

MEMORANDUM



TO: LINDSAY BELL, AICP, DIRECTOR OF PLANNING
FROM: RICK MEADER, LANDSCAPE ARCHITECT
SUBJECT: PROPOSED REVISIONS TO LANDSCAPE ORDINANCE
AND LANDSCAPE DESIGN MANUAL
DATE: MAY 3, 2026

The following memorandum presents a comprehensive set of proposed revisions to Section 5.5 of the Zoning Ordinance (Landscape Standards) and the Landscape Design Manual. These updates are intended to modernize the City's landscape requirements, address identified gaps and inconsistencies, support evolving development patterns—particularly urban multifamily housing—and advance community goals related to aesthetics, sustainability, and long-term maintenance. The proposed changes range from more significant policy updates to minor edits, each aimed at improving clarity, usability, and alignment with current City practices.

Attached are proposed revisions to Section 5.5 of the Zoning Ordinance (Landscape Standards) and the Landscape Design Manual. Staff proposes to make a number of modifications with these objectives in mind:

- Addition of a section for urban multifamily housing developments that have reduced tree requirements to recognize that denser configurations will not have as much space for trees.
- Add green development options to the urban multifamily option that would provide some incentives for developers to incorporate green roofs and other features to their developments.
- Increase parking lot interior area requirements for industrial parking lots to help reduce the heat island effect of large parking lots.
- Removal of some requirements or allowances that aren't being used by the city or developers.
- Miscellaneous cleanup including inconsistencies, errors, typos.

A number of these changes could be considered as significant, and a number of others could be considered as minor edits. A summary of the proposed changes is provided below.

MORE SIGNIFICANT CHANGES

1. Urban Multifamily Housing Development Standards

- a. Reduced number of multifamily unit trees and interior drive trees required
- b. Addition of shrub requirement to partially offset the reduction in trees required and to increase the plant diversity in such developments

- c. Addition of a list of green development options that could be offset by a reduction in trees provided
- d. Limited use of these standards to zoning districts where increased density is desired by the city

2. Street Tree Issues

- a. Add a requirement for a minimum number of interior drive trees placed in front of multifamily housing buildings to create a more consistent distribution of those trees and a more attractive appearance in those developments.

3. City West

- a. Add right-of-way landscaping requirements for City West developments – they weren't included in the City West zoning ordinance (Section 5.5.3.B.ii.g).

4. Heat Islands

- a. In Section 5.5.3.C.iii, removal of the lower parking lot landscape area requirement for Industrial developments so all developments now have the same requirements – to help reduce the heat island effect of large parking lots. This complies with a recommendation from the 2025 Master Plan.

5. Removal of the requirement for a Landscape Maintenance Agreement (5.5.6.B)

- a. Continued maintenance of the landscaping is already required by Section 5.5.6 without that agreement.
- b. We haven't required those agreements in over eleven years.

PROPOSED MINOR CHANGES

Requirements for Landscape Plan

- Section 5.5.2:
 - Add requirement that a landscape plan be created by a licensed professional landscape architect – when they haven't been, the plans have invariably been deficient and required multiple reviews to get them right.
 - Add requirement that trees be at least 10 feet from underground sanitary lines per Engineering's request.

Public Right-of-Way Greenbelt Issues

- Section 5.5.3.B.ii.g: Remove allowance to reduce greenbelt plantings if a wall is provided. This has never been used and is contrary to desire for attractive landscaping.
- Table 5.5.3.B.ii.f:

- Remove “Average of 50-foot” greenbelt width for Residential (keep 34 foot minimum) – average is difficult to calculate and provide.
- Correct deduction of driveway corner clearance area from 25 feet to 10 feet to match the ordinance (Section 5.9).
- Section 5.5.3.B.iv:
 - Allow use of metal decorative fence instead of specifying wrought iron, which is extremely expensive and is not readily available.
 - Add item d: A reduction in plantings required.

Parking Lot Requirement revisions

- Section 5.5.3.C.ii.f: Remove 2-foot maximum width of curb openings for storm water conveyance.
- Figure 5.5.3.C.iii: cleanups and clarifications added.
- Section 5.5.3.C.iv.b: Change “wide” to “deep” to clarify size of greenspace required for perimeter trees.
- Section 5.5.3.C.iv.f: Clarify that a tree can't be triple-counted if a greenbelt tree is within 15 feet of both a parking lot edge and accessway drive edge.
- Section 5.5.3.C.iv.h: Remove unnecessary text regarding placement of evergreen trees along parking lot perimeter.
-

Building Foundation Landscaping

- Section 5.5.3.D.ii a and b: Remove excess verbiage.
- Section 5.5.3.D.ii c: Add note that large areas of mulch shall not be considered as part of the required landscaping area (areas should be dominated by plantings, not mulch, but mulch areas between those plantings won't be deducted).

Subdivision Planting Requirements (5.5.3.F)

- Section regarding Island and Boulevard Planting has been added for each different type of subdivision to make it clear the standards apply to each of those types of subdivisions.

Multi-Family/Attached Dwelling Units

- Section 5.5.3.F.iii.b: Add requirement for a minimum number of street trees to be placed between the building and the road, based on the number of units in the building to improve the appearance of interior drives.
- Section 5.5.3.F.iv Urban Multi-Family/Attached Dwelling Units: Added per the recommendation of former Planning Commissioner Gary Becker to provide allowance for denser developments in certain designated areas of the city where such density is desirable.

Non-Residential Development

- Section 5.5.3.F.iv.b.(6): Restored greenbelt width requirement that had inadvertently been omitted during the last ordinance revision.

Maintenance

- Section 5.5.6.B: Remove the requirement for a Landscape Maintenance Agreement. We haven't required it and is not necessary as other sections of the ordinance require maintenance of the landscaping.
- Section 5.5.6.D: Phragmites and Japanese Knotweed Control – add verbiage stating that treatment report shall be provided to the City Landscape Architect or designated alternate – this puts into the ordinance what is already required.

LANDSCAPE DESIGN MANUAL CHANGES

- LDM 3: Add a sentence stating that woodland replacement trees may be used to meet the Detention Pond tree requirement. We were already allowing it but this codifies the allowance.
- LDM 9: Requirement for live signature on stamping sets was removed as the current system most applicants use for submitting plans does not allow this to occur. Modern requirements allow electronic stamps and signatures.
- LDM 11.e: Add text stating trees shall be in good health
- LDM 11.g: Excess verbiage removed.

PLANNING COMMISSION ACTION

The Planning Commission is asked to hold the scheduled public hearing, review the draft text amendment for changes to the Landscape Ordinance and Landscape Design Manual and make a recommendation for approval or denial to the City Council.

PROPOSED TEXT AMENDMENT 18.307 - DRAFT

STATE OF MICHIGAN
COUNTY OF OAKLAND
CITY OF NOVI
ORDINANCE NO. 18.307

AN ORDINANCE TO AMEND THE CITY OF NOVI CODE OF ORDINANCES, ORDINANCE 14-271, ZONING ORDINANCE, AT THE FOLLOWING LOCATIONS: ARTICLE 5.0, "SITE STANDARDS," SECTION 5.5 "LANDSCAPE STANDARDS: OBSCURING EARTH BERMS AND WALLS, RIGHTS-OF-WAY BUFFERS, AND INTERIOR AND EXTERIOR LANDSCAPE PLANTINGS"; AND UPDATE THE LANDSCAPE DESIGN MANUAL, IN ORDER TO ADD STANDARDS FOR URBAN-STYLE DEVELOPMENTS, IMPROVE CLARITY, CORRECT ERRORS AND COMPLY WITH RECOMMENDATIONS OF THE 2025 MASTER PLAN.

THE CITY OF NOVI ORDAINS:

Part I.

That the City of Novi Zoning Ordinance, as amended, Article 5.0, Site Standards, Section 5.5, "LANDSCAPE STANDARDS: OBSCURING EARTH BERMS AND WALLS, RIGHTS-OF-WAY BUFFERS, AND INTERIOR AND EXTERIOR LANDSCAPE PLANTINGS" is hereby amended to read as follows:

Section 5.5 LANDSCAPE STANDARDS: OBSCURING EARTH BERMS AND WALLS, RIGHTS-OF-WAY BUFFERS, AND INTERIOR AND EXTERIOR LANDSCAPE PLANTINGS

1. Intent. [UNCHANGED]
2. **Landscape Plan Required.** A landscape plan shall be submitted for:
 - any new commercial or residential development
 - any addition to an existing building that is equal to or greater than a 25% percent increase in the overall square footage of the building or 400 square feet, whichever is less
 - any increase to an existing parking lot of 10 spaces or more (or equivalent area), or 10% of the existing paved area, whichever is less.

With the exception of Section 5.5.3.G, Individual (Non-Subdivision/Non-Site Condominium) Single Family Street Tree Requirements, an owner of a single-family home-site shall not be required to comply with the provisions of this Section.

All landscape plans shall be prepared by a licensed professional landscape architect in accordance with the requirements of this Ordinance and the requirements of the City of Novi Landscape Design Manual, as adopted by the City Council by resolution and which may similarly be amended by Council resolution from time to time.

General Landscape Notes:

- For all numerical calculations, round the required square feet or number of plants to the nearest whole number.
- Trees are to be located at least 10 feet away from utility structures including catch basins and manholes and underground sanitary lines, and ~~should be~~ at least 5 feet away from other underground utility lines whenever possible.
- Plantings may be in formal or informal arrangements.

3. Landscape Requirements.

A. **Residential Adjacent to Non-Residential** [UNCHANGED]

B. **Adjacent to Public Rights-of-Way.**

i. Intent. [UNCHANGED]

ii. Requirements. Landscape plantings shall be installed and maintained adjacent to existing or proposed public rights-of-way according to the standards set forth on the Right-of-Way Landscape Screening Requirements Chart (Table 5.5.3.B.ii.f.E), and as otherwise established in this Ordinance, including the individual zoning district, and in the Landscape Design Manual.

a. – f. [UNCHANGED]

~~g. If a wall is provided in accordance with the City standard, a reduction of up to thirty-three (33) percent of the required greenbelt plantings is allowed in the right-of-way greenbelt in front of the parking. This reduction does not apply in cases where parking is between the right-of-way and the building and required landscaping is already reduced.~~

h. [UNCHANGED]

i. Necessary access ways from public rights-of-way through required landscaped areas shall be permitted. The width of the access drive(s) shall be subtracted from the lineal dimension used to determine the minimum number of trees and shrubs required for greenbelt landscaping and street trees (see illustration in Table 5.5.3.B.ii.f, Footnote ~~10~~ 5 below for points of measurement for each).

5.5.3.B.ii.f Right-of-Way Landscape Screening Requirements									
			Requirements						
Use	Zoning	Berm Located	Greenbelt width (feet)	Min. berm crest width (feet)	Min. Berm Height (feet)	3 Foot Wall/ Fence	Deciduous canopy or large evergreen trees: 1 per X linear feet frontage	Deciduous sub canopy trees: 1 per X linear feet frontage	In <u>the</u> area between sidewalk and curb: 1 deciduous canopy tree per X linear feet frontage
Footnotes				1, 2, 3	1, 2, 3	2, 4	5-7 <u>4, 5</u>	5, 6, 7	8, 9, 10 <u>6</u>
Single Family Residential	R-A R-1 R-2 R-3 R-4		34	4	4		40	25	35
Two-Family Residential	RT	Adjacent to parking	20	2	3		35	25	35
		Not adj to parking	30	2	3		40	25	35
Multi Family Residential	RM-1 RM-2 MH	Adjacent to parking	20	2	3		35	25	35
		Not adj to parking	34	2	3		35	25	35
Residential PRO (13)			Avg. 50 <u>Min. 34</u>	4	4		40	25	25

DRAFT 6/5/26

Commercial / Office	NCC C OS-1 OSC OST B-1 B-2 B-3	Adjacent to parking	20	2	3		35	20	35
		Not adjacent parking	25	-	-		60	40	35
		Parking between ROW and at least 67% of primary building (123)	20	2	3		70	40 Plus 3 shrubs per 40 lf	35
Industrial	I-1 I-2	Adjacent to parking	25	3	3		40	35	45
		Not adjacent parking	25	-	-		60	40	45
Downtown	TC TC-1	Adjacent to parking	20	-	-		25 (+Z)	15 (+Z)	-
		Not adjacent parking	-	-	-		30 (+Z)	20 (+Z)	-
Misc. Large Use	P-1 EXO RC FS	Adjacent to parking	20	2	3		35	20	45
		Not adjacent parking	25	-	-		45	30	45
Planned Suburban Low Rise	PSLR	Parking and buildings adjacent to a section line road ROW right-of-way	50	4	3	Not Allowed	35	20	35
		Parking adjacent to other ROW right-of-way To front of principal building per Zoning Ordinance Section 3.21.2.A.ii		4	3	Not allowed	35	20	35

Notes to table:

(1) Shrubs in front of parking areas must provide minimum screening opacity of 80% in winter and 90% in summer and be maintained at a height of at least 3 feet. The use of shrubs in place of the required berm requires a Planning Commission waiver.

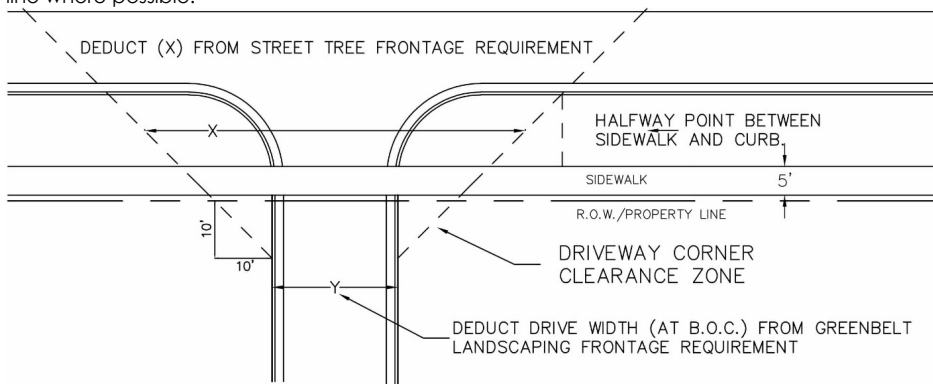
~~(2) A wall may be used instead of a berm. If a wall, consistent with footnote (6) below, is provided in front of parking areas, a reduction of up to 33% of the required greenbelt plantings (not street trees) is allowed in the parking greenbelt area. A Planning Commission Waiver is required to use a wall instead of a berm. An ornamental fence with brick piers and shrubs may be used instead of a berm if approved by the Planning Commission as a landscape waiver. A Planning Commission waiver is required to use a wall or an ornamental fence with brick piers and shrubs instead of a berm.~~

(3) Freestanding walls shall be constructed of masonry or concrete with all exterior sides of face brick with a suitable cap.

(4) Sub-canopy trees are to be used under overhead utilities at a rate of 1.5 sub-canopy trees for each one canopy tree required. If columnar/fastigate varieties are used, 2 sub-canopy trees per canopy tree must be used. Wherever possible, deciduous canopy trees are to be used as street trees.

~~(5) Sub-canopy trees used in foundation landscaping may also count toward the right-of-way sub-canopy requirement if the building is located at the rear of the required greenbelt width.~~

~~(6) (5) The width of access aisles driveways (X) through the greenbelt shall be deducted from the basis of calculation (see illustration in footnote #10 below). In situations where sidewalks are not required, the street trees shall be placed midway between the curb line and right-of-way line where possible.~~



FRONTAGE MEASUREMENT

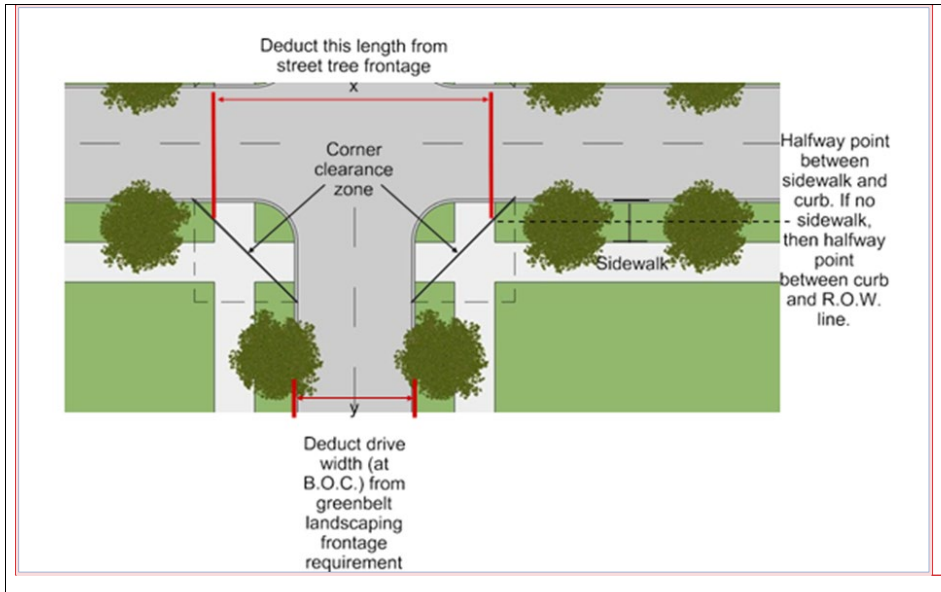
~~(7) (6) Street trees shall not be permitted within the 25-foot corner clearance zone (Section 5.9). Roadways under Road Commission for Oakland County (RCOC) jurisdiction shall utilize RCOC standards for sight distance in locating street trees. If RCOC does not approve any or all of the trees, those trees shall not be planted, with no penalty to the applicant.~~

~~(8) (7) In the Town Center districts, deciduous canopy/large evergreen trees or subcanopy trees are required in the greenbelt, but not both. One or the other requirement shall be met, not a reduced combination of both types.~~

~~(9) (8) These requirements only pertain to zoning districts B-1, B-2 and B-3.~~

~~(10) When the development fronts on one or more major thoroughfare(s), the right-of-way greenbelt along that thoroughfare shall be an average of 50 feet width, with a minimum of 34 feet.~~

~~The width(s) of the corner clearance zone(s) shall be deducted from the basis of the calculation for street trees (see illustration below).~~



Commented [LB1]: Remove this figure

5.5.3.B.ii.g Right-of-Way Landscape Screening Requirements – City West – Sec 3.34.6							
	Minimum requirements						
	Greenbelt width	Berm Crest width	Berm Height	3 Foot Wall	Canopy Trees	Sub-canopy trees	Street Trees
<u>Arterials (Grand River, Beck)</u>							
Adj to pkg	20	0	0	Yes	1 per 30 ft ²	1.5 per 30 ft ²	0
Not adj to pkg	20	0	0	No	1 per 60 ft ²	1 per 40 ft ²	0
<u>Nonresidential collectors and local streets</u>							
Adj to pkg	10	0	0	Yes	0	1 per 15 ft	1 per 50 ft
Not adj to pkg	10	0	0	No	0	1 per 15 ft	1 per 50 ft
<u>Private Drives, Aisles and Shared Access Drives</u>							
Adj to pkg	10	0	0	Yes	0	1 per 15 ft	1 per 50 ft
Not adj to pkg	10	0	0	No	0	1 per 15 ft	1 per 50 ft
<u>I-96 Highway ROW</u>							
Adj to pkg	30	3	4	No	1 per 35 ft	1 per 20 ft	0
Not adj to pkg	75	3	4	No	1 per 60 ft	1 per 40 ft	0

NOTES TO TABLE:

1: Street trees based on overall frontage, not individual lots

2: Canopy trees OR subcanopy trees, not both

- iii. Private Roads. All private roads and access roads not covered in other sections of this ordinance shall be landscaped with deciduous canopy street trees at a rate of 1 tree per 35 linear feet along both sides of the road, with the same allowances for deducting clear vision zones as noted above in 5.5.3.B.ii.f Footnote ~~5 10~~.
- iv. Reduction or Waiver. Except as provided in Section 5.5.3.A.v.a.(3), which governs relief relative to berm height, the Planning Commission may reduce or waive the landscaping screening/buffer right-of-way requirements when it determines that practical difficulties exist due to the parcel size or configuration, or where the design of the site would be enhanced by an alternative design solution while still meeting the intent of this Section. Examples of such situations include, but are not limited to, when:
 - Preservation of regulated woodlands or wetlands or existing trees will occur;
 - The grade of the site is higher than the road and naturally provides a screen;
 - Significant architecture or historic buildings, water features, views of natural resources or vistas will be preserved;

The Commission may, as part of its exercise of such authority, allow the:

- a. Use of a wall instead of a berm; or
- b. Use of a ~~wrought iron~~ decorative metal fence with brick accents or other material of equal aesthetic quality and durability with plantings instead of a berm; or
- c. Use of shrubs/hedge instead of a berm; or
- d. A reduction in plantings required.

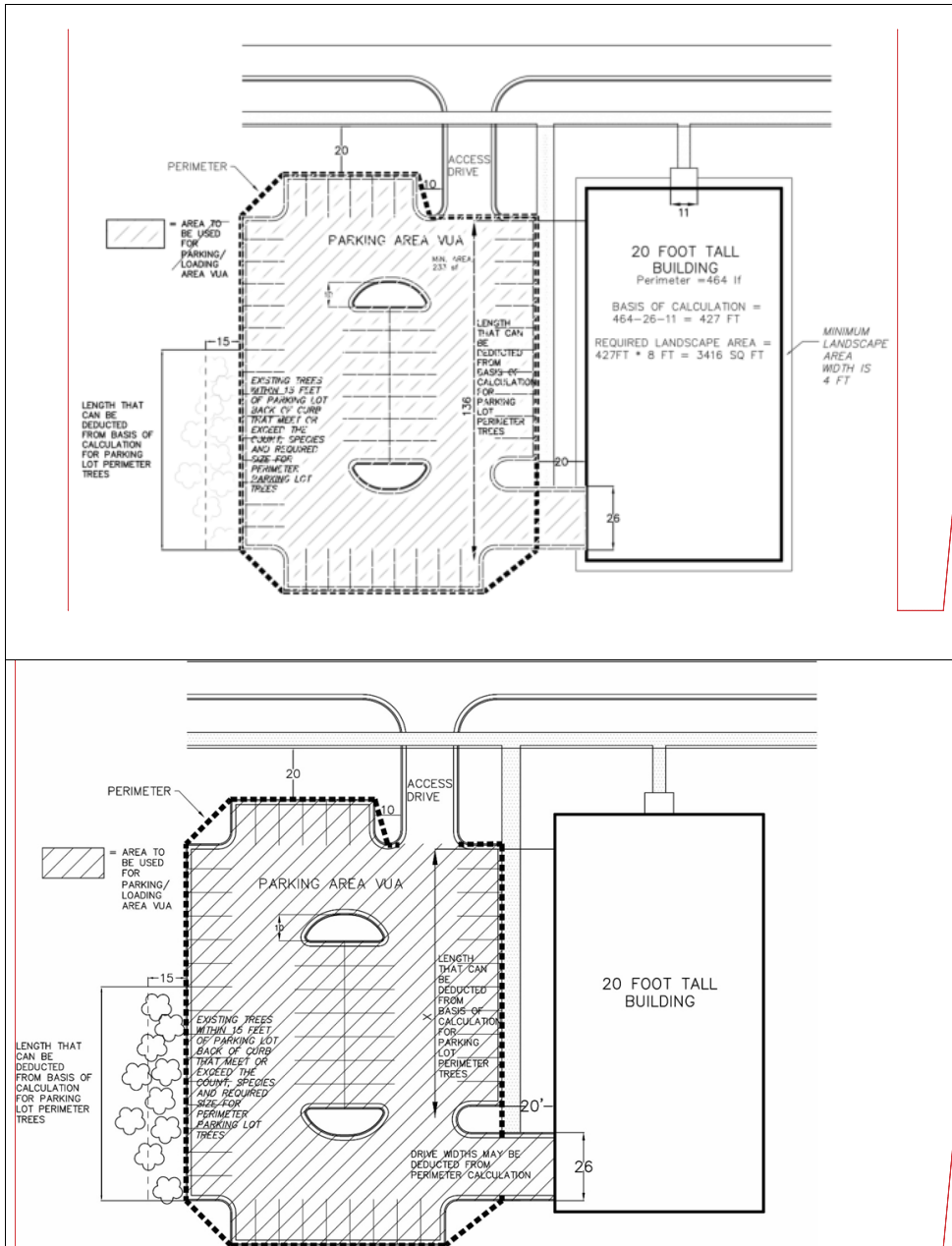
C. Parking Area Landscaping Requirements.

