

Figure 1: State Insectary, 2017

# California State Insectary

HISTORIC AMERICAN BUILDINGS SURVEY LYN HOOPER

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#### HISTORIC AMERICAN BUILDINGS SURVEY

## CALIFORNIA STATE INSECTARY (Capitol Park Insectary)

HABS No. CA-XXXX

Location:

1300 L Street, Sacramento, Sacramento County, California 95814

Capitol Park: Bounded by 10<sup>th</sup> and 15<sup>th</sup> Streets and L and N Streets

The Insectary Building faces west towards the Capitol Park Driveway that bisects the

park to the east of the State Capitol Building.

The coordinates for the Insectary are latitude: 38.576562 N, longitude: -121.490200 W and were obtained through Google Earth in January 2018 using NAD 1983. The

coordinate represents the main entrance point of the Insectary. There is no restriction on

the release of the locational data to the public.

Present Owner/
Occupant:

California Department of General Services, Facilities Management Division, Building and Property Maintenance

**Present Use:** 

The Insectary serves at the Capitol Park District Yard Maintenance Headquarters. The Insectary main building provides office space for maintenance staff, while the accessory buildings provide storage for landscape maintenance tools and equipment.

Significance:

The original Insectary Building was one of only two Insectariums in the world; thus, it is significant under National Register Criterion A. The Insectary was founded by the first State Board of Horticulture Commissioner of California, who introduced the science of beneficial insects that were instrumental in the establishment of California's multibillion dollar agriculture industry; consequently, the building is significant under National Register Criterion B. Additionally, the building is the work of a master in his craft and is a beautiful example of the Arts and Crafts style so prominent in California in the early twentieth century and thus, also qualifies for the National Register under Criterion C.

Historian:

Lyn Hooper, Supervising Architect California Department of General Services (DGS), Real Estate Services Division, Project Management and Development Branch. Report Completed: February 11, 2018

Project Information:

Lyn Hooper prepared or assembled all documentation included herein, including measured drawings, current photographs, and historical assessment. The existing building was surveyed and measured on February 7, 2018. Historical information was provided by DGS archives, drawing vault and staff. Historical photos were obtained from the California State Library, California History Room Collection.

This report was prepared as an assignment for Preservation 720, Savannah College of Art and Design.

#### **Part I. Historical Information**

#### A. Physical History

1. Date of erection: The main Insectary building was constructed in 1908. The original drawings were approved by the "Advisory Board" on February 10, 1908, signed by the architect on February 18, 1908, by the Structural Engineer on February 15, 1908.



Figure 2: State Insectary, c.1908<sup>1</sup>

**2. Architect:** George Clinton Sellon, California's first State Architect. More information on the significance of George Sellon is provided in the Historical Context section below.



Figure 3: George C. Sellon<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> (McCurry Foto Co. c. 1908)

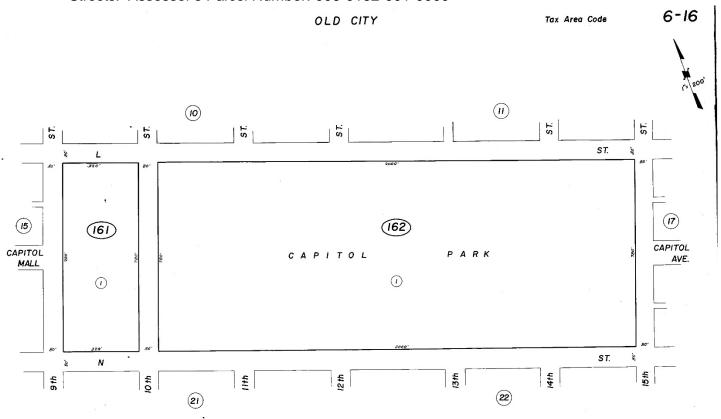
<sup>&</sup>lt;sup>2</sup> (The Division of the State Architect 2007)

<sup>&</sup>lt;sup>3</sup> (Lionakis 2016)

#### 3. Original and subsequent owners, occupants, users:

Legal description: ALL THAT LAND LYING BETWEEN THE E. LINE OF 10TH STREET, S. LINE OF "L" ST., W. LINE OF 15TH. STREET & N. LINE OF "N" STREET.<sup>4</sup>

The building is location within the greater State Capitol Park at the southwest corner of 13<sup>th</sup> and L Streets. Assessor's Parcel Number: 006-0162-001-0000



CITY OF SACRAMENTO
Assessor's Map Bk. 6 - Pg.16
County of Sacramento, Calif.

Figure 4: Capitol Park Assessor's Parcel Map (not to scale)<sup>5</sup>

Assessor's Block Numbers Shown in Ellipses Assessor's Parcel Numbers Shown in Circles

Sacramento has seen its share of changing inhabitants due to the same major events that shaped the rest of the state. The area was originally home to the Maidu and Miwok native tribes and was deemed inhabitable by Spanish explorer Gabriel Moraga in 1808, despite its location at the confluence of the Sacramento and American Rivers. Moraga, nevertheless named the area Sacramento after the Spanish word for sacrament. In 1839, Swiss immigrant John Sutter established a settlement on seventy-six square miles given to him by Mexican Governor Juan Bautista Alvarado. It was at Sutter's mill in the Sierra Nevada Mountain foothills in 1848 where gold was first discovered in the state, and the rush was on. Sacramento profited handsomely from the gold rush, but its location at the convergence of two rivers caused frequent flooding, including the "Great

<sup>&</sup>lt;sup>4</sup> (Sacramento County Assessor n.d.)

<sup>&</sup>lt;sup>5</sup> (Sacramento County Assessor n.d.)

Flood" of 1850. To combat this constant threat, the city streets were raised and levees where constructed. These factors contributed to the City's good fortune of becoming the state's seat of government.

The capital of California has been located in San Jose, Vallejo, Sacramento, Benicia and then back to Sacramento in 1854. To entice the legislature to relocate back to Sacramento, the City offered the land bounded by 9<sup>th</sup>, 10<sup>th</sup>, I, and J Streets to the state government at no charge. With that, a deal was struck and the capital was permanently moved to Sacramento. Construction started on a new capitol building in 1856, but by then the gold rush was over and the state was deeply in debt. Less than two weeks after breaking ground, construction was halted, and the land returned to the City. In 1860 the County of Sacramento deeded four large blocks bounded by 10<sup>th</sup>, 12<sup>th</sup>, L, and N Streets to the state for use as the new capitol grounds. The capitol grounds were further expanded with the purchase of the all parcels bounded by 12<sup>th</sup>, L, 15<sup>th</sup> and N Streets from 50 different owners for a cost to the state of \$16,368.33 for the creation of Capitol Park. An undated drawing was located in the vault at the Department of General Services that includes all of the original parcels acquired to make up the current State Capitol Grounds.

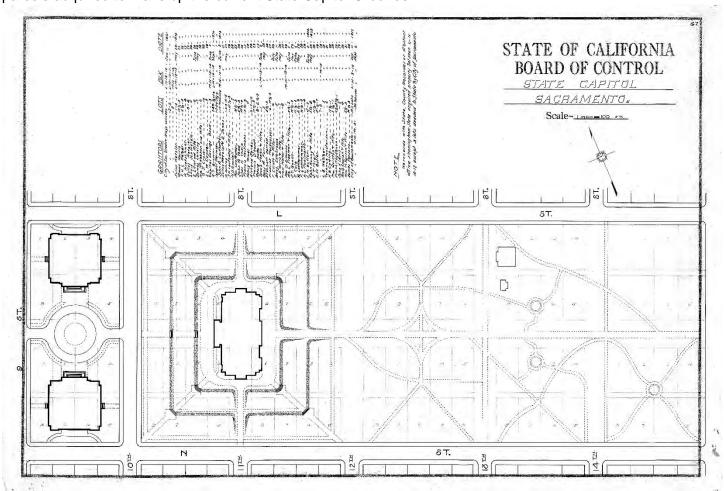


Figure 5: State Capitol Grounds plan showing the former parcels acquired to create the park. The Insectary Building is located on parcel number 1 of the block located between 13th and 14<sup>th</sup> Street and L Street and the Capitol Driveway (Capital Ave to the east of the park and Capitol Mall to the west of the park.)

The Insectary Building was constructed after the formation of Capitol Park and thus has always been owned by the State of California. Initially, managed by the Superintendent of Capitol

<sup>&</sup>lt;sup>6</sup> (Severson 1973)

<sup>&</sup>lt;sup>7</sup> (Horner 2008)

<sup>&</sup>lt;sup>8</sup> (Severson 1973)

Buildings and Grounds, management transferred to the Department of General Services upon that agencies creation in 1963.<sup>9</sup>

#### 4. Builder, contractor, suppliers: Not Known

#### 5. Original plans and construction:

The original building's construction began in the summer of 1908 and the facility was officially dedicated by delegates to the State Fruit Growers Convention on December 2, 1908. The total construction cost was \$8,000 and the building was considered the "most complete institution of its kind in the world," by the United States Government Entomologist. It was so significant and innovative an institution that the governments of France, Spain, South Africa, Japan and Formosa sent their expert entomologists to study the building's layout, facilities and all parties requested copies of the building plans.<sup>10</sup>

The plans were drawn by George Sellon in his office, Sellon and Hemmings State Architects. They were approved by the "Advisory Board" on February 10, 1908, signed by the Structural Engineer (N. Ellery) on February 15, 1908 and dated by the Architect on February 18, 1908.<sup>11</sup> The original hand drawn, ink on mylar drawings still exist in the Department of General Services Vault.

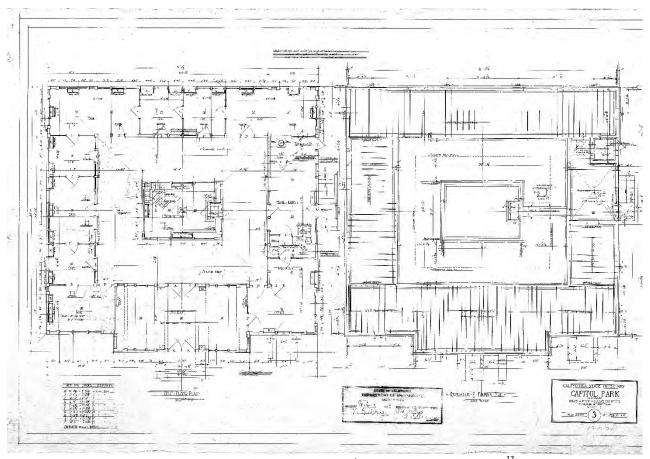


Figure 6: Original First Floor and Foundation/First Floor Framing Plans, 1908<sup>12</sup>

<sup>10</sup> (Charles Forrest Currey, Secretary of State 1909)

<sup>&</sup>lt;sup>9</sup> (Sgromo 2017)

<sup>&</sup>lt;sup>11</sup> (Sellon & Hemmings State Architects 1908)

<sup>12 (</sup>Sellon & Hemmings State Architects 1908)

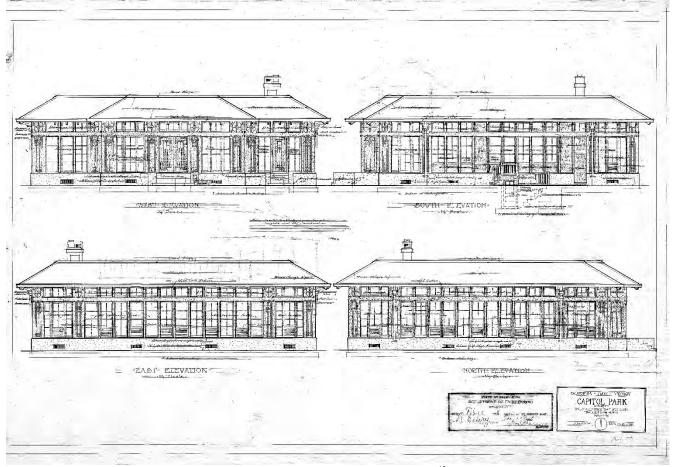


Figure 7: Original Exterior Elevations, 1908<sup>13</sup>

#### 6. Alterations and additions:

- Skylight Addition that enclosed the open courtyard of the Insectary Building: 1913<sup>14</sup>
- Greenhouse: 1914 (no longer extant)<sup>15</sup>
- Addition, including Park rest room structure, cart storage building and perimeter masonry wall:
   1938<sup>16</sup>
- Major alteration to the rest rooms structure: Likely in the 1950's and again in the 1980's or 1990's drawings for alterations of the rest room building have not been located, but alterations include converting the men's only rest room to a men's and women's room and the introduction of accessible toilets and an accessible urinal. It is most likely that the introduction of facilities for both sexes occurred during a park remodel in the 1950's and the introduction of accessible fixtures likely occurred sometime after the adoption of American National Standards Institute (ANSI) A117.1 in 1961, but more likely after the implementation of the American's with Disabilities Act (ADA) in 1991.<sup>17</sup>
- Access Barrier Removal Project at the rest room structure: 2017

<sup>&</sup>lt;sup>13</sup> (Sellon & Hemmings State Architects 1908)

<sup>&</sup>lt;sup>14</sup> (Myra L. Frank & Associates, Inc. 1998)

<sup>&</sup>lt;sup>15</sup> (Myra L. Frank & Associates, Inc. 1998)

<sup>&</sup>lt;sup>16</sup> (Daniels 1938)

<sup>&</sup>lt;sup>17</sup> (Sgromo 2017)

#### **B.** Historical Context

#### Significance: Agriculture

The State Insectary Building was conceived for Capitol Park in 1906 following the loss of the previous State Insectary in the San Francisco earthquake and fire. The Sacramento location was selected because it was deemed far safer than San Francisco. Construction was completed in 1908. 18



Figure 8: View of the widespread destruction from the 1906 San Francisco Earthquake from Nob Hill along Sacramento Street with the Ferry Building in the distance. <sup>19</sup>

The Insectary had an instrumental role in the development of California agriculture. As one of only two Insectariums in the world, its purpose was to collect, breed and distribute beneficial insects, free of charge, to farmers around the state. Beneficial insects were used to combat insects that attack and destroy crops, and the Insectary's primary focus was on insects that attacked the state's lucrative fruit and vegetable crops. The science was known at the time as "parasitology" and California was a leader in the technology and the State Insectary was at the center. According to John L. Cowan's article in the November 13, 1910 edition of the San Francisco Call:

By far the most important establishment in the world devoted to the encouragement of parasitology is the California state insectary, located in the capitol grounds at Sacramento.

<sup>&</sup>lt;sup>18</sup> (Myra L. Frank & Associates, Inc. 1998)

<sup>&</sup>lt;sup>19</sup> (Taylor 2016)

<sup>&</sup>lt;sup>20</sup> (Cowan 1910)

Here millions of predaceous insects (notably the ladybird beetles, collected in the winter month[s] from the high Sierras) are kept in cold storage until needed in the melon fields and apple and peach orchards, and millions of minute parasites are bred in confinement, for the distribution wherever agricultural or horticultural pests make their appearance within the confines of the state.<sup>21</sup>



Figure 9: 1910 Sunday Edition of the San Francisco Call dedicated an entire page for information about the Insectary, including fun graphics<sup>22</sup>

<sup>&</sup>lt;sup>21</sup> (Cowan 1910)

<sup>&</sup>lt;sup>22</sup> (Cowan 1910)

CALIFORNIA STATE INSECTARY (Capitol Park Insectary) HABS No. CA-XXXX (page 14)

The practice of parasitology conducted at the State Insectary saved the state's orange growing industry from destruction by the cottony cushion scale and the olive orchards from black scale, which had also spread to nearly all deciduous fruit crops by the turn of the twentieth century. Thus, the work conducted at the Insectary was instrumental for the continued existence of what is today a \$54 billion dollar a year industry that translates into another \$100 billion annually in related activity.<sup>23</sup>

The beneficial insect breeding and storage activities were moved in 1923 to the Citrus Experiment Station and Graduate School of the Subtropical Agriculture of the University of California at Riverside.<sup>24</sup> By 1938 all Insectary activities ceased at the facility and the building was expanded to house the park maintenance headquarters, which remains its use today.

#### Significance: Association with Person of Significance

The State Insectary was founded by the State Board of Horticulture: Ellwood Cooper was elected as the first State Board of Horticulture Commissioner of California in 1885, a position he held until 1907. It was Cooper's research and his introduction of predaceous insects and parasites to combat noxious insects known to destroy California's vital fruits and fruit trees that was the basis of the work conducted at the Insectary.<sup>25</sup>

Cooper was a horticulturist born in 1829 in Sadsbury, Pennsylvania. After 1870, Cooper primarily spent his time in Santa Barbara, California cultivating semi-tropical fruits including oranges, olives, grapes and almonds. These crops faced challenges from noxious insects that attacked and destroyed the fruits or the entire plants. Cooper's research indicated that the introduction of ladybird beetles to a crop infested with plant lice or scale would wipe out the unwanted pests without further harm to the valuable harvest. The Insectary was constructed to collect, breed and distribute ladybird beetles and other beneficial insects free of charge to farmers throughout the state. Prior to World War II there was not widespread use of insecticides; consequently, the use of beneficial insects allowed California to establish imported crops that would not have survived otherwise. 26 Today, California accounts for more than half of the oranges produced in the United State (by comparison, Florida only accounts for 10%). Grapes and almonds are among the top three commodities in the state, while oranges rank seventh.<sup>27</sup> Almonds are California's top agricultural export and the orchards span over 400 miles up and down the state from Bakersfield in the south to Red Bluff in the north. <sup>28</sup> California's wine industry accounts for 85% of the wine produced in the United States and ranks fourth in the world behind France, Italy and Spain.<sup>29</sup> Similarly, California produces over 95% of the olives grown in the United States.<sup>30</sup> Thus, the significance and legacy of Cooper's research and the work conducted at the Insectary continue to benefit our state and the world today.

#### Significance: Architecture

The original Insectary building exemplifies the Arts and Crafts style that was widely popular in California in the early part of the twentieth century. The Arts and Crafts style is blended with the Prairie School style in this execution and this is likely based on the architect's, George C. Sellon, training in Chicago.<sup>31</sup>

<sup>&</sup>lt;sup>23</sup> (California Department of Food and Agriculture n.d.)

<sup>&</sup>lt;sup>24</sup> (University of California 1924)

<sup>&</sup>lt;sup>25</sup> (Johnson 1904)

<sup>&</sup>lt;sup>26</sup> (Sgromo 2017)

<sup>&</sup>lt;sup>27</sup> (See California n.d.)

<sup>&</sup>lt;sup>28</sup> (See California n.d.)

<sup>&</sup>lt;sup>29</sup> (Wine Institute 2017)

<sup>&</sup>lt;sup>30</sup> (California Olive Committee 2018)

<sup>&</sup>lt;sup>31</sup> (Brunzell 2015)

The building is of wood framed construction with stucco finish and half-timbering configured in a pattern resembling simplified medieval tracery, but it also reflects a Japanese influence, very popular at the time in the Arts and Crafts Movement. The exterior wall composition is symmetrical on all facades and includes window groupings composed of multiple tall, narrow lights. The windows are all casements with many individual panes and the doors are plain plank construction with glazed panels above. The low-sloped hip roof is finished with wood shake shingles. The detailing of the original building makes it clear that this place was of importance when it was designed and constructed.



Figure 10: State Insectary west facade detail, 2017

#### Significance: Work of a Master

The Insectary Building was designed by George Clinton Sellon. Born in San Francisco, Sellon studied at the Chicago Art Institute and returned to San Francisco following the 1906 earthquake to assist in the rebuilding of that city.<sup>32</sup>

Governor James N. Gillett appointed Sellon as California's first State Architect, a regulatory position created as a result of the mass devastation caused by the San Francisco earthquake, where he served from 1907 to 1909. As State Architect, Sellon designed several significant state institutions including the State Normal Scholl at San Jose (now San Jose State University), the Agnew State Hospital, portions of the San Quentin State Penitentiary in Marin County among others.<sup>33</sup>

Following his resignation as State Architect in 1909, Sellon opened a private firm where he remained principal until he retired in 1954. That firm remains active today as Lionakis (formerly Lionakis Beaumont). During Sellon's time as principal, the firm was very active in public works including designing six county courthouses and numerous schools. Additionally, he was the designer of the north and south wings of the Sacramento Hospital (now the University of California Davis main hospital) (1949) that is still in use today, as well as the first high-rise in Sacramento, the Cal State Life Building (known today as the Citizen's Hotel) (1925). Sellon's Cranston-Geary House (1909) is another fine example of the Arts and Crafts style and is listed on the National Register. Sellon's mastery of the architecture of the Prairie School and Arts and Crafts styles can be attributed to his training in Chicago. Chicago was home to Louis Sullivan and Frank Lloyd Wright and the influence of both architects can be seen in Sellon's work, particularly at the Capitol Park Insectary.<sup>34</sup>

#### **Part II. Architectural Information**

#### A. General Statement

#### 1. Architectural character:

The building's purpose was integral to the state's agriculture industry and its architectural design and location demonstrate its importance.

The original building design conveys the architect's formal training in Chicago during the era of Louis Sullivan and Frank Lloyd Wright as well as the influences he likely gained when he returned to California during the high period of Charles Sumner Greene and Henry Mather Greene. The quality of design and execution of construction show a high level of attention to detail. The plan was developed using a column grid of 8x8 redwood posts and all original elements were located within the rigors of the grid. This made for an elegantly composed exterior and well organized interior spaces.

The Insectary's location in Capitol Park and its proximity to the Capitol Building also insured that the design and materials would be of high quality. No records of the design decisions have been located at the time of this writing, but the use of such a modern design for the Insectary, within an otherwise classically designed Capitol Park, seems like it might have been controversial.

<sup>(</sup>The Division of the State Architect 2007)

<sup>33 (</sup>The Division of the State Architect 2007)

<sup>34 (</sup>Lionakis 2016)

#### 2. Condition of fabric:

The building is in fair condition. Much of the original interior finishes have been covered, replaced, or added since the time of the change in use from an insectary to a park landscape maintenance headquarters. The central breeding cage was removed from the courtyard, but the 1913 skylight structure remains. No interior evidence of water damage was observed, indicating that the envelope has been maintained well enough to prevent serious degradation. However, lack of maintenance has contributed to the decline of many of the redwood structural posts and sill plates, but the damage is localized generally to areas exposed the landscape sprinklers and the former basement access area. This should be reviewed by a structural engineer to determine whether the condition should be considered dangerous for the inhabitants.

#### **B.** Description of Exterior

#### 1. Overall dimensions:

The building footprint is 56'-1¼" from front to back and 61'-5¼" from side to side. Additionally, the front entry is centered in a 30'-9¼" wide bay that project 4'-0" in front of the rest of the building. The height is 19'-7" to the ridge and there was originally a partial basement that was infilled at an unknown date.

#### 2. Foundations:

The main building was constructed using a raised wood floor, composed of 2x6 wood joists at 16" on center (o.c.) and supported by 10" wide x 3'-6" high concrete perimeter stem walls and 18" wide by 12" deep concrete footings. The top of the footings are set 18" below grade, which is consistent with the area's frost line. Originally, there was a small basement accessed by a concrete stair at the south side of the building. The stair was removed, and the basement abandoned. The date the basement was abandoned is not clear, but the stair does not appear in the 1938 drawings.

The concrete foundation is generally in good condition, but there are limited areas, particularly around the removed basement stair, where the concrete is crumbing due to water intrusion. Generally, the water damage appears to stem from the detailing of the untreated exposed redwood sill plates. These plates lay flat on the top of the footing without flashing or a way to drain water that accumulates on the ledge or weeps down through the inside of the wall. These sills are in poor condition around the entire perimeter of the building.



Figure 11: Northwest corner of the building showing perimeter concrete foundation



Figure 12: Deteriorated sill plate at former basement stair location.

