Criteria B: Comprehensive Plan Including Project Management

Section B.1: Project Manager

Pacific Studio is pleased to forward the qualifications of Dawn Simon, Project Manager. Dawn has been with Pacific Studio for nearly twelve years, serving as Project Manager for eight of those twelve years. Dawn Simon is experienced with National Park Service projects, including previous assignments for Fort Vancouver National Historic Site, Mojave National Preserve, Great Sand Dunes National Park Mount Rainier National Park, Montezuma National Monument, and War in the Pacific National Historic Site. Ms. Simon has also successfully managed projects for other clients, including Seattle Symphony, the Cedar River Watershed Interpretive Center, the Alaska SeaLife Center, and Woodland Park Zoo. Dawn also holds the distinction of managing the largest project in our company's history, the expansion of the Children's Museum of Utah's new *Discovery Gateway*.

To accomplish the specific Scope of Work Listed in Section C.3, our project Manager will perform the following tasks:

- A thorough and detailed initial review of the task order. Our Project Manager will review and analyze all primary information submitted by the National Park Service, and quickly identify any questions or requests for clarification to National Park Service staff. Our
- Project Manager will meet with our estimating staff and General Manager as part of the initial review of the task order. Given the fact that the scope of work, cost, schedule, and personnel proposed for the project will be agreed to in advance, it is important for our Project Manager to have an in-depth understanding of the agreement between the National Park Service and Pacific Studio's Management and Estimating Team.
- Our Project Manager will also serve as the main point of contact between the National Park Service, Pacific Studio, and its subcontractors. Your Request for Proposal Encourages groups to form partnerships to complete the work associated with Design / Build projects; this has resulted in more than one team subcontracting to Pacific Studio for services under this contract. This has the potential to create communication challenges, and Dawn will be responsible for managing that communication and the submittals for the project.
- Although a fixed fee for our services will be negotiated between the National Park Service and Pacific Studio, we understand your requirement to have increasingly detailed production cost documentation as the project progresses. Dawn Simon will work with our estimators to insure this information is formatted in accordance with your specific requirements for the project.
- Dawn will also manage the transition between the design phase and the construction phase. One of the advantages to design/build projects is that they save time when managed properly. One of Dawn's primary project tasks will be insure there is a logical hand-off between design and fabrication. She will also insure that all team members are available during all phases of each project we undertake for you.
- All Project Management tasks will be completed in strict accordance with National Park Service Specifications. Considering the fact Dawn has completed six previous projects for NPS, she is very familiar with National Park Service specifications. Given the fact that this contract will also encompass design, planning, audiovisual, interpretive media, and evaluation, she will also become intimately familiar with those NPS specificiations that fall outside of a standard fabrication contract. Our Project Manager will thoroughly review project deliverables at key points in each phase to ensure quality and adherence to the specifications and scope of work documentation

- Our Project Manager will also manage the timing of the project, creating a customized timeline for project completion for each task order we receive. These timelines are typically created in Microsoft Project, and shared with all parties involved in creating the exhibition. The timeline will identify target dates, and also point out critical paths in design and exhibit fabrication. The flow chart for the Design Build Process (Attachment C) will serve as the backbone for any schedule we create. We have a similar template for design / build projects; it should only take a few minor modifications to insure that our design build template conforms to your outline in the HFC Exhibit Design-Build Flow Chart.
- In order to insure the project progresses within an established schedule, one of our Project Manager's key responsibilities includes insuring that any subcontractors required on a project are fully aware of their responsibilities to fulfill their obligations to their specific portion of the work.
- Our Project Manager will also manage subcontracts. Our contracts with our subcontractors are linked to the specifications provided by the National Park Service to insure quality is maintained throughout all aspects of the work. Dawn Simon understands the importance of the quality required for NPS projects, and that we are to adhere to the National Park Service Specifications that are part of our agreement with NPS. Our Project Manager will also continually evaluate the progress of a job as it moves through its evolution, working closely with our Key Personnel and Subcontractors to insure the project is delivered in the appropriate time frame.

