Parking structure development shall be in accordance with the City of Troy Safety and Security Standards for Parking Structures, as adopted by the City Council. (Including, but not limited to, Chapter 87 of the City Code.)
4. Parking structures as principal uses may be permitted by the City Council as a Special Land Use, following a report and recommendation by the Planning Commission. **[do we want to continue in this manner?]**

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

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.
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 City 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. Plans for the layout of off-street parking facilities shall be in accord with the minimum requirements set forth in Table 13.04-B.

Table 13.06-B Parking Dimensions				
Parking Angle	Stall Width	Aisle Width	Parking Stall Length	Curb to Curb
<i>0 Deg. to 15 Deg.</i>	9.0 Ft.	12 Ft.	23 Ft.	30.0 Ft
<i>16 Deg. to 37 Deg.</i>	9.0 Ft.	11 Ft.	19 Ft.	46.6 Ft
<i>38 Deg. to 57 Deg.</i>	9.0 Ft.	13 Ft.	19 Ft.	53.2 Ft
<i>58 Deg. to 74 Deg.</i>	9.0 Ft.	18 Ft.	19 Ft.	60.4 Ft
<i>75 Deg. to 90 Deg.</i>	9.0 Ft.	24 Ft.	19 Ft.	62.0 Ft

- 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.
5. **Illumination.** All illumination of parking lots or display areas shall be designed and installed to comply with the requirements of Section 13.04.
 6. **Landscaping.** The parking area shall provide screening, greenbelts, buffers and parking lot landscaping in accordance with Section 13.01. Where parking abuts required landscape islands or greenbelt areas, landscape islands or greenbelts shall be increased by two (2) feet to accommodate vehicle overhang. The parking space may be decreased by two (2) feet in length if curbing is provided.
 7. **Parking Abutting Sidewalks.** Where a parking space overhangs a sidewalk, the minimum sidewalk width shall be seven (7) feet.
 8. **Construction and Maintenance.**
 - a. Plans and specifications for parking areas shall be submitted and approved following the site plan review requirements of Article 6, Site Plan Review.
 - b. Required parking lots shall be installed and completed before issuance of an occupancy permit.
 - c. 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.

- d. Pavement shall be maintained in good condition. The visibility of pavement markings delineating parking spaces and directional control shall be maintained.
- e. All off-street parking and loading facilities required by this Section 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.
- f. The storage of and/or the repair of merchandise, materials, equipment or vehicles are prohibited on required off-street parking or loading spaces.

SECTION 13.07 TRAFFIC IMPACT ANALYSIS

A traffic impact analysis may be required 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.

SECTION 13.08 ACCESS MANAGEMENT

- A. **Where Required.** The standards set forth in this Section shall apply to all uses which access a public street.
- B. **General Requirements.**
 - 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.
 - 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.

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.
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.
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.
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.

C. Location and Spacing.

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.
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,

SECTION 13.09 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 13.10 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 unloading on public streets. 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 requirements set forth in Table 13.09-A.

Table 13.10-A 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 13.11 PEDESTRIAN ACCESS

- A. **Where Required.** The standards set forth in this Section shall apply to all uses that attract non-motorized and pedestrian traffic.
- B. **General Standard.** 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.
- C. **Safety Considerations.** To the maximum extent feasible, pedestrians shall be separated from vehicles.
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.
 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 eight (8) feet shall be required and shall meet American Association of State Highway and Transportation Officials (AASHTO) guidelines and applicable City Engineering design standards.

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.
 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.

5. **Walkways.**

- 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) feet in width. Drive aisles leading to main entrances shall have walkways on at least one (1) side of the drive aisle.
- 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.

SECTION 13.12 OFF-STREET DRIVE-THROUGH AND WAITING SPACE

A. **Where Required.** In addition to meeting off-street parking requirements, all uses which provide drive-through facilities for serving customers within their automobile shall meet the requirements of this Section.

B. **Standards.**

1. No more than one (1) drive-through servicing a pick-up window shall be permitted for each individual building, regardless of the number of uses. Dual ordering stations for drive-through food service shall not be permitted.
2. Ingress and egress to drive-through facilities shall be part of the internal circulation of the site and integrated with the overall site design. Clear identification and delineation between the drive-through facility and parking lot shall be provided. Drive-through facilities shall be designed in a manner which promotes pedestrian and vehicular safety.
3. Any speaker at drive-throughs shall not be audible from adjacent residential uses.
4. Single-lane drive-throughs may be located at the side of a building. Multiple-lane drive-throughs shall be located in a manner that will be the least visible from a public thoroughfare. Canopy design shall be compatible with the design of the principal building and incorporate similar materials and architectural elements.

5. Each drive-through facility shall provide adequate stacking space meeting the following standards:
- a. Each stacking lane shall be one-way, and each stacking lane space shall be a minimum of twelve (12) feet in width and twenty (20) feet in length.
 - b. Each drive-through facility shall have an escape lane a minimum of twelve (12) feet in width to allow other vehicles to pass those waiting to be served.
 - c. For car wash uses, a sufficient additional lane shall be provided for the active or passive drying of the vehicle after the wash. Where the drying process is to be passive, greater lane space shall be required at the discretion of the Planning Commission, applying accepted principles.
 - d. The number of stacking spaces per service lane shall be provided for the uses limited below. Each stacking space shall be computed on the basis of twenty (20) feet in length. When a use is not specifically mentioned, the requirements for off-street stacking space for the use with similar needs, as determined at the discretion of the Planning Commission, shall apply.

Use	Stacking Spaces per Service Lane
Banks, Pharmacy, Photo Service, and Dry Cleaning	4
Restaurants with Drive-Through	10
Auto Washes (Self Service)	
Entry	4
Exit	1 ½
Auto Washes (Automatic)	
Entry	10
Exit	2 ½

- C. **Off-Street Waiting Space.** Uses such as day cares, schools, hospitals, nursing homes, and churches shall provide safe and efficient means for passengers to be dropped off and picked up. Such off-street waiting spaces shall be clearly delineated so as to ensure the safety of pedestrians and motorists.