



Dredging Short Course Considering:

Contracts, Inspection & Oversight

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Contractual Considerations

- Cost Estimating Tools
- Cost Plus, Rental, Fixed Price
- Bid Items & Combining Bid Items



WASHINGTON

• **American Construction Co., Inc.**
411-13th St., Everett, WA 98201

<i>Mukilteo</i>	5.0 yd ³	700 hp	BC
<i>Palouse</i>	5.0 yd ³	750 hp	BC
<i>Snohomish</i>	3.0 yd ³	550 hp	BC

• **General Construction Co.**
2111 N. Northgate Way, 3rd Fl., Seattle, WA 98124-0506;
T: (206) 938-6750, F: (206) 938-6766

<i>D.B. Seattle</i>	15 yd ³	1,350 hp	BC
<i>D.B. Anacortes</i>	7.0 yd ³	450 hp	BC

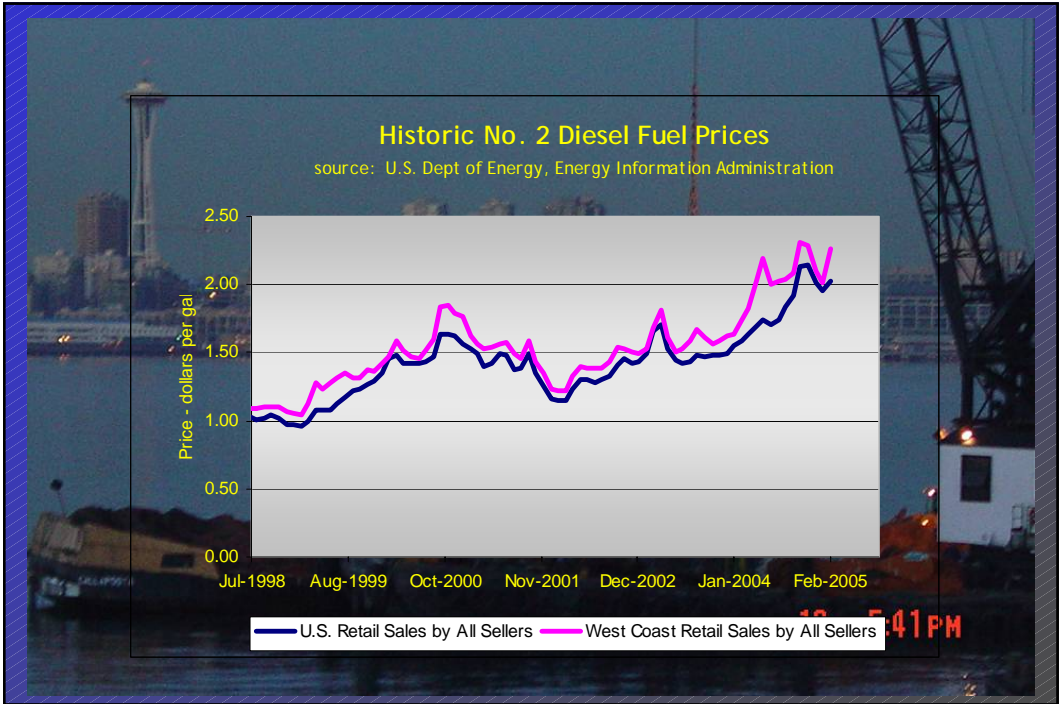
Since 1910, General Construction (subsidiary of Peter Kiewit & Sons) is a full service marine construction company operating projects such as dredging, rip rap, revetment construction piers, wharves, marine, upland and marine pile driving, heavy lifts up to 500 t, dams, pump stations, ocean and marine outfalls and underwater pipelines on the US west coast including Alaska and Hawaii.

William F. Urban - President & CEO
Thomas E. Sherman - Sr. Vice President Northwest Operations
Ron Morford - Vice President
James T. Dick - Sr. Vice President Southwest Operations

• **Hickey Marine Enterprises, Inc.**
6601 NW Old Lower River Rd., Vancouver, WA 98660, T: 360-695-4553 or 888-699-1053, F: 360-695-3295, E: HMEmarine@aol.com

-	3.0 yd ³	-	BC
-	8.0 yd ³	-	BC
-	9.0 yd ³	-	BC
-	15 yd ³	-	BC

Hickey Marine Enterprises, Inc. has over 23 years experience in the Marine Construction Industry, specializing in: dredging, dolphin repair & construction, pile-driving, dock and bridge repair, pile dike installation.





US Army Corps of Engineers

- Type of Contracts
- Bid Items




Inspection & Oversight

- Inspector Qualifications
- Authorities
- Critical Items & Processes



Authorities

The Oversight Official is limited from performing the following activities:

- Shall not authorize any deviation from the project documents.
- Shall not undertake any of the responsibilities of the designer or contracting party.
- Shall not issue directions relative to, or assume control over, any aspect of the means, methods, techniques, sequences, or procedures of design.
- Shall not issue directions regarding, or assume control over, safety precautions and programs in connection with site visits by the designer.
- Shall not accept submittals from anyone other than the contracting party.
- Shall not participate in specialized field or laboratory tests or inspections conducted by others.

From EPA Guidance for Scoping the Remedial Design (Mar 1995)



Critical Items & Processes

Environmental Dredging Tips

The following comments come from lessons learned from more than 10 years of completing environmental dredging projects with Cable Arm Clamshell Buckets.

1. Communicate project goals to the entire dredging team, thoroughly explaining differences between environmental and navigational dredging.
2. Precision dredging requires a crane in top mechanical condition; precision instrumentation can be wasted on a poorly functioning crane.
3. When digging "to grade," remove soft sediment first with a Cable Arm Environmental Clamshell Bucket. For comparability, sample and test sediments using the same methods both before and after dredging. Determine sampling locations and depths precisely, before and after dredging.
4. Use a differential global positioning system, bucket and crane instrumentation, tide gauge, and dredging software (Clamvision) to track bucket location in 3 dimensions (X, Y, & Z) to control excavation. Be sure that your dredging software provides the operator with a current depth and a target depth for each bucket location.
5. Provide an accurate predredge survey on a grid dense (3 to 5 ft) enough to provide