Section B.2 Technical Approach

(a) COST ESTIMATING, TRACKING, AND REPORTING

From early concept through construction documents, we provide you with a cost estimate based on the scope and specificity of the design in each phase. At the schematic stage, this can be a statement of probable costs based on generalized square foot costs from both experience and from comparables (Class C estimate). As the design develops, the estimates become more detailed. In the concept stage, estimates may be based on unit or assembled system costs using actual quantities reflected in the design (Class B estimate). At the later design development phase, when the design has been finalized and materials and equipment have been specified, the estimates are fully itemized and costs for labor and materials can be more accurately predicted (Class A estimate). The purpose of the updated cost estimates is to inform the team in making decisions about design direction – to balance the costs and benefits of the exhibit elements, to weight the repercussions of design decisions, and to make adjustments in materials and methods through value engineering at the most appropriate stages of the design process. Monitoring of cost elements and open discussions between all parties during design and fabrication will help protect both the client and contractor interests and will produce a win-win situation for both parties.

(b) COORDINATION WITH AE FIRMS, BUILDING CONTRACTORS

There are a number of ways that we might interface with architecture and engineering firms, general building contractors and others involved in separate contracts on the same project. First, there are projects where exhibit planning is initiated at the same time that building design is being conducted. In this case, we will be an integral part of the overall design team, providing technical and design information to the architects and engineers at the appropriate stages in their design process. In the case of a visitor center or museum, exhibit planners and designers can often lead

the design process, providing valuable input to the architects and engineers about circulation, building layout, spatial needs, distribution of data and power, mechanical requirements, fire protection systems (especially in relation to exhibition of valuable artifacts), and lighting levels.

A second interface scenario is when exhibit design is initiated after building design has already been started. In this case, we will use our experience and knowledge to make informed decisions about building systems long before the actual exhibit design has been completed. We are often called upon to provide electrical load and distribution information for lighting and power, structural loading, placement of mechanical ventilation systems or access door heights when we are first brought into a project – before any design has occurred.

A third interface scenario occurs when the building is already completed or already exists and then exhibit design is initiated. In this case, we may need to work with existing conditions "as is" or recommend retrofitting an exhibit space to best fit the interpretive function. In an "as is" example, we might have to modify our design to accommodate the existing conditions. For instance, a historical structure that originally had skylights instead of overhead electrical lighting would not be retrofitted with display lighting, so an alternative means of lighting exhibits would need to be designed. In the case of a recommendation for retrofitting, a new facility might lack adequate environmental control to display valuable artifacts. If the interpretive goal of the park were to display their valuable collection, then a retrofit would be recommended for the space. We would then coordinate efforts with a contract AE firm or with NPS architects to bring about the best design solution, which is often an integrated combination of building modifications and changes in the exhibit design.

A fourth scenario occurs during exhibit fabrication, when general building construction is also underway. There are often situations where exhibit elements need to be integrated into the building while it is under construction. This may be the case when structural footings are required, metalwork needs to be embedded into the building walls, or a special piece of equipment or display needs to fit into a part of the structure. These situations point out areas where we will closely coordinate with building contractors to ensure that these items are acknowledged as necessary to be incorporated in the building contractor's workflow, that they are integrated into the fabrication schedule, and that they are delivered in a timely manner with the instructions or on-site personnel to ensure a proper installation.

(c) EXHIBIT PLANNING AND DESIGN TASKS

Pre-Design

The first step in our design process involves a site visit to the park. This very important first step not only allows us to establish a working relationship with the park staff and our COR, but gives us time to scope out the project and to uncover impending issues or potential opportunities. Discussions with interpretive, curatorial and maintenance staff and the superintendent help us determine the initial scope and complexity of a project and establish project needs and goals. At the same time, we document the project area (photos and measurements), inspect existing conditions, get an overview survey of existing collections and gather any pertinent data or resource information from the staff.

Following the initial site visit, we will review background material and become familiar with the subject. We will organize our initial thoughts, summarize your comments and concerns and begin formalizing goals, objectives and themes. Next, we would reconvene at the park to share these thoughts in a planning workshop with the project stakeholders, which includes staff, community groups, cooperating associations, subject matter experts and others. The purpose of the workshop

would be to solidify a conceptual vision for the project and to confirm our direction. From the results of the planning workshop and in consultation with the park, we will develop a project brief that summarizes and analyzes the project goals and budget, giving you a clearer picture of project expectations. This overview information and visioning statements can be used to conduct an evaluation to help gauge the success of the project. Both the planning and design team and the fabrication estimators will analyze and assess the proposed project budget and discuss its relationship to the proposed needs, requirements and desires expressed. Examples of projects with similar budgets could be used to illustrate the scope, complexity and finish level of the project being undertaken. Likewise, schedules will be developed with all key members of the design and fabrication teams weighing in.

