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COASTAL DEVELOPMENT PERMIT AMENDMENT APPLICATION

Application number **A-3-SCO-05-073-A1, Porter SFD Modifications**

Applicants **William and Susan Porter**

Project location 3030 Pleasure Point Drive (seaward side of Pleasure Point Drive) in the Pleasure Point region of the unincorporated Live Oak beach area of Santa Cruz County (APN 032-242-11).

Amendment description . (1) Installation of an almost 35-foot tall 1-kilowatt wind turbine on a pole, (2) change from zero light transmission, low-reflective glass to clear low-reflective glass for the second floor front facade window unit of the residence, and (3) installation of a permanent ladder on the western side of the residence.

Local approvals None determined to be necessary by Santa Cruz County.

File documents Coastal Commission coastal development permit (CDP) file A-3-SCO-05-073; Santa Cruz County certified Local Coastal Program (LCP).

Staff recommendation **Approval with conditions**

A. Staff Recommendation

1. Summary of Staff Recommendation

On June 15, 2006, the Coastal Commission approved the Applicants' residence, currently under construction, on appeal from a Santa Cruz County CDP decision. The Commission's decision did not significantly alter the project that the County had approved, and incorporated several of the County's conditions addressing size, scale, and design. The proposed coastal development permit (CDP) amendment request now seeks (1) approval to install a 1-kilowatt wind turbine mounted against the residence and on a pole extending to a height of almost 35 feet, (2) approval to change Special Condition 2 of CDP A-3-SCO-05-073 to allow for clear low-reflective glass instead of zero light transmission, low-reflective glass for the second story front facade window unit, and (3) approval to install a permanent ladder on the western side of the residence to access the second story deck area from the side yard. The subject property is located at 3030 Pleasure Point Drive, on the seaward side of



Pleasure Point Drive at Soquel Point, in the Pleasure Point portion of the Live Oak beach area of unincorporated Santa Cruz County.

All three components of the proposed amendment raise visual resource and neighborhood character questions; the same questions that were before the Commission when the County's approval of the residence was originally appealed. The project site is located in an urbanized coastal community and very popular visitor destination area, Pleasure Point, and is visible from various public vantage points, such as the LCP-designated scenic road corridor of East Cliff Drive and the beaches that stretch up and downcoast of the site. These areas are high public use areas, and comprise a significant public viewshed. The site itself is on the bluffs fronting the well-known and very popular Pleasure Point surfing area and, due to the orientation of the bluffs, is visible not only from the beach and surf area below, but also from a series of important public viewing areas along East Cliff Drive just downcoast, as well as along Pleasure Point Drive itself.

Under the Santa Cruz County certified Local Coastal Program (LCP), wind turbines can be considered an allowed accessory use in residential zoning districts. The County's LCP does not explicitly account for such residential-type turbines, but does provide for structures accessory to the main residential use and customarily a part thereof. The proposed wind turbine appears fairly industrial in design, and would extend almost 8 feet above the highest point (about 27 feet) of the varying level roof, where it would be prominently featured in the public viewshed. In size and scale, the turbine is unlike other typical elements that extend above a residence, such as antennas, chimneys, and weathervanes, and the elevation drawings and location proposed indicate that it would "loom" over the residence and surrounding areas. As proposed, the turbine would not be visually compatible with the scale and character of the neighborhood because of its large size, industrial appearance, and prominence above the residence, nor is it well integrated with the residence or surrounding area. It also would not complement neighboring development, but rather would contrast with the predominant residential scale and character of the area. The turbine would also be inconsistent with LCP policies that require protection of the public viewshed because it would be visible from various heavily used public recreation areas and would inappropriately degrade views from those areas. Although Pleasure Point is a highly urbanized area, the turbine would be a new type of visual intrusion that would not improve the visual quality (as required by the LCP), but instead would contribute to visual clutter and degradation.

Staff is generally supportive of alternative energy projects that try to reduce reliance on traditional energy supplies as a means to reduce impacts associated with such traditional supplies, including in relation to issues related to global climate change. Such projects can significantly bridge gaps in that respect, and there are a number of successful examples that the Commission has permitted. In fact, the original approved project at this location includes such measures as solar arrays, geothermal heat transfer, and fuel cells to help the residence stay as "off the grid" as possible. The Applicants indicate that the wind turbine is meant to augment those measures to allow the residence to truly be off the grid in terms of its energy needs. However, while commendable in concept, such projects cannot and should not be offered some lesser level of review and compliance just because they are "green." Rather, they too need to be evaluated, and if they raise LCP and/or Coastal Act consistency issues, then such issues need to be addressed in a similar manner as other development that may raise such issues.



In this case, staff believes that the wind turbine raises significant adverse character/public viewshed issues. One way of addressing these issues would be to deny the proposed wind turbine. A second approach is to re-site the proposed turbine in such a way as to avoid such issues. As a means to help facilitate project goals regarding energy independence at the same time as ensure the public viewshed is not inappropriately degraded to meet such goals, and thus to ensure consistency with the LCP, staff recommends that the project be conditioned to require re-siting of the turbine below the roofline in a portion of the site between houses and toward the bluff where it will have the least public visibility. Although locating the turbine below the roofline may result in less wind capture than if it were higher, the site is an oceanfront, blufftop parcel, with direct access to wind blowing off the ocean, and the Applicant has not provided any site-specific data to show that a lower turbine height would not be effective here. It seems reasonable to presume that less wind may reach a re-sited turbine, but there is nothing in the record to indicate how much less, if any (or how much more if it were sited as proposed). In any case, ensuring maximum efficiency for a turbine is not an LCP requirement, and cannot outweigh and come at the expense of the LCP protected public viewshed and neighborhood scale and character. A reduction in height and overall visibility of the turbine is an appropriate compromise that allows for a renewable energy project such as this while protecting the public viewshed from increased degradation and visual clutter, as required by the LCP.

In terms of potential bird strike issues, there is little literature on the effects of such residential-scale wind turbines on birds. There is significant literature on such strikes related to large wind farms and large horizontal axis (i.e., propeller) turbines, and potential issues associated with such structures. However, the proposed structure in this case is much smaller, and is a vertical axis structure (i.e., it is not a propeller but rather is a series of vertical blades that rotate around a central vertical axis). Although the revolving blades will be new development in the airspace at the edge of this house, there is no indication that the blades themselves will attract birds, or that they will “suck in” birds, or that they will trick birds into thinking they can fly through blades as can be the case with large scale horizontal machines. Rather, in this case, it is expected that a turbine here would affect birds in the same manner that other elements of the house do (i.e., the roof, the walls, the deck railings, etc.), and it is not expected that a turbine would result in bird strike issues and mortality because it is turning at times as opposed to one of these other elements that is static. In this sense, small individual-use wind turbines such as this do not appear to raise the potential for bird strike any more than any solid structure or tower. In addition, they are supported by the Audubon Society as a bird-safe alternative energy source. To the extent more bird travel occurs in the more open airspace above the roof as opposed to the area below the roof and between house as identified for re-siting (as can be reasonably hypothesized, although no site specific data has been provided), such re-siting would lessen any potential for bird strike issues as well.

Staff notes that, as far as staff is currently aware, this proposed wind turbine is the first residential-scale wind turbine proposed in the Central Coast area, and appears to be the first residential-scale wind turbine proposed in the coastal zone statewide. As indicated, staff is supportive of efforts to tap more environmentally friendly power sources (such as wind in this case, solar, etc.), but also believes that such efforts are not necessarily environmentally benign otherwise in all cases, and that such projects can raise significant questions regarding protecting public views, wildlife, and other coastal resources. When LCP’s lack explicit residential wind turbine policy direction, such as is the case here, it can be more



difficult to resolve such questions. Staff believes that this wind turbine at this site and as sited as indicated raises coastal resource concerns, and believes that such concerns can be appropriately addressed, but such analysis is case specific. Ideally, LCP's would be revised in a planning context with explicit policy direction regarding such proposals, and staff will continue to encourage local governments to plan and account for the manner in which these emerging technologies should be applied for specific areas.

In terms of the proposed window treatment change, the Commission imposed a condition in its original approval for low reflective and zero light transmission window glazing on the approximately 120-square foot second story curved window unit that comprises much of the second story portion of the front facade of the residence. This condition originated at the County level as a condition of approval based on neighborhood concerns over the large size of the window and potential for nighttime lighting impacts, and was adopted by the Commission when it retained certain County requirements in its approval. The Applicants are requesting to amend this condition to allow for regular, low reflective glass, as is required for the rest of the house. Although the Commission originally found that the zero light transmission window glass was important for visual and neighborhood character reasons, the Applicants have submitted new information that allows for a proposed amendment to this condition to be considered by the Commission (and not rejected outright as a weakening amendment). Namely, the Applicants have installed a low reflective glass window in the front facade area, and have not yet applied any zero light transmission cover or film to it, such that the actual window in the actual placement can be reviewed. Staff's review of the window in both daytime and at night (with the lights on inside the residence) indicates that, despite the large size of the window, clear glass would not alter the existing character of this densely-developed, well-lit residential area and would not significantly impact the public viewshed. The light from the window would be consistent with light from other existing residences in the neighborhood, and would not impact any scenic views of the ocean or shoreline currently available to the public (as none exist at the site), nor would it shine directly towards the shoreline or ocean.

Finally, the Applicants request the addition of a permanently mounted black metal ladder on the western side of the residence near the rear of the property to provide access from the side yard to the second floor roof deck. This roof deck area is planned for a living roof, and the ladder would allow landscaping staff to access it without having to go through the house. The ladder does not conflict with conditions that require specific landscaping along this side of the residence, and it is a minor design element that would provide added articulation to the western wall. It would be visible from public view areas along Pleasure Point Drive, but would not block any views of the ocean or coastline or change the character of the residence or neighborhood.

As conditioned, staff recommends that the Commission approve the CDP amendment to allow the modified window treatment and ladder, and to allow a re-sited wind turbine. The modified approval includes a final plans requirement for the wind turbine, and modifies Special Condition 2 (to allow low reflective glass in the front window similar to the rest of the house), but the other existing Special Conditions of CDP No. A-3-SCO-05-073 as amended would remain the same. The motion to adopt the staff recommendation is found directly below.



2. Staff Recommendation on CDP Amendment

Staff recommends that the Commission, after public hearing, **approve** the proposed project subject to the standard and special conditions below.

Motion: I move that the Commission approve the proposed amendment to coastal development permit number A-3-SCO-05-073 pursuant to the staff recommendation.

Staff Recommendation of Approval: Staff recommends a **YES** vote. Passage of this motion will result in approval of the amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve the Permit Amendment: The Commission hereby approves the coastal development permit amendment and adopts the findings set forth below on the grounds that the development as conditioned will be in conformity with the policies the Santa Cruz County certified Local Coastal Program and Chapter 3 of the Coastal Act. Approval of the permit amendment complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment, or 2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the amended development on the environment.

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B. Findings and Declarations

The Commission finds and declares as follows:

1. Project Location, Background, and Amendment Description

Project Location

The project is located on a blufftop lot at Soquel Point in the Pleasure Point subarea of the Live Oak beach area of unincorporated Santa Cruz County. The site is currently developed with a mostly completed (as of the time of preparation of this report) single-family residence pursuant to the original permit (CDP A-3-SCO-05-073), described below. The improvements on the site are highly visible from various public vantage points, including Pleasure Point Drive, East Cliff Drive, Pleasure Point Park, and the beach areas below those locations.

The Live Oak segment of the County stretches from the City of Santa Cruz (upcoast) to the City of Capitola (downcoast), and is a substantially urbanized area with few remaining undeveloped parcels. The area is primarily residential in nature, with pockets of commercial uses. This area is comprised of a number of defined neighborhood and special communities, including the Pleasure Point area in which the project site is located. The Live Oak coastal area is well known for its excellent public access and coastal recreation opportunities, and it supports a number of different coastal environments including sandy beaches, rocky tidal areas, blufftop terraces, and coastal lagoons (such as Corcoran Lagoon and Moran Lake). These varied coastal elements give Live Oak a unique character that makes it a prime destination for coastal access and recreational opportunities.

Pleasure Point is the name of the predominantly residential area located roughly between upcoast Moran Lake and downcoast 41st Avenue (at the “Hook” where it transitions to the Opal Cliffs area). Pleasure Point is also the name of the offshore surfing area between Soquel Point (aka “Pleasure Point”) and the Hook.¹ This area has an informal, beach community aesthetic and ambiance that clearly distinguishes it from inland commercial areas as well as the downcoast Opal Cliffs neighborhood towards Capitola. Housing stock is eclectic, and densely crowded together. Though certainly in the midst of a gentrification that has intensified over the last decade or so, the Pleasure Point area retains its informal charm and appeal, much of it rooted in the intrinsic relationship between the built environment, its inhabitants, and the surfing area offshore.

Pleasure Point is an extremely popular recreational surfing destination that is well known around the world. It is not uncommon to see more than 100 surfers in the water, even more when prime surfing conditions are present, and to see small groups of people lining East Cliff Drive both enjoying the shoreline view and watching the surfing below.

See Exhibits A and C for a location map and photos of the site and the surrounding area.

¹ There are a number of individually named breaks within the overall Pleasure Point surf area (such as Sewer Peak, First peak, Second Peak, 38th Avenue, etc.), but the overall surf area is generally known as Pleasure Point.



CDP Background

The CDP for the residence on the site was approved with conditions by the Commission on appeal on June 15, 2006 (CDP A-3-SCO-05-073). This 2006 approval authorized remodel and additions to an existing 2,812-square foot single-story residence, including 159 square feet of additional floor area and a 527-square foot two-car garage on the first floor, 1,627 square feet of additional floor area and a 431-square foot deck on the second floor, and a 133-square foot motorcycle workshop.

Prior to the residential approval, the Commission approved a CDP for a seawall on the site on August 11, 1993 to a previous owner, Gisela Scigliano (CDP 3-93-039). On September 8, 2004, the Commission granted an amendment to that CDP to the current Applicants to augment and improve the seawall, including removal of existing rip rap, sculpting and texturing to resemble the natural bluff face, and long-term monitoring and reporting.

