

**Sand Point
Potential Partnership Study**

**Building Cost
Estimates**

September, 2003

Introduction

The Navy started operations at Sand Point in the mid 1920's, as a base for Sea Plane operations through out the Puget Sound Region. Flight operations were discontinued in 1970, and the use of the facility changed to a support facility for other Puget Sound area bases, until 1995, when base operations ceased.

The City took ownership of portions of the former Sand Point Naval Air Station in 1998. This was the culmination of ownership transfer discussions beginning in 1991 with the Navy, after the Air Station was selected for closure.

The City was the lead in developing a local plan for reuse of Sand Point. In this process, numerous buildings at the Air Station were determined to be of historical significance. It was further determined that the appropriate uses for this property would include educational facilities, artist work/display studios, and other not-for-profit agencies and uses.

The City has managed and maintained the buildings since 1998, attracting many small not-for-profit tenants. Still, the buildings remain tremendously underutilized. Earlier this year, the city engaged the Cedar River Group, to undertake a study to determine how to best utilize the buildings, and to identify potential tenants to support the uses.

As part of The Cedar River Group study, an estimate of costs associated with bringing the buildings into useable condition was required. This document provides *Order of Magnitude Estimates* for renovation of the various buildings, to a point that they are ready for tenant improvements. Buildings covered by this study;

- Building No. 2 Repair Hanger
- Building No. 11 Public Works
- Building No. 12 Steam Plant
- Building No. 18 Fire Station
- Building No. 27 Seaplane Hanger
- Building No. 30 Aircraft hanger/Administration
- Building No. 41 Gas Station
- Building No. 67 Motor Pool
- Building No. 138 Gatehouse

(Note: Building No. 47 Recreation Facility was eliminated from this study as remediation work is currently underway)

The estimating study, as directed by the City, has consisted of review of prior documentation related to the building conditions and recommended improvements, physical review of the buildings by RL Collier Company, LLC and review of existing building plans. No detailed studies were undertaken for the development of each

building, nor were specific tenant requirements addressed, as there are no prospective tenants for these buildings.

The underutilization of facilities at Sand Point is in a large part, due to the physical condition of the buildings themselves. The Nave appears to have reduced maintenance late in the life of their operations, and due to other pressing economic issues the City has been unable to supply adequate funding to correct the subsequent deficiencies. The result is that considerable deferred maintenance must be accomplished, along with the renovation work.

Construction of facilities and buildings required to support the Navy's operations started in the 1920's and continued through the 1980's. It was not unusual for construction of any given building to continue over a period of decades, with various additions and modifications. This has resulted in the combining of various structural, mechanical and electrical systems in a given building. In the renovation process, new systems will need to be installed, to modern standards.

Military construction was not governed by the same conditions and codes as that of civilian buildings. Consideration of such issues as accessibility, fire exiting, restroom facilities, energy requirements, etc., was not required in the buildings' construction, and thus there are considerable corrections that must be made for the buildings to be truly acceptable by today's standards.

General assumptions, for the purposes of preparing these estimates, have been made regarding potential development of the project as follows;

- Based upon the experience of the University of Washington, in their renovations, all buildings will essentially be "gutted" and interior systems and improvements built new.
- Estimates for remediation work are based on the City's prior experience on buildings demolished on the property. A full and complete survey, by qualified HAZMAT inspectors will be necessary prior to the actual development of estimates and remediation plans.
- Due to the historic significance of the buildings, every attempt has been made to avoid alteration of the building exterior. (i.e. all mechanical systems will be contained as much as possible within the existing building envelope.)
- The military buildings had no wall or ceiling insulation. All buildings will be furred and insulated to comply as far as possible with current energy codes. (*We have assumed 2 in. rigid insulation at the roofs.*)
- Exterior walls will be furred and insulated with batt insulation only. *They are not assumed to receive GWB covering, as this work will be accomplished in the Tenant Improvement work.*
- Buildings will be supplied with heating and ventilation only. (An alternate has been provided for the inclusion of air Conditioning in each building. *Note: A decision to add air conditioning must be made prior to the renovation design for the building.*)

