

**TAB A**



STATE OF WASHINGTON  
DEPARTMENT OF HEALTH

*PO Box 47890 • Olympia, Washington 98504-7890  
Tel: 360-236-4030 • 711 Washington State Relay*

September 20, 2022

David Schumacher, Director  
Office of Financial Management  
Post Office Box 43113  
Olympia, Washington 98504-3113

RE: Department of Health 2023–2025 Biennium Capital Budget Submittal

Dear David:

I have enclosed the 2023–25 Biennium Capital Budget Submittal for the Department of Health (DOH). This request encompasses priorities for our public health system with improvements to the state's *Public Health Laboratories* in Shoreline and continued funding authorization for our *Drinking Water State Revolving Fund (DWSRF)* program.

Public Health Laboratories

The *Public Health Laboratories* provides diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, and chronic diseases, and environmental health concerns. This infrastructure has been critical in our public health response to COVID-19 and other diseases. In order to continue to move forward with the necessary support for our state, there has to be continued investment in our state's *Public Health Laboratories*.

In 2010, the department completed its 20-year Master Plan for the Shoreline campus. This was a two-year process and encompassed long-rang planning involving community leaders, sister agencies, local government, and public health leaders from across the country.

The improvements proposed in this budget are based on the master plan and continues a phased approach to achieving the 20-year vision for the campus. The final build-out includes *Public Health Laboratories* that are current on technology, offering a safe environment for employees and the community, and enough space to meet projected program needs for the next 20 years.

David Schumacher, Director

September 20, 2022

Page 2

Drinking Water State Revolving Fund (DWSRF)

Capital improvements to our public water systems are critical to the long-term health and economic vitality of Washington's communities. The *DWSRF* program provides low interest infrastructure loans to water systems. This budget request reflects necessary capital appropriations for DOH to administer the program with federal funding expected under the current capitalization grant and the Bipartisan Infrastructure Law signed by President Biden in 2021, including state match for the federal Environmental Protection Agency (EPA) award.

We are confident this capital budget will allow the Department of Health to continue to serve and protect the health of people of Washington State not just for today but for the foreseeable future.

I look forward to discussing these and other related matters with you as necessary. Thank you for your consideration.

Best,



Umair A. Shah, MD, MPH  
Secretary of Health

Enclosure

cc: Myra Baldini, Budget Assistant, Office of Financial Management  
Amy Ferris, Chief Financial Officer, Department of Health  
Elizabeth Perez, Chief of Public Affairs and Equity, Department of Health  
Kristin Peterson, Chief of Policy, Planning and Evaluation, Department of Health  
Jessica Todorovich, Chief of Staff, Department of Health

# Table of Contents

---

## **TAB A Ten-Year Plan Summary Information**

- Ten-Year Capital Program Summary by Project Class (CBS 001)
- DAHP Review Letter
- Backlog Reduction Plan
- FTE Summary (Not Applicable)

## **TAB B Capital Project Request - Preservation Projects**

- New Central Boiler Plant (Project 30000381) **4**
- Replace Air Handling Unit (AHU) in A/Q-wings (Project 40000034) **5**
- Re-route Existing Water Supply Mains (Project 40000041) **7**
- New LED lighting and controls in existing lab (Project 40000054) **6**
- Uninterrupted Power Supply (UPS) Public Health Lab (Project 40000056) **4**
- New Deionized Water (DI) Piping at Public Health Lab (Project 40000063) **7**

## **TAB C Capital Project Request - Programmatic Projects**

- Public Health Lab South Laboratory Addition (Project 30000379) **6**
- E-Wing Remodel into a Molecular Laboratory (Project 40000032) **5**
- Resource/Support Wing Addition (Project 40000036) **4**
- Resource/Support Wing Remodel (Project 40000035) **4**
- Generator for New Central Boiler Plant (40000053)
- Public Health Lab Solar Installation on Existing Roofs (40000055) **5**
- Building 20 Multi Use Renovations (Project 40000064) **1**

## **TAB D Capital Project Request - Grant Projects**

- 23-25 Drinking Water Rehab and Consolidation (Project 40000065) **7**
- DWSRF State Match (Project 40000066) **2**
- DWSRF Construction (Project 40000067) **3**
- Drinking Water Preconstruction Loans (Project 30000334) **1**
- Drinking Water Construction Loans (Project 30000409) **1**
- Drinking Water System Repairs and Consolidation (Project 40000006) **1**
- 2019-2021 Drinking Water Assistance Program (Project 40000025) **1**
- 2019-2021 Drinking Water Systems Repairs and Consolidation (Project 40000027) **1**
- Small & Disadvantage Communities DW (Project 40000031) **1**
- 2021-23 Drinking Water Assistance Program (Project 40000049) **1**
- 2021-23 Drinking Water Construction Loans - State Match (Project 40000051) **1**



Priority	Name	Divison	Fund	Amount Requested
1	Long Term Isolation & Quarantine Facility and Feasibility Study	Emergency Preparedness and Response	State Building Construction Account	\$ 360,000
1	Drinking Water Preconstruction Loans	Environmental Public Health	DWSRF State Fund	\$ 4,499,000
1	Drinking Water Construction Loans	Environmental Public Health	DWSRF State Fund	\$ 46,589,000
1	Drinking Water System Repairs and Consolidation	Environmental Public Health	DWSRF State Fund	\$ 785,000
1	2019-2021 Drinking Water Assistance Program	Environmental Public Health	DWSRF Federal Fund	\$ 11,933,000
1	2019-2021 Drinking Water Systems Repairs and Consolidation	Environmental Public Health	State Building Construction Account	\$ 917,000
1	Small & Disadvantage Communities DW	Environmental Public Health	Federal Fund	\$ 20,632,000
1	2021-23 Drinking Water Assistance Program	Environmental Public Health	DWSRF Federal Fund	\$ 112,900,000
1	2021-23 Drinking Water Construction Loans	Environmental Public Health	DWSRF State Fund	\$ 20,400,000
2	DWSRF Construction Loan Program State Match	Environmental Public Health	DWSRF State Fund	\$ 17,006,000
3	DWSRF Construction Loan Program Allotment Increase	Environmental Public Health	DWSRF Federal Fund	\$ 244,000,000
4	PHL Building wide Uninterrupted Power Supply (UPS)	Disease Control and Health Statistics	State Building Construction Account	\$ 4,100,000
4	PHL Central Boiler Plant	Disease Control and Health Statistics	State Building Construction Account	\$ 4,000,000
4	PHL Generator for New Central Boiler Plant	Disease Control and Health Statistics	State Building Construction Account	\$ 1,000,000
4	PHL Minor Works Preservation	Disease Control and Health Statistics	State Building Construction Account	\$ 600,000
4	PHL Minor Works Program	Disease Control and Health Statistics	State Building Construction Account	\$ 600,000
5	Public Health Lab Solar Installation Existing Roof	Disease Control and Health Statistics	State Building Construction Account	\$ 4,500,000
5	PHL Remodel of E-Wing into a Molecular Lab	Disease Control and Health Statistics	State Building Construction Account	\$ 2,580,000
5	PHL Replacement of A-Q wing AHU	Disease Control and Health Statistics	State Building Construction Account	\$ 1,000,000
6	PHL South Lab Addition	Disease Control and Health Statistics	State Building Construction Account	\$ 44,648,000
6	PHL New Lighting and Controls in Original Lab	Disease Control and Health Statistics	State Building Construction Account	\$ 1,265,000
7	Addressing Failing Water Systems	Environmental Public Health	State Building Construction Account	\$ 10,000,000
			<b>Total</b>	<b>\$ 554,314,000</b>

**303 - Department of Health  
Ten Year Capital Plan by Project Class**

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS001

Date Run: 9/21/2022 3:44PM

**Project Class: Preservation**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>3000381 New Central Boiler Plant</b>									
	057-1 State Bldg Constr-State	13,265,000	540,000	1,287,000	11,438,000					
0	<b>4000034 Replace Air Handling Unit (AHU) in A/Q-wings</b>									
	057-1 State Bldg Constr-State									
	706-8 Coro St Fisc Reco Fd-Federal Stimulus	1,894,000			1,894,000					
	<b>Project Total:</b>	<b>1,894,000</b>			<b>1,894,000</b>					
0	<b>4000041 Reroute Existing Water Supply Mains</b>									
	057-1 State Bldg Constr-State	3,765,000						3,765,000		
4	<b>4000063 New Deionized Water (DI) Piping at Public Health Laboratories</b>									
	057-1 State Bldg Constr-State	1,172,000				1,172,000				
8	<b>4000054 New LED lighting and controls in existing laboratory spaces</b>									
	057-1 State Bldg Constr-State	1,444,000				1,444,000				
9	<b>4000056 Uninterrupted Power Supply (UPS) for Public Health Labs</b>									
	057-1 State Bldg Constr-State	4,282,000				4,282,000				
<b>Total: Preservation</b>		<b>25,822,000</b>	<b>540,000</b>	<b>1,287,000</b>	<b>13,332,000</b>	<b>6,898,000</b>		<b>3,765,000</b>		

**Project Class: Program**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>4000053 Generator for New Central Boiler Plant</b>									

**303 - Department of Health  
Ten Year Capital Plan by Project Class**

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS001

Date Run: 9/21/2022 3:44PM

**Project Class: Program**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>4000053 Generator for New Central Boiler Plant</b>									
	057-1 State Bldg Constr-State	1,837,000			1,837,000					
1	<b>4000064 Bldg 20 Multi-Use Renovations</b>									
	057-1 State Bldg Constr-State	47,259,000				360,000	13,202,000	32,040,000	1,657,000	
2	<b>3000379 Public Health Lab South Laboratory Addition</b>									
	057-1 State Bldg Constr-State	75,214,000	196,000		4,933,000	70,085,000				
3	<b>4000032 E-wing Remodel to a Molecular Laboratory</b>									
	057-1 State Bldg Constr-State	21,247,000		216,000		2,107,000	18,924,000			
5	<b>4000055 Public Health Lab Solar Installation on Existing Roofs</b>									
	057-1 State Bldg Constr-State	2,621,000				2,621,000				
10	<b>4000035 Resource/Support Wing Remodel</b>									
	057-1 State Bldg Constr-State	9,754,000					235,000	1,032,000	8,487,000	
12	<b>4000036 Resource/Support Wing Addition</b>									
	057-1 State Bldg Constr-State	2,343,000						2,343,000		
<b>Total: Program</b>		<b>160,275,000</b>	<b>196,000</b>	<b>216,000</b>	<b>6,770,000</b>	<b>75,173,000</b>	<b>32,361,000</b>	<b>35,415,000</b>	<b>10,144,000</b>	

**Project Class: Grant**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>3000334 Drinking Water Preconstruction Loans</b>									

**303 - Department of Health  
Ten Year Capital Plan by Project Class**

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS001

Date Run: 9/21/2022 3:44PM

**Project Class: Grant**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>3000334 Drinking Water Preconstruction Loans</b>									
	04R-1 Drinking Water Asst.-State	6,000,000	585,000	916,000	4,499,000					
0	<b>3000409 Drinking Water Construction Loans</b>									
	04R-1 Drinking Water Asst.-State	118,000,000	69,610,000	1,801,000	46,589,000					
0	<b>4000025 2019-21 Drinking Water Assistance Program</b>									
	04R-2 Drinking Water Asst.-Federal	35,000,000	1,303,000	21,764,000	11,933,000					
0	<b>4000049 2021-23 Drinking Water Assistance Program</b>									
	04R-2 Drinking Water Asst.-Federal	112,900,000		112,900,000						
0	<b>4000051 2021-23 Drinking Water Construction Loans - State Match</b>									
	04R-1 Drinking Water Asst.-State	20,400,000		20,400,000						
6	<b>4000065 Addressing Drinking Water System Rehabilitations, Consolidations,</b>									
	057-1 State Bldg Constr-State	50,000,000				10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
7	<b>4000066 DWSRF State Match</b>									
	04R-1 Drinking Water Asst.-State	72,500,000				3,500,000	27,800,000	19,200,000	11,000,000	11,000,000
11	<b>4000067 DWSRF Construction Loans 04R2</b>									
	04R-2 Drinking Water Asst.-Federal	392,000,000				131,000,000	261,000,000			
<b>Total: Grant</b>		<b>806,800,000</b>	<b>71,498,000</b>	<b>157,781,000</b>	<b>63,021,000</b>	<b>144,500,000</b>	<b>298,800,000</b>	<b>29,200,000</b>	<b>21,000,000</b>	<b>21,000,000</b>

**Project Class: Grant - Pass Through**

**303 - Department of Health  
Ten Year Capital Plan by Project Class**

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS001

Date Run: 9/21/2022 3:44PM

**Project Class: Grant - Pass Through**

Agency Priority	Project by Account-EA Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
0	<b>4000006 Drinking Water System Repairs and Consolidation</b>									
	057-1 State Bldg Constr-State	5,000,000	3,538,000	677,000	785,000					
0	<b>4000027 2019-21 Drinking Water System Repairs and Consolidation</b>									
	057-1 State Bldg Constr-State	1,500,000	120,000	463,000	917,000					
0	<b>4000031 Small &amp; Disadvantaged Communities DW</b>									
	001-2 General Fund-Federal	20,806,000		174,000	20,632,000					
<b>Total: Grant - Pass Through</b>		<b>27,306,000</b>	<b>3,658,000</b>	<b>1,314,000</b>	<b>22,334,000</b>					

**Total Account Summary**

Account-Expenditure Authority Type	Estimated Total	Prior Expenditures	Current Expenditures	Reapprop 2023-25	New Approp 2023-25	Estimated 2025-27	Estimated 2027-29	Estimated 2029-31	Estimated 2031-33
001-2 General Fund-Federal	20,806,000		174,000	20,632,000					
04R-1 Drinking Water Asst.-State	216,900,000	70,195,000	23,117,000	51,088,000	3,500,000	27,800,000	19,200,000	11,000,000	11,000,000
04R-2 Drinking Water Asst.-Federal	539,900,000	1,303,000	134,664,000	11,933,000	131,000,000	261,000,000			
057-1 State Bldg Constr-State	240,703,000	4,394,000	2,643,000	19,910,000	92,071,000	42,361,000	49,180,000	20,144,000	10,000,000
706-8 Coro St Fisc Reco Fd-Federal Stimulus	1,894,000			1,894,000					
<b>Total</b>	<b>1,020,203,000</b>	<b>75,892,000</b>	<b>160,598,000</b>	<b>105,457,000</b>	<b>226,571,000</b>	<b>331,161,000</b>	<b>68,380,000</b>	<b>31,144,000</b>	<b>21,000,000</b>

### Ten Year Capital Plan by Project Class

\*

**Report Number:** CBS001  
**Date Run:** 9/21/2022 3:44PM

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Functional Area	*	All Functional Areas
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Include Enacted	No	No
Sort Order	Project Class	Project Class
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids



Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

September 30, 2021

Terry Williams, Architect  
Capital Construction Project Manager  
Disease Control and Health Statistics (DCHS)  
Washington State Department of Health

In future correspondence please refer to:  
Project Tracking Code: 111015-18-DOH  
Property: Master Plan Project  
Re: No Historic Properties Impacted

Dear Terry Williams:

Thank you for contacting the Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) regarding the above referenced proposal. Your communication on this action has been reviewed on behalf of the SHPO under provisions of Governor's Executive Order 21-02. Our review is based upon documentation provided in your submittal.

Our opinion continues that no historic properties will be impacted by the current project as proposed. However, any projects with a federal nexus (funding, permitting, etc.) is exempt from 21-02 consultation, and is deferred to the findings under Section 106 of the National Historic Preservation Act. As a result of our review, further contact with DAHP on this proposal is not necessary at this time.

However, if new information about affected resources becomes available and/or the project scope of work changes significantly, please resume consultation as our assessment may be revised. Also, if any archaeological resources are uncovered during construction, please halt work immediately in the area of discovery and contact the appropriate Native American Tribes and DAHP for further consultation.

Thank you for the opportunity to review and comment. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is shared with any hired cultural resource consultants and is attached to any communications or submitted reports. If you have any questions, please feel free to contact me.

Sincerely,

Holly Borth  
Preservation Design Reviewer  
(360) 890-0174  
Holly.Borth@dahp.wa.gov







Building System / Component	Project	Priority	Funding Type		FY23-25	FY25-27	FY27-29	FY29-31	FY31-33	FY33-35	Total	Average
			Operating	Capital								
Painting	Painting	2	X		85,000	85,000	85,000	85,000	85,000	89,250	514,250	102,850
Floors	Replace Sheet Vinyl Flooring	1,2	X		20,000	20,000	100,000	5,000	5,000	5,250	155,250	31,050
	Replace Existing Quarry Tile	1,2	X			250,000					250,000	250,000
	Carpet, Vinyl, Tile Repair & Maintenance	1,2	X		25,000	26,250	27,563	28,941	30,388	31,907	170,048	34,010
Ceiling	Acoustical Ceiling Tile	1,2	X		5,000	5,250	15,000	5,500	5,775	6,064	42,589	8,518
Security	Card Key System, Proximity Cards	1	X		45,000	5,000	5,000	50,000	5,000	5,250	115,250	23,050
	Hard key replacement	1	X		15,000			15,000			30,000	15,000
	Fencing/Gates/Barricades	1,2	X		50,000						50,000	10,000
	Window Film/Tint	1,2	X		100,000						100,000	20,000
	Cameras	1,2	X		50,000						50,000	10,000
	Mechanical door replacements (Main hallway/wings)	1,2	X		70,000						70,000	14,000
	Additional Security Officers	1,2	X		60,000						60,000	12,000
Electrical	Metering panels and Electrical Survey	1,2									0	0
	Lighting System Controls & Lighting	1		X	1,444,000	0	0	0	0	0	1,444,000	288,800
	Systems Testing	2	X		46,000		46,000				92,000	18,400
Plumbing	Systems Testing & Repairs	3	X		5,000	5,000	5,000	5,000	5,000	5,250	30,250	6,050
	Replace Deionized Water System - piping	1		X	1,172,000						1,172,000	234,400
	Reinsulate Piping	5	X								0	0
	Install New Boilers (Central Boiler Plant)	1		X	12,775,000						12,775,000	2,555,000
Fire Suppression	Fire Sprinkler Maintenance & Testing	1	X								0	0
Communications	Upgrade & Removed Abandoned Cable	3	X		14,500	15,363	16,354	17,495	17,495	18,370	99,577	19,915
<b>Mechanical Systems</b>												
Pumps	Miscellaneous Repairs	1,2	X		25,000	25,000	25,000	30,000	30,000	31,500	166,500	33,300
Ancillaries	Miscellaneous Repairs & Maintenance	1,3	X		75,000	75,000	75,000	75,000	75,000	78,750	453,750	90,750
Chemical	Water Treatment	1,2,3	X		10,000	10,000	10,000	10,000	10,000	10,500	60,500	12,100
Controls												
<b>Miscellaneous Systems</b>												
Life Safety Systems	Public Address Systems (Active Shooter Alarms)	1		X			350,000				350,000	70,000
<b>Wing recommissioning</b>	Re-Balancing	1,2,3	X			175,000					175,000	35,000
Subtotal Operating:					1,967,931	936,649	579,917	679,759	469,617	451,160	5,085,033	1,017,007
Subtotal Capital:					12,775,000	0	350,000	550,000	310,000	0	13,985,000	2,797,000
											0	0
<b>Total:</b>					<b>14,742,931</b>	<b>936,649</b>	<b>929,917</b>	<b>1,229,759</b>	<b>779,617</b>	<b>451,160</b>	<b>19,070,033</b>	<b>3,814,007</b>

## **Maintenance Backlog Reduction Plan**

The Public Health Laboratories (PHL) facility is located on the Department of Social and Health Services (DSHS) Fircrest campus in Shoreline. The building consists of approximately 80,000 gross square feet of office and laboratory space. The department is responsible to manage the property, including maintaining the facility, grounds, and roadways.

Projects (operating and capital) are identified below. Costs and timing of the projects are shown in Attachment 1 at the end of this section.

### **Grounds**

Site improvements and maintenance:

- Parking lots – These lots are heavily used and require periodic patching, repaving, and striping. Parking is provided for customers and employees.
- Roads – The roadway access to the campus receives heavy truck traffic. Before 2005, this road was maintained by DSHS. The roadway will need resurfacing and sealing in the 27-29 biennium.
- Sidewalks – The sidewalks provide safe access to the facility. They are subject to normal wear and tear and need minor repairs.
- Signs and furniture – Exterior signs and furniture require occasional replacement, repainting, and repair, based on normal wear and tear.
- Landscaping – The grounds of the PHL require maintenance. Trees must be pruned, removed, and replaced.
- Lawn – The PHL is an important part of the community and the grounds (lawns, trees, trails) are kept up to the community standards.
- Irrigation – The lawn and irrigation system requires annual maintenance. The irrigation system requires regular maintenance every three to four years to ensure efficient water and power use.

### **Infrastructure**

- Plumbing/sewer/storm drains – These systems receive normal wear and tear and need regular maintenance. These systems also require periodic testing. The main sewer line was replaced during the 13-15 biennium. Maintenance/repair budget will be required for future biennium forecasts.
- Electrical – Lighting Part of the 23-25 biennium.
- Central Boiler Plant – Construction of a hot water heating system that will replace the Fircrest campus steam system to the PHL with a significantly more efficient hot water heating system is continuing into the 23-25 biennium. Long term benefits of this project are improved energy efficiencies and reduced future increases in operating costs. The project will also separate PHL from the DSHS infrastructure as the Fircrest Campus uses are changed in the future. Other benefits include the ability to use hot water heating on future lab additions as outlined in the master plan, greater simplicity

of future building systems, and more dependability than a steam system. This project will also reduce the PHL's carbon footprint by 85-90%.

- Nitrogen Generation – A new nitrogen generator was installed during the 15-17 biennium.

## **Buildings**

### **Exterior**

- Roof Maintenance - The facility's roof was replaced during the 07-09 biennium. New roofing is on several additions constructed during the 09-11, 15-17, and 21-23 bienniums. Funding is required for repairs and maintenance based on normal wear and tear.
- Exterior wall system – The facility was built with a stucco exterior finish. The stucco is finished with an elastomeric coating and painted to maintain the integrity of the coating and exterior. The last elastomeric coating was completed in 1997 and has an expected life of 15 years and is scheduled to be refinished in the 25-27 biennium.
- Windows – Exterior windows at PHL are reaching the end of their expected life and are scheduled for replacement during the 15-17 biennium. Windows will be replaced as they fail and replaced with energy efficient glass to reduce electricity consumption.

### **Interior**

- Floors and ceiling – The vinyl in the building has reached the end of its useful life and will be replaced on a wing-by-wing basis over the next few biennia. Floors and ceilings in the PHL receive normal wear and tear.
- Security - The laboratories current key card systems were upgraded to meet strict security requirements during the 19-21 biennium. A new digital security camera system was installed in 13-15 biennium. Additional cameras were installed in the current 21-23 biennium by Capital Minor Works.
- Electrical – system repairs and lighting – The electrical system will require system repairs, periodic testing and maintenance due to normal wear and tear during the 23-25 biennium. New LED lighting and controls are requested in the capital budget for 23-25.
- Plumbing – DI water system – the deionized water system generator was replaced in 19-21 biennium to meet the laboratories needs and requirements for testing. New piping for the original PHL wings is being requested in 23-25 as a capital budget request.
- Plumbing – re-insulated piping - Re-insulation of steam piping is required to maintain energy conservation. Deterioration of insulation is a consequence of normal wear and tear. Much of this work will be done in the 21-23 & 23-25 biennium as the New Central Boiler plant is constructed.
- Fire Suppression - The laboratories fire suppression sprinkler system requires repairs and upgrades due to normal wear and tear.
- Communications - Upgrading of cabling and removal of abandoned cable will be required due to normal wear and tear.

## **Mechanical systems**

- Pumps – normal wear and tear maintenance.
- HVAC – normal wear and tear maintenance.
- Ancillaries – normal wear and tear maintenance.
- Chemical water treatment – normal wear and tear maintenance.
- Controls – normal wear and tear maintenance.

### **Miscellaneous Systems**

- Public Address System – To meet safety requirements, a public address system that reaches all areas of the laboratory needs to be installed and was planned for the 21-23 biennium. Due to supply chain issues that project will not happen. It will be re-requested in the 27-29 biennium.
- Computer System – Computer unit and system upgrades are required due to normal wear and tear.

### **Recommissioning**

- The PHL are required to recommission the building systems for airflow and balancing. As a laboratory, the demands on the HVAC, water, and steam systems are more complex than the typical office building. These systems combine to provide adequate safety for both employees and the community. The lab will recommission all building systems every five years.

## **3.2 Facility Assessments**

- The maintenance preservation plan of the PHL is designed to maintain the facilities as a safe and reliable work place and a good neighbor. The maintenance preservation plan protects the long term value of the state's assets. This translates into a policy that maintains the building infrastructure at or above the as-built standards to which it was constructed. The laboratory spaces are maintained in compliance with laboratory design, safety, and maintenance standards outlined in the "Biosafety in Microbiological and Biomedical Laboratories (BMBL) manual, 5<sup>th</sup> Edition."
- In 2009, a formal standardized assessment was taken of key building infrastructure components by General Administration. Maintenance projects were assessed based on asset age, condition, capacity, and program need. Budgets and maintenance activities for the upcoming year/biennium are performed according to these priorities.
- An electronic facilities and equipment maintenance system has been installed at the PHL. This system helps develop, prioritize, and schedule maintenance/replacement for major assets and will help with the planned building assessment.
- The department used the following criteria in determining maintenance project priority:
  - 1) Budget;
  - 2) Resources and protection of people/environment;

3) Protection of assets;

4) Program need or requirement; and

5) Cost savings.

- Informal re-assessments of all projects scheduled and priorities are done monthly and changed according to need and budget.
- The facilities team regularly conducts an assessment by looking at the unmet needs list and the length of time items have been on the list. The agency uses a combination of program funds and maintenance funds to support replacement of some capital assets such as windows, pumps, compressors, etc.
- A list of prioritized maintenance projects is included as an attachment to this document.

## **TAB B Capital Project Request – Preservation Projects**

# C-100(2020)

Updated June 2020

## Quick Start Guide

### GENERAL INFORMATION

- 1) The C-100(2020) tool was created to align with the estimating application in the Capital Budgeting System (CBS). The intended use is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Unifomat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as Acquisition, MACC, Equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% (x) (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% (x) Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% (x) MACC$
- 4) Artwork:  $0.5\% (x) Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 4\%) (x) (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2020*

Agency	Washington State Department of Health
Project Name	New Central Boiler Plant
OFM Project Number	3000381

**Contact Information**

Name	Terry Williams
Phone Number	206/418-5577
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

**Statistics**

Gross Square Feet	1,391	MACC per Square Foot	\$6,645
Usable Square Feet	1,391	Escalated MACC per Square Foot	\$6,958
Space Efficiency	100.0%	A/E Fee Class	A
Construction Type	Heating and power plan	A/E Fee Percentage	12.38%
Remodel	Yes	Projected Life of Asset (Years)	35

**Additional Project Details**

Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.20%	Location Used for Tax Rate	Shoreline
Contingency Rate	5%		
Base Month	August-20	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

**Schedule**

Predesign Start		Predesign End	
Design Start	July-21	Design End	December-21
Construction Start	December-21	Construction End	July-23
Construction Duration	19 Months		

Green cells must be filled in by user

**Project Cost Estimate**

Total Project	<b>\$12,169,584</b>	Total Project Escalated	<b>\$12,724,657</b>
		Rounded Escalated Total	<b>\$12,725,000</b>



**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2020*

Agency	Washington State Department of Health	
Project Name	New Central Boiler Plant	
OFM Project Number	3000381	

**Cost Estimate Summary**

Acquisition			
<b>Acquisition Subtotal</b>	<b>\$0</b>	<b>Acquisition Subtotal Escalated</b>	<b>\$0</b>

Consultant Services			
Predesign Services	\$0		
A/E Basic Design Services	\$829,023		
Extra Services	\$131,073		
Other Services	\$372,460		
Design Services Contingency	\$66,628		
<b>Consultant Services Subtotal</b>	<b>\$1,399,184</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$1,447,397</b>

Construction			
Construction Contingencies	\$462,144	Construction Contingencies Escalated	\$485,807
Maximum Allowable Construction Cost (MACC)	\$9,242,886	Maximum Allowable Construction Cost (MACC) Escalated	\$9,678,816
Sales Tax	\$989,913	Sales Tax Escalated	\$1,036,792
<b>Construction Subtotal</b>	<b>\$10,694,943</b>	<b>Construction Subtotal Escalated</b>	<b>\$11,201,415</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$63,307</b>	<b>Artwork Subtotal Escalated</b>	<b>\$63,307</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$12,150</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$12,538</b>

Project Cost Estimate			
Total Project	<b>\$12,169,584</b>	Total Project Escalated	<b>\$12,724,657</b>
		Rounded Escalated Total	<b>\$12,725,000</b>

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>				
Programming/Site Analysis				
Environmental Analysis				
Predesign Study				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0218</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>				
A/E Basic Design Services	\$829,023			69% of A/E Basic Services
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$829,023</b>	<b>1.0268</b>	<b>\$851,241</b>	Escalated to Mid-Design
<b>3) Extra Services</b>				
Civil Design (Above Basic Svcs)				
Geotechnical Investigation				
Commissioning				
Site Survey				
Testing				
LEED Services				
Voice/Data Consultant				
Value Engineering				
Constructability Review				
Environmental Mitigation (EIS)				
Landscape Consultant				
DES Project Management (ESCO)	\$131,073			DES Energy Costs
<b>Sub TOTAL</b>	<b>\$131,073</b>	<b>1.0268</b>	<b>\$134,586</b>	Escalated to Mid-Design
<b>4) Other Services</b>				
Bid/Construction/Closeout	\$372,460			31% of A/E Basic Services
HVAC Balancing				
Staffing				
<b>Sub TOTAL</b>	<b>\$372,460</b>	<b>1.0512</b>	<b>\$391,530</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>				
Design Services Contingency	\$66,628			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$66,628</b>	<b>1.0512</b>	<b>\$70,040</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>				
	<b>\$1,399,184</b>		<b>\$1,447,397</b>	

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>				
G10 - Site Preparation	\$45,000			
G20 - Site Improvements	\$83,952			
G30 - Site Mechanical Utilities	\$648,369			
G40 - Site Electrical Utilities	\$456,139			
G60 - Other Site Construction				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$1,233,460</b>	<b>1.0319</b>	<b>\$1,272,808</b>	
<b>2) Related Project Costs</b>				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Seattle City Light Transformer	\$699,600			
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$699,600</b>	<b>1.0319</b>	<b>\$721,918</b>	
<b>3) Facility Construction</b>				
A10 - Foundations	\$229,355			
A20 - Basement Construction				
B10 - Superstructure	\$150,633			
B20 - Exterior Closure	\$155,688			
B30 - Roofing	\$56,400			
C10 - Interior Construction	\$48,283			
C20 - Stairs				
C30 - Interior Finishes	\$13,364			
D10 - Conveying				
D20 - Plumbing Systems	\$158,300			
D30 - HVAC Systems	\$4,777,756			
D40 - Fire Protection Systems	\$77,716			
D50 - Electrical Systems	\$723,969			
F10 - Special Construction				
F20 - Selective Demolition				
General Conditions	\$918,362			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$7,309,826</b>	<b>1.0512</b>	<b>\$7,684,090</b>	
<b>4) Maximum Allowable Construction Cost</b>				
<b>MACC Sub TOTAL</b>	<b>\$9,242,886</b>		<b>\$9,678,816</b>	

This Section is Intentionally Left Blank

**7) Construction Contingency**

Allowance for Change Orders	\$462,144		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$462,144</b>	<b>1.0512</b>	<b>\$485,807</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0512</b>	<b>\$0</b>

**Sales Tax**

<b>Sub TOTAL</b>	<b>\$989,913</b>		<b>\$1,036,792</b>
------------------	------------------	--	--------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$10,694,943</b>		<b>\$11,201,415</b>
-------------------------------------	---------------------	--	---------------------

Green cells must be filled in by user

**Cost Estimate Details**

Equipment				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
E10 - Equipment				
E20 - Furnishings				
F10 - Special Construction				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0512</b>	<b>\$0</b>	
<b>1) Non Taxable Items</b>				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0512</b>	<b>\$0</b>	
<b>Sales Tax</b>				
<b>Sub TOTAL</b>	<b>\$0</b>		<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>		<b>\$0</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Project Artwork	\$63,307				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$63,307</b>		<b>NA</b>	<b>\$63,307</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.0512</b>	<b>\$0</b>	

Green cells must be filled in by user



**Cost Estimate Details**

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal	\$12,150				
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$12,150</b>		<b>1.0319</b>	<b>\$12,538</b>	

Green cells must be filled in by user

**C-100(2020)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

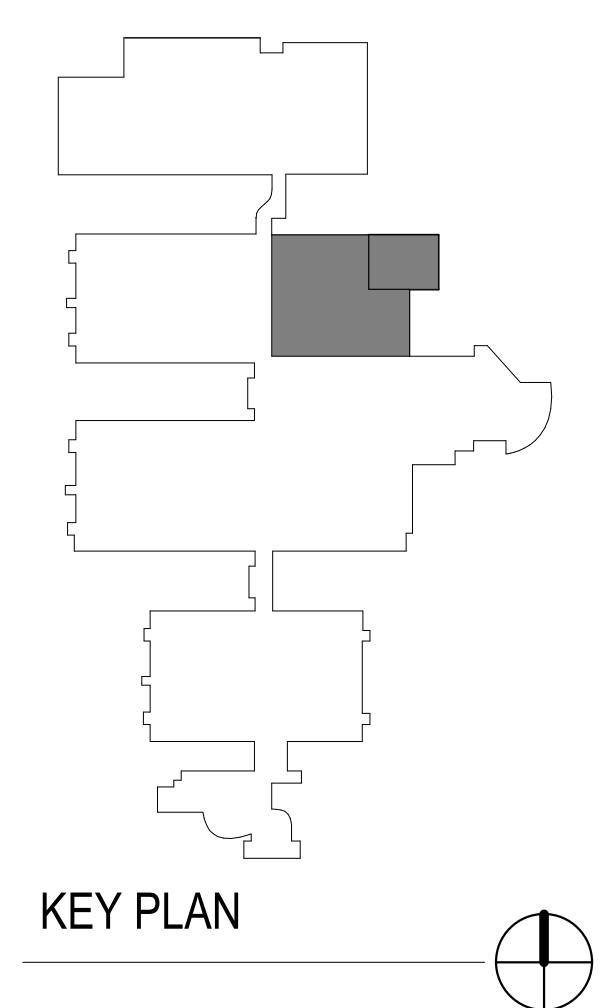
**Tab G. Other Costs**

<i>Insert Row Here</i>

PROJECT:  
**WSPHL GSHP  
AND ELECTRIC  
PLANT**

1610 NE 150TH ST,  
SHORELINE, WA 98155

CONSULTANTS:



REGISTRATION:

ISSUES:

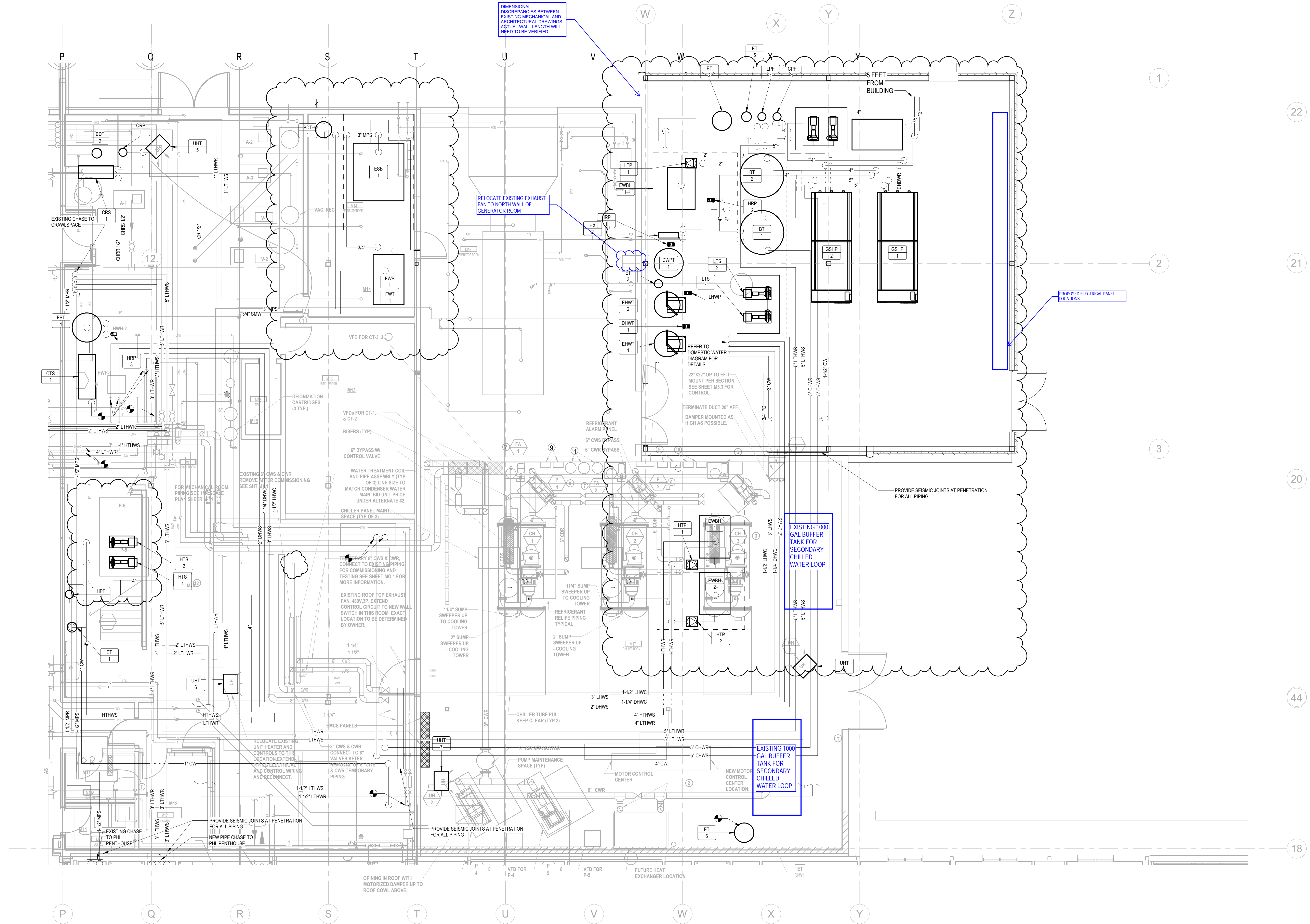
NO	DATE	DESCRIPTION
05/08/2020	05/08/2020	CARTOON SET
05/26/2020	05/26/2020	30% PROGRESS SET
06/19/2020	06/19/2020	30% PROGRESS SET ADDENDUM

DESIGNED: SM, DE, KM  
DRAWN: KM  
CHECKED: SM  
JOB NO: 203053  
ISSUED ON: 06/22/2020

SHEET TITLE:  
**MECHANICAL ROOM  
ENLARGED  
MECHANICAL PLAN**

SHEET NUMBER:

**M-124**



# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:46PM

Project Number: 30000381

Project Title: New Central Boiler Plant

## Description

Starting Fiscal Year: 2024

Project Class: Preservation

Agency Priority: 0

### Project Summary

This project is for the reappropriation of funding for constructing a 1400 sf Central Boiler Plant specifically for the Public Health Laboratory. Design was completed during the 21-23 biennium and construction is starting in October of 2023. The new boiler plant will provide the PHL with hot water heating instead of steam heating while reducing its carbon footprint by 85%. This project is a "CBPS" project and an ESCO project.

### Project Description

#### Project Description:

**1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.**

The Public Health Laboratory was built in 1985, as a part of DSHS, on the Fircrest Campus. When constructed, it was connected to the campus wide utilities, most of which was constructed in 1942 by the US Navy. The campus steam plant and infrastructure is original to the campus, with some upgrades through the years, that requires 24/7 monitoring by a certified steam technician. Steam is an appropriate medium to transfer large amounts of energy on a large campus however, the downsizing on the DSHS campus and age of the system has made it an inefficient and unreliable utility. In the new Fircrest Master Plan currently being developed, DSHS is wanting to remove the existing system and replace it with several small boilers located in several strategic locations around campus. The existing system is off line several times a year leaving the PHL without heat or the ability to sterilize waste in the autoclaves located in the building during those shutdowns. Unreliability, the fact that DSHS wants to remove the campus wide steam plant, and having the current steam system will not allow the PHL to meet EO18-01, HB1257, the Clean Buildings Act makes this project a priority for the PHL.

The project will save approximately \$65,000 in energy costs annually, avoid approximately \$65,000 annually in penalties from the Clean Building Act, and provide the PHL with reliable heat and hot water.

**2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.**

Design work for the plant started during the 19-21 biennium. This request is asking to finish design (25% remaining) and construct the new plant. The new plant will be an approximately 1400 sf addition to the mechanical wing of the PHL. The main heat source will be a ground source heat pump (GSHP) with an electric backup system to supplement heat that the GSHP cannot provide during peak times. Preliminary testing during design confirmed that an open loop system can be used instead of a closed loop system, making for significant savings during construction. A new transformer from Seattle City Light (SCL) will be required to provide power to the electrical backup system. All of the existing heating coils in the Air Handling Units will be changed to accept hot water heating. The plant has been sized to also accommodate the South Lab Addition which is part of the PHL capital budget request.

The project will finish design and begin construction starting with the 21-23 biennium. Construction will take approximately 24 months and be completed around the end of July 2023.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?** This project would allow the PHL to separate itself from the antiquated Fircrest steam system before the Fircrest campus decommissions their steam plant. This project will also allow the PHL to meet the Governor's EO18-01 and HB1257 (Clean Buildings Act). Changing to a hot water system with only an electric steam boiler to run the autoclaves will be a more efficient way to provide building heat, lab hot water, and domestic hot water. The steam boiler would not require a certified steam technician and could be maintained by the existing maintenance staff. Annual energy costs would be lower to run a heating hot water plant than a steam plant. Annual energy savings are anticipated to be \$65,000. Sustainable heating would be provided by an open-loop ground source heat pump with supplemental sustainable energy sources by Seattle City Light hydro produced clean electricity. There would be a carbon reduction for the lab of 85%. Using an ESCO contractor to



## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:46PM

Project Number: 30000381

Project Title: New Central Boiler Plant

### Description

design/build the plant guarantees the energy savings provided by the new plant.

If the plant is not funded the PHL will continue to be dependent on an aging and less efficient campus wide steam system. As the Fircrest campus downsizes the campus steam system becomes less efficient and more costly to operate. When the new Fircrest master plan is implemented the PHL will then be forced to build a new boiler plant on the DSHS development timeline instead of the PHL master plan timeline. The new South Lab Addition would have to be designed with either steam heating coils in the air handling unit (AHU) or heat exchangers would need to be provided in the penthouse so that the heating coils would not need to be replaced. Either way the new wing would need a retrofit when the new central plant came on line. If the plant was not built the PHL would not be able to meet EO18-01, HB1257, and other carbon reducing laws while possibly accruing fines and funding higher energy costs.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated redesign, please summarize the alternatives the redesign considered.**

In the 19-21 budget request 4 alternatives were chosen:

- 1) Natural Gas Fired Boiler Plan
- 2) All Electric Boiler Plant
- 3) Combined Heat and Power
- 4) Ground Source Heat Pump (Chosen)

Design money was given for the Ground Source Heat Pump design in 19-21. This system was chosen to provide the majority of the heating and cooling loads for the site while supplementing the power with electric boilers during extreme cold weather. This option converts the site to all electric which is 90% sustainable hydro power from Seattle City Light, is compliant with EO18-01 goals, provides \$65,000 in annual energy savings, reduces carbon by 85%, and has a new equipment life cycle of 25-35 years. Testing also proved that an open loop system will work on the site for the GSHP which means only 4-12" diameter wells will need to be drilled for the project instead of approximately 200-6" wells. One of the 12" wells was drilled during design for testing and will be used for construction.

The cost estimate for the project is included in CBS and a C-100 is attached with this request.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

Due to the nature of this project, DOH clientele that work with the PHL would not be impacted or even know that this project has taken place. Who would be impacted by this request would be laboratory staff. They would have a reliable source of energy for building heat, lab and domestic hot water, and continuous sources of steam for the autoclaves. It will make for better staff morale and staff retention and help reduce the State Governments carbon footprint.

**6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.**

The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance.**

**Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

The new central boiler plant project was recommended in the PHL master plan due in part to the downsizing and aging of the Fircrest system, the superior efficiency of a hot water system for the lab, and the lower annual heating energy costs. Currently it meets the Governor's EO18-01 and other sustainability laws that the PHL is required meet.

**8. Does this project include IT-related costs, including hardware, software, cloud based services, contracts, or staff? If yes, attach IT Addendum.**

There are no IT-related costs related to this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.**

No, this project is not linked to the PSAA.

**10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.**

This new plant will be a high efficiency, sustainable ground source heat pump (GSHP) mechanical system which will provide

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:46PM

Project Number: 30000381

Project Title: New Central Boiler Plant

**Description**

the typical heating and cooling needs for the lab, while supplementing with electric boilers during peak loads for heating and cooling. The GSHP system will utilize aquifer ground water as a heating and/or cooling source for the lab. This prevents the need to utilize fossil fuels to condition space temperatures, reducing greenhouse gas emissions by 85% and further aligning with strategic clean energy initiatives.

**11. Is there additional information you would like decision makers to know when evaluating this request**

This project, when completed, will make the laboratory independent from the Fircrest steam system and independent from any future development that may happen on the Fircrest site. The PHL will be using 100% sustainable energy and no fossil fuels. There will be an annual energy cost savings of approximately \$65,000/year. The PHL will comply with the Clean Buildings Act, avoiding an annual \$65,000 penalty for not being in compliance. This project will be good for the PHL and good for the people of Washington.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

New Facilities/Additions (Major Projects)

**Growth Management impacts**

No Growth management impacts. Project is part of the PHL 20-year master plan and was approved by the City of Shoreline in 2010.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropr	New Appropr
057-1	State Bldg Constr-State	13,265,300	540,300	746,640	11,978,360	
	<b>Total</b>	<b>13,265,300</b>	<b>540,300</b>	<b>746,640</b>	<b>11,978,360</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**Narrative**

There are no additional operational costs as the energy costs paid to DSHS will now be paid directly to the utility. There are no additional FTEs required for this project.

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	30000381	30000381
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# Washington State Public Health Lab:

Sustainable, critical infrastructure upgrades aiming to create jobs and decarbonize state facilities with the help of key partners

W.R. Giedt Public Health Laboratories  
State of Washington  
Department of Health  
1610 N.E. 150th St.

## OPERATIONAL BENEFITS

- ✓ Allows for lab autonomy, **reducing risk** of shutdown
- ✓ Addresses **critical lab requirements**, satisfying lab space & equipment conditions
- ✓ **Improves resilience/reliability** with built-in redundancy in mechanical systems
- ✓ Provides **highest efficiency** HVAC system available
- ✓ Utilizes onsite natural resources & integrates lab facility with natural environment

## FINANCIAL BENEFITS

- ✓ Unlocks **\$65K of energy cost savings** annually
- ✓ Complies with Clean Buildings Act **avoiding annual penalty of \$65K**
- ✓ May qualify for Clean Buildings Act early adopter funding
- ✓ Potential available stimulus funding may offset project costs

## COMMUNITY BENEFITS


- ✓ Results in creation of **90+ jobs** in various trades, contractors, local permit authorities & clean-technology engineering
- ✓ Requires **15% apprenticeship**
- ✓ **Shovel-ready** for potential construction stimulus

## ENVIRONMENTAL BENEFITS

- ✓ Incorporates Executive Order 18-01, HB 1257, Clean Buildings Act directives
- ✓ **Reduces carbon emissions by 85%**
- ✓ Eliminates 1M lbs of carbon per year – equivalent to (either/or):

 93 vehicles removed from the road

 46 homes removed from the grid

 132 acres of trees planted

## Building Overview

The Washington State Public Health Lab (PHL) in Shoreline is the State's primary facility to provide services to protect and improve the health of people in Washington State. This lab is responsible for many critical public health services including testing, tracking and monitoring infectious diseases (including COVID-19), testing environmental samples, and screening newborns for inherited conditions such as developmental disabilities and diseases.



### NEW CENTRAL PLANT NEEDED

Currently, the Washington State Public Health Lab shares a common heating plant with Fircrest School. This 50-year old district steam boiler plant is at the end of its useful life increasing risk to the resiliency of the system. In the 2019-2021 biennium, the legislature provided funding for design services to address the need to provide dedicated HVAC systems to both facilities. Design requirements for the new system include increasing reliability, efficiency and resilience for the lab, in addition to integrating building systems with the natural environment to the extent possible while decreasing pollution and reducing carbon emissions.



### ECODISTRICT HUB

Engineering design is under-way for a high efficiency, sustainable ground source heat pump (GSHP) mechanical system which will provide the typical heating and cooling needs of the lab, while supplementing with electric boilers during peak loads. The GSHP system will utilize aquifer ground water as a heating and/or cooling source for the lab. This prevents the need to utilize fossil fuels to condition space temperatures, reducing greenhouse gas emissions by 85% and further aligning with strategic clean energy initiatives.



### PROJECTED SCHEDULE\*

\*Schedule can be expedited pending contract and funding negotiations.



### KEY PARTNERS





# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:39PM

Project Number: 40000063

Project Title: New Deionized Water (DI) Piping at Public Health Laboratories

## Description

Starting Fiscal Year: 2024

Project Class: Preservation

Agency Priority: 3

### Project Summary

This project is requesting funds to construct a new Deionized Water System (DI) in the original laboratory wings of the PHL. The existing system is original to the building and is no longer keeping the water pure in all faucets due to changes in the system, dead legs of removed faucets, and difficulty maintaining the system due to no balancing valves installed in the original system. The new system would install new polypropylene piping to each wing, in the ceiling for ease of maintenance and flexibility.

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

Deionized water is purified water used in many laboratory tests that has been scrubbed of all minerals like sodium or potassium ions. Without a working DI system, the PHL would not be able to run many of its tests. The new additions to the original PHL building have new, modernized systems that run in a continuous loop providing DI water easily to all locations. The original laboratories still have the original system.

The original deionized water system is a branched system with supply lines running overhead in the ceiling and return lines running under the concrete floor slab in the crawlspace. The original system was installed in 1985 when the Public Health Laboratories (PHL) was constructed. Over the years changes in the PHL laboratories has created the need for adjustments in the DI system. This has created dead legs in the system where DI faucets were removed or locations where DI faucets were added and did not contribute to the flow of the system.

