

Opinion of Probable Costs (Interpretive Design)

Grand Canyon Historic Boat Museum

Feasibility Study / Pre-Design Phase

May 26, 2010

EXHIBIT FABRICATION & INSTALLATION

| Ref. # | Area and Exhibit Title | Description | | | Notes / Sub Total |
|--------------------------|-------------------------------------|--|----|-------------------|-------------------|
| Scheme C / Hybrid | | | | | |
| 1.00 | Introduction | | | | |
| 1.10 | Introduction - Part 1 | Photomural - (1) 13' x 10' fabric stretched over steel frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 7,431.97 | |
| 1.20 | Introduction - Part 2 | Photomural - (1) 13' x 14' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 10,158.65 | |
| 1.30 | Introduction - Part 3 | Photomural - (1) 13' x 8' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 5,856.17 | |
| 1.40 | Introduction - Part 4 | Photomural - (1) 13' x 12' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 8,582.85 | |
| | | Audio Equipment - Digital Audio equipment with 6 track stereo playback capability and speakers. | \$ | 4,267.08 | |
| | | Audio Program - AV integration by fabricator. | \$ | 30,000.00 | CA +TSG |
| 1.50 | Emma Dean | Structural Glass Guard Rail - (1) 30" H x 18' L. Anchor to existing concrete floor w/ stainless steel stanchions and base plates | \$ | 3,284.41 | |
| | | Primary Interpretive Graphic - (1) 3/4" x 18" H x 60" L HPL Panel & stainless steel structure | \$ | 3,629.67 | |
| | | Artifact Case - (1) 12" H x 48" W x 12" D stainless steel case & structure w/ desiccant. Includes internal LED lighting. | \$ | 22,117.98 | |
| | | Artifacts - (1) Boat - Provided by Client | \$ | - | |
| | | Artifacts Mounts - (1) custom stainless steel cradle | \$ | 4,993.01 | |
| | | Artifacts - (1) Portion of Hull - Provided by Client | | NIC | |
| | | Artifacts - (1) Custom artifact mount | \$ | 4,107.73 | |
| | | Audiovisual - (1) 18" diagonal touchscreen monitor - w/ stainless steel bezel, AV equip cabinet and support structure to glass guard rail. | \$ | 5,571.99 | |
| | | Audiovisual - Digital video source equipment concealed in AV equipment cabinet. | \$ | 5,844.66 | |
| | | Audiovisual Program - AV integration by fabricator. | \$ | 20,000.00 | CA +TSG |
| 1.60 | Acknowledgments | Photomural - (1) 13' x 5' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 4,129.86 | |
| 1.00 | Total Introduction | | \$ | 139,976.01 | |
| 2.00 | Theater | | | | |
| | River Heritage | Audiovisual - HD Projector, HD Source Equipment, Audio Equipment and AV Rack - Provided By Others | \$ | 50,000.00 | CA +TSG |
| | | Seating - Provide by Building Contractor | | NIC | |
| | | Audiovisual Program - Provided by others. | \$ | 450,000.00 | CA +TSG |
| 2.00 | Total Theater | | \$ | 500,000.00 | |
| 3.00 | Pre-World War II Boats | | | | |
| 3.01 | Stone, Edith, Glen, WEN & Escalante | Photomural - (1) 13' x 16' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 10,576.51 | |
| | | Photomural - (1) 13' x 12' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 8,044.59 | |
| | | Photomural - (1) 13' x 6' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 4,369.20 | |
| | | Structural Glass Guard Rail - (1) 30" H x 40' L. Anchor to existing concrete floor w/ stainless steel stanchions and base plates | \$ | 4,261.51 | |
| | | Primary Interpretive Graphic - (5) 3/4" x 18" H x 60" L HPL Panel & stainless steel structure | \$ | 14,832.27 | |
| | | Artifacts - (5) Boats - Provided by Client | | NIC | |
| | | Artifacts Mounts - (5) concealed custom powder-coated steel cradle | \$ | 10,094.79 | |