- *Issues such as exiting, fire corridor requirements, fire separations, quantity of restrooms, elevator access, etc. are directly tied to the actual use of the building, or parts of the building. Where there was question of the use and hence actual requirement, this estimate has considered likely requirements, and provided costs for these improvements, over and above the base estimate for the building. The detail for each building is described in the Building Estimate Summary and Building Data Sheet.*
- Masonry work is assumed to be cleaned and pointed. No additional repair requirements are apparent, other than on Building 12, where considerable masonry cracking was evident.
- Exterior windows are assumed to be replaced, with modern similar units, not restored, as the UW experience has shown restoration to be cost prohibitive.
- We have assumed that all roofing and flashing must be replaced, and that 25% of the roof decking must be replaced due to moisture damage from leaking roofing. (This % was derived from discussions with the UW as well as the Parks Department project management staff on building 30's re-roofing project.)
- Hanger doors on all hangers are in poor condition. We have assumed restoration of these doors, including replacement of 20% of the metal panels due to corrosion, repainting, and installing new weather seals. *We have not attempted to determine the costs associated with restoration of the mechanical operation of the doors.*
- We have assumed a multiplier for Soft Cost, i.e. design, permitting, testing, inspection, administration, etc. at 40% of hard construction costs. This rate is indicative of public sector work, and reflects the additional administrative, reporting, and overhead function cost. This cost could be reduced considerably if the project were to be handled by a private developer or private non-profit, not subject to these requirements.
- The estimate utilizes 2003 dollars, and *no allowance is made for escalation.*

It must be emphasized that actual estimates for any building restoration must be done in conjunction with complete architectural and engineering studies for the building, and the needs of the prospective tenant or use. As with all estimates of this nature, the actual cost for performing the restoration work will be affected by final design, market conditions, inflation to the time of construction, hidden conditions, etc., which are unknown at this time.

*The estimates provided herein represent the **Order of Magnitude** for planning purposes only and should not be relied upon to represent actual costs.*

**Sand Point
Potential Partnership Study**

**Building No. 12
Steam Plant**



Sand Point Potential Partnership Study

Building Data Sheet

Building No: 12

Name: Steam Plant

General Description:

Building 12 was the base steam plant, built in two phases starting in 1930. The building is a tall, single story structure. The northern half of the building is structural steel supporting a concrete roof deck, with brick veneer. The south half is structural steel frame with metal decking. The discrepancy in the structural system results in a 2 +/- ft roof "step" at the center of the building.

The building still houses the three gas fired boilers, and their associated equipment. There is a 4" gas feed into the building, providing tremendous capacity for a kiln or other such device. The steam left the building and was distributed through the base via utilidor.

Year(s) Constructed: 1930, 1942

Building Area:

1 st floor:	6,564 sf.
2 nd floor:	n/a
3 rd floor:	<u>n/a</u>
Total:	6,564 sf.

Construction Type:

The building is a concrete a frame, with a concrete roof deck at the N. ½ and steel decking on steel frame in the southern half. There is a concrete spandrel with separating the two halves, with a 2' +/- center jump in roof elevation the result. The entire building is faced in brick.

Relevant Reference Estimating Information Available:

- TRA Seismic Evaluation, Oct., 95.
- EAF Draft, Sand Point Blue Ribbon Committee, Apr., 98

Survey Highlights:

The building consists of one large room, where all of the main equipment is located and an adjacent room. There is a tremendous amount of equipment that must be removed and the building cleaned out. Services to the building include a large gas line as well as considerable electrical power.

The exterior of the building is in poor shape with cracks in the brick at the sough elevation, and the doors and windows in serious need of repair. The roofing and flashing are also in a deteriorated condition and need replacement.

The steam was distributed to the base through a series of utilidors. The pit leading into this system, appears to be flooded and will need to be cleaned out, and the utilidor opening sealed.

The interior finish of much of the building was simply a coat of paint over the steel or brick. This paint is peeling. Where the roof deck paint has peeled, there are signs of corrosion of the metal.

There is a single office within the building, and a very small multi stall restroom. Both should be demolished, and an adequate restroom facility added.

Upgrade Recommendations

- **Selective Demolition**
 - Removal of the equipment and stores within the building allowance of \$20/sf
 - Demolition of existing office/restroom areas.
- **Remediation;**
 - Asbestos
 - Assumed to be with removal of equipment and piping.
 - Lead paint
 - Allowance @ \$1.00/sf due to large amount of peeling paint.
- **Seismic/Structural:**
 - Seismic/Structural renovation costs to be based on TRA study and estimate in October, 1995. Escalation @ 3-1/4% per year to 9-03.
- **Fire & Life Safety:**
 - Exiting
 - Exit signage and emergency lighting
 - Add exit door at E. side door
 - Add exit door at N. side main door.
 - Corridors
 - n/a
 - Fire Stairs
 - n/a
 - Fire Alarm
 - Allowance for full building system (*with TI work*)
 - Fire Sprinklers
 - Wet system in entire building
 - Fire Separations
 - n/a
- **Plumbing**
 - Allowance for inspection and repair
 - Plumbing for new restrooms
- **HVAC**
 - Provide Furnace and duct system
- **Electrical**
 - Upgrade service panels
 - Electrical for HVAC, restrooms, Fire & Life Safety.
- **ADA Compliance**
 - Accessibility
 - Provide two minimal ramps to exit doors
 - Vertical transportation
 - n/a
 - Restrooms
 - Add men and women, 1 stall each.
 - Signage
 - Allowance for code signage only
- **Exterior Envelope**
 - Façade
 - Masonry
 - Clean and point
 - Repair S. wall
 - Steel
 - Replace windows and doors.

- Repair and renovate exterior roof access ladder
 - Wood
 - Repair or replace main swinging entry door system.
 - Exterior walls
 - Furr and insulate
 - Cleaning and Painting
 - Windows and Frames
 - Doors and Frames
 - Roof top exhaust vents
 - Roof
 - Roofing and Flashing – complete replacement
 - Rigid insulation with roof installation
 - Exterior walls
 - Furr and insulate all walls
- Miscellaneous
 - Remove protruding anchor bolts from previous tank farm.

**Sand Point Magnuson Park
Potential Partnership Study
Estimated Shell Upgrade
Building 12 Steam Plant
Estimate Summary**

Building Area:		
1 st floor:	6,564	sf
2 nd floor:	n/a	sf
3 rd floor:	<u>n/a</u>	sf
Total:	6,564	sf

Work Item	Cost		
Selective Demolition	\$141,780.00		
Remediation;	\$13,128.00		
Seismic/Structural:	\$394,341.61		
Fire & Life Safety:	\$24,692.00		
Plumbing	\$4,923.00		
Heating and Ventilating	\$52,512.00		
Electrical	\$22,974.00		
ADA Compliance	\$21,011.00		
Exterior Envelope	\$135,481.90		
Miscellaneous	<u>\$1,500.00</u>		
Subtotal Direct Construction	\$812,343.51		
General Conditions	\$81,234.35		
Overhead and Fee	\$89,357.79		
Escalation	none		
Estimating Contingency	\$221,160.52		
Sales tax	<u>\$105,960.46</u>		
Subtotal Hard construction cost	\$1,310,056.63		
Soft Costs (permits, fees, consultants, administrative)	<u>\$524,022.65</u>		
<i>Total Project Cost</i>	<i>\$1,834,079.29</i>	<i>\$279.41</i>	<i>\$/sf</i>
HVAC air conditioning alternate			
Based on 400 sf/ton	68,298.28	\$10.40	\$/sf

**Sand Point Magnuson Park
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Estimated Shell Upgrade
Building 12 Steam Plant**

Category	Work Item	Units	Unit	Unit Price	Cost
Selective Demolition	Interior improvements demolition	1	ls	7,500.00	7,500.00
	Demolition of Interior sheathing on exterior walls				n/a
	Demolition required for restroom renovations				incl
	Remove existing boilers and equipment system and associated piping	6,564	sf	20.00	131,280.00
	Misc exterior items such as the tank farm anchor bolts, sump @ south, etc.	1	Allow	3,000.00	3,000.00
<i>Subtotal - Selective Demolition</i>					141,780.00
Remediation;	Asbestos				
	included with equipment demo	6,564	sf	0.00	incl w/demo
	Allow \$1.00/sf for roofing materials abatement	6,564	sf	1.00	6,564.00
	Lead paint				
	Allow \$1.00/sf due to condition of wall and roof paint.	6,564	sf	1.00	6,564.00
<i>Subtotal - Remediation</i>					13,128.00
Seismic/Structural:	Seismic/Structural renovation costs to be based on TRA study and estimate in October, 1995. (less equipment bracing costs)	1	LS	306,100.00	
	Escalation @ 3-1/4% per year to 9-03	1.288	multiplier		394,341.61
	<i>Subtotal - Seismic/Structural</i>				
Fire & Life Safety:	Exiting				
	Exit signage and emergency lighting	1	allow	1,000.00	1,000.00
	provide 2 exit doors	2	ea	2,000.00	4,000.00
	Corridors				n/a
	Fire Stairs				n/a
	Fire Alarm				W/TI
	Fire Sprinklers				
	Wet system in entire building	6,564	sf	3.00	19,692.00
Fire Separations				N/a	
				0.00	
<i>Subtotal - Fire & Life Safety</i>					24,692.00
Plumbing	Allowance for inspection, repair and minimal upgrade	6,564	sf	0.75	4,923.00
	Plumbing for restrooms				W/Restroom
	<i>Subtotal Plumbing</i>				
Heating and Ventilating	Heating and ventilating system based on 1 cfm/sq ft. Main duct only.	6,564	sf	8.00	52,512.00
	<i>Subtotal - HVAC</i>				
Electrical	Upgrade service panels	6,564	sf	3.00	19,692.00
	Electrical for HVAC	6,564	sf	0.50	3,282.00
	<i>Subtotal - Electrical</i>				