The system has been harder and harder to keep contaminates out of the water. During the 19-21 biennium the generating system was replaced with a new modular system, comprised of a packaged Elga deionized water generator, pre-filter tanks, a recirculation pump, and a booster pump. However, due to the existing layout of the original piping, it is not possible to adequately scour every portion of the system using typical cleaning processes. The typical process is to scour the piping and flush any contaminants back to the DI generator where the water is cleaned and then returned into the system. This is easily accomplished in the newer looped systems that have been installed at the PHL. Due to the branch system, along with changes to the system, have made this process difficult at best.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

The project will reuse the DI water generator, pre-filter tanks, recirculation pump, and booster pump that was installed during the 19-21 biennium. This request is for new polypropylene piping 1-1/4" in diameter, located in the ceiling, that would run in a continuous loop throughout the existing laboratories. It would involve running piping into almost every lab space in each of the four wings. In order to allow for individual wings to be isolated for future modifications without shutting down the whole system, a set of isolation valves are included at each wing. By opening the valve in the mainline and closing the valves to the wing, flow can bypass that wing while still serving the other wings in the building. This design would always guarantee continuous flow through the entire system. Flow would be turbulent and would keep the piping scoured to prevent bacteria build-up.

The project cannot be phased over several biennia because of the need to have a working DI water system in all the laboratories. The work will start and be completed during the 23-25 biennium. See the attached C-100 for construction cost.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?**

Installing the new looped DI water piping will address several problems.

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:39PM

Project Number: 40000063

Project Title: New Deionized Water (DI) Piping at Public Health Laboratories

## Description

· Having a continuous loop instead of branches will allow the water flow to scour the piping keeping it clean. A loop system design is the standard

for new DI water systems.

· There would not be any dead legs due to remodeling as a new faucet could simply be included or removed from the loop, keeping the loop continuous.

· Having all piping above the ceiling will allow ease of access for maintenance or alterations to the laboratory spaces.

· The ability to valve the "Backbone" of the loop will enable facilities to valve off a wing if work needs to be done without shutting down the whole

system to the rest of the lab. At this time any work done on the system requires that it be shut down in all laboratory wings.

The result of not acting on this project will result in the PHL having to contend with contaminated (for lab purposes) water. The

amount of water used by the laboratory, especially in the environmental laboratories, use a considerable amount of water.

Going to the Newborn Screening Wing every day to get DI water is not an efficient use of time or staff.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

**Option 1 (preferred):** Remove the existing DI branch piping and install a continuous loop throughout the existing laboratories. This

recommendation was chosen as it guarantees clean DI water and converts the DI system into a standard design for a

modern DI system. It will also make maintenance on the system easier and make it more flexible for alterations to the

laboratories when required.

**Option 2:** Adding piping to dead legs to allow circulation, modifying the return piping at each wing in the crawl space, adding an automatic

isolation valve to the new piping in the crawlspace in each wing, and implementing a maintenance program of periodic opening and

closing valves to isolate wings and force all flow through a single wing to achieve higher flow velocities in an effort to keep the piping

clean. The reasons this option was not chosen is 1) that while flow rates are improved, it is possible that they still may not be high

enough to keep the system clean. 2) a DDC control scheme will have to be generated and the system's water quality will be

dependent on that functioning properly and 3) the isolation valves on which the system depends will require regular maintenance.

Also, the control valves are in the crawlspace which make maintenance difficult and the control wiring would have to run up through

the concrete floor to connect to the DDC control system.

**Option 3:** This involves only making piping modifications to eliminate the dead legs to allow circulation through all the piping branches. To

guarantee adequate water flow through each branch isolation valves would be replaced with DDC control valves.

During off hours, all

valves would be closed except for groups of two or three forcing all water to circulate through those branches. The reasons this option

was not chosen is because the control valves would be on the supply side of the branches so while the valves are closed, no water

would be available if there is demand and this option is also reliant on DDC control valve operation and regular maintenance.

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:39PM

Project Number: 40000063

Project Title: New Deionized Water (DI) Piping at Public Health Laboratories

**Description**

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

This project does not impact any DOH clientele directly, however, DI water is critical to testing at the PHL. Without this system the PHL would not be able to support other groups within the agency, local health jurisdictions, or regional partners.

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

This project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

This project supports agency performance by keeping the PHL running in an efficient manner. When having to bring DI water from one wing into another takes time and will eventually affect schedules. Considering the high rate of testing that goes on at the PHL, not able to get tests out quickly and on time can slow down results for the rest of the agency and its health partners.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

This project does not contribute to statewide goals to reduce carbon pollution but it does keep the PHL operating at full capacity from an efficiency and safety point of view.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

The project does not affect or impact any demographic or geographic communities within the state directly. Indirectly it keeps the PHL running efficiently so that the agency can support its health partners around the state.

**12. Is there additional information you would like decision makers to know when evaluating this request.**

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

**Growth Management impacts**

No growth management impacts. The project is within an existing building

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropr	New Approps

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:39PM

Project Number: 40000063

Project Title: New Deionized Water (DI) Piping at Public Health Laboratories

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	1,172,000				1,172,000
	<b>Total</b>	<b>1,172,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,172,000</b>

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State				
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

this is an infrastructure project within an existing building

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000063	40000063
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	Deionized Water (DI) Piping Replacement
OFM Project Number	40000063

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	54,562	MACC per Gross Square Foot	\$14
Usable Square Feet	47,670	Escalated MACC per Gross Square Foot	\$15
Alt Gross Unit of Measure			
Space Efficiency	87.4%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	14.90%
Remodel	Yes	Projected Life of Asset (Years)	50
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start		Pre-design End	
Design Start	August-23	Design End	February-24
Construction Start	March-24	Construction End	July-25
Construction Duration	16 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$1,059,130</b>	Total Project Escalated	<b>\$1,171,821</b>
		Rounded Escalated Total	<b>\$1,172,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
Design Phase Services	\$85,949		
Extra Services	\$0		
Other Services	\$38,615		
Design Services Contingency	\$12,456		
<b>Consultant Services Subtotal</b>	<b>\$137,021</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$147,725</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$760,001	Maximum Allowable Construction Cost (MACC) Escalated	\$844,058
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$76,000		\$84,406
Non-Taxable Items	\$0		\$0
Sales Tax	\$86,108	Sales Tax Escalated	\$95,632
<b>Construction Subtotal</b>	<b>\$922,109</b>	<b>Construction Subtotal Escalated</b>	<b>\$1,024,096</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$0</b>	<b>Artwork Subtotal Escalated</b>	<b>\$0</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$1,059,130</b>	Total Project Escalated	<b>\$1,171,821</b>
		Rounded Escalated Total	<b>\$1,172,000</b>



## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$147,725		\$147,725		\$0
<b>Construction</b>					
Construction Subtotal	\$1,024,096		\$1,024,096		\$0
<b>Equipment</b>					
Equipment Subtotal	\$0				\$0
<b>Artwork</b>					
Artwork Subtotal	\$0				\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$1,171,821	\$0	\$1,171,821	\$0	\$0
	\$1,172,000	\$0	\$1,172,000	\$0	\$0
Percentage requested as a new appropriation			100%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

*Insert Row Here*

**What has been completed or is underway with a previous appropriation?**

*Insert Row Here*

**What is planned with a future appropriation?**

*Insert Row Here*

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0461</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$85,949				69% of A/E Basic Services
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$85,949</b>		<b>1.0588</b>	<b>\$91,004</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)					
Geotechnical Investigation					
Commissioning					
Site Survey					
Testing					
LEED Services					
Voice/Data Consultant					
Value Engineering					
Constructability Review					
Environmental Mitigation (EIS)					
Landscape Consultant					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0588</b>	<b>\$0</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$38,615				31% of A/E Basic Services
HVAC Balancing					
Staffing					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$38,615</b>		<b>1.1106</b>	<b>\$42,886</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency	\$12,456				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$12,456</b>		<b>1.1106</b>	<b>\$13,835</b>	Escalated to Mid-Const.

CONSULTANT SERVICES TOTAL

\$137,021

\$147,725

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>					
G10 - Site Preparation					
G20 - Site Improvements					
G30 - Site Mechanical Utilities					
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>2) Related Project Costs</b>					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>3) Facility Construction</b>					
A10 - Foundations					
A20 - Basement Construction					
B10 - Superstructure					
B20 - Exterior Closure					
B30 - Roofing					
C10 - Interior Construction					
C20 - Stairs					
C30 - Interior Finishes					
D10 - Conveying					
D20 - Plumbing Systems	\$690,910				
D30 - HVAC Systems					
D40 - Fire Protection Systems					
D50 - Electrical Systems					
F10 - Special Construction					
F20 - Selective Demolition					
General Conditions	\$69,091				
Other Direct Cost					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$760,001</b>		<b>1.1106</b>	<b>\$844,058</b>	
<b>4) Maximum Allowable Construction Cost</b>					
<b>MACC Sub TOTAL</b>	<b>\$760,001</b>			<b>\$844,058</b>	
	\$14			\$15 per GSF	

[Empty box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$76,000		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$76,000</b>	<b>1.1106</b>	<b>\$84,406</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.1106</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$86,108</b>		<b>\$95,632</b>
------------------	-----------------	--	-----------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$922,109</b>		<b>\$1,024,096</b>
-------------------------------------	------------------	--	--------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user



## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:28PM

Project Number: 40000054

Project Title: New LED lighting and controls in existing laboratory spaces

## Description

Starting Fiscal Year: 2024

Project Class: Preservation

Agency Priority: 5

### Project Summary

This project will replace the existing fluorescent lighting in the environmental, microbiology, operations, and mechanical wings with new LED lighting. Updating the lighting to LED will also include lighting controls, such as occupancy and daylighting sensors. Installation of the new lighting will help the Public Health Laboratory (PHL) to be more sustainable by using less electricity in an already high electrical use building, along with other energy saving projects, and help the PHL meet the Washington Clean Buildings Act and EO 18-01 and provide for a cleaner environment by not having to dispose of mercury filled fluorescent tubes.

### Project Description

#### Project Description:

**1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.**

This is an opportunity for the PHL to continue to make the laboratory as energy efficient as possible. The LED lights themselves are more energy efficient thus less expensive to operate. Maintenance on the lights are minimal and they have a life expectancy of over 6 times that of fluorescent. Adding lighting controls save additional energy by turning off lights when sufficient daylight is available or when the space is unoccupied. Lower maintenance cost combined with approximately 50% in lower operating costs within a 55,000 sq.ft. building will be substantial.

This request is a priority because The Department of Health (DOH) is working towards making the PHL as energy efficient as possible along with meeting the Washington Clean Buildings Act and EO 18-01. To this point in time the PHL has replaced the E-wing and C-wing air handling units (AHU) with new, more energy efficient models, installed chilled beams for cooling, reducing the size of the AHUs needed, installed LED lighting and controls in the new additions, and upgraded the building controls and have them on a monitoring system so that they can be tweaked for efficiency. With completion of the new Ground Source Heat Pump boiler plant the fluorescent lighting is the outstanding electrical system that still needs to be upgraded to a more energy efficient, less costly system. While it may not be possible for the laboratory to get to zero net energy, the PHL is working hard to get as close to zero net energy (ZNE) as possible.

**2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.**

The request will replace the existing fluorescent lighting in the PHL with new LED lighting and lighting controls. The lighting fixtures will fit into the existing ceiling grid and hook up to the existing lighting circuits. The project will be designed and constructed during the 23-25 biennium. The project can be phased by doing a single lab wing at a time in each ongoing biennium. This request however is for changing all the lights during the 23-25 biennium so that the PHL can take advantage of the energy savings now instead of waiting. See attached C-100 for costs.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?**

The request would enable the PHL to continue its effort in reducing energy costs. Changing the lights and adding the lighting controls will reduce electricity costs, reduce maintenance work of changing bulbs and ballasts, and create better lighting for the laboratorians to do their work.

If the project is not done the laboratory will lose an opportunity to save energy and operating costs, create better lighting for staff, and make it harder to meet the Washington Clean Buildings Act and the Governor's EO18-01 for sustainable energy.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

No other alternatives were explored. LED lighting is the most energy efficient lighting on the market. LED lighting is also more sustainable due to the lack of mercury in the bulbs and has reduced maintenance costs for continued lighting

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:28PM

Project Number: 40000054

Project Title: New LED lighting and controls in existing laboratory spaces

**Description**

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

No DOH clientele will be impacted by this request, however, staff will enjoy better lighting longer and with less maintenance interruptions, the PHL will be able to reduce its energy costs, and the PHL will not be adding mercury to the environment.

**6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.**

The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

DOH is working toward complying with State energy goals as set forth through the Washington Clean Buildings Act and the Governor's EO 18-01 Executive order. The DOH strategic plan is committed to improving the health of Washingtonians through the environment and other means. By making DOH buildings, especially the PHL, as energy efficient as possible shows our commitment to that goal.

**8. Does this project include IT-related costs, including hardware, software, cloud based services, contracts, or staff? If yes, attach IT Addendum.**

This project does not have any IT-related costs.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.**

This project is not linked to the PSAA.

**10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.**

This project contributes to statewide goals of reducing energy consumption in all state buildings. Changing all lighting to LED and adding lighting controls will reduce energy use and costs as well as reduce environmental impacts from mercury filled lighting disposal. While it will not make the lab a ZNE building it will significantly lower energy, energy costs, and lighting maintenance.

**11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I communities impacted?**

Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. DOH has in its strategic plan a roadmap of health for all communities in the state. This is just another way of reducing the environmental impact of the PHL, which in turn helps disenfranchised communities.

**12. Is there additional information you would like decision makers to know when evaluating this request**

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

**Growth Management impacts**

No Growth Management Impacts

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	1,444,000				1,444,000
	<b>Total</b>	<b>1,444,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,444,000</b>

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:28PM

Project Number: 40000054

Project Title: New LED lighting and controls in existing laboratory spaces

**Funding**

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State				
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

No additional FTEs required for this project

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000054	40000054
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$



**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	New LED Lighting and Controls in Existing Laboratory Spaces
OFM Project Number	40000054

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	43,410	MACC per Gross Square Foot	\$20
Usable Square Feet	38,000	Escalated MACC per Gross Square Foot	\$23
Alt Gross Unit of Measure			
Space Efficiency	87.5%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	14.78%
Remodel	Yes	Projected Life of Asset (Years)	40
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start		Pre-design End	
Design Start	October-23	Design End	February-24
Construction Start	March-24	Construction End	July-25
Construction Duration	16 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$1,307,581</b>	Total Project Escalated	<b>\$1,443,932</b>
		Rounded Escalated Total	<b>\$1,444,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
Design Phase Services	\$173,719		
Extra Services	\$0		
Other Services	\$44,352		
Design Services Contingency	\$21,807		
<b>Consultant Services Subtotal</b>	<b>\$239,877</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$258,140</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$880,000	Maximum Allowable Construction Cost (MACC) Escalated	\$977,328
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$88,000		\$97,733
Non-Taxable Items	\$0		\$0
Sales Tax	\$99,704	Sales Tax Escalated	\$110,731
<b>Construction Subtotal</b>	<b>\$1,067,704</b>	<b>Construction Subtotal Escalated</b>	<b>\$1,185,792</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$0</b>	<b>Artwork Subtotal Escalated</b>	<b>\$0</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$1,307,581</b>	Total Project Escalated	<b>\$1,443,932</b>
		Rounded Escalated Total	<b>\$1,444,000</b>

## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$258,140		\$258,140		\$0
<b>Construction</b>					
Construction Subtotal	\$1,185,792		\$1,185,792		\$0
<b>Equipment</b>					
Equipment Subtotal	\$0				\$0
<b>Artwork</b>					
Artwork Subtotal	\$0				\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$1,443,932	\$0	\$1,443,932	\$0	\$0
	\$1,444,000	\$0	\$1,444,000	\$0	\$0
Percentage requested as a new appropriation			100%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

*Insert Row Here*

**What has been completed or is underway with a previous appropriation?**

*Insert Row Here*

**What is planned with a future appropriation?**

*Insert Row Here*

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0545</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$98,719				69% of A/E Basic Services
Lighting Consultant	\$75,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$173,719</b>		<b>1.0630</b>	<b>\$184,663</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)					
Geotechnical Investigation					
Commissioning					
Site Survey					
Testing					
LEED Services					
Voice/Data Consultant					
Value Engineering					
Constructability Review					
Environmental Mitigation (EIS)					
Landscape Consultant					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0630</b>	<b>\$0</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$44,352				31% of A/E Basic Services
HVAC Balancing					
Staffing					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$44,352</b>		<b>1.1106</b>	<b>\$49,258</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency	\$21,807				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$21,807</b>		<b>1.1106</b>	<b>\$24,219</b>	Escalated to Mid-Const.

**CONSULTANT SERVICES TOTAL**

**\$239,877**

**\$258,140**

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>					
G10 - Site Preparation					
G20 - Site Improvements					
G30 - Site Mechanical Utilities					
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>2) Related Project Costs</b>					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>3) Facility Construction</b>					
A10 - Foundations					
A20 - Basement Construction					
B10 - Superstructure					
B20 - Exterior Closure					
B30 - Roofing					
C10 - Interior Construction					
C20 - Stairs					
C30 - Interior Finishes					
D10 - Conveying					
D20 - Plumbing Systems					
D30 - HVAC Systems					
D40 - Fire Protection Systems					
D50 - Electrical Systems	\$800,000				
F10 - Special Construction					
F20 - Selective Demolition					
General Conditions	\$80,000				
Other Direct Cost					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$880,000</b>		<b>1.1106</b>	<b>\$977,328</b>	
<b>4) Maximum Allowable Construction Cost</b>					
<b>MACC Sub TOTAL</b>	<b>\$880,000</b>			<b>\$977,328</b>	
	\$20			\$23 per GSF	

[Empty box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$88,000		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$88,000</b>	<b>1.1106</b>	<b>\$97,733</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.1106</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$99,704</b>		<b>\$110,731</b>
------------------	-----------------	--	------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$1,067,704</b>		<b>\$1,185,792</b>
-------------------------------------	--------------------	--	--------------------

Green cells must be filled in by user



## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:48PM

Project Number: 40000034

Project Title: Replace Air Handling Unit (AHU) in A/Q-wings

## Description

Starting Fiscal Year: 2024

Project Class: Preservation

Agency Priority: 0

### Project Summary

This project is for the reappropriation of funding for construction of a new Air Handler Unit (AHU) in A & Q-wings. Design is currently being completed and construction will continue into the 23-25 biennium due to supply chain issues. This project is a "CBPS" project and an ESCO project.

### Project Description

#### Project Description:

**1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.**

This project will design and construct a new AHU in A & Q-wings. The AHU is original construction from 1985. The life expectancy for air handlers is approximately 25-35 years. The other air handlers for the laboratory wings were replaced in previous biennia. Per the Public Health Laboratories (PHL) 20-year master plan A & Q-wings were to be demolished to make way for the new South Laboratory Addition. The South Laboratory Addition pre-design recommends that A & Q-wings remain. This would allow A&Q wings to continue to be the Administrative area of the PHL and would make the construction of a new Administrative office building unnecessary in future biennia.

The existing AHU, installed in 1985 as part of original equipment, has pneumatic controls, steam heat coils, and inefficient motors. There aren't any energy saving features such as heat recovery. While the AHU needs to be replaced the ductwork for the system can remain.

**2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.**

The proposed project would replace the existing AHU with a Heat Recovery Unit (HRU), new direct digital controls (DDC), use hot water for heating instead of steam if the Central Boiler Plant project is funded, and re-balance both A & Q-wings.

Installation of the unit includes opening up the side of the mechanical penthouse, demolishing the existing AHU, lifting the HRU in sections up to the mechanical penthouse, assembling the new unit in place, and closing up the hole in the wall.

Connection of the DDC controls and balancing the wings take place after the HRU has been assembled.

The project will be constructed during the 21-23 biennium. Cost estimates are located in both CBS and the attached C-100.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?**

This project would address the HVAC system and controls for the next 25-35 years and make A & Q-wings a viable option to serve as the administrative wing for the PHL in lieu of building an administrative office building to be built in future biennia. It would also be easier to accomplish this work now before any new work starts on the South Laboratory Addition or solar panels are installed on the roof.

Failure to fund the project will lead to higher maintenance costs while significantly reducing the reliability of the HVAC system. It will impair the work environment and reduce the ability of the PHL staff to do their work. Failure of the system would lead to higher construction costs for replacement.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

Originally it was assumed that the existing AHU could be repaired until the A & Q-wings were demolished. Since the South Laboratory Addition's preferred option does not demolish the two wings, it was determined that these wings could serve as the administrative wings for the laboratory instead of building an Administrative Office building. Replacing the AHU now make this a viable option.

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:48PM

Project Number: 40000034

Project Title: Replace Air Handling Unit (AHU) in A/Q-wings

**Description**

Chilled beams were considered for energy efficiency and to reduce the size required for the HRU, however they were not included in the project due to the disruption that would be caused to staff from changing ductwork and piping in the ceiling. If or when the A & Q-wings receive an upgrade the airflow from the HRU can be changed at that time.

See cost estimates in CBS and attached C-100 for project related costs.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

PHL Administrative staff and the Epidemiologists working at the PHL would be the most affected by the budget request.

**6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.**

This project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

Using the existing A & Q-wings as the permanent administrative space for the PHL instead of constructing a new office would save state and agency resources that could be used elsewhere. It would also make the PHL a more efficient division by not requiring the administrative wings to move into overcrowded quarters until the new office building was constructed.

**8. Does this project include IT-related costs, including hardware, software, cloud based services, contracts, or staff? If yes, attach IT Addendum.**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.**

This project would be the last of the PHLs air handlers to be replaced with upgraded, energy efficient HRUs. The unit would be using hot water instead of steam for heat which will reduce the PHLs carbon footprint. The motors in the unit would use less energy and the new DDC controls would make the unit controllable by the current building automation system.

**11. Is there additional information you would like decision makers to know when evaluating this request**

This project will make the A & Q-wings have the ability to serve as the administrative wing of the PHL for the next 35 years.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

Remodel/Renovate/Modernize (Major Projects)

**Growth Management impacts**

No Growth management Impacts. Part of an existing building.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
057-1	State Bldg Constr-State					
706-8	Coro St Fisc Reco Fd-Federal Stim	1,894,000			1,894,000	
	<b>Total</b>	<b>1,894,000</b>	<b>0</b>	<b>0</b>	<b>1,894,000</b>	<b>0</b>

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:48PM

Project Number: 40000034

Project Title: Replace Air Handling Unit (AHU) in A/Q-wings

**Funding**

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State				
706-8	Coro St Fisc Reco Fd-Federal Stim				
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

No additional operation impacts. Replacing an existing Air Handler



**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000034	40000034
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2020)

Updated June 2020

## Quick Start Guide

### GENERAL INFORMATION

- 1) The C-100(2020) tool was created to align with the estimating application in the Capital Budgeting System (CBS). The intended use is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Unifomat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as Acquisition, MACC, Equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \ (x) \ (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \ (x) \ Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \ (x) \ MACC$
- 4) Artwork:  $0.5\% \ (x) \ Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 4\%) \ (x) \ (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2020*

Agency	Washington State Department of Health
Project Name	Replace Air Handler in Q&A Wings
OFM Project Number	40000034

**Contact Information**

Name	Terry Williams
Phone Number	206/418-5577
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

**Statistics**

Gross Square Feet		MACC per Square Foot	
Usable Square Feet		Escalated MACC per Square Foot	
Space Efficiency		A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	14.49%
Remodel	Yes	Projected Life of Asset (Years)	30

**Additional Project Details**

Alternative Public Works Project	No	Art Requirement Applies	Yes
Inflation Rate	2.38%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.20%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month	August-20	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

**Schedule**

Pre-design Start		Pre-design End	
Design Start	July-21	Design End	December-21
Construction Start	January-22	Construction End	July-23
Construction Duration	18 Months		

Green cells must be filled in by user

**Project Cost Estimate**

Total Project	<b>\$1,804,909</b>	Total Project Escalated	<b>\$1,894,485</b>
		Rounded Escalated Total	<b>\$1,894,000</b>

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2020*

Agency	Washington State Department of Health
Project Name	Repace Air Handler in Q&A Wings
OFM Project Number	40000034

**Cost Estimate Summary**

Acquisition			
<b>Acquisition Subtotal</b>	<b>\$0</b>	<b>Acquisition Subtotal Escalated</b>	<b>\$0</b>

Consultant Services			
Predesign Services	\$0		
A/E Basic Design Services	\$135,863		
Extra Services	\$34,000		
Other Services	\$101,040		
Design Services Contingency	\$27,090		
<b>Consultant Services Subtotal</b>	<b>\$297,993</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$309,249</b>

Construction			
Construction Contingencies	\$123,535	Construction Contingencies Escalated	\$129,996
Maximum Allowable Construction Cost (MACC)	\$1,235,350	Maximum Allowable Construction Cost (MACC) Escalated	\$1,299,959
Sales Tax	\$138,606	Sales Tax Escalated	\$145,856
<b>Construction Subtotal</b>	<b>\$1,497,491</b>	<b>Construction Subtotal Escalated</b>	<b>\$1,575,811</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$9,425</b>	<b>Artwork Subtotal Escalated</b>	<b>\$9,425</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$1,804,909</b>	Total Project Escalated	<b>\$1,894,485</b>
		Rounded Escalated Total	<b>\$1,894,000</b>

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0218</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
A/E Basic Design Services	\$135,863				69% of A/E Basic Services
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$135,863</b>		<b>1.0268</b>	<b>\$139,504</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)					
Geotechnical Investigation					
Commissioning	\$20,000				
Site Survey					
Testing					
LEED Services					
Voice/Data Consultant					
Value Engineering					
Constructability Review					
Environmental Mitigation (EIS)					
Landscape Consultant					
Permitting	\$10,000				
Reprographics	\$4,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$34,000</b>		<b>1.0268</b>	<b>\$34,912</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
Bid/Construction/Closeout	\$61,040				31% of A/E Basic Services
HVAC Balancing	\$40,000				
Staffing					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$101,040</b>		<b>1.0523</b>	<b>\$106,325</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency	\$27,090				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$27,090</b>		<b>1.0523</b>	<b>\$28,508</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>					
	<b>\$297,993</b>			<b>\$309,249</b>	

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>				
G10 - Site Preparation				
G20 - Site Improvements				
G30 - Site Mechanical Utilities				
G40 - Site Electrical Utilities				
G60 - Other Site Construction				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0339</b>	<b>\$0</b>	
<b>2) Related Project Costs</b>				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0339</b>	<b>\$0</b>	
<b>3) Facility Construction</b>				
A10 - Foundations				
A20 - Basement Construction				
B10 - Superstructure				
B20 - Exterior Closure	\$60,000			
B30 - Roofing				
C10 - Interior Construction	\$25,000			
C20 - Stairs				
C30 - Interior Finishes	\$20,000			
D10 - Conveying				
D20 - Plumbing Systems	\$60,000			
D30 - HVAC Systems	\$800,000			
D40 - Fire Protection Systems	\$10,000			
D50 - Electrical Systems	\$75,000			
F10 - Special Construction				
F20 - Selective Demolition	\$40,000			
General Conditions	\$100,350			
Controls	\$45,000			
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$1,235,350</b>	<b>1.0523</b>	<b>\$1,299,959</b>	
<b>4) Maximum Allowable Construction Cost</b>				
<b>MACC Sub TOTAL</b>	<b>\$1,235,350</b>		<b>\$1,299,959</b>	

This Section is Intentionally Left Blank

**7) Construction Contingency**

Allowance for Change Orders	\$123,535		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$123,535</b>	<b>1.0523</b>	<b>\$129,996</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0523</b>	<b>\$0</b>

**Sales Tax**

<b>Sub TOTAL</b>	<b>\$138,606</b>		<b>\$145,856</b>
------------------	------------------	--	------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$1,497,491</b>		<b>\$1,575,811</b>
-------------------------------------	--------------------	--	--------------------

Green cells must be filled in by user



## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0523</b>	<b>\$0</b>	
<b>1) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0523</b>	<b>\$0</b>	
<b>Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Project Artwork	\$9,425				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$9,425</b>		<b>NA</b>	<b>\$9,425</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.0523</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0339</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2020)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:25PM

Project Number: 40000041

Project Title: Reroute Existing Water Supply Mains

## Description

Starting Fiscal Year: 2028

Project Class: Preservation

Agency Priority: 9

### Project Summary

This project will construct a new and separate campus water supply system for the Public Health Laboratories as called for in the PHL master plan. The PHL currently uses the Fircrest Campus water supply which was mostly built in 1942 for the navy hospital originally located on the site. The new system will be a looped main water system and provide both domestic and lab water, irrigation, fire sprinkler, and fire hydrant needs. The current system is old and would mostly need to be relocated to accommodate construction of the new structures on the PHL campus. A new system will serve the PHL for 75 to 100 years and the placement of the new design will coordinate with the design of the PHL master plan

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

This project consists of installing water mains to service the Public Health Laboratory to supply water for potable, non-potable and fire systems. The existing water system is extremely old, maintained by DSHS and is a privately State-owned system. Discussions with the Shoreline Water District (SWD) during development of the master plan led the civil engineers to believe that the cast iron mains are probably in need of replacement.

This project is a priority because the lab needs to have a dependable water supply that is not aged, controlled by others, or compromised by incompatible future uses.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

The proposed improvements will provide a stand-alone PHL water system separate from the Fircrest Campus water system. This stand-alone system will be a looped water main around the PHL property and will provide both domestic and lab water, irrigation, fire sprinkler, and fire hydrant needs. The system will tie into the SWD main in two locations within NE 150th street. After completion the system will become part of the SWD public water system and be owned and maintained by them. A small section of the Fircrest System would need to be rerouted around the Northeast corner of the PHL property.

The project will be designed and constructed in the 27-29 biennium. The project is not phased.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?**

It is suspected, given the age of the mains of the existing system, that they are nearing the end of their life expectancy. Master Plans for the Fircrest Campus (non-DOH) include uses and potential occupancies that are not consistent with the direct mission of the state public health lab. In order to fulfill that mission and provide a continuity of operations, the Department of Health must guarantee reliable site utilities that are provided to the lab. Funding this project will provide the lab with a new, dependable water supply that is independent from the Fircrest campus and whatever changes and occupancies that might occur there in the future.

Failure to fund this project will put at risk the dependability of a consistent water supply for the PHL. It will also be difficult and more expensive to meet the SWD requirements as we implement the complete master plan

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

Two approaches were looked at. One was a looped system around the edge of the property with both ends connected to the main water line on NE 150th St. The second approach had one end connected to the main on NE 150th St and the other end connected to 15th Ave. NE. The looped system around the property was chosen because it would all be located within the PHL property lines. The system with connections at 15th and 150th would need to cross DNR/DSHS land and DOH felt it

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:25PM

Project Number: 40000041

Project Title: Reroute Existing Water Supply Mains

**Description**

would be better to keep everything within the DOH campus and not restrict the land use on the DNR/DSHS properties.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

No clientele would be impacted by this budget request unless the master plan could not be implemented due to the lack of an updated water system. In that case the agency, local health jurisdictions, the shellfish industry, CDC and many other groups would be impacted by the PHL not being able to handle the expanded growth and responsibilities in the State of Washington

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

This project will be funded through State Capital Funds. No federal or other sources of funding are available for the project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

The agency, local health jurisdictions, the shellfish industry, CDC, and other groups are dependent on the PHL to provide accurate and timely diagnosis of many diseases, sicknesses, or highly infectious pathogens. The PHL is dependent on the master plan being implemented so that it can accommodate the growth in its mission to the citizens of Washington. This infrastructure project is a critical part of the master plan.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

This project does not contribute to reducing carbon pollution or improving energy efficiency. It does improve water quality and reliability to the laboratory and reduces water waste by creating a new, leak free water system.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. DOH has in its strategic plan a roadmap of health for all communities in the state. This is just another way of reducing the environmental impact of the PHL, which in turn helps disenfranchised communities.

**12. Is there additional information you would like decision makers to know when evaluating this request.**

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

**Growth Management impacts**

No Growth Management Impacts. Project replaces existing infrastructure

**Funding**

Expenditures

2023-25 Fiscal Period

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:25PM

Project Number: 40000041

Project Title: Reroute Existing Water Supply Mains

**Funding**

Acct Code	Account Title	Estimated Total	Prior Biennium	Current Biennium	Reappropriations	New Appropriations
057-1	State Bldg Constr-State	3,765,000				
	<b>Total</b>	<b>3,765,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Future Fiscal Periods

	2025-27	2027-29	2029-31	2031-33
057-1 State Bldg Constr-State		3,765,000		
<b>Total</b>	<b>0</b>	<b>3,765,000</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

There are no operating impacts until after the 27-29 biennium. No additional FTEs will be needed for this project.



**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000041	40000041
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:37PM

Project Number: 40000056

Project Title: Uninterrupted Power Supply (UPS) for Public Health Labs

## Description

Starting Fiscal Year: 2024

Project Class: Preservation

Agency Priority: 6

### Project Summary

This project will provide new Uninterrupted Power Supply (UPS) to each laboratory wing at the Public Health Laboratories. During the past winter utility power would turn off and on intermittently with the down time not lasting long enough to start the electrical generator but the power interruptions would require the equipment runs to be restarted. The solution is to install a new UPS for each wing instead of each piece of equipment having their own.

### Project Description

**1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.**

The problem is that during the winter months the electricity can flicker or go out for 3 to 5 seconds while it takes the existing generator approximately 10 seconds to reach full power. This lapse can cause the lab's sensitive equipment to shut down, invalidating the current run and causing staff to start another run. It has also caused some -80° freezers to quit working. Currently some of the most critical pieces of equipment, like the mass spectrometers, have an individual UPS. It would not be practical to install an individual UPS at every piece of equipment as there isn't space to set the UPSs at each location or the ability to connect that many different UPSs to the electrical system.

This request was generated and became a priority due to the shutdowns that occur in the BSL3 when the electrical grid fluctuates. When equipment in other areas started to have problems it became a lab wide priority.

**2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.**

This request will install a new wing wide UPS in the penthouse of each laboratory wing. The project would be constructed during the last year of the current biennium and possibly into the early part of the next biennium due to the long lead times of construction materials due to the pandemic.

This project could be broken down into phases by doing a wing wide UPS in each of the next 5 biennia. This request is for installing all of the UPSs at one time.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?**

The request would enable the PHL to continue power in each wing when power goes down for a few seconds or until the existing generator comes on board. This would keep the sensitive instruments from failing on their runs and keep equipment like super low temperature freezers from burning up their circuits.

If the project is not done the existing lab equipment will be subject to the severity of the weather and the electrical grid. The grid has more of a chance to flicker than to go dead during the winter and that is what causes the chaos.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

The other alternative that was looked at was a whole building UPS. This alternative wasn't selected because it would be very large and would take a building addition to install. The smaller UPS for each wing would be located in each wing's mechanical penthouses. That would also put them closer to the electrical equipment that they would need to connect with.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

No DOH clientele will be impacted by this request.

**6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.**

The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:37PM

Project Number: 40000056

Project Title: Uninterrupted Power Supply (UPS) for Public Health Labs

**Description**

- 7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.  
The UPSs would improve PHL efficiency in times of power grid fluctuations as the laboratory equipment would not lose power when the generator fails to start with short power outages.
- 8. Does this project include IT-related costs, including hardware, software, cloud based services, contracts, or staff? If yes, attach IT Addendum.  
This project does not have any IT-related costs.
- 9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.  
This project is not linked to the PSAA.
- 10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.  
This project does not contribute to statewide goals to reduce carbon pollution, but it does keep the PHL operating at full capacity from an efficiency and a safety point of view.
- 11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?  
This project does not affect or impact any demographic or geographic communities within the state.
- 12. Is there additional information you would like decision makers to know when evaluating this request

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

**Growth Management impacts**

No Growth Management Impacts

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	4,282,000				4,282,000
	<b>Total</b>	<b>4,282,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,282,000</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**Narrative**

No additional FTEs required for this project

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** T3 Terry's Working Version

**Report Number:** CBS002

**Date Run:** 9/16/2022 2:37PM

**Project Number:** 4000056

**Project Title:** Uninterrupted Power Supply (UPS) for Public Health Labs

**Operating Impacts**

---

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000056	40000056
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	Uninterrupted Power Supply (UPS) for Public Health Labs
OFM Project Number	40000056

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	80,843	MACC per Gross Square Foot	\$35
Usable Square Feet	59,823	Escalated MACC per Gross Square Foot	\$39
Alt Gross Unit of Measure			
Space Efficiency	74.0%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	13.70%
Remodel	Yes	Projected Life of Asset (Years)	30
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start		Pre-design End	
Design Start	September-23	Design End	March-24
Construction Start	March-24	Construction End	July-25
Construction Duration	16 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$3,868,291</b>	Total Project Escalated	<b>\$4,282,243</b>
		Rounded Escalated Total	<b>\$4,282,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
Design Phase Services	\$291,672		
Extra Services	\$0		
Other Services	\$131,041		
Design Services Contingency	\$42,271		
<b>Consultant Services Subtotal</b>	<b>\$464,985</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$502,530</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$2,805,000	Maximum Allowable Construction Cost (MACC) Escalated	\$3,115,233
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$280,500		\$311,524
Non-Taxable Items	\$0		\$0
Sales Tax	\$317,807	Sales Tax Escalated	\$352,956
<b>Construction Subtotal</b>	<b>\$3,403,307</b>	<b>Construction Subtotal Escalated</b>	<b>\$3,779,713</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$0</b>	<b>Artwork Subtotal Escalated</b>	<b>\$0</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$3,868,291</b>	Total Project Escalated	<b>\$4,282,243</b>
		Rounded Escalated Total	<b>\$4,282,000</b>



## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$502,530		\$502,530		\$0
<b>Construction</b>					
Construction Subtotal	\$3,779,713		\$3,779,713		\$0
<b>Equipment</b>					
Equipment Subtotal	\$0				\$0
<b>Artwork</b>					
Artwork Subtotal	\$0				\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$4,282,243	\$0	\$4,282,243	\$0	\$0
	\$4,282,000	\$0	\$4,282,000	\$0	\$0
Percentage requested as a new appropriation			100%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

*Insert Row Here*

**What has been completed or is underway with a previous appropriation?**

*Insert Row Here*

**What is planned with a future appropriation?**

*Insert Row Here*

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0504</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$291,672				69% of A/E Basic Services
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$291,672</b>		<b>1.0630</b>	<b>\$310,048</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)					
Geotechnical Investigation					
Commissioning					
Site Survey					
Testing					
LEED Services					
Voice/Data Consultant					
Value Engineering					
Constructability Review					
Environmental Mitigation (EIS)					
Landscape Consultant					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0630</b>	<b>\$0</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$131,041				31% of A/E Basic Services
HVAC Balancing					
Staffing					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$131,041</b>		<b>1.1106</b>	<b>\$145,535</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency	\$42,271				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$42,271</b>		<b>1.1106</b>	<b>\$46,947</b>	Escalated to Mid-Const.

CONSULTANT SERVICES TOTAL

\$464,985

\$502,530

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>					
G10 - Site Preparation					
G20 - Site Improvements					
G30 - Site Mechanical Utilities					
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>2) Related Project Costs</b>					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	
<b>3) Facility Construction</b>					
A10 - Foundations					
A20 - Basement Construction					
B10 - Superstructure					
B20 - Exterior Closure					
B30 - Roofing					
C10 - Interior Construction	\$300,000				
C20 - Stairs					
C30 - Interior Finishes					
D10 - Conveying					
D20 - Plumbing Systems					
D30 - HVAC Systems					
D40 - Fire Protection Systems					
D50 - Electrical Systems	\$1,250,000				
F10 - Special Construction					
F20 - Selective Demolition					
General Conditions	\$255,000				
Uninterrupted Power Supply	\$1,000,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$2,805,000</b>		<b>1.1106</b>	<b>\$3,115,233</b>	
<b>4) Maximum Allowable Construction Cost</b>					
<b>MACC Sub TOTAL</b>	<b>\$2,805,000</b>			<b>\$3,115,233</b>	
	\$35			\$39 per GSF	

[Empty box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$280,500		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$280,500</b>	<b>1.1106</b>	<b>\$311,524</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.1106</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$317,807</b>		<b>\$352,956</b>
------------------	------------------	--	------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$3,403,307</b>		<b>\$3,779,713</b>
-------------------------------------	--------------------	--	--------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user



## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.1106</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0757</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# **TAB C Capital Project Request – Programmatic Projects**

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 40000064

Project Title: Bldg 20 Multi-Use Renovations

## Description

Starting Fiscal Year: 2024

Project Class: Program

Agency Priority: 0

### Project Summary

This project conducts a one-year pre-design study for renovation of 'Building 20' on the Department of Health (DOH) owned Public Health Laboratories (PHL) campus in Shoreline, WA. The pre-design study of Building 20, currently owned by Department of Social and Health Services (DSHS), will assess the acquisition, design, and renovation of the structure for compliance with Clean Building Performance Standards (CBPS) as passed in SSB 5722 and to support the expanded demands on the DOH PHL as a multi-use building. Catalyzing needs identified for this project include enlarged central accessioning location, central refrigeration and freezer facility, space for bulk supplies and records storage, rooms for isolation and quarantine (IQ), and workshop and office space for the PHL facilities staff.

### Project Description

1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.

This project involves acquisition of Building 20 from DSHS by DOH and the renovation of the building 20 warehouse that sits on the Public Health Laboratories (PHL) campus from a warehouse to multi-use building. New uses in Building 20 will include an isolation & quarantine facility, a central refrigeration and freezer facility, space for bulk supplies and records storage, and workshop and office space for the PHL staff.

The Covid-19 pandemic has overwhelmed the central accessioning space with the number of specimens received daily at the PHL. To handle the daily number of specimens received and accessioned the PHL has had to run two shifts. This is due to the lack of enough BioSafety Cabinets (BSC) and adequate refrigeration space. The layout of the existing accessioning space also too small and not conducive to the intake of such a high number of samples.

Freezer/Refrigeration space is at a premium at the PHL. The high number of samples coming into the PHL has squeezed lab space by the addition of more refrigerators & freezers.

Storage space at the lab does not allow for bulk purchases of PPE or other equipment needed for testing and long-term storage of records has taken up valuable lab space. The PHL maintenance staff does not have enough storage for spare parts. These parts must be ordered creating additional down time for the effected laboratory spaces.

The Public Health Laboratories facilities staff office space is presently in the lab taking away space that would be better suited for laboratory staff. The PHL has been dreadfully short of staff space to support the Epidemiology Group (CDEpi) and the new Public Health Outbreak Coordination, Informatics, and Surveillance Group (PHOCIS), and laboratory staffers.

Through June 2022, the state isolated or quarantined 556 COVID-related guests, with a peak of 110 guests in January of 2022, in one of its many temporary facilities. However, none of the facilities were designed to accommodate the needs of a person isolated or quarantined from Vira Respiratory Diseases like SARS CoV2 (COVID), Tuberculosis, Monkeypox, Ebola and other

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 40000064

Project Title: Bldg 20 Multi-Use Renovations

### Description

emerging infectious diseases and other special pathogens, in a systematic and competent fashion. The pre-design study can help inform DOH how to best utilize this multi-use space so that the building is used efficiently and effectively accommodating all of the PHL needs.

2. What will the request produce or construct (pre-design/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.

This request is for the pre-design portion of the project to determine how to efficiently redesign and utilize this 25,000 ft<sup>2</sup> space. This multi-use facility will include an enlarged, and enhanced central accessioning facility, central walk-in freezer/refrigerator that will be used by the PHL, workshop and storage space with offices for the facility maintenance team, rooms for isolation & quarantine, and additional office space.

The project schedule is as follows:

July 2023 – July 2025: Pre-design

July 2025 – July 2027: Design

July 2027 – July 2029: Construction

This project cannot be phased. See attached C-100 cost estimate for costs.

3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?

This request would address the acquisition of building 20 from the Department of Social and Health Services (DSHS) by the Department of Health (DOH) and the renovation of the building 20 warehouse that sits on the Public Health Laboratories (PHL) campus from a warehouse to multi-use building. New uses in building 20 could include an enlarged central accessioning location, a central refrigeration and freezer facility, additional area for bulk supplies and long-term records storage, workshop and staff space for the PHL Facilities Group, rooms for isolation & quarantine, and additional office space located on a newly built second floor within the building.

Taking no action would perpetuate the functional challenges operating the PHL given the increased demand on the PHL developed during the COVID-19 pandemic. Central Accessioning would be overwhelmed in times of extreme events. Refrigerator/Freezer space would continue to be supplemented by individual units taking up more bench space in the laboratories. PPE would continue to be stored wherever possible in preparation of the next event and long-term storage would continue to be stored in the laboratories with inherently limited capacity. The maintenance group would continue to occupy office space that could be used by laboratorians, and the maintenance staff will continue to order parts and wait for delivery before equipment can be repaired. DOH would continue to not have a permanent solution for isolation and quarantine room and the PHL will continue to be overcrowded and need to search for space every time someone is hired.

4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated pre-design, please summarize the

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 40000064

Project Title: Bldg 20 Multi-Use Renovations

### Description

alternatives the predesign considered.

For other proposed uses of building 20, few other alternatives were explored at this time. When DOH convenes the pre-design process they will look at alternatives such as acquisition of another state-owned facility, acquisition of a privately owned facility, or construct a new building for IQ needs. The PHL will consider adding on to the existing central accessioning space. Walk-in freezer/refrigerator locations will be looked at inside the lab for the current laboratories. The pre-design will also look at possibly redesigning the maintenance area for workspace and storage solutions as well as moving the maintenance offices into the existing workspace. The pre-design will also look at staff seating solutions to determine the appropriate amount of additional staff spaces. An Owner Project Requirements (OPR) document will be written before the pre-design is started and will be given to the consultants chosen as a guide for their process.

5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.

The functions in the redesigned building would immediately affect laboratory staff and the overall efficiency of the PHL. Washington State communities would benefit by the increased efficiency in testing and CDEpi follow-up. NGO and governmental customers of the PHL services including healthcare providers and LHJ will benefit from the increased PHL efficiencies through improved service delivery and reliability. The threat to Washington residents from emerging infectious diseases and other special pathogens will be minimized during instances when non-resident travelers need IQ services, Dept of Corrections work release inmates, people from underserved communities, or residents in local jurisdictions that are unable to provide IQ services after mutual agreement with the DOH Secretary of Health.

6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.

The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.

This package supports the Governor's strategic goal area 4: Health and safe communities: Fostering the health of Washingtonians from a healthy start to safe and supported future.

This package supports the following key objectives of the DOH 2020 strategic plan:

- Diversify and secure funding and strategically deploy resources for maximum impact.
- Integrate the voices of underrepresented communities into all policy, program, and resource decisions.
- Ensure equitable access to services, programs, opportunities, and information.

This package supports the following key objectives of the DOH 2022 strategic plan:

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 40000064

Project Title: Bldg 20 Multi-Use Renovations

### Description

II. HEALTH SYSTEMS AND WORKFORCE TRANSFORMATION: All Washingtonians are well served by a health ecosystem that is robust and responsive, while promoting transparency, equity and trust\

IV. EMERGENCY RESPONSE AND RESILIENCE: All Washington communities have the information and resources they need to build resilience in the face of myriad public health threats and are well-positioned to prepare for, respond to, and recover from emergencies and natural disasters.

V. GLOBAL AND ONE HEALTH All: Washingtonians live in ever-connected environments that recognize and leverage the intersection of both global and domestic health as well as the connections of humans, animals, and the environment.

8. Does this project include IT-related costs, including hardware, software, cloud-based services, contracts, or staff? If yes, attach IT Addendum.

There are no IT-related costs for this project.

9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.

This project is not linked to the PSAA.

10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.

This project will help the PHL meet the state's energy goals in some of the following ways:

- Using sustainable electrical sources – electricity from Seattle City Light (90% sustainable) and possibly making the rooftop solar panel enabled
- Adding energy saving products to the existing exterior envelope. The building remodel will allow the PHL to upgrade the building envelope from 1992 standards to the 2020 State Energy Code.
- Using local building products where available
- Using Heat Recovery Units (HRU) that warm outside air as it passes over the warm exhaust air coils. We will also use hot water for heating (see boiler plant project)
- Using chilled water Chilled Beams for cooling. These units allow for smaller HRUs and motors
- Having a Variable Air Volume (VAV) system.
- LED lighting throughout the wing with lighting controls.
- The remodel will comply with EO18-01 and EO21-02

State agencies are required under RCW 70.235.050 to reduce greenhouse gas emissions. The proposed facility's more central location to ports of entry (e.g., Seattle-Tacoma International Airport of Seattle) as well as other facilities where guests are transported from (NW Detention Center) will reduce the current time spent on roads and reduce vehicle emissions. Additionally, this location is closer to more hospitals in case any guests need acute care.

11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I



303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 40000064

Project Title: Bldg 20 Multi-Use Renovations

**Description**

communities impacted?

Health equity means that everyone, regardless of who they are or where they live, has a fair and opportunity to live a healthy life. Achieving health equity entails eliminating the drivers of health inequities — like structural racism and discrimination, income inequality and poverty, disparities in opportunity, and governance that limits meaningful participation. Public health policies can advance or inhibit health equity, often through unintended consequences. Usage of this facility will be designed to not exacerbate long-standing health disparities and ensure DOH is doing the right thing for the public’s health.

If the changes to Building 20 require, this process may trigger a campus masterplan update with City of Shoreline. If the masterplan update is needed, DOH will conduct community outreach as part of the design process.

