

STATE OF CALIFORNIA  
CAPITAL OUTLAY  
BUDGET CHANGE PROPOSAL (COBCP)  
COVER PAGE (REV 06/15)

DEPARTMENT OF FINANCE  
915 L Street  
Sacramento, CA 95814  
IMS Mail Code: A15

BUDGET YEAR 2016-17

ORG CODE: 8955 COBCP NO. 1 PRIORITY: 1 PROJECT ID: 000000000000624  
(Business Unit/Entity) (15 digits; for new projects, leave blank)

DEPARTMENT: California Department of Veterans Affairs

PROJECT TITLE: Chilled Water Distribution System Renovation

TOTAL REQUEST (DOLLARS IN THOUSANDS): \$5,374 MAJOR/MINOR: MA

PHASE(S) TO BE FUNDED: C PROJ CAT: CRI CCCI/EPI: 5259

SUMMARY OF PROPOSAL:

The California Department of Veterans Affairs (CalVet) requests a reappropriation of the unencumbered balance of the construction phase of the Veterans Home of California - Yountville (VHC-Yountville or Home) Chilled Water Distribution System Renovation project. As a result of design and contracting delays, the completion of the working drawings is scheduled for August 2016, construction is scheduled to begin January 2017, and project completion is scheduled for April 2018. Total estimated project costs for construction are \$5,374,000 (\$1,709,000 lease revenue bond funds and \$3,665,000 federal funds).

HAS A BUDGET PACKAGE BEEN COMPLETED FOR THIS PROJECT? (E/U/N/?): N

REQUIRES LEGISLATION (Y/N): N IF YES, LIST CODE SECTIONS: \_\_\_\_\_

REQUIRES PROVISIONAL LANGUAGE (Y/N) N

IMPACT ON SUPPORT BUDGET: ONE-TIME COSTS (Y/N): N FUTURE COSTS (Y/N): N

FUTURE SAVINGS (Y/N): N REVENUE (Y/N): N

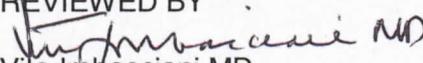
DOES THE PROPOSAL AFFECT ANOTHER DEPARTMENT (Y/N): N IF YES, ATTACH COMMENTS OF AFFECTED DEPARTMENT SIGNED BY ITS DIRECTOR OR DESIGNEE.

SIGNATURE APPROVALS:

  
Sergio Mondragon-Lopez 03/25/2016  
PREPARED BY DATE

  
Coby Petersen, 03/21/16  
Deputy Secretary, Homes Division  
DEPARTMENT DIRECTOR DATE

  
David Gerard, 3/25/16  
Chief, Facilities & Business Services Division  
REVIEWED BY DATE

  
Vito Imbasciani MD, 28 March 2016  
Secretary  
AGENCY SECRETARY DATE

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DOF ANALYST USE

DOF ISSUE # \_\_\_\_\_ PROGRAM CAT: \_\_\_\_\_ PROJECT CAT: \_\_\_\_\_ BUDG PACK STATUS: \_\_\_\_\_  
ADDED REVIEW: SUPPORT: \_\_\_\_\_ OCIO: \_\_\_\_\_ FSCU/ITCU: \_\_\_\_\_ OSAE: \_\_\_\_\_ CALSTARS: \_\_\_\_\_  
PPBA: \_\_\_\_\_ Date: \_\_\_\_\_

BUDGET YEAR 2016-17

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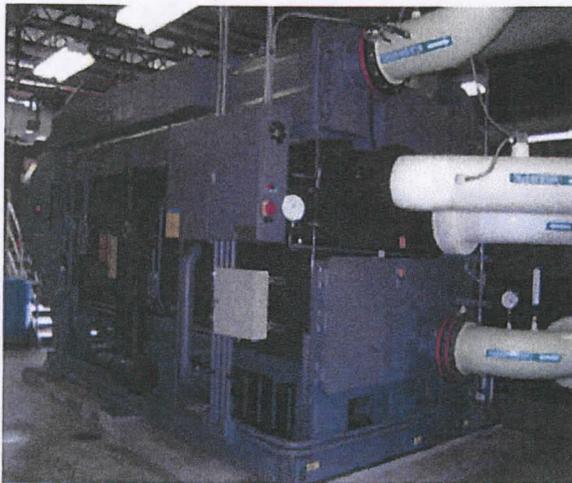
A. PURPOSE OF THE PROJECT: (problem, program need, infrastructure deficiency)

This project will renovate the failing Chilled Water Distribution System at the VHC-Yountville. The renovation is necessary to ensure the health and safety of the elderly and/or disabled veterans who reside at the Home.

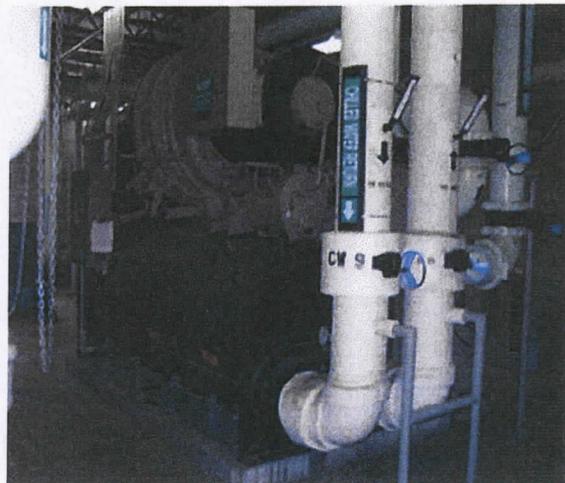
1. Background:

VHC-Yountville is equipped with two chillers (Figure 1 & 2). When the outside air temperature exceeds 96°F, the chilled water system does not keep the water at proper temperature, resulting in patient areas that exceed temperature limitations mandated by the California Department of Public Health.

**Figure 1** Broad 630 Ton Absorption Chiller



**Figure 2** Trane 700 Ton Electric Chiller



A study of the Chilled Water Distribution System by JC Chang, Inc. in November 2007 pointed out two significant shortfalls in the system:

- 1) Insufficient capacity due to chillers limitations. As noted above, the two chillers cannot meet the facility's demand when outside air temperature exceeds 96°F. With the opening of the Member Services Building, the cooling demand for the facility is expected to increase by 195 tons, exacerbating the problem. The JC Chang study mentioned this increasing demand would "break the back" of the Home's cooling system and, in concert with the operators, who stated that "...additional chiller capacity will be required (and) it would be better to add the additional capacity closer to the Holderman building where there will be a great need for additional cooling." JC Chang proposed the installation of a new packaged 400 ton chilled water plant and that it be located close to the Holderman Building and connected to the existing Chilled Water Distribution System.

- 2) System deficiencies other than chiller capacity. After a careful study of the issues and deficiencies surrounding the chilled water system, JC Chang concluded that reliable operation of the system could be ensured for the foreseeable future by correcting the following deficiencies:
- a. **Cooling Towers.** The existing towers are undersized and additional capacity is required. One should be refurbished and the other replaced. The combined flow capacity of the cooling towers is 4072 gallons per minute (gpm), whereas the combined flow of the condenser pumps is 4500 gpm. This flow differential causes excessive flow and pressure resulting in operational issues and there are no proper balancing valves in the system to accommodate the flow. Also, the cooling towers are undersized based upon the combined chiller condenser flow requirement of 4283 gpm. The study noted if outside air temperatures are below 90°F the towers can keep up with the cooling load. However, if temperatures exceed 90°F they cannot provide sufficient cooling. In addition, Gary Harbison from California Hydronics Corporation conducted a survey of the Central Plant cooling towers in October 2007 and noted that the water level in the sump is 18" higher than the manufacturer's recommendation, the locking bars on the horizontal flow control valves are rusted and need maintenance, and there is excessive noise from the fans.



- b. **Chilled Water & Condenser Pumps.** The pressure head on the pumps were designed at 40 feet for the chilled water pumps and 95 feet on the condenser pumps. This relationship is not typical. The pressure head on chilled water pumps should be higher than the condenser water pumps.
- c. **Holderman Building.** Wing G of the Holderman Building has problems with the chilled water supply during peak demand. These flow problems were discovered after the Acute Center Wing was connected to the system. In the Acute Center there are two secondary pumps (each -180 gpm, 40 foot head, 3 horse power) connected to 5" diameter branch piping. Wing G has two secondary pumps (each - 122 gpm, 40 foot head, 3 horse power) connected to 3" diameter branch piping. The Acute Center is "stealing" flow from Wing G because the 3" piping is too small and the flow on the secondary pump is too small to overcome the pressure created by the Acute Wing secondary pump.
- d. **T. Roosevelt Hall (Section D).** T. Roosevelt Hall is located on the Northwest end of the site. This building is at the furthest end of the chilled water site distribution. The building has one 165 gpm secondary pump connected through 4" diameter pipe and there are eight booster pumps in the building. There are several issues related to these conditions.
  - 1) The secondary pump is undersized, given the building is so far away from the central plant.

- 2) The complexity created by having eight booster pumps is creating flow problems in the system.
- 3) Air is getting trapped in the chilled water which results in large pressure drops, caused by flow issues and lack of automatic vents to release the air.

2. Problem/Program Need:

The Chilled Water Distribution System at VHC-Yountville does not maintain the water at the proper temperature when the outside air temperature exceeds 96°F. As a result patient areas exceed temperature limits mandated by the California Department of Public Health. Due to other system deficiencies (e.g. cooling towers, pumps) additional capacity solely on its own will not allow the cooling system to efficiently and effectively meet the increased demand on the chilled cooling system.

	A	B	C	D	E	F	G	H	I	J
1	<b>STATE OF CALIFORNIA</b>									<b>Budget Year 2016-17</b>
2	<b>CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP)</b>									Proj ID: 00000000000624
3	<b>FISCAL IMPACT WORKSHEET</b>									BU/Entity: 8955
4	Department Title: California Department of Veterans Affairs									Program ID: 7015
5	Project Title: Chilled Water Distribution System Renovation									COBCP #: 1
6	Program Category: Critical infrastructure deficiencies									Priority: 1
7	Program Subcategory:									MA/MI: MA
8				Existing Authority	January 10 Action	April 1 Action	May 1 Action	May 14 Action	Special Action	Project Total
9	<b>FUNDING</b>									
10	bu-ref-fund-eny-year	ph	action							
11	8955-801-0701-11-11	P	NB	497						497
12	8955-310-0668-11-11	W	BA	421						421
13	8955-310-0668-11-11	C	BA	1,815						1,815
14	8955-310-0668-11-11	W	RA	-421						-421
15	8955-310-0668-11-11	C	RA	-1,815						-1,815
16	8955-310-0668-11-15	W	RA	527						527
17	8955-310-0668-11-15	C	RA	1,709						1,709
18	8955-801-0890-13-13	C	BA	3,665						3,665
19	8955-310-0668-11-15	C	BA			-1,709				-1,709
20	8955-801-0890-13-13	C	BA			-3,665				-3,665
21	8955-310-0668-11-16	C	RA			1,709				1,709
22	8955-801-0890-13-16	C	RA			3,665				3,665
23										0
24										0
25	<b>TOTAL FUNDING</b>			6,398	0	0	0	0	0	6,398
26	<b>PROJECT COSTS</b>									
27	Study									0
28	Acquisition									0
29	Performance Criteria									0
30	Preliminary Plans									497
31	Working Drawings									527
32	Total Construction or Design-Build									0
33	Equipment (Group 2)									0
34	<b>TOTAL COSTS</b>			1,024	0	5,374	0	0	0	6,398
35	<b>CONSTRUCTION OR DESIGN-BUILD DETAIL</b>									
36	Contract									4,214
37	Contingency									295
38	A&E									356
39	Agency Retained									21
40	Other									488
41	<b>TOTAL CONSTRUCTION OR DESIGN-BUILD</b>			0	0	5,374	0	0	0	5,374
42	<b>FUTURE FUNDING</b>			-5,374	0	5,374	0	0	0	0
43	<b>SCHEDULE</b>									
44				mm/dd/yyyy	<b>PROJECT SPECIFIC CODES</b>					
45	Study Completion				Proj Mgmt:	G	Location:	Veterans Home of CA		
46	Acquisition Approval				Budg Pack:	E	County:	Napa		
47	Start Preliminary Plans/Performance Criteria			3/1/2011	Proj Cat:	CRI	City:	Yountville		
48	Preliminary Plan/Performance Criteria Approval			8/1/2016	Req Legis:	N	Cong Dist:	1		
49	Approval to Proceed to Bid			10/1/2016	Req Prov:	N	Sen Dist:	2		
50	Contract Award Approval			1/1/2017	SO/LA Imp:	N	Assm Dist:	7		
51	Project Completion			4/1/2018						

	A	B	C	D	E	F	G	H	I	J
52	<b>STATE OF CALIFORNIA</b>								<b>Budget Year 2016-17</b>	
53	<b>CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP)</b>						Proj ID:	000000000000624		
54	<b>FISCAL DETAIL WORKSHEET</b>								BU/Entity:	8955
55	Department Title:	California Department of Veterans Affairs						Program ID	7015	
56	Project Title:	Chilled Water Distribution System Renovation						COBCP #:	1	
57	Program Category:	Critical infrastructure deficiencies						Priority:	1	
58	Program Subcategory:							MAM:	MA	
59	Identify all items which fit into the categories listed below. Attach a detailed list if funding is included in this request. Provide descriptions and summary estimates for items for which you plan to request funding in the future. When possible, identify funding needs by fiscal year (BY+1 through BY+4).									
60										
61										
62	<b>PROJECT RELATED COSTS</b>								<b>COST</b>	<b>TOTAL</b>
63	AGENCY RETAINED:									
64										
65										
66										
67										
68										
69	TOTAL AGENCY RETAINED									0
70	GROUP 2 EQUIPMENT									
71										
72										
73										
74										
75										
76										
77										
78										
79	TOTAL GROUP2 EQUIPMENT									0
80	<b>IMPACT ON SUPPORT BUDGET</b>								<b>COST</b>	<b>TOTAL</b>
81										
82	ONE-TIME COSTS									
83										
84										
85										
86	TOTAL SUPPORT ONE-TIME COSTS									0
87	ANNUAL ONGOING FUTURE COSTS									
88										
89										
90										
91	TOTAL SUPPORT ANNUAL COSTS									0
92	ANNUAL ONGOING FUTURE SAVINGS									
93										
94										
95										
96	TOTAL SUPPORT ANNUAL SAVINGS									0
97	ANNUAL ONGOING FUTURE REVENUE									
98										
99										
100										
101	TOTAL SUPPORT ANNUAL REVENUE									0

	A	B	C	D	E	F	G	H	I	J	
102	<b>STATE OF CALIFORNIA</b>									<b>Budget Year 2016-17</b>	
103	<b>CAPITAL OUTLAY BUDGET CHANGE PROPOSAL (COBCP)</b>							Proj ID:	00000000000624		
104	<b>SCOPE/ASSUMPTIONS WORKSHEET</b>									BU/Entity: 8955	
105	Department Title:	California Department of Veterans Affairs							Program ID	7015	
106	Project Title:	Chilled Water Distribution System Renovation							COBCP #:	1	
107	Program Category:	Critical infrastructure deficiencies							Priority:	1	
108	Program Subcategory:								MA/MI:	MA	
109	<p><b>Project Specific Proposals:</b> For new projects provide proposed Scope language. For continuing projects provide the latest approved Scope language. Enter Scope language in cell A110.</p>										
110	<p><b>Conceptual Proposals:</b> Provide a brief discussion of proposal defining assumptions supporting the level of funding proposed by fiscal year in relation to outstanding need identified for that fiscal year. (Also include scope descriptions for BY+1 through BY+4 in cell A110).</p>										
111	<p>This project will renovate the failing Chilled Water Distribution System at the Veterans Home of California, Yountville. The renovation is necessary to ensure the health and safety of the elderly and/or disabled veterans who reside at the Home.</p>										