

30401043



Description

More information on [County Assessor's Website](#)

Details

APN
30401043

FLOOR
1

AREA
6904

ADDRESS
11226 E LOMITA CIR MESA 85209

USE CODE
0131

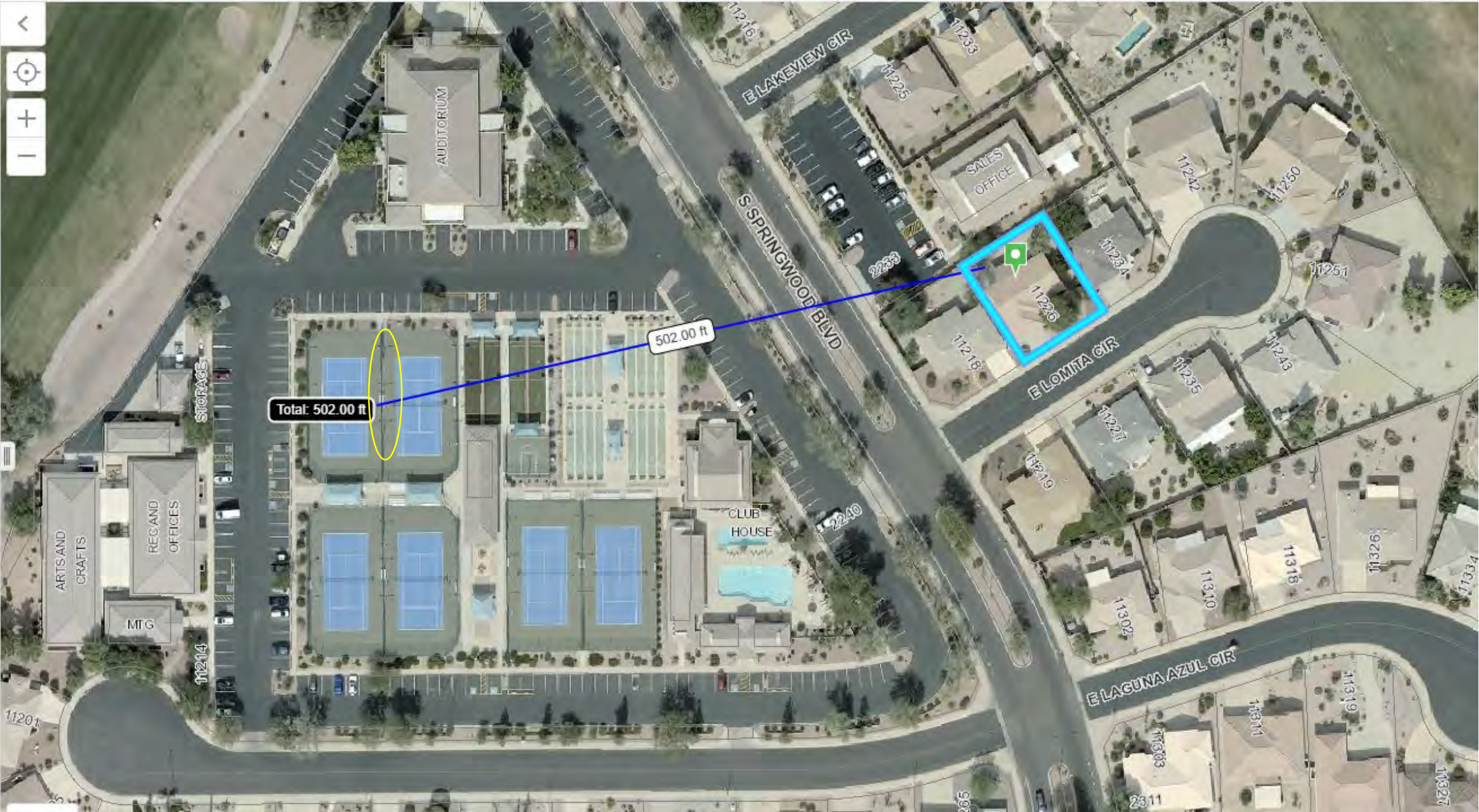
Exempt_CD
N/A

Township
1S

Range
7E

Lot
302

Owner_Name
GRASSMAN JAMES R/SUSAN J





Development Services Department

Date: 7/12/22

To: Building Board of Appeals

From: John Sheffer

Re: Appeal of Building Official's interpretation of Lighting Control Ordinance Section 4-4-1 (N)

Building Board of Appeals Members,

The City of Mesa received an appeal of the Building Official's interpretation of City of Mesa Lighting Control Ordinance Section 4-4-1 (N) from resident James Grassman. This letter includes a summary of the ordinance requirements and appeal, and the following attachments: site plan, City of Mesa Code 4-4-1 Lighting Control Ordinance, interpretation of Section 4-4-1 (N), and appeal of the interpretation of Section 4-4-1 (N).

Background

Mesa adopted a lighting control ordinance in 2004 and the purpose, according to the first Section 4-4-1 (A), is to reduce undesirable light into the night sky which have a detrimental effect on astronomical observations.

4-4-1 (A) Purpose. This Section is intended to restrict the permitted use of outdoor artificial illuminating devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observations.

To achieve this goal, the ordinance requires lights to either comply with filtering/shielding requirements which reduces the amount of light, or to automatically shut off at 11:00p.m. In either case the goal of dark night skies for observatories is accomplished. Several sections in the ordinance are organized in this manner:

1. 4-4-1 (I) Exception No outdoor recreational facility, public or private, shall be illuminated by nonconforming means after eleven (11:00) p.m., except that a specific recreational or sporting event or other similar activity conducted at a ballpark, outdoor amphitheater, arena, or similar facility in progress prior to eleven (11:00) p.m. may continue until concluded.
2. 4-4-1 (M) Outdoor Advertising Lighting. Upward-emitting lighting located upon existing outdoor advertising shall be exempt from compliance with this Section, provided that such lighting is equipped with a permanent automatic shutoff device and will not be operated between the hours of eleven (11:00) p.m. and six (6:00) a.m.
3. 4-4-1 (N) Automatic Shutoff Device. In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic shutoff device.

{00450456.1}

55 N. Center St.
P.O. Box 1466
Mesa Arizona 85211-1466



Interpretation of Section 4-4-1 (N)

The appeal is regarding shielding of the tennis court lighting at the Sunland Springs Village HOA located at 2240 S Springwood Blvd, Mesa, AZ. City staff determined that the court lighting meets the requirements of Section 4-4-1 (N), and therefore shielding is not required.