12. Is there additional information you would like decision makers to know when evaluating this request

This pre-design request for the 23-25 biennium is essential for DOH and the PHL to determine the exact deficiencies and additional needs to rectify lessons learned from the current Covid pandemic. Putting the additional facilities described above on the Shoreline PHL Campus makes sense from 1) a geographic perspective, as it is centrally located within the population centers in Western Washington. 2) The additional facilities will enable DOH and the PHL to be prepared for and able to handle any future public health events that may be coming in the near or distant future. 3) The facility will be able to meet “CBPS” goals in an area where sustainable facilities are needed the most.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Remodel/Renovate/Modernize (Major Projects)

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/20/2022 7:46AM

Project Number: 4000064

Project Title: Bldg 20 Multi-Use Renovations

**Description**

**Growth Management impacts**

This project will help the PHL meet the state’s energy goals in some of the following ways: Using sustainable electrical sources – electricity from Seattle City Light (90% sustainable) and possibly making the rooftop solar panel enabled Adding energy saving products to the existing exterior envelope. The building remodel will allow the PHL to upgrade the building envelope from 1992 standards to the 2020 State Energy Code. This project involves acquisition of Building 20 from DSHS by DOH and the renovation of the building 20 warehouse that sits on the Public Health Laboratories (PHL) campus from a warehouse to multi-use building. New uses in Building 20 will include an isolation & quarantine facility, a central refrigeration and freezer facility, space for bulk supplies and records storage, and workshop and office space for the PHL staff. Using local building products where available Using Heat Recovery Units (HRU) that warm outside air as it passes over the warm exhaust air coils. We will also use hot water for heating (see boiler plant project) Using chilled water Chilled Beams for cooling. These units allow for smaller HRUs and motors Having a Variable Air Volume (VAV) system. LED lighting throughout the wing with lighting controls. The remodel will comply with EO18-01 and EO21-02 State agencies are required under RCW 70.235.050 to reduce greenhouse gas emissions. The proposed facility’s more central location to ports of entry (e.g., Seattle-Tacoma International Airport, Port of Seattle) as well as other facilities where guests are transported from (NW Detention Center) will reduce the current time spent on roads and reduce vehicle emissions. Additionally, this location is closer to more hospitals in case any guests need acute car

New Facility: No

**How does this fit in master plan**

his package supports the Governor’s strategic goal area 4: Health and safe communities: Fostering the health of Washingtonians from a healthy start to safe and supported future. This package supports the following key objectives of the DOH 2020 strategic plan: Diversify and secure funding and strategically deploy resources for maximum impact. Integrate the voices of underrepresented communities into all policy, program, and resource decisions. Ensure equitable access to services, programs, opportunities, and information. This package supports the following key objectives of the DOH 2022 strategic plan: II. HEALTH SYSTEMS AND WORKFORCE TRANSFORMATION: All Washingtonians are well served by a health ecosystem that is robust and responsive, while promoting transparency, equity, and trust IV. EMERGENCY RESPONSE AND RESILIENCE: All Washington communities have the information and resources they need to build resilience in the face of myriad public health threats and are well-positioned to prepare for, respond to, and recover from emergencies and natural disasters. V. GLOBAL AND ONE HEALTH All: Washingtonians live in ever-connected environments that recognize and leverage the intersection of both global and domestic health as well as the connections of humans, animals, and the environment.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
057-1	State Bldg Constr-State	47,259,822				360,000
	<b>Total</b>	<b>47,259,822</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>360,000</b>
<b>Future Fiscal Periods</b>						
		<b>2025-27</b>	<b>2027-29</b>	<b>2029-31</b>	<b>2031-33</b>	
057-1	State Bldg Constr-State	13,202,000	32,040,022	1,657,800		
	<b>Total</b>	<b>13,202,000</b>	<b>32,040,022</b>	<b>1,657,800</b>	<b>0</b>	

**Operating Impacts**

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** E1 DOH Working Copy

**Report Number:** CBS002

**Date Run:** 9/20/2022 7:46AM

**Project Number:** 40000064

**Project Title:** Bldg 20 Multi-Use Renovations

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

This request is purely Capital

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000064	40000064
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Washington State Department of Health
Project Name	Building 20 Renovations
OFM Project Number	

Contact Information	
Name	Travis Linares-Hengen
Phone Number	360-878-4716
Email	<a href="mailto:travis.linares-hengen@doh.wa.gov">travis.linares-hengen@doh.wa.gov</a>

Statistics			
Gross Square Feet	37,604	MACC per Gross Square Foot	\$582
Usable Square Feet	33,843	Escalated MACC per Gross Square Foot	\$736
Alt Gross Unit of Measure			
Space Efficiency	90.0%	A/E Fee Class	A
Construction Type	Other Sch. A Projects	A/E Fee Percentage	11.27%
Remodel	Yes	Projected Life of Asset (Years)	35
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	Yes
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	5%		
Base Month (Estimate Date)	July-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start	July-23	Pre-design End	January-24
Design Start	July-24	Design End	July-26
Construction Start	July-26	Construction End	July-28
Construction Duration	24 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$39,032,703</b>	Total Project Escalated	<b>\$46,900,325</b>
		Rounded Escalated Total	<b>\$46,900,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$7,610,000	Acquisition Subtotal Escalated	\$7,610,000

Consultant Services			
Predesign Services	\$360,000		
Design Phase Services	\$1,786,151		
Extra Services	\$1,426,000		
Other Services	\$935,474		
Design Services Contingency	\$225,381		
<b>Consultant Services Subtotal</b>	<b>\$4,733,006</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$5,592,264</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$21,875,396	Maximum Allowable Construction Cost (MACC) Escalated	\$27,658,436
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$1,093,770		\$1,389,635
Non-Taxable Items	\$0		\$0
Sales Tax	\$2,365,824	Sales Tax Escalated	\$2,991,951
<b>Construction Subtotal</b>	<b>\$25,334,990</b>	<b>Construction Subtotal Escalated</b>	<b>\$32,040,022</b>

Equipment			
Equipment	\$1,016,656		
Sales Tax	\$104,716		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$1,121,372</b>	<b>Equipment Subtotal Escalated</b>	<b>\$1,424,704</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$233,335</b>	<b>Artwork Subtotal Escalated</b>	<b>\$233,335</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$39,032,703</b>	Total Project Escalated	<b>\$46,900,325</b>
		Rounded Escalated Total	<b>\$46,900,000</b>

## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$7,610,000				\$7,610,000
<b>Consultant Services</b>					
Consultant Services Subtotal	\$5,592,264		\$360,000	\$5,232,264	\$0
<b>Construction</b>					
Construction Subtotal	\$32,040,022				\$32,040,022
<b>Equipment</b>					
Equipment Subtotal	\$1,424,704				\$1,424,704
<b>Artwork</b>					
Artwork Subtotal	\$233,335				\$233,335
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$46,900,325	\$0	\$360,000	\$5,232,264	\$41,308,061
	\$46,900,000	\$0	\$360,000	\$5,232,000	\$41,308,000
Percentage requested as a new appropriation			1%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

This project involves acquisition of Building 20 from DSHS by DOH and the renovation of the building 20 warehouse that sits on the Public Health Laboratories (PHL)


**What has been completed or is underway with a previous appropriation?**


**What is planned with a future appropriation?**




## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease	\$7,600,000				
Appraisal and Closing	\$10,000				
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$7,610,000</b>		NA	<b>\$7,610,000</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study	\$360,000				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$360,000</b>		<b>1.1039</b>	<b>\$397,404</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$1,786,151				69% of A/E Basic Services
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$1,786,151</b>		<b>1.1581</b>	<b>\$2,068,542</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)	\$40,000				
Geotechnical Investigation	\$80,000				
Commissioning	\$136,000				
Site Survey	\$20,000				
Testing	\$130,000				
LEED Services	\$40,000				
Voice/Data Consultant	\$25,000				
Value Engineering	\$50,000				
Constructability Review	\$50,000				
Environmental Mitigation (EIS)					
Landscape Consultant	\$50,000				
Interior Design	\$100,000				
Exterior Waterproofing Consultant	\$60,000				
Security Consultant	\$60,000				
Acoustical Consultant	\$50,000				
Cost Estimating Consultant	\$75,000				
A/E - Value Engineering	\$15,000				
A/E - Constructibility Review	\$15,000				
Energy Life Cycle Cost Analysis	\$45,000				
Artwork Coordination	\$5,000				
Reimbursable/Reprographics	\$50,000				
Models/Renderings/Presentations	\$30,000				
Permitting	\$300,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$1,426,000</b>		<b>1.1581</b>	<b>\$1,651,451</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$802,474				31% of A/E Basic Services
HVAC Balancing	\$60,000				

Staffing				
Advertising	\$3,000			
A/E Commissioning Participation	\$20,000			
Record Drawing	\$50,000			
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$935,474</b>	<b>1.2705</b>	<b>\$1,188,520</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>				
Design Services Contingency	\$225,381			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$225,381</b>	<b>1.2705</b>	<b>\$286,347</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>	<b>\$4,733,006</b>		<b>\$5,592,264</b>	

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>				
G10 - Site Preparation				
G20 - Site Improvements	\$506,400			
G30 - Site Mechanical Utilities	\$900,000			
G40 - Site Electrical Utilities	\$600,000			
G60 - Other Site Construction				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	\$2,006,400	1.2110	\$2,429,751	
<b>2) Related Project Costs</b>				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention	\$250,000			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	\$250,000	1.2110	\$302,750	
<b>3) Facility Construction</b>				
A10 - Foundations	\$455,662			
A20 - Basement Construction				
B10 - Superstructure	\$858,407			
B20 - Exterior Closure	\$1,673,135			
B30 - Roofing	\$500,000			
C10 - Interior Construction	\$1,646,679			
C20 - Stairs	\$170,000			
C30 - Interior Finishes	\$1,430,832			
D10 - Conveying	\$161,364			
D20 - Plumbing Systems	\$2,078,589			
D30 - HVAC Systems	\$4,629,805			
D40 - Fire Protection Systems	\$386,945			
D50 - Electrical Systems	\$3,284,360			
F10 - Special Construction				
F20 - Selective Demolition	\$400,000			
General Conditions	\$1,943,218			
Other Direct Cost				
Insert Row Here				
<b>Sub TOTAL</b>	\$19,618,996	1.2705	\$24,925,935	
<b>4) Maximum Allowable Construction Cost</b>				
<b>MACC Sub TOTAL</b>	\$21,875,396		\$27,658,436	
	\$582		\$736 per GSF	

[Empty Box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$1,093,770		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$1,093,770</b>	<b>1.2705</b>	<b>\$1,389,635</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.2705</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$2,365,824</b>		<b>\$2,991,951</b>
------------------	--------------------	--	--------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$25,334,990</b>		<b>\$32,040,022</b>
-------------------------------------	---------------------	--	---------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment	\$262,500				
E20 - Furnishings	\$754,156				
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$1,016,656</b>		<b>1.2705</b>	<b>\$1,291,662</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.2705</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$104,716</b>			<b>\$133,042</b>	
<b>EQUIPMENT TOTAL</b>					
	<b>\$1,121,372</b>			<b>\$1,424,704</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$233,335				0.5% of total project cost for new construction 0.5% of total project cost for new and renewal construction
Higher Ed Artwork	\$0				
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$233,335</b>		<b>NA</b>	<b>\$233,335</b>	

Green cells must be filled in by user

## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.2705</b>	<b>\$0</b>	

Green cells must be filled in by user



## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.2110</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:11PM

Project Number: 40000032

Project Title: E-wing Remodel to a Molecular Laboratory

## Description

Starting Fiscal Year: 2024

Project Class: Program

Agency Priority: 2

### Project Summary

This project will remodel E-Wing from an Environmental Laboratory to a modern Molecular Lab. The new laboratory will have 4 parts: Clean room/Prep areas, Extraction Areas, PCR setup, and PCR/Sequencing. New staff offices will be located between the existing microbiology wing and the new molecular wing with the office space conforming to the Agency's office modernization program and EO16-07. This budget request is for design funding to be performed during the 23-25 biennium. The construction funding request will be requested during the 25-27 biennium. The pre-design funding was not approved until the 21-23 supplemental budget and it is not yet completed. The design funding would not be allocated for use until the per-design document has been approved by OFM. The pre-design document is scheduled to be completed in May of 23.

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

Molecular testing of diseases is where most diagnostic testing is moving towards. Molecular testing is performed quicker, is more sensitive, less expensive per test, and safer for staff. As the molecular lab grows there will be more testing equipment with less staff.

This project is an opportunity for the old environmental wing to become a modern molecular laboratory. While the traditional laboratory will still be needed, E-wing will become the catalyst for testing in the future. This project is a priority because Microbiology needs to add more molecular testing equipment to meet the increasing demands of public health testing and have the spaces that supports that equipment. This wing will not only have the capacity to ramp up for testing of pandemics such as COVID-19 but with the added equipment will also be able to handle testing for diseases like measles, mumps, and Pandemic Influenza.

The Microbiology group has doubled their staff over the last two years. With over 80 molecular staff now working in microbiology and the added equipment now located in the microbiology wing there isn't enough space for staff to fill out their reports, have team meetings, or conduct business in an efficient manner. The new office space that would be constructed between the two molecular wings will provide the molecular staff with dedicated open office space that would not be conducive to be taken over for lab space, provide space for small team meetings and provide areas where staff could have space to tally testing results, read e-mails, and write reports all located outside of the labs. The new office space would also allow the full square footage of both the existing C & E-wings to be designed with lab space only, guaranteeing that the Microbiology Group will have room for additional testing and equipment if needed in future years.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

This project request will provide funding to continue with design phase during the 23-25 biennium. The HVAC system has recently been remodeled in 2015 with a new reheat unit (RHU) for heating and chilled beams for cooling. This remodel would reconfigure the spaces into four distinct laboratory sections. The first section would be the clean prep area where samples are prepared for DNA extraction. The second section would be the extraction area and would include BioSafety Cabinets (BSC) and -80° freezers. The third section would be PCR setup and would have clean air hoods and -80° freezers. The refrigerator and freezer sections would be a walk-in type freezer area to provide adequate storage for both DNA extraction and PCR setup. The fourth section would be the PCR/Sequencing area and would have sequencing testing equipment. The remodel of E-wing will encompass about 10,000 sq.ft. of laboratory space.

Open office space would be built between the existing microbiology wing (C-wing) and the new molecular laboratory (E-wing). This would allow for all square footage in C & E-wings to be used for laboratory space and allow for more flexibility within

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:11PM

Project Number: 40000032

Project Title: E-wing Remodel to a Molecular Laboratory

## Description

each wing. Creating office space between the two wings will also move laboratory staff out of the laboratories and give them sufficient areas to compile test results, track samples, and read their emails. The new infill office addition will encompass approximately 4,000 sq.ft.

This project is going through the pre-design process in the 21-23 biennium, the design process that this request is asking for would take place during the 23-25 biennium and the funding would not be allocated for use until the pre-design has been approved by OFM. It is anticipated that the pre-design will be completed in May of 2023. The project would be constructed during the 25-27 biennium. Project costs for this project are in the attached C-100. The C-100 costs reflect inflation pricing since 2020. Also attached is an AGC bulletin concerning current construction costs.

### 3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?

This project would enable the Microbiological section to keep up with the increasing number of tests that they run. It will also allow them to perform their tests quicker, with better results, at a lower cost. This project would also allow the PHL to ramp up testing during high volume outbreaks such as COVID-19, measles, and Pandemic Influenza at a much higher pace.

This project will also be environmentally sustainable. Use of local materials, upgrade of the existing exterior shell to the Clean Buildings Act standards, electrical systems upgrades, and making the project solar ready will be part of the PHL's sustainability response to the Clean Buildings Act.

Currently the Public Health Laboratory (PHL) is at capacity. Failure to fund this project will reduce the ability of the Public Health Laboratories to respond quickly and efficiently to public health needs, including its ability to support other state, regional, and local health partners as Washington continues to grow. Without the additional molecular laboratory space, the PHL could be forced into the difficult position of prioritizing disease conditions and likely eliminating surveillance and response efforts in some cases.

### 4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.

The PHL's 20-year master plan recommended that the Environmental Laboratory Sciences (ELS) section move to the new south wing addition as they have more laboratory equipment such as Chemical Fume Hoods, receive fewer samples, and the mechanical system for the chemical fume hoods can be built to reduce long term energy costs. That will enable the Microbiology section to separate the molecular laboratory from the traditional microbiological labs; keep the molecular, traditional, and containment labs in close proximity to each other, and give the Microbiology program close access to the central receiving area.

The new office space will allow staff to be moved out of the laboratories to do their post laboratory work such as analyzing test results, write reports and read their emails. This will also allow the existing C&E-wings to be designed only with laboratory space, allowing for flexibility and any future growth.

The pre-design will evaluate the laboratory spaces in terms of

- Flexibility – the current lab is almost exclusively made up of built-in benches. How will the wing be used in 5, 10, 20 years and how can it shift
  - with technology and public health demands and still be flexible enough to make the changes economically viable.
- Lab finishes-they will follow the BMBL guidelines
- Centralized Refrigerator and Freezers – the laboratory currently uses many individual refrigerators and freezers. They typically require constant
  - repair and take up more and more valuable laboratory spaces.
- Storage – Explore high density storage for records and other items required for laboratory testing.
- Office space – provide office space that can be flexible and still accommodate staff growth for the next 20 years.
- Mechanical systems- which are the most efficient and sustainable.
- Electrical systems-lighting and controls for energy efficiency.
- Building Shell-what are the best ways to bring the existing 1985 building shell up to clean building standards.

### 5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.

The Public Health Laboratories (PHL) do not interact with individual Washington State citizens but it does work with local

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:11PM

Project Number: 40000032

Project Title: E-wing Remodel to a Molecular Laboratory

### Description

health jurisdictions such as Seattle/King County Health, regionally with the CDC by running the Antibiotic Resistance Laboratory Network (ALRN) regional laboratory, and nationally working with other DOH divisions and sections such as Communicable Disease Epidemiology to track down sources of e coli, measles, and other contagions. The PHL also works with Environmental Public Health to ensure the quality and safety of shellfish harvested in Washington State. This project will allow the PHL to produce test results in a timely manner, include new tests for emerging diseases such as COVID-19, and not be forced to possibly have to prioritize disease conditions so that they can continue to serve a growing population in Washington State.

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

This project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance.**

**Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

The new molecular laboratory will enable the PHL to continue to supply timely diagnostic support to the rest of the agency and local health jurisdictions while having the ability to provide more testing capacity in times of high disease outbreaks. This project has a part in one of the Key Objectives of the previous DOH Strategic Plan: Make strategic decisions and create working environments that foster the data integration, data sharing, and data analysis necessary to support better health outcomes.

This package supports the following key objectives of the agency's current strategic plan

- Diversify and secure funding and strategically deploy resources for maximum impact.
- Ensure equitable access to services, programs, opportunities, and information.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

This project will help the PHL meet the state's energy goals in the following ways:

- Using sustainable electrical sources – electricity from Seattle City Light (90% sustainable) and making the addition rooftop solar panel ready
- Adding energy saving products to the existing exterior envelope. The wing remodel will allow the PHL to upgrade the building envelope from
  - 1985 standards to the current State Energy Code.
- Using local building products where available
- Using Heat Recovery Units (HRU) that warm outside air as it passes over the warm exhaust air coils during winter. We will also change from
  - campus steam to hot water for heating (see boiler plant project)
- Using chilled water *Chilled Beams* for cooling. These units allow for smaller HRUs and motors
- Having a Variable Air Volume (VAV) system that allows, when working in conjunction with an air monitoring system, much lower air changes
  - per hour (ACH) in the laboratories.
- LED lighting throughout the wing with lighting controls.
- The new office area for the microbiology program will be built to comply with the Governor's EO18-01 order and will be zero

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:11PM

Project Number: 40000032

Project Title: E-wing Remodel to a Molecular Laboratory

**Description**

net energy capable.

With the completion of the central boiler plant, construction of the new south laboratory addition, and this project, the PHL will have meet the Clean Buildings Act well before the 2027 due date.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Construction of this project does not impact equity in the state in any negative way. The new Molecular Laboratory Remodel will require a percentage of contactors and sub-contractors to be minority and women owned businesses. This process will be overseen by DES during the construction phase.

Construction of the project will also reduce the environmental impacts of the PHL. Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. While not directly affecting the environment for any one lower economic community it will help reduce the environmental impacts of the overall environment of Washington State. Laboratories are known high energy consumers. By reducing energy used and environmental hazards produced, this project, along with the other projects at the PHL will help reduce environmental inequity in the Puget Sound Region.

**12. Is there additional information you would like decision makers to know when evaluating this request.**

This project will allow the PHL to be ready for, and have the ability to, handle high impact and sometimes unexpected diseases and pandemics from measles to COVID-19. Testing of diseases could be increased substantially and quickly. This project would require that the Environmental program move into their new facilities before work could start on the new molecular laboratory.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

New Facilities/Additions (Major Projects)

Remodel/Renovate/Modernize (Major Projects)

**Growth Management impacts**

No growth management impacts. Project is part of the PHL 20-year master plan and was approved by City of Shoreline in 2010

New Facility: No

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	21,247,000		216,000		2,107,000
	<b>Total</b>	<b>21,247,000</b>	<b>0</b>	<b>216,000</b>	<b>0</b>	<b>2,107,000</b>
		<b>Future Fiscal Periods</b>				
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State	18,924,000				
	<b>Total</b>	<b>18,924,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** T3 Terry's Working Version

**Report Number:** CBS002

**Date Run:** 9/16/2022 2:11PM

**Project Number:** 40000032

**Project Title:** E-wing Remodel to a Molecular Laboratory

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

There are no operating impacts until the 27-29 Biennium.

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000032	40000032
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids



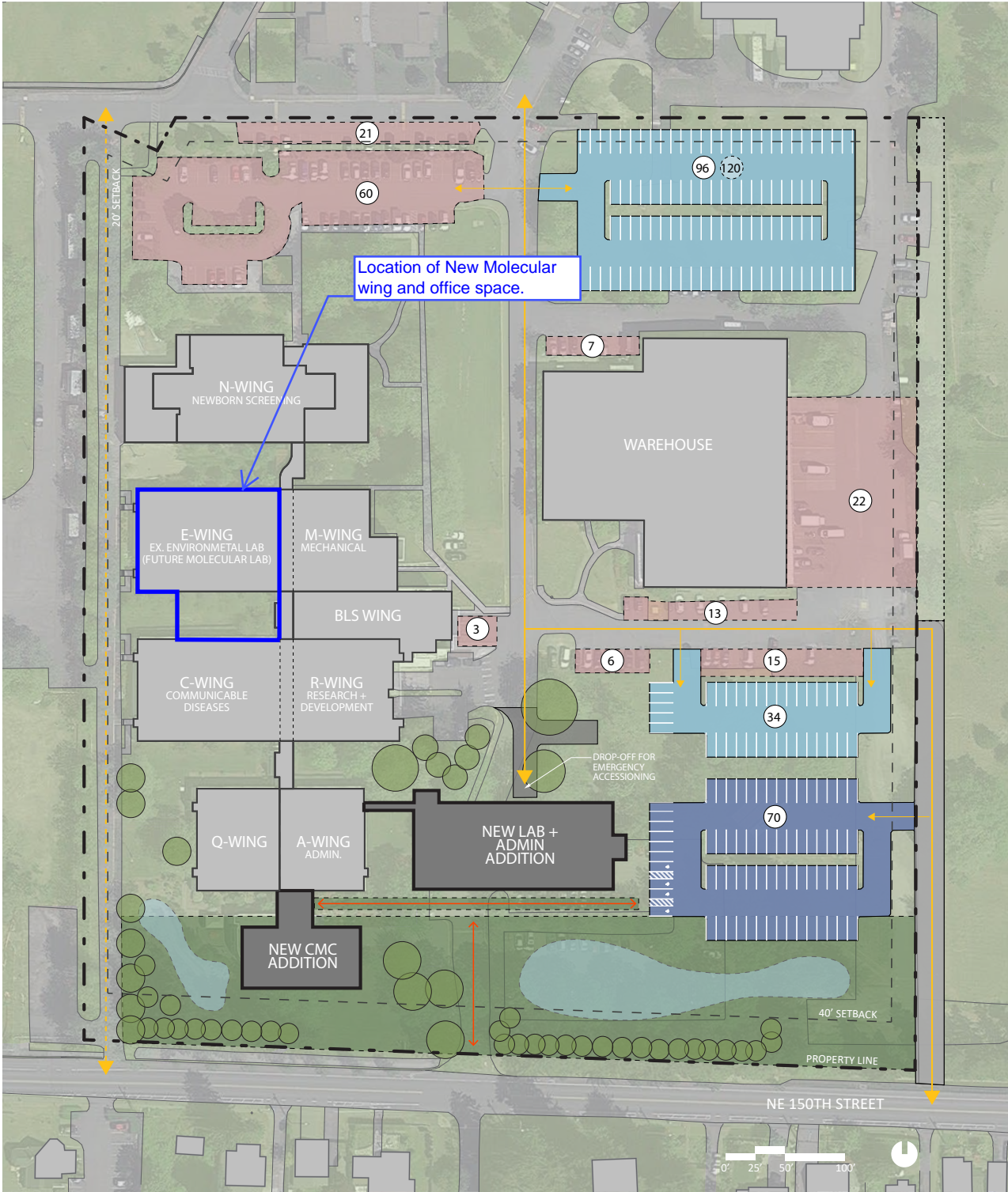


Figure 4R: Parking diagram w/ vehicular circulation

- PROPOSED VISITOR LOT
- PROPOSED TEMPORARY LOT
- EXISTING PARKING TO REMAIN
- PROPOSED DRIVE AISLE
- FUTURE DRIVE AISLE EXTENSION
- VEHICULAR ACCESS
- EMERGENCY VEHICLE ACCESS
- PEDESTRIAN ACCESS



**AGC**  
THE CONSTRUCTION  
ASSOCIATION

**JULY**

**2022**

# CONSTRUCTION INFLATION ALERT

For more than two years the U.S. construction industry has been buffeted by unprecedented increases in materials costs, supply-chain bottlenecks, and a tight labor market. To help project owners, government officials, and the public understand how these conditions are affecting contractors and their workers, the Associated General Contractors of America (AGC) has posted frequent updates of the Construction Inflation Alert.

Several recent developments have raised the specter of a sharp slowdown or even a recession in the U.S. economy. Inflation is at a 40-year high, sapping consumers' purchasing power despite elevated wage increases. Major stock indexes have declined sharply—a frequent but not foolproof harbinger of recession. A growing number of companies have announced layoffs, although the job market remains vibrant, as indicated by large monthly employment increases, near-record job openings, and a persistently low unemployment rate.

However, a recession is far from certain. Demand for infrastructure, manufacturing, and power construction appears to be strong and likely to strengthen further, perhaps for several years to come. In any case, the cost of construction materials and labor does not generally move in sync with the overall economy. In short, owners should not assume that delaying projects will enable them to avoid volatility and disruptions in construction costs, delivery times, and labor supply, even if the economy slows significantly.

Meanwhile, Russia's ongoing attack on Ukraine and Western sanctions against Russia have disrupted production and transport of dozens of commodities. China's prolonged lockdown of Shanghai and other areas in an attempt to control the spread of covid has also affected production and shipping. New variants of covid, as well as a growing number of people with lingering or recurrent symptoms ("long-haul covid"), add to uncertainty about labor supply.

This version of the Alert is the seventh update since the first edition was posted in March 2021—an indication that the situation remains far from "normal." This document will continue to be revised to keep it timely as conditions affecting demand for construction, labor supply, and materials costs and availability change. Each new version is posted here: <https://www.agc.org/learn/construction-data/agc-construction-inflation-alert>

Please send comments and feedback, along with "Dear Valued Customer" letters or other information about materials costs and supply-chain issues, to AGC of America's chief economist, Ken Simonson, [ken.simonson@agc.org](mailto:ken.simonson@agc.org).

**[www.agc.org](http://www.agc.org)**



# Recent changes in input costs

Previous editions of this guide have highlighted the extreme runup in materials costs that began in early 2020. More recently, prices have moved in divergent directions for different materials. But, on balance, they continue to climb at a much higher rate than the consumer price index.

The extent of these increases is documented by the Bureau of Labor Statistics (BLS). BLS posts producer price indexes (PPIs) around the middle of each month for thousands of products and services (at [www.bls.gov/ppi](http://www.bls.gov/ppi)). Most PPIs are based on the prices that sellers say they charged for a specific item on the 11th day of the preceding month. Producers include manufacturers and fabricators, intermediaries such as steel service centers and distributors, and providers of services ranging from design to trucking.

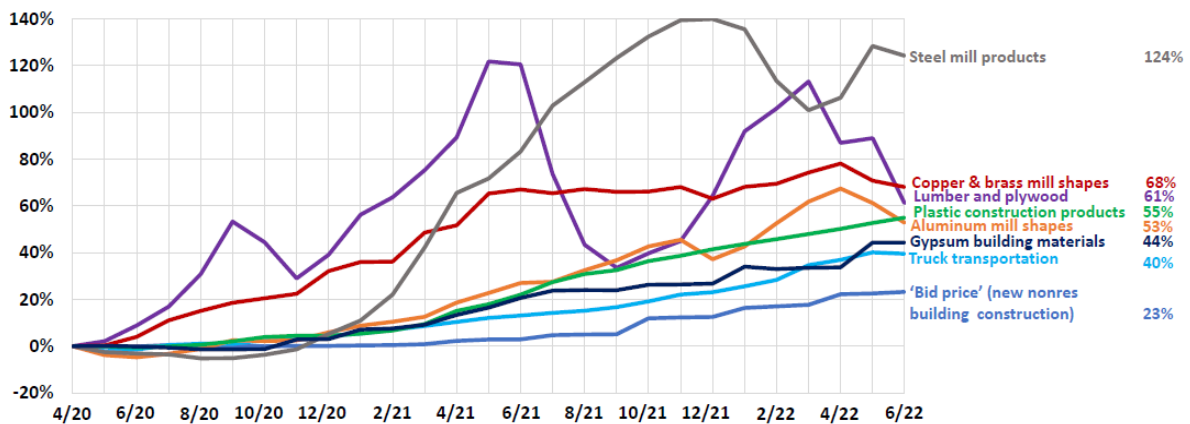
Figure 1 shows the magnitude of the increases for seven widely used categories of construction inputs. From April 2020, the low point for prices of many goods during the early stage of the pandemic, to June 2022, the PPI for steel mill products more than doubled (up 124% in 26 months). There were increases of more than 60% in the indexes for copper and brass mill shapes (up 68%) and lumber and plywood (up 61%). PPIs rose by more than half for plastic construction products (up 55%) and aluminum mill shapes (up 53%). The index for gypsum products increased 44% and the PPI for truck transportation climbed 40%. Numerous other indexes rose by more than the 23% increase in the “bid price” index.

124%

The PPI for steel mill products rose 124% in 26 months

Figure 1

**PPIs for construction bid prices and selected inputs**  
cumulative change in PPIs, April 2020-June 2022 (not seasonally adjusted)



Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi](http://www.bls.gov/ppi)

# Supply-chain issues

From the first days of the pandemic, availability and delivery times for materials have been never-ending headaches for construction firms. Problems began as early as February 2020, when factories in China and northern Italy were shut down, causing shortages of items as diverse as elevator parts, floor tiles, and kitchen appliances. Two years later, another round of covid-related restrictions in China disrupted production and shipping from that country.

Russia's attack on Ukraine, Western countermeasures against Russia, and diversions or blockages of cargo ships are impeding or cutting off supplies of items as diverse as pig iron used in steelmaking, neon for lasers used in semiconductor manufacturing and other applications, and Ukrainian clay used in producing ceramic tile exported to the U.S. from Italy and Spain. Some of these impacts are far down the supply chain from the actual construction item. For instance, a producer of electrical switchgear reported in May that the time for delivering products from its plant had doubled from 20 weeks to 40, in part because of difficulty acquiring a fire-retardant chemical produced in Europe that goes into a plastic resin used to make the housing for its switchgear.

Adding to these pandemic- and conflict-induced problems, a series of unusual mishaps interfered with output or delivery of numerous goods. The biggest impact for construction came from the severe freeze in Texas in February 2021 that damaged all of the petrochemical plants producing resins for a host of construction plastics. Damage to the electrical grid in Louisiana from Hurricane Ida last September further interfered with the production of some plastics inputs. Some cement plants have incurred unusually long outages, in part because of delays in sourcing replacement parts.

Contractors have also been affected by the much-publicized shortage of computer chips. Not only is the construction industry a major buyer of pickup trucks that are in short supply, but deliveries of construction equipment also have been held up by a lack of semiconductors.

Contractors have reported being quoted exceptionally long lead times and/or allocations (less-than-full shipments, generally tied to previously ordered quantities) for inputs as varied as electrical transformers, traffic signal equipment, highway striping paint, wallboard, insulation, windows, and roofing fasteners. Strong demand, plant outages, and truck driver shortages have meant long delays in completing ready-mix concrete pours in several states in the Southeast and West.

So far, there is little sign that the supply chain will consistently improve before 2023—or even 2024, in the case of some computer chips. While the lead time for some items has shortened, deliveries for many materials remain delayed or unpredictable. In fact, the expiration of labor contracts for West Coast longshore workers and rail workers nationwide could result in new disruptions of shipments later this year.

**466,000**

The number of job openings at the end of May, a record for the month

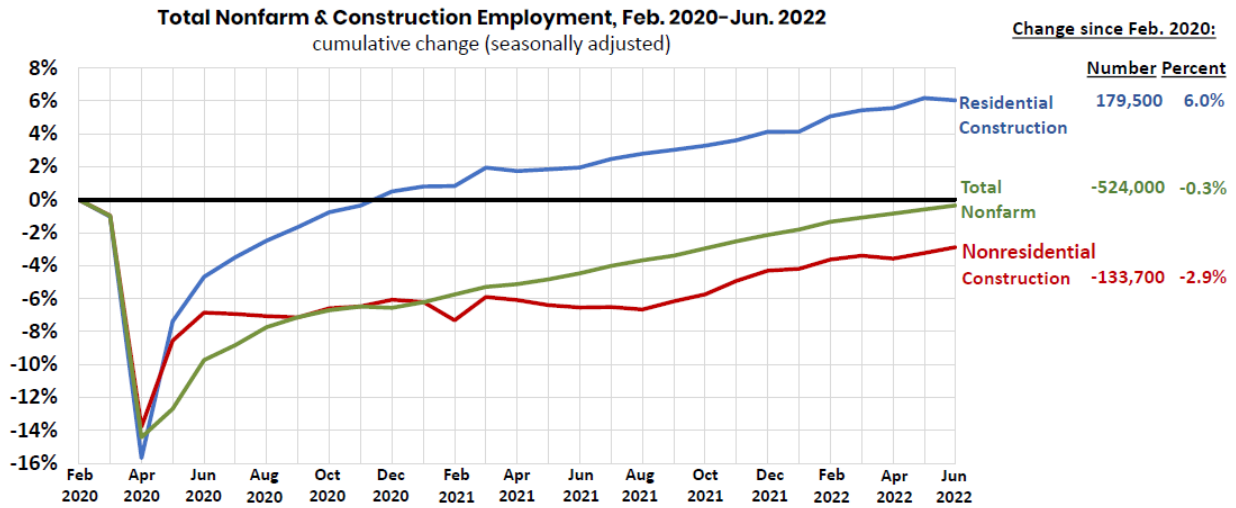
# Labor supply and cost

Construction employment has bounced back well from the early months of the pandemic. However, construction firms are far short of the number of workers they have been seeking. They have partially closed the gap by getting more overtime from the workers they have, but this cannot continue indefinitely.

The construction industry lost 1.1 million employees from February to April 2020—a 15% decline in just two months. While both residential and nonresidential construction employment rebounded somewhat in May 2020, employment stalled for more than a year after that among nonresidential firms—nonresidential building and specialty trade contractors plus civil and heavy engineering construction firms. During that period, thousands of experienced workers moved into residential construction (homebuilding and remodeling), found jobs in other sectors, or left the workforce completely.

By June 2022, seasonally adjusted construction employment totaled 7,670,000—modestly higher than the 7,624,000 employed in February 2020. But there was a large shift between residential and nonresidential subsectors. Compared to February 2020 levels, residential construction firms had added nearly 180,000 workers, while employment in nonresidential construction was still down 134,000 employees or 2.9%, as shown in Figure 2.

**Figure 2**



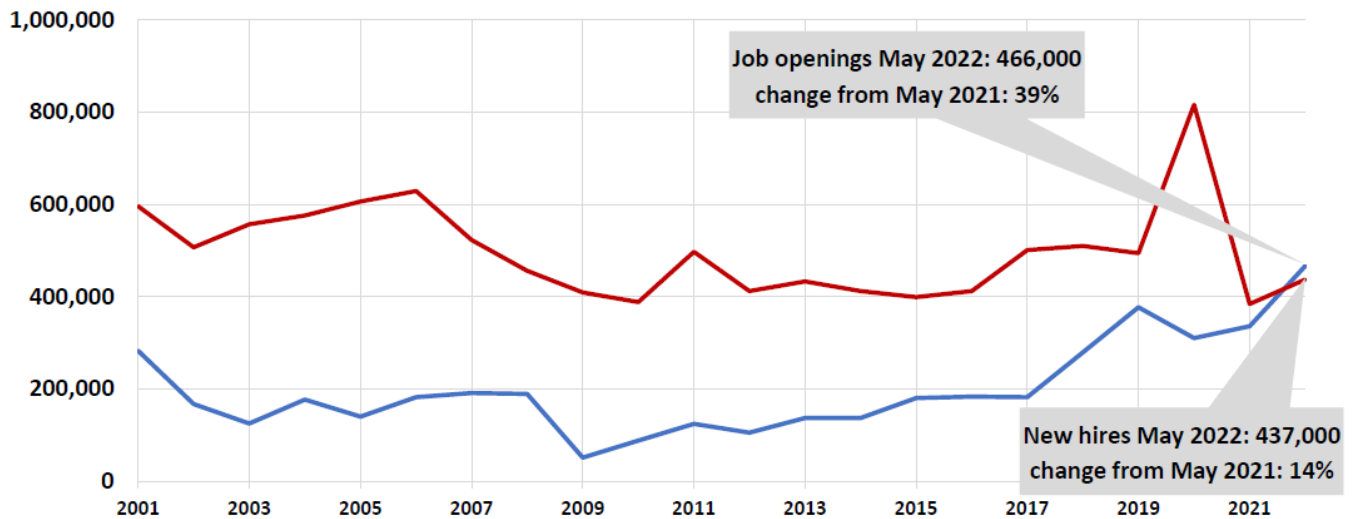
Source: BLS current employment statistics, <https://www.bls.gov/ces/>

There is strong evidence that the construction industry would have added many more workers if they had been available. Job openings in construction at the end of May totaled 466,000 (not seasonally adjusted), a jump of 130,000 or 39% from a year earlier and by far the largest May total in the 22-year history of the data, as shown in Figure 3. In fact, job openings exceeded the 437,000 workers hired in May, implying that construction firms would have hired twice as many workers that month as they were able to, if there had been enough qualified applicants.

**Figure 3**

**Construction job openings exceed hires, set record high for May**

Job openings and hires, May 2001–May 2022, not seasonally adjusted



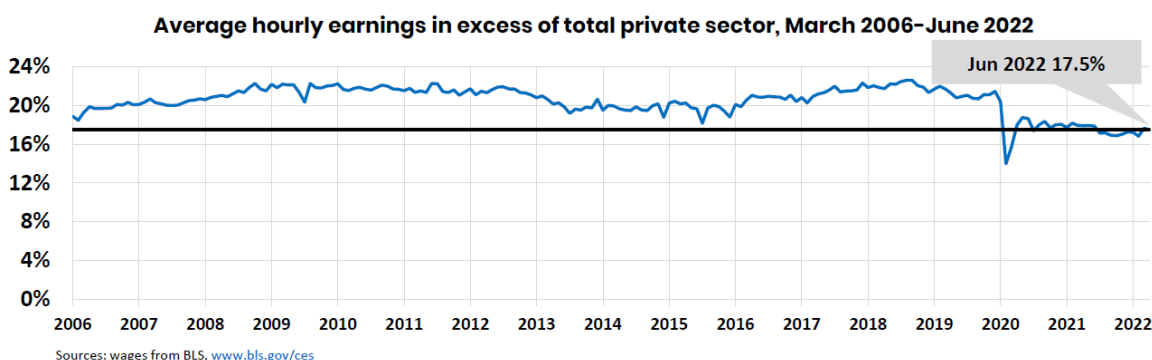
Source: Source: Bureau of Labor Statistics, [www.bls.gov/jlt](http://www.bls.gov/jlt), JOLTS

In order to attract, retain, and bring back workers, construction firms are raising pay. Average hourly earnings in construction for “production and nonsupervisory employees”—mainly hourly craft workers—rose 6.0% from June 2021 to June 2022. That compared with increases of 4.0% in the previous 12 months and 2.8% in the 12 months ending in June 2000. Despite the acceleration in wages, construction pay has not risen as fast as in other industries. Historically, as shown in Figure 4, contractors paid a “premium” to attract workers willing to work in the conditions, locations, and hours required for construction. Specifically, average hourly earnings for production workers in construction typically averaged 20% to 23% more than for all private sector employees, up until the onset of the pandemic. This premium shrank to less than 18% since the start of the pandemic as restaurants, warehouses, delivery services, and other industries drastically increased pay. Other sectors were also able to offer greater flexibility regarding hours and worksites, including work from home, that are not possible for construction.

## Figure 4

### Wage premium for construction has shrunk

- “Premium” for construction wages relative to total private sector has shrunk from 20-23% pre-pandemic to 17.5% for production & nonsupervisory employees as other sectors boost pay, benefits and offer flexible hours and locations
- Implications: Contractors will have raise pay still more, pay more overtime, invest more in labor-saving software and equipment



These differences imply that construction wages will have to rise even more steeply to restore (and perhaps expand) the pay “premium.” In addition, it is likely that contractors will pay more overtime to make up for the workers they don’t have. They may also turn more to offsite production and onsite drones, robotics, 3-D printers, and other ways of reducing the number or skill level of the workers they employ.

# Changes in bid prices

The extreme runup in so many input costs caused financial hardship for many contractors and subcontractors, especially for those whose purchases are concentrated in materials with extra-steep increases.

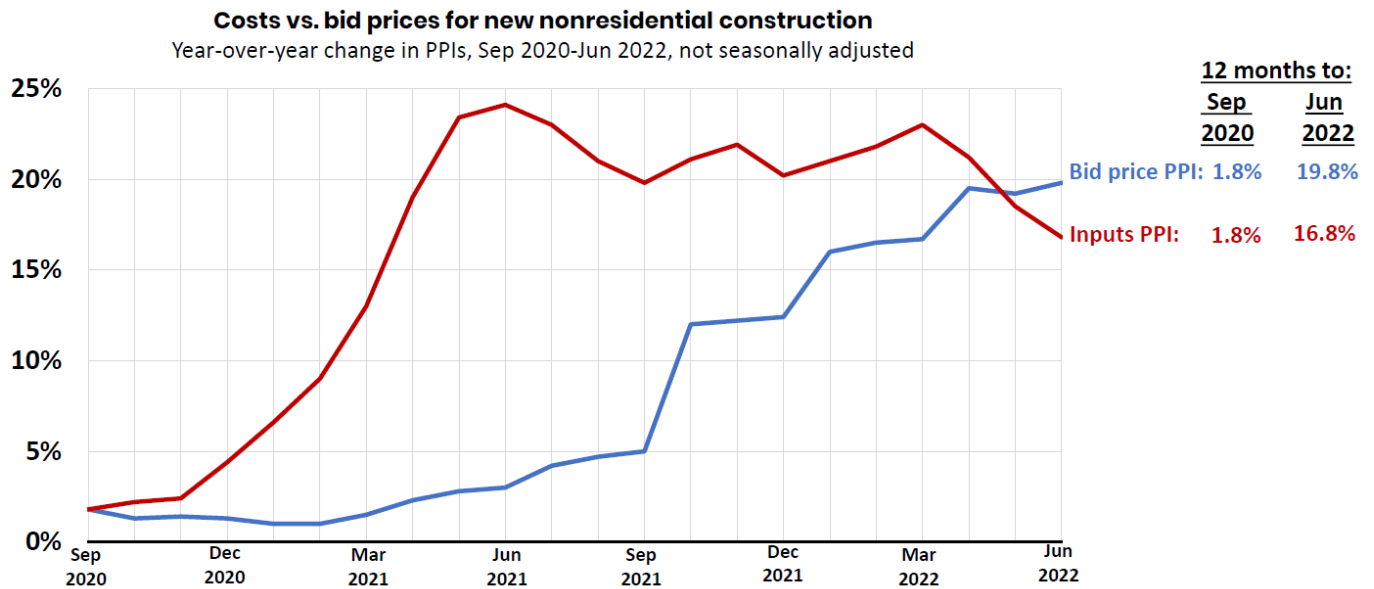
BLS posts several PPIs for new nonresidential construction. Since every construction project is unique, it is not possible to collect prices for identical construction “products” in the same way as for most goods and services. Instead, the agency creates “bid price” PPIs (BLS refers to them as output price indexes) through a two-step process. Each quarter it receives data from construction cost-estimating firms regarding the cost of a package of installed components or “assemblies” of a particular nonresidential building. Every month BLS asks a fixed group of contractors the amount of overhead and profit they would charge to erect that building—the same building that contractor was asked about previously. BLS combines the answers from a set of contractors to create PPIs for new warehouse, school, office, industrial, and healthcare building construction, along with a weighted average of these building types for an overall index for new nonresidential building construction.

BLS also creates PPIs for inputs to construction--weighted averages of the cost of materials and services purchased for every type of project.

As shown in Figure 5, the PPI for bid prices rose at the same rate as the PPI for inputs from September 2019 to September 2020, 1.8% year-over-year. The bid-price PPI continued rising at a modest rate through mid-2021, while the year-over-year change in input prices accelerated to more than 24% by June 2021.

Since mid-2001, the bid-price PPI also has accelerated considerably, as contractors attempt to pass on their rising materials and labor costs. By June 2022, the bid-price index was climbing at a 19.8% year-over-year rate, compared to 16.8% for the PPI for inputs to new nonresidential construction.

**Figure 5**



Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi](http://www.bls.gov/ppi)

The bid-price index only indicates the price contractors propose for new starts. On projects for which they had already submitted a bid or begun work, contractors were stuck with paying elevated materials prices that they could not pass on.

## What's next for bid prices?

There is no fixed relationship between input costs and bid prices. For every firm and time period, the relationship depends on specific market conditions and expectations.

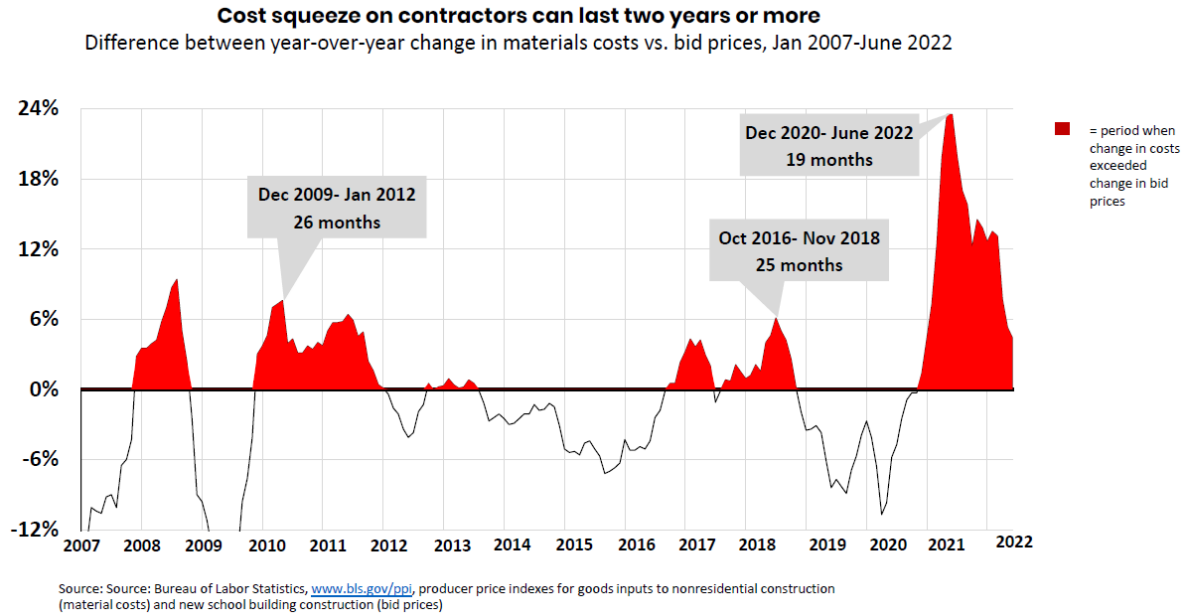
However, it is possible to look at past relationships. Figure 6 shows the difference between the year-over-year change in the PPI for materials costs for goods inputs to construction and the bid-price index for new school construction. The areas in red indicate periods in which the year-over-year change in the PPI for exceeded the bid-price PPI for schools. (Similar patterns exist for the bid-price indexes for new warehouse, office, industrial and healthcare buildings.)

Materials costs outran bid prices for as long as 26 months from late 2009 to early 2012 and for 25 months from late 2016 to late 2018. The current gap hasn't lasted as long but the peak was more than twice as high as in previous episodes, indicating the pain for contractors has been that much more intense.

**26 months**  
The year-over-year change in materials costs may exceed the change in bid prices for 2 years or more



Figure 6



# What can contractors and owners do?

Contractors can provide project owners with timely and credible third-party information about changes in relevant material costs and supply-chain snarls that may impact the cost and completion time for a project that is underway or for which a bid has already been submitted.

Owners can authorize appropriate adjustments to design, completion date, and payments to accommodate or work around these impediments. Nobody welcomes a higher bill, but the alternative of having a contractor go out of business because of impossible costs or timing is likely to be worse for many owners.

For projects that have not been awarded or started, owners should start with realistic expectations about current costs and the likelihood of increases. They should provide potential bidders with accurate and complete design information to enable bidders to prepare bids that minimize the likelihood of unpleasant surprises for either party.

Owners and bidders may want to consider price-adjustment clauses that would protect both parties from unanticipated swings in materials prices. Such contract terms can enable the contractor to include a smaller contingency in its bid, while providing the owner an opportunity to share in any savings from downward price movements (as has occurred recently with lumber, diesel fuel, and some metals prices). The ConsensusDocs set of contract documents ([www.consensusdocs.org](http://www.consensusdocs.org)) is one source of industry-standard model language for such terms. The ConsensusDocs website includes a price escalation resource center (<https://www.consensusdocs.org/price-escalation-clause/>).

The parties may also want to discuss the best timing for ordering materials and components. Buying items earlier than usual can provide protection against cost increases. But purchase before use entails paying sooner for the items; potentially paying for storage, security against theft and damage, and insurance; and the possibility of design changes that make early purchase unwise.



# Conclusion

The construction industry is in the midst of a period of exceptionally steep and fast-rising costs for a variety of materials, compounded by major supply-chain disruptions and difficulty finding enough workers—a combination that threatens the financial health of many contractors. No single solution will resolve the situation, but there are steps that government officials, owners, and contractors can take to lessen the pain.

Federal trade policy officials can act immediately to end tariffs and quotas on imported products and materials. With many U.S. mills and factories already at capacity, bringing in more imports at competitive prices will cool the overheated price spiral and enable many users of products that are in short supply to avoid layoffs and shutdowns.

The federal government can improve the labor supply by allowing employers to sponsor more foreign-born workers to fill positions for which there are not enough qualified applicants. In addition, the federal government should fund and approve more apprenticeship and training programs to enable students and career-switchers to acquire the skills needed for construction trades.

Officials at all levels of government should review all regulations, policies, and enforcement actions that may be unnecessarily driving up costs and slowing importation, domestic production, transport, and delivery of raw materials, components, and finished goods.

Owners need to recognize that fast-changing materials costs and availability require a quick decision regarding bids and requests for changes. For new and planned projects, owners should expect quite different pricing from previous estimates. They may want to consider building in more flexibility regarding design, timing, or cost-sharing.

Contractors need, more than ever, to closely monitor costs and delivery schedules for materials and to communicate information with owners, both before submitting bids and throughout the construction process.

Materials prices do eventually reverse course. Owners and contractors alike will benefit when that happens. Until then, cooperation and communication can help reduce the damage.

## AGC resources

This document will be updated if market conditions warrant. Check for the latest edition at:  
<https://www.agc.org/learn/construction-data/agc-construction-inflation-alert> for the latest edition

The AGC website, [www.agc.org](http://www.agc.org), has a variety of resources available to contractors, owners, and others wanting to know more about the construction industry.

AGC posts tables showing changes in PPIs and national, state, and metro construction employment each month at:  
<https://www.agc.org/learn/construction-data>

AGC's Data DIGest is a weekly one-page summary of economic news relevant to construction. Subscribe at:  
[https://store.agc.org/Store/Store/StoreLayouts/Item\\_Detail.aspx?iProductCode=4401](https://store.agc.org/Store/Store/StoreLayouts/Item_Detail.aspx?iProductCode=4401)  
or email chief economist Ken Simonson at [ken.simonson@agc.org](mailto:ken.simonson@agc.org).

