



## **FORMAL PROJECT APPROVAL**

**Name of Project:** Campus Wide Solar Array Installation  
**Project Type:** New Construction  
**Location of Project:** UAF, Fairbanks Campus, Fairbanks  
**Project Number:** 2013065 CWSAI  
**Date of Request:** May 1, 2013

<b>Total Project Cost:</b>	<i>\$ TBD during project development (Currently Estimated at <b>\$4,105,000</b>) (Approx \$4,000,000 in capitalized costs to be borne by Array Owner. Initial design costs of up to \$105,000 will be the University's obligation.)</i>	
<b>Approval Required:</b>	<b>FLMC</b>	
<b>Prior Approvals:</b>	<b>Preliminary Administrative Approval</b>	<b>April 30, 2013</b>

A Formal Project Approval (FPA) is required for all Capital Projects with a Total Project Cost in excess of \$250,000.

FPA represents approval of the Project including the program justification and need, scope, the total project cost, and the funding and phasing plans for the project. Requests for formal project approval shall include a signed project agreement or facilities pre-design statement, the proposed cost and funding sources for the next phase of the project and for eventual completion of the project, and a variance report identifying any significant changes in scope, budget, schedule, deliverables or prescriptive criteria associated with a design-build project, funding plan, operating cost impact, or other cost considerations from the time the project received preliminary administrative approval. It also represents authorization to complete project development through the schematic design, targeting the approved scope and budget, unless otherwise designated by the approval authority.

### Action Requested

**The Facilities and Land Management Committee recommends that the Board of Regents approve the Formal Project Approval request for the University of Alaska Fairbanks Campus Wide Solar Array Installation, as presented in compliance with the amended campus master plan, and authorizes the university administration to proceed through Schematic Design not to exceed a total University expenditure of \$105,000, with the cost of the solar array of \$4,000,000 to be borne by Siemens Industries, as the owner of the solar array, for a total project cost of \$4,105,000. This motion is effective June 6, 2013.**

### Project Abstract

The university received an unsolicited proposal from Siemens Industries, Inc. in May 2012, to provide the university with up to 1MW of solar power via a Power Purchase Agreement (PPA). Siemens proposes to build a photovoltaic solar array in the field south of the Butrovich Building and west of the new terrain park, as seen in the attached photo sketch. The partnership is structured so that Siemens will design,

finance, build, operate and maintain the array. The university will supply a Land Lease to Siemens for the use of the land for the duration of the PPA.

This form of a public-private partnership shifts the risk for energy production to the private entity while allowing the private entity to take advantage of tax credits for solar energy projects. In exchange, a long term Power Purchase Agreement (PPA) is entered into by the public partner to cover the cost of the project across time. The PPA defines the methods for the sale and purchase of the power produced by the field. The PPA will assume an initial 20 year duration and give the university the option of purchasing the field at various prescribed points throughout the initial period.

The university negotiated a Letter of Intent with Siemens which sets out the basic agreed upon Terms and Conditions to allow Siemens to design the project.

#### Programmatic Need

The need addressed in this project affects all units on campus. If the university can produce its own power through a Public Private Partnership for a comparable cost to purchasing it, the users will all be better served. GVEA's rates are subject to regular escalations as the price of fuel oil needed for power generation increases. Fuel oil prices in Fairbanks have tripled in the last eight years and the cost of electricity has doubled. Generation of renewable power at a cost comparable to purchased power could serve UAF well in its permitting process for replacement of the Atkinson Power Plant. In the short term, the university's best opportunity to reduce its electrical utility expenditures lies in its ability to reduce the annual amount of power it purchases from GVEA.

#### Strategic Importance

This project supports the student sustainability initiative begun in 2009. The basic purpose of the initiative was to bring awareness of sustainable practices to the campus with greener purchasing, installation of alternative energy systems and sustainable programs. This project is directly aligned with the initiative by helping to reduce the campus' reliance on fossil fuels in favor of renewable energy.

#### Impact Analysis

Constructing the array in the field will attract attention and goodwill with certain segments of the community about the university venturing into alternative power generation. However, one can expect a reaction by some portion of the public to the visual impact of a solar array on the west ridge below the Butrovich Building. Counter to the possible negative reaction to the changed "viewscape" aesthetics are the public benefits of a sustainable energy project being erected on campus concurrent with planning for a replacement solid fuel CHP plant. The project demonstrates commitment to a complete energy portfolio.

Because of the partnership with Siemens and the structure of the PPA that will be signed before construction begins, there will be no need for phasing or obtaining additional funding part way through the project. Siemens will be responsible for procuring all the funding prior to executing the contract. Since UAF's financial commitment is based on purchasing only electricity generated, the risk of under-performance or delays with the system rest with Siemens.

#### Needs Assessment

This project will require no special university facilities investment or participation. The contract with Siemens will include the maintenance and operations of both the solar array itself and the grounds keeping of the field surrounding the array.

#### Project Impact

The walking and skiing paths that run through this field will be rerouted around the array as a part of the project. The disc golf course will also require relocation to accommodate the solar array. The exact location of the disc gold course around the array will be coordinated with the campus during design.

Project Site Considerations

This site was selected for its large, unobstructed south facing slope. No other site on campus offers an area large enough to contain a solar array of this magnitude.

Variances

None

Special Considerations

The 2010 UAF Campus Master Plan will require a Board of Regents' amendment to change the land use designation of the area encompassing the solar array from "Ecosystem Research, Instruction, and Recreation" to "Renewable Resources". The UAF Master Planning Committee passed a motion supporting this land use change in November 2012. The Campus Master Plan Amendment is being presented at the June 2013 meeting.

Proposed Funding Plan

Costs to the university are limited to the annual purchase of power through a negotiated PPA. The project planning estimate for the project for total capitalized costs by Siemens is \$4,000,000.

If the project is deemed financially viable and is approved by the president and board, the costs for the initial development will be paid for as part of the 20 year PPA. Power costs would be paid through the UAF utility in the same manner as purchased power from GVEA. Optimally, increased costs for solar power are to be offset by decreased costs for GVEA purchased power on an annual basis.

If the project is not deemed financially viable or the approvals to proceed are not obtained from the president or the board, then a single payment will be paid from university operating funds to cover the initial design fees.

In the event that Siemens and the university cannot negotiate an acceptable rate per kWh that would "meet or beat" projected future purchased power costs, UAF has explored the possibility of partnering with GVEA and the Student Sustainability Group (RISE), as there is interest by others to support such a project.

Total Project Cost and Funding Sources

<u>Funding Title</u>	<u>Fund Account</u>	<u>Amount</u>
FY14 Operating Budget	TBD	\$105,000
<b>Total Project Cost</b>		<b>\$105,000</b>

Annual Program and Facility Cost Projections

This project will replace existing utility purchases from GVEA. Optimally, there will not be an increase in the Annual Program costs. There may be a minimal increase in cost, which is acceptable to show UAF's commitment to energy diversification.

Project Delivery Method

The project is a public private partnership through the use of a Power Purchase Agreement between UAF and Siemens Industries, Inc. This delivery method was deemed most appropriate for the project in that it transfers the majority of the risk and financial burden off the university and onto Siemens. The university's only obligation is to purchase the power actually produced, the rate for such power being negotiated prior to signing the contract.

Affirmation

This project complies with Regents' Policy, the amended campus master plan and the Project Agreement.

Supporting Documents

One-page Project Budget

Drawings

Site Plan

Photo of Solar Panels

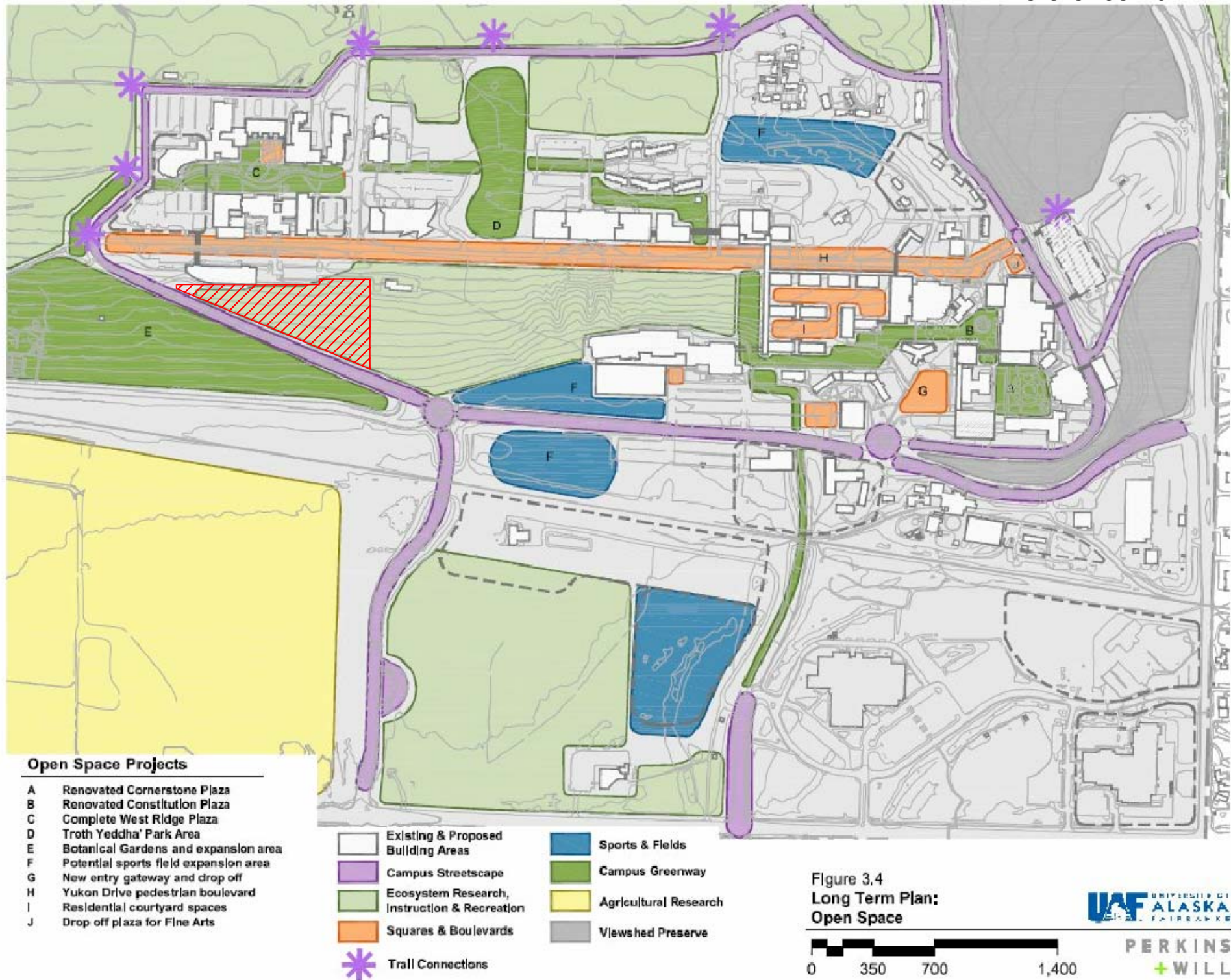
Approvals

The level of approval required for FPA shall be based upon the estimated TPC as follows:

- **TPC > \$4.0 million will require approval by the board based on the recommendations of the Facilities and Land Management Committee (FLMC).**
- TPC > \$2.0 million but not more than \$4.0 million will require approval by the FLMC.
- TPC > \$1.0 million but not more than \$2.0 million will require approval by the Chair of the FLMC.
- $\text{TPC} \leq \$1.0$  million will require approval by the AVP of Facilities and Land Management.

<b>UNIVERSITY OF ALASKA</b>	
Project Name: Campus Wide Solar Array Installation	
MAU: UAF	
Building: Field south of Butrovich Building	Date: 4/24/2013
Campus: Fairbanks	Prepared by: J Campbell
Project #: 2013065 CWSAI	Acct #: TBD
Total GSF Affected by Project:	1
<b>PROJECT BUDGET</b>	FPA Budget
<b>A. Professional Services</b>	
Advance Planning, Program Development	
Consultant: Design Services	\$ 100,000
Consultant: Construction Phase Services	
Consul: Extra Services (List: _____)	
Site Survey	
Soils Testing & Engineering	
Special Inspections	
Plan Review Fees / Permits	
Other	
Professional Services Subtotal	\$ 100,000
<b>B. Construction</b>	
General Construction Contract(s)	
Other Contractors (List: _____)	
Construction Contingency	
Construction Subtotal	0
Construction Cost per GSF	0
<b>C. Building Completion Activity</b>	
Equipment	
Fixtures	
Furnishings	
Signage not in construction contract	
Move-Out Costs	
Move-In Costs	
Art	
Other (Interim Space Needs or Temp Reloc. Costs)	
OIT Support	
Maintenance Operation Support	
Building Completion Activity Subtotal	0
<b>D. Owner Activities &amp; Administrative Costs</b>	
Project Plng, Staff Support	
Project Management	\$ 5,000
Misc. Expenses: Advertising, Printing, Supplies, Etc.	
Owner Activities & Administrative Costs Subtotal	\$ 5,000
<b>E. Total Project Cost</b>	\$ 105,000
Total Project Cost per GSF	\$ 105,000
<b>F. Total Appropriation(s)</b>	









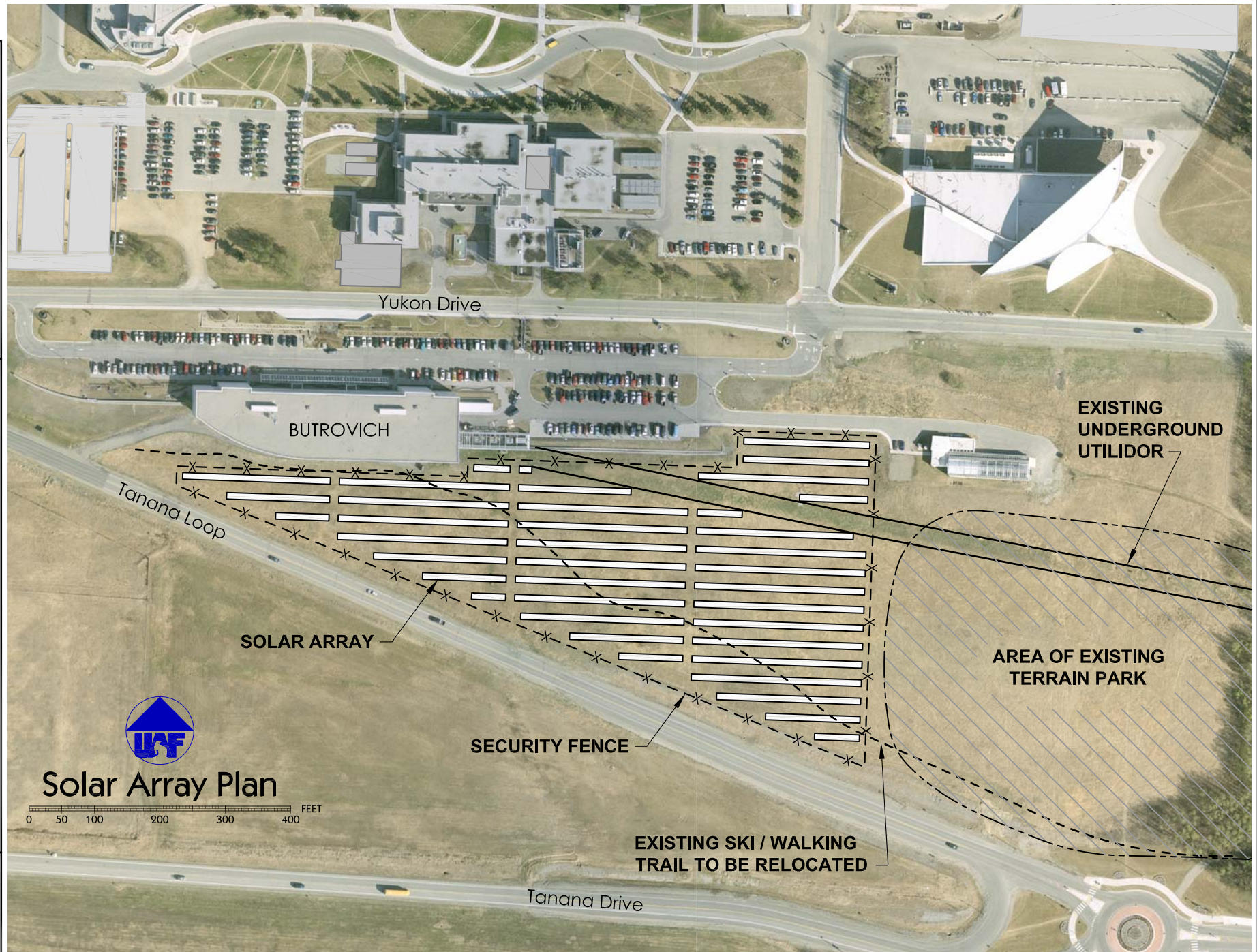
**FACILITIES SERVICES**  
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 FAIRBANKS, AK 99775-8160  
 907-474-5299  
 907-474-7554 (fax)  
 www.uaf.edu/dlc

Project Title:  
**CAMPUS WIDE SOLAR ARRAY  
 INSTALLATION**

Sheet Title:  
**SITE PLAN**

Drawn: SHEET NO.  
 CFP  
 Checked: JLC  
 Date: MAY 2013  
 Scale: AS DISPLAYED  
 Project Number: 2013065 CWSAI

OF 1  
**1**





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