



**LEGEND**

	Federal Navigation Channel		Buoy, Lateral		Benchmark
	Federal Navigation Channel Centerline		Buoy, Cardinal		Pylon Bridge Support
	Cable, Overhead		Buoy, Isolated Danger		Obstruction Point
	Cable, Submarine		Buoy, Safe Water		Weck-Submerged
	Pipeline, Overhead		Buoy, Special Purpose		Staff Gage
	Anchorage Area		Beacon, General		Steel King Pile
	Dredged Material Placement Area		Shoalast Sounding**		
	Cable Area				
	Pipeline Area				
	Shoaling Area				

**NOTES:**  
 Horizontal Coordinate System:  
 North American Datum of 1983 (NAD83), projected to the State Plane Coordinate System (SPCS), Oregon North Zone. Distance units in U.S. Survey Feet.  
 Vertical Datum:  
 Soundings are shown in feet and indicate depths below Mean Lower Low Water. MLLW is 0.03 feet below the North American Vertical Datum (NAVD 88 Geoid 09) at Columbia River Mile 10.9, 0.03 feet above at Columbia River Mile 13.4.  
 River mileage conforms to the River Mile Index of the Hydrology and Hydraulics Commission, Pacific Northwest River Basin Commission, July 1972.  
 The information depicted on this map represents the results of a survey conducted on the date indicated and can only be considered to represent the general channel conditions existing at that time and is not in support of channel maintenance only.  
 \*\* Shoalast Sounding per Quarter per Reach

COLUMBIA AND LOWER WILLAMETTE RIVERS  
 BELOW VANCOUVER, WASH. AND PORTLAND, OREG.  
**COLUMBIA RIVER**  
**FLAVEL BAR**  
 23 January 2025

SCALE IN FEET  
 0 500 1,000 1,500 2,000 2,500

SUBMITTED: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
 RECOMMENDED: \_\_\_\_\_ CHIEF, WATERWAYS MAINTENANCE SECTION  
 CHIEF, SURVEY SECTION \_\_\_\_\_ SURVEYED: \_\_\_\_\_ PLOTTED: \_\_\_\_\_ CHECKED: \_\_\_\_\_

STAFF GAGE AT BRIDGE PIER: Northing: 938345 Easting: 7353764  
 PREDRIDGE  POSTDRIDGE

**THE EXISTING PROJECT**  
 The existing project provides for a channel 43 feet deep and 600 feet wide from deep water in the Columbia River Entrance at river mile 3.0 to river mile 101.4 at the Mouth of the Willamette River; and also -  
 provides for a turning basin 43 feet deep, 800 feet wide and 4,250 feet long in Astoria.