APPLICATION TO BOARD OF ADJUSTMENT FOR VARIANCE

	DATE: 6/24/19
LOCATION OF PROPERTY: 6067 N Paradise View ADDRESS	Dr. Paradise Valley, AZ 85253
LEGAL DESCRIPTION:	
OWNER: Frank Yeary, Newber PRINTED NAME 6067 N Paradise View Dr. Paradise Valley, AZ 85253 ADDRESS	X SIGNATURE 480 535 8700 PHONE#
ENGINEER/OTHER: Evan Jerpbak PRINTED NAME 3225 N Colorado St. Chandler, AZ 85225 ADDRESS	X Jun Bru SIGNATURE PHONE#
APPLICANT/ REPRESENTATIVE: Kaleina Eden PRINTED NAME 3225 N Colorado St. Chandler, AZ 85225	X Value Edu SIGNATURE
ADDRESS 480-689-5011	
PHONE # FAX # THE ABOVE APPLICANT HEREBY APPLIES FOR A VARIANCE AS INDICATED BELOW IN ACCORDANCE WITH THE ZONING ORDINANCE AND SECTION 2-5-3 OF THE CODE OF ORDINANCES OF THE TOWN OF PARADISE VALLEY. STATE HARDSHIP INVOLVED OR GROUNDS FOR APPEAL TO THE BOARD OF	
ADJUSTMENT. (Please attach additional sheets as necessa	ary).

Consideration of a variance from the zoning ordinance, Hillside Development Regulations, ZO-XXII.2207.E, to allow for unscreened roof mounted solar panels that are not hidden from view when viewed from the same level or lower elevation

- 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 warrant a variance under the circumstances."
 - a. Applicant is seeking to reduce the cost of electricity that his home requires to run in a reasonable fashion. The only way to reduce the size of said power bills is for the applicant to generate power at the location of the residence instead of purchasing it from the local utility company. As such the addition of a power generating system [solar] is required for the applicant to reduce the hardship of the electric bills.
- 2. The "special circumstances, hardship, or difficulty [do not] arise out of a misunderstand or mistake..."
 - a. The applicant did not have a misunderstand or made a mistake regarding the cost of electricity and the power bills associated with it.
- 3. "Such variance from ... the strict application of the terms of [the Zoning Ordinance] ... are in harmony with it's general purposes and intents ..."
 - a. The power generating system [rooftop] solar will be installed in such a way that is both aesthetically appealing and non-disruptive to the overall aesthetic of the area. This is in line with the general purpose and intent of the Zoning Ordinance.
- 4. "The special circumstances, hardship, or difficult applicable to the property are [not] self-imposed by the property owner, or predecessor..."
 - a. A certain amount of power is required for a residence to operate in a manner which is considered normal and reasonable. This requirement is by the nature of the residence and not though the intentional actions of the homeowner outside the normal power consumption of living in the residence.
- 5. "Because of special circumstances applicable to the property, including it's size, shape, topography, location, or surroundings, the strict application of the zoning ordinance will deprive such property of privileges enjoyed by other property of the same classification in the same zoning district."
 - a. Other properties within the same zoning classification have been allowed to have solar power systems installed on their rooftops. This was primarily allowed since the profile of the roof allowed for the solar modules to be hidden from view through various means such as an existing parapet wall on a flat roof section of the home.
 - b. The applicant's property does not feature significant parapet walls on viable roof surfaces. Areas of the roof with parapets have obstructions and other factors such as significantly higher shade levels that would make installation on those areas impossible or detrimental to system production.
 - c. However the roof surfaces selected for installation while not surrounded by a parapet wall will still prevent the panels from being seeing from within the lot and surrounding areas. Panels to be installed at a minimum tilt (<10°) and will have a low enough maximum height that they will not be visible from the ground or habitable areas of the property and surrounding properties. This is due to the fact that the panels have a low enough maximum height and are far enough from the edges of the roof that they are shielded from view due to the property being a higher elevation that the surrounding lots.</p>

- d. Therefor for the applicant to enjoy the same privilege of a solar power system on their residence, the power generating modules must be placed in a more visible location.
- e. Additionally, modules are currently placed in locations ideal for PV production. Other locations on the roof would be subject to significant shading due to existing roof elevations, parapets, and obstructions. Adding visual screenings or parapets to the areas surrounding the currently proposed panel locations would cause a significant amount of shading on those roof surfaces. This would be extremely detrimental to the production of the PV system and significantly diminish performance of the 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"
 - a. This variance would not violate the primary purpose of such ordinance in that it will be installed in such a way to maintain the aesthetic appeal of the property. Therefor this variance does not allow for a privilege that is inconsistent with the existing Zoning Ordinance's limitation on other properties in the area.

In addition, is not possible to decrease the size of the array to minimize the visual impact of the system. The applicant is already using a high efficiency panel with a high power density, as such there is no way to decrease the size of the system while maintain the required levels of power generation needed to service the requirements of the residence.

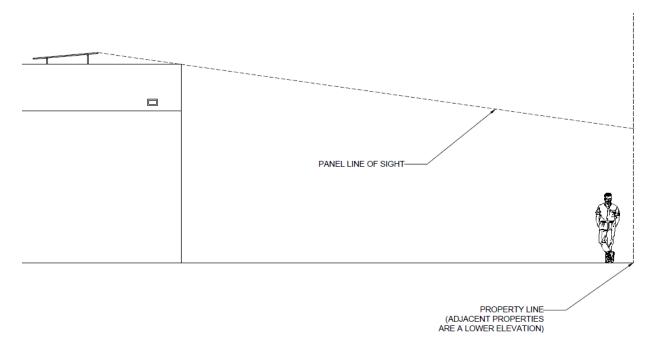
Additionally, the system is designed to be placed on a particular roof surface to optimizer power production in a way that is necessary for the electrical needs of the home. To place the modules on a different roof surface would negatively affect the production of the system and require additional modules.

As noted before, the surrounding lots and habitable spaces are at a lower elevation than the applicant's house. Therefor if the solar arrays are kept at a low enough tilt and placed some distance away from the edge of the roof surface, it will be impossible to see the modules.

Below: Applicant lot is at a higher elevation than surrounding lots. Red lines indicate slope change – Blue indicates general array location.



Below: General concept regarding panels being shielded from line of sight by edge of the roof surface.



Additionally a ground mounted array is not an option due to the available space and topography of the lot. All available ground space is in the front or side yard which has visibility from the frontage street. All other space on the lot is already consumed by existing construction or is plainly visible from adjacent lots.

Below: Natural wash/bridge in the available ground space.

