



11333 N. Cedarburg Road
Mequon, WI 53092
Phone: 262-236-2903
Fax: 262-242-9655
www.ci.mequon.wi.us

Department of Community Development

PLANNING COMMISSION

Policy Subcommittee

Monday, June 7, 2021

6:00 PM

Virtual Meeting

AGENDA

MEETING NOTICE: Pursuant to the current recommendation of the CDC limiting the size of public gatherings and the various federal and state orders implementing that recommendation, and to help protect our community from the Coronavirus (COVID-19) pandemic, this meeting will be held virtually through the GoToMeeting platform with each member accessing the meeting remotely. Citizens may join the meeting online or by phone. Please go to <https://global.gotomeeting.com/join/116424117> to join the meeting online or call into the meeting by dialing 1.877.309.2073 and enter access code 116-424-117.

WRITTEN PUBLIC COMMENTS may be made in writing in advance of the meeting. Written comments should be directed to the Department of Community Development at least 2 hours prior to the meeting by email at DCD1@ci.mequon.wi.us addressed to the intended committee. Written public comment may also be deposited in the drop box at City Hall on 11333 N. Cedarburg Road, Mequon at least 2 hours prior to the meeting. Comments received timely will be forwarded to all members of the body for their consideration.

VERBAL PUBLIC COMMENTS will be accepted only from members of the public who register in advance. Registration shall be made by sending an email to at DCD1@ci.mequon.wi.us or by leaving a message at 262.236.2903 no later than 2 hours prior to the meeting.

- 1. 1 Call to Order, Roll Call**
- 2. Approval of Minutes from March 8, 2021.**
- 3. Ulao Creek Draft Open Space Map.**
- 4. Selection of Ulao Creek streetlight fixture and street tree specifications.**
- 5. Overview of regulations for detached accessory structures in the residential zoning districts.**
- 6. Announcements**
The next meeting is Monday, July 12, 2021, at 6:00 p.m.
- 7. Adjourn**

Dated: June 4, 2021

/s/ John Wirth, Chair

Notice is hereby given that a quorum of other governmental bodies may be present at this meeting to present, discuss and/or gather information about a subject over which they have decision-making responsibility, although they will not take formal action thereto at this meeting.

Persons with disabilities requiring accommodations for attendance at this meeting should contact the City Clerk's Office at 262-236-2914, twenty-four (24) hours in advance of the meeting.

Any questions regarding this agenda may be directed to the Department of Community Development's Office at 262-236-2904, Monday through Friday, 8:00 AM – 4:30 PM



See Agenda Packet for
Login and Complete Packet Details
Mequon, WI 53092
Phone: 262-236-2904
Fax: 262-242-9655

www.ci.mequon.wi.us

Department of Community Development
Taped and Televised

PLANNING COMMISSION

Policy Subcommittee

Monday, March 8, 2021

6:00 PM

Virtual Meeting

Minutes

1) Call to Order, Roll Call

Present:

Chair John Wirth
Alderman Brian Parrish
Commissioner Greg Bach
Commissioner Dan Gentges
Commissioner James Schaefer
Commissioner John Stoker
Commissioner Stephanie Hawley - **Absent**

a) Approval of Minutes from January 11, 2021

Action

Commissioner Stoker made a motion to approve the minutes from February 8, 2021.
Commissioner Schaefer seconded the motion.
A voice vote was taken; vote passed (6-0)

RESULT:	APPROVED [UNANIMOUS]
MOVER:	John Stoker, Commissioner
SECONDER:	James Schaefer, Commissioner
AYES:	Wirth, Parrish, Bach, Gentges, Schaefer, Stoker
ABSENT:	Hawley

2) Ulao Creek Residential Cluster Zoning Standards

- a) Ulao Creek Residential Cluster Zoning Standards (generally the area bound by I-43 to east, Highland Road to south, Oriole Lane/Ulao Creek to west and Pioneer Road to north).

Attachment: Policy Minutes_03.08.21 (6322 : Minutes from March 8, 2021)

Public Comment

Sonja Leonard stated that she feels that there are too many restrictions on the usages allowed for her parent's property located on Port Washington Road just south of Pioneer Road. She feels that a hotel, apartments, or senior market rate housing should be allowed in this area. Her request is for these uses to be reconsidered and permitted.

Staff Report:

Dir. Tollefson stated that the single-family residential cluster zoning district has been brought back because it was largely drafted related to single-family housing not served by public sewer, which the majority of the study area is, but there is one parcel (approximately 40 acres) that is in the sewer service area and slated to be rezoned for the single-family cluster. This is the parcel at the northwest corner of Port Washington Road and Highland Road. When considering lot sizes and density on the property that can be served by city sewer and public water, staff decided that a different set of standards for density and lot sizes should be considered. Other areas in the city were studied (Central Growth and Concord Creek) for some comparisons.

Based on other comparisons, staff is recommending:

- ½ acre yield lot size to allow for greater density within sewer area.
- Allow for the .33-acre lot size.
- 85-foot lot width

She stated that feedback from developers is that they would like to see a great number of lots be achieved on the remaining 30-acre parcel as well as some interest in reducing the lot width. The challenge with lot width of less than 85 feet is that side-loading garages cannot be achieved, which has been a design standard required by PUDs and within the Central Growth area. A mix of front loading and side loading garages is allowed.

She stated that while this parcel is located within the public sewer service area, the capacity to serve the parcel, even at 1-acre density, is not there and it will require a developer to provide infrastructure upgrades. She offered that this can be removed from the sewer service area and still keep it more consistent with the single-family residential cluster subdivision. If served by private systems there would not be the same level of infrastructure costs the developer would need to cover. She added that this would not be the first choice from staff as they prefer to keep it in the public sewer service due to policy objectives for the sewer service area.

Staff stated that the developer has expressed that they would prefer to develop the parcel without the sewer system due to the cost and the density limitations.

She explained that what is proposed is consistent with the policy and the technical standards seen in the past with the change of the ½ acre yield lot size allowance in an effort to provide for more density in this area. It was also commented that the parcel is flat with very little character or aesthetic.

The Subcommittee discussed the neighborhood immediately south of this location and whether it is an appropriate comparison (it is a similar density but less compact). It was stated that this

parcel is somewhat unique in that this parcel is surrounded by many commercial buildings and is located immediately off Port Washington Road while most other residential areas are about ½ block away from Port Washington Road and adjacent to single-family residences.

There was feedback supportive of the proposed density change based on the city's interest to have development take place as well as previous communication to the neighbors that residential single-family housing would be the only approved use for the remainder of this parcel.

There was further discussion that there are not subdivisions in the city that are a close comparison and that it is difficult to select an exact number of lots to be allowed; but it is understood that it will be somewhere between a 40-60 lot yield. The intent is to signal the private market that there is some flexibility and to see what a developer proposes there. A concept plan needs to be submitted for review. There was some agreement to consider a reduction to the open space requirement, with the recommendation that the Commission will make an approval decision based on an actual submitted concept plan.

Mayor Wirth stated that he is less concerned about the size of the lots as much as the overall feel of the development and the density allowed. He commented that too many lots without any amenities (green space, outlots, etc.) will cause more of an urban feeling subdivision in an area that is considered more rural. He believes the yield and the green space around the houses are the most important factors.

He does not believe this area should be so dense.

In conclusion, Dir. Tollefson proposed the following based on the feedback from the Subcommittee:

- ½ acre yield with the ability to vary the lot sizes down to 15,000 sq. ft. up to .5-acre is reasonable (range would be 40 – 50 lots).
- Some flexibility on the open space requirement to allow for play with some pockets of green space throughout the layout and on the perimeter. Some clustering of green space will help visually.

She added that this may delay development and adjustments can be made if the market does not respond.

Action

Ald. Parrish made a motion to recommend the proposed changes in the chart in the packet.

Commissioner Stoker seconded the motion.

A voice vote was taken; vote passed (6-0)

RESULT:	APPROVED [6 TO 0]
MOVER:	Brian Parrish, Alternate Alderman
AYES:	Wirth, Parrish, Bach, Gentges, Schaefer, Stoker
ABSENT:	Hawley

3) Amendment to Chapter 58, Zoning Code Related to Regulation of Conditional Use Grants in All Residential Zoning Districts

a) Amendment to Chapter 58, Zoning Code Related to Regulation of Conditional Use Grants in All Residential Zoning Districts.

Mayor Wirth excused himself from the meeting and Ald. Parrish assumed the chairman position.

Ald. Parrish stated that there was a small committee comprised of himself, Mayor Wirth and John Stoker that worked with Asst. Dir. Zader that discussed the issues with this item a few years ago when the law were changed affecting uses deemed conditional use in residential zoning districts.

Asst. Dir. Zader stated that this was before the Commission in October of 2018. He commented that all the supporting documents are included in the packet that are part of these changes. Some of the changes include:

- In-home daycare is now a permitted use.
- Many conditions were added to the existing conditional uses to help clarify allowances.
- Guesthouses - detached building intended for temporary stays. Typically, they are not allowed to have a kitchen. Staff is working on the definition of what constitutes a kitchen. Staff is open to feedback from the Subcommittee.

There were some questions asked from the Subcommittee regarding guesthouses and caretaker and the differences between these two.

The Subcommittee recommended the proposed amendments be forwarded to the Planning Commission for review and approval.

City Attorney Brian Sajdak stated that the state and the FCC have been drastically attempting to limit the ability of the city to regulate cell tower and small cell towers as part of the 5G rollout. There are two components of the code: Changes that apply to traditional cell towers, and changes that apply to small-cell installations.

Mr. Sajdak highlighted the changes to the traditional cell tower review. Most of these changes relate to the statutory changes made by the legislature in Act 20. The changes address certain statutory definitions and also process and procedure of the applications.

Mr. Sajdak the highlighted the small cell issues but noted that the final version of this portion of the code is not ready. He explained that the 5G signal does not penetrate as deep as traditional

cell service, so the cellular companies need to expand the number of cell towers that they must provide to achieve the same level of coverage; so, they do that with the smaller facilities. These are typically small with mono pole antennas. The modems and power supplies are stored in boxes that are attached to them. He stated that the application process will continue; the biggest change from the state level will be the level of review required based on what type of implementation is happening (small existing facility as opposed as a new larger facility).

There was some discussion about recent cases regarding cell towers and reactions from municipalities. There was also mention about time restrictions that are associated with the applications regarding the review period. The Subcommittee did communicate frustration about the process and lack of power to make any changes to the applications from the cellular companies.

5) Announcements

The next meeting is Monday, May 10th at 6:00 p.m.

The June meeting has been changed to June 7th at 6:00 p.m.

6) Adjourn

Respectfully Submitted,

Kim Tollefson



11333 N. Cedarburg Road
Mequon, WI 53092-1930
Phone: 262-242-3100
Fax: 262-242-9655

www.ci.mequon.wi.us

Office of Community Development

TO: Planning Commission
FROM: Kim Tollefson, Director of Community Development
DATE: June 7, 2021
SUBJECT: Ulao Creek Draft Open Space Map

Background

The new zoning districts for the Ulao Creek neighborhood reference a neighborhood open space plan that may mandate a park impact fee for all new development. Currently, the City's park impact fee is \$900/residential dwelling unit. For each new dwelling unit constructed, a park impact fee is collected at the time of permit. This current fee already applies to Ulao Creek. Staff maintained the reference in the zoning district as a placeholder, until staff could assess new park facilities for this area. Since the creation of the new zoning districts, staff has evaluated the open space within the neighborhood, assessed the City's Comprehensive Park and Open Space Plan and discussed future needs as follows.

Analysis of Ulao Creek Neighborhood

The neighborhood contains Ulao Creek and other tributaries of the Milwaukee River as well as a public school with outdoor amenities and significant wetland complexes. Through consultation among staff, including Mike Gies, City Parks and Forestry Superintendent, the desired feature within the neighborhood is a linear parkway. The parkway can provide a linear recreational feature along Ulao Creek (west side of study area) from Pioneer Road to Highland Road and then adjacent to I-43 right-of-way (east side of study area). In addition, there will be a multi-use path along the right-of-way of N. Port Washington Road as required by the new zoning (see attached proposed Linear Parkway Map).

It is anticipated that a significant amount of open space for inclusion in the linear parkway will be contributed as development occurs either through the site plan approval for commercial development or through the cluster residential design for subdivisions. As required in Central Growth, open space features within each development will likely include some additional active and passive recreational features.

The 2019 City of Mequon Park & Open Space Plan acknowledges improvements in this area for Garrison's Glen (see attached). In addition, 30-50 additional acres of varying types of parking is anticipated to meet National Recreation and Park Association standards and the demands of future residents based on the Wisconsin Department of Administration's 2040 population projection. The plan defines a linear park as:

An area developed for one or more varying modes of recreational travel and may include play areas.

Open Space Plan

Attached is a draft plan identifying the linear parkway location coupled with the multi-use path along N. Port Washington Road. The plan identified potential obstructions and a desired gateway feature at each intersection. With the inclusion of this plan as part of the zoning districts, open space and associated features can be coordinated at the time of private development and prioritized by the City for park impact fee expenditures.

Impact Fee

The City utilizes park impact fees for costs associated with the need for additional public capital facilities based on new development. Park impact fees have not historically been dedicated to specific districts in which the new development occurs, but rather utilized with the greatest flexibility for use in any geographic area of the City that may be in need. In staff's opinion, the linear parkway within Ulao Creek will be utilized by visitors of the City and by all residents, not a sole benefit of those living in Ulao Creek neighborhood.

Impact fees collected through any new development occurring in the City can be expended for the land acquisition or easements for the linear park within Ulao Creek. In addition, some minor features along the trail can be paid for through park impact fees. These features can include outlooks or rest stops that include seating, trash receptacles as well as self-guided fitness facilities.

Parking

As previously noted, and as part of the Inter-Governmental Agreement for the Highland Road interchange, a park-n-ride is needed along N Port Washington Road. It is recommended that a park-n-ride could serve as access to the linear park and provide two benefits to users of the freeway and parkway system. Park impact fees may be utilized, in part, to fund the park-n-ride if it serves a dual purpose.

Staff Summary

It is therefore recommended that the Committee agree to broad open space plan for a neighborhood, linear parkway that includes some minor recreational amenities including outlooks, rest areas and options for parking locations. The plan can be accomplished through a combination of the current park impact fees at the rate of \$900/dwelling unit and open space contribution through each private development.

Staff Recommendation

Staff recommends the Planning Commission Policy Subcommittee review the open space, evaluate desired linear parkway features and forward the recommendation to the Park and Open Space Commission for consideration for future prioritization. The plan can serve to coordinate open space and features and should remain as noted in the proposed zoning districts for Ulao Creek neighborhood.

Attachments:

UC Open Space Map (PDF)

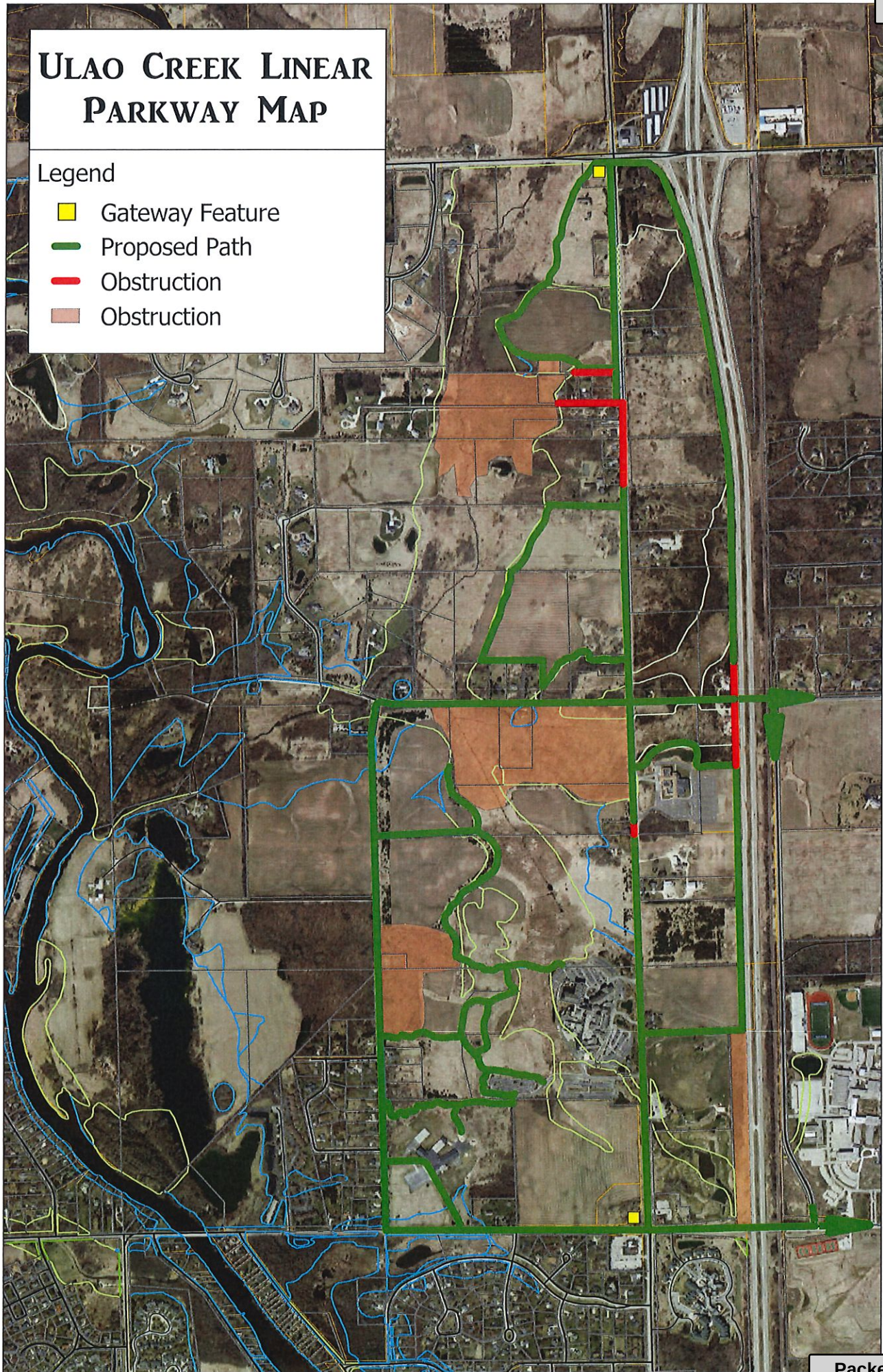
Garrison Glen (PDF)

Open Space recs (PDF)

ULAO CREEK LINEAR PARKWAY MAP

Legend

- Gateway Feature
- Proposed Path
- Obstruction
- Obstruction





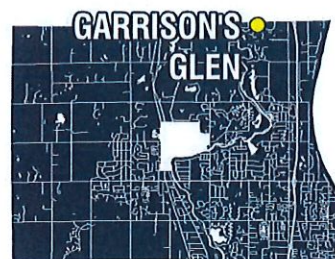
Garrison's Glen is a 20-acre neighborhood park adjacent to the Milwaukee River on Pioneer Road. Park facilities include a boat launch and hiking trails.

Existing Facilities:

- Parking lot
- Natural surface trails
- Canoe/kayak launch
- Canoe/kayak rack
- Pergola
- Park sign
- Picnic table
- Trash receptacles
- Regulatory signage
- Natural area

Issues:

- Visibility of canoe launch
- Some drainage issues on trails
- Erosion at canoe launch
- Hole under pergola
- No recycling receptacles
- No bike racks



Maintenance Program:

- Annual volunteer day with Donges Bay School
- Debris pick up from annual flooding
- Mow trails weekly
- Trash collection twice a week
- Mow trail edges/large mower
- Prune along trails
- Plow east parking lot

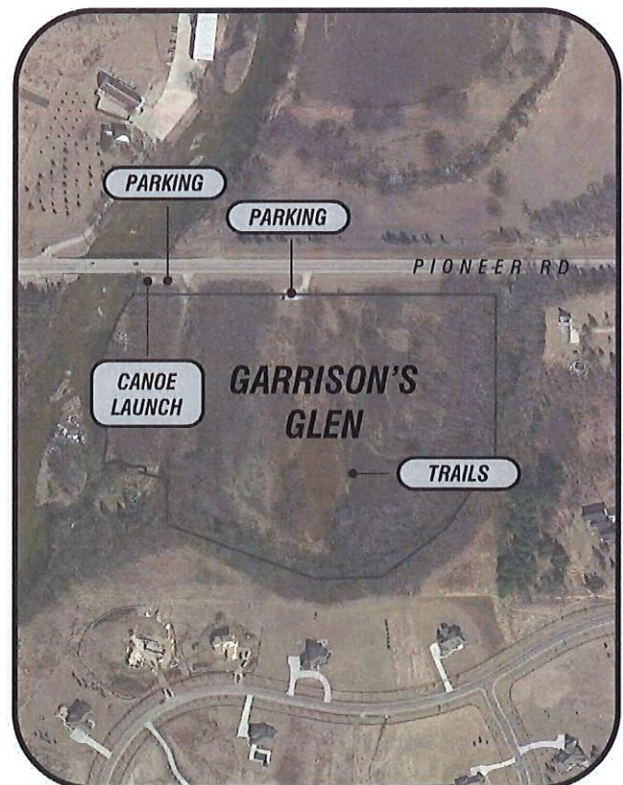
Programs, Events & Revenue Generators

- Canoe/kayak launch

Improvement Options & Estimate

- Complete park master plan\$20,000
- Install 9-hole disc golf course\$15,000
- Install gravel path to canoe path from main parking lot with directional signage\$7,500
- Grade trail locations that are not draining\$5,000
- Repair canoe launch erosion\$5,000
- Install canoe launch signage on Pioneer Road\$2,000
- Install recycling receptacles (2)\$2,000
- Install a bike rack on a concrete pad\$1,500
- Resolve hole under pergola (Install item or fill)\$1,000

TOTAL \$59,000

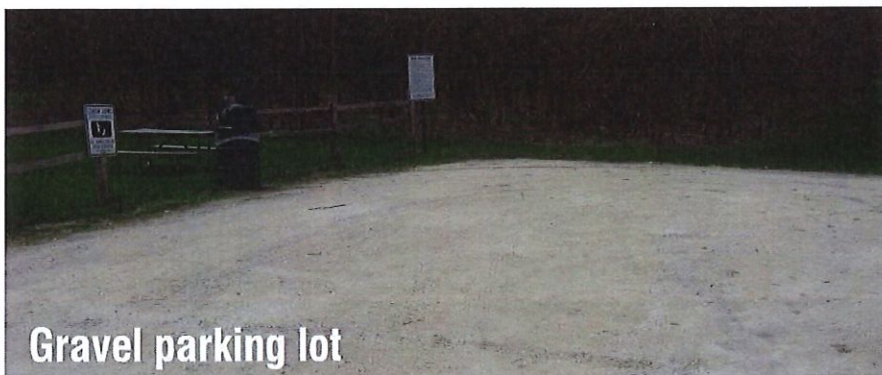


Garrison's Glen

Site Photos:



Canoe/kayak launch



Gravel parking lot



Natural area



Erosion at canoe launch



Natural surface trails



Canoe/kayak rack

C. Space that may be Local or Regional and is Unique to Each Community

Linear Park	Area developed for one or more varying modes of recreational travel, such as hiking, biking, snowmobiling, horseback riding, cross-country skiing, canoeing and pleasure driving. May include active play areas. (NOTE: the above components may occur in the "linear park")	No applicable standard	Sufficient width to protect the resource and provide maximum use	Variable
Special Use	Areas for specialized or single purpose recreational activities, such as golf courses, nature centers, skateparks, marinas, zoos, conservatories, arboreta, display gardens, arenas, outdoor theaters, gun ranges, or downhill ski areas, or areas that preserve, maintain, and interpret buildings, sites, and objects of archeological significance. Also, plazas or squares in or near commercial centers, boulevards, parkways.	No applicable standard	Variable	Variable
Conservancy	Protection and management of the natural/cultural environment with recreational use as a secondary objective.	No applicable standard	Sufficient to protect the resource	Variable

2.2.2 Level of Service Standards

Once a community's existing parks have been classified, a comparison can be made between the national standard for each park type and existing park acreage. While there is no formally established method to determine the Level of Service provided by the existing facilities, the following parameters should be considered.

Indicators	Social Environmental Economic
Acreage/Miles	Population standards (Acres/1000 population) Benchmarking
Facilities, Activities, Capacity	Population standards Demographic Analysis Neighborhood area activities Supply/Demand
Access	Walking/Bicycling/Driving, Transit Parks Facilities
Quality	Evaluation Mapping/Distribution
Programs	Relevancy, quality, and variety Scheduling Mapping/Distribution

TO: Planning Commission
FROM: Kim Tollefson, Director of Community Development
DATE: June 7, 2021
SUBJECT: Selection of Ulao Creek streetlight fixture and street tree specifications

Background

The new zoning districts for the Ulao Creek neighborhood reference a City-approved light fixture for installation along the right-of-way of N Port Washington Road by developers. Selection of an approved fixture will create a consistent look along the public road despite the piecemeal timing of development on individual sites. In addition, given the Committee's interest in maintaining a rural feel, the style of and illumination from the fixture will convey this desired character. Staff provides three distinct light fixtures for consideration as the designated Ulao Creek light.

In addition to the light, street trees, landscaping and an 8 foot wide asphalt path (path only required on the west side of Port Washington Road) are to be installed with a streetscape area. Attached is a map depicting the streetscape area and shows its relationship to the existing conditions on sites that have already developed.

Analysis of Street Trees

The City's Tree Protection and Preservation Policy Manual references a select group of street tree species (see attached list). According to Mike Gies, City Parks and Forestry Superintendent, the current list of street tree species will work well in this neighborhood given the soils. Staff does not recommend any changes to this approved list for the Ulao Creek neighborhood.

Analysis of Light Fixture

Foot candle addresses and measures the intensity of the light within a one-foot square once it reaches the surface area.

Here are some typical foot-candle measurements for given light conditions:

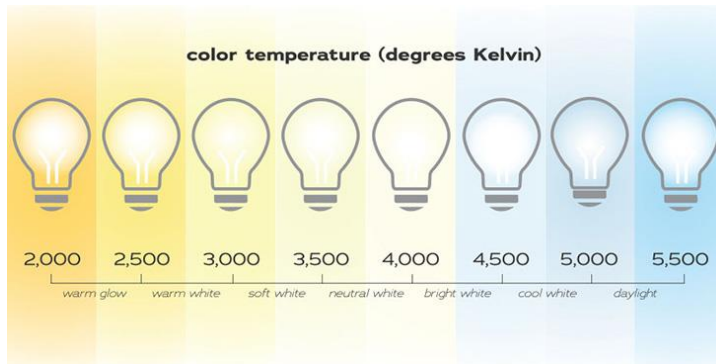
- Unobstructed sunlight: 10,000 fc
- Overcast sunlight: 100 fc
- Visually intensive workspace: 200 fc
- Store environment: 5 fc
- Residential space (living): 5-40 fc
- Residential space (working): 70-90 fc

Recommended Foot Candles for Outdoors and Exterior Lighting:

- Entrances 5 fc
- Parking Garage – Basic 1 fc
- Parking Garage – Ramps 1-2 fc
- Parking Lots 2-5 fc

The City's Zoning Code requires an average foot candle of 2 to be maintained for a parking lot and requires ground surface at a building entrance (emergency exiting) of ½ foot candle. An evening twilight setting is typically 1 foot candle.

Lumens address the brightness of the light source. Color temperature or the glow is measured in degrees. The lower the color temperature, the warmer the color tone (reddish); the higher the color temperature, the cooler the color tone (blue). Under 3000 lumens, a warmer color can be expected.



Three fixtures were selected for consideration. The following describes each and when calculating foot candles for these fixtures, staff utilized a conversion based on lumens and it does not consider variations based on light pole height. Pole height will impact the intensity at the surface and the spacing of fixtures necessary to create uniform illumination (i.e. no dark spots).

Option 1: ESX LED Area Luminaire. This fixture looks like a typical parking lot light fixture and fits round or square poles with 5.3 – 16.7 foot candles and 8,000-25,000 lumens (adjustable). The head has a side shield directing light down.

<https://lithonia.acuitybrands.com/products/family/esx-led-area-lighting>

Option 2: RADPT LED or MRP Area Luminaire. This fixture is “visually comfortable for pedestrian environments” and ideal for pathways as part of nighttime environments. Degrees or temperature options, range from 2700 to 5000. Foot candle options range from 1.8 – 3.3. The fixture is available in several different finished colors and contains shielding which directs light down.

<https://lithonia.acuitybrands.com/products/detail/980041/lithonia-lighting/radpt-led-area-luminaire/radeant-post-top---visually-comfortable-for-pedestrian-environments>

Option 3: Crossroads Astrophile Series. The fixture is International Dark Sky Association approved and uses LED technology, but eliminates the blue light that creates glow in the sky and perceived light pollution. The lumens present an amber color with a temperature of 2700 and are adjustable up to 8000. Foot candle options range from 1.8 – 5.3. The fixture is considered ideal for campus-like settings, parks and historic districts and has a side shield.

<https://crossroadsled.com/dark-sky-matters/>
<https://crossroadsled.com/lighting-products/narrow-band-amber-street-lights/>

Staff Summary

Staff recommends light fixtures for the multi-use path. The Committee should determine temperature and level of illumination at surface level. Staff recommends a warmer temperature, 3,000 degrees or less and foot candles ranging in 1-3 for outdoor safety and the lack of any other light competition in the area. The range will be utilized to address uniformity in illumination.

Staff Recommendation

Staff recommends the Planning Commission Policy Subcommittee select a light fixture for incorporation within the zoning standards.

Attachments:

UC Streetscape Map (PDF)

Plantings (PDF)

Light Option #1 (PDF)

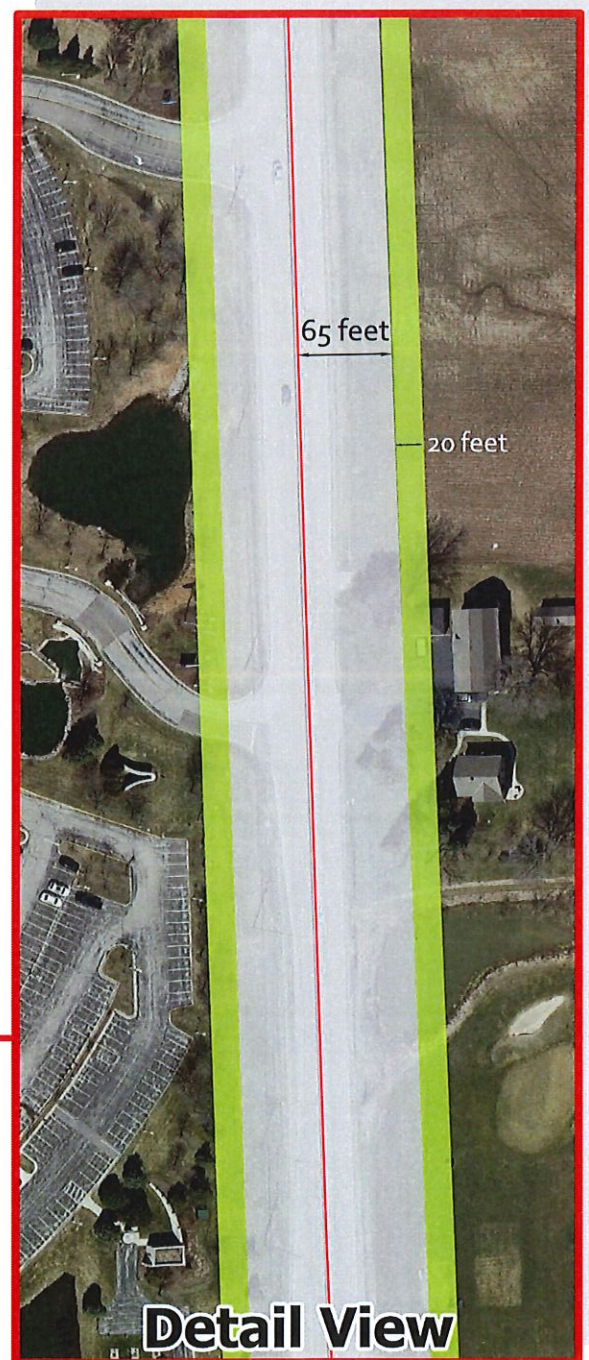
Light Option #2 (PDF)

Ligh Option #3 (PDF)

U LAO CREEK STREETSCAPE MAP

Legend

- Road Centerline
- Ultimate Road ROW: 130 feet
- Streetscape Area: 20 feet



Detail View

Attachment: UC Streetscape Map (6325 : Selection of U Lao Creek streetlight fixture and street tree specifications)

STREET TREE PLANTINGS FOR RESIDENTIAL SUBDIVISIONS - Street Tree List

	Tall (40-100')	Medium (30-40')	Low (15-30')
<u>GROUP 1</u>	▪ *Acer platanoides 'Cleveland' – Cleveland Maple ▪ Tilia x euchlora 'Redmond' – Redmond Linden ▪ Ulmus parvifolia – Lacebark Elm or disease resistant cultivars	▪ Pyrus calleryana 'Autumn Brilliance' –Autumn Brilliance Callery Pear ▪ Prunus virginiana 'Schubert' – Canada Select, Common Chokecherry	▪ Malus disease resistant cultivars ▪ Acer tatarian 'Rubrum' – Tatarian Maple ▪ Cercis Canadensis – Eastern Redbird
<u>GROUP 2</u>	▪ *Acer platanoides 'Emerald Queen' – Emerald Queen Maple ▪ Quercus robur – English Oak ▪ Aesculus hippocastanum 'Baumannii' – European Horsechestnut	▪ Phellodendron amurense 'Macho' – Macho Amur Corktree ▪ Gleiditsia triacanthos 'Imperial' – Thornless Common Honeylocust	▪ Syringa reticulata 'Ivory Silk' – Ivory Silk Japanese Tree Lilac ▪ Acer truncatum 'Pacific Sunset' – Purpleblow Maple, Shantung Maple
<u>GROUP 3</u>	▪ Celtis occidentalis 'Prairie Pride' – Prairie Pride Hackberry ▪ Tilia cordata 'Glenleven' – Glenleven Littleleaf Linden ▪ Gingko biloba 'Autumn Gold' – Autumn Gold Gingko	▪ *Acer platanoides 'Crimson King' – Crimson King Maple ▪ Alnus glutinosa – European Alder	▪ Crataegus crus-galli inermis – Thornless Cockspur Hawthorn ▪ Malus disease resistant cultivars
<u>GROUP 4</u>	▪ Quercus robur 'Skymaster' – Skymaster English Oak ▪ Quercus macrocarpa – Bur Oak	▪ Corylus column - Turkish Filbert	▪ Disease resistant flowering Crab ▪ Acer ginnala 'Flame' – Amur Maple
<u>GROUP 5</u>	▪ *Acer platanoides 'Deborah' – Deborah Norway Maple ▪ Gleditsia triacanthos 'Skyline' – Skyline Honeylocust ▪ Ulmus 'Regal' Regal Elm disease resistant cultivars ▪ Tilia cordata 'Chancellor' – Little Leaf Linden	▪ Gleiditsia triacanthos 'Imperial' – Thornless Common Honeylocust	▪ Crataegus x viridis 'Winter King' – Winter King Hawthorn ▪ Disease resistant Flowering Crab

*Asterisk species may not exceed 15% of the trees planted within the subdivision. (Note: This refers to the species, not the cultivar. Cultivars are shown in ' '.)

Attachment: Plantings (6325 : Selection of Ulao Creek streetlight fixture and street tree specifications)

STREET TREE PLANTINGS FOR RESIDENTIAL SUBDIVISIONS - Street Tree List

	Tall (40-100')	Medium (30-40')	Low (15-30')
<u>GROUP 6</u>	▪ <i>Gymnocladus dioica</i> – Kentucky Coffeetree ▪ <i>Gleditsia triacanthos</i> 'Shademaster' – Shademaster Honeylocust ▪ Freeman Maple ▪ <i>Quercus rubra</i> Red Oak	▪ <i>Cercidiphyllum japonicum</i> - Katsuratree	▪ <i>Acer truncatum</i> 'Norwegian Sunset' – Purpleblow Maple/Shantung Maple
<u>GROUP 7</u>	▪ <i>Acer saccharum</i> 'Legacy' – Sugar Maple ▪ <i>Quercus bicolor</i> – Swamp White Oak ▪ <i>Tilia americana</i> 'Legend' – American Linden ▪ <i>Tilia tomentosa</i> 'Whitnal' or 'Sterling' – Silver Linden	▪ <i>Ostrya virginiana</i> – 'Ironwood' – Ironwood/American Hophornbeam ▪ <i>Betula nigra</i> 'Heritage' – Heritage River Birch	▪ <i>Carpinus caroliniana</i> – Musclewood ▪ <i>Amelanchier grandiflora</i> 'Autumn Brilliance' - Serviceberry

NOTE: Other cultivars may be acceptable with justification.

*Asterisk species may not exceed 15% of the trees planted within the subdivision. (Note: This refers to the species, not the cultivar. Cultivars are shown in ' '.)

Attachment: Plantings (6325 : Selection of Ulao Creek streetlight fixture and street tree specifications)



ESX1 LED Area Luminaire

Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

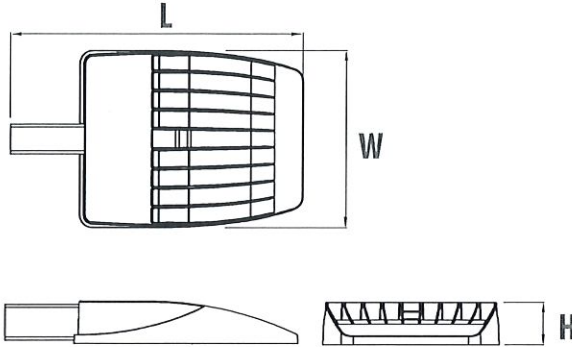
EPA 0.40 ft² (0.04 m²)

Length: 19.9" (50.5 cm)

Width: 12" (30.5 cm)

Height: 2.9" (7.4 cm)

Weight: 11.2 lbs (5.1 kg)



Introduction

The ESX LED area luminaire provides the combination of best product, best price and best delivery. ESX is ideal for one-for-one replacement of HID area lighting and provides up to 76% energy savings, long service life and fast payback.

The ESX1 delivers 8,000 to 25,000 lumens allowing it to replace 150W to 400W HID luminaires. All ESX luminaires feature adjustable light output, providing two light levels from one product, allowing greater flexibility in the field and on distributors' shelves.

All luminaires feature a reversible arm that allows for mounting on both round and square poles. Eight configurations of ESX1 luminaires are stocked in Acuity Brands distribution centers.

Ordering Information

HID Equivalent	Luminaire / Performance Package	High		Low		Distribution	Voltage	Catalog Number	CI Code	UPC
		Lumens	Watts	Lumens	Watts					
4000K										
150W to 250W	ESX1 LED P2	14,000	98W	8,000	50W	Type 3	120-277V	ESX1 LED P2 40K R3 MVOLT UPA BLS DDBXD M2	*269PG3	00194994838302
400W	ESX1 LED P4	25,000	190W	21,000	146W	Type 3	120-277V	ESX1 LED P4 40K R3 MVOLT UPA BLS DDBXD M2	*269PG8	00194994838340
							347-480V	ESX1 LED P4 40K R3 HVOLT UPA BLS DDBXD M2	*269PGC	00194994838364
						Type 5	120-277V	ESX1 LED P4 40K R5 MVOLT UPA BLS DDBXD M2	*269PGG	00194994838418
							347-480V	ESX1 LED P4 40K R5 HVOLT UPA BLS DDBXD M2	*269PGN	00194994838463
5000K										
150W to 250W	ESX1 LED P2	14,000	98W	8,000	50W	Type 3	120-277V	ESX1 LED P2 50K R3 MVOLT UPA BLS DDBXD M2	*269PGY	00194994838555
400W	ESX1 LED P4	25,000	190W	21,000	146W	Type 3	120-277V	ESX1 LED P4 50K R3 MVOLT UPA BLS DDBXD M2	*269PH1	00194994838531
						Type 5	120-277V	ESX1 LED P4 50K R5 MVOLT UPA BLS DDBXD M2	*269PH2	00194994838548

Note: Luminaire ships set on high (switchable to low). All luminaires feature adjustable light output, a reversible arm for mounting on round and square poles and dark bronze finish. The lumen output and input watts shown are nominal values. Refer to the lumens table on page 3 for specific values.

Accessories: Order as separate catalog number.

Catalog Number	Description	CI Code	UPC
ESXWBA DDBXD U	ESX WBA wall bracket, dark bronze finish	*2705ST	00194995092826

Note: Accessories are ordered and shipped separately from the luminaire.



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.acuitybrands.com
© 2021 Acuity Brands Lighting, Inc. All rights reserved.

Lithonia ESX1 Area LED
Rev. 02/08/21
Page 1 of 4

Packet Pg. 20

Accessories

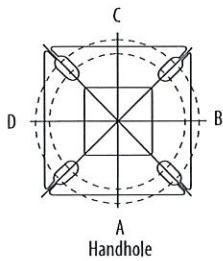


Wall Bracket (WBA)

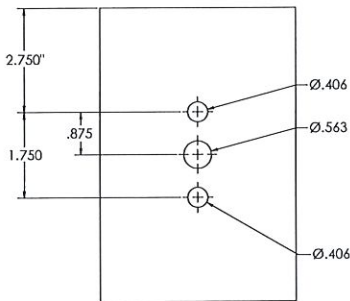
Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

HANDHOLE ORIENTATION



DRILLING TEMPLATE #20



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	ESX1 Mounting	Single	2 @ 180°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
2 - 3/8"	UPA (round)	ASR4-S 190	ASR4-S 280	ASR4-S 290	ASR4-S 320	ASR4-S 390	ASR4-S 490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#20	Drill Nomenclature	DM19ESX	DM28ESX	DM29ESX	DM32ESX	DM39ESX	DM49ESX

Luminaire EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
Mounting Type									
UPA - Reversible Arm Mount	0.40	0.79	0.79	1.19	1.19	1.58	0.79	1.19	1.58



Adjustable Light Output (ALO) technology:

Internal bi-level switch with two light levels for greater flexibility within one product (default set to high)

	High Lumens	Low Lumens	HID Replacement
ESX1 LED P2	14,000	8,000	150W to 250W
ESX1 LED P4	25,000	21,000	400W

UPA - Reversible Arm Mount

The UPA reversible arm is designed to mount onto round and square poles. During installation, the flat end of the arm is placed against the flat surface on square poles. When using with round poles, the arm can be turned around so that the curved end is placed against the curvature on round poles. ESX1 can be mounted onto minimum 3.5" square and round poles.

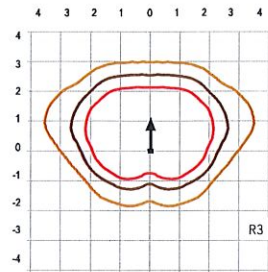
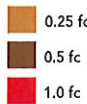


Photometric Diagrams

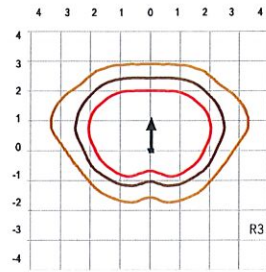
To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [ESX Area homepage](#).

Isofootcandle plots for the ESX1. Distances are in units of mounting height (25').

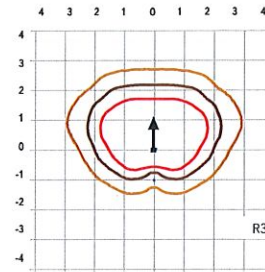
LEGEND



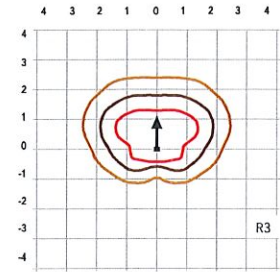
ESX1 LED P4 40K R3



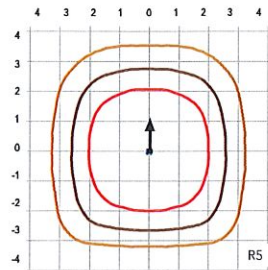
ESX1 LED P3 40K R3



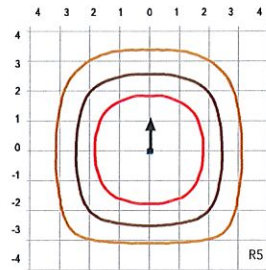
ESX1 LED P2 40K R3



ESX1 LED P1 40K R3



ESX1 LED P4 40K R5



ESX1 LED P3 40K R5

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Series	Performance Package	System Watts	Distribution Type	40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
ESX1 LED P2	P1 (switched to low)	50W	R3	7,874	2	0	2	157	7,993	2	0	2	160
	P2	98W	R3	13,917	2	0	2	142	14,128	2	0	2	144
ESX1 LED P4	P3 (switched to low)	146W	R3	20,658	3	0	3	141	20,881	3	0	3	143
			R5	21,680	5	0	3	148	21,914	5	0	3	150
	P4	190W	R3	25,034	3	0	3	132	25,304	3	0	3	133
			R5	26,273	5	0	3	138	26,557	5	0	3	140

Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1 (low)	50W	0.41	0.24	0.21	0.18	---	---
P2	98W	0.81	0.47	0.41	0.35	---	---
P3 (low)	146W	1.22	0.70	0.61	0.53	0.42	0.30
P4	190W	1.58	0.91	0.79	0.69	0.55	0.40

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient Temperature	Lumen Multiplier
0°C / 32°F	1.03
5°C / 41°F	1.03
10°C / 50°F	1.02
15°C / 59°F	1.01
20°C / 68°F	1.01
25°C / 77°F	1.00
30°C / 86°F	0.99
35°C / 95°F	0.99
40°C / 104°F	0.98

Projected LED Lumen Maintenance

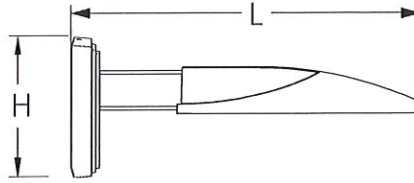
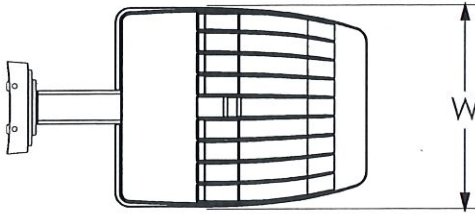
Data references the extrapolated performance projections for the platforms noted in a 25°C ambient and hours of LED testing (tested per IESNA LM-80-08 and reported per IESNA M-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the luminaire performance package below. For other lumen maintenance values, contact factory.

Performance Package	TM-21 Percent Lumen Maintenance at 60,000 hrs
P1 / P2	89%
P3	88%
P4	87%

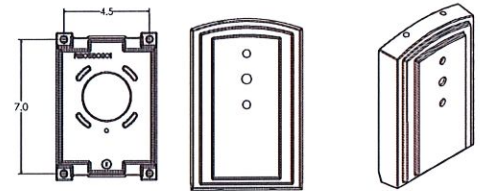
Dimensions

ESX1 with Wall Bracket (WBA)



Length: 21.7" (55.1)
 Width: 12" (30.5 cm)
 Height: 2.9" (7.4 cm) Main Body
 8.9" (22.6 cm) Wall Bracket
 Weight: 14.2 lbs (6.4 kg)

Wall Bracket (WBA) Mounting Detail



FEATURES & SPECIFICATIONS

INTENDED USE

The ESX1 offers a complete area lighting package providing everything needed to replace 150W to 400W HID area luminaires. Adjustable light output provides two light levels from one product, allowing greater flexibility while helping reduce inventory costs.

CONSTRUCTION

The ESX LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED efficacy and extends component life. The mounting arm is made of extruded aluminum and its universal function allows for mounting on round and square poles. The luminaires optics are IP66 rated, and sealed against moisture and environmental contaminants. The low-profile design results in a low EPA. ESX is rated for minimum 1.5 G vibration load per ANSI C136.31.

FINISH

Exterior parts are protected by a Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. The result is a high-quality finish that is warrantied not to crack or peel. The standard finish provided on the housing and mounting arm is dark bronze.

OPTICS

Designed for one-for-one replacement of HID luminaires, acrylic refractive lenses are engineered for application efficiency, distributing the light to where it is needed most, providing greater coverage and improved back-light control. Available in distributions Type 3 and Type 5.

ELECTRICAL

Light engines consist of high-efficacy LEDs with LED lumen maintenance greater than L87/60,000 hours. Color temperature (CCT) options of 4000K and 5000K with minimum CRI of 70 are available. Electronic drivers are 0-10V, capable of continuous dimming, and ensure system power factor >90% and THD <20%. All luminaires have 6kV surge protection. Driver input voltages available in MVOLT (120-277V) and HVOLT (347-480V).

ADJUSTABLE LIGHT OUTPUT (ALO)

ALO allows dimming the luminaire via a switch that is accessible in the driver compartment. Luminaires ship on the high setting. Use ESX1 LED P4 at 25,000 lumens to replace 400W HID luminaires. When less light and/or more energy savings is desired, switch to low (P3) setting at 21,000 lumens. Use ESX1 LED P2 to replace 250W HID luminaires. When less light and/or more energy savings is desired, switch to low (P1) setting at 8,000 lumens or when replacing down to 150W HID.

INSTALLATION

The ESX1 features an extruded aluminum arm that is reversible allowing it to mount on both round and square poles. ESX1 can be mounted onto minimum 3.5" square and round poles. A wall mount bracket is also available.

LISTINGS

UL listed to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



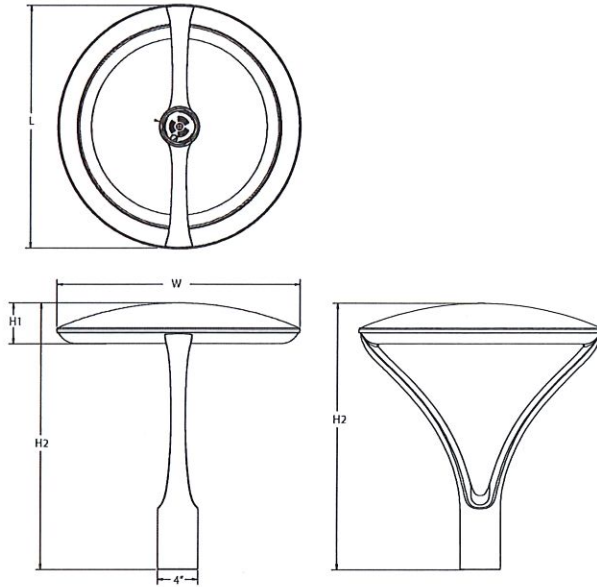
Radean Post Top LED Area Luminaire



Buy American

Specifications

EPA:	1.02 ft ² (0.105 m ²)
Length:	24" (61cm)
Width:	24" (61cm)
H1 Luminaire Height:	4" (10.16cm)
H2 Luminaire Height:	26" (66.04cm)
Weight:	38lbs (17.24Kg)



Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The architecturally-inspired shape of the RADEAN™ post top area luminaire embodies the grace and strength of the RADEAN family. The twin copper-core cast aluminum arms support the slender superstructure, creating a beautiful sculpture by day transforming into a beacon of comfort by night. Triangular arms redirect reflection maintaining its visually quiet appearance. With sleek lines and simple silhouettes, these LED luminaires use specialized lighting and visual comfort to transform common areas like courtyards, outdoor retail locations, universities and corporate campuses into pedestrian-friendly nighttime environments.

Ordering Information

EXAMPLE: RADPT LED P3 30K SYM MVOLT PT4 PIR DNAXD

RADPT LED					
Series	Performance package	Color temperature	Distribution	Voltage	Mounting (required)
RADPT LED	P1 3,000 Lumens	27K 2700K	SYM Symmetric type V	MVOLT ¹ 277 ¹	PT4 ² Slips inside a 4" OD round metal pole
	P2 5,000 Lumens	30K 3000K	ASY Asymmetric type IV	120 ¹ 347	RADPT20 Slips over a 2 3/8" diameter tenon
	P3 7,000 Lumens	35K 3500K	PATH Pathway Type III	208 ¹ 480	RADPT25 Slips over a 2 7/8" diameter tenon
	P4 10,000 Lumens	40K 4000K		240 ¹	
	P5 15,000 Lumens	50K 5000K			
Control options		Other options		Finish (required)	
Shipped installed		SF Single Fuse ¹	Shipped installed	DDBXD Dark bronze	DDBTXD Textured dark bronze
NLTAIR2	nLight AIR 2.0 enabled ³	DF Double Fuse ¹	HS Houseside shield ¹⁰	DBLXD Black	DBLBXD Textured black
PIR	Bi-level motion/sensor (100% to 30%) ^{4,5,6,7}	R90 Rotated optics ⁹		DNAXD Natural aluminum	DNATXD Textured natural aluminum
PE	Button photocell ⁸			DWHXD White	DWHGXD Textured white
FAO	Field adjustable output ^{4,8}				



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

RADPT LED
Rev. 03/17/21

Ordering Information

Accessories

Ordered and shipped separately.

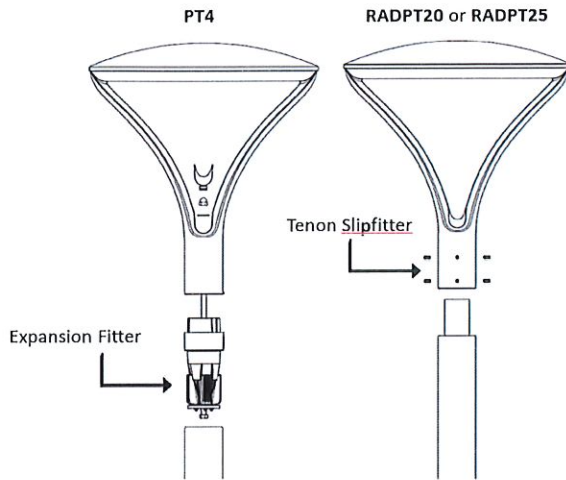
RADHS	Houseside shield (shield is white)
RADCS DDBXD U	Decorative clamshell base for 4" RSS pole (specify finish)
RADFBC DDBXD U	Full base cover for 4" RSS pole (specify finish)

For more control options, visit [DTL](#) and [ROAM](#) online.

NOTES

- 1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- 2 Required nominal 4" round straight metal pole.
- 3 NLTAIR2 not available with PIR, PE or FAO. Must link to external nLight Air network.
- 4 PIR will work with FAO, if adjustable low-end trim is required.
- 5 PIR must specify 120V, 277V, 347V or 480V. Not available in MVOLT, 208V or 240V.
- 6 PE and PIR are available together.
- 7 PIR for use only on luminaires mounted under 15'.
- 8 Field adjustable high-end trim.
- 9 For left rotation, select R90 and rotate luminaire 180° on pole.
- 10 Also available as a separate accessory; see Accessories information at left. HS not available with R90. Shield is field rotatable shield in 180° increments.

Mounting

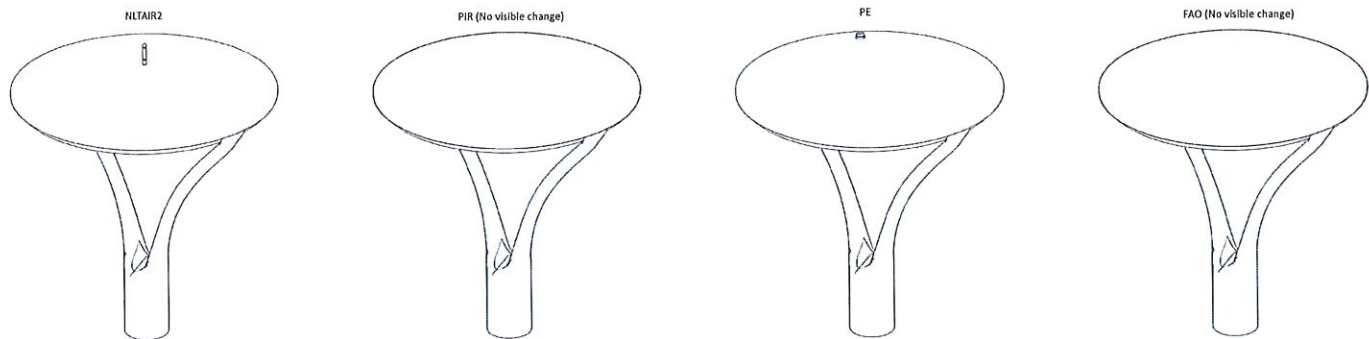


Recommended Poles for use with RADEAN RADPT LED Luminaires.

Acuity Part Number	Description	For luminaires	Used with Mounting
RSS 10 4B PT DDBXD	10' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 12 4B PT DDBXD	12' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 14 4B PT DDBXD	14' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 16 4B PT DDBXD	16' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 18 4B PT DDBXD	18' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 20 4B PT DDBXD	20' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 25 4B PT DDBXD	25' Round Straight Steel - 4" O.D. - Open Top	RADPT LED	PT4
RSS 10 4B T20 DDBXD	10' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 12 4B T20 DDBXD	12' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 14 4B T20 DDBXD	14' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 16 4B T20 DDBXD	16' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 18 4B T20 DDBXD	18' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 20 4B T20 DDBXD	20' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20
RSS 25 4B T20 DDBXD	25' Round Straight Steel - 4" O.D. - Tenon Top	RADPT LED	RADPT20

* Customer must verify pole loading per required design criteria and specified wind speed. Consult pole specification sheet for additional details.

Control Options



Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Contact factory for performance data on any configurations not shown here.

Performance Package	Input Wattage	Distribution	2700K					3000K					3500K					4000K					5000K				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	25	ASY	2,924	2	1	2	115	3,022	2	2	2	119	3,095	2	2	2	122	3,168	2	2	2	125	3,168	2	2	2	125
		PATH	2,529	2	1	2	100	2,613	2	2	2	103	2,676	2	2	2	105	2,739	2	2	2	108	2,739	2	2	2	108
		SYM	3,086	2	1	1	121	3,189	2	1	1	126	3,266	2	1	1	129	3,344	2	1	1	132	3,344	2	1	1	132
P2	38	ASY	4,521	3	2	3	119	4,672	3	2	3	123	4,785	3	2	3	126	4,898	3	2	3	129	4,898	3	2	3	129
		PATH	3,909	2	2	2	103	4,040	2	2	2	106	4,137	2	2	2	109	4,235	3	2	3	111	4,235	3	2	3	111
		SYM	4,772	2	2	1	126	4,931	3	2	1	130	5,050	3	2	1	133	5,169	3	2	1	136	5,169	3	2	1	136
P3	54	ASY	6,387	3	2	3	119	6,600	3	2	3	123	6,760	3	2	3	126	6,919	3	2	3	129	6,919	3	2	3	129
		PATH	5,523	3	2	3	103	5,707	3	2	3	106	5,845	3	2	3	109	5,983	3	2	3	112	5,983	3	2	3	112
		SYM	6,741	3	2	2	126	6,966	3	2	2	130	7,135	3	2	2	133	7,303	3	2	2	136	7,303	3	2	2	136
P4	86	ASY	10,150	4	2	4	118	10,489	4	2	4	122	10,742	4	2	4	125	10,996	4	2	4	128	10,996	4	2	4	128
		PATH	8,777	3	2	3	102	9,070	3	2	3	106	9,289	3	2	3	108	9,509	3	2	3	111	9,509	3	2	3	111
		SYM	10,713	3	2	2	125	11,071	3	2	2	129	11,338	3	2	2	132	11,606	3	2	2	135	11,606	3	2	2	135
P5	123	ASY	14,250	4	2	4	116	14,724	4	2	4	120	15,081	4	3	4	123	15,437	4	3	4	126	15,437	4	3	4	126
		PATH	12,322	4	2	4	101	12,733	4	3	4	104	13,041	4	3	4	106	13,349	4	3	4	109	13,349	4	3	4	109
		SYM	15,040	4	2	3	123	15,541	4	2	3	127	15,917	4	2	3	130	16,293	4	2	3	133	16,293	4	2	3	133

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		LAT Factor
0°C	32°F	1.06
5°C	41°F	1.05
10°C	50°F	1.04
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.96

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the RADPT LED platform in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

	Projected LED Lumen Maintenance			
	0	25,000	50,000	100,000
P1	1.00	0.96	0.91	0.82
P2	1.00	0.96	0.91	0.82
P3	1.00	0.96	0.91	0.82
P4	1.00	0.96	0.91	0.82
P5	1.00	0.95	0.89	0.78

Electrical Load

Lumen Package	LED Drive Current	Voltage	Wattage		Current (A)					
					120	208	240	277	347	480
P1	500	42.8	21.4	Input Current	0.22	0.13	0.11	0.1	0.08	0.06
				System Watts	26	26	26	27	25	26
P2	770	43	33.1	Input Current	0.33	0.19	0.16	0.14	0.11	0.08
				System Watts	39	39	39	39	38	38
P3	1100	43.2	47.5	Input Current	0.46	0.26	0.23	0.2	0.16	0.12
				System Watts	55	54	54	54	54	54
P4	900	87.3	78.6	Input Current	0.73	0.42	0.36	0.32	0.25	0.18
				System Watts	87	86	86	86	86	86
P5	1250	88.2	110.2	Input Current	1	0.58	0.5	0.44	0.35	0.25
				System Watts	120	119	119	119	120	120



COMMERCIAL OUTDOOR

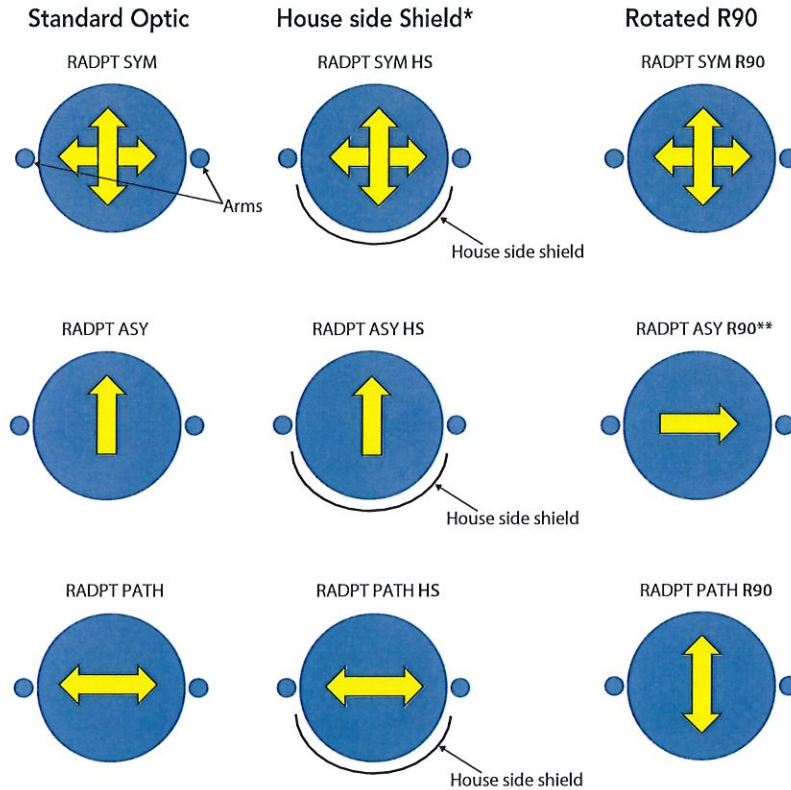
One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

RADPT LED
Rev. 03/17/21

Orientation Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [RADPT LED homepage](#).

Isofootcandle plots are considered to be representative of available optical distributions.



*HS not available with R90

**For L90, use R90 and rotate luminaire 180° on pole

FEATURES & SPECIFICATIONS

INTENDED USE

Pedestrian areas such as parks, campuses, pathways, courtyards and pedestrians malls.

CONSTRUCTION

Single-piece die-cast aluminum housing with nominal wall thickness of 0.125" on a 6mm thick acrylic waveguide is fully gasketed with a single piece tubular silicone gasket.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum and white. Available in textured and non-textured finishes.

OPTICS

6MM thick acrylic waveguide with 360° flexible LED board. Available in 2700K, 3000K, 3500K, 4000K and 5000K (70CRI) CCT configurations.

ELECTRICAL

Light engine consists of 96 high-efficacy LEDs mounted to a flexible circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable 10KV surge protection device meets a minimum Category C Low for operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Standard post-top mounting configuration fits into a 4" OD open pole top (round pole only). Alternate tenon (2-3/8" or 2-7/8") mounting also available.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color or less.

BUY AMERICAN

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FARS, DFARS and DOT. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
© 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.

RADPT LED
Rev. 03/17/21



[HOME](#) // [PRODUCTS](#) // [RADPT LED AREA LUMINAIRE](#)



SAVING ENERGY HAS NEVER BEEN EASIER!

Explore how nLight controls enhance Outdoor luminaires

CHECK IT OUT!



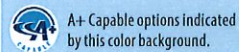
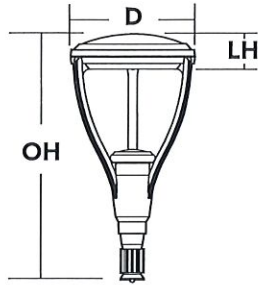
MRP LED LED Area Luminaire



OMERO

Specifications

EPA:	1.125 ft ² (0.105 m ²)
Luminaire Height:	6-3/8" (16.2 cm)
Overall Height:	32" (81.3 cm)
Diameter:	18" (45.7 cm)
Weight (max):	37.5 lbs (17 kg)



Ordering Information

EXAMPLE: MRP LED 42C 700 40K SR5 MVOLT DDBXD

MRP LED	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
MRP LED	42C 42 LEDs (one engine)	350 350mA 530 530mA 700 700mA 1000 1000mA (1A)	30K 3000K 40K 4000K 50K 5000K	SR2 Type II SR3 Type III SR4 Type IV SR5 Type V	MVOLT ¹ 277 ² 120 ² 347 ² 208 ² 480 ² 240 ²	Shipped included (blank) Fits 4" OD round pole Shipped separately³ MRPT20 2-3/8" tenon slipfitter MRPT25 2-7/8" tenon slipfitter MRPT30 3-1/2" tenon slipfitter MRPT35 4" tenon slipfitter MRPF3 3" OD round pole adapter MRPF5 5" OD round pole adapter ⁴

Control options	Other options	Finish (required)
Shipped installed PER NEMA twist-lock receptacle only (control ordered separate) PER5 Five-wire receptacle only (control ordered separate) ⁵ PER7 Seven-wire receptacle only (control ordered separate) ⁵ PNMTDD3 Part night, dim till dawn ⁶ PNMT5D3 Part night, dim 5 hrs ⁶ PNMT6D3 Part night, dim 6 hrs ⁶ PNMT7D3 Part night, dim 7 hrs ⁶	SF Single fuse (120, 277, 347V) ² DF Double fuse (208, 240, 480V) ²	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLTXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

Catalog
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL[®] controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability¹
- This luminaire is part of an A+ Certified solution for ROAM[®] or XPoint[™] Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background¹

To learn more about A+, visit www.acuitybrands.com/aplus.

- See ordering tree for details.
- A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: [Link to Roam](#); [Link to DTL DLL](#)

Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) ¹
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) ¹
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) ¹
DSHORT SBK U	Shorting cap ²
MRPT20 DDBXD U	2-3/8" tenon slipfitter (specify finish)
MRPT25 DDBXD U	2-7/8" tenon slipfitter (specify finish)
MRPT30 DDBXD U	3-1/2" tenon slipfitter (specify finish)
MRPT35 DDBXD U	4" tenon slipfitter (specify finish)
MRPF3 DDBXD U	3" OD round pole adapter (specify finish)
MRPF5 DDBXD U	5" OD round pole adapter (specify finish) ³

For more control options, visit [DTL](#) and [ROAM](#) online.

NOTES

- 1 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- 2 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- 3 Also available as a separate accessory; see Accessories information at left.
- 4 Maximum pole wall thickness is 0.156".
- 5 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls.
- 6 Dimming driver standard. Not available with 347V, 480V, SF, DF, PER5 or PER7.
- 7 Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K					40K					50K				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
42C (42 LEDs)	530	75W	SR2	5,456	1	2	1	73	6,605	1	2	1	88	6,671	1	2	1	89
			SR3	5,436	1	1	1	72	6,581	1	1	2	88	6,647	1	1	2	89
			SR4	5,399	1	1	1	72	6,537	1	1	2	87	6,602	1	1	2	88
			SR5	5,748	3	1	3	77	6,959	3	1	3	83	7,029	3	1	3	94
	700	100W	SR2	6,630	1	2	1	66	8,026	2	2	2	80	8,106	2	2	2	81
			SR3	6,605	1	1	2	66	7,997	1	2	2	80	8,077	1	2	2	81
			SR4	6,561	1	1	2	66	7,943	1	2	2	79	8,022	1	2	2	80
			SR5	6,985	3	1	3	70	8,456	3	2	3	85	8,541	3	2	3	85
	1000	151W	SR2	8,165	2	2	2	54	9,885	2	2	2	65	9,983	2	2	2	66
			SR3	8,135	1	2	2	54	9,848	2	2	2	65	9,947	2	2	2	66
			SR4	8,080	2	2	2	54	9,782	2	2	2	65	9,880	2	2	2	65
			SR5	8,602	3	2	3	57	10,414	4	2	4	70	10,518	4	2	4	70

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✓	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	✗	✓	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion (ROAM on/off only)	✗	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof*	✗	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof* with Motion	✗	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture

- Recommended
 Will not work
 Alternate

*Futureproof means: Ability to change controls in the future.

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C	1.06
10°C	1.04
20°C	1.01
25°C	1.00
30°C	0.99
40°C	0.96

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the MRP LED 42C 700 platform in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.96	0.92	0.85



COMMERCIAL OUTDOOR

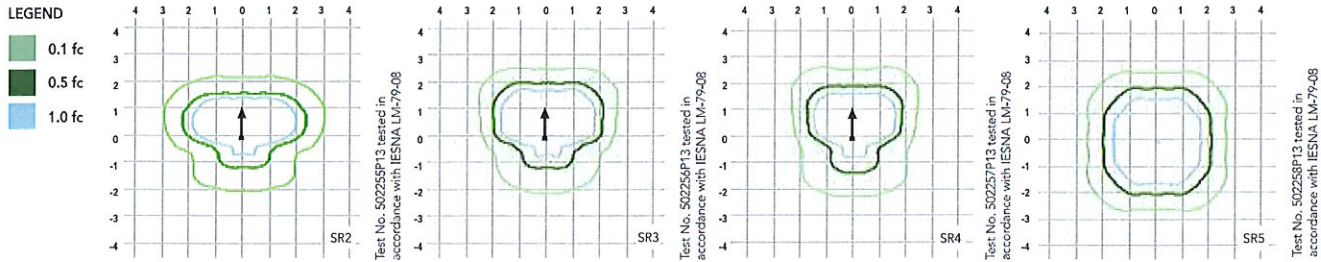
One Lithonia Way • Conyers, Georgia 30012 • Phone: 800-705-SERV (7378) • www.lithonia.com
 © 2011-2019 Acuity Brands Lighting, Inc. All rights reserved.

MRP-LED
 Rev. 10/28/19

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [MRP LED homepage](#).

Isofootcandle plots are considered to be representative of available optical distributions.



Part Night Controls

Part-Night controls are simple, energy-saving devices that allow luminaires dim during the late-night hours without the need of additional control circuits or wireless signals. With this luminaire-embedded device, the luminaires operate at full light output beginning at dusk (when turned on by the photocell or time clock), but then automatically reduce the light output (typically to 30%) for a period during the late-night hours when occupancy is lowest. The part-night device can keep the luminaire in energy-saving mode until dawn when the external photocell/timer switches off the luminaire, or it can be programmed for a shorter period, allowing early-morning occupants to enjoy full light output.

A luminaire with a factory-installed part-night device is easy to install as there are no additional wires and no required commissioning.

Luminaires equipped with part-night devices require some dusk to dawn control in order to operate correctly. This on-at-dusk and off-at-dawn capability may be in the form of a branch circuit photocontrol or astrological timer, or it could be a local photocontrol in the luminaire itself. Without dusk to dawn controls, the part-night will become disabled and the luminaire will remain on at 100%.

Available configurations are as follows:

PNMTDD3	Dims mid-way through the night	Remains dimmed until dawn	Dimmed at 30%
PNMT5D3	Dims mid-way through the night	Remains dimmed for 5 hours	Dimmed at 30%
PNMT6D3	Dims mid-way through the night	Remains dimmed for 6 hours	Dimmed at 30%
PNMT7D3	Dims mid-way through the night	Remains dimmed for 7 hours	Dimmed at 30%

The part-night device uses an algorithm which averages the durations of the last three dusk-to-dawn periods (length of time the luminaire was powered) and divides it in half to determine the mid-point of the night. This accounts for seasonality and specific environmental elements that might affect the lighting in the specific locations. The luminaire may operate at full power for the first three nights in order to calibrate.

FEATURES & SPECIFICATIONS

INTENDED USE

Streets, walkways, parking lots and surrounding areas.

CONSTRUCTION

Single-piece die-cast aluminum housing with nominal wall thickness of .012". Die-cast top access doorframe has impact-resistant, tempered glass lens (3/16" thick). Doorframe is fully gasketed with one-piece tubular silicone.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum and white. Available in textured and non-textured finishes.

OPTICS

Precision acrylic refractive optics for optimum light distribution through the flat glass lens. Light engines are available in standard 3000K (70 CRI) or optional 4000K (70 CRI) or 5000K (70 CRI) configurations.

ELECTRICAL

Light engine consists of 42 high-efficacy LEDs mounted to a metal-core circuit board and aluminum heat sink, ensuring optimal thermal management and long life. Class 1 electronic driver has a power factor >90%, THD <20%, and has an expected life of 100,000 hours with <1% failure rate. Easily-serviceable surge protection device meets a minimum Category C Low for operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Standard post-top mounting configuration fits into a 4" OD open pole top (round pole only). Multiple options and accessories are available for other mounting needs.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP65 rated. Rated for -40°C minimum ambient. **U.S. Patent No. D556,357.**

WARRANTY

5-year limited warranty. Complete warranty terms located at:

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 800-705-SERV (7378) • www.lithonia.com
© 2011-2019 Acuity Brands Lighting, Inc. All rights reserved.

MRP-LED
Rev. 10/28/19



11213 N Garnett Road
Owasso, OK 74055
Tel: (918) 504-6595
Fax: (918) 553-6444

Project _____

Date _____

Catalog # _____

Type and style of customers fixture _____

Comments _____

ASTROPHILE SERIES NARROW BAND AMBER AMBER FIXTURES

CONSTRUCTION

Up to 60 high efficiency LED arrays mounted to proprietary unitary heat sinks. Heat sinks and power supplies are bolted to interchangeable adapter plates.

MOUNTING

The Astrophile street light fixtures are designed to be mounted to 2.40" tenons.

OPTICS

The Astrophile street light fixtures is available in type I, II, III, IV, V.

PEAK DOMINANT WAVELENGTH

Available in 592nm, 592nm, and 595nm $\pm$ 2.5nm

ELECTRICAL

120 to 277VAC input with full dimming capability. 480VAC version is available. Standard three terminal screw type terminal block are provided for quick and simple installation. A 3 wire pigtail is also available.

RELIABILITY

Patented, proven and reliable technology (US Patent number: 9,964,288). Case studies are available upon request.



Attachment: Light Option #3 (6325 : Selection of Ulao Creek streetlight fixture and street tree specifications)

WARRANTY

Standard five-year warranty on all retrofit luminaires. Terms and conditions apply.

CATALOG NUMBERS

100 WATT STREET LIGHT FIXTURES

4000-PS1828-100-589,	120 to 277VAC 100 watt, 60 element LED
4000-PS1828-100-592,	120 to 277VAC 100 watt, 60 element LED
4000-PS1828-100-595,	120 to 277VAC 100 watt, 60 element LED

70 WATT STREET LIGHT FIXTURES

4000-PS1828-70-589,	120 to 277VAC 70 watt, 48 element LED
4000-PS1828-70-592,	120 to 277VAC 70 watt, 48 element LED
4000-PS1828-70-559,	120 to 277VAC 70 watt, 48 element LED

45 WATT STREET LIGHT FIXTURES

4000-PS1828-45-589,	120 to 277VAC 45 watt, 48 element LED
4000-PS1828-45-592,	120 to 277VAC 45 watt, 48 element LED
4000-PS1828-45-595,	120 to 277VAC 45 watt, 48 element LED



11333 N. Cedarburg Road
Mequon, WI 53092-1930
Phone: 262-242-3100
Fax: 262-242-9655

www.ci.mequon.wi.us

Office of Community Development

TO: Planning Commission
FROM: Jac Zader, Assistant Director Community Development
DATE: June 7, 2021
SUBJECT: Chapter 58 of the Zoning Code as it relates to Detached Structures.

Background:

As part of the review of the zoning code related to conditional uses in the residential sections of the zoning code, staff recognized some ambiguity and inconsistencies surrounding the treatment of detached structures that do not fall under the category of garage or storage buildings. There are several different code sections that pertain to accessory structures (see attached) but do not specially include criteria or allowances for certain structures such as pergolas or gazebos.

Some communities specifically regulate certain types of detached structures (see attached City of Brookfield) and others do not regulate them as all. Currently, the City of Mequon does require all detached structures to meet setback per the code. We do not limit the size or number of several of these uncategorized structures unless it is fully enclosed. Staff is looking for feedback from the committee on what changes should be made to the code as a beginning step to create an updated ordinance regarding these structures.

Attachments:

Detached Structures (DOCX)
Brookfield Acc str (DOCX)

List of Detached Structures typically seen on residential properties.

Decks
 Pergolas
 Pavilions
 Cabanas/Pool House
 Playhouses
 Pump Houses
 Gazebos
 Carports
 Sheds and other storage buildings (covered in section 247)
 Garages (covered in section 247)
 Greenhouses (covered in table 247)
 Guesthouses (covered in section 248)
 Tree Houses
 Little Libraries
 Indoor Sport Court
 Boat House
 Outdoor Wood Boiler
 Work studio/office
 AC/Generators
 Stables, barns, animals enclosure etc. (covered in Animal Section and OA)

Relevant Code sections

Definitions:

Accessory use or structure means a subordinate use or structure customarily incidental to and located upon the same lot occupied by the principal use or structure. The single exception is accessory off-street parking facilities which are permitted to locate off-site of the principal building or use served.

Structure means a combination of materials other than natural terrain or plant growth erected or constructed to form among other things, a building, shelter, sign enclosure, retainer, container, support, base, or decoration.

Structure, permanent means a structure placed on or in the ground or attached to another structure in a fixed and determined position, and intended to remain in place for a period of more than nine months.

Structure, storage means a detached structure other than a principal garage that is used for the parking and/or storage of motor vehicles of the families resident upon the premises; boats, campers and other recreational vehicles; lawn and garden equipment and tools, as well as any other items or materials as may be necessary.

Sec. 58-171. - Use regulations.

- (d) *Accessory uses and structures.* These subordinate uses and structures are customarily incidental to and located upon the same lot occupied by the principal use or structure. Any accessory use or structure shall conform to the established regulations of the district in which it is located except as specified below. No accessory use or structure shall be permitted that by reason of noise, dust, odor, appearance, lighting, traffic generation, or other objectionable factors creates a nuisance or a substantial adverse effect upon the property value or reasonable enjoyment of the surrounding property.
- (1) Prior to construction of potential nuisance generating recreational facilities within a residentially zoned district, the applicant/owner must review the proposed recreational facility plans with the building inspector and director of community development. Except as otherwise regulated, the building inspector and director of community development shall determine whether the proposed recreational facility is likely to create a nuisance which would require further administrative review. Further administrative review may result in an informal meeting among city staff, adjacent property owners, and the applicant/owner to solicit comments on the proposed recreational facility. If deemed necessary by city staff, ultimate approval of the proposed recreational facility shall be subject to conditional use grant approval by the planning commission. Provisions of this article do not apply to uses normally accessory to residential development.
 - (2) In the case of an accessory structure not exceeding 150 square feet in ground area, the setback, offset, height, and open area requirements of the district in which such structure is located may be modified by the building inspector and director of community development upon submittal of structural, site, and operational plans where in the building inspector and director of community development's opinion, no adverse impact would result to surrounding properties from such modification. In granting such modification, the building inspector and director of community development may require such architectural treatment, screening by landscape or architectural means, regulation of lighting, or other measures as they deem necessary as a condition to such modification. Any such modification would be based solely on the unique merits of that particular case and would not set any precedent.

58-247

- (a) *Garages and carports.*
- (1) No garage or carport shall be erected prior to the erection of the principal building to which it is accessory.
 - (2) The following provisions apply to properties zoned R-1 through R-5:
 - a. Except as otherwise specifically provided below, no more than one principal garage, either attached or detached, shall be permitted on a lot.

- b. If there is a residence without an attached garage, one principal detached garage not to exceed 800 square feet in area shall be permitted.
- c. If a residence was constructed prior to year 2003 with an attached garage in which two full-sized personal automobiles cannot reasonably be stored side-by-side, one principal detached garage not to exceed 675 square feet in area shall be permitted, provided no such garage structure shall be sited in front of an existing residence or in such other location as shall unreasonably affect or adversely impact the beauty and general enjoyment of existing residences or adjoining properties.
- d. Enclosed vehicular storage space for not more than one vehicle may be rented to persons not resident on the lot, such space being defined as an area not to exceed 300 square feet.

(b) *Detached storage structures.*

In addition to any permissible garages, a single detached storage shall be permitted in the following zoning districts subject to the following conditions:

- (1) On any property zoned R-1 provided that no such detached storage structure shall exceed the lesser of 2,178 square feet or one percent of the area of the property; however, if the property is subject to an AO agricultural overlay, the property shall not be restricted in the number or size of detached storage structures.
- (2) On any property zoned R-1B through R-5 subject to the following conditions:
 - a. If a guesthouse is constructed as a conditional use, no detached storage structure is permitted.
 - b. A detached storage structure shall not exceed one percent of the lesser of (a) five acres or (b) the area of the property if the property is not divisible in the current zoning district or, if it is divisible, the zoning district's minimum lot size.

58-248

(e) *Accessory dwelling units.*

- (1) An accessory dwelling unit is an area, other than an area in a basement, attached to or contained within a primary dwelling unit with its own bathroom, kitchen and sleeping area. As used in this paragraph, a kitchen is an area with a sink, a refrigerator and a stove, range, oven or cooktop.
- (2) The primary dwelling unit must be owner occupied at any time that a person other than the owner or a legal dependent of the owner occupies the accessory dwelling unit. A property shall be deemed to be owner occupied if an owner or in the case of an owner entity, the person who has voting control of the entity, is either

registered to vote using that address or claims the property as the person's primary residence for the Wisconsin lottery and gaming credit.

- (3) An accessory dwelling unit may only be occupied by a family member, blood relative, legal dependent, caretaker or paid servant of a resident of the primary dwelling unit.
- (4) There can be no more than one accessory dwelling unit per one-family dwelling.
- (5) The total living area of an accessory dwelling unit can be no larger than 40% of the total living area of the primary dwelling to which it is attached or contained. Total living area shall be measured from the outside of exterior walls (excluding cellars, basements, open porches, breezeways, garages and other spaces that are not used frequently or during extended periods for living, eating or sleeping purposes).
- (6) The accessory dwelling unit must have at least one common entrance with the primary dwelling unit.
- (7) There shall not be separate direct entrances for each dwelling unit on the front of the building unless this prohibits handicapped access.
- (8) An accessory dwelling unit may not have a separate postal address.
- (9) An area in a basement that would qualify as an accessory dwelling unit if not in a basement shall be permitted without a conditional use grant provided there is no accessory dwelling unit on the property and provided that the city and the owner record an agreement that encumbers the property by which the owner covenants that no accessory dwelling unit may be constructed on the property and the use of such basement area shall be subject to the requirements of (2), (3), (6), (7) and (8).

(f) *Guesthouses.*

- (1) A guesthouse is a detached structure with living quarters and is intended for the temporary stay of occasional guests.
- (2) A guesthouse may not contain a stove, oven, range or cooktop.
- (3) A guesthouse may not be rented or used as a separate dwelling.
- (4) A guesthouse may not be constructed unless the property contains a primary residence.
- (5) If a guesthouse is constructed, no detached storage structure is permitted unless the property is in the R-1 zoning district.
- (6) A guesthouse shall not exceed one percent of the lesser of (a) five acres or (b) the area of the property if the property is not divisible in the current zoning district or, if it is divisible, the zoning district's minimum lot size.
- (7) A guesthouse may not have a separate postal address.

Sec. 58-419. - Structures other than buildings.

- (a) All structures shall be subject to the setback, offset, building size and open space requirements of this chapter except as otherwise specifically provided by ordinance.
- (b) Structures not classified as buildings and less than six inches in height from the surface of the ground shall not require a building permit nor be subject to the setback or offset requirements of this chapter except as otherwise specifically provided by ordinance.
- (c) Fences, walls, and other architectural screening devices, when anchored to supports, imbedded in the ground shall be considered permanent structures and shall be subject to the following:
 - (1) No structure shall be permitted that by reason of noise, dust, odor, appearance or other objectionable factor creates a nuisance or a substantial adverse effect upon the property value or reasonable enjoyment of the surrounding property.
 - (2) Any such structure less than four and one-half feet in height may be permitted anywhere on the lot.
 - (3) Any such structure in excess of four and one-half feet in height may be permitted provided it conforms to the open area, height, setback, and offset requirements of the zoning district in which it is located.
 - (4) Any such structure in excess of four and one-half feet, but not more than six feet in height, may be permitted to within five feet of a street right-of-way provided the side facing the street line is attractively landscaped and subject to approval by the building inspector.
 - (5) Any such structure in excess of four and one-half feet in height may be permitted closer than the required offset from an adjoining lot line, other than a street line, with the written consent of the adjoining property owner. Such structure shall not project forward of the building setback line.
- (d) Basketball structures (poles) may be located within the setback and/or offset areas if the basketball structure is located closer to the house than to the side, rear, or front property lines. Other recreational and miscellaneous structures greater than four and one-half feet in height shall be permitted provided such structure conforms to the open space, height, offset and setback requirement of the zoning district in which it is located and also conforms with [section 58-171](#).

15.04.420 Residential accessory buildings—Regulations.

A. Permit Required. No person shall construct, install, enlarge or alter any yard maintenance building, cabana, gazebo or other similar building (“residential accessory buildings”) unless a permit therefor has first been obtained from the director and all other applicable legal requirements are complied with. Applications for such permit shall be on forms provided by the director and shall be accompanied by such items referenced in Sections [15.04.140](#) through [15.04.260](#) as the director determines to be necessary or appropriate; provided, however, that:

1. In the case of premanufactured residential accessory buildings, two copies of the manufacturer’s plans, specifications and instructions may be submitted in lieu of plans referenced in Section [15.04.160](#)(A).
2. A landscaping plan shall also be submitted as part of such application.

The director shall have the authority, as a condition to granting such permit, to require such additions, changes and safeguards as he/she determines to be necessary or appropriate to carry out the provisions of this section. Notwithstanding anything herein to the contrary, no permit shall be required for any residential accessory building having an area of less than thirty (30) square feet.

3. If the residential accessory building is located a minimum of twenty (20) feet from the rear and side property lines and ten feet from all other buildings, the applicant may submit a survey which is over one year old. Any individual who is issued a permit with a survey which is over one year old shall, as a condition of accepting the permit, agree to indemnify and hold harmless the city, its officers and agents from all and any claims in the event that the residential accessory building is located within an easement, floodplain, drainageway or other similar encumbrance. The survey must accurately portray existing conditions, including all easements. Inaccurate surveys will not be accepted and a new survey will be required.

B. No more than a total of two of the following residential accessory buildings shall be located on a residential property: cabana, gazebo, greenhouse, yard maintenance building, pavilion, **pergola**. The combination of all accessory buildings shall comply with the maximum lot coverage regulations for the zoning district.

C. Construction Requirements.

1. Yard Maintenance Building. One yard maintenance building shall be permitted on a residentially zoned property, subject to the following criteria:

- a. Location. A yard maintenance building shall be erected in the rear yard at least five feet from an interior lot line except as permitted in subsection (C)(1)(b) of this section.
- b. In the case of through lots (lots with no rear offset area), yard maintenance buildings shall be placed in the rear yard and shall be placed with a distance of at least twenty (20) feet from the lot line facing the rear building elevation.
- c. Construction Standards. A residential yard maintenance building shall be built in accordance with the general construction standards established in the UDC and the dimension limitations and the requirements as to materials, appearance and location set forth in Section [17.28.010](#)(F)(7).
- d. Additional Requirements.
 - i. Such building shall not be placed in an area adjacent to any swimming pool, tennis court, patio or other similar activity area of any adjacent properties.
 - ii. Such building shall be adequately screened along the elevation facing any street and interior lot lines with bushes or other foliage, such adequacy to be determined by the director.
 - iii. The maximum height of any yard maintenance building shall be not more than ten feet six inches.
 - iv. Such building shall be constructed on a permanent base consisting of, in the case of a yard maintenance building, at least six inches of sand or gravel and three-inch surface concrete anchored to the base with a length/width ratio not to exceed 2/1.
 - v. The area surrounding a yard maintenance building must be kept free of debris and equipment.
 - vi. Size is limited to one hundred eighty (180) square feet.
 - vii. Garden sheds may not exceed one hundred twenty (120) square feet on lots of less than twelve thousand (12,000) square feet.

2. Cabanas. One cabana shall be permitted on a residentially zoned property, subject to the following criteria:

a. Location. No cabana shall be located in the setback or offset areas or within ten feet of any other building or structure on the subject lot.

b. Construction Standards. A cabana shall be built in accordance with the general construction standards established in the UDC.

c. Additional Requirements.

i. A cabana shall not exceed two hundred (200) square feet in size.

ii. The maximum height of any cabana shall not exceed twelve (12) feet.

iii. Such building shall be constructed on a permanent base consisting of, in the case of a cabana, at least six inches of sand or gravel and three-inch surface concrete anchored to the base.

iv. The area surrounding a cabana must be kept free of debris and equipment.

3. Gazebos. One gazebo shall be permitted on a residentially zoned property, subject to the following criteria:

a. Location. No gazebo shall be located in the setback or offset areas or within ten feet of any other building or structure on the subject lot.

b. Construction Standards. A gazebo shall be built in accordance with the general construction standards established in the UDC.

c. Additional Requirements.

i. A gazebo shall not exceed two hundred (200) square feet in size.

ii. The maximum height of any gazebo shall not exceed fifteen (15) feet.

iii. Such building shall be constructed on a permanent base consisting of at least six inches of sand or gravel and three-inch surface concrete anchored to the base.

iv. Fifty (50) percent or more of the walls shall be open or screened.

v. The area surrounding a gazebo must be kept free of debris and equipment.

4. Greenhouses in Residential Districts. One greenhouse shall be permitted on a residentially zoned property, subject to the following criteria:

- a. Location. No greenhouse shall be located in the setback or offset areas or within ten feet of any other building or structure on the subject lot. Greenhouses must be placed in the rear yard.
- b. Construction Standards. A greenhouse shall be built in accordance with the general construction standards established in the UDC.
- c. Additional Requirements.
 - i. A greenhouse shall not exceed one hundred eighty (180) square feet in size.
 - ii. The maximum height of a greenhouse shall not exceed fifteen (15) feet.
 - iii. Such building shall be constructed on a permanent base consisting of at least six inches of sand or gravel and three-inch surface concrete anchored to the base.
 - iv. The area surrounding a greenhouse must be kept free of debris and equipment.
 - v. Temporary greenhouses shall be prohibited. Greenhouses must be constructed with glass or rigid plastic panels, in a framed structure which is secured to the concrete base.
 - vi. Greenhouses which are attached to the principal building are regulated by rules associated with building additions.

5. **Pergolas** and Pavilions in Residential Districts. One **pergola** or pavilion shall be permitted on a residentially zoned property, subject to the following criteria:

- a. Location. No **pergola** or pavilion shall be located in the setback or offset areas or within ten feet of any other building or structure on the subject lot, with the exception of the principal dwelling.
- b. Construction Standards. **Pergolas** and pavilions shall be built in accordance with the general construction standards established in the UDC.
- c. Additional Requirements.
 - i. **Pergolas** and pavilions shall not exceed two hundred (200) square feet in size.

- ii. The maximum height of a pergola or pavilion shall not exceed fifteen (15) feet.
- iii. Such structure shall be permanently attached to the ground via concrete footings.
- iv. Pergolas or pavilions which are attached to the principal building are regulated by rules associated with building additions.

6. Saunas in Residential Districts. One sauna shall be permitted on a residentially zoned property, subject to the following criteria:

- a. Location. No sauna shall be located in the setback or offset areas or within ten feet of any other building or structure on the subject lot, with the exception of the principal dwelling.
- b. Construction Standards. Saunas shall be built in accordance with the general construction standards established in the UDC.
- c. Additional Requirements.
 - i. Saunas shall not exceed two hundred (200) square feet in size.
 - ii. The maximum height of a sauna shall not exceed fifteen (15) feet.
 - iii. Such building shall be constructed on a permanent base consisting of at least six inches of sand or gravel and three-inch surface concrete anchored to the base.
 - iv. Saunas which are attached to the principal building are regulated by rules associated with building additions.

D. Exterior Finish Materials. A residential accessory building shall have exterior roof and siding finishes that are compatible with the primary structure on the subject lot and neighboring properties. Greenhouses shall have transparent walls and roof made of glass or rigid plastic. Saunas may be constructed of wood, masonry or products which are compatible with the principal dwelling, including roof. All-wood saunas are not required to have a shingle roof.

E. Plan Commission Approval Required. No permit under this section shall be issued for a greenhouse, cabana or gazebo unless and until the plan commission or its designee approves same as to appearance, materials and location so as to assure that same is harmonious with and not adverse to the values of adjacent or nearby properties. (Ord. [2625-20](#) § 1, 2020; Ord. [2523-18](#) § 1, 2018; Ord. [2424-15](#) § 1 (part), 2015; Ord. [2372-14](#) §§ 2, 3, 2014; Ord. [2316-13](#) § 1, 2013; Ord. 2148-08 § 2, 2008; Ord. 1755 § 1, 2000; prior code § 14.20)