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|-------------|---|-----------|-------------------|---|
| | Diorama - Sandy river beach with sculpted rock boulders and driftwood. Does <u>not</u> include water or plant material. | \$ | 89,261.44 | assuming 800 SF |
| | Audiovisual - (5) 18" diagonal touchscreen monitor - w/ stainless steel bezel, AV equip cabinet and support structure to glass guard rail. Does <u>not</u> include audio. | \$ | 15,696.24 | |
| | Audiovisual - Digital video source equipment concealed in AV equipment cabinet. | \$ | 5,427.18 | |
| | Audiovisual Program - AV integration by fabricator. | \$ | 100,000.00 | CA +TSG |
| | Audio Equipment - Digital Audio equipment with 5 track stereo playback capability and speakers. | \$ | 3,962.29 | |
| | Audio Program - AV integration by fabricator. | \$ | 10,000.00 | CA +TSG |
| 3.00 | Total Pre-World War II | \$ | 276,526.02 | |
| 4.00 | Early Powerboats | | | |
| 4.01 | Esmeralda II, Georgie & Wee Red | | | |
| | Photomural - (1) 13' x 12' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 8,044.59 | |
| | Photomural - (1) 13' x 14' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 9,507.84 | |
| | Photomural - (1) 13' x 16' fabric stretched over frame. Anchor powder-coated steel structure to exiting concrete floor and walls. | \$ | 10,576.51 | |
| | Structural Glass Guard Rail - (1) 30" H x 40' L. Anchor to existing concrete floor w/ stainless steel stanchions and base plates | \$ | 4,261.51 | |
| | Primary Interpretive Graphic - (3) 3/4" x 18" H x 60" L HPL Panel & stainless steel structure | \$ | 8,166.25 | |
| | Artifacts - (3) Boats - Provided by Client | | NIC | |
| | Artifacts Mounts - (3) concealed custom powder-coated steel cradle | \$ | 8,450.68 | |
| | Diorama - Sandy river beach, river and wave. Does <u>not</u> include plant material. | \$ | 89,261.44 | assuming 800 SF |
| | Audiovisual - (3) 18" diagonal touchscreen monitor - w/ stainless steel bezel, AV equip cabinet and support structure to glass guard rail. Does not include audio. | \$ | 10,435.12 | |
| | Audiovisual - Digital video source equipment concealed in AV equipment cabinet. | \$ | 5,427.18 | |
| | Audiovisual Program - AV integration by fabricator. AV Program by others. | \$ | 80,000.00 | CA +TSG |
| | Audio Equipment - Digital Audio equipment with 5 track stereo playback capability and speakers. | \$ | 3,962.29 | |
| | Audio Program - AV integration by fabricator. AV Programs by others. | \$ | 10,000.00 | CA +TSG |
| 4.00 | Total Early Powerboats | \$ | 248,093.42 | |
| 5.00 | Contemporary Boats | | | |
| | Structural Glass Guard Rail - (1) 30" H x 60' L. Anchor to existing concrete floor w/ stainless steel stanchions and base plates | \$ | 6,392.27 | |
| | Primary Interpretive Graphic - (8) 3/4" x 18" H x 60" L HPL Panel & stainless steel structure | \$ | 18,213.36 | |
| | Artifacts - (8) Boats - Provided by Client | | NIC | |
| | Artifacts Mounts - (8) custom stainless steel cradles or stainless steel cable hanging systems. Structural system and anchor points in truss work above for hanging boats provided by Building Contractor | \$ | 16,868.49 | |
| | Audiovisual - (8) 18" diagonal touchscreen monitor - w/ stainless steel bezel, AV equip cabinet and support structure to glass guard rail. Does not include audio. | \$ | 24,635.23 | |
| | Audiovisual - Digital video source equipment concealed in AV equipment cabinet. | \$ | 5,427.18 | |
| | Audiovisual Program - AV integration by fabricator. AV Program by others. | \$ | 160,000.00 | CA +TSG |
| 5.00 | Total Contemporary | \$ | 231,536.52 | |
| 6.00 | Gear Display | | | |
| | Structural Glass Walls - (2) two independent 13' H x 12' L glass display walls with a 24" deep x 12' L stainless steel display table. Glass walls include internal LED lighting, audiovisual systems and artifact mounts. Display tables includes graphics, audiovisual systems, interactive exhibits, touchable object and touchable models. Anchor glass display wall structure to existing concrete floor and walls. | \$ | 34,986.49 | |
| | Secondary Interpretive Graphic - (6) 3/4" x 12" H x 18" L HPL Panel with stainless steel tabletop support structure | \$ | 7,262.00 | |
| | Artifact Text Label - (40) 1/8" x 3" H x 5" L HPL Panels surface mounted with adhesive | \$ | 2,811.41 | |
| | Objects / Artifacts - (100+) Miscellaneous Objects / Artifacts provided by Client | | NIC | |
| | Objects / Artifacts - (75+) Open display mounts | \$ | 5,458.42 | |
| | Objects / Artifacts - (25+) small display cases w/ concealed desiccant | \$ | 7,118.96 | Assume 2 small display cases |
| | Touchable Objects - (16) objects provided by Client | | NIC | |
| | Touchable Objects Mounts - (16) | \$ | 1,124.57 | |
| | Interactive Exhibits - (4) 12" H x 18" W x 12" D, stainless steel interactives including a range of motions such as cranking, turning, rotating and pushing. Topics TBD. | \$ | 22,853.02 | Assuming simple, mechanical interactive exhibits. |