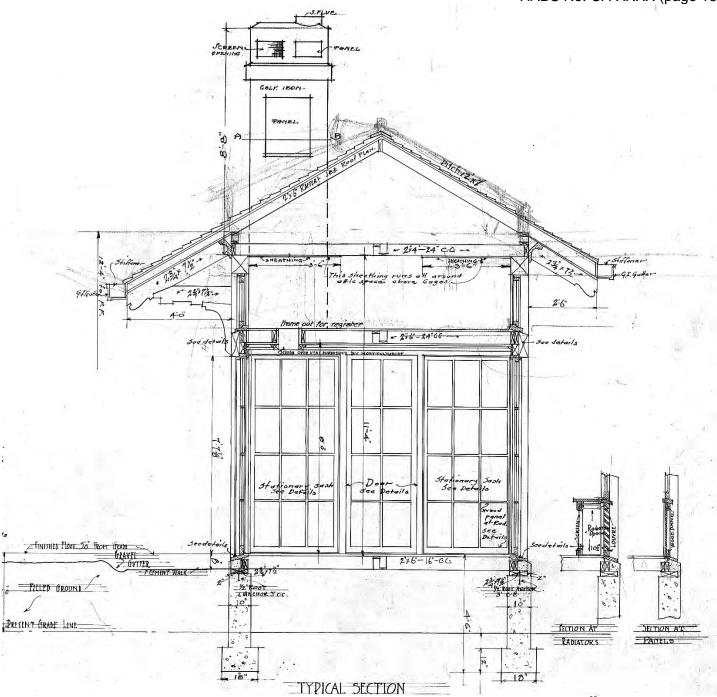


Figure 13: Partial building section drawing with foundation details from original 1908 drawings<sup>35</sup>

<sup>&</sup>lt;sup>35</sup> (Sellon & Hemmings State Architects 1908)

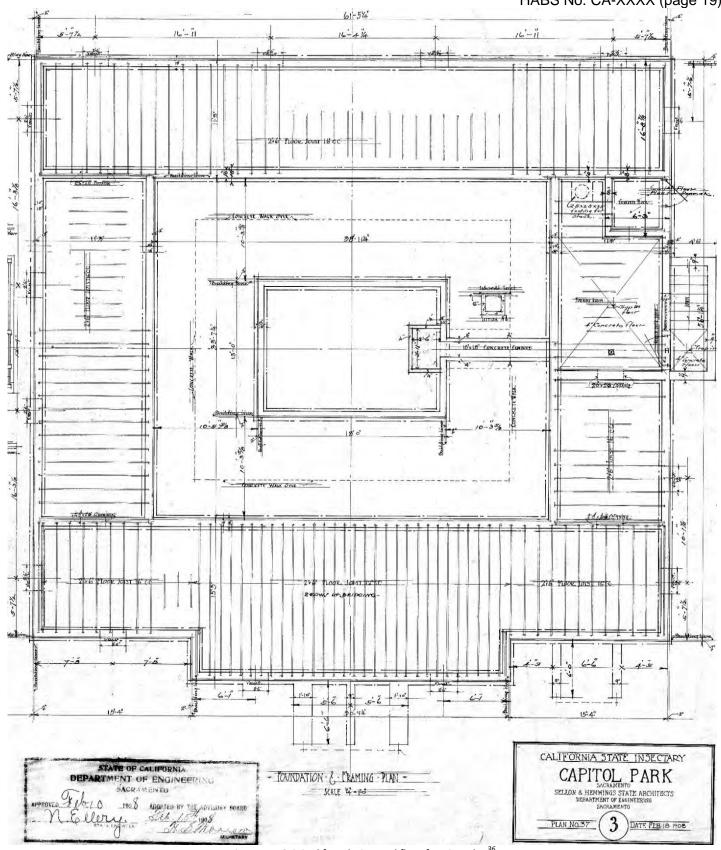


Figure 14: Original foundation and floor framing plan<sup>36</sup>

<sup>&</sup>lt;sup>36</sup> (Sellon & Hemmings State Architects 1908)

#### 3. Walls:

The building is of post and beam construction on a rough cast raised concrete perimeter foundation. The exterior finish of the walls is a mix of exposed redwood posts and beams and 1/2" thick rough cast cement plaster with redwood trim. The redwood posts are recessed into the perimeter foundation, allowing for water damage at the base of many of the posts.

All exterior redwood was painted. Much of the paint is damaged or missing at the base of the west and north walls due to routine exposure to irrigation sprinklers.



Figure 15: Rear (east) facade showing exposed posts extending from foundation to roof with windows and cement plaster panels in between.



Figure 16: Base of redwood post and sill are damaged from dry



Figure 17: Base of redwood post showing water damage



Figure 18: Thickness of exterior cement plaster panels

#### 4. Structural system, framing:

The building is composed of 8x8 redwood posts and 8x8 beams above the attic windows. These elements are expressed as decorative elements on the exterior of the building. Rafters and floor joists are of 2x6 lumber, while 2x4 lumber is used for attic floor framing. Ridge boards are 1x6. Oversized painted wood brackets are utilized to support the roof overhang and those are discussed in more detail in section B(10) below.

Several of the structural redwood posts are in poor condition. These posts are no longer serving their structural purpose due to dry rotted based, which are the result of moisture intrusion. It is likely that routine exposure to landscape sprinklers has accelerated this damage. A structural assessment should be conducted to determine if the building is safe for human habitation.



Figure 19: Base of redwood post is entirely rotted

#### 5. Porches, stoops, balconies, porticos, bulkheads:

There are three stoops along the west façade. The central stoop leads to the main entry, which originally opened directly to the entomology museum in original to the 1908 layout. The southern stood is also original to the 1908 building and is a narrower version of the main entry stoop and lead to the main office of the Insectary. The northern stoop was constructed in 1938 to match the southern stoop and lead to the main park rest room for women. All three stoops consist of 5 risers with a top landing and are constructed of concrete with the sides detailed in a rough finish to match the cement plaster on the building's exterior walls. The tops of each stoop's sidewalls are sloped to drain.

The stoops are in good condition; although, here is some wear and tear from ordinary use and water intrusion damage at the risers and treads causing limited spalling. The northern stoop has a painted pipe handrail that was installed sometime after the completion of the 1938 alteration.



Figure 20: Stoop at main entry

#### 6. Chimneys:

There are no chimneys on the building currently. Originally, there was a fumigating room and an associate exhaust stack near the southeast corner of the building. This room and the vent stack were removed with the 1938 alteration. The south elevation shows a wood door leading to the fumigation room with the vent stack directly above.

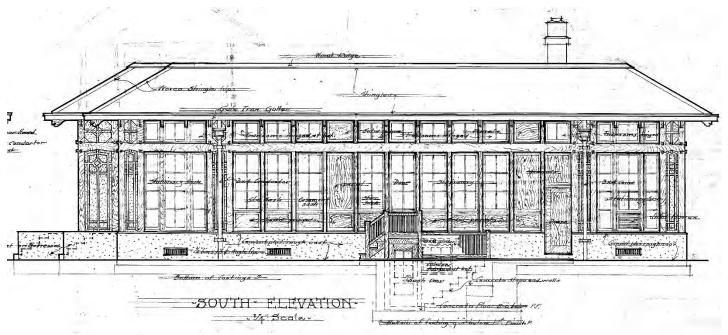


Figure 21: Original South Elevation drawing showing the fumigation room vent stack through the roof<sup>37</sup>

<sup>&</sup>lt;sup>37</sup> (Sellon & Hemmings State Architects 1908)

#### 7. Openings:

All exterior window openings originally extended to the floor, either with glazing, solid wood panels or ventilation panels for the insect cages. All ground floor openings were remodeled in 1938 and their sills were raised to 4'-0" above the finish floor. The exterior walls were refinished with rough finished cement plaster to match the rest of the building, while the interior was refinished in tongue and groove wood.

A new opening for automobiles to enter the courtyard was installed in 1938 where the former fumigation room was located. The pass through was enclosed by a pair of 2'-9 1/3" doors. These doors were removed at an unknown date and the opening is now secured by an oversized rolling door made of plywood.

#### a. Doorways and doors:

The main entry door and the exterior door to the south of the main entry on the west façade are original to the building. All other doors were replaced with the 1938 remodel or with subsequent remodels. The detail below is from the 1938 remodel. Door type 1 was installed at the new exterior doorway to the north of the main entry. This door leaf matches the single and pair of entry doors that were installed originally on the west façade. Each of the matching solid wood doors is constructed of 1-3/4" thick by 5-3/4" styles and top rail, 1-3/4" thick by 11-1/2" bottom rail, 7/8" thick recessed flat panes with glazed vision panels.

Door type 2 was used as an interior door at the office to the south of the entry lobby (southwest corner of the building). One of these doors remains and is used in the same office but was relocated to serve as the entry to the courtyard. No examples of door types 9, 3 or 10 remain.

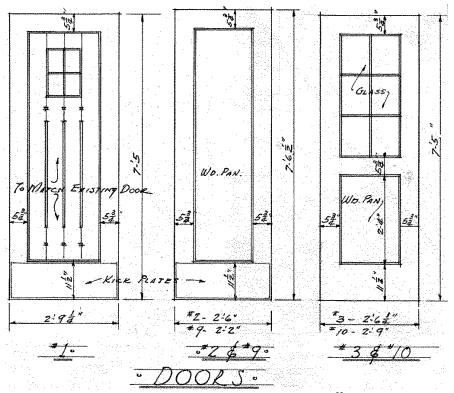


Figure 22: Door types used in the 1938 remodel<sup>38</sup>

<sup>38 (</sup>Sellon & Hemmings State Architects 1908)



Figure 23: Exterior of original main entry doors



Figure 25: Interior side of original main entry doors



Figure 24: Image of door type 1 from 1938 drawings – north entry

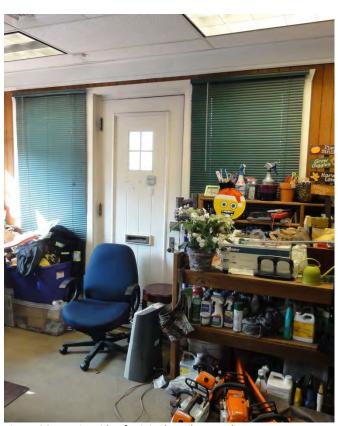


Figure 26: Interior side of original south entry door

The following detail is also from the 1938 remodel and indicates new doors were installed at the east end of the south façade where the fumigation room was removed and at the adjacent repair shop. Each of these doors was of the half glass type, with 1-3/4" thick by 5" styles and rails and 1-3/4" thick by 9-1/2" bottom rails. Door type 4 was replaced at a later unknown date with an oversized sliding door, but door type 5 remains in its 1938 installed location at the south end of the repair shop.

Additionally, the drawing references a new and existing ramp up to these doors. The ramps still exist and are very steep. The ramp on the left in the detail has a slope of 14.2%, while the slope on the right is 25.5%. By comparison, accessible slopes for pedestrian use are a maximum of 5% without a handrail and 8.33% with a handrail.

All other doors within the facility are replacements that have been installed during various subsequent remodels of unknown dates and are of various solid and raised panel types.

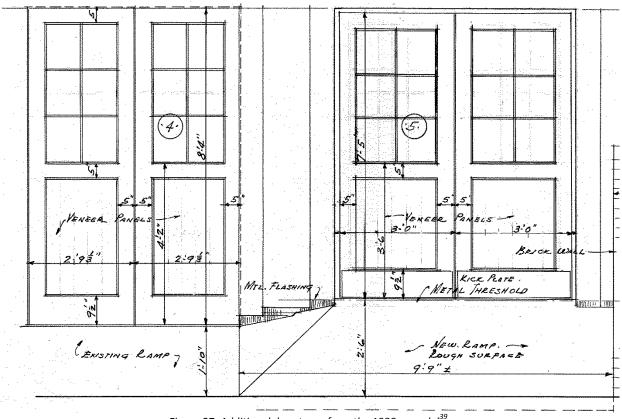


Figure 27: Additional door types from the 1938 remodel<sup>39</sup>

All original doors are in good condition; however, exterior surfaces need paint.

<sup>&</sup>lt;sup>39</sup> (Sellon & Hemmings State Architects 1908)



Figure 28: Exterior view of 1938 door type 5 as originally installed

Figure 29: Interior view of 1938 door type 5 as originally installed

#### b. Windows and shutters:

All original ground floor wood windows were replaced during the 1938 remodel. The original windows extended from floor to ceiling along the west (front) façade but included louvered ventilation inlets below many of the windows at the insect cages along the north and east facades. All windows were fixed sashes except for one casement that was located along the south façade at the location of the 1908 rest room. The replacement wood windows include a mix of fixed and casement sash windows. All sashes consist of three lights in height, but depending on width are either one, two or three lights wide. When the new windows were installed with a sill height of 4 feet above the finish floor, the area below the windows was filled in with rough finished cement plaster to match the rest of the building on the exterior, while the interior finishes were finished in tongue and groove wood.



Figure 30: Typical three-part window with fixed panels at both sides and casement in the middle



Figure 31: Detailed view of west facing window shows crazed and failing paint at the sash and muntin





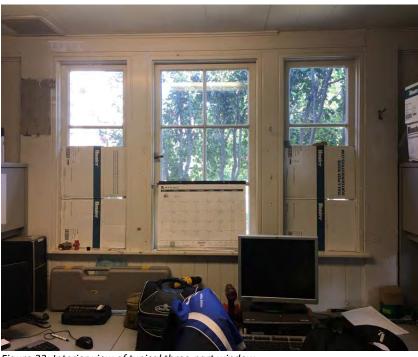


Figure 33: Interior view of typical three-part window

The wood windows above those on the ground floor are original; although some have been replaced with solid or louvered panels. This band of 2'-6" high hopper windows provide light and air to the attic spaces, except at the projecting front entry, where the ceilings were designed higher at what was originally the museum. However, new suspended ceilings have been installed below the original ceiling to allow for HVAC to be provided to the lobby, hall and two offices that now make up what once was an open museum space. Thus, only the windows directly above the main entry doors and the lobby doors leading to the courtyard still serve as clerestories.



Figure 34: Three original attic hoppers above the ground floor windows on the primary (west) façade



Figure 35: Three original hopper windows, two modified with painted glass and one with a louvered vent



Figure 36: The original museum had higher ceilings, where the hoppers served as clerestories. The current t-bar ceiling is sloped at the exterior walls to allow the clerestories to continue to serve the main entry lobby.

Figure 37: Interior view of attic hoppers

#### 8. Roof:

The building consists of a hip roof over the original portion of the building and a skylight structure over the original open courtyard.



Figure 38: View of the west facade showing the hip roof

#### 9. Shape, covering:

The hip roof is finished in redwood shingles. A reroof project was completed in 2001, at which time plywood sheathing was installed over existing skip sheathing. Cupping is beginning to occur on some of the shingles, which will ultimately lead to leaks if the roof is not replaced.

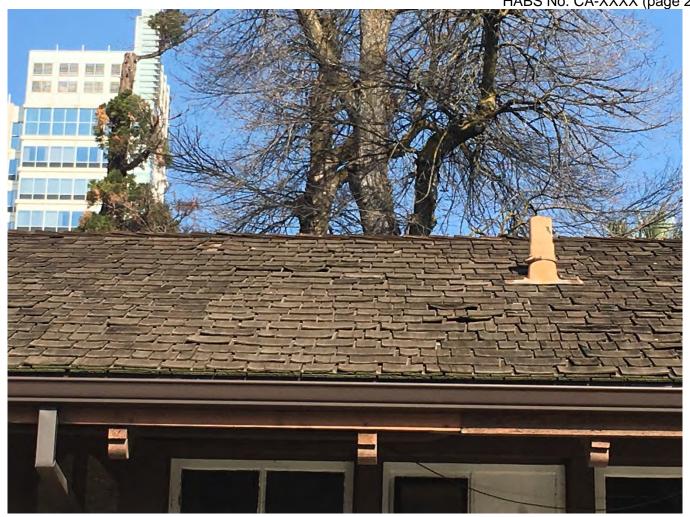


Figure 39: Close up view of shingle roof showing cupping

The original skylight was either altered from its original design or replaced at some point to its current configuration. The drawings indicate that the skylight glazing was to cover the entire area of the courtyard, however, today only the center portion of the structure is glazing. The rest of the roofing is a low sloping hip roof of 2x framing with a roughly 10'-5" by 15'-9" gable skylight structure rising above the center of the courtyard. The skylight glazing is very old glass, including wire glass at the sloped surfaces. The 1938 drawings call for the skylight glass to be repaired; therefore, if the glass is not original to the 1913 skylight, it may have been replaced with the 1938 remodel.

The image below is the 1913 drawing sheet for the original skylight over the courtyard.

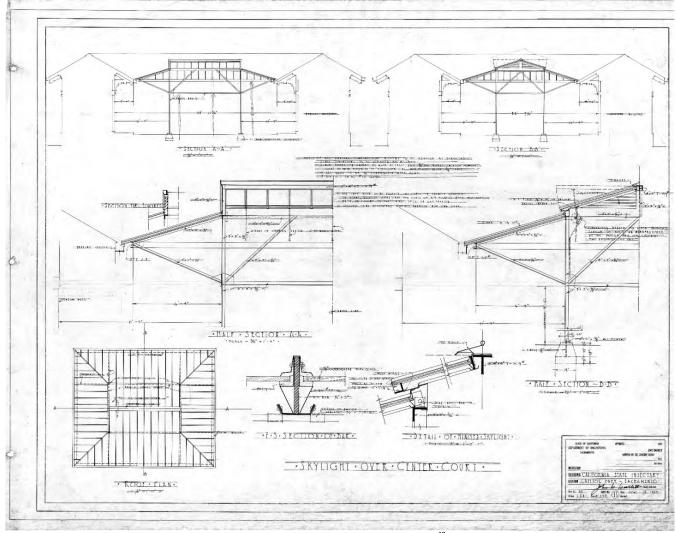


Figure 40: 1913 skylight addition drawing 40







Figure 42: Skylight and open court below

 $<sup>^{</sup>m 40}$  (State of California, Department of Engineering, Sacramento 1913)



Figure 43: Enlarged view of wire glass at skylight

The 2001 reroof did not include any information about the roofing material over the wood framed portion of the skylight structure or the flat portion of the hip roofed entry. It is assumption that it is finished in single ply roofing, typical of most flatter roof state owned projects. A view from Google Earth appears to reinforce this assumption.

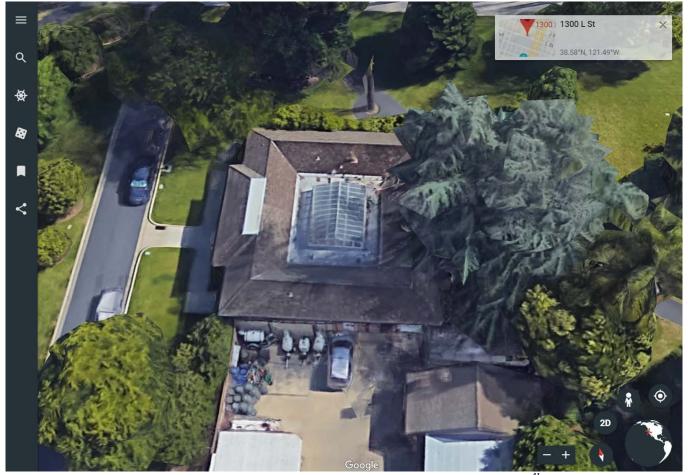


Figure 44: Google Earth image showing existing roof and skylight configuration 41

<sup>&</sup>lt;sup>41</sup> (Google Earth n.d.)

#### 10. Cornice, eaves:

The eaves are articulated with exposed rafters with decoratively cut tails. The rafter tails are further adorned with brackets on the courtyard side. These elements are in good condition.



Figure 45: Typical exposed rafter tails at the exterior of the building



Figure 46: Typical exposed rafter tails and supporting brackets at the courtyard

#### 11. Dormers, cupolas, towers:

N/A

#### 12. Decorative Trim:

The importance placed on the work conducted at the Insectary is evidenced by the attention given to the exterior detailing. All four elevations include intricately detailed redwood trim assemblies utilizing half timbering with a mortise and tenon motif, geometric shapes and rough finished cement plaster infill. The decorative redwood panels vary in size with importance of the element they accentuate. The image below is from the AutoCAD drawings prepared for this survey and included as Appendix B.

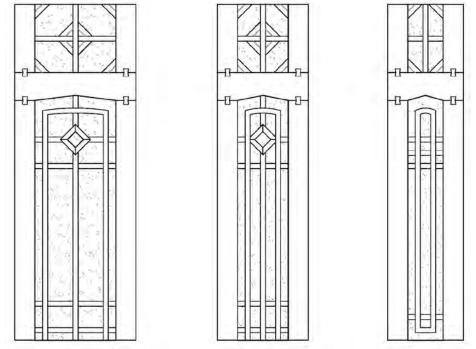


Figure 47: The panel on the left is used at the sides of the projecting main entry bay, the panel in the middle is used at the west (primary) facade, while the simplified one on the right is used at all other facades



Figure 48: Redwood half-timbering exterior detail at projecting entry bay



Figure 49: Redwood mortis and tenon detail at the west facade

#### C. Description of Interior

#### 1. Floor plans:

The original floor plan layout, completed and constructed in 1908, included an entomology museum, office, laboratory, single occupant rest room, work room, fumigation room, vent stack, three storage closets and eight insect cages in the main structure. Within the courtyard was the original breeding cage that was removed with the 1938 remodel.

The 1938 remodeled floor plan altered the museum into a receiving room and bulb storage room. The original insectary office remained the headquarters office in the remodel, but all of the support spaces and insect cages were altered to server the new use. These new spaces included a large store room, repair shop, work room, locker room, a second office, automobile entrance to the courtyard, blacksmith shop in the courtyard and the main park women's rest room.

The current plan indicates that at some point the receiving room was split into an entry lobby, a hall and an office. The main park women's rest room foyer was altered to an office and the rest room space was converted to a single occupant rest room and storage area. The locker room was converted to an office and the other support spaces were converted to three offices, a break room, plan room and work room.