Construction documents are available for viewing and purchase from ConsensusDocs at [www.consensusdocs.org](http://www.consensusdocs.org), including the price escalation resource center, [www.consensusdocs.org/price-escalation-clause/](http://www.consensusdocs.org/price-escalation-clause/)

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	E-Wing Remodel into a Molecular Laboratory
OFM Project Number	40000032

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	14,136	MACC per Gross Square Foot	\$840
Usable Square Feet	11,509	Escalated MACC per Gross Square Foot	\$1,004
Alt Gross Unit of Measure			
Space Efficiency	81.4%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	12.01%
Remodel	Yes	Projected Life of Asset (Years)	50
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	Yes
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start	October-22	Pre-design End	May-23
Design Start	July-23	Design End	July-25
Construction Start	July-25	Construction End	July-27
Construction Duration	24 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$17,927,915</b>	Total Project Escalated	<b>\$21,246,688</b>
		Rounded Escalated Total	<b>\$21,247,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
Design Phase Services	\$1,282,951		
Extra Services	\$442,000		
Other Services	\$586,543		
Design Services Contingency	\$231,149		
<b>Consultant Services Subtotal</b>	<b>\$2,542,644</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$2,868,894</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$11,880,208	Maximum Allowable Construction Cost (MACC) Escalated	\$14,193,254
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$1,188,021		\$1,428,952
Non-Taxable Items	\$0		\$0
Sales Tax	\$1,346,028	Sales Tax Escalated	\$1,609,087
<b>Construction Subtotal</b>	<b>\$14,414,256</b>	<b>Construction Subtotal Escalated</b>	<b>\$17,231,293</b>

Equipment			
Equipment	\$784,506		
Sales Tax	\$80,804		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$865,310</b>	<b>Equipment Subtotal Escalated</b>	<b>\$1,040,796</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$105,705</b>	<b>Artwork Subtotal Escalated</b>	<b>\$105,705</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$17,927,915</b>	Total Project Escalated	<b>\$21,246,688</b>
		Rounded Escalated Total	<b>\$21,247,000</b>

## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$2,868,894	\$216,000	\$2,107,096	\$545,798	\$0
<b>Construction</b>					
Construction Subtotal	\$17,231,293			\$17,231,293	\$0
<b>Equipment</b>					
Equipment Subtotal	\$1,040,796			\$1,040,796	\$0
<b>Artwork</b>					
Artwork Subtotal	\$105,705			\$105,705	\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$21,246,688	\$216,000	\$2,107,096	\$18,923,592	\$0
	\$21,247,000	\$216,000	\$2,107,000	\$18,924,000	\$0
Percentage requested as a new appropriation			10%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

Project Design Phase

Insert Row Here

**What has been completed or is underway with a previous appropriation?**

Predesign is currently underway

Insert Row Here

**What is planned with a future appropriation?**

Project Contract Administration, Project Construction, Equipment & Furnishings and the Artwork installation.

Insert Row Here

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0419</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$1,082,951				69% of A/E Basic Services
Lab Planner	\$200,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$1,282,951</b>		<b>1.0930</b>	<b>\$1,402,266</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)	\$50,000				
Geotechnical Investigation	\$40,000				
Commissioning	\$60,000				
Site Survey	\$6,000				
Testing	\$30,000				
LEED Services					
Voice/Data Consultant	\$5,000				
Value Engineering	\$30,000				
Constructability Review	\$30,000				
Environmental Mitigation (EIS)					
Landscape Consultant	\$8,000				
Permitting	\$80,000				
Interior Designer	\$25,000				
Exterior Waterproofing Consultant	\$30,000				
Life Cycle Cost Analysis	\$5,000				
Energy Life Cycle Cost Analysis	\$8,000				
Air Entrainment Study	\$30,000				
Reimbursables/Reprographics	\$5,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$442,000</b>		<b>1.0930</b>	<b>\$483,106</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$486,543				31% of A/E Basic Services
HVAC Balancing	\$30,000				
Staffing					
Enhanced CA-Architect	\$25,000				
Enhanced CA-MEP	\$10,000				
Enhanced CA-Lab Planner	\$10,000				

A/E Commissioning Participation	\$10,000			
Record Documents	\$15,000			
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$586,543</b>	<b>1.2028</b>	<b>\$705,495</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>				
Design Services Contingency	\$231,149			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$231,149</b>	<b>1.2028</b>	<b>\$278,027</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>	<b>\$2,542,644</b>		<b>\$2,868,894</b>	

Green cells must be filled in by user



## Cost Estimate Details

Construction Contracts					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>					
G10 - Site Preparation	\$182,544				
G20 - Site Improvements					
G30 - Site Mechanical Utilities	\$480,286				
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Temporary Facilities	\$220,000				
Rooftop Solar	\$430,000				
<b>Sub TOTAL</b>	<b>\$1,312,830</b>		<b>1.1466</b>	<b>\$1,505,291</b>	
<b>2) Related Project Costs</b>					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention	\$400,000				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$400,000</b>		<b>1.1466</b>	<b>\$458,640</b>	
<b>3) Facility Construction</b>					
A10 - Foundations	\$87,640				
A20 - Basement Construction					
B10 - Superstructure	\$300,000				
B20 - Exterior Closure	\$83,160				
B30 - Roofing	\$135,000				
C10 - Interior Construction	\$783,302				
C20 - Stairs					
C30 - Interior Finishes	\$684,436				
D10 - Conveying					
D20 - Plumbing Systems	\$679,111				
D30 - HVAC Systems	\$2,126,270				
D40 - Fire Protection Systems	\$177,728				
D50 - Electrical Systems	\$1,893,568				
F10 - Special Construction					
F20 - Selective Demolition	\$110,616				
General Conditions	\$924,307				
Labcasework, fixtures, & fittings	\$2,182,240				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$10,167,378</b>		<b>1.2028</b>	<b>\$12,229,323</b>	
<b>4) Maximum Allowable Construction Cost</b>					
<b>MACC Sub TOTAL</b>	<b>\$11,880,208</b>			<b>\$14,193,254</b>	
	\$840			\$1,004 per GSF	

[Empty Box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$1,188,021		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$1,188,021</b>	<b>1.2028</b>	<b>\$1,428,952</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.2028</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$1,346,028</b>		<b>\$1,609,087</b>
------------------	--------------------	--	--------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$14,414,256</b>		<b>\$17,231,293</b>
-------------------------------------	---------------------	--	---------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment	\$544,506				
E20 - Furnishings	\$240,000				
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$784,506</b>		<b>1.2028</b>	<b>\$943,604</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.2028</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$80,804</b>			<b>\$97,192</b>	
<b>EQUIPMENT TOTAL</b>					
	<b>\$865,310</b>			<b>\$1,040,796</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$105,705				0.5% of total project cost for new construction 0.5% of total project cost for new and renewal construction
Higher Ed Artwork	\$0				
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$105,705</b>		<b>NA</b>	<b>\$105,705</b>	

Green cells must be filled in by user

## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.2028</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.1466</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:52PM

Project Number: 40000053

Project Title: Generator for New Central Boiler Plant

## Description

Starting Fiscal Year: 2024

Project Class: Program

Agency Priority: 0

### Project Summary

This project request is for a reappropriation of 21-23 funding for a new emergency generator specifically for the New Central Boiler Plant that is being designed and constructed during the current 21-23 biennium. The generator is being constructed along the same timeline as the boiler plant. Current lead time for the generator is 36 to 52 weeks. The generator will be paid for and installed during the 23-25 biennium.

### Project Description

**1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system.**

This project will provide a new emergency generator specifically for the New Central Boiler plant that is being designed and constructed during the current 21-23 biennium. The problem is that the existing PHL generator is not large enough to run the laboratory and the new Central Boiler Plant. The current generator can run the current PHL facility for a week without additional fuel. The addition of the central boiler plant added to the current generator is too large of a load and certain laboratories would need to be shut down if the new central boiler plant is added to the current emergency system.

This request is a priority because currently the PHL can continue to operate all laboratories during power outages and during extended power outages staff and possibly the community can use the PHL as a place of refuge. The additional generator will allow all areas of the PHL to continue to run during times when the electrical grid is down and keep the Central Boiler Plant running to provide heat for staff and all sterilization equipment running.

**2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup.**

This request will construct a new generator capable of providing power to the new central boiler plant during times of electrical grid shutdown. The project would be constructed in conjunction with the new central boiler plant project and have the same timeline of completion. The project would be constructed during the last year of the current biennium or possibly into the early part of the next biennium due to the long lead times of construction materials due to the pandemic.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action?**

The request would enable the PHL to continue power all the laboratories and power the central boiler plant during times of power grid shutdown.

If the project is not done the central boiler plant will need to be connected to the existing generator. This will mean that certain labs will not be able to operate, and only highly critical portions of the central boiler plant will continue running during times of power grid shutdown.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

The only other alternative is connecting critical portions of the new boiler plant to the existing PHL generator. The decision to provide another generator just for the boiler plant will allow all sections of the PHL to continue to operate on the existing generator while the new generator will keep the boiler plant running to provide heat and power for the sterilization equipment. Providing the generator for the boiler plant will also allow the current generator to provide power for the new south laboratory addition. The two generators will also allow the PHL to be a place of refuge for staff and possibly the local community in times of extend power outages.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

No DOH clientele will be impacted by this request, however, staff would be able to continue their work during power outages



303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:52PM

Project Number: 4000053

Project Title: Generator for New Central Boiler Plant

**Description**

and the PHL could be used as a place of refuge for staff and the local community during any extended power outages.

**6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation.**  
 The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**  
 The generator would improve PHL efficiency in times of power grid shutdown as the laboratory could continue its work during power grid shutdowns and continue working during extended shutdowns

**8. Does this project include IT-related costs, including hardware, software, cloud based services, contracts, or staff? If yes, attach IT Addendum.**  
 This project does not have any IT-related costs.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions.**  
 This project is not linked to the PSAA.

**10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate.**  
 This project does not contribute to statewide goals to reduce carbon pollution, but it does keep the PHL operating at full capacity from an efficiency and a safety point of view.

**11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I communities impacted?**  
 Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. DOH has in its strategic plan a roadmap of health for all communities in the state. In times of extended power outages, the PHL could become a place of refuge for the local community.

**12. Is there additional information you would like decision makers to know when evaluating this request**

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

**Growth Management impacts**

No growth management impacts

New Facility: Yes

**How does this fit in master plan**

This is infrastructure that is connected to the new central boiler plant

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	1,837,000			1,837,000	
	<b>Total</b>	<b>1,837,000</b>	<b>0</b>	<b>0</b>	<b>1,837,000</b>	<b>0</b>

Future Fiscal Periods

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 1:52PM

Project Number: 40000053

Project Title: Generator for New Central Boiler Plant

**Funding**

	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>
057-1 State Bldg Constr-State				
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

No additional FTEs are required for this project

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000053	40000053
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2021)

Updated June 2021

## Quick Start Guide

### GENERAL INFORMATION

- 1) The C-100(2021) tool was created to align with the estimating application in the Capital Budgeting System (CBS). The intended use is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Unifomat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as Acquisition, MACC, Equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% (x) (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% (x) Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% (x) MACC$
- 4) Artwork:  $0.5\% (x) Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 4\%) (x) (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2021*

Agency	Washington State Department of Health
Project Name	Generator for New Central Boiler Plant
OFM Project Number	40000053

**Contact Information**

Name	Terry Williams
Phone Number	206-375-0025
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

**Statistics**

Gross Square Feet	1	MACC per Square Foot	\$1,336,500
Usable Square Feet	1	Escalated MACC per Square Foot	\$1,415,307
Space Efficiency	100.0%	A/E Fee Class	A
Construction Type	Heating and power plan	A/E Fee Percentage	11.46%
Remodel	No	Projected Life of Asset (Years)	30

**Additional Project Details**

Alternative Public Works Project	No	Art Requirement Applies	No
Inflation Rate	3.28%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	5%		
Base Month	September-21	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

**Schedule**

Predesign Start		Predesign End	
Design Start	July-22	Design End	December-22
Construction Start	January-23	Construction End	January-24
Construction Duration	12 Months		

Green cells must be filled in by user

**Project Cost Estimate**

Total Project	<b>\$1,737,730</b>	Total Project Escalated	<b>\$1,837,211</b>
		Rounded Escalated Total	<b>\$1,837,000</b>

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2021*

Agency	Washington State Department of Health	
Project Name	Generator for New Central Boiler Plant	
OFM Project Number	40000053	

**Cost Estimate Summary**

Acquisition			
<b>Acquisition Subtotal</b>	<b>\$0</b>	<b>Acquisition Subtotal Escalated</b>	<b>\$0</b>

Consultant Services			
Predesign Services	\$0		
A/E Basic Design Services	\$110,967		
Extra Services	\$20,000		
Other Services	\$49,855		
Design Services Contingency	\$9,041		
<b>Consultant Services Subtotal</b>	<b>\$189,862</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$197,922</b>

Construction			
Construction Contingencies	\$66,825	Construction Contingencies Escalated	\$70,902
Maximum Allowable Construction Cost (MACC)	\$1,336,500	Maximum Allowable Construction Cost (MACC) Escalated	\$1,415,307
Sales Tax	\$144,542	Sales Tax Escalated	\$153,080
<b>Construction Subtotal</b>	<b>\$1,547,867</b>	<b>Construction Subtotal Escalated</b>	<b>\$1,639,289</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$0</b>	<b>Artwork Subtotal Escalated</b>	<b>\$0</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$1,737,730</b>	Total Project Escalated	<b>\$1,837,211</b>
		Rounded Escalated Total	<b>\$1,837,000</b>

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>				
Programming/Site Analysis				
Environmental Analysis				
Predesign Study				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0272</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>				
A/E Basic Design Services	\$110,967			69% of A/E Basic Services
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$110,967</b>	<b>1.0341</b>	<b>\$114,751</b>	Escalated to Mid-Design
<b>3) Extra Services</b>				
Civil Design (Above Basic Svcs)				
Geotechnical Investigation	\$15,000			
Commissioning				
Site Survey	\$5,000			
Testing				
LEED Services				
Voice/Data Consultant				
Value Engineering				
Constructability Review				
Environmental Mitigation (EIS)				
Landscape Consultant				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$20,000</b>	<b>1.0341</b>	<b>\$20,682</b>	Escalated to Mid-Design
<b>4) Other Services</b>				
Bid/Construction/Closeout	\$49,855			31% of A/E Basic Services
HVAC Balancing				
Staffing				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$49,855</b>	<b>1.0610</b>	<b>\$52,896</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>				
Design Services Contingency	\$9,041			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$9,041</b>	<b>1.0610</b>	<b>\$9,593</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>				
	<b>\$189,862</b>		<b>\$197,922</b>	

Green cells must be filled in by user



## Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>				
G10 - Site Preparation	\$25,000			
G20 - Site Improvements	\$30,000			
G30 - Site Mechanical Utilities	\$35,000			
G40 - Site Electrical Utilities	\$45,000			
G60 - Other Site Construction	\$25,000			
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$160,000</b>	<b>1.0440</b>	<b>\$167,040</b>	
<b>2) Related Project Costs</b>				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0440</b>	<b>\$0</b>	
<b>3) Facility Construction</b>				
A10 - Foundations	\$40,000			
A20 - Basement Construction				
B10 - Superstructure				
B20 - Exterior Closure	\$50,000			
B30 - Roofing				
C10 - Interior Construction				
C20 - Stairs				
C30 - Interior Finishes				
D10 - Conveying				
D20 - Plumbing Systems	\$15,000			
D30 - HVAC Systems				
D40 - Fire Protection Systems				
D50 - Electrical Systems				
F10 - Special Construction				
F20 - Selective Demolition				
General Conditions	\$121,500			
Generator	\$950,000			includes all electrical components, ie transfer switchs, etc.
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$1,176,500</b>	<b>1.0610</b>	<b>\$1,248,267</b>	
<b>4) Maximum Allowable Construction Cost</b>				
<b>MACC Sub TOTAL</b>	<b>\$1,336,500</b>		<b>\$1,415,307</b>	

This Section is Intentionally Left Blank

**7) Construction Contingency**

Allowance for Change Orders	\$66,825		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$66,825</b>	<b>1.0610</b>	<b>\$70,902</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0610</b>	<b>\$0</b>

**Sales Tax**

<b>Sub TOTAL</b>	<b>\$144,542</b>		<b>\$153,080</b>
------------------	------------------	--	------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$1,547,867</b>		<b>\$1,639,289</b>
-------------------------------------	--------------------	--	--------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0610</b>	<b>\$0</b>	
<b>1) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0610</b>	<b>\$0</b>	
<b>Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

**Cost Estimate Details**

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.0610</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0440</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2021)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>



# WA Dept. of Health, Shoreline

## PV Solar 2019-032A(1)

Preliminary Engineering Study  
SHORELINE, WASHINGTON

JUNE 3, 2019 – REVISION 2

FOR THE  
LIFE OF  
YOUR  
BUILDING





# Project Contacts

---

<b>AREA OF RESPONSIBILITY</b>	<b>NAME</b>	<b>CONTACT NUMBER</b>	<b>EMAIL</b>
<b>Primary Client Contact</b>	Terry Williams	206.418.5577	Terry.Williams@DOH.WA.GOV
<b>WA DES Representative</b>	Joe Sullivan	360.407.9377	joe.sullivan@des.wa.gov
<b>Business Development Manager - Energy</b>	Andrew Williamson	206.832.8489	andrewwi@mckinstry.com
<b>Sr. Program Manager &amp; Sr. Energy Engineer</b>	Mark Nieman	206.832.8152	markn@mckinstry.com





# Contents

<b>SECTION 1. EXECUTIVE SUMMARY .....</b>	<b>7</b>
1.1 OVERVIEW	
1.2 CURRENT SITUATION	
1.3 SOLUTIONS	
1.4 SUMMARY OF BENEFITS	
1.5 MCKINSTRY DIFFERENTIATORS	
<b>SECTION 2. SCOPE OF WORK .....</b>	<b>9</b>
2.1 FACILITY IMPROVEMENT MEASURE (FIM) LIST	
2.2 MCKINSTRY SERVICES	
2.3 EXTENT OF SUBCONTRACTING	
2.4 PROJECT SCHEDULE	
DETAILED SCOPE OF WORK	
<b>SECTION 3. ENERGY SAVINGS ESTIMATE.....</b>	<b>35</b>
3.1 SAVINGS OVERVIEW	
3.2 UTILITY RATES	
TABLE 3.1 - ENERGY SAVINGS SUMMARY	
TABLE 3.3 - BASE UTILITY RATES	
TABLE 4.1 – ROM MAX BUDGET SUMMARY	
TABLE 4.2 – FACILITY IMPROVEMENT MEASURE (FIM) SUMMARY – ROUGH ORDER OF MAGNITUDE (ROM)	
ENVIRONMENTAL IMPACT CALCULATOR	
ENERGY TOOLBASE DEMAND PROFILE ESTIMATES	



# Executive Summary

## OUTCOME SNAPSHOT

This project represents an excellent opportunity to improve this facility while saving energy and trimming utility spending. McKinstry looks forward to making this project a success.

McKinstry estimates these future possible savings, building a maximum-sized solar PV array on the Labs roof and future wing expansions:



**\$32,290 to 41,790**  
Utility cost savings range/year



**Approximately 408,607**  
Proposed kWh production/year

*Carbon dioxide emissions reductions would approximately equal:*



**284.3**  
Metric Tonnes CO<sub>2</sub>/year



**78**  
Acres of trees planted



**292,862**  
Pounds of coal not burned per year



**55**  
Average size vehicles removed from the roads

## 1.1 Overview

Through the Washington State Department of Enterprise Services (DES) Energy Savings Performance Contracting (ESPC) program, McKinstry conducted a study and investigation of energy upgrades for the Department of Health at its Shoreline Public Health Labs. Our Investment Grade Audit investigated the current upper limit possible of installing a solar photovoltaic (PV) system on the existing and future expansion roofs at the Shoreline Labs.

## 1.2 Current Situation

### CHALLENGES

The Washington State Public Health Labs currently does not have any sustainable on-site power generation, such as a solar photovoltaic system. Also, Washington State Executive Order 18-01 states a goal for state facilities to pursue zero net energy.

### GOALS

Providing an on-site solar PV system on the Labs' roofs will help move the Shoreline facility's overall energy use closer to the intent of Executive Order 18-01.

## 1.3 Solutions

This project includes:

FIM ID: 10.01-PHL FUTURE SOLAR PV

This measure looks at the future possible extent of Solar PV on the roof of the WA Public Health Labs in Shoreline, WA. The layout takes into consideration future wing expansions and looks to answer what is the maximum potential solar PV array possible at the Labs. The basis of design is a 370 kW DC system with fixed modules at a 10 degree tilt, pointed south (~180 degree azimuth). Modules are based on Jinko Solar JKM 390M-72-V (390 W modules) and inverters are based on Chint CPS SCA 36KTL-DO (36 kW inverters). Module racking is based on Panel Claw clawRF 10 Degree racks with 11" row gaps. Final pricing, performance and selection of the PV Solar system will depend on staging with the current versus future roof layouts at the Labs.

## 1.4 Summary of Benefits

### FINANCIAL BENEFITS

Including sales tax and prior to any utility incentives, the total ROM project budget for this measure is in the range of \$960,400 to \$1,162,600. The ROM annual energy savings are in the range of \$32,290 to \$41,790. Construction tax credits are currently estimated at an incentive amount of approximately \$31,800. Depending on the final actual design, layout and materials used, the project has a 22.2 to 35 year simple payback, making the solar PV measure very feasible as part of the Labs' goal to meet the intent of EO 18-01.

# Executive Summary

## COMPANY AT-A-GLANCE

- Established 1960
- Over 1,700 employees
- 23 offices
- 55+ Professional Engineers
- 80+ LEED Accredited Professionals

## MCKINSTRY EXPERIENCE

**\$20 million**

Customer utility savings guaranteed

**\$100 million**

Grants & rebates secured for clients

**636 million**

Kilowatt hours saved

**453 thousand**

Metric tons of CO<sub>2</sub> saved

**91 million**

Gas Therms saved

*CO<sub>2</sub> emission reductions resulting from McKinstry projects have environmental impacts equal to:*

**3,167 acres**

Forest acres saved from destruction

**51.5 million**

Gallons of gas not used

**83+ thousand**

Cars taken off the road

**40+ thousand**

Homes taken off the power grid

## ENVIRONMENTAL BENEFITS

By taking the necessary steps to produce on-site electricity through the implementation of the Solar PV facility improvement measure detailed in this report, the Department of Health will attain the savings outlined in the outcome snapshot on the previous page. This is equivalent to:

- 43,523 typical home light bulbs (13.5 Watt LED) not energized; or
- 1,062,246 miles not driven by an average size vehicle.
- Supply approximately 9.4% of the Labs' energy consumption

## NEXT STEPS

McKinstry is prepared to move forward quickly with preparation of final scope information and a full Energy Services Proposal, upon approval from the Department of Health.

## 1.5 McKinstry Differentiators

### COMPANY OVERVIEW

McKinstry has over 50 years of experience assessing and improving facilities in the Pacific Northwest. With more than 1,500 successful energy and facility improvement projects completed in the past 15 years, McKinstry has the expertise to offer comprehensive solutions to the Department of Enterprise Services. McKinstry is more than just another energy services company, we believe in serving as your trusted advisor "*For the Life of Your Building.*"

### MCKINSTRY APPROACH ADVANTAGES

- Vendor- and product-neutral for truly consultative role
- Transparent pricing
- Total cost of ownership consideration
- No "shared savings" model

# Scope of Work

---

## 2.1 Facility Improvement Measure (FIM) List

For full a description of the DRAFT scope of work, please refer to Section 2 - Detailed Scope of Work.

FIM # 10.01-PHL Future Solar PV

## 2.2 McKinstry Services

McKinstry will include the following services related to this project:

1. *Energy Audit:*

The energy audit is complete and is submitted within this Energy Service Proposal.

2. *Design Services:*

McKinstry will provide a detailed engineering design as needed to obtain permitting, Owner review, and approval of the proposed systems. In addition, McKinstry will also provide construction support services, start-up, testing, as-built drawings of systems installed, and provide operations and maintenance manuals.

3. *Construction:*

Provide, or cause to be provided, all material, labor, and equipment, including paying for permits, fees, bonds, and insurance, required for the complete and working installation of McKinstry's equipment.

- a. McKinstry will provide a site superintendent who will be responsible for the onsite supervision and coordination of trades and subcontractors. This individual's responsibilities will also include regular work observations, quality control, site security, enforcement of the site-specific safety plan, as well as coordinating any impact upon building tenants with the Owner.
- b. McKinstry may perform portions of the construction work or may subcontract portions to qualified firms. In either case, McKinstry will share information regarding actual costs of the work with the Owner and DES.
- c. When McKinstry has completed the installation of the equipment, including start-up, operations verification, and training in accordance with the Proposal, McKinstry will provide to Owner and DES a "Notice of Commencement of Energy Savings."
- d. At the conclusion of the project, McKinstry will submit a "Notice of Substantial Completion" to the Owner and DES.

4. *Construction Management:*

McKinstry will provide a dedicated construction manager who will provide contract administration services for the project. The owner is expected to coordinate day-to-day communications with tenants and any scheduling of tenant relocations in and around occupied areas.

5. *Operation Training:*

McKinstry will provide relevant training of building staff during construction as agreed to by the Owner and DES.

6. *Performance Maintenance:*

McKinstry will provide ongoing monitoring and support services to help ensure that guaranteed savings are achieved throughout the term of the agreement. Ongoing services shall be under separate agreement. Ongoing services shall be at the discretion of the Owner and DES to terminate. Specific tasks associated with proposed ongoing Measurement and Verification (M&V) will be provided when a final Design is proposed.



# Scope of Work

---

7. *Equipment Maintenance:*

McKinstry will provide no equipment maintenance or repairs after the warranty period. Following the completion of the installation and Owner acceptance of the equipment, the Owner shall provide all necessary service, repairs, and adjustments to the equipment so that the equipment will perform in the manner and to the extent set forth in the Proposal. McKinstry shall have no obligation to service or maintain the equipment after the warranty period.

8. *Warranty:*

McKinstry will warrant equipment for one year following Notice of Commencement of Energy Savings. Specific information regarding equipment warranty will be passed on to owner.

## 2.3 Extent of Subcontracting

McKinstry may subcontract the energy audit, design, construction management, start-up, and training portions of this Contract to qualified firms upon review and approval by owner. Construction subcontracts will be awarded competitively. McKinstry will endeavor to satisfy the Diverse Business Enterprise utilization goals of the Owner and DES.

## 2.4 Project Schedule

Project schedule will be developed when Design commences of the final Solar PV project. Design duration would be approximately two months, followed by three months for Construction.

# Detailed Scope of Work

---

**FIM ID # 41013**  
**10.01-PHL Future Solar PV**  
**WA Public Health Lab**

## GENERAL

This measure looks at the future possible extent of Solar PV on the roof of the WA Public Health Labs in Shoreline, WA. The layout takes into consideration future wing expansions and looks to answer what is the maximum potential solar PV array possible at the Labs. The basis of design is a 370 kW DC system with fixed modules at a 10-degree tilt, pointed south (~180 degree azimuth). Modules are based on Jinko Solar JKM 390M-72-V (390 W modules) and inverters are based on Chint CPS SCA 36KTL-DO (36 kW inverters). Module racking is based on Panel Claw clawRF 10 Degree racks with 11" row gaps. Final pricing, performance and selection of the PV Solar system will depend on staging with the current versus future roof layouts at the Labs.

## DRAFT ROM SCOPE OF WORK INCLUDES

1. Solar
  - A. Initial basis of design is a flat roof, ballasted fixed-tilt Solar PV system
  - B. Layout based on a 10-degree tilt racking system (Panel Claw clawRF) with 11" row gaps, primarily ballasted. Direct mount anchors only to be used as required, based on Structural requirements.
  - C. Current technology and future Lab wing build-outs suggest a system as large as 370 kW DC
  - D. Initial panel selection based on Jinko Solar 390 watt modules
  - E. Initial inverter selection based on Chint 36 kW inverters
  - F. Final design pending actual roof area available (including final Structural analysis and Electrical design)
2. Training
  - A. Provide training as required for this FIM.



## Maximum Future Solar PV WSPHL Shoreline PV, 1610 NE 150th St, Shoreline WA

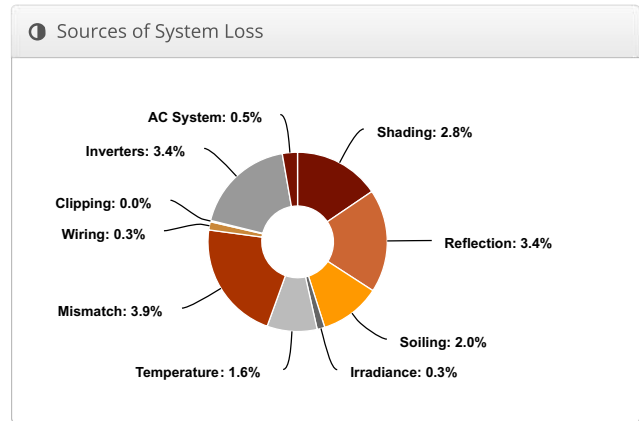
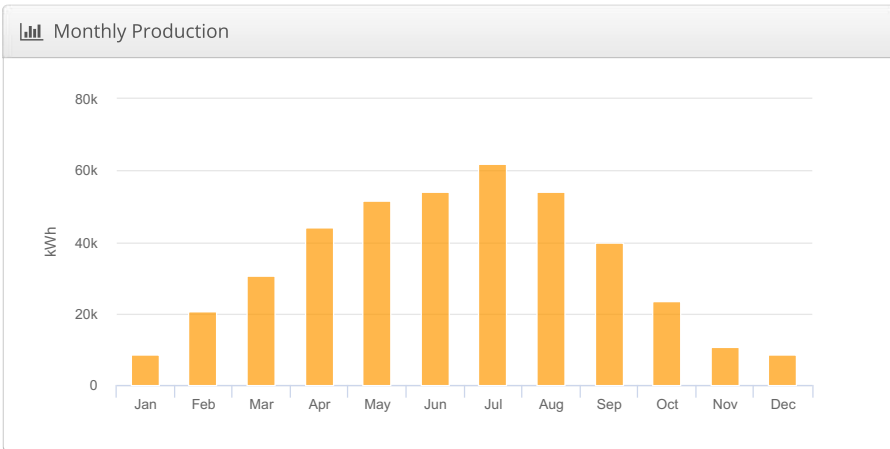
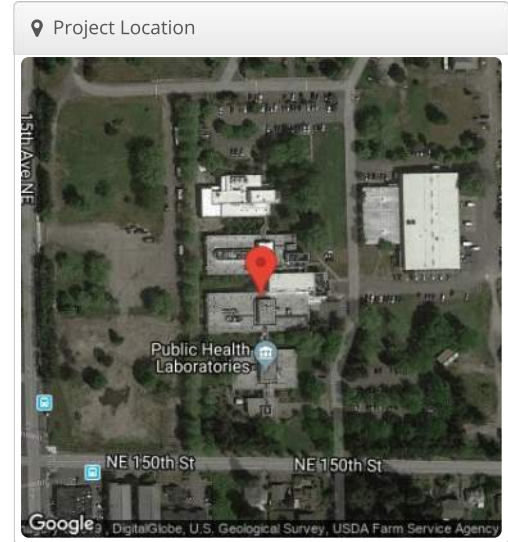
**Report**

Project Name	WSPHL Shoreline PV
Project Description	Maximum Solar PV Array Study
Project Address	1610 NE 150th St, Shoreline WA
Prepared By	Mark Nieman markn@mckinstry.com



**System Metrics**

Design	Maximum Future Solar PV
Module DC Nameplate	370.9 kW
Inverter AC Nameplate	396.0 kW Load Ratio: 0.94
Annual Production	408.6 MWh
Performance Ratio	83.1%
kWh/kWp	1,101.7
Weather Dataset	TMY, 10km Grid (47.75,-122.35), NREL (prospector)
Simulator Version	8888c1159c-ca10379297-66bde7997b-97562fcf95



**Annual Production**

	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,229.6	
	Adjusted Global Horizontal Irradiance	1,229.6	0.0%
	POA Irradiance	1,325.5	7.8%
	Shaded Irradiance	1,288.0	-2.8%
	Irradiance after Reflection	1,244.3	-3.4%
	Irradiance after Soiling	1,219.4	-2.0%
	<b>Total Collector Irradiance</b>	<b>1,219.4</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	452,310.7	
	Output at Irradiance Levels	451,163.3	-0.3%
	Output at Cell Temperature Derate	443,748.2	-1.6%
	Output After Mismatch	426,252.3	-3.9%
	Optimal DC Output	425,104.8	-0.3%
	Constrained DC Output	424,913.6	0.0%
	Inverter Output	410,660.0	-3.4%
	<b>Energy to Grid</b>	<b>408,607.0</b>	<b>-0.5%</b>
<b>Temperature Metrics</b>			
	Avg. Operating Ambient Temp		12.8 °C
	Avg. Operating Cell Temp		19.5 °C
<b>Simulation Metrics</b>			
	Operating Hours	4641	
	Solved Hours	4641	

**Condition Set**

Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (47.75,-122.35), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module	Characterization										
	JKM 390M-72-V (Jinkosolar)	jinko_JKM_390M_72_V*(G3.2_F40).PAN, PAN										
Component Characterizations	Device	Characterization										
	CPS SCA 36KTL-DO (US) (Chint)	Manufacturer										

## Components

Component	Name	Count
Inverters	CPS SCA 36KTL-DO (US) (Chint)	11 (396.0 kW)
Home Runs	6 AWG (Copper)	9 (745.2 ft)
Home Runs	2 AWG (Copper)	3 (124.7 ft)
Home Runs	1 AWG (Copper)	4 (301.4 ft)
Combiners	2 input Combiner	6
Combiners	3 input Combiner	1
Combiners	4 input Combiner	4
Combiners	6 input Combiner	4
Combiners	7 input Combiner	1
Strings	10 AWG (Copper)	62 (3,840.1 ft)
Module	Jinkosolar, JKM 390M-72-V (390W)	951 (370.9 kW)

## Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
West S Wing Wiring Zone	12	14-17	Along Racking
C and R Wing Wiring Zone 2	12	14-17	Along Racking
N Wing Wiring Zone 3	12	14-17	Along Racking
East S Wing Wiring Zone	12	14-17	Along Racking
PHL Wiring Zone 5	12	14-17	Along Racking
E-Wing Wiring Zone 6	12	14-17	Along Racking

## Field Segments

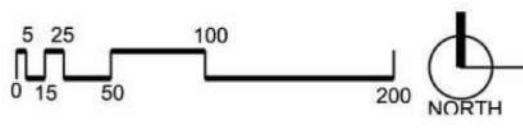
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
C Wing	Fixed Tilt	Landscape (Horizontal)	10°	179.227°	0.9 ft	1x1	130	116	45.2 kW
PHL Addition	Fixed Tilt	Landscape (Horizontal)	10°	178.677°	0.9 ft	1x1	84	84	32.8 kW
West South Wing Addition	Fixed Tilt	Landscape (Horizontal)	10°	178.801°	0.9 ft	1x1	291	286	111.5 kW
E-Wing	Fixed Tilt	Landscape (Horizontal)	10°	179.154°	0.9 ft	1x1	76	57	22.2 kW
N-Wing Mech	Fixed Tilt	Landscape (Horizontal)	10°	178.686°	0.9 ft	1x1	24	24	9.36 kW
N-Wing	Fixed Tilt	Landscape (Horizontal)	10°	179.288°	0.9 ft	1x1	52	44	17.2 kW
W N-Wing	Fixed Tilt	Landscape (Horizontal)	10°	179.288°	0.9 ft	1x1	50	50	19.5 kW
N-Wing Center	Fixed Tilt	Landscape (Horizontal)	10°	179.288°	0.9 ft	1x1	15	15	5.85 kW
East S Wing Addition	Fixed Tilt	Landscape (Horizontal)	10°	178.652°	0.9 ft	1x1	193	182	71.0 kW
R-Wing	Fixed Tilt	Landscape (Horizontal)	10°	178.652°	0.9 ft	1x1	98	95	37.1 kW



- Fircrest Campus Connection
- Bike Parking
- Detention Landscape Feature
- Employee Entrance
- Interior Courtyard Raingardens
- Pedestrian Walking Path
- Exterior Plaza with tables and benches
- Employee exterior Plaza (controlled access)
- Public Art Walk
- Bermed Campus Edge
- Pedestrian Campus Entry (Possible transit stop)



- Two story parking garage
- Solar Panel Shading over Parking Garage
- Alternative Fueling Station for Fleet Parking
- Controlled access
- Green Roof at three story Office building
- Third Floor Roof Deck
- Public Meeting Room
- Bike Parking
- Main Entry Plaza
- Native Plant Health Garden
- Alternative Fueling Station
- Connection to South Woods

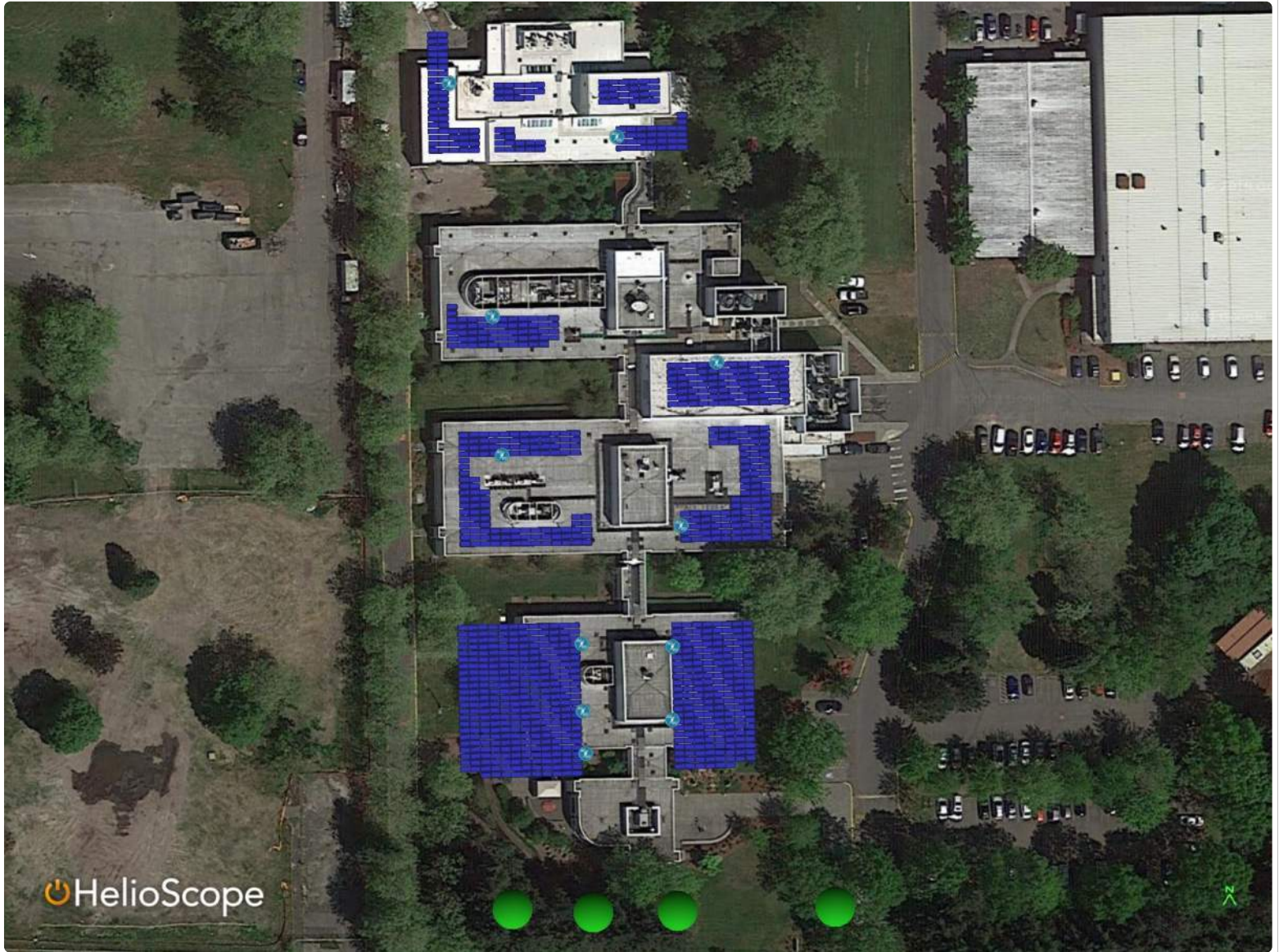


WASHINGTON STATE  
PUBLIC HEALTH  
LABORATORIES  
CONCEPT  
MASTER PLAN





Detailed Layout





# Maximum Future Solar PV WSPHL Shoreline PV, 1610 NE 150th St, Shoreline WA

Shading Heatmap



Shading by Field Segment

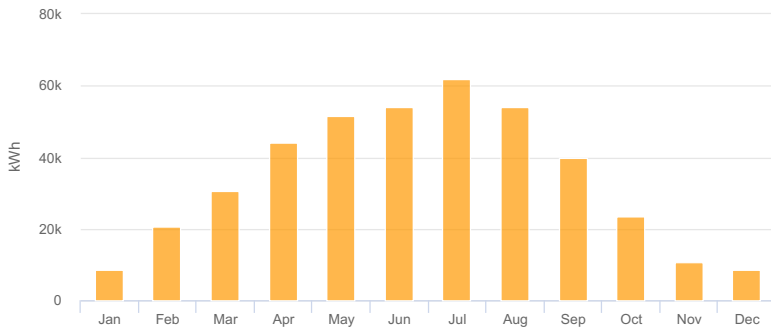
Description	Tilt	Azimuth	Modules	Nameplate	Shaded Irradiance	AC Energy	TOF <sup>2</sup>	Solar Access	Avg TSRF <sup>2</sup>
C Wing	10.0°	179.2°	116	45.2 kWp	1,281.8kWh/m <sup>2</sup>	49.6 MWh <sup>1</sup>	92.3%	96.7%	89.3%
PHL Addition	10.0°	178.7°	84	32.8 kWp	1,299.4kWh/m <sup>2</sup>	36.3 MWh <sup>1</sup>	92.3%	98.0%	90.5%
West South Wing Addition	10.0°	178.8°	286	111.5 kWp	1,295.4kWh/m <sup>2</sup>	123.1 MWh <sup>1</sup>	92.3%	97.7%	90.2%
E-Wing	10.0°	179.2°	57	22.2 kWp	1,277.1kWh/m <sup>2</sup>	24.3 MWh <sup>1</sup>	92.3%	96.3%	89.0%
N-Wing Mech	10.0°	178.7°	24	9.36 kWp	1,303.3kWh/m <sup>2</sup>	10.4 MWh <sup>1</sup>	92.3%	98.3%	90.8%
N-Wing	10.0°	179.3°	44	17.2 kWp	1,270.1kWh/m <sup>2</sup>	18.7 MWh <sup>1</sup>	92.3%	95.8%	88.5%
W N-Wing	10.0°	179.3°	50	19.5 kWp	1,294.9kWh/m <sup>2</sup>	21.5 MWh <sup>1</sup>	92.3%	97.7%	90.2%
N-Wing Center	10.0°	179.3°	15	5.85 kWp	1,278.6kWh/m <sup>2</sup>	6.40 MWh <sup>1</sup>	92.3%	96.5%	89.1%
East S Wing Addition	10.0°	178.7°	182	71.0 kWp	1,295.3kWh/m <sup>2</sup>	78.4 MWh <sup>1</sup>	92.3%	97.7%	90.2%
R-Wing	10.0°	178.7°	95	37.1 kWp	1,258.4kWh/m <sup>2</sup>	40.0 MWh <sup>1</sup>	92.3%	94.9%	87.7%
<b>Totals, weighted by kWp</b>			<b>953</b>	<b>371.7 kWp</b>	<b>1,288.0kWh/m<sup>2</sup></b>	<b>408.6 MWh</b>	<b>92.3%</b>	<b>97.2%</b>	<b>89.7%</b>

<sup>1</sup> approximate, varies based on inverter performance  
<sup>2</sup> based on location Optimal POA Irradiance of 1,435.5kWh/m<sup>2</sup> at 36.2° tilt and 188.2° azimuth

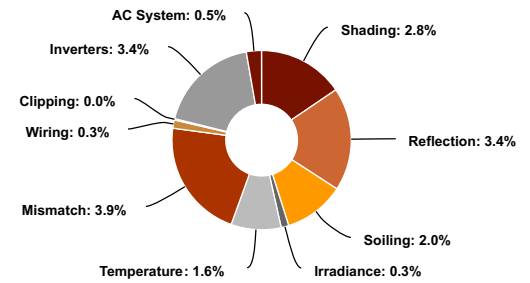
## Solar Access by Month

Description	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
C Wing	89%	92%	98%	98%	98%	98%	98%	98%	98%	95%	88%	85%
PHL Addition	90%	92%	99%	99%	99%	99%	100%	100%	100%	96%	88%	86%
West South Wing Addition	89%	92%	99%	99%	99%	99%	99%	99%	99%	96%	87%	84%
E-Wing	88%	91%	97%	98%	97%	97%	98%	98%	98%	95%	88%	84%
N-Wing Mech	91%	93%	99%	100%	99%	100%	100%	100%	100%	97%	90%	88%
N-Wing	89%	92%	96%	97%	97%	97%	97%	98%	98%	94%	88%	85%
W N-Wing	89%	92%	99%	99%	99%	99%	99%	99%	99%	95%	87%	84%
N-Wing Center	91%	93%	97%	97%	97%	98%	98%	98%	96%	95%	90%	88%
East S Wing Addition	89%	91%	99%	99%	99%	99%	99%	99%	99%	96%	87%	84%
R-Wing	87%	90%	96%	96%	96%	96%	96%	96%	97%	94%	85%	83%
<b>Solar Access, weighted by kWp</b>	<b>89.0%</b>	<b>91.7%</b>	<b>98.3%</b>	<b>98.6%</b>	<b>98.5%</b>	<b>98.6%</b>	<b>98.8%</b>	<b>98.9%</b>	<b>98.8%</b>	<b>95.5%</b>	<b>87.1%</b>	<b>84.2%</b>
<b>AC Power (kWh)</b>	<b>8,684.5</b>	<b>20,773.7</b>	<b>30,734.3</b>	<b>44,253.8</b>	<b>51,722.8</b>	<b>54,014.6</b>	<b>61,725.9</b>	<b>54,120.3</b>	<b>39,824.3</b>	<b>23,398.3</b>	<b>10,739.5</b>	<b>8,615.4</b>

## Monthly Production



## Sources of System Loss



## Southwestern Angle



## Southeastern Angle







800.669.6223

www.mckinstry.com

PROJECT WSPHL ROOFTOP SOLAR FEASIBILITY

TITLE STRUCTURAL ANALYSIS OF ROOF FRAMING

BY JWG, MMR

SCALE

JOB # 203104

DATE

REF.DWG

SHEET



SEE THE ATTACHED SHEETS FOR MORE INFORMATION.



800.669.6223

www.mckinstry.com

PROJECT WSPHL ROOFTOP SOLAR FEASIBILITY

TITLE STRUCTURAL ANALYSIS OF ROOF FRAMING

BY JWG, MMR

SCALE

JOB # 203104

DATE

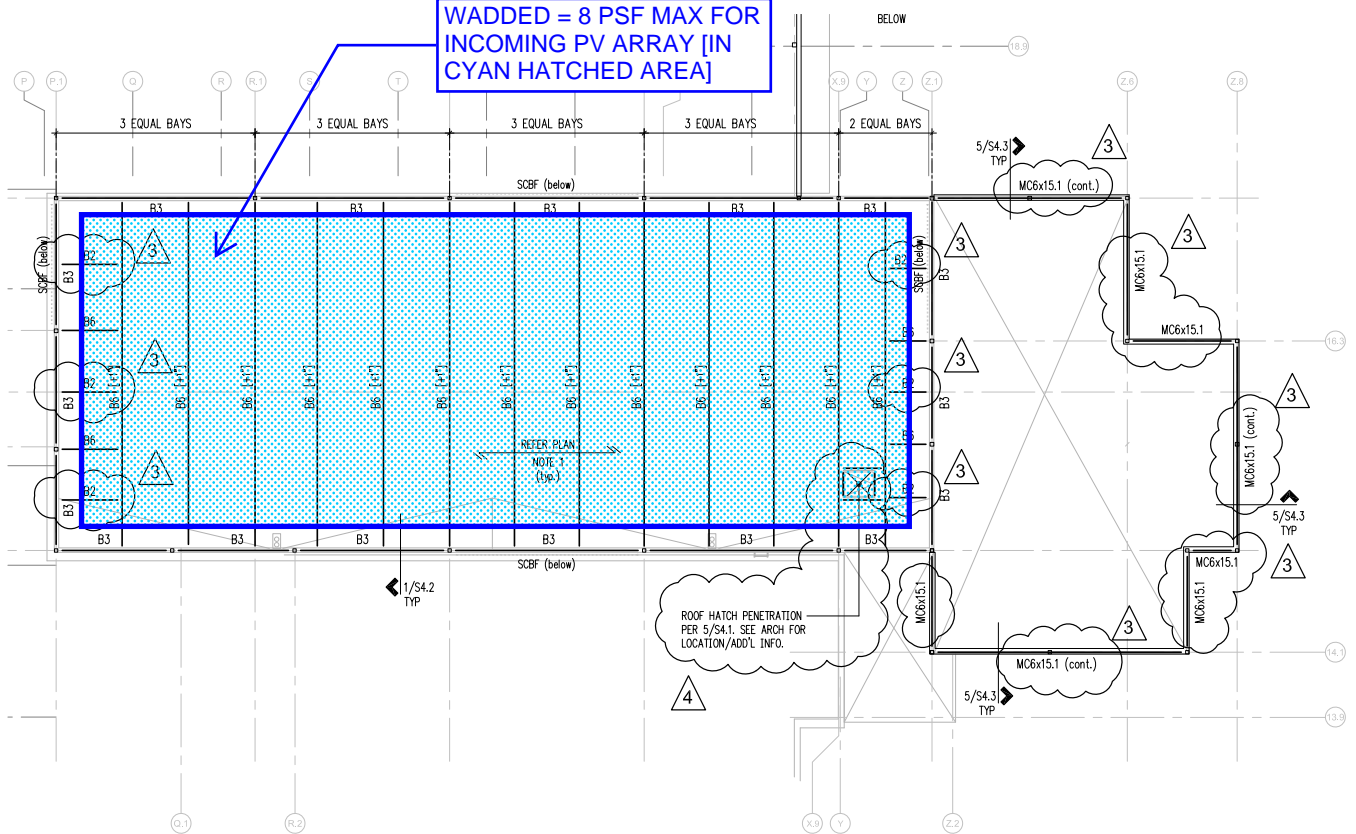
REF.DWG

SHEET

PARTIAL ROOF PLAN -- B WING BLDG

STRUCT INFO FROM MICHAEL WRIGHT S1-4

WADDED = 8 PSF MAX FOR  
INCOMING PV ARRAY [IN  
CYAN HATCHED AREA]





800.669.6223

www.mckinstry.com

PROJECT WSPHL ROOFTOP SOLAR FEASIBILITY

TITLE STRUCTURAL ANALYSIS OF ROOF FRAMING

BY JWG, MMR

SCALE

JOB # 203104

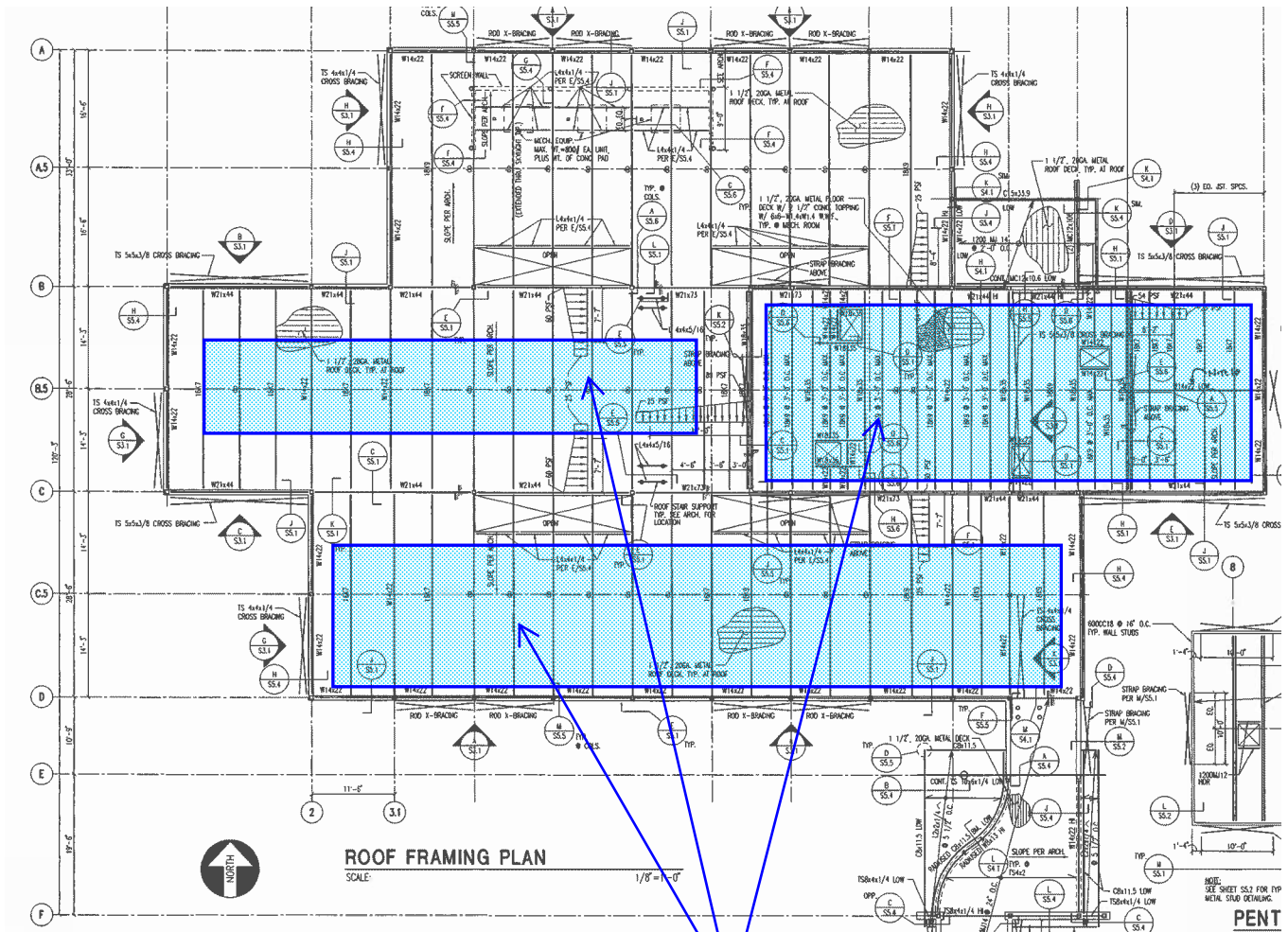
DATE

REF.DWG

SHEET

PARTIAL ROOF PLAN -- N WING BLDG

STRUCT INFO FROM NBBJ/SWMB DWG: S-2.2



WADDLED = 8 PSF MAX FOR INCOMING PV ARRAY [IN CYAN HATCHED AREA]



800.669.6223

www.mckinstry.com

PROJECT WSPHL ROOFTOP SOLAR FEASIBILITY

TITLE STRUCTURAL ANALYSIS OF ROOF FRAMING

BY JWG, MMR

SCALE

JOB # 203104

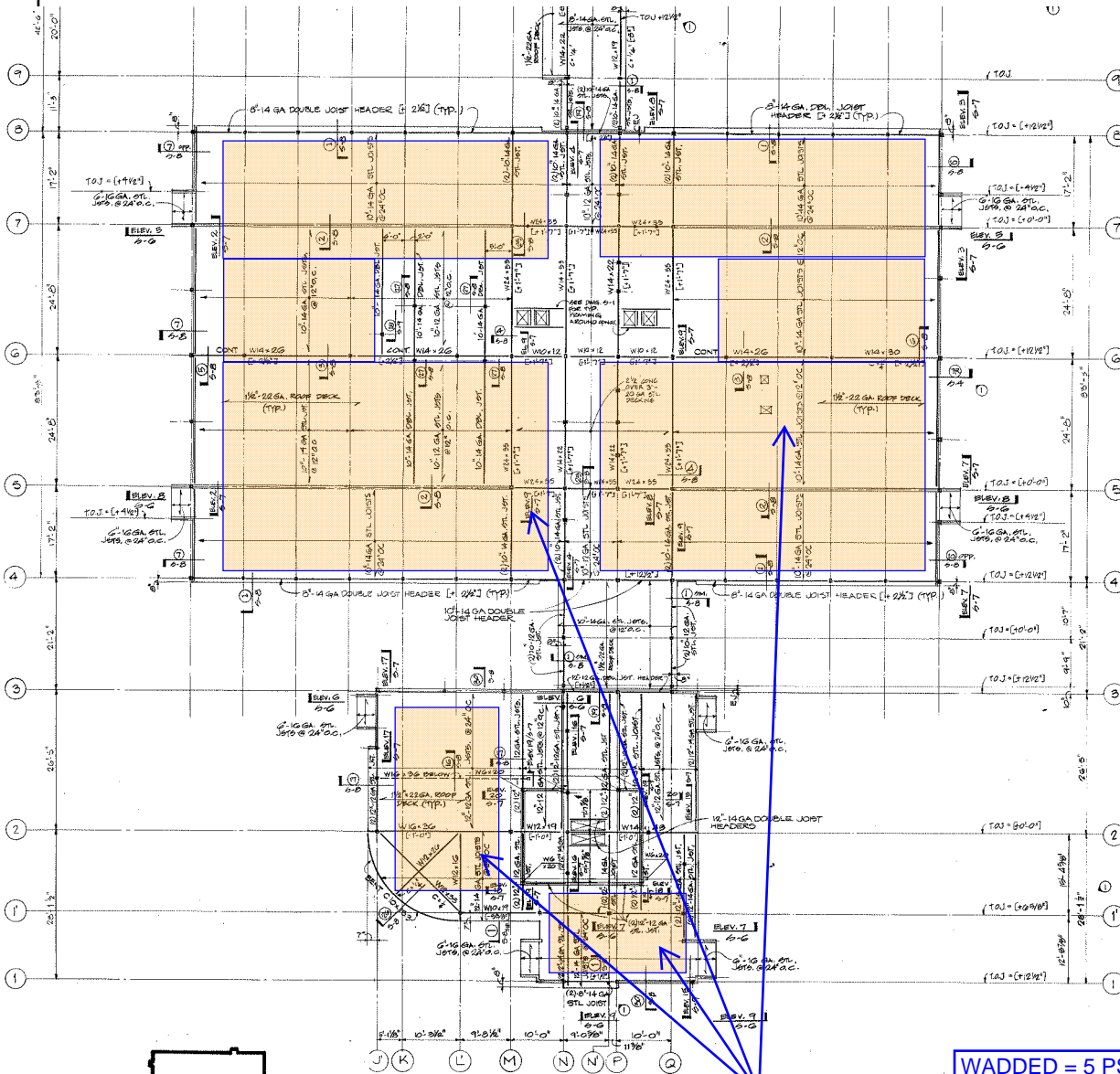
DATE

REF.DWG

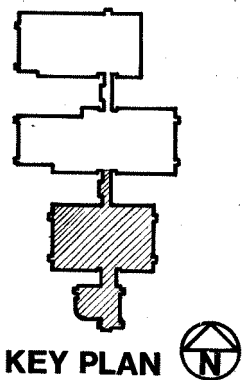
SHEET

PARTIAL ROOF PLAN -- A, Q, & S WING BLDG

STRUCT INFO FROM NBBJ/SWMB DWG: S-4.0



WADDEN = 5 PSF MAX FOR INCOMING PV ARRAY [IN ORANGE HATCHED AREA]







PROJECT WSPHL ROOFTOP SOLAR FEASIBILITY

TITLE STRUCTURAL ANALYSIS OF ROOF FRAMING

BY JWG, MMR

SCALE

JOB # 203104

800.669.6223

www.mckinstry.com

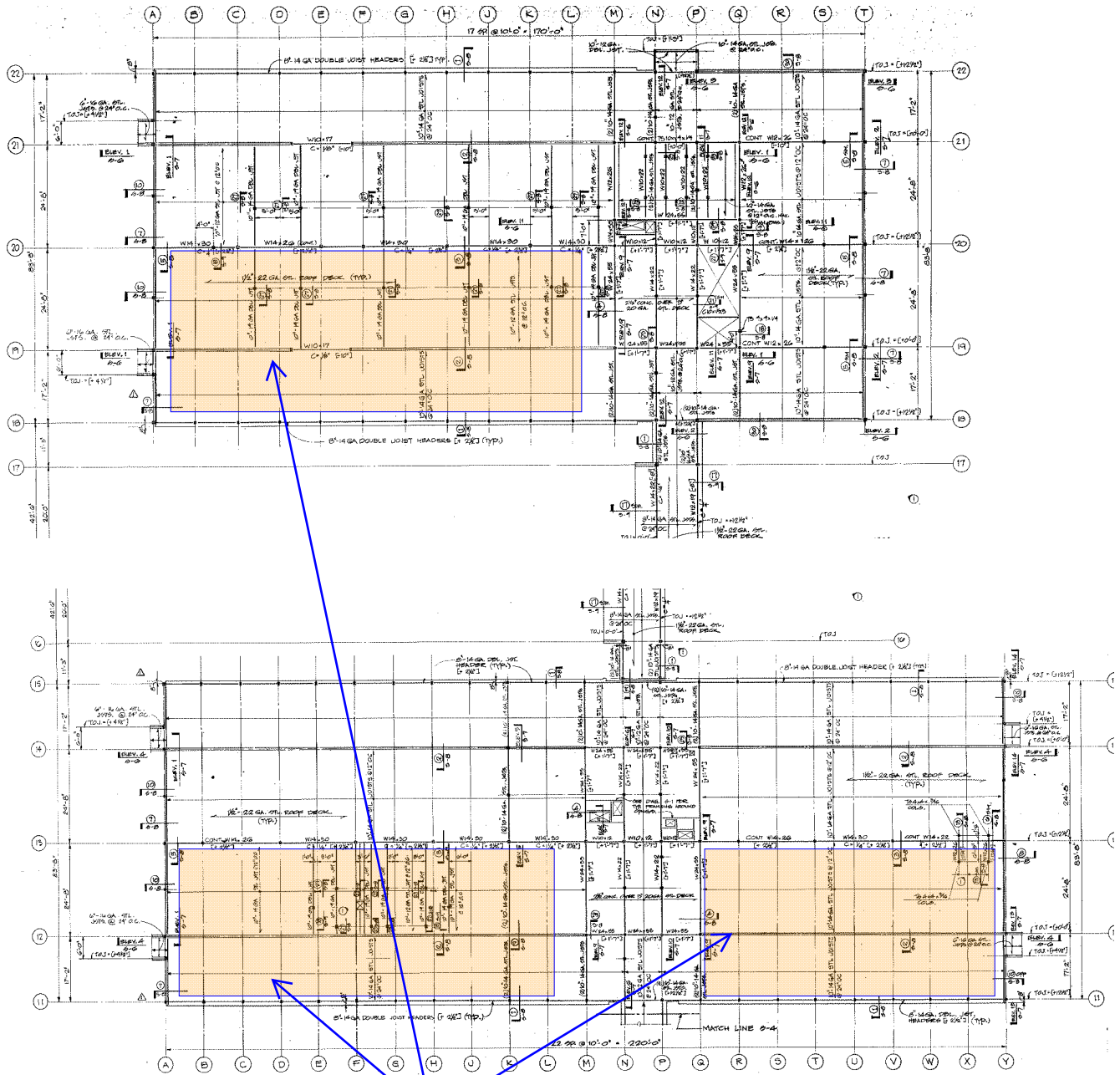
DATE

REF.DWG

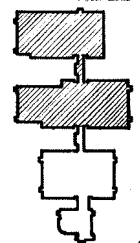
SHEET

PARTIAL ROOF PLAN -- C, E, R & M WING BLDG

STRUCT INFO FROM NBBJ/SWMB DWG: S-5.0



WADDLED = 5 PSF MAX FOR INCOMING PV ARRAY [IN ORANGE HATCHED AREA]

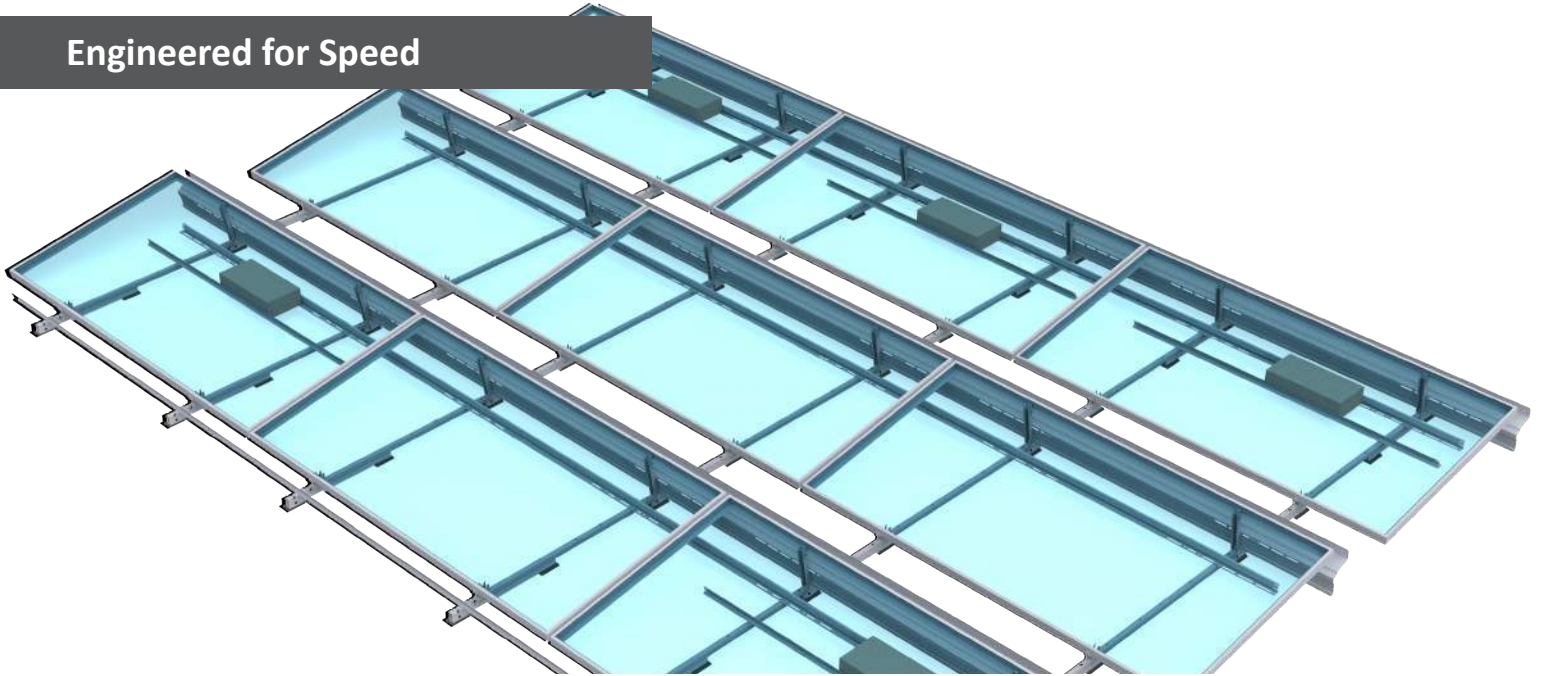


KEY PLAN

# clawFR®

## 10 Degree Flat Roof Mounting System

Engineered for Speed



### Flat Roof Racking Specialists

PanelClaw® is the only major racking provider in North America focused exclusively on flat roof racking. Our 11+ years of focus on flat roof result in a competitive advantage for our partners. No one knows more about flat roof racking than PanelClaw; no one delivers a more thoroughly tested and reliable platform; and no one matches our level of service. Our mission is to accelerate the deployment of flat roof PV and the best way to do this is to continue to lower its life-cycle cost while maintaining the highest levels of reliability. The clawFR platform is the result of this experience and commitment to flat roof.

More than 4.5 million modules have been installed with our products on flat roofs around the world representing more than 1.3GW of deployed racking. With 99.999% reliability, our track record in flat roof remains unmatched.





# clawFR 10 Degree Flat Roof Mounting System



## SYSTEM COMPONENTS



### Accelerated Construction

EPC feedback-driven features for mechanical build and wire management.

- Single M6 bolt hardware kit
- No tool module attachment method
- 90 degree single-module tilt-up feature
- Flexible order of operations installation process allows for optimized coordination of building trades on the roof
- Integrated roof protection pads
- 10" plus access ways between modules
- Only 1 ground lug required per array

### Intelligent System Design

Module agnostic components allow for flexibility in module spec changes. Lead times don't change each time you have to switch modules on a project. The modular design of clawFR also allows for designers to maximize the number of modules that will fit on a give roof. clawFR is the most flexible rail based design ever, allowing for up to 3 degrees of wavy roof undulation in two directions.

### Safety and Reliability

clawFR has been subjected to a battery of reliability and performance tests that go well beyond US code requirements. Our wind tunnel test program spans more than 10 years and our in-house SolarPTL<sup>®</sup> certified satellite test laboratory along with third-party peer reviews are the most robust in the industry.

### O&M Features

Many of the construction features were designed to help O&M providers, but some features were designed specifically for O&M.

- Recessed Deflector allows for easy access to module connections and optimizer equipment
- ZAM<sup>®</sup> coating with 5x better corrosion resistance than G90
- If mechanical roof attachments are needed, they are always placed in the row module gaps for easy O&M inspection

### Applications

< 5° slope flat roofs (up to 7° possible w/engineering review)

### Roof Type Compatibility

Membrane, tar and gravel, ballasted, BUR, concrete, asphalt (not compatible with metal roofs)

### Row-to-Row Spacing Options

11", 14" or 17"

### Platform Load

~ 2.0 - 12 psf

### Module Orientation

Landscape

### Module Attachment

Airy point flange mounted

### Basic Wind Speed

Up to 190 mph  
(>190 mph by approval)

### Wind Exposure Category

B and C (D requires engineering review)

### USGS Seismic Categories

A, B, C, D (others require engineering review)

### Building Height

No building height limitations

### FM Global

Reports and methodologies meet the requirements for FM Global approval

### Warranty and Certifications

25 year warranty

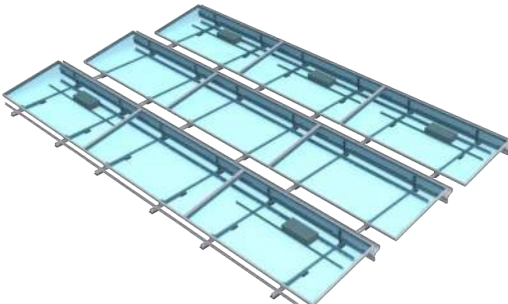
ANSI/UL 2703-2015 Listed  
System Fire Rating  
Class A with Type 1 and Type 2 modules





**PANELCLAW®**

## **clawFR 10 Degree Design Specifications, Rules and Guidelines**



© 2019 PanelClaw, Inc. All Rights Reserved.

6000012\_Rev03 – clawFR 10D Array Design Specifications



## Specifications: clawFR 10 Degree

<b>Roof Loading</b>	2 psf to 12 psf (9.75 kg/m <sup>2</sup> to 58.6 kg/m <sup>2</sup> ) including racking, modules and ballast
<b>Roof Slope</b>	5° max slope (1/12 pitch) in all directions Up to 7° (1.5 / 12 pitch) possible with engineering review
<b>Wavy Roofs</b>	clawFR can span up to to 3° in undulation in any two directions This system is not designed to go over roof crickets
<b>Wind Speed</b>	150 mph (193 km/h) – 3 second gust per ASCE 7-05 (190 mph per ASCE 7-10) Higher wind speeds require PanelClaw engineering review
<b>Exposures</b>	ASCE wind exposure categories B, C and D
<b>Seismic Design Category</b>	USGS seismic design category A, B, C, D Seismic zones beyond D can also be evaluated upon request
<b>Maximum Building Height</b>	No Limitations
<b>Roof Material</b>	EPDM, TPO, PVC, Mod Bitumen, Asphalt, Coal Tar, Foam, Concrete, and Gravel Loose gravel and/or river rock must be cleared out from under cFR bases
<b>UL/ANSI 2703-2015 Grounding &amp; Bonding</b>	UL LISTED – Will accommodate max module fuse rating of 30 amps. Typical module fuse rating is ~15 amps
<b>UL/ANSI 2703-2015 Mechanical Load</b>	UL LISTED – Racking components meet electrical and mechanical requirements of standard System load rating is always module dependent (module allowable loads are typically the limiting factor)
<b>UL/ANSI 2703-2015 Fire Listing</b>	System Fire Rating Class A with Type 1 and Type 2 modules No additional components required for compliance for Type 1 or Type 2 modules
<b>Ballast Block Size</b>	Nominal 2”x 8”x 16”, 3”x 8”x 16”, or 4”x8”x16” blocks Actual dimensions: 1 5/8” or 2 5/8” or 3 5/8”x 7 5/8”x 15 5/8” with +/- 1/8” tolerance



## Row Spacing and Roof Coverage Ratios: clawFR 10 Degree

Dimensions shown below vary by module except the Row-Row Gap, which is fixed.

Example clawFR 10 Degree dimensions shown below are based on a module width of 990 mm (38.98 in).

Dynamic AutoCAD building blocks are available for any framed module between 990 mm and 1070 mm wide.

Tilt Angle [degrees]	Roof Coverage Ratio	Shading Ratio [H:V]	Row-Row Gap	N-S Repeat	Repeat E-W	Configuration Name
10	78%	1.7	11 in [288 mm]	50 in [312 mm]	Module width + 0.75 in [19 mm]	clawFR 10Deg-29 cm (11 in)
10	75%	2.0	14 in [354 mm]	52 in [378 mm]	Module width + 0.75 in [19 mm]	clawFR 10Deg-35 cm (14 in)
10	70%	2.5	17 in [443 mm]	56 in [466 mm]	Module width + 0.75 in [19 mm]	clawFR 10Deg-44 cm (17 in)

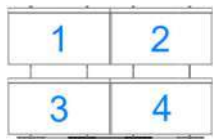


## Array Layout Rules: clawFR 10 Degree

These array layout guidelines were developed to maximize the performance of clawFR over its 25+ year lifespan.

Nonconforming arrays may require layout modifications, may not be ballast-able, or may require mechanical attachments.

- ▶ **Minimum setback from roof edges - 4 ft (1.2 m)**
- ▶ **Maximum array row length<sup>1</sup>: 80 ft (24.4 m)**
- ▶ **Maximum array column length<sup>1</sup>: 80 ft (24.4 m)**
- ▶ **Minimum clearance from obstructions<sup>2</sup>: 6 in (153 mm)**
- ▶ **Minimum module-to-module clearance between sub arrays<sup>2</sup>:**
  - ▶ **Along rows: 8 in (203 mm)**
  - ▶ **Along columns: 18 in (460 mm)**
- ▶ **Avoid going over existing pipes, lighting rods/cables or vents on the roof**
- ▶ **Minimum array size **2 x 2 modules****



<sup>1</sup> Adjacent subarrays can be grouped with a minimum module-to-module clearances as long as those groups of subarrays do not exceed 150' x 150' IBC fire code requirements

<sup>2</sup> Unless otherwise specified in DMPV analysis for unattached designs



## Layout Recommendations for Reducing Weight and/or Mechanical Attachment Counts

---

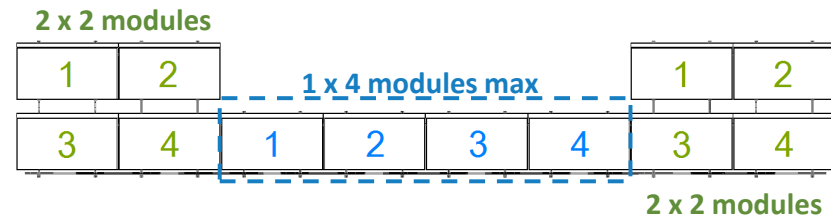
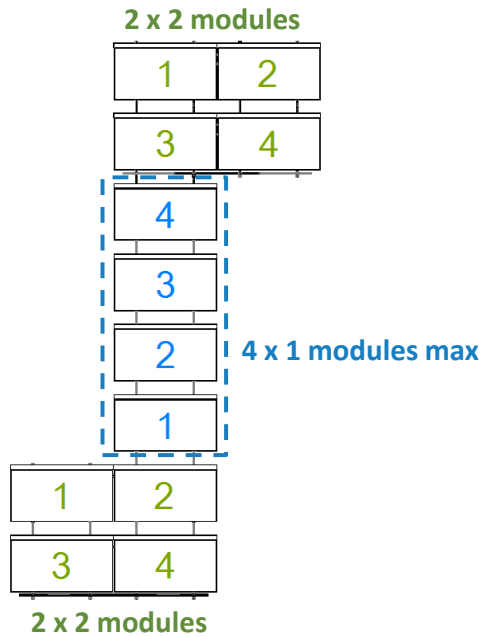


## Minimize the Use of Long “Bridges”

Keep the single module wide “bridges” to no more than **1 x 4 modules** or **4 x 1 modules**.

“Bridges” more than 4 single modules long will require additional ballast and/or mechanical attachments.

If “bridge ends” that are at least **2 x 2 modules** on both ends are not present it may result in additional ballast and/or mechanical attachments.



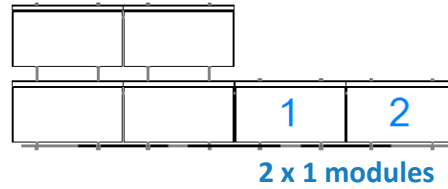
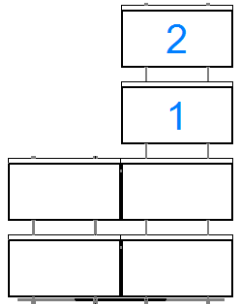


## Limit “Peninsulas” to No More Than Two Modules Long

Keep “peninsulas” to no more than **1 x 2 modules** or **2 x 1 modules**.

“Peninsulas” that are more than 2 module long will require additional ballast and/or mechanical attachments.

1 x 2 modules







For Questions or Feedback Contact [sales@panelclaw.com](mailto:sales@panelclaw.com) or call us at (978) 688-4900

---

# Energy Savings Estimate

---

## 3.1 Savings Overview

### 1. *Calculation Methodology:*

The calculation method for the FIM 10.01-PHL Future Solar PV was based on a concept layout, using HelioScope, an on-line Solar PV calculation tool. The panel layout was based on the April 2010 Concept Master Plan, to calculate the current maximum probable performance of a full Solar PV array serving the Shoreline Labs. Depending on when the array is installed and which roofs are available, the final production output will be determined at that time.

## 3.2 Utility Rates

### 1. *Utility Rate:*

For the purpose of calculating energy cost savings, the utility rate used was estimated based on the future Seattle City Light MDH Electric Rate Schedule that is anticipated to be implemented at the end of 2019. Electric Service is currently fed from the adjacent Fircrest Campus and will be separated in late 2019. Once the new service is implemented, the new utility rate will be confirmed at that time.





# Table 3.1 - Energy Savings Summary

Project: WA State Department of Health - Public Health L  
 Scenario: 2019 PV Solar ESP  
 Date: 5/6/2019

Facility Improvement Measures	Facility	Electricity		Total	% kWh Savings of Bills	% Therm Savings of Bills
		kWh	kWh (\$)	(\$)		
10.01-PHL Future Solar PV	WA Public Health Lab	408,607	\$37,992	\$37,992	14%	0%
<b>Totals</b>		<b>408,607</b>	<b>\$37,992</b>	<b>\$37,992</b>		

\* The savings shown in this table are estimated and not guaranteed.

Confidential and Proprietary



## Table 3.3 - Base Utility Rates

Project WA State Department of Health - Public Health Labs  
Scenario 2019 PV Solar ESP  
Date 5/6/2019

Building_Name	Utility_Provider	Rate_Name	Utility_Type	Dollars_Per_Unit	Units	Published_Date_Effective
WA Public Health Lab	Seattle City Light	Future MDH kWh	Electricity	\$0.092979	kWh	1/1/2019

# Table 4.1 - ROM Max Budget Summary



Project Scenario: WA State Department of Health - Public Health Labs  
 Date: 2019 PV Solar ESP  
 Date: 5/28/2019

Database ID	FIM Name	Mechanical	Electrical	EMCS	Lighting	General	Equipment	Other	Total
41013	10.01-PHL Future Solar PV	\$ -	\$ 400,186	\$ -	\$ -	\$ 85,715	\$ 255,054	\$ -	\$ 740,955
<b>Total Base FIM Cost</b>		\$ -	\$ 400,186	\$ -	\$ -	\$ 85,715	\$ 255,054	\$ -	\$ 740,955
<b>A. Construction Budget</b>									
	Construction Bonds	%	1.10%	Percent of Subtotal (FIM Cost and A)					\$ 8,151
<b>Total Construction Cost</b>									\$ 749,106
<b>B. Professional Services Budget</b>									
	Design	Lump	\$30,000						\$ 30,000
	Const. Management & Proj. Admin	%	6.00%	Percent of Total Base FIM Cost					\$ 44,457
<b>Total Professional Services Cost</b>									\$ 74,457
<b>C. Other Project Budgets</b>									
	Project Contingency	%	5.00%	Percent of Total Base FIM Cost					\$ 37,048
	Performance Assurance (M&V)	Lump	\$10,000						\$ 10,000
<b>Total Other Project Cost</b>									\$ 47,048
<b>D. Overhead Budget &amp; Fees</b>									
	Overhead	%	10.00%	Percent of Total Construction Cost					\$ 74,911
	Profit (Fee)	%	8.00%	Percent of Total Construction Cost					\$ 59,928
<b>Total Overhead Cost &amp; Fee</b>									\$ 134,839
<b>E. Total Estimated Construction &amp; ESCO Services (A + B + C + D)</b>									\$ 1,005,450
<b>F. Estimated Non-Guaranteed Budget</b>									
	Sales Tax	%	10.10%	Percent of Section E					\$ 101,550
	Interagency Fee	Lump	\$51,600						\$ 51,600
	Interagency Fee for Years 2+ M&V	Lump	\$4,000	\$2000 per year WA DES Fee Beyond Year 1					\$ 4,000
<b>Total Non-Guaranteed Cost</b>									\$ 157,150
<b>G. Total Estimated Maximum Project Budget (E + F)</b>									\$ 1,162,600





# Table 4.2 - Facility Improvement Measure (FIM) Summary - Rough Order of Magnitude (ROM)

Project: WA State Department of Health - Public Health Labs  
 Scenario: 2019 PV Solar ESP  
 Date: May 28, 2019

FIM Name	FIM Description	Facility	Budget *		Annual Utility Savings		Simple Payback (SPB)		Potential Incentives ***	Non-Guaranteed Net Customer Cost (with Incentives)		Non-Guaranteed Simple Payback (SPB) (with Incentives)	
			Min	Max	Min	Max	Min	Max		Min	Max	Min	Max
10.01-PHL Future Solar PV	This measure looks at the future possible extent of Solar PV on the roof of the WA Public Health Labs in Shoreline, WA. The layout takes into consideration future wing expansions and looks to answer what is the maximum potential solar PV array possible at the Labs. The basis of design is a 370 kW DC system with fixed modules at a 10 degree tilt, pointed south (~180 degree azimuth). Modules are based on Jinko Solar JKM 390M-72-V (390 W modules) and inverters are based on Chint CPS SCA 36KTL-DO (36 kW inverters). Module racking is based on Panel Claw clawRF 10 Degree racks with 11" row gaps. Final pricing, performance and selection of the PV Solar system will depend on staging with the current versus future roof layouts at the Labs.	WA Public Health Lab	\$960,400	\$1,162,600	\$32,290	\$41,790	23.0	36.0	\$31,800	\$928,600	\$1,130,800	22.2	35.0
			<b>\$960,400</b>	<b>\$1,162,600</b>	<b>\$32,290</b>	<b>\$41,790</b>	<b>23.0</b>	<b>36.0</b>	<b>\$31,800</b>	<b>\$928,600</b>	<b>\$1,130,800</b>	<b>22.2</b>	<b>35.0</b>

\* Since design cost, audit cost, etc. are distributed among the FIMs, the total project cost will not go up or down by exactly the amounts shown here if a FIM or FIMs are dropped.  
 \*\* For non recurring operational savings, the values are averaged over the 30 year length of this analysis.  
 \*\*\* Incentives are contingent on final approval and are not guaranteed. Funds are shown for reference only.

Confidential and Proprietary





<b>Non-BaseLoad</b>	<b>Load Factor to Use</b>		
NWPP	Select eGRID Subregion	1.53381	lbs CO <sub>2</sub> e/kWh (eGRID Subregion Electricity Emissions Factor)

**Amount Each Utility Type Will Be Reduced Per Year**

<b>Electricity</b>			
408,607	kWh	=	626,725 lbs CO <sub>2</sub> 284.3 Metric Tonnes CO <sub>2</sub>
<b>Natural Gas</b>			
0	Therms	=	0 lbs CO <sub>2</sub> 0.0 Metric Tonnes CO <sub>2</sub>
<b>Steam</b>			
0	Mlbs	=	0 lbs CO <sub>2</sub> 0.0 Metric Tonnes CO <sub>2</sub>
<b>Fuel Oil</b>			
0	Gallons	=	0 lbs CO <sub>2</sub> 0.0 Metric Tonnes CO <sub>2</sub>
<b>Propane</b>			
0	Gallons	=	0 lbs CO <sub>2</sub> 0.0 Metric Tonnes CO <sub>2</sub>
<b>Total Reduction</b>		=	626,725 lbs CO <sub>2</sub> 284.3 Metric Tonnes CO <sub>2</sub>

**This Annual Emissions Reduction Is Equivalent To The Following:**

55	Number of Vehicles Removed From Roads (Avg Size); or
1,062,246	Number of Miles Not Driven <u>Per Year</u> (Avg Size); or
7,834	Number of 75 Watt Light bulbs Not Energized; or
27	Number of Avg Sized Houses Removed From Power Grid; or
78	Acres of Trees Planted; or
292,862	Pounds of Coal Not Burned <u>Per Year</u>

**Other Emissions Factors**

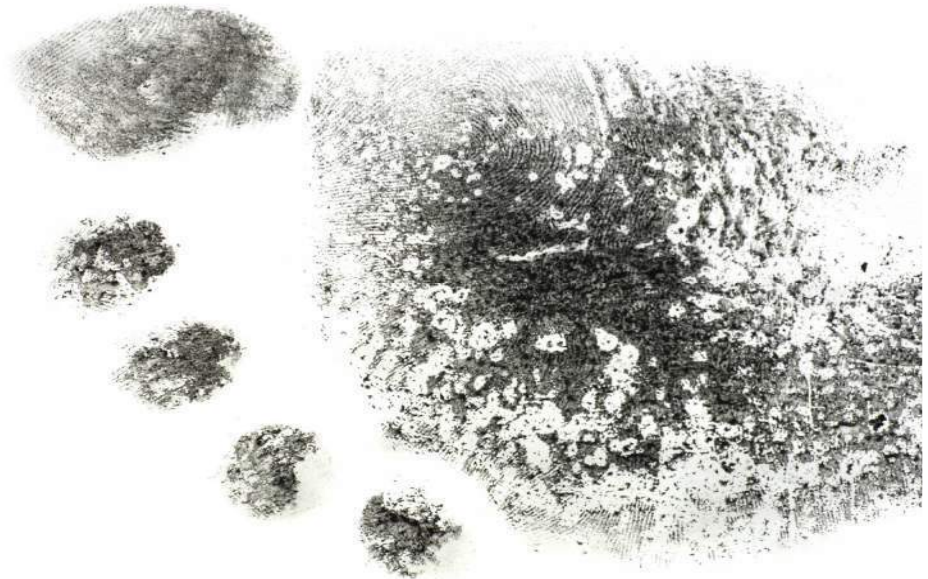
Natural Gas: 11.707 lbs CO<sub>2</sub> / Therm  
 Steam: 195.3636 lbs CO<sub>2</sub> / Mlbs (Seattle Steam)  
 Fuel Oil: 22.384 lbs CO<sub>2</sub> / gal  
 Propane: 12.5 lbs CO<sub>2</sub> / gal  
 Conversion: 2,204.623 lbs CO<sub>2</sub> / Metric Tonnes CO<sub>2</sub>

**Equivalents Conversions**

Car Emissions: 11,470 lbs CO<sub>2</sub> / car / yr  
 Tree Carbon Sequestration: 8,066 lbs CO<sub>2</sub> / acre / yr  
 Vehicle Mileage Emissions: 0.59 lbs CO<sub>2</sub> / mile  
 75 W Light Bulb Emissions: 80 lbs CO<sub>2</sub> / Light Bulb / yr  
 Tree Carbon Sequestration: 8,066 lbs CO<sub>2</sub> / acre / yr  
 Coal Emissions: 2.14 lbs CO<sub>2</sub> / pound Coal  
 Houses Removed: 22,880 lbs CO<sub>2</sub> / house

**Sources:**

- \* Energy Information Agency (EIA)
- \* Environmental Protection Agency (EPA)
- \* ENERGY STAR
- \* eGRID 2014





# Utility Rates

The table below shows the rates associated with your current utility rate schedule (MDH). Your estimated electric bills after solar are shown on the following page.

Energy Charges		Demand Charges	
Type	MDH	Type	MDH
W Flat Rate	\$0.08445	W NC	\$4.16
S Flat Rate	\$0.08445	S NC	\$4.16

## Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

### Rate Schedule: SCL - MDH

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges		
			Energy	Demand	Total
Bill Ranges & Seasons	Total	NC / Max			
1/1/2017 - 2/1/2017 W	222,566	560	\$20,694	\$2,566	\$23,259
2/1/2017 - 3/1/2017 W	209,707	576	\$19,498	\$2,639	\$22,137
3/1/2017 - 4/1/2017 W	243,659	592	\$22,655	\$2,712	\$25,367
4/1/2017 - 5/1/2017 S	208,144	608	\$19,353	\$2,786	\$22,138
5/1/2017 - 6/1/2017 S	249,473	623	\$23,195	\$2,854	\$26,050
6/1/2017 - 7/1/2017 S	271,928	639	\$25,283	\$2,928	\$28,211
7/1/2017 - 8/1/2017 S	260,717	655	\$24,241	\$3,001	\$27,242
8/1/2017 - 9/1/2017 S	287,625	671	\$26,743	\$3,074	\$29,817
9/1/2017 - 10/1/2017 S	261,752	610	\$24,337	\$2,795	\$27,132
10/1/2017 - 11/1/2017 W	229,304	590	\$21,320	\$2,703	\$24,023
11/1/2017 - 12/1/2017 W	220,171	570	\$20,471	\$2,612	\$23,083
12/1/2017 - 1/1/2018 W	245,479	550	\$22,824	\$2,520	\$25,344
Totals:	2,910,525	-	\$270,613	\$33,191	\$303,803

# New Electric Bill

## Rate Schedule: SCL - MDH

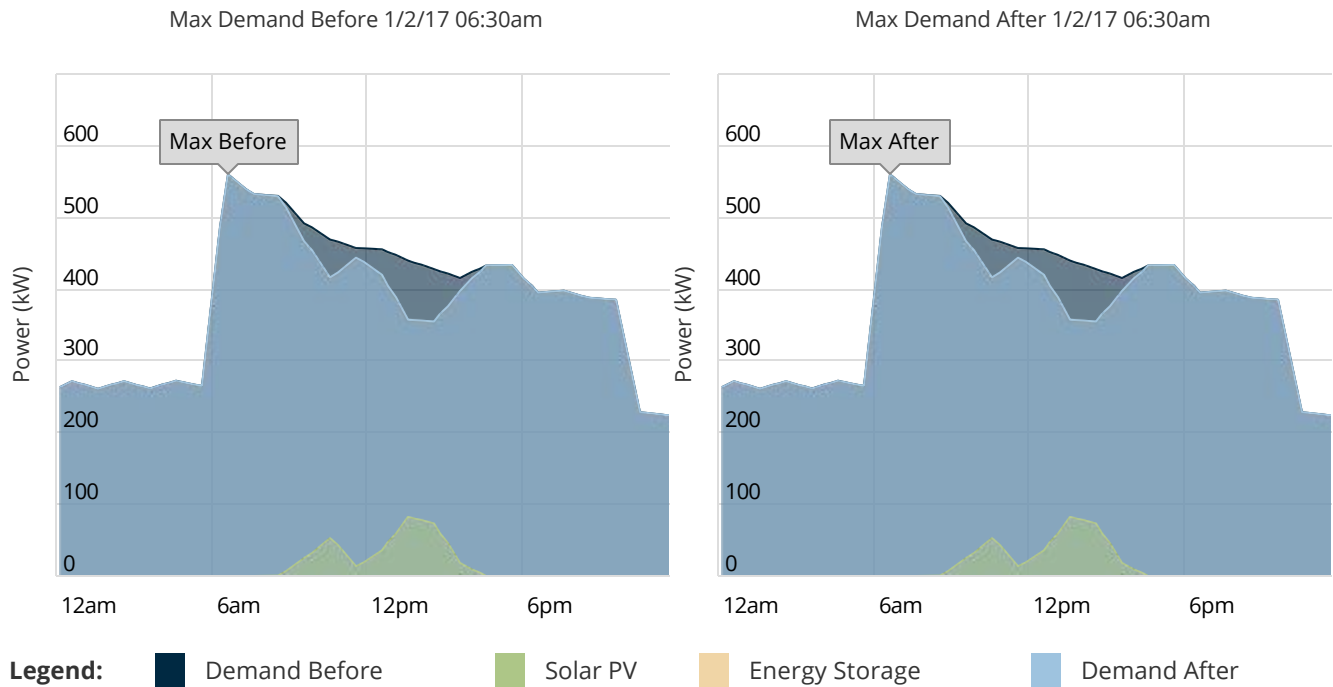
Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges		
Bill Ranges & Seasons	Total	NC / Max	Energy	Demand	Total
1/1/2017 - 2/1/2017 W	213,882	560	\$19,886	\$2,566	\$22,452
2/1/2017 - 3/1/2017 W	188,933	576	\$17,566	\$2,639	\$20,206
3/1/2017 - 4/1/2017 W	212,925	592	\$19,797	\$2,712	\$22,510
4/1/2017 - 5/1/2017 S	163,890	608	\$15,238	\$2,786	\$18,024
5/1/2017 - 6/1/2017 S	197,750	623	\$18,386	\$2,854	\$21,241
6/1/2017 - 7/1/2017 S	217,913	639	\$20,261	\$2,928	\$23,189
7/1/2017 - 8/1/2017 S	198,992	655	\$18,502	\$3,001	\$21,503
8/1/2017 - 9/1/2017 S	233,505	671	\$21,711	\$3,074	\$24,785
9/1/2017 - 10/1/2017 S	221,928	610	\$20,634	\$2,795	\$23,429
10/1/2017 - 11/1/2017 W	205,905	590	\$19,144	\$2,703	\$21,848
11/1/2017 - 12/1/2017 W	209,432	570	\$19,472	\$2,612	\$22,084
12/1/2017 - 1/1/2018 W	236,864	550	\$22,023	\$2,520	\$24,543
Totals:	2,501,919	-	\$232,622	\$33,191	\$265,812

**Annual Electricity Savings: \$37,991**

# Demand Profiles

Date Range: 1/1/2017 - 2/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



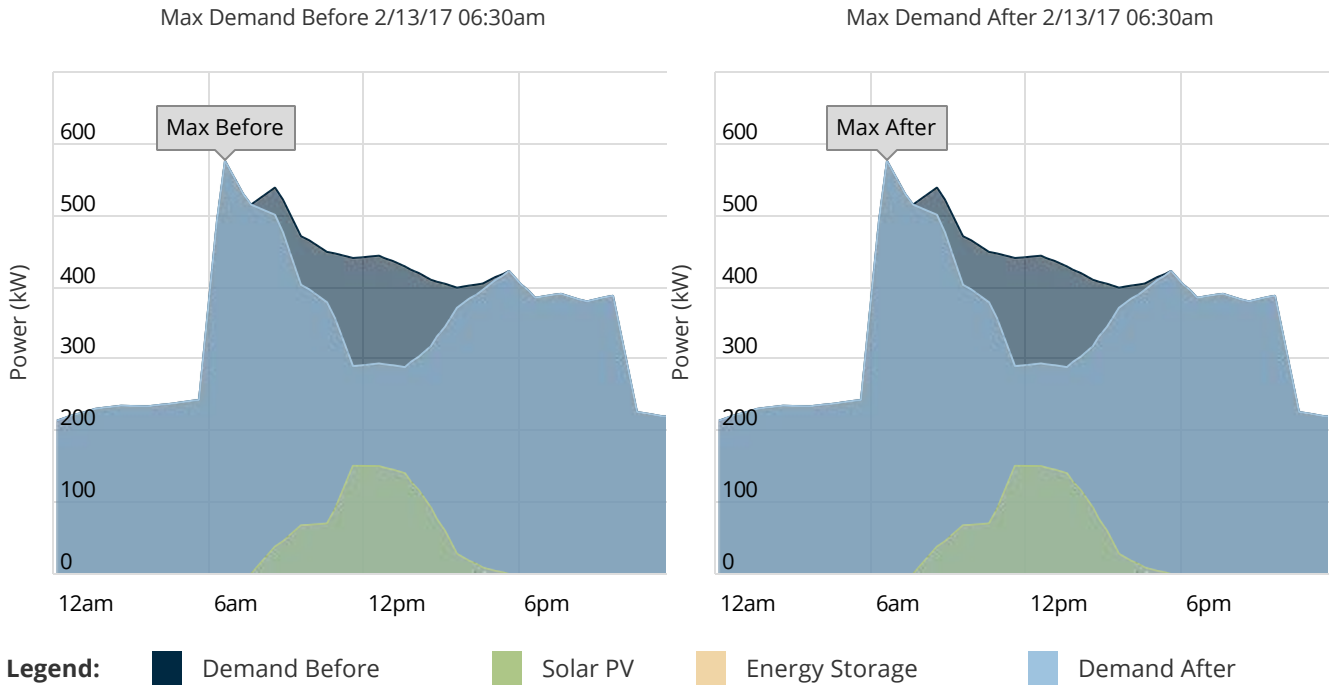
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 2/1/2017 - 3/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



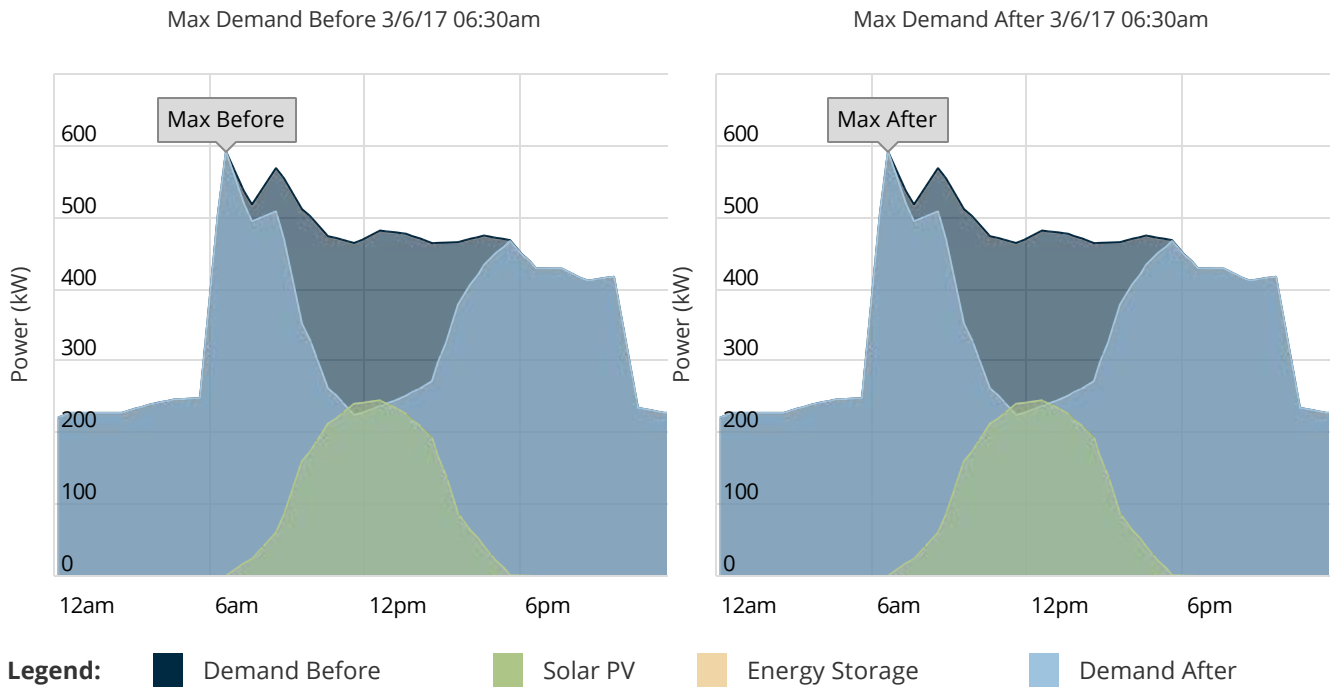
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 3/1/2017 - 4/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

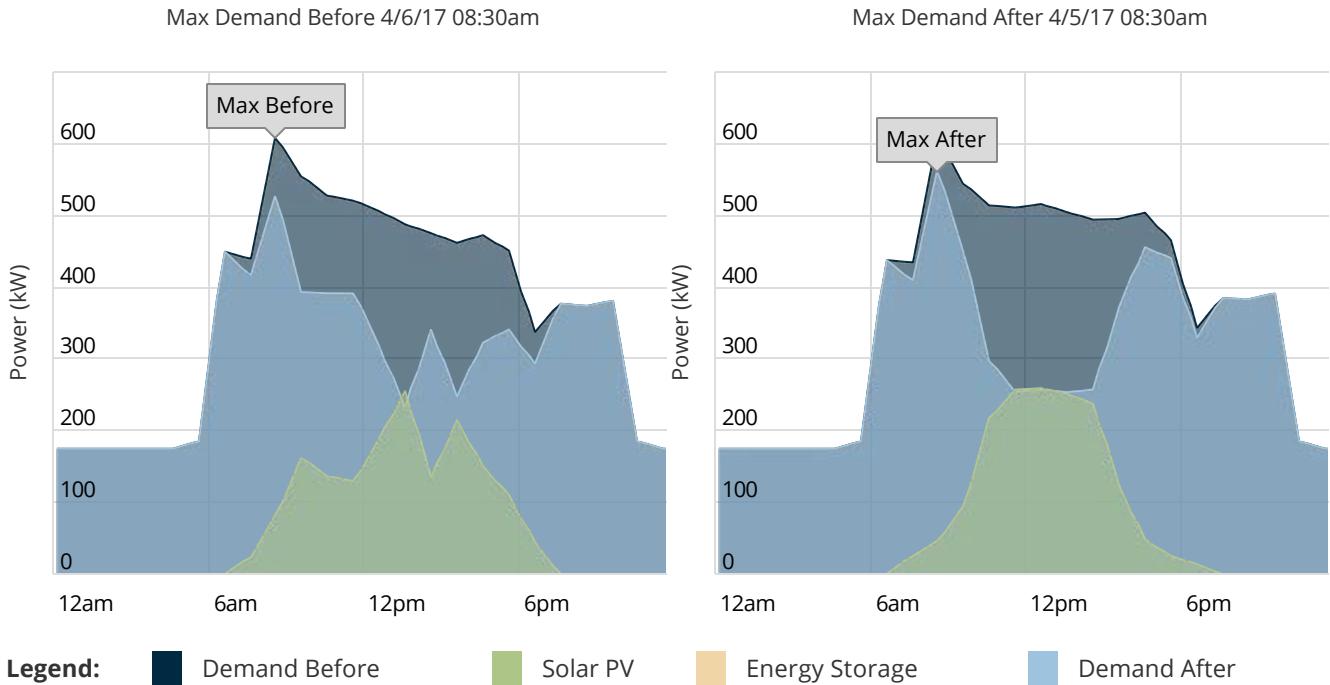
Charts Not Applicable



# Demand Profiles

Date Range: 4/1/2017 - 5/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



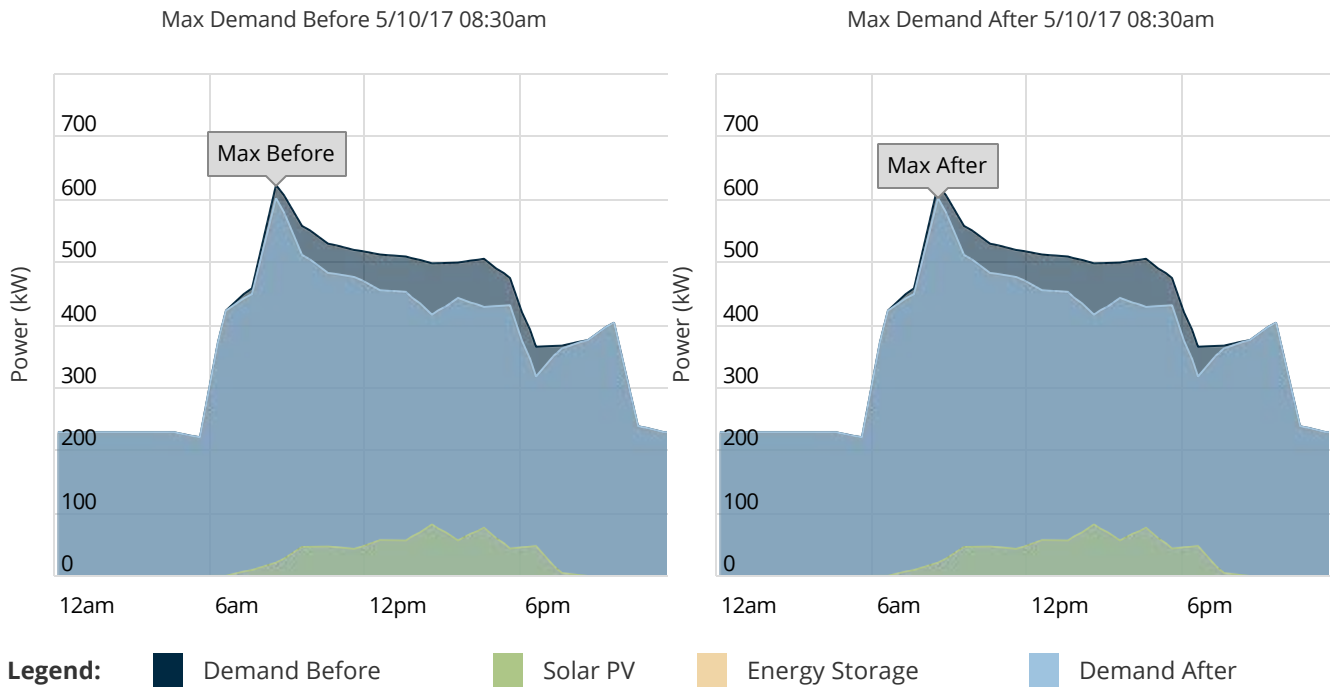
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 5/1/2017 - 6/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



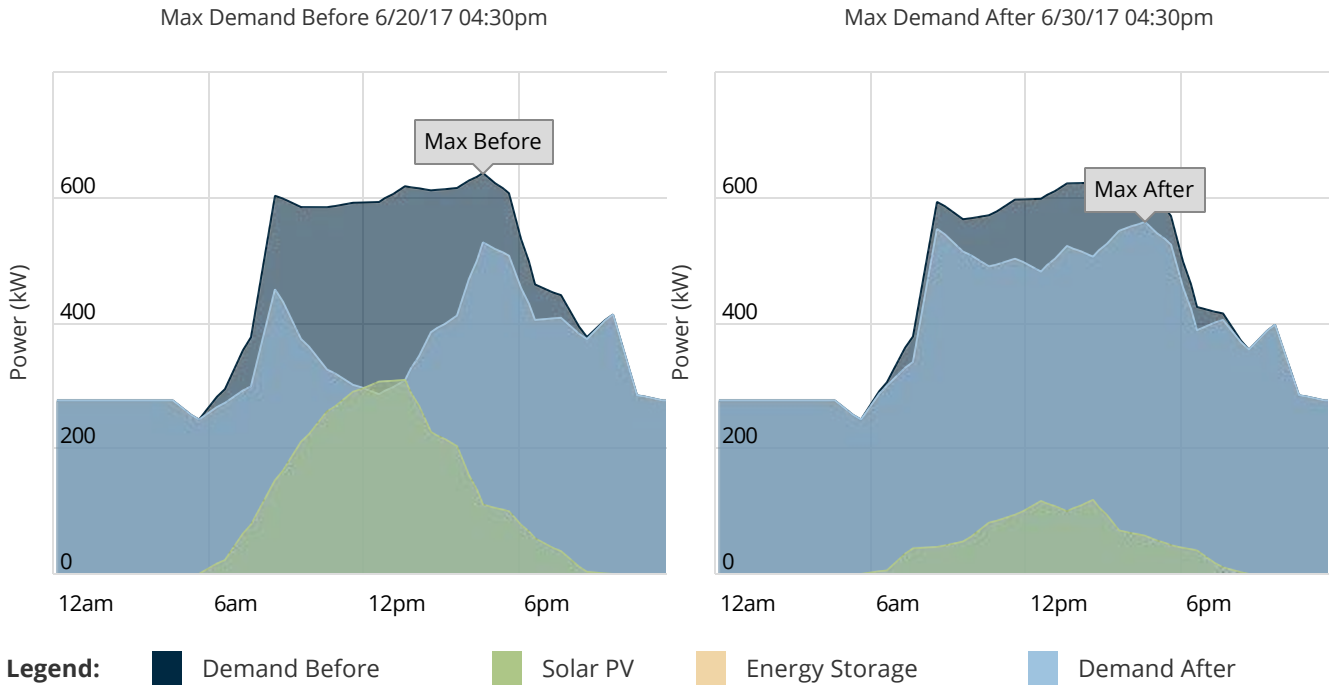
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 6/1/2017 - 7/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



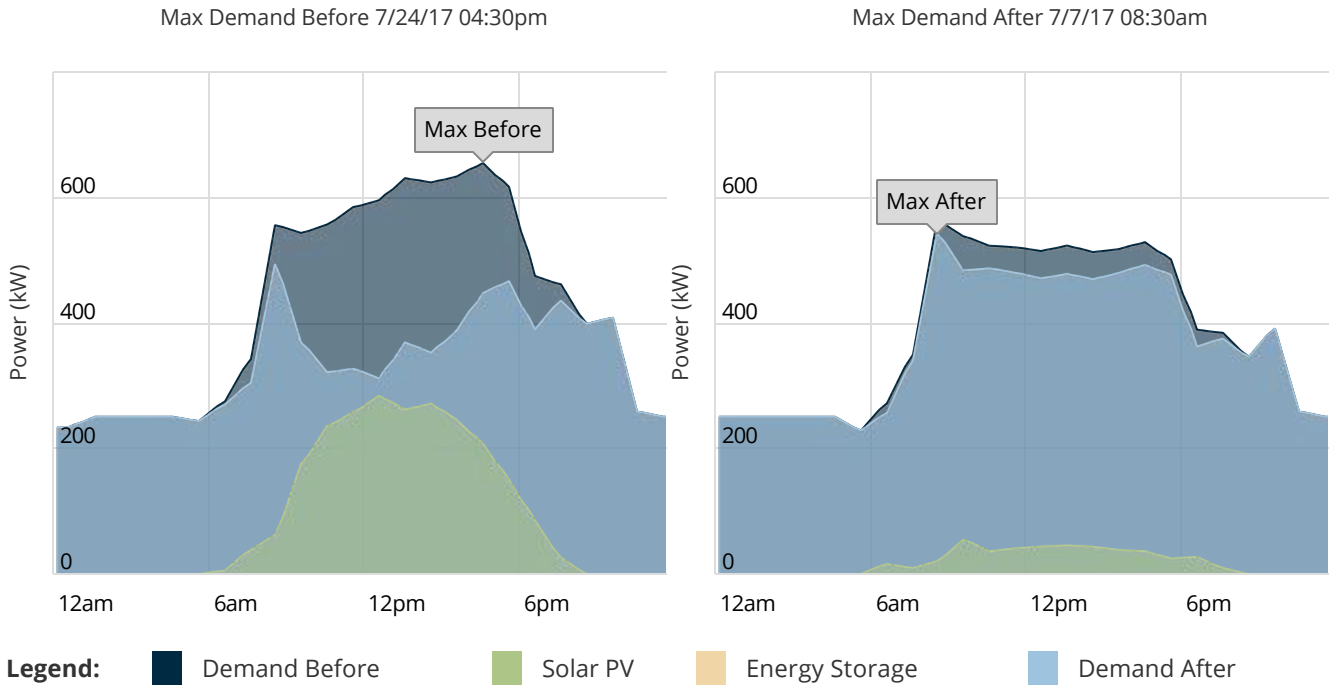
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 7/1/2017 - 8/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



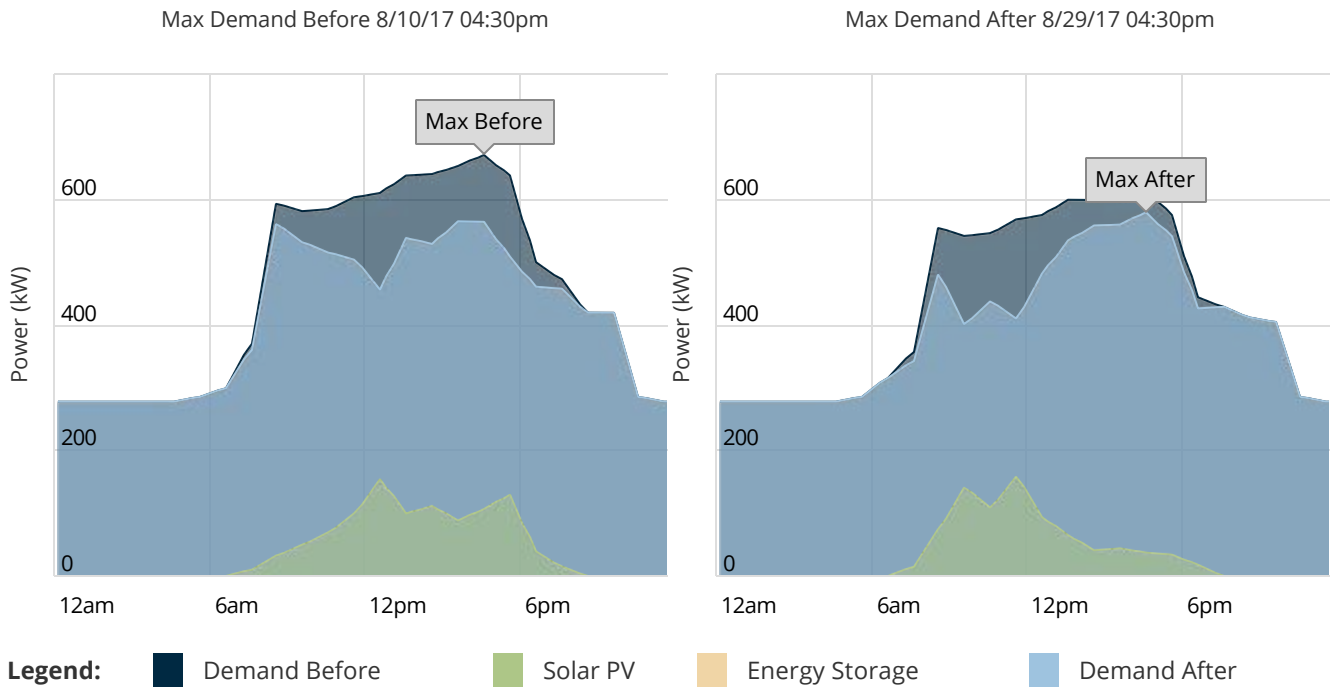
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 8/1/2017 - 9/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



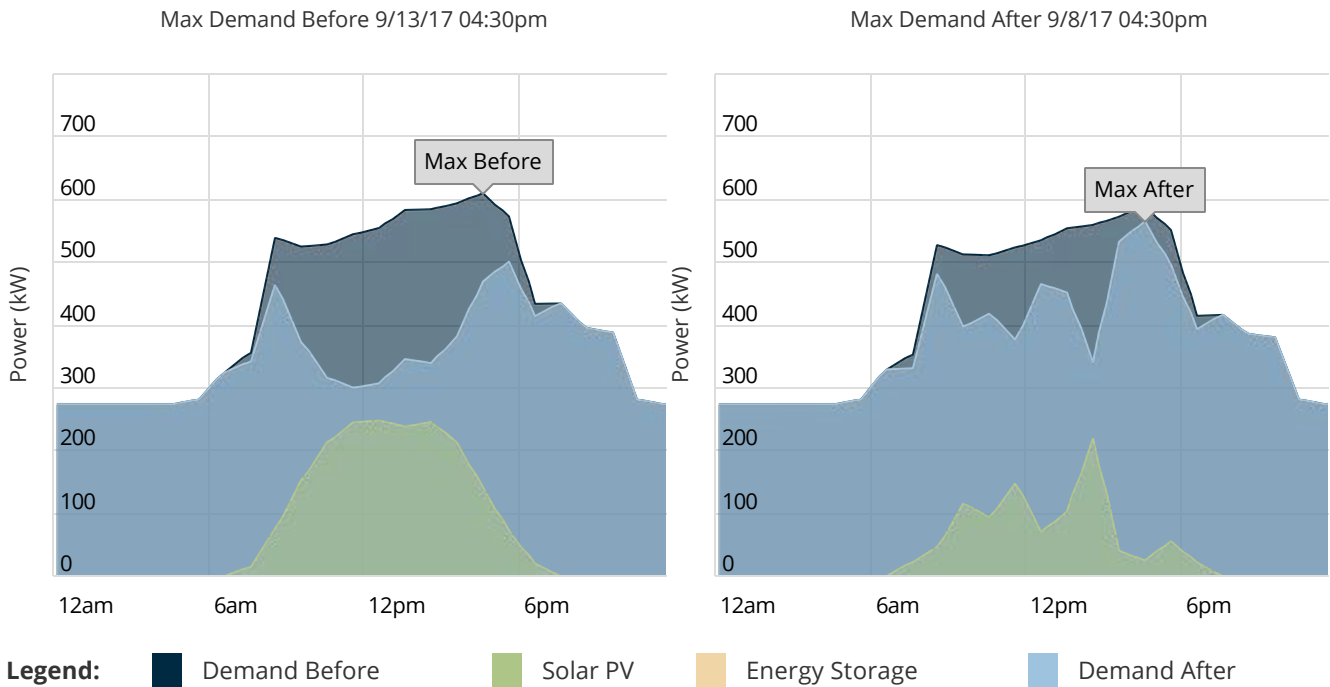
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 9/1/2017 - 10/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



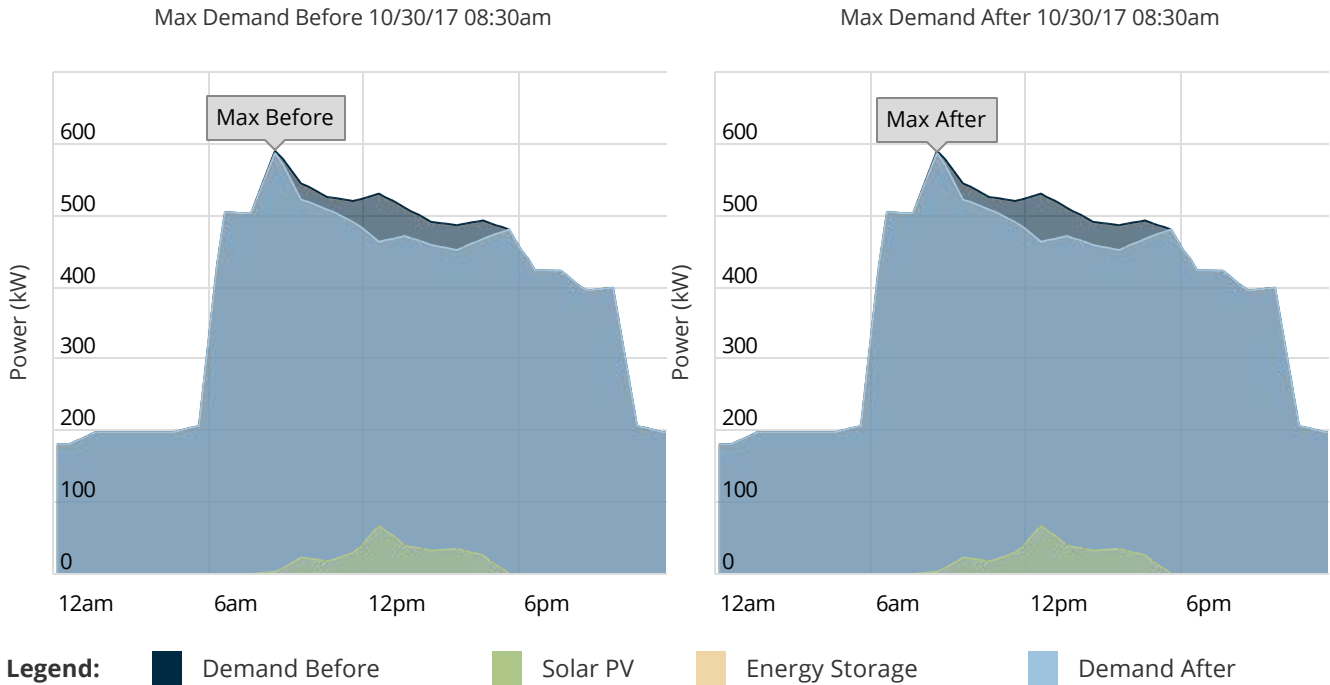
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 10/1/2017 - 11/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



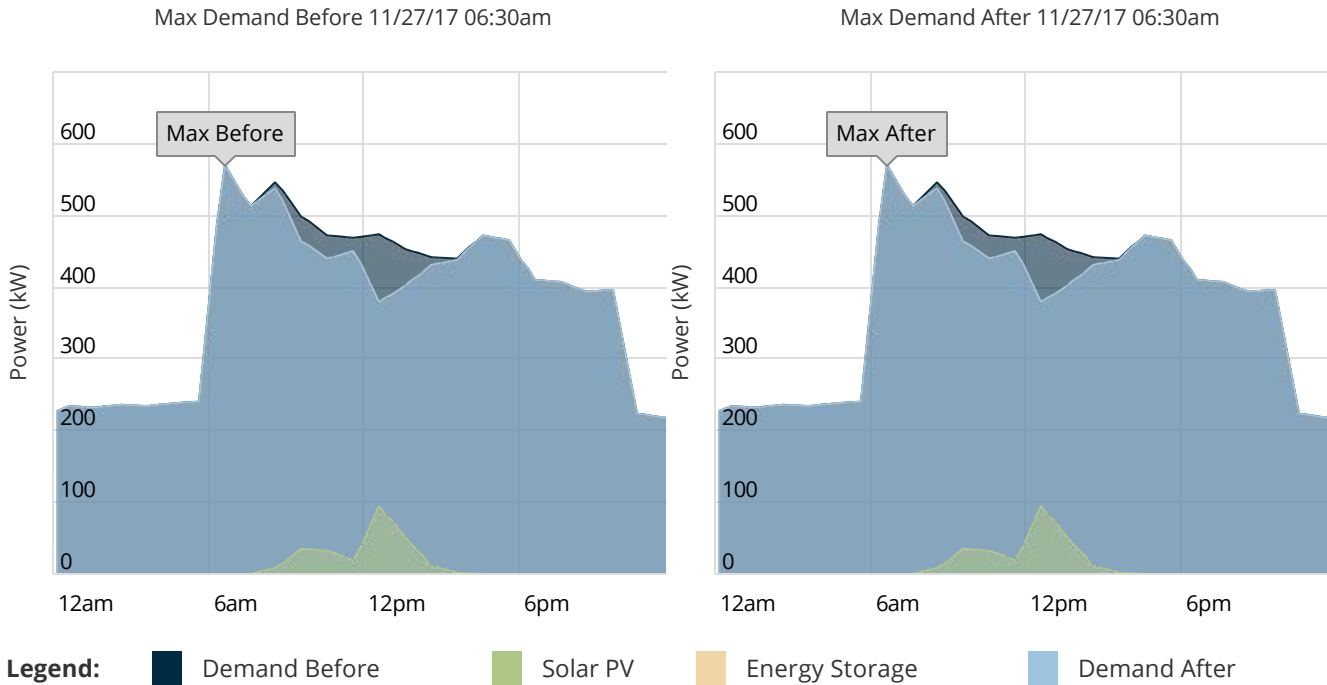
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# Demand Profiles

Date Range: 11/1/2017 - 12/1/2017

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

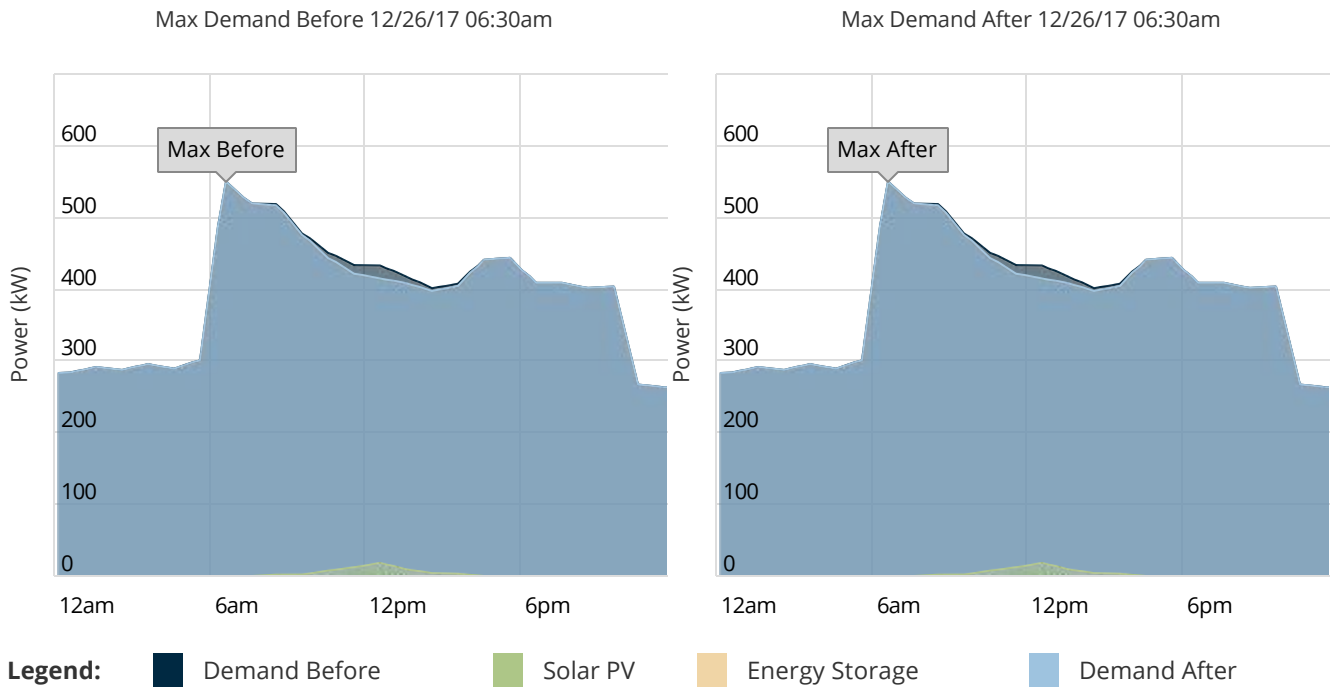
Charts Not Applicable



# Demand Profiles

Date Range: 12/1/2017 - 1/1/2018

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the Solar PV system simulation.



**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the Solar PV system simulation.

Charts Not Applicable

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:33PM

Project Number: 40000055

Project Title: Public Health Lab Solar Installation on Existing Roofs

## Description

Starting Fiscal Year: 2024

Project Class: Program

Agency Priority: 4

### Project Summary

The Public Health Laboratories (PHL) currently does not have any sustainable on-site power generation, such as a solar photovoltaic (PV) system. This project will provide an approximately 277 kW PV system on the existing PHL roofs to provide on-site power generation. The project will help reduce the PHLs overall energy/electrical use, work in conjunction with the new 500 kW PV system on the south laboratory addition for lower energy costs, and push the PHL towards meeting the Washington Clean Buildings Act and the Governor's EO 18-01 executive order for agency buildings. This request would be considered a "CBPS" project.

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

This is an opportunity for the PHL to continue to make the laboratory as energy efficient as possible. The Public Health Laboratories (PHL) currently does not have any sustainable on-site power generation, such as a solar photovoltaic (PV) system. This project will provide an approximately 277 kW PV system on the PHLs existing roofs to provide on-site power generation.

This request is a priority because The Department of Health (DOH) is working towards making the PHL as energy efficient as possible along with meeting the Washington Clean Buildings Act and EO 18-01. To this point in time the PHL has replaced the E-wing and C-wing air handling units (AHU) with new, more energy efficient models, installed chilled beams for cooling, reducing the size of the AHUs needed, installed LED lighting and controls in the new additions, and upgraded the building controls and have them on a monitoring system so that they can be tweaked for efficiency. With completion of the new Ground Source Heat Pump boiler plant the new PV system along with the new 500kW PV system planned for the south lab addition set to come online in 23-25 would offset some of the cost for going all electric at the PHL. While it may not be possible for the laboratory to get to zero net energy, the PHL is working hard to get as close to zero net energy (ZNE) as possible.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

This project will design and construct an approximately 277 kW PV system with fixed modules. The PV layout takes into consideration all wings except for the South Laboratory Addition (a 500kW PV system is being included in that project). The panels will be fixed at a 10° tilt, pointed south and ballasted. The project will be designed and constructed during the 23-25 biennium. Construction will take 12 months after the design is complete. See attached C-100 included with this project. This project will not be phased.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?**

Providing on-site power generation and working in conjunction with the new Central Boiler Plant, the project will make the PHL very close to complying with EO18-01 and the Washington Clean Buildings Act (HB1257). It will also move the PHL closer to its goal of being as close to ZNE as possible.

The result of not acting on this project will result in the PHL losing the opportunity to move in the direction of sustainable energy. The PHL currently doesn't have any site generation utilities on campus and delays in starting to meet EO18-01 and HB1257 will put the PHL at risk of meeting the future goals of the two energy reducing programs.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

The project looked initially at a 370 kW PV array based on assumed south laboratory addition alternatives that were

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:33PM

Project Number: 40000055

Project Title: Public Health Lab Solar Installation on Existing Roofs

**Description**

considered before the pre-design for the South Laboratory Addition was started. The current existing roofs were only considered for the 277 kW PV system. Using roofs from current and future wings beyond the South Laboratory Addition, the array can still be an approximately 370 kW PV system with additional arrays added on the new roofs as they are built. A new roof was considered to be installed so that the roofing and solar arrays would be on the same timeline for replacement. New systems for the solar arrays however now enable the panels to be removed easily and, in a cost, efficient manner. The new roof can be replaced in 15 to 17 years with minimal additional cost of removing the panels.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

No DOH clientele will be impacted by this request, however, annual cost savings in electricity used by the PHL would benefit the citizens of the state of Washington. Also, the public would see how the state is doing its part in reducing energy costs and making it buildings as sustainable as possible.

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

The project will be funded through State Capital Funds. No federal or other sources of funding are available for this project

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance.**

**Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

DOH is working toward complying with State energy goals as set forth through the Washington Clean Buildings Act and the Governor's EO 18-01 Executive order. The DOH strategic plan is committed to improving the health of Washingtonians through the environment and other means. By making DOH buildings, especially the PHL, as energy efficient as possible displays our commitment to that goal.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

This project does not have any IT-related costs.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project is not linked to the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

This project contributes to statewide goals of reducing energy consumption in all state buildings. Installing PV panels will reduce energy costs and working with the new central boiler plant will make the PHL virtually Greenhouse Gas free while enabling the PHL to come as close as it can to a zero net energy (ZNE) building. While it will not make the lab a ZNE building it will lower energy costs and stand as a testament to how DOH is working to lower its carbon footprint. This project will be a CBPS project.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. DOH has in its strategic plan a roadmap of health for all communities in the state. This is just another way of reducing the environmental impact of the PHL, which in turn helps disenfranchised communities.

**12. Is there additional information you would like decision makers to know when evaluating this request.**

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Infrastructure (Major Projects)

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:33PM

Project Number: 40000055

Project Title: Public Health Lab Solar Installation on Existing Roofs

**Description**

**Project Type**

Remodel/Renovate/Modernize (Major Projects)

**Growth Management impacts**

No growth management impacts

New Facility: No

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	2,621,000				2,621,000
	<b>Total</b>	<b>2,621,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,621,000</b>

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State				
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

No additional FTE required for this project

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000055	40000055
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	Public Health Labs Solar Installation on Existing Roofs
OFM Project Number	40000055

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	64,485	MACC per Gross Square Foot	\$26
Usable Square Feet	40,000	Escalated MACC per Gross Square Foot	\$29
Alt Gross Unit of Measure			
Space Efficiency	62.0%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	14.21%
Remodel	Yes	Projected Life of Asset (Years)	25
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	No
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	10%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start		Pre-design End	
Design Start	August-23	Design End	March-24
Construction Start	March-24	Construction End	June-25
Construction Duration	15 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$2,365,156</b>	Total Project Escalated	<b>\$2,620,730</b>
		Rounded Escalated Total	<b>\$2,621,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$0		
Design Phase Services	\$181,580		
Extra Services	\$30,000		
Other Services	\$81,579		
Design Services Contingency	\$29,316		
<b>Consultant Services Subtotal</b>	<b>\$322,475</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$347,839</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$1,683,574	Maximum Allowable Construction Cost (MACC) Escalated	\$1,873,313
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$168,357		\$187,332
Non-Taxable Items	\$0		\$0
Sales Tax	\$190,749	Sales Tax Escalated	\$212,246
<b>Construction Subtotal</b>	<b>\$2,042,680</b>	<b>Construction Subtotal Escalated</b>	<b>\$2,272,891</b>

Equipment			
Equipment	\$0		
Sales Tax	\$0		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$0</b>	<b>Equipment Subtotal Escalated</b>	<b>\$0</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$0</b>	<b>Artwork Subtotal Escalated</b>	<b>\$0</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$2,365,156</b>	Total Project Escalated	<b>\$2,620,730</b>
		Rounded Escalated Total	<b>\$2,621,000</b>



## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$347,839		\$347,839		\$0
<b>Construction</b>					
Construction Subtotal	\$2,272,891		\$2,272,891		\$0
<b>Equipment</b>					
Equipment Subtotal	\$0				\$0
<b>Artwork</b>					
Artwork Subtotal	\$0				\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$2,620,730	\$0	\$2,620,730	\$0	\$0
	\$2,621,000	\$0	\$2,621,000	\$0	\$0
Percentage requested as a new appropriation			100%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

*Insert Row Here*

**What has been completed or is underway with a previous appropriation?**

*Insert Row Here*

**What is planned with a future appropriation?**

*Insert Row Here*

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0461</b>	<b>\$0</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$181,580				69% of A/E Basic Services
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$181,580</b>		<b>1.0608</b>	<b>\$192,621</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)					
Geotechnical Investigation					
Commissioning					
Site Survey					
Testing					
LEED Services					
Voice/Data Consultant					
Value Engineering					
Constructability Review					
Environmental Mitigation (EIS)					
Landscape Consultant					
Solar Energy Consultant	\$30,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$30,000</b>		<b>1.0608</b>	<b>\$31,824</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>	\$81,579				31% of A/E Basic Services
HVAC Balancing					
Staffing					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$81,579</b>		<b>1.1127</b>	<b>\$90,774</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency	\$29,316				
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$29,316</b>		<b>1.1127</b>	<b>\$32,620</b>	Escalated to Mid-Const.

CONSULTANT SERVICES TOTAL

\$322,475

\$347,839

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>					
G10 - Site Preparation					
G20 - Site Improvements					
G30 - Site Mechanical Utilities					
G40 - Site Electrical Utilities					
G60 - Other Site Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0800</b>	<b>\$0</b>	
<b>2) Related Project Costs</b>					
Offsite Improvements					
City Utilities Relocation					
Parking Mitigation					
Stormwater Retention/Detention					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.0800</b>	<b>\$0</b>	
<b>3) Facility Construction</b>					
A10 - Foundations					
A20 - Basement Construction					
B10 - Superstructure					
B20 - Exterior Closure					
B30 - Roofing					
C10 - Interior Construction					
C20 - Stairs					
C30 - Interior Finishes					
D10 - Conveying					
D20 - Plumbing Systems					
D30 - HVAC Systems					
D40 - Fire Protection Systems					
D50 - Electrical Systems	\$65,000				
F10 - Special Construction					
F20 - Selective Demolition					
General Conditions	\$168,574				
Solar Panel System	\$1,450,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$1,683,574</b>		<b>1.1127</b>	<b>\$1,873,313</b>	
<b>4) Maximum Allowable Construction Cost</b>					
<b>MACC Sub TOTAL</b>	<b>\$1,683,574</b>			<b>\$1,873,313</b>	
	\$26			\$29 per GSF	

[Empty box]

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$168,357		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$168,357</b>	<b>1.1127</b>	<b>\$187,332</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.1127</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$190,749</b>		<b>\$212,246</b>
------------------	------------------	--	------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$2,042,680</b>		<b>\$2,272,891</b>
-------------------------------------	--------------------	--	--------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment					
E20 - Furnishings					
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1127</b>	<b>\$0</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1127</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$0</b>			<b>\$0</b>	
<b>EQUIPMENT TOTAL</b>					
<b>EQUIPMENT TOTAL</b>	<b>\$0</b>			<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$0				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user



## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.1127</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0800</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

## Description

Starting Fiscal Year: 2024

Project Class: Program

Agency Priority: 1

### Project Summary

This project is for the new, two-story Environmental Laboratory Sciences (ELS) wing and the new conference room/media center addition to the Washington State Public Health Laboratories. The pre-design was completed and approved during the 19-21 biennium. The funding for the design portion of the project was approved during the supplemental budget process in the current 21-23 biennium and is currently moving forward. This budget request is for a reappropriation of a portion of the design funding from the 21-23 biennium and for funding of construction during the 23-25 biennium. Funding for construction is the number one new capital budget request for the Public Health Laboratories (PHL). Construction of this project will complete the South Laboratory Addition project which will provide ELS with new lab spaces, provide a conference/media center that will expand the locations for staff meetings, provide a location for the agency to give updates on current and future disease outbreaks, and give the Microbiology Group an area where they can build a new Molecular Laboratory in the old ELS wing that will be vacated.

### Project Description

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

The *South Laboratory Addition* is currently going through the design phase that was funded during the 21-23 supplemental budget and a reappropriation is being asked for a portion of the design money. This new request is for the construction phase funding. Funding the construction phase will complete this phase of the PHL master plan and will also help the PHL to be ready for any public health emergencies in the future. The current design is also part of the Departments of Health (DOH) endeavors to meet the new "Clean Buildings" legislation enacted in previous legislative sessions.

This project is a high priority for three reasons. 1) It will update the ELS lab and give them adequate laboratory space and systems support for their automated instrumentation that includes, several types of Mass Spectrometers, Automated DNA extraction machines, MI Sequencers, and various PCR instruments that perform different tasks in all lab sections. As technology has improved, more instruments have been required to complete diagnosis on a more rigid scale. 2) It will open up the current ELS wing to be converted to a new Molecular Laboratory which will provide much more rapid and cost-effective ways of testing for many new and existing diseases such as measles, mumps, and novel coronavirus and give the PHL the ability to ramp up quickly for any new pandemics that may arise. The PHL has reached its maximum capacity for staff and equipment with no room for additional staff or processes. Additional population, new regulations, emerging infectious diseases, and greater awareness of the need for public health emergency preparedness have all contributed to the demand for the additional laboratory space. 3) Construction of this wing, along with the central boiler plant and the molecular laboratory renovation, will make the PHL compliant with the "Clean Buildings" legislation that is required in 2027.

The PHL serves indirectly underserved people/communities by supporting the other divisions in DOH, working with all county health departments, testing statewide, working with tribes, and working in a larger regional way by coordinating work with the CDC. Upgrades to the lab will allow more automated equipment to be installed which will eventually reduce the number of FTEs required to support the PHLs testing needs.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

This request is for a reappropriation of a portion of the design funding and complete funding for the construction of the *South Laboratory Addition* in the 23-25 budget cycle. A pre-design document was produced during the 19-21 biennium that details the size and space requirements for the facility and the systems that would be used in the project. The design phase was funded during the 21-23 supplemental budget process and will be completed in July/August of 2023. Bidding and

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

## Description

Construction will start as soon as the design is complete and permits are obtained.

The project will construct 23,853 sf of additional lab space and 4,081 sf of Admin/Staff/Support spaces for the ELS program. It would also provide 6,629 sf of staff conference rooms/media center/restrooms/staff lunchroom/training lab/support space to be used exclusively by the PHL and DOH staff. The S-wing would be demolished under this project with the new conference center replacing those functions housed there. Construction would also include a high efficiency building shell, a 500-kW solar array, LED lighting, and an environmentally friendly HVAC system. This project will also be a part of the *clean buildings performance standards* (CBPS) application for the PHL.

The construction phase of this project cannot be phased. Construction will be based off the construction and permit drawings and will continue through until completed. Detailed costs for the project are available in the attached C-100. The C-100 costs reflect inflation pricing since 2020. Included as an attachment to this request is an AGC bulletin concerning current construction costs.

### 3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?

This request will provide the Public Health Laboratories (PHL) with relief of overcrowding from both staff and equipment. The new laboratory spaces in the new ELS lab would give this work group ample space for equipment now and in the future. The new lab space would also make each of the workgroups more efficient as the equipment that each group uses would be in one place instead of spread out around the ELS wing as is the current situation. The administration/staff space would be dedicated open office space that would not be conducive to be taken over for lab space. Having adequate office areas for staff will make them more productive and efficient and keep them mentally ready to perform their tasks.

The new conference room space will replace the current S-wing where the lunchroom, large meeting space, and public restrooms are located. Conference room space is at a premium at the PHL. The large meeting space, which also serves as the lunchroom, only holds 65 people. If it is being used as a meeting space there is not a lunchroom for staff. The new conference area will hold 250 staff and have the ability to be subdivided into smaller conference rooms to be used by all staff. It will also serve as the lunchroom and the classroom training lab that was turned into a COVID-19 testing lab. There will also be a media center that will be appropriate to give press conferences about public health issues. Support spaces will also be included such as restrooms and the employee kitchen. This space can also be made available to the surrounding neighborhoods for neighborhood meetings and events if so desired.

Not funding this construction will leave the PHL with an ongoing existing overcrowding situation that will only get worse with time. Currently the Public Health Laboratory is at capacity. Failure to fund will reduce the ability of the Public Health Laboratories to respond quickly and efficiently to public health needs, including its ability to support other state, regional, and local health partners as Washington continues to grow. Without the additional laboratory space, the PHL could be forced into the difficult position of prioritizing disease conditions and likely eliminating surveillance and response efforts.

### 4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.

There were 5 alternatives considered during the pre-design which was completed in the 19-21 biennium and approved by OFM. They were **(1) No Action, (2) Demolish Q-wing, (3) A 2-story ELS wing in the SW corner, (4) A 1-story split lab, and (5) A 2-story ELS wing and a larger S-wing Replacement.** The pre-design was approved by OFM and the recommended *2-story ELS wing and a larger S-wing replacement* was funded for the design phase in the 21-23 biennium. Construction will be completed based on the description of the new wing as follows:

Alternative 5 places a new 2-story ELS lab just east of A-wing and a new conference center located where the existing S-Wing was located. The new ELS wing will be connected to the PHL through an enclosed walkway similar to how the existing wings are connected to each other. The wing will have administration space on the west side of both floors which will allow staff to be closer to their respective labs. The conference room/media center will be connected at the end of the existing building where it will be more convenient for staff to use on a daily basis, be close to the public entrance to the PHL, and present an appealing presence to the neighborhood. The layout presents a front yard to the neighborhood while keeping the more sensitive, private uses of the site shielded. Parking will be located on the east side of the site and a retention pond can be used as part of an art walk which is keeping in the spirit of the approved master plan. Alternate 5 provides the ELS program

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

### Description

with ultimate flexibility, provides much needed conference space for lab staff while minimizing disruption to other campus functions.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

The PHL does not interact with individual Washington state citizens but it does work with local health jurisdictions such as Seattle/King County Health and nationally with the CDC through other DOH divisions and sections like Communicable Disease Epidemiology. The PHL works closely with Communicable Disease Epidemiology to track down sources of e coli, measles, and other contagions and with Environmental Public Health to ensure the quality and safety of shellfish harvested in Washington State to name two groups. As efficiency is compromised due to laboratory overcrowding, accurate results will take more time to produce. Additional time to get test results could put state residents at risk or keep the shellfish industry's ability to sell its products on a national or international scale in jeopardy

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

This project will be funded through State Capital Funds. No Federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance.**

**Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

This project was developed as part of the PHL 20-year Master Plan and approved by Shoreline in 2010. It was determined that this project was needed to help alleviate overcrowding, improve efficiency, and handle growth over the next few decades. Construction of the project will enable the PHL to continue to supply timely diagnostic support to the rest of the agency as it fulfills its strategic mission. The agency's previous strategic plan called for the agency to be a workplace of choice and this project does that by investing in a workplace where staff feel that their work is important. Per the current strategic plan this project helps DOH ensure a safer and healthier Washington by addressing environmental health hazards associated with drinking water, food, air quality, and pesticide exposure. This project not only increases PHL performance for the ELS program but also will increase performance for all programs at the PHL.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff)? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

No, this project is not linked to the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

Laboratories are known to use huge amounts of energy. In the past the PHL has done projects such as change the existing laboratory air flow from constant air volume to variable air volume (VAV), install chilled beams throughout the existing labs, and install an Aircuity system. All of these systems are designed to slow down air flow yet maintain safety for staff. Slowing down the air flow reduces the energy required to power the lab.

The new ELS wing will slow down air changes per hour (ACH) from an average of 10-12 ACH for the existing labs to 6 ACH during occupied hours and 4 ACH during unoccupied hours. The new wing will also use VAV hoods, Chilled Beams, manifold exhaust systems together, having smart outlets, and all LED lighting to decrease energy consumption. The exterior of the building will be as energy efficient as possible and will be commissioned to ensure that it is constructed correctly. An energy recovery system will be used on the addition. Energy recovery in laboratory buildings exhausting 100% of intake air can substantially contribute to lifetime energy cost savings, short payback periods, and lower peak loads. Lighting controls will be used in the ELS addition and controlled by the Building Automation System (BAS).

The conference and media center (CMC) has a very different load and ventilation profile. Displacement cooling is

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

## Description

recommended and natural ventilation or mixed mode options in perimeter spaces will be evaluated during design. The CMC has a much lower energy intensity program and offers a natural opportunity to offer a standalone net-zero program using on-site power. The pre-design has established that the CMC could have an Energy Use Intensity (EUI) of 20 while the ELS laboratory addition could have a EUI of 200 or less. For reference, Offices may have an average EUI of 52.9 while hospitals have an average EUI of 234.3.

The project intends to include a 500 kW photo-voltaic (PV) system to offset up to 80% of the energy needed for this project. PV panels will be installed on the southern half of the ELS addition and will make up half of the 500 kW array. The remaining 250 kW PV system is proposed on structure at the new parking area and to provide cover along the pathway from parking to the building entry. There would also be charging stations in the new parking lots for electric vehicles.

This project, working in conjunction with the new Central Boiler Plant, will drastically reduce the carbon footprint of the PHL.

### **11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Construction of this project does not impact equity in the state in any negative way. The new ELS Facility will require a percentage of contactors and sub-contractors to be minority and women owned businesses. This process will be overseen by DES during the construction phase.

Construction of the project will also reduce the environmental impacts of the PHL. Communities of color and communities of low economic standing are typical subjected to more environmental impacts than other communities. While not directly affecting the environment for any one community it will help reduce the environmental impacts of the overall environment of Washington State. Laboratories are known high energy consumers. Construction of this project, along with the current construction of the central boiler plant, will greatly reduce the environmental impact on the environment for the local community.

The new Conference room/Media Center (CMC) will be made available for community meetings if they are so desired. Since the PHL can run on Generator power during times of extended power outages, the CMC could be used by the community as a place of refuge during those extended outages.

### **12. Is there additional information you would like decision makers to know when evaluating this request.**

Construction of this project is essential to the continued performance of the PHL. The PHL's work has grown considerably and with each office turned into a mini-lab that performance is harder to maintain. This project accomplishes several things:

- Moving the ELS program out of its current location will allow the microbiology program to have space for a molecular laboratory. With the increase in testing for not only pandemics like COVID-19 but other less invasive diseases like measles, mumps, and zika to name a few, a molecular laboratory is essential so that the PHL can keep up with testing.
- The new ELS wing will create additional laboratory space for the overcrowded ELS laboratory. The use of diagnostic equipment such as mass spectrometers, DNA extraction machines, MI sequencers, and various PCR equipment has created a space shortage that has affected the efficiency of staff in a negative way. When a new piece of equipment comes in it is usually placed by where it can go instead of where it should go.
- The CMC will expand the conference room space that the staff so desperately needs. With quite a number of additional Epidemiologist being hired, new microbiology staff hires, and the general lack of space, these rooms are needed for staff planning meetings, training meetings, and all staff meetings.
- The original 20- year master plan located the new ELS lab where the Q/A/S-wings are currently located. The preferred design leaves intact Q and A-Wings. Leaving these wings plus constructing the CMC precludes the PHLs need to build a 26,800 sf administrative office building that

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

**Description**

was a future phase of the PHLs 20-year master plan. With the probability that the 38,000 sf administrative office building (Phase II) will not be

required the PHL would not need a future parking garage to meet the parking requirements required by the city of Shoreline.

This project will be a highly efficient energy consumer. This project will provide enough PV panels to power up to 80% of the energy costs for

this project. When the new central boiler plant comes online in late 2023 the PHL will be using almost all sustainable energy. The solar array

associated with this project and moving from steam to hot water heat with the new boiler plant powered by a ground source heat pump and

electricity from Seattle City Light (90% sustainable utility) will make the PHL a very low carbon emitter. The CMC has the potential to be a

zero-net energy part of the building.

This project also meets the spirit of the master plan by being neighborhood friendly. The neighborhood uses the DOH and Fircrest

campuses for walks. The 20-year master plan continued to have sidewalks and trails, including an art walk that would connect the

neighborhood with Fircrest. These neighborhood amenities would not have been built until the proposed office building was constructed in a

much later phase. This project would construct the artwalk and create a very neighborhood friendly "front yard" at the PHL in a shorter period.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

New Facilities/Additions (Major Projects)

**Growth Management impacts**

No impacts to growth management. Was approved by Shoreline in 2010.

New Facility: Yes

**How does this fit in master plan**

This project was part of the PHL 20-year master plan and approved by the City of Shoreline in 2010. The master plan determined that a new facility was required for the Environmental Laboratory Sciences (ELS) group and that the Microbiology group would then expand into the existing ELS wing.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	75,213,914	195,914		4,933,000	70,085,000
	<b>Total</b>	<b>75,213,914</b>	<b>195,914</b>	<b>0</b>	<b>4,933,000</b>	<b>70,085,000</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	



303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 12:47PM

Project Number: 30000379

Project Title: Public Health Lab South Laboratory Addition

**Funding**

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State				
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Operating Impacts**

No Operating Impact

**Narrative**

There will be no operating impacts until the 25-27 biennium as the project will be under construction until that time.

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	30000379	30000379
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids



**AGC**  
THE CONSTRUCTION  
ASSOCIATION

**JULY**

**2022**

# CONSTRUCTION INFLATION ALERT

For more than two years the U.S. construction industry has been buffeted by unprecedented increases in materials costs, supply-chain bottlenecks, and a tight labor market. To help project owners, government officials, and the public understand how these conditions are affecting contractors and their workers, the Associated General Contractors of America (AGC) has posted frequent updates of the Construction Inflation Alert.

Several recent developments have raised the specter of a sharp slowdown or even a recession in the U.S. economy. Inflation is at a 40-year high, sapping consumers' purchasing power despite elevated wage increases. Major stock indexes have declined sharply—a frequent but not foolproof harbinger of recession. A growing number of companies have announced layoffs, although the job market remains vibrant, as indicated by large monthly employment increases, near-record job openings, and a persistently low unemployment rate.

However, a recession is far from certain. Demand for infrastructure, manufacturing, and power construction appears to be strong and likely to strengthen further, perhaps for several years to come. In any case, the cost of construction materials and labor does not generally move in sync with the overall economy. In short, owners should not assume that delaying projects will enable them to avoid volatility and disruptions in construction costs, delivery times, and labor supply, even if the economy slows significantly.

Meanwhile, Russia's ongoing attack on Ukraine and Western sanctions against Russia have disrupted production and transport of dozens of commodities. China's prolonged lockdown of Shanghai and other areas in an attempt to control the spread of covid has also affected production and shipping. New variants of covid, as well as a growing number of people with lingering or recurrent symptoms ("long-haul covid"), add to uncertainty about labor supply.

This version of the Alert is the seventh update since the first edition was posted in March 2021—an indication that the situation remains far from "normal." This document will continue to be revised to keep it timely as conditions affecting demand for construction, labor supply, and materials costs and availability change. Each new version is posted here: <https://www.agc.org/learn/construction-data/agc-construction-inflation-alert>

Please send comments and feedback, along with "Dear Valued Customer" letters or other information about materials costs and supply-chain issues, to AGC of America's chief economist, Ken Simonson, [ken.simonson@agc.org](mailto:ken.simonson@agc.org).

**[www.agc.org](http://www.agc.org)**

# Recent changes in input costs

Previous editions of this guide have highlighted the extreme runup in materials costs that began in early 2020. More recently, prices have moved in divergent directions for different materials. But, on balance, they continue to climb at a much higher rate than the consumer price index.

The extent of these increases is documented by the Bureau of Labor Statistics (BLS). BLS posts producer price indexes (PPIs) around the middle of each month for thousands of products and services (at [www.bls.gov/ppi](http://www.bls.gov/ppi)). Most PPIs are based on the prices that sellers say they charged for a specific item on the 11th day of the preceding month. Producers include manufacturers and fabricators, intermediaries such as steel service centers and distributors, and providers of services ranging from design to trucking.

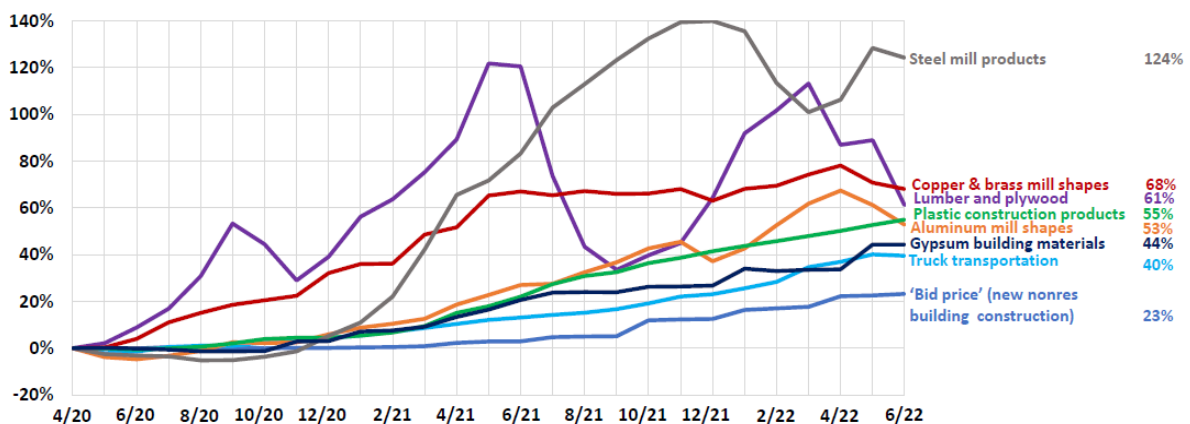
Figure 1 shows the magnitude of the increases for seven widely used categories of construction inputs. From April 2020, the low point for prices of many goods during the early stage of the pandemic, to June 2022, the PPI for steel mill products more than doubled (up 124% in 26 months). There were increases of more than 60% in the indexes for copper and brass mill shapes (up 68%) and lumber and plywood (up 61%). PPIs rose by more than half for plastic construction products (up 55%) and aluminum mill shapes (up 53%). The index for gypsum products increased 44% and the PPI for truck transportation climbed 40%. Numerous other indexes rose by more than the 23% increase in the “bid price” index.

124%

The PPI for steel mill products rose 124% in 26 months

Figure 1

**PPIs for construction bid prices and selected inputs**  
cumulative change in PPIs, April 2020-June 2022 (not seasonally adjusted)



Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi](http://www.bls.gov/ppi)

# Supply-chain issues

From the first days of the pandemic, availability and delivery times for materials have been never-ending headaches for construction firms. Problems began as early as February 2020, when factories in China and northern Italy were shut down, causing shortages of items as diverse as elevator parts, floor tiles, and kitchen appliances. Two years later, another round of covid-related restrictions in China disrupted production and shipping from that country.

Russia's attack on Ukraine, Western countermeasures against Russia, and diversions or blockages of cargo ships are impeding or cutting off supplies of items as diverse as pig iron used in steelmaking, neon for lasers used in semiconductor manufacturing and other applications, and Ukrainian clay used in producing ceramic tile exported to the U.S. from Italy and Spain. Some of these impacts are far down the supply chain from the actual construction item. For instance, a producer of electrical switchgear reported in May that the time for delivering products from its plant had doubled from 20 weeks to 40, in part because of difficulty acquiring a fire-retardant chemical produced in Europe that goes into a plastic resin used to make the housing for its switchgear.

Adding to these pandemic- and conflict-induced problems, a series of unusual mishaps interfered with output or delivery of numerous goods. The biggest impact for construction came from the severe freeze in Texas in February 2021 that damaged all of the petrochemical plants producing resins for a host of construction plastics. Damage to the electrical grid in Louisiana from Hurricane Ida last September further interfered with the production of some plastics inputs. Some cement plants have incurred unusually long outages, in part because of delays in sourcing replacement parts.

Contractors have also been affected by the much-publicized shortage of computer chips. Not only is the construction industry a major buyer of pickup trucks that are in short supply, but deliveries of construction equipment also have been held up by a lack of semiconductors.

Contractors have reported being quoted exceptionally long lead times and/or allocations (less-than-full shipments, generally tied to previously ordered quantities) for inputs as varied as electrical transformers, traffic signal equipment, highway striping paint, wallboard, insulation, windows, and roofing fasteners. Strong demand, plant outages, and truck driver shortages have meant long delays in completing ready-mix concrete pours in several states in the Southeast and West.

So far, there is little sign that the supply chain will consistently improve before 2023—or even 2024, in the case of some computer chips. While the lead time for some items has shortened, deliveries for many materials remain delayed or unpredictable. In fact, the expiration of labor contracts for West Coast longshore workers and rail workers nationwide could result in new disruptions of shipments later this year.

# Labor supply and cost

Construction employment has bounced back well from the early months of the pandemic. However, construction firms are far short of the number of workers they have been seeking. They have partially closed the gap by getting more overtime from the workers they have, but this cannot continue indefinitely.

The construction industry lost 1.1 million employees from February to April 2020—a 15% decline in just two months. While both residential and nonresidential construction employment rebounded somewhat in May 2020, employment stalled for more than a year after that among nonresidential firms—nonresidential building and specialty trade contractors plus civil and heavy engineering construction firms. During that period, thousands of experienced workers moved into residential construction (homebuilding and remodeling), found jobs in other sectors, or left the workforce completely.

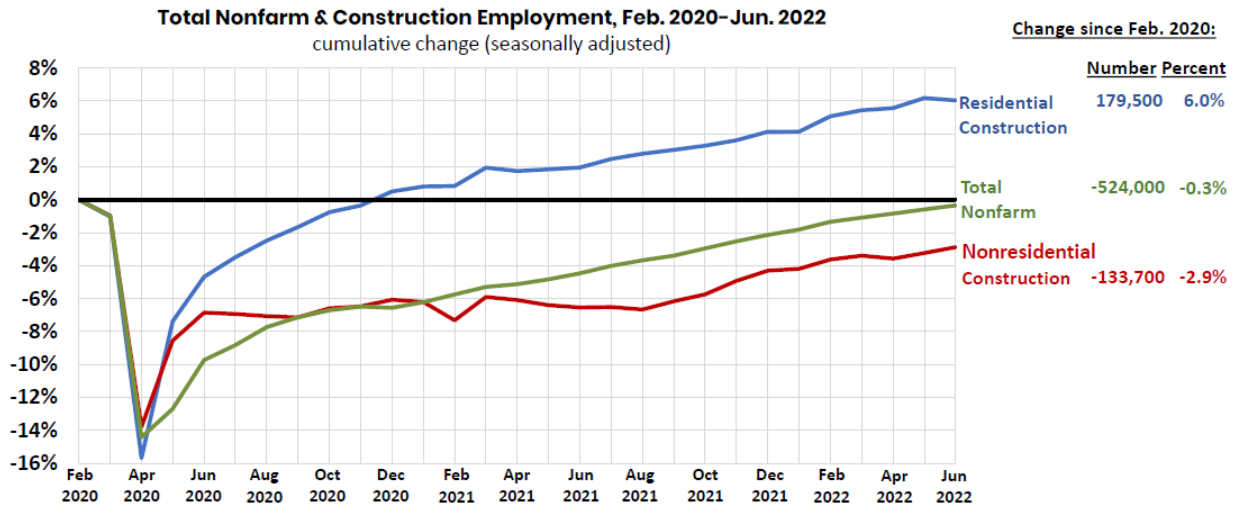
**466,000**

The number of job openings at the end of May, a record for the month



By June 2022, seasonally adjusted construction employment totaled 7,670,000—modestly higher than the 7,624,000 employed in February 2020. But there was a large shift between residential and nonresidential subsectors. Compared to February 2020 levels, residential construction firms had added nearly 180,000 workers, while employment in nonresidential construction was still down 134,000 employees or 2.9%, as shown in Figure 2.

**Figure 2**



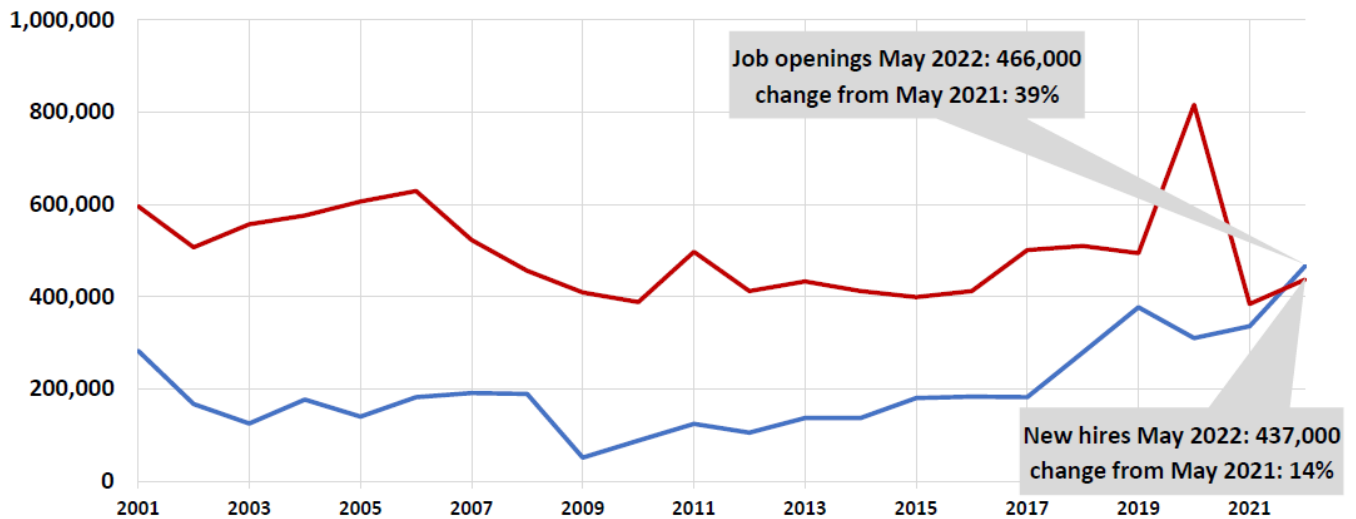
Source: BLS current employment statistics, <https://www.bls.gov/ces/>

There is strong evidence that the construction industry would have added many more workers if they had been available. Job openings in construction at the end of May totaled 466,000 (not seasonally adjusted), a jump of 130,000 or 39% from a year earlier and by far the largest May total in the 22-year history of the data, as shown in Figure 3. In fact, job openings exceeded the 437,000 workers hired in May, implying that construction firms would have hired twice as many workers that month as they were able to, if there had been enough qualified applicants.

**Figure 3**

**Construction job openings exceed hires, set record high for May**

Job openings and hires, May 2001–May 2022, not seasonally adjusted



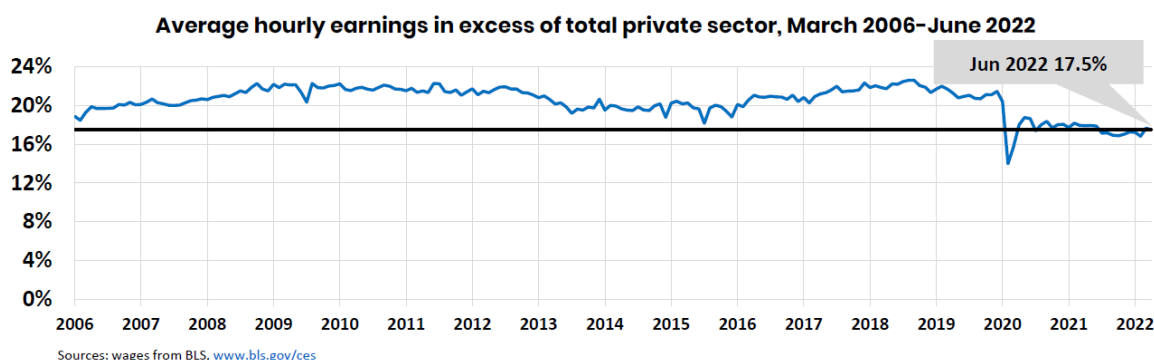
Source: Source: Bureau of Labor Statistics, [www.bls.gov/jlt](http://www.bls.gov/jlt), JOLTS

In order to attract, retain, and bring back workers, construction firms are raising pay. Average hourly earnings in construction for “production and nonsupervisory employees”—mainly hourly craft workers—rose 6.0% from June 2021 to June 2022. That compared with increases of 4.0% in the previous 12 months and 2.8% in the 12 months ending in June 2000. Despite the acceleration in wages, construction pay has not risen as fast as in other industries. Historically, as shown in Figure 4, contractors paid a “premium” to attract workers willing to work in the conditions, locations, and hours required for construction. Specifically, average hourly earnings for production workers in construction typically averaged 20% to 23% more than for all private sector employees, up until the onset of the pandemic. This premium shrank to less than 18% since the start of the pandemic as restaurants, warehouses, delivery services, and other industries drastically increased pay. Other sectors were also able to offer greater flexibility regarding hours and worksites, including work from home, that are not possible for construction.

## Figure 4

### Wage premium for construction has shrunk

- “Premium” for construction wages relative to total private sector has shrunk from 20-23% pre-pandemic to 17.5% for production & nonsupervisory employees as other sectors boost pay, benefits and offer flexible hours and locations
- Implications: Contractors will have raise pay still more, pay more overtime, invest more in labor-saving software and equipment



These differences imply that construction wages will have to rise even more steeply to restore (and perhaps expand) the pay “premium.” In addition, it is likely that contractors will pay more overtime to make up for the workers they don’t have. They may also turn more to offsite production and onsite drones, robotics, 3-D printers, and other ways of reducing the number or skill level of the workers they employ.

# Changes in bid prices

The extreme runup in so many input costs caused financial hardship for many contractors and subcontractors, especially for those whose purchases are concentrated in materials with extra-steep increases.

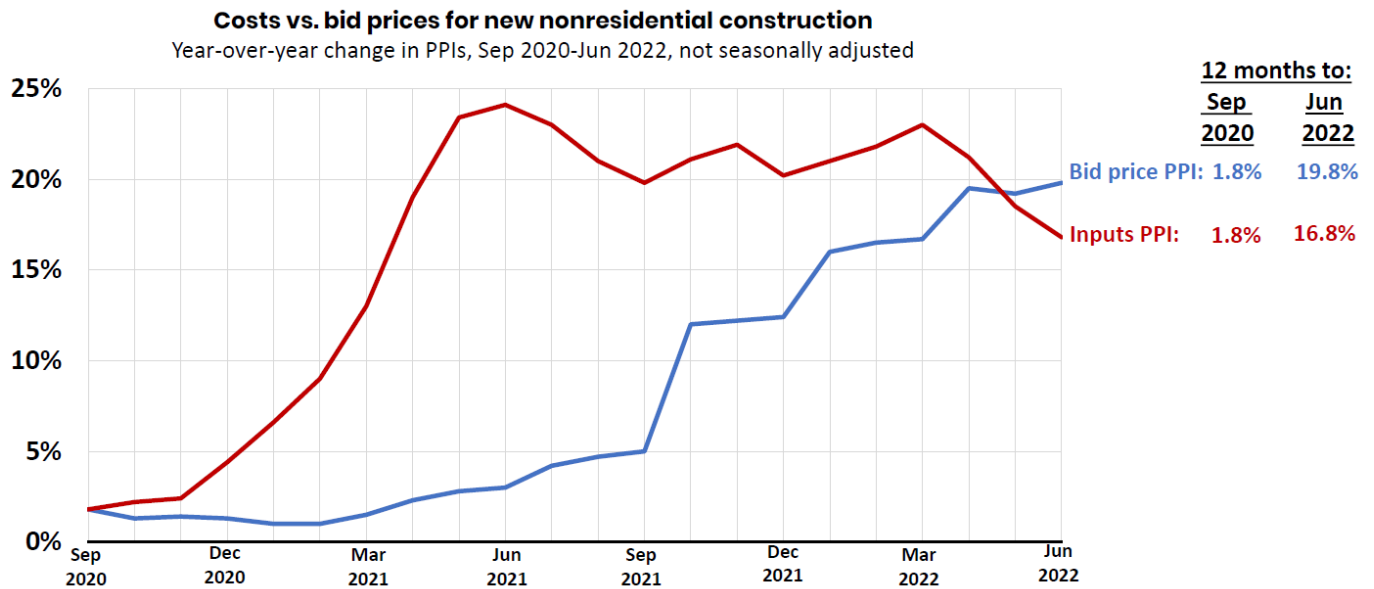
BLS posts several PPIs for new nonresidential construction. Since every construction project is unique, it is not possible to collect prices for identical construction “products” in the same way as for most goods and services. Instead, the agency creates “bid price” PPIs (BLS refers to them as output price indexes) through a two-step process. Each quarter it receives data from construction cost-estimating firms regarding the cost of a package of installed components or “assemblies” of a particular nonresidential building. Every month BLS asks a fixed group of contractors the amount of overhead and profit they would charge to erect that building—the same building that contractor was asked about previously. BLS combines the answers from a set of contractors to create PPIs for new warehouse, school, office, industrial, and healthcare building construction, along with a weighted average of these building types for an overall index for new nonresidential building construction.

BLS also creates PPIs for inputs to construction--weighted averages of the cost of materials and services purchased for every type of project.

As shown in Figure 5, the PPI for bid prices rose at the same rate as the PPI for inputs from September 2019 to September 2020, 1.8% year-over-year. The bid-price PPI continued rising at a modest rate through mid-2021, while the year-over-year change in input prices accelerated to more than 24% by June 2021.

Since mid-2001, the bid-price PPI also has accelerated considerably, as contractors attempt to pass on their rising materials and labor costs. By June 2022, the bid-price index was climbing at a 19.8% year-over-year rate, compared to 16.8% for the PPI for inputs to new nonresidential construction.

**Figure 5**



Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi](http://www.bls.gov/ppi)

The bid-price index only indicates the price contractors propose for new starts. On projects for which they had already submitted a bid or begun work, contractors were stuck with paying elevated materials prices that they could not pass on.

## What's next for bid prices?

There is no fixed relationship between input costs and bid prices. For every firm and time period, the relationship depends on specific market conditions and expectations.

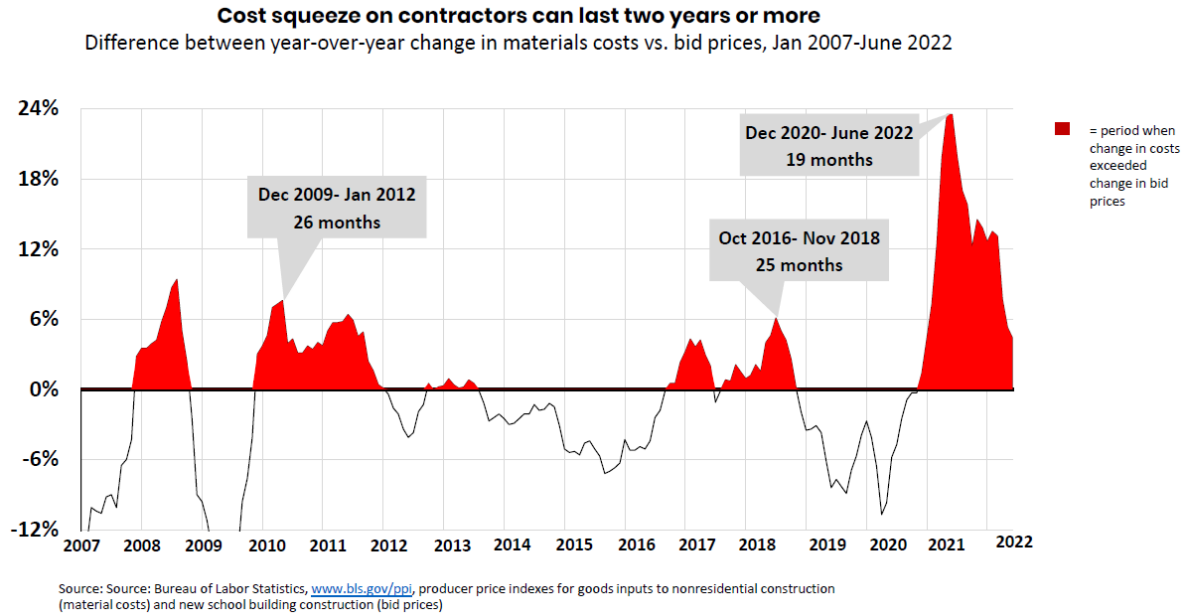
However, it is possible to look at past relationships. Figure 6 shows the difference between the year-over-year change in the PPI for materials costs for goods inputs to construction and the bid-price index for new school construction. The areas in red indicate periods in which the year-over-year change in the PPI for exceeded the bid-price PPI for schools. (Similar patterns exist for the bid-price indexes for new warehouse, office, industrial and healthcare buildings.)

Materials costs outran bid prices for as long as 26 months from late 2009 to early 2012 and for 25 months from late 2016 to late 2018. The current gap hasn't lasted as long but the peak was more than twice as high as in previous episodes, indicating the pain for contractors has been that much more intense.

**26 months**  
The year-over-year change in materials costs may exceed the change in bid prices for 2 years or more



Figure 6



# What can contractors and owners do?

Contractors can provide project owners with timely and credible third-party information about changes in relevant material costs and supply-chain snarls that may impact the cost and completion time for a project that is underway or for which a bid has already been submitted.

Owners can authorize appropriate adjustments to design, completion date, and payments to accommodate or work around these impediments. Nobody welcomes a higher bill, but the alternative of having a contractor go out of business because of impossible costs or timing is likely to be worse for many owners.

For projects that have not been awarded or started, owners should start with realistic expectations about current costs and the likelihood of increases. They should provide potential bidders with accurate and complete design information to enable bidders to prepare bids that minimize the likelihood of unpleasant surprises for either party.

Owners and bidders may want to consider price-adjustment clauses that would protect both parties from unanticipated swings in materials prices. Such contract terms can enable the contractor to include a smaller contingency in its bid, while providing the owner an opportunity to share in any savings from downward price movements (as has occurred recently with lumber, diesel fuel, and some metals prices). The ConsensusDocs set of contract documents ([www.consensusdocs.org](http://www.consensusdocs.org)) is one source of industry-standard model language for such terms. The ConsensusDocs website includes a price escalation resource center (<https://www.consensusdocs.org/price-escalation-clause/>).

The parties may also want to discuss the best timing for ordering materials and components. Buying items earlier than usual can provide protection against cost increases. But purchase before use entails paying sooner for the items; potentially paying for storage, security against theft and damage, and insurance; and the possibility of design changes that make early purchase unwise.

# Conclusion

The construction industry is in the midst of a period of exceptionally steep and fast-rising costs for a variety of materials, compounded by major supply-chain disruptions and difficulty finding enough workers—a combination that threatens the financial health of many contractors. No single solution will resolve the situation, but there are steps that government officials, owners, and contractors can take to lessen the pain.

Federal trade policy officials can act immediately to end tariffs and quotas on imported products and materials. With many U.S. mills and factories already at capacity, bringing in more imports at competitive prices will cool the overheated price spiral and enable many users of products that are in short supply to avoid layoffs and shutdowns.

The federal government can improve the labor supply by allowing employers to sponsor more foreign-born workers to fill positions for which there are not enough qualified applicants. In addition, the federal government should fund and approve more apprenticeship and training programs to enable students and career-switchers to acquire the skills needed for construction trades.

Officials at all levels of government should review all regulations, policies, and enforcement actions that may be unnecessarily driving up costs and slowing importation, domestic production, transport, and delivery of raw materials, components, and finished goods.

Owners need to recognize that fast-changing materials costs and availability require a quick decision regarding bids and requests for changes. For new and planned projects, owners should expect quite different pricing from previous estimates. They may want to consider building in more flexibility regarding design, timing, or cost-sharing.

Contractors need, more than ever, to closely monitor costs and delivery schedules for materials and to communicate information with owners, both before submitting bids and throughout the construction process.

Materials prices do eventually reverse course. Owners and contractors alike will benefit when that happens. Until then, cooperation and communication can help reduce the damage.

## AGC resources

This document will be updated if market conditions warrant. Check for the latest edition at:  
<https://www.agc.org/learn/construction-data/agc-construction-inflation-alert> for the latest edition

The AGC website, [www.agc.org](http://www.agc.org), has a variety of resources available to contractors, owners, and others wanting to know more about the construction industry.

AGC posts tables showing changes in PPIs and national, state, and metro construction employment each month at:  
<https://www.agc.org/learn/construction-data>

AGC's Data DIGest is a weekly one-page summary of economic news relevant to construction. Subscribe at:  
[https://store.agc.org/Store/Store/StoreLayouts/Item\\_Detail.aspx?iProductCode=4401](https://store.agc.org/Store/Store/StoreLayouts/Item_Detail.aspx?iProductCode=4401)  
or email chief economist Ken Simonson at [ken.simonson@agc.org](mailto:ken.simonson@agc.org).

Construction documents are available for viewing and purchase from ConsensusDocs at [www.consensusdocs.org](http://www.consensusdocs.org), including the price escalation resource center, [www.consensusdocs.org/price-escalation-clause/](http://www.consensusdocs.org/price-escalation-clause/)

# C-100(2022)

Updated June 2022

## Quick Start Guide

### GENERAL INFORMATION

- 1) The intended use of the C-100(2022) is to enable project managers to communicate their project cost estimates to budget officers in the standard format required for capital project budget requests/submittals to OFM.
- 2) This workbook is protected so that the worksheets within it cannot be moved or deleted in the usual manner. This protection is necessary to ensure that the cost estimate details and formulas align with the estimating application in the Capital Budgeting System.
- 3) The estimating format to develop the maximum allowable construction cost (MACC) is presented in Uniformat II.
- 4) Form-calculated costs such as A/E Basic Design Service fees and Agency Project Management costs are dependent on other estimated project costs such as MACC, equipment, etc.
- 5) Project estimates generated with this tool are not sufficient for budget request submittals to OFM. Use the Capital Budgeting System to submit capital project budget requests and attach the C-100 form.
- 6) Contact your assigned OFM Capital Budget Analyst with questions.

[OFM Capital Budget Analyst](#)

### INSTRUCTIONS

- 1) Only green cells are available for data entry.
- 2) Fill in all known cells in the 'Summary' tab prior to moving on to the cost entry tabs A-G.
- 3) It is recommended, but not required, to fill out cost entry tabs in the following order:  
A. Acquisition, C. Construction Contracts, D. Equipment, G. Other Costs, B. Consultant Services, F. Project Management, then E. Artwork.
- 4) If additional rows are inserted to capture additional project costs, a description must be provided in the Notes column or within Tab H. Additional Notes. Be particularly detailed for additional costs estimated for contingencies and project management.

### FORM-CALCULATED COSTS (FEE CALCULATIONS)

- 1) A/E Basic Design Services:  $AE\ Fee\ \% \times (MACC + Contingency)$
- 2) Design Services Contingency:  $Contingency\ \% \times Consultant\ Services\ Subtotal$
- 3) Construction Contingency:  $Contingency\ \% \times MACC$
- 4) Artwork:  $0.5\% \times Total\ Project\ Cost$
- 5) Agency Project Management (Greater than \$1million):  $(AE\ Fee\ \% - 3\%) \times (Acquisition\ Total + Consultant\ Services\ Total + MACC + Construction\ Contingency + Other\ Costs)$

**STATE OF WASHINGTON**  
**AGENCY / INSTITUTION PROJECT COST SUMMARY**

*Updated June 2022*

Agency	Department of Health, Public Health Laboratories
Project Name	South Laboratory Addition
OFM Project Number	30000379

Contact Information	
Name	Terry Williams
Phone Number	206/375-0025 (cell)
Email	<a href="mailto:terry.williams@doh.wa.gov">terry.williams@doh.wa.gov</a>

Statistics			
Gross Square Feet	38,780	MACC per Gross Square Foot	\$1,366
Usable Square Feet	24,700	Escalated MACC per Gross Square Foot	\$1,494
Alt Gross Unit of Measure			
Space Efficiency	63.7%	A/E Fee Class	A
Construction Type	Laboratories (Research)	A/E Fee Percentage	7.07%
Remodel	No	Projected Life of Asset (Years)	50
Additional Project Details			
Procurement Approach	DBB	Art Requirement Applies	Yes
Inflation Rate	4.90%	Higher Ed Institution	No
<a href="#">Sales Tax Rate %</a>	10.30%	Location Used for Tax Rate	Shoreline
Contingency Rate	5%		
Base Month (Estimate Date)	August-22	OFM UFI# (from FPMT, if available)	A04008
Project Administered By	DES		

Schedule			
Pre-design Start	March-20	Pre-design End	September-20
Design Start	August-22	Design End	July-23
Construction Start	September-23	Construction End	November-25
Construction Duration	26 Months		

Green cells must be filled in by user

Project Cost Estimate			
Total Project	<b>\$69,061,524</b>	Total Project Escalated	<b>\$75,214,255</b>
		Rounded Escalated Total	<b>\$75,214,000</b>

**Cost Estimate Summary**

Acquisition			
Acquisition Subtotal	\$0	Acquisition Subtotal Escalated	\$0

Consultant Services			
Predesign Services	\$211,000		
Design Phase Services	\$2,973,273		
Extra Services	\$1,791,000		
Other Services	\$1,462,006		
Design Services Contingency	\$321,864		
<b>Consultant Services Subtotal</b>	<b>\$6,759,143</b>	<b>Consultant Services Subtotal Escalated</b>	<b>\$7,040,721</b>

Construction			
Maximum Allowable Construction Cost (MACC)	\$52,970,688	Maximum Allowable Construction Cost (MACC) Escalated	\$57,956,129
DBB Risk Contingencies	\$0		
DBB Management	\$0		
Owner Construction Contingency	\$2,648,534		\$2,930,074
Non-Taxable Items	\$0		\$0
Sales Tax	\$5,728,780	Sales Tax Escalated	\$6,271,279
<b>Construction Subtotal</b>	<b>\$61,348,002</b>	<b>Construction Subtotal Escalated</b>	<b>\$67,157,482</b>

Equipment			
Equipment	\$526,000		
Sales Tax	\$54,178		
Non-Taxable Items	\$0		
<b>Equipment Subtotal</b>	<b>\$580,178</b>	<b>Equipment Subtotal Escalated</b>	<b>\$641,852</b>

Artwork			
<b>Artwork Subtotal</b>	<b>\$374,200</b>	<b>Artwork Subtotal Escalated</b>	<b>\$374,200</b>

Agency Project Administration			
Agency Project Administration Subtotal	\$0		
DES Additional Services Subtotal	\$0		
Other Project Admin Costs	\$0		
<b>Project Administration Subtotal</b>	<b>\$0</b>	<b>Project Administration Subtotal Escalated</b>	<b>\$0</b>

Other Costs			
<b>Other Costs Subtotal</b>	<b>\$0</b>	<b>Other Costs Subtotal Escalated</b>	<b>\$0</b>

Project Cost Estimate			
Total Project	<b>\$69,061,524</b>	Total Project Escalated	<b>\$75,214,255</b>
		Rounded Escalated Total	<b>\$75,214,000</b>

## Funding Summary

	Project Cost (Escalated)	Funded in Prior Biennia	New Approp Request 2023-2025	2025-2027	Out Years
<b>Acquisition</b>					
Acquisition Subtotal	\$0				\$0
<b>Consultant Services</b>					
Consultant Services Subtotal	\$7,040,721	\$5,129,000	\$1,911,721		\$0
<b>Construction</b>					
Construction Subtotal	\$67,157,482		\$67,157,482		\$0
<b>Equipment</b>					
Equipment Subtotal	\$641,852		\$641,852		\$0
<b>Artwork</b>					
Artwork Subtotal	\$374,200		\$374,200		\$0
<b>Agency Project Administration</b>					
Project Administration Subtotal	\$0				\$0
<b>Other Costs</b>					
Other Costs Subtotal	\$0				\$0

<b>Project Cost Estimate</b>					
Total Project	\$75,214,255	\$5,129,000	\$70,085,255	\$0	\$0
	\$75,214,000	\$5,129,000	\$70,085,000	\$0	\$0
Percentage requested as a new appropriation			93%		

**What is planned for the requested new appropriation? (Ex. Acquisition and design, phase 1 construction, etc.)**

Construction of the new addition and consultants Construction Administration Services

*Insert Row Here*

**What has been completed or is underway with a previous appropriation?**

The Pre-design has been completed and the Design phase is underway

*Insert Row Here*

**What is planned with a future appropriation?**

Construction of the South Laboratory Addition is planned for the 23-25 budget request. There are no future requests after construction.

*Insert Row Here*

## Cost Estimate Details

Acquisition Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Purchase/Lease					
Appraisal and Closing					
Right of Way					
Demolition					
Pre-Site Development					
Other					
Insert Row Here					
<b>ACQUISITION TOTAL</b>	<b>\$0</b>		<b>NA</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Consultant Services					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Pre-Schematic Design Services</b>					
Programming/Site Analysis					
Environmental Analysis					
Predesign Study	\$196,000				
Design Charrette	\$15,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$211,000</b>		<b>1.0000</b>	<b>\$211,000</b>	Escalated to Design Start
<b>2) Construction Documents</b>					
<b>A/E Basic Design Services</b>	\$2,713,273				69% of A/E Basic Services
Lab Planner	\$260,000				
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$2,973,273</b>		<b>1.0193</b>	<b>\$3,030,657</b>	Escalated to Mid-Design
<b>3) Extra Services</b>					
Civil Design (Above Basic Svcs)	\$150,000				
Geotechnical Investigation	\$106,000				
Commissioning	\$136,000				
Site Survey	\$20,000				
Testing	\$130,000				
LEED Services	\$40,000				
Voice/Data Consultant	\$25,000				
Value Engineering	\$52,000				
Constructability Review	\$52,000				
Environmental Mitigation (EIS)	\$0				
Landscape Consultant	\$110,000				
Interior Design	\$100,000				
Exterior Waterproofing Consultant	\$60,000				
Security Consultant	\$60,000				
Acoustical Consultant	\$50,000				
Audio Visual Consultant	\$35,000				
ZNE and Cargon Consultant	\$20,000				
Cost Estimating Consultant	\$100,000				
Life Cycle Cost Analysis	\$25,000				
Energy Life Cycle Cost Analysis	\$45,000				
A/E - Value Engineering	\$25,000				
A/E - Constructability Review	\$25,000				
Air Entrainment Study	\$40,000				
Artwork Coordination	\$5,000				
Reimbursables/Reprographics	\$50,000				
Models/Render'gs/Presentations	\$30,000				
Permitting	\$300,000				
Insert Row Here					



<b>Sub TOTAL</b>		<b>\$1,791,000</b>	<b>1.0193</b>	<b>\$1,825,567</b>	Escalated to Mid-Design
<b>4) Other Services</b>					
<b>Bid/Construction/Closeout</b>		\$1,219,006			31% of A/E Basic Services
HVAC Balancing		\$50,000			
Staffing					
Advertising		\$3,000			
Enhanced CA-Architect		\$60,000			
Enhanced CA-MEP		\$25,000			
Enhanced CA-Lab Planner		\$35,000			
A/E Commissioning Participation		\$20,000			
Record Documents		\$50,000			
Insert Row Here					
<b>Sub TOTAL</b>		<b>\$1,462,006</b>	<b>1.1063</b>	<b>\$1,617,418</b>	Escalated to Mid-Const.
<b>5) Design Services Contingency</b>					
Design Services Contingency		\$321,864			
Other					
Insert Row Here					
<b>Sub TOTAL</b>		<b>\$321,864</b>	<b>1.1063</b>	<b>\$356,079</b>	Escalated to Mid-Const.
<b>CONSULTANT SERVICES TOTAL</b>		<b>\$6,759,143</b>		<b>\$7,040,721</b>	

Green cells must be filled in by user

## Cost Estimate Details

Construction Contracts				
Item	Base Amount	Escalation Factor	Escalated Cost	Notes
<b>1) Site Work</b>				
G10 - Site Preparation	\$1,475,000			
G20 - Site Improvements	\$5,358,000			
G30 - Site Mechanical Utilities	\$974,000			
G40 - Site Electrical Utilities	\$180,000			
G60 - Other Site Construction				
Special Construction (solar)	\$3,557,620			Site PV array + supports
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$11,544,620</b>	<b>1.0504</b>	<b>\$12,126,469</b>	
<b>2) Related Project Costs</b>				
Offsite Improvements				
City Utilities Relocation				
Parking Mitigation				
Stormwater Retention/Detention				
Other				
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.0504</b>	<b>\$0</b>	
<b>3) Facility Construction</b>				
A10 - Foundations	\$850,000			
A20 - Basement Construction				
B10 - Superstructure	\$5,569,000			
B20 - Exterior Closure	\$5,375,000			
B30 - Roofing	\$1,309,000			
C10 - Interior Construction	\$2,111,000			
C20 - Stairs	\$151,000			
C30 - Interior Finishes	\$1,844,000			
D10 - Conveying	\$425,000			
D20 - Plumbing Systems	\$1,830,000			
D30 - HVAC Systems	\$5,730,000			
D40 - Fire Protection Systems	\$479,000			
D50 - Electrical Systems	\$5,102,000			
F10 - Special Construction				
F20 - Selective Demolition				
General Conditions	\$4,590,000			
Fixed Equipment + Furnishings	\$2,524,000			Fixed Equipment
Special Construction (Solar)	\$3,537,068			Bldg. PV array + supports
Insert Row Here				
<b>Sub TOTAL</b>	<b>\$41,426,068</b>	<b>1.1063</b>	<b>\$45,829,660</b>	
<b>4) Maximum Allowable Construction Cost</b>				
<b>MACC Sub TOTAL</b>	<b>\$52,970,688</b>		<b>\$57,956,129</b>	

\$1,366

\$1,494 per GSF

This Section is Intentionally Left Blank

**7) Owner Construction Contingency**

Allowance for Change Orders	\$2,648,534		
Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$2,648,534</b>	<b>1.1063</b>	<b>\$2,930,074</b>

**8) Non-Taxable Items**

Other			
Insert Row Here			
<b>Sub TOTAL</b>	<b>\$0</b>	<b>1.1063</b>	<b>\$0</b>

**9) Sales Tax**

<b>Sub TOTAL</b>	<b>\$5,728,780</b>		<b>\$6,271,279</b>
------------------	--------------------	--	--------------------

<b>CONSTRUCTION CONTRACTS TOTAL</b>	<b>\$61,348,002</b>		<b>\$67,157,482</b>
-------------------------------------	---------------------	--	---------------------

Green cells must be filled in by user

## Cost Estimate Details

Equipment					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Equipment</b>					
E10 - Equipment					
E20 - Furnishings	\$526,000				
F10 - Special Construction					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$526,000</b>		<b>1.1063</b>	<b>\$581,914</b>	
<b>2) Non Taxable Items</b>					
Other					
Insert Row Here					
<b>Sub TOTAL</b>	<b>\$0</b>		<b>1.1063</b>	<b>\$0</b>	
<b>3) Sales Tax</b>					
<b>Sub TOTAL</b>	<b>\$54,178</b>			<b>\$59,938</b>	
<b>EQUIPMENT TOTAL</b>					
	<b>\$580,178</b>			<b>\$641,852</b>	

Green cells must be filled in by user

## Cost Estimate Details

Artwork					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Artwork</b>					
Project Artwork	\$374,200				0.5% of total project cost for new construction
Higher Ed Artwork	\$0				0.5% of total project cost for new and renewal construction
Other					
Insert Row Here					
<b>ARTWORK TOTAL</b>	<b>\$374,200</b>		<b>NA</b>	<b>\$374,200</b>	

Green cells must be filled in by user

## Cost Estimate Details

Project Management					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
<b>1) Agency Project Management</b>					
Agency Project Management	\$0				
Additional Services					
Other					
Insert Row Here					
<i>Subtotal of Other</i>	\$0				
<b>PROJECT MANAGEMENT TOTAL</b>	<b>\$0</b>		<b>1.1063</b>	<b>\$0</b>	

Green cells must be filled in by user

## Cost Estimate Details

Other Costs					
Item	Base Amount		Escalation Factor	Escalated Cost	Notes
Mitigation Costs					
Hazardous Material Remediation/Removal					
Historic and Archeological Mitigation					
Other					
Insert Row Here					
<b>OTHER COSTS TOTAL</b>	<b>\$0</b>		<b>1.0504</b>	<b>\$0</b>	

Green cells must be filled in by user

**C-100(2022)**  
**Additional Notes**

**Tab A. Acquisition**

<i>Insert Row Here</i>

**Tab B. Consultant Services**

<i>Insert Row Here</i>

**Tab C. Construction Contracts**

<i>Insert Row Here</i>

**Tab D. Equipment**

<i>Insert Row Here</i>

**Tab E. Artwork**

<i>Insert Row Here</i>

**Tab F. Project Management**

<i>Insert Row Here</i>

**Tab G. Other Costs**

<i>Insert Row Here</i>



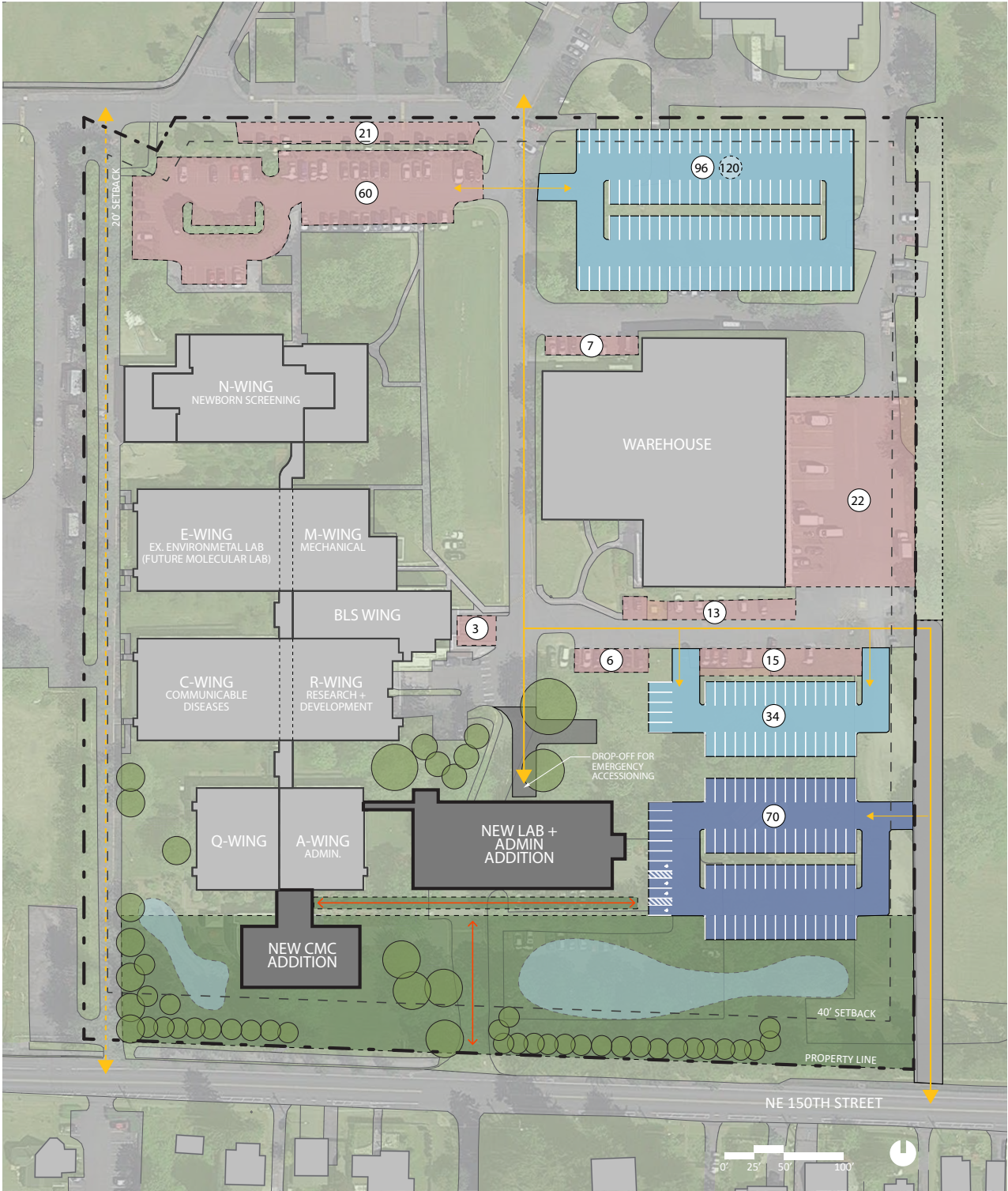


Figure 4R: Parking diagram w/ vehicular circulation

- PROPOSED VISITOR LOT
- PROPOSED TEMPORARY LOT
- EXISTING PARKING TO REMAIN
- PROPOSED DRIVE AISLE
- FUTURE DRIVE AISLE EXTENSION
- VEHICULAR ACCESS
- EMERGENCY VEHICLE ACCESS
- PEDESTRIAN ACCESS

# PREDESIGN DOCUMENT

PREPARED FOR:  
**WASHINGTON STATE DEPARTMENT OF HEALTH**

PREPARED BY:  
**DEPARTMENT OF HEALTH PUBLIC HEALTH LABORATORIES**

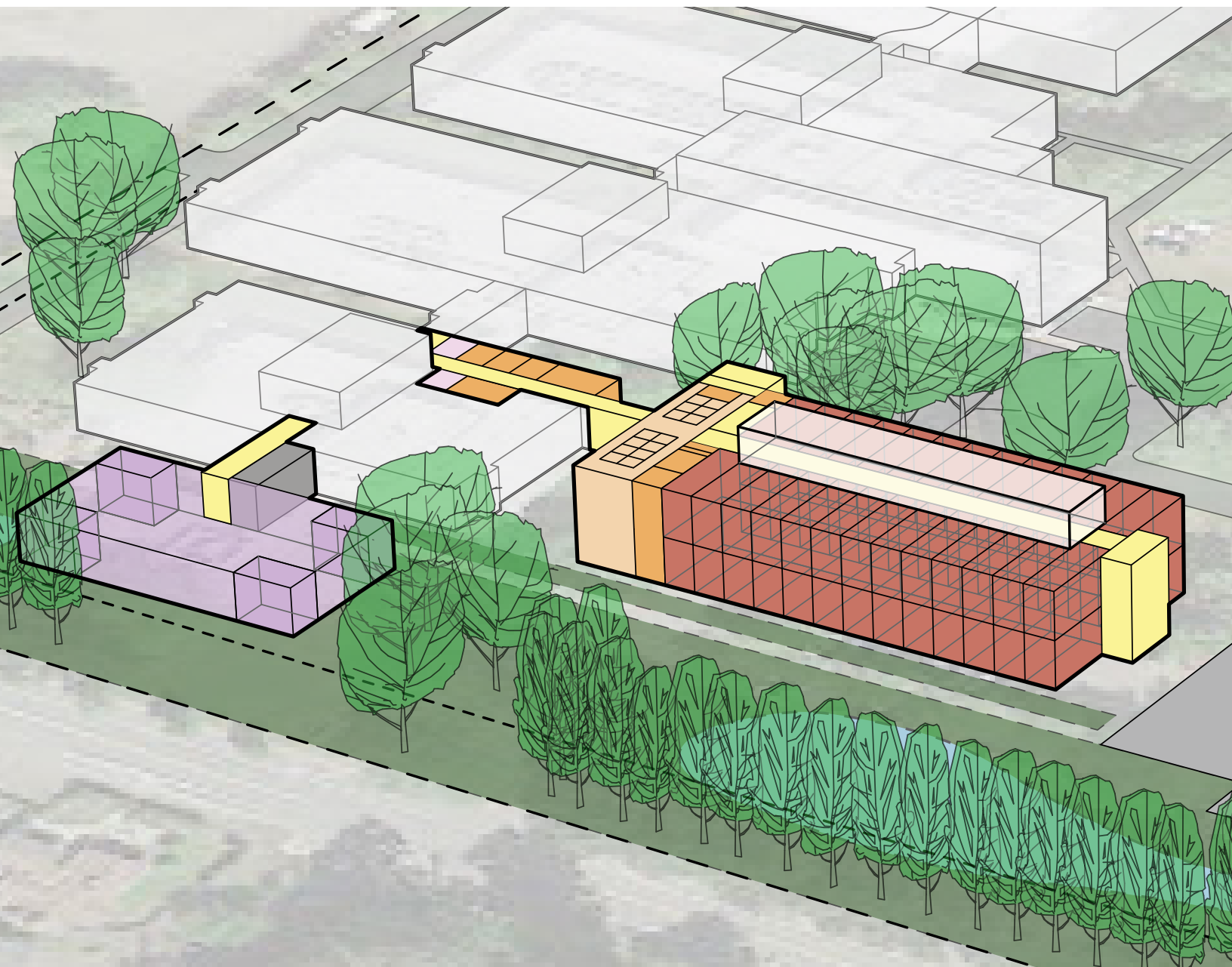
IN COOPERATION WITH:  
**THE MILLER HULL PARTNERSHIP, LLP**

AGENCY NAME  
**WASHINGTON STATE DEPARTMENT OF ENTERPRISE SERVICES**

PROJECT IDENTIFIER  
**2020-176**

PROJECT TITLE  
**SOUTH LABORATORY ADDITION  
WASHINGTON STATE PUBLIC HEALTH LABORATORIES**

AUGUST 14, 2020



# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:23PM

Project Number: 40000036

Project Title: Resource/Support Wing Addition

## Description

Starting Fiscal Year: 2028

Project Class: Program

Agency Priority: 8

### Project Summary

This project is a 2,800 sf addition to Public Health Laboratory Resource-Support Wing (R-Wing). The project includes a new loading dock space, new cylinder storage space, new chemical storage space, new emergency response supply storage, and new lab supply storage. It will be designed and constructed in conjunction with the remodel of the existing R-Wing. The added growth and number of processes that the laboratory conducts today are much larger than when the PHL was designed in 1985 (i.e. 70 original staff vs about 235 current staff). The existing storage areas have insufficient space for the amount of lab supplies, cylinder tanks, and chemical storage required by today's laboratory. This addition will provide adequate space for central storage of lab supplies and provide a new loading dock and receiving area for supplies and equipment to be received.

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

The existing Laboratory Resource-Support Wing (R-Wing) was built in 1985 as part of the original PHL laboratory building. The existing R-wing originally supported 70 staff and their processes. Current staff has grown to about 235 and the support wing is running out of space for sufficient storage of lab supplies, cylinder tanks, and chemical storage as well as shipping and receiving area and dock space. The lack of storage space for shipping and receiving has left the lab working as a "just in time" supply group, only storing the very most used items. This leads to many delivery trucks during the day and moving product through is a huge effort. The PHL master plan recommends that 2,800 sf of new shipping and receiving/storage space be constructed to accommodate the PHL's growth over the next several decades.

This project is a priority for the PHL due to the growth of the laboratory and the additional supplies that will be received and stored for staff to be an efficient operation. It will also allow the PHL to buy and store additional Personal Protection Equipment (PPE) for times of high use. It could generate savings because the PHL will have the ability to buy more items in bulk. It will allow the existing warehouse to be used as a surge space while the current Resource Wing (R-wing) is being remodeled during the 29-31 biennium.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

The project will construct, a 2,800 sf addition to R-wing. The R-wing addition will have a new expanded loading dock, new cylinder storage space, new chemical storage space, new emergency supply storage, and expanded laboratory supply storage. The storage area will have more space to handle large shipments of supplies and equipment within the receiving area. It will work in conjunction with the R-Wing remodel as it will allow flexibility in the remodel design. It will also give the R-wing remodel project surge space to continue operations during the remodeling of the wing.

This project will be designed and constructed during the 27-29 biennium. The reason not combining this project with the R-wing remodel is that it will give surge space for that remodel in the old storage area. The need for the surge space is because the operations in R-wing cannot be totally shut down during the R-wing remodel.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?**

Funding this request will allow the shipping and receiving group to transition from a "just in time" supply group to having the ability to store supplies in a logistical and comprehensive way. Supplies would always be available for laboratory staff making the work of the lab more efficient and less stressful. R-Wing would also have the space for the additional storage of cylinder tanks, chemical storage, and emergency response supply storage. Additional covered dock space would allow product to be

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:23PM

Project Number: 40000036

Project Title: Resource/Support Wing Addition

## Description

unloaded during inclement weather without getting wet. The additional receiving area within the laboratory will allow all product to be brought into the building when it is received and not left on the loading dock and brought into the building as space becomes available.

If the project is not funded the increased demands placed on the support wing will ultimately begin to affect the operation and efficiency of the PHL. Without this additional space it will also be extremely more difficult to remodel R-Wing without shutting down areas due to construction.

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

Reconfiguration of the Resource-Support Wing to include more storage space but without any additional space did not work program wise. Adding 2,800 GSF to the building enabled the lab to meet program growth requirements with minimum space.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

Other state, regional, and local health partners could be impacted by this funding as these funds will affect the lab's effectiveness and reliability in responding to public health needs.

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

The projects will be funded through State Capital Funds. No federal or other sources of funding are available for this project

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance.**

**Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

This project contributes to the PHLs efficiency in helping other state, regional, and local health partners. This help could be impacted by the support staff's inability to support lab staff and their effectiveness and reliability in responding to public health needs. This project is also supported and recommended in the PHLs master plan that was developed to guide the PHL as it expands its services to the citizens of Washington State.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

Only in the sense that the laboratory is moving toward ZNE. This space would be built using the latest energy conservation methods and energy would be provided to the space with a ground source heat pump (GSHP), sustainable electricity, and solar panels.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Construction of this project does not impact equity in the state in any negative way. The new R-wing Addition will require a percentage of contractors and sub-contractors to be minority and women owned businesses. This process will be overseen by DES during the construction phase.

Construction of the project will also reduce the environmental impacts of the PHL. Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. While not directly affecting the environment for any one lower economic community it will help reduce the environmental impacts of the overall environment of Washington State by using up to date sustainability methods for reducing energy used. By reducing energy used and environmental hazards produced, this project, along with the other projects at the PHL will help reduce

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:23PM

Project Number: 40000036

Project Title: Resource/Support Wing Addition

**Description**

environmental inequity in the Puget Sound Region.

**12. Is there additional information you would like decision makers to know when evaluating this request.**

When this project is built, solar panels (PV) could be installed on the roof to increase the existing PV that was installed during previous biennia. It would give the PHL an even higher percentage of on-site energy generation.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

New Facilities/Additions (Major Projects)

**Growth Management impacts**

This project has no impact on Growth Management. It is part of the PHL 20-year Master Plan that was approved by the City of Shoreline in 2010.

**New Facility:** Yes

**How does this fit in master plan**

This addition is a part of the 20-year master plan. It was put into the master plan so that the lab support program could handle the large amount of growth expected at the Public Health Laboratories.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropr	New Appropr
057-1	State Bldg Constr-State	2,343,000				
	<b>Total</b>	<b>2,343,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<b>2025-27</b>	<b>2027-29</b>	<b>2029-31</b>	<b>2031-33</b>	
057-1	State Bldg Constr-State		2,343,000			
	<b>Total</b>	<b>0</b>	<b>2,343,000</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**Narrative**

There are no operating impacts until the 29-31 biennium

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000036	40000036
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids



# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:20PM

Project Number: 40000035

Project Title: Resource/Support Wing Remodel

## Description

Starting Fiscal Year: 2026

Project Class: Program

Agency Priority: 7

### Project Summary

This project is a remodel of the 8,700 sf Public Health Laboratory Resource/Support Wing (R-Wing). The project includes alterations for laboratory support facilities such as media preparation, glass wash, and glassware sterilization. It will also include new building infrastructure like a new HVAC system and new building controls. It will be designed in conjunction with the new R-Wing addition. The wing, built in 1985, is outdated and is having a hard time providing support to the PHL laboratories due to increased processes and procedures conducted by the PHL. The existing HVAC system has met its 30 year life expectancy. This remodel, as recommended by the PHL master plan, will provide a modern support wing for the expanding PHL. The project will be a "CBPS" project due to the new energy saving features such as the new HVAC system, Lighting and Controls, and envelope upgrades.

### Project Description

#### Project Description:

**1. Identify the problem or opportunity addressed. Why is the request a priority? This narrative should identify unserved/underserved people or communities, operating budget savings, public safety improvements or other backup necessary to understand the need for the request. For preservation projects, it is helpful to include information about the current condition of the facility or system.**

The Public Health Laboratories (PHL) were originally built in 1985 and staffing has grown to meet increased demands from 70 employees in 1985 to about 235 employees today. Since 1985, many of the original laboratory offices and support spaces have been converted to badly needed laboratory spaces. Laboratory technology has also changed since the original building was constructed. Technology has shifted from traditional, bench-oriented methods to a more automated approach, utilizing sophisticated equipment. Improved methods have reduced the need for certain laboratory testing supplies, for instance, the animal room space could be reduced for other support activities. Support activities such as media prep, glass wash, and glassware sterilization have grown along with the staff and lab processes. Work conducted in these spaces has increased dramatically but the spaces have never been remodeled to increase efficiency. The HVAC system has met its 30 year life expectancy and needs to be replacement.

This project is a priority because without the support wing upgrade and expansion, the PHL will have a hard time meeting its growing state and regional responsibilities to the public.

**2. What will the request produce or construct (i.e., predesign or design of a building, construction of additional space, etc.)? When will the project start and be completed? Identify whether the project can be phased, and if so, which phase is included in the request. Please provide detailed cost backup.**

This project will be designed and constructed in conjunction with the Resource-Support Wing Addition. The project will provide remodeled and reconfigured spaces for media preparation, glass wash, and glassware sterilization to more efficiently provide those services. The existing storage space will be expanded into the addition area so that the support group transitions from a "just in time" supply group to a more traditional lab supply group. Offices for Operations, Maintenance, and Procurement Staff will be reconfigured to more suit their needs. The HVAC system will be replaced and reconfigured to meet the new design needs as it has met its 30 year life expectancy.

This project will be pre-designed during the 25-27 biennium, designed during 27-29, and constructed during the 29-31 biennium. This project will not be phased. Cost estimates for the project are included in the attached C-100.

**3. How would the request address the problem or opportunity identified in question 1? What would be the result of not acting?**

Funding this request will allow the Operations staff to keep up with the growing and ever expanding role of the PHL. The support wing has had equipment, such as new autoclaves, added to meet growing lab demands but the R-wing spaces have never been remodeled to increase support staff efficiency. This project will address those issues. Storage of supplies, working in conjunction with the addition project will address storage issues. Offices for support staff will be reconfigured to more support their needs. The HVAC system will be replaced with a more efficient, energy saving, heat recovery system.

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:20PM

Project Number: 40000035

Project Title: Resource/Support Wing Remodel

### Description

Constructing the R-wing addition before the remodel of R-wing will allow the project to have surge space. Surge space is critical to the project as R-wing functions must continue during the remodel process.

If the project is not funded the increased demands placed on the support wing will ultimately begin to affect the operation and efficiency of the PHL

**4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered.**

Explored in conjunction with the R-wing addition, a remodel of the support wing was less expensive than building a new wing and still meet program requirements.

The pre-design document that that will be completed during the 25-27 biennium will explore other possibilities for the layout of the wing, how to incorporate the new addition into existing wing, and look at the sustainability possibilities for the wing.

**5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc.**

Other state, regional, and local health partners could be impacted by this funding as these funds will affect the lab's effectiveness and reliability in responding to public health needs

**6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation or documentation.**

This project will be funded through State Capital Funds. No federal or other sources of funding are available for this project.

**7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate.**

This project contributes to the PHLs efficiency in helping other state, regional, and local health partners. This help could be impacted by the support staffs inability to support lab staff and their effectiveness and reliability in responding to public health needs. This project is also supported and recommended in the PHLs master plan that was developed to guide the PHL as it expands its services to the citizens of Washington State.

**8. Does this decision package include funding for any Information Technology related costs including hardware, software (to include cloud-based services, contracts, or staff? If the answer is yes, you will be prompted to attach a complete IT addendum. (See Chapter 10 of the operating budget instructions for additional requirements.)**

There are no IT-related costs for this project.

**9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 13 (HEAL Act and Puget Sound Recovery) in the 2023-25 Operating Budget Instructions.**

This project has no impact on the PSAA.

**10. How does this project contribute to meeting the greenhouse gas emissions limits established in RCW 70A.45.050, Clean Buildings performance standards in RCW 19.27A.210, or other statewide goals to reduce carbon pollution and /or improve energy efficiency? Please elaborate.**

Only in the sense that the laboratory is moving toward ZNE. This space would be remodeled using the latest energy conservation methods and energy would be provided to the space with sustainable electricity and solar panels. The new Air Handler Unit (AHU) would be an energy efficient reheat unit, chilled beams would be used for cooling, and all lighting would be LED fixtures with lighting controls.

**11. How is your proposal impacting equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities in communities impacted?**

Construction of this project does not impact equity in the state in any negative way. The new R-wing Addition will require a percentage of contactors and sub-contractors to be minority and women owned businesses. This process will be overseen by DES during the construction phase.

Construction of the project will also reduce the environmental impacts of the PHL. Communities of color and communities of low economic standing are typically subjected to more environmental impacts than other communities. While not directly affecting the environment for any one lower economic community it will help reduce the environmental impacts of the overall environment of Washington State by using up to date sustainability methods for reducing energy used. By reducing energy



303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: T3 Terry's Working Version

Report Number: CBS002

Date Run: 9/16/2022 2:20PM

Project Number: 40000035

Project Title: Resource/Support Wing Remodel

**Description**

used and environmental hazards produced, this project, along with the other projects at the PHL will help reduce environmental inequity in the Puget Sound Region.

12. Is there additional information you would like decision makers to know when evaluating this request.

**Location**

City: Shoreline

County: King

Legislative District: 032

**Project Type**

Remodel/Renovate/Modernize (Major Projects)

**Growth Management impacts**

No impact on Growth Management. This is a remodel in an existing building.

New Facility: No

**How does this fit in master plan**

It is part of the PHL 20-year master plan. It was approved by the City of Shoreline in 2010. This is the last major renovation to the PHL as part of the master plan.

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	9,754,000				
	<b>Total</b>	<b>9,754,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<b>2025-27</b>	<b>2027-29</b>	<b>2029-31</b>	<b>2031-33</b>	
057-1	State Bldg Constr-State	235,000	1,032,000	8,487,000		
	<b>Total</b>	<b>235,000</b>	<b>1,032,000</b>	<b>8,487,000</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**Narrative**

There will not be any operating impacts until after the 29-31 biennium when the remodel is completed.

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	T3-A	T3-A
Project Classification	*	All Project Classifications
Capital Project Number	40000035	40000035
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

## **TAB D Capital Project Request – Grant Projects**

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/26/2022 11:08AM

Project Number: 40000025

Project Title: 2019-21 Drinking Water Assistance Program

**Description**

Starting Fiscal Year: 2018  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested necessary authority to administer the Drinking Water State Revolving Fund (DWSRF) Construction Loan Program. Construction loans will address infrastructure needs to solve public health and safety issues, failing or antiquated public infrastructure, emergency situations, or regulatory compliance issues. This re-appropriation is requesting authority for unused funds to continue work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
04R-2	Drinking Water Asst.-Federal	35,000,000	1,303,000	21,764,000	11,933,000	
	<b>Total</b>	<b>35,000,000</b>	<b>1,303,000</b>	<b>21,764,000</b>	<b>11,933,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-2	Drinking Water Asst.-Federal					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/26/2022 11:08AM

**Project Number:** 40000025

**Project Title:** 2019-21 Drinking Water Assistance Program

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

No Operating Impact

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000025	40000025
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/26/2022 11:10AM

Project Number: 40000027

Project Title: 2019-21 Drinking Water System Repairs and Consolidation

**Description**

Starting Fiscal Year: 2018  
 Project Class: Grant - Pass Through  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requests reappropriation of 2021-23 funds into 2023-2025 biennium to consolidate small drinking water systems with larger well-run utilities or fix failing water systems and bring these systems into compliance with the Safe Drinking Water Act.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Dept of Health

RCW that establishes grant: N/A

**Application process used**

This funding will be bundled into the annual Drinking Water State Revolving Fund application cycle and will be used to provide grant incentive funding for consolidation projects that meet the criteria for these funding and will be ranked on public health risk. These projects are generally very high scoring due to the compliance issues for the smaller failing systems that have been acquired.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	1,500,000	120,000	463,000	917,000	
	<b>Total</b>	<b>1,500,000</b>	<b>120,000</b>	<b>463,000</b>	<b>917,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State	0	0	0	0	
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/26/2022 11:10AM

**Project Number:** 40000027

**Project Title:** 2019-21 Drinking Water System Repairs and Consolidation

**Operating Impacts**

---

**Narrative**

No Operating Impact



**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000027	40000027
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/26/2022 11:12AM

Project Number: 40000049

Project Title: 2021-23 Drinking Water Assistance Program

**Description**

Starting Fiscal Year: 2022  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested necessary authority to administer the Drinking Water State Revolving Fund (DWSRF) Construction Loan Program. Construction loans will address infrastructure needs to solve public health and safety issues, failing or antiquated public infrastructure, emergency situations, or regulatory compliance issues. This re-appropriation is requesting authority for unused funds to continue work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
04R-2	Drinking Water Asst.-Federal	112,900,000		112,900,000		
	<b>Total</b>	<b>112,900,000</b>	<b>0</b>	<b>112,900,000</b>	<b>0</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-2	Drinking Water Asst.-Federal					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/26/2022 11:12AM

**Project Number:** 40000049

**Project Title:** 2021-23 Drinking Water Assistance Program

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

No Operating Impact.

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000049	40000049
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/26/2022 11:13AM

Project Number: 40000051

Project Title: 2021-23 Drinking Water Construction Loans - State Match

**Description**

Starting Fiscal Year: 2022  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested appropriation authority for The Drinking Water State Revolving Fund (DWSRF). DWSRF is structured as a federal-state partnership through which a permanent drinking water infrastructure revolving loan fund has been created in every state. Without matching state funds, Washington State cannot access new federal funds. Public Works Assistance has provided state matching dollars since the inception of the DWSRF program in 1996. This re-appropriation is requesting authority for unused funds to continue work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
04R-1	Drinking Water Asst.-State	20,400,000		20,400,000		
	<b>Total</b>	<b>20,400,000</b>	<b>0</b>	<b>20,400,000</b>	<b>0</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-1	Drinking Water Asst.-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/26/2022 11:13AM

**Project Number:** 40000051

**Project Title:** 2021-23 Drinking Water Construction Loans - State Match

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

No Operating Impacts.

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000051	40000051
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 4:46PM

Project Number: 40000065

Project Title: Addressing Drinking Water System Rehabilitations, Consolidations,

## Description

Starting Fiscal Year: 2024

Project Class: Grant

Agency Priority: 0

### Project Summary

Small water systems face greater challenges due to declining quality in water sources, the age of the system's infrastructure, the lack of financial, managerial, and technical capacity of the system and other challenges. The department requests funding to provide financial assistance for the water system acquisition and rehabilitation program, and for costs related to transfer of ownership or receivership of failing drinking water systems to counties, and Group A systems with a history of sound utility management.

### Project Description

1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system. Failing water systems result in communities that don't have access to safe and reliable drinking water. In extreme cases, traditional formal enforcement is ineffective in achieving compliance with drinking water regulations. In such cases there is a need to replace the existing purveyor with an entity that will provide responsible operation of a water system. Small water systems continue to be at the greatest risk of failing due to many scenarios. Historically, every water system that requires the process of receivership has been due to a failure of governance (the associated ownership, leadership, and fiscal ability of the water systems). This has typically been due to a lack of willingness or ability to establish a rate structure to address infrastructure needs to support public health. When a water system demonstrates inability or unwillingness to continue to operate for the health and safety of its community the state uses the receivership process while working in coordination with the receiver to find or develop a supported governance structure. The Department works diligently to find willing entities either as a receiver or to consolidate. If a willing entity cannot be found, counties are the receivers of last resort.

2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup. The Department will call for applications from qualifying entities in order to provide for grants to well-managed, publicly-owned group A water utilities for the repair and consolidation of group A and B water systems under the following conditions: (1) A grant may be provided when a water system has been voluntarily transferred to a publicly owned water utility within the last three years. The grant may be used for repair and consolidation costs. (2) The grant applicant will provide the department of health with an accounting of rehabilitation costs and the value of the system. The grant will be used primarily to cover project design and construction costs, and in limited cases to cover the cost of system acquisitions, as determined by the department of health in evaluating grant applications. (3) Grants will primarily be used to cover project construction costs that customers benefiting from the project cannot afford to repay through loans, as determined by the department of health and the publicly owned utility receiving the grant to complete the project. (4) Applicants must provide a plan demonstrating that project completion will occur within three years of the grant contract execution. (5) Each grant must be less than twenty-five percent of the total appropriation. Additionally, these funds will provide for associated costs for any receivership that may occur. Under Chapter 7.60 RCW and RCW 43.70.195 the Department can ask the court to appoint a receiver to take over operation of a problem water system. Generally, a receivership is intended to be a temporary arrangement until a permanent solution is found. Counties are the "receivers of last resort" when another willing entity cannot be found. The funding request is based upon information received through communication with utilities and historical spending needs. This funding will continue to be used to address water systems at risk of failing and working to either rehabilitate those systems to avoid receivership or find opportunities to help them consolidate with other well managed systems.

3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action? This proposal allows water systems facing compliance issues to access necessary funds to meet the needs of the water system when there is a technical and managerial capacity but lacks financial needs. This provides a source of funding that will also help the Department prevent utilities going into receivership due to failing infrastructure that can't otherwise be addressed by federal funds. Water systems that do not meet compliance with the Safe Drinking Water Act (SDWA) pose a risk to the health and well-being of the consumers. The risk is compounded when water system receivers do not have the resources to



303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 4:46PM

Project Number: 4000065

Project Title: Addressing Drinking Water System Rehabilitations, Consolidations,

**Description**

operate and bring systems back into compliance. Systems without the means to return to compliance either through water system’s efforts or receivership process may encounter county code enforcement including condemnation, or health officer orders. 4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered. No other alternatives were explored as this is the only such program established for this purpose. 5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc. This program is available to support all Group A water systems in the state. Additionally, we find that most failing system serve low-income communities. 6. Does this project or program leverage non-state funding? If yes, how much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation. No. 7. Describe how this project supports the agency’s strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate. The proposal contributes to the Governor’s Results Washington goal of Healthy and Safe Communities by ensuring all residents of Washington have equitable access to safe and reliable drinking water to communities throughout the state. The proposal relates to agency’s strategic plan, including Outward Mindset, Funding, and Equity, Diversity, and Inclusion foundational transformations. This proposal helps meet our agency needs by ensuring safe and reliable drinking water and our partners to ensure they are providing safe and reliable drinking water to all people of Washington. By supporting this request, we can support court-ordered receiving counties to have the resources available to support these water systems and obtain compliance with safe drinking water regulations. This proposal will equitably support underserved, overburdened communities by increasing the economies of scale, and ensuring infrastructure maintenance and replacement using innovative technologies. 8. Does this project include IT-related costs, including hardware, software, cloud-based services, contracts, or staff? If yes, attach IT Addendum. No 9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions. NA 10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate. No impact to statewide goals to reduce carbon pollution or improve energy efficient. 11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I communities impacted? Failing water systems may have a disproportionate negative impact on either low- income communities or low-income residents. Economies of scale need to come into play often because the ratepayers can’t pay any more due to low-income status. This policy results in bigger health disparities for those communities. This often happens due to increasing rates to cover the costs of dealing with problems created by poor management of the system as well as increasing cost of addressing safe water from impacted water supplies. This proposal helps minimize the equity gap between water systems with access to affluent populations who often pay higher fees versus those serving disadvantaged water system often with lower income populations. This proposal supports water system infrastructure maintenance and compliance for systems that are facing enforcement penalties or operational gaps to avoid receivership. Engagement and partnerships with communities and system owners/managers will be crucial to developing successful plans to reach compliance with flexible funding options. 12. Is there additional information you would like decision makers to know when evaluating this request. No.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

**Application process used**

The Department will run an application cycle in the fall of 2023.

**Growth Management impacts**

N/A

**Funding**

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 4:46PM

Project Number: 40000065

Project Title: Addressing Drinking Water System Rehabilitations, Consolidations,

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
057-1	State Bldg Constr-State	50,000,000				10,000,000
	<b>Total</b>	<b>50,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000,000</b>

		Future Fiscal Periods			
		2025-27	2027-29	2029-31	2031-33
057-1	State Bldg Constr-State	10,000,000	10,000,000	10,000,000	10,000,000
	<b>Total</b>	<b>10,000,000</b>	<b>10,000,000</b>	<b>10,000,000</b>	<b>10,000,000</b>

**Operating Impacts**

No Operating Impact

**Narrative**

There is no associated program within the operating budget

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000065	40000065
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/21/2022 3:16PM

Project Number: 30000409

Project Title: Drinking Water Construction Loans

**Description**

Starting Fiscal Year: 2018  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested necessary appropriation authority to administer the Drinking Water State Revolving Fund (DWSRF) Construction Loan Program. Construction loans will address infrastructure needs to solve public health and safety issues, failing or antiquated public infrastructure, emergency situations, or regulatory compliance issues. This re-appropriation is requesting authority for unused funds to continue work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
04R-1	Drinking Water Asst.-State	117,999,714	69,609,714	1,801,000	46,589,000	
	<b>Total</b>	<b>117,999,714</b>	<b>69,609,714</b>	<b>1,801,000</b>	<b>46,589,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-1	Drinking Water Asst.-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/21/2022 3:16PM

**Project Number:** 30000409

**Project Title:** Drinking Water Construction Loans

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

No Operating Impact.

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	30000409	30000409
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/21/2022 3:12PM

Project Number: 30000334

Project Title: Drinking Water Preconstruction Loans

**Description**

Starting Fiscal Year: 2016  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested appropriation authority in the 2015-17 biennium for a pilot project to provide low-interest pre-construction loans to municipal and privately owned water systems to prepare for drinking water infrastructure projects. This pilot project is unfinished and DOH requests authority for the unused funds to complete the work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Drinking Water loan applications are received annually and ranked by the Office of Drinking Water at the Department of Health to provide loans to public water systems enabling them to comply with state and federal drinking water regulations and provide customers with safe reliable drinking water. Pre-construction loans will be offered in conjunction with the annual loan cycle.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
04R-1	Drinking Water Asst.-State	6,000,325	585,325	916,000	4,499,000	
	<b>Total</b>	<b>6,000,325</b>	<b>585,325</b>	<b>916,000</b>	<b>4,499,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-1	Drinking Water Asst.-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/21/2022 3:12PM

**Project Number:** 30000334

**Project Title:** Drinking Water Preconstruction Loans

---

**Operating Impacts**

**Narrative**

No Operating Impact.



**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	30000334	30000334
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/21/2022 3:42PM

Project Number: 40000006

Project Title: Drinking Water System Repairs and Consolidation

**Description**

Starting Fiscal Year: 2018  
 Project Class: Grant - Pass Through  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) requested reappropriation of 2021-23 funds into 2023-25 biennium to consolidate small drinking water systems with larger well-run utilities or fix failing water systems and bring these systems into compliance with the Safe Drinking Water Act.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: N/A

**Application process used**

This funding will be bundled into the annual Drinking Water State Revolving Fund application cycle and will be used to provide grant incentive funding for consolidation projects that meet the criteria for these funding and will be ranked on public health risk. These projects are generally very high scoring due to the compliance issues for the smaller failing systems that have been acquired.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	5,000,000	3,538,000	677,000	785,000	
	<b>Total</b>	<b>5,000,000</b>	<b>3,538,000</b>	<b>677,000</b>	<b>785,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/21/2022 3:42PM

**Project Number:** 40000006

**Project Title:** Drinking Water System Repairs and Consolidation

**Operating Impacts**

---

**Narrative**

No Operating Impact.

**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000006	40000006
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:06PM

Project Number: 4000067

Project Title: DWSRF Construction Loans 04R2

**Description**

Starting Fiscal Year: 2024  
 Project Class: Grant  
 Agency Priority: 0

**Project Summary**

The Office of Drinking Water (ODW) administers the Drinking Water State Revolving Fund (DWSRF) program within our state to provide low interest infrastructure loans to water systems. Our current allotment is not sufficient to spend the federal funding expected under the current capitalization grant and the Bipartisan Infrastructure Law (BIL) signed by President Biden in 2021.

**Project Description**

1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system. The drinking water infrastructure in the State is aging and needs to be upgraded. Based on 2015 Needs Survey data, EPA calculated the capital improvement needs of Washington's Group A public water systems through the year 2035 at \$11.7 billion. In 2021, President Biden signed the BIL, the single largest investment in water the federal government has ever made. The funding will make significant investments in health, equity, and resilience of communities across the county. The Office of Drinking Water (ODW) administers the DWSRF program within our state to provide low interest infrastructure loans to water systems. Our current allotment is not sufficient to spend the federal appropriations expected. Our current 04R-2 allotment is not sufficient to spend the federal grants expected. We are currently requesting additional appropriation to spend an additional \$392M in the next two bienniums. This additional appropriation along with the projected \$3M re-appropriated from the 21-23 biennium, the \$78.9M appropriated in the 2022 supplemental budget, and the \$34M already appropriated for FY23-25 DWSRF base grants will meet the expected funding needs of \$507.6M through FY 2027. The ODW has 2 years to request each year's grant funding, ODW elected not to apply for the first year's funding (FY23). To apply to EPA for this funding, ODW must present a project priority list (PPL) of eligible projects and activities in an Intended Use Plan. To establish our PPL, we will solicit applications for the first year of all available funding, except lead service line inventory, between October 1, 2022, and November 30, 2022. because we did not have a list of projects to meet the new federal crosscutters, such as Build America Buy America (BABA) requiring all construction material to be manufactured in the United States. ODW expects be award the following federal awards over the next 5 years (in millions of \$). Available DWSRF Federal Allocations Each Fiscal Year (in millions) SFY24 SFY25 SFY26 SFY27 SFY28 DWSRF Capitalization Grant (with 31% set asides) \$15.7 \$15.7 \$15.7 \$15.7 \$15.7 DWSRF Capitalization Grant (without 31% set asides) \$10.8 \$10.8 \$10.8 \$10.8 \$10.8 Stimulus DWSRF Grant (with 26% set-asides) \$40.2 \$46.9 \$51.2 \$55.5 \$55.5 Stimulus DWSRF Grant (without 26% set-asides) \$29.7 \$34.7 \$37.9 \$41.1 \$41.1 DWSRF Lead Service Line Replacement Grant(0%set-asides) \$63.3 \$63.4 \$63.3 \$63.4 \$63.3 DWSRF Emerging Contaminants Grant (0% set-asides) \$16.9 \$16.9 \$16.9 \$16.9 \$16.9 Total (without operating budget set-asides) \$120.7 \$125.8 \$128.9 \$132.2 \$132.1

2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup. This decision package requests an increase in federal appropriation of \$507.6M for the FY2023-25 and FY2025-27 biennium's. This proposal ensures that Washington's water systems can benefit from this once in a lifetime investment in water system infrastructure. This will allow ODW to increase the loan cycles and the maximum loan amount available. Water system infrastructure around the state will be upgraded or constructed to improve public health by ensuring safe and reliable drinking water throughout the State. Drinking water infrastructure eligible projects using the DWSRF capitalization grant and DWSRF stimulus grants include: · Installation of treatment to address both acute and chronic chemical contamination · Installation of treatment to address microbial risk · Projects that increase system resiliency to climate change, natural disasters, and cybersecurity threats. · Projects that replace failing and aging infrastructure. · Projects that consolidate two water systems · Projects that create a new public water system to address contamination of individual wells or develop new regional water systems. The additional BIL federal appropriations include approximately \$63.3M yearly over the next 5 years to conduct lead service line inventories and replace lead service lines, include customer owned service lines. This will reduce exposure to lead within the state and help water systems meet Governor's directive 16-06 goal of removing all lead service lines and lead components in Group A Public

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:06PM

Project Number: 4000067

Project Title: DWSRF Construction Loans 04R2

### Description

Water drinking systems by 2031. The BIL includes approximately \$16.9M in grant funding over the next 5 years to address emerging contaminants such as per- and polyfluoroalkyl substances (PFAS), pharmaceuticals and personal care products, and unregulated contaminants such as manganese, perchlorate, and 1,4 dioxane. 3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action? DWSRF funding would be obtained for public health protection and compliance with drinking water regulations. If authority is not obtained through this request, then the EPA funding could not be obtained and drinking water systems would be out of compliance and Washington residents would not have safe drinking water. 4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered. ODW considered not requesting any or all of Washington States BIL federal allocation for drinking water systems. Failure to request all or a portion of Washington's BIL federal will reduce the amount of federal funds directed to support drinking water infrastructure, including the amount of grant or loan forgiveness funding the program can provide. This may impact the resiliency, water quality and capacity of the drinking water systems in the State. This funding is crucial in maintaining water system compliance for both water quality and adequacy now and into the future. Alternatively, not requesting the full allocation will reduce the amount of state match required for the DWSRF stimulus grant. Other portions of the BIL funding such as the lead service line replacement grant and the emerging contaminants of control grant do not require any state match to apply for these funds. 5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc. The Drinking Water State Revolving Fund (DWSRF) and Bipartisan Infrastructure Law (BIL) provide funds to Washington State for water system infrastructure projects. The DWSRF allotment requires a 20% state match and the portions of the BIL allotment require a 10% state match in FY24 and 20% state match in FY25. The state match is provided in part or whole by the Public Works Board at the Department of Commerce. City, county, and other quasi-government entities are eligible for these loans and grants, along with tribal owned water system. Tribal owned water systems are not eligible if the system is receiving other SRF set-aside funding for the project. DWSRF loans are supported by water system utilities owned by city and county governments along with other quasi-government entities include public utility districts, water and sewer districts, and homeowner associations. Working with each of these public utilities we have learned of more than \$900M of current infrastructure needs over the next five years. This expansion of the DWSRF loan program is a critical support for low interest loans toward meeting that need. It is also supported by EPA as they have shown to be effective as a tool to help systems be successful at moving forward with construction when they are prepared to do so and keep state revolving fund money and associated federal capitalization be timely invested. Water systems statewide support more loans and larger loans provided by this request to increase allotment. This request is supported by small and medium size water systems throughout the state that need additional resources to complete infrastructure improvements. Publicly owned, privately owned, and for -profit Group A community water systems and nonprofit non-community Group A water systems are all eligible for these loans. 6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation. This appropriation request will allow ODW to spend EPA DWSRF federal grant money for drinking water loans throughout the state. This appropriation ties to the ODW State Match DP that is also submitted for approval. This request provides appropriation for the DWSRF annual grant of \$15.7M and the BIL Stimulus grant of \$40.2M in FY24, \$46.9M in FY25, \$51.2M in FY26 and \$55.5M in FY27. 7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate. The proposal contributes to the Governor's Results Washington goal of Healthy and Safe Communities by funding infrastructure pre-design, pre-construction, and construction activities to ensure safe and reliable drinking water to communities throughout the state. A portion of this funds can be used to conduct lead service line inventories and lead service line replacements in support of Governor's Directive 16- 06. This directive has a goal of removing all lead service lines and lead components in Group A Public Water drinking systems by 2031. The DWSRF construction loan program supports the goal of a Prosperous Economy by providing funding for large and small infrastructure construction projects throughout the state. In addition to supporting economy through a construction project, ensuring safe and reliable drinking water is vital to local economy. The proposal meets relates to agency's strategic plan, including Outward Mindset, Funding, and Equity, Diversity, and Inclusion foundational transformations. The SRF Loan program helps meet our agency needs by ensure safe and reliable drinking water and our partners utilities to construct

# 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:06PM

Project Number: 40000067

Project Title: DWSRF Construction Loans 04R2

## Description

necessary infrastructure to ensure they are providing safe and reliable drinking water to all people of Washington. The SRF loan program helps systems upgrade critical infrastructure while providing low interesting loans and loan forgiveness to small, disadvantaged community water system. These systems may not be able to access funding without this loan program. The DWSRF program is critical in assuring water systems can maintain compliance with both federal and state drinking water regulations. The agency goal is to reduce the number of Washington's population being served water by a water system in violation with a federal drinking water regulation. Currently 6 percent of Washingtonian's served by public water systems, are served water that is in violation with the Safe Drinking Water Act (SDWA). 8. Does this project include IT-related costs, including hardware, software, cloud-based services, contracts, or staff? If yes, attach IT Addendum. No. 9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions. NA 10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate. This request does not impact statewide goals to reduce carbon pollution or improve energy efficiency. 11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I communities impacted? Water system failures increase inequities throughout our communities. In 2019 according to the American Society of Civil Engineering Washington's drinking water infrastructure scored a C- in their assessment. The nation's drinking water infrastructure is composed of 2.2 million miles of mostly underground piping that is reaching the end of its useful life. Nationally there is a water main break every two minutes. Water main breaks disrupting water service and can be a pathway for contamination. Many water systems do not have the resources to pay for expensive repairs and upgrades. DWSRF makes funds available to Group A drinking water systems to pay for infrastructure improvements. The program provides low-interest construction loans to publicly- (municipal) and privately-owned drinking water systems. These loans cover capital improvements that increase public health and compliance with drinking water regulations. To ensure that all communities get their fair share of this much needed infrastructure funding, a portion of the funding must be provided as grants or principal forgiveness loans. ODW must make at least 26% but no more than 49% of the DWSRF capitalization grant available as subsidy to water systems. The BIL requires 49% of the additional DWSRF stimulus grant and the lead service line replacement funds to be provided as grants or loan subsidy. The BIL also requires 100% of the emerging contaminant funding be provided as grants. Loan subsidy is provided to disadvantage communities as defined in WAC 246-296-020 as follows: Disadvantaged community" means the service area of a proposed project within a public water system where the project will result in: (a) Water rates that are more than one and one-half percent of the MHI of the service area; or (b) Restructuring, when one or more public water systems are having financial difficulties. ODW is evaluating the need to update this definition to look at other metrics that may help identify disadvantage and underserved communities at this time. DWSRF is expected to meet Justice40 Initiative. Justice40 was established in President Biden's executive order 14008 and is a whole-of-government effort to ensure that Federal agencies work with states and local communities to make good on President Biden's promise to deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities. DWSRF is also evaluating how to incorporate the HEAL Act (RCW 70A.02) into the program. Staff and partners work together to understand the needs and assess challenges using community engagement and interactive partnerships to provide technical service and guidance to best use this funding opportunity. 12. Is there additional information you would like decision makers to know when evaluating this request No.

## Location

City: Statewide

County: Statewide

Legislative District: 098

## Project Type

Grants

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:06PM

Project Number: 40000067

Project Title: DWSRF Construction Loans 04R2

**Description**

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
04R-2	Drinking Water Asst.-Federal	392,000,000				131,000,000
	<b>Total</b>	<b>392,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131,000,000</b>
		<b>Future Fiscal Periods</b>				
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
04R-2	Drinking Water Asst.-Federal	261,000,000				
	<b>Total</b>	<b>261,000,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

No Operating Impact

**Narrative**

No Operating Impacts.



## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000067	40000067
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:05PM

Project Number: 4000066

Project Title: DWSRF State Match

**Description**

Starting Fiscal Year: 2024

Project Class: Grant

Agency Priority: 0

**Project Summary**

The Office of Drinking Water (ODW) is requesting additional state match dollars to support the drinking water state revolving fund (DWSRF) and the increased funding provided in the Bipartisan Infrastructure Law (BIL) in the 23-25 biennium. Without the increase in state match to these federal dollars ODW will not be able to apply for the entire federal allocation.

**Project Description**

1. What is the problem/opportunity? Identify: priority, underserved people/communities, operating budget savings, public safety improvements & clarifying details. Preservation projects: include information about the current condition of the facility/system. The drinking water infrastructure in the State is aging and needs upgraded. Based on 2015 Needs Survey data, EPA calculated the capital improvement needs of Washington's Group A public water systems through the year 2035 at \$11.7 billion. In 2021, President Biden signed the BIL, the single largest investment in water the federal government has ever made. The funding will make significant investments in health, equity, and resilience of communities across the county. The Office of Drinking Water (ODW) administers the DWSRF program within our state to provide low interest infrastructure loans to water systems. Our current State Match allotment is not sufficient to spend the federal appropriations expected. ODW was allotted \$20.4M in state match in the FY21-23 biennium but due to reduction in DWSRF capitalization grant allocation and other factors only needs \$8.6M. The remaining \$11.8M will not be transferred from the Public Works Assistance Account to ODW and will be re-appropriated to the FY23-25 biennium allotment to support both the DWSRF capitalization and stimulus grants. To apply for all the federal grants ODW projects it will need a total of \$15.3M in state match for the 23-25 biennium, an additional allotment of \$3.5M is necessary for FY2025. The ODW has 2 years to request each year's funding, ODW elected not to apply for the first year's funding (FY23). To apply to EPA for this funding, ODW must present a project priority list (PPL) of eligible projects and activities in an Intended Use Plan. To establish our PPL, we will solicit applications for the first year of all available funding, except lead service line inventory, between October 1, 2022, and November 30, 2022, because we did not have a list of projects to meet the new federal crosscutters, such as Build America Buy America (BABA) requiring all construction material to be manufactured in the United States. ODW expects the following state match is needed based on the estimated federal DWSRF capitalization and stimulus grant allocations over the next 5 years (in millions of \$). State Match Requirements per Fiscal Year (in millions) SFY24 SFY25 SFY26 SFY27 SFY28 DWSRF Capitalization Grant \$15.7 \$15.7 \$15.7 \$15.7 \$15.7 DWSRF Capitalization Grant Required State Match (20%) \$3.2 \$3.2 \$3.2 \$3.2 \$3.2 DWSRF Stimulus Grant \$40.2 \$46.9 \$51.2 \$55.5 \$55.5 DWSRF Stimulus Grant Required State Match (10% in first 2 years, 20% for remaining years.) \$4.0 \$4.7 \$10.3 \$11.1 \$11.1 Total State Match Required. \$7.2 \$7.9 \$13.5 \$14.3 \$14.3 2. What will the request produce or construct (predesign/design of a building, additional space, etc.)? When will the project start/end? Identify whether the project can be phased, and if so, which phase is included in the request. Provide detailed cost backup. This decision package requests an increase State Match allotment by \$3.5M over the FY23-25 biennium. This proposal ensures that Washington's water systems can benefit from this once in a lifetime investment in water system infrastructure. This will allow ODW to increase the loan cycles and the maximum loan amount available. Water system infrastructure around the state will be upgraded or constructed to improve public health by ensuring safe and reliable drinking water throughout the State. Based on 2015 Needs Survey data, EPA calculated the capital improvement needs of Washington's Group A public water systems through the year 2035 at \$11.7 billion. Drinking water infrastructure eligible projects using the DWSRF base grant and DWSRF stimulus grants include: · Installation of treatment to address both acute and chronic chemical contamination · Installation of treatment to address microbial risk · Projects that increase system resiliency to climate change, natural disasters, and cybersecurity threats. · Projects that replace failing and aging infrastructure. · Projects that consolidate two water systems · Projects that create a new public water system to address contamination of individual wells or develop new regional water systems. 3. How would the request address the problem or opportunity identified in question 1? What would be the result of not taking action? This requested state match would allow ODW to apply for millions of new and existing EPA grant money that Congress has appropriated to states through the Bipartisan Infrastructure Law. Funding from these grants would be used to provide low interest loans to water systems to improve their infrastructure. If the requested state match is

## 303 - Department of Health Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:05PM

Project Number: 4000066

Project Title: DWSRF State Match

### Description

not funded ODW would lose approximately \$56M to \$72M per year in federal grant money that is used to support and improve over 4,000 water systems around the state. 4. What alternatives were explored? Why was the recommended alternative chosen? Be prepared to provide detailed cost backup. If this project has an associated predesign, please summarize the alternatives the predesign considered. ODW considered not requesting any or all of Washington States BIL stimulus federal allocation for drinking water systems. Not requesting the full allocation will reduce the amount of state match required for the DWSRF stimulus grant. Failure to request all or a portion of Washington's BIL federal will reduce the amount of federal funds directed to support drinking water infrastructure, including the amount of grant or loan forgiveness funding the program can provide. This may impact the resiliency, water quality and capacity of the drinking water systems in the State. This funding is crucial in maintaining water system compliance for both water quality and adequacy now and into the future. The BIL federal allocations are for federal fiscal years 2022 through 2026 and funding must be requested by the state within 2 years of the allocation. This unprecedented funding will only be available for a limited time and unrequested funding will be reallocated to other states with needs. 5. Which clientele would be impacted by the budget request? Where and how many units would be added, people or communities served, etc. Water systems statewide support more loans and larger loans provided by this request to increase allotment. This request is supported by small and medium size water systems throughout the state that need additional resources to complete infrastructure improvements. Publicly owned, privately owned, and for -profit Group A community water systems and nonprofit non-community Group A water systems are all eligible for these loans. 6. Does this project or program leverage non-state funding? If yes, How much by source? If the other funding source requires cost share, also include the minimum state (or other) share of project cost allowable and the supporting citation of documentation. This request will leverage funding from federal EPA grants. This request will satisfy the EPA match requirements for the DWSRF annual grant of \$15.7M and the BIL Stimulus grant of \$40.2M in FY24, \$46.9M in FY25, \$51.2M in FY26 and \$55.5M in FY27. 7. Describe how this project supports the agency's strategic master plan or would improve agency performance. Reference feasibility studies, master plans, space programming and other analyses as appropriate. The proposal contributes to the Governor's Results Washington goal of Healthy and Safe Communities by funding infrastructure pre-design, pre-construction and construction activities to ensure safe and reliable drinking water to communities throughout the state. The DWSRF construction loan program supports the goal of a Prosperous Economy by providing funding for large and small infrastructure construction projects throughout the state. In addition to supporting economy through a construction project, ensuring safe and reliable drinking water is vital to local economy. The proposal meets relates to agency's strategic plan, including Outward Mindset, Funding, and Equity, Diversity, and Inclusion foundational transformations. The SRF Loan program helps meet our agency needs by ensure safe and reliable drinking water and our partners utilities to construct necessary infrastructure to ensure they are providing safe and reliable drinking water to all people of Washington. The SRF loan program helps systems upgrade critical infrastructure while providing low interesting loans and loan forgiveness to small, disadvantaged community water system. These systems may not be able to access funding without this loan program. The DWSRF program is critical in assuring water systems can maintain compliance with both federal and state drinking water regulations. The agency goal is to reduce the number of Washington's population being served water by a water system in violation with a federal drinking water regulation. Currently 6 percent of Washingtonian's served by public water systems, are served water that is in violation with the Safe Drinking Water Act (SDWA). 8. Does this project include IT-related costs, including hardware, software, cloud-based services, contracts, or staff? If yes, attach IT Addendum. No. 9. If the project is linked to the Puget Sound Action Agenda, describe the impacts on the Action Agenda, including expenditure and FTE detail. See Chapter 12, Puget Sound Recovery in the 2021-23 Operating Budget Instructions. N/A 10. How does the project contribute to statewide goals to reduce carbon pollution and/or improve energy efficiency? Please elaborate. No impact to carbon pollution. 11. How does this project impact equity in the state? Which communities are impacted by this proposal? Include both demographic and geographic communities. How are disparities I communities impacted? Water system failures increase inequities throughout our communities. In 2019 according to the American Society of Civil Engineering Washington's drinking water infrastructure scored a C- in their assessment. The nation's drinking water infrastructure is composed of 2.2 million miles of mostly underground piping that is reaching the end of its useful life. Nationally there is a water main break every two minutes. Water main breaks disrupting water service and can be a pathway for contamination. Many water systems, especially those serving less than 3,300 persons do not have the resources to pay for expensive repairs and upgrades. DWSRF makes funds available to Group A drinking water systems to pay for infrastructure improvements. The program provides low-interest

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:05PM

Project Number: 40000066

Project Title: DWSRF State Match

**Description**

construction loans to publicly- (municipal) and privately-owned drinking water systems. These loans cover capital improvements that increase public health and compliance with drinking water regulations. To ensure that all communities get their fair share of this much needed infrastructure funding, a portion of the funding must be provided as grants or principal forgiveness loans. ODW must make at least 26% but no more than 49% of the DWSRF capitalization grant available as subsidy to water systems. The BIL requires 49% of the additional DWSRF stimulus grant to be provided as grants or loan subsidy. Loan subsidy is provided to disadvantage communities as defined in WAC 246-296-020 as follows: Disadvantaged community” means the service area of a proposed project within a public water system where the project will result in: (a) Water rates that are more than one and one-half percent of the median household income (MHI) of the service area; or (b) Restructuring, when one or more public water systems are having financial difficulties. ODW is evaluating the need to update this definition to look at other metrics that may help identify disadvantage and underserved communities at this time. DWSRF is expected to meet Justice40 Initiative. Justice40 was established in President Biden’s executive order 14008 and is a whole-of-government effort to ensure that Federal agencies work with states and local communities to make good on President Biden’s promise to deliver at least 40 percent of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities. DWSRF is also evaluating how to incorporate the HEAL Act (RCW 70A.02) into the program. Staff and partners work together to understand the needs and assess challenges using community engagement and interactive partnerships to provide technical service and guidance to best use this funding opportunity. 12. Is there additional information you would like decision makers to know when evaluating this request No.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: 70.119A.170

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
04R-1	Drinking Water Asst.-State	72,500,000				3,500,000
	<b>Total</b>	<b>72,500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,500,000</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	

303 - Department of Health  
Capital Project Request

2023-25 Biennium

\*

Version: E1 DOH Working Copy

Report Number: CBS002

Date Run: 9/19/2022 2:05PM

Project Number: 40000066

Project Title: DWSRF State Match

**Funding**

	Future Fiscal Periods			
	2025-27	2027-29	2029-31	2031-33
04R-1 Drinking Water Asst.-State	<u>27,800,000</u>	<u>19,200,000</u>	<u>11,000,000</u>	<u>11,000,000</u>
<b>Total</b>	<b>27,800,000</b>	<b>19,200,000</b>	<b>11,000,000</b>	<b>11,000,000</b>

**Operating Impacts**

No Operating Impact

**Narrative**

No Operating Impacts.

## Capital Project Request

2023-25 Biennium

\*

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	303	303
Version	E1-A	E1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000066	40000066
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

303 - Department of Health  
 Capital Project Request

2023-25 Biennium

\*

Version: S1 DOH 23-25 Capital Budget Final

Report Number: CBS002

Date Run: 9/21/2022 3:20PM

Project Number: 40000031

Project Title: Small & Disadvantaged Communities DW

**Description**

Starting Fiscal Year: 2022  
 Project Class: Grant - Pass Through  
 Agency Priority: 0

**Project Summary**

This is a re-appropriation. The Department of Health (DOH) previously requested appropriation authority to help small, disadvantaged water systems with water quality and quantity issues so that they might receive safe and reliable drinking water from nearby public water systems. This re-appropriation is requesting authority for unused funds to continue work in 2023-2025.

**Project Description**

NA - Re-Appropriation.

**Location**

City: Statewide

County: Statewide

Legislative District: 098

**Project Type**

Grants

Grant Recipient Organization: Washington State Department of Health

RCW that establishes grant: N/A

**Application process used**

Criteria for the financial assistance program for public water systems includes, but is not limited to: (i) Determining projects addressing the most serious risk to human health; (ii) Determining the capacity of the system to effectively manage its resources including meeting state financial viability criteria; and (iii) Determining the relative benefit to the community served. The annual application cycle is held each September. Applications are rated and ranked, resulting in a final project list in late November. The proposed list is approved by the Public Works Board in January-February of the following year, resulting in project loan contracts being executed in the spring.

**Growth Management impacts**

N/A

**Funding**

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reappropriations	New Appropriations
001-2	General Fund-Federal	20,806,000		174,000	20,632,000	
	<b>Total</b>	<b>20,806,000</b>	<b>0</b>	<b>174,000</b>	<b>20,632,000</b>	<b>0</b>
<b>Future Fiscal Periods</b>						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
001-2	General Fund-Federal					
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Operating Impacts**

**303 - Department of Health  
Capital Project Request**

2023-25 Biennium

\*

**Version:** S1 DOH 23-25 Capital Budget Final

**Report Number:** CBS002

**Date Run:** 9/21/2022 3:20PM

**Project Number:** 40000031

**Project Title:** Small & Disadvantaged Communities DW

**Operating Impacts**

---

**No Operating Impact**

**Narrative**

No Operating Impact.



**Capital Project Request**

**2023-25 Biennium**

\*

<b><u>Parameter</u></b>	<b><u>Entered As</u></b>	<b><u>Interpreted As</u></b>
Biennium	2023-25	2023-25
Agency	303	303
Version	S1-A	S1-A
Project Classification	*	All Project Classifications
Capital Project Number	40000031	40000031
Sort Order	Project Priority	Priority
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids