



## URBAN FORESTRY TREE COMMISSION MEETING

Wednesday December 21, 2022 – 6:00 P.M.

Parks, Recreation & Cemetery Administrative Office

Meeting Room A

50 Officer Manny Familia Way Worcester, MA 01605

Or

### If you choose to use the WebEx platform:

- 1) Go to [www.webex.com](http://www.webex.com)
- 2) Click the “join” button on the top right side of the screen
- 3) Enter Meeting ID#: 2308 510 8082
- 4) Enter password: Treecomm12-21

### If you choose to attend via phone:

- 1) Call 1-415-655-0001
- 2) Enter Meeting ID#: 2308 510 8082

## AGENDA

1. Call to Order
2. Attendance (Roll Call)
3. Acceptance of Minutes for the (Roll Call) – November 30, 2022
4. To request a reasonable accommodation or interpretation or submit written comments or questions in advance of the meeting, please contact the Parks, Recreation & Cemetery Division by email at [Worcestertrees@worcesterma.gov](mailto:Worcestertrees@worcesterma.gov). Please note that interpretation requests must be received no later than 48 hours in advance of the meeting. Para solicitar una interpretacion razonable, o enviar comentarios o preguntas por escrito por favor comuniquese con la oficina de la Division de Parques, Recreo & Cementerio por correo electronico a [Worcestertrees@worcesterma.gov](mailto:Worcestertrees@worcesterma.gov). Por favor note que las solicitudes de interpretacion deberan ser enviadas 48 horas antes de la reunion.
5. Public Participation – Pursuant to Chapter 20 of the Acts of 2021 and in order to ensure active, public engagement, the City of Worcester currently allows for both in person and remote participation at the Urban Forestry Tree Commission meetings. To partake in the “Public Participation” section of this meeting, you may join us directly within the 50 Officer Manny Familia Way Meeting Room A, follow the information above to join via the WebEx application or dial the direct line as indicated. If you would like to raise your hand when in the meeting as a call-in user you may dial \*3.

6. Assistant Commissioners Report (See Report Topics Below)

5. Old Business

- NA

6. New Business

- Election of Chairperson and Vice Chairperson

7. Date of Next Meeting:

- January 18, 2023
- February 15, 2023
- March 15, 2023
- April 12, 2023
- May 3, 2023
- June 7, 2023
- September 6, 2023
- October 4, 2023
- November 1, 2023
- December 6, 2023

8. Meeting Adjourned (Roll Call)

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## URBAN FORESTRY TREE COMMISSION MEETING MINUTES

Wednesday November 30, 2022 – 6:00 P.M.

Parks, Recreation & Cemetery Administrative Office

Meeting Room A

50 Officer Manny Familia Way Worcester, MA 01605

Or

### If you choose to use the WebEx platform:

- 1) Go to [www.webex.com](http://www.webex.com)
- 2) Click the “join” button on the top right side of the screen
- 3) Enter Meeting ID#: 2308 806 6542
- 4) Enter password: Treecomm11-30

### If you choose to attend via phone:

- 1) Call 1-415-655-0001
- 2) Enter Meeting ID#: 2308 806 6542

## AGENDA

1. Call to Order – Meeting was called to order at 6:13 PM
2. Attendance (Roll Call) –
  - a. **Commissioners Present:**
    - i. Alexander Elton
    - ii. Joseph Mogel
    - iii. Joy Winbourne – Virtual
  - b. **Administration Present:**
    - i. Robert C. Antonelli, Jr. Assistant Commissioner
    - ii. Brian Breveleri, Urban Forester and Supervisor of Forestry
    - iii. Milagros Pacheco, Staff Assistant III
    - iv. Denis Tucker – Working Foreman
3. Acceptance of Minutes for the (Roll Call) - NA
4. To request a reasonable accommodation or interpretation or submit written comments or questions in advance of the meeting, please contact the Parks, Recreation & Cemetery Division by email at [Worcestertrees@worcesterma.gov](mailto:Worcestertrees@worcesterma.gov). Please note that interpretation requests must be received no later than 48 hours in advance of the meeting. Para solicitar una interpretacion razonable, o enviar

comentarios o preguntas por escrito por favor comuníquese con la oficina de la División de Parques, Recreo & Cementerio por correo electrónico a [Worcestertrees@worcesterma.gov](mailto:Worcestertrees@worcesterma.gov). Por favor note que las solicitudes de interpretación deberán ser enviadas 48 horas antes de la reunión.

5. Public Participation – Pursuant to Chapter 20 of the Acts of 2021 and in order to ensure active, public engagement, the City of Worcester currently allows for both in person and remote participation at the Urban Forestry Tree Commission meetings. To partake in the “Public Participation” section of this meeting, you may join us directly within the 50 Officer Manny Familia Way Meeting Room A, follow the information above to join via the WebEx application or dial the direct line as indicated. If you would like to raise your hand when in the meeting as a call-in user you may dial \*3.
  
  6. Assistant Commissioners Report (See Report Topics Below)
  
  7. Old Business NA
  
  8. New Business
    - Election of Chairperson and Vice Chairperson – Tabled
    - Commissioners Elton, Mogel and Winbourne introduced themselves
  
  9. Date of Next Meeting:
    - December 21, 2022
    - January 18, 2023
    - February 15, 2023
    - March 15, 2023
    - April 12, 2023
    - May 3, 2023
    - June 7, 2023
    - September 6, 2023
    - October 4, 2023
    - November 1, 2023
    - December 6, 2023
  
  10. Meeting Adjourned (Roll Call)
- 

#### **ASSISTANT COMMISSIONER’S REPORT:**

1. General:

- Urban Forestry Master Plan Update
  - Mr. Antonelli detailed that there had been 7 public meetings to date and 10 or 12 additional meetings with individual city departments, neighborhood groups, with individuals that have vested interest in our urban forest, Clark University, New England Botanical Garden, Regional Environmental Council, Sustainability, Transportation and DPW Operations. He also said there were 3 public meetings in each of the 5 districts (presentations are available online on the City’s Website), there are biweekly meetings with Davey Resource Group in the development of the master plan. They are looking into hopefully January to be able to launch some draft

information out there for public review, and public comment to refine the master plan with information previously missed. It would then go to Parks and Tree Commissions to be reviewed and refined again. Then the document will go to City Council. Hopefully between January and March of 2023 we will have a final draft depending on how much stuff has been missed. He also indicated that not all items will be addressed in this document, some things will be addressed some things will be action items as there's a cost associated with them. He also spoke about allocating funding for tree inventory. An inventory was completed as part of the master plan for the entire city right of way, there is no funding for public parks therefore the city has been working with Clark University and John Rogan and his students to do inventory of city parks. Davey Resource has trained the students and given them the tools they need to be able to get those trees into the system, but it's going to take a little longer, University Park and Elm Park have already been completed.

- Commissioner Elton had Inventory questions, Master Plan questions and questions about outreach.
- Commissioner Winbourne also had questions about the inventory, when was the inventory done, was that the first inventory, and is the data available on the Worcester website.
- Commissioner Mogel opened the floor to the public for questions or comments.
- Ms. Evelyn Herwitz resident of District 1 requested more information about the Master Plan
- Ms. Deb Cary Mass Audubon wanted to share some handouts called trees matter, she also asked if there would be a draft before it gets finalized. She also asked if there would be coordination with Worcester Now Next and an update to the city zoning ordinance. She suggested that tree planting might be something that can be included in the city's zoning ordinance.
- Mr. Ted Conna - Green Worcester Advisory Committee representing district 4, he stated that a healthy urban forest is essential to a sustainable city. He also brought a wish list important for accomplishing some of the goals, such as:
  - Good coordination between various city departments when the city does a major thoroughfare.
  - Coordinate with other departments when new projects are happening to add trees
  - Coordinate when streets and sidewalks are being built to add trees
  - Create a better process for involving neighborhoods when streets and sidewalks get done and what happens with trees
  - Cross coordination to make sure that when paving or repaving sidewalks to make sure that it doesn't get paved up to the tree trunk as that is not a good idea.
  - Mr. Conna also spoke about rights of way, he's a bicyclist and along Franklin Street where it begins to overlook the rail yard the trees there get pruned by the large trucks, so it keeps the tree from growing. He also said that as a cyclist some of that vegetation is pushing him out into the street. He suggested a program that would keep the rights of way clear enough for bicyclist safety.
  - He also suggested a policy that when the city does a new project there's no loss of trees. If a project requires for 6 trees to come down 6 trees should go up. No net loss or better. Yet a net gain of trees.
  - Develop a policy for what happens when we have city street tree begins to shade a solar. Installation of more solar is good to get us off fossil fuels. Trees should not be planted on top of the houses/buildings but in fields, forests, and farmland to help with sustainability.
  - Mr. Conna added that he thinks this committee will serve as a liaison between the community and the city.
- Mr. Frank Zitomersky raised the issue of future potential for tree planting in the right of ways the public waterways, and location of conduit. Mr. Zitomersky recommended that some coordination with other city departments happen some incorporation of departmental reviews so that looking to the future where conduits are placed to allow future plantings on right of ways.
- Mr. Paul Popinchalk made a request to include a discussion about the issue of solar rights versus trees because it's a concern of some residents that install solar on their homes and then realize they are getting shading from the trees. He explained a calculation he had made and stated he was advocating that a middle way approach be found that allows to move to 100% renewable energy but also preserving street trees.
- Ms. Mara Pentlarge from the Worcester Tree Initiative asked about what type of species of trees would be planted, she did not like Norway, Maple. she asked to have native plants.

- Mr. Brian Breveleri, City of Worcester Forester & Forestry Supervisor explained that for as long as he has been with the City of Worcester, they have planted everything from ornamental type trees, depending on the area. If planting around utilities, businesses, or where there's a lot of signage they use smaller ornamental trees, and in open areas due to the ALB (Asian Longhorn Beetle) they are planting different variety of oak for the shade tree aspect. They use tulip in some areas, but the tulip is super-fast growing and have the potential for problems in the future. He also informed that the biggest problem now is the nurseries and what's available, he indicated he was already doing negotiations for the Springtime and it's already difficult on what's going to be available.
- Ms. Pentlarge asked if the city can ask the nursery to start growing native plants (native to Worcester).
- A meeting attendant (name unknown) asked:
  - What are the key metrics that either the parks department or the Commission keep track of that will tell if goals are being achieved?
  - What is the vehicle for reporting these metrics out to the community is it going to be a report that the city gives out?
  - How do you ensure you have a consistent tracking system if you are moving to a new system?
  - Is there a potential of the now the CPA is passed to allocate funds from that to help with the initiative?
- Commissioner Elton informed that the American Forest has a tree equity calculator which is overlaid with all types of census data. He added that 1.5 billion dollars has come from the Federal Government to State Urban Forestry and they are looking to give it away and there should be ideas on where to spend the money that Worcester will be allocated.
- Mr. Dale Wickenheiser wanted to know if there is anything homeowners can do to help with the inventory process.
- Mr. Rick Silva spoke about a program that happened several years ago that trees were planted next to the storm drain with a large grate. The idea was the rain coming down would be filtered, he was curious how successful that program was?
- Ms. Ruth Seward had two questions:
  - Was other public land that's privately managed included (for example Collins Land, The Greater Worcester Land Trust)?
  - What going to be done with the master plan once done? Will there be goals set?
  - How does the public get the information about the progress?
- Commissioner Joy Winbourne asked:
  - Is Davey Tree's methodology used for taking the inventory for the master plan would be made available to the public and the Parks & Recreation Commission.
  - If anyone wanted to bring more date in, is it now or as it is being developed or after the Commission has reviewed it?
- Ms. Martha Grace had the following questions:
  - How does the zoning issues get put into this plan, should the citizens be asking council members to make sure this gets put into the master plan?
  - Is it a legitimate time, when then master plan is presented, will there be enough time to alter the plan or expand if necessary?
- Ms. Elizabeth Fleming asked:
  - Is there any city or town that is doing similar work and that the City of Worcester is looking at as a model?
  - Is there a requirement from developers to plant trees or is it up to the developer?
  - Are you thinking of adding a component to the master plan regarding training of forestry staff about the maintenance of the trees and the concern about the volcano mulching seen around the city?
  - Will invasive species eradication throughout the city be included in the master plan?
  - Will invasive species removal training be added as the master plan? As some species do not go away by just mowing them down.
  - Ms. Fleming added that she supports planting native trees such as a Ginkgo tree native to this area.
- Mr. Conna spoke to clarify that he agreed with Mr. Popinchalk and did not want to give the impression that he wants trees cut down in favor of solar. He also asked if it was too late to

send in any recommendations.

- City of Worcester Ordinance
- Planting –
  - Spring 2022 Planting Update – Planted approximately 250 trees
  - Spring 2023 Planting Update – Planning on planting around that range in 2023
- Customer Service Update
  - Customer Service Contact Information 508-929-1300 &/or 311
- Forestry Informational Flyers
- Street Resurfacing Opportunities & Challenges
- Partnerships –
  - New England Botanical Garden @ Tower Hill
  - Worcester Technical High School
- Grant Applications –
  - NA
- Economic Development Initiatives –
  - NA
- Forestry Vandalism & Graffiti –
  - NA
- Donations –
  - NA
- Forestry Operations –
  - Tree City USA – NA
  - ALB (Asian Longhorned Beetle)
  - EAB (Emerald Ash Borer)
  - Arbor Day – April 28, 2023
- Budget – Operational & Capital – NA
  - Parks, Recreation & Cemetery Division – NA
  - Capital Improvement Program – NA
  - City Five Point Financial Plan – NA
- Misc.
  - Ms. Fleming asked for information on DPW's program adopt an island, she also advised that it was not easy to find on the website.
- Date of Next meeting – December 21, 2022
- Assistant Commissioner Robert C. Antonelli, Jr. answered all questions, there was no further questions, he asked to adjourn. A roll call was done. Meeting was adjourned at 8:05 PM.
- **A copy of this full meeting will be available to view and listen to at:**  
[www.worcesterma.gov/city-clerk/public-meetings/agendas-minutes](http://www.worcesterma.gov/city-clerk/public-meetings/agendas-minutes)



**ASSISTANT COMMISSIONER'S REPORT:**

1. General:

- Urban Forestry Master Plan Update
- Neighborhood Based Urban Heat Risk Assessment
- Worcester Now | Next online survey
  - [Priority Goals for Worcester Now | Next are public: Tell us what you think! \(google.com\)](#)
- Green Worcester Advisory Committee
  - Article - Effects of trees on solar panels
- Planting –
  - Spring 2023 Planting - NA
- Customer Service Update
  - Customer Service Contact Information 508-929-1300 &/or 311
- Street Resurfacing Opportunities & Challenges – NA
- Zoning Ordinance Discussion
- Partnerships –
  - New England Botanical Garden @ Tower Hill - NA
- Grant Applications –
  - NA
- Economic Development Initiatives –
  - NA
- Forestry Vandalism & Graffiti –
  - NA
- Donations –
  - NA
- Forestry Operations –
  - Tree City USA – Submitted
  - ALB (Asian Longhorned Beetle)
  - EAB (Emerald Ash Borer)
  - Arbor Day – April 28, 2023
- Budget – Operational & Capital – NA
  - Parks, Recreation & Cemetery Division – NA
  - Capital Improvement Program – NA
  - City Five Point Financial Plan – NA
- Misc.



# **URBAN FORESTRY TREE COMMISSION MEETING**

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Parks, Recreation & Cemetery Administrative Office

Meeting Room A

50 Officer Manny Familia Way Worcester, MA 01605

Or

Virtual with WebEx

## **ASSISTANT COMMISSIONER'S REPORT**

**GENERAL**

**Also Read:** [Deforestation May Offer Climate, and Economic Benefits in Certain Areas](#)

## **Worcester residents worry about the effect of trees on solar panels**

The Green Worcester Advisory Committee decided against requesting the city to create a formal policy on Monday night. Ted Conna, a committee member, made the request the second time, as per [Telegram & Gazette](#).

The committee resolved on Monday to have John Odell, the city's top sustainability officer, present the issue to several city agencies and the city's Urban Forestry Tree Commission.

If those levels of discussion take place, Odell would update the Green Worcester Advisory Committee.

Due to its consultative function, the committee was hesitant to ask for a written policy.

As Conna presented his draft proposal in October, he requested if he may make a motion to record the committee's belief that the city should take into consideration a policy on how to deal with street-tree and rooftop solar issues when they occur.

The committee claimed to require additional time to consider the document at the time.

The city might cut the tree and cover the costs if it grows and casts shade on a rooftop solar installation already in place.

It stated that anyone wishing to cut, prune, or remove a public shade tree must obtain the tree warden's permission, pay for the associated costs, and replace the tree if necessary.

Seven city residents who were chosen by the city manager make up the Green Worcester Advisory Committee.

Its responsibility is to ensure that Worcester makes progress toward the objectives of the Green Worcester Plan.

# **Worcester Residents Unable To Convince City To Take Formal Action To Mitigate Effect of Public Trees on Solar Panels**

By Paw Mozter Dec 14, 2022 11:31 PM EST

The Worcester City Committee has turned down a second request to City Hall to implement a plan to balance the needs of homes and businesses with rooftop solar panels with the planting of trees on public routes.

## **Cutting down trees for Solar Panels?**



**(Photo : Jeff J Mitchell/Getty Images)**

Nowadays, there is a significant increase in the search for sustainable energy sources.

In order to produce energy that is environmentally beneficial, wind turbines and solar farms are growing all over the world, as per [Fuerst Solutions](#).

But the issue is that these kinds of remedies frequently require changing the environment.

Large tracts of land, for instance, on which to erect wind or solar farms.

The condition of the land before building a solar or wind farm determines if it will be environmentally friendly or not. The only way it can be environmentally benign is if no trees are taken down to make room.

In a variety of settings and habitats, from forests to deserts, solar energy farms are being built all over the world. The location determines how these farms or plants affect the environment.

Trees are removed and vegetation is mowed to reduce shadowing; this keeps vegetation at one meter and below.

Naturally, this has a significant influence on animal and plant life, which makes obtaining a permit for the construction of solar farms quite difficult.

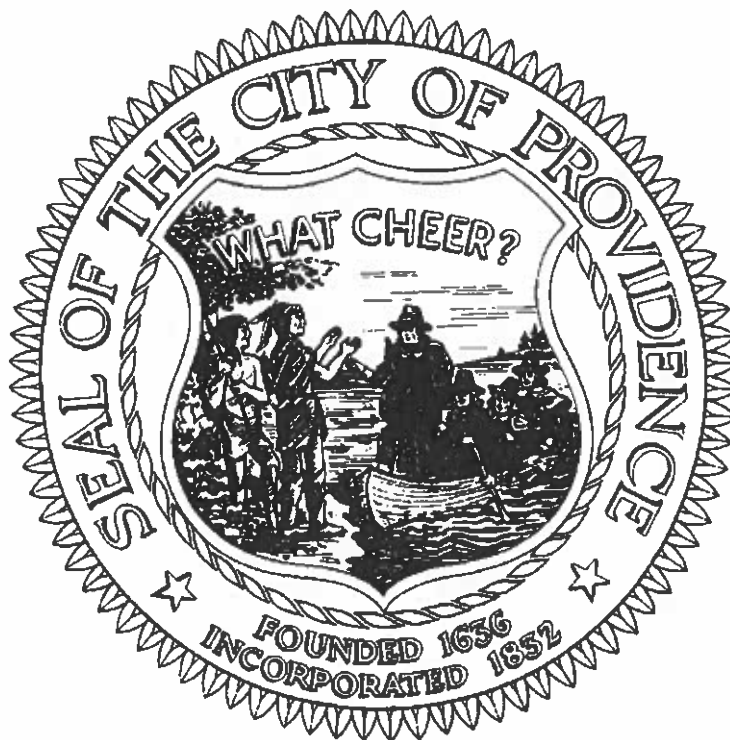
To date, solar farms have required the removal of millions of trees from all over the world.

Nearly 2 million trees have been planted in South Korea throughout recent years.

Over 4,407 hectares of woodland have suffered harm because of these solar energy farms.

Even if the government wants to encourage individuals to adopt renewable energy, this should not be done at the expense of eliminating the world's primary natural energy supply.

# CITY OF PROVIDENCE ZONING ORDINANCE



CHAPTER 2014-39 NO. 513  
ADOPTED NOVEMBER 24, 2014  
EFFECTIVE DECEMBER 24, 2014

## **ARTICLE 15. TREES AND LANDSCAPING**

- 1500 LANDSCAPING REQUIRED**
- 1501 LANDSCAPE PLAN**
- 1502 LANDSCAPE DESIGN STANDARDS**
- 1503 ON-SITE LANDSCAPING AND REQUIRED TREES**
- 1504 PARKING LOT PERIMETER LANDSCAPE STRIP**
- 1505 INTERIOR PARKING LOT LANDSCAPING**
- 1506 SCREENING OF PARKING LOTS FROM RESIDENTIAL DISTRICTS**
- 1507 WATERBODY VEGETATIVE BUFFERS**

### **1500 LANDSCAPING REQUIRED**

#### **A. Development activity that meets any of the criteria described below triggers conformance with this Article:**

1. At a minimum, full conformance is required for the entire development or area within the limits of disturbance, whichever is less.
2. If land within limits of disturbance equals more than 50% of the area of the lot or lots being developed, the entire development shall fully conform to the requirements of this Article.
3. Full conformance is required when new principal buildings are constructed in the R-1A, R-1, R-2, R-3, and RP Districts.

No development or tree cutting may result in a loss of trees and landscaping below what is required by this Article.

### **1501 LANDSCAPE PLAN**

#### **A. Content of Landscape Plan**

1. The location and dimensions of all existing and proposed structures, property lines, easements, parking lots and drives, rights-of-way, refuse disposal and recycling areas, pedestrian and bicycle paths, fences, mechanical equipment, overhead utility wires, and drainage facilities.
2. The location, quantity, size, name, and condition, both botanical and common, of all existing trees and shrubs on-site, indicating trees and shrubs to be retained and removed.
3. The location, quantity, size, and name, both botanical and common, of all proposed plant material.
4. The existing and proposed grading of the site indicating contours at one foot intervals. Proposed berming shall also be indicated using one foot contour intervals.
5. Elevations of all proposed fences, walls, stairs, and retaining walls.

#### **B. Enforcement of Landscape Plan**

1. No certificate of occupancy shall be issued until all the requirements of this Article and the landscape plan have been fulfilled.
2. If weather prohibits the installation of landscaping at the time a certificate of occupancy is applied for, a temporary certificate of occupancy may be issued for a six-month period.

### **1502 LANDSCAPE DESIGN STANDARDS**

#### **A. Selection of Plant Materials**

All plant materials shall be of good quality and meet American Association of Nurserymen (AAN) standards for minimum acceptable form, quality, and size for species selected, and capable to withstand the seasonal temperature variations of Rhode Island, as well as the individual site microclimate. The use of species native or naturalized to Rhode Island is encouraged. Size and density



of plant material, both at the time of planting and at maturity, are additional criteria that shall be considered when selecting plant material. Where appropriate, the use of drought and salt tolerant plant material is preferred.

**B. Installation of Plant Materials**

All landscape materials shall be installed in accordance with the current planting procedures established by the AAN. All plant materials shall be free of disease and installed so that soil of sufficient volume, composition, and nutrient balance are available to sustain healthy growth. Installation of plant materials during the appropriate growing season is encouraged.

**C. Minimum Planting Sizes**

1. Shade trees shall have a minimum trunk size of two inches in tree caliper at planting.
2. Evergreens trees shall have a minimum height of six feet at planting.
3. Single stem ornamental trees shall have a minimum trunk size of two inches in tree caliper at planting. Multiple stem ornamental trees shall have a minimum height of eight feet at planting.
4. Large deciduous and evergreen shrubs shall have minimum height of three feet at installation. Small deciduous and evergreen shrubs shall have a minimum height of 18 inches at installation. Large shrubs are those shrubs that reach five or more feet in height at maturity. Small shrubs are those shrubs that may grow up to five feet in height if left unmaintained, but are generally maintained at heights of 18 to 30 inches.

**D. Species Diversity**

Diversity is required in plant material for visual interest and to reduce the risk of losing a large population of plants due to disease.

**E. Maintenance**

1. Landscape material depicted on approved landscape plans is considered a required site element in the same manner as structures, parking, lighting, and other improvements. As such, the property owner is responsible for the maintenance, repair, and replacement of all landscape material, fences, walls, steps, retaining walls, and similar landscape elements.
2. All landscape material shall be maintained in good condition, present a healthy, neat, and orderly appearance, and kept free of refuse and debris. Any dead, unhealthy, or missing plants shall be replaced within 60 days.

**F. Tree Protection During Development**

1. During development, all precautions shall be undertaken to prevent construction damage to existing trees, as described in the City Tree Ordinance of the Providence Code of Ordinances. Protection includes prevention of injury to the trunk, branches, and root systems.
2. No person may create a trench through the root system of an existing tree, expose the roots to the air overnight without a method for maintaining moisture, change the soil grade within the dripline of the tree, or cause soil compaction with the use of vehicles, machinery, or other method. The root systems of trees on adjacent lots shall also be protected.

**1503 ON-SITE LANDSCAPING AND REQUIRED TREES**

**A. General Requirements**

1. All portions of a lot not covered by structures or paved surfaces shall be landscaped with trees, shrubbery, grass, live groundcover, and other plantings. The landscape design may also include the use of stone, mulch beds, or other pervious landscaping materials (this excludes pervious pavement).

2. All existing plantings that are maintained on a site may be counted toward any required on-site landscaping.
3. Nothing in this section prohibits tree pruning to promote the health of a tree or for public safety purposes.

**B. Significant Tree Preservation**

1. A significant tree is any tree that measures 32 inches or more in diameter at four and one-half feet above the ground. No significant tree may be removed without the permission of the City Forester.
2. Any person wishing to remove a significant tree shall file a request with the City Forester. In order to grant permission to remove a significant tree, the City Forester shall make one or more of the following findings within 30 days of receipt of the request:
  - a. The tree is in poor health or diseased with an expected life span less than two years.
  - b. The removal of the tree is unavoidable because the tree poses a danger to property or human health, safety, and welfare.
  - c. The tree prevents the property owner from developing the property in conformance with this ordinance, and there are no alternatives to removal of the tree. In this case, the City Forester shall not approve removal of the tree until a permit for new construction has been approved.
3. Any person who removes a significant tree without prior permission from the City Forester or causes the death of a significant tree through negligent construction practices or other means, as determined by the City Forester, is subject to a one-time fine equivalent to the value of the tree. The tree value is established using the Trunk Formula Method set forth in the latest edition of "Guide for Plant Appraisal," authored by the Council of Tree and Landscape Appraisers, or the maximum fine allowed by Rhode Island General Laws, whichever is greater. Fines will be held by the Parks Department for forestry-related uses as determined by the City Forester.

**C. Required Tree Canopy**

**1. Required Tree Canopy Percentage**

Sufficient trees shall be retained and/or planted on a lot so that the square footage of vegetative canopy of such trees, when mature, equals a certain percentage of the square footage of the lot. This required percentage is established by district as follows:

- a. All residential districts, and the PS, OS, and CD Districts: 30% of the square footage of the lot
- b. I-1 and I-2 Districts: 30% of the square footage of the lot
- c. D-1 District: 15% of the lot area not occupied by a structure
- d. All other districts: 15% of the square footage of the lot

**2. Calculation of Tree Canopy Coverage**

The total canopy coverage for a lot is the sum of the canopy, at maturity, of the individual trees located on the lot. The square footage of canopy cover varies according to tree species. The City Forester maintains a list of trees species and the expected size of the canopy for each species, at maturity, when planted. Trees are classified as small, medium, or large and the canopy coverage credit for each classification is as follows:

- a. Large: 1,000sf
- b. Medium: 700sf
- c. Small: 300sf

### 3. Tree Retention Bonus

Additional credit for canopy coverage may be granted for the retention of healthy trees of appropriate species and in the proper location, subject to the approval of the City Forester. The following thresholds and associated coverage bonus is as follows:

- a. Tree diameter at four and one-half feet above the ground is between 10 and 19 inches: 300sf of canopy coverage credit
- b. Tree diameter at four and one-half feet above the ground is 20 inches or greater: 700sf of canopy coverage credit

### 4. Street Tree Accommodation

Existing or planned street trees located in the public right-of-way directly adjacent to the lot line may be counted toward the canopy coverage for the lot.

### 5. Landscaping for Multiple Lots

For developments that encompass more than one lot, the percentage is calculated for the total canopy for the total area of all of the lots. For developments that span multiple blocks, the percentage required is calculated separately for each contiguous area of the development within a block.

### 6. Off-Site Planting Permission

Where existing conditions or other provisions of this Ordinance make it impracticable to meet the canopy coverage requirement on or adjacent to the site, the applicant shall plant sufficient trees to make up the shortfall in public rights-of-way within one-quarter mile of the lot, with the location to be determined by the City Forester.

## 1504 PARKING LOT PERIMETER LANDSCAPE STRIP

A perimeter landscape strip is required for all parking lots that abut a public right-of-way, excluding curb cuts, and shall be established along the edge of the parking lot that abuts such public right-of-way to screen the parking lot. The landscape treatment shall run the full length of the parking lot perimeter along the right-of-way. The landscape strip shall be improved as follows: (Figure 15-1)

- A. The perimeter parking lot landscape strip shall be a minimum of five feet in depth. There shall be a minimum linear distance of six inches between wheels stops or curbs and the landscape strip to accommodate vehicle bumper overhang, which is not included in the minimum five foot calculation.
- B. One shade tree shall be planted for every 25 feet of landscape strip length, spaced linearly.
- C. The landscape strip shall also be planted over a minimum of 60% of its length with shrubs, perennials, native grasses, and other planting types that provide screening of a minimum of three feet in height.
- D. Alternatively, a low fence or pedestrian wall a minimum of three feet to a maximum of four feet in height may be used instead of such plantings. Where feasible, plant materials shall be installed between the sidewalk and the wall to provide a softening effect on the fence or wall.
- E. Where existing conditions or other provisions of this Ordinance make it impracticable to meet the perimeter landscape strip requirements, the City Forester may approve a modification to the width or location of the perimeter landscape strip, or the spacing or number of trees in the perimeter landscape strip, so long as there is no net loss of planted area or number of trees required.
- F. The use of stormwater management techniques such as rain gardens and bioswales is encouraged in landscape strips. Landscaped areas should be designed for the absorption of stormwater.

FIGURE 15-1

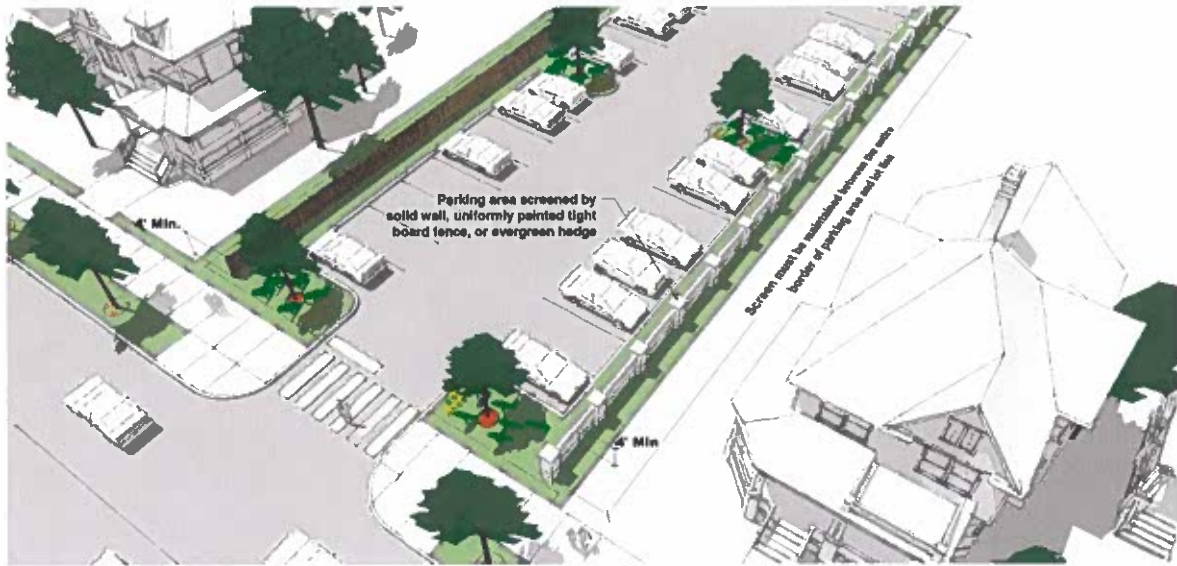


**1505 INTERIOR PARKING LOT LANDSCAPING**

All parking lots consisting of 20,000 gross square feet or more require interior parking lot landscaping as described in this section. When the calculation of interior parking lot landscaping requirements results in a fraction, said fraction is rounded up. (Figure 15-2)

- A. One parking lot island shall be provided between every ten parking spaces. As part of the landscape plan approval, parking lot island locations may be varied based on specific site requirements or design scheme, but the total number of islands shall be no less than the amount required of one island for every ten spaces.
- B. In addition to parking lot islands, additional landscape areas shall be provided within the interior of parking lots. The minimum total landscape area of a parking lot, including parking lot islands, shall be 10% of the total parking lot area. Parking lot perimeter landscaping is excluded from the calculation of total parking lot area.
- C. All rows of parking spaces shall terminate in a parking lot island or landscaped area.
- D. Parking lot islands shall be the same dimension as the parking stall at a minimum. Double rows of parking shall provide parking lot islands that are the same dimension as the double row.
- E. A minimum of one shade tree shall be provided for every parking lot island or landscaped area. If a parking lot island extends the width of a double row, then two shade trees are required..
- F. The use of stormwater management techniques such as rain gardens and bioswales is encouraged in landscaped areas. Parking lot islands and landscaped areas should be designed for the absorption of stormwater.
- G. Where existing conditions or other provisions of this Ordinance make it impracticable to meet the interior parking lot landscaping requirements, the City Forester may approve a modification to the requirements so long as there is no net loss of planted area or number of trees required.

FIGURE 15-2



1506 SCREENING OF PARKING LOTS FROM RESIDENTIAL DISTRICTS

Where a parking area in any district abuts a lot in a residential district, the parking area shall be screened by a solid wall, a uniformly painted tight board fence, or a hedge of compact evergreens or other suitable plantings. Such screen shall be at least four feet in height, and erected and maintained between the entire border of such parking area and the property in the residential district. (Figure 15-3)

FIGURE 15-3



**1507 WATERBODY VEGETATIVE BUFFERS**

- A.** Unless otherwise specified by the Rhode Island Coastal Resources Management Program Special Area Management Plan, a vegetated buffer a minimum of 25 feet in width is required adjacent to the entire length of any water body. This buffer area is measured from the water's edge or the inland edge of a coastal shoreline feature for tidal waterbodies, as defined by the Rhode Island Coastal Resources Management Program.
- B.** This buffer shall include trees and plant material that filter stormwater runoff and help to improve the quality of the water body.
- C.** No parking or structures are permitted within this buffer. However, paving for a walking path, bicycle path, or access to docks, piers, or beaches may be included within this buffer.