Section 4-4-1 (N) allows outdoor light fixtures not meeting the other provisions of the section, which are shielding provisions, to remain if extinguished between the hours of 11:00p.m. and sunrise by an automatic shutoff device. According to Sunland Springs Village, the tennis court lights automatically shut off at 10p.m.

4-4-1 (N) Automatic Shutoff Device. In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic shutoff device.

The automatic shutoff device in Section 4-4-1 (N) is one option for compliance. In the absence of a shutoff device, compliance may be achieved by meeting the other provisions of the Section, which contain requirements to reduce the amount of light through filtering, shielding, etc., instead of turning off the light. In either case there is a reduction of light rays into the night sky that effect astronomical observations.

Additionally, court lighting is exempt under Section 4-4-1 (I), which allows private outdoor recreational facilities to be illuminated by nonconforming fixtures until 11p.m.

EXCEPTION: No outdoor recreational facility, public or private, shall be illuminated by nonconforming means after eleven (11:00) p.m., except that a specific recreational or sporting event or other similar activity conducted at a ballpark, outdoor amphitheater, arena, or similar facility in progress prior to eleven (11:00) p.m. may continue until concluded.

Appeal of Lighting Control Ordinance Section 4-4-1 (N).

The appeal of the interpretation of City Code Section 4-4-1 (N) is attached. The appeal contains several elements including past emails and text messages with building inspectors, zoning code, Arizona Revised Statutes, etc., however, in accordance with City Code, the Building Board of Appeals jurisdiction is limited to Mesa Municipal Code, Title 4 - Building Regulations (all Chapters) and Chapter 2 Fire Code of Title 7- Fire Regulations.



Development Services Department

Attachments:

1. Site Plan
2. City Code Section 4-4-1 Lighting Control Ordinance
3. Interpretation of Section 4-4-1 (N) issued May 20, 2022
4. Appeal of the interpretation of Section 4-4-1 (N)

{00450456.1}

55 N. Center St.
P.O. Box 1466
Mesa Arizona 85211-1466

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June 8, 2022

James R. Grassman
11226 E. Lomita Circle
Mesa, AZ 85209

Building Board of Appeals
City of Mesa
55 N. Center Street
Mesa, AZ 85201

Members, Building Board of Appeals,

I am writing to appeal the attached staff decision dated May 20, 2022 regarding lighting pollution controls. I also want to request this appeal be immediately put "on hold" for the following reasons:

1. It has taken the City more than two years and reviews by four or five separate staff members (depending how it is counted) to finally come up with a "final" though only partial response to my complaint about a lack of Code enforcement. Over that time and as the names changed, I submitted a large amount of information and communications, and I can't be expected to reconstruct and synthesize those two years in just 30 days along with other efforts I already had to make to try to clarify the May 20 staff response and the time it took to correct an initial determination that would have incorrectly charged a fee for Code Appeals by homeowners of single residences.

I hope it's fair to say it is at least finally conceded there are violations of several Sections of Code 4-4-1, including (D) and possibly (H) among others, on their face alone. There are also potential violations of the Zoning Code and development standards but those still have not been addressed by staff.

Apparently the issue has evolved down in part to the staff interpretation of 4-4-1 (N), which was raised by John Sheffer in February 2021 and addressed (see attached documents Feb. 10, 15 & 16, 2021) and again after he took over the lead in the matter around April 28, 2022. Also attached is my response of May 26 seeking clarification of several key points, which are also at the core of my appeal at this time, in addition to the lack of response to potential violations of the Zoning Code and development standards.

2. A key issue is the meaning of State Statute 49-1103, which pre-empts Code Section 4-4-1 (N), and which are identical but for the heading "Nonconforming light fixtures" in the Statute, which seemingly and significantly narrows its scope compared to the staff interpretation of (N).

I have suggested that we jointly contact the State Department of Environmental Quality to seek its perspective on the meaning and applicability of 49-1103, which AZDEQ enforces, but there has been no answer from staff.

I believe it is important and have already started taking steps to request input from AZDEQ pursuant to the following, which I believe can provide critical information one way or the other, but could take some time. Time is available for it has already taken over two years and the staff response is incomplete.

Arizona Statute 49-104 (Arizona Department of Environmental Quality)

Provide information and advice on request of any local, state or federal agencies and private persons and business enterprises on matters within the scope of the department.

OMITTED RELEVANT AND IMPORTANT INFORMATION

The following additional provisions are also important, and notably were not included among relevant Code and Statutory references quoted by staff:

Arizona Statute 49-1106. Exemption of cities, towns and counties

The provisions of this article are cumulative and supplemental and shall not apply within any county, city or town which by ordinance or resolution has adopted provisions restricting light pollution which are equal to or more stringent than the provisions of this chapter.

and,

Mesa Code Section 4-4-1(B) Conformance with Applicable Regulations.

All outdoor artificial illuminating devices shall be designed and installed in conformance with the provisions of this Section and all other Sections of Chapter 4-4. Where provisions of the Arizona State Statutes, or of the Federal laws, or other regulation of the City conflicts with the requirements of this Section, the most restrictive shall govern. (4245)

In other words, both State law and Code provide that 49-1103 remains in effect where a similar provision of the Code is less stringent. If Section 4-4-1(N) is an option for all, including new lighting installations, it is less restrictive than Stat. 49-1103, which only applies to Nonconforming light fixtures, or those in existence when the Statute was adopted. The same is true regarding the relationship between Section 4-4-1 (N) and City zoning laws and development standards, pursuant to Code. These aspects are an integral part of the Code meaning.

In addition to the two provisions quoted above, the following was a third relevant and important provision omitted by staff:

Mesa Code Section 4-4-1 (I) Nonconforming Fixtures.

Outdoor light fixtures existing and fully installed prior to September 18, 2004 that complied with all applicable codes at installation may remain as "nonconforming;" provided, however, that no change in use, replacement, structural alteration, or restoration after abandonment of the outdoor light fixtures shall be made unless it thereafter conforms to the provisions of these regulations. (4245, 4637)

EXCEPTION: No outdoor recreational facility, public or private, shall be illuminated by nonconforming means after eleven (11:00) p.m., except that a specific recreational or sporting event or other similar activity conducted at a

1c

ballpark, outdoor amphitheater, arena, or similar facility in progress prior to eleven (11:00) p.m. may continue until concluded. (4245)

The purpose of such nonconforming use provisions is to gradually eliminate “grandfathered” violations over time. Unlike 4-4-1(I), the staff interpretation does just the opposite. It provides the option of no controls on expansion and lighting and lighting pollution whatsoever until after midnight, when most people are asleep and many lights are extinguished anyway to save electricity. The long history and presence of other lighting restrictions in the Code effective at all hours indicate that is unlikely a valid assumption.

