

4430 South Adams County Parkway 1st Floor, Suite W2000 Brighton, CO 80601-8204 PHONE 720.523.6800 FAX 720.523.6998

Request for Comments

Case Name: Case Number:

Hudson Community Solar Garden

RCU2015-00037

October 8, 2015

Adams County Planning Commission is requesting comments on the following request:

Request for a conditional use permit to allow a solar garden on the property located at 5900 Hudson Road.

This request is located at 5900 Hudson RD

The Assessor's Parcel Number is 0181900000027

Applicant Information:

HUDSON COMMUNITY SOLAR GARDEN LLC (LUKE RICKARD)

1441 18TH STREET, SUITE 400

DENVER, CO 80202

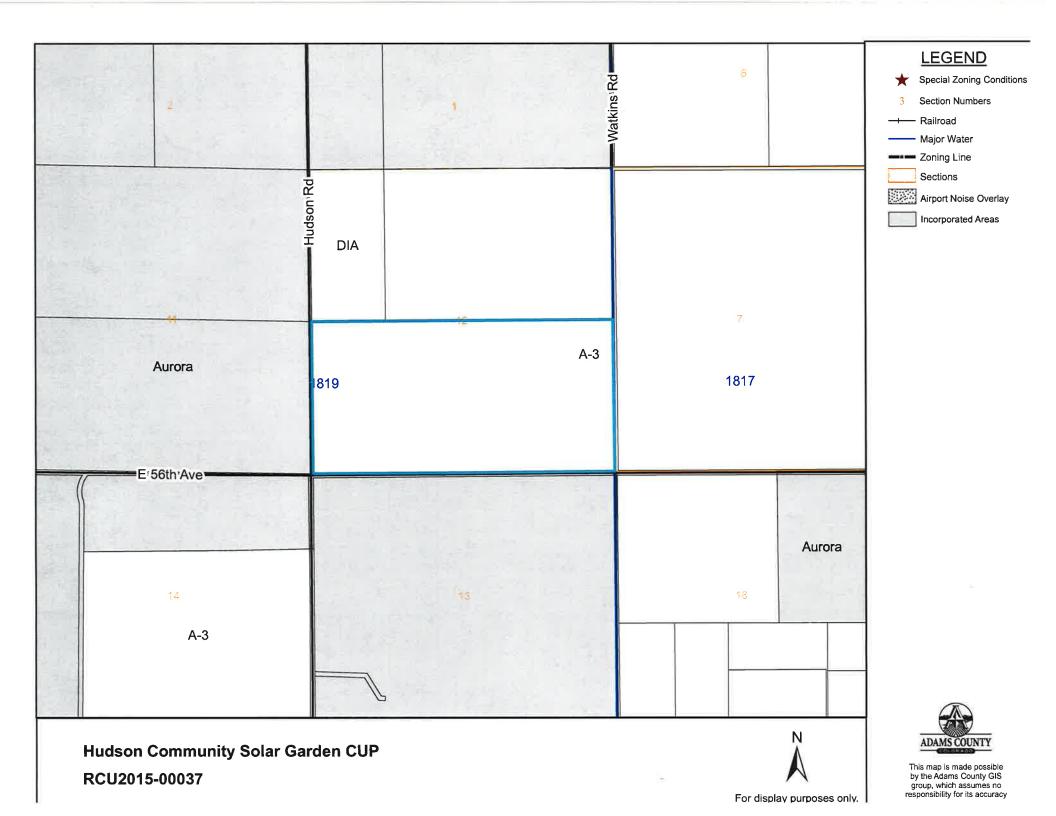
Please forward any written comments on this application to the Department of Community and Economic Development at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 (720) 523-6800 by 10/30/2015 in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to GJBarnes@adcogov.org. Once comments have been received and the staff report written, the staff report and notice of public hearing dates will be forwarded to you for your information.

The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at www.adcogov.org/planning/currentcases.

Thank you for your review of this case.

Greg Barnes

Case Manager





Submittal Item C - Written Explanation

Date: September 20, 2015

To: Adams County Planning and Zoning

RE: Conditional Use Permit Application for a Community Solar Garden to be called "Hudson Community Solar Garden".

Explanation of Project

Hudson Community Solar Garden LLC ("Applicant"), a wholly-owned subsidiary of SunShare LLC ("SunShare"), would like to build a Community Solar Garden ("Project") in cooperation with Xcel Energy at 5900 Hudson Road, Watkins, CO 80137. SunShare subsidiary CO Land Acquisitions LLC has executed a lease agreement for a nominal twenty (20) -acre parcel on the north of the three hundred and twenty (320) -acre subject property (Parcel ID 0181900000027). SunShare seeks a Conditional Use Permit ("CUP") from Adams County. The following outlines key aspects of the Project and our application:

- 1. The parcel is currently zoned A-3 "Ag dry farming land". In our previous experience in permitting similar projects in Adams County this is the proper zoning for a Major Energy Facility such as a Solar Garden. The site is not in a regulated floodplain and there are no site restrictions for this type of development. The Project site land is ideal for a solar facility due to its adjacent property uses, relatively flat topography, soil characteristics and close proximity to utility three phase distribution lines. The site features adequate space for the proposed use with no environmental constraints. All uses of the lease parcel under this development application will be compatible with the underlying zoning.
- 2. SunShare will design and construct the Project in accordance with all applicable zoning regulations and building codes, and in compliance with the requirements and conditions of the CUP issued by Adams County. SunShare will also ensure that any and all applicable performance standards are met or exceeded. Assuming that Commission and Board approval is received in time for us to begin the construction permitting process in November 2015, the following tentative schedule is under consideration:



CUP Approved / Building Permit Submitted

Solar Garden Component Delivery

Perimeter Fence Installation

• Transformer and Inverter Installation

Solar Panel Foundation Installation

Solar Panel Installation

· System Operational

Nov. 20, 2015

Dec. 21, 2015 - Jan. 22, 2015

Dec. 28, 2015 - Jan. 22, 2015

Jan. 11, 2016 – Jan 29, 2016

Jan. 25, 2016 - Feb. 26, 2016

Feb. 15, 2016 - Apr. 15, 2016

Spring 2016

3. The solar facility is expected to operate for twenty (20) years with likely extensions in Xcel interconnect contract. The photovoltaic ("PV") technology proposed for installation will be of industry standard, has been used widely in thousands of projects across the state and country, and is designed to achieve a high level of performance efficiency. The technology is designed to exceed the 20-year design life of the facility. The technology features approximately ten thousand (10,000) standard PV modules mounted on single-axis tracking arrays and connected to central inverter stations. The tracking arrays will follow the sun; facing east in the morning, laying flat at noon, and facing west in the afternoon. The technology is clean, quiet and generates no dust or other environmental pollutants.

The long-term operation and maintenance of a solar facility is clean, quiet and safe. A quarterly maintenance diagnostic is the only regular traffic anticipated for the long-term maintenance of the facility. Amenities such as parking lots, water and sewer service, septic, and other infrastructure are not required due to the facility being unoccupied on a day-to-day basis. Performance of the solar facility is tracked through sophisticated data acquisition equipment that tracks production and allows remote system monitoring.

At the end of the project life the solar generation equipment will be removed from the site and the facility will be decommissioned. Many of the commodity components such as steel, aluminum and copper can be recycled. There may be a second-hand market for the used PV modules as they will continue to be usable. The Project site will be restored to its original state including reseeding of the native vegetation (low growth prairie grass).

4. Denver International Airport is located North of the subject property. The Front Range Airport is to the East of the Project. The Federal Aviation Administration (FAA) has provided a letter of no hazard to aviation regarding this project (see attachment). SunShare has obtained a letter from DIA from



their preliminary review of the proposed Project also with no initial objections (see attachment), although they did note that the project lies near a future runway approach should DIA expand their runways in the future. SunShare does not anticipate any aviation-related issues with this Project over the next twenty years.

- 5. The Bennett Fire Protection District Fire Marshall has been supportive of previous SunShare projects in the area. SunShare has obtained approval of the CUP plan set from the Bennett Fire Protection District (See attachment).
- 6. For previous SunShare projects in the area Steve Voehringer, Development Review Coordinator for the Water and Sanitation District, indicated that his Department would only be involved if the Fire Marshall needs a fire hydrant. Additionally, conversations with Tri-County Health regarding previous projects in the area determined that no permanent septic system is necessary for a solar garden. Consequently SunShare is assuming that no permanent municipal or county water or sewer service will be needed at the site as these items are not required for daily operation of the Project, which will be unoccupied during daily operation. There is currently no permanent water or sewer at the site. SunShare or SunShare's general contractor will provide adequate and portable potable water, construction water and sanitary facilities during on-site construction activities; proof of which will be furnished during the construction permit phase.
- 7. SunShare does not anticipate any significant offsite impacts due to the Project, with no pollution, noise, emissions, heavy traffic or similar conditions expected during normal operation. There will be no lighting associated with the finished facility. Offsite impacts during construction will primarily be related to construction traffic and are more clearly detailed in the attached traffic letter. SunShare will design and build the Project in compliance with all zoning setbacks and outside of the future right-of-way for the planned future Hudson Road expansion. Applicant has obtained preliminary comments from the City of Aurora and will comply with all applicable recommendations (see attachment).
- 8. There are no environmental constraints related to this property. There are no trees, foliage, wetlands or other natural vegetation on site other than native low-growth prairie grass. No land grading will be required for the Project. The



natural drainage of the site topography will be maintained. These items are more clearly detailed in the attached drainage letter.

- 9. Access to the property would be from Hudson Road. Applicant will make use of the existing dirt road access from Hudson Road and will build a short access driveway with a code approved turn-around area as shown on the site plans. Hudson Road is controlled by the City of Aurora; Applicant has confirmed with Aurora that no access permit will be necessary for the proposed project access. Applicant will secure an access easement with the landowner and the neighboring oil/gas extraction lease holders as necessary for the portion of the existing road that we plan to use. Our access driveway would be a code approved road that is also compliant with fire access code. There will be ample space within the site boundaries for construction crew parking and equipment and material laydown. The proposed hammerhead cul-de-sac on the access driveway will provide ample parking space for maintenance inspection or repair activities; there will be no permanent staff onsite during normal operation.
- 10. Our solar site will be protected by a six to eight (6-8) feet high fence around the perimeter in compliance with National Electric Code (NEC) and for security reasons. Site may have several security cameras to monitor theft, vandalism, and weather conditions. Access to the Project site will be via a swing gate twenty (20) feet wide that will be locked. The lock will comply with the Bennett Fire Protection District's specifications and requirements. The Project fence line will be located four hundred (400) feet from the current Hudson Road right-of-way center line and does not abut any less intense uses identified under Section 4-16-18-01 of the Adams County Development Standards and Regulations. Consequently Applicant is not including a landscaping plan as part of this planned use.
- 11. Construction of the solar garden is expected to mobilize in late 2015. The construction process is expected to last twelve to sixteen (12-16) weeks. No land grading is expected. Structural and mechanical installation will involve several trucks and crews and various pile driving and excavation machines. Electrical installation will involve several trucks, trenching machines, and crews including licensed electricians.



- 12. The solar array rows will extend north to south in neat, symmetrical rows. The modules will be mounted on single axis trackers meaning they will track from east to west on daily basis. At full tilt angle the height expected is nine (9) feet, but will be closer to six (6) feet at solar noon. The maximum allowable height for a ground-mounted solar system per Adams County Code Section 4-03-03-02-10 is fifteen (15) feet. Electrical equipment will consist of transformer and inverter stations located close to the solar arrays and grid interconnection equipment located on the western edge of the project site. All equipment will be set back at least twenty (20) feet from the fence line and are shown on the site plan at a distance of approximately seven hundred (700) feet from the Hudson Road center line. Given the distance of the Project from the road and the presence of a berm and large grain silos between the road and the Project, Applicant asserts that the visual impact of the Project from Hudson Road will be limited.
- 13. Interconnection to Xcel's distribution grid will be made to the distribution lines running north to south along Hudson Road or the existing utility lines serving the grain silos located immediately west of the Project. Xcel will most likely run a line from their distribution grid and connect to the electrical equipment on the western edge of our Project property. Applicant chose this site because of its close proximity to grid infrastructure and flat land suitable for solar development.
- 14. Applicant has already held a community meeting related to this project on May 27th, 2015 at Lulu's Inn in Watkins, CO. No objections to the proposed development were voiced at this meeting. A sign-in sheet for the meeting is attached for reference.
- 15. Conceptual Review Questions: The following issues were included as relevant planning issues in the Conceptual Review Letter sent after our meeting and are addressed as outlined below:
 - a. Water: Applicant does not believe that a permanent water source will be necessary for the long-term operation of the facility.
 - b. Sanitation: Applicant expects that sanitation will not be necessary for the long-term operation of the facility. A check for the relevant amount is included herein should Tri-County Health review be necessary.



- c. Soils: A soils report for the specific project parcel is pending. SunShare has evaluated other soils in the immediate area and is confident that the soils under the proposed site will be suitable for the proposed use.
- d. Public Land Fees: do not apply as Applicant is not platting the land.
- e. Traffic Impact Fees: See Submittal Item I and the attached Traffic Impact Study.
- f. Setbacks: Applicant will observe and maintain all required setbacks associated with the A-3 zone district and Section Line Arterial roads as necessary.
- g. Height: Applicant is not installing a screening fence at this facility due to the set back distances from the road. Solar system design will comply with the height requirements in Section 4-03-03-02-10.
- h. Animals: Should animals or livestock be kept on the Project parcel, Applicant will ensure that all requirements of the Animal Keeping Regulations are met.
- i. Landscaping: Section 4-16-19-01 requires the installation of landscaping where the property fronts on a public street or less intense use. As seen on the attached site plan, the Project lease parcel does not front on a public street and is not adjacent to another use of any kind. The property fence line is four hundred (400) feet from the Hudson Road center line and the closest solar arrays are shown as seven hundred (7800) feet away from the same. In addition, there are currently large grain silos and oil/gas infrastructure on the property, which would be between the Project and the road. Therefore, Applicant believes that the requirements of this Section do not apply in this case and is not currently planning any landscaping or screening fence installation for the Project.
- j. Parking: Permanent Parking will not be installed as the Project will not have a permanent staff during operation. There is ample space for craft parking during construction.
- k. Airport Height/Noise Overlay, Airport Zone of Influence: The proposed use is not specifically prohibited under Sections 3-32, 3-33 and 3-34. Applicant has secured a letter of no hazard determination from the FAA with regard to this proposed project (see attached letter). Pursuant to these Sections, the Project will not emit steam or smoke and is not considered to attract birds or other wildlife. A glare analysis was included in the FAA aviation hazard study, which determined no hazard to aviation. Applicant does not anticipate any interference with electronic communications between aviators and ground control. All other



- applicable requirements of Sections 3-32, 3-33 and 3-34 will be complied with.
- I. Municipal Growth Area: Applicant has contacted the City of Aurora and has received preliminary comments from them regarding the proposed use. There were no major concerns stated other than ROW requirements related to Hudson Road (see attached letter).

m. Other:

- i. Relationship with Energy Provider: The project would be built and power delivered into the distribution grid under a supply agreement with Xcel Energy. Project ownership and operation would be by SunShare LLC or its subsidiaries and/or affiliates. SunShare LLC plans to secure third-party financing for the construction of the Project.
- ii. Neighborhood Meeting: see item (14) above.
- iii. List of Frequently Asked Questions: much of the information generally requested is already included in the preceding sections. Items mentioned but not previously specifically addressed:
 - Wind/Snow loads: The solar modules and their racking will be designed to meet or exceed all required wind or snow loading ratings.
 - 2. PV Cell Life: PV cells can last for decades and degrade at a set rate as energy is produced. Module manufacturer output guarantees last for 20-25 years, coinciding with the proposed project life. It is expected that the modules will still be capable of energy production upon plant decommissioning.
 - 3. Weed Control: Native ground cover (low growth grasses/wildflowers) will be planted after construction. If necessary, weed control will be achieved through mowing. However, Applicant is considering periodic livestock grazing as a method of plant control within the project parcel.
 - 4. Metrics: There is no set way to determine exactly how many homes could benefit directly from a solar installation. However, based on averages, approximately four to six hundred (400-600) homes could potentially benefit from this Project.

iv. Potential issues:

1. Environmental: Environmental issues for the Project site related to PV technology installation or operation are not



- anticipated. The use of toxic substances during construction is expected to be limited to diesel or gasoline fuel for construction equipment. PV technology is clean and quiet and generates no harmful emissions.
- 2. Cultural or historical issues: no cultural or historical issues are expected as a result of the Project's location or operation. Applicant does not believe the site to be of significant archaeological or paleontological significance.
- v. Site Cleaning: Applicant would require the Contractor overseeing construction of the Project to leave the site in a clean and orderly condition in order to achieve Final Completion under the Contract. See section 3 above for information related to decommissioning the facility after its operational term has expired.
- vi. Solar Energy Conversion/Transmission: solar energy from the modules would be converted from DC power into AC power at the inverter stations. AC power will then be converted to distribution grid voltage through a transformer and connected to the grid at the Point of Common Connection (PoCC). There will be a meter at the PoCC to track the production of the facility and allow Xcel to compare the power produced against subscriber's consumption over a 12-month period. Xcel energy would determine what physical structures or equipment would be necessary for interconnection to their distribution grid.
- n. Relevant Engineering Issues:
 - Drainage: Applicant discussed drainage onsite with County Engineer Matt Emmens as requested. No specific drainage requirements for the site were outlined during the discussion. See attached drainage letter for more information.
 - ii. Traffic: Please see the attached traffic study letter for information on the expected traffic impacts in the local area both during construction and operation.
 - iii. Roads/Right-of-Way: Applicant discussed Right-of-Way with County Engineers Matt Emmens and Ian Cortez as requested. It was determined that the City of Aurora holds jurisdiction over Hudson Road. Conversations with Rick Hunter and Porter Ingrum at the City of Aurora determined that no Access Permit would be required from the City for site access.



- iv. Easements: Applicant will contact any easement holders on the parcel to discuss any concerns in advance of commencing construction activities. In addition, Applicant will work with the landowner to secure an Access Easement from the Hudson Road ROW to our project site.
- v. Utilities: with the exception of the electrical service interconnection from Xcel needed for operation, no permanent utilities are required at the site as it will not be occupied during operation.
- vi. Floodplain: Applicant contacted County engineers Greg La Brie and Matt Emmens regarding the floodplain. A small part of the western portion site is listed as being within a 500-year floodplain. It was determined that a floodplain permit is not required for the Project. Applicant believes that this floodplain designation represents a minimal risk to the project.
- 16. Attached you will find the following items as inclusions to this submission (single copies each unless otherwise stated):
 - a. Development Application Form (Submittal Item A)
 - b. Conceptual Review Meeting Summary Letter (Submittal Item B)
 - c. Written Explanation and General Overview (Submittal Item C), forty (40) copies
 - i. Site Development Plan, forty (40) copies
 - ii. Neighborhood Meeting Summary
 - iii. Preliminary Drainage Study Letter, six (6) copies
 - iv. Review of Project by FAA and DIA
 - v. CO Parks and Wildlife Letter
 - d. Applicant Feedback Survey Form (Submittal Item D)
 - e. Traffic Impact Fee Acknowledgement Affidavit (Submittal Item I)
 - i. Traffic Impact Study Letter, six (6)copies
 - f. Certification of Notice to Mineral Estate Owners (Submittal Item J)
 - g. Application Fee (Submittal Item M)
 - h. Statement of Taxes Paid
 - i. Updated Title
 - j. Legal Description
 - k. Current ALTA Survey, four (4) copies



Thank you for your consideration; we look forward to moving this Project forward alongside Adams County Building and Planning Department.

Best Regards,

Luke Rickard, Solar Project Developer

Sun Share

1441 18th Street; Suite 400

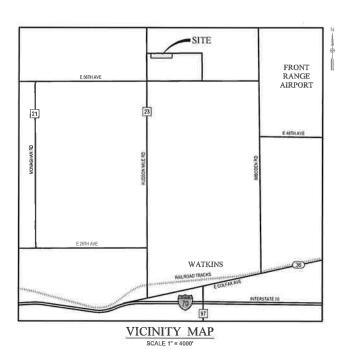
Denver, CO 80202

Direct: (720) 501-5136

Email: Irickard@mysunshare.com

CONDITIONAL USE PERMIT **HUDSON COMMUNITY SOLAR GARDEN**

LOCATED IN THE SOUTH ONE-HALF OF SECTION 12, TOWNSHIP 3 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF ADAMS, STATE OF COLORADO



LEGAL DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SAID SECTION 12, TOWNSHIP 3 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

BASIS OF BEARING OF THIS DESCRIPTION IS ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF SECTION 12
ASSUMED TO BEAR N89°38′07″E A DISTANCE OF 2638.82 FEET FROM A 3.25″ ALUMINUM CAP L.S. ILLEGIBLE FOUND AT
THE WEST QUARTER CORNER OF SAID SECTION 12 TO A 3.25″ ALUMINUM CAP L.S. #13155 FOUND AT THE CENTER QUARTER CORNER OF SAID SECTION 12;

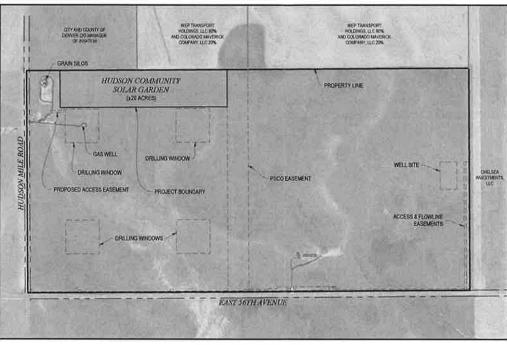
BEGINNING AT A POINT ON SAID NORTH LINE, SAID POINT BEARS N89°38'07"E ALONG SAID NORTH LINE, A DISTANCE OF 400 00 FROM SAID WEST QUARTER CORNER OF SECTION 12;

THENCE CONTINUING N89°38'07"E ALONG SAID NORTH LINE, A DISTANCE OF 1,988.81 FEET; THENCE S00°29'40"E A DISTANCE OF 441.50 FEET; THENCE S89°38'07"W A DISTANCE OF 1,988,73 FEET; THENCE N00°30'19"W A DISTANCE OF 441.50 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 878,032 SQUARE FEET OR 20.157 ACRES OF LAND, MORE OR LESS.

GENERAL NOTES:

- BEARINGS ARE BASED ON THE NORTH LINE OF THE SW/, SECTION 12, T3S, R65W, 6TH P.M. ASSUMED TO BEAR N89°38'07"E A DISTANCE OF 2638 82 FEET FROM A 3.25° ALUM. CAP L.S. #13155 FOUND AT THE CENTER QUARTER CORNER OF SAID SECTION 12
- 2. UTILITY COMPANY: XCEL ENERGY, 1-800-628-2121.
- 3 GENERATION FACILITY LAYOUT IS CONCEPTUAL AT THIS TIME, FINAL EQUIPMENT SELECTION AND LOCATIONS, INCLUDING PV ARRAYS, INVERTERS, TRANSFORMERS, AND INTERCONNECTION EQUIPMENT MAY BE SUBJECT TO CHANGE DUE TO DESIGN OR UTILITY INTERCONNECTION REQUIREMENTS OR OTHER



OVERALL SITE MAP

APPLICANT HUDSON COMMUNITY SOLAR GARDEN LLC DENVER, COLORADO, 80202 CONTACT: LUKE RICKARD (720) 501-5136

ENGINEER ENERTIA CONSULTING GROUP, LLC 1529 MARKET STREET, SUITE 200 DENVER, COLORADO 80202 CONTACT: SEAN O'HEARN, PE, PG (303) 473-3131

SURVEYOR PRECISION SURVEY 9145 EAST KENYON AVENUE, SUITE 101 DENVER, COLORADO 80237 CONTACT: CHRIS JULIANA, PLS (303) 753-9799

SITE DATA

PROJECT AREA: ±20 ACRES INDUSTRY STANDARD PV MODULES INDUSTRY STANDARD CENTRAL INVERTERS INDUSTRY STANDARD SINGLE-AXIS TRACKING SYSTEM

SHEET INDEX

- 1 COVER SHEET
- 2 SITE PLAN
- 3 EROSION & SEDIMENT CONTROL PLAN
- 4 TYPICAL DETAILS
- 5 BMP DETAILS

LEGEND	
	PROJECT BOUNDARY
	ROW LINE
and the same of th	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SETBACK LINE
	PROPOSED CHAIN LINK FENCE
опполини полив	PV ARRAY
1945	PROPOSED ACCESS DRIVE
	INVERTER PAD
	POINT OF INTERCONNECT

BOARD OF COUNTY COMMISSIONERS APPROVAL

APPROVED BY THE ADAMS COUTHIS DAY OF	JNTY BOARD OF COMMISSIONERS, A.D., 20
CHAIR:	
ATTEST:	

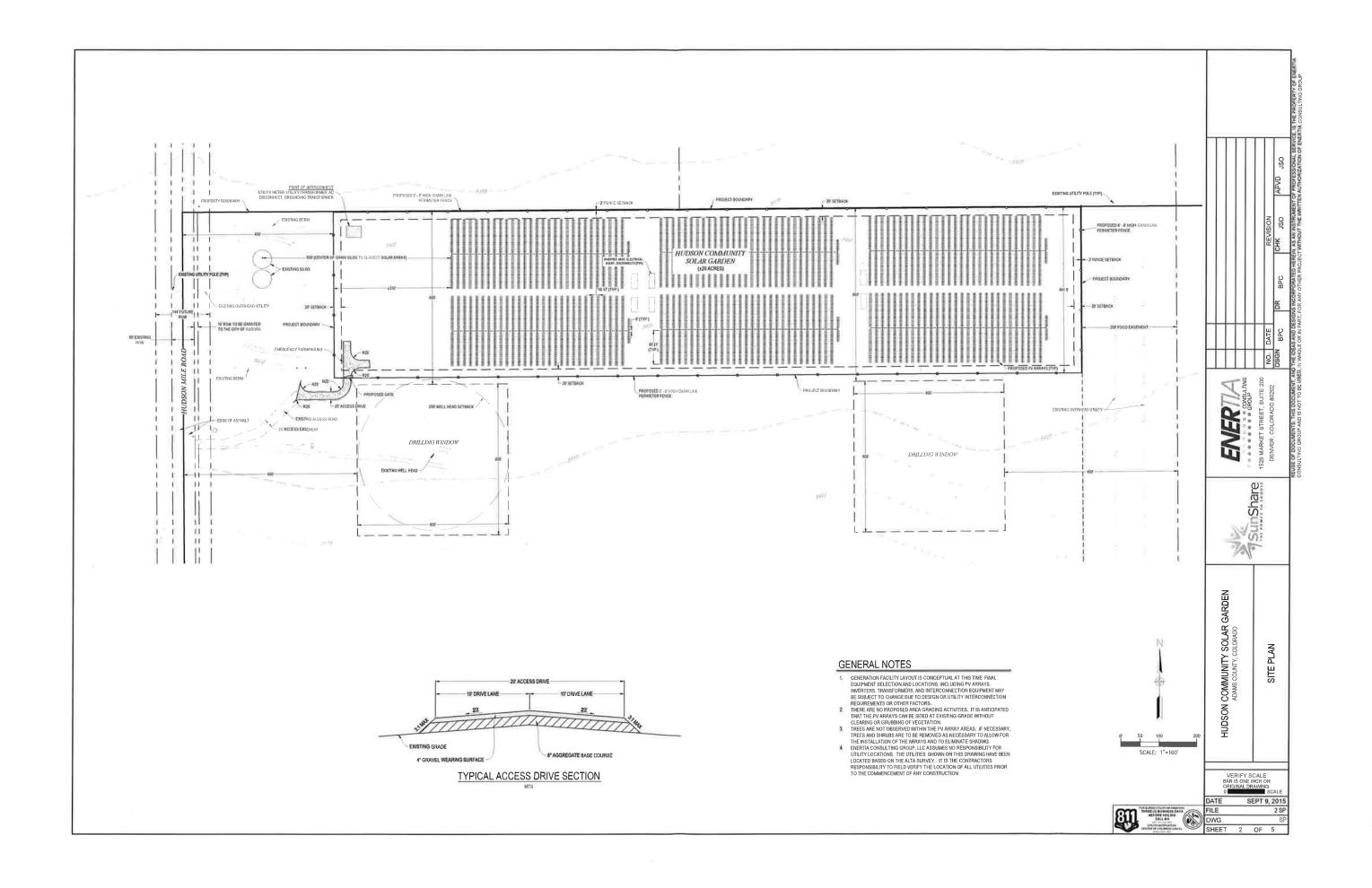
PLANNING COMMISSION RECOMMENDATION

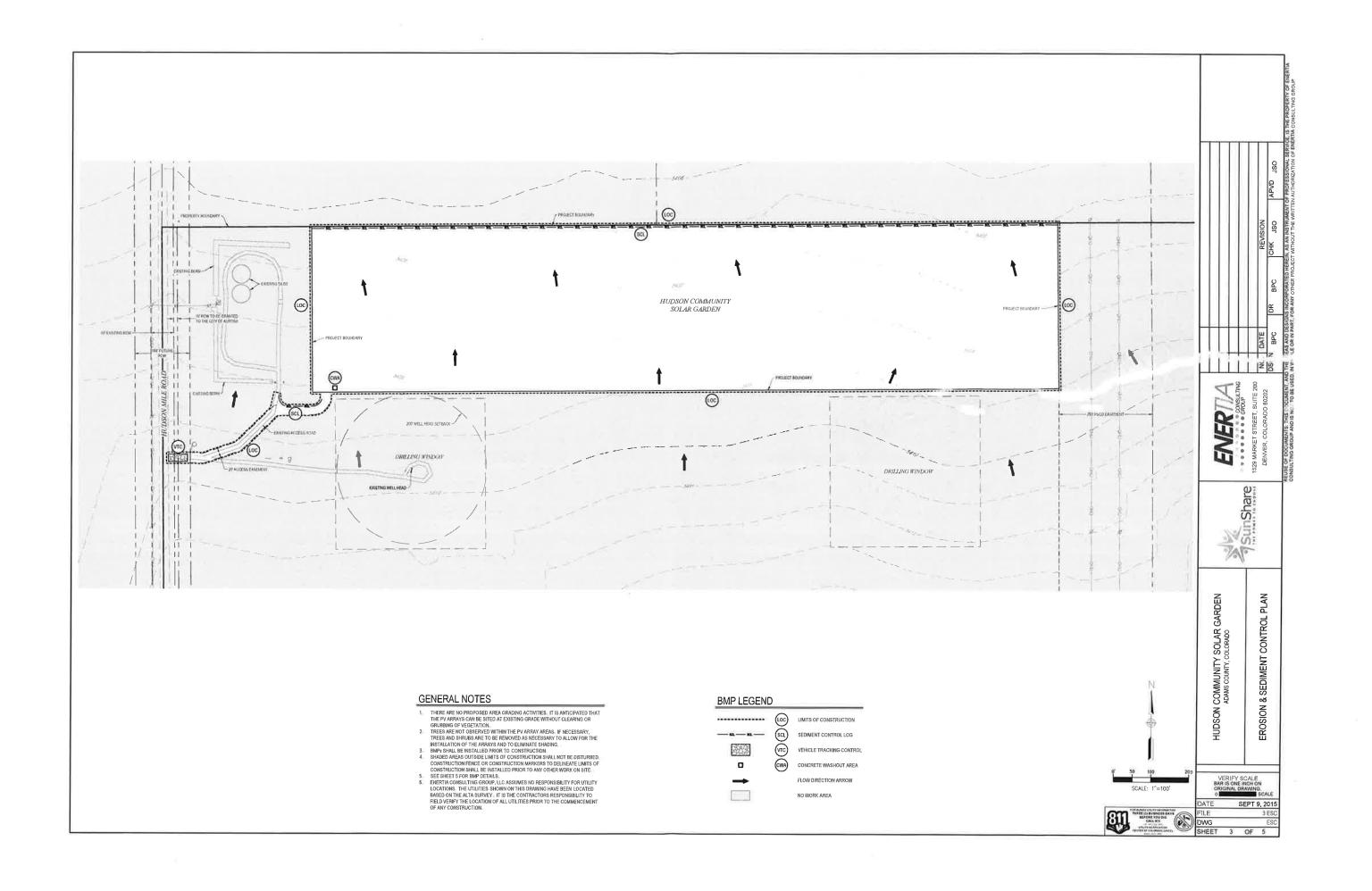
RECOMMENDED E	Y THE ADAMS COUNTY PLANNING COMMISSION
THIS DAY O	A.D., 20
CHAIR:	

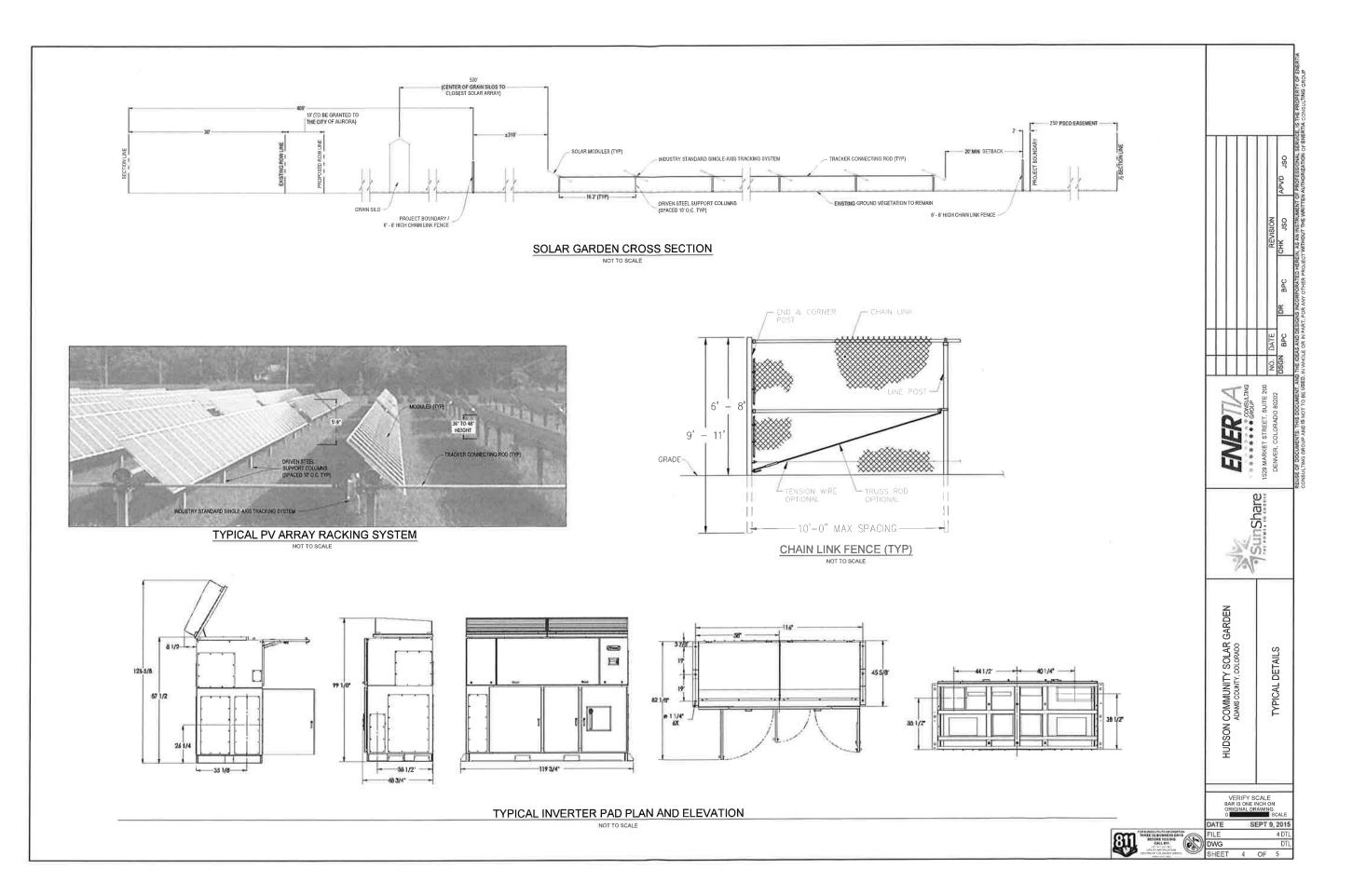




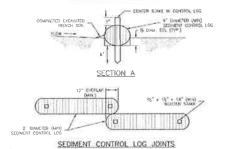






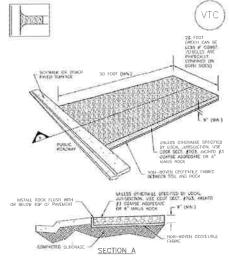


SEDIMENT CONTROL LOG



SCL-1. SEDIMENT CONTROL LOG

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Mannal Volume 3



VTC-1, AGGREGATE VEHICLE TRACKING CONTROL

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Eco-Pan Specification sheet

Eco-Pan objective Allows for easy concete pump warrout, ready mix trucks, and other equipment associated with cement on site and easy off site recycling of the same concerts materials

Eco-Pan Application
Construction projects where concrete, slucco, mortar, grout and cement are used as a construction material or where cerrenibous wastewater is created

Ece-Pan Maintenance Inspect and clean out when Mulat, not allowing the Eco-Pan to uverflow Inspect vaste-order televal and request service. (Replace with energy Eco-Pan, as needed Inspect Eco-Pan's to ensure that proper househeaping are employed when weshing out equipment.

Description
A self-contained and violentique eco-pain with added fork channels for potability captures and contained consider westerwater and washout material. Our eco-pain's come in two sizes to accommodate every size pour, 1 yard /2 ton or 2.5 yard 4.5 ton

SPECIFICATIONS
The eco-ean must be portable and temporary, watertight, equipped with fork channels and have a holding capacity to accept washout from approximately 250 yds -2.5 yard 4.5ton, $Q_{\rm K}$, 150yards byard 2 ton of poured contrate.



SunShare

BMP DETAILS

HUDSON COMMUNITY SOLAR ADAMS COUNTY, COLORADO

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
0 SCALE DATE SEPT 9, 2015

SHEET 5 OF 5

FILE DWG
SHEET SUBSECTIONS
SHEET SUBSECTIONS
SHEET
SHEET SUBSECTIONS
SHEET

000 Galton Capacity 20 to 30 Mixer Wash Outs* 7'x7'x 26"