

## **Appendix O: Conceptual Cost Estimate**

**Rough Order of Magnitude Construction Costs**  
**Austin Point - Option 1**  
 3/29/2023



	Item	Quantity	Unit	Unit Cost	Subtotal (2022\$)
<b>1.00</b>	<b>Mobilization/Demobilization (7.0%)</b>	1	LS	\$6,000,000	<b>\$6,000,000</b>
<b>2.00</b>	<b>General Site Preparation</b>				<b>\$2,570,000</b>
2.01	Clear and Grub	23	AC	\$5,000	\$115,000
2.02	Temporary Erosion & Sediment Control	23	AC	\$7,000	\$161,000
2.03	Mass Earthwork (Onsite Reuse)	95,100	CY	\$11	\$1,046,000
2.04	Common Borrow Fill (Import)	56,516	CY	\$22	\$1,243,000
<b>3.00</b>	<b>Pier Construction</b>				<b>\$12,100,000</b>
3.01	Grain Vessel Pier (Panamax Pier)	1	LS	\$7,290,000	\$7,290,000
3.02	Grain Barge Pier	1	LS	\$4,720,000	\$4,720,000
<b>4.00</b>	<b>Dredging</b>				<b>\$13,800,000</b>
4.01	Dredging and Disposal for Piers	245,000	CY	\$23.5	\$5,758,000
4.02	Dredging and Disposal for Turning Basin	342,000	CY	\$23.5	\$8,037,000
<b>5.00</b>	<b>Geotechnical Improvements</b>				<b>\$28,000,000</b>
5.01	River Bank Stabilization/Ground Improvements	65,000	SF	\$431	\$28,000,000
5.02	Upland Ground Improvements (By Tennent)	-	SF	-	
<b>6.00</b>	<b>Site Access</b>				<b>\$640,000</b>
6.01	Crushed Surfacing Base Course	6,936	TN	\$32	\$222,000
6.02	Asphalt	4,556	TN	\$90	\$410,000
<b>7.00</b>	<b>Civil Utilities</b>				<b>\$4,980,000</b>
7.01	Sanitary Sewer, 6 IN DIAM HDPE Buried	550	LF	\$100	\$55,000
7.02	Sanitary Sewer Septic and Drain Field	1	EA	\$70,000	\$70,000
7.03	Sanitary Sewer Manholes	2	EA	\$5,000	\$10,000
7.04	Domestic Water, 4 IN DIAM HDPE Buried	1,150	LF	\$50	\$58,000
7.05	Domestic Water, 4 IN DIAM HDPE Hanging	1,060	LF	\$220	\$234,000
7.06	Domestic Water Well	1	LS	\$40,000	\$40,000
7.06	Fire Water, 10 IN DIAM HDPE	2,450	LF	\$130	\$319,000
7.07	Fire Water, 8 IN DIAM HDPE Buried	580	LF	\$110	\$64,000
7.08	Fire Water, 8 IN DIAM DI Hanging	1,580	LF	\$400	\$632,000
7.09	Fire Hydrants/Fire Department Connections	21	EA	\$6,500	\$137,000
7.10	Fire Water Tank, Foundation, and Piles	1	LS	\$2,080,000	\$2,080,000
7.11	Fire Water Wells, Pumps, Pumphouse, and Backup Power	1	LS	\$1,280,000	\$1,280,000
7.12	Natural Gas	0	LF	\$0	\$0
<b>8.00</b>	<b>Storm Drainage</b>				<b>\$1,130,000</b>
8.01	Catch Basins and Manholes	14	EA	\$4,500	\$63,000
8.02	Infiltration Basin and Pretreatment (Qwq)	1	LS	\$480,000	\$480,000
8.03	Site Stormwater Conveyance Piping	700	LF	\$135	\$95,000
8.04	Outfall to Columbia River	1	LS	\$490,000	\$490,000
<b>9.00</b>	<b>Electrical</b>				<b>\$8,430,000</b>
9.01	On Site Power	1	LS	\$6,800,000	\$6,800,000
9.02	Cowlitz County PUD Service, Engineering and Construction	1	LS	\$1,500,000	\$1,500,000
9.03	Site Lighting	1	LF	\$125,000	\$125,000
<b>10.00</b>	<b>Fencing</b>				<b>\$310,000</b>
10.01	Site Fencing	4,000	LF	\$65	\$260,000
10.02	Site Access Gate	3	EA	\$15,000	\$45,000
<b>11.00</b>	<b>Public Access and Park</b>				<b>\$920,000</b>
11.01	Clearing and Grubbing for Public Access	4	AC	\$5,000	\$19,000
11.02	North Parking Lot	10	CAR	\$1,500	\$15,000
11.03	Central Parking Lot	20	CAR	\$1,500	\$30,000
11.04	Bathroom Facilities	1	LS	\$135,000	\$135,000
11.05	Fish Cleaning Stations	1	LS	\$30,000	\$30,000
11.06	Park/Landscaping	3.86	AC	\$75,000	\$289,000
	<b>Item</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Subtotal (2022\$)</b>

