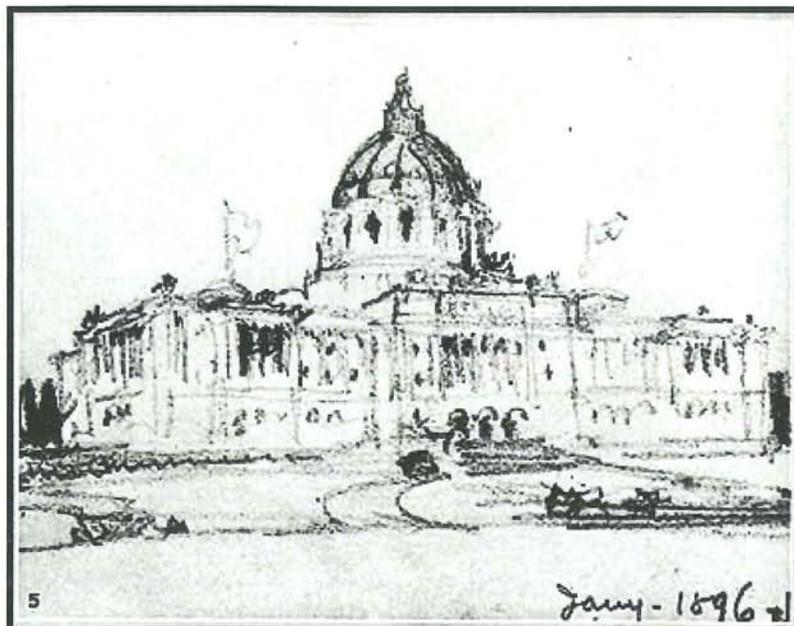


10-1456



MINNESOTA STATE CAPITOL RESTORATION WORKING GROUP



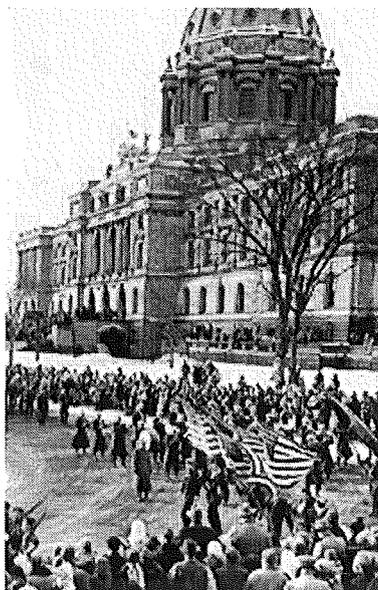
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\$250,000 the first year is to the Legislative Coordinating Commission for a facilitated planning process relating to the Capitol building and the Capitol complex. The process must be conducted in cooperation with the Capitol Area Architectural and Planning Board and the commissioner of administration, and must include consideration of issues relating to renovation and possible expansion of the Capitol building, phasing strategies relating to renovation of the Capitol, and related Capitol complex planning issues. The process must include consideration of as many options as feasible relating to renovation of the Capitol and related Capitol complex buildings. The process must be completed by September 30, 2007. Beginning October 1, 2007, the Legislative Coordinating Commission may transfer any unexpended balance from this appropriation to the commissioner of administration for additional planning and design for the renovation of the Capitol complex.

Legislative Coordinating Commission
Resolution Establishing the
Capitol Restoration Working Group

Clark _____ moves that the Legislative Coordinating Commission adopt the following resolution:

Be it Resolved, by the Legislative Coordinating Commission of the State of Minnesota:

1. **Authority.** The Capitol Restoration Working Group is established under authority provided in Minnesota Statutes 3.305, Subdivision 6.
2. **Membership.** The Capitol Restoration Working Group (Working Group) consists of:
 - a. six members of the House of Representatives, including two members of the minority caucus, appointed by the Speaker;
 - b. six members of the Senate, including two members of the minority caucus, appointed by the Subcommittee on Committees of the Committee on Rules and Administration;
 - c. one representative of the Minnesota Historical Society, appointed by the Executive Director of the Minnesota Historical Society;
 - d. the Commissioner of Administration, or her designee;
 - e. one member of the Capitol Area Planning and Architecture Board, appointed by the Chair;
 - f. the Attorney General or her designee;
 - g. the Governor, or his designee;
 - h. the Chief Justice of the Supreme Court, or his designee; and
 - i. two members from organizations that represent people who are disabled, appointed jointly by the Speaker of the House of Representatives and the Senate Subcommittee on Committees of the Committee on Rules and Administration.
3. **Organization.** The Director of the Legislative Coordinating Commission shall convene the first meeting of the Working Group, at which the Working Group shall elect its co-chairs, a senator and a representative.
4. **Duties.** As provided in Laws 2007, chapter 148, article 1, section 3, subdivision 4 (d), the Working Group must engage in a planning process and make recommendations to the full Legislature regarding the restoration and renovation

of the Capitol and other Capitol Complex buildings, and related Capitol Complex planning issues, by September 30, 2007.

5. Expenditures; Support.

- a.** The Working Group may engage consultants or a facilitator to assist it in its deliberations.
- b.** The Legislative Coordinating Commission may pay per diems and reimburse travel expenses Working Group members incur in carrying out their work.
- c.** The Working Group may commit and spend up to \$250,000 appropriated to the LCC in chapter 148 to carry out its work. The Commissioner of Administration and staff of the Capitol Area Planning and Architecture Board are requested to provide support to the Working Group.
- d.** Appropriate staff of the LCC, the House, and Senate must provide support to the Working Group.

6. Expiration. The Working Group expires January 1, 2009.

As adopted
June 19, 2007

Working Group Members

<u>Name</u>	<u>Phone</u>	<u>Email</u>
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**Project Background:
2001 & 2006 Pre Design Review & Comparison**

Sec. 14. CAPITOL AREA ARCHITECTURAL
AND PLANNING BOARD

Subdivision 1. To the commissioner of
administration for the purposes specified
in this section

2,370,000

Subd. 2. Capitol Interior Renovation

1,200,000

To complete schematic design for the
phased renovation and restoration of
the Capitol's interior, including all
floors, ceremonial and public spaces,
office suites, and spaces currently
serving as hearing rooms. The design
may not include any building outside
the Capitol.

The appropriation in this subdivision
may not be spent on any project that
affects space under the control of the
senate without the approval of the
secretary of the senate nor on any
project that affects space under the
control of the house of representatives
without the approval of the chief clerk
of the house.

Subd. 3. Capitol Third Floor

1,170,000

To repair and restore the public
corridors, walls, and ceilings of the
third floor of the Capitol Building in
St. Paul. Restoration of the dome will
be addressed by private fundraising
efforts.

Sec. 35. **CORRECTION 19.** Laws 2000, chapter 429, section 1, is amended to read:

Section 1. INCOME EXCLUSION OR DISREGARD.

(a) The earned income that a temporary census employee for the 2000 census receives from the United States Census Bureau is excluded from income under Minnesota Statutes, sections 256B.056, subdivision 4 1a; 256D.03, subdivision 3; 256J.21, subdivision 2; and 256L.01, subdivision 5, and disregarded as income under Minnesota Statutes, sections 256D.06, subdivision 1; and 256D.435, subdivision 5.

(b) An income exclusion or disregard under paragraph (a) applies to a person receiving benefits on or before March 1, 2000, under Minnesota Statutes, chapter 256B, 256J, or 256L, or sections 256D.03, subdivision 3, 256D.06, or 256D.33 to 256D.54.

Sec. 36. **CORRECTION 21.** Laws 2000, chapter 489, article 6, section 44, subdivision 1, is amended to read:

Subdivision 1. **LABOR DAY START.** Notwithstanding Minnesota Statutes, section 120A.40, paragraph (a), for the 2000-2001 school year only, a district must not begin the elementary or secondary school year prior to Labor Day.

Sec. 37. **CORRECTION 24.** Laws 2000, chapter 492, article 1, section 12, subdivision 10, is amended to read:

Subd. 10. Capitol Building Predesign 300,000

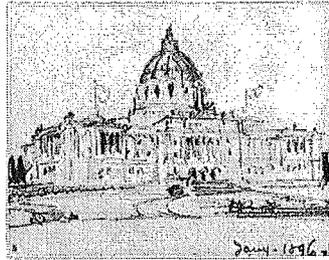
To predesign the phased restoration of remaining areas in the capitol building.

The commissioner of administration shall appoint a restoration advisory committee, which must include any members or employees of the senate named by the chair of the committee on rules and administration, and any members or employees of the house named by the speaker of the house, to advise the commissioner on the expenditure of this appropriation.

Sec. 38. **CORRECTION 25. REPEALER.**

Laws 1999, chapter 241, article 1, section 64, is repealed effective the day following final enactment.

Sec. 39. **CORRECTION 26.** Laws 2000, chapter 488, article 8, section 2, subdivision 6, is amended to read:



Section 2: Background Narrative

PROJECT BACKGROUND

This Predesign anticipates restoration of Minnesota's proud and unique Capitol Building. Building upon the initial investment of the State, the project will ensure a second century of service, supporting the efficient, safe and secure functioning of state government through the 21st Century.

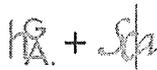
In 1896, Architect, Cass Gilbert, created the sketch shown on this page – his vision of a white marble American Renaissance State Capitol to serve the people of Minnesota for generations. Ten years later, this vision was realized, and the “new” Capitol had its grand opening. Gilbert went on to New York, becoming one of America's great architects, and listed in the National Register of Historic Places in 1972, the Minnesota State Capitol took its place in the annals of American architecture as one of the great State Capitols.

The purpose of this project is to restore the Minnesota Capitol Building and prepare it for the next 100 years.

The Capitol Building is in critical need of repair and comprehensive rehabilitation. Failure to move forward now will cost the state significantly more, first, through continued deterioration and, second, through further cost escalation for restoration. If unaddressed, the condition will affect how the people of the State of Minnesota participate in the government of their state.

PREVIOUS APPROPRIATIONS FOR THIS PROJECT

In 2000, \$300,000 was appropriated for the Capitol Building Predesign. In 2005, appropriations were \$1.2 million for Schematic Design for the full interior restoration of the Capitol, and \$1.17 million for restoration of the paint, plaster and other surfaces of the public corridors of the third floor. In 2006, \$2.4 million was appropriated for continued design efforts, waterproofing of the exterior dome and repainting of interior surfaces affected by water damage. Overall funding appropriated for the Capitol Building over the past two decades totals just over \$47 million, at least half of which was committed to the exterior, stabilization, and for security needs.



PROJECT SCOPE

The Capitol restoration project addresses two primary requirements – updating of systems and accommodation of space requirements. The main components of these requirements are summarized below:

Update systems

- **Life safety and general code modifications.** Code deficiencies that must be addressed include life-safety, exiting, fire/smoke alarm, fire sprinklers, fresh air requirement and rest room quantity.
- **Security upgrades.** Since 9/11, there is a heightened emphasis on security. Potential for catastrophic terrorist activity was not anticipated prior to 9/11. The security approaches were previously designed with apprehension in mind versus prevention of catastrophic situations by intentional acts. The Department of Homeland Security, in conjunction with the National Guard, have reviewed a majority of the public buildings in Minnesota and offer a wide variety of analysis and recommendations to enhance the security and provide opportunity to deter terrorist acts or other acts that would endanger the public and the historic building.
- **Updated and energy efficient systems.** The existing mechanical systems are obsolete and well past their useful life. The Minnesota Capitol's HVAC (heating, ventilation and air conditioning) systems do not provide an adequate number of fresh-air exchanges, in addition, balancing air for heating, cooling and humidity is inconsistent and inadequate throughout the building. This proposal calls for replacing these systems in their entirety. Lighting components are also failing at a rate that is cost-prohibitive compared to the cost of replacing infrastructure.
- **Accessibility.** Over 100 years ago, when the Minnesota Capitol was being designed, access for people with disabilities was not considered. This project includes provisions for enhanced access with the goal of full accessibility, which includes parking, an accessible path to and into the building, clear routes to the legislative areas (or employment destinations) of the building, full ability to participate in the activities of the building (offices, hearing rooms, legislative and judicial halls and others), accessible rest rooms, food service and other service areas.
- **Updated technology.** The existing telephone and data systems are not configured in a way that supports today's operational requirements and are prone to faults and failures. Critical equipment is located in non-secure spaces. Antiquated equipment is being utilized for certain system services. Network operations and configurations do not conform to today's standards. System components are susceptible to damage and sabotage.

Accommodate space requirements

- **Visitor facilities.** There is currently not a designated place of arrival for the large number of Minnesotans that come to the Capitol to participate in government, or for the thousands of school children and others who visit to learn about our state's history, its architecture and its government. The entire visitor sequence will be addressed, including arrival, greeting/screening, orientation, touring, restrooms, gift shop and dining.



Minnesota State Capitol Restoration

- **Enhanced hearing rooms.** More people attend legislative hearings than ever before in rooms that are too small, have poor sitelines and antiquated technology.
- **Additional space that is required to support government functions** – Growth of government has created spaces that are over-crowded – to the point of creating inefficiencies, operational difficulties and disrespect for the qualities of the historic architecture.

OPERATIONAL PROGRAM AND STATUTORY REQUIREMENTS

(Legislation that supports or demands the development of the project).

This Predesign is unique because it originated from the Capital Area Architectural and Planning Board (CAAPB) in lieu of coming directly from the tenant groups. It involves many diverse tenant groups that have been located in the building since the building was completed in 1905, including the House of Representatives, the Senate, the Governor, the Supreme Court, the Attorney General and the Minnesota Historical Society.

The operational program of each tenant is derived from the statutory requirements of the state. The operational program is the purpose and requirements of a state office or agency. The statutory requirements of the tenants are listed below.

<u>Agency</u>	<u>Enabling Legislation</u>
Attorney General's Offices	Minnesota Constitution KFM5801-1857.A3
Capitol Café and Rathskeller	Minnesota Statutes, Chapter 16B.875
Capitol Security	Minnesota Statutes, Chapter 299E
Council on Disability	Minnesota Statutes, Chapter 256, section 256.482
Governor's Office	Minnesota Constitution, Article V,
House of Representatives	Minnesota Constitution, Article IV
Minnesota Historical Society	Minnesota Statues and Minnesota Constitution Article 1, Section 3 16B.24
Plant Management	Minnesota Statues 16B
Press Corps	Minnesota Statutes 16B.24 Minnesota Constitution Article 1, Section 3
Senate	Minnesota Constitution, Article IV
Services for the Blind	
Supreme Court	
Public Areas (via MHS)	MN Statues Section 138.69

As the responsibilities of the State Government have grown and continue to grow, all of these tenant groups have grown in size and scope. Many factors are causing this growth including that the state has grown in population, the state administrates more programs from the Federal Government and Local Government, and the public requests the state to take on more responsibility and provide additional assistance and programs.



PROCESS

This Predesign builds upon and replaces a Predesign report that was completed in 2001 by Miller Dunwiddie Associates. After reviewing the earlier Predesign, the design team focused on the building occupants and their needs and meet with each of the individual tenant groups in the building to confirm and update the program. Meetings with other stakeholders were also conducted, including the Capitol Area Architectural and Planning Board (CAAPB), The Department of Administration, the State Architects Office, Disabilities Council, State Historic Preservation Officer, and local building officials. A parallel focus of the design team was the review of the physical aspects of the building, conducting extensive evaluations of the building and its systems.

The design team analyzed all of the information it gathered and identified gaps in the previous study. The team then drew on its extensive experience with similar projects to generate options to address those gaps. The information has since been presented during numerous legislative committee meetings and building tours for anyone with the state that was interested.

OPTIONS REVIEWED

The 2001 Predesign identified that there is not adequate temporary swing space available to move people out during the construction process. It also noted that the restoration will require additional existing space be converted to rest room use, mechanical/electrical spaces and existing stairs. The Predesign offered two basic options to address this situation.

- Construction of a new State Office Building.
- Use of space on the capitol complex for temporarily housing building tenants.

It has been concluded that there is insufficient support for a new State Office Building and as such this option is no longer being pursued. This, in conjunction with the Legislative Appropriations language, does not allow funding to be used to explore new building options.

The ability to identify temporary swing space on the Capitol Complex has been problematic. The space available is typically office space, but availability is subject to the time frame of construction activities – making planning of specific space nearly impossible. The review of other building options; (such as the Ford Building) have been problematic in that they require an initial dedication of funding for refurbishing of the building. In addition to this, there is a reluctance to relocate critical governmental functions outside of the Capitol building during session – such as: the staff offices, the legislative chambers, the press facilities and other functions seen as critical to the legislative session.

The solution recommended in this Predesign offers solutions to these conditions. It provides permanent swing space to the Capitol Building, provides a legislative Chamber swing space adjacent to the Capitol and minimizes the amount of moves required to facilitate the construction process. This solution minimizes first cost and life cycle cost.

A design history that details a summary of the options that were reviewed for each of the project components follows:



HISTORY OF DESIGN APPROACH

2001 Predesign through 2006 Conceptual Design

In 1972, the Minnesota State Capitol was placed on the National Register of Historic Places. Following this, a series of reports were issued that studied the Capitol building and the Capitol Complex. These reports focused on the Preservation of the State Capitol and a schedule for this work that identified completion of the work by 1994. This restoration work has not occurred and further deterioration of the building systems and integrity is underway.

2001 Predesign Process

In June 2001, a Predesign study was submitted for the Interior Restoration of the Minnesota State Capitol building. This Predesign report was created in order to:

- Preserve the historic resource of the Minnesota State Capitol,
- To better utilize the tenant space in the Capitol,
- To better facilitate the interaction between the public citizens of Minnesota and their State Government for the next ten (10) years.

The 2001 Predesign Report established an Advisory Group with representatives from the following groups:

Department of Administration, Division of State Building Construction, Capitol Area Architectural and Planning Board, Governor's Office, Senate, House of Representatives, Minnesota Historical Society, Plant Management Division, Department of Finance.

A Tenant's Group was formed with representatives from:

Capitol Café, Capitol Security, Council on Disability, Press Corps, State Services for the Blind Supreme Court, Department of Administration, Division of State Building Construction, Capitol Area Architectural and Planning Board, Governor's Office, Senate, House of Representatives, Minnesota Historical Society, Plant Management Division, Department of Finance and Real Estate Management Division.

Surveys, interviews and visits with tenants generated a list of priorities. These priorities were then presented to the Advisory Group for review and prioritization. The result of this process was presented to the key tenant groups, revised and then was presented to the House Leadership following the 2001 Session.

2005 Design History

The design team of HGA + SCA was hired to begin Schematic Design of the Capitol Restoration based on the 2001 Predesign Study by Miller Dunwiddie Associates.

The 2001 Predesign provided the following as the basis for design work:

Office Space:

- Identified a need for an additional 70,000 SF of office space in close proximity to the Capitol.
- Stated that it would be very desirable to have both the majority and minority Senator offices in the same building and for all of the offices to be similar to each other.

- Identify the need for swing space nearby to accommodate the offices and hearing rooms displaced by construction. Stated that approximately 50,000 SF of swing space would be needed for each phase of construction.

Hearing Rooms:

- Identified a need for an additional 91,200 SF of hearing rooms.
- Recognized the need for one or two very large hearing rooms that could seat 40 people at the dais and accommodate 500 to 600 people in the audience.
- Stated that the Capitol currently has very limited services for the hundreds of thousands of visitors that come each year.

Building Systems:

- Suggested that the air handling units be replaced in phases (in place) based on the age of the equipment and the area of the building being remodeled.
- Did not indicate replacement of the existing duct work or additional mechanical rooms.
- Noted that the building is not entirely sprinklered and does not contain any enclosed exit stairs.
- Called for accessible restrooms on every floor and an increase in the total number of fixtures to meet code, but did not provide restrooms for both genders on every floor.
- Identifies the existing at-grade loading dock as a problem Trucks idle just feet from the existing building and air intakes. The existing loading dock is also a security problem.
- The Capitol does not currently have a service elevator.

Capitol Restoration Design History and Comparison

Expansion Space:

2001 Identified Need

- The Predesign identified a need for an additional 91,200 SF of hearing rooms and an additional 70,000 SF of office space in close proximity to the Capitol.

2001 Solutions

- The two solutions proposed in the Predesign were to find an additional 160,000 SF. of space in an existing building on the Capitol Complex or to construct a new building at 200,211 SF.

2005 Options reviewed

- The options to make 160,000 SF (contiguous) available would be to move the existing tenants out and lease space elsewhere to accommodate them. The other option was to identify space in various areas of the Capitol Complex. Identification of such space was problematic due to lack of space available and to the uncertainty of when the space would be required.
- Constructing a new building on the Capitol Complex, possibly on parking Lot B, has not been viewed as an acceptable solution. Legislative language restricted design options to the Capitol building and did not allow funds be spent to explore new building construction.

2006 Proposed Solution

- The proposed solution seeks to provide the identified expansion at the Capitol itself.
- An above ground addition would compromise the integrity of Cass Gilbert's original design and was removed from consideration.
- Underground expansions on both north and south sides of the historic building can provide approximately 157,000 SF of additional space. The new space will accommodate the identified needs of a loading dock, secure entry, and mechanical vaults on the north.
- Expansion space to south will be used for offices, visitor services, a large assembly hall (also identified as a need in the Predesign), television studios, storage, and new mechanical vaults.
- Within the existing building, the existing basement will be renovated, allowing additional usable space to be 'found' within the Capitol. The expansion space will also serve as swing space while the historic portion of the building is renovated.

Swing Space:

2001 Identified Need

- In order to renovate the Capitol, swing space must be found nearby to accommodate the offices and hearing rooms displaced by construction. The 2001 Predesign states that approximately 50,000 SF of swing space would be needed for each phase of construction.

2001 Solutions

- The Predesign suggested that the swing space be found in a combination of the existing buildings on the Capitol Complex.

2005 Options Reviewed

- Although the Ford Building is approximately 40,000 SF., the building would have to undergo substantial renovations and upgrades before it could be used for offices or hearing rooms. The required renovations would cost approximately \$16 million (2005 \$) and take two years. No work could begin on the Capitol until that work is completed. Even once remodeled, the existing building configuration would preclude temporarily relocating the chambers or hearing rooms. The Ford Building is connected to the rest of the Capitol Complex by an existing long, often steep tunnel. The Ford Building option was rejected by the 2006 Legislature.
- The other option was to identify space in various areas of the Capitol Complex. Identification of such space was problematic due to lack of space available and to the uncertainty of when the space would be required.

2006 Proposed Solution

- The design solution proposes combining the need for swing space with the need for permanent expansion space close to the Capitol by building underground expansion space both north and south of the existing building.
- The House and Senate chambers could be temporarily accommodated in the large assembly hall built underneath the south stair while the offices on either side could accommodate offices displaced by construction.
- The swing space would be directly connected with the Capitol, thus minimizing disruptions due to construction.

Additional Office Space:

2001 Identified Need

- The Predesign calls for an additional 70,000 Sf of office space as part of the needed expansion space.
- The Predesign also states that it would be desirable to have both the majority and minority Senator offices in the same building and for all of the offices to be similar to each other.

2001 Solutions

- The Predesign suggested that the additional office space be found in either an existing building on the Capitol Complex.
- One option was to identify space in various areas of the Capitol Complex. Identification of such space was problematic due to lack of space available and to the uncertainty of when the space would be required.
- The other option was to construct a new 200,211 SF building.
- Constructing a new building on the Capitol Complex, possibly on parking lot B, has not been viewed as an acceptable solution. Legislative language restricted design options to the Capitol building and did not allow funds be spent to explore new building construction.

2005 Options Reviewed

- The Ford Building is approximately 40,000 SF., the building would have to undergo substantial renovations and upgrades before it could be used for offices or hearing rooms. The required renovations would cost approximately \$16 million (2005 \$) and take two years. No work could begin on the Capitol until that work is completed.
- The Ford Building is connected to the rest of the Capitol Complex by an existing long, often steep tunnel. The Ford Building option was rejected by the 2006 Legislature.

2006 Proposed Solution

- Currently, all of the additional office space needed is accommodated in the south expansion or in the renovated Capitol. Both the majority and minority Senators would have similar offices in either an individual suite or as part of a committee suite. The space request for individual and committee suites was determined with assistance from the Secretary of the Senate.

Additional Hearing Rooms:

2001 Identified Need

- A need for additional hearing rooms was identified in the Predesign. The new rooms should accommodate updated technology.
- The Predesign recognized the need for one or two very large hearing rooms that could seat 40 people at the dais and accommodate 500 to 600 people in the audience.

2001 Solution

- The Predesign suggested that additional hearing rooms would have to be located in another building on the Capitol Complex because it would not be feasible to create such spaces within the Capitol.
- The location was left unidentified.

2005 Options Reviewed

- There was not space adjacent to the Capitol for permanent hearing rooms use – a new building option was not allowed in the design funding language.
- There was no space on the Capitol Complex to accommodate the large capacity hearing rooms.

2006 Proposed Solution

- Six new hearing rooms have been created in the existing Capitol by removing existing vaults. The hearing rooms will accommodate approximately 30 people at the dais and 130 audience members.
- The existing south stair presents an opportunity to create a large assembly hall in close proximity to the Capitol. The assembly hall is a large multi-purpose space that could be configured in a variety of ways to accommodate different events.
- In addition to accommodating the requirement stated in the Predesign, the hall will also serve as swing space for both the House and Senate Chambers while the north and west wings of the capitol are renovated. The proposed balcony will serve as gallery seating for spectators. The temporary chamber is also convenient to the swing space for the offices currently adjacent to the historic chambers.
- Temporary space adjacent to the assembly hall will accommodate the clerk, retiring rooms, and other spaces needed to operate during the legislative session.

Visitor Services:

2001 Identified Need

- As stated in the Predesign, the Capitol currently has very limited services for the hundreds of thousands of visitors that come each year.

2001 Solution

- Consideration of a basement level visitor center was proposed in the Predesign, if there was space available. The proposed space is not directly accessible to a building main entrance and would not be large enough to handle all of the additional services desired.

2005 Options Reviewed

- The restoration would require all of the available space and more, leaving no identified space for visitor center or services.

2006 Proposed Solution

- A new, at grade entrance for visitors is proposed as part of the south expansion. The expansion space also contains coat rooms, lockers, gift shop, classroom, large restrooms, information desk, and an area for groups to gather before tours.

- Additional space on the existing portion of the Lower Level will accommodate display space for the Historical Society. Space will also be provided for expanded vending facilities, additional dining space for the Rathskeller, and for students to eat lunch.
- A “found” rotunda will provide orientation and exhibit space.

Loading Dock:

2001 Identified Need

- The existing at-grade loading dock is identified as a problem.
- Trucks idle noisily just feet from the existing building and air intakes.
- The existing loading dock is connected to a small service lift.
- The existing lift is too small to handle a standard pallet so large deliveries must be made through the Ground Floor, further disrupting the building occupants.
- There is also no receiving area for deliveries to be stored temporarily. The existing loading dock is also a security problem.

2001 Solution

- The Predesign did not identify a solution to the problems with the existing loading dock.
- Routing all deliveries through a centralized receiving area constructed elsewhere on the Capitol Complex was considered. While appealing from a security standpoint, this is not a practical solution for daily deliveries and trash collection.

2005 Options Reviewed

- The design team revisited the long term replacement of the Admin Ramp and potential receiving in that area. The realization of that idea was uncertain and the schedule unknown.

2006 Proposed Solution

- Constructing a small, secure loading dock/receiving area below grade would address all of the problems with the current loading dock. There would be a true loading dock capable of accommodating semi-trucks.
- The connection to the building would be at the existing basement level with direct access to receiving areas and the new service elevator, eliminating deliveries through the ground floor and separate noisy, idling trucks away from occupants.
- This will also allow the restoration of the gardens at the ground level.

Service Elevator:

2001 Identified Need

- The Capitol does not currently have a service elevator. All deliveries, equipment, furniture, and trash share the east elevator with passengers.

2001 Solution

- The Predesign suggested adding a service elevator in a shaft in the east wing of the Capitol in an area currently occupied by small file rooms and toilet rooms.

2005 Options Reviewed

- The design team reviewed numerous locations for the service elevator and identified potential locations.

2006 Proposed Solution

- The current design locates the service elevator in the area suggested by the Predesign. This location is convenient to the proposed loading dock and connects all but the fourth floor of the existing building. The elevator will be approximately 12' long, 7' wide with 4' wide doors and able to carry up to 5,000 lbs.

Secure Entry:

2001 Identified Need

- The 2001 Predesign predated the security concerns of the current day. There were no significant security issues identified.

2001 Solution

- No issue was identified and hence no solutions were noted.

2005 Options Reviewed

- A security report done for the Capitol identified the lack of a secure entry for the Governor or other VIPs as a major concern.
- A secure entry structure, at grade, was quickly eliminated as an option due to the sensitivity of the historic building.

2006 Proposed Solution

- An underground sally port, just north of the existing security offices at the existing basement level, would provide a secure entry for the Governor and other VIPs.
- A secure corridor connects the sally port and security office to the Governor's private elevator.
- Locating the entry below grade would also allow the northwest garden to be restored.

Access for People with Disabilities:

2001 Identified Needs

- Currently, there is no at grade entrances are open to the public.
- The Predesign lists south port cochere entrance and north Ground Floor entrances as accessible, but both require a key card for entry.
- There is also a need for ADA compliant signage and restrooms throughout the building.
- The fourth floor rooms north of the House Chamber are not currently accessible.

2001 Solutions

- The Predesign states that a lift should be added to make the fourth floor accessible but does not select a location for the lift.
- It does not locate accessible restrooms on every floor.
- Providing an accessible visitor entrance is not addressed.

2005 Options Reviewed

- Review of the Presdesign options did not provide sufficient direction for proceeding.

2006 Proposed Solution

- The south expansion creates an at-grade accessible entrance for everyone, not just those with key cards.
- Accessible restrooms and unisex companion restrooms are available on every floor.
 - A lift is incorporated into the renovation of the House area and would provide accessible access to both the third and fourth floors north of the House without having to pass through the House Gallery.
 - Lifts and ramps are proposed at the main entrance to each of the chambers to make the main entrance accessible for everyone.
 - New signage throughout the building will be ADA compliant while sensitive to the historic character of the building.

Life Safety:

2001 identified Needs

- The building is not entirely sprinklered and does not contain any enclosed exit stairs.

2001 Solution

- The Predesign suggests adding sprinklers through much, but not all of the building.
- It proposes enclosing the stairs at the ends of the secondary corridors and adding railings to make them more code compliant. It would also be necessary to extend the northwest stair down to the first floor. The southwest quadrant would lack adequate exits because it is not possible to extend that stair down to the first floor through the historic governor's office.

2005 Options Reviewed

- Full sprinklering of the building was anticipated.

- Providing new enclosed exit stairs without damaging or negatively impacting historical fabric.

2006 Proposed Solution

- The entire building will be sprinklered except the Rotunda where sprinklers would be ineffective.
- Two new enclosed, code-compliant stairs will be added near the south elevators.
- These stairs will increase the exiting capacity and eliminate the need for the public to have access to the stairs at the ends of the secondary corridors.
- New early warning systems will also be installed throughout the building.

Plumbing Requirements:

2001 Identified Needs

- The Capitol currently lacks accessible restrooms for both genders on every floor.
- The total number of fixtures is far below what is required by code.

2001 Solution

- The Predesign called for accessible restrooms on every floor and an increase in the total number of fixtures to meet code but did not provide restrooms for both genders on every floor.

2005 Options reviewed

- Locations for men's and women's restrooms at each floor in typical locations.
- Locations for rest rooms at entry points and secure areas.

2006 Proposed Solution

- Each floor will have a pair of accessible restrooms that will match the character of the original restrooms.
- The restrooms will be located in a consistent location on every floor just east of the oval staircase. This consistency is not only more economical to build, but is also more convenient for building occupants.
- Each pair of restrooms will also have an adjacent unisex companion restroom and janitor closet.

Mechanical:

2001 Identified Needs

- The existing mechanical systems in the Capitol are aging rapidly, are inadequate in size, and do not meet current codes. There are currently twenty-eight air handlers scattered throughout the building.
- Air intakes are currently located at grade on the north side of the building and are susceptible to exhaust fumes from idling cars and trucks.
- The building currently operates under negative pressure which is a problem with both the cold winter air and hot, humid summer air.

2001 Solutions

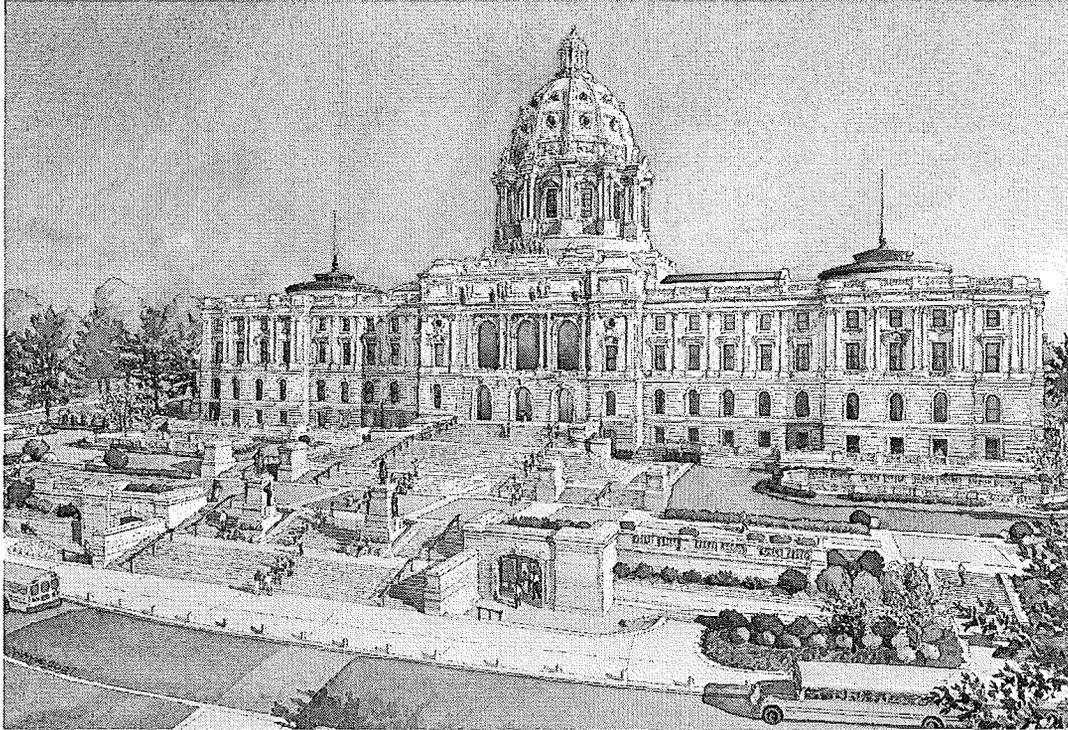
- The Predesign suggested that the air handling units be replaced in phases based on the age of the equipment and the area of the building being remodeled. Replacing the existing system in such a piecemeal fashion would not bring the entire building up to code and under positive pressure.
- The Predesign also fails to address the issue of where the new mechanical units could be located. Typical units for a building the size of the Capitol are each 38' long, 15' wide, and 15' tall, approximately the size of a cargo container.

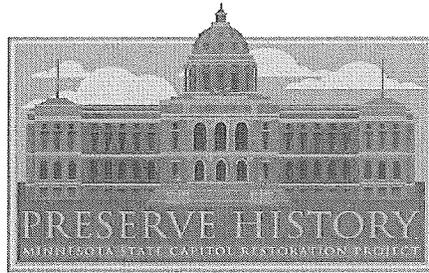
2005 Options Reviewed

- Conversion of internal office spaces to mechanical rooms and additional vertical shaft space.
- Locations for external mechanical vaults to locate new energy efficiency equipment

2006 Proposed Solution

- The mechanical systems in the entire building will be replaced with systems that meet current needs and codes. The building will then be able to operate at a slight positive pressure.
- New mechanical vaults north and south of the building will accommodate units that supply the lower three floors of the building. New units in the attic will supply the upper floors. This type of split system will reduce the need for expensive fire dampers.
- The new systems will also be much more reliable and energy efficient than the existing systems.





IT'S ABOUT TIME. LITERALLY.

The Minnesota State Capitol: *Designing a Safer Capitol* Minnesota State Capitol Restoration Project

Over the last 100 years, building codes have changed to provide occupants with safer buildings. It is now time to update the Minnesota State Capitol to meet these enhanced life safety requirements.

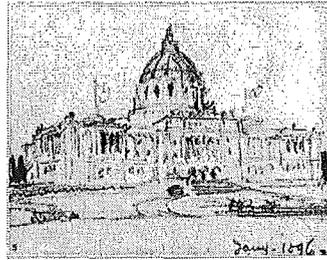
Current life safety concerns in the Capitol include:

- Lack of a complete sprinkler system. The Capitol was originally constructed without a sprinkler system. Over the years, sprinklers have been installed only in limited areas.
- Lack of a comprehensive smoke detection and fire alarm system. Early warning systems are an important part in saving lives and mitigating damage.
- Lack of enclosed egress stairs. Current building standards require enclosed stairs that exit directly to the outside.
- Lack of smoke management system. More people die due to smoke inhalation than due to burns in fires.

Some life safety aspects of the proposed project include:

- Comprehensive sprinkler system throughout the building. Sprinklers are able to limit the spread of fires and they provide more time for building occupants to exit the building safely.
- Comprehensive smoke detection and alarm system. In addition to fire alarm horns and strobes, the early warning system will have pre-recorded voice messages to warn occupants of fire, weather, and security emergencies.
- Two new code-compliant stair towers. These stairs will provide occupants on the Basement through Third Floor with a safe means of exiting the building.
- Smoke management. A variety of active and passive systems will help prevent the spread of smoke from one area of the Capitol to another.
- Fire Department facilities and equipment. This will include a fire command center, properly distributed standpipes, zoned fire alarm system, and a fire communication system.

Design of the Minnesota State Capitol Restoration will comply with all applicable regulations and codes, including the Minnesota State Building Code. In addition, the design team will work in consultation with a fire protection and code consultant to seek advice and to review the developing plans – to ensure that the life safety goals of the project are met.



Section 6.4.9: Life Safety Summary

Planned Renovation and rehabilitation efforts involve significant improvements of the overall safety of the structure safety, additional space, improved efficiency, and preserved aesthetics. The cultural, environmental and economic benefits are incorporated into this design effort. The likelihood of damage to the State Capitol is similar to that of other buildings. However there is an important distinction given the high visibility and the activities that occur within the building.

Emergencies other than fire include panic, medical, weather and various security breaches. Any threats to life safety of the building occupants can be mitigated (but not eliminated) to a certain extent by the fire and life safety features designed into the structure. Recommendations outlined in this report significantly improve the fire and life safety level in this building.

The fundamental aspects of improved fire and life safety involve fire prevention, early warning detection and notification, effective communications, fire suppression, fire smoke management, compartmentalization and tenable egress.

The State of Minnesota is the jurisdictional authority; they have deferred review and enforcement to the City of Saint Paul. See the list of applicable codes at the end of this report.

All new construction, repairs, remodeling and alterations will comply with the current State of Minnesota Building Code. Other building features are evaluated in accordance with best fire and life safety practices and the Minnesota Conservation Code, which is specifically designed to address existing buildings and those that historical and social significance.

Therefore, the basis for the code analysis begins with the Minnesota State Building Code. Where the code is silent, best practices that achieve acceptable performance based levels of safety are recommended. From a code perspective, where there is no change in use or occupancy reclassification, building features are evaluated to the MCC.

MCC and SBC recognize that existing buildings, especially a structure as unique as the Minnesota State Capitol, pose unique life safety challenges. However, MCC does address key



Minnesota State Capitol Restoration

fundamental life safety features and as long as a distinct hazard is not created, will allow specific conditions to remain. This report will identify the main code issues given concept design status.

Key Life Safety Objectives

There are three (3) primary goals.

1. Minimize Fire-related Injuries and Prevent Undue Loss of Life
 - a. The first goal is to minimize fire-related injuries and prevent undue loss of life. This includes building occupants and emergency responders. It pertains to both life safety and structural stability of the building.
2. Minimize Downtime
 - a. A second goal of this project is to minimize downtime. Continued functionality is essential for the State Capitol.
3. Minimize Property Damage and Structural Collapse
 - a. The third goal is to minimize property damage and structural collapse. This goal is directly related to the first goal because structural collapse affects life safety.

These goals applied to fire, panic, security breach or weather scenarios. Achieving these goals relies upon proactive fire and life safety systems. The earlier a fire or other emergency is detected and appropriately responded to, the less the risk to building occupants.

Thwarting a fire that could jeopardize life safety relies upon both passive and active fire protection systems. Detecting a fire in its incipient stage, establishing appropriate occupant and emergency responder notification and providing fire control through automatic sprinkler protection increases the probability of tenable egress.

Significant Issues

The proposed work in the Basement and Lower Level provide distinctly separate fire life safety and code challenges in comparison to the Ground Level through the Fourth Level. Given the extent of construction at the basement level and the new construction of the Lower Level, fire life safety and code compliance are more directly achievable relative to the levels above. So for the purpose of this analysis, the Ground Level through the Fourth Floor is viewed distinctly different from a fire life safety perspective in comparison to the lower level and basement.

With respect to the Ground Level through Fourth Level, the primary challenge involves safe and tenable egress since existing exiting is insufficient and the vertical communicating spaces through these floor levels, namely the rotunda and stairs within the common area of the rotunda, present a potential for smoke and fire movement. Having said this, the sheer volume of the dome may also work to our advantage by dissipating smoke that could have the potential of creating untenable conditions.



Egress

Exits from spaces on the Ground Level through the Fourth Level lack exit capacity and number to handle the projected occupant load. This issue which will vary significantly depending upon if the legislature is in session or if special events are held. Establishing identifiable exit routes that allow occupants to discharge to the exterior of the building or a safe dispersal area is a high priority. The lack of sufficient exits as the building currently is situated creates evacuation challenges. A timed evacuation study should be considered which addresses partial and full evacuation. At peak occupant loads, evacuation of the entire facility under a fire or other emergency will be prolonged given the current layout.

The influx of visitors and staff varies with time of year, especially when the legislature is in session. While the number of legislators and support staff are readily defined, experience indicates that there are issues faced by the legislature that may cause a significant spike in the occupant load. The structure is accessible to the public in many areas. Other areas are restricted. Visitors will use the most familiar path for entering and exiting the building. The Ground Level through the Fourth Level exiting currently is insufficient. Additional exit capacity that is clear and distinct is necessary. The NE, SE, NW and SW stairs in the east and west wings respectively are primarily used for circulation between floors, and due to their condition, are not considered acceptable as part of the means of egress. Spaces within proximity of the stairs are considered suites, and occupants of these areas are directed to the exits within the Rotunda common areas.

Therefore, additional new exits stairs serving the ground-level through the fourth level are required along the south end of the rotunda on opposing sides from the elevators. While many occupants may use the grand stairs or other open circulation stairs within the rotunda given their familiarity with them, they are exposed to the communicating adjacent spaces and provide essentially no passive protection through fire rated construction. This report establishes that these open stairs remain open. They will become secondary routes of escape. In reality, during an evacuation emergency we expect a significant portion of occupants to use these open stairs. Egress from Chambers and support spaces around the periphery of the rotunda will rely upon the additional new exits and the existing open stairways. Therefore, it is important to ensure that these areas remain tenable during an evacuation situation.

The Lower Level and Basement pose different challenges with respect to egress. A multipurpose assembly space at the Basement Level increases the occupant load upwards of 500 persons. It is recommended that a horizontal exit constructed as a two hour assembly wrap around the space. The area may serve as an area of refuge if warranted. Exiting from this multi-purpose area is achieved through the pre-function and circulation spaces to exterior exit discharge as well as utilization of the existing tunnel system. We believe the existing tunnel system and basement area along with the multi-purpose room, can serve as



an exit passageway to safe areas and also act as a weather protected enclosure. The challenge would be of course the prolonged time necessary for occupants to relocate to the Basement Level in an emergency situation.

Security controlled devices may be implemented in areas requiring security. These devices would require automatic release in an alarm condition or manually activated release if security elects to release due to non-fire emergencies that require occupants still to exit.

Sprinklers

Given the extensive work at the Basement and Sub-Basement Levels, they will be fully sprinkler protected and compartmentalized. This is not necessarily the case with Ground Floor through the Fourth Level. Currently, these floor levels are not sprinkler protected and have insufficient fire alarm and notification. A potential fire may produce sufficient smoke and allow for vertical fire spread if not readily detected and controlled.

Smoke Control

Extensive vertical openings from the Ground Floor to the Roof Level allow potential paths for smoke and fire to spread. However, the large volume of space in the Rotunda and the openings allows smoke to both potentially dissipate and spread- creating competing fire safety challenges. The large volume of space may assist in smoke management for the area so that tenable egress is achieved. Interestingly, one of the most effective forms of smoke management is a sprinkler system. Test data clearly indicates fire control by sprinklers subsequently limits the cumulative output of smoke that creates untenable egress conditions. While the Rotunda and Common Areas to the Rotunda normally present a light fire load, adjacent spaces based on use traditionally have higher fire loads. Sprinkler protection of these areas is an effective means of fire and smoke mitigation. By controlling the fire, the cumulative output of smoke is limited relative to an uncontrolled burning fire.

Utilization of mechanical systems, whether dedicated or part of the HVAC systems, provide some assistance in the restriction of smoke spread. The sheer volume of the Rotunda and adjacent Common Areas will allow smoke to dissipate. The Rotunda may serve as a smoke reservoir. However, smoke migration may be restricted by directing airflow in the opposing path of smoke movement or purging the rotunda as we commonly would an Atrium.

Fire Alarm

The sooner a fire is detected, the faster it can be mitigated. Early warning detection throughout the State Capitol is recommended so that in the event of a fire, detection would provide the early warning to begin exiting and notify the appropriate emergency responders. From an egress perspective, time is everything. There are various strategies to minimize false alarms. Manual pull stations located at security check points for trained personnel and not accessible to the public are recommended.



Minnesota State Capitol Restoration

Coordinated alarm communications is an effective form of a crowd and occupant control strategy. An integrated voice communications system, with zone speakers throughout the building, improves the appropriate response of occupants with specific pre-recorded announcements and public address capabilities by emergency responders and security staff. Studies indicate voice commands from a voice communications system can improve response time and occupant action by several minutes. Occupants respond more appropriately to specific instructions during an emergency.

Fire and Smoke Zones

The State Capitol can be divided into distinct fire and smoke zones. Each floor level represents a general zone while individual spaces or areas are subdivided into more discreet zones. The zoning strategy would be based upon the Emergency Management Plan for the building. This would be developed as the design progresses. In any event, a coordinated zoning strategy provides for a more effective emergency responder effort and orderly evacuation.

Recommended Protection

1. Automatic sprinkler protection throughout the building where feasible. Sprinklers are zoned to coordinate with specific fire areas and are constantly monitored by the buildings fire alarm system. Sprinklers in most areas are quick response type wet systems. Areas with contents sensitive to water are designed as pre-action systems.
 - a. All new construction work.
 - b. The periphery support spaces surrounding the rotunda at Ground Floor through Fourth Level
 - c. The Basement and Lower Levels
 - d. Chambers
 - e. Specific areas within the Rotunda/Common Spaces that have ceiling heights less than 25 feet
 - f. Areas where there is concealed combustible construction.
 - g. Hazardous areas
2. Class I standpipes located in required exit stairs and then spaced to cover up to 200 feet. The final location of standpipes is based on the feedback from the Saint Paul Fire Department.
3. Addressable automatic smoke detection and alarm notification throughout the building.
 - a. Beam Projection type smoke detection or air sampling in the Rotunda and adjacent Common Space to the Rotunda.
 - b. Spot detection through all other areas of the building unless ambient conditions prevent this.
 - c. Notification devices throughout the building that comply with the Minnesota Accessibility Code. Speaker strobes and horn strobes are recommended.



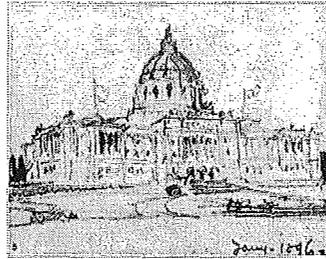
Minnesota State Capitol Restoration

4. Emergency voice/alarm communications system.
 - a. Total coverage voice communication system with pre-recorded messages to address fire, weather and security scenarios. Manual override capabilities. Zoned by area and coordinated with the emergency plan for the State Capitol.
5. Fire department communications system – provide communications at all levels throughout the facility.
6. Fire command room which houses all fire communications and fire alarm zones. This can be within a security room surrounded by one hour construction.
7. Standby power to the fire command center, electrically powered fire pumps and ventilation/automatic detection equipment for smoke management.
8. Emergency power systems for all exit signs and means of egress illumination, elevator car lighting, emergency voice/mutation systems, fire alarm system, fire detection system and smoke management systems.
9. Exiting.

Identification	Communicating Levels	Comment
Basement	B to ground	- Two-hour enclosure B to ground – direct discharge to grade or - use tunnels as exit passageways
Grand Stairs – East and West Wing	Lower level though 2 nd level	- remain open-
NE Stair	L through 3	- Circulation only
SE Stair	G through 3	- Circulation only
NW Stair – West Wing	2 through 3	- Circulation only
SW Stair – West Wing	2 through 3	- Circulation only
House Stair- Circular - Center	G through 3	Only public accessible circulation- two new exit stairs are required to compensate for the insufficient exiting.
Senate Chamber Gallery	2 through 4	Far West unclear – circulation to exit
House Gallery	Exit into Rotunda	No direct egress path; Only public accessible circulation- two new exit stairs are required to compensate for the insufficient exiting.
Supreme Court Gallery	Exit into corridor	Use NE and SE stairs
House (Back of House – north – two stairs	NE: 2 through 4 SE: 3-4	Not for public use - enclose in one hour construction - meet MCC provisions for handrails - verify rise/run
Multi-purpose assembly– lower level	Lower level	Create a two-hour horizontal exit surrounding it



- a. Current egress routes involving levels ground through four are insufficiently distributed. This includes all areas that are both accessible and not accessible to the public.
 - b. The stairs located at the corners of the wings (NE, SE, NW and SW) are for circulation purposes only. Office suites along the East and West wings will discharge into the Rotunda for exiting purposes.
 - c. Add two new exit stairs at the south end of the Rotunda. Constructed of two hour construction, these exits provide additional exit capacity and discharge to the outside.
 - d. The new multi-purpose assembly at the lower level shall be enclosed with two hour construction and horizontal exits created around it.
 - i. This space may also serve as an area of refuge.
 - e. Use the tunnel system as an exit passageway and weather protected area.
10. Compartmentalization
- a. Periphery spaces and office suites to the Rotunda common areas should form smoke barriers
 - b. Vertical openings within the rotunda and adjacent common areas remain open
 - c. At the lowest level of the rotunda opening, place closely spaced sprinklers around the periphery of the opening.
11. Smoke Management:
- a. Take advantage of the large volume of space to dissipate smoke. The Rotunda itself may serve as a smoke reservoir.
 - b. Integrate an opposing airflow method in spaces adjacent to the Rotunda to restrict vertical smoke spread. Depending upon the fire location, air can be directed against the spread of smoke to restrict its movement into vertical openings.
 - i. An option to consider is a smoke purge system for the Rotunda; however its design should not foster vertical smoke movement. The intent of a smoke purge system to maintain theoretical smoke layer 10 feet above the highest occupied floor. Depending upon the smoke zone strategy, make up air would be supplied from unaffected smoke zones. Appropriately sized exhaust fans with equal tempered make up air introduced at specific locations creates air and smoke entrainment towards the top of the Rotunda.
 - c. Sprinkler the building
 - d. Minnesota code requires a post fire incident exhaust system for use by firefighters after the fact. This is not a life safety system rather a tool for fire fighters to purge spaces of smoke. Utilizing the buildings HVAC system is acceptable.
 - i. Consider an exhaust fan near the top of the Rotunda for use by fire fighters to evacuate lingering smoke.
12. Emergency action plan as required by the fire code



Section 7.3: Security Update

The Minnesota State Capitol Building is a treasured state asset. Designed by Minnesota's own nationally acclaimed Cass Gilbert just over 100 years ago, it is considered to be among the best of the nation's capitols. Today, on the surface, it is a beautiful and majestic building, but under the surface are antiquated mechanical and electrical systems leading to poor air quality and widely varying temperatures, "dead end" corridors and other life safety code problems, inadequate Office and Public Hearing Room spaces, a lack of modern technology and security protection, places that are inaccessible to people with disabilities and virtually no accommodation for the thousands of visitors who come to see it each year. Current tenants have long outgrown a building designed a century ago, leading to compelling need for additional space. For the past many years, the majority of funding provided for the building has been required for quick emergency fixes. The time has come to provide the Capitol with much needed systems updates, enhanced security, code required Rest Rooms and exiting, Building Support Spaces and overall building repairs, to prepare it for its second hundred years of useful life. The State of Minnesota is at a moment of great opportunity.

There is a recently issued Security Report, prepared by the Minnesota National Guard for Homeland Defense. The Mission Statement of the Report is: *"conduct vulnerability assessments on identified critical infrastructure to prevent, mitigate, and respond to all threats and hazards to protect key assets and key resources against degradation or destruction that may affect the mission and capabilities of that facility or organization and the Minnesota National Guard."* The Report identifies numerous areas for improvement in the Security Systems at the State Capitol. The planned restoration of the Capitol building provides an opportunity to address the items mentioned in a comprehensive manner. Among the items mentioned are some items that can and will be addresses by the restoration of the Capitol building are:

- *"The locations of the buildings, roads, parking lots and ramps, co-located in a restrictive urban setting have all but eliminated correct DoD stand-off distances."* The restoration and expansion of the Capitol will provide the opportunity to construct a small underground, private and secure parking structure. The opportunity to construct an underground secure loading dock area will permit these activities to be performed in a controlled and monitored fashion. The relocation of Aurora Avenue will provide additional stand-off distance of vehicles from the Building proper. The reuse of the Porte-cochere as a vertical circulation node will eliminate the vehicles driving under this area. The Report notes the recommended stand-off distance to be a clear zone of 33' in order to prevent structural collapse.



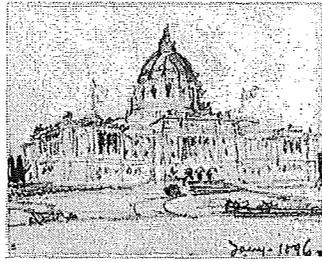
Minnesota State Capitol Restoration

- *"The infrastructure systems of the Capitol Complex have redundancy and good physical security measures, except for a few key areas. Those key areas are of incorrect height placement of HVAC intakes, public access to some of the fuel systems and public access to vital communication supply lines."* The restoration provides the opportunity to address these items by placing the new Mechanical, Electrical and Communication systems in secured vaults. These vaults will be underground and invisible to the public. The air intakes will be relocated in such a manner to greatly reduce the risk of intentional contamination.
- *"The Capitol Complex uses an average 1/4 inch double glazed window pane throughout its facilities. The windows provide very little protection and represent a high glass fragmentation hazard."* The restoration provides an opportunity to replace and upgrade the windows of the Capitol building to meet the requirements for enhancing the protection of employees and visitors in the building.
- *"The Capitol Complex has insufficient Internal Access Control Procedures."* The restoration provides an opportunity to rethink the building entry/ access sequences. We will look at development of secure V.I.P. access, the provision for a more controlled visitor access sequence that will allow greatly improved monitoring of building visitors and a regulated procedure for screening. The current first line of exterior visual monitoring is the remote security cameras, while the first line of internal monitoring is provided by volunteer tour guides of the Minnesota Historical Society in the Rotunda.
- *"Capitol Security has a High Risk Personnel protection program. Identify Safe Room for High Risk Personnel."* The restoration will provide an opportunity to identify key rooms that can be used for Safe room use.
- *"There is adequate but incomplete Redundancy of Electric Utility Systems. Install electrical back-up generator at all Capitol Complex facilities for redundancy."* The restoration will provide the opportunity to redesign the electrical system to reduce vulnerability and to provide redundancy as recommended.
- *The Capitol Complex does not have redundancy in its water supply. Create plans to identify outside drinking water sources for use if the primary source is tampered with or negatively impacted."* The restoration will provide an opportunity to plan for secure delivery and storage of materials to the building and provide a planned internal delivery sequencing process.
- *The Capitol Complex has inadequate physical security for gas supply. Protect outside supply lines with bollards and a fence."* The restoration provides the opportunity to rethink the current delivery of gas and the placement of critical supply lines to eliminate the potential high risk situation that currently exists.
- *The Capitol Complex has inadequate and inconsistent physical security of communication cable lines. Secure outside communication cable access panels. Protect exposed communication cables."* The restoration will provide the opportunity to separate the communication lines from the public circulation and place them in a secure environment that will reduce the risk of tampering or destroying them.
- *The Capitol Complex's' Shelter-in-Place considerations are not adequate. Address temporary shelter-in-place considerations for current facilities and for new construction."* The restoration will provide the opportunity to develop and construct a large 500 seat multi-purpose space that will be able to act as a shelter-in-place for the building and Capitol Complex occupants.



Minnesota State Capitol Restoration

- *The Capitol complex has insufficient mass notification procedures to alert, direct, and inform the Capitol Complex population of imminent threats in real time. Install a Complex-wide Public Address/Mass Notification system.* The restoration will provide the opportunity to address this requirement and install a system that can be modified and upgraded and will act as the notification system that will reduce and minimize occupant risk.
- *“The Capitol Complex has limited medical asset and no medical contingency plans.”* The restoration will provide the opportunity to consider and put-in- place areas that can be used for medical equipment storage, and occupant provisions.



Section 7.1: Sustainable Design

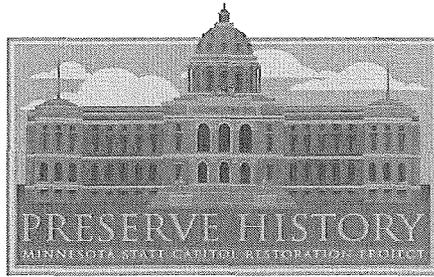
The following are excerpts from the State of Minnesota Requirements for B3 Guidelines for sustainability. These are to be considered and discussed as this project moves through the design and construction phases.

The Minnesota Legislature required the Departments of Administration and Commerce, with the assistance of other agencies, to develop sustainable building design guidelines for all new state buildings by January 15, 2003. According to the legislation, the guidelines must:

- Exceed existing energy code by at least 30 percent.
- Achieve lowest possible lifetime costs for new buildings.
- Encourage continual energy conservation improvements in new buildings.
- Ensure good indoor air quality.
- Create and maintain a healthy environment.
- Facilitate productivity improvements.
- Specify ways to reduce material costs.
- Consider the long-term operating costs of the building including the use of renewable energy sources and distributed electric energy generation that uses a renewable source of natural gas or a fuel that is as clean or cleaner than natural gas.

General Criteria

- Construction and operation of buildings result in high levels of energy and resource usage. Great care must be taken therefore when creating "sustainable" projects.
- Consultants shall design buildings to use resources in a way and at a rate that does not jeopardize the needs of future generations.
- Design decisions must balance economic, environmental and community needs.
- Sustainability may increase or reduce costs. Time and effort is required to make informed sustainable design decisions.
- Design decisions must consider the full life of materials including life-cycle assessment (LCA) and life-cycle cost (LCC) factors, and must also consider operating costs.
- Design decisions must be well documented since issues, suppliers, resources and product choices change frequently.
- Consultants shall use building components that are produced using reliable sustainable technology, avoiding untested systems, materials, and processes.



IT'S ABOUT TIME, LITERALLY.

The Minnesota State Capitol, designed by prominent American Architect, Cass Gilbert, is 100 years old. The outdated and obsolete mechanical and electrical systems no longer meet life safety standards, no longer provide adequate or consistent levels of comfort, no longer are energy inefficient, and are no longer reliable. The question is not *if* the systems will fail but rather *when* they will fail.

Mechanical Systems Condition

Heating Systems:

There is a real potential of a total heating failure during the winter months, when legislature is in session.

- Systems and equipment are old and worn out.
- Modifications and improvements made to the heating systems have been made incrementally and have not been addressed building-wide.
- Heating water distribution system cannot provide a consistent level of comfort to all occupied areas.
- Aging terminal heating devices (unit heaters, radiators, heating coils, etc.) have lost capacity.
- Control of heating systems is inconsistent and unreliable
- There is risk of losing heating in an area that could result in frozen pipes which would then burst and cause water damage to historical building material.

Ventilation and Air Conditioning Systems:

Air handling systems are not capable of meeting even minimum standards for indoor air quality.

- Air handling systems and equipment are well beyond their expected lives.
- Ventilation and air conditioning systems cannot adequately provide for the modern needs and uses.
- Systems and equipment have a high potential for failure and are energy inefficient
- There is inadequate duct capacity to properly cool many areas of the building.
- Current outside air intake louvers are poorly located and do not provide clean air or the minimum level of security recommended by Homeland Security Agencies.
- Outside air ventilation does not meet minimum indoor air quality standards.
- Cooling coils have insufficient capacity to control interior space humidity – the major contributor to the production of mold spores.
- Air handling systems do not have the capability to provide the controlled means of smoke evacuation required to meet modern life safety codes.

Plumbing Systems Condition

Storm Water Collection System:

All existing components have far exceeded their life expectancies.

- Upper level roof leaks and lower level flooding occurs every time there is a substantial rainfall causing ongoing degradation of and damage to the structure, ceilings, walls and floors.

Domestic Water, Waste and Vent Systems:

The age of the system components and materials results in a scenario where piping failures are imminent

- Sections of the plumbing systems have been replaced as areas have been remodeled; these older systems tend to fail during times of heavy use.
- Women's restroom facilities were minimal at the time of original construction and continue to be inadequate for the changing demographics in the Capitol.
- The integrity and adequacy of the current water and waste systems cannot be ensured.

Fire Protection Systems:

The building does not have a comprehensive automatic fire sprinkler system. The existing standpipe system is not in compliance with modern codes and does not provide means for the Fire Department to adequately or safely fight a major fire within the building.

Electrical Systems Condition

Power Distribution Systems:

The power distribution system has been in the process of being upgraded over the past two years and is close to completion.

- The capacity of the upgraded distribution system is not capable of supporting the expansion and restoration of the Capitol Building.
- The existing 208Y/120 volt system will not support new Air Handling equipment being provided at 480Y/277 volts.
- The existing 208Y/120 volt system will not support the expanded requirements of the restored spaces.
- The existing power distribution will not support the new expansion and is not configured to be expanded at this time.

Emergency Power Distribution:

The emergency power distribution system has been upgraded with new distribution panelboards but has not been distributed throughout the facility.

- New branch power distribution is required to support the building restoration and the building expansion.
- The present system will not support the addition of a smoke control system which is required to meet modern minimum code requirements.

Lighting Systems:

The present lighting and lighting control systems do not meet the state guidelines for energy conservation, lighting quality or minimum light levels.

- These systems must be upgraded to comply with accepted national standards including ASHRAE 90.1 (American Society of Heating, Refrigeration, and Air Conditioning Engineers standard for acceptable indoor environments) and IESNA (Illuminating Engineering Society of North America).

Fire/Smoke Alarm Systems:

The fire/smoke alarm system in the building is in the process of being upgraded by Honeywell. The present system is capable of expanding to meet the growing requirements of the building.

- The expansion of the system is required to accommodate areas of the building that are presently not covered and to meet the building expansion parameters.
- The central rotunda is not presently monitored and will require additional components to meet the Fire Code requirements.

Telephone/Data Systems:

The existing telephone and data systems are not configured in a way that supports today's operational requirements and are prone to faults and failures.

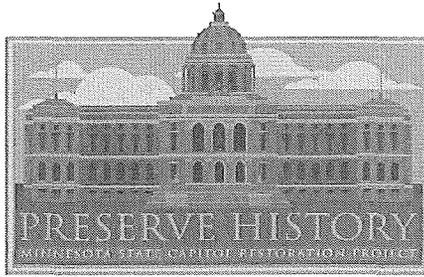
- Critical equipment is located in non-secure spaces.
- Antiquated equipment is being utilized for certain system services.
- Network operations and configurations do not conform to BICSI (Building Industry Consulting Service International) standards, today's state of the art.
- System components are susceptible to damage and sabotage.

Security System:

The security system parameters are well below today's design standards and do not function as required for a facility of this type.

- Secure access must be upgraded.
- Security monitoring must be upgraded to accomplish the required Zones of Protection.

- Camera coverage of various types must be added to meet the security requirements of the facility.



IT'S ABOUT TIME, LITERALLY.

The Minnesota State Capitol: *Access for All* Minnesota State Capitol Restoration Project

Over 100 years ago, when the Minnesota Capitol was being designed, access for people with disabilities was not a significant concern. Over the past decades there have been a number of efforts to make the Capitol more accessible, but there has been no comprehensive approach.

The State of Minnesota is committed to providing equal access to all programs, services and activities for persons with disabilities. The current proposal to restore the State Capitol includes provisions for enhanced access – the goal of the design team is nothing less than full accessibility, sensitively designed to complement the historic architecture.

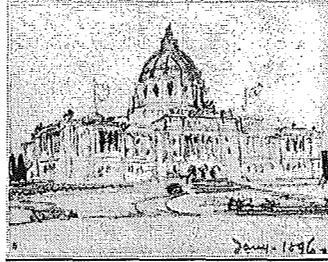
Full accessibility includes parking, an accessible path to and into the building, clear routes to the legislative areas (or employment destinations) of the building, full ability to participate in the activities of the building (offices, hearing rooms, legislative and judicial halls and others), accessible rest rooms, food service and other service areas. Accessibility means providing appropriate assists to people with a wide variety of permanent and temporary disabilities – mobility, hearing, sight and others.

Some accessibility provisions of the proposed project include:

- At-grade entrances into the Capitol, including the new visitor entrance
- Tunnel transfer to Judicial Building and State Office Building with accessible grade
- Improved and expanded elevator access and controls
- Visible and logical signage in alternative formats
- Accessible men's and women's restrooms (and family rest rooms) on all floors, in identical locations
- Enhanced life-safety, including provisions for people with disabilities during emergencies
- Legislative hearing rooms with improved sight lines and acoustics, and accessible seating
- Assisted listening devices in hearing rooms and legislative halls
- Accessible legislative and Supreme Court chambers (and galleries) with access for the public, attorneys, legislators, staff, witnesses and judges with disabilities
- Accessible "behind the scenes" staff areas like the office areas behind the House Chamber
- Lighting, controls, counters, dais platforms, signage, signaling and other systems designed to assist people with disabilities for full participation
- Additional seating in public areas for people to sit and rest
- Access to significant site features and amenities

Design of the Minnesota State Capitol Restoration will comply with all applicable regulations and codes, including the *Americans with Disabilities Act*, the *Minnesota State Building Code* and others. In addition, the design team will work in consultation with a consortium of disability agency groups

to seek practical advice and to review the developing plans – to ensure that the accessibility goals of the project are met.



Section 7.2: Telecom

General Description and Existing Conditions

Capitol Campus Centrex phone service is supplied to the majority of the Capitol Building by O.E.T. with some offices choosing to use their own phone systems. It is anticipated that the campus system will be migrating to a Voice over IP (VoIP) system soon.

The telecommunications infrastructure systems will be designed and installed per TIA/EIA standards, applicable codes and standards for state buildings. The finished infrastructure will support voice, data, and video distribution in the various room and space types (i.e. Senate Offices, Hearing Rooms New Auditorium etc.) throughout the building. The necessary telecommunications infrastructure for the State Capitol Building will be in place to afford employees opportunities to telecommute successfully. The telecommunications cabling infrastructure will be capable of supporting information technology that is identified during the design phase of this project, enabling agencies to cost effectively minimize their need for office space, provide more of their services electronically; and decentralize their operations as specified by Appendix E, MN Statute 16B.335, subdivisions 5 & 6, from the Predesign manual.

It is quite possible that the existing infrastructure cabling feeds to the Capitol Building (both from the local carrier and from the Capitol complex OET network) will need to be re-routed to the new Equipment Room/Server Room Locations on the Basement Level as part of this renovation. Also, the phone equipment within the Governor's Secure Phone Room may need to be relocated to one of the new equipment room/server rooms and enclosed in a security cage within the room as part of this renovation. Existing telecommunications systems are likely to be moved or replaced. Wireless LAN Access Points will be installed to provide 100% wireless network access coverage in the building. New infrastructure cabling will be installed based on the technology needs and programming of the particular space or area.

Telecommunication Spaces

To properly address the information technology requirements of the 425,000-plus SF Capitol Building and maintain TIA/EIA standards based cable lengths to workstation



Minnesota State Capitol Restoration

outlets, we recommend the following spaces for telecommunications. The specific location of these spaces will develop as design continues:

- Two 30' x 50' Main Equipment/Server Rooms (primary and secondary). One in the east wing and one in the west wing of the Sub-Basement level addition.
- One 10' x 15' Entrance Facility Room (MPOP) on an outside wall in the existing Basement Level nearest to the carriers existing manhole location.
- Two 10' x 12' Telecom Rooms in the existing Basement Level (one in the east wing and one in the west wing).
- Two 10' x 12' Telecom Rooms in the addition to the Basement Level (one in the east wing and one in the west wing).
- Three 10' x 12' Telecom Rooms in the Ground Level (one in the north wing, one in the east wing and one in the west wing).
- Three 10' x 12' Telecom Rooms in the First Floor Level (one in the north wing, one in the east wing and one in the west wing).
- Two 10' x 12' Telecom Rooms in the Second Floor Level (one in the east wing and one in the west wing).
- Two 10' x 12' Telecom Rooms in the Third Floor Level (one in the east wing and one in the west wing).

The two main Equipment Rooms/Server Rooms on the Sub-Basement Level addition would be utilized for the termination of Intra-building and Inter-building backbone infrastructure cabling, core network hardware, main phone equipment, and each Agencies file/application servers. The Telecom Rooms located throughout the building would be utilized for the termination of infrastructure cabling and network hardware required to meet the technology needs of the particular space served by the Telecom Room.

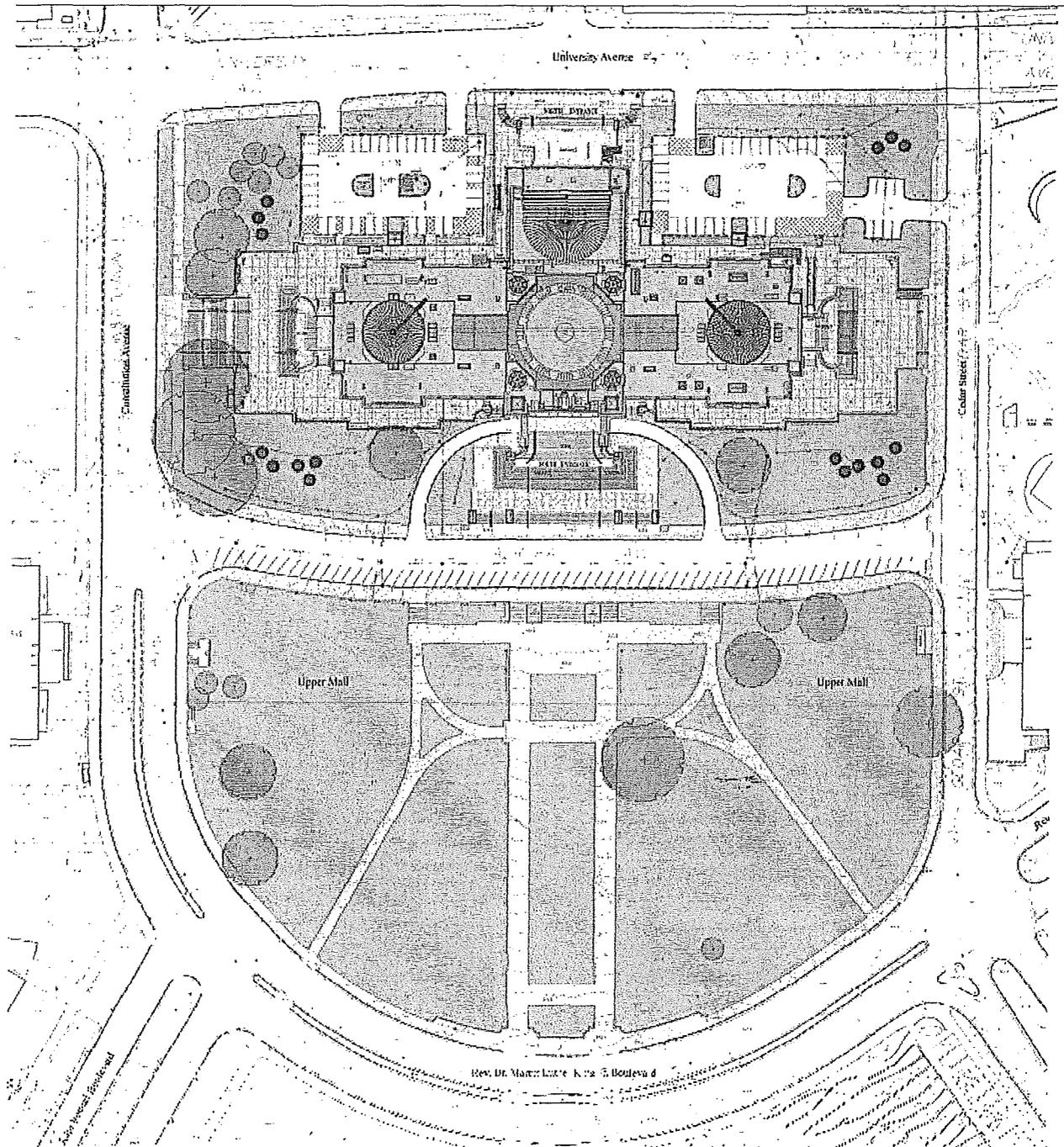
Refer to S.A.O. website for:

- Designer procedures manual.
- Building Infrastructure Best Practices for State-Owned Buildings (November, 2006).

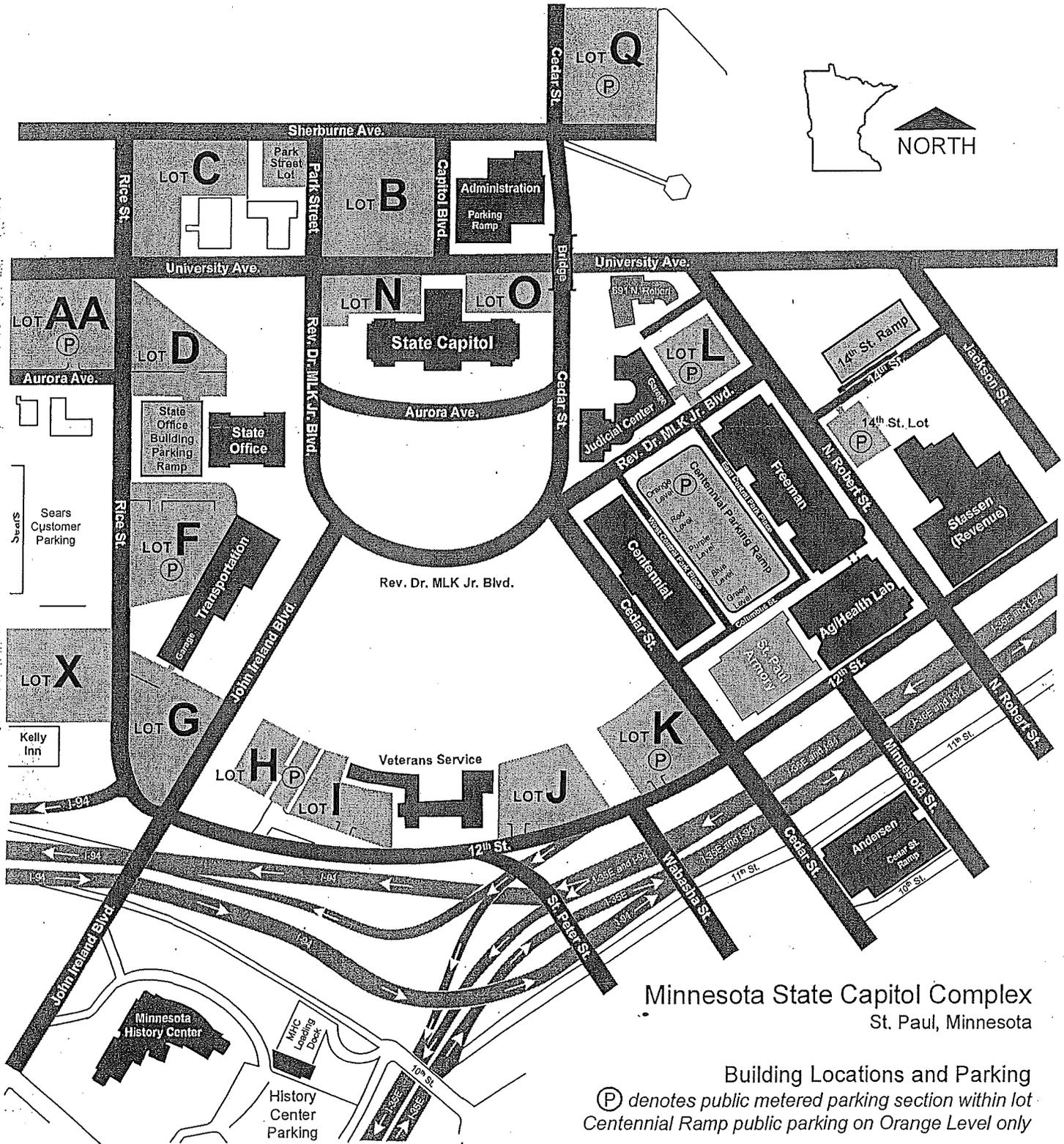
Capitol Complex



Minnesota State Capitol Restoration



Existing Conditions



Minnesota State Capitol Complex
St. Paul, Minnesota

Building Locations and Parking
Ⓟ denotes public metered parking section within lot
Centennial Ramp public parking on Orange Level only

Key Needs:

- Upgrades to meet ADA guidelines and building code.
- Signage

TUNNEL SYSTEM

Most of the buildings in the Capitol Complex are connected by underground tunnels. For the purposes of this predesign, we are only considering the tunnels that directly connect to the Capitol building.

The information in this summary was gathered by visually inspecting the tunnels and by reviewing information from the DSBC. Many of these areas may require further review. Tunnels reviewed in this study are those between the Capitol and:

- The State Office Building (with connection to Ford Building)
- The Administration Building Parking Ramp and parking lot "B"
- The Judicial Center

GENERAL NOTES:

- **Ceiling Height** – Ceiling heights in all tunnels are inconsistent and vary between 6'-10" to 13'-0."
- **Slope** - The floor slope in the tunnels is an immediate concern. Due to the varied grade conditions of buildings within the Capitol Complex, some of the tunnels connecting the buildings have steep slopes (as steep as 1:6) that exceeds the Minnesota accessibility codes requirements for ramps. These tunnels need to be reviewed and may require the addition of landings and handrails. Any new tunnels must meet the current ADA and building code requirements for accessible paths (i.e. slope of 1:12 maximum).
- **Finishes** - Floor, wall, and ceiling finishes are inconsistent in color and material throughout the tunnel system.
- **Lighting** – Fixtures and light quality are inconsistent throughout tunnels.
- **Electrical** - Some of the tunnels have exposed wiring and conduit, which is a critical security issue.
- **Mechanical and Ventilation** – The heating, cooling and ventilation systems require updating and balancing. Mechanical and electrical systems run through some tunnel systems, reducing the head-height or the overall width of the tunnel. Many of these support systems are outdated and need to be modified. Lack of ventilation and differential pressure between tunnel segments cause doors to slam and create hot and cold areas within the tunnel system.
- **Safety Systems** – Not all of the tunnels have emergency call boxes and automatic sprinkler systems. These systems should be extended to all of the tunnels.
- **Signage** - Exiting signage as well as directional signage is also generally lacking and needs to be updated. See Public Needs Summaries - Signage in Appendix B.

PUBLIC NEEDS SUMMARIES

TUNNEL SYSTEM SUMMARY

TUNNEL TO THE STATE OFFICE BUILDING

This passage is one of the most heavily used tunnels in the system. This tunnel has a parallel utilities tunnel to the side of it.

1a From State Office Building to the Ford Tunnel link

- Length: approx. 528'-9"
- Ceiling height: 7'-8" to 7'-5"
- Slope: approx. 1:24
- Finishes: concrete floors, glazed masonry block walls, and concrete ceilings
- Lighting: wall mounted fluorescent fixtures located down one side of tunnel, exiting signage is in place
- Electrical: in parallel utility tunnel
- Heating and ventilation:
- Safety systems: smoke detectors, emergency call boxes, and automatic sprinkler systems are in place

1b From Ford Tunnel link to the Capitol

- Length: approx. 240'-0"
- Ceiling height: 7'-0" to 7'-8"
- Slope: approx. 1:9 for the first 150'-0" from the Capitol, minimal slope beyond, hand rail on one side
- Finishes: concrete floors, glazed masonry block walls, and concrete ceilings
- Lighting: wall mounted fluorescent fixtures located down one side of tunnel, exiting signage is in place
- Electrical: in parallel utility tunnel
- Heating and ventilation:
- Safety systems: smoke detectors, emergency call boxes, and automatic sprinkler systems are in place
- Other: poor directional signage

TUNNEL TO THE ADMINISTRATION PARKING RAMP

The passage connects the Administration Building Parking Ramp with the State Capitol, but also provides access to the Administration Building and Lot "B", allowing pedestrians to cross under University Avenue easily.

2a From Administration Building Parking Ramp to Lot B

- Length: 124 ft.
- Ceiling height: 7'-6"
- Slope: approximately 1:22 no handrails
- Finishes: concrete floors, walls, and ceilings (some tile), floor edge painted out approx. 9" from tunnel wall
- Lighting: ceiling mounted fluorescent fixtures located centrally down tunnel
- Electrical: exposed wiring and conduit

PUBLIC NEEDS SUMMARIES

TUNNEL SYSTEM SUMMARY

- Heating/ventilation: absent in this segment of the tunnel system, moisture identified on floor, sprinklers are absent
- Safety systems: smoke detectors and emergency call boxes are in place, while the automatic sprinkler system is absent.
- Other: poor signage

2b From Lot B to the Capitol

- Length:
- Ceiling height: 7'-6"
- Slope: approximately 1:110 (minimal, not identified as a ramp)
- Finishes: concrete floors, walls, and ceilings

TUNNEL FROM CAPITOL TO THE JUDICIAL CENTER

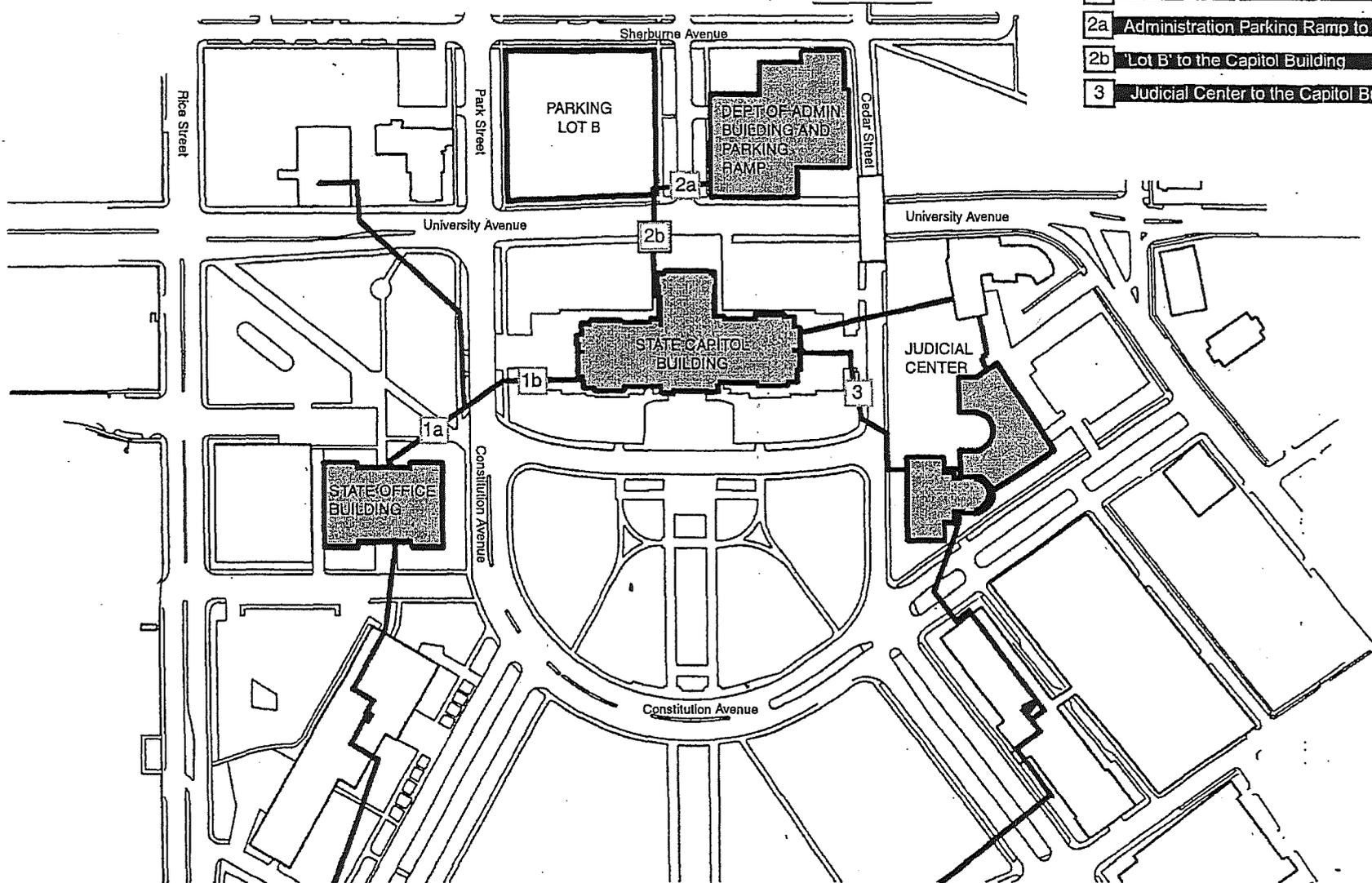
This passage is the shortest tunnel and oldest connection from the Capitol Building.

3 From the Judicial Center to the Capitol

- Length: 360'-7"
- Ceiling height: varies from 7'-1" to 8'-0"
- Slope: approximately 1:16 no rails or landings, slip resistant strips have been applied to the floor
- Finishes: concrete floors, concrete and tile walls, concrete and plaster ceilings
- Lighting: wall mounted fluorescent fixtures located down one side of tunnel
- Electrical: exposed wiring and conduit
- Heating and ventilation: absent in this segment of the tunnel system, moisture identified on floor
- Safety systems: smoke detectors, emergency call boxes, and automatic sprinkler systems are in place

KEY PLAN

- 1a Ford Tunnel link to State Office Building
- 1b Capitol Building to Ford Tunnel link
- 2a Administration Parking Ramp to 'Lot B'
- 2b 'Lot B' to the Capitol Building
- 3 Judicial Center to the Capitol Building



MILLER DUNWIDDIE
ARCHITECTURE / PRESERVATION

123 North Third St., Suite 104
Minneapolis, MN 55401-1657

tel 612.337.0000 fax 612.337.0031

Project: **MINNESOTA STATE CAPITOL PREDESIGN STUDY**
Capitol Complex Site Plan, Tunnel System

Project Location: St. Paul, Minnesota



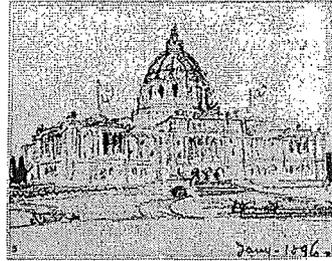
COMMISSION NO.: MIN0002 DRAWING NO.:

DATE: JUNE 2001

Not to Scale

B-24

Other State Capitol Restoration Information



Section 3: Financial Information – Capitol Expenditure

This budget request is based on the current conceptual cost estimate and the Conceptual Design. The cost numbers will be verified at numerous times throughout the project process. A “Construction Manager at Risk” (CM) project delivery method is recommended for the Capitol restoration project. With this delivery method, the CM provides a Guaranteed Maximum Price (GMP) prior to initiating construction. This will provide the state a guaranteed cost for the project while minimizing risk. The CM will provide an updated cost estimate at the end of Schematic Design. The GMP can be provided at the end of design development, which is scheduled to occur in the Fall of 2007. Construction is scheduled to begin in the Fall of 2008.

Impact on Agency Operating Budgets

The Design Team, working with the Department of Administration, CAAPB, local estimators and the construction industry, reviewed the Concept Plans and developed an estimated project budget and schedule. The estimate concluded that the full comprehensive scope of this project was approximately \$200 million (in 2007 dollars), which if extended out with construction starting in 2008 through 2014 (with escalation factored in), totals \$267 Million.

The cost of this project would increase lease rates in FY 2012 and would affect state agency rent appropriations. The Department of Administration is in the process of calculating the impact of the project on the square-foot lease rate.

Cost Benchmarking

Other states have acknowledged their state capitol buildings’ needs for major restoration projects. The cost of these projects has ranged from \$70 million to over \$200 million. Texas addressed restoration needs of their historic capitol and also expanded into an annex, spending \$287 million while vacating the building during construction. Other examples of Capitol project costs (with cost escalated to today’s dollars for comparable mid point construction) include:

- Kansas underway: \$162 million (\$230 million)
- Michigan completed 1992: \$58 million (\$200 million)



Minnesota State Capitol Restoration

- Ohio completed 1996: \$129 million (\$330 million)
- Texas completed 1993: \$200 million (\$566 million)
- Utah underway: \$210 million (\$285 million)
- Virginia underway: \$83 million (\$130 million)
- Wisconsin completed 2001: \$145 million (\$266 million)

Following is a more detailed summary of Schooley Caldwell Associates (SCA) work with Capitol buildings in other states. The scopes and circumstances of these projects vary widely, so an “apples to apples” comparison of costs is not really possible. It is, however, relevant to note the magnitude of investment that these states are making in their historic capitol buildings.

Ohio: National Historic Landmark built between 1839 and 1861, with additions in 1901 (above ground Annex, now Senate Building) and 1964 (underground parking garage, 1,200 cars); 10 acre urban site. Phased project beginning in 1989 and continuing to 1998 with completion of the Ohio Veterans Plaza. The entire building was never closed during construction, but the Senate met in alternative chambers within the complex, and the House met off-site in an adjacent building during construction.

Project included: restoration, accessibility, life safety code improvements, security upgrades, mechanical/electrical/technology systems, an above-ground addition, service and security entrances, rehabilitation and re-roofing of the garage, furnishings, site redevelopment, etc.

- **Total cost in 1996 dollars:** \$129 million.
- **Schedule:** Nine (9) Years.
- **Design Architects/Engineers:** – Schooley Caldwell Associates. Architect/Engineer of Record – Schooley Caldwell Associates.

Kansas: Built in phases between 1868 and 1903, 20-acre site adjacent to downtown Topeka. The project is being completed in small phases so that the Legislature never has to meet in alternate quarters (this accounts for the construction time frame and for considerable additional costs). The underground garage is complete, and the East wing (including the restored Senate chamber), was re-dedicated this past Spring.

Project includes: restoration, accessibility, life safety code improvements, security upgrades, mechanical/electrical/ technology systems, a modest underground addition that opens up an entire floor for new uses, service and security entrances, a new underground parking garage for 600 cars, furnishings, etc.

- **Total cost:** is estimated to be \$162 million (site redevelopment is not included in this figure).
- **Schedule:** Eight (8) Years. Phased project beginning in 2002 and projected to be complete in 2010.
- **Architect of Record:** – Treanor Architects, Topeka. Architectural Design Consultants – Schooley Caldwell Associates. Engineer of Record – Schooley Caldwell Associates.



Minnesota State Capitol Restoration

Utah: Built between 1912 and 1915, large hillside site adjacent to downtown Salt Lake City. The overall project includes two new buildings (designed by others, and attached underground) and an outdoor connecting plaza that provide needed additional office space and service. This capitol restoration is not being done in phases, as the seismic reinforcement involves a very extensive structural re-building. The separate East and West Buildings, were completed in advance, and provide swing space for the capitol restoration.

The Capitol restoration includes: an extensive base isolation seismic upgrade and stiffening of the original capitol structure and dome, as well as restoration, accessibility, life safety code improvements, security upgrades, mechanical/electrical/technology systems, a modest underground "plinth" addition that makes up for basement space lost to the base isolation system, etc.

- **Total cost:** is estimated to be \$210 million (approximately \$70 million of this is for the seismic upgrade).
- **Schedule:** Three (3) Years. Construction began in 2005 and is scheduled to be completed before the legislative session in 2008.
- **Architectural Design Team:** Capitol Restoration Group: An Association of VCBO Architects (Salt Lake City), MJSA Architects (Salt Lake City) and Schooley Caldwell Associates.

Additional Information

MINNESOTA STATE CAPITOL *Timeline*

The current State Capitol, designed by Cass Gilbert, is the third Minnesota Capitol Building. At the time of its completion the building housed the <i>entire</i> state government. Although expansion space was designed into the plan, the building was fully utilized from the day it opened.	1905
More space was needed and the basement areas were excavated to create additional space to meet the expanding tenant needs.	1936
Capitol placed on National Register of Historic Places	1972
Miller Dunwiddie Architects selected as “Capitol Architects” by State Designer Selection Board	1984
“ <i>Preservation and Planning Study for Public and Ceremonial Spaces</i> ” <ul style="list-style-type: none">• Basis for restoration of Senate & House Chambers• Focused on restoration of public and ceremonial spaces	1985
“ <i>Comprehensive Preservation Plan & Implementation Strategy</i> ” <ul style="list-style-type: none">• Complete inventory of the historic materials• Reviewed the building infrastructure• Laid out strategy for implementation & completion of restoration work by 1994	1988
Senate Chambers Restoration \$4.8M Appropriation	1987
House Chambers Restoration \$2.2M Appropriation	1989
Structural Stabilization & Accessibility upgrade \$8.1M Appropriation	1998
Restoration of Rathskellar + excavation under the west steps	1999
(2) Electrical Vaults – excavation to the north	1999
\$300,000 Appropriated for a Pre Design	2000
“ <i>Minnesota State Capitol Pre Design Study</i> ” issued. ...“to Pre-Design the phased restoration of remaining areas in the Capitol” ... Establishes that the Capitol does not contain sufficient space to adequately support the needs of the public and the current tenants. Identifies need for: <ul style="list-style-type: none">• <u>public hearing rooms</u>• <u>Expansion space</u><ul style="list-style-type: none">○ Remodel existing space on the Capitol Complex<u>or</u>○ Build a new facility on the Capitol Complex.	2001
\$1.17 million Capitol Third Floor Restoration Appropriation Completion scheduled for 2/11/2008	2005
\$1.2 million Schematic Design Appropriation <i>Legislative Language: “The design may not include any building outside the Capitol”</i>	2005

MINNESOTA STATE CAPITOL *Timeline (continued)*

Prior to embarking on Schematic Design for the full restoration of the Capitol, a Request for Proposal, for an architectural design team, was prepared and issued. The proposal drew attention from dozens of nationally recognized historic preservation firms. The 12 member evaluation committee reviewed all proposals in a thorough 3-step process.

Capitol Restoration Collaborative, was selected.

December 2005

A partnership of Hammel, Green and Abrahamson from Minneapolis and Schooley Caldwell, from Columbus, Ohio.

An update to the 2001 Pre Design is initiated:

2006

The new consultants documented changes that had occurred between 2001 and 2006 such as:

- Heightened Security - 911
- Increased Mechanical requirements
- Increased energy costs
- Technological advances
- Legislative restriction on designing a new building
- Increase in public participation in government

'06 CBR is for \$26.41 M (project total = \$83.364 M) based on 2001 Pre-Design

2006

- New Design is being developed during session that differs from 2001 Pre Design in that it proposes converting all of basement level to public use and an underground expansion to the south, to begin addressing issues noted above.
- Funds were not appropriated for this request.

Appropriation for Exterior Dome Repair and Interior Dome Restoration of \$1.4 M

2006

- An Exterior Dome *Study* is underway.
- Interior Dome work is on hold.

Appropriation for Continued Schematic Design of \$1M

2006

- New design is further developed for use in '07 CBR
 - Improve Security by providing one new point of entry and relocating the tunnel and parking.
 - Provide sally port for high-profile tenants.
 - Move mechanical/electrical rooms out of foot print of building to maximize volume, efficiency and security.
 - Underground structure & light wells. New energy efficient lighting.
 - More data closets through-out the Capitol.
 - Utilize "Found Space" and Expansion Space to accommodate space shortage. Keep Hearing Rooms in the Capitol.- "*Capitol is the People's House*" – not just ceremonial
 - New Visitor Services and improved hearing rooms.
 - New entry at 'street' level.

Capitol Spending - \$47 M total

1985 to 2006

- Interior = \$20.829 M (44%)
- Exterior = \$23.712 M (50%)
- Planning = \$2.85 M (6%)

'07 CBR is for \$130 M

2007

- Based on new Design Proposal for Capitol Restoration and Expansion
- No bonding bill / no funds appropriated

\$250,000 Appropriation for Working Group/Facilitation

2007



MINNESOTA STATE CAPITOL RESTORATION

ST. PAUL, MINNESOTA

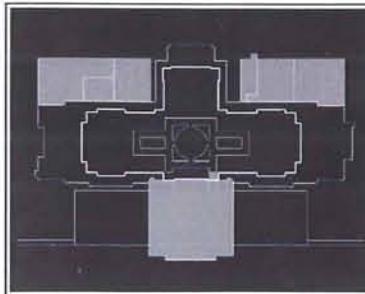
*For more than a century, they've come
from all walks of life, from all parts of the
state... in rain and snow, mud and ice...
by foot, horseback, carriage,
automobile and bus...
to learn, work, participate,
rally, mourn, celebrate
and most of all,
to be heard.*

Minnesota's State Capitol needs restoration. Preserving this important building - your building - means equipping it for today and saving it for tomorrow.

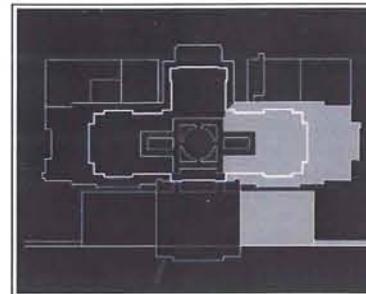
By taking care of this building now, instead of costly patchwork repairs, Minnesotans gain better service, increased efficiency, improved safety, enhanced features and experiences, and a sense of pride in this special state symbol.



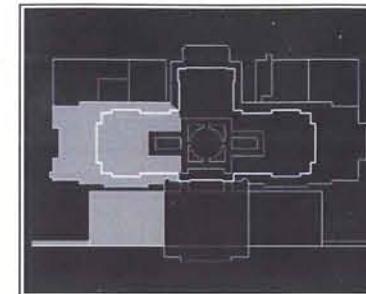
BUILDING
BLOCKS
IN THE
RESTORATION
OF THE
MINNESOTA
STATE CAPITOL
BUILDING



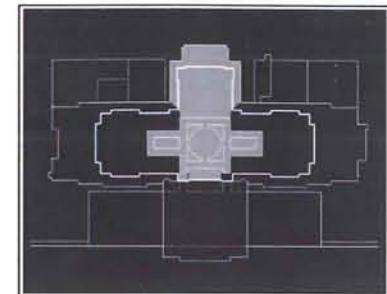
PHASE I
 North Vaults and South Stairs
 2009-2011
 Preliminary Estimated Cost
\$63.9 million
 (Escalated to Midpoint in 2010)



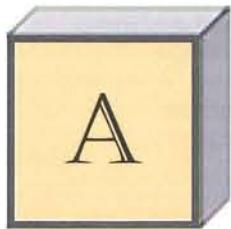
PHASE II
 East Wing and Southeast Vault
 2011-2013
 Preliminary Estimated Cost
\$89.8 million
 (Escalated to Midpoint in 2012)



PHASE III
 West Wing and Southwest Vault
 2013-2015
 Preliminary Estimated Cost
\$86.2 million
 (Escalated to Midpoint in 2014)



PHASE IV
 North Wing and Rotunda
 2015-2017
 Preliminary Estimated Cost
\$68.0 million
 (Escalated to Midpoint in 2016)



**ACCESS,
 SECURITY
 and
 LIFE SAFETY**

Highest Priority Vulnerabilities

- * Relocated, secure, ADA accessible visitor entry & restrooms
- * Full vehicular standoff
- * Improved security of outside air intakes
- * Secure dock & drop-off

Code & ADA Compliance

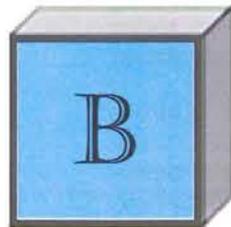
- * Accessible Supreme Court & hearing rooms
- * Accessible tunnel to Judicial Center
- * New fire alarm system
- * Enclosed fire stairs

Code & ADA Compliance

- * Accessible Senate chamber & hearing rooms
- * Accessible tunnel to State Office Building
- * New fire alarm system
- * Enclosed fire stairs

Code & ADA Compliance

- * Accessible House chamber, hearing rooms and restrooms
- * Visitor Center
- * Secure tunnel configuration
- * New fire alarm system



**BUILDING
 SYSTEMS**

Stabilize & Prepare Systems

- * North Vaults—Upgrade telcom, heating pumps, fire pump, chilled water services
- * Mechanical repair/replace
- * Upgrade electrical service to 480 volts
- * Rainwater cistern

Upgrade Systems & Services

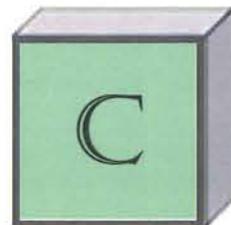
- * Southeast mechanical vault
- * New fresh air shafts (partial)
- * New East Wing mechanical & electrical systems
- * Updated sprinkler system
- * New underground utilities

Upgrade Systems & Services

- * Southwest mechanical vaults
- * New fresh air shafts (partial)
- * New West Wing mechanical & electrical systems
- * Updated sprinkler system

Upgrade Systems & Services

- * New North Wing mechanical & electrical systems
- * New fresh air shafts (final)
- * Updated sprinkler system



CONSERVATION

Control Deterioration

- * New Roof
- * Dome & 3rd floor (interior) humidity mitigation
- * Landscape restoration—north side (complete), south side (partial)
- * Swing space (decision/design)

Restore

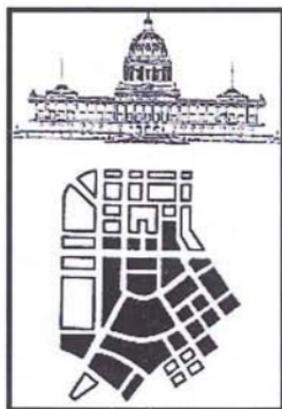
- * East Wing restoration
- * East Wing stone restoration
- * Replace East Wing windows
- * Southeast landscape restoration

Restore

- * West Wing restoration
- * West Wing stone restoration
- * Replace West Wing windows
- * Southwest landscape restoration
- * Renovate Senate offices & chamber

Restore

- * North Wing and Rotunda restoration
- * Exterior stone restoration
- * North window replacement
- * Renovate House offices & chamber

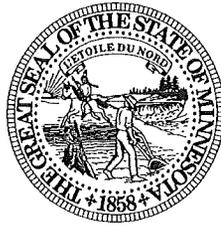


**CAPITOL AREA ARCHITECTURAL
AND PLANNING BOARD**

November 20, 2007

Working Group Members

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Capitol Restoration Working Group

72 State Office Building St. Paul, MN 55155-1201 Phone: (651) 296-9002 Fax: (651) 297-3697 TDD (651) 296-9896

MEMBERS

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Senator James Metzen
Senator Claire Robling
Senator Dennis Frederickson
Senator Ann Rest
Senator Richard Cohen
Justice Paul Anderson
Dana Badgerow - *Admin*
Rebecca Spartz - *AB*
Cynthia Weitzel - *Disability*

Rep. Alice Hausman
Rep. Morrie Lanning
Rep. Diane Loeffler
Rep. Mary Murphy
Rep. Lyndon Carlson
Rep. Mary Liz Holberg
David Lanegran - *CA P/B*
Bob Schroeder - *AS*
Margot Imdieke - *Disability*
Carolyn Kompelien - *MH 5*

AGENDA

10:00 a.m. Friday, August 3, 2007
Room 5, State Office Building

- I. Introductions
- II. Election of House and Senate co-chairs
- III. Agenda overview
- IV. Review history of recent Capitol restoration proposals and plans
- V. Mission discussion and identification of issues and options
- VI. Next steps
- VII. Other business as approved by the chair

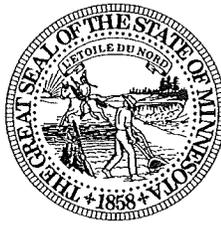


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AGENDA

- 1 Introductions *Judgy Plant*
2. Review recent history *State Grail Fin. bill - \$250,000-LCC*
3. LCC role
4. Facilitated process
5. Role of facilitator
6. Review meeting agenda
7. Timeline/extension
8. Contracts



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AGENDA

10:00 a.m. Friday, August 3, 2007
Room 5, State Office Building

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