

SPAR Scuttlebutt

July 2009

SPAR's Cost Estimating Services

SPAR continues to be active in the business of producing independent costs estimates for the design and construction of ships, commercial, military and coast guard.

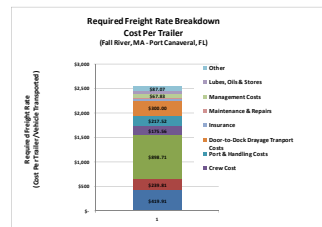
High Speed Trailer Ship

SPAR provided life cycle cost estimates for a concept High Speed Trailer (HST) ship designed to service the coastal markets of the United States. The service anticipates the need to offload trailer transport off congested interstates as forecast by the American Marine Highways.

Cost estimates were developed for a pure commercial trimaran trailer ship design capable of transporting 140 trailers at a maximum speed of 26 knots. Another set of cost estimates were developed for a trailer ship design that would provide added Naval Defense Features (NDF): more fuel capacity for a longer voyage range and a higher hull speed of 30 knots. Such a vessel would be available for military service during war time or other national emergency.

The estimates for design, engineering and (non-recurring) construction costs were

developed on a four ship construction basis. Operational costs included capital costs allocated to private equity and to MARAD Title 11 guaranteed financing. Life cycle costs included estimated costs for operations, crew, maintenance, and administration as well as port costs and limited highway transport to/from ports, door to door. These costs were compiled and found to be within a competitive price range to an equivalent required freight rate (RFR) for current highway costs per trailer and per statute mile. A sensitivity analysis on RFR also was performed for a range of fuel costs escalating between \$400 per metric ton to \$600.



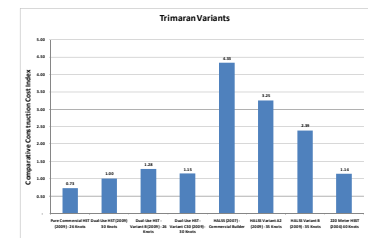
Cost Breakdown of Required Freight Rate

This project was performed for Herbert Engineering and Computer Sciences Corporation working under a research contract for the Center for the Commercial Deployment of Transportation Technologies (CCDoT)

U.S. Army's Variant Design Trimarans

Again subcontracted by Herbert Engineering and Computer

Science Corporation, SPAR produced construction cost estimates for nine different trimaran concept designs (ranging in size from 166 meters to 327 meters). SPAR's cost estimates will function as part of Computer Sciences Corporation's ship "Synthesis Design Module" (SDM) that is under development.

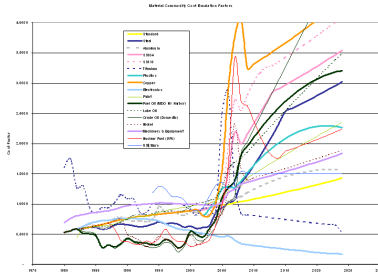


Comparative Cost Indexes

New Construction & Ship Repair Cost Libraries

SPAR's extensive cost libraries have been updated for mid-2009. The upgrades include revised commodity-based escalation tables that reflect current changes in prices for materials (steel, aluminum, paint, copper, fuels, etc.). European machinery & equipment prices have been linked to the latest U.S. dollar to Euro exchange rate.

"Over 35 Years of Providing Planning & Production Management Systems to Shipyards"



Time-Phased Commodity-Based Escalation Tables

These cost libraries are available for purchase either in the form of Excel workbooks or pre-loaded into SPAR's *PERCEPTION® ESTI-MATE®* cost estimating system and database.

Since SPAR's cost models utilize these cost libraries, these upgrades update the cost models too. Cost models are available for mono-hulls, catamarans and two types of trimarans (SWATH and ama type side hulls). Other cost models include tankers and product carriers; containerships; RO-ROs; RO-PAX; RO-CONS; Research and survey ships; tugs; and barges.

Expanded Tool Room Management Module

Southern New England Shipbuilding Company (SENECO) has contracted SPAR to expand the capabilities of SPAR's *PERCEPTION®* software that has been installed and operating at the shipyard since 2001. This new work modifies the capabilities and reports of the Tool Room Management Module that tracks and controls the issues and returns of yard tools.

PERCEPTION is an integrated shipyard planning and management control system that fully integrates the following functions: cost estimating; planning and scheduling; purchasing and material control; work orders and time charge management; earned value cost and schedule performance reporting by each level of a contract's work breakdown structure (WBS) and by individual shipyard work centers.

Shipbuilders Benefit from Earned Value Cost Reporting

Earned value cost performance reporting provides a meaningful comparison of actual cost against planned or budgeted cost for the amount of real progress achieved from the actual cost expended.

Earned value cost reporting measures cost performance at any point in time for an on-going project. This incremental statusing of cost performance provides much better visibility of a project's ability to meet its budget goals. Budget problems can be identified early and remedial actions can be taken before they become critical and before they jeopardize a successful project.

Earned value cost evaluations are provided automatically by SPAR's *PERCEPTION* system from data compiled by the system from work being performed on project work orders. These evaluations are made at any level of the

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project's work breakdown structure (WBS) and for each of the shipyard's work centers of engineering, manufacturing and assembly processes.

Shipbuilders Benefit from Earned Schedule Reporting

Earned schedule performance reporting provides a meaningful comparison of actual schedule progress against planned schedule progress at any point in time for an on-going project.

This incremental statusing provides much better visibility of a project's ability to meet its schedule goals. Schedule problems can be identified early and remedial actions can be taken before they become critical and before they jeopardize a successful project.

Earned schedule evaluations are provided automatically by SPAR's *PERCEPTION* system where planned schedules can be developed either manually or via a comprehensive critical path method solution. These evaluations are made at any level of the project's work breakdown structure (WBS) and for each of the shipyard's work centers of engineering, manufacturing and assembly processes.

Shipbuilders Benefit from Final Cost & Schedule Forecasts

Knowing how well a project is being performed can be complemented by forecasting how well the project will likely be when finished. SPAR's *PERCEPTION* system makes automated cost forecasts (estimated costs at completion, or EAC) and schedule forecasts (estimated date of completion, or EDC). These forecasts are based on relative performance data compiled by the system and the amount of work remaining. In addition, *PERCEPTION* generates statistical trends of these forecasts to provide management with additional insight.

These forecasts are made at any level of the project's work breakdown structure (WBS) and for each of the shipyard's work centers of engineering, manufacturing and assembly processes.

SPAR Associates, Inc.

SPAR has been providing shipyard production planning and management control software since 1972. In addition to its software products, SPAR offers a variety of support services, including custom software design and development; training and software maintenance services; independent cost estimating; supplemental shipyard planning and scheduling services; and management consulting to various interests in the marine industries.

We are always available to address whatever questions that you might have. Your success is ours.

SPAR Associates, Inc.
927 West Street
Annapolis, MD 21401, USA
Phone: (410) 263-8593
Fax: (410) 267-0503
E-Mail: info@sparusa.com
Web Site: www.sparusa.com

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SPAR Publications

SPAR has the following publications available to help shipyards plan and manage their operations:

- **"Planning New Construction & Major Ship Conversion"**
(US \$75.00)
- **"Shipyard Cost Estimating"**
(US \$125.00)
- **"Guide for Shipyard Material Control"**
(US \$75.00)
- **"Full Implementation of a Shipbuilder's Earned Value Management System (EVMS)"**
(US \$75.00)
- **"Comparing Methods of Measuring Progress, Earned Values & Estimates at Completion (EAC)"**
FREE
- **"Expanded Modularization, Ship Design & Construction"**
(US \$75.00)

Publications are available in pdf file format via electronic mail.

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