

BAR ACTIONS

CITY OF CHARLOTTESVILLE BOARD OF ARCHITECTURAL REVIEW

Regular Meeting

July 18, 2017 – 5:30 p.m.

City Council Chambers - City Hall



BAR Members Present: Melanie Miller, chair; Justin Sarafin; Breck Gastinger; Stephan Balut; Carl Schwarz; Whit Graves; Corey Clayborne (arrived late)

BAR Members Absent: Tim Mohr, co-chair; Emma Earnst

Staff Present: Mary Joy Scala, Camie Mess, Reid Saunders, Carolyn McCray

Welcome to this Regular Monthly Meeting of the Charlottesville Board of Architectural Review (BAR). After presentations by staff and the applicant, members of the public will be allowed two opportunities to speak. Speakers shall identify themselves, and give their current address. The Chair will first ask for questions from the public, then from the BAR. After questions are closed, the Chair will ask for comments from the public. Members of the public will have, for each case, up to three minutes to ask questions, and up to three minutes to comment. Comments should be limited to the BAR's jurisdiction; that is, regarding the exterior design of the building and site. Following the BAR's discussion, and before the vote, the applicant shall be allowed up to three minutes to respond, for the purpose of clarification. Thank you for participating.

PLEASE NOTE THE TIMES GIVEN ARE APPROXIMATE AND ARE INTENDED TO BE A GUIDE. THE ACTUAL MEETING MAY BE LONGER OR SHORTER.

5:30 A. Matters from the public not on the agenda (please limit to 3 minutes)

Mark Kavitt noted the distinction between “updates” and “preservation.”

Bob Fenwick, City councilor, said “the BAR helps,” and thanked the BAR for its work.

B. Consent Agenda (Note: Any consent agenda item may be pulled and moved to the regular agenda if a BAR member wishes to discuss it, or if any member of the public is present to comment on it. Pulled applications will be discussed at the beginning of the meeting.)

1. Minutes June 20, 2017 Regular Meeting

Balut moved to approve the June 20, 2017 minutes. Schwarz seconded. Approved 4-0-2, with Gastinger and Graves abstained.

C. Deferred Items

5:40 2. Certificate of Appropriateness Application
BAR 17-06-09
416-418 West Main Street
Tax Parcel 290012000
Main Street West, LLC, Owner/ Greg Jackson, Applicant
Roof Addition

Balut moved: Having considered the standards set forth within the City Code, including City Design Guidelines for New Construction and Additions, I move to find that the proposed new roof addition satisfies the BAR's criteria and guidelines and is compatible with this property and other properties in

the Downtown ADC district, and that the BAR approves the application, with the stipulation that the applicant submit color renderings of the proposed design in the most realistic possible fashion, for the BAR to review and approve [to be circulated via e-mail], prior to the COA being issued. [The BAR recommends a darker color for than the light grey.] Graves seconded. Motion approved (4-2, with Gastinger and Schwarz opposed).

D. New Items

6:00 **3. Certificate of Appropriateness Application**
BAR 17-07-02
120 East Main St., Unit B.
Tax Parcel 280026000
Coran Capshaw, Owner/Sushi Ten, LLC, Applicant
Façade Materials Change

Graves moved: Having considered the standards set forth within the City Code, including City Design Guidelines for Rehabilitation, I move to find that the proposed façade changes satisfy the BAR's criteria and are compatible with this property and other properties in the Downtown ADC district, and that the BAR approves the application as submitted. Balut seconded. Motion approved (6-0).

6:20 **4. Certificate of Appropriateness Application**
BAR 17-07-03
McGuffey Hill North Garage, 2nd Street NW
Tax Parcel 3301741V0
McGuffey Hill Home Owners Association, Owner/Jennifer Linkous, Applicant
Green Roof Replaced with Membrane

Miller moved to accept the applicant's request for deferral. Sarafin seconded. Motion approved (6-0).

The BAR suggested that the applicant come back with options for the replacement of the roof. Some of the suggestions were:

- replacing the green roof
- moving the parapet wall to make the roof aesthetically part of the carport instead of the park
- having the apartment association replace the membrane then have the city design and maintain the green roof

6:40 **5. Certificate of Appropriateness Application**
BAR 17-07-04
834 Locust Avenue
Tax Parcel 510088000
Tripp and Lisa Stewart, Owner/Bob Pineo, Applicant
Demolition and Addition

Sarafin moved: Having considered the standards set forth within the City Code, including Historic Conservation District Guidelines for Additions and New Construction and Demolitions, I move to find that the proposed demolitions and addition satisfy the BAR's criteria and are compatible with this property and other properties in the Martha Jefferson Historic Conservation District, and that the BAR approves the application as submitted. Balut seconded. Motion approved (6-0).

~~**7:00** **6. Certificate of Appropriateness Application (deferred by Applicant)**~~

~~BAR 17-07-01~~
~~425 2nd Street NE~~
~~Tax Parcel 330085000~~
~~James E. and Lynn K. Garnett, Owner/ James E. Garnett, Applicant~~
~~Construct new front wall, front walk, and install gates~~

Corey Clayborne arrived at the meeting.

7:20 7. Certificate of Appropriateness Application
BAR 17-07-05
1509-11 University Avenue
Tax Parcel 090078100
Amorgos, LLC, Owner/ William Adams, Train Architects, Applicant
Façade revisions

Graves moved: Having considered the standards set forth within the City Code, including City Design Guidelines for Rehabilitation, and for Additions and New Construction, I move to find that the proposed façade renovations satisfies the BAR’s criteria and are compatible with this property and other properties in The Corner ADC District, and the BAR approves this application as submitted. Sarafin seconded. Motion approved (7-0).

7:40 E. Other Business

8. BAR Review of Proposed Text Amendments for Solar Energy Systems

- **In general, the BAR wants to encourage solar energy systems but still wants to review them as they have been doing.**
- **In historic conservation districts, ordinance changes are needed in order to continue to review solar panels that are visible additions to a building. They are clearly additions to the historic fabric.**
- **In ADC districts it is unclear whether the BAR can continue to review freestanding solar structures that are too small to require a building permit. Ordinance changes may be necessary for the BAR to continue to be able to review them.**
- **The BAR wanted to alert the Planning Commission that, everywhere, not only in historic districts, a 15- ft solar structure (for instance on a parking garage) could cover the entire rooftop of a building which would change the massing. They did not know if that would be an issue.**
- **Under Sec 34-1101 a (2) it was suggested that “in aggregate” be added to the text so it would not be interpreted that each type of item could, by itself, cover 25% of the roof.**

9. BAR Recommendation for Court Square Markers

Schwarz moved that the BAR endorse the [Historic Resource Committee’s proposed] Court Square Markers. Gastinger seconded. Motion approved (7-0).

10. PLACE report

Tim Mohr was not in attendance, so there was no PLACE report update.

The BAR wants to begin the review of ADC guidelines and suggested meeting every other month during the lunch hour for 1.5 hours.

8:40 F. Adjournment 7:55pm

**CITY OF CHARLOTTESVILLE
BOARD OF ARCHITECTURAL REVIEW
STAFF REPORT
July 18, 2017**



BAR Review of Proposed Text Amendments for Solar Energy Systems

Background

On July 5, 2017 City Council held the first reading on proposed text changes to the City Code (zoning ordinance).

As a condition of their approval, the Planning Commission recommended that, prior to a Second Reading of the proposed Ordinance, City Council should request the BAR and Entrance Corridor Review Board (ERB) to weigh in as to **whether any additional zoning text amendments might be necessary in order to ensure that those design review bodies will have authority, under their respective ordinance provisions, to review the compatibility of each different type of solar energy system that might have a significant impact on a major design control district, a conservation district or an entrance corridor.**

The BAR is being asked to:

- (1) Make sure that any solar installation that currently requires review by the BAR or ERB will still require review under the language of the new code;
- (2) If not, what changes need to be made in order to cover the solar energy systems? and
- (3) Does the BAR have any comments on the proposed underlying code.

The ERB will review the changes on Tuesday August 8. City Council's second reading is Monday August 21.