Amendment Description

The proposed amendment request involves three parts. First, the amendment seeks approval to install a 1-kilowatt wind turbine on a monopole against the southwest exterior wall near the front of the residence (see Exhibit D). The wind turbine/pole would be attached to the residence and flush with the exterior wall and would extend 7.5 feet above the tallest point (27 feet) of the varying level roofline, for a total height (including blades) of almost 35 feet. The proposed turbine would be a vertical axis machine, and would rotate around a vertical rotor shaft, as opposed to a traditional windmill-type turbine (also known as a horizontal axis machine). The three curved blades of the turbine would each be approximately 7 feet tall and would rotate around a central axis in between the blades. The turbine would have a diameter of 5.25 feet. According to the Applicants, the residence is intended to be entirely “off the grid,” and energy produced from the wind turbine would tie into the infrastructure for the residence’s photovoltaic system and would provide backup to the residence’s photovoltaic and geothermal energy systems.

Second, the amendment requests approval to change Special Condition 2 of CDP A-3-SCO-05-073 to allow for clear low-reflective glass instead of zero light transmission, low-reflective glass for the second story front facade window unit. The approximately 120-square foot second story curved window unit comprises much of the top portion of the front facade of the residence (see Exhibit C). The original County approval of the residential remodel and additions included a condition that this window unit be zero-light transmitting, and this condition was carried forward in the Coastal Commission’s approval of the residential project on appeal. The Applicants have submitted new information that allows for a proposed amendment to this condition to be considered by the Commission (and not rejected outright as a weakening amendment). Namely, the Applicants have installed a low reflective glass window in the front facade area, and have not yet applied any zero light transmission cover or film to it, such that the actual window in the actual placement can be reviewed.²

² California Code of Regulations Section 13166 requires the Executive Director to reject an amendment if he or she determines that the proposed amendment would lessen or avoid the intended effect of the Commission’s original approval unless the applicant presents newly discovered material information which could not have been presented before the permit was granted.



Finally, the amendment requests installation of a permanently mounted black metal ladder on the western side of the residence near the rear of the property. The ladder would provide access from the side yard to the second floor roof deck which is planned for a living roof, and the ladder would allow landscaping staff access to it without having to go through the house.

See Exhibit B for proposed project plans.

2. Coastal Development Permit Amendment Determination

A. Applicable LCP Policies

The LCP includes residential districts for which uses and standards are specified, including:

IP Section 13.10.321 Purposes of Residential Districts. (a) General Purposes. In addition to the general objectives of this Chapter (13.10.120) the residential districts are included in the Zoning Ordinance in order to achieve the following purposes:

- 1. To provide areas of residential use in locations and at densities consistent with the County General Plan.*
- 2. To preserve areas for primarily residential uses in locations protected from the incompatible effects of nonresidential land uses.*
- 3. To establish a variety of residential land use categories and dwelling unit densities which provide a choice of diversified housing opportunities consistent with public health and safety.*
- 4. To achieve patterns of residential settlement that are compatible with the physical limitations of the land and the natural resources of the County and that do not impair the natural environment.*
- 5. To ensure adequate light, air, privacy, solar access, and open space for each dwelling unit.*
- 6. To maximize efficient energy use and energy conservation in residential districts, and to encourage the use of locally available renewable energy resources.*
- 7. To provide adequate space for off-street parking of automobiles.*
- 8. To provide areas of residential use consistent with the capacity of public services, the Urban Services Line and Rural Services Line and the reserve capacity policy of the Local Coastal Program Land Use Plan for tourist services. To minimize traffic congestion and avoid the overloading of utilities by preventing the construction of buildings of excessive size in relation to the land around them.*
- 9. To protect residential properties from nuisances, such as noise, vibration, illumination,*



glare, heat, unsightliness, odors, dust, dirt, smoke, traffic congestion, and hazards such as fire, explosion, or noxious fumes.

IP Section 13.10.700.A Appurtenant Use. Any use accessory to the main use and customarily a part thereof; an appurtenant use is clearly incidental and secondary to the main use and does not change the character of the main use.

IP Section 13.10.323 Development standards for residential districts. R-1 single family residential zone districts site and structural dimensions chart: maximum 28 foot height limit for R-1-5 zone district.

IP Section 13.10.510.d (2) Height Exceptions. Chimneys, church spires and steeples, water tanks, cooling towers, elevators, flagpoles, monuments, non-commercial radio and television antennas, fire towers, and similar structures not used for human habitation and not covering more than ten percent of the ground area covered by the structure, may be erected to a height of not more than twenty-five (25) feet above the height limit allowed in any district. Utility and commercial poles and towers may not be subject to the height limits prescribed in the district regulations. Height limits on windpowered generators shall be established in Section 12.24. Non-commercial radio and television towers or free-standing antennas may exceed the height limits above by twenty-five (25) feet with the approval of a Level IV Use Approval. Flat plate solar collectors on existing structure shall be permitted to exceed height restrictions by three feet.

The County's LCP is fiercely protective of coastal zone visual resources, particularly views from public roads, and especially along the shoreline. The LCP states:

LUP Objective 5.10.a Protection of Visual Resources. To identify, protect, and restore the aesthetic values of visual resources.

LUP Objective 5.10.b New Development in Visual Resource Areas. To ensure that new development is appropriately designed and constructed to minimal to no adverse impact upon identified visual resources.

LUP Policy 5.10.2 Development Within Visual Resource Areas. Recognize that visual resources of Santa Cruz County possess diverse characteristics.... Require projects to be evaluated against the context of their unique environment and regulate structure height, setbacks and design to protect these resources consistent with the objectives and policies of this section....

LUP Policy 5.10.3 Protection of Public Vistas. Protect significant public vistas...from all publicly used roads and vistas points by minimizing disruption of landform and aesthetic character caused by grading operations,... inappropriate landscaping and structure design.

LUP Policy 5.10.6 Preserving Ocean Vistas. Where public ocean vistas exist, require that these vistas be retained to the maximum extent possible as a condition of approval for any new development.



LUP Policy 5.10.7 Open Beaches and Blufftops. Prohibit the placement of new permanent structures which would be visible from a public beach, except where allowed on existing parcels of record, or for shoreline protection and for public beach access...

LUP Policy 5.10.10 Designation of Scenic Roads. The following roads and highways are valued for their vistas. The public vistas from these roads shall be afforded the highest level of protection... East Cliff Drive – from 33rd Avenue to 41st Avenue...

LUP Policy 5.10.12 Development Visible from Urban Scenic Roads. In the viewsheds of urban scenic roads, require new discretionary development to improve the visual quality through siting, architectural design, landscaping and appropriate signage.

LUP Objective 8.2 Site and Circulation Design. To enhance and preserve the integrity of existing land use patterns and to complement the scale and character of neighboring development by assuring that new development is sited, designed and landscaped to be functional and visually compatible and integrated with surrounding development, and to preserve and enhance the natural amenities and features unique to individual building sites, and to incorporate them into the site design.

IP Section 13.20.130(b)(1) Entire Coastal Zone, Visual Compatibility. The following Design Criteria shall apply to projects site anywhere in the coastal zone: All new development shall be sited, designed and landscaped to be visually compatible and integrated with the character of surrounding neighborhoods or areas.

IP Section 13.20.130(d)(1) Beach Viewsheds, Blufftop Development. The following Design Criteria shall apply to all projects located on blufftops and visible from beaches: Blufftop development and landscaping...in rural areas shall be set back from the bluff edge a sufficient distance to be out of sight from the shoreline, or if infeasible, not visually intrusive. In urban areas of the viewshed, site development shall conform to (c)2 and 3 above.

Referenced policies (c)2 and (c)3:

(c)2. Site Planning. Development shall be sited and designed to fit the physical setting carefully so that its presence is subordinate to the natural character of the site, maintaining the natural features (streams, major drainage, mature trees, dominant vegetative communities). Screening and landscaping suitable to the site shall be used to soften the visual impact of development in the viewshed.

(c)3. Building Design. Structures shall be designed to fit the topography of the site with minimal cutting, grading, or filling for construction. Pitched, rather than flat roofs, which are surfaced with non-reflective materials except for solar energy devices shall be encouraged. Natural materials and colors which blend with the vegetative cover of the site shall be used, or if the structure is located in an existing cluster of buildings, colors and materials shall repeat or harmonize with those in the cluster.



The LCP also explicitly recognizes the Live Oak beach area as a special area. The LCP states:

LUP Objective 8.8, Villages, Towns and Special Communities. *To recognize certain established urban and rural villages as well as Coastal Special Communities for their unique characteristics and/or popularity as visitor destination points; to preserve and enhance these communities through design review ensuring the compatibility of new development with the existing character of these areas.*

LUP Policy 8.8.1 Design Guideline for Unique Areas. *Develop specific design guidelines and/or standards for well-defined villages, towns and communities.... New development within these areas listed in Figure 8-1...shall conform to the adopted plans for these areas, as plans become available.*

Figure 8-1 Areas with Special Design Criteria or Guidelines....Area: Live Oak Planning Area; Design Guideline Source: Live Oak Community Plan (to be completed)...

The LCP also includes policies related to wildlife, including birds, protection:

LUP Objective 5.1 Biological Diversity. *To maintain the biological diversity of the County through an integrated program of open space acquisition and protection, identification and protection of plant habitat and wildlife corridors and habitats, low-intensity and resource compatible land uses in sensitive habitats and mitigations on projects and resource extraction to reduce impacts on plant and animal life.*

LUP Policy 5.1.10 Species Protection. *Recognize that habitat protection is only one aspect of maintaining biodiversity and that certain wildlife species, such as migratory birds, may not utilize specific habitats. Require protection of these individual rare, endangered and threatened species and continue to update policies as new information becomes available.*

LUP Policy 5.1.11 Wildlife Resources Beyond Sensitive Habitats. *For areas which may not meet the definition of sensitive habitat contained in Policy 5.1.2, yet contain valuable wildlife resources (such as migration corridors or exceptional species diversity), protect these wildlife habitat values and species using the techniques outlined in policies 5.1.5 and 5.1.7 and use other mitigation measures identified through the environmental review process.*

B. Wind Turbine

Allowed Use

The Santa Cruz County Code includes a chapter on wind energy (Chapter 12.24) that is intended to “promote the effective and efficient use of wind energy conversion systems, and to regulate the placement of wind energy conversion systems so that the public health and safety will not be jeopardized.” However, this chapter addresses only horizontal axis machines (windmill-type turbines) in a wind farm-like setting, and it is not part of the LCP. The LCP does not address individual wind turbines as a use and/or structure that is explicitly allowed in the R-1 zoning district or any other



designated residential areas (defined in Section 13.10.322) or any other areas otherwise. The two main ways that the residential use charts account for allowed uses and structures are (1) they are listed in the use charts; or (2) they are accounted for as uses and structures that are accessory to the main residential use. In the first instance, it is clear that wind turbines are not listed in the LCP's residential use charts. In the second, the LCP use charts include a heading for "accessory structures and uses, including," and proceed to list what some of the allowed residential accessory structures and uses are. A wind turbine is not listed there as an example of the type of use and structure envisioned by the LCP. However, the LCP is structured so that the list of such uses and structures is non-exhaustive. In other words, it identifies some specific examples (such as storage tanks, signs, swimming pools, and detached garages), but it also holds open the possibility that there are other accessory uses and structures not listed there. In order to understand what might be thought of by the LCP as such an "accessory structure and use," the definition must be consulted.

The definition of an accessory structure and use is a structure and use that is "accessory to the main use and customarily a part thereof...[where such] use is clearly incidental and secondary to the main use and does not change the character of the main use."³ In other words, the LCP's accessory definition requires multiple criteria to be met to be considered an accessory structure or use and thus allowed under that category of the use charts. First, it is clear that a wind turbine could be something that is associated with and accessory to a main use, but not a main use itself. In that respect, a wind turbine that is attached to and intended to serve a single-family residence would satisfy the first criteria of the definition. Next, up until very recently, a wind turbine was not something that would be considered "customarily a part" of a main residential use. In fact, the Commission is unaware of any such developments in Santa Cruz County's coastal zone (or the County as a whole for that matter, or elsewhere in the Central Coast) and, to the Commission's knowledge, this would be the first such residential wind turbine in Santa Cruz County's coastal zone, and possibly the coastal zone as a whole. Residential scale wind turbines are a fairly new but emerging technology, and it appears that more of them can be expected (similar to solar energy systems that have now become fairly common), but they are not common now. Although wind turbines have historically not been considered customarily a part of residential development, they serve to provide energy just like other energy infrastructure, such as solar arrays, power poles, power lines, and generators, and they could be considered customarily a part of such a development in the sense that they are not something completely different and distinct from a residential use in an urban setting. Energy infrastructure in general is customarily a part of residential uses, so it follows that if newer energy technology, such as wind turbines, photovoltaic systems, and geothermal systems, are beginning to supplement or replace traditional electricity and gas, then they can be treated similarly as a customary accessory use for a residence. Unlike something that would not be considered customarily a part of a residential use or required for residential use (such as loading docks or broadcast towers), individual use wind turbines, and necessary utility infrastructure in general, can be considered customarily a part of residential development.

The final two tests to qualify as an accessory/appurtenant use are that it must be "clearly incidental and secondary" to the main use and must not "change the character" of the main use. As described above,

³ LCP Section 13.10.700-A "A" definitions.



the wind turbine would serve the purpose of providing energy to a single family residence, which is the primary use on the site. Furthermore, the wind turbine is expected to provide supplemental energy to the residence's photovoltaic and geothermal systems. In other words, not only would it be secondary to the residential use, but it would also be a secondary source of energy to the main energy sources. The wind turbine would also not change the character of the residential use, in that the residence will be used as a residence with or without the turbine; the turbine would not result in the development being perceived as something other than a residence. The turbine's effect on the overall character of the neighborhood is discussed in the following section. In sum, the wind turbine can be considered an accessory or appurtenant use in the R-1 zoning district.

