5.7.2 Building Interior

Architectural Description

Rotunda

The Capitol interior is fitting for a building of its stature. A grand, three-story high Rotunda acts as the core of the building interior. Rising 54 feet from the First Floor to the stained glass laylight above, the Rotunda is surrounded by perimeter balustrades at the Second and Third Floors, creating a sense of openness within the Capitol. [*Figures 5.7.1.1 and 5.7.2.1*] Broad, axial circulation corridors extend east-west from the Rotunda on all floors. Elaborate wood staircases connect the First Floor Rotunda with the Second Floor corridors, flanked by beautifully carved wood balustrades that also line the Rotunda perimeter at the Second and Third Floors. The corridors are characterized by black and white checkerboard marble flooring, with textured plaster walls, and wood wainscoting and/or wood chair rails and baseboards. The First Floor corridor east of the Rotunda, known as the Governor's Portrait Gallery, has a suspended acoustical tile ceiling that was installed as part of the comprehensive interior renovations of 1974-1980. This suspended ceiling covers decorative historic ceilings that include ornate painted beam enclosures and decorative ceiling stenciling.

Chambers

The east and west [1917] wings of the Capitol contain the House and Senate Chambers, respectively. Aside from changes to the finishes, the Chambers and the perimeter offices and meeting rooms have gone largely unchanged. One major exception is the removal of the original Third Floor House balcony, and the Second Floor offices below, along the east exterior wall. This was the result of the decision to expand the floor area of the Chamber, thus allowing the dais to be moved against the east end wall. The present finishes scheme in the House and Senate Chambers includes:

- A color pallette of yellows and whites, accented by subtle inflections of greens and blues and decorative elements such as column capitals and modillions
- Murals painted by Allen Tupper True at the four [4] corners of each Chamber depicting an aspect of the history, culture, or industry of the state of Wyoming
- Varnished wood wainscoting, with painted walls, a decorative cornice, wood balconies, a coffered ceiling, and colored glass laylights

In order to recapture the historic appearance of the Chambers, as well as provide modern infrastructure for the legislature, the following items need to be addressed:

1. All non-historic "intrusions" need to be removed [e.g. acoustical tile wall and ceiling panels];
2. Installation of new infrastructure, including HVAC, lighting, electrical and teledata;
3. Fix all areas of distress. Plaster cracking was observed in multiple locations in both the House and Senate Chambers. As discussed in detail

Figure 5.7.2.3: Non-Historic Modifications Within Room 118, Including Exposed Piping, Inappropriate Architectural Lighting Fixtures, and Drapery Boxes.

Figure 5.7.2.4: Governor's Ceremonial Conference Room, Which Has a Mix of Original and Inappropriate Interior Finishes.

Figure 5.7.2.5: Typical Basement Level Corridor and Existing Finishes.

Figure 5.7.2.6: Perimeter Office Space at the Basement Level. Suspended acoustical tile ceilings with inappropriate flourescent light fixtures are hung below the interior window heads, decreasing daylight penetration.

Figure 5.7.2.7: Existing Condition of the Senate Chamber.

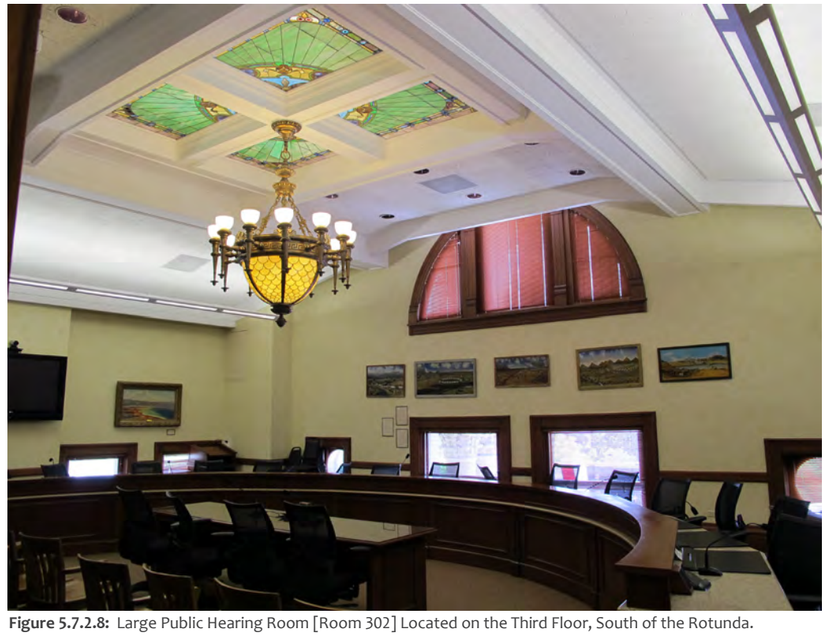

Figure 5.7.2.8: Large Public Hearing Room [Room 302] Located on the Third Floor, South of the Rotunda.

within Section 4 : Historic Analysis, many of these cracks likely relate to the Phase III [1917] building expansion.

4. Audio/Visual distribution from a dedicated space. This would remove the exposed network of cables and wires from view and distribute them in a concealed manner. The A/V feeds would be routed through the Attic Level from a dedicated Third Floor space and routed downward to the chamber floor below.
5. As part of the Design Phase, a detailed finishes analysis will be performed in the Chambers to uncover the various periods of finishes that have adorned the chambers walls over time. This analysis served will assist the Design Team in recommending a finishes scheme for the spaces.

Committee Rooms

There are two [2] types of existing committee rooms in the Capitol Building:

1. Small Committee Rooms that are undersized and their narrow geometry and layout are not conducive to public participation.
2. Large Committee Room - specifically Room 302 - which was recently renovated and is more in line with recommended space requirements for modern committee rooms.

The small committee rooms are located adjacent to the Second and Third Floor House and Senate Lobbies, in the Phase II [1890] Sections of the Building, as well as in the Third Floor rooms adjacent to the House and Senate Chamber balconies. These spaces are deep and narrow, finished with carpeted flooring and textured plaster walls that are painted white. Varnished wood baseboards, chair rails and window and door surrounds line the perimeter of each space. Modern fluorescent light fixtures are hung from the ceilings, which are finished with acoustical tile panels.

Located on the Third Floor, south of the Rotunda, Room 302 is a large public hearing room that was renovated in 2008 to provide the State with a modern meeting space large enough for public engagement. The renovations included the integration of modern systems, including electrical, audio/visual and tele-data. The space is finished with carpeted flooring and textured wall covering. Varnished wood baseboards, chair rails and window and door surrounds line the perimeter of the space. Modern fluorescent light fixtures are hung from the ceilings and provide both direct and indirect lighting. The vaulted ceiling is an off-white painted plaster, with acoustical tile panels and decorative plaster beams that define the colored-glass laylight in the center of the space. A historic chandelier is suspended from the center of the laylight structure, and is positioned directly above a stained wood desk.

A more in-depth discussion of the programming issues related to the Committee Rooms can be found in *Volume I Section 6 : Program Summary*.

Office Suites

The private office suites located off of the circulation corridors have undergone significant alterations over the course of their service lives. As part of the comprehensive interior renovation campaign of 1974-1980, office suites were partitioned into smaller spaces and interior finishes were altered as part of a building-wide redecorating campaign.

- A number of large, private offices have had minimal changes over time, with the exception of changes to paint schemes, light fixtures and flooring, which was historically wood flooring but now is typically carpeted. These spaces have painted plaster walls and ceilings, with stained wood window trim, wall bases and chair rails.
- In contrast, a large number of spaces – specifically the First and Second Floor office suites – were significantly altered as part of the 1970's renovations. The renovations resulted in:

1. The loss of the once-tall ceiling heights, which were lost when suspended acoustical tile ceilings were installed and HVAC, lighting and other systems were installed above the path of least resistance
2. Exposed piping within office spaces
3. Limited access to daylight, supplemental electric lighting and obscured potential views due to window bulkheads created by the suspended ceilings

The Basement Level has been divided into a labyrinthine collection of office spaces over the Capitol's life. Principally composed of mechanical and storage spaces, the function of the Basement has evolved over time, adapting to the changing needs of the State Government and the daily functions of the Capitol itself. The organization of the upper three [3] floors of the building is virtually non-existent in the Basement, as the layout of spaces lacks both logic and efficiency. Though there was likely very little significant decorative or architectural fabric in place when the Capitol was constructed, the Basement, today, has generic office-type finishes. Carpeted flooring, wood wall bases and textured wall paper, meant to mimic the textured plaster walls seen in the floors above, decorate the spaces.

Attic

The Attic Level has historically, and continues, to serve as service space for the Capitol. The Phase I [1888] portion is the attic's only finished area, with exposed brick walls, painted wood enclosure around the Rotunda, and untreated wood flooring. The Third Floor plaster ceiling and the black iron structure are exposed in the Phase II [1890] and Phase III [1917] Attic areas. Temporary access pathways constructed of structural wood members and plywood lead from the Phase I area through Phase II to the Chambers laylights access platforms. The laylight access platforms were recently erected as part of the skylight restoration performed in 2008. Constructed of painted structural steel members, the platforms are located along the inside edge of each of the Chamber skylights.

The three [3] intermediate Dome platforms are accessed via a series of metal staircases that connect each level. Two of the intermediate platforms have wood decking, while the third has a concrete slab on metal deck. The interior of the Dome is unfinished, exposing the inner face of the wood roof decking and the various metal components that comprise the Dome assembly. A network of complex steel columns and x-trusses rise up through the interior Dome volume.

Support / Service Areas

The Capitol interior has a number of support and service areas throughout, most of which are predominately located at the Basement and Attic Levels. They are unoccupiable or underutilized spaces that have basic finishes and minimal significant historic fabric.

1. The support areas are small, programmed spaces that are occupiable and provide direct support to the activities and functions of the Capitol. They include break rooms, kitchenettes, Capitol security, and restrooms. Though some spaces do have finishes similar to the adjacent office spaces, some [e.g. the restrooms] have been heavily modified to meet the functional needs/requirements of each space use.
2. The service areas are comprised of mechanical, electrical, and other building systems related spaces, as well as spaces currently used as storage. These spaces include historic "safes" and other Basement Level spaces located below the Rotunda (Phase I [1888] construction). In addition, the entirety of the Attic Level would be considered a service area, as it is unoccupied, unconditioned and houses mechanical and electrical equipment.

5.7.3 Building Interior

Architectural Finishes

Introduction

As described in *Volume I Section 4 : Historic Analysis*, the Design Team was able to obtain a number of archival photographs showing interior spaces throughout the building's lifetime with the help of **AICM** and the **State Archives**. By organizing the images and drawings sequentially, these photographs begin to tell the story of how the building used to look, how spaces and use groups were arranged, and how the Capitol changed, both architecturally and programmatically.

Rotunda : First Floor

Historic photographs of the Rotunda depict a series of changes made to the various architectural elements over time. Since its construction, the Rotunda has served as the epicenter and ceremonial space of the Capitol. Major events are held in the Rotunda, including the annual installation of the State Christmas Tree. Architecturally, the Rotunda has remained largely unchanged since 1888. However, the same cannot be said for the finishes within the space. Post-construction photographs following the completion of the Phase I construction [1888] show dark, possibly unfinished cast iron columns along the perimeter of the space, with what appear to be beige walls and plaster work painted white. We believe that the simplicity of the finishes represented in the photographs corresponds with common construction practice during this period of providing basic finishes at the completion of construction, with more ornate finishes to follow soon after once the funds have been appropriated.

A review and comparison of historic photographs with the existing conditions at the Rotunda has revealed the following:

- A photograph dating to 1929, taken during the funeral procession of Governor Francis E. Warren, shows wood bases, painted column shafts similar to the adjacent wall color and gilded capitals. [*Figure 5.7.3.2*]
- Wall stenciling and a decorative border, both of which are similar to what currently exists in areas of the Rotunda, are visible on the north walls in the 1929 photograph, as well as a photograph from 1935. [*Figures 5.7.3.3, 5.7.3.5*]
- The finishes depicted in a 1979 HABS photograph appear to be similar to the existing finishes on the First Floor of the Rotunda. [*Figures 5.7.3.6*]
- The existing decorative border above the Rotunda First Floor North Entrance is comprised of a central modillion with a continuous vine pattern emanating outward from it that spans pilaster-to-pilaster, whereas the border depicted in the 1929 and 1935 photographs has a diamond-shaped modillion with three segments of the vine motif emanating outward on each side. [*Figure 5.7.3.5*]
- The existing decorative border in the First and Second Floor Corridors and above above the acoustical tile drop ceiling located in the Governor's Portrait Gallery appear to match that depicted in the 1929 and 1935 images of the Rotunda First Floor. [*See the "Corridors" Section for further description.*]
- This decorative scheme is composed of (a) an alternating pattern of the aforementioned diamond-shaped modillion with three segments of the vine motif, and (b) a central rosette with three segments of the vine motif.

Figure 5.7.3.1: Rotunda First Floor East Stair, ca. 1888.

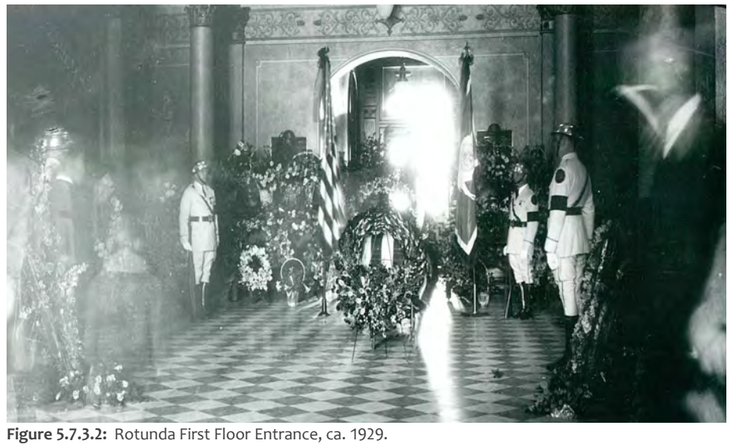

Figure 5.7.3.2: Rotunda First Floor Entrance, ca. 1929.

Figure 5.7.3.3: Enlargement of the Decorative Border with Central Rosette Adjacent to Rotunda First Floor North Entrance, ca. 1935.

Figure 5.7.3.4: Enlargement of the Wall Stenciling and Decorative Border with Diamond-Shaped Modillion at the Rotunda, ca. 1935.

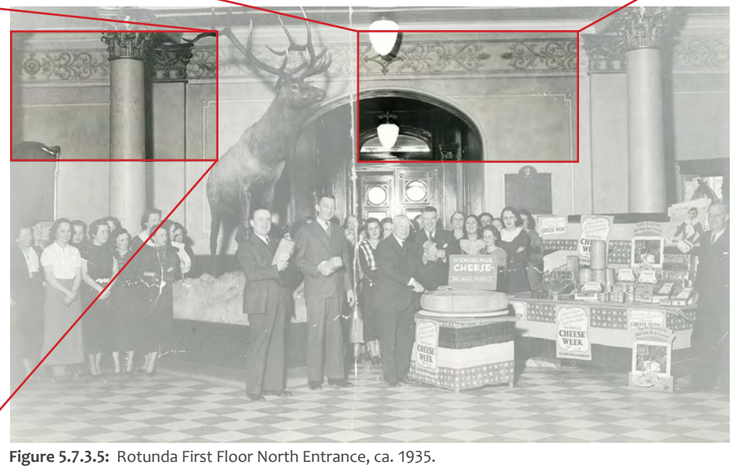

Figure 5.7.3.5: Rotunda First Floor North Entrance, ca. 1935.

Figure 5.7.3.6: HABS Photograph of the West Rotunda Monumental Stair, ca. 1974.

Figure 5.7.3.7: Enlargement of the Existing Wall Stenciling and Decorative Border with Central Rosette Above the Rotunda First Floor North Entrance at the Rotunda, ca. 2013.

Figure 5.7.3.8: Existing Second Floor Corridor Decorative Border with Diamond-Shaped Modillion, ca. 2013.

Figure 5.7.3.10: Enlargment of the Rotunda Ceiling, ca. 1902.

Figure 5.7.3.11

Figure 5.7.310

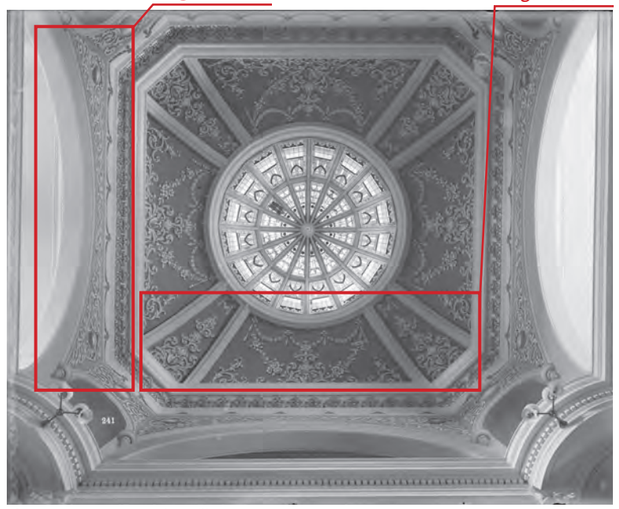

Figure 5.7.3.9: Rotunda Ceiling, ca. 1902.

Figure 5.7.3.11: Enlargement of the Rotunda Wall Finishes at the Third Floor Level, ca. 1902.

Figure 5.7.3.12: Enlargement of the Rotunda Ceiling.

Figure 5.7.3.13: Enlargement of the Rotunda Wall Finishes at the Third Floor Level.

Rotunda : Ceiling

The Rotunda ceiling has undergone quite possibly the most extreme change of any space in the building. A 1902 photograph depicts a series of classical murals surrounding the colored-glass laylight, adorned with acanthus and flowers and shaded to provide a three-dimensional appearance [*Figure 5.7.3.9*]. The raised plaster decoration that runs along the base of the vaulted ceiling – currently painted green – appears to have been gilded [*#1*]. A variation of the motif continues along the Third Floor perimeter walls facing the Rotunda, while a more delicate pattern runs along the corridor-side of the same Third Floor walls [*#2*].

During the 1974 renovation campaign, a large number of the Capitol Building's walls were re-painted. Based on conversations with both the paint contractor [Fisher Painting] and a representative of the architectural firm Hitchcock & Hitchcock, a finishes investigation was not undertaken prior to the commencement of the finishes application. Instead, the finishes were designed by a decorator, who dictated the desired finishes based on minimal investigation and what was visually evident at the time, as well as a series of personal designs that utilized a Frontier motif and color palette.

One of those designs was located at the Rotunda ceiling. The Design Team has not come across any photographs of the Rotunda ceiling between 1902 and 1979, so it is unclear if there were any large-scale changes to the finishes prior to the scheme currently in place. The present scheme, dating to the 1974 renovation, has a light blue background with four native coats of arms. [*Figure 5.7.3.14*] The State Seal is situated within the east and west motifs, while the Territorial Seal is situated within the north and south motifs. The stenciling along the inward perimeter walls [*#2*] at the Third Floor are unique, yet stylistically similar to those found on the typical corridor walls. In addition, the small corner alcoves, painted to match the background ceiling color in 1902 [*#3*], were refinished to include a scalloped shell with a gridded panel below [*#3*].

Figure 5.7.3.12 Figure 5.7.3.13

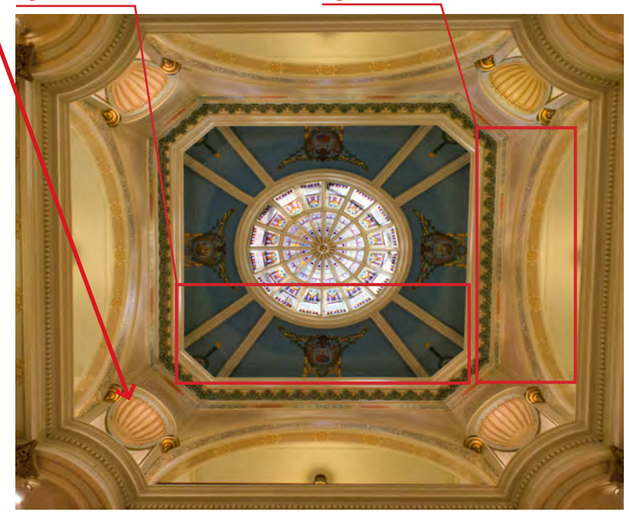

Figure 5.7.3.14: Rotunda Ceiling.

Corridors

The corridors act as the arteries of the Capitol Building, providing vertical and horizontal public circulation throughout. Based on the Design Team's archival research and consistent with common practice during the period, the public spaces within the Capitol appear to have been given a higher level of finishes compared with many of the private spaces, such as offices. The finishes reflect their importance within the context of the building, as they form the major impression of the building on State residents and other visitors. The corridors are adorned with paneled wood wainscoting, carved wood balustrades and staircases, and decoratively painted walls. Similar to the post-construction photographs [ca. 1888] of the Rotunda, the millwork appears to be varnished, while the walls appear to be painted beige and decorative plaster work painted white. An image [*Figure 5.7.3.21*] of the Third Floor corridor adjacent to the Rotunda dating to 1902 indicates that the delicate, three-dimensional pattern that ran along the corridor-side of the Rotunda also ran along the perimeter of the Third Floor corridor walls.

Photographs from the 1920s depict a different pattern that more closely resembles the motif seen today [*Figure 5.7.3.22*]. Rectilinear panels framed the wall segments, while stenciling ran along the perimeter cornice. The finishes appear to have been different from that seen today, as the stenciling was denser and the wall colors appear to have been darker. Furthermore, as part of the 1970s restoration work, fire-rated acoustical tile ceilings were installed, lowering the ceiling height in some locations, including the Governor's Portrait Gallery, thus modifying the cornice heights.

During the Survey Phase, the Design Team, with the assistance of A+I and members of the facilities team, was able to document existing decorative finishes in the Governor's Portrait Gallery that have been hidden by the acoustical tile drop ceiling installed during the 1970s renovation. The observed finishes differ from the finishes seen in the First Floor corridor today. In addition to the stenciled ceiling and undersides of beams, the decorative border on the wall is similar to that found in the 1929 and 1935 photographs of the First Floor Rotunda [*Figure 5.7.1.18*]. As part of the finishes analysis program to be undertaken by the Design Team, the finishes above the Governor's Portrait Gallery ceiling will be analyzed to:

- Provide further information as to whether or not they match the finishes depicted in the 1929 and 1935 Rotunda photographs
- Determine if this scheme was continuous throughout the First Floor corridors and Rotunda

According to the National Register Nomination Form [1987], the existing stencil used at the Third Floor corridor was copied from a Roman Fasces design uncovered during remodeling of the original Supreme Court space [presently LSO offices to the north of the Rotunda]. The Fasces design is a bound bundle of wooden rods, which historically symbolized a magistrate's power and jurisdiction, sometimes carrying the meaning "strength through unity." It should be noted that the current finishes scheme has a series of perimeter stenciling patterns that vary from floor-to-floor. We have yet to find a series of historic photographs that corroborate the variation from floor-to-floor evident in the existing paint scheme.

Figure 5.7.3.15: Post-Construction Photograph of the Second Floor Corridor, Looking East, ca. 1888.

Figure 5.7.3.16: Finishes Exposure at the Third Floor Corridor. The exisitng decorative fasces design is seen on the left, and a historic motif at the right.

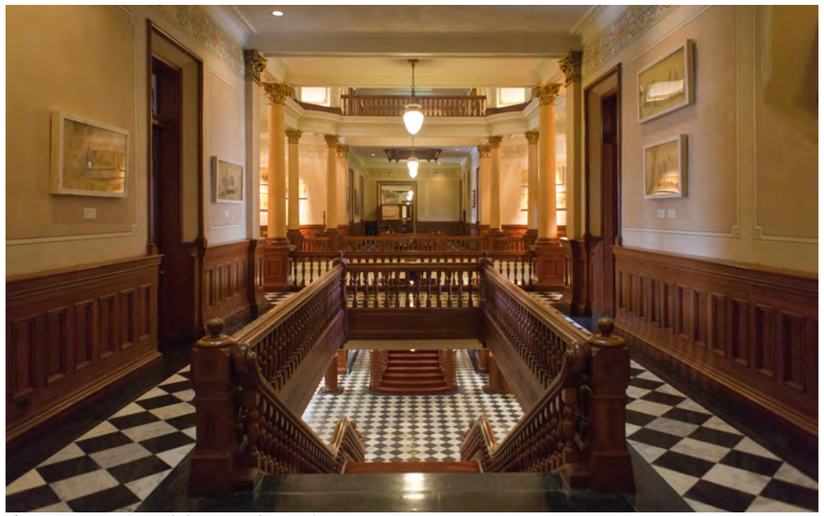

Figure 5.7.3.17: Second Floor Corridor, Looking East.

Figure 5.7.3.18: Photograph of Existing Decorative Border, Painted Plaster Ceiling and Painted Underside of Beam Above Drop Ceiling at Governor's Portrait Gallery.

Figure 5.7.3.19: Enlargement of the Third Floor Corridor Finishes, ca. 1902.

Figure 5.7.3.21: Third Floor Corridor, ca. 1902.

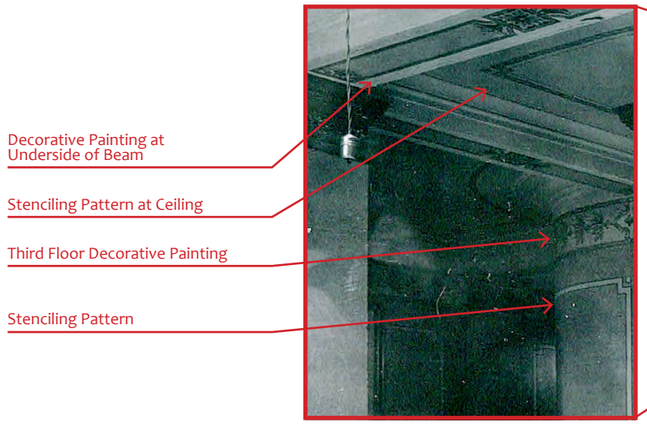

Figure 5.7.3.20: Enlargement of the Third Floor Corridor FInishes, ca. 1920.

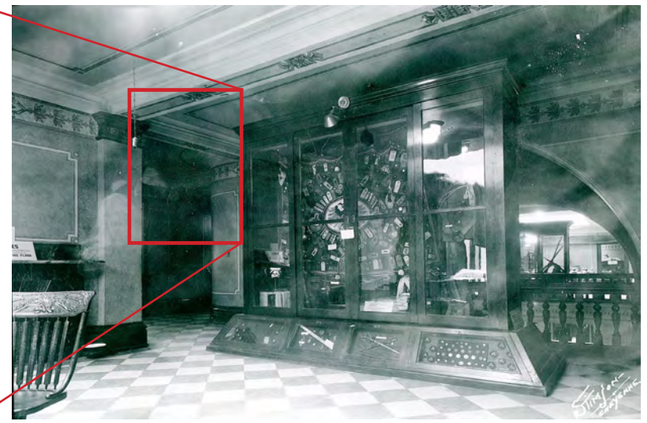

Figure 5.7.3.22: Third Floor Corridor, ca. 1920.

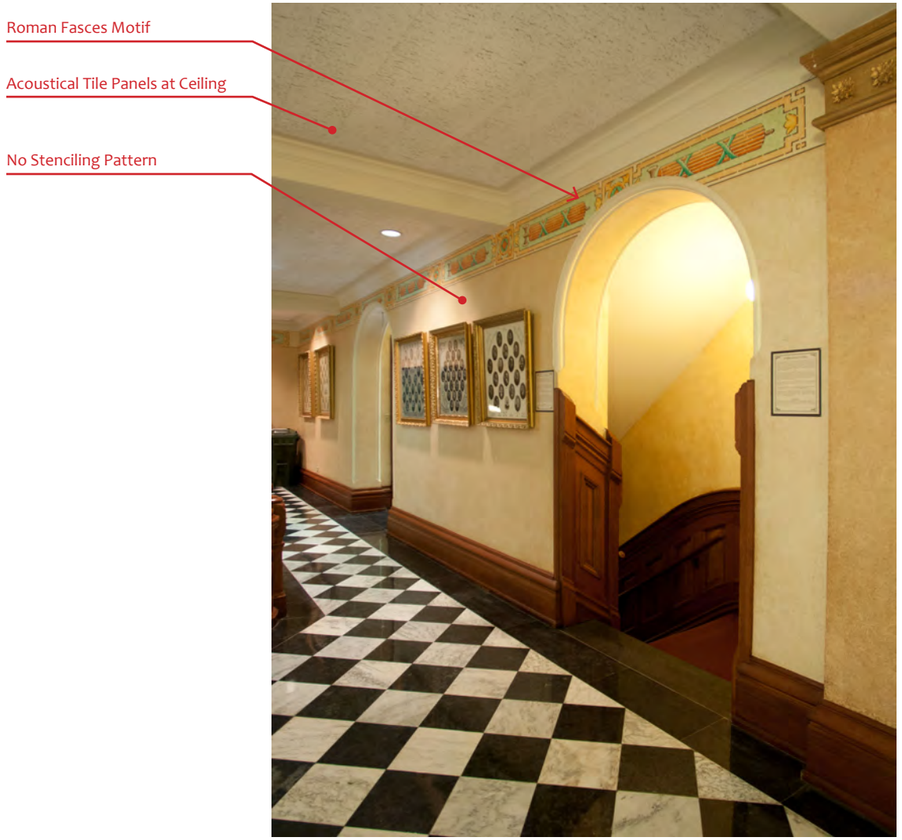

Figure 5.7.3.23: Third Floor Corridor and East Stair Portal, 2013.

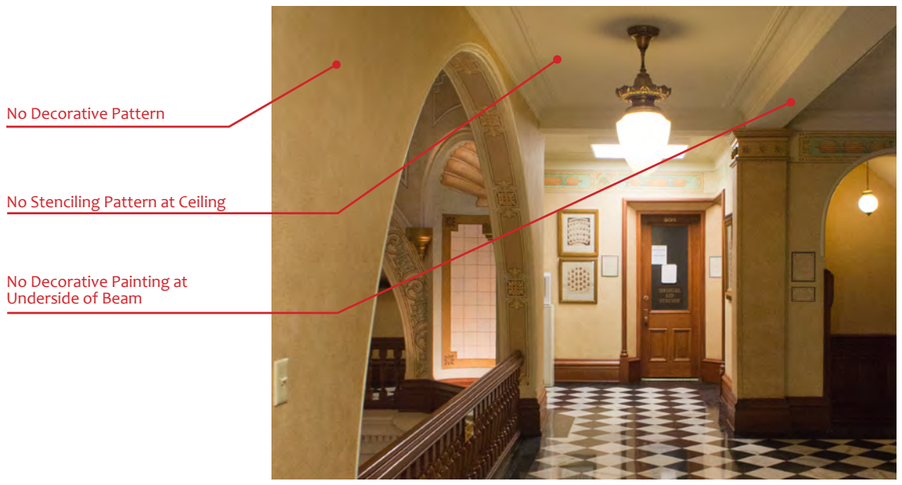

Figure 5.7.3.24: Third Floor Corridor, Adjacent to Rotunda, 2013.

House Chamber

Figure 5.7.3.25: Post-Construction Photograph, House Chamber, 1917.

Figure 5.7.3.26: House Chamber, 2013.

Senate Chamber

Figure 5.7.3.27: Senate Chamber During the Inauguration of Governor Frank Emerson, 1927.

Figure 5.7.3.28: Senate Chamber, 2013.

Figure 5.7.3.29: Senate Chamber HABS Photograph, ca. 1974.

Figure 5.7.3.30: Senate Chamber, ca. 1917.

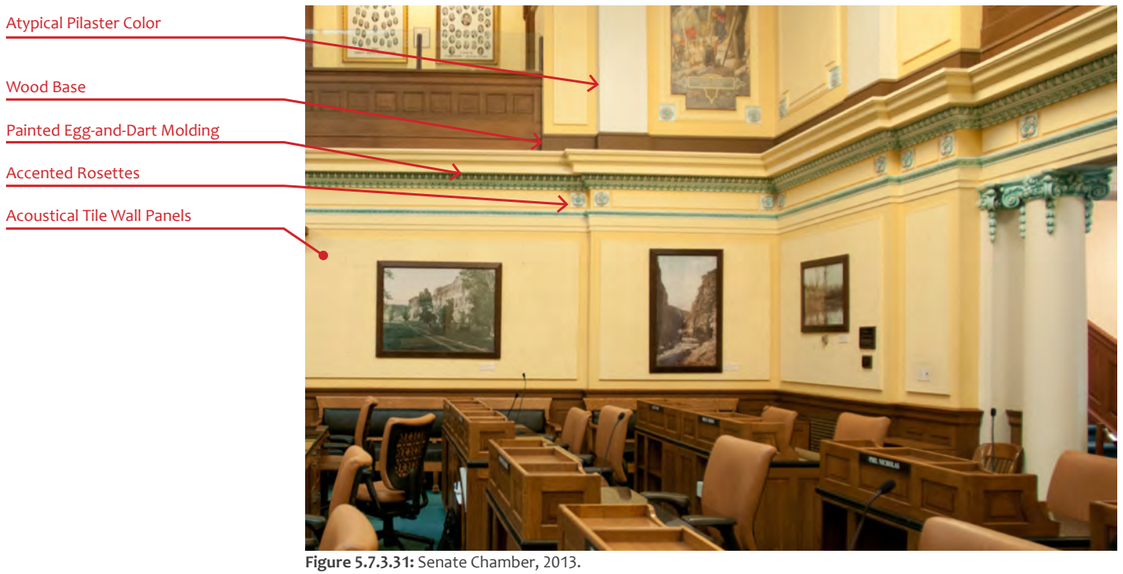

Figure 5.7.3.31: Senate Chamber, 2013.

House and Senate Chambers

The original House and Senate Chambers, situated within the east and west wings of the Phase II construction, differed greatly from the current chambers that date to the Phase III [1917] expansion. The original chambers utilized the entire floor plate of each wing and were surrounded by a perimeter colonnade supporting a continuous wood balcony. The balcony was rectilinear in the House Chamber and curvilinear in the Senate Chamber. The ceiling structure was embellished by a network of encased beams and the coffers were decoratively painted in a manner similar to that found at the Rotunda ceiling. The walls appears to have had a decorative, monotone wall covering with wood wainscoting.

When the Phase II chambers were removed and new chambers were constructed within the Phase III east and west wings, the layout changed to incorporate perimeter committee rooms and support spaces. The Phase III chambers, as originally designed, are somewhat similar to one another with one major difference; the Senate Chamber is enveloped by a series of rectilinear walls, while the House Chamber has chamfered corners at 45-degree angles [*Figures 5.7.3.25*]. Since the completion of the Phase III expansion, the Chambers and their adjacent rooms have been slightly modified and partitioned. During the renovation campaign undertaken in the 1970s, the corridor and three offices behind the House Chamber dais, as well as the visitor's gallery above, were removed and the dais was relocated to the East end wall, providing a larger House Chamber with a double-height dais. [*Figure 5.7.3.27*] Both chambers have varnished wood wainscoting, with painted walls, a decorative cornice, wood balconies, a coffered ceiling, and colored glass laylights. [*Figures 5.7.3.28 and 5.7.3.31*]

Post-construction photographs dating to 1917 depict a basic, non-descript finishes scheme, similar to those noted in the 1888 post-construction imagery. [*Figures 5.7.3.25*] In August of 1917, four months after the completion of the chambers, Allen Tupper True was contracted by the State to create four [4] murals for each chamber at a cost of $500 each. Each mural depicts an aspect of the history, culture, or industry of the State of Wyoming. [The True murals had not been installed at the time of the 1917 photographs.]

A photograph of the Senate Chamber taken during World War I [ca. 1917] shows dark colored walls with a simple stenciled band. [*Figure 5.7.3.30*] The rosettes appear to be gilded, while the cornice and egg-and-dart moldings remain a light color. An image of the Senate Chamber during the Inauguration of Governor Frank Emerson in January 1927 shows a similar collection of finishes. [*Figure 5.7.3.27*]

Photographs taken during the Historic American Buildings Survey [HABS] of 1974 reflect the finishes scheme seen today. [*Figure 5.7.3.29*] The darker wall colors and gilded detailing have been replaced with a collection of yellow, green and white pastels. Panels of acoustical tile were added to the walls and ceiling, and various paintings are hung throughout. Moreover, the unadorned green carpeting differs from the patterned carpeting visible in the 1917 and 1927 photographs. [*Figure 5.7.3.30*]

CONCLUSION

After reviewing the Building Evolution and the resultant Preservation Zones, the Design Team was able to determine the interior restoration scope of work. In order to inform the restoration, significant spaces were isolated for detailed examination of the finishes evolution over time.

Based on archival research, there were three key finishes schemes identified between 1890 and present:

Late 1890's : Following the completion of the Phase II [1890] construction, the first comprehensive interior finishes campaign appears to have been implemented.

Early 1920's : Following the completion of the Phase III [1917] construction, the Capitol interior underwent a second comprehensive interior finishes campaign.

1974 - 1980 : As part of the interior renovations campaign, the Capitol interior was re-interpreted. The finishes were based on existing motifs observed by the designer, and then re-interpreted. This finishes campaign comprises the majority of the current presentation of the Capitol interior.

It is important to note that the first two finishes campaigns noted above occurred shortly after the completion of major building additions and alterations.

As was the case with many projects at the Capitol during that time, the appropriations for finishes followed the construction completion dates by a number of years.

Because of the addition of new spaces and the significant disruption to existing spaces, it was logical to approach the finishes in a comprehensive manner to tie the new and existing spaces together homogenously. This was especially true in the monumental corridors, which connected all three phases of construction at multiple levels.

The "Applied Research" portion of the work is only a piece of the puzzle. The pictorial evidence assembled provides a roadmap for further investigative work, such as selective finishes removals and destructive probes, which will be undertaken by the Design Team at the beginning of the Design Phase.

These investigations will be necessary in determining the finishes that existed during what we believe to be the Period of Interpretation. As noted in *Volume I Section 4 : Historic Analysis*, at this juncture, based on current knowledge and evidence, the most appropriate Period of Interpretation of the rehabilitated and restored Capitol should be between 1917 and the mid-1920's. This will be further verified during the Design Phase of the project.

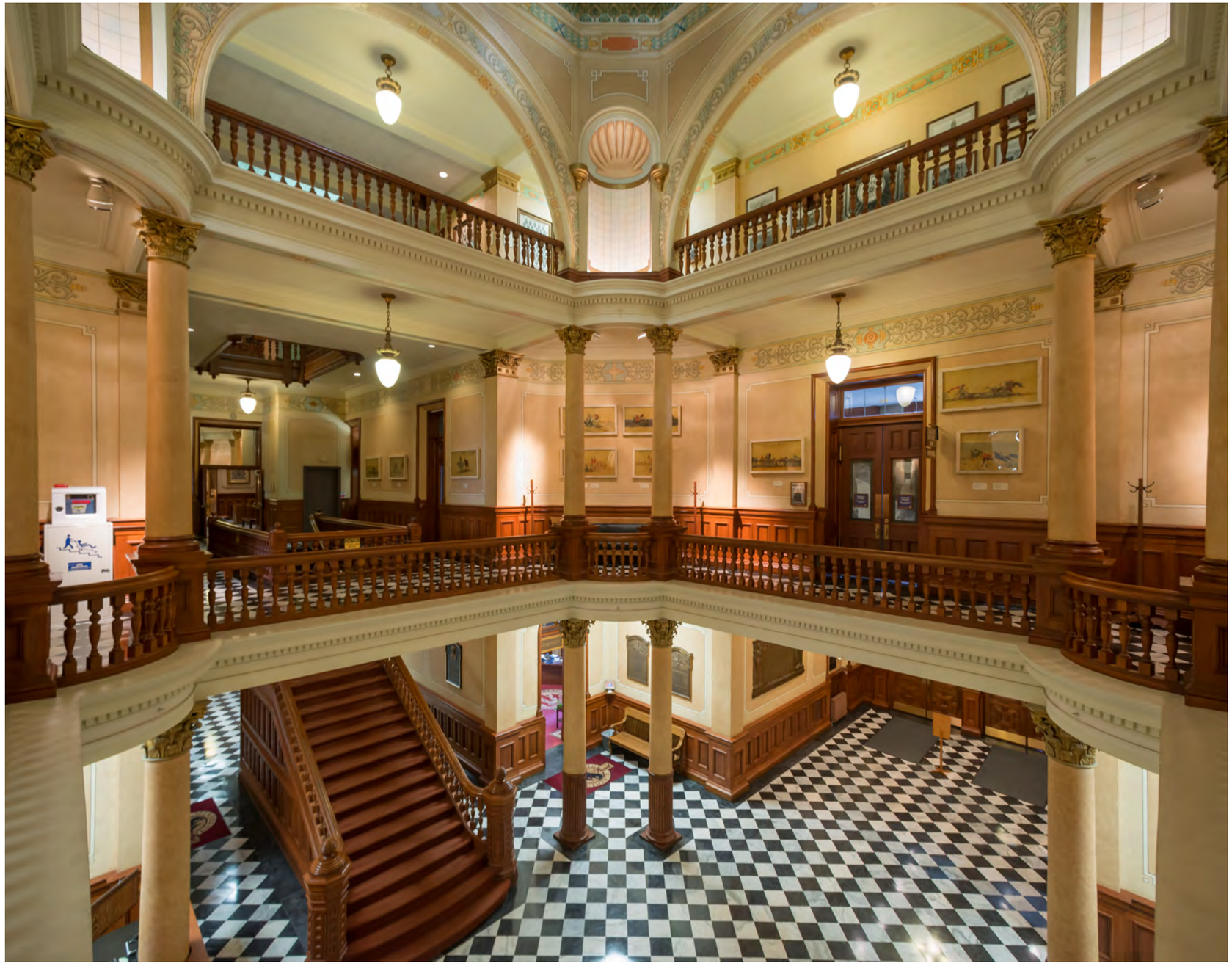

Figure 5.7.1.41: View of the Rotunda from the Second Floor Balcony.

5.7.4 Building Interior

Architectural Lighting

Figure 5.7.4.1: Typical Historic Light Fixture at the House Chamber.

Figure 5.7.4.2: House Chamber.

Figure 5.7.4.3: Typical Historic Light Fixture at the Senate Chamber.

Figure 5.7.4.4: Historic Light Fixture at the Second Floor House Lobby.

Figure 5.7.4.5: Historic Light Fixture at the Second Floor Senate Lobby.

Figure 5.7.4.6: Typical Lighting at the House Chamber Circulation.

Figure 5.7.4.7: Non-Historic Flourescent Lighting at a Perimeter Office.

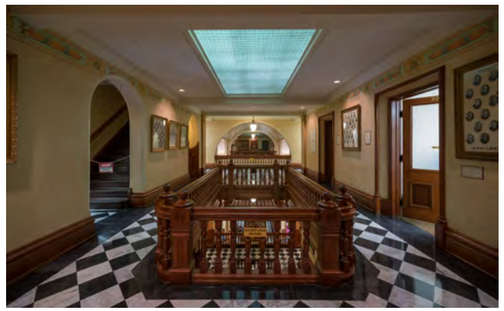

Figure 5.7.4.8: Non-Historic Lighting at the Former Laylight Location at the Third Floor West Corridor.

Figure 5.7.4.9: Historic Light Fixture at the Third Floor Committee Room.

Introduction

In April 2013, Gary Steffy of Gary Steffy Lighting Design [GSLD] performed a comprehensive assessment of the existing interior architectural lighting. A photographic record was made relating to lighting conditions and effects and to lighting equipment. A cursory record was made of light levels [illuminances] during daytime and nighttime hours to assess the existing daylighting and electric lighting conditions. Some lamping information was recorded to assist with later resolutions involving scale, size, and potential lamping [for purposes of light output, distribution, and energy use]. **Findings from the Assessment indicate that a fair amount of the existing lighting equipment in public areas is historical.** Further, it appears that a reasonable cache of original plans and specifications is available referring to specific lighting details and equipment. This is significant and fortuitous for restoration and re–creation.

Detailed study and assessment was reserved for spaces of historical significance [as defined in the Preservation Zones, presented in *Volume I Section 4 : Historic Analysis*] and where lighting effects and equipment offer some semblance of historic quality or where public access is encouraged. As a result, typical office spaces, committee rooms, and lounges were not reviewed in detail. Lighting in many of these areas is of the mid-to-late-twentieth century typically comprised of a variety of ceiling-suspended wraparound lensed fluorescent luminaires and ceiling-recessed flat-lensed fluorescent luminaires. **This lighting is neither historically significant nor appropriate for current practice.**

Man-Made Lighting

Electric light is used throughout the Capitol to provide both decorative and functional light. Some dates to the Phase III work completed in 1917. Fluorescent light was installed during the interior renovations campaign of the 1970s and is the primary electric light source throughout the building. [*Figure 5.7.4.7*] Additionally, in the extant historic decorative luminaires, compact fluorescent lamps (CFLs) have replaced the earlier tungsten filament lamp type. **With the exception of these CFLs, the fluorescent lighting exhibits color temperature (whiteness) and color rendering properties that are considered less than desirable for a landmark property and for Class A office space today.**

Space-by-Space Analysis

Rotunda and Circulation

The Rotunda and adjacent circulation are located on the First, Second and Third Floors. Lighting here consists of a collection of historic luminaires as well as 4-foot-square surface-mounted lensed fluorescent luminaires, recessed downlights, trackhead accents, and electrically-lighted laylights likely from the 1970's interior work. The Dome is backlit with daylighting and supplemental electric lighting. [*Figures 5.7.4.11 and 5.7.4.13*] Light levels for circulation are appropriate with the exception of the Second/Third Floor communicating stairs, which in some instances fall below 1 fc and have a very dim appearance. Artwork, like that in the Governors' Portraits Gallery, is over-lighted, and may be damaged unless artwork is rotated frequently.

A number of historic luminaires appear in, or near, original locations and are well-preserved. Several shades exhibit damage and some have been replaced with modern acrylic proxies.

House of Representatives Chamber

The House of Representatives is comprised of the Second and Third Floors of the East Wing [Phase III] of the Capitol. The lighting in the House Chamber is quite serviceable for legislative functions. [*Figure 5.7.4.1*] However, the upper perimeter of the Chamber has a dingy appearance, perhaps exacerbated by the overly harsh and directional downlighting from the modern downlights. The distribution of the downlighting does not contribute to the historical character. Daylight contributes greatly to the historical character and to the overall impression of brightness by providing a wonderful glow to the stained glass laylight. However, it contributes less robustly to the functional light at desks during typical sessions.

A recently-installed system of lightweight opal "greenhouse" protective diffusing panels just above the backside of the stained glass lantern act as dust covers and accommodate periodic cleaning from a movable catwalk-like platform that reduces the possibility of damage to the stained glass laylight. The protective covering above the stained glass may diffuse daylight too well; this diffusion by the protective panels, combined with the skylight and stained glass transmission properties and the unfinished nature of the interstitial attic, arguably throttles daylight too aggressively. For effect at night, a series of ceramic metal halide PAR-lamp trackheads arranged on tracks are mounted just below the skylight to backlight the laylight. However, little functional light is provided by these fixtures. [*Figures 5.7.4.14 and 5.7.4.15*]

Significant historical lighting infrastructure dating to 1918 remains in place in public areas of the House of Representatives and can be attributed to Beardslee Chandelier Manufacturing Company (Beardslee) based on historic specifications, plans, and photographs. Period detailing on most of the historic luminaires is intact.

Senate Chamber

Opposite the House Chamber, the Senate Chamber is comprised of the Second and Third Floors of the West Wing [Phase III] of the Capitol. The lighting in the Senate Chamber is very similar to that found in the House Chamber and is quite serviceable for legislative functions. Unlike the House Chamber, however, the Senate Chamber appears to exhibit a somewhat brighter or livelier appearance, perhaps attributable to such aspects as the laylight configuration, the chamber finishes, and the 4-side-illuminated-gallery layout. The lighting of the downlighting does not contribute to the historical character. Daylight contributes greatly to the historical character and to the overall impression of brightness by providing a wonderful glow to the stained glass lantern, but contributes less robustly to the functional light at desks during typical sessions. [*Figures 5.7.4.16 and 5.7.4.17*]

Similar to the House, the Senate Chamber chandeliers are extremely difficult to access for cleaning and relamping. Significant historical lighting infrastructure dating to 1917 remains in place in public areas of the Senate and can be attributed to Beardslee based on historic specifications, plans, and photographs. Period detailing on most of the historic luminaires is intact. [*Figure 5.7.4.3*]

Governor's Suite

The Governor's Suite is in the East Wing on the south side of the First Floor of the Capitol [Phases II & III]. Although a few historic luminaires exist in the Governor's Suite, most lighting consists of 2-foot-by-4-foot and 4-foot-by-4-foot lensed and paracube louver-recessed luminaires, likely from the 1970's. The light levels in most areas are appropriate as task lighting, but considered somewhat high for ambient (general) lighting for typical administrative and conferencing functions where, in current standards of practice, a low-to-moderate level of ambient lighting is supplemented with desk-mounted task lighting. The glare, institutional light color, modern shapes, lower ceiling heights, and acoustical tile ceilings are not appropriate to the status of the office nor historically sympathetic.

Of the six [6] historic luminaires in the suite, the two [2] pendants in the ceremonial conference room most closely match the 1916 Chandelier Order list from Beardslee [chandelier order] for a 9-socket, art glass finished in brushed antique bronze [BAB] in "Gov. Private" space and may be in or near original locations, but with shortened overall suspension lengths. Four [4] other potentially historic luminaires currently in the suite are also likely Beardslee ca. 1918. Two of these are pendants that were probably originally 5-socket. These are similar to the 4-socket, art-glass, BAB finished chandeliers cited in a 1916 Beardslee order for "Gov. business" [Four were originally purchased, so two are missing]. The two [2]

Figure 5.7.4.10: A Common Application for the Then-New Incandescent Lamps, Architectural Detailing Was Outlined with Lamps Consistently Placed, ca. 1902.

Figure 5.7.4.11: Combination Wall Brackets are Shown on the Rotunda Second Floor Fascia Detailing. Electric Lamps Ring the Perimeter of the Dome, as Shown in the Close-up in Figure 5.7.4.14, ca. 1902.

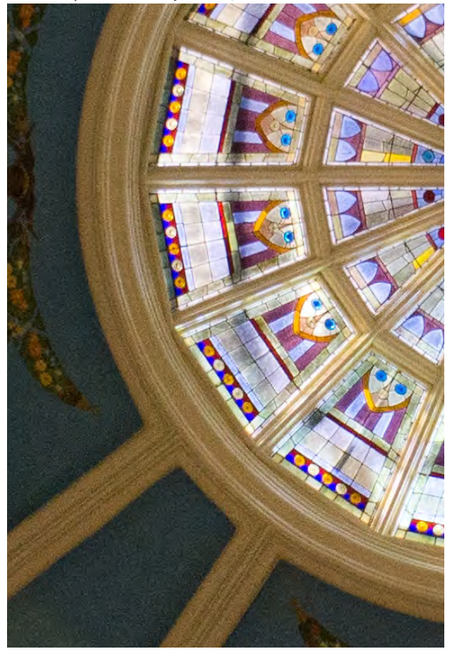

Figure 5.7.4.12: Existing Condition Around the Rotunda Laylight, Without Exposed Incandescent Fixtures.

Figure 5.7.4.13: Existing Rotunda, Without Exposed Light Fixtures, 2013.

Figure 5.7.4.14: House Chamber Laylight - Daytime Daylighting, 2013.

Figure 5.7.4.15: House Chamber Laylight - Nighttime Electric Accent Lighting, 2013.

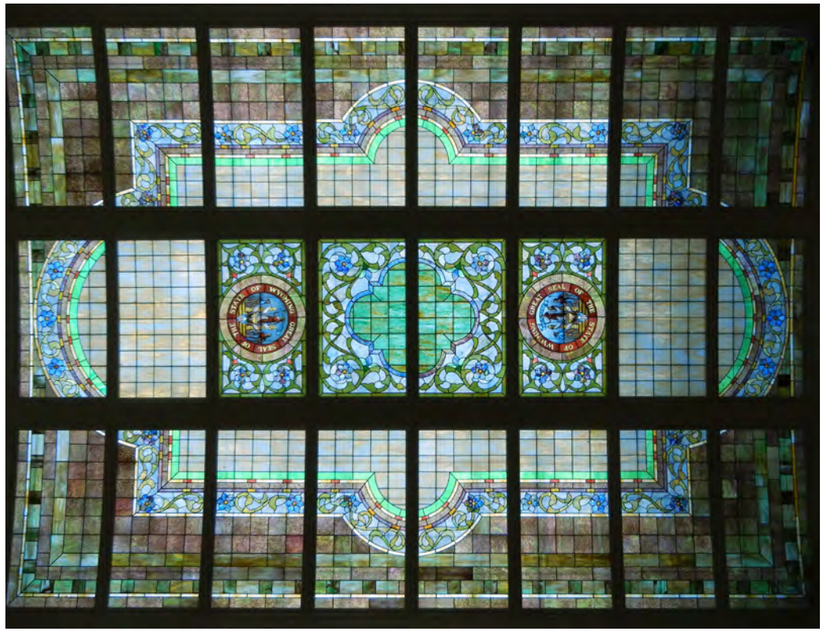

Figure 5.7.4.16: Senate Chamber Laylight - Daytime Daylighting, 2013.

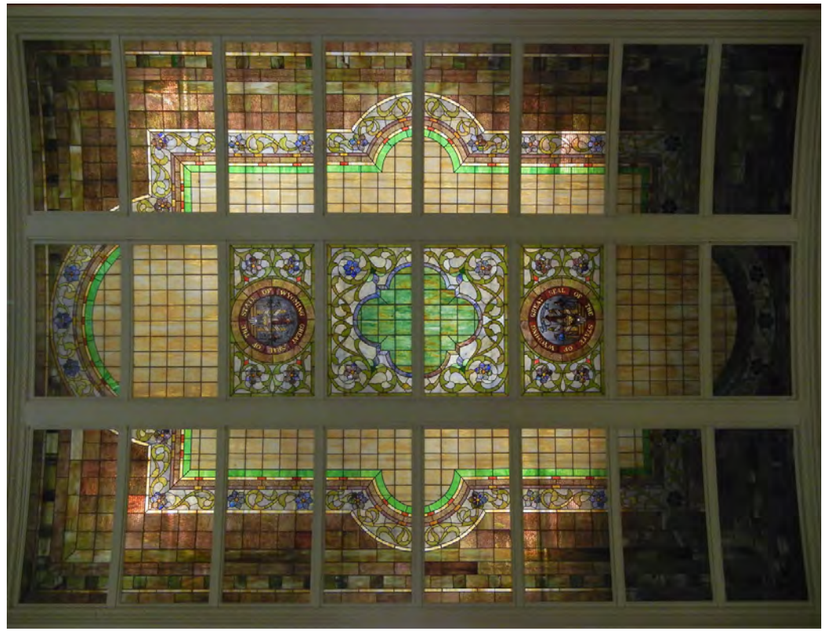

Figure 5.7.4.17: House Chamber Laylight - Nighttime Electric Accent Lighting, 2013.

others cannot be attributed to the 1918 Governor's Suite, but may perhaps be attributed to the 1916 Beardslee chandelier order for the rest of the building or to the 1937 work. Without original shop drawings and historic photographs of each space, certain attribution cannot be made. Apparently the three [3] nickel-finished luminaires identified in the 1916 Beardslee chandelier order for the Governor's toilet and the ante toilet are missing or hidden above modern ceilings.

Other Historic Luminaires

The north circulation stairs, the Assistant Secretary of State's office, and the Supreme Court Conference Room are lit with what appear to be original historic luminaires from the 1916 Beardslee chandelier order.

Existing Maintenance

The ca. 1918 historic luminaires are in good condition, a testament to their quality of manufacture and their ongoing care and maintenance. Many historic luminaires appear intact and operable. All luminaires are relamped and cleaned at the same time, as part of the building's maintenance program.

SUMMARY

Based on the assessment of the existing architectural light fixtures and the requirements of a modern Capitol, the Design Team has established the following criteria for the building lighting:

- All existing fixtures that are to remain need to be re-wired;
- All fixtures will be energy efficient [LED];
- All fixtures will have multiple settings, depending on the event;
- All fixtures will be dimmable;
- All fixtures will be easily accessible, for maintenance purposes;
- All fixtures will be historically appropriate to work within the character of the building. However, the fixtures need to provide adequate lighting requirements that meet contemporary standards.
    1. Task Lighting, for working conditions;
    2. General Lighting;
    3. Emergency Egress Lighting.
        i. There will not be any emergency light fixtures, but the lighting along the path of egress travel will meet the code requirements and will be connected to the emergency circuit.

A more detailed description on the Capitol architectural lighting can be found in *Volume III Appendix O : Architectural Lighting Report*.

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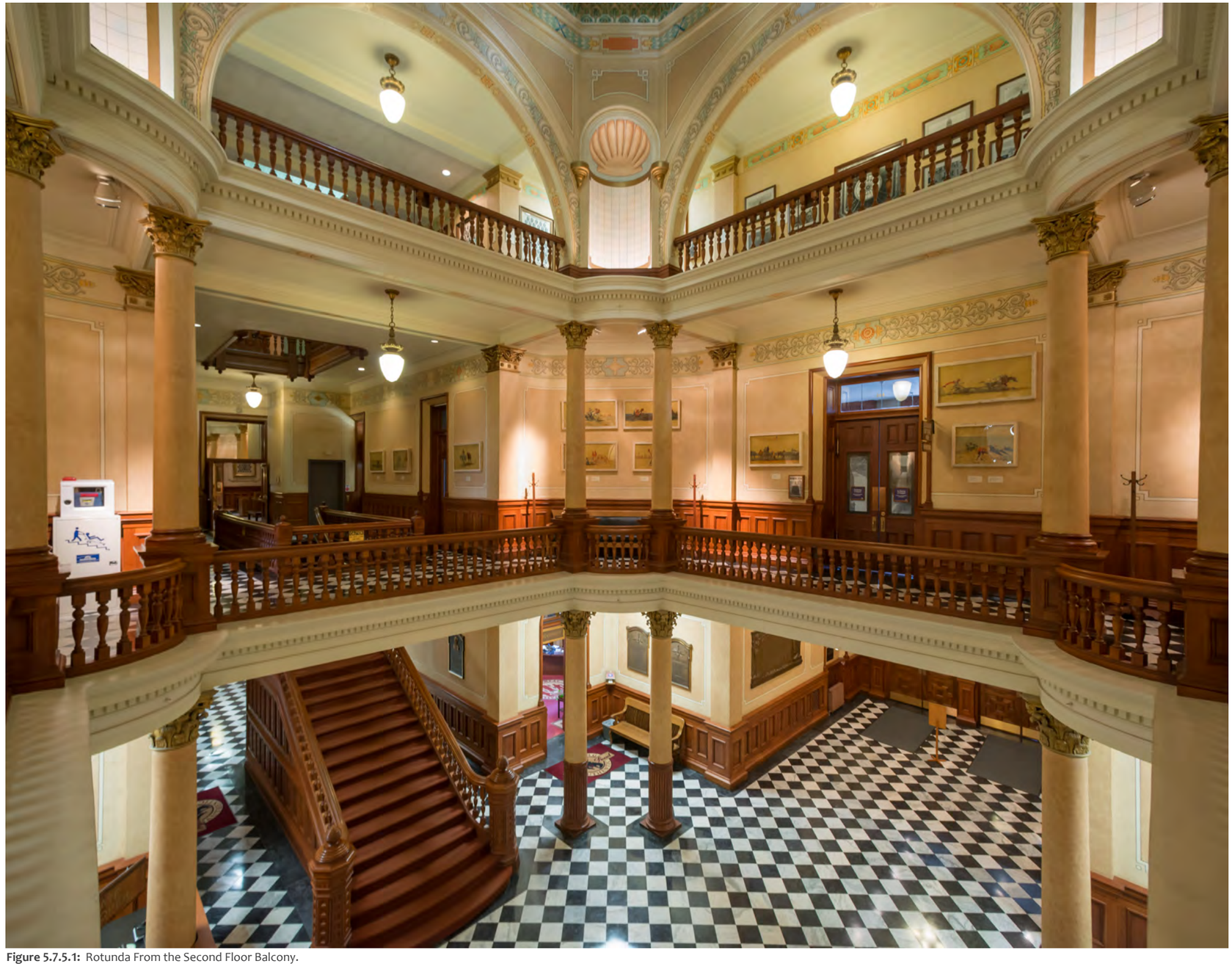

Figure 5.7.5.1: Rotunda From the Second Floor Balcony.

5.7.5 Building Interior

Life and Fire Safety

Introduction

As part of the project Design Team's Level I / Level II Services, a comprehensive life safety and fire protection assessment was conducted by the Design Team to evaluate the building against the state of Wyoming Building and Fire Codes to identify areas of noncompliance and identify recommendations to achieve compliance and protect the building from the consequences of a fire.

A careful assessment of the existing conditions revealed the following:

- The Wyoming State Capitol, typical of virtually all capitols built around the end of the 19th and early 20th centuries, is **a single volume building**, i.e. all levels and areas of the building are interconnected both horizontally and vertically, comprising a single volume. [*Figure 5.7.5.1*]
- This condition can have significant risks associated with the spread of fire and smoke.
- There are no fire protection and detection systems in place to provide full coverage throughout all areas of the building, from the basement to the attic, that is, **there are no smoke detection nor automatic sprinkler systems.**
- Egress presents significant challenges. An attempt was made to address this issue through the installation of open metal stairs at the north façade of the building to provide an alternate means of egress from both chambers.
- Historic railings in the Rotunda and the monumental stairs are well below the code-required heights, constituting a life safety risk. Similar conditions exist in the House and Senate Chambers. [*Figure 5.7.5.1*]

Building Codes, in general, are written to protect the public health, safety and general welfare, based on scientific analysis and past case studies. The approach is prescriptive, since codes are written to address new construction. Historic buildings, such as the Capitol, were typically designed and built before the introduction of building codes. Applying a prescriptive approach to an historic structure may result in irreversible loss of significant historic building fabric, rare materials, character-defining features and monumental spaces, such as the Rotunda.

Fortunately, there is an alternative approach, known as **Performance Based Code Analysis** that is based on scientific analysis of the building, to understand its behavior in the event of a fire. This analysis provides direction in introducing systems that can address all key life safety issues, while ensuring that the architectural and historic integrity of the building are not adversely affected and the goals of life safety and property protection are achieved without compromises. [*Figure 5.7.5.2*]

Existing Building Characteristics

Compartmentalization

The Capitol's floors appear to be subdivided horizontally into **five [5] fire zones on each floor level** (Basement through Third Floor) [*Figure 5.7.5.3*]

The compartments on each floor level are created by the masonry walls separating the Phase I construction from the Phase II and Phase III construction to the east and west with substantially thick doors in the openings. The masonry walls and the doors appear to create a minimum 1-hour fire-resistance-rated separation between compartments on the respective floors.

A preliminary review of the floor/ceiling assemblies separating the Basement, First, Second, and Third Floors indicates the assemblies provide a minimum 1-hour fire-resistance rating/separation. Vertical openings [stairs] between the Basement and First Floor are protected with 1-hour fire-resistance-rated door assemblies, thus creating two [2] separate vertical fire compartments.

The First through Third Floors are open to each other via the Rotunda and two stairs, thus creating a single fire area. [*Figure 5.7.5.1*] The floor/ceiling assembly separating the Third Floor from Attic appears to be of steel and wood frame construction that, thus, does not provide a fire-rated separation. Therefore, the building center extending from the First Floor to Third Floor and the entire Third Floor and Attic are considered a single fire area.

Because of the lack of separation - vertically and horizontally - on all floors and Attic, the Capitol is considered to be a single space and single fire area.

Existing Fire Protection System

The existing Capitol Building fire protection system includes the following:

1. A manual fire alarm system is provided throughout the building. The system consists of manual pull stations generally installed at the exit/exit access doors in the common corridor areas.
2. Alarm-indicating appliances consist of bells and horns and generally appear to be installed in the public/common spaces.
3. A Class I fire standpipe system complete with 2½-inch diameter fire hose valve outlets is provided in the building. The fire hose valve outlets are located in cabinets installed in locations within the building.
4. Portable fire extinguishers are provided throughout the building. The extinguishers are multi-purpose type units, 2A10BC rating, and are typically installed in visible cabinets.

The existing Capitol fire protection system is deficient in the following areas:

- The building is not provided with an automatic fire suppression [automatic sprinkler] system.
- The existing automatic fire detection system appears to be limited to the local area smoke detection installed at the elevators and cross corridor fire-resistance-rated doors for the purpose of elevator recall and door closure, respectively. **General building area smoke detection is not provided.**

Means of Egress

An assessment of the Capitol Building's existing Occupant Load and Egress Capacity yielded the following:

- An occupant load analysis conducted in accordance with the building code - based on the number of occupants per square foot - indicates the theoretical building population is **1,459 persons total**.

Performance-Based Code Analysis: Fire Evacuation and Modeling Results

Design Fire Scenario	Building Occupant Load	Evacuation Scenario	Required Safe Egress Time	Exhaust Capacity	Results of Fire Modelling Analysis [*Figures 4-1 and 4-2*]
Design Fire Scenario 1 - Fire within the House Chambers	Maximum Expected Occupant load – 758 people	All Stairs Available	9 minutes [See Table 3-2.]	90,000 CFM	Evacuation routes and tenable conditions outside of the House Chambers and anterooms maintained for 20+ minutes
Design Fire Scenario 2 - Fire at the base of the monumental stair [Blocked evacuation]	Maximum Expected Occupant load – 758 people	One monumental stair at first floor blocked	14 minutes [See Table 3-4.]	90,000 CFM	After smoke exhaust system initiation, tenable conditions within the building and evacuation routes maintained for 20+ minutes
Design Fire Scenario 1 - Fire within the House Chambers	Maximum Expected Occupant load – 758 people	All Stairs Available	9 minutes [See Table 3-2.]	None	Smoke spread has reduced visibility throughout the third floor corridor to less than tenable conditions within 10 minutes. By 14 minutes visibility conditions have been reduced below tenability limits throughout the corridor on the second floor.
Design Fire Scenario 2 - Fire at the base of the monumental stair [Blocked evacuation]	Maximum Expected Occupant load – 758 people	One monumental stair at first floor blocked	14 minutes [See Table 3-4.]	None	Smoke spread has reduced visibility throughout the second floor corridors and Rotunda to less than tenable conditions within 3 minutes. By 8 minutes visibility conditions have been reduced below tenability limits throughout the corridor on the third floor.
Design Fire Scenario 1 - Fire within the House Chambers	IBC Occupant load – 1,459 people	All Stairs Available	12 minutes [See Table 3-1.]	90,000 CFM	Evacuation routes and tenable conditions outside of the House Chambers and anterooms maintained for 20+ minutes
Design Fire Scenario 2 - Fire at the base of the monumental stair [Blocked evacuation]	IBC Occupant load – 1,459 people	One monumental stair at first floor blocked	20 minutes [See Table 3-3.]	90,000 CFM	After smoke exhaust system initiation, tenable conditions within the building and evacuation routes maintained for 20+ minutes
Design Fire Scenario 1 - Fire within the House Chambers	IBC Occupant load – 1,459 people	All Stairs Available	12 minutes [See Table 3-1.]	None	Smoke spread has reduced visibility throughout the third floor corridor to less than tenable conditions within 10 minutes. By 14 minutes visibility conditions have been reduced below tenability limits throughout the corridor on the second floor.
Design Fire Scenario 2 - Fire at the base of the monumental stair [Blocked evacuation]	IBC Occupant load – 1,459 people	One monumental stair at first floor blocked	20 minutes [See Table 3-3.]	None	Smoke spread has reduced visibility throughout the second floor corridors and Rotunda to less than tenable conditions within 3 minutes. By 8 minutes visibility conditions have been reduced below tenability limits throughout the corridor on the third floor.

Figure 5.7.5.2: Design Fire Scenario Results Matrix. Refer to *Volume II, Appendix M: Life Safety and Fire Protection Assessment* for referenced tables and figures.

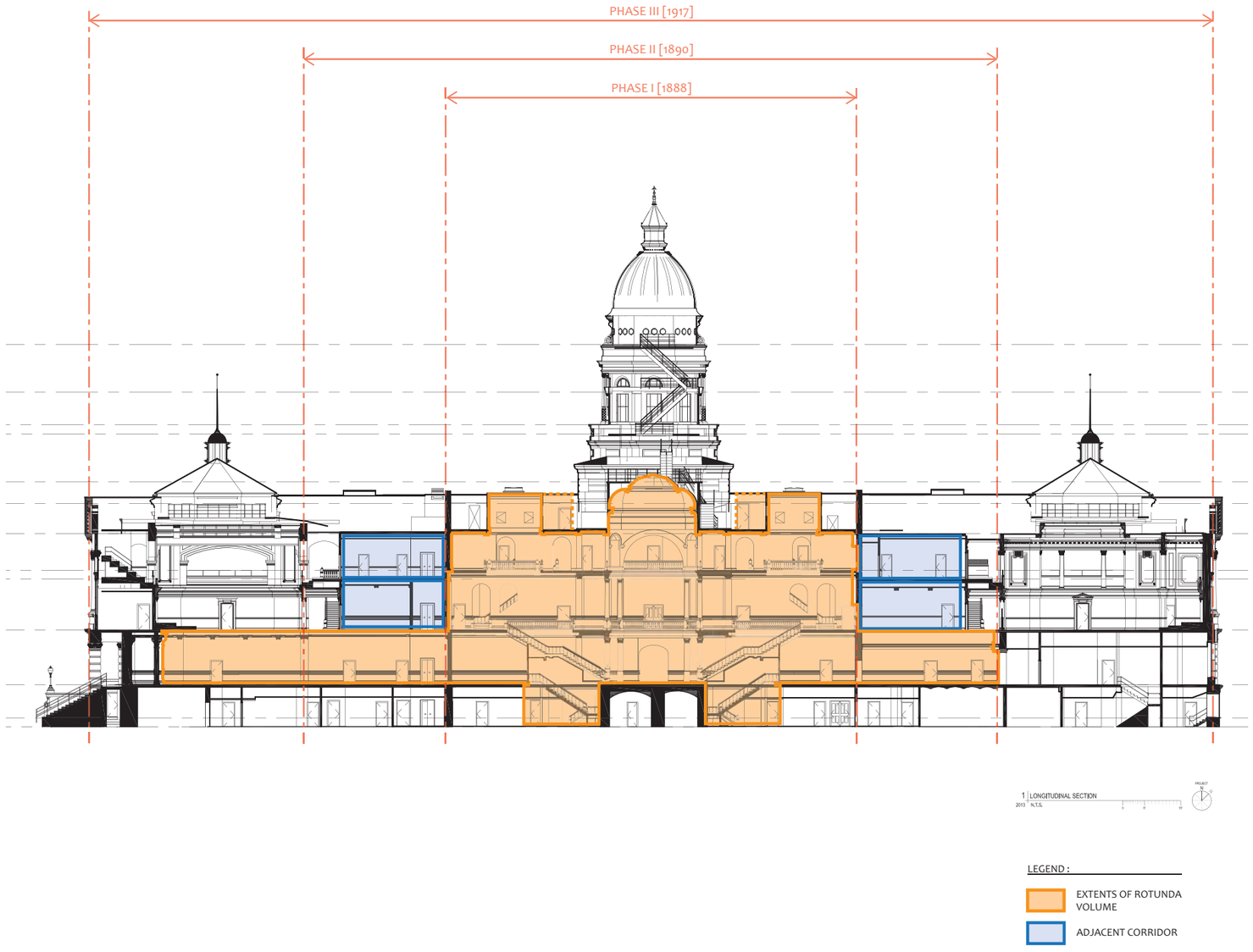

Figure 5.7.5.3: Longitudinal Building Section Illustrating the Single-Volume Nature of the Existing Building.

- The Capitol Building population during normal business hours is less than 200 persons when the legislature is not in session. **During legislative sessions, the building population is approximately 750 persons.** Access to the non-public spaces, including the House and Senate Chambers, is restricted.

  1. The building code occupant load calculation yields an occupant load twice that of the maximum expected number of occupants. **Therefore, the maximum expected occupant load of 758 persons is used to calculate evacuation times**. The purpose of this particular exercise was to determine whether the existing exterior fire escapes would be required to remain acoording to the building code.

  2. Maximum legislative session occupant loads were determined based upon attendance calculations provided by the State of Wyoming Legislative Services Office. This occupant load is considered the maximum expected occupant load within the building.

A detailed egress analysis is provided in *Volume II Appendix M : Life Safety and Fire Protection Assessment*.

Exiting and exit access was evaluated for the existing Capitol on a per floor basis.

- Due to the relatively small building footprint, travel distances within the building are small and limited to less than 300 feet. The travel distance to the fire escape stair on the Second and Third Floors is less than 200 feet, the maximum travel distance permitted by code for this building without automatic fire suppression.
- With the exception of the Governor's Suite on the First Floor, common path of travel is limited to 75 feet or less throughout the building due to the circular nature of the common public corridor and the open exit access stairs within the Chambers. However, exit access for some administrative spaces requires egress through an adjacent space.

A detailed egress analysis is provided in *Volume II Appendix M : Life Safety and Fire Protection Assessment*, illustrating common paths of travel, travel distances, dead ends, and exit capacities for each floor.

Additional Code Items

The Capitol is deficient in regards to the following code-related items:

- Handrails on all stairs, **except the Monumental Stairs connecting the First Floor Rotunda and Second Floor Corridors,** comply with the existing building code with regard to height and circular cross section. Both Monumental Stairs have handrail circular cross sections that exceed 2-inches diameter, the code maximum dimension. [*Figure 5.7.5.1*]
- Guards at the Rotunda opening on the Second and Third Floors are approximately 30 inches, measured vertically above the floor walking surface. **This height does not comply with the International Existing Building Code (IEBC) requirement of a minimum 42-inch height**. [*Figure 5.7.5.4*]
- Exit signs are provided in some spaces **but are not installed throughout the building**.
- **Dedicated emergency lighting was not observed.**

- **The building is not currently provided with emergency power.** The majority of the building is not currently provided with emergency lighting.

CONCLUSION

The Level I / Level II Life and Fire Life Safety Assessment reviewed the existing conditions of the Wyoming State Capitol and the applicable code requirements. It presents a list of noncompliance items that require action as part of the building modernization. Its key findings are:

- **Life safety systems within the existing Capitol Building are limited**.
    1. There is a standpipe system, but no automatic suppression or smoke detection systems.
    2. Exit signs are located within the Basement but are not consistent on other levels.
    3. No emergency power source (i.e. generator) is provided for any of the existing life safety systems or lighting.
- The building has a relatively small floor plate. The floor openings at the Rotunda, main egress corridors, and within the Chambers result in the Capitol's being largely a single volume. **This significantly impacts the behavior of the building when subjected to fire conditions**.
- **The building has sufficient exit capacity for even the most extreme occupant loading (current International Building Code [IBC] occupant loads) without consideration of the exterior fire escape stairs.** Review of the building occupancy and loading concluded that the prescribed IBC occupant loads were almost double the maximum anticipated occupant load within the building during peak crowds for the duration of the legislative session. As such, a more realistic maximum occupant load, based on prior legislative occupant loads, of 758 occupants was evaluated in the egress analysis and determined that **the building currently has sufficient exit capacity without accounting for the existing exterior fire escapes**.
- Due to the historic nature of the existing building and in accordance with National Fire Protection Association (NFPA) 914, it was determined that a **performance based analysis** was the most appropriate measure to document the behavior of the building during a fire and to identify additional life safety measures required to meet the life safety goals of the renovation project.

Figure 5.7.5.3: Existing Non-ADA Compliant Railing at the Third Floor House Balcony.

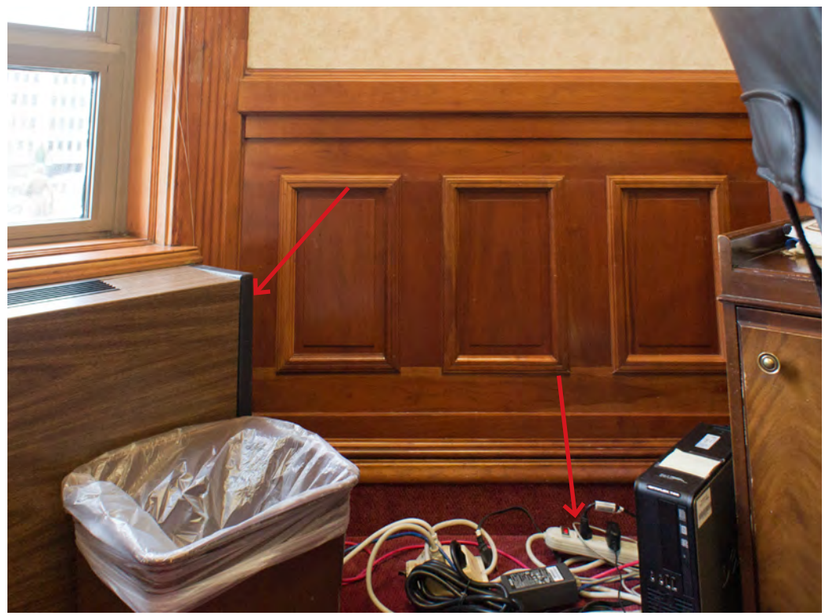

Figure 5.7.6.1: Disorganized Nature of the Existing Building Systems as a Result of the Ad Hoc Installation Over the Last 30+ Years, As Illustrated in Room 102 With Exposed Cords and the Non-Historic Fan Coil Unit.

Figure 5.7.6.2: Example of the Historically Insensitive Installation of Building Systems in Room 104. Here the fan coil unit installation resulted in the removal of the historic wood window frame and plumbing chases are exposed at the interior.

System #	Equipment Location	Area Served
SF-1	Basement East	House of Representatives Chamber
SF-2	Basement East	Basement & 1st Floor East Interior Zones
SF-3	Basement West	Senate Chamber
SF-4	Basement West	Basement & 1st Floor West Interior Zones
SF-5	Attic West	2nd Floor Senate Lobby
SF-6	Attic West	3rd Floor Senate Lobby and Press Room
SF-7	Attic East	2nd Floor House Lobby
SF-8	Attic East	3rd Floor House Lobby
SF-9	Attic	3rd Floor Conference Room and Press Room

Figure 5.7.6.3: Summary of Air Handling Systems in the Capitol Building.

Equipment	Expected Life	Existing Equipment Age
Fan Coil Units	20 years	35+ years
Ductwork	30 years	35+ years
Fans	20-25 years	35+ years
Coils- Water or Steam	20 years	35+ years

Figure 5.7.6.4: Expected Equipment Service Lives.

Figure 5.7.6.5: Existing Fan Coil Unit in Room 119, Where the FCU Installation Resulted in the Removal of the Historic Wood Window Frame.

5.7.6 Building Interior

Building Systems

Introduction

The first two [2] phases of construction of the Wyoming State Capitol were heated by fireplaces located throughout the building. A steam system for comfort heating was installed in these areas and expanded to heat the Phase III addition to the Capitol building. In the 1960s, air conditioning was introduced to select areas of the building. Supplemental heating and air-conditioning systems have since been added, including window air conditioners, split units, and electric baseboard heating. [*Figures 5.7.6.1 and 5.7.6.2*] The resultant system lacks organization and is an accumulation of equipment and distribution networks of varying sizes, types and ages organized in a random collection of zones which grew over the years to address isolated deficiencies.

The current Heating, Ventilation, and Air Condition (HVAC) system:

- Does not serve over 25% of the Capitol interior [*Figures 5.7.6.6 - 5.7.6.9*]
- Is comprised of equipment and associated distribution systems that have exceeded their useful service life with failure possible at any time
- Does not provide any conditioning / dehumidification at the Attic Level or Dome interior. As previously described in the Dome sub-section, significant frost / condensation was observed during walk-throughs in these areas. These conditions have resulted in the degradation of building fabric that will only increase if unaddressed.

Similarly, the current plumbing system:

- Has an inadequate number of fixtures to meet current code requirements
- Has an inadequate distribution of restrooms that appears to have been installed on an *ad-hoc* basis. Restrooms and associated plumbing distribution systems are not properly organized, resulting in a troublesome network of piping that makes maintenance, repairs and potential system improvements difficult.
- Has a small number of ADA-compliant restrooms; due to their poor distribution, building occupants are forced to travel long distances

The current electrical system is a similar combination of new and old equipment:

- The electrical panels and wiring are a mix of newer and older vintages
- Many of the panels and pieces of equipment are beyond their expected useful life expectancy
- The Capitol Building is not served by an emergency power service or generator
- The building is not currently provided with an overall lightning protection system

As the needs of the Capitol have evolved over time, newer equipment and wiring were installed as necessary throughout the building. The disorganization of the existing electrical system has resulted in an

underserved and overburdened distribution system that is struggling to keep pace with the technological demands of a 21st century capitol building.

Existing HVAC Systems

The existing HVAC systems for the Capitol consist principally of one-hundred sixty-five [165] 4-pipe fan coil units, which serve the majority of the spaces in the building. The fan coil units utilize chilled water from the central plant for cooling and low-pressure steam for heating. These spaces have minimal mechanical ventilation and rely primarily on operable windows for ventilation. There are all-air systems serving selected interior offices and high-occupancy spaces. These systems have chilled water coils for cooling and steam coils for heating. *Figure 5.7.6.3* summarizes the existing air handling systems in the building.

The limitations of the existing systems include the following:

- The Rotunda volume is not directly conditioned and relies on spill air from adjacent spaces for conditioning and ventilation.
- The use of operable windows does not allow for proper filtration of outdoor air, resulting in reduced Indoor Air Quality [IAQ].
- The use of operable windows is highly unlikely during inclement weather or cold periods, resulting in under-ventilated spaces.
- The use of operable windows for ventilation can be a security concern.
- The use of steam as the final medium requires maintenance of traps. Moreover, the Capitol maintenance staff noted during walk-throughs that there are currently leaking condensate lines. These leaks not only decrease the efficiency of the system itself, but they risk damaging adjacent historic fabric.
- The current system requires maintenance of over 170 fans associated with the 165 individual fan coil units and the air system located in the Basement and Attic Mechanical Equipment Rooms. The HVAC system is past its useful life expectancy, based upon the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) guidelines and existing equipment ages. [*Figure 5.7.6.4*]

Existing Plumbing Systems

There is a dedicated water meter and pressure reducing station that follow the 2" Capitol branch off of the 6" main water service in the underground Connector building and the associated dedicated backflow preventer that is described above. An 1-1/2" branch following this serves the Capitol cooling tower make-up with a dedicated submeter. **This branch is unprotected by a backflow preventer and could potentially back-feed into the Capitol drinking water system.**

A separate 6" water service was added in approximately 1999, routed from 24th Street into the front of the Capitol Building to serve fire protection systems. This service is protected by a double check valve backflow preventer and can likely remain to serve the modified and expanded fire protection systems; ultimate adequacy will be determined by hydraulic calculations.

A single sanitary main exits the Capitol to the west towards Carey Avenue. An approximate location for this service was provided to the Design Team

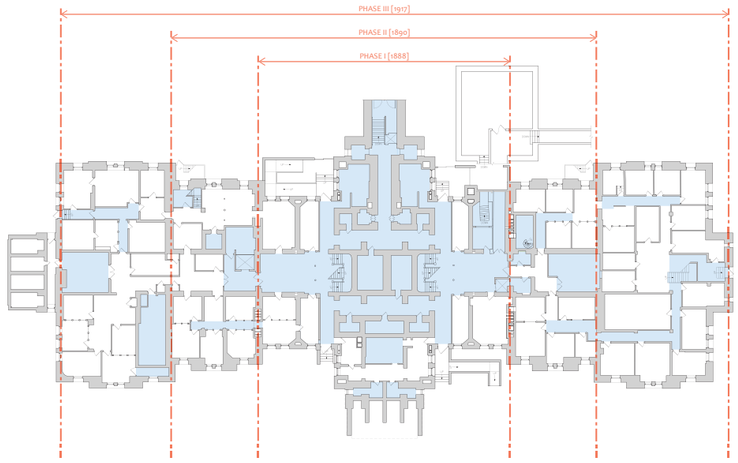

Figure 5.7.6.6: Spaces at the Basement Level that are Not Currently Served by a Dedicated Mechanical System.

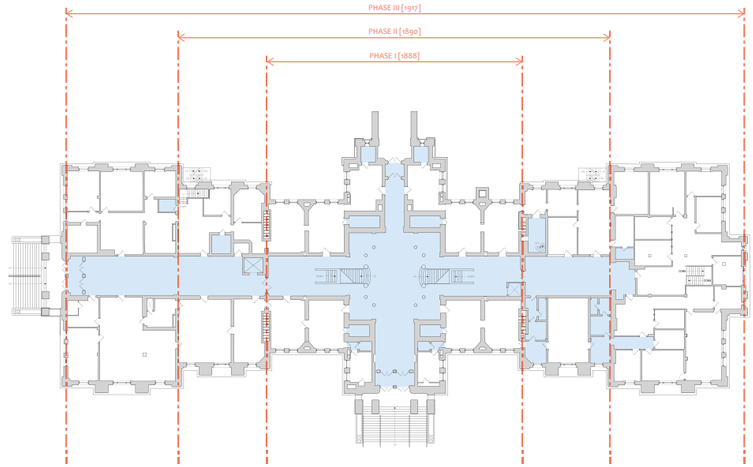

Figure 5.7.6.7: Spaces at the First Floor Level that are Not Currently Served by a Dedicated Mechanical System.

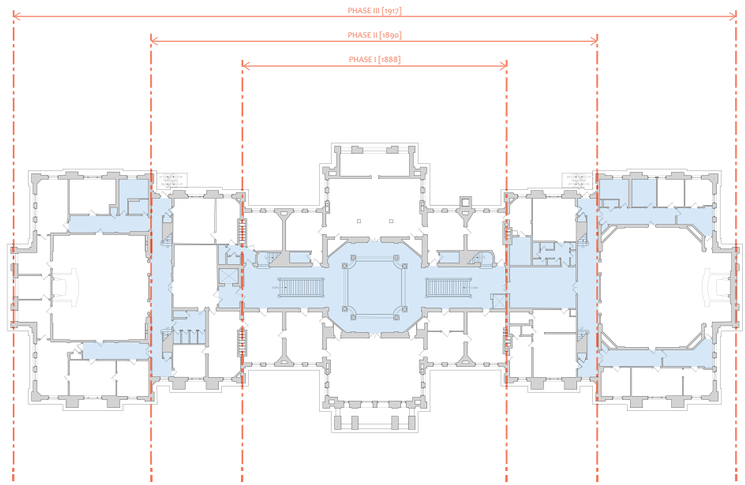

Figure 5.7.6.8: Spaces at the Second Floor Level that are Not Currently Served by a Dedicated Mechanical System.

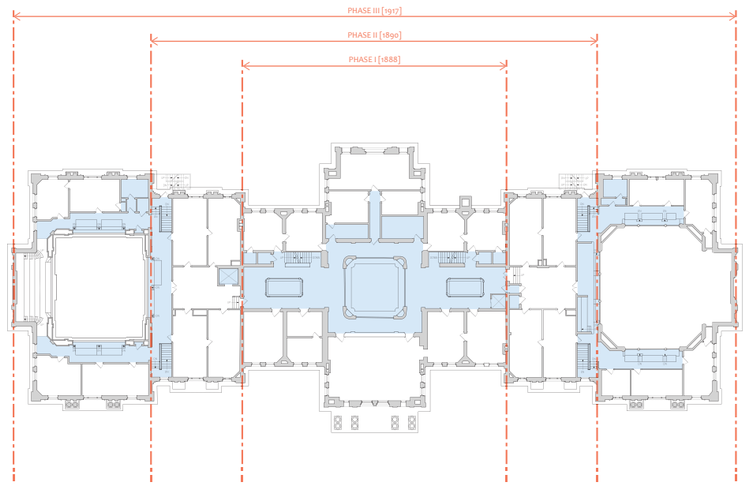

Figure 5.7.6.9: Spaces at the Third Floor Level that are Not Currently Served by a Dedicated Mechanical System.

Figure 5.7.6.10: Existing "Intrusions" Along the Northwest Side of the Capitol Site. These "intrusions" include an enclosure housing a series of cooling towers, as well as utility transformers.

Figure 5.7.6.11: Aerial Photograph Indicating the Existing "Intrusions" Along the Northwest Side of the Capitol Site.

Figure 5.7.6.12: Existing Capitol Building Utility Transformer.

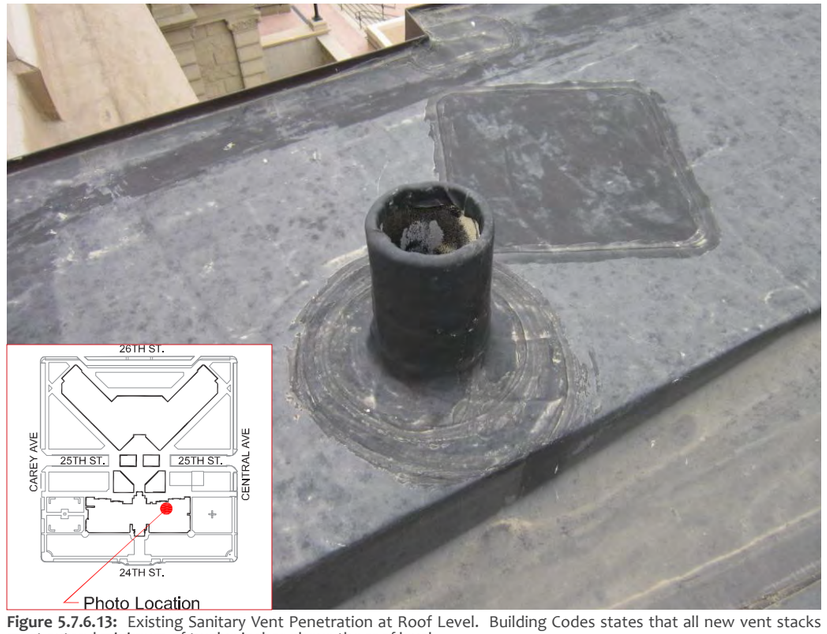

Figure 5.7.6.13: Existing Sanitary Vent Penetration at Roof Level. Building Codes states that all new vent stacks must extend minimum of twelve inches above the roof level.

by maintenance staff, but there is no house trap and the pipe is buried underground. An exterior cleanout was reportedly added by the staff, but has subsequently become buried in the lawn. The main is reportedly original to the building, and there is no manhole in the street at its connection to the street main. Consideration should be given to replacing it during modifications to the Capitol Building.

Vent stacks extend up through the roof from existing toilet fixtures. These stacks currently extend between three and eight inches above the roof level. **New vent terminations must extend a minimum of 12-inches above the roof level and must be a minimum of 10-feet from any outside air intakes (or shall be a minimum of 2' higher than any such outside air intake).** [*Figure 5.7.6.13*]

Existing Electrical Systems

The Capitol derives electrical power from one [1] exterior 500 kVA pad-mounted utility transformer located at the Northwest rear of the building. [*Figure 5.7.6.12*] The utility transformer feeds one [1] 1,600A , 208/120V, 3-phase, 4-wire service switchboard located in the adjacent Connector Link in a dedicated main electrical room on the Basement level, west of the Connecting Corridor to the Capitol. The switchboard is fed by a single utility feeder and includes utility metering and two [2] overcurrent devices:

- One [1] 400A that serves a chiller in the Connector Link
- One [1] 1,200A that serves an integral switchboard distribution section that serves all Capitol feeders. An existing "lightning protection" surge protection device is connected to the service switchboard.

The Capitol is not served by an emergency power service or generator. Over two-dozen individual feeders from the main switchboard in the Connector Link are routed through the Connector Link in the Basement ceiling to serve the Capitol. The feeders are routed through a large splice box located in the ceiling in the Capitol's Basement Level north [central] corridor at the location of an old switchboard that was removed when the building link was constructed; the feeders are spliced to older feeders at the splice box to serve individual Capitol building electric panels.

Typical power distribution system feeders are installed in conduits and panels are located throughout the building flush-mounted in corridors and in closets.

The panels are a mix of newer and older vintage. Wiring is a mix of newer and old vintage, some reported by facilities personnel to be old, cloth-covered type. Many of the panels and pieces of equipment are beyond their useful life expectancy.

Emergency Power

As noted above, there is currently no emergency power service in the Capitol. Emergency lighting throughout the building is provided by the use of battery-powered fixtures and exit signs. A 5kW UPS inverter system located in the Attic provides emergency power to selected lighting in the two chambers via transfer relays at the dimming panels.

Lighting

The typical existing lighting systems throughout the building are described in detail in *Appendix O: Architectural Lighting Report*.

Fire Alarm

The building is provided with a stand-alone conventional zoned fire alarm system. ["Conventional" or "hardwired" fire alarm systems are zoned by groups of initiating devices and how they are wired. In modern "addressable" systems, every initiating device has a unique electrical address.]

- The fire alarm control panel is located in the Basement near the southeast handicap ramp.
- The fire alarm system is comprised of manual pull stations, audible horns and gongs [no visual strobe devices] and smoke detectors with door hold-open devices at the Rotunda. The fire alarm system dials out to an independent central station.

Lightning Protection

The existing building is not provided with an overall lightning protection system. A typical overall lightning protection system would consist of numerous lightning rods at the roof with multiple down-conductors to grade. However, a single "Lightning Preventer" device is mounted at the peak of the Dome; the device is connected to the ground via two [2] lightning protection down-conductors that are concealed in PVC conduits and routed downward on opposite sides of the Dome through the Attic and down to the ground near the East and West elevators. Surge protection is provided on the Capitol Building's north switchboard.

CONCLUSION

In simple terms, the existing Capitol building systems are failing, obsolete and inadequate.

1. **Heating Ventilation and Air Conditioning [HVAC]**

   The existing HVAC system cannot necessarily be labeled as such, i.e. a system. It is a collection of equipment that was installed over time without a clear plan to address:

   a. The architecture of the building

   b. Zones and areas of comparable use, i.e. assembly spaces, offices, etc.

   c. Occupancy areas

   In addition, approximately a little **over one quarter of the building** [27% to be exact] **does not have HVAC coverage and it relies on "spill over" air that migrates from other areas of the building**.

   Finally, the current HVAC arrangement lacks controls that would allow the occupants to achieve better environmental comfort and lower operating costs.

2. **Electrical Systems**

   During recent years, the Capitol has experienced failures of several electrical components, including obsolete and dangerous wiring.

   During the Design Team's assessment of existing conditions, the following observations were made:

   a. Several areas of the building are at risk with the possibility of electrical components failing.

   b. The infrastructure is **over 35 years old** and, in certain areas, significantly older.

   c. Electrical wiring does not meet current codes and existing sections have already failed with more at risk of failure in the future.

   The current needs of the users with increased reliance on electronic technology [computers, printers, etc.] necessitate that all spaces be wired properly to address the users' needs both today and in the future.

3. **Plumbing Systems**

   The same is true for plumbing systems, where failures have occurred in several locations of the building.

The assessment of the Site & Building conditions were used to prepare the Proposed Scope of Work, the Sequence of Implementation / Schedule and the project Budget.

Section 6 : Program Summary

6.0 Program Summary

Preamble

A parallel discussion to understand the needs of the building, as discussed in Section 5: Site and Building Assessment, is a discussion to understand the space available in the Capitol and the programmatic space needs of the occupants. The HDR/PDP/Plan One Design Team organized the programming work in three distinct ways.

1) Understand the current Capitol in terms of what space is available, how the space is utilized, and what challenges exist for conducting government.

2) Understand the space and organizational needs of the legislature and elected offices as they strive for efficient and accessible government.

3) Understand the space that will be available in the Capitol after the proposed changes to the Capitol infrastructure are completed.

This portion of the program summary references findings reported in Section 7: Proposed Scope of Work. This portion of the program summary also includes findings from the Herschler Study [see Volume IV: Herschler Supplement; Section 3: Program Summary].

The findings represented below are derived from comprehensive data collection efforts to build a functional program that supports existing, known operations, as well as reasonable expectations for future operations. A series of detailed interviews with staff were held to document the goals, space needs, and organization of each office. The space needs for this study are further documented in the Appendices [Volume III – Section P: Detailed Programming Data, and Volume IV - Herschler Supplement]. The Level III Design phase of the project will develop space plans and layouts to address these needs. Stated in a different way, the Level I/II Study defines the need, and the Level III Design work will address the need.

The study was an inclusive process, which sought to understand the needs of the legislature, each of the five elected offices, the attorney general's office, and support spaces associated with the Capitol. It is understood that some of these operations are not currently located in the Capitol, and it has not been determined which operations will return to the Capitol. Interviews were conducted with:

- Legislature – inclusive of all Senate, House, and Legislative Service Office [LSO] operations currently in the Capitol.
- Governor – inclusive of all operations currently in the Capitol, plus the Governor's Policy Group currently located in the Herschler building.
- Secretary of State - – inclusive of all operations currently in the Capitol.
- State Auditor – inclusive of all operations currently in the Capitol.
- State Treasurer – inclusive of all operations currently in the Capitol, plus the Treasurer's Unclaimed Property division located in the Hanson building.
- Superintendent of Public Instruction – inclusive of all operations currently in the Barrett building.
- Attorney General - – inclusive of all operations currently in the Capitol.
- Support Spaces – inclusive of security, Capitol information/tours, media, and medical support currently located in the Capitol.

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6.1 Current Building Area Utilization

A complete understanding of building area and building efficiency informs prudent planning and cost estimating. These calculations are tracked in detail through the course of the entire project. A few important clarifications on the terms used in this report.

- Gross Square Feet [GSF] - The Gross Square Feet (GSF) of the building includes the entire footprint of the building at every floor and includes exterior walls, mechanical spaces, shafts, and all NASF. This area also includes a portion of exterior covered areas such as porticos and balconies.
- Net Assignable Square Feet [NASF] - Net Assignable Square Feet (NASF), also referred to as the usable area, is discretionary, programmable space, usually assigned to a specific use and/or user. NASF includes enclosed rooms, footprints of open workstations, and circulation within office suites. Typical areas, or programmable space categories, include offices, office support, meeting rooms, and common support.
- Building Efficiency – building efficiency is a ratio of the NASF divided by the GSF. This calculation is typical in the building industry for comparing peer facilities. A higher the efficiency percentage is desired in all cases, as this represents maximizing usable area. Laboratory buildings, for example, are typically between 50-60% efficient, and office buildings are between 70-80% efficient. These typical building types are common and are based on hundreds of peer facilities.

Historic State Capitols have low efficiency ratios for the following reasons:

-They were constructed of thick masonry walls which in many cases represent at least 10% of the gross square foot area.

-They contain monumental spaces such as the rotunda, monumental corridors, lobbies, etc.

The Wyoming Capitol GSF has a total area of 129,539 GSF [table 6.1.1], with almost 26,000 GSF, or about one-fifth of the building, attributed to the attic and dome levels.

The current usable area totals 60,200 NASF. The basement level has higher NASF than the first and second floors because this floor does not have the same monumental circulation spaces as the upper floors. The third floor NASF is lower than the first and second floors because the openings above the legislative chambers are excluded from calculating the NASF.

	Current Capitol	
	Building Area [GSF]	Usable Area [NASF]
Basement	28,830	17,221
1st	27,010	15,886
2nd	26,207	16,048
3rd	21,513	11,045
Attic	24,727	0
Dome Levels	1,252	0
Total	**129,539**	**60,200**

Table 6.1.1: Area Summary – Current Capitol

Through the process of interviews and observations, key challenges for conducting open and accessible government were identified:

1) The existing committee rooms are extremely crowded and are not conducive to public participation. These rooms are also too small for the committee to conduct their business in an efficient or appropriate manner. Larger, correctly configured committee rooms are needed for legislative session.

a. There are 15 Committee Rooms within the Capitol which range in size from 301 NASF to 1,083 NASF. All but two of these rooms are between 301 NASF and 425 NASF; Nearly 90% of the existing committee rooms are not the appropriate size and configuration.

b. Committee chairpersons and the associated secretarial staff are inconsistently assigned. House Chairpersons share dedicated offices and Senate Chairpersons use the Committee Rooms as their office. Secretarial staff is typically dedicated to the Committee Room.

c. There is insufficient space for public attendance, and for the small committee rooms, there is no place available for staff or guest presentations. These small rooms have no audio/visual capability.

d. The rooms are not used when the assigned committees are not meeting.

2) Executive and legislative offices are fragmented by being on multiple floors and having poor layouts within their suites. Office spaces throughout the Capitol are inefficiently utilized. Office and workstation sizes vary significantly. In some cases a member of staff may have an office larger than the Governor or the President of the Senate. In another case, a key staff person, handling sensitive information, may have a 40 square foot workstation located in a corridor.

a. Offices range from 85 NASF to 350 NASF for one person. This range does not necessarily correspond to hierarchy for leadership. For example an attorney may have a 350 NASF office and the Governor has a 258 NASF office.

b. Workstations vary significantly. In some cases the workstation is in the corridor with no separation. These desks can be less than 35 square feet. In other cases, workstations are oversized due to space available and are inefficiently configured as part of the office suite corridors.

c. There are not enough conference rooms available to accommodate citizen access to their government. Many of the conference rooms within the elected office suites are located between offices and function as a corridor when not in use. This configuration may require guests to pass through an assigned office to get to the conference room, and when a conference room is in use, the office suite is severed in two (because the corridor is then blocked).

The following subsections provide an overview of the space currently assigned to the legislature and the five elected offices.

6.1.1 Legislature

The Legislature, including LSO, is currently located on the second and third floors of the Capitol. Additional office space for LSO is located in the basement of the Capitol [figures 6.1.1.1; 6.1.1.2; and 6.1.1.3]. The total assigned space in the Capitol is 36,563 NASF [table 6.1.1.1].

Figure 6.1.1.1: Current Space Allocation: Legislature and LSO – Basement [Capitol]

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	Total NASF
LEGISLATURE		
Senate Chamber		8,337
House Chamber		7,930
Meeting Rooms		9,064
LSO Administration		9,552
Administration	2,573	
Legal Services Division	2,136	
School Finance Section	829	
Information Technology Section	997	
Research & Information Services	1,776	
Program Evaluation Section	1,241	
LSO Support		1,680
Subtotal		**36,563**

Table 6.1.1.1: Summary Space Tabulation: Legislature and LSO

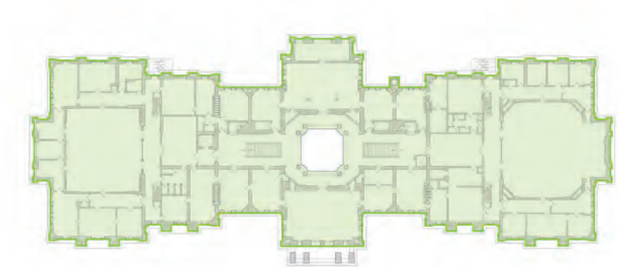

Figure 6.1.1.2: Current Space Allocation: Legislature and LSO – Second Floor [Capitol]

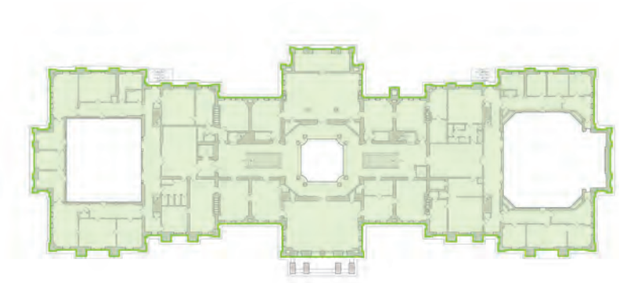

Figure 6.1.1.3: Current Space Allocation: Legislature and LSO – Third Floor [Capitol]

6.1.2 Governor

The Office of the Governor is currently located on the first floor of the Capitol. The Governor also has the Policy Group located in the Herschler building [figures 6.1.2.1 and 6.1.2.2]. The total assigned space in the Capitol and the Herschler building for these offices is 7,559 NASF [table 6.1.2.1].

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	Total NASF
GOVERNOR		
Administration		1,027
Administration Staff		1,243
Policy Group		3,784
Support		1,505
Subtotal		**7,559**

Table 6.1.2.1: Summary Space Tabulation: Governor

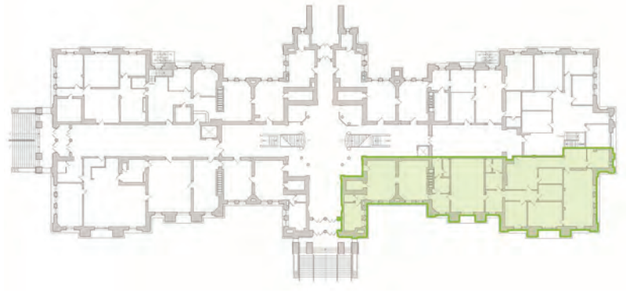

Figure 6.1.2.1: Current Space Allocation: Governor –First Floor [Capitol]

Figure 6.1.2.2: Current Space Allocation: Governor – Second Floor [Herschler]

6.1.3 Secretary of State

The Office of the Secretary of State is currently located on the first floor and basement level of the Capitol [figures 6.1.3.1 and 6.1.3.2]. The total assigned space in the Capitol is 7,568 NASF [table 6.1.3.1].

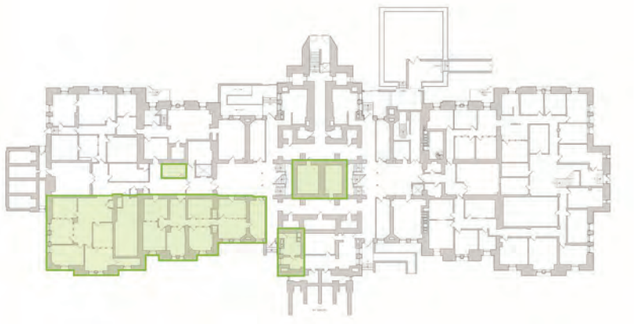

Figure 6.1.3.1: Current Space Allocation: Secretary of State - Basement [Capitol]

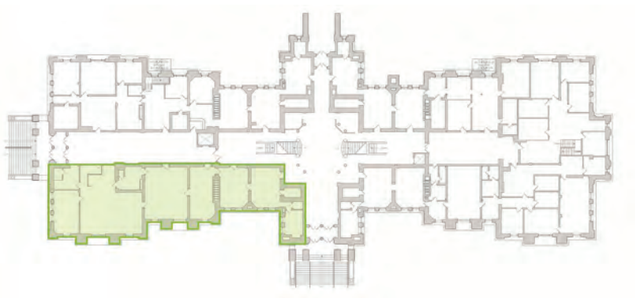

Figure 6.1.3.2: Current Space Allocation: Secretary of State – First Floor [Capitol]

	EXISTING ASSIGNMENTS	
Room Name/Functional Area	subtotal NASF	Total NASF
SECRETARY OF STATE		
Administration		5,352
Secretary of State	846	
Administrative Support Division	663	
Business Division	1,038	
Elections Division	964	
Compliance Division	1,344	
Technology Division	497	
Support		2,216
Subtotal		**7,568**

Table 6.1.3.1: Summary Space Tabulation: Secretary of State

6.1.4 State Auditor

The Office of the State Auditor is currently located on the first floor and basement level of the Capitol [figures 6.1.4.1 and 6.1.4.2]. The total assigned space in the Capitol is 6,584 NASF [table 6.1.4.1].

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	Total NASF
STATE AUDITOR		
Administration		4,353
State Auditor	1,119	
Payroll	1,001	
CAFR	569	
Technology	852	
WOLFS	812	
Support		2,231
Subtotal		**6,584**

Table 6.1.4.1: Summary Space Tabulation: State Auditor

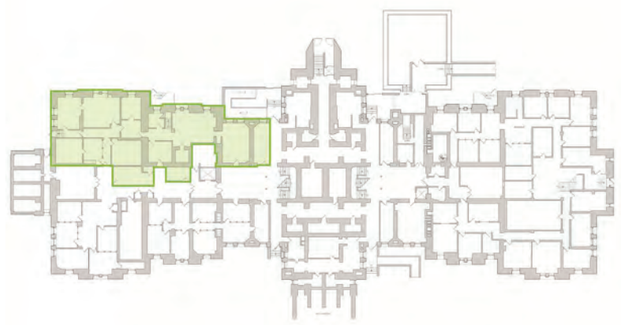

Figure 6.1.4.1: Current Space Allocation: State Auditor – Basement [Capitol]

Figure 6.1.4.2: Current Space Allocation: State Auditor – First Floor [Capitol]

6.1.5 State Treasurer

The Office of the State Treasurer is currently located on the first floor and basement level of the Capitol. The Treasurer also has the Unclaimed Properties group located in the Hansen building [figures 6.1.5.1; 6.1.5.2; 6.1.5.3; and 6.1.5.4]. The total assigned space in the Capitol, Herschler and Hansen buildings for these offices is 7,625 NASF [table 6.1.5.1].

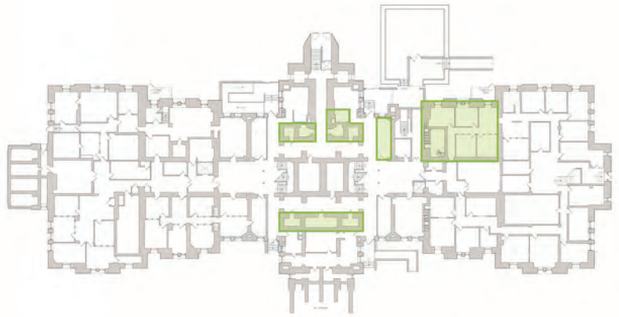

Figure 6.1.5.1: Current Space Allocation: State Treasurer – Basement [Capitol]

Figure 6.1.5.2: Current Space Allocation: State Treasurer – First Floor [Capitol]

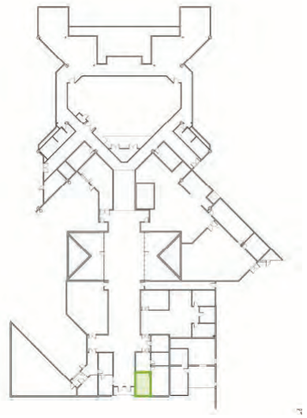

Figure 6.1.5.3: Current Space Allocation: State Treasurer – Basement Connector

Figure 6.1.5.4: Current Space Allocation: State Treasurer – Second Floor [Hansen]

	EXISTING ASSIGNMENTS	
Room Name/Functional Area	**subtotal** NASF	**Total** NASF
STATE TREASURER		
Administration		4,364
State Treasurer	662	
Accounting	420	
Network Administration	306	
IT Program	496	
Unclaimed Property	1,385	
Investment	1,095	
Support		3,261
Subtotal		**7,625**

Table 6.1.5.1: Summary Space Tabulation: State Treasurer

6.1.6 Superintendent of Public Instruction

The Office of the Superintendent of Public Instruction is currently located on the second floor of the Barrett building. This space has one enclosed office. The conference room and all other offices are open cubicles [figure 6.1.6.1]. The total assigned space in the Barrett building is 1,672 NASF [table 6.1.6.1].

	EXISTING ASSIGNMENTS	
Room Name/Functional Area	subtotal NASF	Total NASF
SUPERINTENDENT OF PUBLIC INSTRUCTION		
Administration		953
Support		719
Subtotal		**1,672**

Table 6.1.6.1: Summary Space Tabulation: Superintendent of Public InstructionSecond

Figure 6.1.6.1: Current Space Allocation: Superintendent of Public Instruction –

6.1.7 Attorney General

The Office of the Attorney General occupies a suite of five offices adjacent to the Governor's Office on the first floor of the Capitol. This suite has been staffed to support the activities of the Capitol and all other offices for the Attorney General are located outside the Capitol [figure 6.1.7.1]. The total assigned space in the Capitol is 1,904 NASF [table 6.1.7.1].

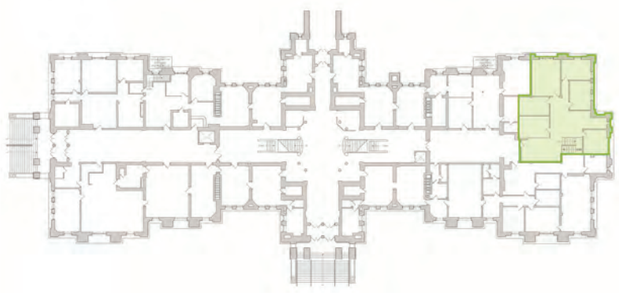

Figure 6.1.7.1: Current Space Allocation: Attorney General – First Floor [Capitol]

	EXISTING ASSIGNMENTS	
Room Name/Functional Area	subtotal NASF	Total NASF
ATTORNEY GENERAL		
Administration		1,008
Support		896
Subtotal		**1,904**

Table 6.1.7.1: Summary Space Tabulation: Attorney General

6.2 Proposed Program

The proposed program is based on specific goals and assumptions. In addition to seeking solution to the challenges identified above, a broader definition of the goals of the project was identified. The goals of this programming effort include:

a) Focus on improving and embracing public access.

b) Objectively represent the spatial and organizational needs.

c) Seek operational efficiency.

d) Seek equity in space sizes and amenities.

e) Incorporate flexibility and adaptability, particularly for intermittently used spaces.

When working with an existing building, and particularly with a National Historic Landmark, several challenges exist in developing a definitive space request. Two significant challenges are noted here.

1) Historic buildings are not flexible. They are defined, and to a certain extent, set by thick masonry walls. AS a result, true available space may not correspond to the true space need. For example, agiven room may be forecast to be a specific size based equity with other similar spaces, such as offices, or based a specific need. Existing conditions, however, may not accommodate such theoretical expectations. For example, based on the room sizes the Capitol can provide [due to existing historic walls] a 1,000 NASF Committee Room may be located in a 1,092 NASF room. Office assignments may see the most variation as there may be limited ability to consistently provide 150 NASF offices.

2) The program space for each group, legislature and elected office suites, had been documented with the expectation that the office would be reasonably located as a single office suite. If a suite is subdivided, such as being located on multiple floors, or split among two buildings, certain additional accommodations may be needed to address the needs of the office. For example, if a group is assigned some space in the capitol and some space in the Herschler building, additional work rooms, conference rooms, and perhaps staff, may be needed. The assumption to keep each group 'whole' was made for consistency, and based on the fact that locations are not determined at this time. This assumption defines the 'base' need of the group, subject to modifications to be determined during the Level III Design phase of the project.

The following subsections provide an overview of the program request for the legislature and the five elected offices. This program request incorporates specific initiatives to address the challenges noted above [Section 6.1].

1) The program includes committee rooms to be a minimum of 1,000 square feet each (which is about the size of the current committee room #302 on the third floor of the Capitol). The Joint Appropriations Committee should be in a larger room to accommodate added staff support and supporting materials [program request is 1,500 NASF]. A single large Committee Room is included to accommodate large meetings [program request is 1,900 NASF]. This room is intended to replace the existing large conference room in the basement of the Herschler building [B-63], and would be used all year for large public meetings of the legislature, elected offices, state commissions, etc.

In studying the scheduling of committee rooms, it was found that the current, dedicated committee rooms could be more efficiently utilized if they were not dedicated. The recommended program includes moving to flexibly assigned, shared committee rooms. This adjustment reduces the total number of committee rooms. This approach has been applied to offices for the chairperson and secretary of each committee. Chairperson offices will be shared (two per office), and secretaries will be located in a shared, open workstation area. This arrangement is anticipated to facilitate more flexible assignments, ready back-up, and improved efficiency.

2) The program includes adding conference rooms to ensure leadership have executive conference rooms to receive constituents and guests. Large flexible conference rooms are needed to bring staff together, conduct training, and other flexible use operations. Although a large conference room is included with each executive's space recommendation, it is acknowledged that these rooms can be intermittent in use, and should be shared among the executive offices.

3) The program assigns office and workstation sizes with logical, consistent sizes that incorporate appropriate equity and hierarchy across legislature and executive offices. The basic office is about 150 square feet, with larger offices for supervisors and leadership only. Workstations are standardized at 80 square feet, with larger spaces for reception and specialized positions.

6.2.1 Legislature

The total program request for legislature is 49,722 NASF [table 6.2.1.1]. The primary change to the program for the Legislature is to increase committee room and committee support spaces. In December 2012, Management Council accepted the concept of providing correctly-sized committee rooms and associated support spaces outside the footprint of the Capitol.

Additional changes to leadership offices and spaces supporting the chambers (attorney rooms, break rooms, and legislator-only restrooms) are included to address challenges to the legislature's ability to conduct their work efficiently.

	EXISTING ASSIGNMENTS		PROGRAM REQUEST			
Room Name/Functional Area	subtotal NASF	Total NASF	subtotal NASF	Total NASF	Difference NASF	Change %
LEGISLATURE						
Senate Chamber		8,337		9,180	843	10%
House Chamber		7,930		9,552	1,622	20%
Meeting Rooms		9,064		19,262	10,198	113%
LSO Administration		9,552		8,978	-574	-6%
Administration	2,573		2,448		-125	-5%
Legal Services Division	2,136		2,220		84	4%
School Finance Section	829		720		-109	-13%
Information Technology Section	997		1,020		23	2%
Research & Information Services	1,776		1,320		-456	-26%
Program Evaluation Section	1,241		1,250		9	1%
LSO Support		1,680		2,750	1,070	64%
Subtotal		**36,563**		**49,722**	**13,159**	**36%**

Table 6.2.1.1: Summary Space Tabulation: Legislature and LSO

6.2.2 Governor

The total program request for the Office of the Governor is 8,908 NASF [table 6.2.2.1]. The Governor has requested to move the Policy Group to the Capitol to increase efficiency in operations and staffing. The increase in support space is directly attributable to improving public access to this office by providing additional conference room space.

The Program Request includes an enlarged, centrally-located ceremonial conference room. The Governor's Office currently has a room for this purpose, in the middle of the suite, that is difficult to use, and is too small for most events. The programmed room is envisioned to be located adjacent to the Governor's Office with access from the main corridor. In this way, it may be used by others for announcements, citizen recognition, and other formal events.

	EXISTING ASSIGNMENTS		PROGRAM REQUEST			
Room Name/Functional Area	subtotal NASF	Total NASF	subtotal NASF	Total NASF	Difference NASF	Change %
GOVERNOR						
Administration		1,027		1,860	833	81%
Administration Staff		1,243		504	-739	-59%
Policy Group		3,784		2,664	-1,120	-30%
Support		1,505		3,880	2,375	158%
Subtotal		**7,559**		**8,908**	**1,349**	**18%**

Table 6.2.2.1: Summary Space Tabulation: Governor

6.2.3 Secretary of State

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	EXISTING ASSIGNMENTS Total NASF	PROGRAM REQUEST subtotal NASF	PROGRAM REQUEST Total NASF	Difference NASF	Change %
SECRETARY OF STATE						
Administration		5,352		6,986	1,634	31%
Secretary of State	846		1,140		294	35%
Administrative Support Division	663		600		-63	-10%
Business Division	1,038		2,040		1,002	97%
Elections Division	964		1,140		176	18%
Compliance Division	1,344		1,416		72	5%
Technology Division	497		650		153	31%
Support		2,216		3,030	814	37%
Subtotal		**7,568**		**10,016**	**2,448**	**32%**

Table 6.2.3.1: Summary Space Tabulation: Secretary of State

The total program request for the Office of the Secretary of State is 10,016 NASF [table 6.2.3.1]. The favorable business climate in Wyoming, as well as changing rules in adjacent states, creates a need to increase space associated with the Business Division. This space increase is needed to improve public access to the division and to decongest the work environment. The office has significant storage in the Capitol and has identified a portion of this storage that may be moved to the Herschler, which should be adjacent and not be moved to a remote archive.

6.2.4 State Auditor

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	EXISTING ASSIGNMENTS Total NASF	PROGRAM REQUEST subtotal NASF	PROGRAM REQUEST Total NASF	Difference NASF	Change %
STATE AUDITOR						
Administration		4,353		4,152	-201	-5%
State Auditor	1,119		1,236		117	10%
Payroll	1,001		720		-281	-28%
CAFR	569		768		199	35%
Technology	852		804		-48	-6%
WOLFS	812		624		-188	-23%
Support		2,231		2,610	379	17%
Subtotal		**6,584**		**6,762**	**178**	**3%**

Table 6.2.3.1: Summary Space Tabulation: Secretary of State

The total program request for the Office of the State Auditor is 6,762 NASF [table 6.2.4.1]. The current layout of this office has a circuitous flow and inefficient workstations. The Program Request seeks to correct these inefficiencies and add important support space. The net result for the State Auditor is a minimal increase in area.

6.2.5 State Treasurer

The total program request for the Office of the State Treasurer is 8,864 NASF [table 6.2.5.1]. Acknowledging the limited space available in the Capitol, if the Treasurer can be located in the Capitol, it is not desired to bring the Unclaimed Property group into the Capitol. If the Treasurer is located outside the Capitol, it is desirable to unite the offices to one location to improve agency efficiencies.

Program adjustments for this office [Table 6.5] include consolidation of the Network Administration and IT Program groups, and an increase in support space. The support space increase is primarily for conference space. The group acknowledges that some of the storage needs accommodated within the Capitol, could be archived to a secure location off site.

	EXISTING ASSIGNMENTS		PROGRAM REQUEST			
Room Name/Functional Area	subtotal NASF	Total NASF	subtotal NASF	Total NASF	Difference NASF	Change %
STATE TREASURER						
Administration		4,364		4,734	370	8%
State Treasurer	662		1,116		454	69%
Accounting	420		516		96	23%
Network Administration	306		0		-306	-100%
IT Program	496		450		-46	-9%
Unclaimed Property	1,385		1,092		-293	-21%
Investment	1,095		1,560		465	42%
Support		3,261		4,130	869	27%
Subtotal		**7,625**		**8,864**	**1,239**	**16%**

Table 6.2.5.1: Summary Space Tabulation: State Treasurer

6.2.6 Superintendent of Public Instruction

The total program request for the Office of the Superintendent of Public Instruction is 3,266 NASF [table 6.2.6.1]. The increase in space is attributed to correcting office sizes and providing support spaces similar to other agency suites.

	EXISTING ASSIGNMENTS		PROGRAM REQUEST			
Room Name/Functional Area	subtotal NASF	Total NASF	subtotal NASF	Total NASF	Difference NASF	Change %
SUPERINTENDENT OF PUBLIC INSTRUCTION						
Administration		953		1,836	883	93%
Support		719		1,430	711	99%
Subtotal		**1,672**		**3,266**	**1,594**	**95%**

Table 6.2.6.1: Summary Space Tabulation: Superintendent of Public Instruction

6.2.7 Attorney General

The total program request for the Office of the Attorney General is 2,930 NASF [table 6.2.7.1]. The adjacency to the Governor is convenient for their frequent consultations. The other elected officials and the Legislature also value close accessibility of the Attorney General.

The increase in space is attributed to correcting office sizes and providing support spaces similar to other agency suites. A significant reduction to the reception area is recommended.

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	EXISTING ASSIGNMENTS Total NASF	PROGRAM REQUEST subtotal NASF	PROGRAM REQUEST Total NASF	Difference NASF	Change %
ATTORNEY GENERAL						
Administration		1,008		1,500	492	49%
Support		896		1,430	534	60%
Subtotal		**1,904**		**2,930**	**1,026**	**54%**

Table 6.2.7.1: Summary Space Tabulation: Attorney General

6.2.8 Support Functions and Spaces

Support functions refer to program spaces which are not assigned to the office suites above, but are needed to support the operations of the building and the building occupants as a whole. Support spaces have been identified on a preliminary basis. Full development of these space requests have been deferred to the Level III Design phase because these spaces tend to be dependent on how and where the above agencies are located. Once the primary occupants of the Capitol are determined, these needs and space allocations will be studied in further detail. The total program request for the support spaces is 3,254 NASF [table 6.2.8.1] with important qualifiers noted below.

Room Name/Functional Area	EXISTING ASSIGNMENTS subtotal NASF	EXISTING ASSIGNMENTS Total NASF	PROGRAM REQUEST subtotal NASF	PROGRAM REQUEST Total NASF	Difference NASF	Change %
SUPPORT SPACES						
Security Center		312		477	165	53%
Public Information Counter		127		127	0	0%
Print Media Services		369		400	31	8%
Broadcast Media Services		324		400	76	23%
Medical Support Center		174		350	176	101%
Dining / Catering Area		0		1,500	1,500	na
Subtotal		**1,306**		**3,254**	**1,948**	**149%**

Table 6.2.8.1: Summary Space Tabulation: Support Spaces

a) Security – Security operations are currently located at the rotunda and other locations in the Capitol. The space request shown is a placeholder which will be developed during Level III Design to accommodate appropriate space and systems requirements for the Capitol and Herschler buildings.

b) Public Information – A Public Information counter is currently located at the rotunda of the Capitol. The space request shown is a placeholder which will be developed during Level III Design to accommodate appropriate space for reception, waiting, and exhibits.

c) Media Services – Two rooms on the third floor of the Capitol are currently provided for media services. These services have requested nominal increases in space. Some discussion has taken place to accommodate these services outside of the Capitol.

d) Medical Support – Activities at the Capitol can be intense and create strain for the large number of people that use the Capitol. A small medical support room is currently located on the second floor of the Capitol. This function is staffed by volunteers. This space has been overflowing during special events and legislative session. A nominal increase is recommended. This space should remain in a central location in the Capitol.

e) Dining/Catering Area – Whereas a cafeteria has existed in the Capitol, as well as in the Herschler building, in the past, there is no cafeteria provided today. Vending machines are available at the basement of the Capitol and the Herschler building.

Meals are provided to legislators during session at the break rooms; however, all other occupants must utilize vending machines or leave the Capitol for meals. The Program Request includes a dining area that would be supported by vending machines and a catering kitchen. This space would accommodate the need for large numbers of people working in the area, attending events, and attending the legislative session [it is also important to embrace the important social aspect of public involvement in government]. This space is tracked here, but is not intended to be located within the Capitol.

The total program request for the Office of the Attorney General is 2,930 NASF [table 6.2.7.1]. The adjacency to the Governor is convenient for their frequent consultations. The other elected officials and the Legislature also value close accessibility of the Attorney General.

The increase in space is attributed to correcting office sizes and providing support spaces similar to other agency suites. A significant reduction to the reception area is recommended.

6.2.9 Summary Tabulation

The total increase from the current allocation to the full program request for the above groups is 22,941 NASF [refer to table 6.2.9.1], and is primarily attributed to increases in committee rooms, conference rooms, and accommodating an efficient legislature. This full list was developed to aid the State in making informed decisions, enabling the State to understand the full need. This list of spaces represents needs that should be provided. The location for each of these spaces will be determined by the State during the Level III Design phase of the project.

The program represented here is agreed to address the scope of services and operations in place at the time of the meetings. This is considered a reasonable basis of design and is understood to vary in time due to changes in elected officials, changes to statutes regarding extent of services, or directives for special, short term projects.

As noted above, the full request of 93,722 NASF includes operations and spaces not intended to be located in the Capitol, e.g. dining/catering, Unclaimed Property Group, etc. Table 6.2.9.2 illustrates the revised totals when these spaces are excluded, and represent only the request for space in the Capitol.

Refer to Volume IV – Herschler Supplement for programming information related to the Herschler building.

	EXISTING ASSIGNMENTS	PROGGRAM REQUEST		
	Total NASF	Total NASF	Difference NASF	Change %
LEGISLATURE	36,563	49,722	13,159	36%
GOVERNOR	7,559	8,908	1,349	18%
SECRETARY OF STATE	7,568	10,016	2,448	32%
STATE AUDITOR	6,584	6,762	178	3%
STATE TREASURER	7,625	8,864	1,239	16%
SUPERINTENDENT OF PUBLIC INSTRUCTION	1,672	3,266	1,594	95%
ATTORNEY GENERAL	1,904	2,930	1,026	54%
COMMON	1,306	3,254	1,948	149%
Total	**70,781**	**93,722**	**22,941**	**32%**

Table 6.2.9.1: Summary Space Tabulation – Full Request

	EXISTING ASSIGNMENTS	PROGGRAM REQUEST		
	Total NASF	Total NASF	Difference NASF	Change %
LEGISLATURE	36,563	49,722	13,159	36%
GOVERNOR	7,559	8,908	1,349	18%
SECRETARY OF STATE	7,568	10,016	2,448	32%
STATE AUDITOR	6,584	6,762	178	3%
STATE TREASURER	7,625	6,172	-1,453	-19%
SUPERINTENDENT OF PUBLIC INSTRUCTION	1,672	3,266	1,594	95%
ATTORNEY GENERAL	1,904	2,930	1,026	54%
COMMON	1,306	1,704	398	30%
Total	**70,781**	**89,480**	**18,699**	**26%**

Table 6.2.9.2: Summary Space Tabulation – Capitol Request only

6.3 Proposed Building Area and Utilization

Section 7: Proposed Scope of Work illustrates the recommended solutions and economical layout of systems to address the needs of the Capitol as documented in Section 5: Site and Building Analysis. The discussion below draws from the information of Section 7 to represent the full area analysis documents of the proposed building area and utilization for the Capitol. The full progression of this discussion, as noted above, is to:

1) Document the current conditions

2) Identify the proposed area available

3) Compare the available area with the full programmatic need

The current Capitol has about 60,200 usable area. A reduction of about 10,576 of usable area in the Capitol is expected to accommodate code compliant restrooms, and other building systems [table 6.3.1]. Nearly half of the reduction is taken in the basement, where new air handling, electrical, and smoke evacuation systems are being added. The upper floors have slight variations due to added egress stairs [at the first floor] and added audio/visual/technology closets [at the third floor]. Each of the occupied floors has added restrooms and service closets.

It is clear that the full 89,480 NASF request for space in the Capitol cannot be fully accommodated in the proposed Capitol's 49,624 NASF [table 6.3.2]. The difference of about 39,856 NASF needs to be accommodated, and preferably close to the Capitol.

The Herschler building and Herschler Addition, as discussed in Volume IV – Herschler Supplement, provide significant additional usable area adjacent to the Capitol. This additional usable area is created through re-organizing the existing Herschler office spaces and constructing additional office space. This work creates about 246,203 NASF in the Herschler building and Herschler Addition. This space will accommodate the 39,856 NASF shortfall noted above for the Capitol offices and operations, and the 111,158 NASF projected space needs for Herschler offices and operations. Additionally, a surplus of about 95,189 NASF of flexible office space is created for relieving the State's lease burden in Cheyenne [see Volume IV – Herschler Supplement; Appendix A - Joint Appropriations Committee Correspondence]. Refer to Volume IV – Herschler Supplement for additional programming information related to the Herschler building.

	Current Capitol		Proposed Capitol		Difference
	Building Area [GSF]	Usable Area [NASF]	Building Area [GSF]	Usable Area [NASF]	Usable Area [NASF]
Basement	28,830	17,221	28,830	12,253	-4,968
1st	27,010	15,886	27,010	13,540	-2,346
2nd	26,207	16,048	26,207	14,565	-1,483
3rd	21,513	11,045	21,513	9,266	-1,779
Attic	24,727	0	24,727	0	0
Dome Levels	1,252	0	1,252	0	0
Total	**129,539**	**60,200**	**129,539**	**49,624**	**-10,576**

Table 6.3.1: Area Summary – Current and Proposed Capitol

	Capitol		Herschler		Herschler Addition		Totals	
	Building Area [GSF]	Usable Area [NASF]	Building Area [GSF]	Usable Area [NASF]	Building Area [GSF]	Usable Area [NASF]	Building Area [GSF]	Usable Area [NASF]
Building Assessment	129,539	60,200	288,780	173,247			418,319	233,447
Program Request		89,480		111,158				200,638
Proposed Building	129,539	49,624	280,773	189,693	82,544	56,510	492,856	295,827
Difference	**0**	**-39,856**	**-8,007**	**78,535**	**82,544**	**56,510**	**74,537**	**95,189**

Table 6.3.2: Summary Space Tabulation (Excluding Parking Structure)

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