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|-------------|--|----|-------------------|-----|
| | Audiovisual - (4) 30" diagonal HD monitors - w/ stainless steel bezels mounted within glass display wall. Does not include audio. | \$ | 20,689.38 | |
| | Audiovisual - (4) 18" diagonal touchscreen monitors - w/ stainless steel bezel, cabinet and table top support structure. Does not include audio. | \$ | 18,749.34 | |
| | Audiovisual - Digital video source equipment concealed in AV equipment cabinet concealed within display table | \$ | 5,427.18 | |
| | Audiovisual Program - AV integration by fabricator. AV Programs by others. | \$ | 40,000.00 | TSG |
| 6.00 | Total Gear Display | \$ | 166,480.77 | |

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|-------------|-----------------------|---|----|-------------------|---|
| 7.00 | Histomap | Structural Glass Wall - (1) one independent 13' H x 10' L glass display walls with a 24" deep x 12' L stainless steel display table. Glass walls includes internal LED lighting, audiovisual systems and sculpted boat models. Display table includes graphics, audiovisual systems, interactive exhibits, touchable object and touchable models. Anchor glass display wall structure to existing concrete floor and walls. | \$ | 18,989.38 | |
| | | Secondary Interpretive Graphic - (3) 3/4" x 12" H x 18" L HPL Panel with stainless steel tabletop support structure | \$ | 4,753.10 | |
| | | Artifact Text Label - (30) 1/8" x 3" H x 5" L HPL Panels surface mounted with adhesive | \$ | 2,183.37 | |
| | | Audiovisual - (2) 13" diagonal touchscreen monitors - w/ stainless steel bezel, cabinet and table top support structure. Does not include audio. | \$ | 12,889.76 | |
| | | Audiovisual - Digital video source equipment concealed in AV equipment cabinet concealed within display table | \$ | 5,427.18 | |
| | | Audiovisual Program - AV integration by fabricator. | \$ | 40,000.00 | TSG |
| | | Models - (30) +/- 12" long cast resin half-hull models of emblematic Grand Canyon River boats | \$ | 9,792.27 | |
| | | Interactive Exhibits - (2) 12" H x 18" W x 12" D, stainless steel interactives including a range of motions such as cranking, turning, rotating and pushing. Topics TBD. | \$ | 12,922.64 | Assuming simple, mechanical interactive exhibits. |
| 7.00 | Total Histomap | | \$ | 106,957.70 | |

8.00 Outdoor Boat Display / Demonstration

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|-------------|---|--|----|------------------|---|
| 8.01 | Introduction - Part 1 | Outdoor Photomural - (1) 13' x 14' fabric stretched over frame. Anchor Corten steel structure to exiting concrete paving and walls. | \$ | 15,907.51 | |
| 8.02 | Introduction - Part 2 | Primary Interpretive Graphic - (4) 3/4" x 18" H x 60" L HPL Panel & Corten steel structure | \$ | 5,903.97 | |
| 8.03 | Introduction - Part 3 | Objects / Artifacts - 25+ Miscellaneous Objects / Artifacts provided by Client | | NIC | |
| | | Touchable Objects Mounts - (25) | \$ | 5,047.39 | |
| | | Artifact Text Label - (25) 1/4" x 8" H x 10" L HPL Panels & Corten steel structure | \$ | 12,709.73 | |
| 8.04 | Introduction - Part 4 | Outdoor Interactive Exhibits - (4) stainless steel interactives including a range of motions such as cranking, turning, rotating and pushing. Topic TBD. | \$ | 21,356.89 | Assuming simple, mechanical interactive exhibits. |
| 8.05 | Introduction - Part 5 | Objects - (1) S-Rig or similar boat - Provided by Client | | NIC | |
| | | Ladder Structure - (4) Boat access stairs, ladders, ramps TBD | \$ | 17,345.28 | |
| 8.06 | Acknowledgments | Cast Plaque - (1) 18" x 24" bronze plaque identify project stakeholders, etc. | \$ | 6,129.21 | |
| 8.00 | Total Outdoor Boats Display / Demonstration Area | | \$ | 84,399.98 | |

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|---------------------------|--|----|---------------------|--|
| Sub Total Exhibits | | \$ | 1,753,970.43 | |
|---------------------------|--|----|---------------------|--|

Contingency @ 20% \$ 350,794.09

Probable Tax \$ -

Probable Shipping and Installation \$ 129,874.97

TOTAL \$ **2,234,639.49**

- Notes**
- 1) Retail area by Building Contractor
 - 2) Flooring by Building Contractor
 - 3) Lighting by Building Contractor
 - 4) Power and Data to Point of Connection by Building Contractor
 - 5) Loading Dock is Paved and Doors are 14' H x 12' W

Notes and Assumptions

- 1) All graphics supplied to Fabricator as production ready files.
- 2) Fabricator has not included costs associated with image acquisition and/or use rights
- 3) Fabricator has not included costs associated with producing original illustrations, maps or other art
- 4) Artifact mounts by Fabricator, artifact mounting by others
- 5) Numbers by PS unless otherwise noted

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