11.07	Pedestrian Path	3,554	LF	\$12	\$43,000
11.08	South Boardwalk	3,191	LF	\$25	\$80,000
11.09	South Confluence Overlook	1	EA	\$100,000	\$100,000
11.10	Park Lighting	1	LS	\$75,000	\$75,000
11.11	Park Water Service	1	LS	\$50,000	\$50,000
11.12	Park Sanitary Sewer and Drain Field	1	LS	\$50,000	\$50,000
11.13	Boat launch (NOT INCLUDED)	0	EA	\$0	\$0
<b>12.00</b>	<b>Mitigation</b>				<b>\$19,700,000</b>
12.01	Over water Coverage Mitigation	1	LS	\$15,400,000	\$15,400,000
12.02	Dredging Mitigation	1	LS	\$4,300,000	\$4,300,000
12.03	Waterside Wetland Mitigation	1	LS	\$0	\$0
12.04	Off Channel Salmon Habitat Restoration	1	LS	\$0	\$0
<b>13.00</b>	<b>Rail Line</b>				<b>\$0</b>

**PROJECT SUBTOTALS**

<b>14.00</b>	<b>Subtotal</b>				\$98,580,000
<b>14.01</b>	<b>Sales Taxes</b>			7.8%	\$7,690,000
<b>14.02</b>	<b>Soft Costs - Engineering Design and Permitting (see Notes)</b>			12%	\$11,830,000
<b>14.03</b>	<b>Subtotal (Construction Cost + Soft Cost + Sales Tax)</b>				<b>\$118,100,000</b>

**CONTINGENCY**

<b>15.00</b>	Total Project ROM High Range (+40% Contingency, 2022 Dollars)				\$165,300,000
<b>15.01</b>	Total Project ROM Low Range (-30% Contingency, 2022 Dollars)				\$82,700,000
<b>15.02</b>	<b>Total ROM Estimate Option 1 (2022 \$)</b>		<b>\$82,700,000</b>	<b>to</b>	<b>\$165,300,000</b>

**ESCALATION**

<b>16.00</b>	Total Project ROM High Range (+40% Contingency, 2030 Dollars, Escalation @ 4% per Year)				\$217,500,000
<b>16.01</b>	Total Project ROM Low Range (-30% Contingency, 2030 Dollars, Escalation @ 4% per Year)				\$108,800,000
<b>16.02</b>	<b>Total ROM Estimate Option 1 (2030 \$)</b>		<b>\$108,800,000</b>	<b>to</b>	<b>\$217,500,000</b>

**NOTES**

- General** Estimate only includes "backbone infrastructure" that would be constructed by the Port. Tenant related improvements are not included.
- General** Estimate only includes infrastructure waterside of the levee.
- General** Line Items are rounded to the nearest thousand, subtotals are rounded to the nearest ten thousand, and project subtotals rounded to the nearest one hundred thousand.
- 1.00** Mobilization percentage was estimated based on WSDOT mobilization criteria.
- 2.04** Common Borrow costs could potentially be reduced by utilizing dredge spoils as fill material.
- 4.00** Dredging costs include dredging, bathymetric survey and in-water transport and disposal.
- 5.01** Riverbank stabilization assumes deep soil mixing (DSM) ground improvements at a treatment depth of 80 to 150 feet. This assumption is to be further refined in later phases of design.
- 6.00** Site access includes all site pavement, assumes pavement section is 6 inches of asphalt over 10 inches of crush surface base course.
- 7.10** Fire system assumes approximately 750,000 gallon storage tank. This is a conservative estimate that may be optimized in future design.
- 7.12** Natural gas is not assumed to be provided to the project site due to the distance to the nearest connection in the City of Woodland.
- 8.01** Catch basin quantity assumes a catch basin located approximately every 100 feet on access roads.
- 8.02** Infiltration basin is assumed to infiltrate the water quality storm. See "Appendix K - Preliminary Stormwater Assessment".
- 9.00** Electrical costs provided by Elcon Associates, dated 1/12/2023
- 9.01** Onsite power includes (2) 12.47kV 600 amp service switchgears, (2) 12.47kV to 4.16kV 600 amp substations, (2) 12.47kV to 480V 1,200 amp substations, (1) 12.47kV to 480V 800 amp substation, conduit and wire to feed substations, and miscellaneous fencing, bollards, and grounding. This provides service to both sides of the levee (waterside facility and train car unloader facility).
- 11.11** This item includes a well, iron treatment system, and park water distribution piping.
- 11.12** This item includes all sanitary sewer piping, septic tank, and drain field.
- 12.01-12.04** Mitigation costs include purchase of land, design, construction and permitting. The mitigation costs presented are likely conservative and may be refined as design progresses and negotiations with applicable agencies occur.
- 12.01** Over water coverage mitigation estimated using Puget Sound Habitat Equivalency Analysis and Discounted Service Acre Year methodology and previous project experience.
- 12.02** Dredging mitigation will be negotiated with the National Marine Fisheries Service during consultation process once biological assessment is provided. See "Appendix N - Preliminary Permitting Assessment" for additional discussion.
- 12.03** Minimal to no wetland mitigation is anticipated for Docksides Improvements. Additional wetland mitigation will need to be determined for the upland rail construction.
- 12.04** Design and costs associated with potential off-channel salmon habitat restoration on the upstream parcel will need to be reviewed in future phases of work.
- 13.00** Upland rail service is excluded from the scope of this cost estimate. Rail costs to be assessed in future phases of work.
- 14.02** Engineering Design and Permitting includes all construction support, geotechnical monitoring, and Geotechnical Explorations estimated at 12% of Construction Cost subtotal item 14.00.
- 15.00-15.02** Cost estimate was developed to be consistent with an AACE Class 4 estimate with a -30% to +40% contingency range.
- 16.00-16.02** Escalation has been applied to an estimated mid-point of construction.