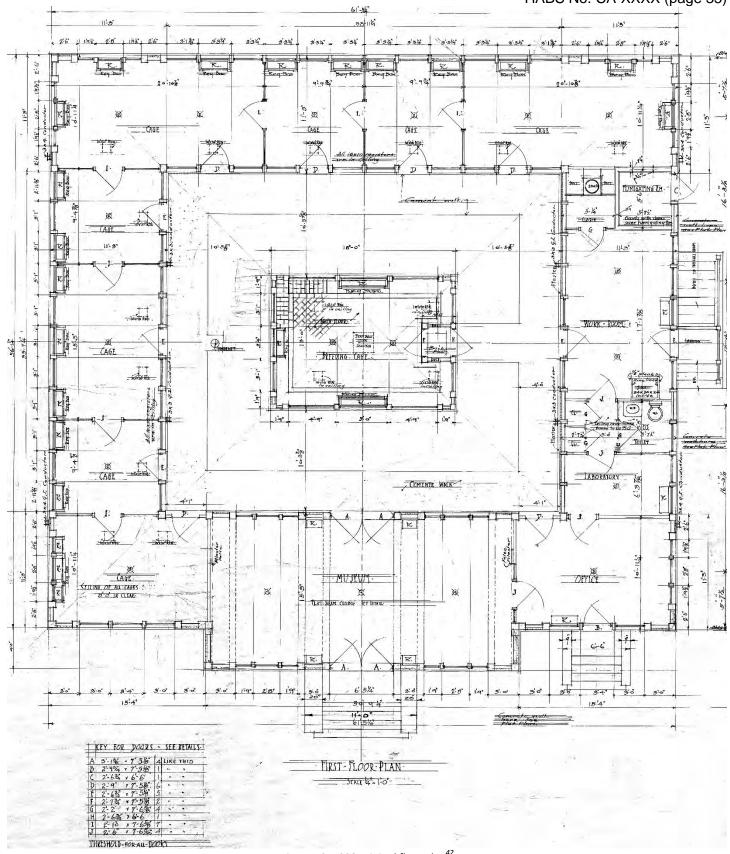


Figure 50: 1908 original floor plan<sup>42</sup>

<sup>&</sup>lt;sup>42</sup> (Sellon & Hemmings State Architects 1908)

# (Capitol Park Insectary) HABS No. CA-XXXX (page 36) (A) (B) (A) $\mathscr{A}$ · LEPAIR SHOP . 3 NEW CONC. RAMP. LOUGHEN. T & G. PANELS REMINENCE TO THE DO EXISTING RAMP EXTEND TEG. WALLS METAL HOOD PERFORGE GRADE AT FACE OF KYLIGHT ABOVE REPAIR GLAS. $(\mathcal{A})$ -WOMENS -**3** · BULB · · RECEIVING · (A) OOM. ·STOR AGEO (F) (F) $\mathscr{A}\mathscr{B}\mathscr{B}$ (A) (B) (A) NEW 5-0" WALK

CALIFORNIA STATE INSECTARY

Figure 51: 1938 Floor Plan - Conversion to Park Maintenance Headquarters  $^{43}$ 

<sup>&</sup>lt;sup>43</sup> (Daniels 1938)

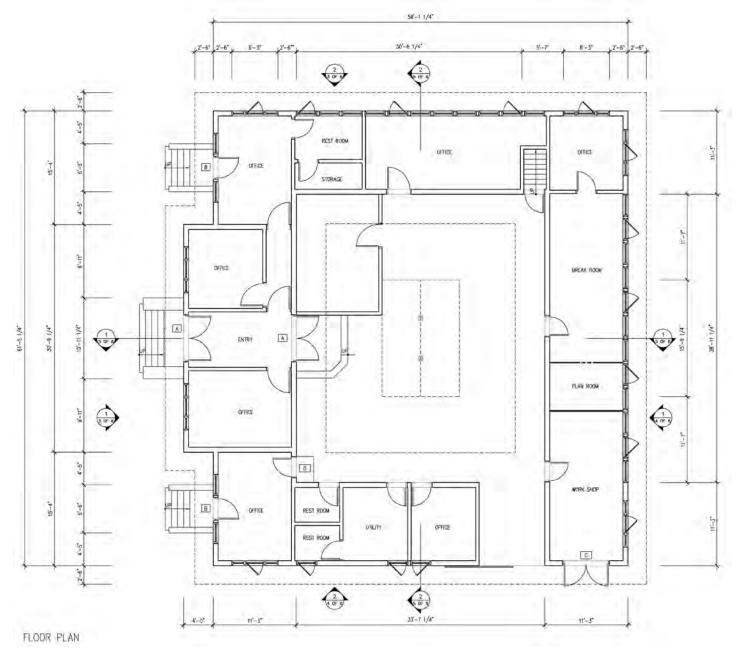


Figure 52: Floor plan as surveyed on February 7, 2018

# 2. Stairways:

The three entry stoops are addressed in section B(5) above. The only other stairway in the building serves the attic and was constructed in 1908. It consists of 10 open risers at 10-5/16" each and 9 treads at 8-1/8" each. Each tread is constructed using 1x12 boards, with the front edge rounded, and 3-3/8" nosings. A simple pipe handrail has been installed at either side of the stair.

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Figure 54: Attic stair, showing pipe handrails

Figure 53: Attic Stair, showing 1x12 treads

# 3. Flooring:

The original flooring is shown in the 1908 details as wood, but it is not called out specifically; therefore, the type and species remain unknown. The original flooring is entirely covered with current finishes including carpet, sheet vinyl, vinyl composite tiles and what appears to be midcentury linoleum. The courtyard, originally an exterior space, was initially finished with brick pavers but is now a concrete slab sloped to drain to the two original courtyard drains.

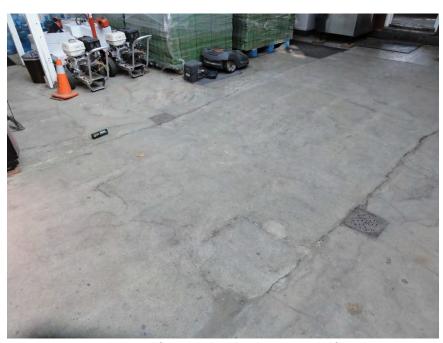


Figure 55: Courtyard floor slab sloped to drain to original floor drains.

# 4. Walls and ceiling finish:

Walls:

The interior of the building has seen many changes and new wall finishes appear to have been introduced with every alteration. The wall finishes present during this survey include tongue and groove painted redwood, painted redwood 1x3 boards, plaster on metal lath, redwood paneling, gypsum board, prefinished wood paneling and fiber reinforced panels (FRP).



Figure 56: Painted redwood tongue and groove, typical of partitions between utility rooms on the east side of the courtyard.



Figure 57: Tongue and groove partitions are one layer thick as this damaged partition indicates. The courtyard is visible through the hole.



Figure 58: Lath and plaster walls at the foyer

Figure 59: The exterior walls are finished in 1x3 painted redwood boards

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Figure 60: Redwood paneling, typical at most offices



Figure 61: Gypsum board used between remodeled rest room and storage area

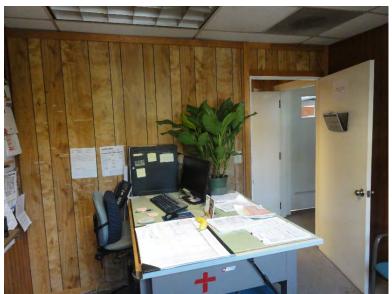


Figure 62: Prefinished wood paneling



Figure 63: FRP used as office wall finish

The interior of the enclosed courtyard matches the exterior exposed post and beam construction with cement plaster infill panels. However, some large windows and French doors have been removed and the spaces infilled with redwood paneling and smaller doors.



Figure 64: Courtyard - looking west

Figure 65: Courtyard - looking east



Figure 66: Courtyard cement plaster panels and redwood paneling infill

Originally, glazed partitions and large glass doors were used to divide the Insectary cages as can be seen in the following two historic photos. These partitions were removed during the 1938 alteration along with the full height exterior windows. That is also likely when all of the courtyard windows were removed.



Figure 67: Interior view of the building in use as an insectary, 1910<sup>44</sup>



Figure 68: Interior view in 1910<sup>45</sup>

#### Ceilings:

The ceilings are a mix of materials installed over time. The original ceiling material appears to have been wood boards (likely 1x3's) utilizing butt joints in all of the insect cages and utility spaces and where these remain, they are painted. Suspended T-bar ceiling grids with 2x4 acoustical panels are installed in the main lobby, the rest rooms and most of the offices. Additionally, one office has drilled acoustical ceiling tiles. The ceiling materials are in good condition.

<sup>&</sup>lt;sup>14</sup> (Unknown 1910)

<sup>&</sup>lt;sup>45</sup> (Unknown 1910)

The Insectary entomology museum ceiling was finished with exposed wood beams. It is likely that these beams still exist above the suspended acoustical ceiling system.



Figure 69: Original painted wood ceiling



Figure 70: T-bar ceiling in main entry



Figure 71: Drilled acoustical ceiling tiles

# 5. Openings:

#### a. Doorways and doors:

Interior doors in the building are a mix of the various remodels that have occurred over time. The only original interior doors remain at the doorway from the main entry lobby (originally part of the entomology museum) to the courtyard. One door from the 1938 remodel was relocated from its original 1938 location to the courtyard entrance to the southwest corner office. All other interior doors have been added or replaced over time.



Figure 72: Doors from the original Insectary museum (lobby) to the courtyard match the main exterior entrance doors



Figure 73: Courtyard side of lobby doors

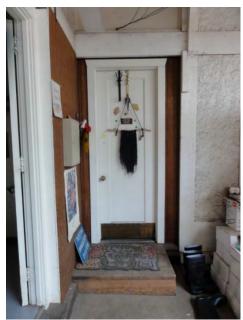


Figure 74: Door type 2 from the 1938 drawings, relocated from its original location within the same office



Figure 75: Modern interior door replacement

#### b. Windows:

There is currently only one interior window, which is in the main lobby. It is a 4'-0" wide by 2'-10" high aluminum framed slider that is used as a pass-through counter from the lobby to the adjacent office. Below this window and counter is what appears to be an afterhours mail drop slot.

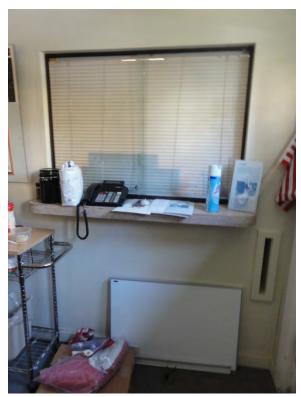
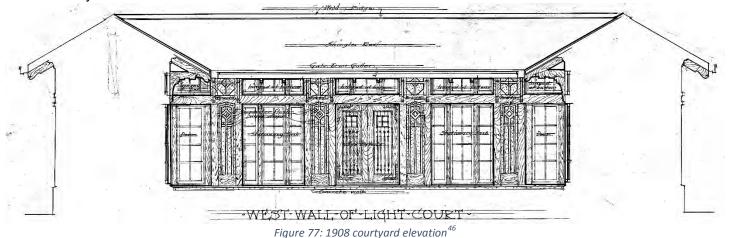


Figure 76: Lobby pass-through window and mail slot

Originally, the courtyard had full height windows like those on the exterior as represented in the courtyard elevation. It is unclear if these were removed in 1938 or in the various remodels since.



# 6. Decorative features and trim:

As is typical of the Craftsman style, there is very little decorative trim in this building. Additionally, the original building was designed for research and breeding of insects, which explains the lack of interior

<sup>&</sup>lt;sup>46</sup> (Sellon & Hemmings State Architects 1908)

detailing. There are simple window and door surrounds, one-inch thick base trim and simple crown moldings. Much of the original finishes have either been removed are or covered by various additions.



Figure 78: Simple door surround and base trim installed sometime after the 1938 remodel



Figure 79: Interior of the original office in the southwest corner of the building with original exterior door

#### 7. Hardware:

The only original hardware is that located on the entry doors, clerestory/attic windows and skylights. Original door hardware is polished brass.



Figure 80: Entry door knob and night latch



Figure 81: One of three pairs of brass hinges at the main entry door

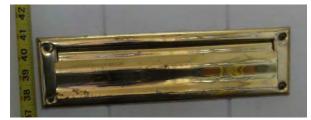


Figure 82: Brass mail slot

Skylight hardware consists of polished brass hinges and hopper window chain stops.



Figure 83: The vertical skylight windows are operable hoppers

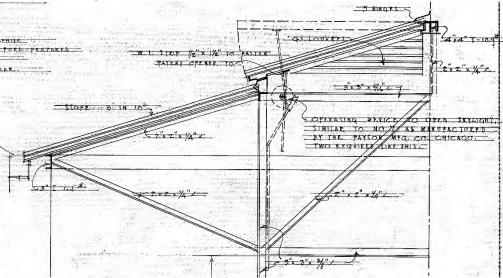


Figure 84: The original skylight design included operable sloping upper units

The existing window hardware was installed during the 1938 remodel when the full height windows and louvered ventilation system were replaced. Hardware includes polished brass casement and hopper hinges, latches and chain stops.



Figure 85: Typical casement window

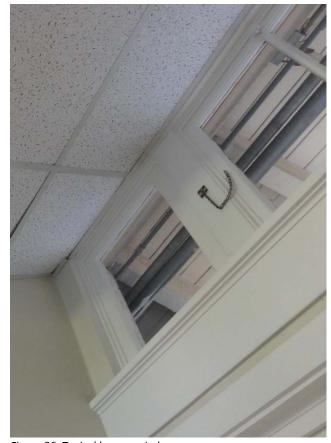


Figure 86: Typical hopper window

Other hardware consists of unmatched knobs, hinges and sweeps of various metals including polished brass, oil rubbed bronze and brushed nickel.

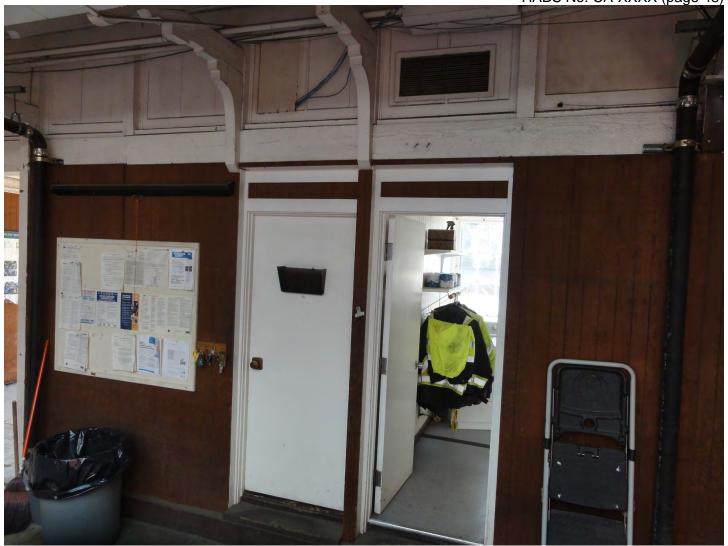


Figure 87: Two doors with mismatched hardware

# 8. Mechanical equipment:

The existing mechanical equipment consist only of HVAC which is discussed below. There are no fire sprinklers or alarm system. There are no fire rated walls; thus, there are no fire dampers used in the HVAC system.

#### 9. Heating, air conditioning, ventilation:

The building currently utilizes a split forced air HVAC system with two fan coils in the attic and two condensing units outside near the northeast corner of the building. Air is distributed throughout the enclosed portions of the building (excluding the courtyard) by flexible round ducts installed in the attic. Each room has a supply grille and a return air grille, which vary in size and shape. Most are located in the ceiling, but those in the entry lobby are located in the upper wall.

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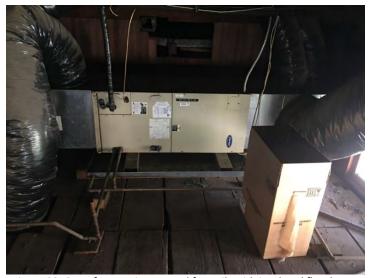


Figure 88: One of two attic mounted fan coils with insulated flex duct



Figure 90: Supply air provided through openings in attic floor

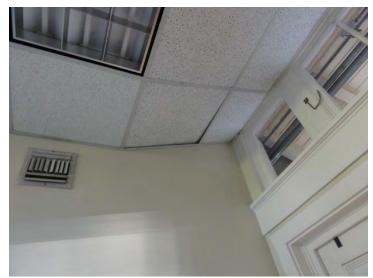


Figure 92: Supply grille located at the top of the lobby wall



Figure 89: Two condensing units are located at the north end of the east façade



Figure 91: Supply grille can be seen in the foreground and a return air grilled in the background



Figure 93: Another type of supply grille can be seen on the left and a return air grill on the far right

The building originally had a more primitive system – that at the time was state-of-the-art. Each room had at least one intake louvered vent (most had two or more) on the exterior of the building below a fixed window sash. The plan shows a register box at each louvered vent location. These provided fresh air to each space while a 10"x10" ceiling register in each space served as exhaust.

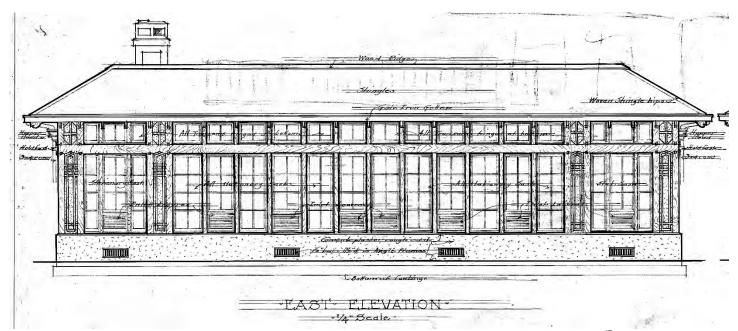


Figure 94: Louvered vents are evident below multiple window sashes on the original east elevation 47

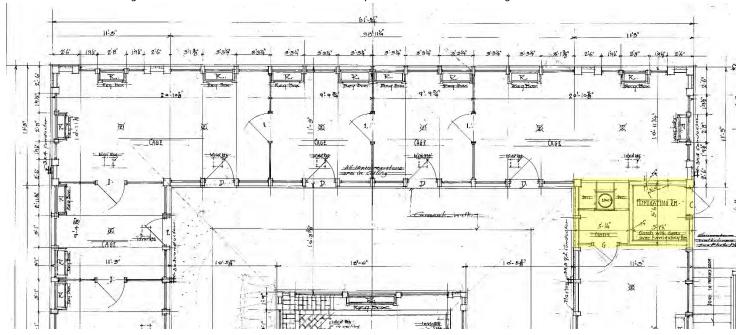


Figure 95: This (not to scale) partial plan is roughly aligned with the elevation above and shows the interior register boxes at the windows and the 10x10 ceiling registers<sup>48</sup>

<sup>&</sup>lt;sup>47</sup> (Sellon & Hemmings State Architects 1908)

<sup>&</sup>lt;sup>48</sup> (Sellon & Hemmings State Architects 1908)

The ceiling registers were connected to exhaust ducts in the attic that ran to the exhaust vent stack adjacent to the fumigation room (both areas highlighted in yellow on plan above).

Each space was also served by a radiator that was heated by a boiler located in the basement below the fumigation room. Hot water was distributed to the radiators through supply and return pipes ranging in size from 3/4" to 2" in diameter.

#### 10. Lighting:

The electric lighting in the attic is by exposed incandescent bulb fixtures, but the attic is also served by the clerestory type windows seen on the exterior:



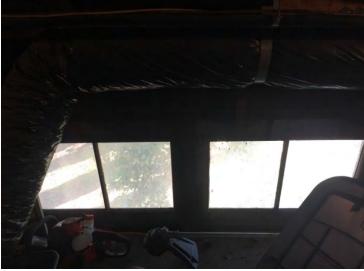


Figure 96: Typical attic electric lighting

Figure 97: Daylighting provided by attic windows

All the ground floor electric lighting consists of fluorescent fixtures. Daylighting is provided by large fixed and casement windows and the large courtyard skylight:



Figure 98: Typical ground floor lighting



Figure 99: Typical window configuration



Figure 100: Courtyard skylight

#### 11. Plumbing:

The only original electrical, lighting or plumbing elements remaining in the building are the two floor drains located in the courtyard. This was once an open court with paver flooring, where rain water needed to be drained away. Today, there is a sloped concrete floor slab in a spaced that severs a utility use and is likely hosed down for cleaning.



Figure 101: Floor drains at courtyard

All plumbing fixtures and lines (water supply, waste and vent stacks) have been relocated from the original single occupant rest room to the current three single occupant rest rooms (north single occupant, south men's and south women's). The plumbing fixtures are midcentury era in the south portion of the building but are newer on the north side.



Figure 102: North single-occupant rest room.



Figure 103: South men's room (south women's room similar)



Figure 104: Plumbing vent can be seen at the roof

The crawl space was not accessible during the building survey; thus, the existing piping material could not be verified. The original drawings call for clay pipe underground drainage for the downspouts and galvanized iron water supply and waste pipes. However, the supply and waste lines have been relocated several times and the new work likely utilizes plastic.

# 12. Electrical Equipment:

The building originally had an electrical distribution system consisting of knob and tube wiring; the remnants can be seen still in the attic:



Figure 105: Abandoned knob and tube wiring still evident in the attic

But this has been replaced with copper wiring in metal (ridged and flex) conduit:



Figure 106: Ceiling lights served by rigid and flexible conduit



Figure 107: Light switch in former insect cage (current break room) served by surface mounted conduit

The building is served by a main panel located in the storage room in the northwest corner of the courtyard, one of two rooms that were not accessed during the site visit.

#### 13. Original furnishings:

No original furnishings remain.

#### D. Site

#### 1. Historic landscape design:

A plot plan of the landscaping as surveyed in 1948 is included at Appendix H.<sup>49</sup> The Insectary area still included a large greenhouse at that time with multiple flower beds to the east for growing the plants and flowers that were displayed in the Capitol Building. The flowers were removed from this area at an unknown date and are now gown in the Rose Garden at the east end of the park.

The park was designed in a typical Victorian style including long lanes between beds planting beds of annuals. Eight hundred flowering shrubs and trees were planted in 1869, representing more than two hundred native and exotic varieties. The park currently contains many of the state's most important heritage trees, including the Atlas Cedar directly to the south of the Park Maintenance facility, which is the largest of its species in California.<sup>50</sup>

#### 2. Outbuildings:

In 1913 a Conservatory building and attached greenhouse were constructed to the south of the main Insectary building in 1913. The greenhouse was later removed, but the Conservatory remains today and is used for storage.

When the Insectary building was converted to Park Maintenance Headquarters in 1938, a cart storage and men's rest room buildings were added to the facility.

#### Part III. Sources of Information

#### A. Architectural drawings:

2018 field note drawings conducted for this survey are included as Appendix A. 2018 AutoCAD drawings completed for this survey are included as Appendix B.

1908 original building drawings are included herein as Appendix C.51

1913 skylight drawing is included as Appendix D.<sup>52</sup>

1938 alteration and facility expansion drawings are included as Appendix E.<sup>53</sup>

2001 reroof plan is included as Appendix F.54

1913 Conservatory building drawings are included as Appendix G.55

1948 Partial Park Plot Plan showing existing landscaping is included as Appendix H. 56

<sup>&</sup>lt;sup>49</sup> (State of California, Department of Public Works, Division of Architecture November)

<sup>&</sup>lt;sup>50</sup> (California State Parks 2016)

<sup>&</sup>lt;sup>51</sup> (Sellon & Hemmings State Architects 1908)

<sup>&</sup>lt;sup>52</sup> (State of California, Department of Engineering, Sacramento 1913)

<sup>&</sup>lt;sup>53</sup> (Daniels 1938)

<sup>&</sup>lt;sup>54</sup> (Department of General Services, Professional Services Branch, Design Services Section 2001)

<sup>&</sup>lt;sup>55</sup> (State of California, Department of Engineering, Sacramento 1913)

<sup>&</sup>lt;sup>56</sup> (State of California, Department of Public Works, Division of Architecture November)

# Early views:



Figure 108: Insectary in 1910<sup>57</sup>



Figure 109: Insectary courtyard in 1910, before the installation of the skylight<sup>58</sup>

<sup>&</sup>lt;sup>57</sup> (Unknown 1910)

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#### B. Interviews:

And interview was conducted with Vito Sgromo, The Department of General Services historian on October 17, 2017 for a different assignment, but the information provided by Mr. Sgromo was instrumental in the research for this project.

# C. Selected Sources:

All consulted sources are included in the bibliography below.

### D. Likely Sources Not Yet Investigated:

There may be additional information about the building's original Architect, George C. Sellon in the archives of the private sector architecture firm he founded in Sacramento, currently known as Lionakis. Additionally, there may be student developed research on Sellon at the University of California at Davis main library.

#### E. Supplemental Material:

The State Capitol Museum: Capitol Park Tree Guide is provided in its entirety as Appendix J. The State Insectary / Park Maintenance Headquarters is referred to in this document as the Service Area or Service Yard and the block's trees are documented on page 12. A full list of the park's trees begins on page 16.

<sup>&</sup>lt;sup>58</sup> (Unknown 1910)

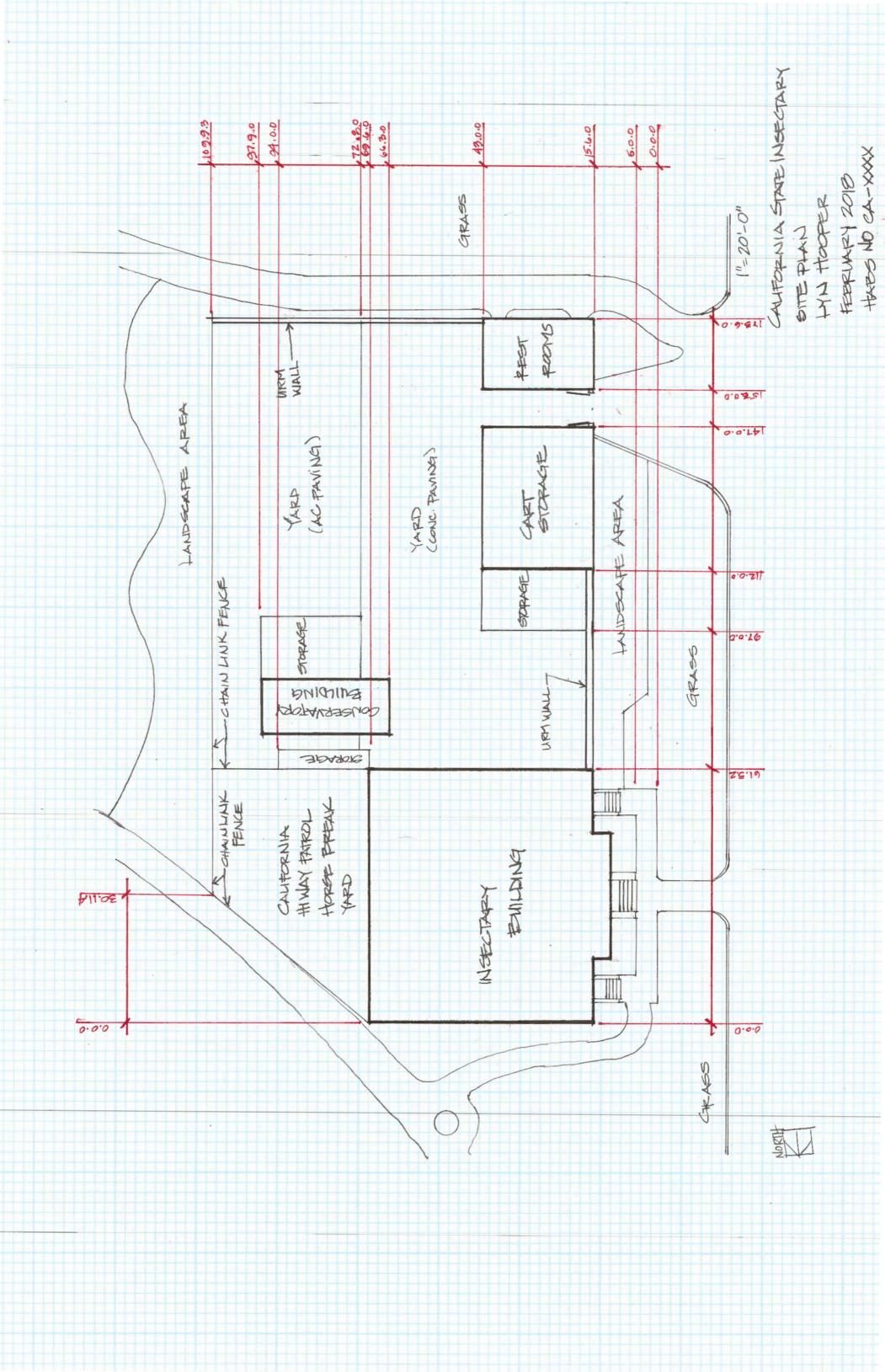
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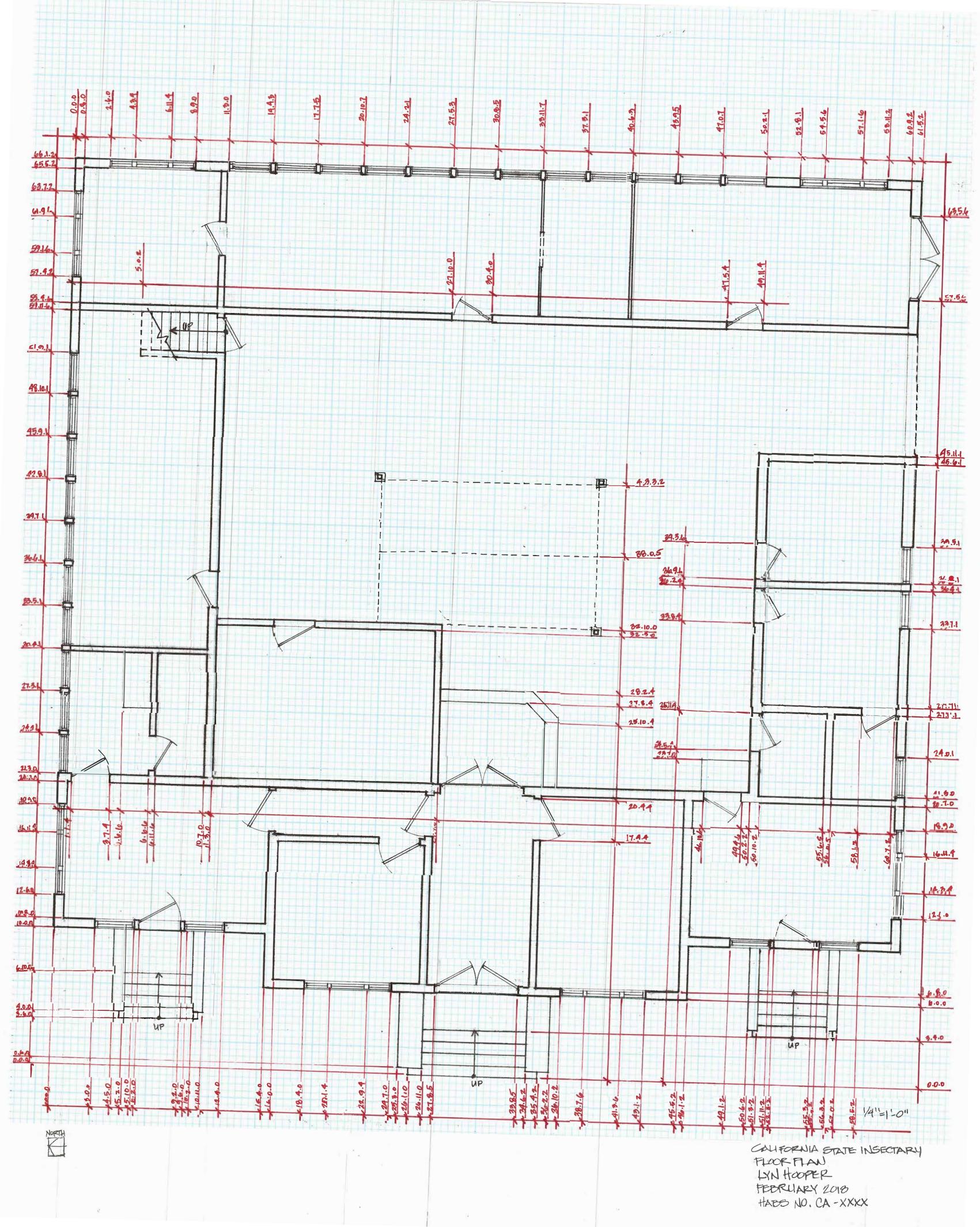
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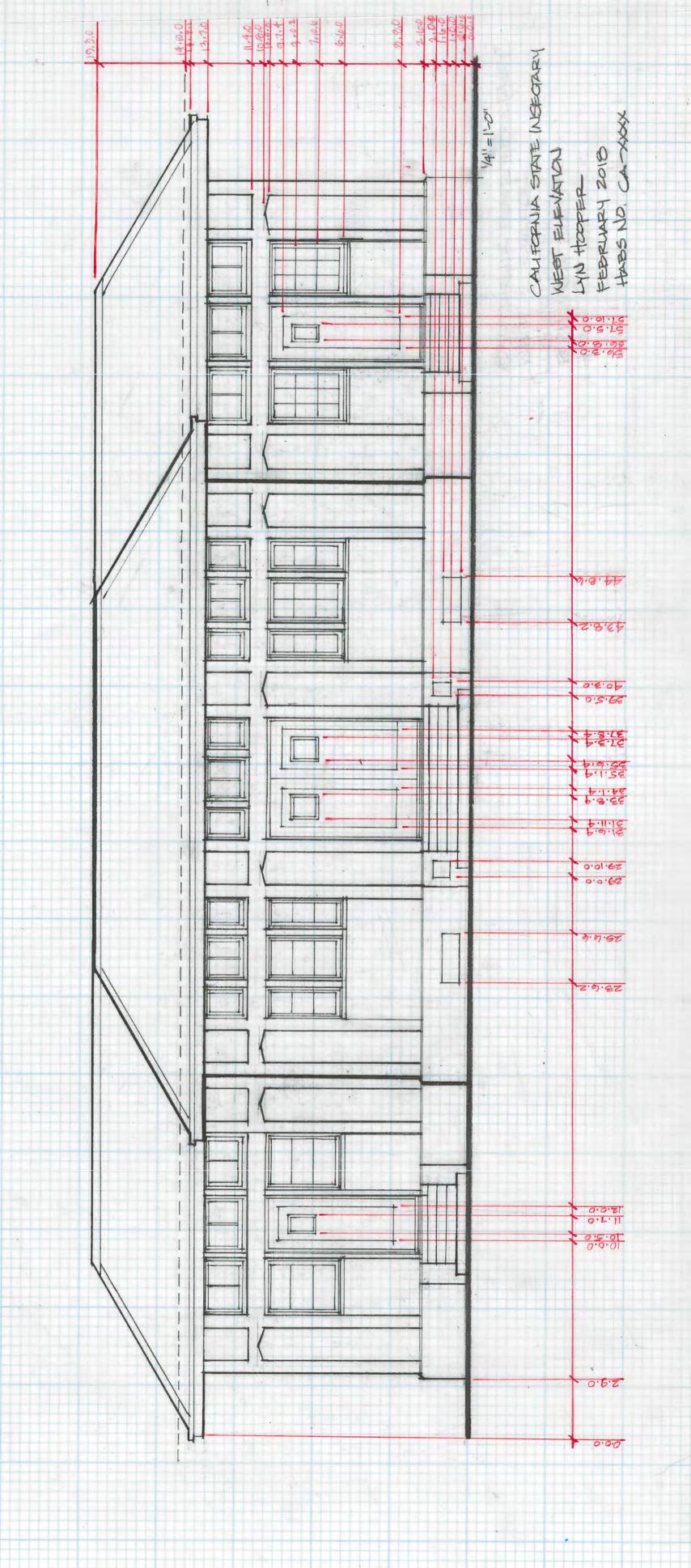
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Appendix A: 2018 Field Note Drawings

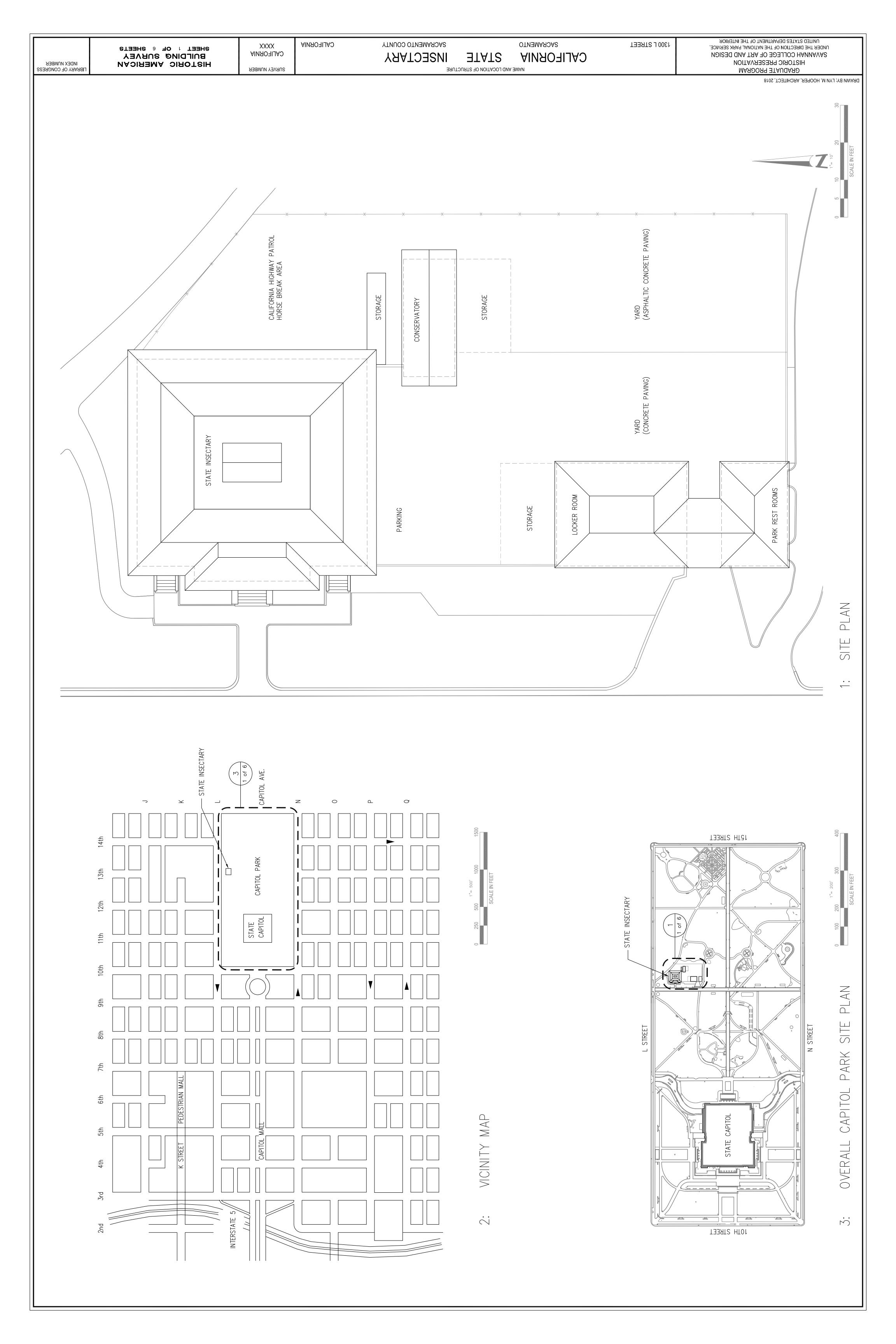


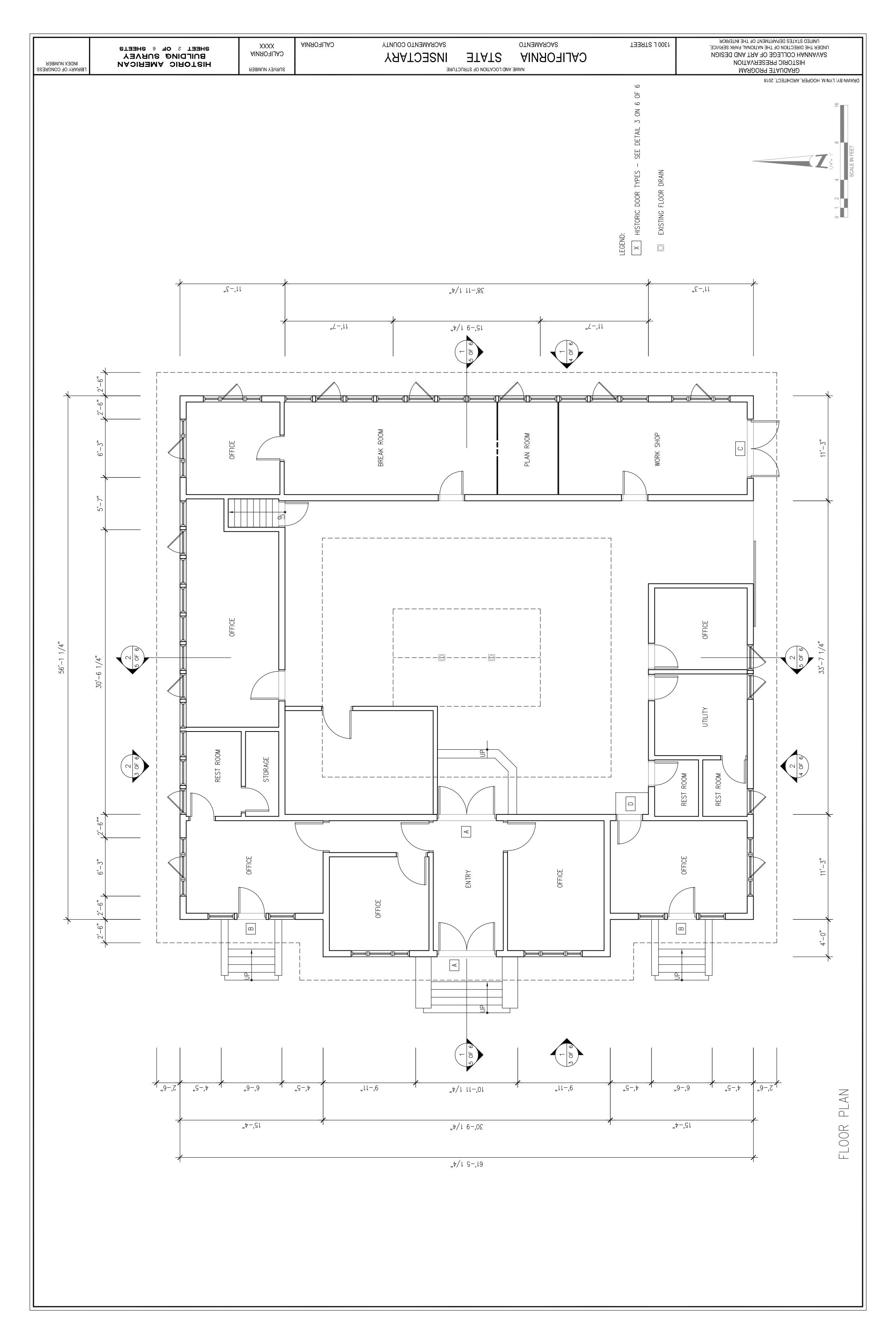


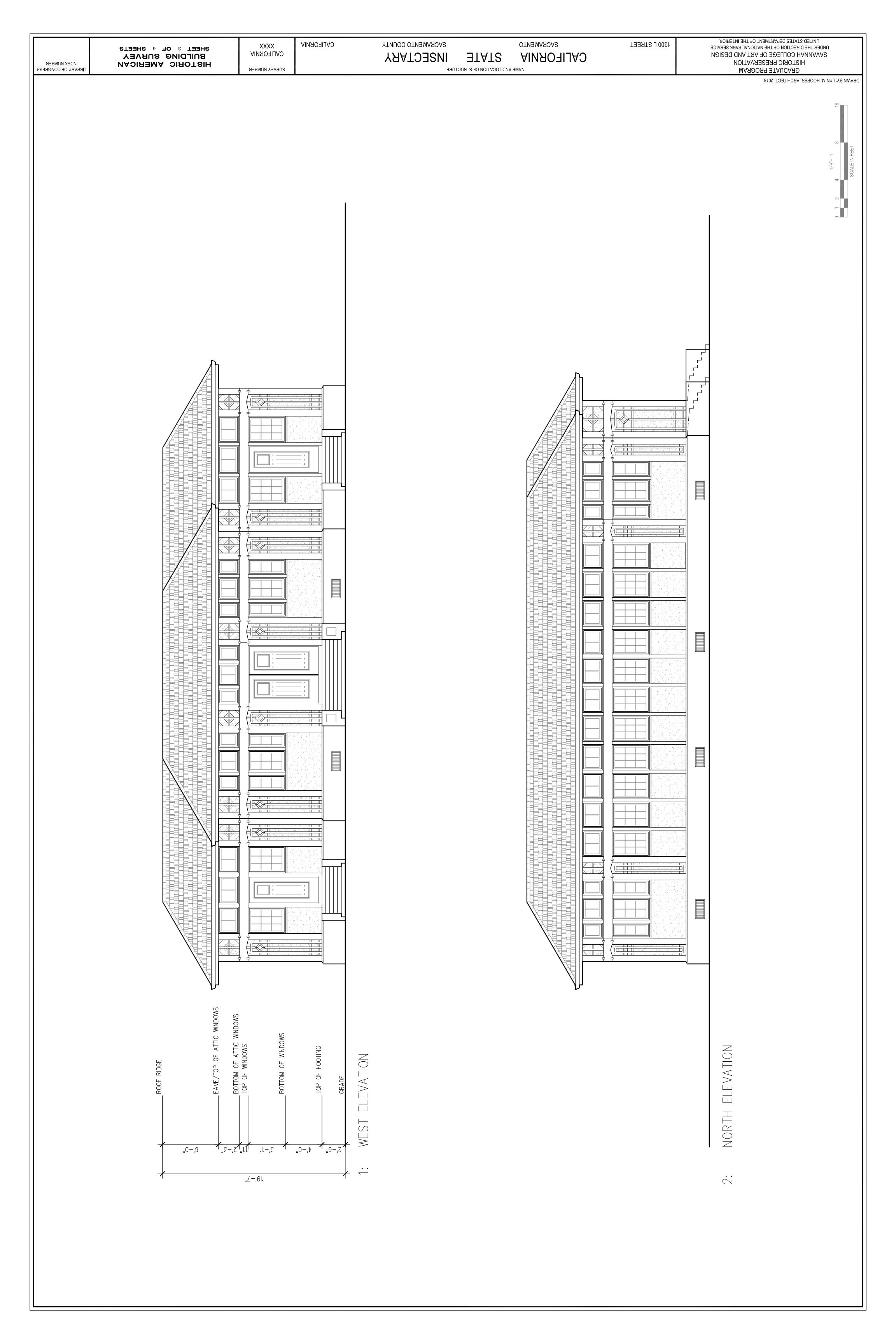


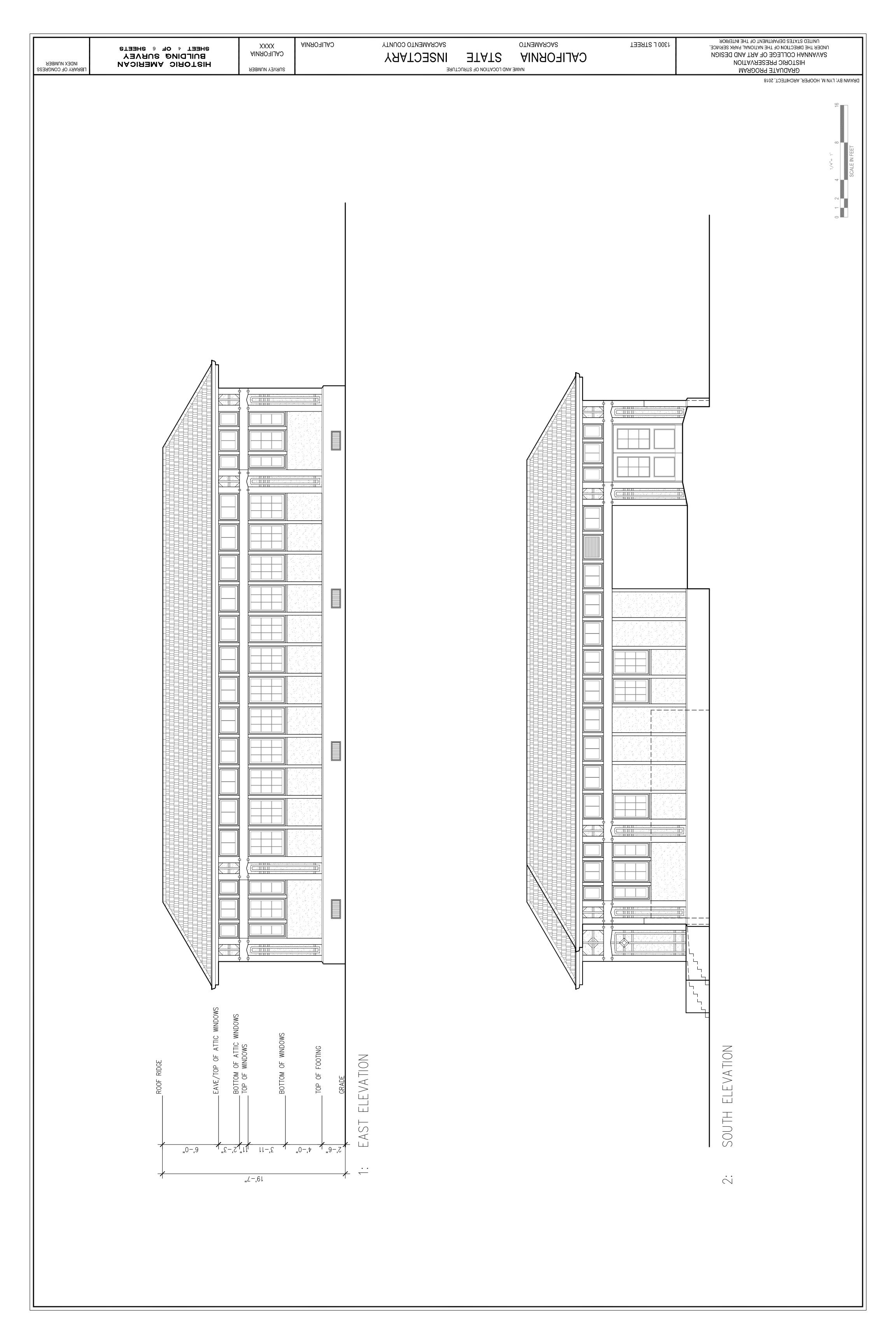
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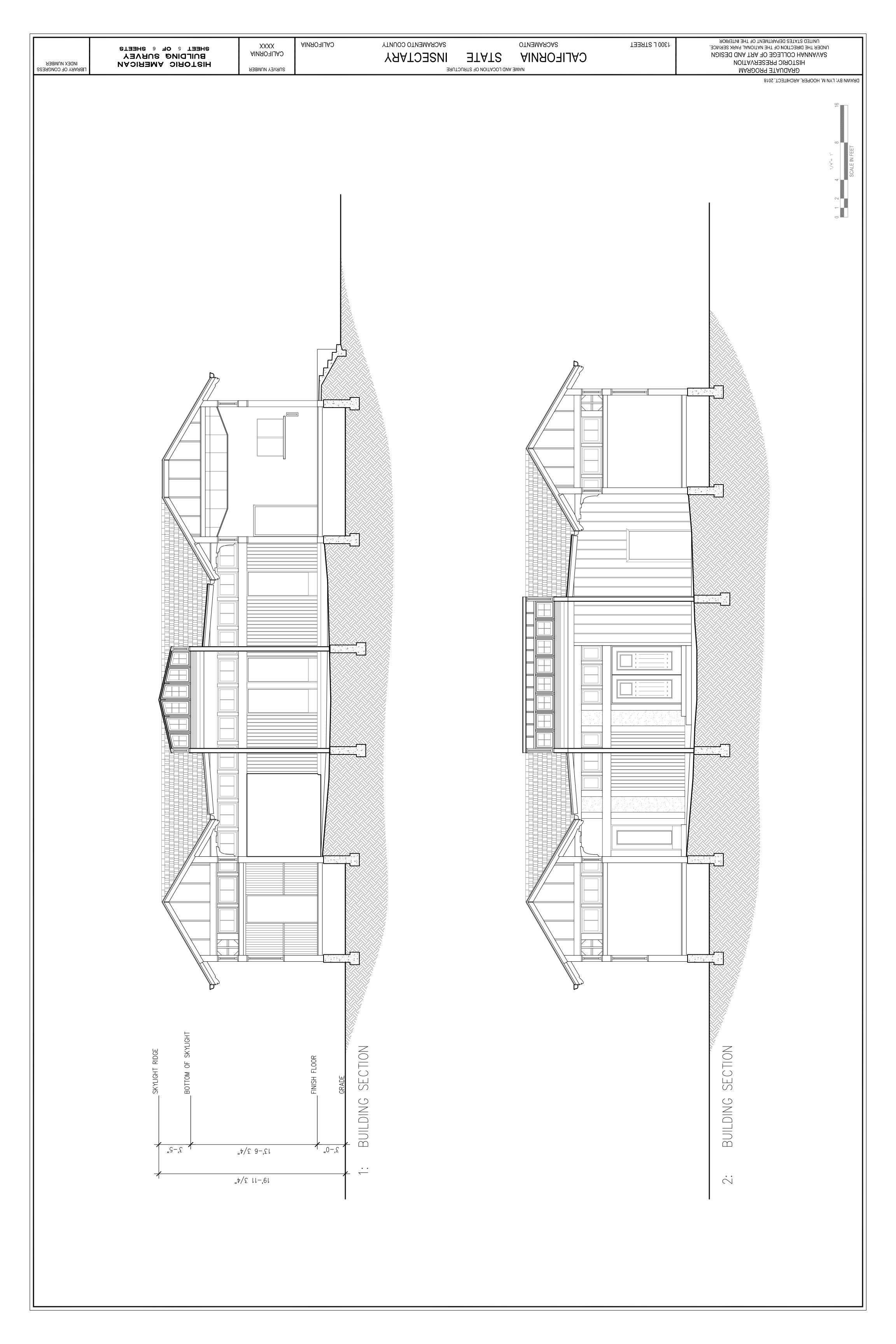
Appendix B: 2018 AutoCAD Drawings

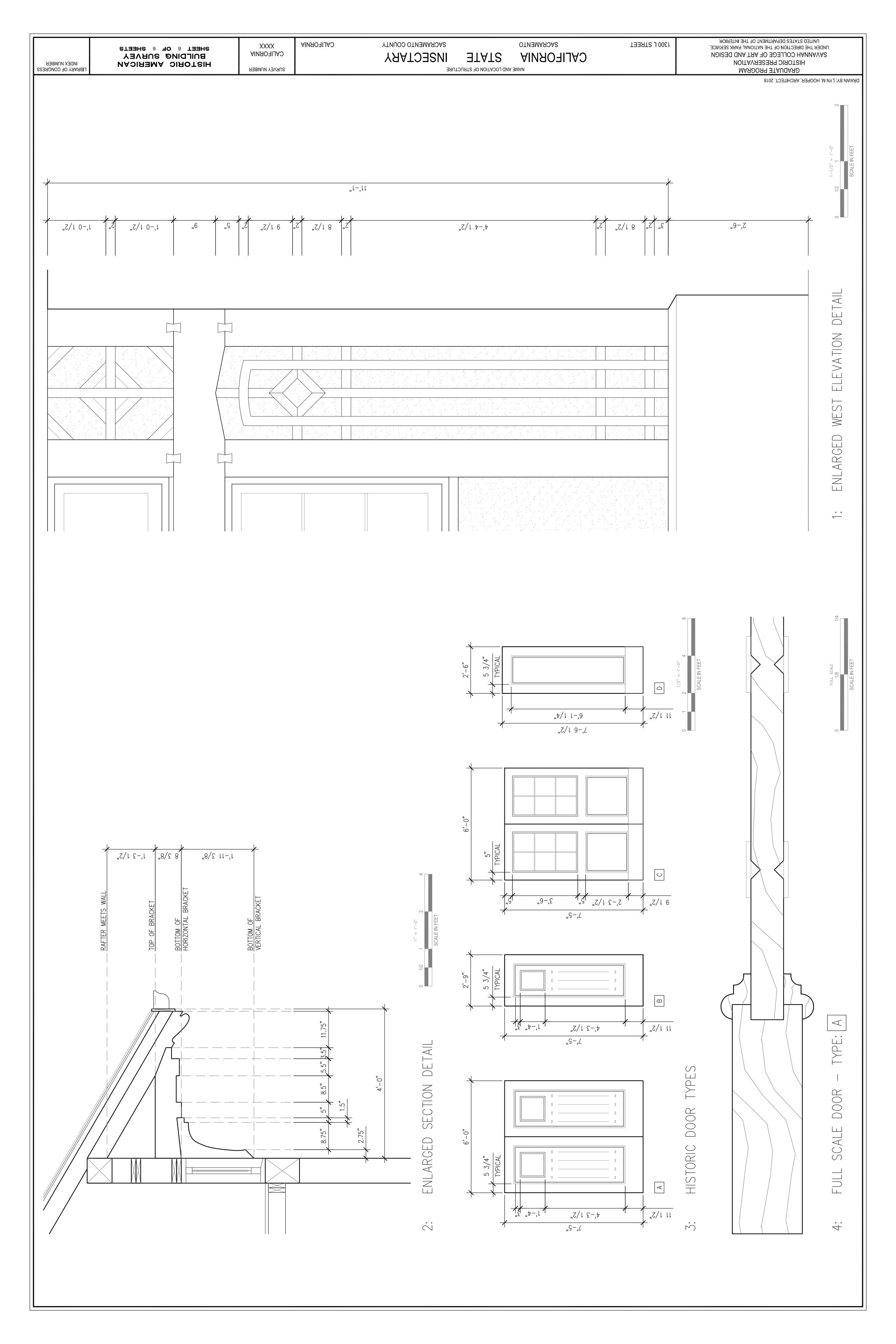






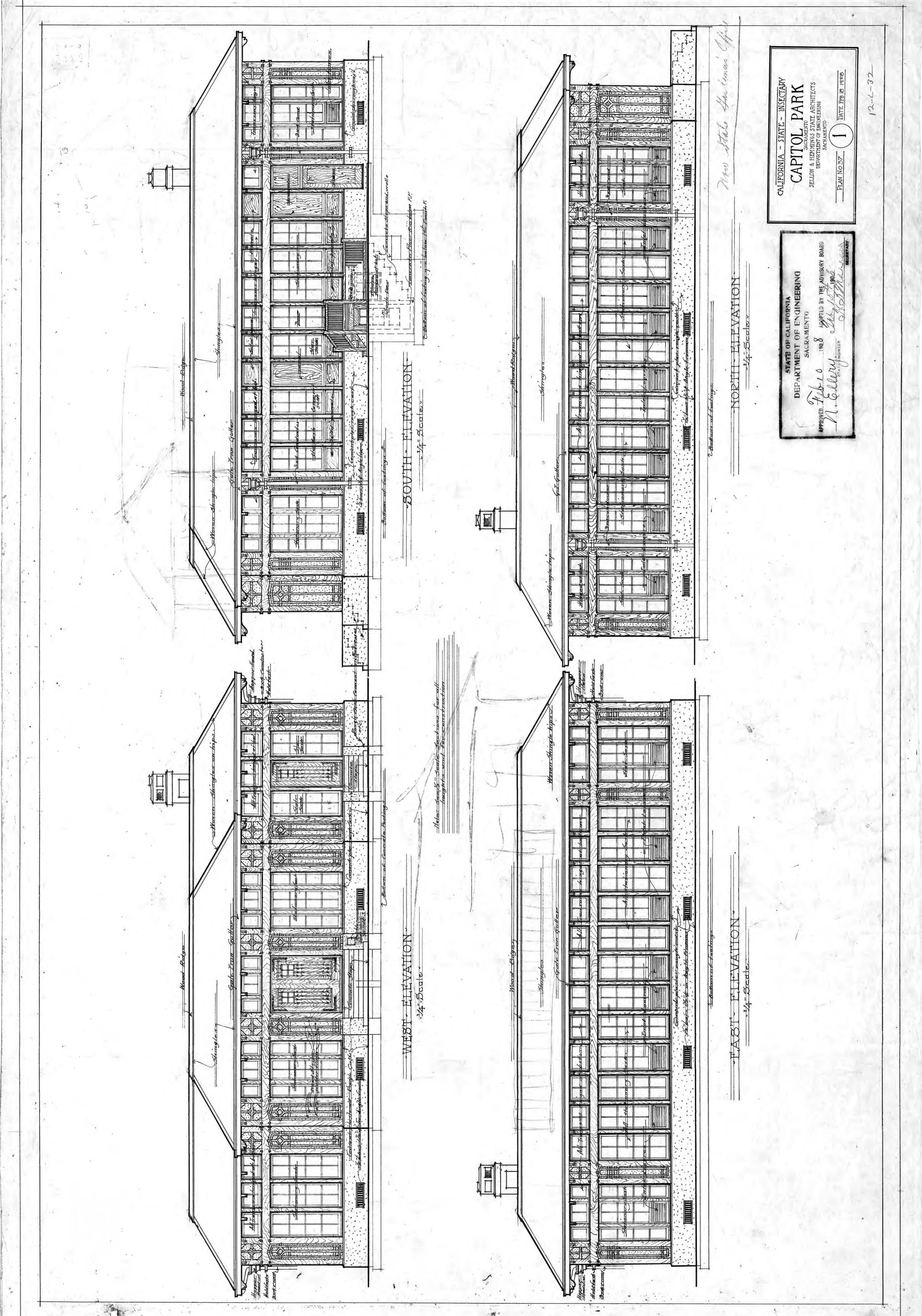


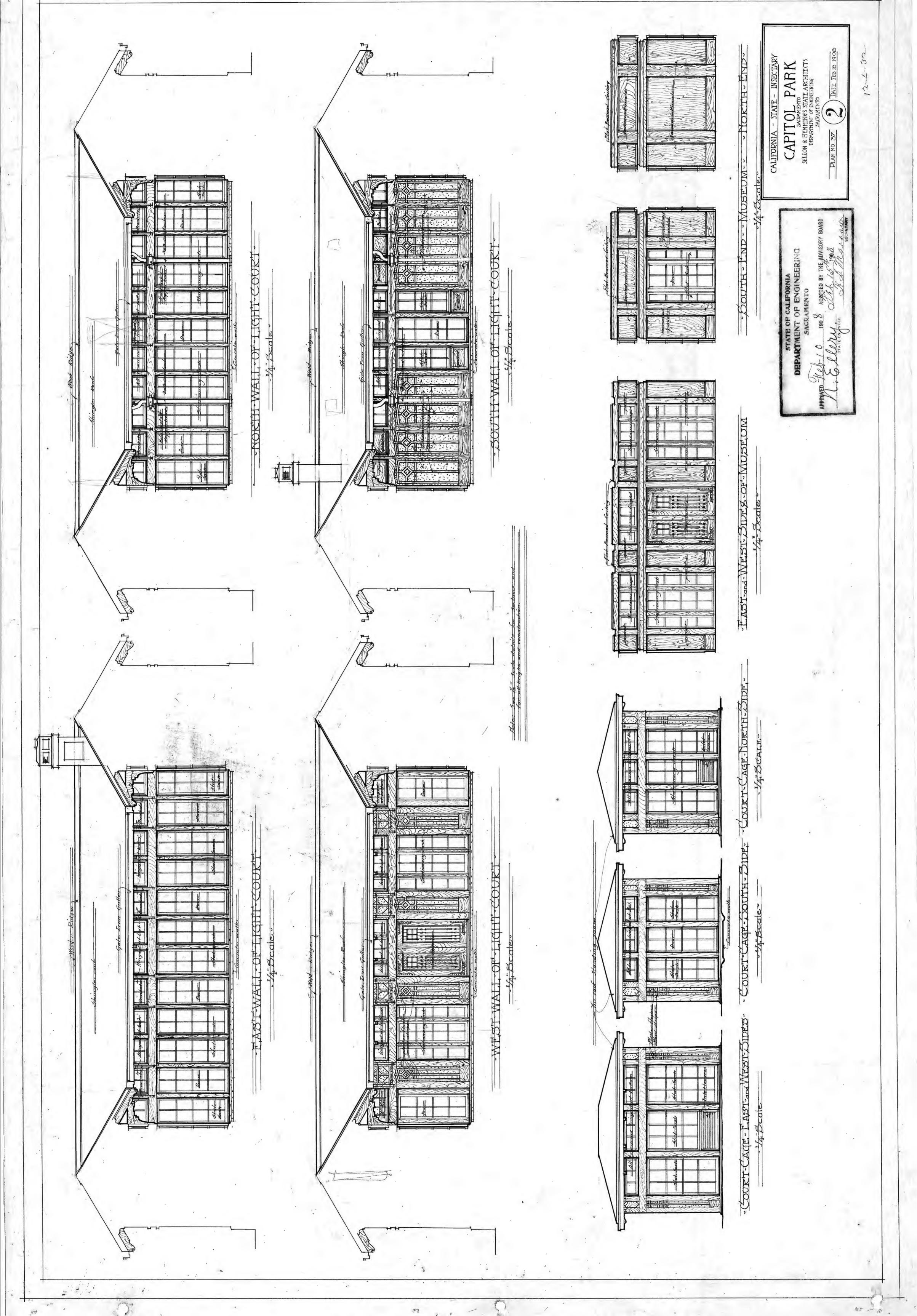


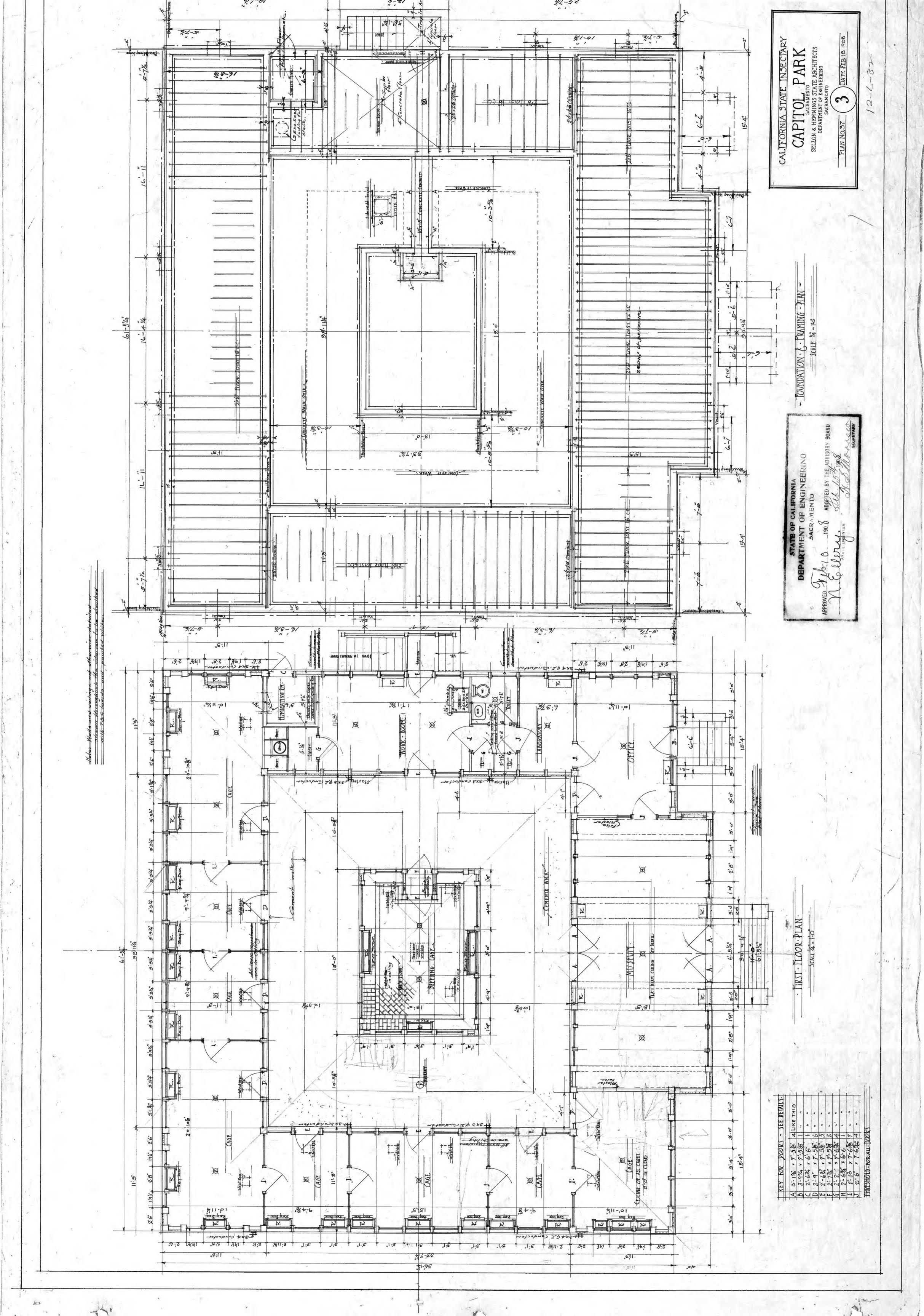


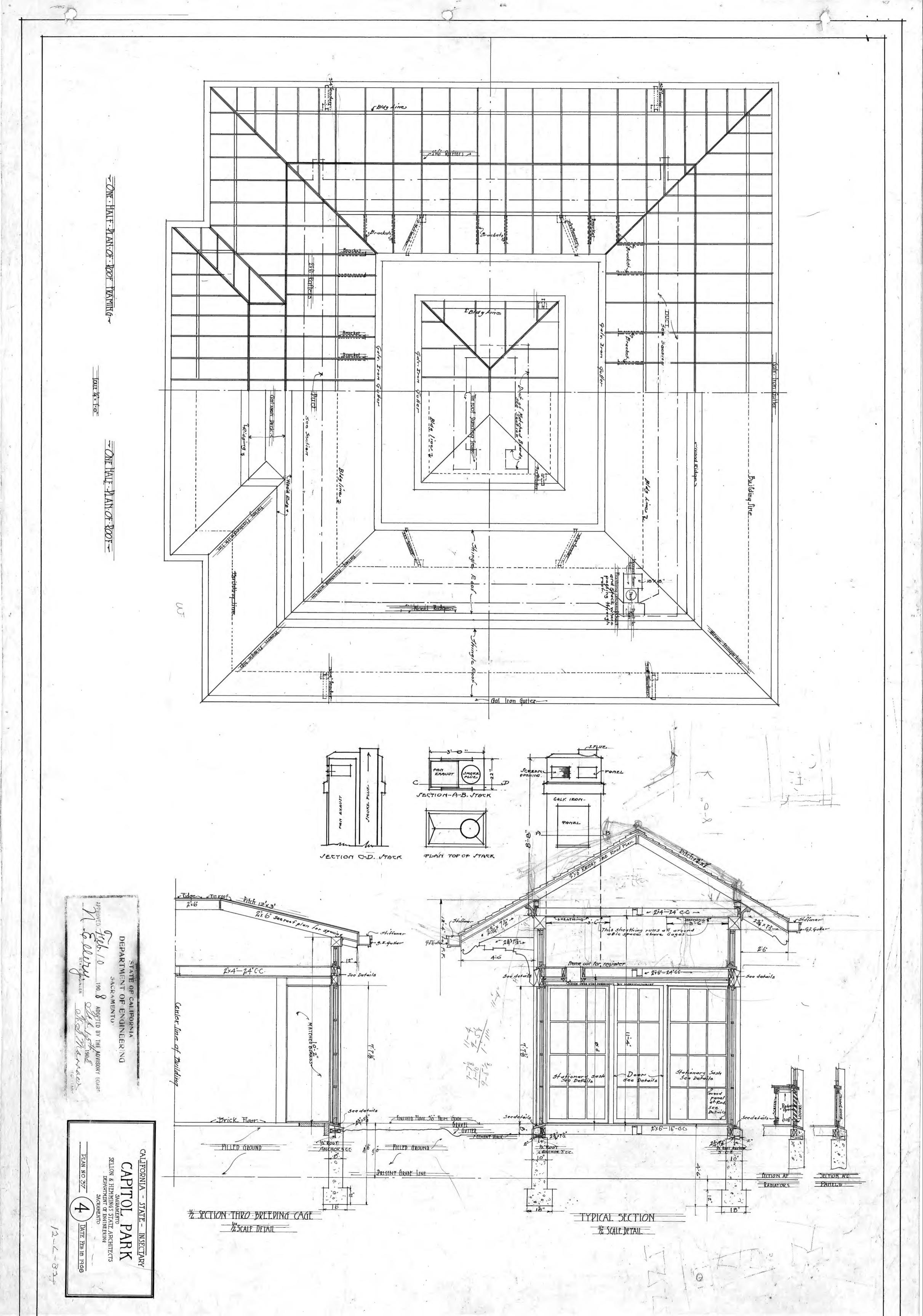
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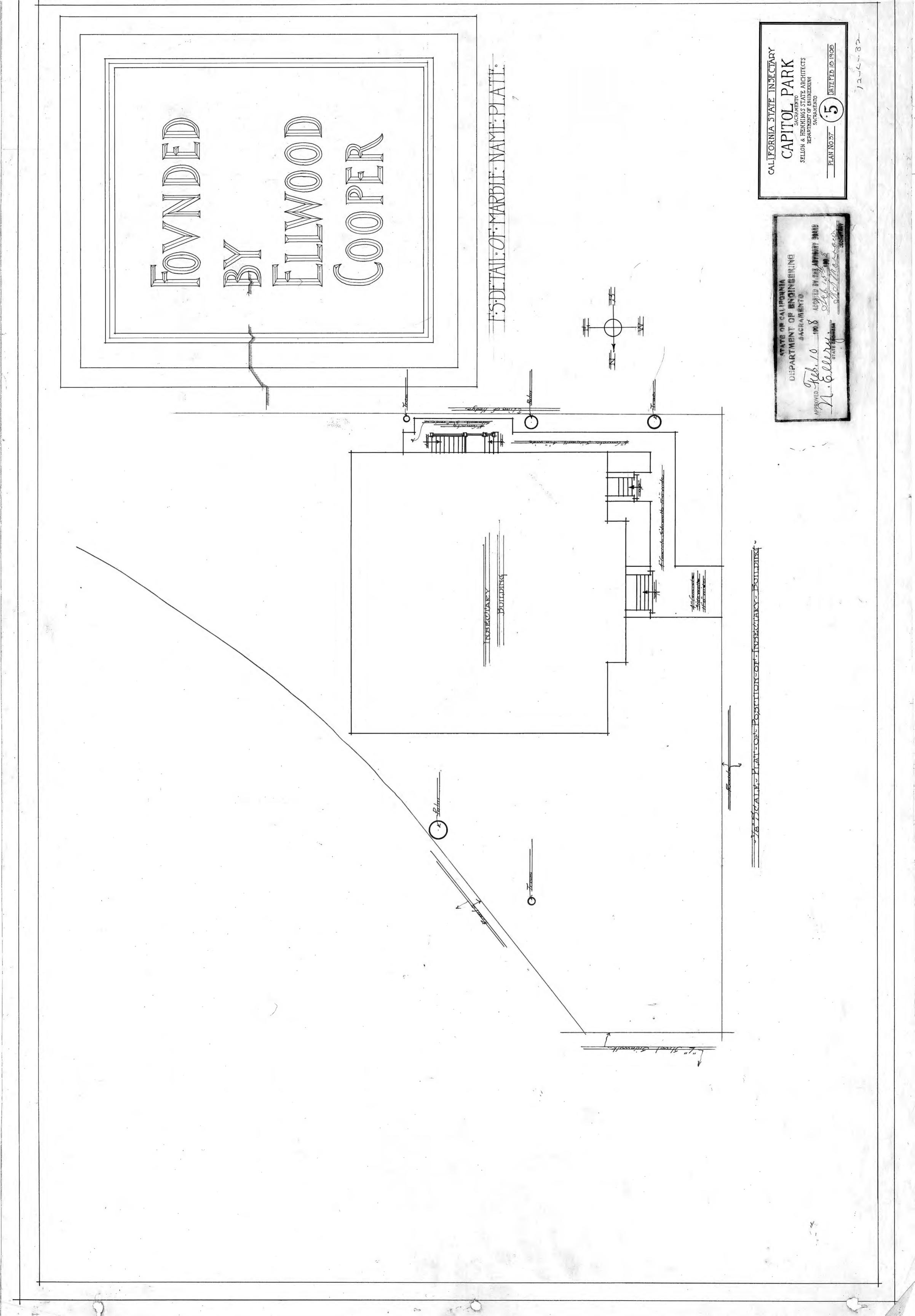
Appendix C: 1908 Original Building Drawings

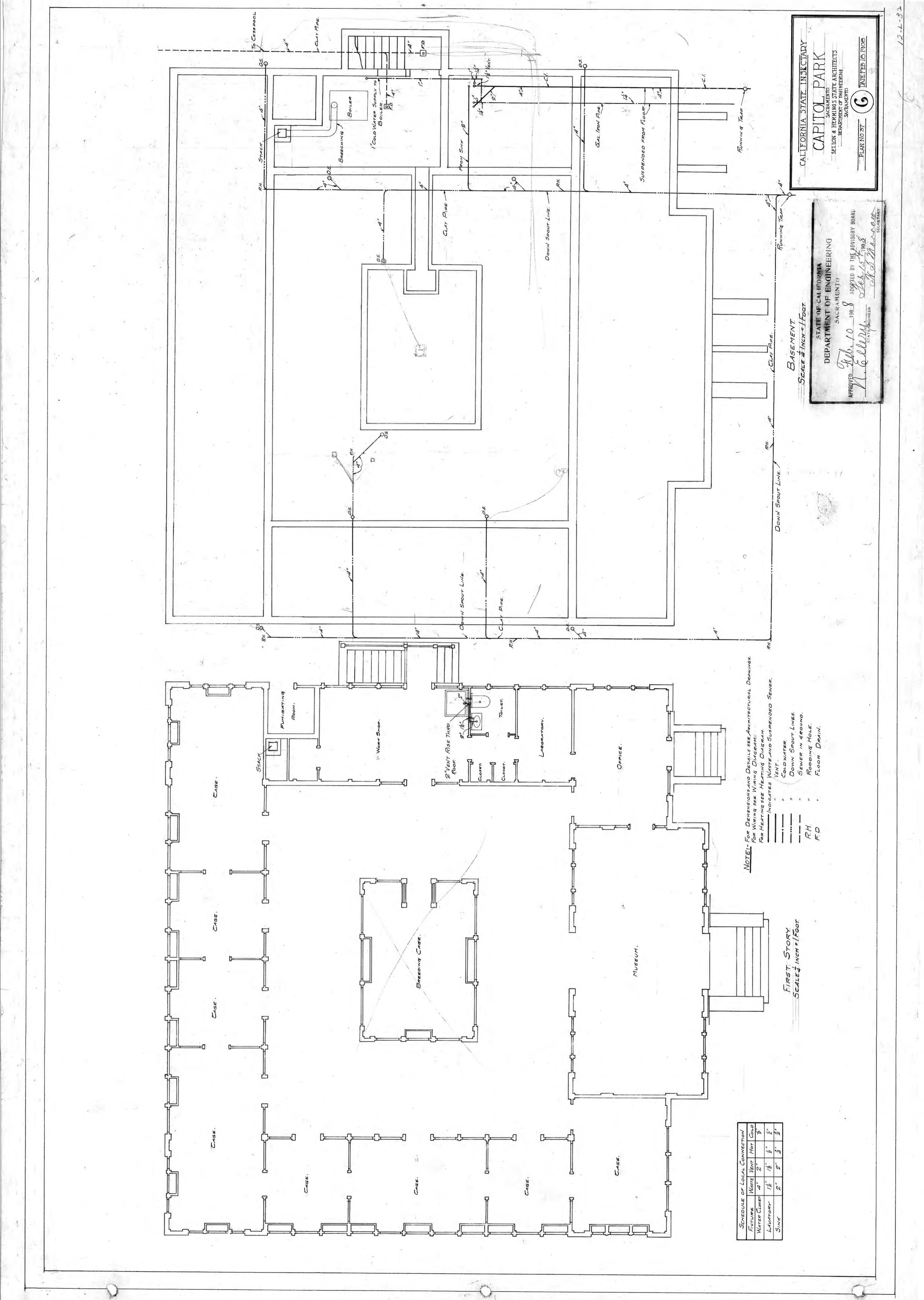


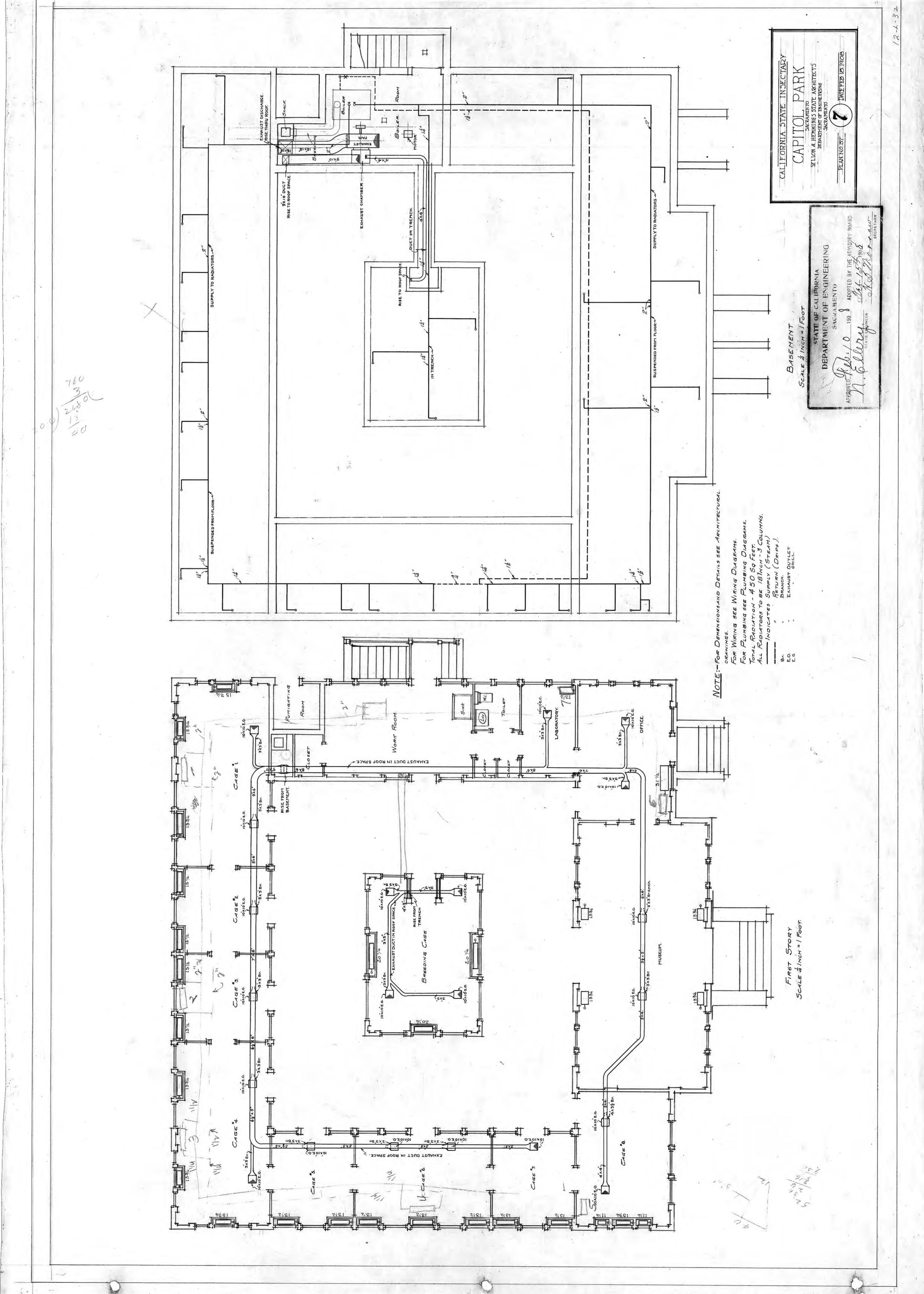


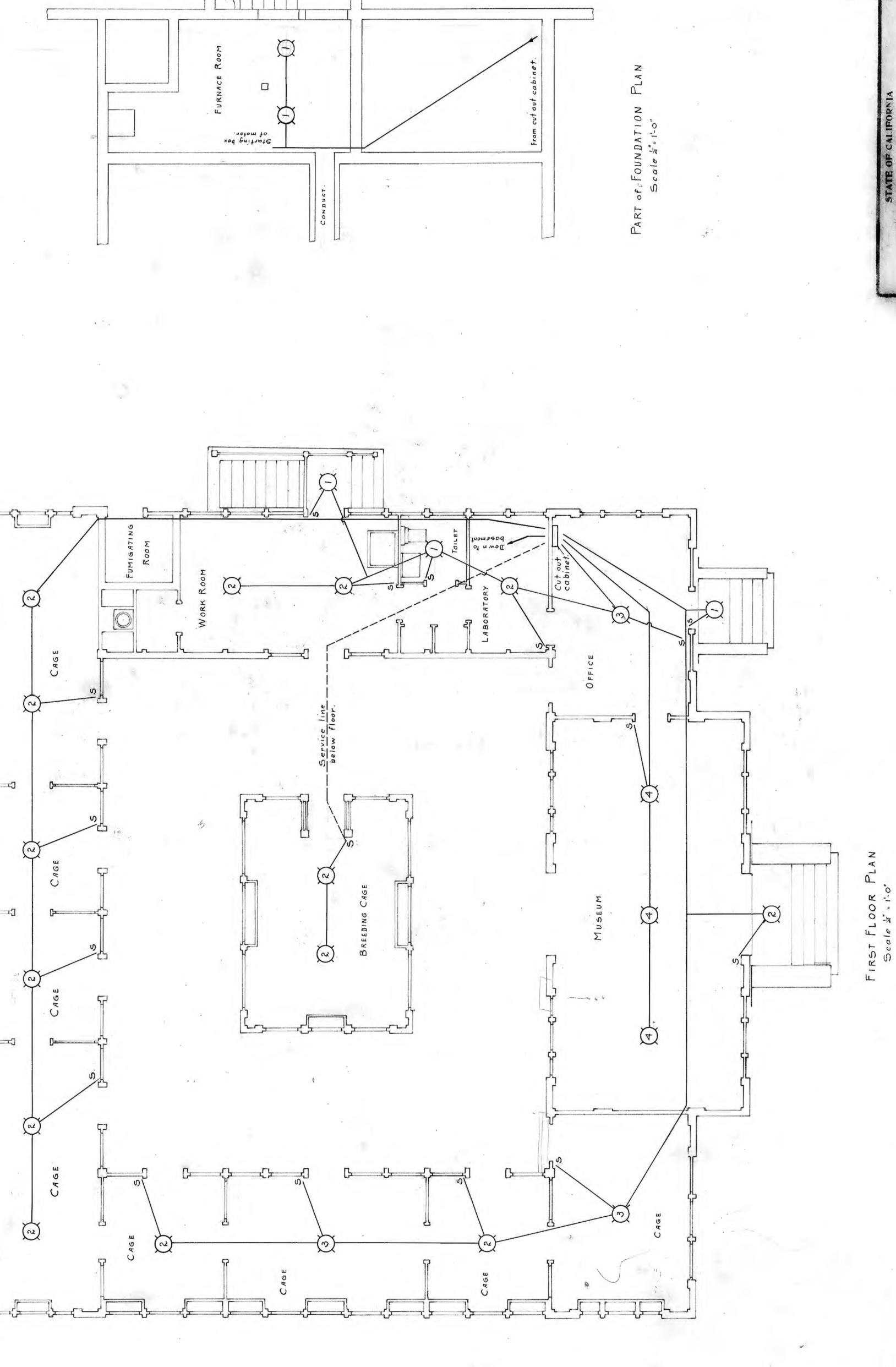










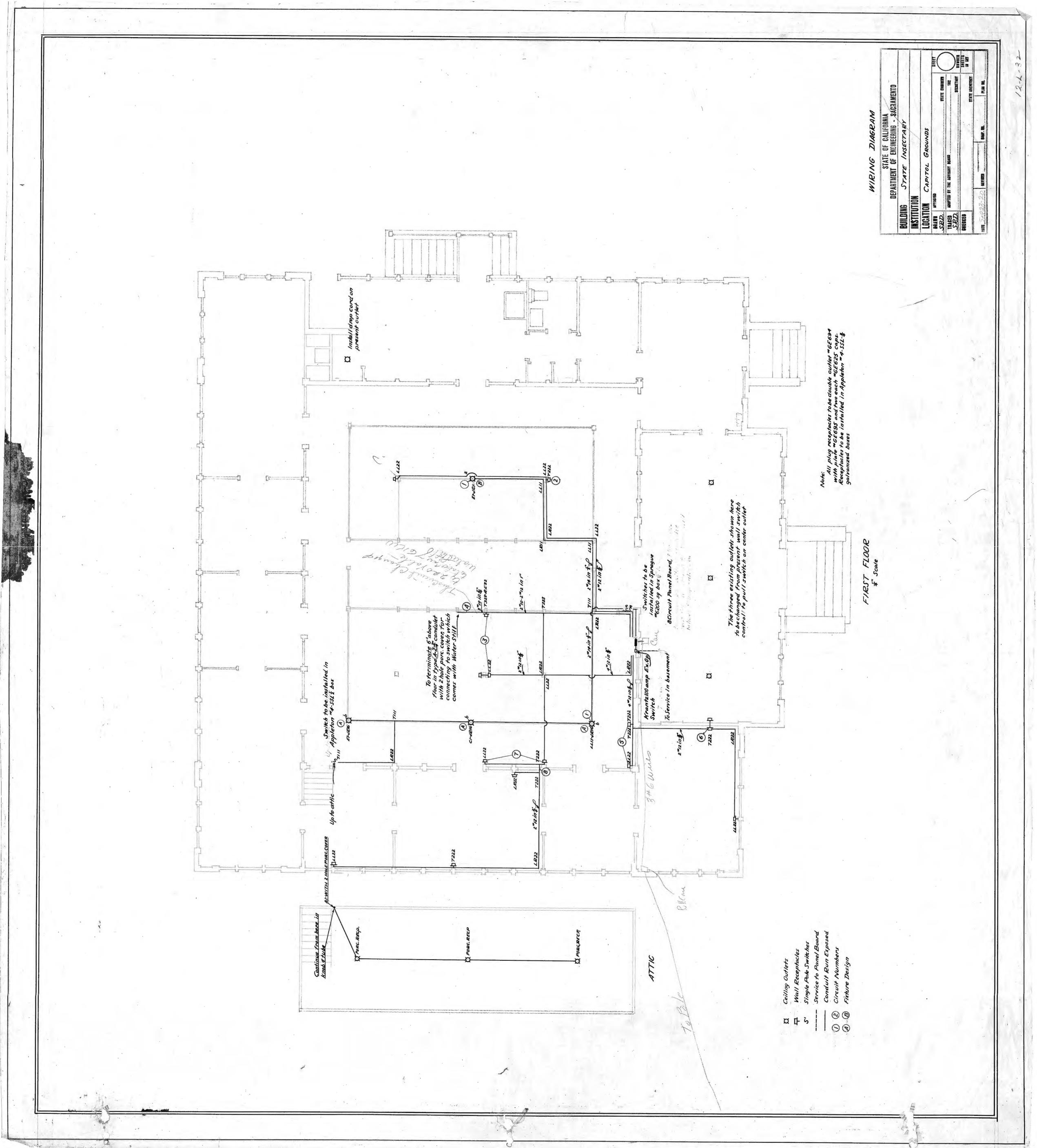


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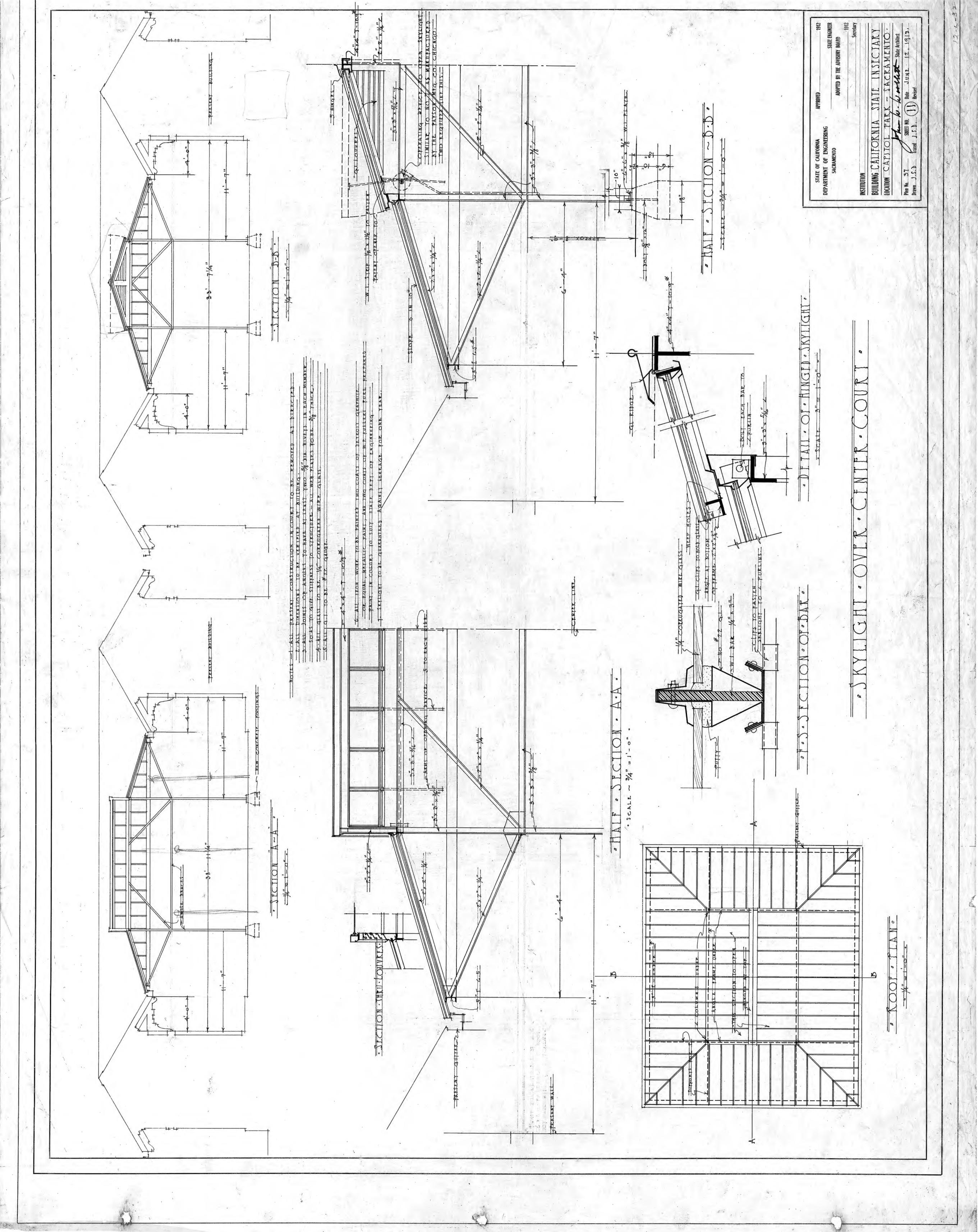
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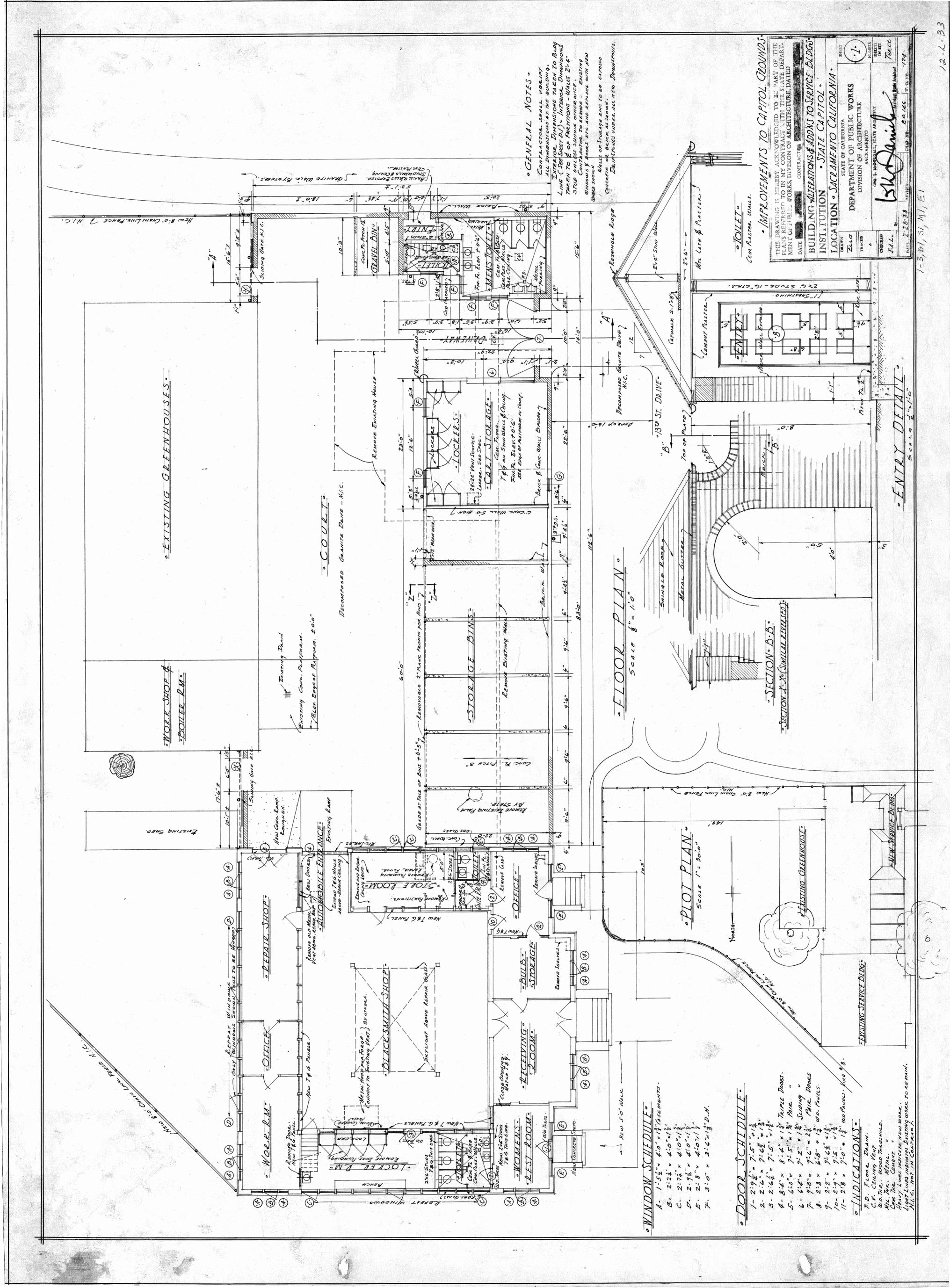
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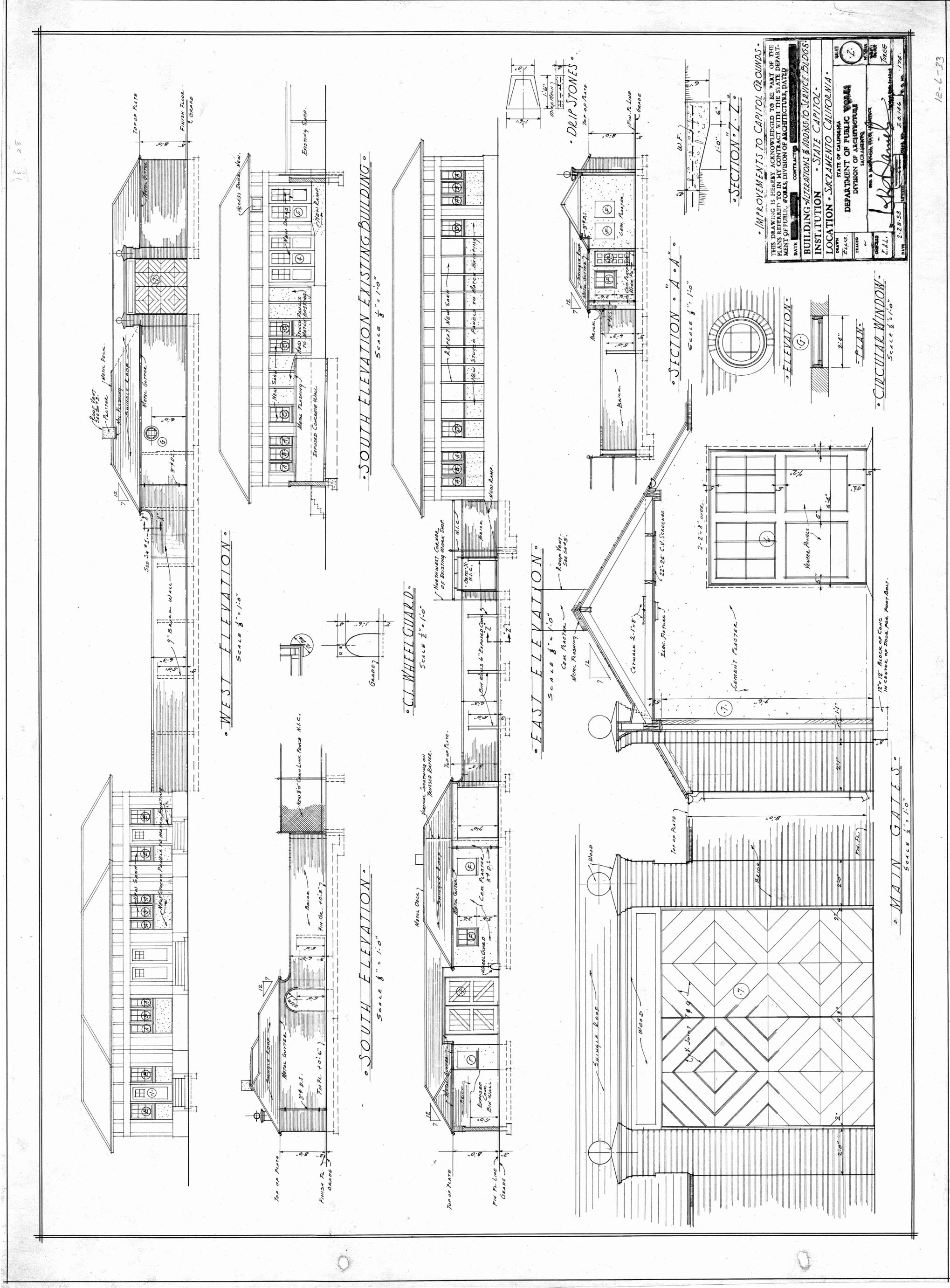
Appendix D: 1913 Skylight Drawing

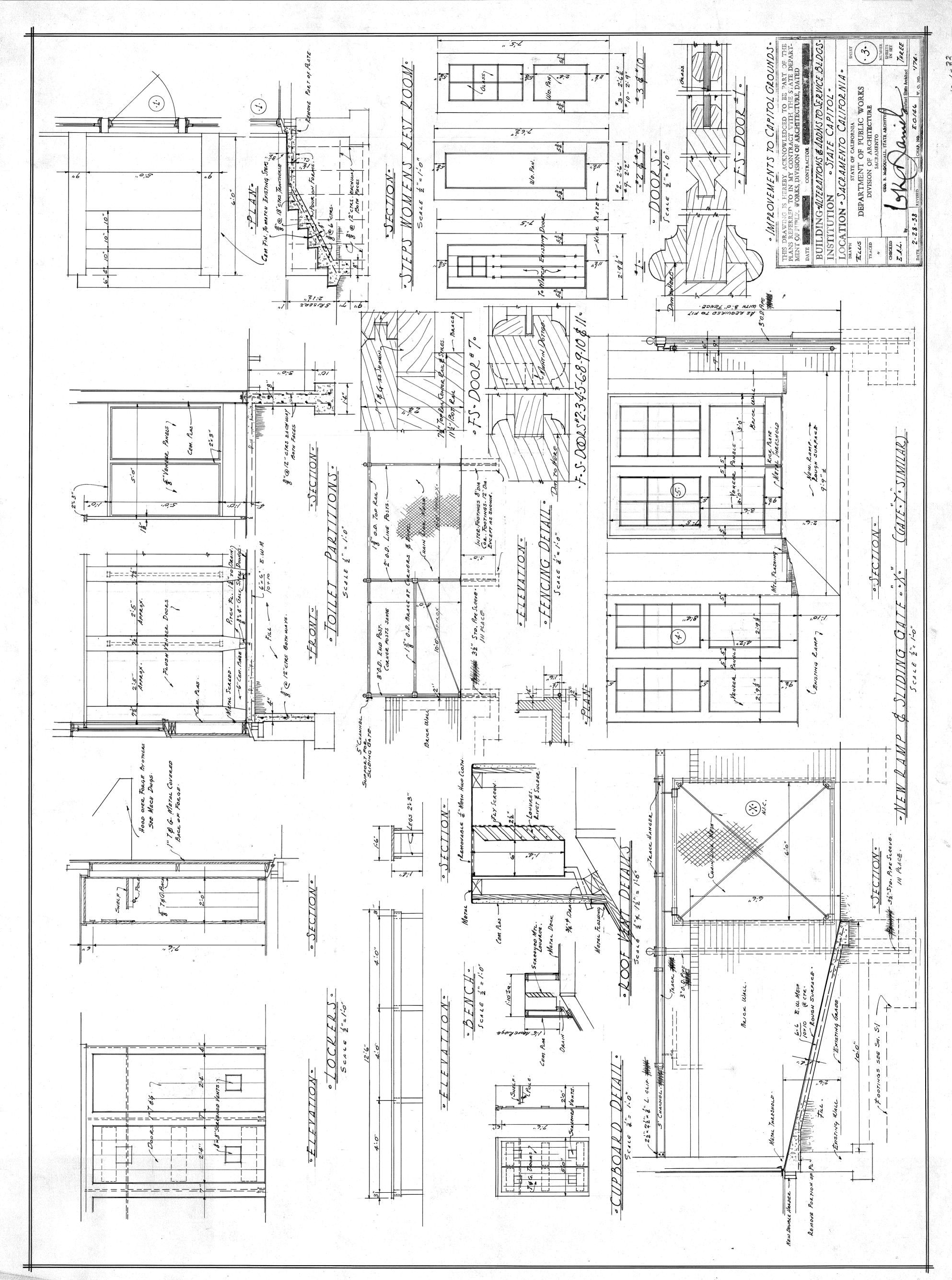


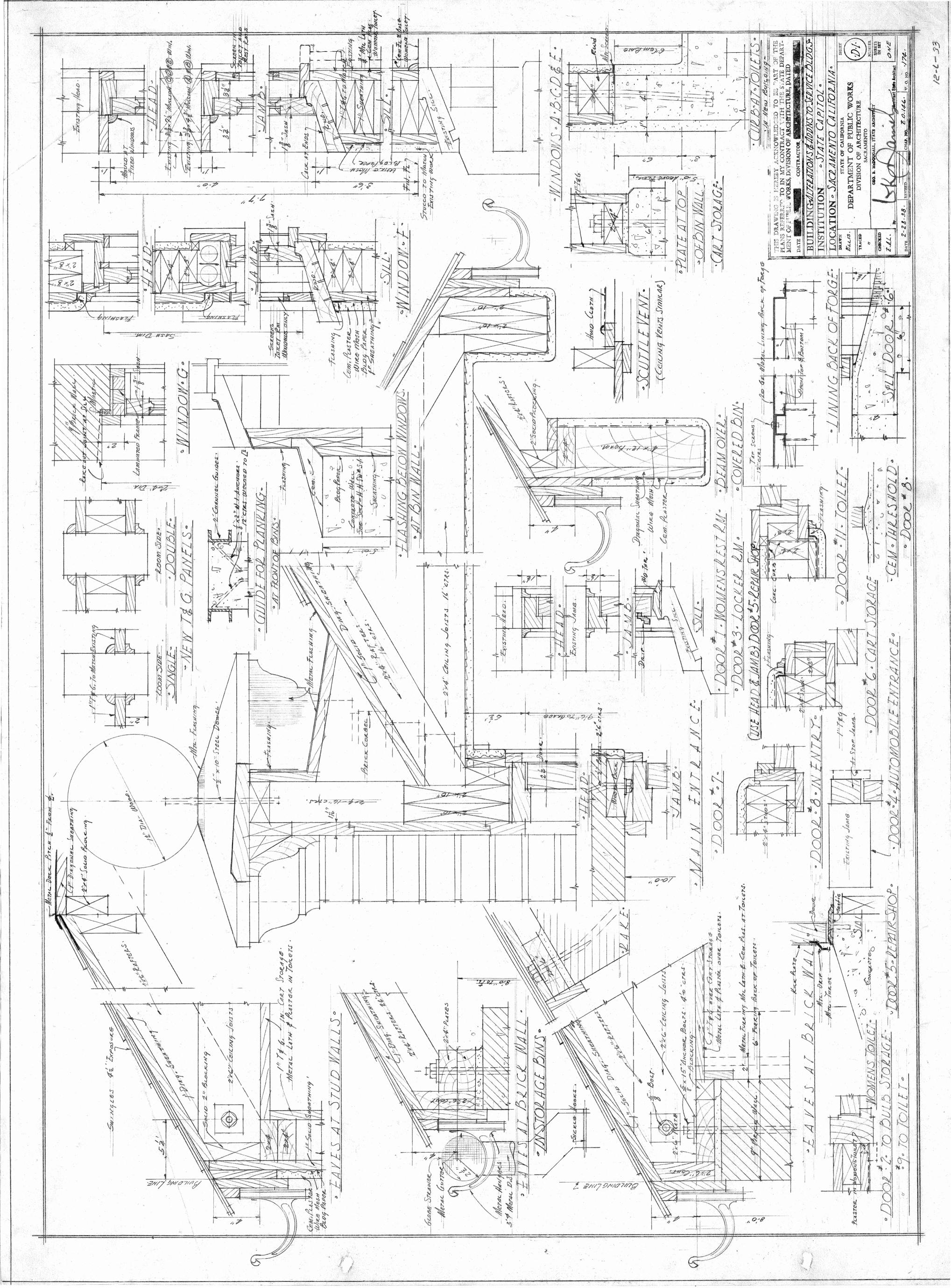
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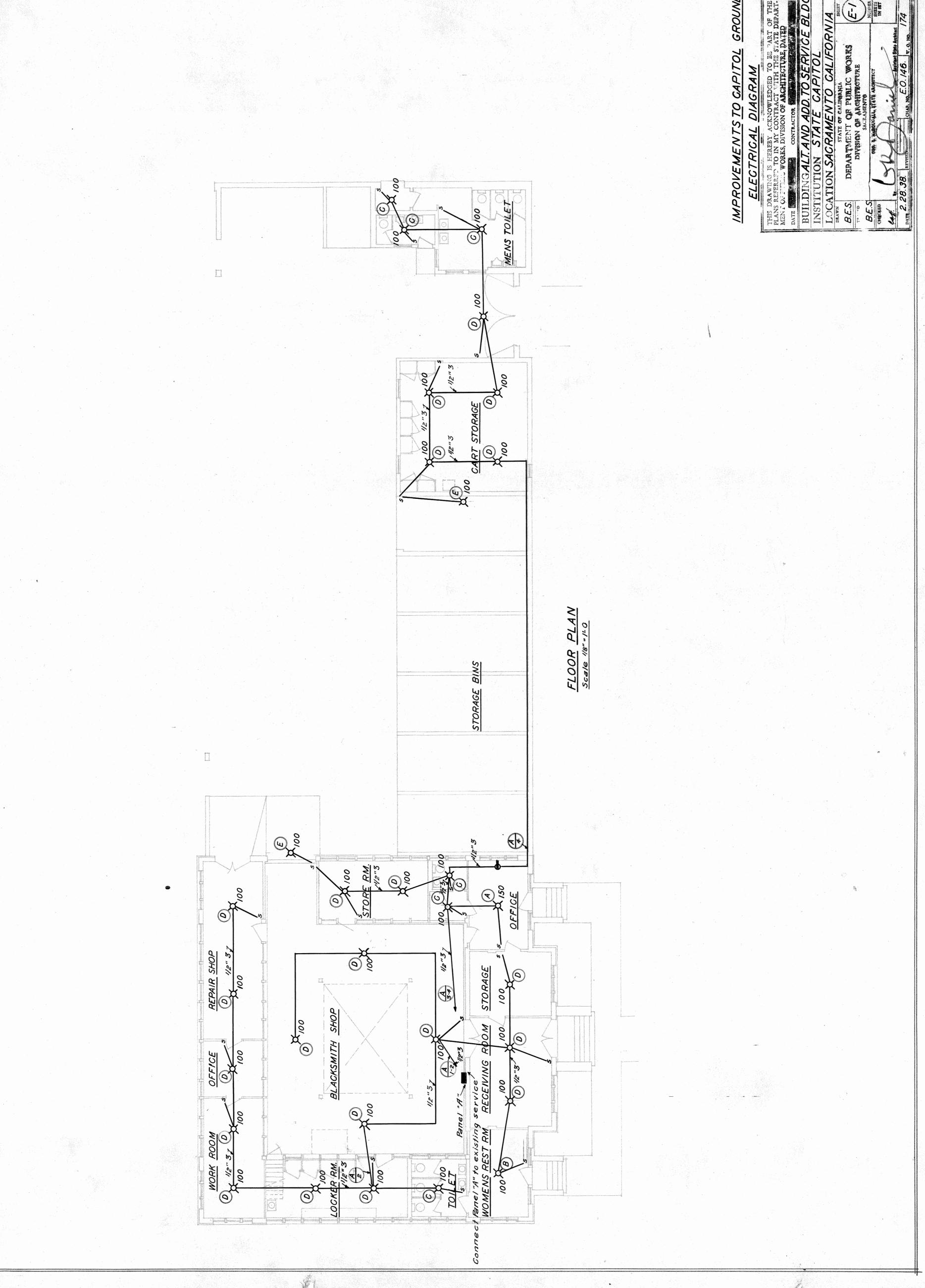
Appendix E: 1938 Alteration and Facility Expansion Drawings