Note that the proposed amendments deal not only with **solar energy**, but they also re-write the **appurtenance** section of the Code. Staff has been assured by the City Attorney's office that the appurtenance section still allows rooftop structures that are less than 18 feet tall, that occupy less than 25% of the roof area of a building, and that cannot be used as any type of habitable residential space. Nothing has changed that currently-existing language.

Text Amendments

Susan Elliot, Climate Protection Program Coordinator for the City, has summarized the proposed amendments. She says the amendments are intended to remove any ambiguity that solar energy systems are allowed as an accessory use by right in all zoning districts. She says it is the intent to maintain the additional review or restrictions as applicable by overlay zoning or design control districts.

Solar energy systems may be different types:

- A. Roof-mounted panels, either flat or tilted at an angle to the roof, on either main buildings, porches, or accessory buildings such as secondary dwellings or garages;
- B. Solar energy systems incorporated into the building facades (awnings, canopy or pergola roofs, wall coverings, roof shingles, window shutters) ;

- C. Free-standing, ground-mounted structures (either with no other purpose than solar collection, or used to cover parking or tables, etc).

Discussion

Appurtenances

In staff opinion, the changes to the **appurtenance** section are appropriate.

Solar Energy Systems

Regarding the **solar energy** changes, the attached photo pages from the City Attorney's office indicate what the proposed language addresses, and what it does not address.

In the ADC districts, including individually protected properties, (IPPs) the following ordinance language is inclusive enough to include **alterations** such as Type A Roof-mounted panels and Type B, systems incorporated into the facades even if they do not require a building permit.

Type C ground-mounted systems would require approval if they are considered structures. Staff is unsure whether a freestanding system too small to require a building permit would be considered a "structure," and therefore whether it would require approval.

Sec. 34-275. - Certificates of appropriateness; construction and alterations.

*(a) No building **or structure** within any major design control district, and no protected property, shall be constructed, reconstructed, **altered** or restored unless and until an application for a certificate of appropriateness is approved.*

Sec. 34-283. - Administrative review.

(a) Notwithstanding any contrary provision of this article, the director of neighborhood development services may review, and may approve or deny, applications for certificates of appropriateness, in the following situations:

(1)....

*(5) Structural changes to a building or structure **which do not require issuance of a building permit under the Uniform Statewide Building Code except for the following, which must be reviewed by the BAR: replacement of roof coverings and installation or replacement of siding on any buildings or structures, and replacement of windows and doors on any buildings or structures.***

In Historic Conservation Districts the ordinance language was amended in April 2017. The BAR has been reviewing solar energy systems if they are visible from the frontage street on either new construction or as an addition to an existing building. The BAR should decide if they want to continue to review Type A or Type B solar energy systems if visible on a new or existing building in a historic conservation district.

When the ordinance was recently amended, it was made clear that accessory structures (such as Type C structures) that were small enough not to require a building permit would not require BAR review in a historic conservation district. Larger structures that would require a building permit and that were visible to the frontage street would require BAR review.

Sec. 34-340. Actions requiring certificate of appropriateness; exemptions; penalties.

(a) A certificate of appropriateness (COA) must be approved in accordance with this

division, prior to the commencement of construction, erection, alteration, or demolition of certain buildings, structures or improvements, as follows:

- (1) All new buildings and structures require a COA if they require a building permit, and unless they are concealed by the principal structure from all abutting streets.**
- (2) All new fences and walls that abut a street, or which are located in a side yard between a street and the front of the principal structure on a lot, require a COA.**
- (b) The following proposed additions to existing buildings or structures require a COA:**
 - (1) Additions located wholly or partially to the side or front of the principal structure on a lot, or**
 - (2) Additions located on a lot that abuts a street on the side or rear, or**
 - (3) Additions that are equal to or greater than fifty (50) percent of the total gross floor area of the existing building, or**
 - (4) Additions located to the rear that exceed the height or width of the existing building or structure.**

....

Recommendations

In general, historic preservation and sustainability go hand-in-hand. The ADC guidelines contain a section in the Introduction called "Sustainability," that includes this paragraph:

Sustainability and preservation are complementary concepts, and both goals should be pursued. Nothing in these guidelines should be construed to discourage green building or sustainable design. If such a design is found to conflict with a specific guideline, the BAR shall work with the applicant to devise a creative solution that meets that applicant's goal for sustainability that is also compatible with the character of the district and the property

The historic conservation district guidelines contain this sentence: "Modern and sustainable, energy-efficient construction is encouraged when done thoughtfully in concert with older structures."

To date, most if not all of the solar applications received have not proposed locations that would compromise the front façade of a historic structure. It is not clear what action the BAR would take if confronted with that possibility, but the BAR should retain its ability to review solar energy systems in the ADC districts, for IPPs, and in the historic conservation districts.

1. In ADC districts and for IPP's, staff is unsure whether a freestanding system too small to require a building permit (under 225 square feet) would be considered a "structure," and therefore whether it would require approval. This should be clarified and fixed so that approval is still required.
2. In historic conservation districts, the BAR should decide if they want to continue to review Type A and Type B solar energy systems if visible on a new or existing building in a historic conservation district. The BAR is unlikely to deny a solar energy system if only a front location is possible, but the design could possibly be adjusted to have the least impact. Also, requiring approval of visible locations does encourage building where approval is not required.

ADDING SOLAR PANELS TO THE ROOF OR PORCH OF AN EXISTING BUILDING:



Existing City Code Provisions Which Authorize Design Review:

Major Design Control District, sec. 34-275(a): no building or structure within any major design control district may be constructed, reconstructed, **altered** or restored unless and until a COA is approved.

- Solar panels would be an alteration of the building, so they would be subject to BAR review.

Conservation District, sec. 34-340(b)(1): COAs are required for **additions** located wholly or partially to the side or front of the principal structure on a lot.

- Adding solar panels to an existing rooftop or porch would **NOT** be considered an “addition” under either the USBC or the current zoning ordinance; therefore, adding solar panels to a roof or porch in a conservation district would not require BAR review.

(See Z.O. 34-1200 “addition [to an existing building] means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition that is connected by a firewall or is separated by independent perimeter load-bearing walls is new construction”.)

Entrance Corridor District, sec. 34-309(a)(1): a COA is required for all **improvements** requiring a building permit (but for which no site plan is required).

- The Building Official would not require a building permit for the installation of solar panels on the roof of a building or porch—only electrical/plumbing, as applicable; therefore, these panels would not be subject to review by the Entrance Corridor Review Board.

A SOLAR CANOPY



Existing City Code Provisions Which Authorize Design Review

Major Design Control District, sec. 34-275(a): no building or **structure** within any major design control district may be **constructed**, reconstructed, altered or restored unless and until a COA is approved.

- The solar canopy support shown above, because it involves poles/ posts sunk into the ground and that require footings, is a **STRUCTURE**; therefore, it would be subject to BAR review prior to construction.

Conservation District, sec. 34-340(a)(1): all new buildings and **structures** require a COA, if they require a **building permit**, and unless they are concealed by the principal structure from all abutting streets.

- The above-referenced **STRUCTURE** would require a **building permit**; therefore, it would require **BAR review** prior to construction.

Entrance Corridor District, sec. 34-309(a)(1): a COA is required for all **improvements** requiring a **building permit** (but for which no site plan is required).

- The above-referenced **STRUCTURE** is an *improvement* which would require a **building permit**; therefore it would be subject to **Entrance Corridor Review Board** approval prior to construction.

PROPOSED ORDINANCE AMENDMENTS

~~Strikeout text~~ = existing provisions proposed to be deleted

Blue font text = new provisions proposed to be added

1. Chapter 34, Article X (Definitions), Section 34-1200 is amended and re-enacted, as follows:

Sec. 34-1200: Zoning--Definitions

Accessory building, structure or use means a building, structure or use located upon the same lot as the principal use, building, or structure, the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common residential accessory buildings and structures. Heating, electrical and mechanical equipment, utility service lines and meters, solar energy systems, and related equipment, are equipment or fixtures used accessory to a building or structure located on the same lot.

