**MUSE Basis of Estimate**

**Shipping of Scintillator Detectors WBS 7**

I. General Information

Task Name: Purchase of backing structure for scintillators

Unique ID Number

Date of Estimate: 19/12/2015

Estimate Generator: Steffen Strauch

Cost Category:

X M&S

SWF

Comments: The backing structure estimate is based on the CLAS12 FTOF design. For MUSE, the scintillator bars are all vertically oriented and sagging is not an issue. A simpler, less expensive design is being considered.

Vendor Quote Number if Applicable:

Drawing Reference Number or Attachment:

Costing Method: estimate based on JLab FTOF experience

Total Task Cost: $44,215

Total Contingency: $9,727

II. Cost Estimate Breakdown

Cost of each element, along with justification

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | QTY | Description | Unit Price USD | Total Price USD |
| 1 | 46 | Backing structure | $890 | $40,940 |
| 2 |  | 8% SC Tax |  | $3,275 |
|  |  | Total |  | **$44,215** |

Backing structure to support pairs of two scintillator bars for the TOF wall, the backing structure will be mounted on the frame.

III. Contingency and risk analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Technical | Design | Cost | Schedule | Contingency |
| Backing structure | 2 | 4 | 4 | 6 | 22% |

IV. Time Estimates and contingency on time

Time estimate is (optimistic+pessimistic+4\*most-likely)/6.

Sigma is (pessimistic-optimistic)/6.

Be sure to indicate if work days or calendar days.



Comments: No estimate yet.