- i. Intent. [UNCHANGED]
- ii. General Requirements.
 - a. The design and layout of all parking lots and islands shall be subject to review and approval by the City of Novi.
 - b. End islands are to conform to the general requirements in Section 5.3.12.
 - c. ~~b- Interior islands are to confirm to Section 5.5.3.C.ii.h~~
 - d. ~~e-~~ Creative island configuration and design is encouraged, such as islands between rows of parking in long, wide planting strips, and/or depressed islands to detain storm water.
 - e. ~~d-~~ The use of pedestrian walkways in parking lot islands is encouraged, if the islands' paths are at least 5 feet wide with no vehicle overhang or seven (7) feet wide with vehicle overhang and a ten (10) foot planting area width is maintained.
 - f. ~~e-~~ Landscaped islands are to be installed with 6-inch curbs to protect landscaping from damage by vehicles (4 inches where vehicles are to overhang the curb). However, periodic openings in curbs, ~~which do not exceed 2 feet in width~~, shall be permitted for sidewalks and for the purpose of conveying storm water run-off across an island.
 - g. ~~f-~~ If more than one (1) island is provided in a parking lot, they are to be distributed evenly throughout the lot.
 - h. ~~g-~~ Each parking lot landscape island shall have:
 - (1) A minimum of ~~two-hundred two hundred~~ (200) square feet in area.
 - (2) A minimum of ~~two-hundred two hundred~~ (200) square feet in unpaved area per tree planted in an island.

- (3) A minimum dimension of ten (10) feet in width from back of curb to back of curb.
 - (4) A minimum of three (3) feet between the back of a curb and a tree trunk.
 - (5) Islands that project into the parking lot from the side of the lot may be a minimum of 130 square feet in area if that island is at least 10 feet wide and adjoins 70 square feet or more of green space.
 - i. ~~h.~~ For any development other than a single-family or two-family dwelling, the square footage of landscape islands required shall be as specified in the Interior Parking Area Landscape Islands and Canopy Tree Chart (Table 5.5.3.C.iii).
 - j. ~~i.~~ Wheel stops or raised curbing shall be installed to prevent vehicles from encroaching more than two (2) feet into any parking landscape area. When adjacent ninety (90) degree parking stalls are reduced from nineteen (19) to seventeen (17) feet in length, the required six (6) inch curbs shall be reduced to four (4) inches in height. This applies to both landscape and sidewalk overhangs. Where vehicles overhang a sidewalk, the sidewalk shall have a minimum width of seven (7) feet.
 - k. ~~j.~~ No plantings with a mature height greater than twelve (12) inches shall be within ten (10) feet of fire hydrants. Plant materials shall not block the visibility of the hydrant or Fire Department Connections.
 - l. ~~k.~~ Islands are to have adequate drainage to the nearest catch basin or adequate areas of amended sandy loam soil, as specified on the plan, to achieve proper drainage. Depressed (sunken) islands are allowed if:
 - (1) the plantings are salt -tolerant
 - (2) the islands are designed to provide drainage adequate for survival of the island plantings
 - (3) they meet all City of Novi engineering standards.
 - m. ~~i.~~ Paint, contrasting brick or concrete pavers may be used to delineate stall lines within parking areas.
 - n. ~~m.~~ Any area within a parking lot not dedicated to parking use, driveways, or sidewalks exceeding ~~one hundred~~ one hundred (100) square feet, shall be landscaped with a minimum of lawn or other living ground cover.
 - o. ~~n.~~ All parking lot landscaped areas required herein shall contain at least 1 deciduous canopy tree and lawn or other plantings/ groundcovers.
 - p. ~~e.~~ The total square footage of required interior landscape islands shall be provided as follows:
 - (1) – (3) [UNCHANGED]
 - (4) No bay of parking (defined herein as a single row of ~~side-by-side~~ side-by-side parking spaces) greater than 15 parking spaces in length shall be provided except as noted in (5).
 - (5) – (6) [UNCHANGED]
 - (7) If the parking lot layout requires more islands/area than the table below would indicate (such as to break up long bays), each of those additional islands must still meet the area and planting requirements of Section 5.5.3.C.ii. ~~g-h~~ but perimeter trees may be used in outer and corner islands to help landscape those islands.
- iii. **Parking Lot Greenspace and Tree Requirements.** The following chart is to be used to calculate the square footage of island space and the number of canopy trees required for Parking Area Interior and Perimeter Landscaping.

5.5.3.C.iii Interior Parking Area Landscape Islands and Perimeter Canopy Tree Chart					
	A	B	C	D	E
Category* Category 1: All zoning districts except for 1-1 and 1-2 Category 2: 1-1, 1-2	Total square footage of landscaped islands for VUA areas less than or equal to 50,000 square feet equals:	Total square footage of landscaped islands for VUA beyond the initial 50,000 sq. ft. (A) equals:	Total square footage required in interior parking lot islands equals:	Total number of interior landscape deciduous canopy trees:	Perimeter Deciduous Canopy Trees required for parking lot and access drives:
1	VUA × 7.5%	(VUA - 50,000) × 1.0%	A + B	(A + B)/200	Perimeter (If LF) /35
2	VUA × 6%	(VUA - 50,000) × 0.5%	A + B	(A + B)/200	Perimeter (LF) /35
Footnotes	1, 2	1, 2		3, 5	4, 5
Notes to table:					
<p>1. Vehicular Use Area (VUA) includes parking spaces, loading/unloading areas and access aisles within the parking lot. It does not include drives to the Vehicular Use Area or long drives without parking spaces adjacent. (See Figure 5.5.3.C.iii)</p> <p>2. If a vehicular use area is greater than 50,000 sq. ft., the landscape requirement for the first 50,000 sq. ft. of VUA is to be calculated per Column A, and the requirement for the remaining VUA is to be calculated per Column B. As an example, a 65,000 square foot parking area in Category 1 would require 50,000 x 7.5% plus 15,000 x 1% = 3750 sq. ft. + 150 sf = 3900 sq. ft. landscape area within the parking lot boundary.</p> <p>3. Corner islands projecting into the parking area and areas at the ends of bays must also have trees planted in them and be at least 200 sq. ft. in area. Perimeter trees may be used in corner and edge islands if the required number of interior trees is less than the total number of islands and corners that need trees.</p> <p>4. Perimeter trees are required for parking areas and access drives to and between parking areas.</p> <p>5. In areas with overhead utility lines, sub-canopy trees may should be used.</p>					

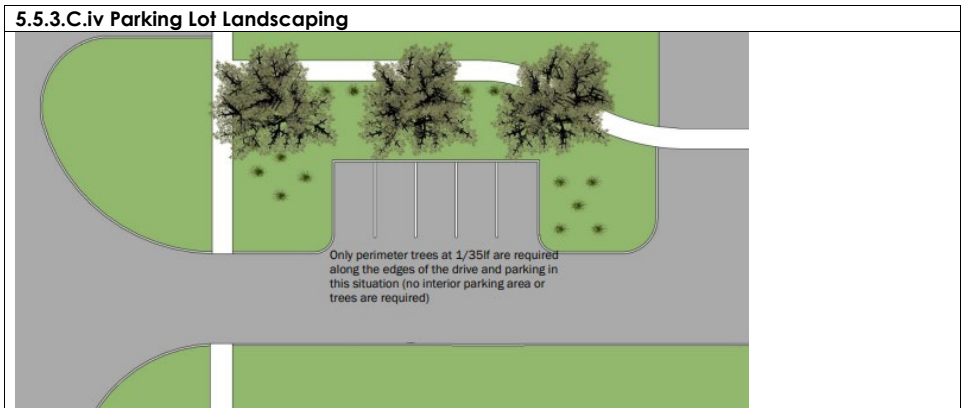
5.5.3.C.iii Parking Lot Landscaping



Commented [LB2]: IMAGE TO BE REMOVED

Commented [LB3]: NEW IMAGE TO REPLACE

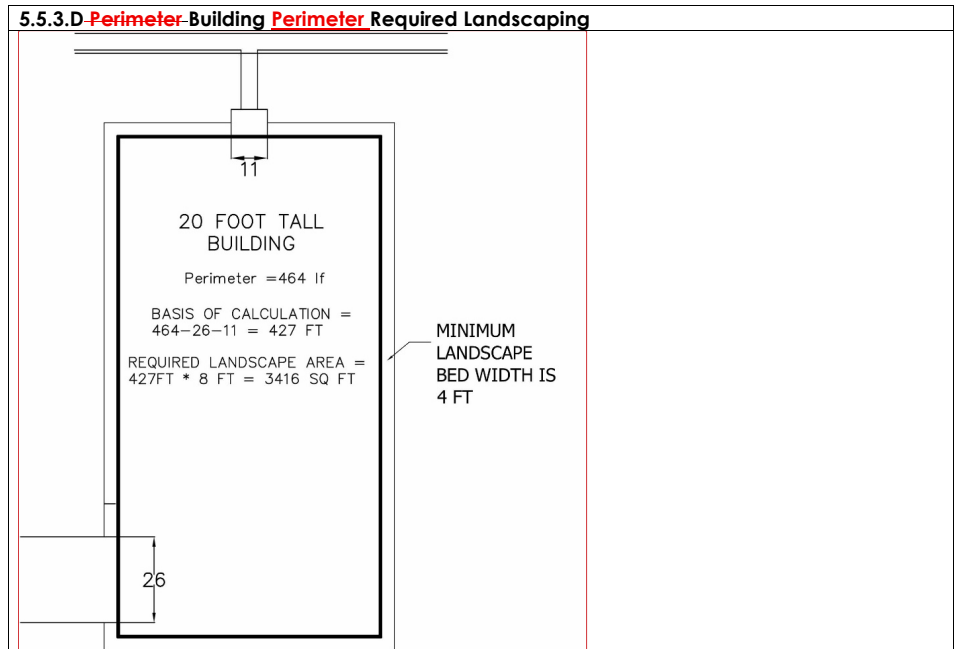
- iv. Parking Lot Perimeter Trees
 - a. [UNCHANGED]
 - b. A landscape area at least 10 feet ~~wide-deep~~ (measured perpendicular to the curb) is required along parking lot perimeters and access drives for planting the required trees.
 - c. – e. [UNCHANGED]
 - f. Greenbelt canopy trees within 15 feet of the back of curb of an access drive may double-count toward the access drive perimeter tree requirement, but a tree within 15 feet of both may not be triple-counted.
 - g. [UNCHANGED]
 - h. While deciduous canopy trees are preferred as perimeter trees, where they would provide desired screening between properties, large evergreen trees may be used for up to 25% of the required perimeter trees. ~~Sufficient space should be provided between the tree and the curb to allow the evergreens to maintain their branches down to ground level when they mature and the lower branches must be maintained as long as they are healthy.~~
 - i. – j. [UNCHANGED]



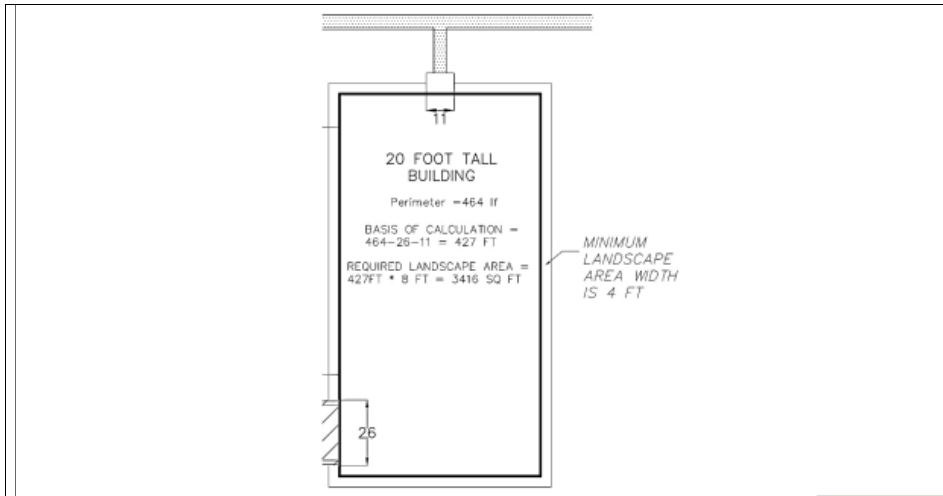
- v. Waiver. [UNCHANGED]
- D. Building Foundation Landscape Requirements.**
- i. Intent. [UNCHANGED]
 - ii. Requirements. For all buildings or accessory buildings requiring site plan review, the following shall apply:
 - a. There shall be, as a minimum, interior-site foundation landscaping square footage equal to the quantity calculated by multiplying the entire perimeter of the building, less ~~the paved access points including walkways to the building (but not including those walkways or drives immediately along the building doorways and vehicular entrance ways to the building interior (i.e., garage doors),~~ by eight (8) feet.
 - b. Landscaped planting beds shall be placed immediately adjacent to the building for ~~as much of the building as possible,~~ with a minimum of no less than 75% of the building foundation having landscaping, ideally more. Landscape beds must

have a minimum width measuring four feet from the building. Creativity ~~in~~ of the physical configuration of the landscape planting bed shape and dimension is strongly encouraged. ~~Applicant is encouraged to provide additional greenspace adjacent to the building wherever possible.~~

- c. ~~Landscape beds shall have a mixture of trees, shrubs, perennials, ornamental grasses and/or annuals. Lawn areas or large areas of mulch shall not be considered as part of the required landscaping area.~~
- d. ~~e.~~All foundation landscaping areas shall be labeled in square feet on the landscape plan. ~~Lawn areas shall not be considered as part of the required greenspace.~~
- e. ~~a.~~For the front and any other facades visible from a public street, a minimum of sixty (60) percent of the exterior building perimeter shall be greenspace planted with a mix of trees, shrubs and groundcovers, perennials, grasses, annuals and bulbs. ~~Deciduous canopy and/or large evergreen trees and subcanopy trees may also be included around the building if separated from the building by the appropriate distances.~~
- f. ~~e.~~If the front and/or a side of the building is at the rear line of the required right-of-way greenbelt, trees included in the foundation plantings of those sides of the building may also count toward the required greenbelt plantings.



Commented [LB4]: New image



Commented [LB5]: Image to be deleted

- g. ~~f.~~ With respect to projects within the TC and TC-1 districts, the Planning Commission may ~~waive the 8-foot width calculation requirements~~ approve a waiver to allow less planted area if equivalent ~~additional planting and/or~~ decorative paving area or amenities are added adjacent to the building.
- h. ~~g.~~ There shall be landscaping adjacent to patios ~~and~~ outdoor dining areas.
- i. ~~h.~~ In instances where the building has a first floor overhang greater than 2 feet, the landscaping required under this subsection shall begin at the outside edge of the overhang in order to ensure the landscaping receives sufficient sun and water. In those cases, the extent of the overhang should be shown on the landscape plan with a dashed line or other means.
- j. ~~i.~~ Foundation landscaping for building perimeter occupied by loading/unloading areas, drivethrough lanes or sidewalks along the building may be located on the outside of these areas without requiring a landscape waiver.
- k. ~~j.~~ In situations where the building use does not allow landscaping immediately adjacent to the building, alternate placements of required foundation landscaping may be proposed elsewhere on the property. In that case, the alternative area(s) should be clearly labeled as foundation landscaping, with its area in square feet. A Planning Commission waiver is required for the alternate positioning for all cases except as noted above.
- l. ~~k.~~ Plantings shall be no taller than 12 inches when below or adjacent to a building's Fire Department Connection.

iii. Waiver Procedure. [UNCHANGED]

E. Detention/Retention/Sedimentation Basin Landscape Requirements. All detention basins shall be planted with the minimum requirements as set forth in the Landscape Design Manual and shall be designed to have a natural appearance, utilizing ~~natural-looking~~ natural-looking contours whenever possible. Detention basin maintenance shall be provided per Ordinance Chapter 12, Storm Water Management and the plantings shall be maintained per Section 5.5.6 and Section 5.5.7.

F. Subdivision Planting Requirements.

- i. Single-Family Platted Subdivisions or Residential Site Condominiums
 - a. Intent. [UNCHANGED]
 - b. Requirements Adjacent to Major Thoroughfares. [unchanged]
 - c. Street Trees ~~and Boulevard~~ Planting
(1) – (4) [UNCHANGED]
 - d. Island and Boulevard Planting
 - (1) All islands, boulevards and e a s e m e n t s s h a l l b e landscaped and irrigated. Islands within a cul-de-sac shall not have any plant materials that may obscure vision across the island between heights of three (3) feet to six (6) feet as m e a s u r e d f r o m t h e established street grade. See the Landscape Design Manual for additional requirements regarding the type and size of plantings.
 - (2) Island and boulevard plantings will not count toward the required street tree totals and must be maintained by the developer, property owner or homeowner's association, whichever is applicable.
 - (3) A landscape plan shall be submitted to the City for administrative approval by the homeowners association prior to planting any island or entry landscaping revisions.

- ii. Single-Family Residential Condominiums without lots/units
 - a. – b. [UNCHANGED]
 - c. Street Tree ~~and Boulevard~~ Planting
(1) – (4) [UNCHANGED]

 - d. [UNCHANGED]

- iii. Multi-Family/Attached Dwelling Units
 - a. Intent. The intent of this subsection is to create visually appealing multi-family residential areas that integrate natural resources into the overall landscape design.
 - b. Requirements. For all multiple-family or other development with attached dwelling units (other than a single RT dwelling on an individual lot) the following shall apply:
 - (1) Three trees for each dwelling unit on the first floor shall be provided across the site. At least 75% of those trees shall be deciduous canopy or large evergreen trees. The remainder can be sub-canopy or ornamental trees to add diversity to the site.
 - (2) In addition, there shall be one deciduous canopy tree along interior roads for every 35 feet of lineal interior roadway (excluding driveways, interior roads adjacent to public rights-of-way and parking entry drives), along each side of the roadway. The spacing of the deciduous canopy trees along the drive shall be a minimum of 25 feet and a maximum of 35 feet unless driveways require different spacing. In case of overhead utility lines, deciduous sub-canopy trees can be substituted for deciduous canopy trees at a rate of 1.5 sub-canopy tree for each 1 canopy tree. Those sub-canopy trees would not count toward the limit placed in subsection (1) above. ~~For purposes of the Financial Guarantee and Maintenance Bond, the trees along the interior drive can be counted as site landscaping, not street trees. Any street trees along public roads are considered to be street trees for Financial Guarantee and Maintenance Bond purposes.~~

There shall be trees placed between the interior drive and buildings at or exceeding these minimum rates:

- 3-4 connected units – 1 tree
- 5-7 connected units – 2 trees
- 8 or more connected units – 1 tree per 3 units, rounded up

For purposes of the Financial Guarantee and Maintenance Bond, the trees along private interior drives can be counted as site landscaping, not street trees. Any street trees along public roads shall be considered as street trees for Financial Guarantee and Maintenance Bond purposes.

- (3) A mixture of shrubs, subcanopy trees, groundcovers, perennials, annuals, and/or ornamental grasses shall be provided as foundation plantings covering at least 35% percent of the building perimeter facing the interior drive.
- (4) Parking lots for these developments shall meet the layout and landscaping requirements of Section 5.5.3.C but unit trees from Requirements section (1) may be used to meet the parking lot interior and perimeter tree requirements.

c. Island and Boulevard Planting

- (1) All islands, boulevards and easements shall be landscaped and irrigated. Islands within a cul-de-sac shall not have any plant materials that may obscure vision across the island between heights of three (3) feet to six (6) feet as measured from the established street grade. See the Landscape Design Manual for additional requirements regarding the type and size of plantings.
- (2) Island and boulevard plantings will not count toward the required street tree totals and must be maintained by the developer, property owner or homeowner's association, whichever is applicable.
- (3) If an island's or entry's landscaping is to be revised by the homeowner's association, a landscape plan shall be submitted to the City for administrative approval prior to planting.

iv. Urban Multi-Family/Attached Dwelling Units

- a. Intent. The intent of this subsection is to create visually appealing multifamily residential developments in areas where more density is desired. It is not intended for vertically mixed-use projects. It may only be used for projects proposed in the Town Center (TC and TC-1), RC and City West zoning districts. A waiver from the Planning Commission is required to use it in other districts.

Refer to the Town Center Study and the City West Design Manual for design guidelines. Where possible, pocket parks distributed across the development are desired for these urban multi-family residential projects.

- b. Requirements. For all multiple family development with attached dwelling units in the districts noted above the following shall apply:

- (1) One and one-half (1.5) tree for each dwelling unit on the first floor shall be provided across the site. At least 75% of those trees shall be deciduous canopy or large evergreen trees. The remainder

can be sub-canopy or ornamental trees to add diversity to the site.

- (2) In addition, there shall be one deciduous canopy tree along interior roads for every 50 feet of lineal interior roadway (excluding driveways, interior roads adjacent to public rights-of-way and parking entry drives), along each side of the roadway. The spacing of the deciduous canopy trees along the drive shall be a minimum of 35 feet and a maximum of 50 feet unless driveways require different spacing. In case of overhead utility lines, deciduous sub-canopy trees can be substituted for deciduous canopy trees at a rate of 1.5 sub-canopy tree for each 1 canopy tree. Those sub-canopy trees would not count toward the limit placed in subsection (1) above.

There shall be trees placed between the interior drive and the buildings at or exceeding these minimum rates:

- 3-4 connected units – 1 tree
- 5-7 connected units – 2 trees
- 8 or more connected units – 1 tree per 3 units, rounded up

For purposes of the Financial Guarantee and Maintenance Bond, the trees along private interior drives can be counted as site landscaping, not street trees. Any street trees along public roads shall be considered as street trees for Financial Guarantee and Maintenance Bond purposes.

Interior drive trees shall be located along the side of parking bays placed along an interior drive (no additional parking lot perimeter or interior trees are required for such bays).

- (3) At least 2 shrubs per ground floor dwelling unit shall be planted around the development. These shrubs are not to be used as part of the required foundation plantings noted below – ideally, they will be fruiting native shrubs planted in masses on the site to support birds and other wildlife.
- (4) A mixture of shrubs, groundcovers, perennials, annuals, and/or ornamental grasses shall be provided as foundation plantings covering at least 25% percent of the building face(s) fronting on all interior drives.
- (5) Parking lots for these developments shall meet the layout requirements of Section 5.3. Landscaping shall be provided as follows:
- a. 1 interior canopy tree in an island at least 200sf in area per 10 spaces
 - b. Endcap islands with trees are required and may be met with the interior trees noted above
 - c. Perimeter canopy trees shall be provided at 1 per 35lf of perimeter except where buildings are within 20 feet of the parking lot

- (6) Multi-family unit trees may be used to meet the parking lot interior and perimeter tree requirements but not the interior drive requirements.

- (7) Options for Credit – In order to offer design flexibility and incentives to provide "green" design alternatives, the following options are available (calculations for any of the options utilized must be provided on the landscape plan):
 - a. Green roof on buildings or carports/garages:
 - 1) Minimum runoff coefficient C factor reduction to 0.45
 - 2) 700sf = 1 interior drive tree (up to 25% of requirement) or 700sf = 1 multifamily unit tree (up to 10% of requirement)
 - b. Green (living) wall on buildings or garages:
 - 1) 700sf = 1 interior drive or multifamily unit tree
 - 2) Up to 10% of required trees
 - c. Living retaining wall – 1000 sf = 1 multifamily unit tree (or drive tree if it's adjacent to a drive).
 - d. Clusters of large native shrubs – in addition to shrub requirements noted above
 - 1) 8 shrubs = 1 multi-family unit tree – more than 8 shrubs can be in a cluster
 - 2) Up to 15% of the multifamily unit canopy tree requirement
 - e. Flower boxes on all windows of at least 3 lowest floors of building – especially for designs with no greenspace at base of building
 - 1) Boxes covering at least 25% of building linear frontage facing road may count toward the building foundation landscaping requirement
 - 2) Box material shall be durable and weather-resistant
 - 3) Developer shall provide initial perennial plantings in all boxes – it is understood that residents may change plantings over time, at no risk to the developer.
 - f. Boulevard with densely-planted center island beyond entry island
 - 1) 700sf = 1 canopy street tree
 - 2) Lawn would not qualify for this credit
 - g. Pollinator/Butterfly/Rain gardens:
 - 1) 700sf = 1 multifamily unit tree or 8 required multifamily unit shrubs (not foundation plantings)
 - 2) No limit on size or reduction
 - h. Natural area preservation within the developed portion of a site:
 - 1) Preserved trees 4" dbh and larger in a natural area can count toward multifamily unit tree requirement (one for one basis) for up to 50% of requirement IF they are desirable Michigan native species (i.e. not boxelder) or non-native species
 - 2) Mulch or limestone fines ADA-compliant pathway is created through nature area

- 3) Natural groundcover is kept and maintained in a natural condition
- 4) All invasive species listed below are removed and maintained for 3 years – to be maintained by HOA or owner after that:
 - Buckthorn (*Rhamnus spp.*)
 - Honeysuckle species (*Lonicera spp.*)
 - Autumn olive and Russian olive (*Eleagnus spp.*)
 - Multiflora rose (*Rosa multiflora*)
 - Privet species (*Ligustrum spp.*)
 - Barberry (*Berberis spp.*)
 - Oriental bittersweet (*Celastrus orientalis*)
 - Garlic mustard (*Alliaria petiolata*)
 - Dame's Rocket (*Hesperis matronalis*)
- i. All of the above must be maintained on an ongoing basis by owner or HOA. A maintenance plan for any of the above options must be submitted for approval as part of the site plan process and provided to the party responsible for maintenance. If any of the alternatives provided fail and maintenance/restoration is not desired by the responsible party, they must plant the tree(s) for which credit was given on the site.
- j. Definitions:
 - Green roof – roof of structure planted with grasses, sedges, sedums or other plantings
 - Green wall – element of building with living plants along entire face
 - Living wall – retaining wall constructed to support living plants and planted with vines, perennials or other long-lived plants

c. Island and Boulevard Planting

- (1) All islands, boulevards and easements shall be landscaped. Islands within a cul-de-sac shall not have any plant materials that may obscure vision across the island between heights of three (3) feet to six (6) feet as measured from the established street grade. See the Landscape Design Manual for additional requirements regarding the type and size of plantings.
- (2) Island and boulevard plantings will not count toward the required street tree totals and must be maintained by the developer, property owner or homeowner's association, whichever is applicable.
- (3) If an island's or entry's landscaping is to be revised by the homeowner's association, a landscape plan shall be submitted to the City for administrative approval prior to planting.

iv. Non-Residential Subdivisions

- a. Intent. [UNCHANGED]
- b. Requirements. For all non-residential subdivisions or non-residential site condominiums, the following landscape requirements shall apply:

- (1) - (5) [UNCHANGED]
- (6) Interior streets of the non-residential subdivision shall be landscaped per each lot as they are built upon as follows (Note: These planting requirements are in place of those in Zoning Section 5.5.3.B except for along public rights-of-way):
 - (A) The greenbelt width shall be equal to the required zoning district setbacks for buildings and parking lots.
[REORDER ITEMS (B) THROUGH (G) FOLLOWING]

G. Individual (non-subdivision/non-site condominium) single-family requirements. [UNCHANGED]

4. Landscape Plan Review Standards. [UNCHANGED]

5. Installation Specifications. [UNCHANGED]

6. Maintenance.

- A. Maintenance shall be carried out on an ongoing basis.
 - i. Maintenance of required plantings by the owner shall be carried out ~~so as~~ to present a healthy, neat and orderly appearance, free from dead plants, weeds, refuse, and debris.
 - ~~ii. It shall be unlawful to intentionally abuse or injure any tree on public or private property.~~
 - ~~iii. Trees shall be trimmed or pruned in a natural and proportionate manner per the species/cultivar's natural appearance, in accordance with best management practices of the landscape industry. If severe or aggressive trimming or pruning of a tree that was required to be planted as part of a development plan occurs such that the ordinance's intent for the trees is compromised, the property shall be considered in non-conformity with this ordinance, and the Director of Community Development or the City's Forester may require the removal and replacement of such tree in accordance with this Chapter.~~
- ~~B. To insure proper maintenance and as a condition of Final Site Plan approval, the City shall require the property owner to enter into and record with the office of the Oakland County Register of Deeds a Landscape Maintenance Agreement, or include such provisions as part of subdivision restrictions or condominium master deed, each of which shall be approved by the City Attorney. Such instrument shall identify the minimum plan of maintenance, the person or entity responsible for maintenance, and shall provide the procedure, authority and finance for City cure of breaches by the responsible entity. Such instrument shall also include provisions that:~~
 - ii. All unhealthy and dead material shall be replaced within three (3) months, or the next appropriate planting period, whichever is deemed appropriate by the City;
 - iii. Plantings shall be guaranteed for two (2) growing seasons after the date of the acceptance of the installation;
 - iv. Tree stakes, guy wires and tree wrap are to be removed after one winter season;
 - v. All landscaped areas shall be provided with a method of providing water for the landscaping during establishment and long-term survival. A permanent irrigation system or other method of providing water on a regular basis must be installed if plantings that require a consistent source of water for survival are part of the landscape;
 - vi. The use of plantings that don't require regular watering once established (xeriscaping), is encouraged. In that case, the applicant must provide a method

for providing sufficient water for establishment, and a backup source of water, such as hose bibbs or a statement that water trucks or other means will be used in times of extreme drought. Locations of hose bibbs on the building must be shown on the landscape plan if they will be used;

- ~~vii. Plantings shall be guaranteed for 2 growing seasons after the date of the acceptance of the installation; and~~
 - ~~viii. Tree stakes, guy wires and tree wrap are to be removed after one winter season;~~
 - vii. If grass or weeds exceed the height specified in Chapter 21 of the Novi Code of Ordinances, or if shrubs are allowed to obstruct vision across any portion of parking or boulevard islands, or within corner clearance vision zones, and the responsible party is unwilling to rectify the problem, the City will abate such violations and shall assess the cost of such abatement measures in the manner proposed by the developer and approved by the City in such instrument.
 - B. ~~It shall be unlawful to intentionally abuse or injure any tree on public or private property.~~
 - C. ~~Trees shall be trimmed or pruned in a natural and proportionate manner per the species/cultivar's natural appearance, in accordance with best management practices of the landscape industry. If severe or aggressive trimming or pruning of a tree that was required to be planted as part of a development plan occurs such that the ordinance's intent for the trees is compromised, the property shall be considered in non-conformity with this ordinance, and the Director of Community Development or the City's Forester may require the removal and replacement of such tree in accordance with this Chapter.~~
 - D. Phragmites and Japanese Knotweed Control
 - i. If Phragmites australis (commonly known as Giant Reed) or Japanese Knotweed (Fallopia japonica ~~or and~~ related species) are found on the property, all populations of it in the immediate areas of the project shall be shown on the plan. A plan for the species' removal shall be added to the site plan that includes treatment by a licensed pesticide applicator, using MDEQ approved means, at the time of site preparation, or the soonest appropriate time after that, and follow up treatments shall be performed as necessary. The City's Landscape Architect shall determine the extent to which such treatment is required, given the size and condition and other factors related to the property.
 - ii. The invasive species' population(s) will be inspected by the City's Landscape Architect at the time of the landscape inspection for approval of the installed landscape. If they were treated prior to such inspection, a copy of the invoice from the vendor who performed the work shall be provided to the City. If it is to be treated after the inspection, the invoice shall be sent to the City when the work is complete. A note to this effect shall be included in the plans with the other notes regarding treatment of the Phragmites and/or Knotweed on the site. All treatment reports shall be provided to the City's Landscape Architect or designated alternate.
 - iii. – v. [UNCHANGED]
7. Responsibility and Certificates of Occupancy. [UNCHANGED]

Part II.

Severability. Should any section, subdivision, clause, or phrase of this Ordinance be declared by the courts to be invalid, the validity of the Ordinance as a whole, or in part, shall not be affected other than the part invalidated.

DRAFT 6/5/26

PART III.

Savings Clause. The amendment of the Novi Code of Ordinances set forth in this Ordinance does not affect or impair any act done, offense committed, or right accruing, accrued, or acquired or liability, penalty, forfeiture or punishment, pending or incurred prior to the amendment of the Novi Code of Ordinances set forth in this Ordinance.

PART IV.

Repealer. All other Ordinance or parts of Ordinance in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

PART V.

Effective Date: Publication. Public hearing having been held hereon pursuant to the provisions of Section 103 of Act 110 of the Public Acts of 2006, as amended, the provisions of this Ordinance shall be published within fifteen (15) days of its adoption by publication of a brief notice in a newspaper circulated in the City of Novi stating the date of enactment and effective date, a brief statement as to its regulatory effect and that a complete copy of the Ordinance is available for public purchase, use and inspection at the office of the City Clerk during the hours of 8:00 A.M. to 5:00 P.M., Local Time. The provisions of this Ordinance shall become effective seven (7) days after its publication.

MADE, PASSED, AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, ON THE ____ DAY OF _____, 2026.

JUSTIN P. FISCHER, MAYOR

CORTNEY HANSON, CITY CLERK

Ayes:
Nays:
Abstentions:
Absent:

**PROPOSED CHANGES TO
LANDSCAPE DESIGN MANUAL – DRAFT**

DRAFT 6/5/26

CITY OF NOVI

LANDSCAPE DESIGN MANUAL

(Adopted by City Council Resolution dated 8-25-03) – revised 2020, 2026

TABLE OF CONTENTS

Part I. Supplemental Requirements and Procedures
Part II Screening Opacity Diagrams
Part III. Standard Planting Details
Part IV. Street Tree List
Part V. Suggested Plant Material List

NOTE:

In addition to this Landscape Design Manual and Section 5.5 of the Zoning Ordinance, issues related to landscaping are also addressed in the following sections of the Novi Code of Ordinances. Please consult these for other possible impacts on a project.

(Note: the following list is provided as an aid and does not guarantee that other ordinances may not have an impact on landscaping):

ZONING ORDINANCE:

<u>Ordinance Section #</u>	<u>Title/Relevant Section</u>
3.6	Notes to District Standards
3.6.M:	Wetland/Watercourse setback
3.9.7	MH-Mobile Home district buffer
3.11:	GE Gateway East District – particularly section 6
3.12:	Special Development Option (SDO) for the GE District
3.14.4, 3.14.5.B&E:	I-1
3.15.1.B, 3.15.2:	I-2
3.19.3&7.D:	OST Retail Service Overlay
3.20.2.A&C:	OST Required Conditions
3.21.2.A.iii&iv:	PSLR Overlay
3.22	P-1
3.23.1.vi	Conference District
3.27.1. C,D,F	TC and TC-1 Required Conditions
3.28.6&10	One Family Clustering Option
3.29.2	RUD buffering
4.12.1	Day Care screening

4.13.2	Recreation Areas/Centers
4.19.2.F	Accessory Uses – Refuse Bin
4.37.4	Drive-in businesses
4.40.2.F	Fast food restaurants
4.55	Outdoor Storage Yards
4.58	Junkyards
4.74	Parking for Sale of Motor Vehicles in P-1 District
4.80.1.B & 2.B	Open Air Businesses
4.86.H	Other Uses not Included in a District – Towers
5.2	Off-Street Parking
5.3	Off-Street Stacking, Parking Lot Layout Standards
5.4.2	Loading Zone Screening for Business and Other Commercial Zoning
5.9	Corner clearance
5.11	Fences

CODE OF ORDINANCES

<u>Ordinance Section #</u>	<u>Title/Relevant Section</u>
11-143	Design Considerations – drainage/slopes
12 Article V, 12-275	Wetland and Watercourse Protection
29	Soil – including Sedimentation Control
36	Waterways
37	Woodlands Protection

SUPPLEMENTAL REQUIREMENTS AND PROCEDURES

The following Supplemental Requirements and Procedures shall apply to any landscape plan required under Section 5.5 of the City of Novi Zoning Ordinance. In the event of inconsistency between the provisions of that ordinance, or any other ordinance of the City, and these supplemental requirements and procedures, the ordinance provisions shall prevail.

1. Landscape Screening/Buffer Requirements

a. Residential Adjacent to Non-Residential

(1) Berm Requirements.

- (a)** The berm shall be landscaped and maintained in a clean, orderly, and growing condition.
- (b)** The berm must be planted with a combination of trees, shrubs, sod or other living ground covers.
- (c)** A minimum opacity shall be provided and maintained at 80% winter opacity and 90% summer opacity at the required height within 2 years of installation. This level of opacity shall be provided wherever screening is called for in this ordinance. Opacity includes an intermittent visual obstruction height of 20 feet, as well as the required screening capacity. (See Obscuring Earth Berm Diagrams in this section for examples of landscaping layouts that provide the required opacity.) The intermittent screening does not have to provide 80-90% opacity above 6 feet, but it should have at least 50% summer opacity.
- (d)** Landscaping shall provide the required opacity primarily by using a dense planting of evergreen trees or shrubs. Spacing of the plant materials shall be in accordance with the Plant Material Spacing Chart below and the attached illustrations. Groupings of canopy deciduous trees, subcanopy trees and/or shrubs that provide similar opacity as the illustrations may also be used to provide screening, especially for the intermittent obstruction. As an example, densely-branched deciduous plant material two (2) or more layers deep and/or evergreen plant material may be used to achieve the required opacity.
- (e)** The berm and landscaping materials shall be irrigated with an underground watering system or have an operational hose bibb within 100 feet of the landscaping.
- (f)** The required minimum and maximum distances between proposed plant materials within this Section for screening and landscape purposes are as follows or as determined by the City Landscape Architect or City Forester based upon accepted principles not specified in the chart:

(Recommended distances are dependent on species' mature sizes and their size within 2 years of planting to attain opacity requirements. Recommended maximum spacing distances do not apply to other landscape requirements such as street tree spacing, greenbelt buffering, woodland replacement trees or foundation plantings).

Table 1.a.(1)(f): Plant Material Spacing Relationship Chart for Landscape Purposes

Plant Material Types Spacing (on-center)		TO					
		Large Evergreen Tree	Narrow Upright Evergreen	Deciduous Canopy Tree*	Deciduous Subcanopy Tree*	Large Shrub	Small Shrub
FROM	Large Evergreen Tree	Min. 15 ft Max. 25 ft	Min. 12 ft	Min. 20 ft	Min. 15 ft	Min. 15 ft	Min. 10 ft
	Narrow Upright Evergreen	Min. 12 ft	Min. 2.5 ft Max. 10 ft	Min. 15 ft	Min. 10 ft	Min. 5 ft	Min. 3-5 ft
	Deciduous Canopy Tree*	Min. 20 ft	Min. 15 ft.	Min. 20 ft	Min. 15 ft	Min. 5-7 ft	Min. 3-5 ft
	Deciduous Subcanopy Tree*	Min. 15 ft	Min. 10 ft	Min. 15 ft	Min. 10 ft	Min. 5-7 ft	Min. 3-5 ft
	Large Shrub (6-15+' tall)	Min. 15 ft	Min. 5 ft	Min. 5-7 ft	Min. 5-7 ft	Min. 5 ft Max. 10 ft	Min. 3 ft Max. 6 ft
	Small Shrub (0-5.9' tall)	Min. 10 ft	Min. 3-5 ft	Min. 3-5 ft	Min. 3-5 ft.	Min. 3 ft Max. 6 ft	Min. 3 ft Max. 6 ft

* Fastigate/columnar trees may require closer spacing to achieve required opacity.

- (g) Berms shall be constructed of loam soils with a 6" top layer of topsoil and shall be free of construction materials and debris. Where possible, they shall be undulating in height, and they shall always maintain at least the minimum height required in Zoning Section 5.5.3.A.ii.
- b. Developments Adjacent to Public Rights of Way
 - (1) Berm Requirements
 - (a) Berms are to vary in height and width
 - (b) The minimum height specified in Zoning Section 5.5.3.B.ii.f should always be met by the berm, with variations in height taller than the minimum.
 - (2) Plant Material Location Spacing

- (a) In order to assist emergency vehicles, create view channels to business address at a 20-40 degree angle for approaching vehicles from both directions of traffic
- (b) The base of any permitted display platform must be totally screened by shrubs at least 2 feet in height.
- (3) Shopping Centers and sites adjacent to freeways or other major corridors are highly visible. Therefore, a strong emphasis shall be placed on the design of landscaping that achieves substantial aesthetic enhancement, and a diminution of paving and parking views along these corridors.

2. Residential Subdivision Planting Requirements

a. Single-family platted subdivisions or residential site condominiums.

(1) Street Tree Spacing. Trees shall be provided in front of each residential lot in the area between the sidewalk and the curb as described in the Charts below:

i. Minimum planting area widths:

Table 2.a.(1).i Recommended Tree Sizes for ROW areas

Tree Species Type	Lawn width (curb to sidewalk)
Small Tree (Deciduous Subcanopy)	4-6 feet
Medium Tree (Deciduous Subcanopy and Canopy)	6-8 feet
Large Tree (Deciduous Canopy)	>8 feet

ii. Minimum spacing:

Table 2.a.(1).ii Recommended Tree Spacing for ROW areas

Tree Species Type	Tree Height	Distance between trees (on average)
Small Tree (Deciduous Subcanopy)	Up to 20'	Min. 20'
Medium Tree (Deciduous Canopy and Subcanopy)	20-40'	Min. 30'
Large Tree (Deciduous Canopy)	>40'	Min. 35'

(2) Street Tree Location. Large street trees shall be planted in front of each lot in the right-of-way in accordance with the following standards for large deciduous canopy trees :

Table 2.a.(2) Street Tree Requirements for Single Family Residential Lots

Lineal Frontage*	Trees Required
<70 feet	1 tree
> or =70 feet	2 trees

> or =105 feet	3 trees
> or =140 feet	4 trees
> or =175 feet	5 trees

* Driveway width and corner clearance zones may be subtracted from the lineal frontage.

- (a) Corner lots shall have trees planted along both streets in accordance with the above requirements for each frontage, provided that trees are not planted within the 25 foot corner clearance zone (Section 5.9) or Road Commission for Oakland County (RCOC) required clear vision zone.
 - (b) Subdivision open spaces shall have street trees located within the right-of-way at a rate of 1 tree per 35lf (not including frontage in clear vision zones).
 - (c) Trees shall not be planted closer than 10 feet from any driveway.
 - (d) Distances between trees and curbs or sidewalks shall be:
 - 1. At least (4) feet for deciduous canopy trees and 2.5' for subcanopy trees.
 - 2. At least 5 feet for shrubs behind curbs with angled or perpendicular parking
 - (e) If subcanopy trees are to be used as street trees for tight planting areas and under utility lines, only use species/varieties which can be attractively pruned per city standards (a minimum ground clearance of 14 feet on the street side and 10 feet on the non-street side).
 - (f) No deciduous canopy tree, subcanopy tree or evergreen tree shall be planted closer than 15 lateral feet from any overhead utility wire, or closer than 10 lateral feet from any fire hydrant, catch basin or manhole. Effort should also be made to keep all trees at least 5 feet away from underground utility lines.
- b. Single-family or residential site condominiums with no lot lines.
- (1) Street Tree Requirement: 1 canopy or 1.5 ornamental trees per residential unit.
 - (2) Tree Placement: In front of residential unit in the area between the sidewalk and the curb as described in the Charts below:

Minimum planting area widths:

Table 2.b.(1) Recommended Tree Sizes for ROW areas

Tree Species Type	Lawn width (curb to sidewalk)
Small Tree (Deciduous Subcanopy)	4-6 feet
Medium Tree (Deciduous Subcanopy and Canopy)	6-8 feet
Large Tree (Deciduous Canopy)	>8 feet

- c. Island and Boulevard Planting.
 - (1) A mixture of shrubs, groundcover, perennials, and/or ornamental grasses, as well as canopy and sub-canopy trees, is to be provided.
 - (2) Maintenance of such areas shall be the responsibility of the subdivision association.
 - (3) At least 75% of the area shall be landscaped with a combination of plantings other than lawn. The remaining 25% of area can be lawn if desired.
 - (4) Refer to Zoning Ordinance Section 5.9 for corner clearance requirements for boulevards.

3. Detention and Retention Basin Landscaping Requirements

- a. Large deciduous canopy trees shall be planted at a rate of 1 tree per 35 lf of the pond edge measured at the permanent water line, 6-10 feet away from the permanent water level, around the east, west and south sides of the pond to provide cooling shade for the pond. Woodland replacement trees may be used to meet some or all of the tree requirement if a conservation easement to protect them is provided.
- b. Clusters of large native shrubs shall cover 70-75% of the basin perimeter measured 10 feet from the permanent water level, or pond bottom for ponds designed to empty after 24-48 hours. Shrubs should be clustered at a distance approximately 10 feet from the permanent water level line or pond bottom but shouldn't be arranged in a straight line.
- c. At least three different shrub species native to Michigan shall be used. Straight species are preferred. Dwarf cultivars with mature heights less than 5 feet do not fulfill the size requirement.
- d. The bottom and sides of the basin(s) extending 25 feet from the permanent water level shall be planted with a mix of native grasses, sedges and wildflowers and be maintained at a natural height (not mowed as lawn) to discourage use by waterfowl. The application of fertilizer and pesticides on grass areas in the basin shall be limited to the initial establishment of the groundcover.
- e. Contact the City's wetland consultant when specifying basin seed mix. The seed mix(es)' species composition and cover crop(s) should be included on the landscape plan, as well as clear indications of where each mix should be applied. A plan for the successful establishment and maintenance of the groundcover should also be included on the landscape plan.
- f. Prior to seeding, the area to be seeded shall be ripped to a depth of 18" to remove soil compaction. The seeding area shall be prepared per the recommendations of the native seed vendor.
- g. The landscape contractor shall send a photo of the seed bag from the seed being planted to the city landscape architect or city environmental consultant or landscape architect to verify that an acceptable mix is being used. A note to this effect shall be added to the plan sheet with the seed mixes.

- h. Utilize anti-waterfowl devices while establishing plantings, such as string matrix or string edge or other approved method.

4. Tree species diversity (includes canopy, subcanopy and evergreen trees).

In order to avoid landscape disasters like the Dutch elm disease and Emerald Ash Borer infestations, where overplanting of a single type of tree (elm, ash) resulted in large scale tree replacements, a diversity of tree species is to be used for all projects requiring site plan approval.

- a. When fewer than 200 trees are proposed, not more than 25% of the proposed tree plantings shall be of one genus and not more than 15% shall be of a single species.
- b. When 200 or more trees are proposed, not more than 15% percent of the tree plantings shall be of one genus and not more than 10% shall be of a single species.
- c. Variations from these percentages shall be at the discretion of the City Forester or Landscape Architect. (See Novi Street Tree List).
- d. The breakdown of the species and genera used shall be added to the plant list in a format similar to that shown in the table below:

Table 4.e: Sample Species Breakdowns

Symbol	Scientific Name	Common Name	Size	Qty	Genus %	Species %
AL	Amelanchier laevis	Serviceberry	6-7' ht	20	12%	12%
AR	Acer rubrum	Red Maple	2.5" cal.	25	15%	15%
CA	Cornus alternifolia	Pagoda Dogwood	6-7' ht	20	18%	12%
CF	Cornus florida	Flowering Dogwood	1.75" cal.	10		6%
MS	Malus 'Snowdrift'	Snowdrift Flowering Crabapple	1.75" cal.	5	3%	3%
PO	Platanus occidentalis	Sycamore	2.5" cal.	25	15%	15%
PS	Pinus strobus	Eastern White Pine	6-7' ht	10	6%	6%
QB	Quercus bicolor	Swamp White Oak	2.5" cal.	10	21%	6%
QR	Quercus rubra	Red Oak	2.5" cal.	25		15%
UA	Ulmus americana 'Princeton'	Princeton American Elm	2.5" cal.	15	9%	9%
Total				165	100%	100%

- e. The above requirements do not apply to woodland replacement trees.
- f. Woodland tree replacement species shall have roughly the same composition as the native trees removed in order to maintain some semblance of the impacted woodland (except in the cases of elm, ash or other species which are known to have major survivability issues due to environmental factors).
 - i. No more than 10% of the credits planted on site may be evergreen trees.
 - ii. Native maples may be used as substitutes for boxelders. Varieties of native elm species shown to have good resistance to Dutch elm disease may be used as replacements for elms.
 - iii. The counts of woodland replacement trees shall not be included in the breakdown described above (items a-d).

- g. Shrubs: While shrubs are not subject to the requirements above, efforts toward using a diversity of shrub species should also be used for the same reasons described above.

5. Parking Area Landscaping Requirements

- a. Landscape designs shall utilize plant materials which enhance infiltration of storm water, such as those with deep root systems. Designs to lessen runoff are preferred. Wherever possible, designs should utilize vegetated swales, weirs and basins within and around the parking areas to create an attractive storm water system that promotes storm water infiltration.
- b. Salt-tolerant plants material native to the state of Michigan are preferred.
- c. Parking area landscaping materials within parking lot islands shall be maintained at 3 feet in height or less above adjacent paving for clear sight distance within the parking islands.
- d. Evergreen trees are not allowed in any parking islands unless the applicant can demonstrate that all clear sight distances shall be maintained and a note in a form approved by the City Attorney is added on the final approved site plan stating that the City of Novi is not responsible for any accidents caused by the lack of clear sight distance
- e. All landscaping shall be maintained in a healthy condition and replaced as necessary.
- f. Name, type and number of groundcover plants (including seed or sod) proposed on islands are to be specified on the landscape plan.
- g. Parking area islands may not utilize mulch as the only groundcover. It is only allowed in association with trees or shrubs planted within an island (the ring of mulch around a tree, or within and around shrub beds). Rock or gravel mulches shall not be used adjacent to vehicular use areas.

6. Transformers/Utility Boxes/Irrigation Control Boxes

All transformer and utility boxes shall be screened from public view in an attractive manner, but shall allow safe access to said facilities.

- a. Plant materials shall be maintained at a height at least equal to the transformer, utility box or irrigation control box.
- b. Screening plant material shall be evergreen or densely-branched deciduous shrubs.
- c. A minimum of 2 feet separation is required between the structure and the full growth potential of plant material at maturity.
- d. Groundcover is allowed up to the transformer pad, if it is kept below 4" in height.
- e. Doors of transformers must be accessible. No plant materials are to be placed within 8 feet of the front of the doors but the doors shall be screened from view.
- f. A detail of transformer screen plantings and locations of all transformers must be provided with the landscape plans.

- g. Safety is the first priority when screening transformers and utility boxes. If plantings are above 2 feet in height, they cannot be placed in the corner clearance (refer to Section 5.9).
- h. A solid fence or wall may be approved if warranted by safety or site limitations.

7. **Dumpsters/Trash Containers** – Required screening for Dumpsters/Trash Containers is described in Chapter 21-145 and Zoning Ordinance Section 4.19.2.f. No additional landscaping is required.

8. **Fire Hydrants/Fire Department Connections** – Plantings shall be kept away from or below hydrants and Fire Department Connections, so they are not obscured from view and are easily accessed.

9. **Landscape Plan Requirements**

A landscape plan shall be submitted for:

- any new commercial or residential development
- any addition to an existing building that is equal to or greater than a 25% increase in the overall square footage of the building or 400 square feet, whichever is less
- any increase of 5 spaces or more to a parking lot, or equivalent paving area

An owner of a single-family home site shall not be required to comply with the provisions of this section.

The landscape plan shall contain the following information:

- a. Name, address and telephone number of the owner and developer or association.
- ~~b.a. Name, address and telephone number of the Registered or Licensed Landscape Architect who created the design or is responsible for its accuracy and adherence to city standards.~~
- ~~e.b.~~ A legal description or boundary line survey of the site on which the work is to be performed.
- ~~d.c.~~ Project Name and address (or other information showing the site location).
- ~~e.d.~~ Zoning districts of the proposed site and adjacent properties.
- ~~e.~~ Miss Dig contact information on all sheets.
- ~~f.~~ Name, address and telephone number of the Registered or Licensed Landscape Architect who created the design or is responsible for its accuracy and adherence to city standards.
- ~~f.a.~~ Miss Dig contact information on all sheets.
- g. The seal of a Registered or Licensed Landscape Architect responsible for the plans (on Final Site Plans and Stamping Sets). ~~Live signature of the landscape architect is required on Stamping Sets.~~

- h. The soil type(s) on site as determined by the Soils Survey of Oakland County, Michigan published by the United States Department of Agriculture Soils Conservation Service.
- i. A plan of the site at a scale that matches other plans in the plan set and is legible with proper north indication. In addition, for reviewing purposes, the landscape plan shall be submitted in a scale not to exceed 1"=20' for detailed areas, 1"=60' for large areas. Variations from this scale requirement may be approved by the City Landscape Architect as long as the different scale provides sufficient detail, legibility and ease of use for evaluation. This plan should include:
 - (1) Proposed topography at a maximum of ~~2-foot~~2-foot contour intervals, extending at least 50 feet beyond the site boundary. For berm, wall areas and steep topography, contour intervals shall be shown at 1 foot.
 - (2) Location, type and size of all existing plant materials showing those materials to be saved, to be moved and to be removed.
 - (a) If there is no existing vegetation, the plan shall note that.
 - (b) If the site includes regulated woodlands or wetlands, the plan shall identify the locations of regulated natural resources with the appropriate boundary determinations.
 - (c) A tree survey that includes all regulated trees within the area of disturbance and a corresponding tree chart that includes tree tag #, species, size (dbh), and whether it will be saved or removed.
 - (d) Tree protection fence locations must be shown on Removal/Demolition and Grading Plans/Soil Erosion Control plans.
 - (e) All trees 8" dbh or greater within 50 feet of construction shall also be included in the tree survey.
 - (f) Trees in woodlands or other areas at least 50 feet away from construction that will not be impacted do not need to be identified individually, but the cover of those areas should be generally noted (e.g. dense woodland, open, scrub/shrub, wetland) and the area noted as "To Remain" or "To Be Saved". See Woodlands Protection Ordinance, Chapter 37 and Wetlands Protection Ordinance, Chapter 12 for additional plan requirements.
 - (3) Locations of all existing and proposed buildings, easements, parking spaces, vehicular use areas, proposed ground sign locations, flagpole locations, public rights-of-way, existing and proposed overhead and underground utilities, including the locations of hydrants, utility boxes and trash receptacles. Dimensions shall be shown from overhead utility poles.
 - (4) Location, type and size of all proposed plant materials. For Final Site Plan submittals, plants shall be indicated with actual plant material names or symbols linked to a plant list.

- (5) All plantings shall have unique labeling to indicate the requirement they are intended to satisfy (i.e. interior parking, parking perimeter, woodland replacement, right-of-way greenbelt, street trees, foundation planting, etc.)
- (6) Corner Clearance Zones at driveways and road intersections. (See Section 5.9 or Road Commission for Oakland County clear vision requirements, depending on the road jurisdiction).
- (7) An indication of area(s) clear of trees or shrubs for snow depositing areas in winter.
- j. Right-of-way greenbelt, street tree, foundation and other landscaping calculation requirements, including the amount required and the amount provided. Include labels in square feet for all landscape areas intended to satisfy landscape requirements.
- k. Parking lot landscaping calculations, including interior and perimeter requirements, should include the amount required and the amount provided. Include labels in square feet for all landscape areas intended to satisfy landscape requirements.
- l. A planting schedule for all proposed landscape materials showing the quantity of materials for each species, botanical and common names of plant materials, caliper sizes or container sizes, height of material where applicable, root type balled and burlapped or potted), type and amount of mulch.
(At least 50% of all species used, not including those used for woodland replacements, or in seed mixes, shall be species native to Michigan, and preferably Oakland County. (www.michiganflora.net may be used as a reference to determine whether a species is native).
- m. An itemized cost estimate for all new plantings, mulch, seed and sod contained on the planting plan must be provided on the Final Site Plans. The costs for this should be from the Community Development Fees standard costs on the Community Development website, not estimates, unless there is no comparable standard cost, in which case estimates are acceptable.
- n. Planting details for evergreen trees, deciduous trees, multi-stem trees, tree guys, shrubs, and perennials/ground covers, as applicable to the plan. (See typical City of Novi Tree Planting Details).
- o. A plan for site preparation, seeding, establishment and maintenance of any native seed mixes per the direction of the native seed vendor.
- p. When berms are included on the plans, a representative berm cross-section including slope, height and width, construction of loam with 6" top layer of topsoil, type of ground cover, and labeled contour lines. Show where overhead utility lines exist or are planned, and the required setback of 15 feet from the edge of the utility or 20 feet from the closest pole for canopy trees. (See Berm Cross-Section Diagram).
- q. Wall detail(s), when applicable, with notes indicating materials, height and type of construction and footings. Wall designs and calculations for any walls greater than or equal to 3 ½ feet ~~48 inches~~ in height must be provided by a design or structural engineer and approved with building plans
- r. Fencing details – tree protection, screening and decorative fencing
- s. Notes required:

- (1) A note indicating the proposed estimated planting dates (should be between March 15 and November 15).
 - (2) A statement of intent to guarantee the plant materials for 2 years from the date of acceptance and maintain all such landscaped areas in accordance with the requirements of this ordinance.
 - (3) A note indicating that the plants should be Upper Midwest/Great Lakes grown.
 - (4) A note stating that the property's landscape will be maintained per the approved final site plan in perpetuity, per Zoning Ordinance Section 5.5.7, including replacement of all dead or failing plant material within three (3) months of its discovery, or the next appropriate growing period.
- t. Plans for irrigation, or alternative means of providing sufficient water for establishment and long-term survival must be provided with final site plans. If an area is landscaped with plant species that do not require irrigation (xeriscaping), no permanent irrigation system is required, but the plants must be watered as necessary until they are established with a temporary system, hose(s) or portable water tanks. In that case, hose bibb locations within 100 feet of the plantings or other water sources must be noted on the plans.
- u. If an irrigation system will be used, plans for it must be provided with final site plans.
- v. Other information or data as may be required in other sections of this ordinance, and additional information or data as reasonably required by the Planning Commission.

10. Plant Material Requirements

a. General Conditions / Plant Requirements.

Wherever in this Ordinance landscaping plantings are required, such landscape plantings shall be subject to the following conditions:

- (1) For all plant materials, plants native to Michigan and, ideally, Oakland County, are to be the first choice. No fewer than 50% of the species used, not including those for woodland replacements or in seed mixes, shall be native. The source of the native plants should be local or of the North Midwest America/Great Lakes region.
- (2) All plant materials shall be northern nursery grown, No. 1 grade, and installed according to accepted planting procedures. All plant materials shall meet current American Association of Nurserymen Standards. They shall be planted according to City of Novi Planting Details and specifications. The City shall have the right to inspect the plant materials prior to planting and to reject any plant materials deemed not to meet the standards of this ordinance.
- (3) The selection, spacing, and sizing of plant materials shall depend on the use to which the plantings are to be placed. A mixture of plant materials (evergreen and deciduous trees and shrubs) and plant species is required in all landscape plans as a protective measure against disease and insect infestation. Plant materials used together in groupings for screening shall meet the on-center spacing requirements as set forth in this Section 1.a.

- (4) Plant materials, except lawn, ground covers or creeping vine type plantings, shall be located at least 4 feet from the property line, as measured to the trunk of deciduous canopy or subcanopy trees, or to the mature dripline of shrubs and evergreens.
 - (5) Where plant materials are placed in 2 or more rows for screening, plantings shall be staggered from row to row.
 - (6) All trees shall have a central leader and a radial branching structure. Park grade trees are not acceptable. All trees, except those of 1" caliper or less, shall be balled and burlapped (B & B).
 - (7) Any deciduous canopy trees with branches that might tend to develop into "V" crotches shall be subordinated so as not to become dominant branches.
 - (8) Miss Dig must be notified to locate all underground utilities before planting begins.
- b. Plant Materials.