The exception above appears to affirm that use of an automatic shut off device only applies to Nonconforming fixtures, consistent with 49-1103. Even the exception to the exception would be erased from the Code along with all the other restrictions as 4-4-1(N) as interpreted by staff.

I recall being told and it is being implied that darkness after midnight is an important accommodation solely for the benefit of astronomers. There is nothing to support this assumption either. “Astronomical observation” literally means seeing the stars and planets, and it includes everyone’s enjoyment of those things, especially sunset to midnight. Even the recommended outdoor lighting code of the Arizona Astronomy Consortium recognizes the need to “grandfather” nonconforming uses. Their 2014 model code states:

12.1 Nonconformance. All outdoor light fixtures lawfully installed prior to and operable on the effective date of this Code are exempt all requirements of this Code.

As a related matter of enforcement, it is further understood that permits were not taken out for the lighting project in question, even though it did more than just replace lighting fixtures of a similar type. Rather, it included replacing numerous sports facility and parking lot lights with extremely bright new LED fixtures (not just lamps of the same kind, which are exempt from permits). Also included were complete new, ground-up LED lighting structures for an additional outdoor sport complex constructed around 2015, and a “major improvement” at the tennis courts, as the HOA manager wrote before the complaint was filed. Even lights in violation that were abandoned more than four years were restored and re-activated with bright LED fixtures installed in such a way that allows horizontal light to escape. However, it was decided administratively to even forego retro permits, including plan and compliance reviews as well as fees and penalties, for any of this work.

Nor, despite repeated requests, was I supplied with the City’s wattage restrictions for LED fixtures pursuant to 4-4-1(H), which led me to believe they don’t exist, and which raises a question how any LED lighting projects are being reviewed.

CONCLUSION

To arrive at the staff’s interpretation the Board has to: **1)** ignore “Nonconforming” in 49-1103 and 4-4-1(I); **2)** overlook 4-4-1 (B) which brings in provisions in the Zoning Code and development standards, as well as involving State Statutes; and **3)** omit everything except one minor detail comparing 49-1103 to 4-4-1(N) (also see my attached letter of May 26). The result is one that is being taken out of context because it only focuses on one narrow aspect of several important factors, but which is not supported by the Code and Statutes when viewed in their entirety. By limiting its response in this way, staff has only partially addressed


issues and violations involved and the result is incomplete and will be inconclusive. While implying it is providing a complete and definitive answer, it is not.

Most of the confusion would disappear with a more thorough and reasonable interpretation of 4-4-1(N) that includes and addresses all the relevant portions of the applicable Codes and Statutes.

I appreciate this is a complicated matter with broad implications. That is why, if I was in your shoes, I would want to try to obtain a fair and open reading from the Department of Environmental Quality about the meaning and application of 49-1103 as it relates to 4-4-1(N) of the Code, even if it's still just a partial piece of the total picture.

Please feel free to contact me via email at : Jimgrassman@yahoo.com.

Thank you for your consideration.



JAMES R. GRASSMAN

From: "John Sheffer" <John.Sheffer@MesaAZ.gov>
To: "James R. Grassman" <jimgrassman@yahoo.com>
Sent: Fri, May 20, 2022 at 2:49 PM
Subject: RE: PS ltr w addl attachmts

Jim,

This email is in response to your questions regarding tennis court lighting at Sunland Springs Village. Specifically, the application of Mesa City Code Section 4-4-1 Lighting Control Ordinance and its conformance with Arizona Revised Statutes.

I have reviewed Section 4-4-1 and the information you provided via mail and email. Upon review, I find Section 4-4-1 (N) is applicable to the light fixtures at the tennis courts. Section 4-4-1 (N) allows outdoor light fixtures not meeting the other provisions of the section to remain if they are extinguished between the hours of 11:00p.m. and sunrise by an automatic shutoff device. According to Sunland Springs Village, the tennis court lights automatically shut off at 10p.m. Extinguishing lights earlier than 11p.m. complies with Section 4-4-1 (N), which allows lights to remain, even if they do not meet the other provisions of 4-4-1.

The automatic shutoff device in Section 4-4-1 (N) is one option for compliance. In the absence of a shutoff device, compliance may be achieved by meeting the other provisions of the section, which contain requirements to reduce the amount of light through filtering, shielding, etc., instead of turning off the light. In either case, the purpose, which according to Section 4-4-1 (A) is to reduce undesirable rays into the night sky which have a detrimental effect on astronomical observations, is achieved.

Additionally, City of Mesa Code Section 4-4-1 (N) is more restrictive than Arizona Revised Statutes. A.R.S. Title 49, Chapter 7 Light Pollution, Article 1, 49-1103 allows outdoor light fixtures not meeting the other provisions of the Article to remain if extinguished between midnight and sunrise by an automatic shutoff device. Given Mesa requires an 11p.m. shutoff and A.R.S. requires a midnight shutoff, Mesa is more restrictive by one hour.

As we discussed, I ran this by several others and all had the same interpretation.

The City of Mesa Code Section 4-4-1 (A), 4-4-1 (N), and A.R.S. 49-1103 are provided below for reference.

City of Mesa City Code

4-4-1 (A) Purpose. This Section is intended to restrict the permitted use of outdoor artificial illuminating devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observations.

4-4-1 (N) Automatic Shutoff Device. In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic shutoff device.

Arizona Revised Statutes

49-1103. Nonconforming light fixtures. In addition to other exemptions provided in this article, outdoor light fixtures not meeting the provisions of this article shall be allowed provided such fixtures are extinguished between the hours of midnight and sunrise by an automatic shutoff device.

If you wish to appeal this decision, a written appeal must be filed pursuant to Title 2-11 of the Mesa City Code with the Building Board of Appeals within thirty (30) calendar days of this notice. The cost for an appeal is \$220.00.

Thank you,

John L. Sheffer, PE, CBO
Deputy Director/Building Official
City of Mesa | Development Services
55 N. Center St. Mesa, AZ 85201
TEL 480.644.5879

May 26, 2022

James R. Grassman
11226 E. Lomita Circle
Mesa, AZ 85209

John Sheffer, Deputy Director – Building Official
City of Mesa Development Services
Mesa, AZ

Mr. Sheffer,

Forgive me for being persistent, but I have repeatedly run into inaccurate and misleading information presented as obstacles since filing my complaint with the City well over two years ago. It started with the HOA's bogus assertion that I lacked "standing" under the Code to file a complaint about lighting pollution, and the first building inspector who wrote it "probably is a civil matter" and closed the case without even letting me know. Only weeks ago I was told that the use of cut-off LED fixtures means there is no shielding violation, even though the fixtures were improperly installed at an angle, which is clearly addressed in the Code. I can cite more. As a result, I look carefully at all the information I receive.

I am writing to respond to your email of May 20, 2022. It is well written, but it does not address some important and basic aspects. To help me understand better, would you please clarify the following:

1. How can 4-4-1(N) be more restrictive than Statute 49-1103 when the heading defines the overall scope of the Statutory paragraph as only applying to "Nonconforming Uses"? In comparison, Code section 4-4-1(N), which is identical but for the heading, you are interpreting as expanded to apply to all lighting, including all new installations that will forever create additional lighting pollution. This is a significant change in public policy, which the State has pre-empted. The heading "Nonconforming Uses" has to exist in the Statute for a reason. What does it mean unless it applies solely to "Nonconforming Uses" as the term is commonly used in government, which makes 49-1103 considerably more restrictive than (N)?

(In view of the above distinction, 49-1103 and (N) -- as (N) is being interpreted -- are not equal but for the one-hour difference. They involve differing solutions to fundamentally different circumstances. You point out that 4-4-1(N) is more restrictive than State law in one detail because it provides an hour earlier shut-down of uncontrolled lighting. That hour pales in comparison to the increase caused by universally allowing new lighting pollution, i.e. from zero to 4 - 6 hours every day, 365-days a year, and whether it ceases at 11 pm or midnight is minor. It's like "closing the barn door after the horses have run away." Nothing says hours of darkness (when lighting restrictions are in place anyway) are an acceptable trade-off for hours of uncontrolled violations of the rest of the Statute, except where non-conforming uses are involved. It is an incorrect assumption. Nor does it help most people who would like to engage in "astronomical observation," which is just another way of saying "star-gazing," and not just something for people to enjoy who are awake after 11 pm or midnight.)

2. What about the violations of other Code sections, such as those in the Zoning Code and development standards? Among other things, I specifically asked Mr. Spillars to include an explanation regarding the lack of shielding as required in both the Statute and Code Section 4-4-1 because the angle of the fixtures is such an obvious violation, and I never thought (N) applied on its face as well (see my letter of Feb. 10, 2021 to Mr. Spillars, which I thought put the issue to rest because the case remained open, including a citation I learned was issued in June 2021 but apparently not enforced). My complaint was never limited to just violations of 4-4-1 (also see the original complaint to the City sent March 3, 2020, my 9-page analysis provided to the City of the HOA's bogus explanations dated May 21, 2020, as well as the chart of violations from Dec. 2021 that I copied to you again on May 16, 2022).

Thank you in advance for the continued effort to be open and transparent. I still think it would be helpful to try to get the perspective of the obvious source regarding the scope and applicability of 49-1103, which is the AZ Department of Environmental Quality and/ or Attorney General's office. I think it is plain but it could matter a lot one way or the other. Nonetheless, I will look forward to your reply clarifying the important aspects above regarding your May 20 response to my complaint.

Sincerely,

JAMES R. GRASSMAN

12/2019⁴



Night view from patio when North Tennis Court lights are OFF.



Night view from patio when North Tennis Court lights are ON.



Blow up of photo from patio showing angled up brackets and exposed light fixtures on North Tennis Courts.

December, 2020

12/2020

SOME SPECIFIC AREAS OF LIGHT POLLUTION IDENTIFIED AT SUNLAND SPRINGS VILLAGE

Location	New installation since 2004 (1)	Material change in use by installing LED lamps in 2019	Other major improvement identified (2)	Lighting designed to minimize glare & light trespass (3)	Angled arms used & lamps NOT properly shielded (4)	Glare and escaping light evident	Potential of LEDs over 100 watt limit (5)	Lamps visible at property line Line (6)	House side shields lacking on poles (7)
Pickleball Court Lighting at corner of Springwood and Guadalupe	YES	YES	No	NO	YES	YES	YES	YES	YES
North Tennis Courts lights	Unknown	YES	YES	NO	YES	YES	YES	YES	YES
Parking lot lights by Auditorium on Springwood at Lakview	Unknown #	YES	Unknown #	NO	YES	YES	YES	YES	YES

= While it is unknown, there are indications that other changes may have been made in addition to replacing fixtures and LED lamps.

1. This was the year the current State Statute regarding "Light Pollution" was adopted and became applicable to municipalities.
The pickleball courts were installed in Phase 2 of SSV around 2015.
2. In the community newsletter of Dec. 2019 the HOA executive identified "major improvements" were made to North tennis court lights. Previously those lights were "dark" for at least four years.
3. This is required by the Mesa Zoning Code, Chapter 30, Section 11-30-5.
4. Shielding per State Statute and Mesa Code is required, specifically "fully shielded" per the table in Code Section 4-4-1 adjusted for LED and as defined in the Code and Statute.
5. See Municipal Code Section 4-4-1 H adjusting for LED lights on 25 foot poles.
6. Municipal Code Section 4-4-1 F prohibits lamps that are "directly visible at the property line."
7. Municipal Code Section 10-35-5 B.2 provides "House side shields shall be provided on all (parking lot) light standards adjacent to residential development.
Note several of the fixtures are right at the Springwood right-of-way and are slanted away from the parking lot and toward the residences across the street.

Arizona Revised Statutes Title 49 - The Environment

Chapter 7 - LIGHT POLLUTION Article 1 - General Provisions

49-1101. Definitions

In this article, unless the context otherwise requires:

1. "Fully shielded" means that fixtures are shielded in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.
2. "Outdoor light fixture" means outdoor artificial illuminating devices, lamps and other devices, permanent or portable, used for illumination or advertisement. Such devices shall include, but are not limited to, search, spot or flood lights for buildings and structures, recreational areas, parking lot lighting, landscape lighting, billboards and other signage and street lighting.
3. "Partially shielded" means that fixtures are shielded in such a manner that the bottom edge of the shield is below the plane of the center line of the lamp reducing light above the horizontal.

49-1102. ** Shielding of outdoor light fixtures

All outdoor light fixtures shall be fully or partially shielded except incandescent fixtures of one hundred fifty watts or less and other sources of seventy watts or less. Streetlight fixtures are exempt from this requirement if the shielding is not available from the manufacturer.

49-1103. Nonconforming light fixtures

In addition to other exemptions provided in this article, outdoor light fixtures not meeting the provisions of this article shall be allowed provided such fixtures are extinguished between the hours of midnight and sunrise by an automatic shutoff device.

49-1104. Use of mercury vapor light fixtures

A. No new mercury vapor outdoor light fixtures shall be installed after the effective date of this section. No replacement equipment other than bulbs for mercury vapor lighting fixtures shall be sold in the state after January 1, 1991 and the use of mercury vapor light fixtures is prohibited after January 1, 2011.

B. The provisions of this section shall not apply to outdoor light systems erected prior to 1950.

49-1105. Airport lighting

Nothing in this article shall apply to navigational lighting systems at airports

49-1106. ** Exemption of cities, towns and counties

The provisions of this article are cumulative and supplemental and shall not apply within any county, city or town which by ordinance or resolution has adopted provisions restricting light pollution which are equal to or more stringent than the provisions of this chapter.

February 10, 2021

James R. Grassman
11226 E. Lomita Circle
Mesa, AZ 85209

Clyde Spillers
Department of Development Services
City of Mesa, AZ

Dear Mr. Spillers,

I am writing to follow up on my call earlier today about the status of my lighting complaint.

I can see why 4-4-1(N) might be seen as a "red flag." However, it must be read in its entirety and in context of the rest of the Code, and State Statutes.

The confusion may arise from these words found in paragraph (N) "...outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic shutoff device."

Viewed alone, the potential interpretation of just the words above is that installing an automatic shutoff device would effectively negate and could be used to circumvent virtually all other lighting pollution restrictions in the Code, including the following examples :

Shielding requirements found in Section 4-4-1 (E), and State Statutes.

The provision that lamps shall not be visible beyond the property line Section 4-4-1(F)

Maximum lamp wattages that are set forth in Section 4-4-1 (H)

No mercury vapor lights as prohibited in Section 4-4-1 (H) 2.

It would also have the same effect regarding Section 4-4-1(I) regarding Non-Conforming Uses, which reads :

Outdoor light fixtures existing and fully installed prior to September 18, 2004 that complied with all applicable codes at installation may remain as "nonconforming;" provided, however, that no change..... shall be made unless it thereafter conforms to the provisions of these regulations.

Install a shutoff device and non-conforming light fixtures become conforming before 11 pm !!! As the above examples illustrate, simply installing a shutoff device makes no sense. It does take on meaning, however, when the phrase that preceded it in the Code is added and which then reads :

In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are

extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic shutoff device.

In other words, the shutoff device is **IN ADDITION TO OTHER EXEMPTIONS**. It is an additional requirement so otherwise illegal lighting, per the current Code and which qualifies for an exemption, does not continue to pollute during the specified hours of 11 pm to sunrise.

Unlike a blanket waiver of Code requirements, which makes no sense, this interpretation of the significance of Section 4-4-1 (N) is fully compatible with, for example, section 4-4-1 (L) which reads as follows :

4-4-1 (L) Special Exemption. The Building Safety Director may grant a special exemption to the requirements of this Section only upon finding, in writing, that there are extreme geographic or geometric conditions warranting such exemption and that there are no conforming fixtures that can comply.

This more-correct interpretation is further supported by State Statutes regarding lighting pollution (Title 49 – The Environment, Chapter 7 – Light Pollution, Article 1 – General Provisions), which I previously provided to you.

Most noteworthy, the heading of the text in the Statute which is identical to the text of Code Section 4-4-1 (N), but which heading is not in the Code, is **“49-1103 Non-conforming light fixtures.”** In other words, it is NOT a general provision, but specifically targeted at non-conforming uses and similar exemptions that are contained in the Statute.

And, to preclude a broader interpretation of Code Section (N), the Statutes provide :

49-1106 Exemption of cities, towns and counties

The provisions of this article are cumulative and supplemental and shall not apply within any county, city or town which by ordinance or resolution has adopted provisions restricting light pollution which are equal to or more stringent than the provisions of this chapter. (emphasis added)

In other words, the Statutes trump any local rules that are less stringent, and apply where local rules are silent. As such, the Statutes serve to clarify and further define the language of the Code.

Please feel free to contact me if you have any questions or would like to discuss any aspect of this matter further. Thank you.

Sincerely

JAMES R. GRASSMAN

CC: John Sheffer, Deputy Director – Building Official

From: "Jim Grassman" <jimgrassman@yahoo.com>
 ★ (To: "clyde.spillers@mesaaz.gov" <clyde.spillers@mesaaz.gov>
 Cc: "john.sheffer@mesaaz.gov" <john.sheffer@mesaaz.gov>
 Sent: Mon, Feb 15, 2021 at 8:40 AM
 Subject: Additional observations re 4-4-1 (N)

Here are some additional points that supplement the analysis I provided Feb. 11 regarding the interpretation of Section 4-4-1 (N) of the lighting Code. I hope this is of further assistance to you.

An automatic shutoff device operating from 11 pm to sunrise cannot realistically be interpreted as a substitute for compliance with all the other important provisions in the City Code aimed at curbing lighting pollution. If interpreted that way, the other Code restrictions would be almost cut in half time-wise and could be potentially circumvented completely in every case merely by shutting off the violation during the specified hours. It would also be less stringent than the controlling State Statute (attached), which is not permitted.

Rather, a shutoff device is more reasonably interpreted as an additional requirement in those situations where a specific exemption is available and is granted.

Here is the relevant text as it appears in the State Statute –

49-1103 Non-conforming light fixtures.

In addition to other exemptions provided in this article, outdoor lighting fixtures not meeting the provisions of this article shall be allowed provided such fixtures are extinguished between the hours of midnight and sunrise by an automatic shutoff device.

Clearly the provision as it appears above is only applicable to the exemption for non-conforming light fixtures. For some unknown reason the Code omits the heading which serves to better define its scope – a reason to be wary sometimes of the codification process. The Code further provides, in accordance with the Statute:

Conformance with Applicable Regulations. All outdoor artificial illuminating devices shall be designed and installed in conformance with the provisions of this Section and all other Sections of Chapter 4-4. **Where provisions of the Arizona State Statutes, or of the Federal laws, or other regulation of the City conflicts with the requirements of this Section, the most restrictive shall govern.** (4245) (*emphasis added*)

The same Code provision favoring more restrictive provisions in the event of a conflict applies to the interpretation of 4-4-1 (N) in contrast to all the other, more restrictive provisions contained in Section 4-4.

In addition, all provisions relating to exemptions are no longer applicable in situations where the exemption has been forfeited.

P.S. Although probably a moot point for the reasons mentioned above, there may be some misunderstanding about shutoff devices on the tennis courts at Sunland Springs Village. Yes there are timers and I have seen the lights go off after people are done playing, as is commonly done to reduce electric bills, but I recall being up at 5 a.m. this past Fall and the lights were on for people playing tennis before sunrise.

Text msg Grassman to Clyde Spillars of Feb. 16, 2021

I thought of another, simpler way to explain my interpretation.

The basic question is which of two conflicting provisions, Stat #49-1103 or Code 4-4-1 (N), provides the correct interpretation. Both also provide that the more restrictive provisions apply in such cases.

The more restrictive interpretation is Stat 49-1103 which provides 1) that a non-conforming use must be shut off between midnight and sunrise (rather than not at all), and 2) that all other Code provisions continue as each is written (not the reduced hours in 4-4-1 (N).

Further, as a consequence,

(Balance of above msg was lost)

Sent from Yahoo Mail on Android

Text msg Spillars to Grassman of Feb. 16, 2021

I sent Mr Sheffer an email EOD Wednesday with interpretation question, he responded early Thursday. We briefly discussed the case, I told him I would talk with him tomorrow. Will talk with you after I talk w/JS.

(No further communication about this. Case remained open, including notice of violation in June 2021 requiring compliance with 4-4-1(D) FULLY SHIELDED but apparently not enforced)

Sent from Yahoo Mail on Android

From: Clyde Spillers
Sent: Wednesday, March 23, 2022 1:07 PM
To: James R. Grassman
Cc: Larry Snyder
Subject: Re: Two Years 11214 E Laguna Azul Cir, COB20-00331

Mr. Grassman

I understand that this case (COB20-00331) has taken awhile. When I was assigned to this case in December of 2020, first inspection on 1/13/2021. I approached the case as a voluntary compliance case. Voluntary compliance cases tend to take longer. That being said it doesn't mean we won't issue a notice of violation. I did issue a notice of violation on April 5th 2021 (attached), requiring compliance with 4-4-1(G) Light Spillage. In June 2021 I was instructed to have Sunland Springs HOA comply with 4-4-1 (D) Fully Shielded, not 4-4-1 (G) because of the cost factor for a photometric study by an Engineer.

Larry Snyder, Senior Inspector Supervisor and I have a meeting next week with Sunland Springs HOA pertaining to compliance with 4-4-1 (D) Fully Shielded.

4-4-1 (D) Definitions

FULLY SHIELDED: Those fixtures designed and erected in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are only projected below a horizontal plane running through the lowest point on the fixture where light is emitted. (4245)

4-4-1 (G) Definitions

Light Spillage. The light level at any property line, measured thirty-six inches (36") above ground level, shall be not more than 0.5 foot candles (5 Lux) above ambient light level, except for property lines adjacent to residential use property, the light level shall be not more than 0.3 foot candles (3 Lux) above ambient light level. Where the property is adjacent to a public street, the property line may be considered to be the centerline of the street. (4245)

Clyde Spillers
480/8618712
City of Mesa
Development Services

Sent from [Mail](#) for Windows

From: [Larry Snyder](#)

Sent: Wednesday, April 27, 2022 6:29 AM

To: jimgrassman@yahoo.com

Subject: Lighting

Good Morning Mr. Grassman,

Thank you for bringing your lighting concern to us. We take every concern of this nature seriously and do our best to determine resolution based on the laws and codes legally adopted.

As stated in 4-4-1 of the Mesa Code, the purpose of the lighting control ordinance is to restrict the permitted use of outdoor artificial devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observation.

Fully shielded, as defined in 4-4-1 are those fixtures designed and erected in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are only projected below a horizontal plane running through the lowest point on the fixture where light is emitted.

The fixtures the HOA purchased fits within the definition.

Subsequently dropped - see attached)

Also, when automatic shutoff devices are installed as mentioned in (N) of 4-4-1, outdoor lighting not meeting all of the provisions of the section are allowed to remain, provided such fixtures are extinguished between the hours of 11:00PM and sunrise.

It is our understanding that an automatic shutoff device is installed for the fixtures in question, and those fixtures are set to turn off at 10:00 every night, thus meeting the exception provided in (N) of 4-4-1 of the Mesa Code.

If you have any questions feel free to call me at the number below,

Respectfully,

Larry Snyder

Sr. Building Inspector

City of Mesa / Development Services

Cell 480-297-3698

Desk 480-644-2436

Email from me to Larry Snyder 4-27-22 in response to his msg same day

Mr. Snyder,

Thank you for writing and explaining your response to my complaint about violations of lighting pollution Codes and Statutes. Getting involved late in a process that has spanned over two years is a disadvantage for you because you don't have the benefit of the history that has transpired.

Accordingly, I will be sending you hard copies of correspondence regarding the interpretation of Code Section 4-4-1-N, which was addressed in February 2021. Fortunately I kept copies of almost everything for such a situation.

Regarding the definition of fully-shielded in Section 4-4-1 and State Statutes, the key words are "designed and erected." Clearly fixtures that have been installed on an angle, estimated 15 degrees off the horizontal plane, do not meet the definition, even though the fixtures themselves may be designed to control horizontal light when properly installed to be effective. I am sure a supplier would readily tell you this.

There is also an important, unanswered question about compliance with Code Section 4-4-1 H, which involves a common issue regarding the intensity of LED lighting which is significantly brighter than older lamps even if the LEDs are of comparable or lesser wattage. The table found in Section 4-4-1 H identifies the City's standards in this regard, which the HOA should be able to readily address if just asked for the wattage of the new lamps installed when the complaint was filed.

Please review this information and re-consider your response, and provide further clarification based on the above input if you continue to see things differently. As I have suggested in the past, I would consider seeking a legal opinion from the City Attorney's Office if I was uncertain about a Code and Statute interpretation . Thank you.

Sincerely,

Jim Grassman

To: Jim Grassman

Jim,

The City of Phoenix has the same provision as Mesa for shutting off a light from 11pm to sunrise. However, the language they use is simplified. Perhaps their version makes more sense (I think it is written better).

Sec. 23-100. Outdoor lighting.



Filtration: Those outdoor light fixtures which have glass, acrylic, or translucent enclosures (quartz glass does not meet this requirement).

C. *Requirements for shielding or filtration.* When used for outdoor lighting, shielding or filtration shall be required for the lamp types as set forth in the following table, unless the lighting contains an automatic shutoff device and is not used from 11:00 p.m. until sunrise:

Fixture Lamp Type	Shielded	Filtered
High pressure sodium	Fully	None
Metal halide	Fully	Yes
Fluorescent	Fully	Yes
Quartz	Fully	None
Incandescent greater than 150 watts	Fully	None
Low pressure sodium	None	None

Thanks,
John L. Sheffer, PE, CBO

To: John Sheffer

Thank you. I was aware of it. I believe there is also language the states that restrictions in other sections of their Code remain in effect, such as the Zoning Code.

I also looked at numerous other Codes. All others had provisions like our 4-4-1 (I).

Statute 49-1103 applies to all and pre-empts anything that is less restrictive.

But you may be right. Quite frankly, if it was just the tennis court lights I may have given up already and gladly gone back to being just retired, but the idea of living in a community with no lighting restrictions whatsoever between sunset and midnight is inconceivable to me.

I hope DEQ will clarify things for everyone.

So now you have a preview of a portion of my appeal. Too bad we can't have a meaningful discussion, but you seem to have made up your mind. All it takes are some added shielding like that done in other places at SSV but they don't seem motivated.

Jim

From: [John Sheffer](#)
To: [James R. Grassman](#)
Bcc: [John Sheffer](#)
Subject: RE: PS ltr w addl attachmts
Date: Friday, May 20, 2022 12:49:35 PM

Jim,

This email is in response to your questions regarding tennis court lighting at Sunland Springs Village. Specifically, the application of Mesa City Code Section 4-4-1 Lighting Control Ordinance and its conformance with Arizona Revised Statutes.

I have reviewed Section 4-4-1 and the information you provided via mail and email. Upon review, I find Section 4-4-1 (N) is applicable to the light fixtures at the tennis courts. Section 4-4-1 (N) allows outdoor light fixtures not meeting the other provisions of the section to remain if they are extinguished between the hours of 11:00p.m. and sunrise by an automatic shutoff device. According to Sunland Springs Village, the tennis court lights automatically shut off at 10p.m. Extinguishing lights earlier than 11p.m. complies with Section 4-4-1 (N), which allows lights to remain, even if they do not meet the other provisions of 4-4-1.

The automatic shutoff device in Section 4-4-1 (N) is one option for compliance. In the absence of a shutoff device, compliance may be achieved by meeting the other provisions of the section, which contain requirements to reduce the amount of light through filtering, shielding, etc., instead of turning off the light. In either case, the purpose, which according to Section 4-4-1 (A) is to reduce undesirable rays into the night sky which have a detrimental effect on astronomical observations, is achieved.

Additionally, City of Mesa Code Section 4-4-1 (N) is more restrictive than Arizona Revised Statutes. A.R.S. Title 49, Chapter 7 Light Pollution, Article 1, 49-1103 allows outdoor light fixtures not meeting the other provisions of the Article to remain if extinguished between midnight and sunrise by an automatic shutoff device. Given Mesa requires an 11p.m. shutoff and A.R.S. requires a midnight shutoff, Mesa is more restrictive by one hour.

As we discussed, I ran this by several others and all had the same interpretation.

The City of Mesa Code Section 4-4-1 (A), 4-4-1 (N), and A.R.S. 49-1103 are provided below for reference.

City of Mesa City Code

4-4-1 (A) Purpose. This Section is intended to restrict the permitted use of outdoor artificial illuminating devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observations.

4-4-1 (N) Automatic Shutoff Device. In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic

shutoff device.

Arizona Revised Statutes

49-1103. Nonconforming light fixtures. In addition to other exemptions provided in this article, outdoor light fixtures not meeting the provisions of this article shall be allowed provided such fixtures are extinguished between the hours of midnight and sunrise by an automatic shutoff device.

If you wish to appeal this decision, a written appeal must be filed pursuant to Title 2-11 of the Mesa City Code with the Building Board of Appeals within thirty (30) calendar days of this notice. The cost for an appeal is \$220.00.

Thank you,

John L. Sheffer, PE, CBO

*Deputy Director/Building Official
City of Mesa | Development Services
55 N. Center St. Mesa, AZ 85201
TEL 480.644.5879*

From: James R. Grassman <jimgrassman@yahoo.com>

Sent: Monday, May 16, 2022 6:10 AM

To: John Sheffer <john.sheffer@mesaaz.gov>

Subject: PS ltr w addl attachmts

Attached is a letter to you with 3 attachments. Thanks for your consideration.

Jim Grassman

Sent from [Mail](#) for Windows

4-4-1: - LIGHTING CONTROL ORDINANCE

- (A) Purpose. This Section is intended to restrict the permitted use of outdoor artificial illuminating devices emitting undesirable rays into the night sky which have a detrimental effect on astronomical observations. (4245)
- (B) Conformance with Applicable Regulations. All outdoor artificial illuminating devices shall be designed and installed in conformance with the provisions of this Section and all other Sections of Chapter 4-4. Where provisions of the Arizona State Statutes, or of the Federal laws, or other regulation of the City conflicts with the requirements of this Section, the most restrictive shall govern. (4245)
- (C) Public street lighting shall be in conformance with the City of Mesa engineering and design standards. (4245, 4637)
- (D) Definitions. The following definitions shall apply to this chapter: (4245, 4637)

AMBIENT LIGHT LEVEL: The measured light level at night when all the lights associated with a facility are off. (4245)

FILTERED: Outdoor light fixtures whose transmission is less than five percent (5%) total emergent flux at wavelengths less than three thousand nine hundred (3,900) angstroms. Total emergent flux is defined as that between wavelengths of three thousand (3,000) and seven thousand (7,000)-angstrom units. (4245)

FULLY SHIELDED: Those fixtures designed and erected in such a manner that light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are only projected below a horizontal plane running through the lowest point on the fixture where light is emitted. (4245)

INSTALLED: The initial installation of outdoor light fixtures defined herein, provided the date of such installation is on or after September 18, 2004. (4245)

OUTDOOR LIGHT FIXTURES: Outdoor artificial illuminating devices, outdoor fixtures, lamps, and other devices, permanent or portable, used for illumination or advertisement. Such devices shall include, but are not limited to, lighting for buildings and structures, recreational areas, parking lots, landscape areas, billboards and other signage, and private street lighting.

PARTIALLY SHIELDED: Those fixtures designed and erected in such a manner that the bottom edge of the shield is below the plane of the centerline of the light source (lamp), minimizing the light emitted above the horizontal. (4245)

- (E) Shielding and Filtering. All exterior illuminating devices, except those exempt from this Section, shall be fully or partially shielded and filtered as required in the following table: (4245)

TABLE 4-4-1(F)
REQUIREMENTS FOR SHIELDING AND FILTERING

FIXTURE LAMP TYPE	SHIELDED	FILTERED (4)
Low-Pressure Sodium (1)	Partially	None
High-Pressure Sodium	Partially	None
Metal Halide	Fully	Yes
Fluorescent	Partially (3)	Yes (5)
Quartz (2)	Partially	None
Incandescent Greater than 150W	Partially	None
Incandescent 150W or less	None	None
Fossil Fuel	None	None
Glass Tubes Filled with Neon, Argon, Krypton	None	None
Other Lamp Types	As Approved by the Building Safety Director	
Footnotes:		
(1) This is the preferred lamp type to minimize undesirable light into the night sky, negatively affecting astronomical observations.		
(2) For the purposes of this Section, quartz lamps shall not be considered as an incandescent light source.		
(3) Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding.		

(4) Glass, acrylic, or translucent enclosures shall be deemed to satisfy filter requirements.

(5) Warm White and Natural Lamps are recommended to minimize detrimental effects.

(4245, 4637)

- (F) Visibility. No fixture, with a lamp size greater than 150W incandescent, shall be designed or erected where the lamp is directly visible to a person standing at the property line. (4245)
- (G) Light Spillage. The light level at any property line, measured thirty-six inches (36") above ground level, shall be not more than 0.5 footcandles (5 Lux) above ambient light level, except for property lines adjacent to residential use property, the light level shall be not more than 0.3 footcandles (3 Lux) above ambient light level. Where the property is adjacent to a public street, the property line may be considered to be the centerline of the street. (4245)
- (H) Prohibitions. The following fixture types shall not be used within the City of Mesa: (4245)
 - 1. Searchlights. The operation of searchlights for advertising purposes is prohibited between the hours of eleven (11:00) p.m. and sunrise. (4245)
 - 2. Mercury Vapor. The installation of mercury vapor fixtures is prohibited. (4245)
 - 3. Maximum lamp wattage shall be limited in relation to mounting height as set forth in the following table, except for special use as approved: (4245)

TABLE 4-4-1(H)
MAXIMUM WATTAGE FOR MOUNTING HEIGHT

Wattage	Height
1,000	40 ft.
400	25 ft.
250	20 ft.
150	15 ft.

Fixtures with lamps less than 150 watts shall be permitted to be installed at any height, subject to conformance with other adopted codes.

Lamp wattages in this table are for HID arc lamps; other lamp types shall be limited to equivalent lumen output.

(4245, 4637)

- (I) Nonconforming Fixtures. Outdoor light fixtures existing and fully installed prior to September 18, 2004 that complied with all applicable codes at installation may remain as "nonconforming;" provided, however, that no change in use, replacement, structural alteration, or restoration after abandonment of the outdoor light fixtures shall be made unless it thereafter conforms to the provisions of these regulations. (4245, 4637)

EXCEPTION: No outdoor recreational facility, public or private, shall be illuminated by nonconforming means after eleven (11:00) p.m., except that a specific recreational or sporting event or other similar activity conducted at a ballpark, outdoor amphitheater, arena, or similar facility in progress prior to eleven (11:00) p.m. may continue until concluded. (4245)

- (J) Fossil Fuel Lights (Gas). Lighting produced by the combustion of natural gas or other utility-type fossil fuels shall be exempt from the requirements of this Section, except lighting produced indirectly from combustion of natural gas or other utility-type fossil fuels, such as through the use of electricity to produce lighting shall not be exempted from compliance. (4245)
- (K) Federal and State Facilities. Facilities and lands owned, operated, or protected by the U.S. Federal Government or the State of Arizona are exempted by law from all requirements of this Section. Voluntary compliance with the intent of this Section at such facilities is encouraged. (4245)
- (L) Special Exemption. The Building Safety Director may grant a special exemption to the requirements of this Section only upon finding, in writing, that there are extreme geographic or geometric conditions warranting such exemption and that there are no conforming fixtures that can comply. (4245)
- (M) Outdoor Advertising Lighting. Upward-emitting lighting located upon existing outdoor advertising shall be exempt from compliance with this Section, provided that such lighting is equipped with a permanent automatic shutoff device and will not be operated between the hours of eleven (11:00) p.m. and six (6:00) a.m. (4245)
- (N) Automatic Shutoff Device. In addition to the specific exemptions provided in this Section, outdoor light fixtures not meeting the provisions of this Section shall be allowed to remain, provided such fixtures are extinguished between the hours of eleven (11:00) p.m. and sunrise by an automatic

shutoff device. (4245)

- (O) Temporary Exemptions. The Building Safety Director may grant a temporary exemption to the requirements of this Section, for a period of up to thirty (30) days, renewable at the discretion of the Building Safety Director. (4245)

The request for temporary exemption shall be submitted by the property owner and shall contain the following information, at a minimum: (4245)

1. Specific exemptions requested. (4245)
2. Type and use of exterior lighting involved. (4245)
3. Type of shielding and filtering of fixtures, if any. (4245)
4. Duration of time for the requested exemption. (4245)
5. Type of lamp and calculated lumens for all fixtures involved. (4245)
6. Total wattage of lamps for all fixtures involved. (4245)
7. Proposed location of exterior lighting. (4245)
8. Previous temporary exemptions, if any. (4245)
9. Other data and information as required by the Building Safety Director. (4245)

Within five (5) working days from the receipt of a properly completed request for temporary exemption, the Building Safety Director shall approve or reject the request. Such action shall be in writing. If rejected, the applicant shall have the right of appeal to the Building Board of Appeals, pursuant to Title 2 Chapter 11 of the Mesa City Code. (4245, 4637)

- (P) Flagpole Lighting. Upward emitting lighting whose purpose is to illuminate a flag on a flagpole at night shall be exempt from compliance with this section provided all of the following provisions are met:

1. The flag flown on the flagpole shall be permitted under Title 11, Mesa Zoning Ordinance. (4790)
2. The fixtures used to illuminate the flag shall be of a light source permitted by this Chapter with lamps rated at not more than 75 watts. (4790)
3. The fixture used to illuminate the flag shall be limited to not more than three fixtures, ground or building mounted, aimed upwards, with no fixture exceeding the light level or lamp visibility requirements shown in Subparagraph (G) or (H) above. (4790)

(Ord. No. 5538, §§ 1—3, 12-2-19)