



PROPOSAL

State of Wyoming
WYOMING STATE CAPITOL
Renovation & Restoration
Level I/II Design Studies
Professional Services PS0642

*Cheyenne, Wyoming
December 19, 2012*





December 19, 2012



Suzanne Norton

State of Wyoming Office of Construction Management
Department of Administration & Information
700 W 21st Street
Cheyenne WY 82002



**Reference: PROFESSIONAL SERVICES PS0642
State Capitol Restoration and Renovation Level I/II Design Studies**

HDR Architecture, Inc. in association with Preservation Design Partnership,
with Plan One / Architects

Dear Suzanne –

HDR is pleased to submit the following proposal for Professional Services for Wyoming State Capitol Renovation & Restoration Level I/II Design Studies for the State of Wyoming, Department of Administration & Information. Our proposal is based on: the services you have outlined in the Request for Professional Services 0642; the information we received from you on the project (including reports, tours, and drawings); and on the expertise, process, and care we have outlined in our submittal and presentation.

Our Proposal presents two options:

- 1) A **Basic Level I and Level II Study** that includes all “typically required” services and deliverables. The Basic Study would meet the stated scope of the Statute Level I & II services.
- 2) An **Enhanced Level I and Level II Study** that is based on the comprehensive work we have presented with our submittal and our presentation. The Enhanced Study would allow the State of Wyoming to reach an informed decision on how this important project should proceed and help manage risks, based on facts and not conjecture.

Our approach is based on decades of collective experience

- on projects of this **type, complexity and significance**, as well as important “lessons learned” from over seven State Capitol restorations,
- on guiding large groups with potentially **divergent agendas to reasonable consensus**, and
- **Plain and pure passion** for Architecture, Spirit of Place, and Service to our Clients

Should you have any questions or would like to discuss any part of this proposal in further detail, please do not hesitate to contact me at 303/318-6288 (direct), 720/253-4635 (mobile) or via e-mail at thomas.whetstone@hdrinc.com.

On behalf of our team, I would like to thank you and the Selection Committee for the opportunity to be considered for this important, “career defining” project.

Sincerely,

HDR Architecture, Inc.

Thomas P. Whetstone
Senior Project Principal

TABLE OF CONTENTS

Section 1: Introduction / Preamble	1
Section 2: Our Team Structure - Roles and Responsibilities	2
Section 3: Project Understanding, Organization and Deliverables	4
Section 4: Compensation & Expenses	9
Section 5: Proposed Schedule	10
Section 6: Exclusions	12
Section 7: Level III Design Compensation Structure	13
Section 8: Appendices	16

Section 1: Introduction / Preamble



The Wyoming State Capitol is a National Historic Landmark designed and constructed in the great tradition of the late 19th / early 20th century monumental capitols of the country, exemplifying the values, character and the dimensions of the Great State of Wyoming.

The building reached its present form and configuration through three building campaigns, namely 1887 [Original portion of the building], 1890 [First Expansion] and 1917 [Second Expansion].

In the intervening 96 years, several building renovation campaigns have attempted to address the needs of the building, including building systems improvements, code compliance, space utilization and visitor services.



Some of these efforts have already exceeded their useful lives by a significant factor, while others no longer meet current performance and code compliance building standards. While the efforts of the building maintenance team are exemplary, there are significant areas of deferred maintenance and major deficiencies in the building's infrastructure and systems that present significant risks at every level, including life safety, security and continuation of government.

Recognizing that the time has come to create a plan for the next fifty years for this venerable landmark, the State of Wyoming has embarked on a journey that is about to begin with the award of this contract for the preparation of a Level I and Level II Study for the future of this important, iconic and revered building that belongs to all citizens of the Great State of Wyoming.



The Study will become the “blueprint”, the road map and the foundation for all subsequent decisions and will guide the comprehensive restoration and rehabilitation of this National Historic Landmark. As a result, it needs to be:

- Comprehensive
 - Thorough
 - Based on facts and evidence
 - Carefully conceived and organized, addressing unknowns and managing risk
 - Sensible, sensitive and sustainable
- and above all very **reliable**.

This Proposal builds on our previous submitted Statement of Qualifications (September 27, 2012), and our Interview (December 7, 2012).

The following sections address all requirements of Level I and Level II studies, as well as the Request for Estimated Fee, dated December 6, 2012. This Proposal follows the sequence of the requested information, as it appears in that document.

Section 2: Our Team Structure – Roles and Responsibilities

As described previously, our team structure is organized and managed to ensure clear leadership and communication for the State of Wyoming.

The Leadership Team is available to you at any time from start to forever and will represent the team. Whereas we are an integrated team, our general assignments are

- Tom Whetstone – management, programming, ...and the buck stops with Tom
- George Skarmeas - investigation, planning, design, and champion/expert for this National Historic Landmark
- Charlie Van Over – peer review, constructability, and voice of Wyoming.

Our Leadership Team in more detail:

HDR Architecture, Inc:

- Principal in Charge for the Project: Thomas Whetstone
- Team Administration and Management: Thomas Whetstone and his designee
- Responsibilities:
 - Executive Architect
 - Programming Lead

Preservation Design Partnership:

- Lead Planner, Designer, and Preservation Architect: George Skarmeas
- Technical and Content Coordinator: Dominique Hawkins
- Responsibilities:
 - Lead Planning
 - Design
 - Preservation Architect
 - Coordination of Group A Sub-consultants

Plan One / Architects:

- Team Administration and Management: Charles Van Over
- Responsibilities:
 - Project Coordination
 - Peer Review for Alignment with Wyoming Expectations and Practices
 - Coordination of Group B Sub-consultants

Our Core Team includes additional consultants will assist the Leadership Team relative to their expertise.

Group A Core Team:

- Robert Silman Associates
 - Structural Engineering
- Joseph R. Loring & Associates
 - HVAC
 - Plumbing
 - Power
 - Exterior Lighting
 - Fire Alarm
 - Lightning Protection
- AON Fire Protection Engineering
 - Code Analysis
 - Fire Protection
- Gary Steffy Lighting Design
 - Interior Lighting
- International Consulting
 - Cost Estimating
- GB Geotechnics*
 - Non-Destructive Testing

Group B Core Team:

- Sage, Ltd.
 - Peer Review for Construction Efficiency
- BenchMark
 - Civil Engineering

* Noted firm's services may be negotiated to be contracted directly from the Owner – similar to a geotechnical investigation or survey.

We emphasize that we will have clear order and direction among this large team, and yet work as an integrated team. Contractually, we anticipate HDR Architecture, Inc. to be the prime; to enter into an Agreement with the State of Wyoming, and the listed team members will be sub-consultants to HDR Architecture, Inc.

Section 3: Project Understanding, Organization and Deliverables

A. Project Understanding

The project involves the comprehensive restoration of the Wyoming State Capitol, an iconic and monumental National Historic Landmark.

While the immediate focus of the project is to prepare a **Level I and Level II Study**, the real goal is to lay out all the necessary steps that would enable the State of Wyoming to:

- a. Make informed and rational decisions as to how this important undertaking would be organized, structured and delivered
- b. Prepare for the relocation of the occupants of the Capitol, while the restoration work is under way
- c. Provide for temporary but suitable space for the occupants of the Capitol for up to two sessions – or approximately two years – to ensure that they will continue to provide the necessary services for the citizens of Wyoming
- d. Develop a comprehensive, sensible, realistic, reliable and well organized restoration plan that would include all disciplines and areas of expertise needed to successfully deliver this project
- e. Carefully identify and delineate all costs associated with the project, from major construction items to details associated with artwork, exhibits and important artifacts
- f. Ensure that the project meets the highest standards and best practices and is approved by all users, stakeholders and “authorities having jurisdiction” [AHJs] over the project
- g. Assist the stakeholders in achieving consensus and a speedy, efficient and focused approval of proposed Scope of Work, Budget and Schedule, as it would be delineated in the Level I and Level II Study.

An Important Note:

The restoration of the Capitol, a project that is envisioned to be undertaken in a thorough, comprehensive, efficient and unimpeded manner, can only be achieved if all the occupants of the building have been relocated and the building is vacant to implement a carefully sequenced construction program, from selective demolition to application of decorative finishes.

The relocation of the occupants and the programming and planning effort for creating appropriate space to accommodate the mission critical functions of the Capitol for up to two sessions is an important aspect of this Study.

B. Scope of Services

A planning document, such as a Level I and Level II study, has specific requirements for topics to be covered, disciplines to be included, issues to be addressed and deliverables to be developed for all “typical projects”.

The Capitol, on the other hand, is a unique, a “one-of-a-kind” Landmark that is not typical; in addition to the basic services normally found in “typical” projects, it requires a much wider range of answers, areas of expertise and disciplines.

As we presented at our interview, there are two options in developing this Level I and Level II Study:

- **Basic Level I and Level II Study** and
- **Enhanced Level I and Level II Study.**

The **Basic Level I and Level II Study** is exactly what the term indicates. It meets all the requirements of the State; however, it does not include all the critical information necessary to make informed decisions, as we presented at our interview.

On the other hand, the **Enhanced Study** includes all the important dimensions, activities and “fact finding process” we reviewed at our presentation.

We have organized our team based on this understanding.

While this type of organization is primarily driven by contractual and administrative convention, our experience from comprehensive restorations of capitols and monumental historic landmark buildings indicates that all of these services will ultimately be necessary and essential in providing a comprehensive treatment for such an important building.

It would be prudent and appropriate for the long term success of the project for all of these services to be included in this Level I and Level II Study.

Based on our experience with the Capitols of Pennsylvania, Virginia, West Virginia, and California - to name a few – the following services will ultimately be needed in the project:

A. *Basic Services*

- Programming
- Planning
- Architecture / Historic Preservation
- Site Planning / Urban Design
- Structural Engineering
- Mechanical / Electrical / Plumbing / Fire Protection Engineering
- Lighting
- Code Analysis
- Cost Estimating

B. *Enhanced Services*

- Documentation of “As-Found” Conditions
- Non – Destructive Evaluation
- Analytical Testing of Archaic Materials and Assemblies
- Destructive Examination and Probing
- Performance Based Code Analysis and Modeling
- Exiting / Egress Studies
- Audio / Visual Technology & Systems

C. *Optional Services*

- Furniture, Fixtures & Equipment
- Artwork
- Exhibits
- Signage

It is important to note that ultimately there may be some very specific studies and services that should also be considered for this project that are unique to projects involving the treatment of historic buildings and specifically monumental national historic landmarks. More specifically:

- Dynamic Load Studies [Seismic Modeling]
- Building Envelope Thermal Analysis
- Energy Performance Studies

C. Deliverables

A Final Report shall be provided and include a full description of the Study findings and recommendations.

- Facility Assessments
 - Utilize existing documentation, interviews and commentary from State Staff, and professional observations by our team
 - Provide a consistent and accessible format of reporting existing conditions
 - Care will be taken to articulate and differentiate the preferred conditions and the conditions which create risk for the State, i.e. code, life safety, and licensing issues.

- Program Analysis
 - Utilize existing documentation, interviews and commentary from State Staff, and professional observations by our team
 - Revisit the 2007 Space Needs Reports as needed to support appropriate planning and decision making
 - Care will be taken to articulate and differentiate the needs and desires of the organization

- Option Analysis
 - Utilize the findings above
 - Focus on developing options that inform the process and State decision making. Options include
 - Capitol Renovations
 - Space Planning
 - Transition Planning
 - Project Delivery Strategies
 - Provide consistent and accessible format of reporting

- Recommendation
 - The Recommendation shall be based on the Steering Committee's deliberations and support.
 - With appropriate deference to the nature of the Study, the recommendation shall endeavor to be as specific and direct as possible.

We will provide 25 (twenty-five) color printed Final Reports along with an electronic file for the Owner's use.

We will provide 5 (five) printed Intermediate Reports as produced for the project along with an electronic file for the Owner's use.

All printing shall be performed by a business of our choosing. Additional copies may be requested with reimbursement of costs (with no mark-up by HDR).

An important note:

It has been brought to our attention that there is an open question whether a **Historic Structure Report [HSR]** would be necessary or beneficial. Here are thoughts:

1. An HSR is a valuable document that includes a wide range of topics, issues, etc. It was designed by the National Park Service to provide guidance in planning for the future of historic buildings.
2. Its format and organization has a specific structure, which in some ways would interfere or be in conflict with the requirements, structure and goals of a Level I and Level II Study.
3. A properly conceived HSR would require anywhere between six to eight months to complete. Setting aside for a moment the costs associated the preparation of an HSR, if we were to wait for the completion of an HSR, before the Level I and Level II Study is completed, the project would probably require significantly more time and more funding, for no compelling reason or significant benefit.
4. On the other hand, as we delineated during our interview, our approach which is based on **applied** – and not academic - **research**, which is what an HSR is in many ways, would allow all of us to focus on the right issues and reach our goals in a more cost effective and efficient way.

One of the two founding principals of the Preservation Design Partnership, LLC, namely Dominique M. Hawkins, after careful and thorough research, produced the guidelines for preparing HSRs and Preservation Plans for the State Historic Preservation Office of the State of New Jersey. Her research, experience and record as an expert in reviewing preservation projects in the Mid-Atlantic Region, was the basis for our approach to performing “applied research” as opposed to academic research, i.e. an HSR.

Historic Structure Reports have their value and place; however, we do not believe this is the time or the place to introduce such a project requirement.

Section 4: Compensation & Expenses

HDR proposes to provide professional services as outlined in this document, and with the expectation of negotiating a fair Agreement based on the State of Wyoming’s Professional Architectural and Engineering Services Agreement between the State of Wyoming, Administration and Information, Construction Management and HDR Architecture, Inc.

As noted herein, we are representing two options:

- **Basic Level I and Level II Study** and
- **Enhanced Level I and Level II Study.**

The fees shall be based on a lump-sum “Fixed Fee”. The elements of the work that make up this fee is provided below:

Basic Level I & II Study

Leadership / Planning / Programming	\$265,000
Building Systems (MEP, Structural, etc)	\$167,000
Delivery Studies (Sequencing & Estimating)	78,000
<u>Expenses</u>	<u>\$55,000</u>
Total Basic	\$565,000

Enhanced Level I and II Study

Code Approach Documentation	\$100,000
Non-Destructive Evaluation	\$158,000
Imaging (includes BIM model)	\$162,000
Vertical Access	\$42,000
Expenses	\$25,000
<u>Weather Allowance</u>	<u>\$10,000</u>
Subtotal Enhanced Services	\$497,000
Total Enhanced Level I & II Study	\$1,062,000

Expenses are running a bit high for this project when compared to our project histories; however we attribute this to the number of consultants that are not local to the job for this level of work. As noted herein, the team will revisit the appropriate participation for all parties for the Level III work.

Not included here, but necessary for the Enhanced Study, is the expenses of a lift sufficient to reach to cornice at each façade. We expect this to be an Owner expense and would recommend allowing \$5,000 for one month rental.

Section 5: Proposed Schedule

We have prepared a “Logic Sequence” for the preparation and delivery of the Level I and Level II Study – this is an important organizational tool and very important aspect of this Proposal. Due to the size of the document however, we have placed it in the Appendix.

The Logic Sequence is based on the following assumptions:

- a. The selected option would be the **Enhanced Option**.
- b. We are anticipating that there would be three [3] workshops / presentation cycles to a series of stakeholders to ensure that the project receives the proper feedback and ultimately is supported by all participating entities. (Additional meetings will certainly be arranged to support the work.)

There are several factors that can affect the schedule:

- **Weather:**
A significant portion of our work would focus on the exterior building envelope, from the top of the Dome to the base of the building. Strong winds, snow and other weather related challenges given the fact that accessing the exterior of the building for the Enhanced Option may involve the use of a high reach or engaging **Vertical Access** a group that specializes in assessing inaccessible areas of historic buildings and providing both “live feeds”, as well as formal reports. [Please refer to the Appendix for more information on Vertical Access]
- **Legislative Calendar and Obligations of Stakeholders**
One of the important dimensions of our work would be to observe how the building is used during the “peak loads”, i.e. the Legislative Session. Selecting the “right window” or timeframe to observe would be critical to ensuring that we have a full understanding of how the “business of Government” is being conducted during sessions and what it means for the occupancy of the building, life safety concerns, etc.
- **Scheduling Work Sessions with Key Stakeholders**
Our past experience indicates that while there are good intentions and strong interest in and support for the project by several key stakeholders, the reality is that their schedules often are incompatible with the “flow of the project”. In other words, special accommodations may have to be made to allow for certain reviews to take place and / or “make up sessions” would have to be considered.

- Finally, digesting a lot of information about several complex issues may require time to review our findings and recommendations, as well as internal and private discussions among the stakeholders, without the participation of the design team.

All of these factors contribute to the duration of the project. We have provided in the appendix, a worksheet that begins to map the sequence of events and makes some duration assumptions. The challenge with this worksheet is to align with the above factors. We look forward to working through these factors with the State to establish a concise schedule.

Past experience indicates that the Level I and Level II Study can be completed in approximately 6 to 8 months.

It is our intention to minimize this timeline and move the project forward and quickly and as prudently as possible.

Section 6: Exclusions

Our approach in presenting our Project Understanding, Compensation and Deliverables was based on presenting two options, i.e. a **Basic** and an **Enhanced** Option for the Level I and Level II Study.

As a result if the choice is made to select the Basic Option, then the range of services would be limited to those specifically delineated in this option.

As we demonstrated at our interview, the best way for the State of Wyoming to be able to make informed decisions, based on facts and evidence, manage risks and develop a reliable plan for the future, without guesses, arbitrary contingencies and “gaps” in the Scope of Work is by commissioning **the Enhanced Option**.

A few exclusions are noted here for clarity. The following services or areas of work are not included in this proposal:

- 1) Evaluation of abatement/removal of hazardous materials. We will document where hazardous materials are reported to us.
- 2) Topographic surveying, geotechnical explorations, and/or utility locating. We note that if these investigations are needed for the project, we will provide guidance with selection and scope of services. These services will require specialized direction to ensure care with a Historic Landmark.
- 3) Dynamic Load Studies [Seismic Modeling]
- 4) Building Envelope Thermal Analysis
- 5) Energy Performance Studies
- 6) Energy and life cycle cost analysis.
- 7) USGBC LEED documentation.
- 8) Level III Services

HDR can provide the services above as additional services to the contract.

Section 7: Level III Design Compensation Structure

In determining the compensation structure for Level III, the following questions need to be answered:

- a. What services would be included in the final contract for our team?

The **American Institute of Architects** has established a nationally accepted structure of basic services, additional services and optional services. In many ways, our structure is based on this paradigm.

This structure can be one of the reference frameworks that should be used for determining the compensation.

The State of Wyoming also has a similar structure for “typical projects”, which would be used as a reference framework.

Given the nature of the project and the wide range of potential services needed, all of which would have to be coordinated ultimately by the prime entity, a “**custom tailored**” structure would have to be created specifically for this project.

- b. What “benchmarks” can be used for arriving at a fair compensation structure and actual price?

The **Federal Government** has established a compensation structure that is used for all of its agencies, including the **General Services Administration** and the **National Park Service**, the two agencies that have more historic landmarks than any other “landlord” in America, with many being National Monuments, National Historic Landmarks and National Register Properties.

In addition, the Federal Government has developed the **Design Excellence Program**, a process of undertaking important projects that involve major facilities, iconic historic buildings and buildings that are anchors in their communities. The Design Excellence Program engages nationally recognized architects, engineers and consultants, carefully selected for their abilities, experience and expertise, specifically suited for these important projects.

In many ways, the consultant selection process, project organization, expectations and complexity of the work associated with the restoration of the Capitol of the State of Wyoming is very similar to the Design Excellence Program.

Finally, several states have their own “look - up” tables to establish the framework for the compensation for professional services. These “look - up” tables recognize unusual and

exceptional conditions and circumstances and add “bonus” percentages for projects similar to the Capitol.

Our experience with the Commonwealth of Pennsylvania, the Commonwealth of Virginia, the State of West Virginia, and the State of New Jersey indicates that bonus percentages up to 4% above the “typical” fees are allowed for unique, complex and historic projects and are added to the “typical” compensation to arrive at the proper compensation for a complex project such as this one.

Of all the “benchmarks”, the Federal model provides the most significant benefits for both sides, i.e. the client and the design team.

The Federal model is based on a simple structure, i.e.:

- Title I
- Title II and
- Title III

In general, **Title I** includes all Pre-Design Studies, special studies, etc., and Schematic Design.

Title II encompasses the Design effort and includes Design Development and Construction Documentation.

Title III focuses on the Construction Phase of the project.

Historically, we have seen fees **averaging** as follows:

- Title I 3%
- Title II 6%
- Title III 3%

Thus, our expectation for Level III Services will begin with this benchmark: total fee percentage of 12%, and adjust to align the work with the approved findings of the Level I / II Study. As a couple examples:

- Detailed Transition Planning would warrant supplemental fees
- Construction that may be associated with this project but not connected to the Capitol, such as an addition to the North of the Herschler Building, or renovations to the Herschler Building would warrant lower fees.

Expenses are negotiated separately and are normally a fixed budget to be managed by the prime entity.

Historic indices indicate that expenses range between 8% and 10% of the compensation, depending on the structure of the team, required travel, required deliverables, etc.

For the total compensation [fees / expenses], our research and indices indicate that it ranges between 13 and 15%.

Our recommendation:

Given the uniqueness of this project, we would recommend the following:

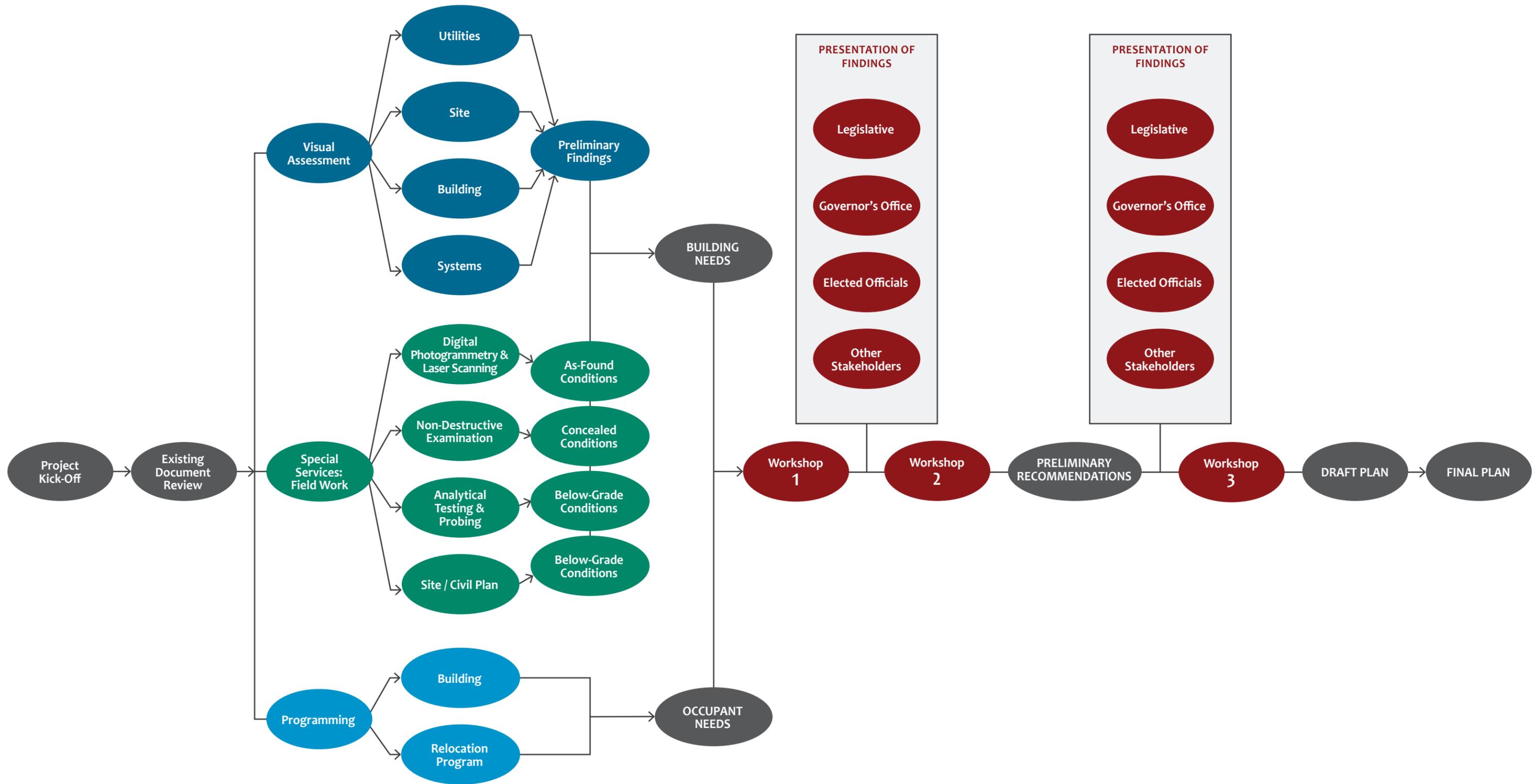
1. As the team approaches the completion of the Draft Level I and Level II Study, a detailed **Work Plan** would be developed based on the proposed Sequence of Implementation, Schedule and Project Cost.
2. The Plan would have a clear delineation of all services to be included and what services would be outside the contract, directly contracted by the client, if any.
3. The coordination of all disciplines would be under the responsibility of the Architect of Record / Prime Entity.
4. The team that will prepare the Level I and Level II study would continue to be engaged through all stages of the project; however, a careful analysis of how the national expertise and the local capacity would be used with the intent to achieve a balanced team at a reasonable cost for all the needed services, without compromising the quality of the process and the product.
5. The fee negotiation would be based on an “open book” policy – or an audited financial statement of the key design team participants - that would determine which overhead costs would be allowed in the compensation structure.
6. Finally, for the construction phase of the project, a clear understanding would be developed as to what on-site representation would be needed and what facilities the state and / or the project would offer, such as work space, trailer, etc.
7. A fixed budget for all expenses would be negotiated for the duration of the project based on the accepted Work Plan.

Our intent is to provide some initial intentions here, as you have requested, and to envision that the completed Level I / II Study provides the State of Wyoming with reliable expectations for construction, process and fees.

Section 8: Appendices

- A. Logic Sequence (one – 11 x 17 sheet)
- B. Scheduling Worksheet (one – 11 x 17 sheet)
- C. Vertical Access – Company Profile (four – 8 ½ x 11 sheets)

WYOMING STATE CAPITOL
PHASE I & PHASE II - LOGIC DIAGRAM



Work Plan - Level I Reconnaissance / Level II Feasibility Study

primary secondary	Work Planning																																	
	DECEMBER				JANUARY				FEBRUARY				MARCH				APRIL				MAY				JUNE				JULY					
	3rd	10th	17th	24th	31st	7th	14th	21st	28th	4th	11th	18th	25th	4th	11th	18th	25th	1st	8th	15th	22nd	29th	6th	13th	20th	27th	3rd	10th	17th	24th	1st	8th	15th	22nd
Drivers																																		
	Notice to proceed Project Planning & Scheduling Owner Driven Milestone Owner Driven Milestone																																	
Work Plan																																		
	Phase I: Visioning PDP HDR Task 01 - Project Visioning, Guiding Principles, & Objectives PDP HDR Task 02 - Constitution																																	
	Phase II: Information Gathering PDP HDR Task 01 - Facility Understanding 01.01 Documentation 01.02 Applied Research 01.03 Non-Destructive Evaluation 01.04 Building Systems Structure Geotechnical Utilities Envelope - Walls Envelope - Doors & Windows Envelope - Roof Interior - Partitions Interior - Doors & Windows Interior - Floors Interior - Ceilings Interior - Stairs, Lifts, & Elevators Interior - Finishes Interior - Signage HVAC Plumbing Controls Power Lighting Fire Alarm Fire Protection Technology Security PDP HDR 01.05 Life Safety & Accessibility Task 02 - Program Understanding HDR PDP 02.01 Observation Session Committees HDR PDP 02.02 Interviews Governor's Office Attorney General's Office Secretary of State's Office Auditor's Office Treasurer's Office Senate Chamber House Chamber Legislative Services Organization HDR P1 02.03 Update Prior Report																																	
	Phase III: Scenario Modeling PDP HDR Task 01 - Integration PDP P1 Task 02 - Implementation Strategies PDP P1 Task 03 - Transition Planning PDP P1 Task 04 - Cost Studies																																	
	Phase IV: Study Recommendation PDP HDR Task 01 - Recommendation PDP HDR Task 02 - Report																																	
Executive Committee																																		
HDR PDP	Work Session 1 hr session																																	
Steering Committee																																		
PDP HDR	Kick-Off Meeting																																	
PDP HDR	Work Session 2 hr session																																	
User Groups																																		
HDR PDP	Governor's Office																																	
HDR PDP	Attorney General																																	
HDR PDP	Secretary of State																																	
HDR PDP	Auditor																																	
HDR PDP	Treasurer																																	
HDR PDP	Legislative Support Organization																																	
HDR PDP	House Chamber																																	
HDR PDP	Senate Chamber																																	
Stakeholders & Assessment																																		
PDP HDR	Security																																	
PDP HDR	Hospitality																																	
PDP HDR	Housekeeping																																	
PDP HDR	Mechanical																																	
PDP HDR	Electrical																																	
PDP HDR	Technology																																	
PDP HDR	Historical																																	
PDP P1	Procurement																																	
External Meetings																																		
PDP HDR	Community Meetings																																	
PDP P1	State Fire Marshal - Riverton																																	

State Capitol Building Projects

Kentucky State Capitol

Frankfort, KY

Scope: Provide access for client

Client: WJE

Massachusetts State House, Bullfinch Dome

Boston, MA

Scope: Existing condition survey; guiding

Client: Goody Clancy

Client: Simpson Gumpertz & Heger

Michigan State Capitol

Lansing, MI

Scope: Existing condition survey

Client: Quinn Evans Architects

New Jersey State House

Trenton, NY

Scope: Existing condition survey

Client: State of New Jersey, Division of Building and Construction

New York State Capitol

Albany, NY

Scope: Nondestructive investigation; measurements; guiding

Client: Robert Silman Associates,

Client: Simpson Gumpertz & Heger

United States Capitol Dome

Washington, DC

Scope: Existing condition survey

Client: Architect of the Capitol

Virginia Capitol

Richmond, VA

Scope: Access consulting

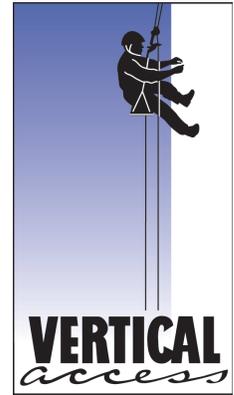
Client: Hillier Architecture

West Virginia State Capitol

Charleston, WV

Scope: Existing condition survey

Client: The State of West Virginia



State House Dome ♦ Trenton, New Jersey



Original architect:

Lewis Broome (completed 1889)

Building owner:

The State of New Jersey

In collaboration with:

- Jan Hird Pokorny Architects & Planners, *cast iron, architectural finishes*
- Robert Silman Associates, *structural engineering*
- Vulcan Supply, *roofing*
- Gold Leaf Studios, *gilding*
- Mazia/Tech-Com, *metallurgy*
- Mathew J. Mosca, *historic paints and finishes*
- Society for the Preservation of New England Antiquities, *decorative painting*
- McKernan Satterlee Associates, *stained glass*
- Preservation Architecture, *codes review, report preparation*

Scope of work:

- coordinated all scheduling of site investigations
- provided safe access and rigging for inspection of the interior and exterior of the cast iron drum/lantern and gilded, copper-clad dome
- conducted non-destructive investigations using ultrasonic testing and fiber-optics borescope
- employed live video feed for interaction with subconsultants, as necessary
- coordinated and undertook removals of decorative sheet metal, cast iron, and structural steel coupons
- coordinated subconsultant submissions to produce a four-volume condition report, with annotated elevations, still photography, and video tapes

Photos by Jon Reis/Photolink



United States Capitol Dome ♦ Washington, DC



Original architect of dome:

Thomas U. Walter with Montgomery C. Meigs
(completed 1866)

Owner:

United States Legislature

Collaborator:

Office of the Architect of the Capitol

Structure description:

The current dome of the United States Capitol was designed by Philadelphia architect Thomas U. Walter between 1854 and 1859. Construction of the Dome began in 1856, with the removal of Charles Bulfinch's 1824 wooden dome, and was completed in 1866 when Constantino Brumidi finished his remarkable frescoes at the interior of the dome. Montgomery C. Meigs served as the superintendent of construction during most of that period.

Walter's design for the Dome of the United States Capitol employs the neo-classical vocabulary used in other portions of the building and throughout the capital city. It is also a style that the architect was a familiar proponent of, having previously designed numerous residential, commercial and institutional buildings in the styles of Greek and Roman revival architecture.

One of the innovations of the design of the Capitol Dome is the extensive use of cast iron for the structural and decorative elements of the dome. The cast iron for the dome of the Capitol was manufactured predominantly by Janes, Fowler, Kirtland and Company of New York. The projecting ornament includes column capitals, modillions, window hood finials, pendant ornament and consoles.

Scope of work:

- Hands-on inspection of all projecting ornament at the exterior of the dome from the top of the lantern to the peristyle column capitals.
- Documentation of existing conditions of cast iron ornament.
- Temporary stabilization and waterproofing measures at selected areas of ornament.

Photos by Jon Reis/PhotoLink



Michigan State Capitol ♦ Lansing, Michigan



Original architect:

Elijah E. Myers (*completed 1878*)

Building owner:

The State of Michigan

In collaboration with:

- Quinn Evans Architects, *architects*
- The Christman Company, *construction manager*

Building description:

The Michigan State Capitol is a prominent Neoclassical structure at the center of Lansing, Michigan. It was designed by Elijah Myers, who went on to design state capitols in Texas and Colorado, and built between 1872 and 1878. The lower four floors of the building are constructed of a yellowish-brown Berea sandstone. A central metal-clad dome rises to a height of 267 feet above the ground. The pedestal and arcade of the drum are clad in cast iron and the rest of the dome, comprised of the attic of the drum, dome proper, and lantern with finial, are clad in galvanized sheet metal.

Scope of work:

- Surveyed existing condition of paint coatings and related materials at cast iron drum and galvanized sheet metal-clad dome and lantern.
- Documented conditions using digital photographs and video.
- Provided annotated AutoCAD drawings, digital still photographs and video tapes with existing condition report.



Tom Whetstone, AIA LEED AP BD+C
Project Principal
303 E 17th Avenue, Suite 1000
Denver, CO 80203-1256
303.318.6288

hdrarchitecture.com

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