For suggested plant materials and information by categories of Native, Interest, Woodlands Replacement, Canopy, Street Tree, Growing Conditions, and Nurseries, see separate Suggested Plant Materials List (Part V). This list is not to be considered all-inclusive of acceptable plant materials and may be amended periodically.

(1) Existing Plant Material

- (a) Existing plant material is to be preserved as a first priority. Refer to Chapter 37, Woodlands Preservation Ordinance or Chapter 12, Wetlands and Watercourse Ordinance, for specific standards regarding preservation of these natural resources.
- (b) In instances where existing healthy plant material is proposed to be saved on a site prior to its development and is *not* regulated by Chapter 37, Woodlands Preservation Ordinance, or Chapter 12, Wetlands and Watercourse Ordinance, the applicant may apply to adjust the application of the landscape standards to allow such plant material to substitute for planting if such an adjustment is in keeping with, and will preserve, the intent of this Section.
- (c) For approval of substitutions, the existing preserved plant material shall be of high quality as determined by the City. Trees listed as Prohibited Plantings, and materials required to be preserved under Chapter 12, Article V, and under Chapter 37 of the Ordinance Code, will not receive credit under this provision.
- (d) All removals shall be clearly marked as to be removed with an X or R on the plan view, and on the accompanying tree chart/list (show as Saved or Removed). The tree labels for existing trees 8 inches dbh and larger to remain should appear on the Landscape Plan (plan view).
- (e) Protective fencing and preservation techniques will be required for all vegetation to be saved where there is a chance that construction activities

could damage it. The location of tree protection fencing and the City Protection Fencing Detail are to be shown on the Demolition/Removal Plan and Grading plans. Large masses of protected vegetation should be labeled “To be saved” or “To Remain” on the Landscape Plan and on the Demolition/Removal Plan and Grading Plan.

- (f) Landscape credit for preserved canopy trees, which do not fall within a regulated Wetland or Woodland, may be used to fulfill woodland replacement credits that may be required if they are not prohibited and/or invasive species. These replacements shall be at the following rate:

Table 10.b.(1)(f): Landscape Tree Credit Chart

Diameter of Trunk of Preserved Tree*	Number of Tree Credits
36” or greater caliper	7 trees
>29 to 36” caliper	6 trees
>23 to 29” caliper	5 trees
>17 to 23” caliper	4 trees
>12 to 17” caliper	3 trees
>7 to 12” caliper	2 trees
3 to 7” caliper	1 tree

* The tree trunk diameter measurement shall be rounded off to the nearest whole inch at a height of four and one-half (4.5) feet above the natural grade. (Diameter at Breast Height, D.B.H.)

- (g) Existing, non-prohibited trees may also be used to fulfill some or all of the required street tree, greenbelt or parking lot perimeter plantings, at a 1 for 1 basis if they are located in appropriate locations

(2) Proposed Plant Material

(a) Plant Sizes.

- i. The minimum sizes are as follows:

Table 10.b.(2)(a).i – Minimum plant sizes by application

Planted Material Types	Deciduous Canopy Trees	Large Evergreen Trees	Deciduous Subcanopy Trees (5)	Upright Evergreens	Large Shrubs	Small Shrubs (6)	Perennials, Ornamental Grasses
R-O-W Plantings (4)	2.5” cal.	8’ ht.	2” cal.	6’ ht.	36-42” ht.	18-24” ht.	1 gal. cont.
Street Trees (4)	2.5” cal.	n/a	2” cal.	n/a	n/a	n/a	n/a
Woodland Replacement Trees (2)	2.5” cal.	6’ @ 3:2 Ratio	(3)	(3)	(3)	(3)	(3)
All other	3” cal.	7’ ht.	2.5” cal.	6’ ht.	36” ht.	24” ht.	1 gal. cont.

Footnotes:

- (1) The City Landscape Architect may permit smaller sizes upon receipt and review of sufficient documentation that required minimum sizes are not readily available.
- (2) Refer to Chapter 37-8(b) for acceptable species.
- (3) Refer to Chapter 37-8(c) for use of this plant type for replacement credits.
- (4) Shall also apply to private road easements or other equivalent. QUESTIONS
- (5) Multi-stem trees are to be eight to ten (8-10) foot minimum height.
- (6) Spreading or horizontal shrubs are to be eighteen (18) inch width minimum.
- (7) _n/a: not allowed

- ii. To encourage a mixture of sizes, additional landscape credit can be given for larger-sized deciduous canopy trees and large evergreen trees as follows for Right-of-Way Greenbelt trees and Parking Lot Perimeter trees. (Upsizing credit is not allowed for woodland replacement trees, street trees or interior parking lot trees.)

Table 10.b.(2)(a).ii

Size	Total Tree Credits *
Large Evergreen Trees	
8' height	1.0
> 8' to 10' height	1.25
>10' to 12' height	1.5
>12' to 14' height	2.0
>14' height	2.5
Deciduous Canopy Trees	
3" caliper	1.0
>3" to 3.5" caliper	1.25
>3.5" to 4.5" caliper	1.5
>4.5" to 5" caliper	1.75
>5" caliper	2.0

* Where greater than minimum size listed above (Table 10.b.(2)(a).i).

Example: a 4" caliper deciduous canopy tree would count as 1.5 required landscape trees. A 13' high evergreen canopy tree would count as 2 required landscape trees.

The total number of trees required may be reduced through the use of these credits by a maximum of 33% (per category) (i.e. the total number of trees provided must be at least 67% of the total number of trees required based on the standard tree size, per category)

c. Prohibited Plants.

In order to promote native plant species diversity and to prevent the loss of habitat due to the spread of naturalized non-native plant species, the following species will be prohibited in planting plans:

Table 10.c – Prohibited Plants

Botanical Name	Common Name	Plant Type
<i>Acer negundo</i>	Boxelder	Deciduous Subcanopy Tree
<i>Acer platanoides</i>	Norway Maple	Deciduous Canopy Tree
<i>Acer saccharinum</i> **	Silver Maple	Deciduous Canopy Tree
<i>Ailanthus altissima</i>	Tree-Of-Heaven	Deciduous Canopy Tree
<i>Alnus glutinosa</i>	Black Alder	Deciduous Canopy Tree
<i>Berberis spp.</i>	Barberry	Small shrub
<i>Celastrus orbiculatus</i>	Round-Leaved Bittersweet	Vine
<i>Coronilla varia</i>	Crown Vetch	Perennial / Grass
<i>Echinochloa crus-galli</i>	Barnyard Grass	Perennial / Grass
<i>Elaeagnus umbellata</i>	Autumn Olive	Large Shrub
<i>Ginkgo biloba(female)</i>	Ginkgo (female)	Deciduous Canopy Tree
<i>Gypsophila paniculata</i>	Baby's Breath	Perennial / Grass
<i>Hypericum perforatum</i>	Common St. Johns-Wort	Small Shrub
<i>Iris pseudacorus</i>	Water Flag	Perennial / Grass
<i>Ligustrum spp.</i>	Privet	Small shrub
<i>Lonicera japonica</i>	Japanese Honeysuckle	Large Shrub
<i>Lonicera maackii</i>	Amur Honeysuckle	Large Shrub
<i>Lonicera tatarica</i>	Tartarian Honeysuckle	Large Shrub
<i>Lythrum salicaria</i>	Purple Loosestrife	Perennial / Grass
<i>Melilotus alba</i>	White Sweet Clover	Perennial / Grass
<i>Melilotus officinalis</i>	Yellow Sweet Clover	Perennial / Grass
<i>Morus alba</i>	White Mulberry	Deciduous Canopy Tree
<i>Polygonum persicaria</i>	Spotted Lady's Thumb	Perennial / Grass
<i>Populus alba</i>	White Poplar	Deciduous Canopy Tree
<i>Populus deltoides</i>	Eastern Cottonwood	Deciduous Canopy Tree
<i>Populus nigra</i>	Black Poplar	Deciduous Canopy Tree
<i>Populus tremuloides</i>	Quaking Aspen	Deciduous Canopy Tree
<i>Pyrus calleryana</i>	Flowering Pear	Deciduous Canopy Tree
<i>Rhamnus cathartica</i>	Common Buckthorn	Large Shrub
<i>Rhamnus frangula</i>	Glossy Buckthorn	Large Shrub
<i>Rhamnus frangula angustifolia</i>	Narrow-Leaved Glossy Buckthorn	Large Shrub
<i>Ribes americanum</i>	Wild Black Current	Small Shrub
<i>Robinia pseudoacacia</i>	Black Locust	Deciduous Subcanopy Tree
<i>Rosa multiflora</i>	Japanese Rose	Large Shrub
<i>Salix alba</i> **	White Willow	Deciduous Canopy Tree

<i>Salix babylonica</i> **	Weeping Willow	Deciduous Canopy Tree
<i>Salix nigra</i> **	Black Willow	Deciduous Canopy Tree
<i>Ulmus americana</i> *	American Elm	Canopy Deciduous Tree
<i>Ulmus pumila</i>	Siberian Elm	Canopy Deciduous Tree
<i>Vinca minor</i>	Common Periwinkle	Groundcover

* Disease resistant cultivars are acceptable

** Allowed under special circumstances

d. Recommended Trees for Planting Under Overhead Utilities:

Table 10.d – Trees for Under and Near Overhead Utility lines

Botanical Name	Common Name
<i>Acer campestre</i>	Hedge Maple
<i>Acer griseum</i>	Paper Bark Maple
<i>Amelanchier sp.</i>	Serviceberry
<i>Carpinus caroliniana</i>	Musclewood
<i>Cercidiphyllum japonicum</i>	Katsura Tree
<i>Cercis canadensis</i>	Eastern Redbud
<i>Cornus alternifolia</i>	Alternate Leaf Dogwood
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus kousa</i>	Japanese Dogwood
<i>Cornus mas</i>	Cornelian Cherry Dogwood
<i>Crataegus sp.(thornless)</i>	Hawthorn sp. (thornless)
<i>Magnolia soulangiana</i>	Saucer Magnolia
<i>Malus hybrids</i>	Flowering Crabapple
<i>Syringa reticulata</i>	Japanese Tree Lilac
<i>Viburnum lentago</i>	Nannyberry
<i>Viburnum prunifolium</i>	Blackhaw Viburnum

(Choose varieties with mature heights less than lowest power line if directly below lines)

e. Collected or Transplanted Trees

- (1) All collected trees shall be from on site and inspected by the City. Trees may be rejected for reasons of insect infestation, disease or standards set forth in this ordinance. Such plant material may be rejected either in full or in part.
- (2) All transplanted trees shall be in good health and conform to standards set forth in Section 910.

- (3) The root ball of any transplanted tree shall measure 1 foot for each inch of trunk diameter measured 12” above the root flare or graft collar.
- (4) If trees are to be stored, they shall be burlapped and heeled in with mulch in a pre-determined area approved by the City.
- (5) The trees shall be provided with a working irrigation system approved by the City to ensure their viability during storage.

11. Nonliving Durable Material

- a. Mulch for all plantings shall be premium shredded hardwood and shall not be artificially colored. No cypress wood mulch or rubber mulch is to be used.
- b. Trees shall be mulched to a maximum of 3 inches overall depth at planting.
- c. Shrubs, groundcovers and perennials shall be mulched to a maximum of 2 inches overall depth at planting.
- d. All lawn trees shall be planted with a 4 foot diameter circle of the shredded hardwood bark mulch.
- e. Mulch shall be pulled back 3 inches from the tree trunk in a circle down to the root ball dirt to expose the root collar to air. No mounding of mulch on the tree trunk is allowed at planting or in future applications of mulch.
- f. If a rootball’s dirt is piled up on the trunk, it should also be removed to expose the root flare.
- g. For fire safety, shredded hardwood bark is not to be installed adjacent to or within 4 feet of buildings that are constructed of combustible materials. Plantings adjacent to combustible buildings shall be mulched with a non-combustible material ~~typically marketed as landscape mulch or rock~~. The color of such materials shall be natural and compatible with the building.
- h. Gravel or rock mulches are not permitted within or immediately adjacent to paved parking lots or roadways. Approval of type, depth and specific location for gravel mulch is to be approved by the City.
- i. Sphagnum peat/bog peat is harvested from functioning wetlands so it shall not be used for landscape purposes. Compost may be used as an alternative.
- j. Plastic or other artificial replicas of plant material are prohibited.