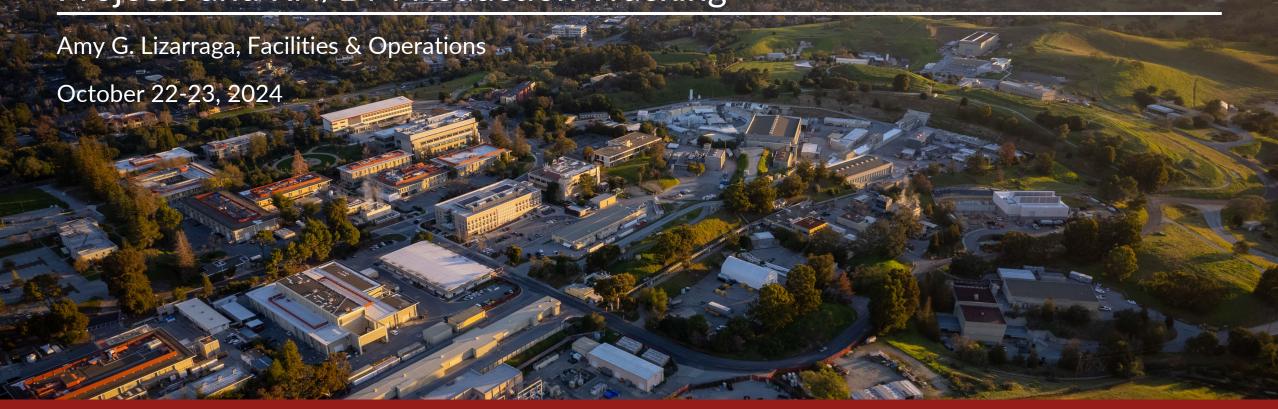
CAIS – Leveraging "Tools" Projects and RN/DM Reduction Tracking





Location

426 Acres
3 miles from Stanford
Centrally located in Silicon Valley

Impact

12 Core Capabilities5 User Facilities6 Institutes & Centers

Assets

382 assets: 2.4M GSF and ~445,500 linear feet Average age of facilities: 40 years Utility infrastructure backbone: 50+ years old BOLD PEOPLE VISIONARY SCIENCE REAL IMPACT BOLD PEOPLE VISIONARY SCIENCE REAL IMPACT

Agenda

SLAC Overview

SLAC Science Mission

SLAC Growth. 1960s-2020s

SLAC Infrastructure Today

Infrastructure Planning - Data Driven Decisions

• project development example

CAIS Projects Module

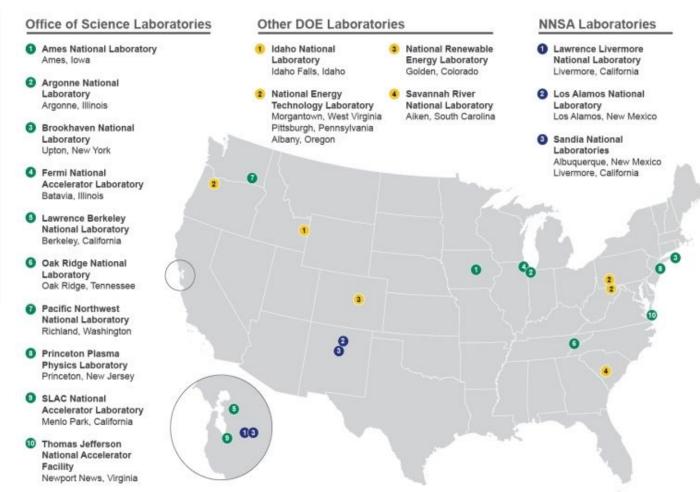


Department of Energy National Laboratories



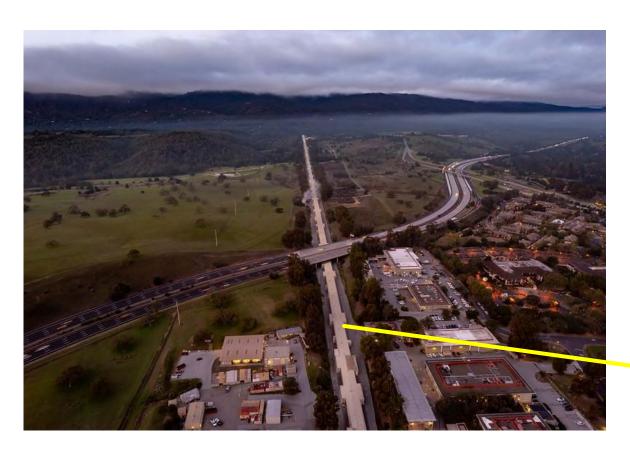
17 National Laboratories:

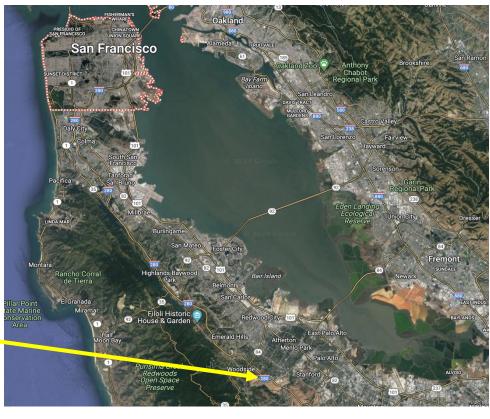
- National security, nuclear weapons stewardship, nuclear non-proliferation
- Environment and energy
- Science





First glance: Along Interstate 280 between San Francisco and San Jose







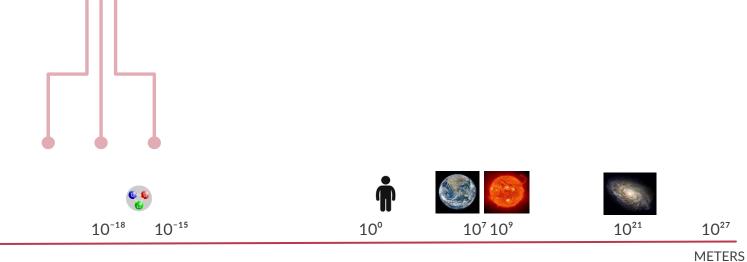
Science at Scale: The "Monster"

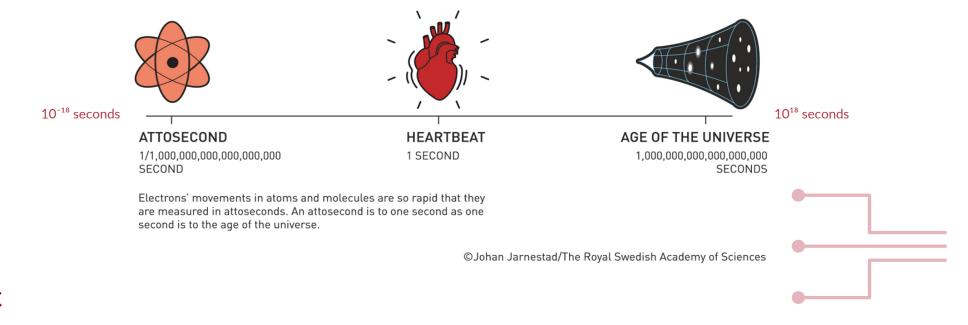


A gigantic linear electron accelerator + land from Stanford University* = 2 mile chain of RF cavities to accelerate electrons to 20 billion electron volts at 99.9999997% the speed of light.

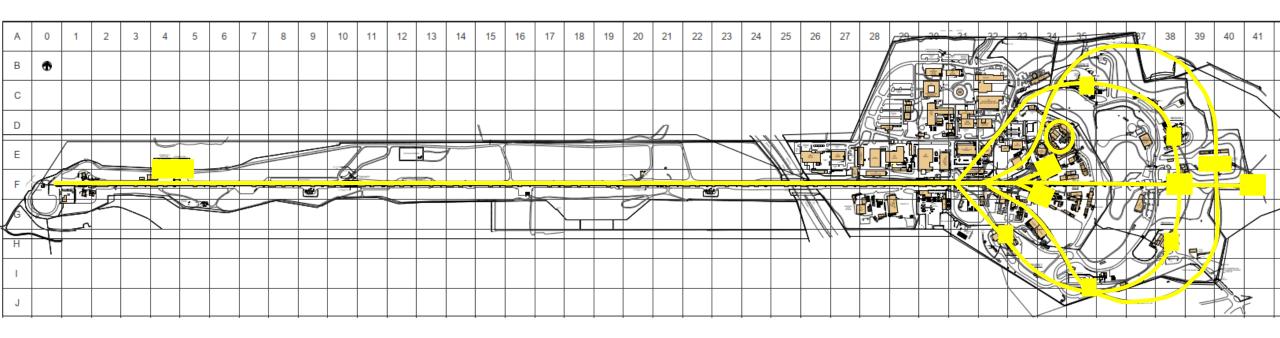
*We start with a recognition that Stanford sits on the ancestral land of the Muwekma Ohlone Tribe. This land is of great importance to the Ohlone people, and has been since time immemorial. Consistent with our values of community and diversity, we have a responsibility to acknowledge, honor and make visible the university's relationship to Native peoples.

Science at Scale: SLAC Today



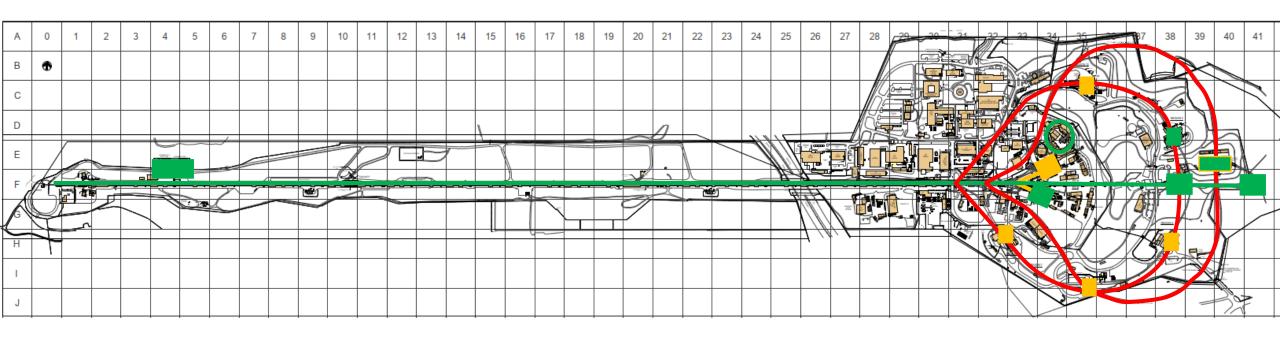


SLAC Growth: 1960s-2020s





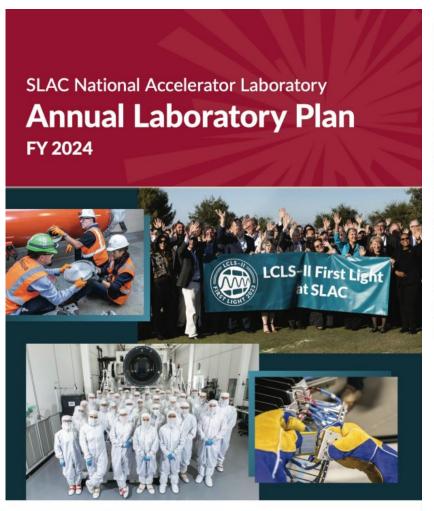
SLAC Science Mission Today

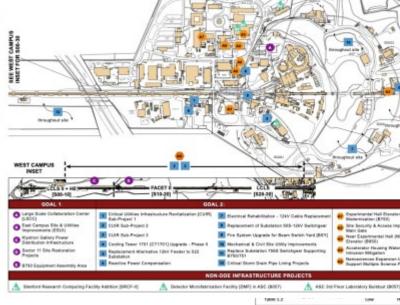




Campus Strategy: Infrastructure & Campus Planning

THIS PROJECT MAP DOES NOT INCLUDE PROGRAM FUNDED INFRASTRUCTURE INVESTMENTS.





ASC (BOST)		user a	nti Fisor Laborsi	tory Buildout (B)	0571	- Guard Hou	use Expansion										
1896 S.Z	114			tow	mp.	tow	mp	Love	mp		FFB4 Low	PY34 High	PYRS Low	PYRS High	Remaining Balance Low	Reno Belano	
Mission	\$3,702,577, \$1,496,218		148,713 5	256,804.5	296,996 5	521,811 5	321,968 \$	282,491 5	282,594	5	266,866 5	269,035 \$	289,336 5	269,316	1,379,228	\$ 1,375	5,80
Core Infrastructure	\$400,656/ \$273,696	\$	45,000 \$	61,500 5	79,500 \$	49,000 5	#5,000 \$	42,000 \$	78,000	5	36,000 5	26,000 \$	23,000 \$	25,000 5	211,500	\$ 291	1,50
Other	\$456,813/ \$218,063	\$	78,688 \$	24,290 5	24,390 \$	8,800 5	8,800 \$			5	- 5	- 5	- 5	- 1	33,000	\$ 33	1,000
Total		5	279,401 5	312,504 5	340,656 S	379,611.5	415,768 S	824,481 \$	360,594	8	304,866 5	295,035 S	292,836 5	292,316 5	1,623,728	\$ 1,70	4,360
able 2.2 - Fundi	ing for Select	ed Fu	nding Types														
retal Table 1.1 + Table 1.2	TRC/TEC*		1130	PYS1 Low	PYS1 High	Low Low	PYS2 Migh	PYSS Low	PYSS High		PYS4 Low	PY94 High	PYSS Love	PYSS High	Remaining Balance Low	Rema	
U-SU	\$151,500/	5	45,000 S	61,500 \$	79,900 S	48,000 5	#5,000 S	42,000 S	78,000	5	16,000 S	58,000 \$	23,000 \$	28,000 5	211,900	\$ 311	8,50
U-SC Program	\$1,111,500		59,900 S	150,000 5	190,000 S	250,000 S	250,000 \$	250,000 S	250,000	5	25,000 5	250,000 \$	250,000 S	250,000 5	925,000	\$ 1,190	0.00
GPP-92.I	\$49,156/ \$5,698	5	- 5	- 5	- 5	- 5	- 5	. s		5	- 5	- 5	- 5		-1		
GPP-Prog	\$68,264/ \$52,655	5	2000		- 5	- 5		- 4		\$	- 1	- 1	- 5		en and di		
			104,900 \$	211,500 5	229,500 \$	299,000 \$	335,000 \$	292,000 \$	328,000		61,000 5	305,000 5	275,000 5		1,136,500	5 1,49	









		Y23 Actual	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Maint - Indirect Only	5	17,450	\$17,974	\$ 18,513	\$ 19,068	5 19,640	\$ 20,230	\$ 20,837	5 21,462	\$ 22,105	\$ 22,769	5 23,452	\$ 24,155	5 24,88
IGPP*	5	1,749	\$ 5,951	\$ 6,130	\$ 6,313	\$ 6,503	5 6,698	\$ 6,899	5 7,106	5 7,319	5 7,539	\$ 7,765	5 7,998	5 8,23
ndirect Excess Facilities Disposition /D&D/ Legacy Waste Removal		723	6 343	5 685	6 360	S 258	¢ 365	\$ 273	£ 101	£ 160	£ 100	5 307	6 217	5 30

ALPINE ROAD

Infrastructure Planning: Data-Driven Decisions (NAVFAC Example)

Cover Sheet/Team List for: Project Title: F-35C Maintenance Hangar	1. Component NAVY FY 2021 MILITARY (1. Component NAVY FY 2021 MILITARY (1. Component NAVY FY 2021 MILITARY (12. Supplemental Data:
Location: LEMOORE, CALIFORNIA Prepared By: NAS LEMOORE CA	3. Installation(SA) and Location/UIC: N63042 NAS LEMOORE CA LEMOORE, CALIFORNIA	3. Installation(SA) and Location/UIC: N63042 NAS LEMOORE CA LEMOORE, CALIFORNIA	3. Installation(SA) and Location/UIC: N63042 NAS LEMOORE CA LEMOORE, CALIFORNIA	ite Approval: X Yes, obtained date: 03/2018 No, expected date: Issues (If yes, please provide discussion under issue):
A. Team Check List: Completed: 3. Team Meeting: Date: On-Site: VTC: Conf. C. Team Members: Name Position D. Remarks:	Tiem F-35C MAINTENANCE HANGAR ADDITION AIRCRAFT MAINTENANCE HANGAR TYPE I CC21105 (110,7925F) AIRCRAFT PAVEMENTS CC11320 (876,7265F) AME OPERATIONAL STORAGE CC14377 (3,6725F)	HANGAR TYPE I 11612 AIRCRAFT FAVEMENTS 120.00 14164 User Generated Unit Costs (UGUCs) were devel (A/E) cost estimate that was developed for P; estimate was based on previous related proje developed using Micro-Computer Aided Cost Est and escalated from base year 12/2019 to midp	5. Program Element 6. Category Code 21105 This project will provide AT/FF features a security mitigation in accordance with DoD User Generated Unit Cost (UGUC) is used fo unit costs. Built-in equipment includes overhead bridg aircraft service stations/kiosks at apron power, and fire suppression storage tanks.	Yes No X DDESB, AICUZ, Airfield, EMR, or wetlands X Endangered species/sensitive habitat X Air quality D Form 1 Dec 76 1 Dec 76 2 Page 1 2 Evel: REGN/FEC_TEAM_RIDraft: POM21 P391 F-35C TWO MOD ADDITION (HGR 6)
	CYBERSECURITY FEATURES SPECIAL COSTS OPERATION & MAINTENANCE SUPP INFO (OMSI) SUPPORTING FACILITIES SPECIAL CONSTRUCTION FEATURES SITE PREPARATIONS PAVING AND SITE IMPROVEMENTS ELECTRICAL UTILITIES MECHANICAL UTILITIES	The Using Activity for this project is plan FLEET NAS. Construct a two module multi-story aircraft hangar (Hangaré) in support of F-35C Joint NAS Lemoore. The hangar will be constructed deck, combination of steep slope standing : pile foundation. The facility will include space; and operations, training, and admin: comply with Intelligence Community Directi	Special costs include Post Construction Co commissioning. The cybersecurity commissio submittals, administrative actions and com cybersecurity requirements as well as DON' and to implement steps necessary for obtain include monitoring during SAPF construction Security Technicians and Cleared American accordance with Intelligence Community guiobserve the construction to ensure there a compromise the SAPF.	1. Component NAVY FY 2021 MILITARY CONSTRUCTION PROGRAM 2. Date 26 :EP 201 3. Installation(SA) and Location/UIC: N63042 NAS LEMOORE CA LEMOORE, CALIFORNIA 5. Program Element 6. Category Code 21105 7. Project Number P391 127,0
F. Sign Offs: Signature <u>Position</u>	SUBTOTAL CONTINGENCY (20%) TOTAL CONTRACT COST SIGH (5.7%) SUBTOTAL DESIGN/BUILD - DESIGN COST (4%) TOTAL REQUEST ROUNDED TOTAL REQUEST	Secure Access Program Facility (SAPF) space Construct hangar associated aircraft parkit shoulders, taxiway connections, apron light tank, fire suppression storage tanks, airf: Owned Vehicle (POV) parking brought on by lextend Reeves Boulevard (Blvd) to the end (Force Protection(AT/PF) fencing at Reeves lalso provide proper undergrounding of exist	Operations and Maintenance Support Informa Department of Defense and Department of th sustainable building requirements will be project in accordance with federal laws an be included in the design and construction Demolition includes removal of existing as	X Clearing of trees X Clearing of trees X X Known contamination at selected site X Operational problems X Traffic patterns impact X Emisting utilities upgrade X Ordnance sweep required prior to Construction Planning (If no, please provide an explanation): Yes No X Consistent w/ Master Plan or Base/Regional Dev.
	EQUIPMENT FROM OTHER APPROPRIATIONS (NON ADD Suidance Unit Cost Analysis Cat OSD Guid. Gui Cost Siz 11340 AIRCRAFT PAVEMENTS 236.68 2707.3	armament which will only be used during spaincraft. These items are to stay with the	existing taxiway edge lighting, abandoned shoulder. Facilities will be designed to m in DoD Unified Facility Criteria. Facilities will incorporate features that solutions satisfying the facility requirem efficiency.	Host Nation Approval: N/A National Capital Region Approval: N/A NEPA Documentation: Yes No X Complete Record of Decision (RoD) signed 1-Oct-2014.
	21107 AIRCRAFT MAINTENANCE 3,824.73 2449.1 HANGAR TYPE I 14377 AME OFERATIONAL STORAGE 3,014.01 341.1 21105 AIRCRAFT MAINTENANCE 8,400.00 4191.2 HANGAR TYPE I 11210 AIRCRAFT PAVEMENTS 236.68 23783.	with Intelligence Community Guidance. Information systems include basic telephone television, Autonomic Logistics Information	11. Requirement: Adequat FACILITY PLANNING DATA: Category Code 21106WAINTENANCE HANGAR - 0 89ACE (CREW AND EQUIPM NT)	Level of NEPA: Yes No X Categorical Exclusion X Environmental Assessment (EA) X Environmental Impact Statement (EIS) X Memorandum of Negative Decision EIS completed May 2014 and Record of Decision (RoD) issued October 2014.



CAIS Project Module



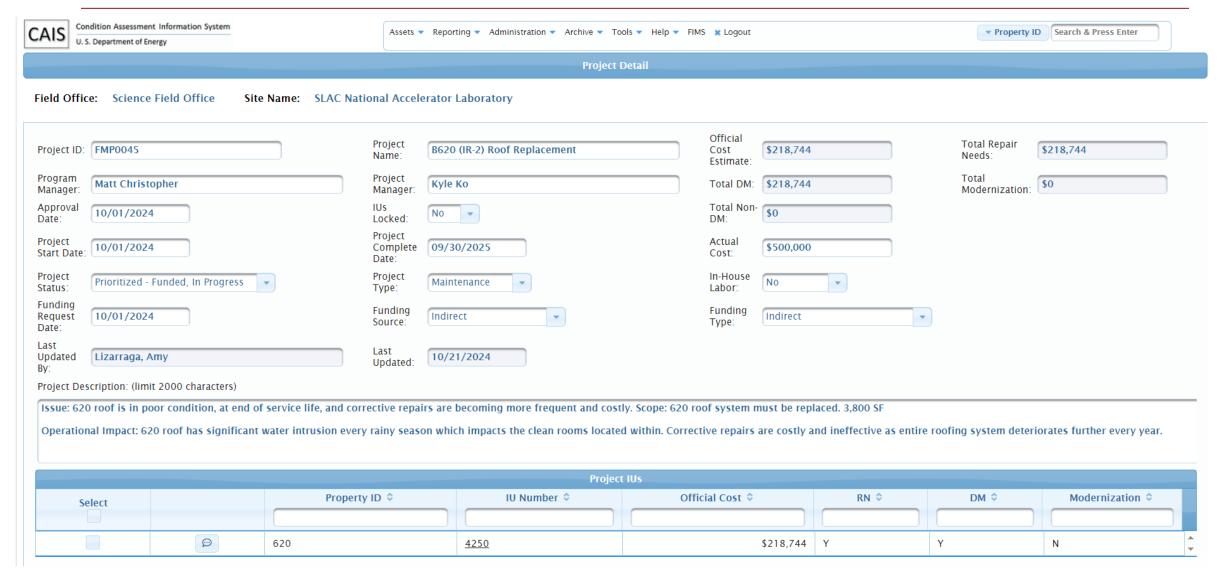


CAIS: Project Module – Project List



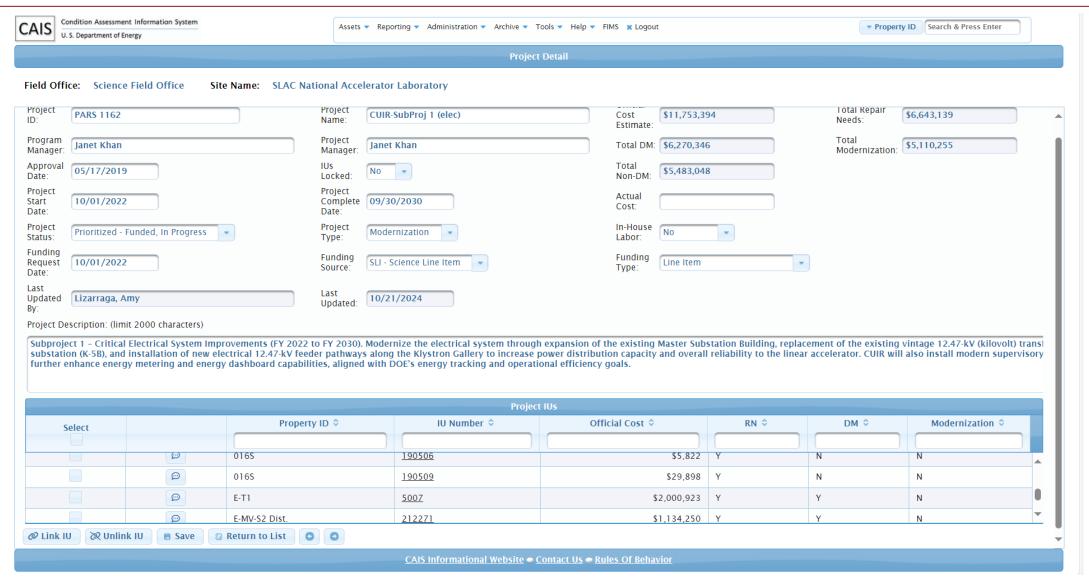


CAIS: Project Module - Project Example 1





CAIS: Project Module – Project Example 2





CAIS: Project Module – Then What ???