Solar Energy System means equipment used primarily for the collection and use of solar energy for water heating, space heating or cooling, or other application requiring an energy source.

2. Chapter 34, Article IX (General Regulations) is hereby amended and re-enacted as follows:

Sec. 34-1101. – Exclusions from building height and minimum yard requirements ~~Appurtenances.~~

(a) None of the following ~~An appurtenance to a building or structure shall not be counted in measuring the height of a building or structure:~~

(1) rooftop solar energy systems, subject to the provisions of 34-1108;

~~(b)~~ (2) rooftop heating, electrical, and mechanical equipment, or elevator returns, which are necessary for or in connection with the proper operation of a building in accordance with USBC requirements, provided that no such equipment or elevator return, as installed ~~No rooftop appurtenance shall: (i) itself measure more than eighteen (18) feet in height above the building, or (ii) cover more than twenty-five (25) percent of the roof area of a building;~~

in aggregate

(3) Telecommunications equipment, subject to the provisions of 34-1070 et seq.;

(4) Chimneys constructed or attached to the side of a building, which extend above the level of the roof deck of a building to a height required by the USBC or VSFPC;

(e) (5) Other equipment or structures constructed or installed above the roof deck of a building, so long as they: (i) comply with the height and area requirements set forth in paragraph (2) above, and (ii) contain no ~~Within a rooftop appurtenance, no enclosed space~~ that is ~~shall be designed for or that can be~~ used as any type of habitable residential space. The provisions of this paragraph shall not preclude open-air space on a building rooftop from being used accessory to the primary use of the building.

(b)(d) Each of the following appurtenances may encroach into minimum required yards as specified:

(1) Window sills, roof overhangs, belt courses, cornices and ornamental features may encroach into a required yard by no more than twelve (12) inches.

(2) Open lattice-enclosed fire escapes, fireproof outside stairways, and the ordinary projections of chimneys and flues may encroach into a required rear yard by no more than five (5) feet.

(3) Chimneys or flues being added to an existing building may encroach into a required side yard, but not closer than five (5) feet to the side lot line.

(4) Elevator shafts, and heating, electrical and mechanical equipment, ~~which are~~ if screened in accordance with the requirements of Section 34-872, may encroach into a required side or rear yard.

(5) Handicapped ramps meeting ADA standards may encroach into a required yard.

(6) Solar energy systems may encroach into required front, side and rear yards, subject to the provisions of sec. 34-1108 (limitations on placement in front of buildings). No solar energy system shall be placed closer than five (5) feet to any lot line.

~~(6) Except as otherwise provided above:~~

(7) a- Uncovered and unenclosed structures (such as decks, porches, stoops, etc.) attached to a building, and appurtenances which have a maximum floor height of three (3) feet above the finished grade may encroach into any required yard, but not closer than five (5) feet to any lot line and no more than ten (10) feet into a required front yard; however, no such structure or improvement appurtenance, shall occupy more than thirty (30) percent of a rear yard.

(8) b- Any appurtenance to a For any single- or two-family dwelling, an unenclosed structure attached to the façade of the dwelling, and having a height greater than three (3) feet above finished grade may encroach into a required front yard by up to ten (10) feet, but no closer than five (5) feet to a front lot line; however, Any such structure such appurtenance shall comply ~~be in~~ compliance with the applicable side yard setback(s).

(c) e- No enclosed structure that is attached to any building appurtenance, regardless of height (including but not limited to a screened-in porch), shall encroach into any required yard.

Sec. 34-1108. Standards for solar energy systems

The following requirements apply to solar energy systems:

(1) Solar energy systems shall be installed in compliance with applicable provisions of the USBC and the VSFPC.

(2) A solar energy system may be installed on the roof of any building or structure, whether principal or accessory.

(i). The height of a solar energy system installed on the roof of a single- or two-family dwelling, or on the roof of an accessory building or structure on the same lot as such dwelling, may extend up to five (5) feet above the highest point of the roof of the building or structure on which it is installed.

(ii). Except as limited by subparagraph (i), above, a rooftop solar energy system may extend up to fifteen (15) feet above the highest point of the roof of the building or structure on which it is installed.

(3) A solar energy system may be attached and incorporated as part of any building façade (for example: roof tiles, window shutters, canopies, etc.).

(4) Placement in front of buildings:

(i) Within required front yards--Within a required front yard, a solar energy system may be incorporated as part of any structure allowed by Sec. 34-1101(b)(7) and Sec. 34-1101(b)(8). Otherwise, no solar energy system shall be located within a required front yard.

(ii) Within other areas forward of the front building façade—Within a low-density residential zoning district, except as provided in subparagraph (i), above, no solar energy system may be located forward of an imaginary line extending along the exterior façade of a residential building, parallel to the front lot line and extending between the side lot lines. In all other zoning districts, a solar energy system may be located in an area between the front building façade and the required front yard.

(5) Except as provided in paragraph (2)(i), above, a solar energy system, together with its support, shall not itself exceed a height of fifteen (15) feet unless otherwise required by the USBC or VSFPC for a specific use.

Sec. 34-1146. Nonconforming structures, permitted changes.

(a) A nonconforming structure may be changed, altered, repaired, restored, replaced, relocated or expanded only in accordance with the provisions of this section and of sec. 34-1147, and subject to all approvals required by law.....

...(e) A solar energy system may be placed on or attached to on a nonconforming building or structure.

Sec. 34-1147. - Expansion of nonconforming uses or structures.

(a) Nonconforming uses or structures may expand only in accordance with the provisions of this section. Whenever a percentage limitation is placed on expansion, that limitation shall be the total expansion allowed, in increments of any size that add up to the total, or all at once. All expansion shall occur on the lot occupied by the nonconforming use or structure, inclusive of any permitted consolidations or re-subdivisions.

(b) Nonconforming uses, other than structures, may be expanded on an area of a lot not originally devoted to the nonconforming use, provided such expansion meets all current requirements of this chapter applicable only to the expansion. The placement or installation of a solar energy system on a building or lot shall not be deemed an expansion of a nonconforming use.

(c) Nonconforming structures.

(1) Nonconforming single-family dwelling. The structure may be expanded as provided within this subsection. New or expanded residential accessory structures (such as storage sheds, garages, swimming pools, etc.) may be permitted. Expansion of the dwelling, and new or expanded accessory structures, shall meet all zoning ordinance requirements, including height, yard and setbacks, for the zoning district in which located; except that extension of an existing front porch that encroaches into a front yard required by this ordinance shall be permitted to the side yard(s), so long as such extension will not result in an increase in the front yard encroachment. A single-family detached dwelling that is nonconforming because it encroaches into any required yard(s) may be expanded as long as the expansion will not result in an increase in the yard encroachment(s). However, expansions in height to existing nonconforming single-family dwellings, which do not meet current setback requirements, shall be permitted only if: (i) the dwelling is only being increased in height, and (ii) the footprint of the dwelling will remain unchanged by the proposed expansion in height. Such expansion will not required to meet more restrictive setbacks enacted since the date the dwelling became nonconforming; however, all other zoning regulations for the district in which the dwelling is located shall apply.

(2) Nonconforming structures, other than single-family dwellings. Where the use of a nonconforming structure is permitted by right, or with a special use or provisional use permit, in the zoning district in which the structure is located, then expansion of a nonconforming structure may be approved provided that: (i) yard, setback, screening and buffering, and height standards applicable to the proposed expansion are met; (ii) all applicable sign regulations are met, and (iii) such expansion does not exceed twenty-five (25) percent of the gross floor area of the existing structure. For any proposed expansion exceeding

twenty-five (25) percent of the gross floor area of the existing structure, all development standards applicable to the property as a whole shall be met.

(3) The placement or installation of a solar energy system on a building or lot shall not be deemed an expansion of a nonconforming building or structure, and the area occupied by any such system shall not be included within the calculation of percentages of expansion pursuant to paragraphs (c)(2) or (e) of this section.

