

# TOWN *Of* PARADISE VALLEY



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## STAFF REPORT

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**TO:** Chair and Board of Adjustment

**FROM:** Jill B. Keimach, Town Manager  
Lisa Collins, Community Development Director  
Paul Michaud, Planning Manager  
Loras Rauch, Special Projects Planner

**DATE:** January 6, 2021

**DEPARTMENT:** Community Development Department, Planning Division  
Loras Rauch, 480-348-3595

**AGENDA TITLE:**

Tan Variance – 6204 N. Hogahn Circle (APN: 169-22-080C)  
Case No. BA-20-07

**MOTIONS**

**A. MOTION FOR APPROVAL**

I move for **[approval]** of Case No. BA-20-07, a request by Wendy Tan, property owner of 6204 N. Hogahn Circle, for a variance from the Zoning Ordinance, Article XXII, Hillside Development Regulations, to allow for unscreened roof mounted solar panels. The variance shall be in compliance with the following submitted plans and documents:

1. The Tan Variance Narrative Resubmitted 12/11/20, prepared by Aneva Solar.
2. Tan Solar Plans; Sheet(s) E-1-15 dated 12/3/20, prepared by Aneva Solar.

**Reasons for Approval:**

I find that there are special circumstances, applicable to the subject lot, meeting the variance criteria.

**B. MOTION FOR DENIAL**

I move for **[denial]** of Case No. BA-20-07, a request by Wendy Tan, property owner of 6204 N. Hogahn Circle; for a variance from the Zoning Ordinance, Article XXII, Hillside Development Regulations, to allow for unscreened roof mounted solar panels

**Reasons for Denial:**

I find that the variance requested does not meet the variance criteria.

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### **BACKGROUND**

#### Request

The applicant is proposing to place three (3) arrays, for a total of 36 unscreened roof mounted solar panels, on the house. Typically, roof mounted solar panels are placed on flat portions of the roof and screened by the adjoining roof parapets. Since the house does not have any flat roofed areas, the applicant is seeking a variance request to place unscreened solar panels on the pitched roof of the house. Solar panels may be allowed on pitched roofs when screened from the same or a lower elevation by the adjoining hillside or hillside cut. This application does not have an adjoining hillside or hillside cut that will act as a screen for the solar panels. Section 2207.II.E of the Town Zoning Ordinance states:

- Solar panels may be allowed if they are integrated into the building design and hidden from view when viewed from the same or a lower elevation and approved by the Hillside Building Committee by a Combined Review. Solar panels may be allowed on pitched roofs when screened from the same or a lower elevation by the adjoining hillside or hillside cut and approved by the Hillside Building Committee by a Combined Review.
- Stealth solar technology may also be used on roofs and may not be required to be hidden from view. Stealth solar technology shall be limited to solar shingles and solar tiles that are integrated to blend in with the building design, do not have a shiny metallic finish, have a light reflective value of 38% or less, and must be approved by the Hillside Building Committee by a Combined Review.

#### Lot Conditions

The property is zoned R-43 Hillside and is approximately 58,466 square feet in size (1.34 acres). The property is a rectangular shaped lot that fronts both Hogahn Drive along the south property line and Hogahn Circle along the east property line. The property slopes down from Hogahn Drive and with more than a forty (40') foot front setback the home sits well below the street level of Hogahn Drive. It is this south (Hogahn Drive) frontage that the unscreened solar panels will be visible from.

There is an existing six (6') foot block wall that runs parallel to the east (Hogahn Circle) frontage and encloses a large portion of the rear yard. The northernmost (rear yard) portion of the lot is flat enough to facilitate a tennis court, swimming pool and other recreational amenities.

#### Lot History

The house is approximately 5,200 square feet and was constructed in 1972 with a pitched roof. The following is a chronological history of the property:

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- April 24, 1972. Building permit issued for new single-family residence.
- May 23, 1972. Building permit issued for a pool.
- February 11, 1991. Building permit issued for a remodel and addition.
- September 7, 1993. Building permit issued for a patio enclosure to livable space.
- March 27, 2007. Building permit issued for gates
- August 16, 2019. County Issues permit for replacing original septic system.

### Proposed Plan

The applicant wishes to reduce the hardship of their electricity costs and solar is the only viable option in the valley for alternative electric generation. The proposal is for 3 separate arrays located on the south facing roof(s) of the residence's two most northern roof structures. On the main roof structure there will be 2 arrays: 1 with 24 panels located 3 feet below the roof ridgeline; another with 6 panels located mid-roof between existing roof vents. The 3<sup>rd</sup> array with 6 panels will be located on the front entry structure roof 3 feet below the roof ridgeline. All panels will be non-reflective black (including the frame, cells and back sheet) mounted on a black racking system placing the panels at seven (7") inches above the existing roof structure. The PV components will be located adjacent to the existing SES and utility meters on the outer wall of the garage and screened by a retaining wall and the cut elevation.

### **DISCUSSION/ FACTS**

#### Variance criteria:

Town Code and Arizona Revised Statutes set criteria an applicant must meet before a Board of Adjustment may grant a variance request. If the Board finds an applicant meets all of these criteria, the Board may grant the variance. However, if the Board finds the applicant does not meet all of the criteria, the Board may not grant the variance. The following are staff's findings with regard to such variance criteria.

1. *"Such variance... will serve not merely as a convenience to the applicant, but [is] necessary to alleviate some demonstrable hardship or difficulty so great as to warrant a variance under the circumstances."* (Town Code Section 2-5-3(C)2).

#### **Findings in Favor (FIFs):**

The hardship is the design of the existing house built in 1972 and the fact that this home is located on a hillside lot. If this exact pitched roof home was located on a non-hillside lot no variance would be required for the unscreened roof mounted solar panels. If this hillside home had been designed with a flat roof and adjoining roof parapets, similarly to the home across the street at 6245 N. Hogahn Drive, the roof top solar would be allowed by right (no variance needed).



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Since the house is located on a hillside lot and does not have any flat roofed areas, the applicant must seek a variance to place unscreened solar panels on the pitched roof of the house. Placing a screen around the panels will not only degrade the structural integrity and architectural character of the home but will shade the panels and reduce the efficiency of the system. Although solar tiles (which do not have to be screened per code) exist in the market they are not readily available, cost about 4 to 5 times more, and would require re-roofing of the entire roof.

**Findings Opposed (FOPs):**

There is no property hardship that warrants the request and other alternatives may exist such as a ground installation of the racking system. A different brand of panels or panels with a larger output capacity, if available at this time, would reduce the number of panels required to produce the desired kW output but would not change the need for a variance to the Town's regulations.

2. *The "special circumstances, hardship, or difficulty [do not] arise out of misunderstanding or mistake..." (Town Code Section 2-5-3(C)4(b)).*

**FIFs:**

The hardship is not out of mistake or misunderstanding. The house was constructed in 1972 without any flat roofed areas, which limits the options for solar panels.

**FOPs:**

The applicant should be aware of all special circumstances on the property and plan any designs accordingly.

3. *"Such variance from ... the strict application of the terms of [the Zoning Ordinance] ... are in harmony with its general purposes and intents..." (Town Code Section 2-5-3(C)2).*

**FIFs:**

The intent of the hillside ordinance is to minimize the amount of disturbance to the hillside and to preserve the visual openness and the natural features of the mountain. The request meets the intent of the hillside ordinance since the roof mounted solar panels will not increase the amount of disturbance, will not obstruct views, and has limited off-site visibility. Since the house is situated below the street, placing the panels on the south facing roof(s) and in several arrays limits their visibility and meets the intent of the code which requires the solar panels be hidden from the same or lower elevation. Also, placing the solar



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panels on the ground may result in additional disturbance to the hillside and would be more visible to those at a lower elevation.

The applicant is utilizing non-reflective black panels (frame, cells and back sheet) black inverters and a black racking system, which is the least obtrusive option available in the solar industry, to minimize the impact of this installation from viewpoints on the adjacent lots.

**FOPs:**

The request does not meet the intent of the code since other alternatives exist. Although not ideal, the applicant could use a ground mounted racking system for the solar panel installation. The least unencumbered area for such a ground mounted installation is in the frontage setback along the east property line over the newly constructed septic tank/field. The existing six (6') foot high perimeter wall would need to be raised in this area to screen both the racking system and panels. Given the topography of the lot the perimeter wall would need to be approximately 15 feet in height to sufficiently screen the array; requiring another variance as well as cast significant shading on the array itself. Also, many of the existing trees in the rear yard would need to be removed to eliminate shading the array.

4. *"The special circumstances, hardship or difficulty applicable to the property are [not] self-imposed by the property owner, or predecessor..." (Town Code Section 2-5-3(C)4).*

**FIFs:**

The request is not self-imposed. The applicant is trying to improve the house while utilizing existing conditions. The solar panels will not create additional disturbance to the hillside, will utilize the existing roof, and not will obstruct views. As proposed the solar system is designed to be placed on the south facing roof exposure to optimize power generation free from obstructions and vegetation with the least number of panels and in the most aesthetically pleasing and least visible manner.

**FOPs:**

Arizona Revised Statutes and the Town Code do not require the most optimal or profitable use of a property. The request is self-imposed since other options exist. The applicant could potentially use a ground mounted solar system.

5. *Because of special circumstances applicable to the property, including its size, shape, topography, location, or surroundings, the strict application of the Zoning Ordinance will deprive such property of privileges enjoyed by other property of*

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*the same classification in the same zoning district.” (Arizona Revised Statutes 9-462.06(G)(2)).*

### **FIFs:**

The location and orientation of the house on the lot helps to hide the solar panels which is the intent of the code. Since the house is located on the north side of the street and situated below the street, the southern exposed solar panels will have limited off-site visibility which meets the intent of code requirement to hide the solar panels from the same or lower elevation.

The hillside home across the street from this property (at 6245 N. Hogahn Drive) is afforded the greater privilege of having 5 times more (182 panels) roof mounted solar panels by right (no variance required) than the applicant is proposing simply because of the flat roof design.

### **FOPs:**

There is no property hardship that warrants the request. The size, shape, and topography of the lot do not prevent the applicant from using a code compliant solar option such as ground mounted solar system.

6. *The variance would not “constitute a grant of special privilege inconsistent with the limitations upon other properties in the vicinity and zone in which such property is located.” (Arizona Revised Statutes 9-462.06(G)(2)).*

### **FIFs:**

The request meets the intent of the hillside ordinance. The request does not increase the amount of disturbance to the hillside and has limited visibility. Since the house is situated below the street with existing vegetation between the house and the street, the solar panels will have limited off-site visibility from the same or lower elevation.

### **FOPs:**

There does not appear to be other hillside properties in the immediate area that have unscreened solar panels. Also, all other hillside properties must meet the solar requirements outlined the Zoning Ordinance.

**COMMENTS:** Staff has received no inquiry or comments to date regarding this request.

**COMMUNITY IMPACT:** None.

**FISCAL IMPACT:** None.

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**CODE VIOLATIONS:** None.

**ATTACHMENTS:**

- A. Staff Report
- B. Vicinity Map & Aerial Photo
- C. Zoning & Hillside Maps
- D. Application
- E. Narrative & Plans
- F. Notification Materials

C: Mark Grabowski (Applicant)  
Case File BA-20-07