Schematic Design

Content Research: Once we have a better idea about the story we would like to tell, we can move forward with the content research component of the project. Research may not necessarily be limited to just a front-end activity, but could extend through the Design Development Phase. Research includes not just topical research for writing, but visual and object-based information as well. We have found that the best place to always start is in the park. Spending an adequate amount of time speaking with knowledgeable staff members provides a wealth of information, and looking thorough the park resource collections for objects, documents, and images will often yield the lion's share of information needed in an exhibit. Furthermore, finding out what subject matter experts the park staff has connecting with or what researchers are doing projects in the park is another great way to widen the search for content. Finding information in local and regional libraries, historical societies, and academic institutions also will yield information that cannot easily be found elsewhere. Independently, we can also research at leading state or national institutions and repositories such as the National Archive, the Library of Congress or the National Park collections. Statewide in California for instance, we regularly research subjects at the Bancroft Library at the University of California, the California Academy of Sciences, the California State Parks Archive and the Huntington Library. Additionally, many of the institutions named above also have online digital collections or access to search indexes. This has been found to save valuable time and allow us to connect with more people and organizations than in the past.

Content Organization and Management: Once we begin to gather data and resource information and begin draft text writing, it is crucial to stay organized. Labeling and cataloging all text, images and objects as they are being gathered or created makes it infinitely easier for anyone on the design team to find and/or refer to a given item. In researching, we must be sure to always know the source of the information, any identifying numbers or cataloging, and rights or use requirements or limitations on the material. We will use the NPS Museum Exhibit Planner database software to catalog and organize text, images and artifacts and objects. Each item is assigned a unique identification number in the system that gives it a prefix and suffix indicating what type of item it is and what sequential number it is in an exhibit series. These identification numbers live with each item throughout the design process and the database allows everyone on the design team access to the information. Typically, the task of database organization begins at the onset of Design Development and is continually updated through the end of Design Development.

Telling an Interpretive Story: At the beginning of Schematic Design, we will convene a design charette at the park that again includes all stakeholders. In this session, we will define the exhibit's interpretive themes, take home messages, guiding principles, and educational, emotional and behavioral objectives. From the charette and through further research, we will select topics and stories that support our themes, collating and organizing them into an Interpretive Outline. We will then submit that outline for comment and review. From that exercise, we would then move forward with developing an exhibit Interpretive Plan that more fully spells out the stories and potential media for all the exhibit components.

The creative task of weaving an interpretive story truly begins at this point. With enough background research done, we look for the things that connect the visitor to the story. Personal experiences (quotes, images, diary accounts, interviews) are a very effective means of communicating a story without recounting every detail of an event. It is also an excellent way to show multiple viewpoints about a subject. The voice of the narrative is also carefully discussed. Whose voice is speaking to the visitor and why?

Personal objects and mementos work in much the same way as quotes. Likewise, tactile objects can make a personal connection, or immersive experiences surround the senses and draw you in. Personal services, in the form of ranger talks or special tours, are yet another way to connect with visitors. We like to analyze the exhibit objectives and separate the interpretive messages based not only on where and when we think visitors should receive them, but in what form they can be delivered most effectively. Simple and straightforward messages work, and limiting the amount of reference information (i.e. names, dates, events) is always helpful.

Using the Interpretive Plan developed earlier, we would then come up with several schematic alternatives. We would also provide you with cost information and narratives and sketches describing each alternative. Once this information has been presented and absorbed, we would participate in a Value Analysis workshop to determine the best alternative (if the project is of a dollar amount to trigger DAB review). From the results of the Value Analysis, we will formulate a preferred alternative. We can then assist the park in assembling a presentation package for a DAB presentation, should that be required.

Design Development

Developing the Exhibit Design: As the design progresses, so does the interpretive story. We start with draft text in Design Development I and through an iterative process working with the staff, we begin to refine our messages. Through several checkpoints, the text is developed to a point at the end of Design Development that it is substantially completed.

We would then take our preferred schematic alternative (pending DAB approval) and develop it into a defined concept design. At this level of design (Design Development I), it would contain a floor plan, power and lighting schemes, cross sections through the exhibit space, elevations of exhibits, and first iterations of graphic formats. Media programs will have short descriptive narratives and sample text development. We would also indicate any necessary building modifications at this juncture. We would then convene a meeting at the park to present the plans and review them as a group. We would then take your consolidated comments from this review as the basis for continuing to the next phase of design.

We would then move forward into Design Development II, where every design element previously mentioned would be further developed and refined. Each exhibit would have its structure, material and finishes defined. Major details or assemblies would be drawn. Every graphic would be represented and specified for size, production method, and mounting. Every graphic will have an artwork layout. Audiovisual and interactive equipment will be specified, along with operational functions, accessories and ancillary equipment. Treatments for audiovisual programs will be finalized. The completion of the resource database would be done at this stage as well.

Additionally, the following elements will have been taken into consideration during the design development process. They include universal design and accessibility, sustainability, evaluation, and a host of content specialties. These are listed and described below.

Universal Design and Accessibility: Our approach to design incorporates the idea of universal access for exhibits. We do not try to develop separate exhibits for those who have physical impairments, but rather try to design an exhibit that makes sense for all people. Heights of exhibits, viewing angles, control reach, and reading contrast are all taken in to account to accommodate people of all ages and capabilities. Where physical impediments prohibit universal access to all areas of a park (such as a trail), we will create an alternative interpretive experience that visitors can enjoy. On the specific point of meeting physical accessibility standards mandated by federal law, we feel very confident that we have done a good job of that in the past. With new emphasis on programmatic accessibility for exhibits (including assistive listening, open captioning, audio description, etc.), we are keenly aware that we will need to be even more diligent in incorporating these elements into our designs.

Sustainability: The principles of green building, which have been mandated for architectural projects throughout the Federal system, can also be applied to exhibit design. Though not as clear-cut in terms of the selection of innovative new building products, it is incumbent upon our industry to embrace the spirit and intent of the guidelines. Where at all possible, we specify products and materials that are green and environmentally friendly. Finish materials such as carpeting, carpeting adhesives, plywood, solid woods, and paints and sealants are selected with "green building" in mind. At the same time, we are keeping a watchful eye on the market for new green products. For instance, our choice of materials for a recent project, Kuchel Visitor Center exhibits for Redwood National and State Parks, used recycled Douglas fir timbers and steel (recycled) for exhibit construction. In another project, La Purisima Mission State Historical Park, we are using large plastic panels made from recycled soda bottles instead of plexiglass for graphic surfaces. Universally, we use low VOC emission paints and sealants for construction of display cases, which must satisfy both the environmental requirements as well as conservation standards for museum objects. Lighting is another area where energy efficiency and impact on HVAC loads are very important considerations. More and more, we are moving away from blanket track lighting systems to more task oriented and efficient lighting systems. We have been using fiber optic and LED lighting systems for a number of years now, which are excellent from both energy efficiency and conservation standpoints. When track lighting is required, we seek the most energy efficient type of fixture and lamp to perform the task at hand. We feel that the principles of green building will become a more important factor in exhibition design in the coming years.

The Power of Evaluation

Testing and feedback are valuable tools in the development of an interpretive exhibit. Front-end evaluation can test exhibit concepts, topic selections or delivery methodologies to evaluate visitor reaction, acceptance or understanding on a high level. Formative evaluation can be done during

design to test specific exhibits for comprehension, interest level or ease of use, and can lead to design revisions that greatly improve the functional capabilities of an exhibit. Summative evaluations can be done to see how effective exhibits are when completed – to see whether the intended objective matches the actual experience. The true test of summative evaluation lies in providing a budget contingency or planning future budgets that could allow for corrective measures to be taken should evaluation show that substantial gains in comprehension, interest or use be gotten from making revisions. We have worked with evaluators on previous exhibit projects, mostly for private institutions. We have used focus groups to gauge the feasibility of subject material and museum concepts in early stage planning. We have used our designs and rough mock ups in formative evaluations to refine our messages and our designs, even discarding exhibit ideas judged to be too hard for visitors to understand.

(d) DEVELOPMENT OF CONTENT SPECIALTY ITEMS

Handling and Preparation of Artifacts

We have many years of experience dealing with artifacts and designing museum conservation cases and mounts. In the content research phase or while in design, we will examine, measure, photograph and inventory artifacts in the park (park collection or regional collection). We typically work with the park curator in inventorying and handling artifacts. Jointly we weigh the desire to display an object against its conservation requirements (object condition, environmental conditions for display, mounting method, length of time on display, ability to rotate with alternate artifacts) to determine its feasibility for display. From this information, we will make a selection of artifacts for inclusion in the exhibits. The information about each artifact is logged in the Museum Exhibit Planner database and is used in laying out display cases and designing mounts. This information, along with field sketches and other notes, will be passed on to the production department for review and comment. Concerns or issues about mounting can then be addressed during the design phase of the project instead of during fabrication.

We do not ask to receive artifacts during the design phases of work. During fabrication, it may be necessary to re-measure some of the artifacts at the park for absolute sizing if artifacts cannot be sent from the park to our facility for the mount fabrication process. As an example, Pacific Studio personnel travelled to Guam and Saipan in preparation of the mountmaking tasks associated with the World War II War Memorial in Garapan, Saipan. It was not necessary for those mounts to be shipped to Seattle, they could remain on island and not be exposed to any unfavorable elements during their transport to and from our fabrication facility.

Custom Exhibit Elements

Topographic models, dioramas, interactive devices, taxidermied or carved specimens, and art and sculpture are all custom exhibit elements that are part of the overall repertoire in the exhibit designer's bag of tricks. We routinely deal with these elements in all our work and have had experience in working with different vendors for all of these specialty items. The quality of the work is often dependent upon the close coordination of our design and the information we impart to the vendor for a particular specialty item. The more information and specificity we can provide, the smoother the job will flow and the higher the overall quality. For instance, we are familiar with cartographic requirements for producing different types of topographic models; we have working knowledge of mechanics and electrical systems in interactive devices; and we know the degree of specificity required for different levels of diorama work. Accuracy in determining requirements for custom exhibit elements will result in more accurate pricing and cost control. It also helps to match expectations with outcomes when the element is completed.

Audiovisual and Electronic Interactive Programs

Multimedia is an integral part of all exhibit work these days. Our designs incorporate many different types of media programs and exhibits, from 200 seat multimedia theaters to computer kiosks, electronic games, and other interactive devices. In the early stages of design, we are responsible for the development of the concept, writing a program treatment, and describing an exhibit's major design elements or characteristics. As the design develops, we then write performance, equipment and functional specifications., define the budget, and identify producers, programmers, developers and others with specialized knowledge needed to produce desired program.

By bringing the media production team into the process fairly early, we are able to be more realistic about what can and cannot be done for a given budget. We can also iron out techniques and cost-saving features early as well, often avoiding duplication of efforts in the production process. Additionally, we can look at technological alternatives to media delivery to find just the right fit between the medium and the message.

Original Artwork, Illustrations, Maps, Diagrams, Photography

During Design Development, we determine the type of artwork needed to support the interpretive stories. Simple diagrams and maps are usually done in-house, as graphic design and illustration are a part of the services we offer. Illustrations and artwork that are very exacting will be commissioned, using artists selected for their ability to produce art in a particular style and who are experienced in illustrating a particular subject matter (i.e. a Civil War artist for a Civil War subject; a Hawaiian illustrator for a Hawaiian cultural project). We will write a scope of work for an artist, then provide them with the interpretive context, graphic layouts with placement and size information, samples of illustration style, and subject information (images, descriptions, etc.). During Pre-Production, we will art direct and coordinate with you on reviews of the work, with the goal of completing artwork before the start of the Production Phase. Coordination of production methods, final production sizes, and other technical issues will help speed up this exhibit element and avoid production conflicts later.

Acquisition of Historic and Contemporary Images

As we explained in the content research phase of our work, we will conduct searches for historic images. When images are found, it will be our responsibility to acquire copies of these images, either in print or digital form. We understand that we will need to negotiate reproduction rights and pay duplication fees for copies. This information will be logged in the database and kept on file for legal purposes (a copy of these files will be given to NPS at project close out). In some instances, we have found that images in collections could not be taken out of the facility for copying, and we have had to bring a computer and scanner to the facility to perform in-house scans. We will keep you informed about issues such as this, as they cannot be easily foreseen at the outset of each project.

The same idea holds true for photography. We will locate professional photographers who have done work in the region or in the park and review their work for appropriate images. If necessary, we will commission them to shoot specific subjects. Art direction and provision of resource information will be part and parcel of our coordination of their services. Much of the photography could be dictated by price as well. We will always strive to get you the best quality images at the best prices. Again, coordination between the design team, the project manager, and the fabrication staff about production methods, sizes, and mounting techniques can speed up production and also avoid duplication of efforts (for instance, handling photographs or scans multiple times, readying them for production).

Design Development Summary: From the Schematic Phase, where a floor plan and interpretive layout is established along with a content outline, Design Development can be characterized as where the "meat is put on the bones" of the design. By the end of this phase, the exhibit design is fully drawn out, with each exhibit element defined by size, construction, material and content. Likewise graphics and all media elements are similarly defined. In the case of audiovisual elements, they are further defined by their equipment specifications and content treatment. Custom elements and objects are fully defined and/or selected and performance specifications, content treatment or other specific requirements are called out. In essence, a complete package describing the exhibit has been developed and assembled into a comprehensive form that will be transferred directly to the next phase of work: Pre-Production.

(e) PRE-PRODUCTION

At the beginning of the Pre-Production Phase, we will finalize any revisions to the design drawings and to the content (graphics) package so that everything will be production-ready. This may include additional detailing, clarifications, specification information, and minor text changes for typographical or formatting errors in the graphic layouts. Coordination between the design team and the production staff is essential at this juncture in order that the transfer of information is complete and thorough. Throughout all stages of design, construction details, materials and methods will be shared and reviewed between the design and the production staffs so that there are no conflicts or ambiguities about how or what to build. At the same time, this coordination will ensure that all exhibit components are buildable and have been value engineered to produce an optimal product.

After the above tasks are complete, our Project Manager will oversee the creation of fabrication drawings. We will provide fabrication drawings that will detail all proposed structures to be furnished. Copies of these fabrication drawings will be submitted for approval before fabrication commences. These submittals will be dated to easily identify any revisions, and will also clearly indicate scale, materials and construction methods. All fabrication drawings will also clearly indicate operational and maintenance procedures. Our fabrication drawings are typically created at 11" x 17" unless otherwise specified. Fabrication drawings will also be archived in order to allow easy access and reference should questions arise over the specifications. All shop drawings are done in AutoCAD. Our process also allows for an internal red-line step before shop drawings are sent out for review.

The next step will be to furnish the National Park Service with samples, mock-ups and prototypes. Our submittals will include color chips, finish samples, and materials samples. Additionally, when working with digitally output graphics such as Lambda prints, Phenolic graphics, or inkjet graphics, we will provide proofs for color, density, crispness and clarity. Our graphic samples will typically include a quarter scale proof of the graphic for color and density, and a 1:1 scale proof for crispness and clarity. Our mock-ups and prototypes have been useful for our clients to evaluate exhibits, especially in the area of interactive displays. Where appropriate, samples and mock-ups will be archived in the project binder for future reference. In some cases, we may recommend that larger mock – ups representing highly stylized finishes can be evaluated at the in-shop reviews.

(f) OFF-SITE PRODUCTION

After we have received approvals on the shop drawings and samples, the next step will be to provide Exhibit Structures. We will provide all elements of exhibit fabrication, including cabinetry, panels, platforms, artifact cases, artifact mounts, vitrines, etc. In order to insure high quality, our exhibit structures are typically trial assembled and tested in our fabrication facility

before installation. We also ensure high quality by insuring that the majority of our fabrication is done “in house”. Our in-house capabilities include exhibit-grade cabinetry, custom metal fabrication, artifact mounts, artifact replicas, interactive display prototyping, interactive exhibits, hand-painted murals, sculpting and dioramas. As the project moves into the shop, a Lead Fabricator is assigned. The role of the Lead Fabricator is to assist the project manager in terms of managing the day-to-day aspects of the project as it moves through our facility. Michael Graham, the Lead Fabricator selected for this work, has past experience on NPS projects such as Yellowstone National Park and the War in the Pacific National Historic Site. He will work closely with the project manager to insure the exhibits are built to the specifications of the project. The Lead Fabricator will also assist the Project Manager with quality control documentation as the project moves from fabrication to paint, from paint into assembly, from assembly to staging, from staging to packaging – carefully signing off on the quality at each stage of the project.

Included in the fabrication of exhibit structures is Electrical and Electronic. We will purchase, assemble and test electrical, electronic and mechanical devices. This will include but is not limited to lighting, digital repeaters, fiber optics, audiovisual components, and miscellaneous electrical controls.

We will also provide the National Park Service with graphics. We will provide all exhibit graphics by utilizing approved layouts, and creating high-resolution files from those supplied layouts. After our in-house staff of graphic artists has created the high-resolution files, we will oversee the output and mounting of all graphics. Graphics are then test fit on to the exhibit structures to insure proper fit. We have been fortunate to have had the opportunity to produce graphics for the National Park Service under a wide variety of paradigms. Our work has consisted of the creation of a few small interpretive panels to complex graphics packages in multiple languages requiring image research, image procurement, typography, translations, and layout work. Whether the project is large or small, easy or complex, all graphics will be produced in accordance with National Park Service Specifications to insure a quality product is delivered.

Conservation guidelines are also a critical part of quality control for our work for the National Park Service. Our staff will utilize its experience in the area of conservation in order to insure that the National Park Service’s artifacts are properly maintained while on display. This will include the fabrication of artifact mounts, installation of the artifacts into exhibit cabinetry, and additional conservation accessories such as silica gels. Our fabrication facility features lockable storage for client-supplied artifacts if they are stored on site during the fabrication process. Depending upon the specific needs of the project, we can provide on-site documentation of artifacts.

After the design is transferred to the production departments and throughout the different phases of production, the design team will stay involved in the project to ensure that the original design intent remains true. They will be available on an as-needed basis to answer questions, review work or decisions when production affects or impacts design.

(g) ON-SITE INSTALLATION

Upon completion of the items above, we will provide the National Park Service with **s**et up and installation. Typically our exhibits go through “trial assembly” before they are shipped out, to insure that the exhibit components will work as specified. Our installation crews, working in conjunction with the project manager, will also insure the exhibits are functional, complete, and ready for use. As a general rule, those employees who were involved in fabricating the exhibits will be the employees who set up and install the displays. This familiarity with the components

leads to a more efficient installation. At the beginning of an installation, we will have a client walk-through to inspect existing conditions. Any existing damage to building is identified and documented at that time. Upon arrival, our crew will also assess the site for logistics and an understanding of the site, to insure it conforms to our plan to unload, set up, install, and clean the exhibit. Our set up and installation plan includes the creation of exhibit manifests, and a schedule outlining the order in which the exhibit items will be installed. In order to maximize efficiency and effectiveness, a list of the daily goals to be accomplished will also be created. These goals will be reviewed in a brief morning meeting with our installation crew. Before a client walk through, all exhibits will be thoroughly cleaned, using the appropriate cleaning materials for each exhibit surface. All carpeted and floor surfaces will be vacuumed, and tools, extension cords, ladders etc., will be removed before the client walk through occurs. We will bring all of our own cleaning supplies, including a vacuum.

On installations that are complex and have a high degree of object mounting, diorama-work or environmental settings where aesthetic decisions must be made in the field, the designer may be brought into the installation to aid in this process.

(h) ORGANIZATION OF CLOSE-OUT MATIERALS

After the installation, our Project Manager will submit a summary of the work performed for the National Park Service. This will be in the form of a Project Closeout Document, which will be submitted to the National Park Service. The Project Closeout will include photographs of the exhibit, relevant documents and a maintenance manual. Our maintenance manuals include maintenance instructions, cut-sheets and/or web addresses for spare parts, and cleaning recommendations.