Next, the LCP's residential zoning district regulations limit all development in the R-1 zoning district to a maximum of 28 feet in height. However, Section 13.10.510.d(2) of the zoning code includes exceptions to the 28-foot limit for accessory elements, such as chimneys, flagpoles, radio and television antennas, elevators, and similar structures not used for human habitation and not covering more than 10 percent of the ground area covered by the structure. These elements are allowed to exceed the 28-foot height requirement by no more than 25 feet. The height exceptions also state that utility and commercial poles and towers may not be subject to the height limits prescribed in the district regulations. Section 13.10.510.d(2) states that height limits on wind powered generators are established in Section 12.24; however, as described above, Section 12.24 is not part of the LCP and only addresses horizontal axis machines (windmill-type turbines) in a wind farm-like setting, and is therefore not applicable to the proposed project. The residence is being constructed to a maximum height of about 27 feet, and the proposed wind turbine would extend 7.5 feet above that to a height just below 35 feet. The turbine would therefore not exceed 25 feet over the 28-foot limit. The turbine is an accessory element that is theoretically similar to a chimney, flagpole, or weathervane, and would not be used for human habitation or exceed 10 percent of the ground area covered by the residence. As such, a residential use turbine of this sort is an element that would qualify under the Section 13.10.510.d(2) height exceptions.

Finally, the proposed wind turbine is partially consistent with the LCP's general purposes for residential districts. Specifically, Section 13.10.321(a)(6) states that residential districts are intended to, among other things, "maximize efficient energy use and energy conservation in residential districts, and to encourage the use of locally available renewable energy resources." The wind turbine is a clear example of the use of a locally available renewable energy resource and energy conservation. Another purpose of residential districts is to "protect residential properties from nuisances, such as noise, vibration, illumination, glare, heat, unsightliness, odors, dust, dirt, smoke, traffic congestion, and hazards such as fire, explosion, or noxious fumes" (13.10.321(a)(9)). The manufacturer's specifications for the proposed wind turbine indicate that when operating between 15.7 and 22.4 miles per hour at a distance of 9.8 feet, the wind turbine would operate at a noise level of 32 decibels (dB), which is equivalent to a whisper or the background noise level in a quiet rural setting.⁴ In most small scale residential wind turbines currently available in the market, the rotors are supported and separated from the main shaft by electro-

⁴ On the decibel scale, the smallest audible sound (near total silence) is 0 dB. Examples of various decibel levels include a quiet whisper or rustling leaves measuring at 20 dB, a quiet rural area at 30 dB, a quiet suburb or indoor conversation at 50 dB, a busy urban street or diesel truck at 90 dB, and a motorcycle at 100 dB.



magnetic forces. This keeps the physical contact between the moving elements to a minimum and thereby reduces noise and vibration.⁵ As such, the turbine is not expected to have noise or vibration impacts to this or any other nearby residential properties. However, the proposed turbine raises consistency problems with the requirement that residential properties be protected from unsightliness. As discussed in greater detail in the following section, the large, imposing size and industrial appearance of the proposed turbine is out of scale with the residence and the surrounding neighborhood and creates an intrusion in the public viewshed. For these reasons, it also raises a consistency issue with the requirement that residential development be compatible with the physical limitations of the land and not impair the natural environment (13.10.321(a)(4)).

In sum, an individual use wind turbine can be considered an allowable appurtenant use in the R-1 zoning district, and can qualify as an accessory element that is allowed to exceed the required height limit. An individual use turbine is consistent with some of the general requirements for residential districts, including maximizing renewable energy resources, but it raises consistency issues with other general requirements, such as the need to protect residential districts from unsightliness.

Visual Resources/Community Character

The LCP requires the protection of visual resources and designates East Cliff Drive from 33rd Avenue to 41st Avenue as a scenic road (LUP Objective 5.10.a and Policy 5.10.10). Development in the viewshed of that stretch of road is required to utilize appropriate siting and architectural design in order to improve visual quality (LUP Policy 5.10.12). In all areas of the Coastal Zone, the LCP requires new development to be visually compatible and integrated with the character of the surrounding area (LUP Objective 8.2 and 13.20.130(b)). For projects located on bluffs and visible from beaches in urban areas, the LCP requires development to be sited and designed to fit the physical setting carefully so that its presence is subordinate to the natural character of the site, to use screening suitable to the site to soften the visual impact of development in the viewshed, and where structures are located in an existing cluster of development, such as this, to use colors and materials that repeat and harmonize with those in the surrounding development (Section 13.20.130(d)1).

As described above, the Pleasure Point area is an urbanized coastal community and very popular visitor destination point. The area is primarily residential in nature, with an assortment of styles and sizes of homes generally lacking a defining architectural theme or design. The Pleasure Point area is also a heavily used public recreation area, particularly along the portion of East Cliff Drive that is designated as a scenic road and along the beaches that stretch up and downcoast of the project site. These areas are high public use areas, and comprise a significant public viewshed. The site itself is on the bluffs fronting the well-known and very popular Pleasure Point surfing area and, due to the orientation of the bluffs, is visible not only from the beach and surf area below, but also from a series of important public viewing areas along East Cliff Drive just downcoast, as well as along Pleasure Point Drive itself.

The Applicants propose to mount the wind turbine on a pole that would be flush against the front west

⁵ Los Angeles Community College District. Greenpaper: Building Integrated Wind Turbines. March 2009. Available at: <http://laccd.stonearchsoftware.com/projects/dcs/pub/Green%20Papers/released/GP%2D011.pdf>.



side of the house extending to a maximum height of almost 35 feet. The proposed mounting location was chosen on the west side of the residence in order to give the turbine the appearance of being connected to the residence (i.e., as opposed to a standalone pole not so connected). At this location, it would extend above the roofline, and, as shown in Exhibits B and C, it would be attached to the side of the residence along the exterior wall of the first floor and would then extend adjacent to the second floor, approximately three feet from the exterior wall of the second floor. See Exhibits B and C for the site plan, elevation drawings, and photos.

The 35-foot height is proposed in order to capture maximum wind unobstructed by the roof of the residence and surrounding residences. According to the Applicants, for the turbine to function properly, the blades of the turbine cannot be located any lower than the highest point of the roof and cannot be mounted directly on the roof due to vibration concerns. The Applicant has provided information regarding these types of turbines that indicates that, generally, the further the turbine is situated from solid obstacles that create wind turbulence, the better they will perform. However, the Applicant has not provided site and case specific data regarding the wind dynamics of this area in particular or oceanfront bluffs in general where no obstructions exist between the property and the ocean. Nor has the Applicant provided wind readings from the project site to determine the most suitable location(s) for wind capture.

The turbine would not block views to the ocean/coastline from any public vantage point because none are available through the site on account of the residence. Rather, it would silhouette against the sky. Thus, it would not create an intrusion to public blue water views or views of the coastline itself. Rather, the visual issues center around whether the development would be compatible with the character and scale of the surrounding area and otherwise protect the public viewshed, of which the residence is now a part.

The LCP requires that all new development be visually compatible with, integrated with, and complement the scale and character of neighboring development. The body of the turbine (i.e., the blades) would extend 7.5 feet above the highest point of the varying roofline of the residence. The portion of the turbine that would extend above the roof is almost equivalent to the height of a standard size room (8 feet tall), and is industrial-looking in nature. It would appear similar to a large modern weathervane, large commercial antenna, or even a piece of modern art (see Exhibit D for photos), and would be one of the most prominent features of the residence, as viewed from multiple vantage points. For comparison purposes, it would be only somewhat smaller than one of the garage doors of the residence (see Exhibit B). In size and scale, the turbine is unlike other typical elements that extend above a residence, such as chimneys, small scale antennas, and weathervanes. It is significantly larger than those typical accessory elements, and appears more like something that might be seen in an industrial or commercial setting than a residential setting. The fairly dense surrounding neighborhood is generally comprised of one- and two-story homes, in a wide range of styles and sizes. Despite its lack of coherent design, the neighborhood is clearly residential, and does not contain industrial-type elements, particularly ones that are featured prominently connected to a residence. The elevation drawings (Exhibit B) and the proposed siting indicate that it would “loom” over the residence and surrounding areas and be the primary focal point of this portion of Pleasure Point Drive. In sum, the turbine is not



visually compatible with the scale and character of the neighborhood because of its large size, industrial appearance, and prominence above the residence, nor is it well integrated with the residence or surrounding area. It also would not complement neighboring development but would starkly contrast with the predominant residential scale and character of the area.

The turbine can also not be found consistent with LCP requirements to protect the public viewshed, particularly from scenic roads and beaches. Because of the property's prominent location on Soquel Point and because the turbine would extend almost 8 feet above the highest point of the residence, it would be visible from various heavily used public recreation areas, including East Cliff Drive, Pleasure Point Park (on the corner of East Cliff and Pleasure Point Drives), the beaches, and tidepooling and surfing areas. The turbine would likely also be visible from the rocky and sandy beach areas below and in the immediate vicinity of the residence, as well as from the more heavily used main Pleasure Point beach (between 32nd Avenue and 41st Avenue). From these locations, the turbine would be a prominent feature in a viewshed that is comprised primarily of single-family residences, bluff, beach, and ocean. Although Pleasure Point is a highly urbanized residential area, the turbine would be a new type of visual intrusion that would not improve the visual quality (as required by the LCP), but instead would contribute to visual clutter and degradation. Because of its prominence, the turbine would also be inconsistent with LCP requirements to site and design new blufftop development to fit the physical setting carefully and be subordinate to the natural character of the site. As such, the turbine has not been sited to minimize visual intrusion on public beaches and the public viewshed in general.

In sum, the proposed wind turbine, at its proposed location and height, would be inconsistent with neighborhood scale and character requirements of the LCP, as well as public viewshed protection policies. Commission staff has visited the site and determined that other siting configurations may exist that would eliminate the turbine's inconsistency with the LCP. The blufftop property is the seaward-most parcel in the area, and receives unobstructed wind off the ocean. Locations on the seaward side of the property could serve as effective locations for a turbine that would capture ample wind without needing to be above the roofline. The Applicant has indicated that locating the turbine below the roofline would result in less wind capture than if it were higher, but has not provided any site specific data to this effect. In addition, the manufacturer's specifications show the turbine mounted below the highest point of a building (see Exhibit D). Furthermore, the Commission finds that ensuring maximum efficiency for a turbine is not an LCP requirement, and cannot outweigh and come at the expense of the LCP protected public viewshed and neighborhood scale and character.

In addition, other small-scale residential use turbines may exist that are smaller and have the ability to integrate more effectively into the residence. Clearly, this is an emerging technology that is rapidly evolving. In fact, the Applicant has changed the proposed turbine type several times during the course of the current application, including in response to vendors being acquired by other vendors in this emerging marketplace. According to the American Wind Energy Association (AWEA), the small wind market in the United States grew by 78% in 2008, and the industry projects 30-fold growth within as little as 5 years. As such, it can be expected that a multitude of new types and sizes of turbines will be available within a short period of time, and that as the technology evolves, smaller turbines may be able to capture the same amount of wind as larger ones do now, and that different designs may allow for



effective wind capture at lower heights. A different turbine design may be acceptable above the roofline so long as it resembles a typical residential accessory element and is consistent with the scale of the residence, such as a weathervane or small antenna.

To address the above-described LCP inconsistencies and resource impacts, Special Condition 1 requires re-siting of the proposed turbine (or a smaller turbine) below the roofline. The turbine can be sited closer to the bluff, in the northwest corner of the second story deck (roof deck) so long as it does not extend above the roof (see page 3 of Exhibit B and page 3 of Exhibit C). Although locating the turbine in this location may result in less wind capture than if it were higher, the site is an oceanfront, blufftop parcel, with direct access to wind blowing off the ocean, and the Applicant has not provided any site-specific data to show that a lower turbine height would not be effective here. It seems reasonable to presume that less wind may reach a re-sited turbine, but there is nothing in the record to indicate how much less (or how much more if it were sited as proposed). In addition, moving the turbine closer to the bluff may mean that more wind reaches that location than one that is more inland. In any case, ensuring maximum efficiency for a turbine is not an LCP requirement, and cannot outweigh and come at the expense of the LCP protected public viewshed and neighborhood scale and character. A reduction in height and overall visibility of the turbine is an appropriate compromise that allows for a renewable energy project such as this while protecting the public viewshed from increased degradation and visual clutter, as required by the LCP. Only as so conditioned can the amendment be found consistent with the Santa Cruz County LCP.

The proposed amendment highlights the fact that individual use wind turbines raise the potential and likelihood for impacts to public views and community character, and the LCP does not currently directly address these types of wind turbines. Santa Cruz County should consider amending its LCP to include design standards, specific siting criteria, height restrictions, and other parameters to address those impacts. It is clear that the LCP would benefit from clarification and specific standards for individual-use wind turbines, similar to what the County code has for wind farms and solar energy systems. This is particularly important given the fact that wind energy technology is expected to become more commonplace, and because wind turbines raise important coastal resource questions about visual impacts, community character, and bird strikes, especially on a cumulative basis. A proliferation of individual residential wind turbines, particularly taller and larger ones, in densely developed residential areas and/or coastal scenic areas without specific guidelines to ensure coastal resource protection has the potential for adverse individual and cumulative coastal viewshed and character impacts. As such, this is an issue area for which the LCP can and should be updated.

Bird Strike and Safety

The LCP requires protection of wildlife corridors and migratory birds, even for areas that may not meet the definition of sensitive habitat. In this case and at this location, the issue is really one of bird strike in general as opposed to sensitive habitat or species per se. There is little literature on the effects of such residential-scale wind turbines on birds. There is significant literature on such strikes related to large wind farms and large horizontal axis (i.e., propeller) turbines, and potential issues associated with such structures. In this respect, wind turbines have the reputation of being dangerous to avian wildlife,



including bats. Much of this reputation comes from the Altamont Pass wind farm, where more than 6,500 wind turbines, mainly horizontal axis machines, have caused significant bird kill over the years. For perspective on those types of numbers a study completed by the National Wind Coordinating Committee in 2001 compared various forms of avian mortality in the United States and found that avian collision mortality associated with wind turbines is much lower than collision deaths related to other human structures, like buildings and windows, communication towers, vehicles, and powerlines.⁶ This report concluded that even if wind turbines were quite numerous (e.g., 1 million turbines), they would likely cause no more than a few percent of all bird collision deaths related to human structures.

In addition, the California Audubon Society has weighed in on individual use wind turbines, and stated that large-scale wind turbines (100 meters or 328 feet tall) are a lot taller than small-scale turbines (30 meters or 100 feet tall) and are not within the normal height range of migrating birds.⁷ They further determined that although zero mortality could not be assured through limiting turbines to small-scale turbines, the mortality numbers would reflect a rate similar to that caused by other stationary objects that birds routinely encounter, and they concluded that they do not believe a significant threat to bird populations exist from small-scale wind turbines.⁸ More recently, both the Massachusetts chapter of the Audubon Society in Newburyport and the Audubon National Wildlife Refuge in Coleharbor, North Dakota have added or will be adding single-use vertical axis wind turbines to their facilities.⁹ Design elements that typically contribute to verified bird kill include siting tall (100-300 feet) turbines within migratory routes, where topography and air currents funnel birds into turbines; using turbines with long blades that have a high “smear” factor, which are difficult for birds to perceive; mounting certain types of lighting which attract migrating birds; using tower designs with lattice and bracing that raptors can perch in, and are then struck by the large, slow-moving blades upon takeoff; using guy wires to stabilize turbine towers, which are difficult for birds to see; using overhead utility lines instead of trenching the cables; and close spacing of turbines, creating a barrier for migration and feeding activity.¹⁰ Birds have exceptionally keen vision, and generally avoid flying into fast-moving, highly visible objects, such as wind-whipped tree branches. Despite their keen vision, they have been known to collide into various objects, such as highly reflective surfaces, structures that are within migratory heights and obscured by low clouds or fog or when they contain bright lights that confuse birds, and structures that are located in

⁶ The National Wind Coordinating Committee. Avian Collisions with Wind Turbines: A Study of Existing Studies and Comparisons to Other Sources of Avian Collision Mortality in the United States. August 2001. Available at: http://www.west-inc.com/reports/avian_collisions.pdf.

⁷ John McCaull, Legislative Director, National Audubon Society – California. Letter to Assemblyman John Longville in Support of AB 1207. July 17, 2001.

⁸ Id (Audubon Society 2001).

⁹ Katie Farrell, “Mass Audubon seeks OK for wind turbine,” *Newburyport News*, July 31, 2009 and James E. Ducey, “New Facility at Audubon Refuge to be Energy Efficient and Bird-Safe,” July 6, 2009, www.bloggernews.net/121474 and <http://wildbirdsbroadcasting.blogspot.com>.

¹⁰ City of Berkeley, Office of Energy and Sustainable Development. “Wind Turbine Background, Project Scope, and Environmental Review for the Shorebird Nature Center Southwest Wind Power Small Wind Turbine Beta Test Project.” March 7, 2006. Available at: <http://www.ci.berkeley.ca.us/citycouncil/2006citycouncil/packet/032106/2006-03-21%20Item%2013%20Wind%20Turbine%20at%20Shorebird%20Nature%20Center.pdf>.



valleys or on ridgelines where air currents funnel birds into the structures, particularly at night.¹¹

For public viewshed/character reasons, Special Condition 1 requires that the turbine be re-sited, and possibly reduced in size. Regardless of what type of small-scale turbine is selected, whether it is the proposed turbine located below the roofline or a different turbine, it is not expected to result in avian mortality rates beyond those that are normally associated with existing residences and other types of structures in the area. Although the revolving blades would be new development in the airspace at the edge of this house, there is no indication that the blades themselves would attract birds, or that they would “suck in” birds, or that they would trick birds into thinking they can fly through blades as can be the case with large scale horizontal machines. It is expected that the turbine would affect birds in the same manner that other elements of the house do (i.e., the roof, the walls, the deck railings, etc.). In this sense, small individual-use wind turbines such as this do not appear to raise the potential for bird strike any more than any solid structure or tower. And these residential-scale systems are much smaller than wind turbines historically thought of as “small-scale” in relation to large-scale turbines such as found at wind farms (like Altamont). As conditioned, the turbine would therefore be relatively small and short as wind turbines go, it would not involve any lighting, would not be mounted on a lattice-type structure with guy wires, and would have utility lines installed underground. To the extent more bird travel occurs in the more open airspace above the roof as opposed to the area below the roof and between house as proposed for re-siting (as can be reasonably hypothesized, although no site specific data has been provided), such re-siting would lessen any potential for bird strike issues as well. In sum, the re-sited turbine would be just as visible to birds as other structural development and is not expected to impact birds any more than any other structure, and it therefore can be found consistent with the LCP’s biological resource and sensitive habitat policies.

In addition, in terms of general safety, the proposed wind turbine is UL listed,¹² and it has been tested to withstand up to 111-mile per hour winds. On average, during strong winter storms in Santa Cruz County, wind speeds may reach up to 50 to 60 miles per hour. The turbine would therefore not be expected to present a safety hazard for people, as it has been designed for integrated residential use, has been tested and approved by the nationally-recognized UL organization, and has the capacity to withstand wind speeds that are more than double the highest gusts typical for the Santa Cruz coastline. Special Condition 1 requires that if a different turbine is selected, it too must be UL listed, and the Applicant is required to provide safety information.

Conclusion

In this case, the Commission cannot find this particular wind turbine at the proposed location and height to be consistent with the applicable Santa Cruz County LCP policies. It has not been sited and designed to respect public views and community character, and, as such, the amendment has been conditioned to require re-siting below the roofline, and possibly the use of a smaller turbine. As conditioned, the turbine would be consistent with the LCP. Regardless of the model, the turbine is not expected to result

¹¹ Id.

¹² Underwriter’s Laboratories (UL) is a nationally-recognized independent product safety certification organization that tests products for safety and writes safety standards.



in other significant coastal resource problems, like bird strike. The Commission notes that, as far as the Commission is currently aware, this proposed wind turbine is the first residential-scale wind turbine proposed in the Central Coast area, and appears to be the first residential-scale wind turbine proposed in the coastal zone statewide. The Commission is supportive of efforts to tap more environmentally friendly power sources (such as wind in this case, solar, etc.), but also believes that such efforts are not necessarily environmentally benign otherwise in all cases, and that such projects can raise significant questions regarding protecting public views, wildlife, and other coastal resources. When LCPs lack explicit residential wind turbine policy direction, such as is the case here, it can be more difficult to resolve such questions. The Commission believes that this wind turbine at this site and as sited as indicated raises coastal resource concerns, and believes that such concerns can be appropriately addressed through conditions in this case, but such analysis is case specific. Ideally, LCPs would be revised in a planning context with explicit policy direction regarding such proposals, and the Commission encourages Santa Cruz County and other local governments to plan and account for the manner in which these emerging technologies should be applied for specific areas.

C. Window Glass

The original approval for the Applicants' residence included a condition (Special Condition 2) that required the approximately 120-square foot second story front facade window unit to be low reflective, zero light transmission (opaque) glass. This condition was imposed on the project by the County Board of Supervisors in their approval as a result of discussions and negotiations between the Applicants and surrounding neighbors. It was agreed to by the Applicants as a mitigating measure to reduce neighborhood concerns about the large size of the window and potential for nighttime lighting impacts, as well as to address general concerns associated with the modern design and size of the residence.

The project was appealed to the Coastal Commission, and the Commission found that the opaque window glass was important to reduce glare, increase privacy, and address nighttime illumination, and so it carried forward the County's condition in its approval of the project. This condition, along with other design-related conditions, such as specific landscaping to soften the appearance of the western facade, paint and driveway coloration, and exterior lighting requirements, were included in the Coastal Commission's approval in order to ensure that the development was visually compatible and integrated with the neighborhood.

As previously indicated, the Applicants have submitted new information that allows for a proposed amendment to this condition to be considered by the Commission (and not rejected outright as a weakening amendment).¹³ Namely, the Applicants have installed a low reflective glass window in the front facade area, and have not yet installed any zero light transmission covers or films to it, such that the actual window in the actual placement can be reviewed.

Coastal Commission staff viewed the window during both daytime and at night, the latter to evaluate the effect of light from the room behind the window (see photos in Exhibit xxx). Although construction of

¹³ Id (CCR Section 166).



the residence is not complete, the regular low reflective glass has been installed, and the Applicants were able to light the room with 9 lights, mounted in the ceiling, at 35 watts each for a total of 315 watts. As mentioned above, the Applicants have designed the residence to be off the main electrical grid, and indicated that this wattage was specified by the lighting designer based on what the off-grid system can handle (i.e., larger wattage could not be adequately supported and would not be installed). The project area is a well-lit neighborhood at night, with light from numerous streetlights and dense residential development. The subject window (like the house itself) was visible from numerous vantage points along Pleasure Point Drive and East Cliff Drive.

Based on Commission staff's field work, the light from the window is not inconsistent with light from other existing residences in the neighborhood, some of which have multiple well-lit windows that face the public streets, other public view areas, and neighboring residences. The window did not appear as a beacon and did not shine directly on any public or private areas or structures. Instead, the light was diffuse, similar to other low-level lights in typical residential settings. The Applicants indicated that the window will have a curtain for privacy reasons, which is expected to reduce the amount of external light when the room is in use. The existing street light immediately in front of the subject property provides significantly brighter and more direct light along the public street and as viewed from neighboring residences. The streetlight also significantly illuminates the front of the Applicants' residence, as shown in Exhibit C.

Although the Commission originally found that the opaque window glass was important for visual and neighborhood character reasons when it first approved the residence on appeal, based on the new information and review recently completed, non-opaque low reflective glass would not alter the existing character of this densely-developed residential area and would not significantly impact the public viewshed. The window would be as visually compatible as the original approved project was with surrounding development, and would not impact any scenic views of the ocean or shoreline currently available to the public (as none exist at the site), nor would it shine directly towards the shoreline or ocean. Light from the window would be visible in peek-a-boo views from East Cliff Drive where it intersects Pleasure Point Drive, but is not expected to adversely affect the existing views along this corridor. The window is not directed at any one area and, like many of the windows in the neighborhood, is visible when lit at night. In summary, although the window change would result in a new source of nighttime light in the neighborhood, it is not likely to be a significant source of light, unlike that of some other residences and street lights, and would not adversely affect the existing visual resources or character of the area. The window change can be found consistent with the applicable LCP policies previously cited.

D. Ladder

The proposed ladder would be located along the western side of the residence to allow for access to the second story deck from the side yard. The second story deck is planned for a living roof, and the ladder would allow landscaping staff access to it without having to go through the house. As described above, the original approval for the residence contained conditions that required specific landscaping along the western facade of the residence. The ladder would not affect those conditions, and would not change the



character of the residence or the surrounding neighborhood. It would be visible from public view areas along Pleasure Point Drive (see photo showing how ladder would appear from Pleasure Point Drive in Exhibit C), but would not block any views of the ocean or coastline. The ladder is a minor design element that would be visually compatible with the residence and provides added articulation along the western exterior wall. The ladder can be found consistent with the applicable LCP policies previously cited. Special Condition 1 requires resiting of the wind turbine to the same general location as the ladder; as such, the ladder may be relocated slightly to accommodate the turbine.

3. Conditions of Approval

A. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. **Revised Final Plans.** PRIOR TO ISSUANCE OF THIS AMENDMENT TO COASTAL DEVELOPMENT PERMIT A-3-SCO-05-073, the Permittee shall submit two full size sets of revised final plans to the Executive Director for review and approval. The revised final plans shall be in substantial conformance with the original plans submitted to the Coastal Commission (dated 12/17/2009, prepared by Matson Britton Architects) except that they shall be revised to show the wind turbine located on the northwest corner of the second story deck (roof deck) (as shown on page 3 of Exhibit B and page 3 of Exhibit C) and at a maximum elevation below the existing roofline in this area. A different turbine than that identified on the original plans (i.e., the original turbine) may be shown in this revised location on the revised final plans provided that it is smaller than the original turbine, it is UL-listed as safe, and it is substantially of the same materials, character, and



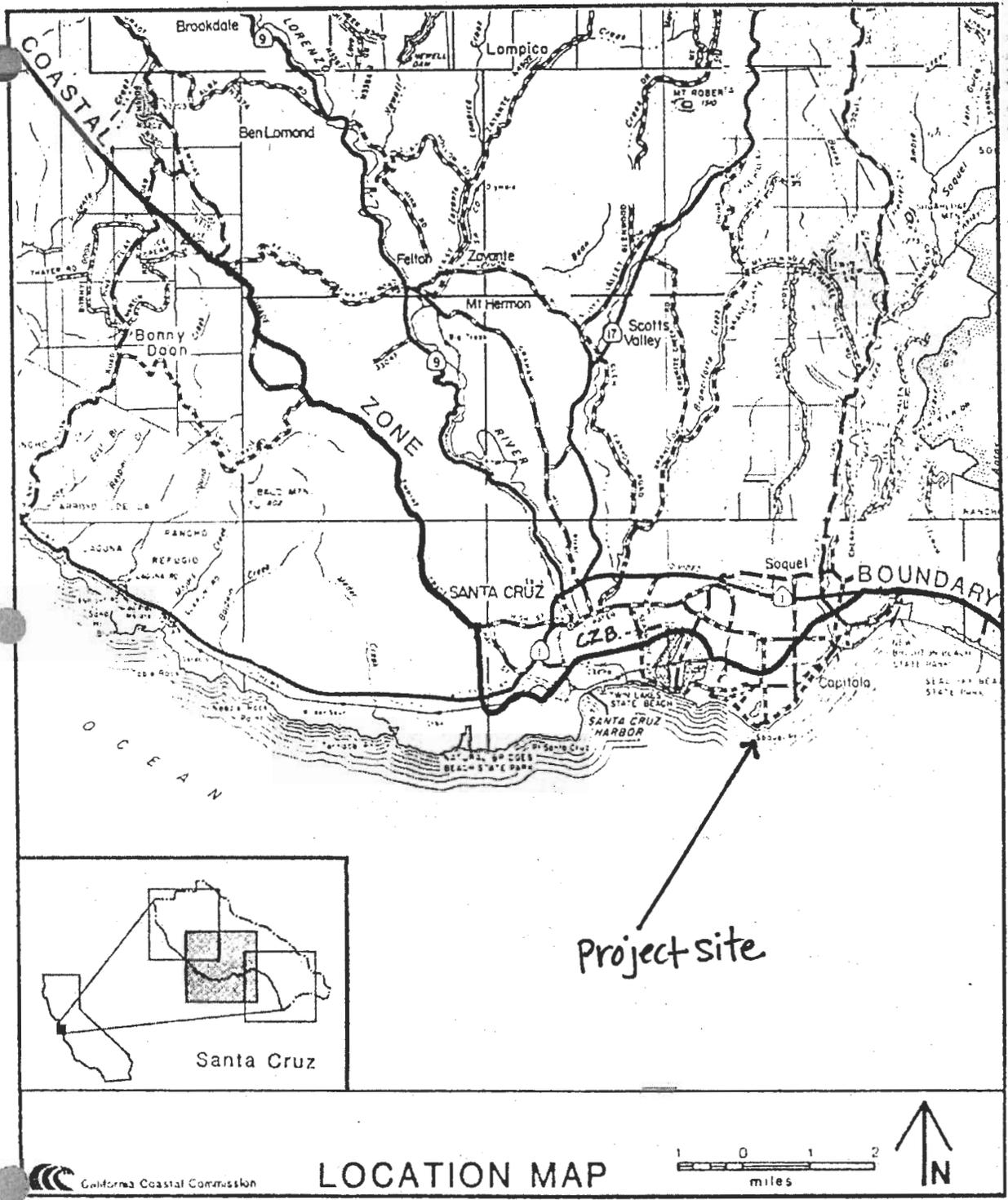
function as the original turbine. The Permittee shall undertake development in accordance with the approved revised final plans.

C. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

Santa Cruz County, acting as lead CEQA agency, did not require environmental review for the proposed project under CEQA. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. The Commission has not identified any significant adverse environmental effects associated with the proposed amendment. This staff report discussed the relevant coastal resource issues raised by the proposal, and it did not identify any modifications to avoid and/or lessen any potential for adverse impacts to said resources. All public comments received to date have been addressed in the findings above. All above findings are incorporated herein in their entirety by reference. Thus, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

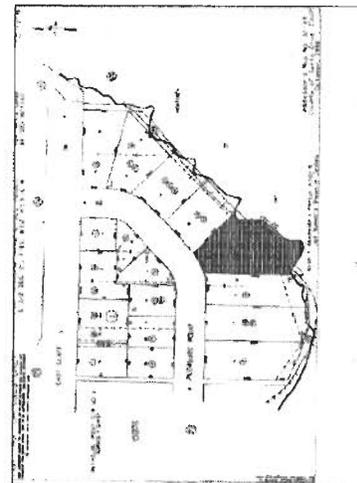




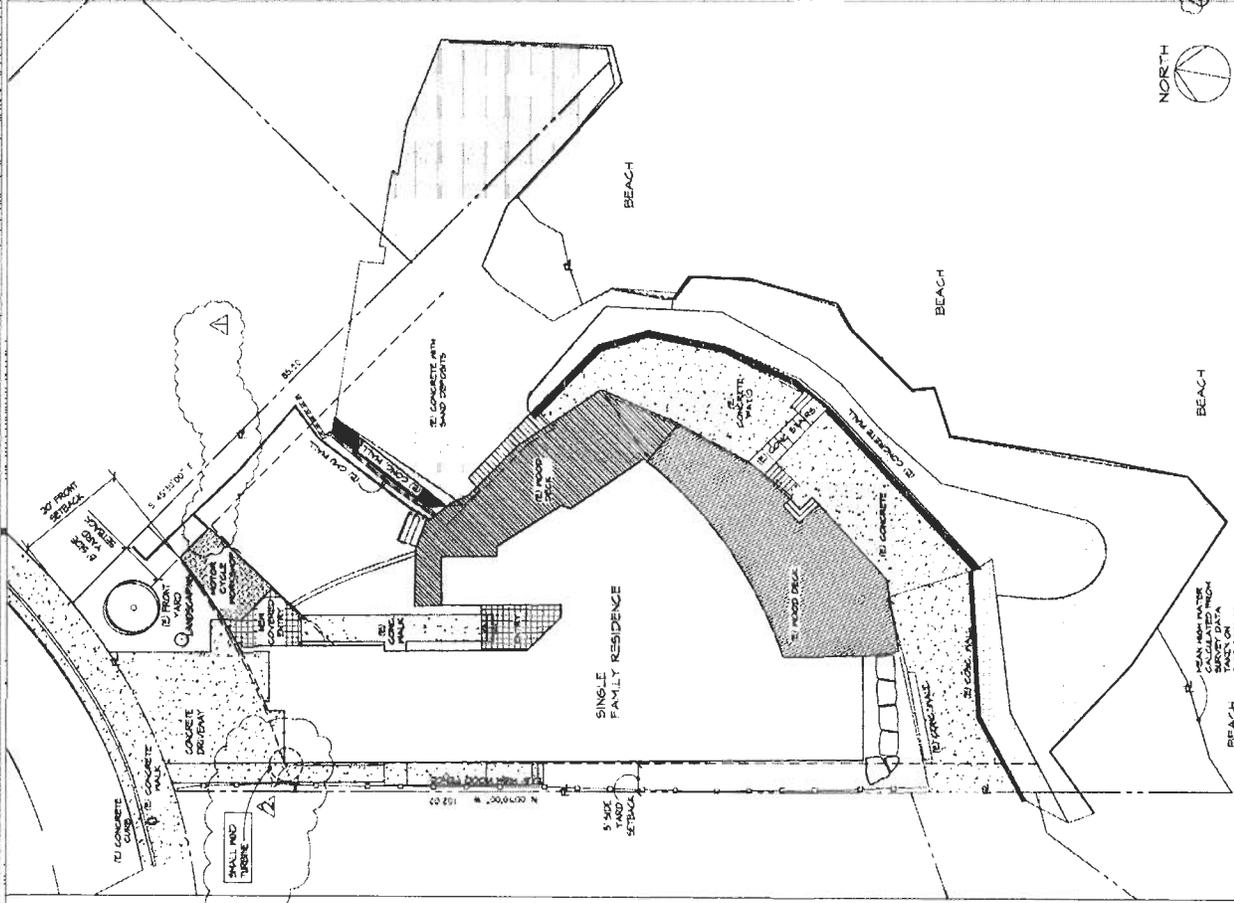
County of Santa Cruz

Sheet 2 of 3

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 CALIFORNIA
 COASTAL COMMISSION
 CENTRAL COAST AREA



A.P.N. MAP



SITE PLAN & NOTES
 SCALE: = 10'



1
 2
 3
 4
 5
 TITLE SHEET / SITE PLAN
 ENTER OR ELEVATIONS
 ENTER OR ELEVATIONS
 SURVEY

SHEET INDEX

VICINITY MAP



CONSULTANTS

ARCHITECTS: MATSON BRITTON ARCHITECTS
 421 CLINTON STREET
 SANTA CRUZ, CA 95062
 95-425-0544 F 95-425-4795

SURVEYORS: LUNBAR AND CRAIG
 LAND SURVEYORS
 1101 CEDAR STREET
 SANTA CRUZ, CA 95060
 95-425-7585

PROJ. SUMMARY

LOT SIZE: 14,740 SF
 GROSS FLOOR AREAS:
 PROPOSED ACCESSORY STRUCTURE: 193.50 FT.
 EXISTING FIRST FLOOR: 2530.50 FT.
 FIRST FLOOR ADDITION: 194.50 FT.
 SECOND FLOOR ADDITION: 1945.50 FT.
 TWO CAR GARAGE: 541.50 FT.
 FIRST FLOOR COVERED ENTRY: 101.50 FT.
 IMPROVED DRIVEWAY: 102.50 FT.
 P.A.R. 849-228 SF / 14740 SF * 36.2%
 LOT COVERAGE 3470 SF / 14740 SF * 24%

OWNERS: WILLIAM & SUSAN PORTER
 9030 PLEASURE POINT
 SANTA CRUZ, CA 95062

A.P.N. 092-242-11

OCCUPANCY GROUP R-3 (PER 91 J.B.C.)

CONSTRUCTION TYPE V-N

PROJECT DESCRIPTION:
 AMENDMENT TO A COASTAL DEVELOPMENT PERMIT FOR AN APPROVED REMODEL & SECOND ADDITION TO A SINGLE FAMILY RESIDENCE AND A SECOND FLOOR ADDITION. THE PROJECT CONSISTS OF THE REVISION OF THE SINGLE FAMILY RESIDENCE ATTACHED TO THE ACCESSORY STRUCTURE.

CODE COMPLIANCE
 THIS RESIDENTIAL CONSTRUCTION COMPLIES WITH THE FOLLOWING CALIFORNIA CODES: 1941 USC, 1911 USC, 1917 USC AND 1918 USC



DATE: 10/15/09
 DRAWN BY: J. BRITTON
 CHECKED BY: W. PORTER
 PROJECT NO: 092-242-11

FORTRAN RESIDENCE
 9030 PLEASURE POINT
 SANTA CRUZ, CA 95062
 A.P.N. 092-242-11

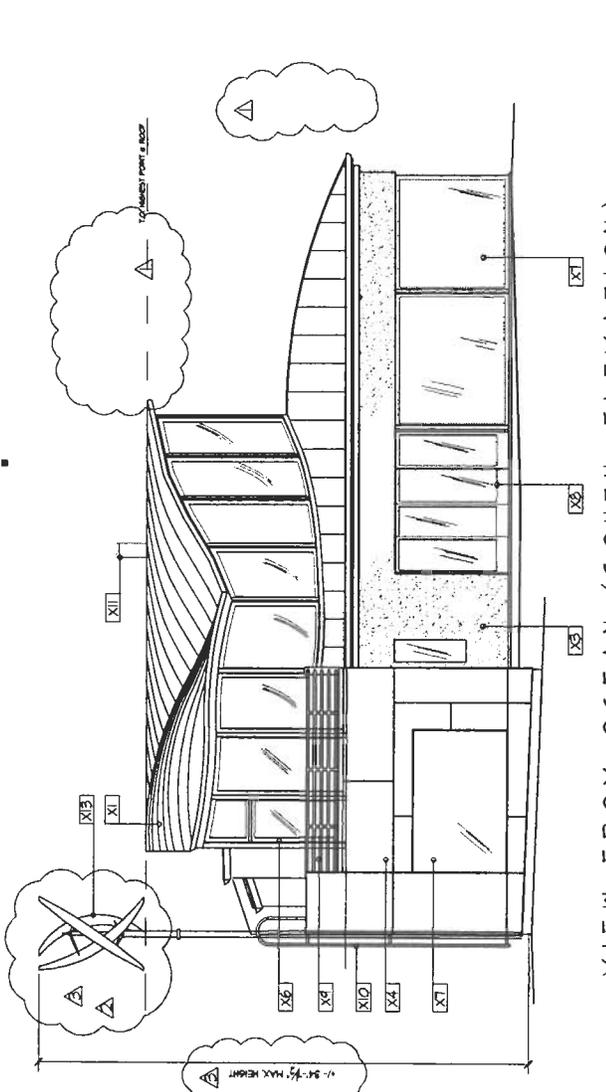
SITE PLAN
 PROJECT NOTES

DATE	10/15/09
BY	J. BRITTON
CHECKED	W. PORTER
PROJECT	FORTRAN RESIDENCE

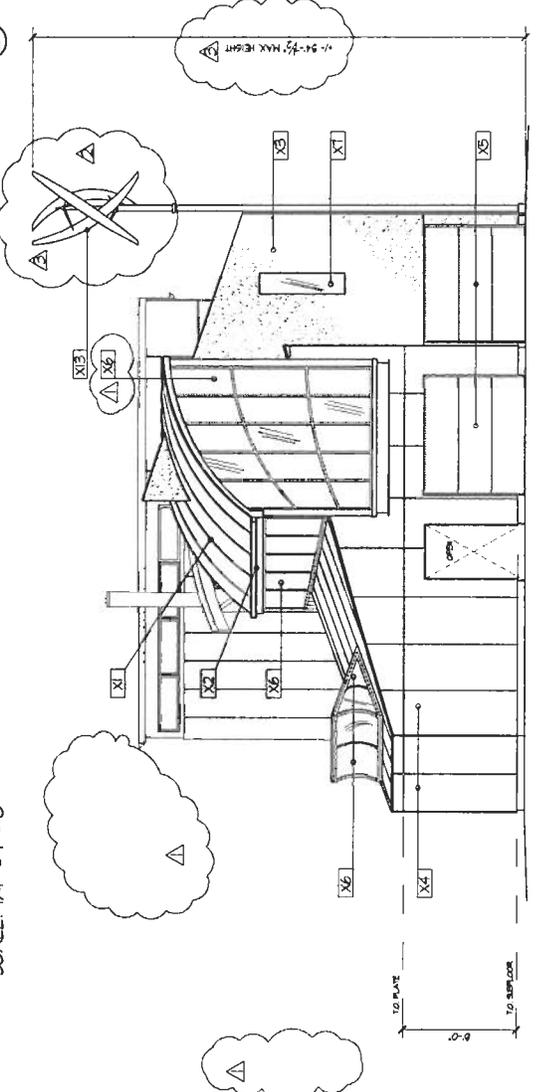
PI

ELEVATION NOTES

- X1 TITANIUM ZINC SPANNING SEAM
- X2 METAL ROOF COLOR
- X3 PRE-PAINTED BLUE GRAY
- X4 TITANIUM ZINC BUTTER COLOR
- X5 PRE-PAINTED BLUE GRAY
- X6 2 COAT STEGOL HARD THERMAL
- X7 1 COAT GREEN EPICORAL STAIN
- X8 STONE VENEER PANELS BY SAND
- X9 COLOR LIMES STONE
- X10 TEAK WOOD PANEL GARAGE DR
- X11 TEAK WOOD FRAME WINDOW BY
- X12 CLEAR LOW REFLECTIVE GLASS
- X13 CONCRETE FRAME WINDOW BY
- X14 WOOD FRAME SLIDING P/ DOORS
- X15 CLEAR LOW REFLECTIVE GLASS
- X16 8 HIGH TEAK WOOD QUADRANT
- X17 ACCESS LADDER
- X18 METAL FLE TO MATCH ROOFING
- X19 NOT USED
- X20 WALL AND CEILING FINISH
- X21 1/4" / 1/8" URBAN GREEN ENERGY
- X22 ACCESS LADDER
- X23 NOT USED
- X24 METAL WIRE FOR VINES TO GRAB
- X25 1/2" PELLETS FOR BIR LEISERS
- X26 READ IN DOWNPOUT & DRAIN



VIEW FROM OCEAN (SOUTH ELEVATION)
SCALE: 1/4" = 1' - 0"



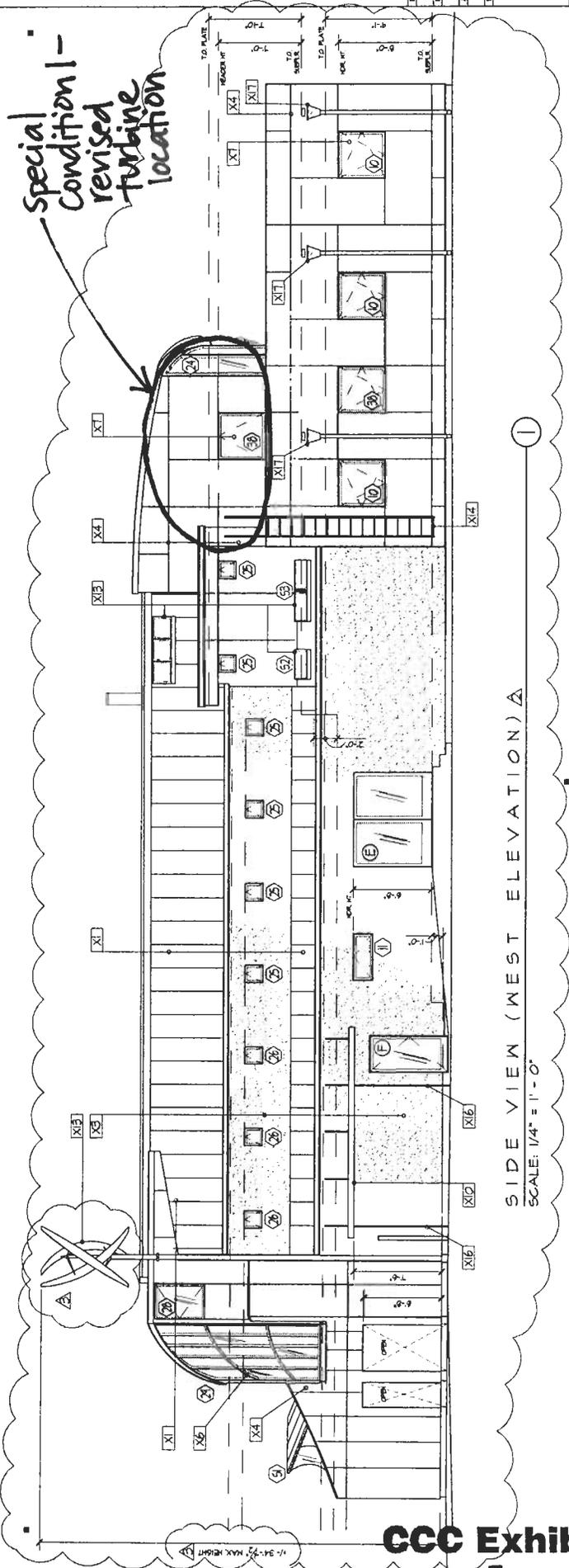
VIEW FROM STREET (NORTH ELEVATION)
SCALE: 1/4" = 1' - 0"

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 DEC 17 2009
 CALIFORNIA
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 CENTRAL COAST AREA

ELEVATION NOTES

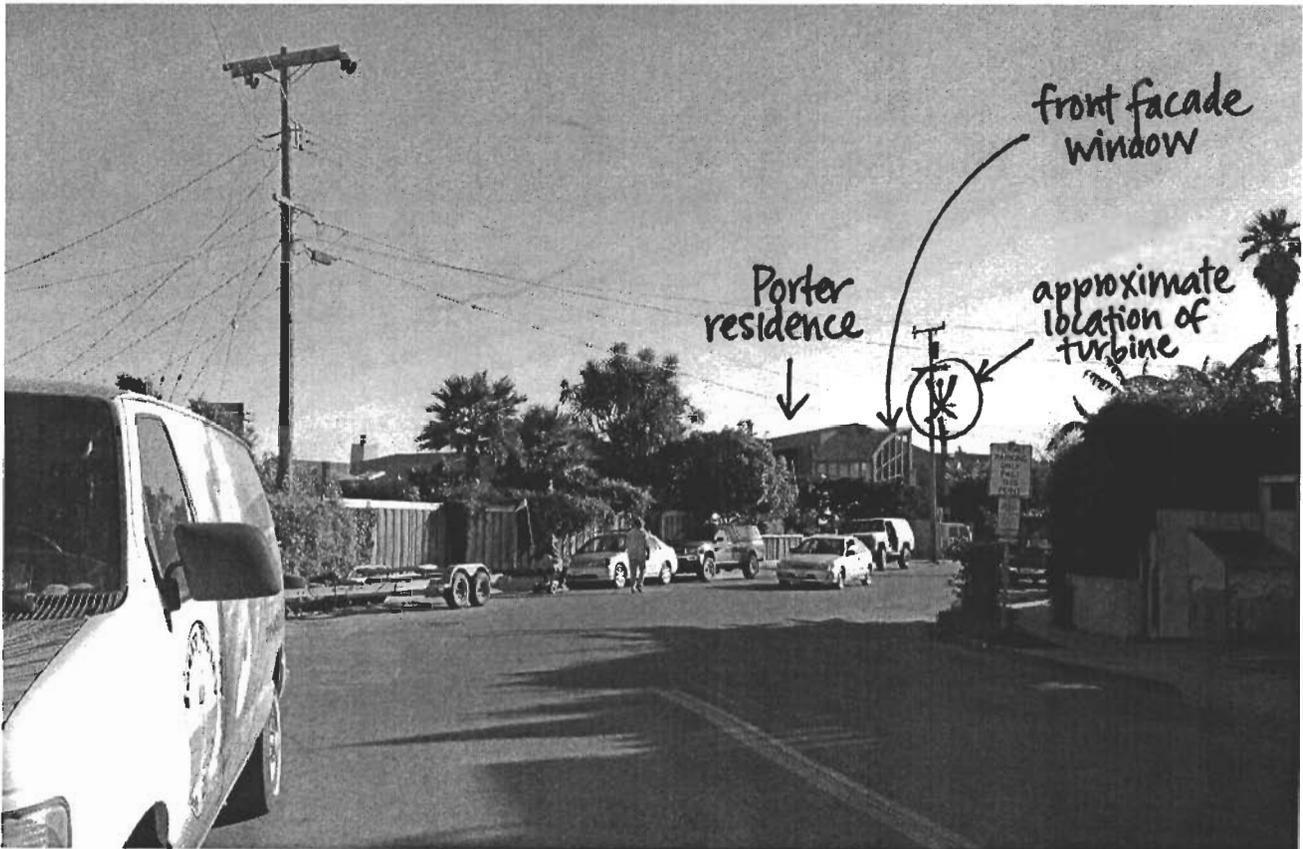
- X1 TITANIUM ZINC SHIMONS SEAM
- X2 METAL ROOF COLOR
- X3 PRE-WEATHERED BLUE GRAY
- X4 TITANIUM ZINC BUTTER COLOR
- X5 PRE-WEATHERED BLUE GRAY
- X6 2 CONT. STILCO HARD TRIMEL
- X7 4 MOSS GREEN CERAMICAL STAIN
- X8 SOME WINDERS PANELS W/ SAND COLOR LIMESTONE
- X9 TEAK MOOD PANEL GARAGE DR
- X10 TEAK MOOD FRAME INDOOR TV
- X11 CLEAR LOW REFLECTIVE SLABS
- X12 CONCRETE FLOOR FINISHES W/ NEWER FINISHES
- X13 MOOD FRAME SLABS W/ LOGS
- X14 CLEAR LOW REFLECTIVE SLABS
- X15 5" HIGH TEAK MOOD QUANTRAL
- X16 ACCESS LADDER
- X17 METAL FLUE TO MATCH ROOFING
- X18 NOT USED
- X19 METAL WIRE FOR VINES TO GROW UP WALLS
- X20 PRE-WEATHERED ZINC LEADER
- X21 ROAD W/ DRIVEPOIT & DRAINS

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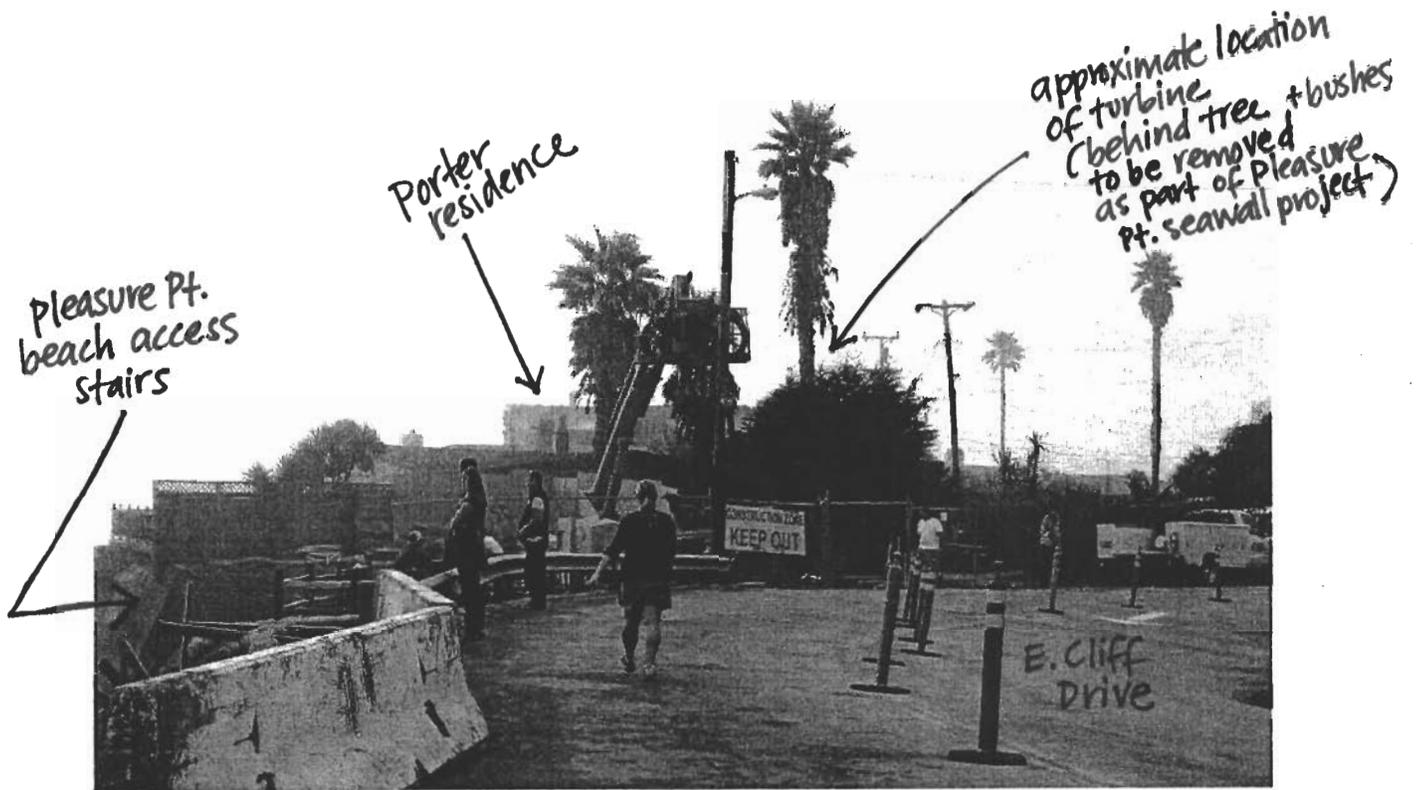




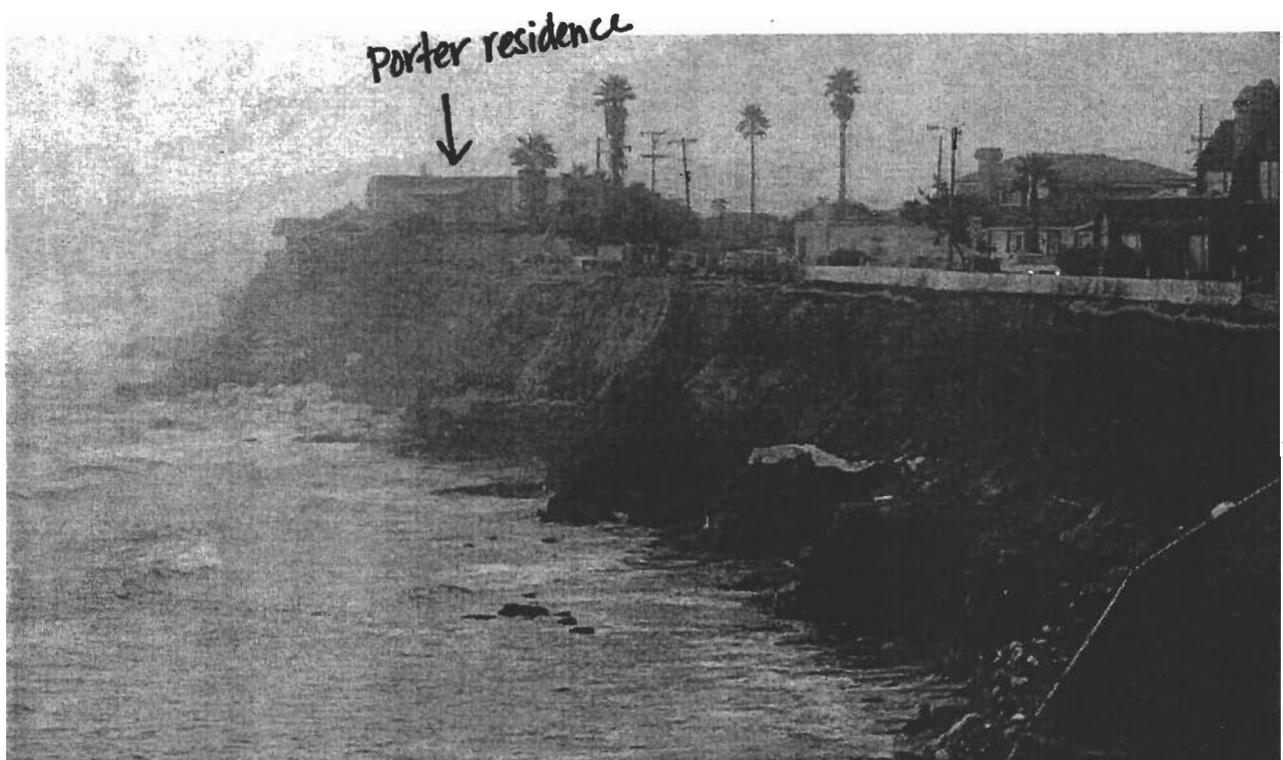
California Coastal Records Project photo #200907873, October 3, 2009



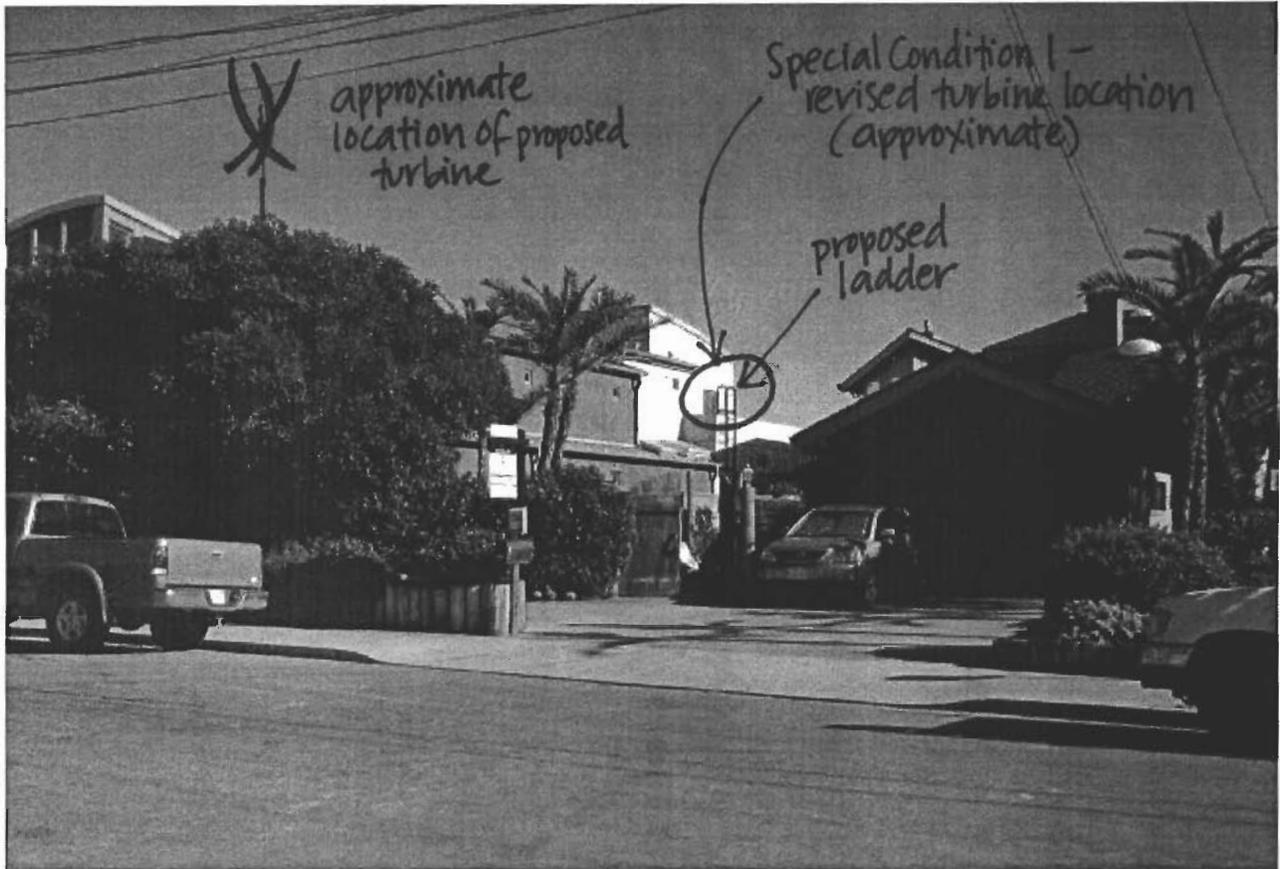
Staff photo of Porter residence from the corner of Pleasure Point Drive and East Cliff Drive



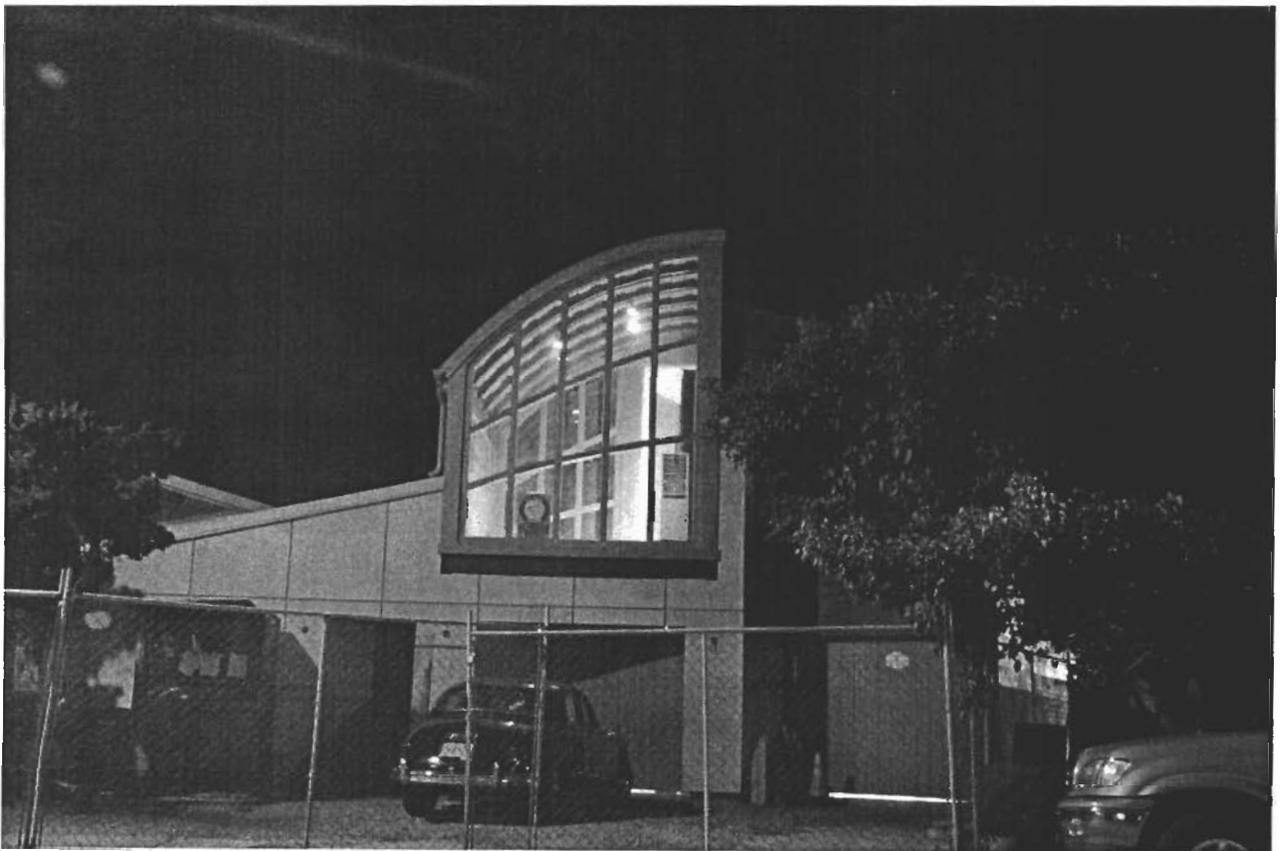
Staff photo of Porter residence from East Cliff Drive at 33rd Avenue



Staff photo of Porter residence from East Cliff Drive at 35th Avenue stairs



Neighbor photo of Porter residence from Pleasure Point Drive



Staff photo of Porter front façade window at night



UGE-1K 2nd Generation VAWT Grid-Tie

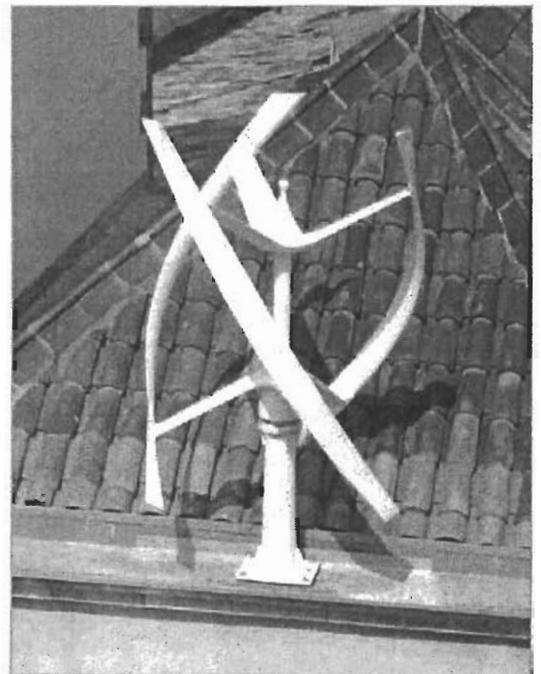
YOU can make a difference

With Urban Green Energy's UGE-1K, you can make your own energy choice and ensure your energy is provided by 100% clean, renewable energy. Quieter than a human whisper, the UGE-1K can be installed on a tower, on a roof, or just about anywhere!

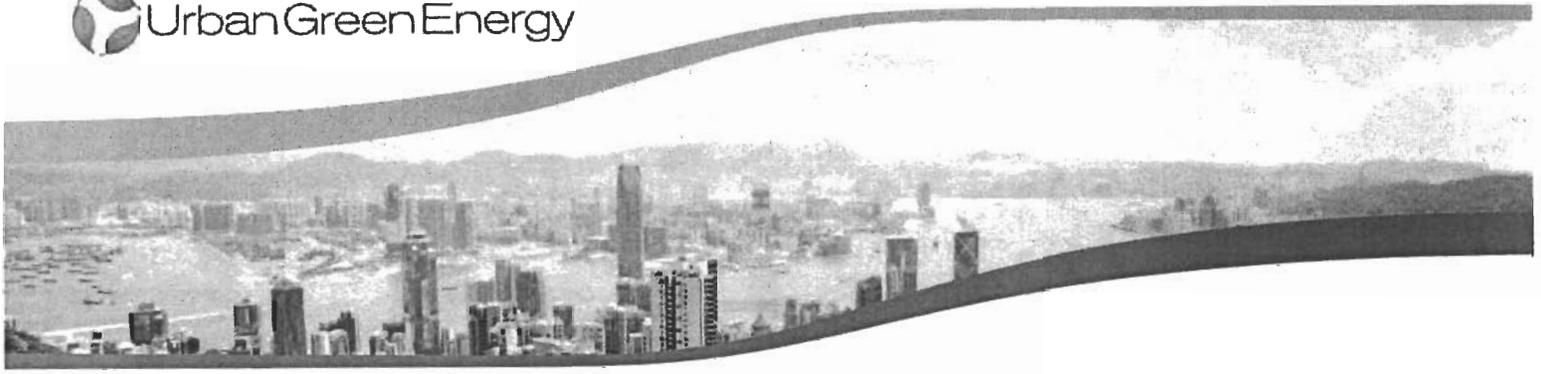
The UGE-1K was designed to provide a significant contribution to a home or business's energy needs, even at low wind speeds.

Grid-tie functionality means that when you generate extra electricity it is sold to your utility company; when your wind turbine isn't producing enough electricity the grid will automatically provide required electricity. Using multiple wind turbines will provide even more power. One of our other models may also help you meet your goals.

Please speak to your local distributor or visit our website for more information on our products and government **incentives** that will make your purchase even more affordable!

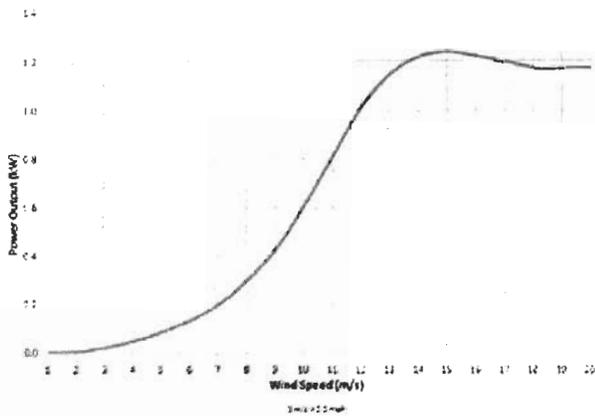


CCC Exhibit D
(page 1 of 3 pages)

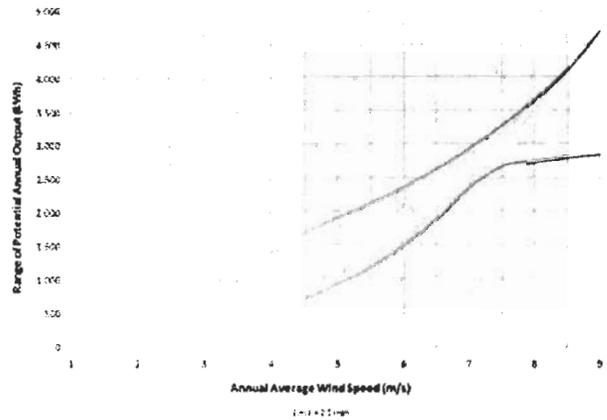



Power Output

UGE-1K 2nd Generation VAWT Power Curve



UGE-1K 2nd Generation VAWT - Annual Output




Specifications

Performance:

Rated Power – 1 kW
 Rated Wind Speed - 12 m/s
 Operating Range - 3 - 25 m/s
 Maximum Wind Speed - 50 m/s
 Noise Level at 3 Meter Distance:
 @ <7 m/s - < 27 DB
 @ 7 - 10 m/s - < 32 DB
 @ 10 - 13 m/s - < 37 DB

Generator:

Type - Permanent magnet direct drive generator
 Temperature range - -40°C to 115°C

Wind Interface Box: (Power-One Aurora PVI-7200)

Output: 0-600Vdc

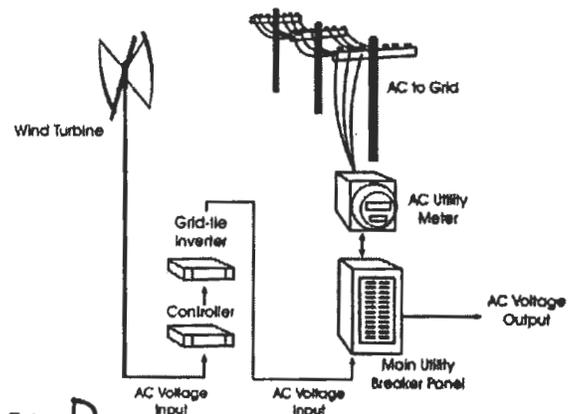
Grid-tie Inverter: (Power-One Aurora PVI-3000)

Input: 50 - 580Vdc

Grid-tie inverter is ordered to meet local grid specifications. Battery back-up is available as an option.

Physical Parameters:

Mill Size - 2.3m x 1.6m (90" x 63")
 Tower Height (Standard) - 5.5m (18')
 Gross Weight w/o Tower - 158kg (348lbs)
 Gross Weight w/ Tower - 360kg (795lbs)
 Gross Weight w. Roof mount - 260kg (570 lbs)





Source: Urban Green Energy website (www.urbangreenenergy.com)

Katie Morange

From: Bill Beasley [papabeas@sbcglobal.net]
Sent: Sunday, July 26, 2009 4:06 PM
To: Katie Morange
Cc: jdsheehan2002@yahoo.com
Subject: House at 3030 Pleasure Point-Amendment A-3-SCO-05-073 A1

Dear Coastal Commission and Planning Department Santa Cruz

My wife and I own the home at 3031 Pleasure Point. We are directly across the street from the property in question. For more than five years we have appeared at meetings to object to features and elements of the house under construction. The commissions agreed with some of our concerns. Since that time the construction has proceeded ignoring some concerns, primarily the front glass, and now a wind turbine has been added to the plan.

Katie Morange has been helpful in explaining the process for review of the above amendment.

My formal objections:

Current 1) Opaque glass requirement removed by county.

It was a major concern originally and the neighbors do not know why it was removed.

It was agreed to by the owners as an alternative to reducing dramatically the front window size.

It now appears to be 10 feet by 15 feet in size.

2) Addition of a wind turbine

Ongoing 1) Motorcycle noise

2) lights in house visible for ½ mile or more

3) Non compatible design with neighborhood

4) Process of outlasting commissions, lobbying with attorneys, ignoring rulings with no penalty to owner or Architect.

I plan to continue to write since at the Planning Commission changes were approved without notifying the neighbors. I hope the Coastal Commission will not be swayed by the owner, the architect or their legal, lobbying counsel.

Please make a visit to the neighborhood and see this house before and more amendments are approved.

Bill Beasley

7/28/2009

CCC Exhibit E
(page 1 **of** 4 **pages)**

Katie Morange

From: Jim Sheehan [jdsheehan2002@yahoo.com]
Sent: Monday, August 10, 2009 9:30 AM
To: Katie Morange
Cc: Bill&Gerry Beasley
Subject: 3030 Pleasure Point Drive

Hi Katie,

The problems with the glazing on the front, second story windows of the house at 3030 Pleasure Point Drive, and the reason for the conditions imposed regarding the use of opaque glass, are not the result of concerns about design or aesthetics. Instead, they were added to address issues about the visual pollution that would result when the room behind the windows was lighted at night. Please keep in mind that this is a floor to ceiling window wall, not just a few windows, that is the dominant feature of the street facing side of the house (I will bring pictures to our meeting Wednesday).

Three different sections of the Santa Cruz County Code are relevant to this discussion:

-13.11.072 (2)(i) "Development shall protect public viewshed, where possible".

-13.20.130 (b) (1) "All new development shall be sited, designed and landscaped to be visually compatible and integrated with the character of surrounding neighborhoods and areas".

-13.11.074 (d) "It shall be the objective of lighting design to relate to the site and building design and reduce off-site impacts".

The light pollution issue was raised repeatedly at public hearings before the Planning Commission and Board of Supervisors, and in private meetings with the Porters and Cove Britton (I will also bring copies of e-mails on the topic to our Wednesday meeting). The conditions about opaque glazing were added and accepted before jurisdiction transitioned to the Coastal Commission. The underlying concerns remain the same, and will not be mitigated if the glazing conditions are allowed to be modified.

Thank you for your consideration.

Regards,

Jim Sheehan

8/11/2009

CCC Exhibit E
(page 2 of 4 pages)

DONALD W. DARST

3052 Pleasure Point Drive
Santa Cruz, Ca. 95062
(831) 465-1142
donalddarst@yahoo.com

RECEIVED

AUG 26 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

California Coastal Commission
725 Front Street
Santa Cruz, Ca. 95060-4538

August 24, 2009

Attn: Katie Morange

RE: Porter residence

Dear Ms. Morange,

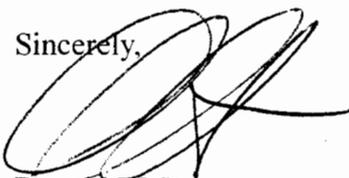
Thank you for the opportunity to discuss the Porter residence on Monday, August 24th. As I advised, I had just been informed regarding the Porter's pending application to construct a wind mill type device near the street and to get a variance for their second story windows.

Whether I like the warehouse design or it's lack of compatibility in the neighborhood is not the issue. They have approval for what they have done. It is my understanding, however, that they were required to install opaque glass on the large second story windows facing the street. They went ahead and installed clear glass in violation of their agreement. They knew it was in violation, but they obviously intended to do whatever they wanted, regardless of their prior promises, and in spite of the County and the Coastal Commission. Workers on the site have told me as much. They should be held to their conditions and promises or your actions, and authority, will have been meaningless.

In regard to the windmill: enough is enough. The house is a monstrosity, and the addition of yet another eye sore will further degrade the residential aspect of our neighborhood. We already have telephone poles with "spaghetti" wires that are unsightly. They have just installed a ladder on the west side of the structure that adds to it's look as a commercial structure and adding another pole will only increase it's growing incompatibility with the surrounding homes.

Please deny their attempt to install the pole and "windmill" structure and require them to live by the agreement they made in regard to the windows. Thank you for your kind consideration to this matter

Sincerely,



Donald W. Darst

Katie Morange

From: Peter Vokos [petevokos@gmail.com]
Sent: Tuesday, September 01, 2009 11:59 AM
To: Katie Morange
Cc: jdsheehan2002@yahoo.com; papabeas@sbcglobal.net; donalddarst@yahoo.com
Subject: Porter Residence

Hello Katie,

I am following up on our meeting three weeks ago with Jim Sheehan and myself.

The two issues we reviewed were the proposed wind mill and the use of opaque glass in the "wall of glass" facing the street.

As I understand it the local Coastal Commission of which you are a part of is predisposed to denying the application for the windmill and were split on the issue of the opaque glass.

After reviewing the specifications for the windmill it is ludicrous to even entertain the idea of a windmill. Specifically at maximum output it would power the equivalent of a hair dryer. It would also be one more feature that is completely out of scale with the rest of the neighborhood. The noise factor, the visual impact and the lack of conformity to the neighborhood are compelling reasons to denying the application.

I do not understand why your group is split on recommending denial of the application to change from opaque glass to clear glass. This issue seems to be clear and in compliance with the the board of supervisors and the County building departments condition for granting the building permit. It is the one issue that neighbors attending those meeting held firm on. Cove Briton stood before those governing bodies and said they would change the glass to opaque. He went back to his office and they ordered clear glass, he never intended to follow through with his promise. He also said they would reduce the amount of glass in the " wall of glass". In short he lied in order to get the application approved knowing that he could come back with a request to change. I urge you to argue our case with your colleagues as to the impact of clear class as stated in our arguments before the building department and the board of supervisors and recommend denial of the application to use anything other than opaque glass.

Cove Briton has run roughshod with the building department and the neighbors to get his way. A recent example of this is a large industrial ladder that just appeared on the north side of the building. It's visual impact is jarring. Was this on the original plan?, I don't think so.

We are counting on you to be our advocate in holding the Porters and Cove Britton to their commitment to the neighbors in building this according to the original plan and specifications.

Sincerely,

Peter and Terry Vokos

9/2/2009

CCC Exhibit E
(page 4 of 4 pages)

RECEIVED

DEC 14 2009

**FORM FOR DISCLOSURE
OF EX PARTE
COMMUNICATIONS**

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Name or description of project, LCP, etc.: Porter Appeal (Santa Cruz County)
Date and time of receipt of communication: 12/8/09, 3:00 pm
Location of communication: Board of Supervisor's Office, Santa Cruz, California
Type of communication: e-mail received
Person(s) initiating communication: Cove Britton
Person(s) receiving communication: Mark Stone

Detailed substantive description of content of communication:
(Attach a copy of the complete text of any written material received.)

See attached e-mail.

Date: 12/14/09 Signature of Commissioner: Mark W. Stone

If the communication was provided at the same time to staff as it was provided to a Commissioner, the communication is not ex parte and this form does not need to be filled out.

If communication occurred within seven or more days in advance of the Commission hearing on the item that was the subject of the communication, complete this form and transmit it to the Executive Director within seven days of the communication. If it is reasonable to believe that the completed form will not arrive by U.S. mail at the Commission's main office prior to the commencement of the meeting, other means of delivery should be used; such as facsimile, overnight mail, or personal delivery by the Commissioner to the Executive Director at the meeting prior to the time that the hearing on the matter commences.

If communication occurred within seven days of the hearing, complete this form, provide the information orally on the record of the proceeding and provide the Executive Director with a copy of any written material that was part of the communication.

Mark Stone

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DEC 14 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

From: Cove Britton [cove@matsonbritton.com]
Sent: Tuesday, December 08, 2009 2:59 PM
To: Mark Stone
Subject: Coastal turbine

Hi Mark-

Susan said at your office that I should e-mail you directly...this is going to a CC hearing in January.

Our office is proposing the first small scale wind turbine in the state of California in the coastal area (we are also in contact with John Leopold's office in regards to this project).

This submittal was over a year ago...

We are now at the third location of the turbine ,at coastal staff's request. We have also said we are willing to go with a turbine that is more attractive to coastal staff.

We have also looked at multiple wind turbine styles (and provided cut sheets for them)...and have found a couple that are virtually silent, do not have to be extraordinarily tall, and are bird safe. Essentially designed for residential urban installation, a relatively new product.

I understand the concern of visual issues...and I think it is a legitimate discussion of the worth the visual intrusion of these small scale wind turbines versus the energy benefits. I personally do not think having these turbines in undeveloped areas is a great idea, but in an urban area where the turbines are just more visual "noise", like chimneys, telephone poles, etc...that the benefits may out way the visual intrusion.

That said... if these things are to be allowed- this apparently endless request for more information is getting trying (see e-mail below). The cost of processing this permit exceeds the cost of the wind turbine itself....

Of course smaller turbines are available...you see them on back of sailboats. They don't power much though.

Obviously a turbine below the roof line of the surrounding homes will get less wind...and be less effective.

If wind turbines are going to be viable, I do not think it is appropriate to have this sort of process.

Regards-
Cove

From: Katie Morange [mailto:kmorange@coastal.ca.gov]
Sent: Tuesday, December 08, 2009 10:35 AM
To: Cove Britton
Cc: reem@matsonbritton.com
Subject: RE: Porter

Hi Cove,

Although we prefer the design of the UGE one over the previously proposed turbine, we are still concerned about the size and being able to find it consistent with viewshed/community character policies. Have you researched any other smaller turbines since we last spoke? We also need information about the performance of this turbine (or of these types of turbines in general) when located below a roofline vs. above a roofline. Of course there are many factors that go into determining this (site specific wind conditions, orientation to the wind, distance to nearest buildings, etc.), but we are looking for general calculations/assumptions (eg., if you put a turbine lower than the roofline and adjacent to a building, wind capture can generally be assumed to be reduced by x percent

12/14/2009

CCC Exhibit F
(page 2 of 3 pages)

when compared to a location above the roof). Since the UGE one is shown on their website adjacent to a building and below a roof, hopefully they have information to that effect. Give me a call if you want to discuss.

Katie

From: Cove Britton [mailto:cove@matsonbritton.com]
Sent: Wednesday, December 02, 2009 10:00 AM
To: Katie Morange
Subject: RE: Porter

Hi Katie-

I actually prefer the helical turbine... UGE1kw - if you and Dan prefer that one we will revise our drawings with it.

What else do we need at this point?

Regards-
Cove

From: Katie Morange [mailto:kmorange@coastal.ca.gov]
Sent: Tuesday, December 01, 2009 1:56 PM
To: cove@matsonbritton.com
Subject: Porter

Hi Cove,
Just checking in on Porter. Have you finalized plans for the turbine? We will be gearing up for the January hearing soon (if you can believe it), and I want to make sure we have discussed the turbine you want to use and that we have the plans as soon as possible.

Thanks,
Katie

Katie Morange
Coastal Planner
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060
P: (831) 427-4863
F: (831) 427-4877
kmorange@coastal.ca.gov
www.coastal.ca.gov

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DEC 14 2009

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA