



Docket No. _____

Exhibit SBSF-DR-2

Admitted: _____

AESTHETIC ASSESSMENT OF THE PROPOSED SOUTH BURLINGTON SOLAR FARM

South Burlington, Vermont

Date:

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Prepared for:

Chittenden County Solar Partners, LLC

P.O. Box 3111

Burlington, VT 05408

Prepared by:

LandWorks



Landscape Architecture. Planning. Graphic Design.

228 Maple Street, Suite 32

Middlebury, Vermont 05753

Phone: 802.388.3011

Fax: 802.388.1950

www.landworksvt.com

info@landworksvt.com

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1. Project Background

1. Project Background

1.1 Introduction

This aesthetic assessment of the proposed South Burlington Solar Farm Project (SBSF or Project) is conducted in response to the requirements set forth for aesthetic review of energy transmission and generation projects under Title 30 Section 248 of the Vermont statutes. The Public Service Board has adopted the Quechee Analysis, a two-step analysis as set forth originally for the review of aesthetics under Criterion 8 of Act 250.

This report will be referenced by the testimony of David Raphael, ASLA, Principal and Landscape Architect with LandWorks, the firm preparing this assessment. Thus, this report and its accompanying appendices will become a part of the overall aesthetics testimony submitted by Chittenden County Solar Partners, LLC in its application for a Certificate of Public Good (CPG) from the Vermont Public Service Board (PSB) to construct a solar energy generation facility under Section 248 of Title 30 of the Vermont Statutes.

The methodology for the aesthetics assessment of this Project includes visual and cartographic analyses, document research and review. Our primary analyses assess the Project's visibility and potential for visual and aesthetic impacts, with a focus on vantage points from major federal, state or local roads, relationships to nearby public lands and areas of public interest, high scenic value and/or official designation as a cultural, aesthetic or recreational facility or resource. Locations that involve residential areas in close proximity to the proposed solar farm were also considered, although review of aesthetics under Section 248, using the Quechee Analysis, specifically does not guarantee that views from individual private homes and properties will never change. We have used on-site and field study to reinforce our analyses and findings.

The aesthetic analysis for this Project has been conducted within the parameters set forth in Section 248 for review of commercial energy generation and transmission projects. The analysis thus follows and responds to the process and determinations required under the Quechee Analysis, established in 1985 in the Environmental Board's Quechee Lakes decision. This analysis also recognizes that the Public Service Board weighs "societal benefits" when considering the aesthetic impacts of projects within its purview (see side panel).

"Our analysis, however, does not end with the results of the Quechee test. Instead, our assessment of whether a particular project will have an 'undue' adverse effect on aesthetics and scenic or natural beauty is significantly informed by the overall societal benefits of the project" ~ Findings, PSB Docket 6860

1. Project Background

1.2 Report Organization and Contents

This analysis is organized around and relies on an extensive narrative of the Quechee "Test" as it applies to this proposal. It also includes a number of exhibits and studies, including the following:

1. Project context map.
2. Photographic inventory presenting the character of the area and views to the Project area from a range of public locations.
3. Line-of-site sections.
4. Potential visibility map.
5. Visual simulations of the Project.
6. Analysis of the aesthetic impacts, if any, which may result from the improvement of the existing access road to the solar farm site, as well as the installation of an underground electrical line from the project site to Meadowland Drive.
7. A review of applicable town and regional plans.

The following discussions, narratives, and appendices, assembled by the professional staff at LandWorks, present a compelling case for the suitability of the SBSF Project and collectively demonstrate and conclude that the Project will not result in an undue, adverse impact on aesthetics.

1.3 Project Description

The Project will consist of 383+/- AllSun Tracker solar panels sited in a grid layout at 45-foot intervals. It will occupy 22.5+/- acres within the 32+/- acre leased area of the Project site property (53+/- acre parcel). For ease of discussion, we will use the term "Project site" to refer to the 32+/- acre area where the Project will be developed, and the term "Project parcel" to refer to the full 53-acre property. The panels are typically 16.5 feet by 21.5 feet, are approximately 19 feet high when tilted to their highest elevation, and are approximately 8.5 to 9 feet high in their dormant (horizontal) position. See exhibits to the prefiled testimony of Patrick Michael for examples of the proposed solar panels and panel array. Minimum site disturbance will occur as the structures will be installed and secured with threaded earth anchors rather than concrete foundations. The panels are dark blue in color and have a non-reflective coating in order to maximize solar absorption. As a result, reflectivity (sometimes referred to as glare or glint) is minimal, and further limited by the angle of the panels relative to the few places where the panels will be visible from.

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In addition to the trackers and panels, there will be four inverters, which will be approximately 8 feet in height, and two similarly sized transformers. These structures will be mounted on concrete pads. The transformers and inverters will be grouped in pairs and located in the center of the solar field. They may also be housed in enclosures.

A 6-foot high black wire fence is presently planned for security and safety purposes around the perimeter of the array layout. In addition, a higher security fence will be placed immediately around the perimeter of the inverters and transformers. The 12.4 kV electrical connector line for the Project will exit the site to the northwest, run underground and interconnect with an underground Green Mountain Power line along Meadowland Drive.

The site is accessible from a point at the terminus of the Dubois Drive cul-de-sac, which is accessed off of Route 116 in South Burlington.

1.4 The Aesthetic Assessment

Under Section 248(b)(5) the Vermont Public Service Board must find that the Project will not have an undue adverse effect on aesthetics, giving due consideration to Criterion 8 of Act 250. Act 250's Criterion 8 addresses aesthetic impact within the parameters of the so-called Quechee Analysis, which was established to provide a consistent and defensible method for evaluating the aesthetic impacts of projects undergoing Act 250 review. The Quechee Analysis is a two-step process, which begins with assessing the nature of the project, its context, and whether it will lead to adverse aesthetic impacts. This step asks whether the project is in harmony with its surroundings, and the analysis is based on a clear understanding of the nature of the visual impacts. This step must describe the surrounding area of the project and the compatibility of the project with those surroundings. It also asks: 1) whether suitable colors and materials have been used; 2) how visible the project is; 3) how the project affects open space in the area; and, 4) whether the project has been proposed for visually sensitive land.

If the conclusion from this first step of the analysis is that the aesthetic impacts of the project are considered to be in harmony or compatible with its surroundings, then the aesthetic impacts of the project are considered not adverse. If this is not the case, then the project is considered to have an adverse impact and the second step of the analysis is required to determine if the adverse impacts are undue. The second step asks three questions: 1) Does the project violate any clear, written community standards intended to protect the scenic beauty of the area?; 2) Does the project

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1. Project Background

appear shocking or offensive to the average person?; and, 3) Has the applicant taken all generally available and reasonable steps to mitigate the identified adverse impacts of the project as proposed? If the answer to questions 1 or 2 is yes, or the answer to question 3 is no, then the aesthetic impact of the project is considered unduly adverse under the Quechee Analysis.

2. The Quechee Analysis

2. The Quechee Analysis

As stated in the initial narrative regarding the Quechee analysis, the applicant must address the relationship of the proposed project to its surroundings, describe its color and materials, its impact on open space, and assess other aesthetic qualities. Therefore, this section follows the Quechee analysis on a step-by-step basis. The first step asks a series of questions to ascertain whether or not a project will have an "adverse" impact. The second step determines whether that impact, if adverse, is "undue."

LandWorks employs a number of methodologies, as stated in Section 1.2, to assess the nature of the project's surroundings and the potential visual and aesthetic impacts that the project may pose to those surroundings. Site reconnaissance efforts, review of important public vantage points and scenic and conservation resources, line of sight sections, photographic simulations and travel along local roads have all contributed to our assessment and the conclusions derived from that assessment. In summation, all of the research, activities and exhibits generated and presented as part of this assessment have informed and guided the conclusions which have been reached by the assessment.

2.1 First Step of the Quechee Analysis

2.1.A What is the nature of the Project surroundings?

The solar farm is proposed in the City of South Burlington, an area of Vermont that has continued to see significant growth and development. The 32-acre Project site is situated within an area designated by the City as the Southeast Quadrant (SEQ), which is characterized by a "mixture of agricultural, open space, and both neighborhood and rural residential uses, as well as an industrial area in the northeast corner of the Quadrant" (Comprehensive Plan, p. 24). A pair of distinct north-south ridges between Spear and Dorset Streets, and between Dorset Street and Hinesburg Road further distinguishes the area, and define a number of headwaters, including a large swath of the Muddy Brook, which flows near the eastern edge of the Project site. The Comprehensive Plan has described the Muddy Brook corridor as having "a high vegetative diversity, which . . . helps support habitat for a variety of wildlife including mink, muskrat, herons and fish. Noted natural community areas associated with the corridor include the Dubois Swamp, a flooded red maple-black ash swamp, and the Van Sicklen Woods, a 12-acre Clay Plain forest that has been assessed as part of a statewide Clay Plain forest inventory." Plan, p. 56.

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A portion of the Project site also falls within an area designated by the City as a scenic overlay, and that designation is based on the possibility of long distance views to the Green Mountains from Hinesburg Road. South Burlington Land Development Regulations, p. 10-7. The visual analysis of this area and adjacent properties (which to the north consists of large scale commercial industrial buildings and parking lots in an open landscape, and the south and west includes medium density residential subdivisions) yielded the conclusion that the immediate and surrounding landscape, and the parcel itself, is not particularly or uniquely scenic, nor will it interfere with potential views to the Green Mountains.

There is an extensive industrial-commercial development to the north of the Project parcel, accessed primarily by Meadowland Drive and bordered to the north by Interstate 89. In this area, there are many large commercial and industrial-type buildings surrounded by parking lots, all built out in an open landscape with little or no screening or landscaping. Companies such as FairPoint and Dynapower are located here (and there is an older non-functioning wind turbine visible to the northwest of the Project parcel on the FairPoint parcel). To the immediate east and south, the site is bordered by wooded landscapes, wetland areas, and the Muddy Brook stream course, as described above. Further east and northeast are gravel pits and scattered residential properties as well as one farm complex along South Brownell Road. To the west is the medium-density residential neighborhood served by Dubois Drive, Highland Drive, and Knoll Drive. See Figure 1 "Context Map" and Figure 2 "Photo Inventory" for reference regarding the site and environs. Interstate 89 runs in an east-west direction further north of the commercial/industrial area. The area to the north has historically been zoned for commercial and industrial uses and the land use quality and character reflects those uses.

The Project site itself is an open field surrounded on about 80% to 90% of its perimeter by wooded buffers of deciduous and coniferous vegetation ranging in height from 20 to 50 feet and of varying widths. Minimal additional clearing will be required by the Project, as the footprints of the individual panels are contained within the open field area. However, the integrity of the surrounding buffer will not be affected or undermined. There is an informal trail that exists on this property that is not officially listed or designated as a public trail.

2.1.B Is the Project's design compatible with its surroundings?

The nature of these installations is such that they are developed as an array of moving panels that follow the course (azimuth) of the sun to maximize the solar gain. While the effect can be seen as a repetitive pattern of panels and support structures, these arrays can also be seen as the dynamic and rhythmic display of the

2. The Quechee Analysis

“energy capture” function of solar power generation.

The function “fits” the site due to its low profile, minimum disturbance, lack of substantial structures and related elements, and because it will not be readily visible from most of the surrounding areas. LandWorks has prepared cross-sections through the Project site, presented in Figure 3, which demonstrate these qualities of the Project.

2.1.C Are the colors and materials selected for the Project suitable for the context within which it is located?

The solar panel system being employed for this project is the AllSun Tracker. The colors are dark and muted for the panels themselves and their support structures will be galvanized steel. Thus, the colors are suitable insofar as they do not stand out or make the panels or structures highly visible. The tracker follows the path of the sun for maximum solar gain and does not go below a 30-degree angle. The panel is always perpendicular to the incoming sun and therefore any reflected light will be directed back at the sun. Moreover, the panels will have anti-reflective coatings to reduce potential reflectivity, and consequently glare. The existence of intervening vegetation will also limit the potential impact to adjacent residences on Dubois Drive or Knoll Circle. Thus, it can be concluded from these factors alone that there will be no direct off site glare from this project, even for homes that may be higher than the project site. The structure design selected and the size of the structures and panels are such that they will readily fit within the open area designated for the rows of solar panels.

2.1.D What is the Project’s impact on open space?

There will be minimal site disturbance due to the use of earth anchor foundations. Other than the relatively small concrete pads for the transformer/inverter installations, the site will not be substantially impacted from the Project and could be readily returned to its existing state if the Project should be decommissioned.

This is not a public open space nor is there any designated or official public use or access for this property. There is an informal pedestrian trail through the private property, and the developer has agreed to create a public access easement in order to maintain entry through the southern portion of the Project site once the Project is installed. Thus, if this Project is developed, there will not be any impacts on public open space.

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2.1.E Where is the Project visible from?

Figure 2 of this assessment provides photographs of the site and environs, demonstrating the limited visibility of the Project site from surrounding locations. The Project viewshed map (Figure 4) also demonstrates the limited visibility of this Project from surrounding locations, including the residential areas to the west and south. A site reconnaissance conducted by LandWorks along the roads around the site, and within the 1 and 3 mile radius, including Route 116, Interstate 89, Van Sicklen Road to South Brownell Road, Oak Hill Road (Route 2A), Walker Hill Road, and Old Creamery Road yielded the conclusion that there is little, if any, visibility of the Project site from surrounding areas and residential developments. The Muddy Brook watercourse has extensive woodlands and wetlands, which screen the Project site from areas to the south and east. The Project site is almost impossible to pick out from the Interstate, whether pulled over on the breakdown lane or traveling at the speed limit. Higher ground to the east does not offer any distinct views of the Project site and the site itself is difficult to discern given all the land use elements and structures in the view from these vantage points. One residential development in an open area on Overlake View off of Creamery Road has long distance views oriented to the northwest, but no distinct or discernible views to the Project site.

In sum, it is very difficult to pick out the Project site due to the landscape pattern of surrounding buildings, utility infrastructure, hedgerows, rolling topography and woodlands. The Project's low profile and dark colored panels will also greatly reduce off-site visibility.

LandWorks performed a viewshed analysis and created a Potential Visibility Map (Figure 4) and it was determined that only very limited areas of visibility would result from the Project (see also *Notes with regard to Figure 4* in the box that follows). The visual impact of that potential visibility will be minimal because of the scale of the Project, the size of the solar panel structures, and the intervening elements that will make it very hard to see the Project from even distances of over a half of a mile. The only locations with any distinct Project visibility will be from Meadowland Drive in the industrial/commercial park development, and through a narrow clearing that will provide access from Dubois Drive. The view of the Project that these points will provide is shown in Figures 5a and 5b. Only a limited view of the Project site will be possible from Dubois Drive as there is only a narrow opening for the access road; most of the Project will be screened by the existing vegetation on either side of this access road. In the neighborhood itself, the intervening buildings serve to screen the Project along with the surrounding treelines.

Due to this limited visibility, the nature of the site itself, and the Project design, this

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seems to be an ideal site for a solar farm. If constructed, the Project will result in minimal, if any, off-site aesthetic impacts. Figure 2 presents photographs from the surrounding area and also of the site itself.

Notes with regard to Figure 4. Potential Visibility Map

The potential visibility map provides a point of departure for assessing how visible a project may be within its delineated viewshed. The process includes an initial assessment using GIS software and data sets and is then refined by analysis on the ground. Field assessment provides additional verification of visibility or lack of visibility. LandWorks conducted a field study to ascertain the extent of visibility within the 1 and 3 mile radius, using the GIS analysis as a point of departure. The following notes are keyed to the numbers inserted on the Potential Visibility Map and they explain why the visibility of the project, as verified in the field, will be extremely low even within the areas of potential visibility displayed on Figure 4.

1. Only portions of the project will be visible from some locations within this area. Visibility will be minimized, however, by the presence of buildings within the commercial/industrial area. The presence of existing structures, including commercial buildings and residences, as well as vegetation along Route 116 will greatly reduce the areas around the highway from which the project can be seen.
2. Intervening structures, vegetation and the interstate will limit if not preclude any substantial visibility of the project from areas north of the interstate. The height, color and nature of the solar panels and their supporting structures reduce their presence and visibility within the landscape. Given those factors, the further away the viewer is from this project, the less likely or able the viewer will be to discern the project. Views from the interstate will also be negligible due to the factors cited coupled with the fact that 1) travel speeds along the interstate will minimize viewing time and distance as well as make the project difficult to pick out in the landscape, and 2) the orientation of the interstate is such that passengers could possibly glimpse the project only if they are looking south and only if they know where the project location is and what to look for. Field study from the interstate concluded that it was difficult to even pick out the project site when the viewer was stopped in the breakdown lane.
3. Limited visibility of the project may be possible from areas to the southwest but the visual impact will be negligible due to the distance from the project and the extent of the project that will be visible (i.e. only a portion of the total panels and structures will be visible). Additionally, there is a much broader view from some locations in the area to the west of South Brownell Road that will diminish the presence of the project within the landscape and thus the visual impact.

2.1.F Conclusion to the First Step of the Quechee Analysis

The conclusion of the first step of this assessment is that the Project will most likely not result in an "adverse" impact on the aesthetics and scenic beauty of the area under the Quechee Analysis. However, given past Act 250 and Section 248 cases, the threshold for adverse impact under Quechee is low, and one could argue that siting 383 +/- solar panels in an open field is sufficiently different than the existing land uses in the area that it would potentially result in an adverse effect to the Project site.

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Assuming this were the case, the second step of the Quechee Analysis would need to be addressed. We have conducted that second step in the next section of this assessment.

2.2 The Second Step of the Quechee Analysis

2.2.A Does the Project violate a clear written community standard intended to preserve the aesthetics or scenic, natural beauty of the area?

"In order for a provision to be considered a clear, written community standard, it must be 'intended to preserve the aesthetics or scenic beauty of the area' where the proposed project is located and must apply to specific resources in the proposed project area."¹

In evaluating whether a project violates a clear community standard, which directly addresses aesthetics or a scenic resource under the Quechee test, the Board routinely looks to the town plan as the foremost document for providing these standards. If the Board finds that such standards do exist, and that the project as designed would violate those standards, the adverse impact would be undue.

The development boundaries of the SBSF are located in the City of South Burlington and under the purview of the Chittenden County Regional Planning Commission (CCRPC). A review of the South Burlington Comprehensive Plan and the Chittenden County Regional Plan yields the conclusion that the solar project will not violate a clear, community standard intended to preserve the aesthetics or scenic beauty of the area in accordance with the Quechee test. The Chittenden County Regional Planning Commission invested two and a half years in the preparation of the 2006 Regional Plan and it was adopted on August 28, 2006. The Regional Plan makes reference to the use of solar power as an alternative energy source, but it does not indicate what impacts, if any, such uses have on the scenic and natural beauty of the area. Likewise, there are no clearly identified resources of aesthetic value in the plan, nor are there any policies that outline the means for their protection. In fact the Plan recommends *"Municipal land-use regulations...should encourage larger-scale renewable energy sources as principal uses."* Regional Plan, p. 10.14.

Regional plans, in general, contain overriding goals, policies and recommendations, which are characteristically advisory and non-compulsory in nature. Statements are usually made in terms of "encourage," "support," "promote," and "should," terms

¹ In re Halnon, NM-25, Order of 3/15/01 at 22 n.5.

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that in Act 250 cases have been determined to constitute non-mandatory language. Regional plans, as a matter of policy, are focused on broader issues, which affect the region as a whole, and typically do not consider impacts on an individual town. Thus, while it is important to consider relevant regional policies in this Quechee analysis, these must be weighed against the independent and more specific standards provided in the local town plans.

The City of South Burlington's Comprehensive Plan seeks to *"protect the City's important scenic vistas and view sheds"* and *"promote well planned development that protects the City's important...views"* (p. 94). The City also encourages the *"preservation of important scenic views from public ways including roadways, parkland, pedestrian trails and recreation paths...through appropriate development design whereby buildings and landscaping are placed so as to minimize disruption to the scenic view"* (p. 96). However, there are no clearly defined criteria that specifically identify these areas, nor are there any standards to implement these broad goals. The area to be leased for Project development is located in the Southeast Quadrant, as identified on the February 25, 2008 South Burlington Zoning Map, and is further delineated as a Neighborhood Residential (SEQ-NR) subdistrict on the February 25, 2008 South Burlington Southeast Quadrant Zoning Map, with a minor portion along the southern boundary situated within the Natural Resource Protection (SEQ-NRP) subdistrict. One of the goals for the SEQ states *"Allow for continued growth and development while at the same time avoiding unmitigated negative impacts to . . . scenic views . . ."* Comprehensive Plan, p. 29. However, there are no explicit standards listed in the Plan for the SEQ district, or either of the subdistricts, that limit or strictly prohibit development on this parcel due to its scenic value.

It should be noted that the northern half of the Project development site is also located within the Hinesburg Road North Scenic View Protection Overlay District (HRNSVPOD). January 5, 2009 South Burlington Overlay Districts Map. The Comprehensive Plan provides no guidance for view protection zones other than *"such zones are designed to limit the height and placement of structures and landscaping in order to preserve spectacular views from public lands and r.o.w.s"* (p. 171). However, the South Burlington zoning regulations do provide some further guidance by limiting structures in this district to no more than 393.5 feet above mean sea level, plus 5.8 feet for each 1000 feet the structure is horizontally distant from the boundary line shown on the above referenced Overlay District Map. South Burlington Land Development Regulations, p. 10-11. The highest point within the Project parcel is 350 feet and the maximum height of the solar collector will be approximately 19 feet. Therefore, the structures will fall well below the maximum structure height required in the scenic overlay district and will not violate a clearly written community standard.

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In conclusion, the applicable Regional and Town plans do not contain "clear, written community standards intended to preserve the aesthetics or scenic beauty of the area" because there are no mandatory provisions or language that could be considered a clear guide for protecting scenic values under Step 2 of the Quechee analysis. The zoning regulations provide one clear standard that may apply to a portion of the site, namely, the portion within the HRNSVPOD, but the Project development will be well within the zoning standards and thus will not violate them.

2.2.B Does the Project offend the sensibilities of the average person? Is the Project, when viewed as a whole, offensive or shocking, because it is out of character with its surroundings, or significantly diminishes the scenic qualities of the area?

The Project will not be shocking or offensive to the average person due to its low profile, limited visibility, and limited impacts to the site itself. Additionally, the land uses and industrial activities to the north are compatible with the Project, and the Project will not be visible to most people traveling, living, or working in the area.

Even from locations where the Project is visible, it will not be seen in its entirety from any vantage point and thus the visual impact will be reduced due to this factor. Finally, there is a heightened public awareness about larger scale solar projects of this sort and people understand that they represent a "green" or renewable energy source. This consideration adds to the acceptability of the Project and lessens the potential that the Project will be shocking or offend the average person.

2.2.C Has the applicant taken generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed Project with its surrounding?

The applicant has planned, and will take, the generally available mitigation steps a reasonable person would take to reduce the aesthetic impacts of this Project, including: 1) selecting a suitable site with limited off-site visibility; 2) employing elements such as black colored perimeter fencing to reduce its visibility; 3) limiting any clearing and thus maintaining vegetative screening; 4) proposing that the electrical connector line to the GMP electrical grid be installed underground; and, 5) allowing a public access easement along the southern boundary as a means to maintain the informal neighborhood trail.

The layout of the panels and the selection of the panels and their support structures are such that the solar project will have a relatively low profile in the landscape allowing the surrounding vegetation to suitably screen the Project. The structures

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will be secured to the ground plane using earth anchors, which will result in the least amount of disturbance possible to existing surface and subsurface soils.

Additionally, the developer will continue to allow a trail through the property, but it will be relocated so as to be outside of the Project area to protect public safety. The relocated trail will connect at either end with the access points currently, though informally, used by neighborhood walkers over this privately owned land.

2.3 Overall Conclusion

Based on our analysis, as described in the narrative above, we conclude unequivocally that the Project, if constructed, would not result in an undue adverse impact to the aesthetics and scenic beauty of the area. The Project's impacts will not be unduly adverse because: 1) the Project will not be shocking or offensive to the average person; 2) the Project does not violate any clearly written community standard; and 3) the applicant has taken reasonably available mitigation steps to reduce the Project's visual and aesthetic impacts. In summary, this is an appropriate Project sited in an appropriate location that will have limited, if any off-site aesthetic impacts.

3. Impacts to Historic Resources

A requirement of the Section 248 review includes a determination of whether a proposed project will have an undue adverse effect on historic sites within the surrounding areas of the project. To address this requirement, LandWorks has undertaken a review of the historic structures in the vicinity of the South Burlington Solar Farm, including the City of South Burlington and the Town of Williston, and has concluded that the Project will create no undue adverse effect on any historic sites.

This review was conducted following standards used by the Vermont Division for Historic Preservation (VDHP), guided by Section 106 of the National Historic Preservation Act, and that have been applied in other Section 248 cases. Project review identified potential historic buildings, structures, and historic districts. Research of these resources was conducted by examining National Register and State Register (SR) files at VDHP offices in Montpelier, VT for structures that are currently listed. To establish an appropriate Area of Potential Effect (APE), LandWorks relied on our familiarity with the site and environs, as well as the viewshed map (Figure 4), which provided a 1-mile radius around the Project Site and also identified areas with potential visibility. Since the nature of the Project with its low profile within the landscape greatly reduces visibility from long-distances, the 1-mile radius was used as the APE for the historic structure review. Fieldwork involved visiting, photographing, and identifying potential impacts to the structures within the APE and within the area of potential visibility.

There are eleven (11) individual sites listed on the State Register that are located within the 1-mile APE. Based on research and field analysis it was noted that there did not appear to be any additional sites or structures eligible for listing on the State or National Register within the 1-mile project radius. The following table and accompanying photographs and location map (see Figure 6) provide a listing of these resources, their locations, and visibility. Due to topography, buildings and forested woodland, there will be no views from these sites, and it can be concluded that the Project will not have an undue adverse impact on historic resources. The Vermont Division of Historic Preservation has reaffirmed this conclusion. In an email to David Raphael of LandWorks from Devin Colman, Historic Buildings Specialist with the Division, dated, March 30, 2010, Mr. Colman stated: "I looked at the historic assessment and concur there are no direct or indirect effects to historic structures since the project will not be visible." A letter from the Division addressing historic sites and archaeology will be included in the section 248 application.

What's the "Area of Potential Effects"?

The SHPO uses the federal definition of "Area of Potential Effects" (APE) to describe the maximum area that may be affected by a project. Both direct and indirect effects to historic resources must be considered when determining the APE.

"The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." [36 CFR 800.16(d)].

Source: Vermont Dept. of Historic Preservation
<http://www.historicvermont.org/general/reviewfaq.html>

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3. Impacts to Historic Resources

Table 1. Listing of Historic Sites

Site #	Site Name	Use	Listed	Potential Visibility/ Impact
1	700 Hinesburg Rd.	Private Residence	SR	None
2	1075 Hinesburg Rd.	Private Residence	SR	None
3	1100 Hinesburg Rd.	Not Extant	SR	None
4	1425 Hinesburg Rd.	Private Residence	SR	None
5	1475 Hinesburg Rd.	Private Residence	SR	None
6	1500 Hinesburg Rd.	Private Residence	SR	None
7	1550 Hinesburg Rd.	Private Residence	SR	None
8	1731 Hinesburg Rd.	Private Residence	SR	None
9	3188 S. Brownell Rd.	Private Residence	SR	None
10	700 Van Sicklen Rd.	Private Residence	SR	None
11	86 Van Sicklen Rd.	Private Residence	SR	None

4. Orderly Development and Public Investments

4.1 Orderly Development

Section 248 requires that a project not unduly interfere with the orderly development of the region. This Project will not unduly interfere with the Orderly Development of the Region and is, in fact, consistent with the local and regional plans and those plans' advocacy for the development of renewable energy resources and generating facilities. For example, the City of South Burlington's Comprehensive Plan states on page 10 *"It is a goal of this City to provide quality public and quasi public utilities and services to all residents and businesses in a manner that is efficient, cost effective and environmentally sound."* The South Burlington Plan also seeks to preserve natural areas within the Southeast Quadrant, where the Project is proposed, and the solar farm will avoid disturbing these areas by placing all structures outside the wetlands and wetland buffer. Williston, the adjacent town to the east and portions of which are within the 3 mile radius of the Project, states on page 70 of its comprehensive plan that: *"The Town of Williston will encourage the development of renewable energy resources to support the diversification of Vermont's electric resources portfolio, as well as local and regional energy stability and independence."* The Chittenden County Regional Plan also includes policies and goals that directly support the development of local renewable energy generation facilities, as reflected on page 10.14 of the plan, Policies 1 through 3. Availability of local and reliable power sources is critical to the future planned development of any region. In fact, VELCO recently upgraded its electrical transmission capabilities via the Lamoille County Project to better serve the Town of Stowe, which had previously been forced to place a moratorium on new, planned development due to a lack of sufficient and reliable power.

Thus, this Project is an integral part of the region's orderly development, is proposed for a site that is suitable for the use being proposed and will, in fact, support Orderly Development by avoiding key natural features and providing a local source of renewable energy that is necessary for such development to occur.

4.2 Public Investments

Section 248 also references and incorporates 10 V.S.A. Section 6086, which includes Act 250 Criterion 9(K): Development affecting public investments. The South Burlington Solar Farm, as proposed, will not "unnecessarily or unreasonably

4. Orderly Development and Public Investments

endanger" or "interfere with...the public's use and enjoyment of...or access to" any public investment adjacent to or in the vicinity of the proposed Project site.

The only public investments adjacent to this Project are the conserved lands that are part of the Muddy Brook stream corridor, which is located to the east of the Project site. This Project will have no material effect on the functional, aesthetic or recreational qualities of this public investment and the public's ability to access, use or enjoy the lands and/or the trail system associated with these conserved lands. The access through the private property of the Project will be maintained but relocated to ensure that there are no conflicts with the public or safety issues. The Project will not be readily visible from the conserved lands or the trail network within those conserved lands due to existing screening and the location of the trails.

4.3 Conclusion

In conclusion, the Project is proposed for a site that is suitable for the proposed use and will support the region's goals for local renewable energy sources. The site itself is not currently used for a legal public use. However, the developer intends to allow a public access easement across the property in order to maintain the informal pedestrian path to the trail system associated with the adjacent conserved lands. Therefore, similar to the aesthetic impact and the impact on historic resources, the Project will not have an adverse impact on the region's orderly development or public investments.