**Sand Point Magnuson Park
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Building 12 Steam Plant**

ADA Compliance

Accessibility				
Provide 2 minimal ramps to exit doors	2 ea	500.00		1,000.00
Vertical transportation				na
Restrooms				
Add men and women, 1 stall each	2 ea	9,505.50		19,011.00
Signage				
Allowance for code signage only	1 Allow	1,000.00		1,000.00
<i>Subtotal - ADA</i>				<i>21,011.00</i>

Exterior Envelope

Façade

Masonry				
Clean and Point	w TRA Est	sf	0.00	w TRA Estimate
Parapet cap regrouting/bracing	w TRA Est	lf	0.00	w TRA Estimate
Steel				
Windows and doors – replace 100%	1,453 sf	45.00		65,385.00
Replace exterior roof access ladder	26 lf	150.00		3,900.00
Wood				
Windows and doors – renovate double entry door.	1 ea	4,500.00		4,500.00
Exterior walls				
Furr and insulate	6,737 sf	6.00		40,420.38
Cleaning and Painting				
Exterior wood and metal	1 allow	1,500.00		1,500.00
Windows and Frames				in reno
Doors and Frames	2 ea	50.00		100.00
Concrete base	1,178 sf	1.50		1,766.52
Roof Exhaust Hood	3 ea	500.00		1,500.00
Roof				
Roofing and Flashing – complete replacement	6,564 sf	incl		w/TRA Estimate
Rigid insulation with roof replacement	6,564 sf	2.50		16,410.00
<i>Subtotal - Exterior Envelope</i>				<i>135,481.90</i>

Miscellaneous

Removal of anchor bolts @ tank farm.				w/demolition
Seal Utilidor	1 ls	1,500.00		1,500.00
<i>Subtotal - Miscellaneous</i>				<u><i>1,500.00</i></u>

Subtotal Direct Construction *812,343.51*

General Conditions *10%* *81,234.35*

Subtotal *893,577.86*

Overhead and Fee *10%* *89,357.79*

Subtotal *982,935.65*

Escalation *0%* *none*

Subtotal *982,935.65*

Estimating Contingency *23% (Due to uncertainty in equipment demo)* *221,160.52*

Total Direct Construction Cost *1,204,096.17*

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Building 12 Steam Plant**

<i>Sales tax</i>	8.8%	<u>105,960.46</u>
<i>Subtotal</i>		1,310,056.63
<i>Soft Costs (permits, fees, consultants, administrative)</i>	40%	<u>524,022.65</u>
<i>Total Project Cost</i>		1,834,079.29

HVAC air conditioning alternate			
Based on 400 sf/ton			
Heating - Hydronic Boiler System	6,564 sf	2.50	16,410.00
Cooling - Remote Cooler	6,564 sf	2.50	16,410.00
			<u>32,820.00</u>
<i>Subtotal Direct Construction</i>			32,820.00
<i>General Conditions</i>	8%		<u>2,625.60</u>
<i>Subtotal</i>			35,445.60
<i>Overhead and Fee</i>	10%		<u>3,544.56</u>
<i>Subtotal</i>			38,990.16
<i>Escalation</i>	0%		<u>none</u>
<i>Subtotal</i>			38,990.16
<i>Estimating Contingency</i>	15%		<u>5,848.52</u>
<i>Total Direct Construction Cost</i>			44,838.68
<i>Sales tax</i>	8.8%		<u>3,945.80</u>
<i>Subtotal</i>			48,784.49
<i>Soft Costs (permits, fees, consultants, administrative)</i>	40%		<u>19,513.80</u>
<i>Total Project Cost</i>			68,298.28
Add'l cost/sf for AC			10.40