(4) Where a nonconforming structure is utilized for or in connection with a nonconforming use, then no expansion of the nonconforming structure shall be approved unless the zoning administrator certifies that:
(i) expansion of the nonconforming structure would not result in expansion of the nonconforming use, or
(ii) expansion of the nonconforming structure would result in expansion of the nonconforming use, but expansion of the nonconforming use would meet the requirements of section 34-1147(b), above.

(5) (4) Prior to the approval of any expansion of a nonconforming use or structure, nonconforming status shall be verified by the zoning administrator.

(d) In the event of any permitted expansion of a nonconforming structure, all signs located on the property shall be brought into full compliance with current zoning ordinance requirements.

(e) Permitted expansions for nonresidential, nonconforming uses that require special or provisional use permits are required to obtain special or provisional use permits only when such expansions exceed twenty-five (25) percent of the gross floor area of the existing structure.

Executive Summary of Proposed Text Amendments for Solar Energy Systems

The proposed zoning text amendment is intended to establish the underlying zoning code for all zoning districts, provide clear guidance on how and where systems can be installed, and maintain additional review or restrictions as applicable by overlay zoning or design control districts.

Why is a Zoning Text Amendment for Solar Energy Systems Needed?

Growing demand and interest in solar PV installations has been observed in Charlottesville over the past 3 years through the popular Solarize Charlottesville campaigns and subsequent increased market activity and requests for solar PV electrical permits. This growth aligns with regional and national trends and is expected to continue to increase.

Increases in solar energy systems align with the City of Charlottesville's City Council Vision, Strategic Plan, and Comprehensive Plan (goals, strategies, and community values). Additionally, it is consistent with the City's commitments to reduce greenhouse gas emissions (recently reiterated in the June 19, 2017 Climate Resolution), the cooperative MOU for Collaboration between the City and County Regarding the Environment, *Streets That Work* Code Audit, and 2015 *Smart Growth America* (SGA) Technical Assistance recommendations.

The City's current zoning code does not reference solar energy system installations directly. Staff has received comments from the public observing that allowance of solar energy systems is not clear in the zoning ordinance, and two best practice reviews – through the 2015 *Smart Growth America* (SGA) Technical Assistance and SolSmart Program – noted the lack of zoning code reference as a barrier and source of potential ambiguity.

Furthermore, the City is participating in the national SolSmart program (SolSmart). The City has been awarded Bronze level designation as a 'solar-friendly community' and is pursuing Silver level, which requires that zoning code clearly allows solar energy systems as an accessory use by-right in all major zoning districts.

Background:

Environmental Sustainability staff worked cooperatively with a SolSmart Advisor (see attached background on the SolSmart program), NDS, and the City Attorney's office to draft the proposed ordinance. Considerations included:

- current conditions accepted for installations
- existing zoning code allowances for related items, such as appurtenances and accessory structures
- best practices specific to solar PV (rather than other types of mechanical equipment)
- experienced-based feedback from the local solar installation industry
- sample model codes from SolSmart and the Virginia Department of Environmental Quality
- comments from the Planning Commission meeting on May 9, 2017

Additional Comment:

Local solar PV industry practitioners who have aligned themselves as members of the recently-launched Charlottesville Renewable Energy Alliance (CvilleREA) reviewed the originally proposed zoning text amendment and supported the draft without concern. A couple of CvilleREA members subsequently noted that the 15 foot height maximum could be restrictive for parking lot solar canopies. Staff and these members are willing to work together on a future proposal to address this specific application for solar energy systems.

Background on the SolSmart Program:

In March 2016, the City of Charlottesville earned SolSmart *Early Adopter* status and began pursuing ‘solar-friendly community’ designation. By participating in the SolSmart program, Charlottesville’s primary aims are to:

- 1) Receive national recognition for the good work that Charlottesville does as a Green Leader
- 2) Move forward on the solar photovoltaic (PV) Smart Growth America recommendations and the Code Audit portion of “Streets That Work”
- 3) Improve our processes and policies where it makes sense

SolSmart is funded by the US Department of Energy and is supported by – amongst other organizations – The Solar Foundation, the National League of Cities and the International City/County Management Association. SolSmart assists localities to adopt local government best practices and policies that contribute to reducing the soft costs of solar photovoltaic (PV) system installations. Solar PV systems use solar panels to generate electricity. While the hardware costs (e.g. equipment costs) for solar PV have reduced significantly over the past 5 years, nationwide studies have shown that soft costs (e.g. permitting, inspections, and financing costs) can amount to 60% of a solar PV system’s installation costs.

As a result of a successful joint application from the City of Charlottesville and the County of Albemarle, the localities have been awarded free technical assistance in the form of an on-site SolSmart Advisor for a period of up to 6 months through July to assist both the City and the County in achieving their SolSmart designation goals. One of the primary focuses of the SolSmart Advisor’s work with the City has been to assist staff in reviewing local zoning code and drafting proposed updates related to solar energy systems.

Supplemental Reference Materials (attached):

- Summary Table – proposed zoning text
- Diagrams – showing proposed allowable locations for solar energy systems in low density residential zoning districts and in all other zoning districts
- Pictures of Example Solar Energy Systems
- Information about the Reflectivity of Solar PV Panels

Solar Energy Systems – Zoning Text Amendment – Summary Chart


General Provisions for All Solar Energy Systems:			
Defined as:	<p>Uses accessory to the use of the building, structure or use being served; for purposes of the city's zoning ordinance, they are not considered to be buildings or structures.</p> <p>Solar Energy System means equipment used primarily for the collection and use of solar energy for water heating, space heating or cooling, or other application requiring an energy source.</p>	Sec. 34-1200	
Shall be:	Installed in compliance with applicable provisions of the Uniform Statewide Building Code (USBC) and the Virginia Statewide Fire Prevention Code (VSFPC).	Sec. 34-1108(1)	

Rooftop Systems:			
	May be installed on the roof of any building or structure, whether principal or accessory	Sec. 34-1108(2)	
Height:	<p><i>Single- or two-family dwellings:</i> May extend up to five (5) feet above the highest point of the roof of the building or structure on which it is installed</p> <p><i>All other uses:</i> May extend up to fifteen (15) feet above the highest point of the roof of the building or structure on which it is installed ...</p>	Sec. 34-1108(2)	<p>Example: Angled solar installation on single- or two-family dwellings with flat roofs</p> <p>Examples: Parking garage solar canopies and rooftop canopy on commercial flat roof</p>
	... unless otherwise required by the USBC or VSFPC for a specific use.	Sec. 34-1108(5)	
	Excluded from measuring the height of a building or structure, subject to the provisions of Sec. 34-1108	Sec. 34-1101(a)(1)	
Perimeter Setback:	<p><i>Non-residential buildings:</i> A minimum 6-foot-wide clear perimeter around the edges of the roof. Or, where either axis of the buildings is 250 feet or less, there shall be a minimum 4-foot-wide clear perimeter around the edges of the roof (VSFPC 605.11.3)</p>	Sec. 34-1108(1) – via reference to USBC and VSFPC	

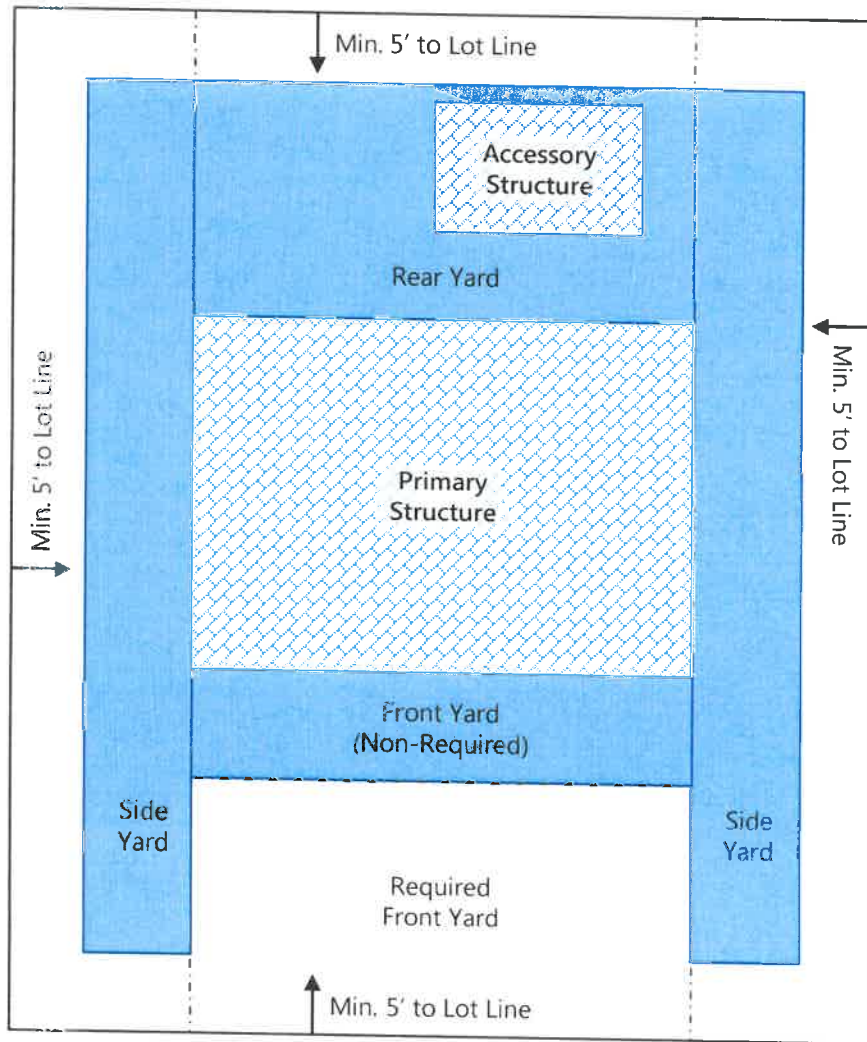
Non-Rooftop Systems (e.g. systems that are ground-mounted or incorporated into a building or structure):			
	May be attached and incorporated as part of any building façade	Sec. 34-1108(3) <i>* New Addition</i>	Examples: roof tiles, window shutters, canopies
Setbacks:	Min. 5 feet from any lot line	Sec. 34-1101(b)(6) <i>* New Addition</i>	
	A clear, brush-free area of 10 feet shall be required for ground-mounted photovoltaic arrays. (VSFPC 605.11.4)	Sec. 34-1108(1) – via reference to USBC and VSFPC	
Height:	Together with its support, shall not itself exceed a height of fifteen (15) feet unless otherwise required by the USBC or VSFPC for a specific use	Sec. 34-1108(5)	Examples: parking canopies, pole-mounted solar panels, outdoor seating canopies, incorporated in decks and porches
Placement in Yards:	May encroach into required front, side, and rear yards, subject to the provisions of Sec. 34-1108	Sec. 34-1101(b)(6) <i>* Adjusted to reference Sec. 34-1108 for all yard provisions</i>	
	<p><i>Required Front Yards:</i> May be located within a required front yard only when incorporated as part of an allowed structure per Sec. 34-1101(b)(7) and Sec. 34-1101(b)(8).</p> <p><i>Note: Attached and unenclosed structures that are allowed in required front yards are defined in Sec. 34-1101(b)(7) and Sec. 34-1101(b)(8). No adjustments to these sections are included in this proposal.</i></p> <p><i>Low-Density Residential Zoning Districts:</i> Not allowed in any front or side yard between the line of the front building façade and the front lot line, unless incorporated as part of an allowed structure as defined in Sec. 34-1101(b)(7) and Sec. 34-1101(b)(8).</p> <p><i>All Other Zoning Districts:</i> Allowed between the front building façade and the required front yard.</p>	Sec. 34-1108(4) <i>* New Addition</i>	

All Zoning Districts Except Low-Density Residential (Commercial, Mixed Use, etc. Does not include Low-Density Residential.)

 Solar Energy Systems Allowed

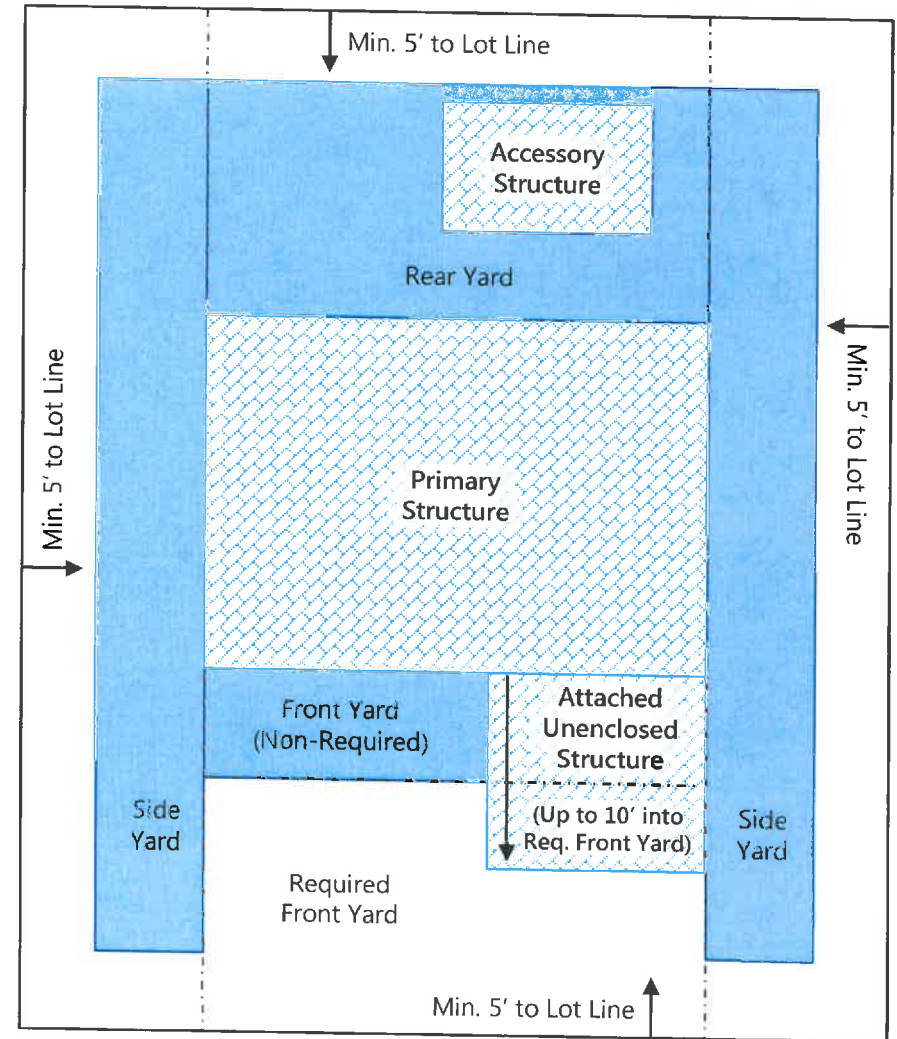
 Solar Energy Systems Allowed on Structures

Without an Allowed, Unenclosed Structure in Front Yard



Diagrams Show: Proposed Sec. 34-1101(b)(6) and Sec. 34-1108(4)

With an Allowed, Unenclosed Structure in Front Yard



Existing Sec. 34-1101(b)(7) and Sec. 34-1101(b)(8)

Examples of allowable rooftop solar energy systems on accessory structures



Mounted on garages and sheds

Section 34-1108(2)(i)

Applies only single-and two-family dwellings

Examples of allowable rooftop solar energy systems up to 5 feet in height above highest point of the roof



Tilted solar energy systems on sloped or flat roofs

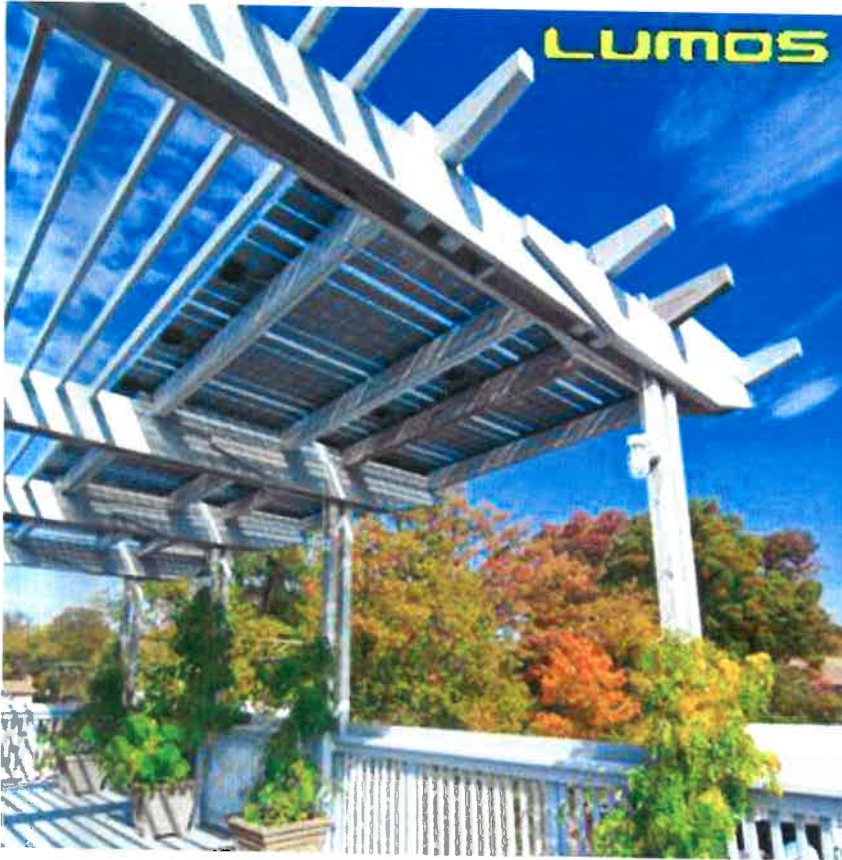
Photo Credits: NZ Builders, Shades of Green Landscape Architecture, Solaire Energy Systems

Prepared for Charlottesville Planning Commission – June 13, 2017

Section 34-1108(2)(ii)

Applies to all except single-and two-family dwellings

Examples of allowable rooftop solar energy systems
up to 15 feet in height above highest point of the roof



Rooftop Canopies

**Examples of allowable rooftop solar energy systems
up to 15 feet in height above highest point of the roof**



Parking Garage Canopies

Examples of allowable solar energy systems incorporated into building facade



Building-integrated solar energy systems in residential districts

Examples of allowable solar energy systems incorporated into building facade



Building-integrated solar energy systems in non-residential districts



Examples of allowable solar energy systems incorporated into building facade



Building-Integrated Solar Energy Systems in non-residential districts

Section 34-1108(4)(i-ii)

Applies to all zoning districts, including low-density residential districts

Examples of allowable solar energy systems mounted on an attached, unenclosed structure that is allowed to encroach into the required front yard



Mounted on unenclosed, attached porches



Section 34-1108(4)(i-ii)

Applies to low-density residential districts

Example of solar energy system that is **NOT ALLOWED** between building setback line and the adjacent front lot line



Examples of allowable solar energy systems up to 15 feet in height



Ground-mounted solar energy systems in residential districts



Examples of allowable solar energy systems up to 15 feet in height



ConnectTables are installed at UVA and Albemarle High School



Two pole-mounted solar energy systems are installed at Charlottesville High School

Examples of allowable solar energy systems up to 15 feet in height



Ground-mounted solar energy systems in non-residential districts

REFLECTIVITY OF PHOTOVOLTAIC SOLAR PANELS COMPARED TO OTHER BUILDING MATERIALS

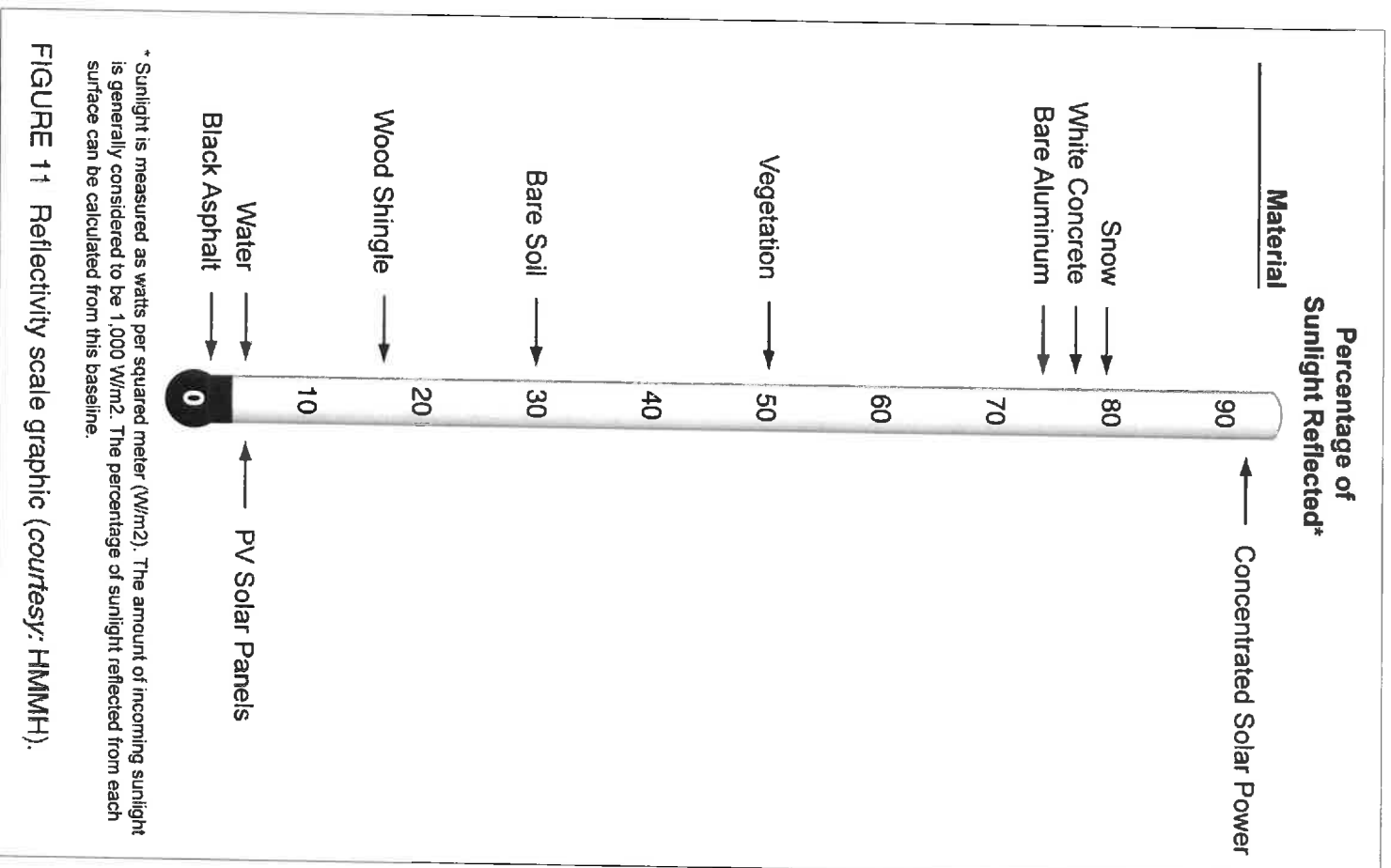


FIGURE 11 Reflectivity scale graphic (courtesy: HMMH).

Source: "Investigating Safety Impacts of Energy Technologies on Airports and Aviation." Report commissioned by U.S. Department of Transportation Federal Aviation Administration and National Academy of Science Transportation Research Board and prepared in cooperation with Harris, Miller, Miller, and Hanson, Inc. <https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB2012100306.xhtml>



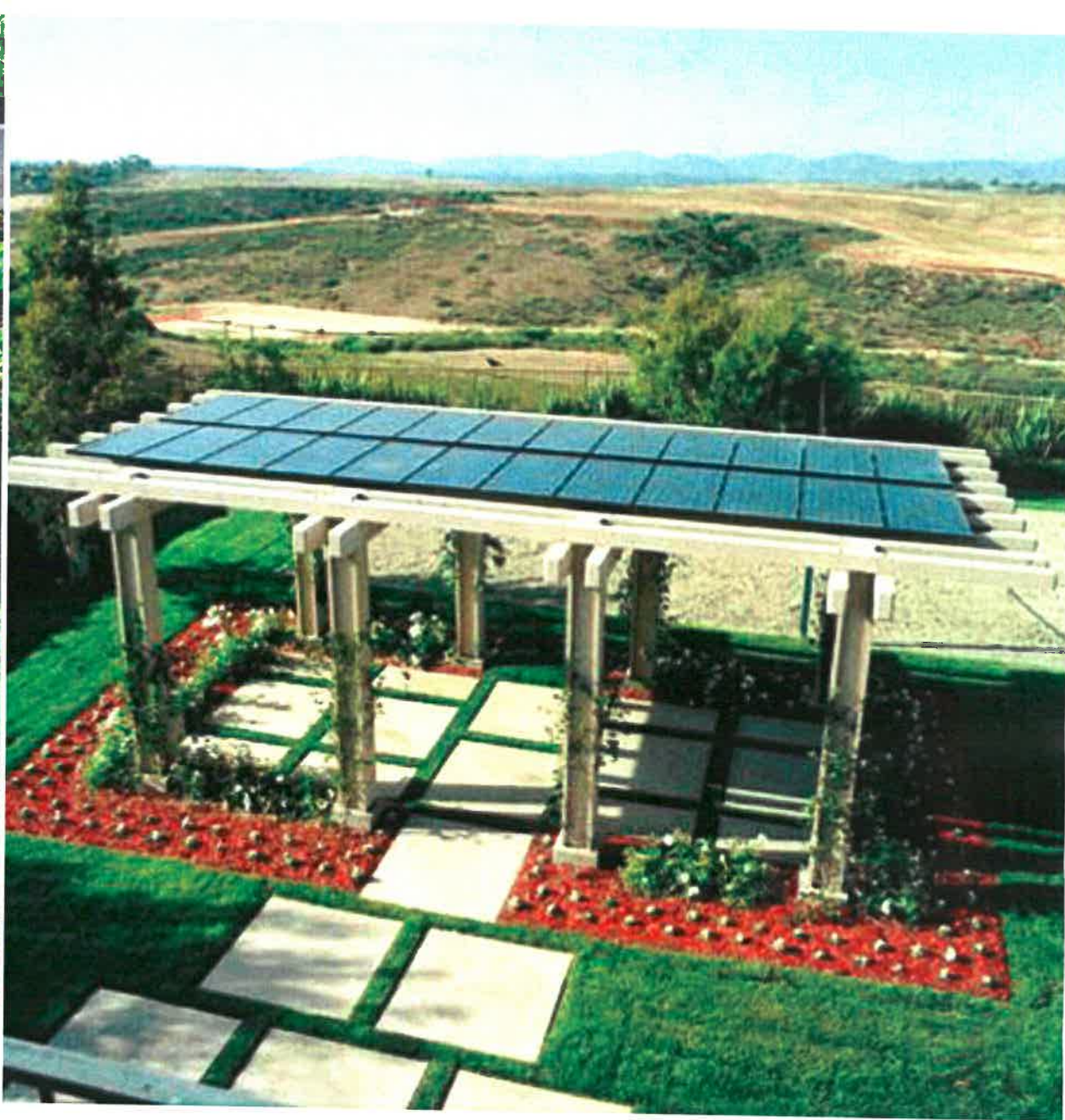
CHARLOTTESVILLE RESIDENCE ROOFTOP SOLAR ENERGY SYSTEM



CHARLOTTESVILLE RESIDENCE ROOFTOP SOLAR ENERGY SYSTEM



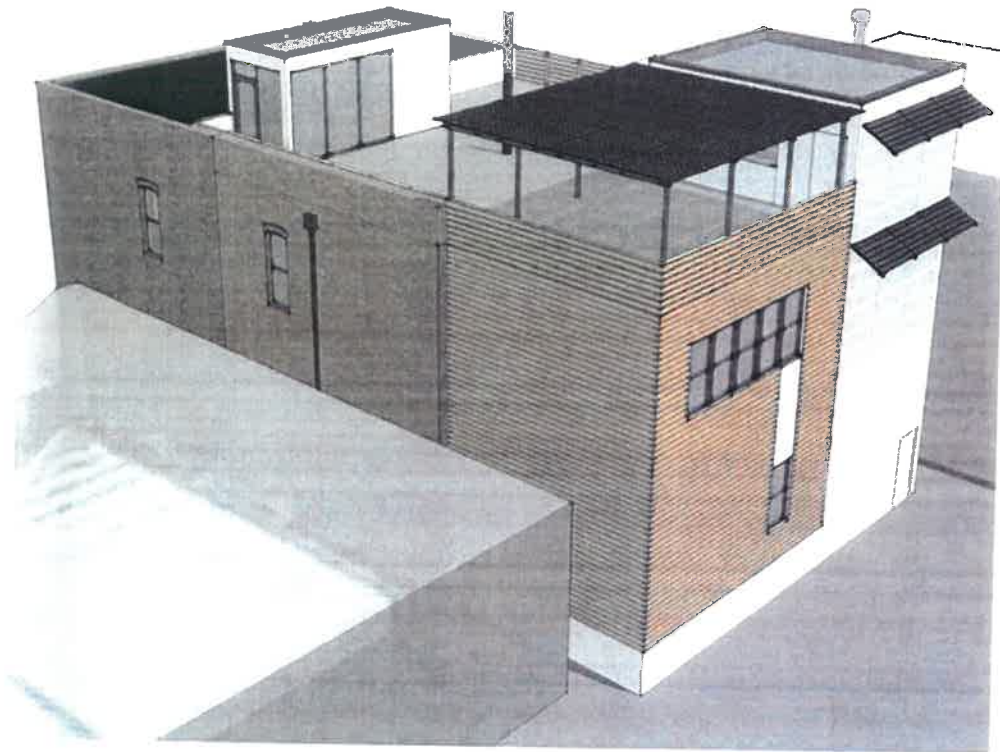
RESIDENTIAL GROUND-MOUNTED SOLAR ENERGY SYSTEM



SOLAR CANOPY



CHARLOTTESVILLE MULTI-FAMILY RESIDENTIAL ROOFTOP SOLAR ENERGY SYSTEM



WOLF ACKERMAN DESIGN
COMMON HOUSE

CHARLOTTESVILLE COMMERCIAL ROOFTOP SOLAR CANOPY – in a Historic District



CHARLOTTESVILLE COMMERCIAL ROOFTOP SOLAR CANOPY – in a Historic District



CHARLOTTESVILLE FACILITIES MAINTENANCE BUILDING



ALBEMARLE COUNTY PARKING SOLAR CANOPY

ORDINANCE
TO AMEND AND RE-ENACT THE CODE OF THE CITY OF CHARLOTTESVILLE (1990), AS AMENDED, CHAPTER 34 (ZONING), SECTIONS 34-1101, 34-1146, 34-1147, and 34-1200, AND TO ADD A NEW SECTION 34-1108, TO EXPRESSLY AUTHORIZE SOLAR ENERGY SYSTEMS

WHEREAS, in accordance with Virginia Code §15.2-2286(A)(7), the Charlottesville City Council previously initiated amendments of the Zoning Ordinance of the City of Charlottesville, Chapter 34 of the Code of the City of Charlottesville (1990), as amended (“Zoning Ordinance”), to expressly allow permit solar energy systems, and City Council referred the proposed amendments to the Charlottesville Planning Commission for review and recommendations, in accordance with Virginia Code §15.2-2285; and

WHEREAS, a public hearing was conducted jointly by City Council and the Planning Commission on May 9, 2017 following public notice as required by law; and

WHEREAS, on June 13, 2017, the Planning Commission voted to recommend that City Council should approve certain proposed amendments to the Zoning Ordinance, to expressly authorize solar energy systems subject to appropriate regulations, finding that such amendments are required by the public necessity, convenience, general welfare or good zoning practice; and

WHEREAS, this City Council concurs with the Planning Commission that the proposed zoning text amendments are required by the public necessity, convenience, general welfare or good zoning practice, and further, Council finds that the proposed amendments have been designed to give reasonable consideration to the purposes set forth within Virginia Code §15.2-2283 and have been drawn with reasonable consideration given to the matters set forth within Virginia Code §15.2-2284;

NOW, THEREFORE, this City Council does hereby amend and re-enact the Code of the City of Charlottesville (1990), as amended, as follows:

~~Strikeout text~~ = existing provisions proposed to be deleted

Blue font text = new provisions proposed to be added

- 1. Chapter 34, Article X (Definitions), Section 34-1200 is amended and re-enacted, as follows:**

Sec. 34-1200: Zoning--Definitions

Scala, Mary Joy

From: Robertson, Lisa
Sent: Monday, July 10, 2017 1:19 PM
To: Scala, Mary Joy
Cc: Creasy, Missy; Haluska, Brian
Subject: RE: Solar and appurtenance amendments Part 2
Attachments: SOLAR CANOPY Design Review Chart.pdf; SOLAR ROOF PANEL Design Review Chart.pdf

In addition, I need assurance that the BAR and ERB will still be required to review solar energy systems as they do now. **See attached Charts. That's the question that the PC wants presented to the BAR to be answered. The PC wants the BAR to say that the "enabling" words authorizing design review for the BAR/ ERB are sufficient to allow review of SES. As you will see from the attached charts, based on the language in our ordinance, some SES will be reviewable, some will not.**

If you have photos of other types of installations you'd like analyzed, let me know. The short answer: the SES will certainly be subject to review, if they fit within the language of the ordinance.

You need to be aware that solar panels added to an existing building (e.g., roof) or to an existing unenclosed structure (e.g., porch, carport), in and of themselves, will not trigger design review. According to Tom Elliott, the panels themselves require only an electrical permit.

If there are ordinance amendments that you would like to recommend in the BAR or ECRB "enabling" provisions (i.e., the words that identify what types of improvements trigger review) let us know.

All solar energy systems are now defined as "equipment or fixtures used accessory to a building or structure located on the same lot."

What about the freestanding type? Are they still called a structure? **If, by "freestanding type" you mean the solar canopies (see attached picture), then yes.**

- In the ADC district the BAR reviews all **buildings and structures** including all exterior alterations to buildings and structures. **See attached pictures/ charts**
- In HCD the BAR currently reviews solar systems as "additions" if visible from the frontage street. **See attached pictures/ charts**
- In EC the ERB reviews **improvements requiring a building permit** (but no site plan) if 25% or more of gross area; or **installations/replacements of roof coverings, windows, doors, siding, if visible; or all development** requiring a site plan. **See attached pictures/ charts. I might need to modify the Roof Panel Chart a bit, relative to ERB review, but before I do that, please mark it up with any questions or other changes you may have.**

The BAR will consider these on July 18. I need some things clarified before I write my staff report to them.

My concern with the solar section is that people may be led to believe that solar energy systems are not subject to design review. **Everyone needs to continue to focus on the language of the ordinances; most, but not all, will be subject to review.**

Could we add a statement, for example, under 34-1108 Standards that says solar energy systems are permitted by right but are subject to design review per Sections 34-275, 34-340, and 34-309. (ADC, HCD, and EC). **I think that will just confuse things. As noted above, we just need to focus on the language of the design review sections. Then we should ask for Susan's assistance in putting together some website information, and/or brochures, to educate people to understand that most of these SES will require design review.**

My concern with the appurtenance changes is that you may be precluding rooftop uses that we want. **The appurtenance section still allows unenclosed rooftop structures that are less than 18 feet tall, that occupy less than 25% of the roof area of a building, and that cannot be used as any type of habitable residential space. Nothing has changed that currently-existing language.**

As written I believe both the Landmark Hotel and the Quirk Hotel would not be permitted the uses they have planned on their appurtenance levels. **As noted above, the language hasn't changed from what was approved by the PC a few months ago. Elevator returns are fine. Building stories are not.**

The Landmark shows the following enclosed spaces: club, bar, storage, elevators, stairs, service, bathrooms. **On the landmark, don't get confused between the additional building story(ies) and uses that will be made of the open-air roof spaces adjacent to Main Street and Water Street. Also, the Landmark is not a good example because the site plan was originally approved under a different set of appurtenance language, I think.**

The Quirk shows enclosed bar, elevators, stairs and restrooms.

Would all these uses be allowed under 34-1101(a)(5) "Other ...structures ...so long as they... contain **no enclosed space that is designed for or that can be used as any type of habitable residential space.**" It's not clear. See note above; that's the rule now, and it's not being changed.

The intent all along has been to allow rooftop bars, which require restrooms. **I do not believe it's correct that a building story containing bathrooms is required for a rooftop bar, but you should ask Tom Elliott that question.**

Stairs are an essential use for any building to access the roof **Elevator returns are allowed.** I think that enclosed bars, restrooms and stairs should be specifically permitted. **The current wording of the ordinance is not change from what was approved by the PC a few months ago.**

Thank you.

Mary Joy Scala, AICP

Preservation and Design Planner

City of Charlottesville

Department of Neighborhood Development Services

City Hall – 610 East Market Street

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Charlottesville, VA 22902

Ph 434.970.3130 FAX 434.970.3359

scala@charlottesville.org

Scala, Mary Joy

From: Elliott, Susan
Sent: Thursday, June 29, 2017 3:29 PM
To: Scala, Mary Joy
Subject: Solar ZTA Files for BAR Meeting
Attachments: Proposed Ordinance - Solar Energy Systems.pdf; BAR - Solar ZTA Narrative and Attachments.pdf

Mary Joy,

Please let me know if you have any questions about the solar ZTA item for the July BAR meeting. Below are items that I said I'd send to you.

1) Attached are the PDFs of:

- the solar ZTA ordinance recommended by the Planning Commission, and
- the materials I delivered to your office on Tuesday

2) Planning Commission's Direction for BAR Comment:

This is such a broad topic, I think it would be helpful if we make sure to emphasize – in both the staff report and my presentation – what the Planning Commission specifically wants the BAR to consider. The main question is if anything needs to be adjusted in the sections of code that grant the BAR its review authority in order to ensure review of solar energy systems when warranted by a design control or overlay district.

If it's helpful for your staff report, below, I've copy and pasted the Planning Commission's direction, as well as some related comments with code citations that we received from Morgan Butler and Travis Pietila of the Southern Environmental Law Center (SELC). I believe Lisa may have been working on a chart as well.

Planning Commission Direction, as stated in the 7/5/2017 City Council Memo:

"As a condition of their approval, the Planning Commission has also recommended that, prior to a Second Reading of the proposed Ordinance, City Council should request the BAR and Entrance Corridor Review Board to weigh in as to whether any additional zoning text amendments might be necessary in order to ensure that those design review bodies will have authority, under their respective ordinance provisions, to review the compatibility of each different type of solar energy system that might have a significant impact on a major design control district, a conservation district or an entrance corridor."

Comments from SELC:

"Admittedly, the challenge with providing much clarity here may be that the answer seems likely to vary depending on the type of SES, as well as the type of overlay district in which it would be located. For example, in the architectural design districts (34-271 to 34-291), it appears to us that stand-alone facilities—no matter how large or prominent—may never require a CofA since the CofA requirement in those districts relates to a "building or structure" (34-275), and the solar ZTA would make clear that SESs are not "buildings" or "structures" for purposes of the zoning ordinance. However, it appears that installing solar panels on the wall or roof of a building could frequently require a CofA in those same districts, even if they're inconspicuous, since that could constitute an "alteration" of the building (under 34-275). That balance, assuming we have it right, strikes us as problematic."