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The City of Carmel-By-The-Sea

LIBRARY MASTER PLAN PROJECT
FINAL REPORT

August 25th, 2023



EXECUTIVE SUMMARY

On January 17th, 2023, Jayson Architecture was engaged by the City of Carmel-by-the-Sea to evaluate the renovation of two City library branches, the historic 7,300 square foot Harrison Memorial Library which was designed by notable California architect Bernard Maybeck, and the 6,300 square foot Park Branch Library. To support this effort, we engaged a team of engineering sub-consultants with expertise directly relevant to the scope of the project. This team included BASE Design Inc. for structural engineering, Alter Consulting Engineers for mechanical and plumbing engineering, and RIJA Inc. for electrical engineering. In addition to our engineering sub-consultant team, we also worked directly with TBD Consultants, a professional cost estimation firm, to evaluate our design approach and establish a budget for the project.

Our first task was to assess the condition of the existing facilities and their underlying infrastructure. We began this process by reviewing available existing documentation of the building, including the original 1927 construction drawings of the Harrison Memorial Library, the drawings of the addition completed in 1949, and drawings of subsequent renovations completed in 1974 and 1989. For the Park Branch Library, existing documentation was limited and incomplete. The only available drawings of the original 1971 construction documents for a bank were for the mechanical system. We reviewed these partial 1971 drawings along with drawings of the Library renovation completed in 1988.

After reviewing the existing documentation, we spent a day at the project sites with our engineering team methodically going through each space and area of the buildings and evaluating the condition of the facilities. Our findings are detailed in sections I of this report. Our primary takeaway from the building assessment is that the aging facilities are in need of significant upgrades, both to address deferred maintenance and deteriorated systems, as well as to update programmatic layouts to align with contemporary best practices for library services. Electrical systems are largely obsolete and will not support onsite photovoltaic arrays or all electric HVAC systems. The mechanical system for the Harrison Memorial library, while served by relatively new equipment, is dependent on gas and does not provide cooling. The mechanical system for the Park branch, while also in decent working condition, has some components that are reaching end of life. In addition to systems deficiencies, the materials and finishes are worn and damaged. Access compliance issues are present throughout both buildings, critically at the Harrison branch, which is without an accessible entrance or an elevator to serve the multiple building levels. The structural systems of both buildings are seismically deficient and not compliant with current codes, and seismic upgrades are recommended. In addition, primary utility service connections for electric service were also deemed to be inadequate for future uses, and the inclusion of photovoltaic systems.

With the assessment complete, we turned to an evaluation of the Library's programmatic and space need considerations. The proposed designs, detailed in Sections II and III of the report, make several key changes to the layouts of the Harrison and Park branch libraries. Importantly, we have proposed relocating the historical archives from the Park branch to the Harrison branch library, and locating it in the space currently occupied by the Reference and the Gathering Space. The historical archives are a more natural programmatic fit in the historic Harrison branch than at the Park branch where the primary programmatic use is the children's library. Two other significant programmatic shifts resulted from the relocation

of the historical archives. First, we have relocated the Gathering Place to the mezzanine of the Harrison branch, giving it a prominent location at the rear of the building looking out through the large arched window. And second, we have relocated the teen area from the basement of the Harrison branch into the Park branch, where space has been freed up by the relocation of the historical archives. In addition to the primary programmatic changes, we have proposed other smaller shifts in layout at the Harrison branch, while the Park Branch has been completely reconfigured to maximize available square footage.

With regards to the site and exterior of the two branches, the approach is very different. At the Harrison branch, special care was given to ensure that the historic exterior was not impacted in any significant way. The only noticeable changes are associated with the new accessible entrance at the rear of the building and elevator overrun, otherwise the exterior scope is limited to addressing deferred maintenance issues such as replacing rotting wood and damaged flashing, as well as repainting the exterior. At the Park branch we have recommended more significant changes and improvements. The existing basement space that is located under the parking lot will be reduced in size, and accessed solely from a new code-compliant stairway. Parking lots at the north and south sides of the building have been closed off and plaza and garden space added in their places. Lastly, the exterior cladding and windows of the building have been replaced updating the character of the building while remaining respectful of the neighborhood context.

Based on these design recommendations, we have established a recommended budget for this project. Working directly with TBD, a Conceptual Cost Estimate (see report Section IV) was created outlining all materials and labor required to complete the scope of work. A \$25 million construction budget target was established based on this exercise, approximately \$10 million for the Harrison branch and \$15 million for the Park branch. With the inclusion of 40% soft costs, a typical range for a public project of this scale, we recommend the City plan for a total project budget of approximately \$36 million for the baseline project. Additional improvements including photovoltaics and a custom decorative elevator could be included for a budget of \$42 million.

Jayson Architecture and our sub-consultant team have worked thoughtfully to deliver the best design approach to meet the needs of the City of Carmel-by-the-Sea for the revitalization of the Harrison and Park branch libraries. We have outlined functional, programmatic, and aesthetic improvements to be included for this project. As outlined in the 5-Year Capital Improvement Plan (Section IV) the next steps for the City will be to initiate the design and engineering process, starting with the Conceptual Design phase of work. Should the City choose to proceed with work as outlined in this schedule, both the Harrison and Park branch libraries would be completed at the end of 2026. This report is intended to serve as the foundation for the City to build on in the subsequent project phases.

Sincerely,



Abraham Jayson | Architect | LEED AP BD+C
Principal, Jayson Architecture

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TEAM

We have assembled a team of engineering sub-consultants with deep expertise in the design of public buildings and libraries. Each member of the team has worked with Jayson Architecture on multiple library projects throughout the Bay Area. Together, we have taken a design approach with an eye towards cost efficiency, while maintaining an appropriate level of robust quality and functionality to appropriately serve these incredibly important civic facilities for decades into the future.



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SITE ASSESSMENT |.





SITE ASSESSMENT

Harrison Memorial Library

The following report summarizes the visual and document assessment performed by the architecture and engineering team of the Harrison Memorial Library.

The existing conditions reported, and system descriptions are based on the team's site walk and review of available project data. While existing conditions documentation was provided by the City for the branch, as is typical for a building of this age, information on systems was incomplete and not comprehensive. Where this was the case, our team relied on past experience with similar building types and made reasonable assumptions based on our professional expertise.

The Harrison Memorial Library is located at the northeast corner of Ocean and Lincoln Streets. It was designed by Architect Bernard Maybeck. The building was completed in 1928 and designated as a historical property in 2005. The building has been expanded once and undergone numerous renovations. Documented history of the existing building includes:

- 1928: Building construction, designed by Architect Bernard Maybeck
- 1949: Building addition, designed by Robert R. Jones Architect
- 1965: Remodel to lower floor, by Comstock Architect
- 1974: Seismic upgrades
- 1976: Interior remodel, plans by Keeble & Rhoda, Architects
- 1981: Seismic upgrades to floor system
- 1985: Computer room addition
- 1989: Interior remodel, by Flescher + Foster, Architects.
- 1995: Computer room air conditioner replacement
- 1998: Structural analysis, by Flescher + Floster
- 1999: Circulation desk upgraded
- 2000: Building Reroofed
- 2001: JM Electrical installed ground wire system for phone
- 2002: Sewer lateral replacement
- 2012: Fire system permit
- 2014/2015: New HVAC furnaces installed
- 2016: One new furnace supply fan
- 2018: One new furnace ignition
- 2021: New heat pump domestic water heater installed

ARCHITECTURAL ASSESSMENT

Harrison Memorial Library

The exterior of the Harrison Memorial Library shows signs of deterioration typical of a public library that has undergone multiple small renovations over the years, but has never undergone a wholistic architectural upgrade. The exterior of the building is in need of new paint, and exposed wood shows signs of weather exposure and mild non-structural deterioration. The clay tile roofing appears to be in generally adequate condition, with no issues of water intrusion noted by City staff. A small portion of roofing tiles appeared to be out of alignment and/or damaged, and may require replacement. Roof eaves lack uniform flashing and gutters, resulting in elevated levels of wood deterioration at the roof edges. Drainage at depressed walkways and lightwells along the perimeter of the building appeared to be functional, but the location and configuration leaves these locations vulnerable to future intrusion. In addition, a buildup of trash, debris and leaves was observed. The original wood windows are intact, but show sign of deterioration, particularly in locations where the paint has peeled and left the natural wood surface exposed. Due to the historic designation of the exterior of the library, any exterior improvements should be limited to rehabilitation of the original construction or limited careful upgrades that will improve the exterior envelope without a significant impact on the exterior aesthetic character.

The interior of the Harrison Memorial also shows signs of deterioration typical of a public library that has undergone multiple small renovations over the years, but has never undergone a wholistic architectural upgrade. Finishes subject to regular wear and tear, such as carpeting and resilient flooring show significant damage and deterioration. Countertops are not level and are damaged due to ongoing use and water exposure, and the restroom tile is cracked and in need of replacement. The lighting is of poor quality throughout, primarily provided by surface mounted fluorescent fixtures. Surface mounted conduit is visible on walls and ceilings in all spaces, negatively impacting the appearance of the interiors. Acoustic ceiling tiles are worn, dingy, and hanging out of alignment in many locations. Interior wood surfaces need to be refinished and/or painted where appropriate. In addition, the ceiling height under the mezzanine is substandard and not appropriate for a primary public space in a library. The furniture upholstery and finishes are inconsistent, lacking a cohesive aesthetic and material palette, although several original Maybeck tables remain and should be refinished and restored for continued use. Based on our site evaluation we recommend a comprehensive replacement of interior flooring, finishes, lighting, and furniture to address maintenance issues, functionality, and aesthetics.



Architectural Figure 1: Existing Library - Exterior



Architectural Figure 1: Existing Library - Interior

ACCESSIBILITY ASSESSMENT

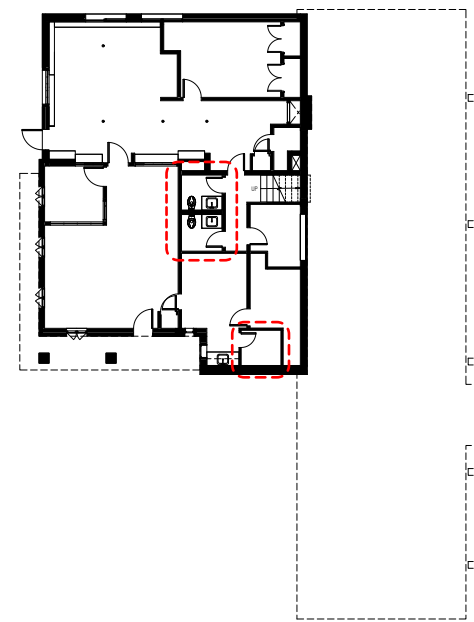
Harrison Memorial Library

A complete CASp report was prepared by William M. Holl, AIA and Kasavan Architects for the City of Carmel-by-the-Sea, dated September 28, 2018, outlining code compliance deficiencies at the Harrison Memorial Library in detail. Instead, our assessment highlights non-compliant elements of the building that play an important role in the renovation and improvement of the library.

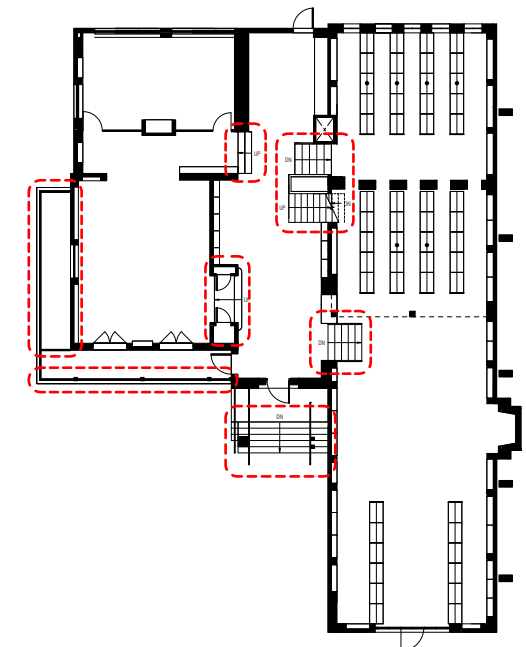
First, the primary entrance was observed to be inaccessible from the public sidewalk with several elevation changes along the stone path and stairs leading up to the entry door. Upon entering the building there are several elevation changes within the library, splitting the building between full and half levels, as well as an intermediate level along the west wing of the library. These multiple levels are an immediate accessibility compliance issue without the presence of a passenger elevator providing direct access to each floor level.

Located in the basement level, the existing restrooms are also in need of a comprehensive accessibility update to meet code requirements. These deficiencies include restroom fixtures, accessories, accessory mounting heights, and turning areas.

The existing stairs were also observed to be non-compliant, as well as each associated handrail. Lastly, both interior and exterior guardrails were observed to be non-compliant. At the exterior, the balcony along the southwest corner of the library is well below the required minimum height, with its baluster spacing also failing to meet code requirements. And at the interior, the baluster spacing of the mezzanine guardrail is also non-compliant.



Accessibility Figure 1: Existing Library - Basement Level



Accessibility Figure 2: Existing Library - Main Level

STRUCTURAL ASSESSMENT

Harrison Memorial Library

INTRODUCTION

The purpose of this study is to perform a structural survey of Harrison Memorial Library in Carmel by the Sea, CA. The survey includes visual examination of as-built conditions. This process identifies apparent decay, weakening of existing structural materials (where visible), seismic deficiencies, and the impact of proposed future remodel work. The assessment is based on BASE Design's professional experience and knowledge with comparable construction. A site visit was conducted on February 24, 2023, to observe existing conditions. The site visit did not include removal of existing finishes. Therefore, verification of structural conditions hidden by architectural finishes or existing grade were not performed. The building is a multi-level wood framed building, originally built in 1927. A library expansion was added in 1949. The addition is a wood framed construction.

Gravity Load Carrying System

Roof:

- (Reading Room) 1x8 T&G (tongue & groove) wood decking over 2x4 joists spaced at 16" O.C.. Joists are supported by 6x6 purlins over trusses.
- (Children's Room) 1x8 T&G (tongue & groove) wood decking over 4x6 rafters at 32" O.C.
- (Northwest Room) 1x6 T&G (tongue & groove) wood decking over 2x wood trusses at 16" O.C.

Floor:

- 1x wood decking over 4x10 beams at 24" and 2x8 joists at 16" O.C. at stack room. Steel wide flange and wood beams supported by 3" pipe columns.

Walls:

- 2x wood stud at 16" O.C. and 8" concrete basement walls.

Foundation:

- 9" deep x 20" wide, conventional concrete wall foundations.
- 4" thick concrete slab on grade basement floor.

Lateral Load Carrying System:

- Diagonal sheathing.

List of Available Documents

- Drawing prepared by B.R. Maybeck dated 1/31/27.
- Drawings prepared by Robert R. Jones, dated 7/29/49.
- Drawings prepared by Howard G. Carter, dated 1/23/74

Site Visit

BASE Design visited the site on February 24, 2023. The main purpose of the site visit was to gather the following data and to evaluate the physical conditions of the structures:

1. Type and materials of building and foundation construction.
2. Type of construction of roofs, floors, and walls.
3. Type of finishes.
4. Presence and frequency of shear panels.
5. Visible cracks in superstructure and foundation.
6. Decay of structural elements.

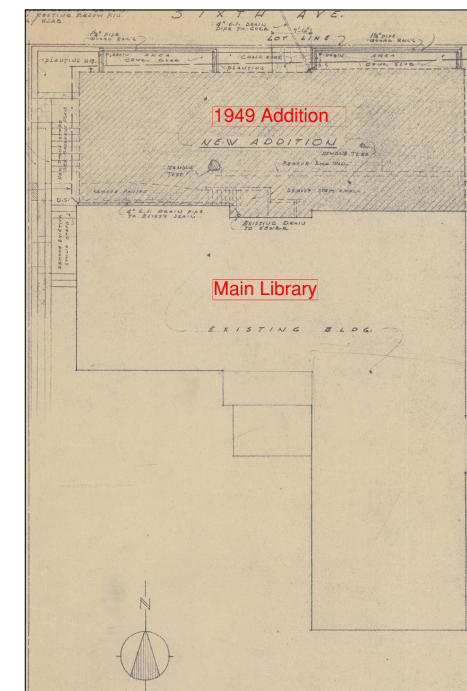
During the site visit, the building was examined for evidence of weather decay, cracking or settlement. Finishes were not removed and therefore, identification of structural conditions hidden by architectural finishes or below existing grade was not performed.

Site Observation

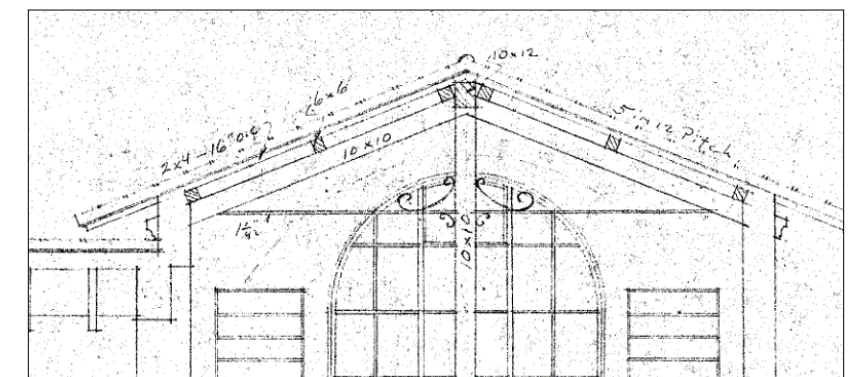
The existing building appeared to be in relatively good condition. There were no major signs of deterioration observed.

RECOMMENDATIONS

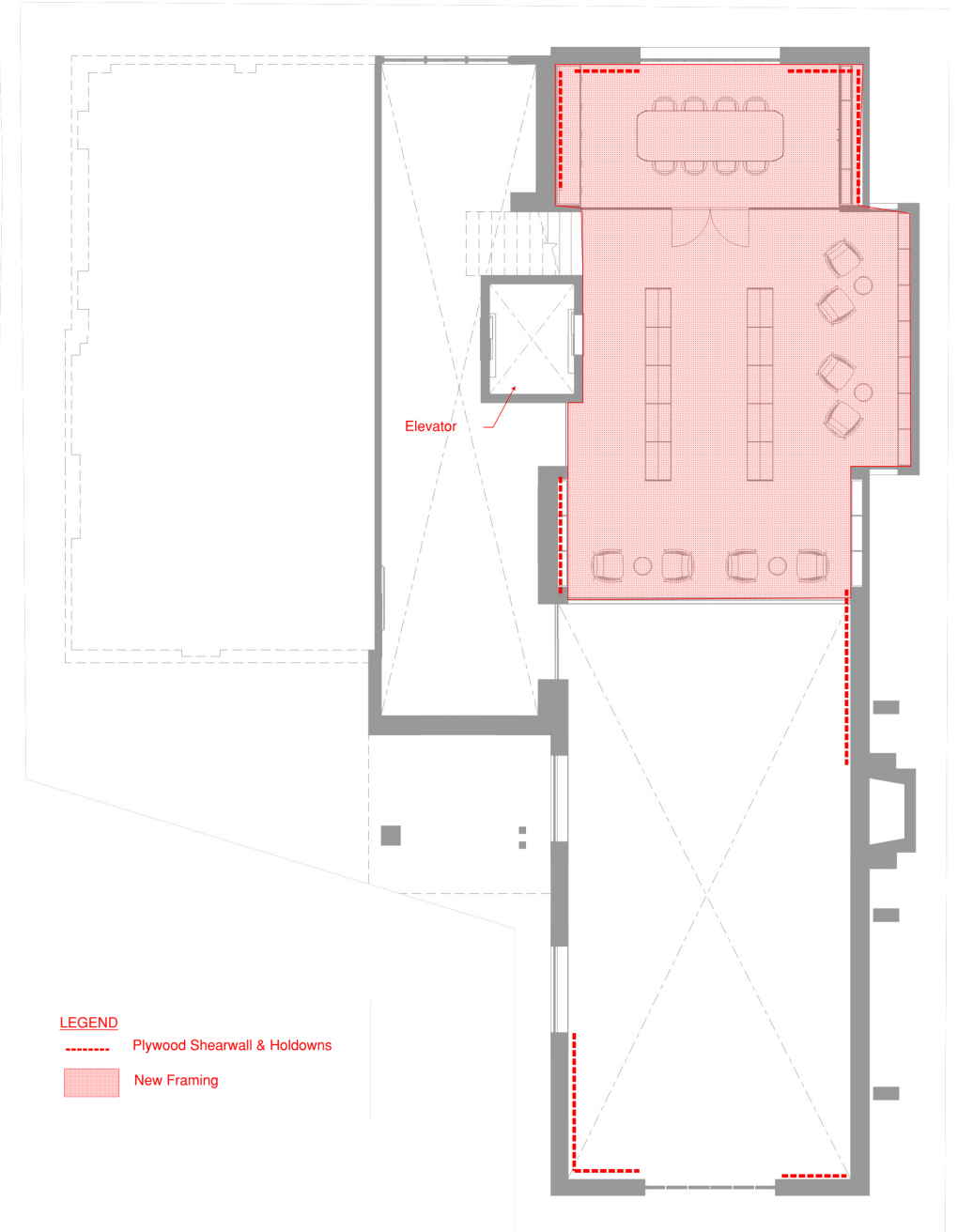
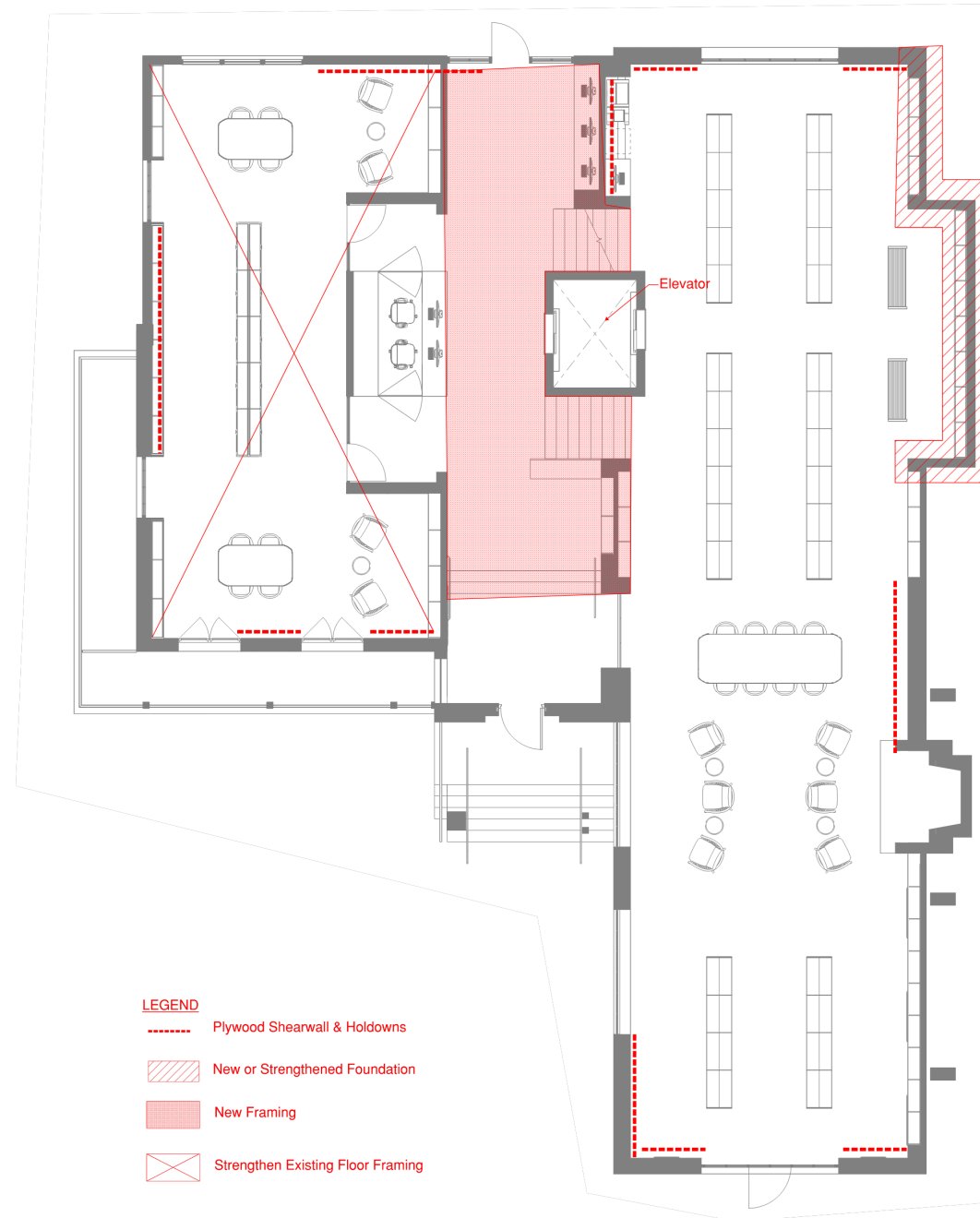
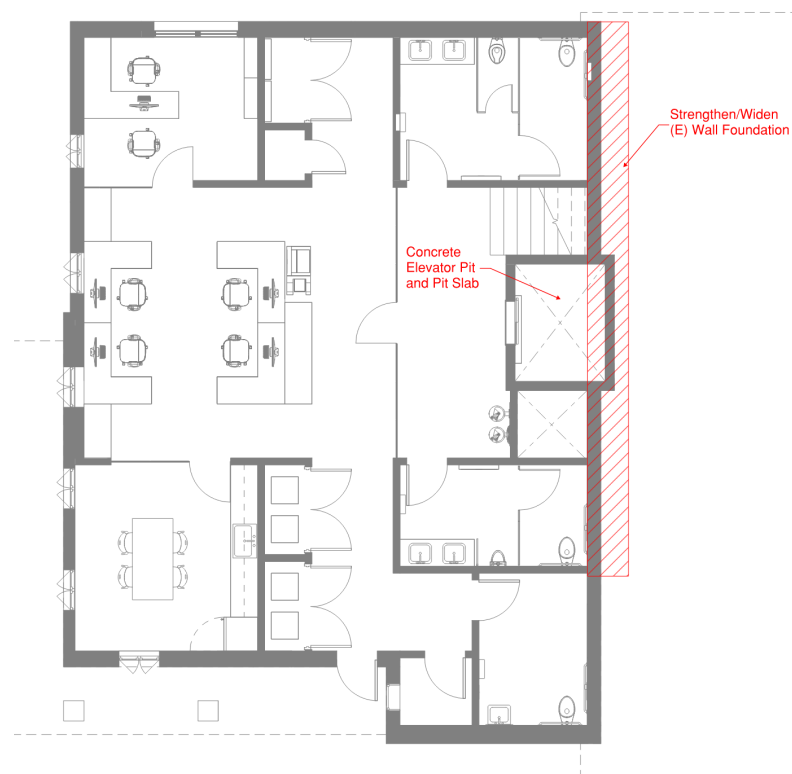
The original building was built in 1927 and expanded in 1949. 1974 upgrades included dryrot repairs and improvements to the building's lateral resistance with the addition of rectangular concrete columns along the east wall. It is reported that the building also underwent seismic upgrades in 1981; however, there are no record drawings available for the 1981 seismic upgrade work. Proposed renovations will require alterations to both gravity and lateral elements of the existing building. We recommend implementing voluntary seismic upgrades as part of any future renovation work.



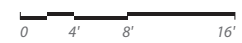
Structural Figure 1: Building Plan



Structural Figure 2: Building Section - Existing Framing



Structural Figure 3: Proposed Basement Plan



Structural Figure 4: Proposed Main Floor Plan

Structural Figure 5: Proposed Mezzanine Floor Plan

MECHANICAL ASSESSMENT

Harrison Memorial Library

INTRODUCTION

The Harrison Memorial Library is heated and ventilated by two furnace air handling units. These furnaces are located within the building's basement furnace room. Each furnace is provided with a two-stage, gas-fired furnace and two speed supply fan:

Furnace F-1: Carrier 58CTW-135-22

- High Heating Capacity: 107,000 BTU/HR
- Low Heating Capacity: 70,000 BTU/HR
- High Airflow @ 1.0inWC: 1,615 CFM
- Low Airflow @ 1.0inWC: 1,475 CFM
- Efficiency (AFUE): 80%
- Power: 115V / 13.0amp MUA / 20amp MCOP

Furnace F-2: Carrier 58CTW-135-22

- High Heating Capacity: 107,000 BTU/HR
- Low Heating Capacity: 70,000 BTU/HR
- High Airflow @ 1.0inWC: 1,615 CFM
- Low Airflow @ 1.0inWC: 1,475 CFM
- Efficiency (AFUE): 80%
- Power: 115V / MUA: 13.0A / MOCP: 20A

The existing furnaces appear new. Based on a review of available project materials, it is believed that the furnaces were installed between 2014 and 2015. Furnaces appear to be well operating and maintained; furnaces should have at least 10 years of useful life remaining. A maintenance log within the building's furnace room indicates the furnaces are regularly inspected and serviced.

Each furnace discharges air into a common discharge plenum. From the common plenum, flexible ductwork is routed to building risers. In new construction, the use of flexible ductwork is not permitted. Flexible ductwork does not allow for smooth, low energy, air distribution. Existing duct work within the furnace mechanical room should be modified to eliminate use of flexible ductwork. From the furnace mechanical room, air is distributed through the building's existing duct network. Ductwork is routed above ceiling areas that air accessible by way of ceiling tiles and above ceiling area that are inaccessible due to plaster ceiling conditions.

In addition to the two gas-fired furnaces, the building is also provided with a one-to-one split system. This split system is dedicated to the buildings computer IDF room. The split system provides cooling for the room computer and server equipment. The split system includes an outdoor condensing unit and an indoor wall hung fan coil unit. The outdoor condensing unit is located at just below grade on Ocean Street; the indoor fan coil unit is located in the computer IDF room. Refrigerant piping and low voltage power run between the units. Piping and low voltage power are routed below the ceiling, exposed visually to the occupants. The condensing unit and fan coil unit appear to be operating sufficiently. If reused, only the condensing unit and the fan coil unit should be reused, not the existing piping.

CU-1 / FCU-1: Mitsubishi

- Condensing Unit Model Number: PKA-A24KA7 (assumed)

- Fan Coil Unit Model Number: PUY-A24NHA7 (assumed)
- High Airflow: 775 CFM
- Low Airflow: 635 CFM
- Efficiency (EER/SEER): 12.2 / 21.4
- Power: 208V / MCA: 19.0A / MOCP: 26A

Restrooms are exhausted by dedicated ceiling mounted exhaust fans located within restrooms. Based on a visual inspection restroom exhaust fans appear to have been replaced within the last 10 years.

RECOMMENDATIONS

The Basis of Design heating ventilation and air conditioning (HVAC) system, proposed for the renovation of the Harrison Memorial Library, is a variable refrigerant volume (VRF) system – similar to a Daikin VRV-S systems. Locate heat pumps in the Side Yard area, as indicated on the site plan.

Heat Pumps

Provide (qty.3) single zone variable refrigerant volume (VRF) heat pumps – similar to a Daikin VRV-S Heat Pump (HP-1, HP-2, and HP-3). Outdoor heat pumps will source heating and cooling from the outdoor air. These heat pumps will distribute refrigerant from the outdoor units to indoor fan coil unit recessed in the building. Indoor fan coil units will provide ventilated and conditioned air to all regularly occupied area of the building.

Basement Fan Coil Units:

On the basement level, within the area designated "Mechanical" provide (qty.2) 100% Outdoor Air VRF fan coil units, similar to a Daikin" 4-Ton 100% Outdoor Air Processing Unit". Each 100% outdoor air unit (FCU-1, and FCU-2) conditions and ventilates a different area of the building. Configure each unit in a vertical position. Provide a ducted connection between intake of each unit to a common outdoor air intake louver. Route the conditioned discharge air of both units into the basement ceiling space. FCU-1 sources heated and cooled refrigerant from HP-1. FCU-2 sources heated and cooled refrigerant from HP-2.

- FCU-1:
 - On the basement level FCU-1 provides conditioned ventilation air to the Office, Staff Room, and Staff Workroom. Conditioned air is supplied from overhead ceiling diffusers. Provide fully custom, factory painted, ceiling diffusers matching the character of the existing building.
- FCU-2:
 - Supply ductwork from FCU-2 shall be routed to Level 1. Route ductwork up from the basement level to Level 1 through risers recessed within the walls. On Level 1, FCU-2 supplies air to the Adult Collection Area, Lobby, Self Check OPAC, New Books and Holds Area. Air is supplied into these Level 1 room through linear slot wall diffusers. Provide linear slot diffusers with (qty.2) 1" linear slots. Provide fully custom, factory painted, linear supply diffusers matching the character of the existing building.

On the basement level provide a separate branch of FCU-2's distribution ductwork up to Level 1. On Level 1, at this location, FCU-2 provides conditioned ventilation air to the Local History Room. Air is supplied into the Local History Room through linear slot wall diffusers. Provide single 1" slot linear supply diffusers. Provide fully custom, factory painted, linear supply diffusers matching the character of the existing building. FCU-2 sources heated and cooled refrigerant from HP-2.

- **Level 1 Fan Coil Units:**
On Level-1, in the ceiling space above the lobby provide (qty.2) ducted VRF fan coil units, similar to a Daikin "2 Ton MSP Concealed Ducted Unit". Each recirculating unit (FCU-3 and FCU-4) conditions a different area of the building. Suspend each unit in the ceiling space above the lobby. Box out each fan coil unit in an acoustical enclosure. Provide an acoustical intake silencer on the return of each fan coil unit. FCU-3 and FCU-4 source heated and cooled refrigerant from HP-3.
- **FCU-3:**
FCU-3 supplies conditioned air to the Mezzanine's Gathering Space. Transfer grilles within the Gathering Space allow for return air transfer into the Mezzanine. Provide a ceiling return grill in the Level 1 Lobby ceiling. Route return air back FCU-3's intake silencer.
- **FCU-4:**
FCU-4 supplies conditioned air to the Level 1 Adult Collection area and the Mezzanine's Mezzanine Area. Supply air into the Level 1 Adult Collection Area utilizing a linear slot diffuser. Route ductwork from FCU-4 to linear slot diffusers recessed in the ceiling area just below the Mezzanines balcony. Provide single 1" slot linear supply diffusers. Provide fully custom, factory painted, linear supply diffusers matching the character of the existing building. In addition, FCU-4 supplies conditioned air from the Level 1 Lobby ceiling area to the Mezzanine. Route ductwork up from Level 1 through risers recessed within the wall. On Level 2, FCU- 4 supplies air to the Mezzanine. Air is supplied into this room through linear slot wall diffusers. Provide linear slot diffusers with (qty.2) 1" linear slots. Provide fully custom, factory painted, linear supply diffusers matching the character of the existing building.

Window Actuators

In addition to the VRF conditioning systems, the building shall be provided with a mechanically actuated glazing system, similar to a Window Master system. Actuated glazing shall be limited to the skylights above Level 1 Lobby. Skylights shall be electronically actuated by a common HVAC / skylight control system. Provide contact sensors within the skylight frame. The HVAC system shall command skylights open/closed based on outdoor air conditions.

Exhaust Fans

Each Basement restroom and the janitors closet shall be provided with a dedicated ceiling recessed exhaust fan (qty.4). Route ductwork in the basement ceiling exhaust fans to exterior wall discharge louvers located in the areaway outside of the Level 1 Staff Room.

Relief Hood

The building shall maintain a positive pressure relationship to the outdoors. On the roof, adjacent to the elevator provide a barometric relief hood. Set the relief hood to 0.1inWC. Provide a wall mounted exhaust grille in the lobby ceiling, duct from the exhaust grille to the barometric relief hood.

IT/Electrical Room Cooling

The building's Basement Telecom and Electrical rooms shall each be provided with a dedicated cooling only split system, similar to a Samsung Split System. Provide (qty.2) Samsung Outdoor Units, AC-1 and AC-2, in the equipment yard adjacent to the buildings heating and cooling heat pumps. Above the door in the Telecom and Electrical room provide wall hung fan coil units, FCU-5 and FCU-6. Route refrigerant from each fan coil unit to its respective outdoor AC units. Route condensate from all (qty.6) fan coil units to the mop sink located in the basement's Janitors room. FCU-1, FCU-2, FCU-5, and FCU-6 shall be provided with integrated condensate pumps.

Provide a central building management system which integrates all the HVAC equipment identified in the equipment list below. The integrator shall provide remote scheduling, metering, and automatic fault detection diagnostics.

HVAC EQUIPMENT LIST:

Heat Pumps:

- HP-1: Daikin RXYMQ48PVJU
- HP-2: Daikin RXYMQ48PVJU
- HP-3: Daikin RXYMQ48PVJU, with 2-Port Adaptor

Fan Coil Units:

- FCU-1: Daikin FXMQ48MFVJU
- FCU-2: Daikin FXMQ48MFVJU
- FCU-3: Daikin FXSQ24TAVJU
- FCU-4: Daikin FXSQ24TAVJU

Building Management System:

- BMS: Honeywell Niagra N4

Window Actuator:

- Lobby Skylights: Window Master

Exhaust Fans:

- EF-1: Panasonic FV-30VQ3
- EF-2: Panasonic FV-30VQ3
- EF-3: Panasonic FV-30VQ3
- EF-4: Panasonic FV-30VQ3

Relief Hood:

- HD-1: Greenheck WRH 2'x2'x2'

IT/Electrical Cooling:

- AC-1: Samsung AC018BNADCH/AA
- AC-2: Samsung AC018BNADCH/AA
- FCU-3: Samsung AC018BXADCH/AA
- FCU-4 Samsung AC018BXADCH/AA

PLUMBING ASSESSMENT

Harrison Memorial Library

PLUMBING ASSESSMENT INTRODUCTION

The following Plumbing services are provided to the building:

Domestic Cold Water

- 1" water meter in vault at north of building
- 1-1/2" water line connected directly downstream to serve new flushometers in Basement Restrooms during 1998 Renovation.
- Irrigation backflow preventer at west of site (within planter)

Domestic Hot Water

- A heat pump water heater was installed relatively recently (nameplate indicates unit manufactured Dec 2022) in Mechanical Room. No circulation pump or expansion tank. Condensate and T&P relief piping routed to floor drain in middle of the room.

Natural Gas

- Meter and Seismic Shutoff valve installed at the building South Installed in 1998 (per 2013 Facilities Report Assessment)
- Gas currently serves furnace only (appears that water heater used to be fed by natural gas but no longer)

Sanitary Sewer

- Sewer lateral replaced in 2002 (per 2013 Facilities Report Assessment)

Storm

- Gutters and downspouts that are routed to grade and terminate below grade piping that (presumably) connects to the site storm system.

Fire Protection

- Sprinklered as part of 1976 renovation. Appears that entire building is sprinklered: 4" fire service with 2" sprinkler drain at north of building.
- Fire Department Connection located on north of building.
- Sprinkler types consist of upright, concealed, and pendant type with cages for protection at sprinklers at low ceilings in the Basement.

The building includes the following groups of fixtures:

(2) Adjacent Restrooms (open to the public)

- Renovated in 1989 to bring a larger water line (1-1/2") presumably to support flushometer toilets
- Wall-hung (back outlet) flushometer toilet
- Vitreous china lavatory basin with lever faucet

(1) Staff Restroom

- Wall-hung (back outlet) gravity flush toilet
- Small vanity with integrated bowl and a lever-type faucet

(1) Staff Break Room

- Small stainless steel top-mount sink with manual goose neck faucet

(1) Janitor Closet

- Floor-mount mop sink with manual hot/cold faucets with integrated vacuum breaker

RECOMMENDATIONS

The Basis of Design proposed for the renovation of the Harrison Memorial Library, includes providing new plumbing systems and fixtures to serve the basement restrooms and janitor's room.

Domestic Cold Water (CW)

The new programming requires approximately 50gpm at 50-60psi to serve the (6) new flushometer toilets and sink fixtures. The existing site is served by a 1-1/2" cold water main and 1" meter. The existing CW service will be required to be upgraded to meet the new demands with a 2" CW point of connection. A new upsized meter will need to be provided and coordinated with the water utility company.

Domestic Hot Water (HW)

The existing heat pump water heater can be reused to serve the new lavatories and janitor's sink fixtures. Hot water piping will be replaced with new. A recirculation pump and expansion tank shall be provided as a part of a complete hot water recirculation system to avoid hot water losses.

Natural Gas (G)

Natural gas system shall be demolished and capped back to the meter as the new building systems will not require gas connections. Gas meter removal shall be coordinated with gas meter company.

Sanitary Waste & Vents

It is recommended that the sewer lateral be scoped as a part of the new construction scope. This scoping survey would include a marked up sketch of existing invert elevations to confirm that the new fixtures can be routed by gravity.

Pending the results of the video scope and the condition of the existing sewer lateral, the sewer lateral may need to be replaced between the building and the main in the street if the condition is unacceptable. The cost estimate should

include a video scope survey report and an “add-alternate” price for replacement of the sewer lateral.

Existing waste and vent connections shall be extended to serve new restroom fixture locations. Existing invert elevation is likely constrained therefore assume 4” waste branches to be able to route at 1% slope. All new plumbing fixtures shall be provided with new vents. Vents shall connect and tie into existing vents-through-roof. New penetrations through the roof shall be avoided.

Storm Drainage

No new scope is required for the storm drain system.

Plumbing Fixtures

All new plumbing fixtures shall be provided as required on architectural plans.

Fire Protection

The entire existing building appears to have sprinklers installed throughout. Storage will be limited to shelving no taller than 8 ft which represents a Light Hazard Classification throughout the building. All sprinkler branches will have to be modified to suit the new architectural layout with new sprinkler heads throughout.

PLUMBING EQUIPMENT LIST:

- (1) 2” Meter (by Water District)
- (1) 2” CW POC
- (1) Sanitary sewer video scope & report
- (1) 4” SS POC
- (1) 20-gallon thermal expansion tank
- (1) ½ HP HW recirculating pump with aquastat & timer
- Plumbing Fixtures (per Arch Plans)
- +Add alternate: sewer lateral replacement.

ELECTRICAL ASSESSMENT

Harrison Memorial Library

A site visit was performed February 4, 2023 during open hours to survey and evaluate the existing electrical systems for adequacy and feasibility of re-use and/or needs for system upgrades for the planned renovation at Harrison Memorial Library.

- The existing service size is 400Amp, 240/120V, 1phase, 3wire. Given the planned renovation, which is understood to include adding substantial load additions such as elevator and potential electrification of the building, we anticipate an electrical service will be required.
- The electrical distribution equipment appears to be from the original construction. While equipment appears to be maintained, the equipment is beyond manufacturers recommended life. For the building renovation, we recommend complete replacement of the distribution system.
- The facility utilizes a variety of lamp types, we recommend standardizing lamp types or utilize LED lighting to limit stock of various lamp types.

EXISTING CONDITIONS

Utility Service

Existing electrical service is 400Amps, 240/120V, 1phase, 3wire. Service appears to be derived from an underground secondary utility network originating on Lincoln Street. Service terminates in an outdoor service enclosure located on an exterior wall of the library.

The service enclosure has the following breakers:

- 400Amp – Main circuit breaker
- 200Amp – Panel A located in the computer/network room
- 200Amp – Panel Q located inside the library adjacent to library stacks
- 50Amp – Labeled as 220v at eaves
- 20Amp – Fire Alarm

Building Distribution

- The main switchboard serves various branch panels located throughout the building. Feeder breakers are as follows:
 1. Panel A and associated downstream distribution appears to be a newer installation. Panel B is connected to
 2. Panel A via shunt trip circuit breaker.
- Branch panels do not have physical space for additional circuit breakers to be added.
- Mechanical equipment located at the ground floor and is served from Panel A.
- All building distribution equipment appears to be from original construction.
- Improvements to the branch circuit distribution was observed. For these improvements, devices such as switches, outlets and raceways is done via surface mount raceway, which is no longer in business.

- A newer Panel was added to the distribution system to serve the telecommunications room, complete with rack mounted UPS, servers, switches, etc.

Lighting and Lighting Control System

- Enclosed rooms such as offices and conference rooms are controlled via on-off toggle switches. A few rooms were retrofitted with occupancy sensors.
- Library stacks are manually controlled on-off via toggle switches. Library stacks are controlled via zones.
- Emergency lighting via bug eyes and combo exit sign bug eye fixtures.

Fire Alarm System

- There is an existing fire alarm control panel that appears to be in very good condition. The fire alarm system provides monitoring of the fire sprinkler system and provides area detection via smoke detectors.
- System consists of manual pull stations, smoke detectors, flow switch, and tamper switch. Notification devices consist of strobes and speaker/strobes.

Low Voltage Systems

- A new telecommunication room was added, with dedicated panel and HVAC system. All connectivity originates from this room.
- Connectivity is via hard wire data drops and wifi.

RECOMMENDATIONS

Utility Service

For pricing purposes, include an electrical service upgrade which will provide sufficient capacity for the elevator addition and HVAC improvements. New service shall be 400Amp, 208/120V, 3phase 4wire. Assume PG&E will allow for a UCD transformer (Underground Commercial Distribution Transformer) located below the sidewalk. Note PG&E will require approval and a 'Special Facility' agreement to allow this type of transformer. Otherwise, if PG&E does not approve the UCD transformer, then a pad mount transformer will be required within the property lines.

Building Distribution

A new 400Amp switchboard/meter/main shall be provided outdoor. The main breaker will be set at 300Amp to allow for PV interconnection. Refer to section C below.

The switchboard shall have feeder breakers as follows:

- Elevator, 150Amp 3phase
- PV Interconnection breaker, 80Amp 3phase
- Dedicated panel 42circuit panel, 150Amp 3phase for general lighting and plug loads
- Dedicated panel 42circuit panel, 60Amp 3phase for server room. Panel will be connected to a shunt trip breaker via EPO.
- Dedicated panel 42circuit panel, 100Amp 3phase panel for HVAC and Domestic Hot Water system

Circuit design will not exceed a maximum of 1,600 volt amperes per 20 ampere, 120 volt circuit for general areas. Branch

circuit design for computer rooms, offices, and administration will not exceed a maximum of 720 volt amperes per 20 ampere, 120 volt circuit. Motors of 1/2 horsepower and larger will be served at 208 volt service, 3 phase, 3 wire + ground. Motors less than 1/2 horsepower will be served at 120 volt service, 1 phase, 2 wire + ground. Surge Protective Devices and Power Conditioners will be specified and installed on all electrical service equipment feeding computer, server, and sensitive electronic equipment loads. All multi-wire branch circuits will be installed with dedicated neutrals. Highly loaded, 20-amp, continuous electrical loads, such as circulation lighting and servers, will have increased wire sizes (i.e.: from #12 to #10) in order to reduce power loss in the wiring.

Separate wires in conduit will be provided for each of the following loads:

Elevators

- 208V, 3 phase, 3 wire + ground, 60 hertz.

Mechanical and Plumbing Systems

- 208V, 3 phase, 3 wire + ground, 60 hertz.
- 208V, 1 phase, 2 wire + ground, 60 hertz.
- 120V, 1 phase, 2 wire + ground, 60 hertz.

Lighting

- 120V, 1 phase, 2 wire + ground, 60 hertz.

General Purpose Receptacles

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Computer Equipment Areas

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Head-ends for Signal Systems (i.e.: BMS, Security, Fire Alarm, Lighting Controls, etc.)

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Floor boxes, similar to Legrand Evolution 4-gang boxes shall be located as follows:

- Qty 3 – Mezzanine Level
- Qty 6 – Main Level
- Qty 2 – Basement Level, provide 'on-grade' type box.

Photovoltaic System

An addressable lighting control system will have the ability for granular control and monitoring of each luminaire and Provide a 22kW PV system on roof complete with (1) string inverters (Solar Edge SE17.3KUS or equivalent) with DC optimizer and Hi-efficiency solar panels (Rec Alpha Pure R series, 400W). Refer to cut sheets.

Lighting and Lighting Control System

Refer to Lighting Exhibits and Cut Sheets for description and qualitative representation of light fixtures. Custom colors and finishes on select fixtures such as the stack mounted luminaires is expected. Lighting quality, including uniformity, foot-candles, and color rendering will be per IES (Illuminating Engineering Society) recommendations.

The lighting control system will be an addressable control system that will have the ability for granular control and monitoring of each luminaire and associated lighting control device, load monitoring, and automatic demand response

(ADR) capability. Addressable lighting controls will be Lutron Athena, with both wireless and wired components.

The addressable lighting control system will be controlled via application based controls, residing on a the cloud, which allows for seamless post occupancy support and integration with the building energy management systems. The lighting control head-end will have capability of control and monitoring of any space excluding electrical and mechanical rooms in a cluster by area or zone and set schedules/presets. Each luminaire or group of luminaires will be controlled and monitored by individually addressable drivers and/or interface devices.

The primary method of controlling interior luminaires while conserving energy in the building will be achieved through the use of occupancy sensors and manual override switches. These devices will be provided in offices, library stacks, support spaces, and storage rooms. Occupancy sensors will be set to "manual on/auto off" in offices and conference rooms; "auto on/auto off" for restrooms and support areas, "auto on/dim/auto off" for library stacks and public areas. Enclosed stairs will also include occupancy sensor controls to reduce the lighting within the stair (by a minimum of 50%) when it is not occupied. There will be no 24/7 emergency lighting. Emergency lighting will be controlled with other lights. Occupancy sensors that control stairs and emergency egress lighting will be bypassed to provide 100% illumination in the event of normal power failure. Additional photosensors will dim luminaires based on available daylighting.

Astronomical time clock controls, occupancy sensors, and/or photosensors will be provided for exterior, site, and landscape lighting applications via the lighting control system. Lighting will automatically turn on or off as appropriate throughout the course of the day. Photosensors will allow dimming based on scheduled times, occupancy sensor control overrides at night, and adjustment based on available daylight levels.

Daylight harvesting will be designed and specified to reduce energy where natural daylight occurs in sufficient levels. Spaces, receiving sufficient, natural sunlight from glazing, will be equipped with a dimmable lighting system to automatically adjust the amount of electric light against available and constantly fluctuating daylight. This continuously dimming system consists of photocells, daylight dimming control modules, and dimmable 0-10VDC electronic drivers for each space.

Fire Alarm System

Provide a new, code compliant addressable Fire Alarm system with voice evacuation

Low Voltage System

One telecommunication room shall be required for the project. Horizontal backbone shall include cable tray within the telecommunication room and exposed locations. J-hooks shall be used above drop ceilings and accessible/concealed locations.

Network drops for wifi will be provided. For pricing assume the following quantity for wifi:

- Qty 2 – Mezzanine
- Qty 4 – Main Level
- Qty 3 - Basement

ELECTRICAL EQUIPMENT

Switchboard

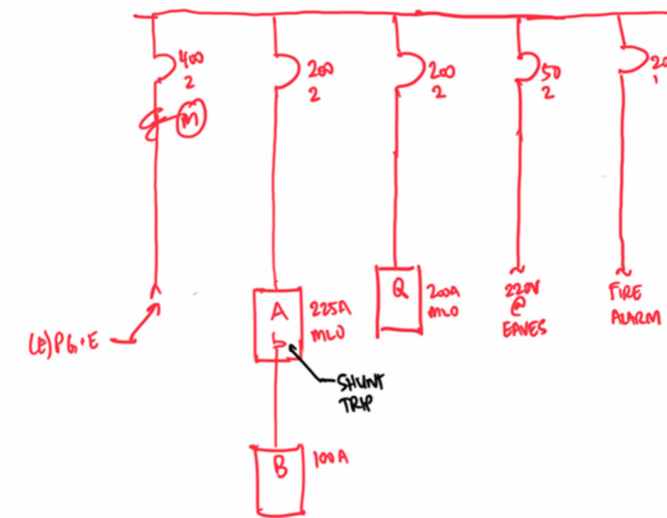
Switchboards will be completely assembled, indoor, free standing, with copper bus bars, full neutral bus, and separate copper ground bus. All bus work will be braced to withstand 36KAIC amperes RMS symmetrical. Short circuit values shall be revisited in future design phase to determine actual ratings for all equipment. Protective devices will be provided with approved barrier between sections and extended load terminals. Protective devices will consist of circuit breakers. Circuit breaker selection will utilize molded case type; be rated for application in their intended enclosure; include solid state tripping with adjustable long time, instantaneous, short time, and ground fault. Additional spare branch feeder breakers will be provided for future and spare capacity. Switchboard will be Eaton Cutler Hammer, Square D, GE, Siemens, or approved equal.

Panelboards

Panelboards shall have door-in-door construction with 42-poles, and copper bussing. Transient Voltage Surge Suppressors shall be used on all panelboards feeding all IT rooms (IDF, MDF, Site Cores, etc). For pricing purposes, 208/120V panelboard bus work will be braced to withstand 22kAIC amperes RMS symmetrical. Proposed: Square D, Eaton Cutler Hammer, or approved

Conduit and Wiring

Conductors will be copper, THHN or THWN-2, with PVC insulation; galvanized rigid steel (GRS) conduit in exterior or exposed interior work up to eight feet above finished floor, and for work embedded in concrete; rigid nonmetallic conduit (PVC) for all underground exterior work; electrical metallic tubing (EMT) for interior concealed work or above eight feet exposed; flexible metal conduit (Greenfield) for interior work in short lengths or liquid tight flexible metal conduit (Sealtight) wherever moisture may be present for the connection of recessed luminaires, motors, separate building structures and any vibrating equipment. MC Cable shall be used in accessible, concealed locations such as above drop ceilings. Where exposed and/or visible, rigid metallic conduits shall be used.



Electrical Figure 1 – Existing Harrison Library Single Line Diagram

SITE ASSESSMENT

Park Branch Library

The following report summarizes the visual and document assessment performed by the architecture and engineering team of the Park Branch Library.

The existing conditions reported, and system descriptions are based on the team's site walk and review of available project data. While existing conditions documentation was provided by the City for the branch, as is typical for a building of this age, information on systems was incomplete and not comprehensive. Where this was the case, our team relied on past experience with similar building types and made reasonable assumptions based on our professional expertise.

The Park Library is located at the northeast corner of 6th and Mission. The one-story building with a partial basement is the renovated composite of several preceding structures. In 1971 the existing structures on the site were merged to form a branch bank for Crocker-Citizens National Bank. The bank renovation was designed by architect Olof Dahlstrand. The building conversion from a bank to a library was later completed in 1991 by Flescher + Foster Architects. Documented history of the existing building includes:

- 1971: Original Crocker-Citizens National Bank mechanical drawings
- 1988: Library renovation drawings by Hall Goodhue Haisley & Barker
- 1991: Library renovation drawings by Flescher + Foster Architects



Site Figure 1: Site Plan

ARCHITECTURAL ASSESSMENT

Park Branch Library

The exterior of the Park Branch Library appears to be in relatively decent shape given the age of the original structure, without any significant observable deficiencies that would result in envelope failure. That being said, the exterior is relatively worn, with faded paint and dated windows. The exterior materials are inconsistent, with a combination of stucco, stonework, and aluminum framed windows. A large portion of the exterior site is given over to substandard parking and vehicular circulation. Non-structural cracking was observed in exterior concrete slabs, ramps, and stairs, and ferrous handrails with deteriorated paint have resulted in rust stains at the post bases.

The interior entry lobby is in fairly good condition, however is a large space that is not easily utilized and lacking in clear organization and wayfinding. Interior finishes such as carpet, paint, and ceiling tiles are worn and somewhat dilapidated. Lighting is of poor quality, served by recessed fluorescent fixtures throughout. In the children's area, paint colors are extremely dated, and finishes and upholstery are garish and inconsistent. Staff areas are generally worn and in need of new finishes.

Of particular note is the subgrade basement space, which extends from underneath the library to a larger series of rooms under the parking lot. Served by noncompliant stairs, the space shows significant signs of repeated water intrusion, and seriously damaged finishes.

Based on our site evaluation we recommend a comprehensive replacement of interior flooring, finishes, lighting, and furniture to address maintenance issues, functionality, and aesthetics. In addition, we recommend the exterior siding and windows are replaced with new siding and code compliant glazing, to provide both a newly sealed code compliant envelope as well as a revitalized appearance.



Architectural Figure 3: Existing Library - Exterior



Architectural Figure 4: Existing Library - Interior

ACCESSIBILITY ASSESSMENT

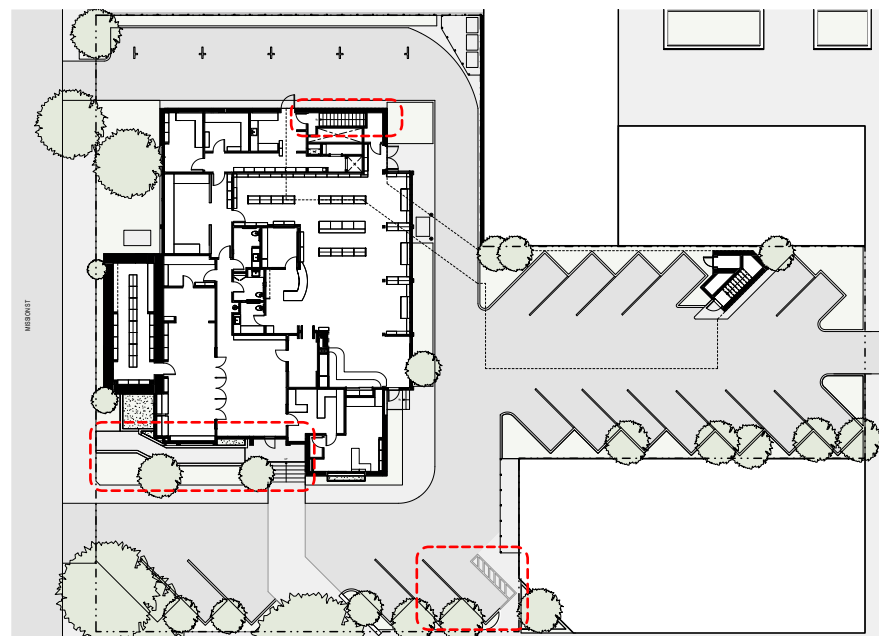
Park Branch Library

A complete CAsp report was prepared by William M. Holl, AIA and Kasavan Architects for the City of Carmel-by-the-Sea, dated September 28, 2018, detailing code compliance deficiencies at several municipal buildings, including the Park Branch Library. Our assessment highlights non-compliant elements of the building that we determined to be a top priority for the renovation and improvement of the library.

At the main entry, several accessibility issues were observed at the main stair and ramp. At the onset, the sidewalk slopes at the bottom of the stairs do not meet the code-minimum cross slope requirements for an accessible landing. However, the stair treads and risers themselves meet code requirements. The adjacent concrete ramp, interrupted by an abrupt turn at the corner of the building with no intermediate landing, does not meet code requirements outlined in the California Building Code (CBC) Chapter 11B, section 405. And handrails for both stairs and ramp were observed to be non-compliant as well.

Another notable accessibility deficiency that was observed relates to the accessible parking. The accessible parking stall located along the main entry drive aisle falls short of code-required clearances for angled parking as outlined in CBC Chapter 11B, section 502. Further, a van accessible parking stall is not provided as required by CBC Chapter 11B, section 208.

The interior of the building had a limited number of notable deficiencies, with the stairs leading to the basement area and mechanical rooms were found to be non-compliant.



Accessible Figure 3: Existing Library - Main Level

STRUCTURAL ASSESSMENT

Park Branch Library

INTRODUCTION

The building is a one-story wood framed building, approximately 6,000 square feet, with a partial basement extending beyond the building footprint towards east parking lot. The building was originally built in 1971.

Gravity Load Carrying System

Roof:

- Wood sheathing on 2x10 wood joists spaced at 24" O.C.. Joists are supported by 4x14 wood beams and glulam beams. Beams are supported by wood and steel posts on the interior and concrete walls on the perimeter.

Walls:

- 2x wood stud at 16" O.C. and 8" concrete walls at stone veneer walls.

Foundation:

- Conventional concrete wall foundations.
- Concrete slab on grade basement floor.

Lateral Load Carrying System:

- Concrete walls.

List of Available Documents

- Drawing prepared by Hall Goodhue Haisley & Barker dated 1/26/88.

Site Visit

BASE Design visited the site on February 24, 2023. The main purpose of the site visit was to gather the following data and to evaluate the physical conditions of the structures.

1. Type and materials of building and foundation construction.
2. Type of construction at roofs, floors, and walls.
3. Type of finishes.
4. Presence and frequency of shear panels.
5. Visible cracks in superstructure and foundation.
6. Decay of structural elements.

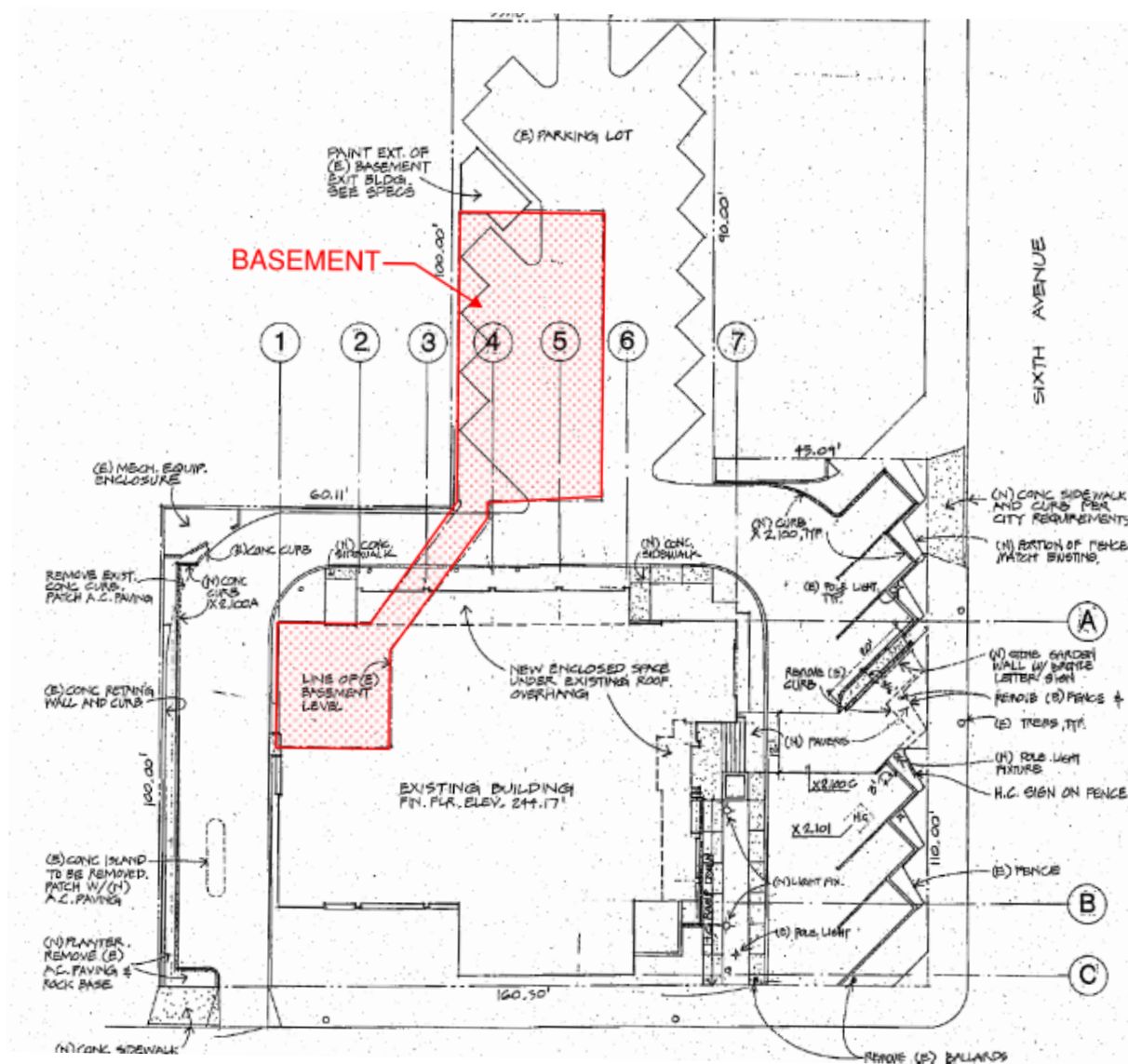
During the site visit, the building was examined for evidence of weather decay, cracking or settlement. Finishes were not removed and therefore, identification of structural conditions hidden by architectural finishes or below existing grade was not performed.

Site Observations

The existing building appeared to be in relatively good condition. There were no major signs of deterioration observed. Due to limited availability of existing structural drawings, existing main structural elements could not be verified in field.

RECOMMENDATIONS

The original building was built in 1971. Since the original construction, it appears that there have not been any seismic upgrades to the building. Today's building codes are considerably more stringent with regard to seismic design than those in effect when the building was constructed. We recommend implementing seismic upgrades as part of any future renovation work.

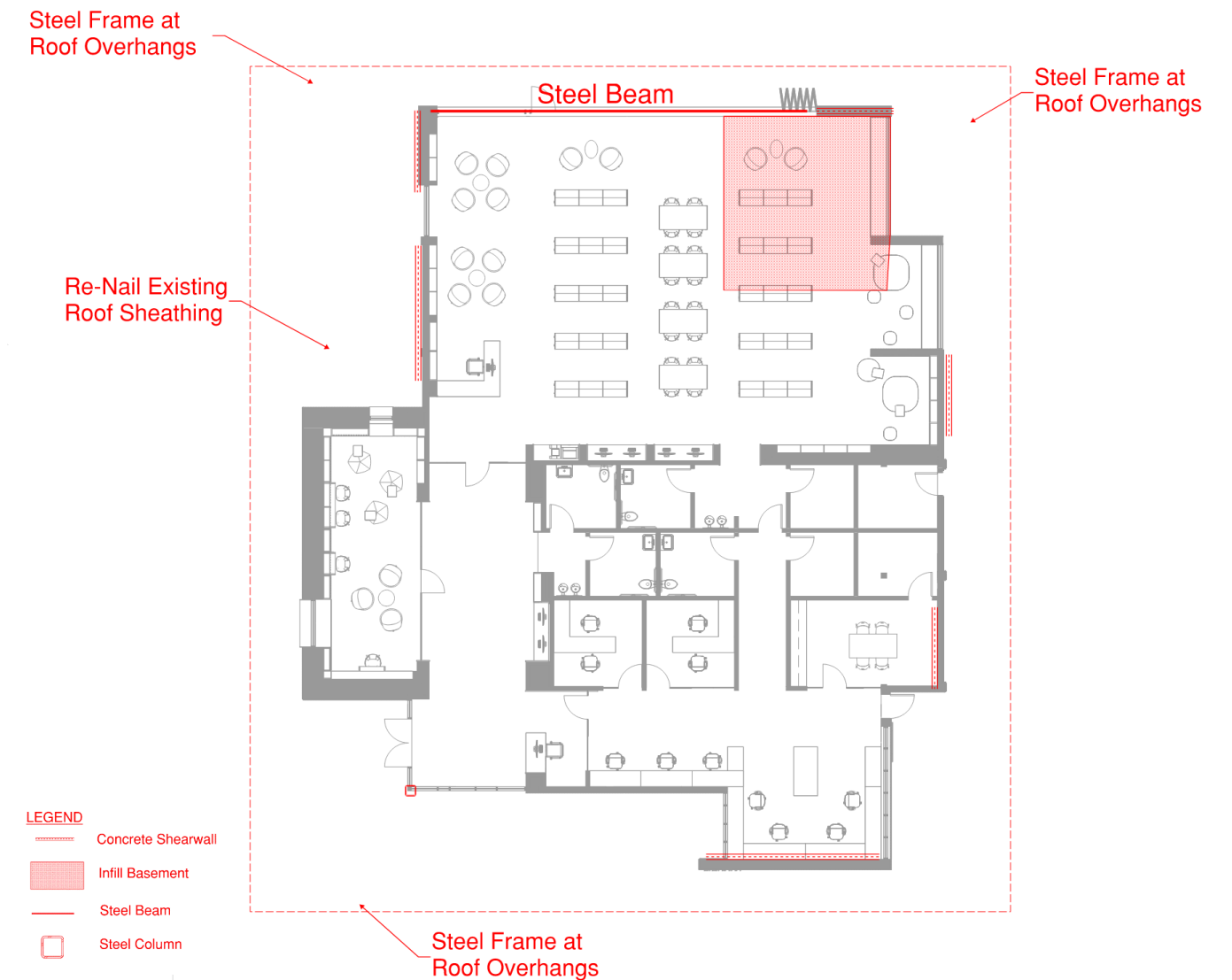


Structural Figure 6: Building Plan

Proposed renovations will require alterations to both gravity and lateral elements of the existing building. New concrete shear walls and steel framing will be required.

This report includes a qualitative (visual) evaluation of an existing building. Obvious gravity or seismic deficiencies that are identified visually during our site visit or on available drawings are identified and documented in this report.

Users of this report are advised that deficiencies may exist in the structure that were not observed in this limited evaluation. Our services have consisted of providing professional opinions, conclusions, and recommendations based on generally accepted structural engineering principles and practices.



Structural Figure 7: Server Room Condensing Unit

MECHANICAL ASSESSMENT

Park Branch Library

INTRODUCTION

The Park Branch Library is heated and ventilated by four forced air furnaces air handling units, and a central return air fan. The building's furnaces and central return fan are located within the building's mechanical room. Each furnace air handling unit is identical, further investigation of all model numbers will be required to confirm. Furnaces serving the Park Branch are lower capacity than those serving the Harrison Memorial Library, but the model family is similar.

Furnaces F-1 and F-2 serve dedicated risers, each are supply air into a dedicated duct riser above the unit. Furnaces F-3 and F-4 are twinned, the pair appear to operate as a single unit. Furnaces F-3 and F-4 discharge supply air into a common duct riser located above the units.

Furnace F-1: Carrier 58CTY-090

- High Heating Capacity: 71,000 BTU/HR
- Low Heating Capacity: 47,000 BTU/HR
- High Airflow @ 1.0inWC: 915 CFM
- Low Airflow @ 1.0inWC: 370 CFM
- Efficiency (AFUE): 80%
- Power: 115V / MUA: 10.2amp / MCOP: 20amp

Furnace F-2: Carrier 58CTY-090

- High Heating Capacity: 71,000 BTU/HR
- Low Heating Capacity: 47,000 BTU/HR
- High Airflow @ 1.0inWC: 915 CFM
- Low Airflow @ 1.0inWC: 370 CFM
- Efficiency (AFUE): 80%
- Power: 115V / MUA: 10.2amp / MCOP: 20amp

Furnace F-3: Carrier 58CTY-090

- High Heating Capacity: 71,000 BTU/HR
- Low Heating Capacity: 47,000 BTU/HR
- High Airflow @ 1.0inWC: 915 CFM
- Low Airflow @ 1.0inWC: 370 CFM
- Efficiency (AFUE): 80%
- Power: 115V / MUA: 10.2amp / MCOP: 20amp

Furnace F-4: Carrier 58CTY-090

- High Heating Capacity: 71,000 BTU/HR
- Low Heating Capacity: 47,000 BTU/HR
- High Airflow @ 1.0inWC: 915 CFM
- Low Airflow @ 1.0inWC: 370 CFM
- Efficiency (AFUE): 80%
- Power: 115V / MUA: 10.2amp / MCOP: 20amp

The existing furnaces appear to be in sufficient operating condition. Based on a review of available project materials, it is believed that the furnaces were installed within the last 10 years. Furnaces appear to be well operating and maintained; furnaces should have at least 10 years of useful life remaining. Each furnace discharges air into a ducted riser. Duct connections appear clean. All four furnaces sit above a common intake plenum. This plenum is used to mix return air with fresh air. This mixed air is sucked in by the furnaces, heated, and supplied to the occupied parts of the building. The plenum is a custom construction, originally built in 1971 when the building HVAC was originally constructed. The plenum has been retrofit to include actuated control dampers. These dampers are intended to modulate open and closed, allowing the unit to operate in mixed air mode, 100% recirculation mode, or 100% outdoor air mode. It is unclear



Structural Figure 8: Basement Entrance



Structural Figure 9: Basement

if these dampers still function as intended. Based on the age of the actuators, they are likely at the end of their useful life.

The furnace's mixed air plenum is fed air from two sources, an outdoor air connection and a return air connection. Outdoor air is fed directly from the outdoors, a duct connects the mixed air plenum to an outdoor intake louver on the building's exterior facade. Return air is ducted to the mixed air plenum from the buildings return air fan. The return air fan is located within the building's basement mechanical room. This fan draws return air from various points within the occupied portions of the building. Return air inlets are integrated into interior, with return air grills at the base of bench seating in some areas. The return air fans discharge is split into two air streams, one air stream is exhaust out the building, and the second air stream is sent to the furnace's mixed air plenum. A manual balancing damper is utilized to balance airflows at the divergence. Based on a visual inspection of the age, the return air fan is likely approaching the end of its useful life.

Air is supplied from the furnaces to the first floor and to the regularly occupied areas of the basement. The first floor ceiling is mostly accessible through accessible ceiling tile. Like the Harrison branch, the stacks and reading areas of the Park Branch Library are not mechanically cooled. Instead these spaces rely on outdoor air supplied from the furnaces and Carmel's cool coastal climate. And similar to the Harrison branch, the Park Branch Library's computer / IDF room has been provided with a dedicated system. The Park Branch computer room heating / cooling system consists of an outdoor pad mounted heat pump air handling unit and associated distribution ductwork. The heat pump air handling unit provides heating and cooling. Based on visual inspection this unit does not appear to be properly balanced. When operating the unit appears to be experiencing significant vibration. Improperly balanced equipment will shorten equipment's anticipated useful life. Due to the style, type, and assumed age the existing heat pump is not recommended for re-use.

Packaged Unit AHU-1: York B2HZ024A06A

- High Heating Capacity: 27,000 BTU/HR
- Cooling Heating Capacity: 24,000 BTU/HR
- Max External Static Pressure @ 0.5inWC
- Power: 208V / RLA: 17.6 / MCOP: 20amp MCOP

Supply air and return air are ducted from the outdoor unit into the building. Exterior ductwork has been coated for exterior application. Due to exposure, exterior ductwork is not recommended for reuse.

Restrooms are exhausted by dedicated ceiling mounted exhaust fans located within restrooms. Some of these exhaust fans appear original and are reaching the end of their useful life expectancy.

RECOMMENDATIONS

The Basis of Design HVAC system proposed for the renovation of the Park Branch Library is air source heat pumps serving indoor fan coil units and a radiant floor. Locate heat pumps, thermal storage tanks, and hydronic pumps within the Mechanical Enclosure, as indicated on the site plan.

Heat Pumps

Provide (qty.2) single zone variable refrigerant volume (VRF) heat pumps – similar to a Daikin VRV-S Heat Pumps (HP-1 and HP-2). These heat pumps shall provide heated or cooled refrigerant to indoor fan coil units.

Additionally, within the Mechanical Enclosure provide (qty.2) high temperature heat pumps, similar to Sanden CO2 heat pumps (HP-3 and HP-4). Provide (qty.2) 100-gallon thermal storage tanks (ST-1 and ST-2). ST-1 provides heating hot water to the buildings radiant floor. ST-2 provides domestic hot water to the building.

Radiant Heating

The wood flooring limited to the Children's Reading Room shall be provided with integrated radiant tubing, similar to a Warmboard product. Less than 2,400 square feet of Warmboard product anticipated. Provide radiant tubing within the Children's Rooms wood floor. Route radiant tubing to a common manifold in a wall. From the manifold provide a set of hot water supply and return pipes to the heating hot water storage tank ST-1. Provide a dedicated circulating pump to serve the heating hot water loop. The radiant wood floor shall be enabled whenever the building is occupied to maintain comfort and modulated by an IR thermostat.

Fan Coil Units

Within the building, above the Vestibule provide (qty.2) 100% Outdoor Air VRF fan coil units, similar to a Daikin" 4-Ton 100% Outdoor Air Processing Unit". Each 100% outdoor air unit (FCU-1, and FCU-2) conditions a different area of the building. Provide a ducted connection between intake of each unit to a dedicated mixing boxes. Provide (qty.2) modulating mixing boxes, similar to Mirco Metal Belimo Actuated 2,000 CFM Mixing Boxes (MXB-1 and MXB-2). MXB-1 serves FCU-1, located MXB-1 over the Storage Room. MXB-2 serves FCU-2. Locate MXB-2 over the Custodial Room. Provide a ducted connection between intake of each mixing box to a common outdoor air intake louver. Suspend each fan coil unit in the ceiling space above the Vestibule. Box out each fan coil unit in an acoustical enclosure. Provide an acoustical intake silencer on the return of each fan coil unit.

Mixing Box MXB-1

FCU-1 supplies heated and cooled air to the Children's room. Duct from the discharge of FCU-1 to side wall supply diffusers in the Children's room. MXB-1 serves FCU-1. MXB-1 requires three duct connections, outdoor air intake; return air intake; and mixed air discharge. Connect the mixed air discharge to FCU-1. Provide an intake silencer before connecting return ductwork to MXB-1. Route from the outdoor air intake to an outdoor air intake louver located above the Electrical Room.

Mixing Box MVB-2

FCU-2 supplies heated and cooled air to the Teen's Room, Lobby, Offices, Staff Workroom, and Staff Lounge. This FCU operates as a single zone and sources heated and cooled refrigerant from HP-2. In each zone served by FCU-2 provide linear slot diffusers with (qty.1) 1" linear slots.

Well integrate slot diffusers with architectural wood slot ceiling, aligning HVAC slots with architectural wood slots. Provide an open plenum return. MXB-2 serves FCU-2. MXB-2 requires three connections, outdoor air intake; return air intake; and mixed air discharge. Connect the mixed air discharge to FCU-2. Provide an intake silencer before connecting return ductwork to MXB-2. Route from the outdoor air intake to an outdoor air intake louver located above the Electrical Room.

Window Actuators

The building shall be provided with a mechanically actuated glazing system, similar to a Window Master system. Actuated

PLUMBING ASSESSMENT

Park Branch Library

INTRODUCTION

The following Plumbing services are provided to the building:

Domestic Cold Water

- 1-1/2" water meter in vault at south of building (along 6th Ave).
- 1" water line connected to main at the corridor beneath the parking lot.

Domestic Hot Water

- A tank-type electric water is installed on a shelf within the Janitor Closet on the Ground Floor. A circulation pump is included but no expansion tank. (The lack of expansion tank can result in high pressure spikes as a result of thermal expansion.) T&P relief piping and drain from pan routed to mop sink beneath unit.

Natural Gas

- Meter installed at the building North, routed below parking lot to serve backup generator and HVAC equipment.

Sanitary Sewer

- Sewer lateral at east of building beneath parking lot.
- 1988 Drawings indicate a 3" lateral size in ceiling of Basement.
- Drawings explicitly call out 1/8" slope minimum which suggests that the existing lateral is constrained by a shallow invert elevation. (1/8" per ft slope is only technically allowed by Plumbing Code for 4" pipes and larger.

Storm Water

- Gutters and downspouts that are routed to grade and terminate below grade piping that (presumably) connects to the site storm system.
- The basement has a history of flooding and moisture intrusion even though there have been several basement renovations intended to solve the problem. A sump pump and been installed to presumably prevent standing water but does not address the larger issue of moisture intrusion and resulting dampness.

Fire Protection

- Modifications and expansion of the sprinklers noted in 1988 Drawings that appear to bring the building is sprinklered: 3" fire service and fire department connection at south of building along 6th Ave. Enters basement to extend to rest of building.
- (What appears to be) a pre-action assembly is provided outside the building beside the outdoor HVAC unit. Not clear whether the system is still functional.
- Sprinkler types consist of upright, concealed, and pendant type with cages for protection at sprinklers at low ceilings in the Basement and stairwells.
- 1988 drawings indicate hydrant data: 118 psi static and 66 psi static.
- Drawings emphasize that system is sized for a Light Hazard Occupancy which limits the height of the stacks

glazing shall be limited to the skylights above the Lobby. Skylights shall be electronically actuated by a common HVAC / skylight control system. Provide contact sensors within the skylight frame. The HVAC system shall command skylights open/closed based on outdoor air conditions.

Additionally, provide contact sensors within the frame of the Operable Glass Wall frame. The building's HVAC control system shall disable use of FCU-1 when the sensors indicates the Operable Glass Wall is open.

Exhaust Fans

Each restroom, the janitors closet and the staff lounge shall be provided with a dedicated ceiling recess exhaust fan (qty.6). Route discharge ductwork to roof vent caps.

Relief Hood

The building shall maintain a positive pressure relationship to the outdoors. On the roof, above the lobby provide a barometric relief hood. Set the relief hood to 0.1inWC.

IT/Electrical Room Cooling

The building's Telecom and Electrical rooms shall each be provided with a dedicated cooling only split system, similar to a Daikin Split System. Provide (qty.2) Daikin Outdoor Units, AC-1 and AC-2, in the Mechanical Enclosure adjacent to the buildings heating and cooling heat pumps. Above the door in the Telecom and Electrical room provide wall hung fan coil units, FCU-3 and FCU-4. Route refrigerant from each fan coil unit to its respective outdoor AC units.

Route condensate from all (qty.2) fan coil units to the mop sink located in the Custodian's room.

Provide a central building management system which integrates all the HVAC equipment identified in the equipment list below. The integrator shall provide remote scheduling, metering, and automatic fault detection diagnostics.

HVAC EQUIPMENT LIST:

Storage Tanks:

ST-1: AO Smith, Outdoor Rated, 100 Gallon, Insulated

ST-2: AO Smith, Outdoor Rated, 100 Gallon, Insulated

Radiant:

Zone 1: 2,400 SQFT of Warmboard Product

Mixing Boxes:

MXB-1: MicroMetl VRF Mixing Box TOSH-CAR 6-8T

MXB-2: MicroMetl VRF Mixing Box TOSH-CAR 6-8T

Window Actuator:

Lobby Skylights: Window Master

Operable Glass Wall Frame Contact Sensor: Window Master

Relief Hood:

HD-1: Greenheck WRH 2'x2'x2'

Exhaust Fans:

EF-1: Panasonic FV-30VQ3

EF-2: Panasonic FV-30VQ3

EF-3: Panasonic FV-30VQ3

EF-4: Panasonic FV-30VQ3

EF-5: Panasonic FV-30VQ3

EF-6: Range Hood

Fan Coil Units:

FCU-1: Daikin FXMQ48MFVJU

FCU-2: Daikin FXMQ48MFVJU

IT/Electrical Cooling

AC-1: Samsung

AC018BNADCH/AA

AC-2: Samsung

AC018BNADCH/AA

FCU-3: Samsung

AC018BXADCH/AA

FCU-4 Samsung

AC018BXADCH/AA

Heat Pumps:

HP-1: Daikin RXYMQ48PVJU

HP-2: Daikin RXYMQ48PVJU

HP-3: Sanden SANCO2 v4

HP-4: Sanden SANCO2 v4

that are allowable by code. (likely constrained by the existing 3" service that is relatively small for a this type of building.)

The building includes the following groups of fixtures:

(3) Adjacent Restrooms at Ground Floor

- Floor-mount gravity flush toilet
- Drop-in vitreous china lavatory basin with manual faucet
- Drinking fountain and bottle filler (appear to be relatively new)

(1) Restroom Group in Basement underneath the parking lot (not in use)

- Floor-mount gravity flush toilets
- Wall mounted vitreous china lavatories with manual hot/cold faucets

(1) Staff Break Room

- Small stainless steel top-mount sink with manual goose faucet

(2) Janitor Closet (Ground floor and Basement)

- Floor mount mop sink with manual hot/cold faucets with integrated vacuum breaker

RECOMMENDATIONS

The Basis of Design proposed for the renovation of the Park Branch Library includes providing new plumbing systems and fixtures to serve the first-floor restrooms.

Domestic Cold Water (CW)

The new programming requires approximately 40gpm at 50-60psi to serve the (4) new flushometer toilets and sink fixtures. The existing site is served by a 1" cold water main and 1-1/2" meter. The existing CW main will be required to be upgraded to meet the new demands with a 2" CW point of connection. The existing 1-1/2" meter will be adequate to serve the new demands. The pipe shall be upsized at the existing point of connection location to the building.

Domestic Hot Water

The existing tank-type electric water heater shall be replaced by the heat pump water heaters serving the buildings radiant slab. As indicated in the HVAC section, (2) 4.5kW CO2 heat pumps, and (2) 100-gallon storage tanks will be provided to serve the combination heating hot water and domestic hot water systems. A recirculating hot water pump and expansion tank shall be provided for the domestic hot water system. The hot water equipment will be located in the mechanical area outdoors. Space for weather-proof enclosure shall be provided for the recirculating pump and expansion tank.

Heat pumps and tanks will be included as a part of the mechanical scope and cost.

Natural Gas (G)

Natural gas system serving the backup generator shall remain. All other natural gas connections and piping shall be demolished back to the main.

Sanitary Waste & Vents

It is recommended that the sewer lateral be scoped as a part of the new construction scope. Pending the results of the video scope and the condition of the existing sewer lateral, the sewer lateral may need to be replaced between the building and the main in the street if the condition is unacceptable. The cost estimate should include a video scope survey report and an "add-alternate" price for replacement of the sewer lateral. All plumbing fixtures shall connect to a new 4" sewer connection.

All new plumbing fixtures shall be provided with new vents. Vents shall connect and tie into existing vents-through-roof. New penetrations through roof shall be avoided.

Storm Drainage

(6) Floor drains and a sump pump shall be provided at the basement level to mitigate the flooding issues seen by the building. All floor drains shall be routed to the sump pump at 2% slope. Installation of the floor drains will include saw-cutting the existing slab. The sump pump shall be a 3' diameter, 12' deep, 5 HP duplex system and connect directly to the storm drain system. Because the new design includes severing the basement from the original building, a new storm drain point of connection will be required to discharge the sump pump into. A new 4" storm drain connection shall be provided and coordinated with civil and site design. An electrical connection for the sump pump including a disconnect and a panel shall be provided as part of the scope of work. The new electrical connection will need to be coordinated with the existing electrical service.

Plumbing Fixtures

All new plumbing fixtures shall be provided as required on architectural plans.

Fire Protection

The entire existing building appears to have sprinklers installed throughout. Storage will be limited to shelving no taller than 8 ft which represents a Light Hazard Classification throughout the building. All sprinkler branches will have to be modified to suit the new architectural layout with new sprinkler heads throughout.

PLUMBING EQUIPMENT LIST:

- Plumbing Fixtures: All new plumbing fixtures shall be provided as required on architectural plans.
- (1) 2" CW POC
- (1) Sanitary sewer video scope & report
- (1) 4" SS POC
- *HW Storage Tank specified in HVAC Equipment List
- *HW Heat Pumps specified in HVAC Equipment List
- (1) HW Expansion tank
- (1) HW Recirc Pump
- (6) 3" Floor drains
- (1) 3' Dia. x 12' Deep Fiberglass Sump basin
- (2) Sump pumps (duplex system) 2.5 HP each
- (1) Sump pump electrical control panel
- Plumbing Fixtures (per Arch Plans)
- Add Alternate: sewer lateral replacement

ELECTRICAL ASSESSMENT

Park Branch Library

A site visit was performed February 4, 2023 during open hours to survey and evaluate the existing electrical systems for adequacy and feasibility of re-use and/or needs for system upgrades for the planned renovation at Park Branch Library.

- The existing service size is 400Amp, 208/120V, 3phase, 4wire located in the basement. Given the extent of the planned renovation and age of the equipment, we recommend replacement
- The electrical distribution equipment appears to be from the original construction. While equipment appears to be maintained, the equipment is beyond manufacturers recommended life. For the building renovation, we recommend complete replacement of the distribution system.

EXISTING CONDITIONS

Utility Service

- Existing electrical service for the building is 400Amp, 120/208V, 3phase, 4wire. Based on record drawings, it appears service is derived from a PG&E secondary box located along 6th Avenue. If constructed today, PG&E will require that a 3phase service of this capacity will require a pad mount transformer within the property lines.
- The switchboard and branch panels appear to be in satisfactory working conditions. The below grade installation of the switchboard does not have a housekeeping pad and lacks a 'drip-loop' section that PG&E requires for below grade installations. A drip-loop section prevents potential water intrusion from the service conduits.

Building Distribution

The service enclosure has the following breakers:

- 400Amp – Main circuit breaker with a surge protection device
- 150Amp – Panel A located in closet adjacent to office spaces
- 150Amp – Panel B
- 150Amp – Panel C (dedicated for mechanical equipment)
- 100Amp – Panel D located at the east end of the basement/tunnel

Park Branch Library panels also appear to be in satisfactory condition, but do not have many spares or spaces for adding circuits.

A 14kW natural gas generator was observed, and appears to have been installed May 2022. The generator is providing standby power for a sump pump.

Lighting and Lighting Control System

- Enclosed rooms such as offices and conference rooms are controlled via on-off toggle switches. A few rooms were retrofitted with occupancy sensors.
- Library stacks are manually controlled on-off via toggle switches. Library stacks are controlled via zones.



Electrical Figure 2 – Library Stacks and Panel

- Emergency lighting via bug eyes and combo exit sign bug eye fixtures.

Fire Alarm System

- There is an existing fire alarm control panel that appears to be in very good condition. The fire alarm system provides monitoring of the fire sprinkler system and provides area detection via smoke detectors.
- System consists of manual pull stations, smoke detectors, flow switch, and tamper switch. Notification devices consist of strobes and speaker/strobes.

Low Voltage Systems

- Telcom services terminate a telecom backboard located adjacent to the existing switchboard in the basement.
- Connectivity is via hard wire data drops and wifi.

RECOMMENDATIONS

Utility Service

Include an electrical service upgrade which will provide sufficient capacity for the planned improvements. New service shall be 600Amp, 208/120V, 3phase 4wire. Provide a new pad-mounted PG&E transformer, refer to Figure 6.

Building Distribution

A new 600Amp switchboard/meter/main shall be provided in a dedicated electrical room. The main breaker will be set at 500Amp to allow for PV interconnection. Refer to section C below.

- The switchboard shall have feeder breakers as follows:
- Lighting Panel, 100Amp 3phase
- Receptacle Panel, 225Amp 3phase
- Dedicated 100Amp 3phase panel for Network equipment
- PV Interconnection breaker, xxAmp 3phase
- 90Amp 1phase for existing generator connection

Circuit design will not exceed a maximum of 1,600 volt amperes per 20 ampere, 120 volt circuit for general areas. Branch circuit design for computer rooms, offices, and administration will not exceed a maximum of 720 volt amperes per 20 ampere, 120 volt circuit. Motors of 1/2 horsepower and larger will be served at 208 volt service, 3 phase, 3 wire + ground. Motors less than 1/2 horsepower will be served at 120 volt service, 1 phase, 2 wire + ground. Surge Protective Devices and Power Conditioners will be specified and installed on all electrical service equipment feeding computer, server, and sensitive electronic equipment loads. All multi-wire branch circuits will be installed with dedicated neutrals. Highly loaded, 20-amp, continuous electrical loads, such as circulation lighting and servers, will have increased wire sizes (i.e.: from #12 to #10) in order to reduce power loss in the wiring.

Separate wires in conduit will be provided for each of the following loads:

Elevators:

- 208V, 3 phase, 3 wire + ground, 60 hertz.

Mechanical and Plumbing Systems:

- 208V, 3 phase, 3 wire + ground, 60 hertz.
- 208V, 1 phase, 2 wire + ground, 60 hertz.
- 120V, 1 phase, 2 wire + ground, 60 hertz.

Lighting:

- 120V, 1 phase, 2 wire + ground, 60 hertz.

General Purpose Receptacles:

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Computer Equipment Areas:

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Head-ends for Signal Systems (i.e.: BMS, Security, Fire Alarm, Lighting Controls, etc.):

- 120V, 1 phase, 2 wire + ground, 60 hertz.

Floor boxes, similar to Legrand Evolution 4-gang boxes shall be located as follows:

Qty 3 – Mezzanine Level

Qty 6 – Main Level

Qty 2 – Basement Level, provide 'on-grade' type box

Photovoltaic System

Provide a 69kW PV system on roof complete with (4) string inverters (Solar Edge SE17.3KUS or equivalent) with DC optimizer and Hi-efficiency solar panels (Rec Alpha Pure R series, 400W). Refer to cut sheets.

Lightning and Lightning Control System

Refer to Lighting Exhibits and Cut Sheets for description and qualitative representation of light fixtures. Custom colors and finishes on select fixtures such as the stack mounted luminaires is expected. Lighting quality, including uniformity, foot-candles, and color rendering will be per IES (Illuminating Engineering Society) recommendations.

The lighting control system will be an addressable control system that will have the ability for granular control and monitoring of each luminaire and associated lighting control device, load monitoring, and automatic demand response (ADR) capability.

Addressable lighting controls will be Lutron Athena, with both wireless and wired components. The addressable lighting control system will be controlled via application based controls, residing on a the cloud, which allows for seamless post occupancy support and integration with the building energy management systems. The lighting control headend will have capability of control and monitoring of any space excluding electrical and mechanical rooms in a cluster by area or zone and set schedules/presets. Each luminaire or group of luminaires will be controlled and monitored by individually addressable drivers and/or interface devices.

The primary method of controlling interior luminaires while conserving energy in the building will be achieved through the use of occupancy sensors and manual override switches. These devices will be provided in offices, library stacks, support spaces, and storage rooms. Occupancy sensors will be set to "manual on/auto off" in offices and conference rooms; "auto on/auto off" for restrooms and support areas, "auto on/dim/auto off" for library stacks and public areas. Enclosed stairs will also include occupancy sensor controls to reduce the lighting within the stair (by a minimum of 50%) when it is not occupied. There will be no 24/7 emergency lighting. Emergency lighting will be controlled with other lights. Occupancy sensors that control stairs and emergency egress lighting will be bypassed to provide 100% illumination in the event of normal power failure. Additional photosensors will dim luminaires based on available daylighting.

Astronomical time clock controls, occupancy sensors, and/or photosensors will be provided for exterior, site, and landscape lighting applications via the lighting control system. Lighting will automatically turn on or off as appropriate throughout the course of the day. Photosensors will allow dimming based on scheduled times, occupancy sensor control overrides at night, and adjustment based on available daylight levels.

Daylight harvesting will be designed and specified to reduce energy where natural daylight occurs in sufficient levels. Spaces, receiving sufficient, natural sunlight from glazing, will be equipped with a dimmable lighting system to automatically adjust the amount of electric light against available and constantly fluctuating daylight. This continuously dimming system consists of photocells, daylight dimming control modules, and dimmable 0-10VDC electronic drivers for each space.

Fire Alarm System

Provide a new, code compliant addressable Fire Alarm system with voice evacuation.

Low Voltage Systems

One telecommunication room shall be required for the project. Horizontal backbone shall include cable tray within the telecommunication room and exposed locations. J-hooks shall be used above drop ceilings and accessible/concealed locations.

Network drops for wifi will be provided. For pricing assume Qty 8 network drops for WAPs

Switchboard

Switchboards will be completely assembled, indoor, free standing, with copper bus bars, full neutral bus, and separate copper ground bus. All bus work will be braced to withstand 36KAIC amperes RMS symmetrical. Short circuit values shall be revisited in future design phase to determine actual ratings for all equipment. Protective devices will be provided with approved barrier between sections and extended load terminals. Protective devices will consist of circuit breakers. Circuit breaker selection will utilize molded case type; be rated for application in their intended enclosure; include solid-state tripping with adjustable long time, instantaneous, short time, and ground fault. Additional spare branch feeder breakers will be provided for future and spare capacity. Switchboard will be Eaton Cutler Hammer, Square D, GE, Siemens, or approved equal.

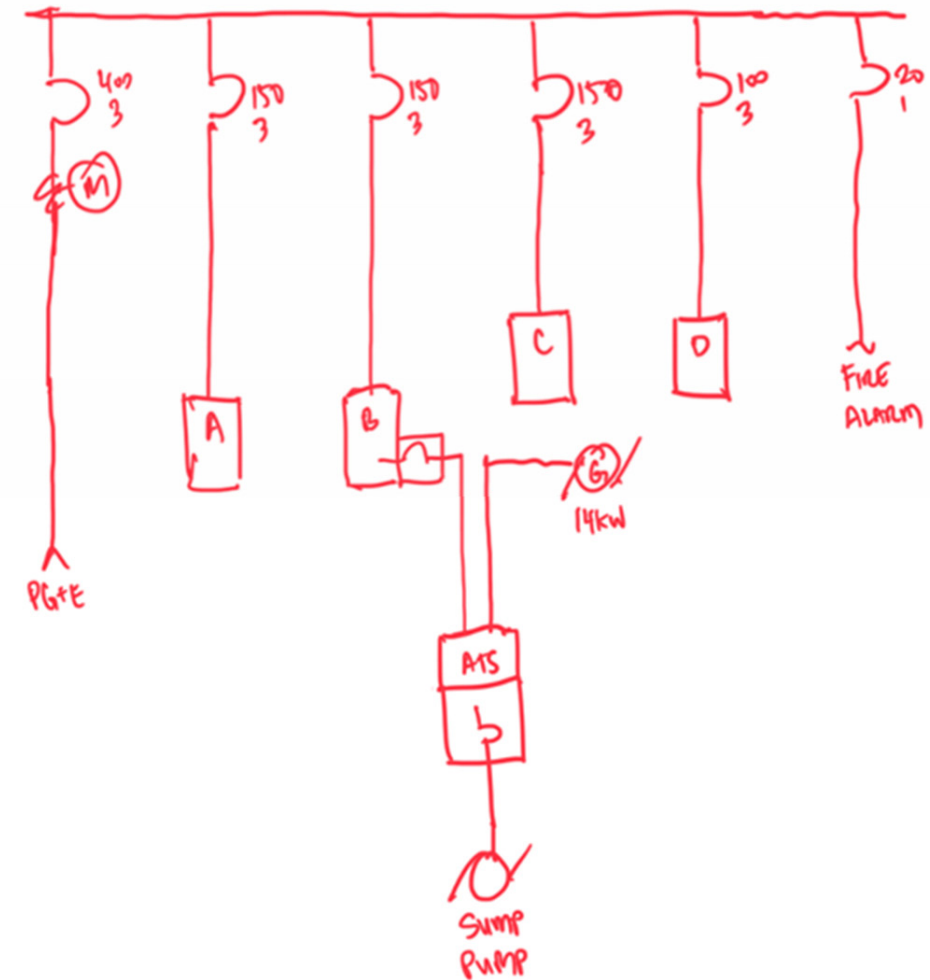
Panelboards

Panelboards shall have door-in-door construction with 42-poles, and copper bussing. Transient Voltage Surge Suppressors shall be used on all panelboards feeding all IT rooms (IDF, MDF, Site Cores, etc). For pricing purposes, 208/120V panelboard bus work will be braced to withstand 22kAIC amperes RMS symmetrical.

Proposed: Square D, Eaton Cutler Hammer, or approved.

Conduit and Wiring

Conductors will be copper, THHN or THWN-2, with PVC insulation; galvanized rigid steel (GRS) conduit in exterior or exposed interior work up to eight feet above finished floor, and for work embedded in concrete; rigid nonmetallic conduit (PVC) for all underground exterior work; electrical metallic tubing (EMT) for interior concealed work or above eight feet exposed; flexible metal conduit (Greenfield) for interior work in short lengths or liquid tight flexible metal conduit (Sealtight) wherever moisture may be present for the connection of recessed luminaires, motors, separate building structures and any vibrating equipment. MC Cable shall be used in accessible, concealed locations such as above drop ceilings. Where exposed and/or visible, rigid metallic conduits shall be used.



Electrical Figure 3 – Park Branch Library Single Line Diagram

HARRISON MEMORIAL LIBRARY CONCEPTUAL DESIGN II.





CONCEPTUAL DESIGN SUMMARY

Harrison Memorial Library

With such a prominent presence in the heart of Carmel-by-the-Sea and its storied history, our conceptual design for the Harrison Memorial Library required a careful and thoughtful approach. First, we evaluated the building and its surrounding site, observing its current conditions and public access from each street. We then looked at the existing library's program and space allocation, reviewing the relationships and adjacencies between the various library spaces.

At the conclusion of our initial project assessment, conversations with Carmel Public Library and the Carmel Public Library Foundation provided additional feedback as our design process was underway. Through those early discussions, key library programs from both the Harrison Memorial Library and the Park Branch Library were identified for potential relocation as we began to determine alternatives for more efficient programmatic layouts that also addressed the consolidation of the children and teen spaces, moving the teen reading area out of the Harrison Memorial Library basement and into the Park Branch Library, while moving the local history spaces from the Park Branch Library into the west wing of the Harrison Memorial Library. Finally, deficiencies with accessibility throughout the various floor levels were addressed through several strategies. By raising the entry lobby and mezzanine floor and placing the primary stairs with a new elevator in a centralized location, simplified and code compliant access to each library level is provided.

Programmatically, the Harrison Memorial Library has also been simplified by reorganizing the basement level exclusively for staff and support spaces, while the relocation of the Gathering Place to the mezzanine opens up the entirety of the west wing for the Local History Room, providing the historic collections a notable presence. The remainder of the library is largely left intact, receiving only fine-tuned touch ups to its finishes to help brighten up the large existing main areas such as the entry lobby and the main reading room. A key strategy for the improvement of these main spaces was the focus on the removal of paint from the existing wood beams and ceilings, re-staining the historic structure, and letting the exposed woodwork shine, providing a rich and warm atmosphere throughout the library. Simple and elegant cylindrical light fixtures replace the clunky and outdated fluorescent lights, lining the library ceilings and maintaining the grandeur of the exposed wood structure and ceilings.

Inspired by the beautiful and rugged coastline surrounding Carmel-by-the-Sea, with its fog-covered cliffs, sandy beaches, and vast landscape, our material palette selection captures the region's natural tones. Wood flooring in the main entrance lobby and warm carpet tones throughout the library reflect the wood and stone textures found along the coast. Interior walls are brightened up with a Venetian plaster finish, taking more cues from the nearby coastal cliffs. And accents of brass materials on light fixtures provide a spark within the spaces, while intricate custom wrought iron patterns wrap the feature elevator and continue as guardrails throughout the library.

SITE PLAN

- 1 ENTRY PLAZA
- 2 MAIN ENTRY
- 3 DRINKING FOUNTAINS
- 4 LIGHT WELL
- 5 SIDE YARD

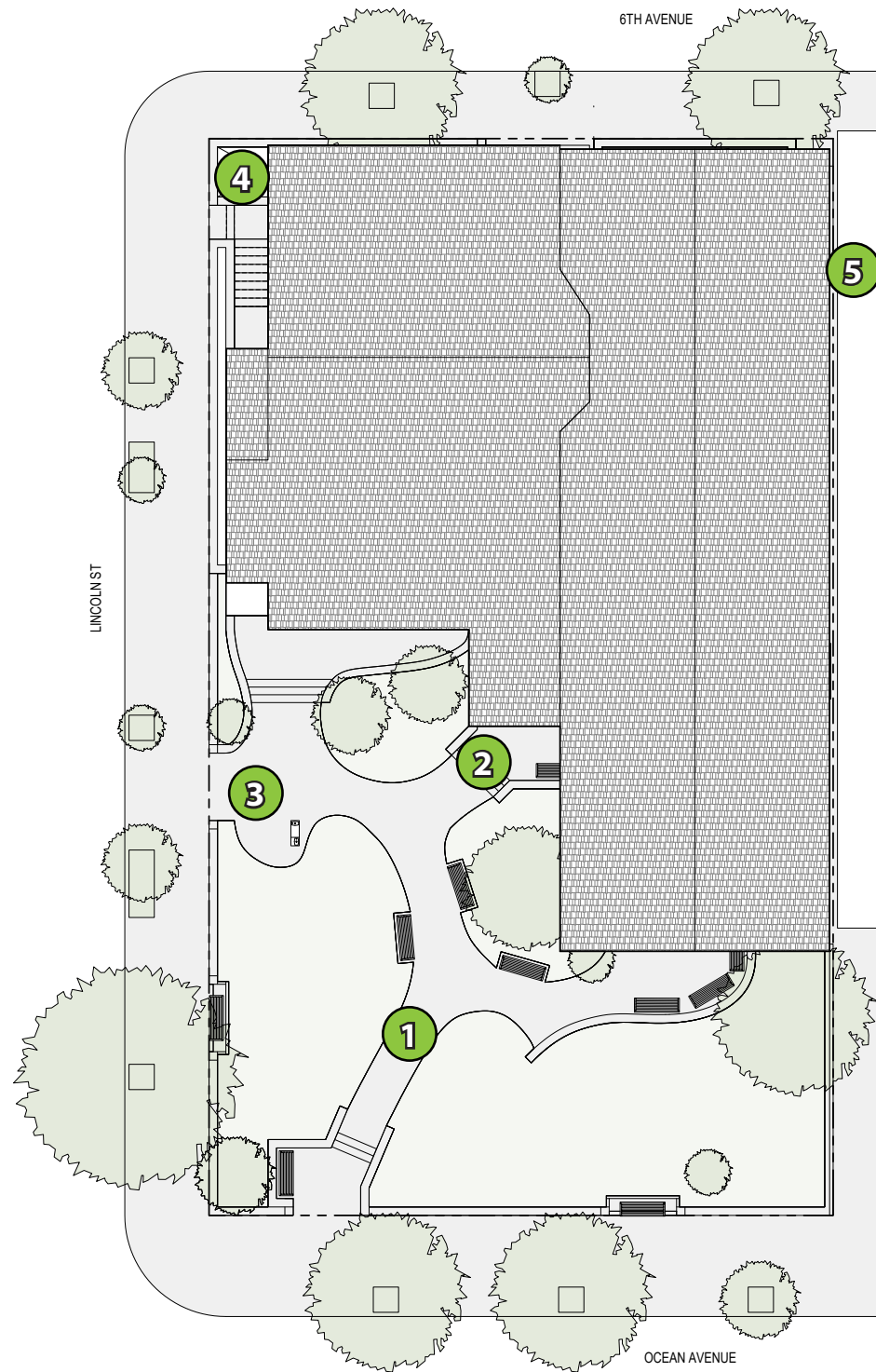


Figure A: Existing Site Plan

- 1 ENTRY PLAZA
- 2 MAIN ENTRY
- 3 DRINKING FOUNTAINS
- 4 LIGHT WELL
- 5 SIDE YARD
- 6 ADA ENTRY
- 7 OPERABLE SKYLIGHT
- 8 PHOTOVOLTAICS
- 9 ELEVATOR OVERRUN
- 10 ELECTRICAL SERVICE BELOW SIDEWALK

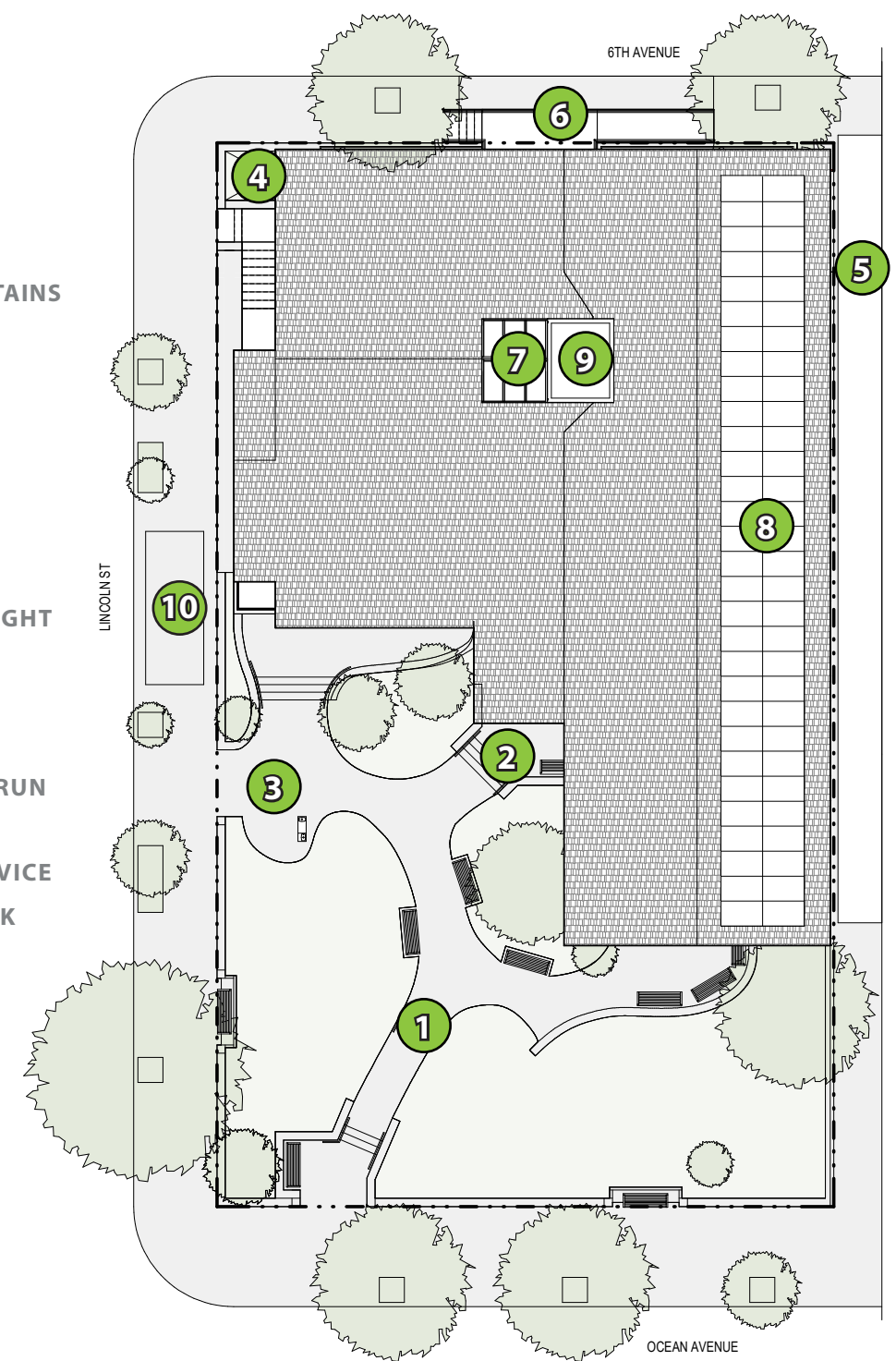
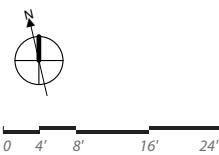


Figure B: Proposed Site Plan



BASEMENT LEVEL FLOOR PLAN

- 1 TEENS
- 2 STAFF WORKROOM
- 3 OFFICE
- 4 STAFF LOUNGE
- 5 IT
- 6 RESTROOM
- 7 STAFF RESTROOM
- 8 MECHANICAL
- 9 JANITOR
- 10 HALLWAY
- 11 STORAGE
- 12 CLOSET

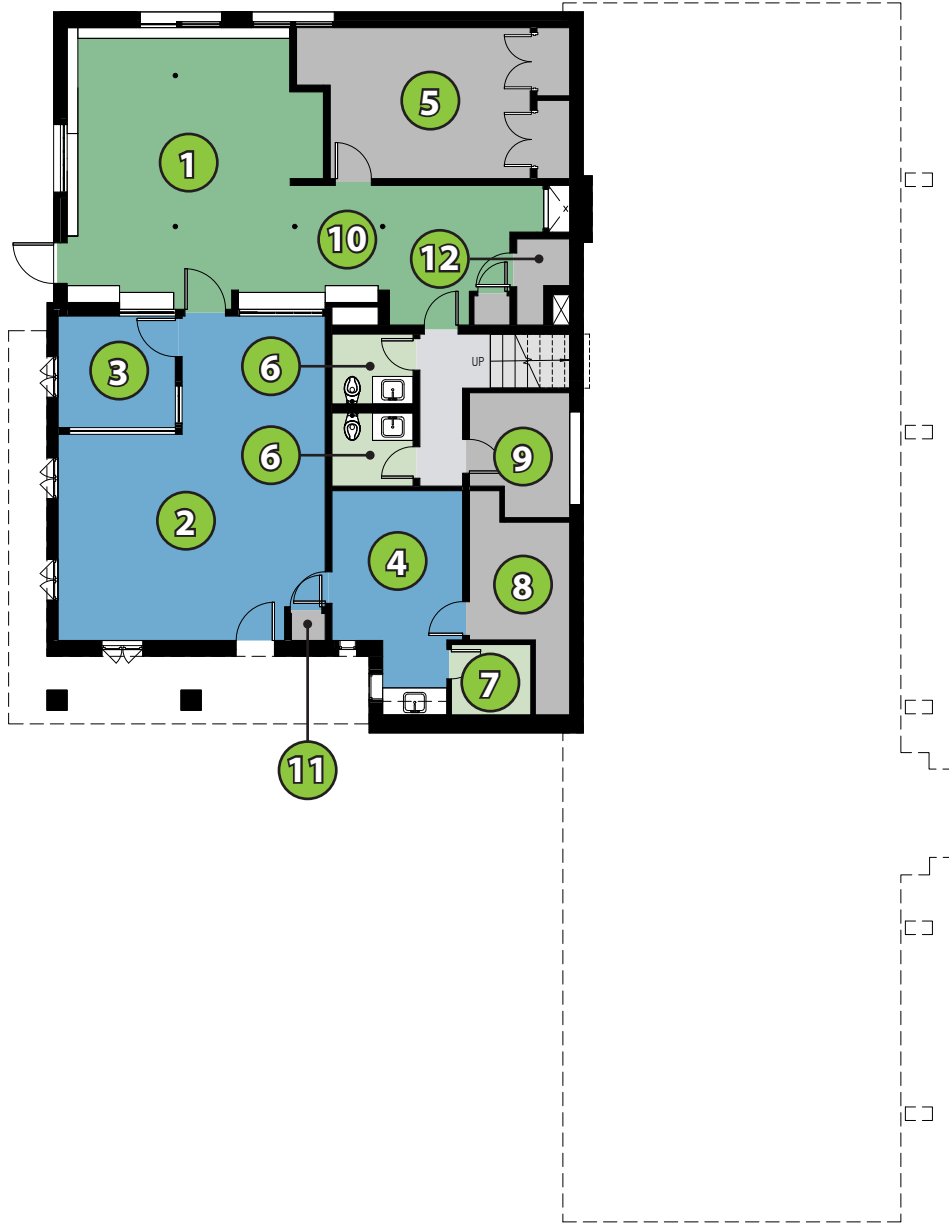


Figure C : Existing Program Plan Basement Level

- 1 LOBBY
- 2 STAFF WORKROOM
- 3 STAFF BREAKROOM
- 4 OFFICE
- 5 WOMEN'S RESTROOM
- 6 MEN'S RESTROOM
- 7 STAFF RESTROOM
- 8 HALLWAY
- 9 ELECTRICAL
- 10 STORAGE
- 11 TELECOM
- 12 MECHANICAL
- 13 JANITOR
- 14 ELEVATOR

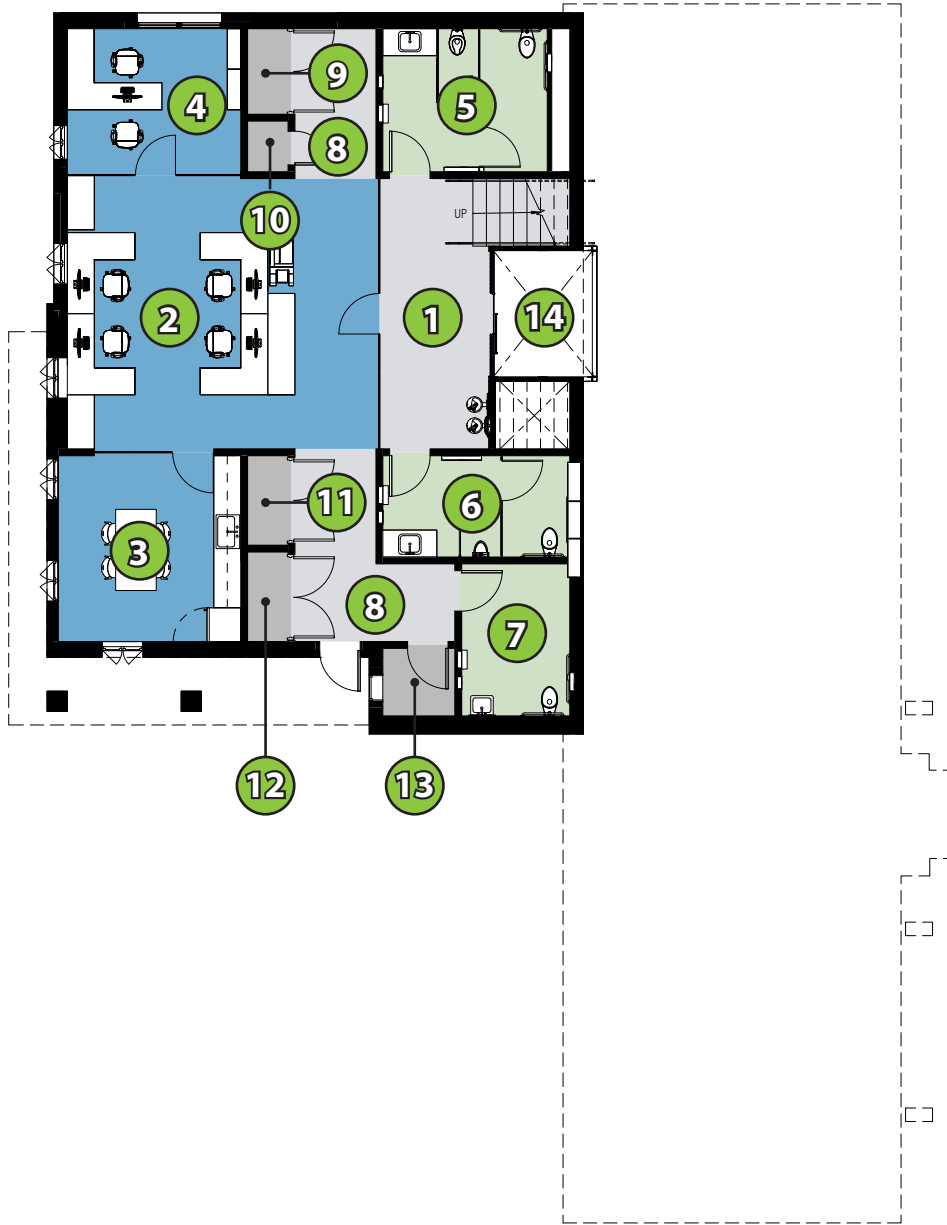
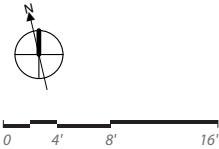


Figure D: Proposed Program Plan Basement Level



MAIN LEVEL FLOOR PLAN



Figure E: Existing Program Plan Main Level

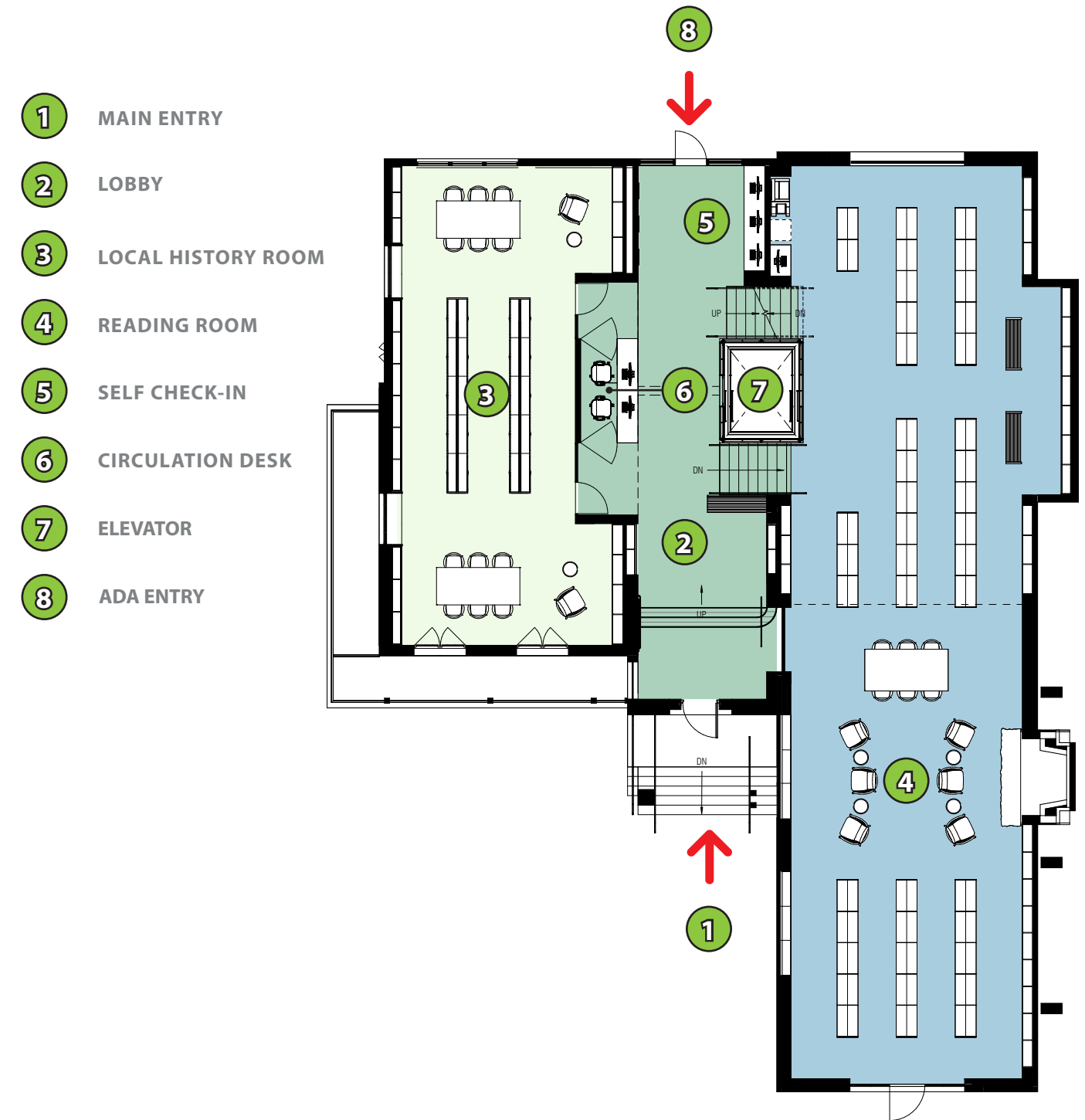
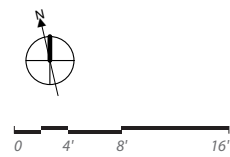


Figure F: Proposed Program Plan Main Level



BASEMENT LEVEL PLAN

- 1 MEZZANINE
- 2 OPEN TO BELOW

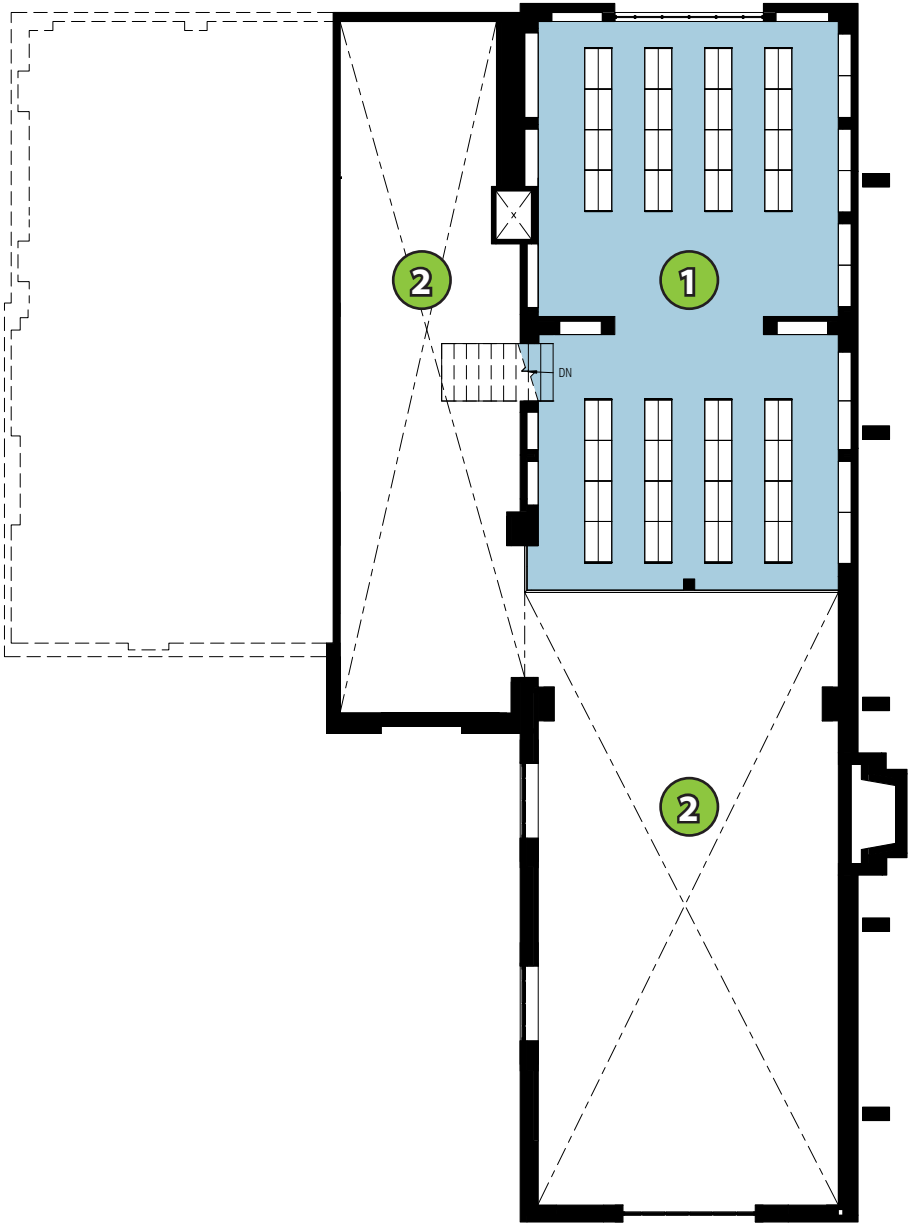


Figure G: Existing Program Plan Mezzanine Level

- 1 MEZZANINE
- 2 GATHERING SPACE
- 3 ELEVATOR
- 4 OPEN TO BELOW

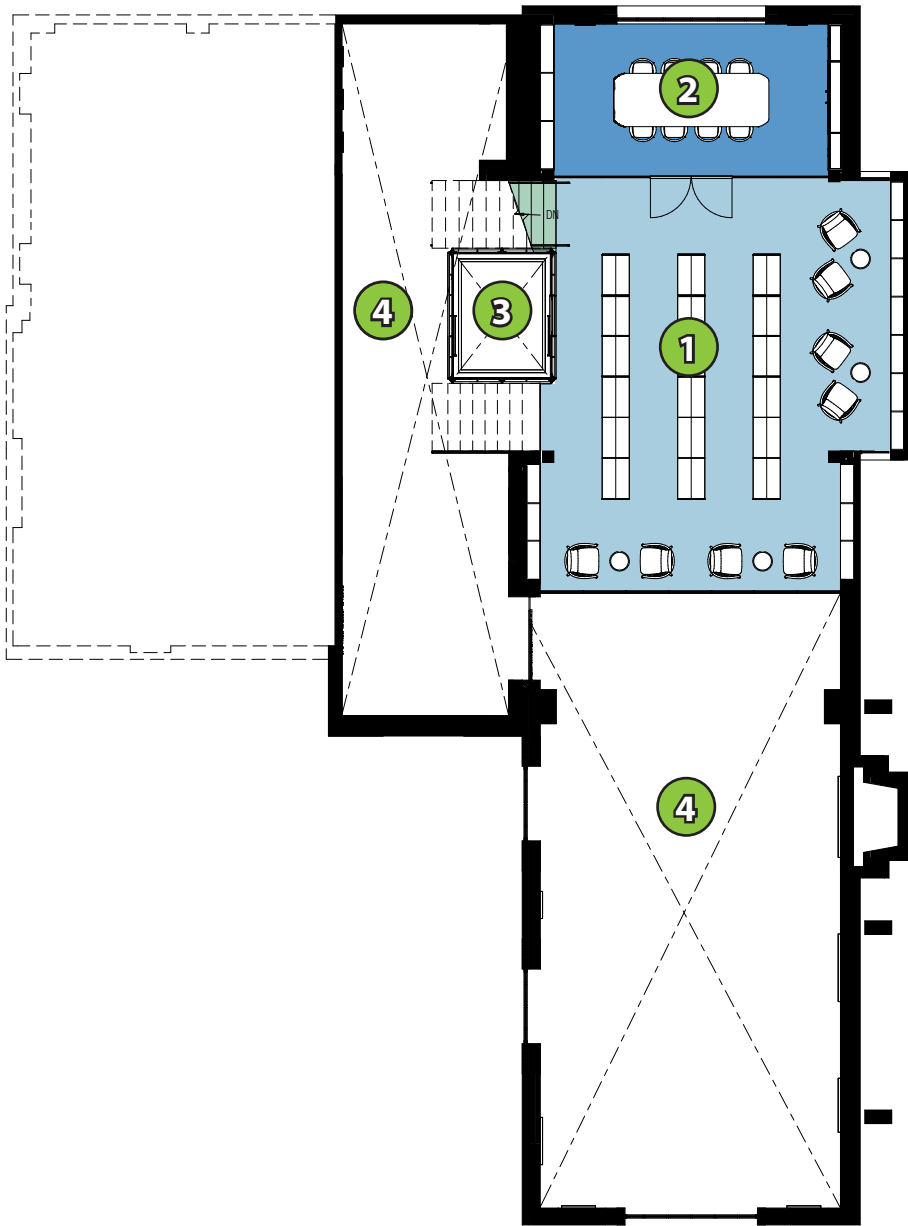
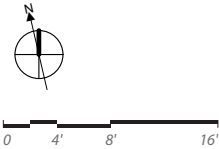


Figure H: Proposed Program Mezzanine Level



INSPIRATION IMAGES



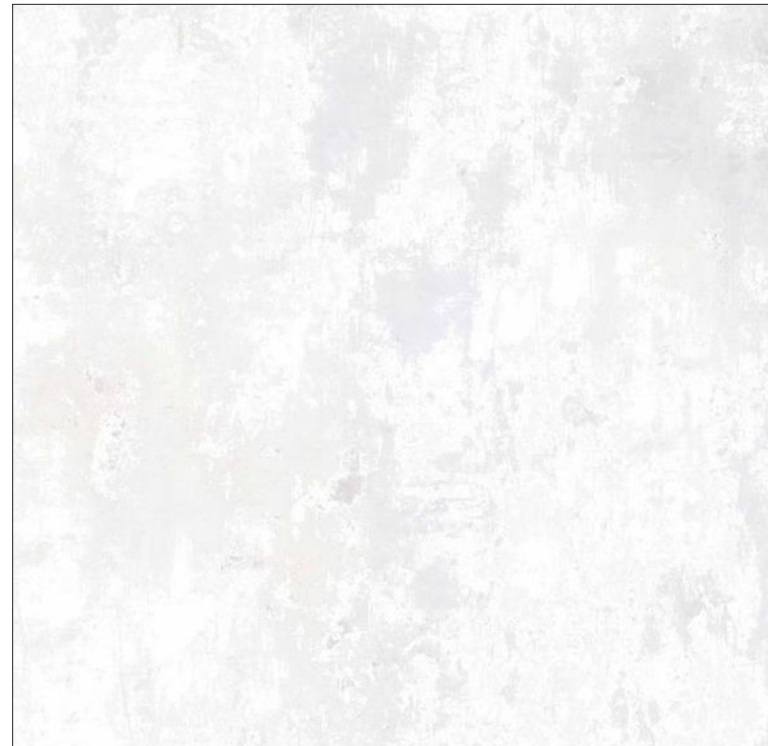
MATERIALS



Redwood



Carpet Inlay



Venetian Plaster



Wrought Iron



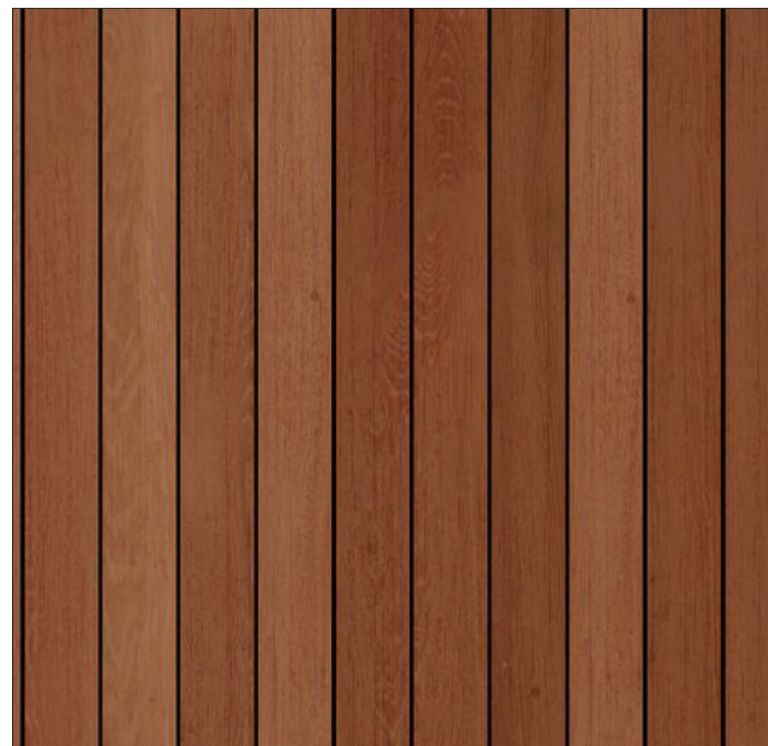
Brass



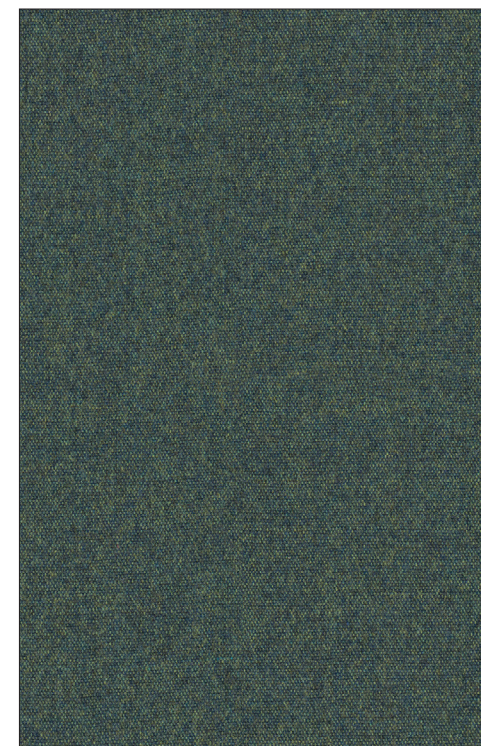
Carpet



Wood Floor



Redwood Boards



Textile

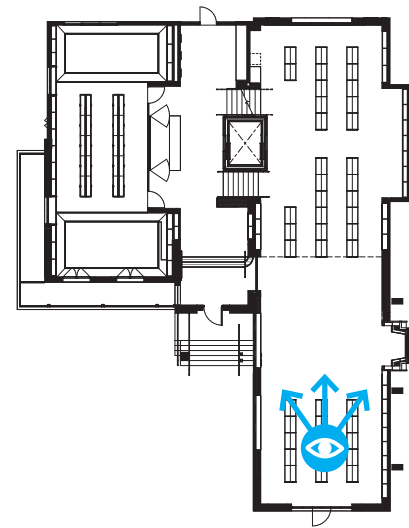


Antique Bronze

VISUALIZATIONS

View of Main Reading Room

- 1 VENETIAN PLASTER FINISH
- 2 CARPET TILE FLOORING
- 3 BRASS PENDANTS
- 4 REDWOOD SOFFIT
- 5 METAL FIREPLACE WITH STONE BASE AND WROUGHT IRON SCREEN
- 6 WROUGHT IRON ELEVATOR
- 7 CUSTOM BRONZE RAILING
- 8 WALNUT SHELVING
- 9 REDWOOD CEILING WITH PURLINS
- 10 WROUGHT IRON PANEL
- 11 BRASS SIGNAGE



- 1
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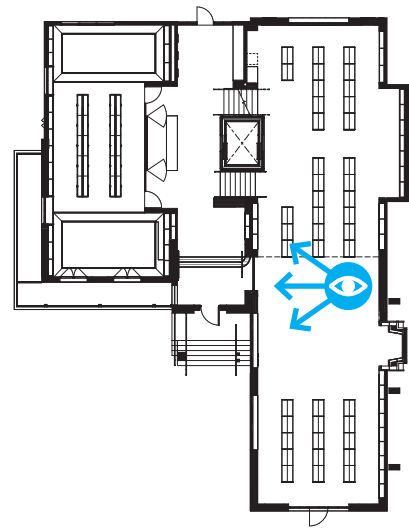
Figure 2: Rendering - View of Main Reading Room



VISUALIZATIONS

View of Main Reading Room Towards Lobby

- 1 VENETIAN PLASTER FINISH
- 2 CARPET TILE FLOORING
- 3 BRASS PENDANTS
- 4 REDWOOD SOFFIT
- 5 BRASS SIGNAGE
- 6 WROUGHT IRON ELEVATOR
- 7 CUSTOM BRONZE RAILING
- 8 WALNUT SHELVING
- 9 REDWOOD CEILING WITH PURLINS
- 10 WROUGHT IRON PANEL
- 11 ORIGINAL MAYBECK TABLES



- 3
- 2
- 5
- 9
- 1
- 11
- 10
- 7
- 8
- 6
- 4

Figure 3: Rendering - View of Main Reading Room Towards Lobby



VISUALIZATIONS

View from Main Entry

- 1 WOOD FLOOR
- 2 DONOR RECOGNITION WALL
- 3 VENETIAN PLASTER FINISH
- 4 AUTOMATED SKYLIGHT
- 5 WALNUT BENCH
- 6 WROUGHT IRON ELEVATOR
- 7 CUSTOM BRONZE RAILING
- 8 EXPOSED REDWOOD STRUCTURE
- 9 BRASS PENDANTS
- 10 REDWOOD CEILING WITH PURLINS
- 11 ORIGINAL DONOR RECOGNITION

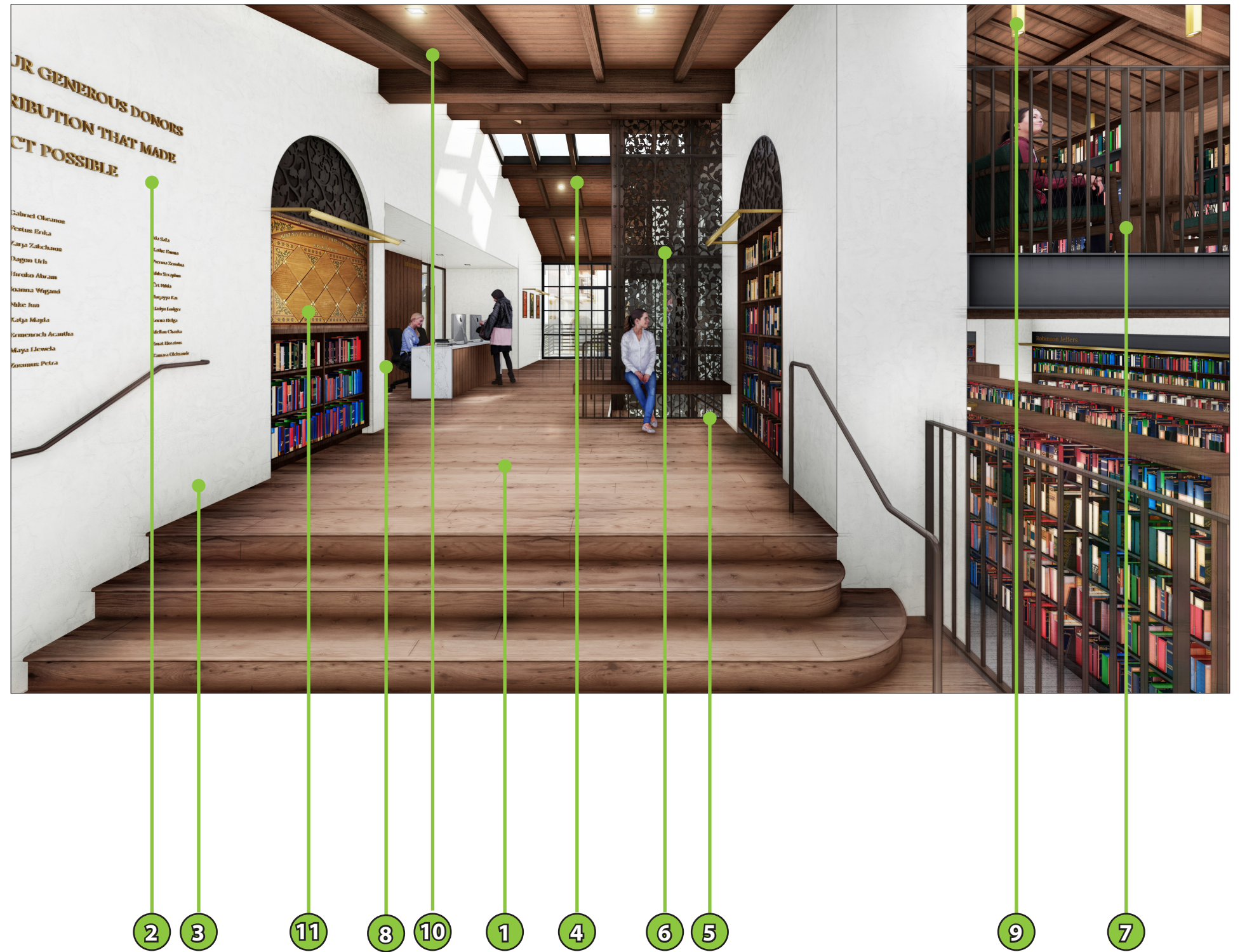
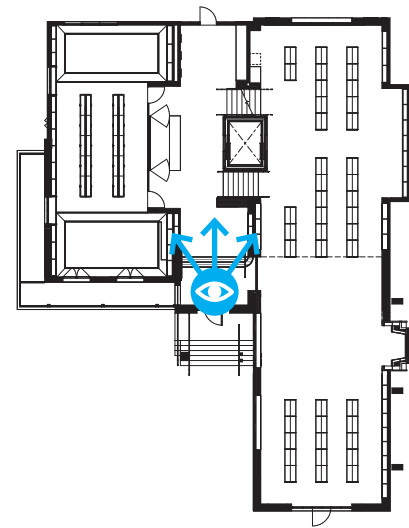


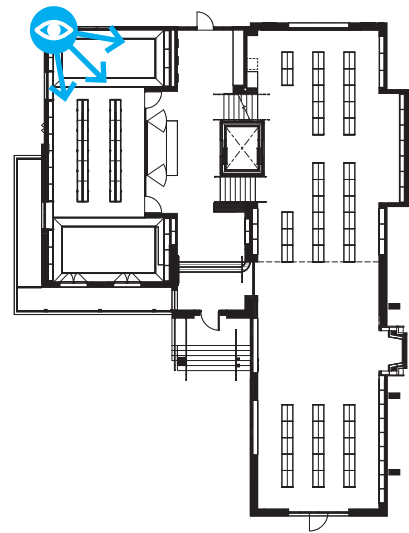
Figure 4: Rendering - View of Main Entry



VISUALIZATIONS

View of Local History Room from East

- 1 VENETIAN PLASTER FINISH
- 2 WOOD FLOORING
- 3 DECORATIVE IRON CHANDELIER
- 4 REDWOOD CEILING WITH PURLINS
- 5 PERSIAN CARPET
- 6 BRASS SIGNAGE
- 7 EXPOSED REDWOOD STRUCTURE
- 8 GLASS PARTITION
- 9 WALNUT SHELVING
- 10 ORIGINAL MAYBECK TABLES



- 7
- 6
- 1
- 3
- 8
- 10
- 5
- 9
- 4
- 2

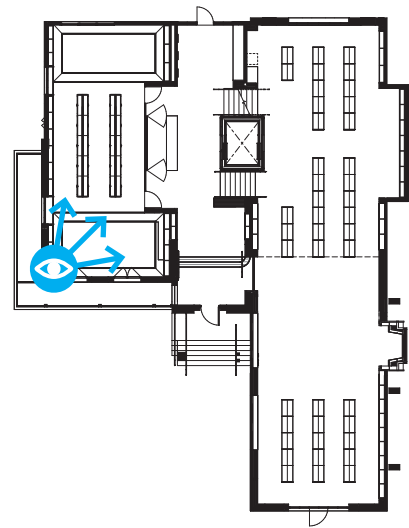
Figure 5: Rendering - View of Local History Room from East



VISUALIZATIONS

View of Local History Room from South

- 1 VENETIAN PLASTER FINISH
- 2 WOOD FLOORING
- 3 DECORATIVE IRON CHANDELIER
- 4 REDWOOD CEILING WITH PURLINS
- 5 PERSIAN CARPET
- 6 BRASS SIGNAGE
- 7 EXPOSED REDWOOD STRUCTURE
- 8 GLASS PARTITION
- 9 WALNUT SHELVING
- 10 ORIGINAL MAYBECK TABLES



- 2
- 5
- 9
- 10
- 6
- 8
- 3
- 6
- 1
- 4

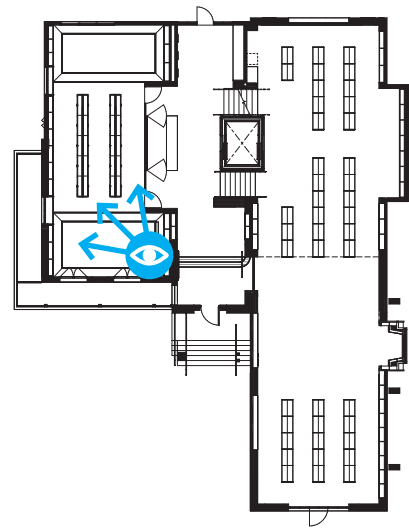
Figure 6: Rendering - View of Local History Room from South



VISUALIZATIONS

View of Local History Room from South

- 1 VENETIAN PLASTER FINISH
- 2 WOOD FLOORING
- 3 DECORATIVE IRON CHANDELIER
- 4 REDWOOD CEILING WITH PURLINS
- 5 WALNUT SHELVING
- 6 ORIGINAL MAYBECK TABLES
- 7 PERSIAN CARPET



- 2
- 1
- 3
- 6
- 7
- 5
- 4

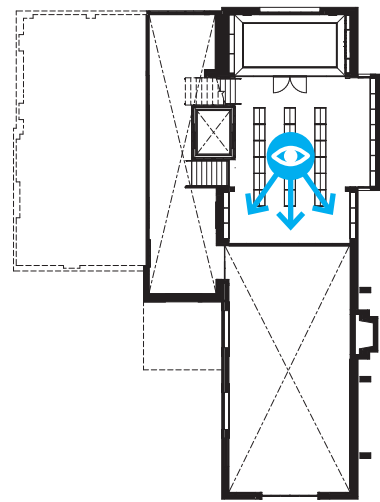
Figure 7: Rendering - View of Local history Room from South



VISUALIZATIONS

View from Mezzanine

- 1 VENETIAN PLASTER FINISH
- 2 WOOD FLOORING
- 3 BRASS PENDANTS
- 4 REDWOOD CEILING WITH PURLINS
- 5 BRASS SIGNAGE
- 6 WROUGHT IRON PANEL
- 7 CUSTOM BRONZE RAILING
- 8 WALNUT SHELVING



- 1
- 7
- 4
- 2
- 6
- 3
- 5
- 8

Figure 8: Rendering - View from Mezzanine



VISUALIZATIONS

View of Gathering Place

- 1 VENETIAN PLASTER FINISH
- 2 WOOD FLOORING
- 3 BRASS PENDANTS
- 4 REDWOOD CEILING WITH PURLINS
- 5 REDWOOD VENEER
- 6 WALNUT SHELVING
- 7 GLASS PARTITION

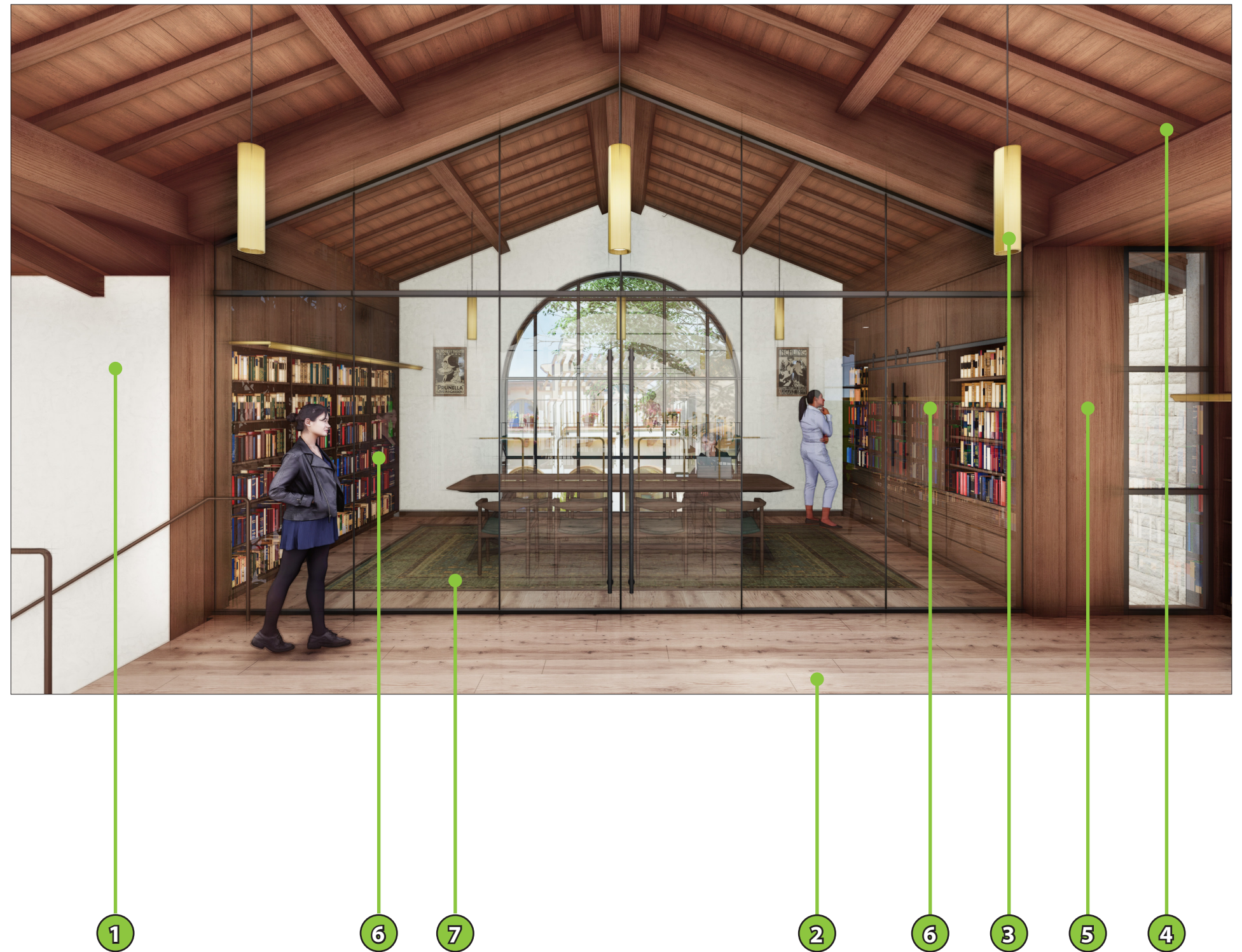
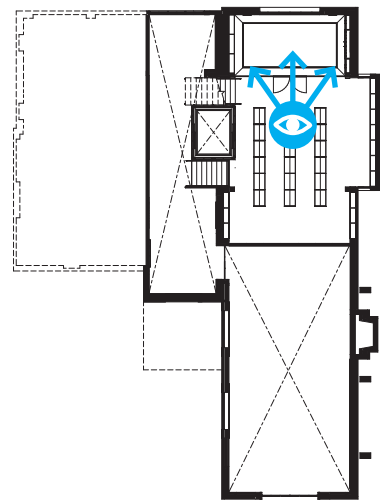


Figure 1: Rendering - View of Gathering Place