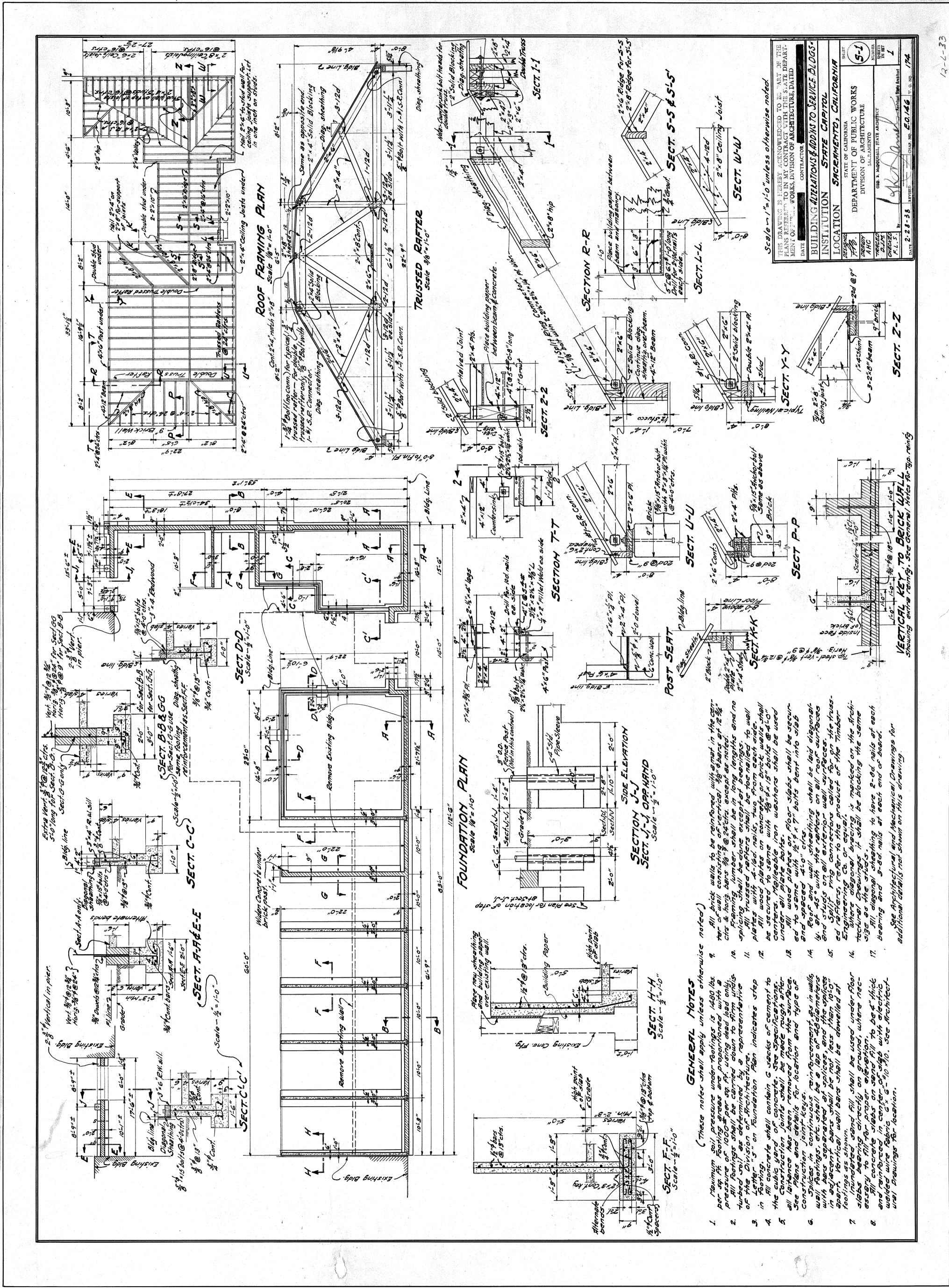






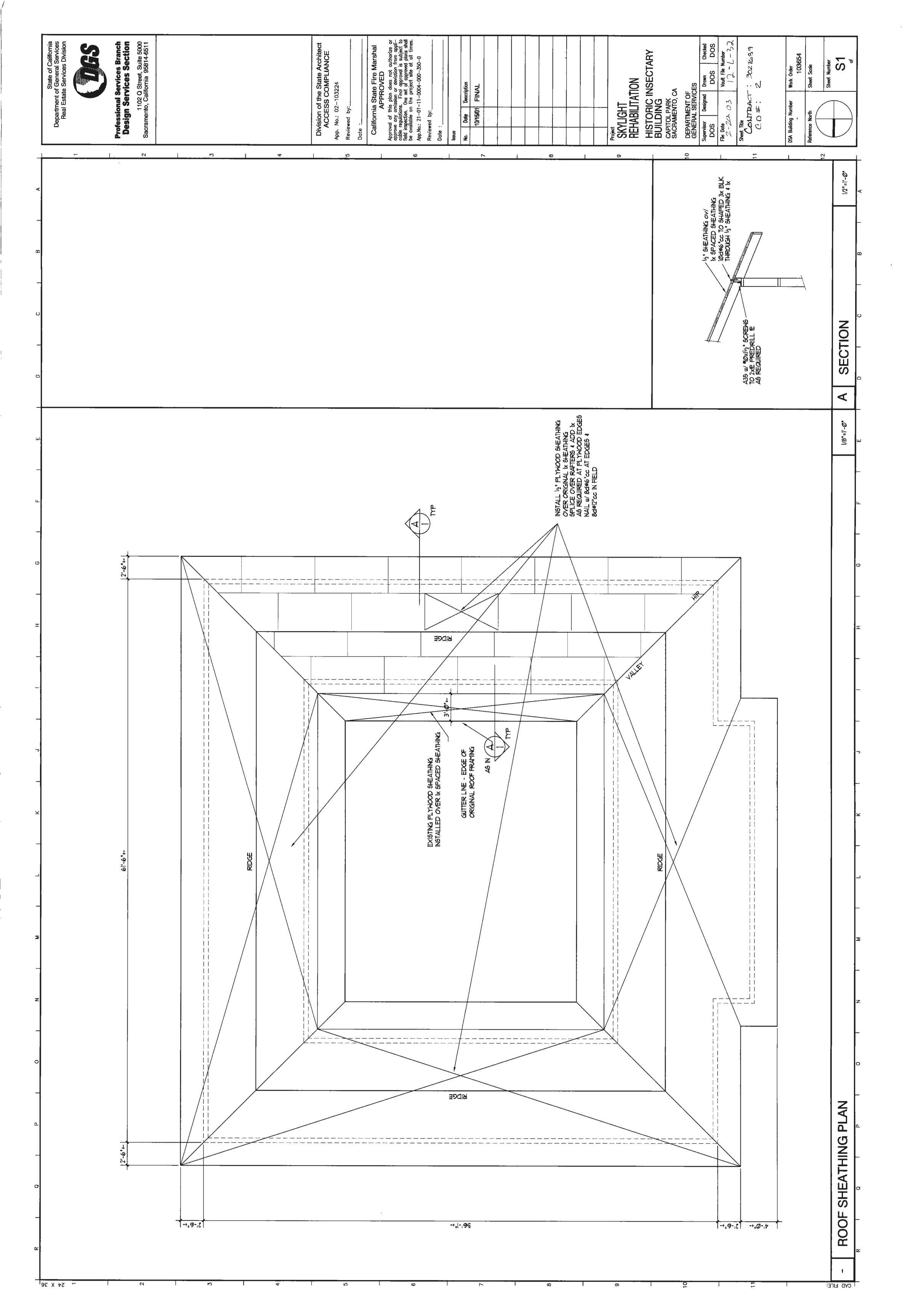


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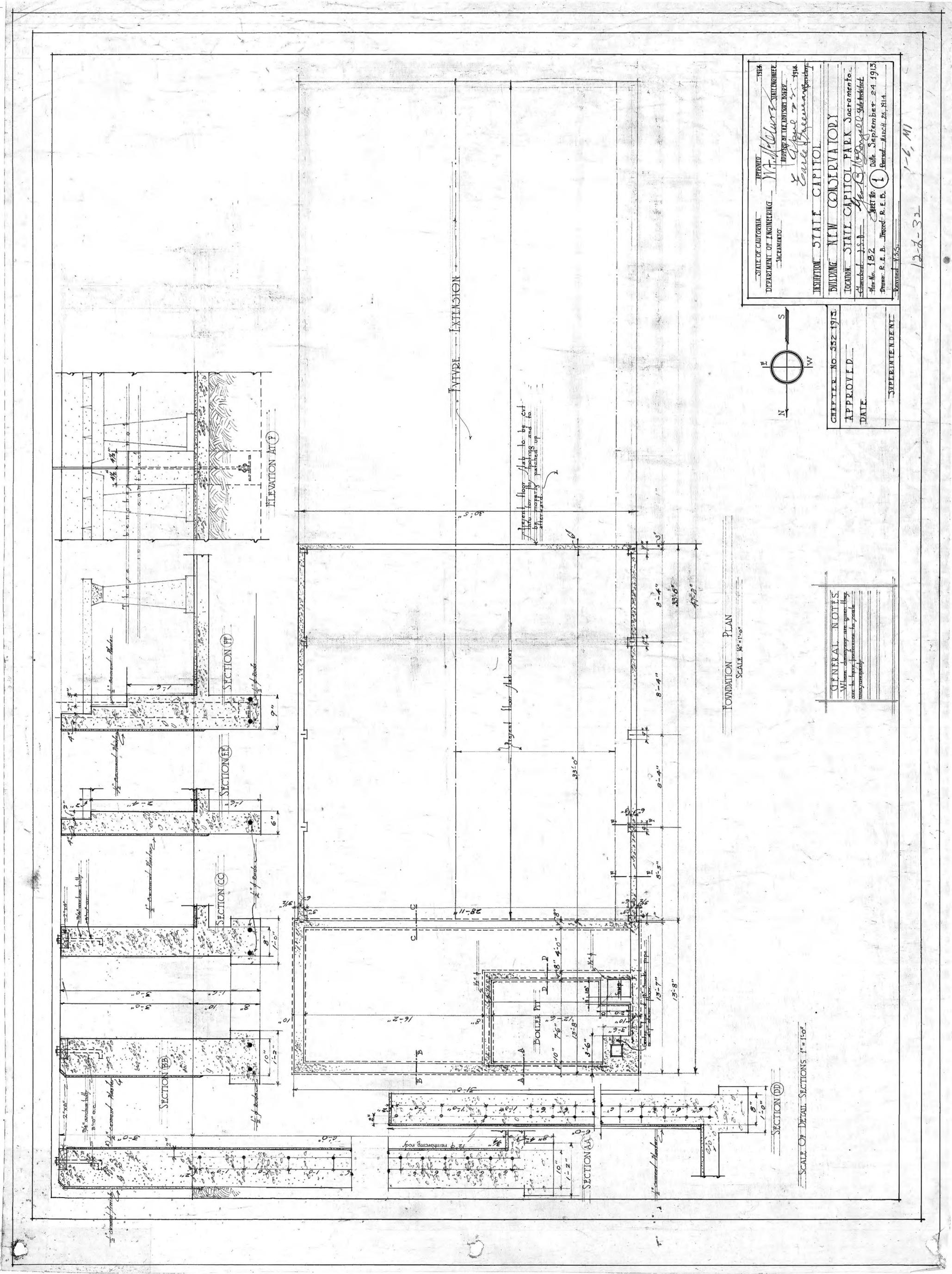
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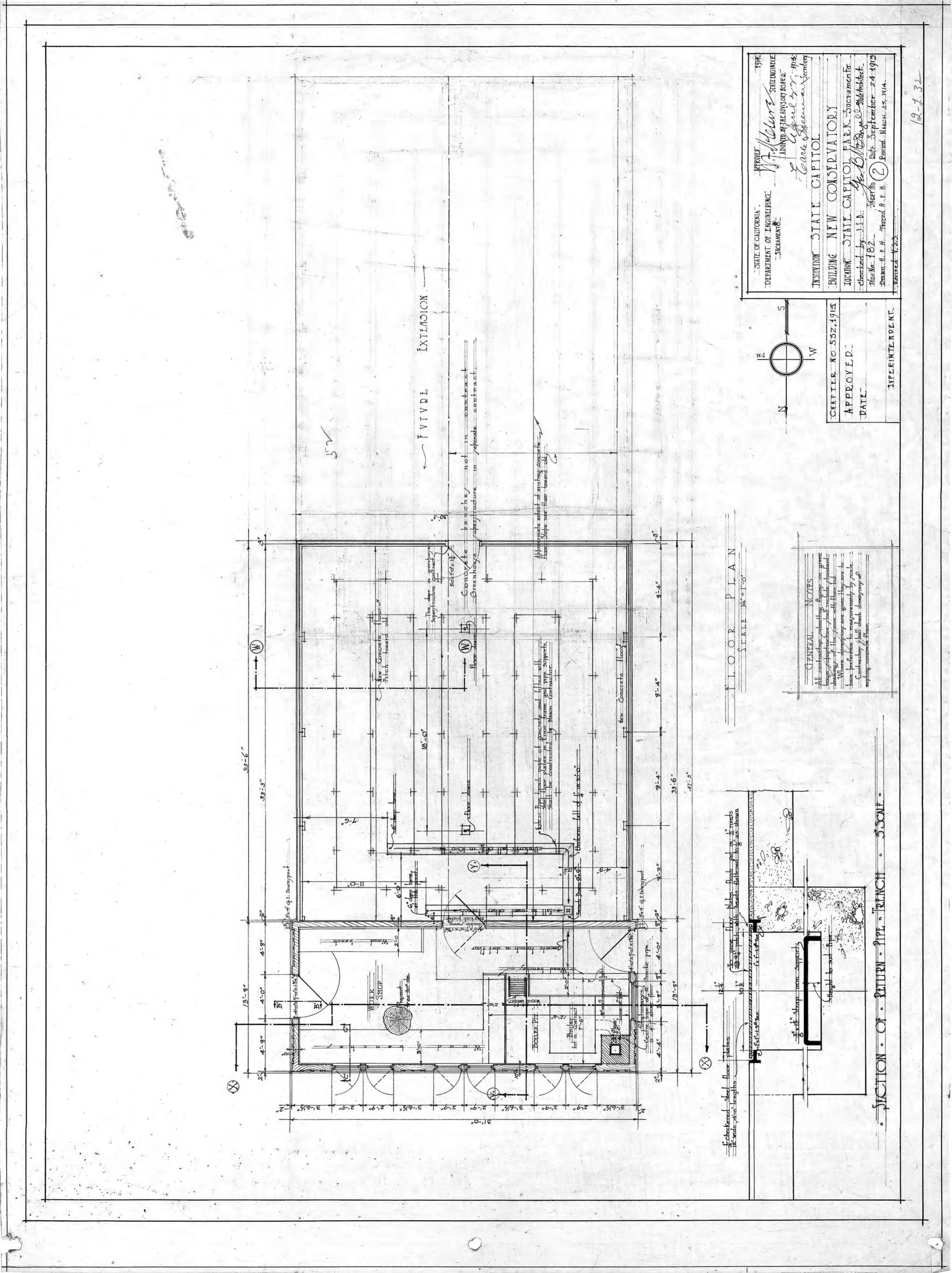
Appendix F: 2001 Reroof Plan

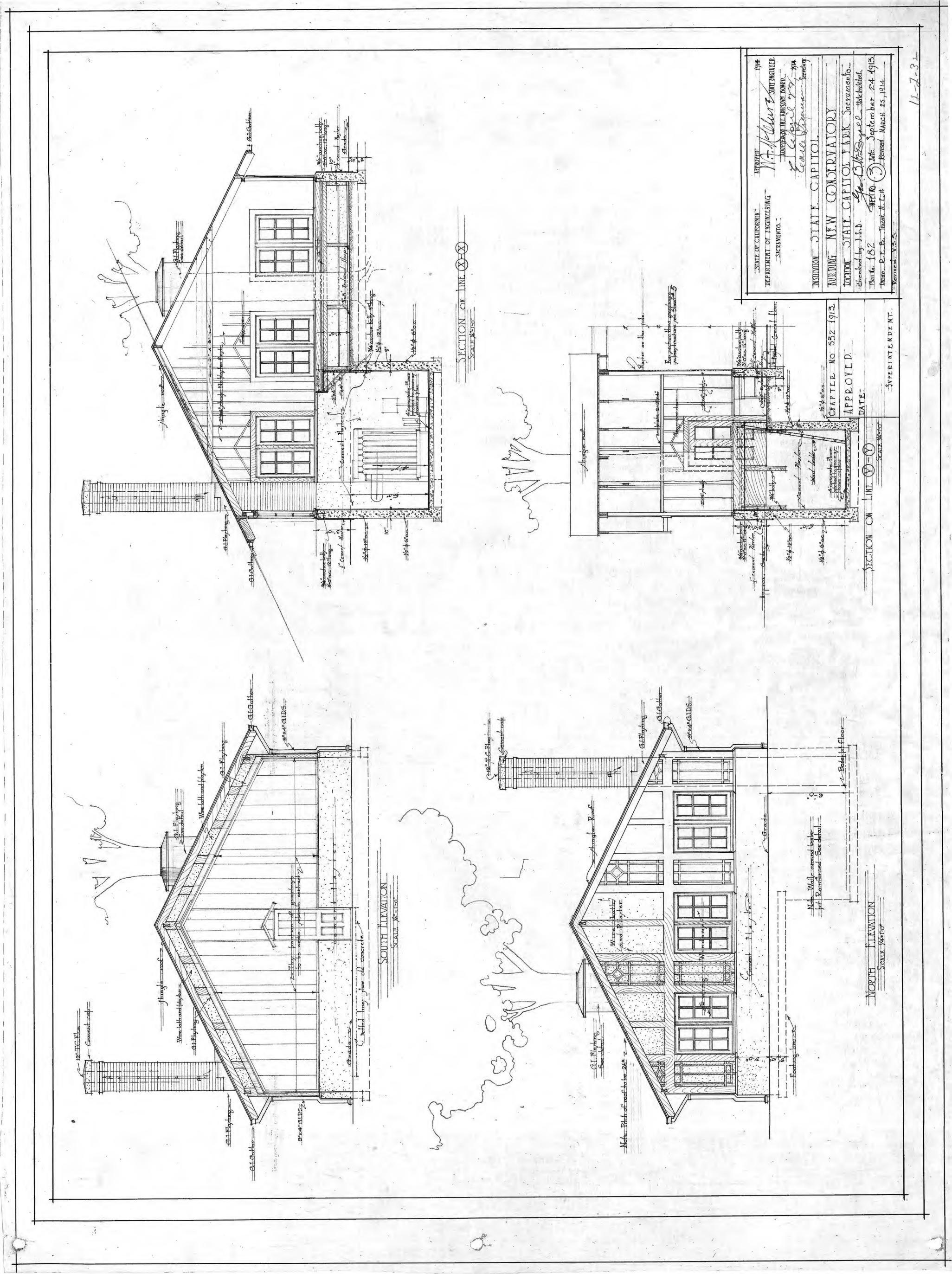


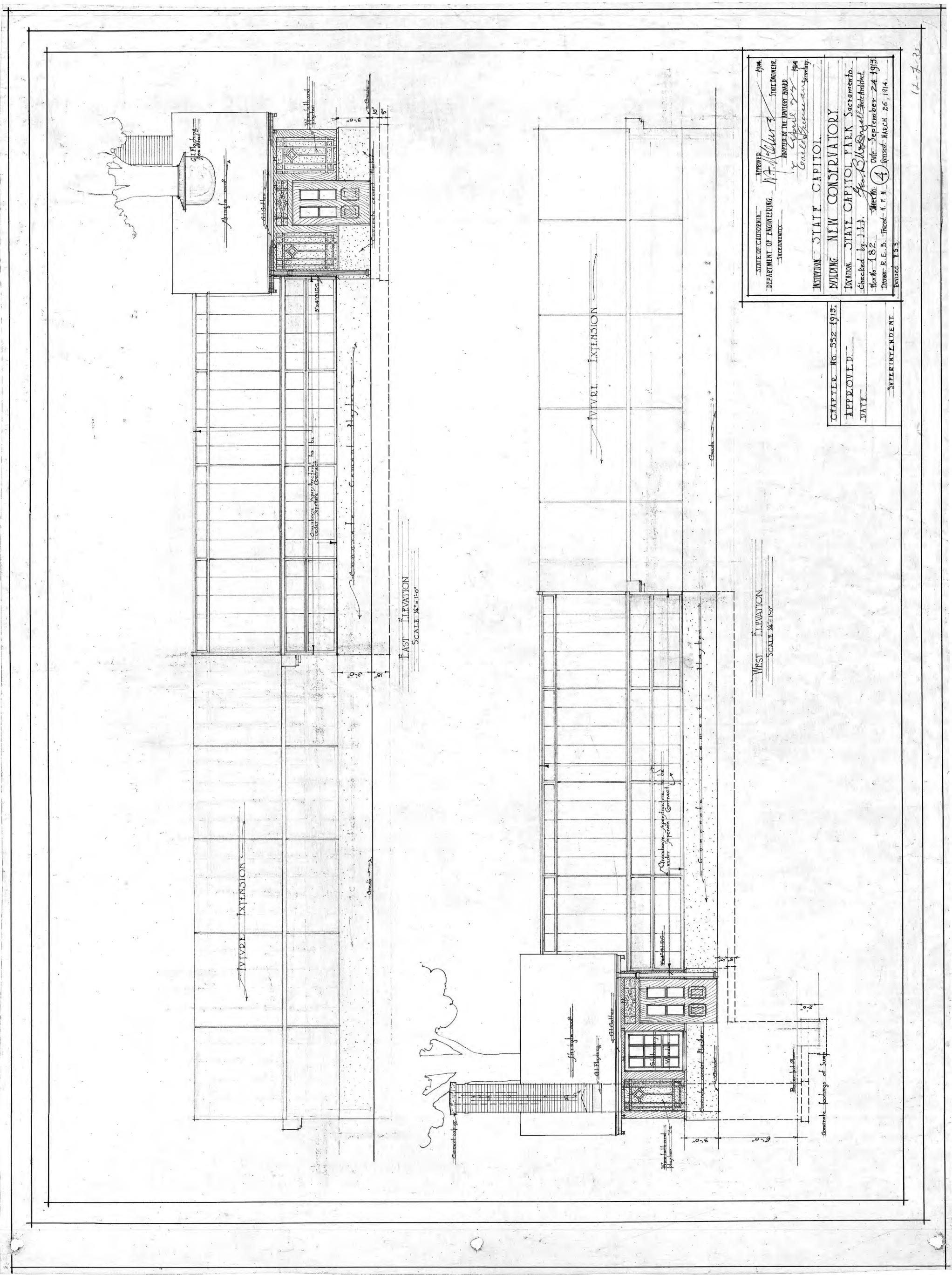
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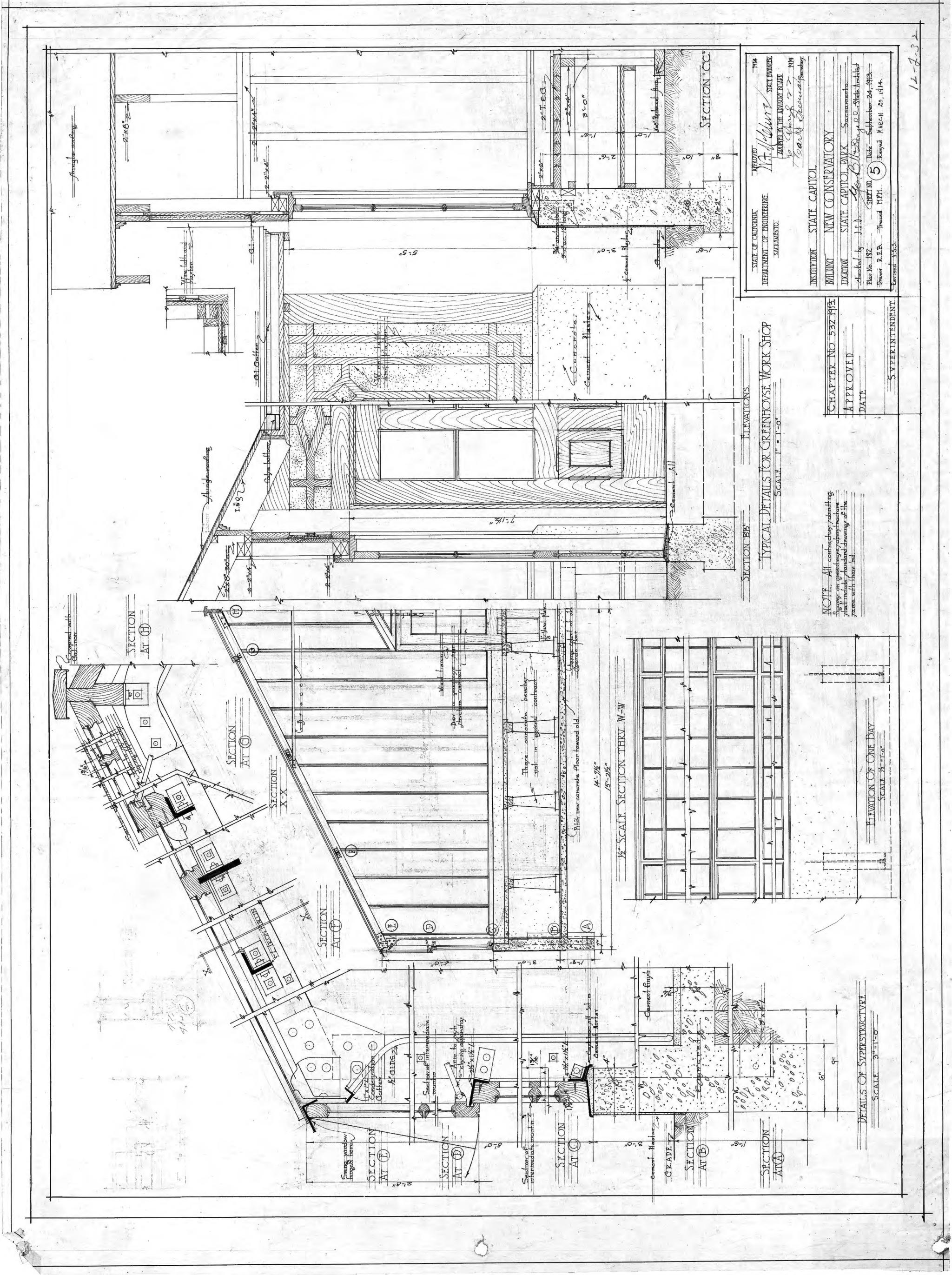
Appendix G: 1913 Conservatory Building Drawings

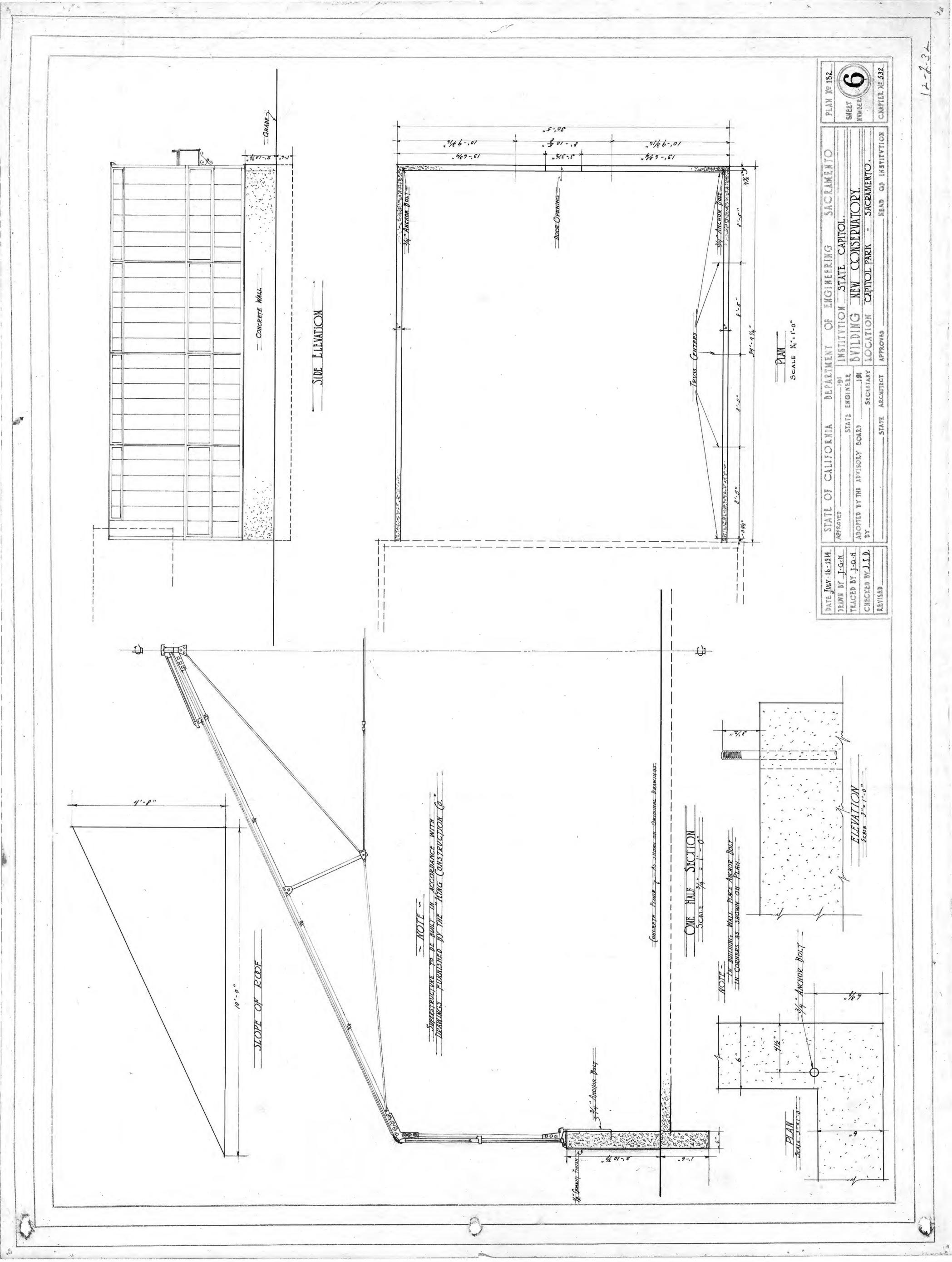


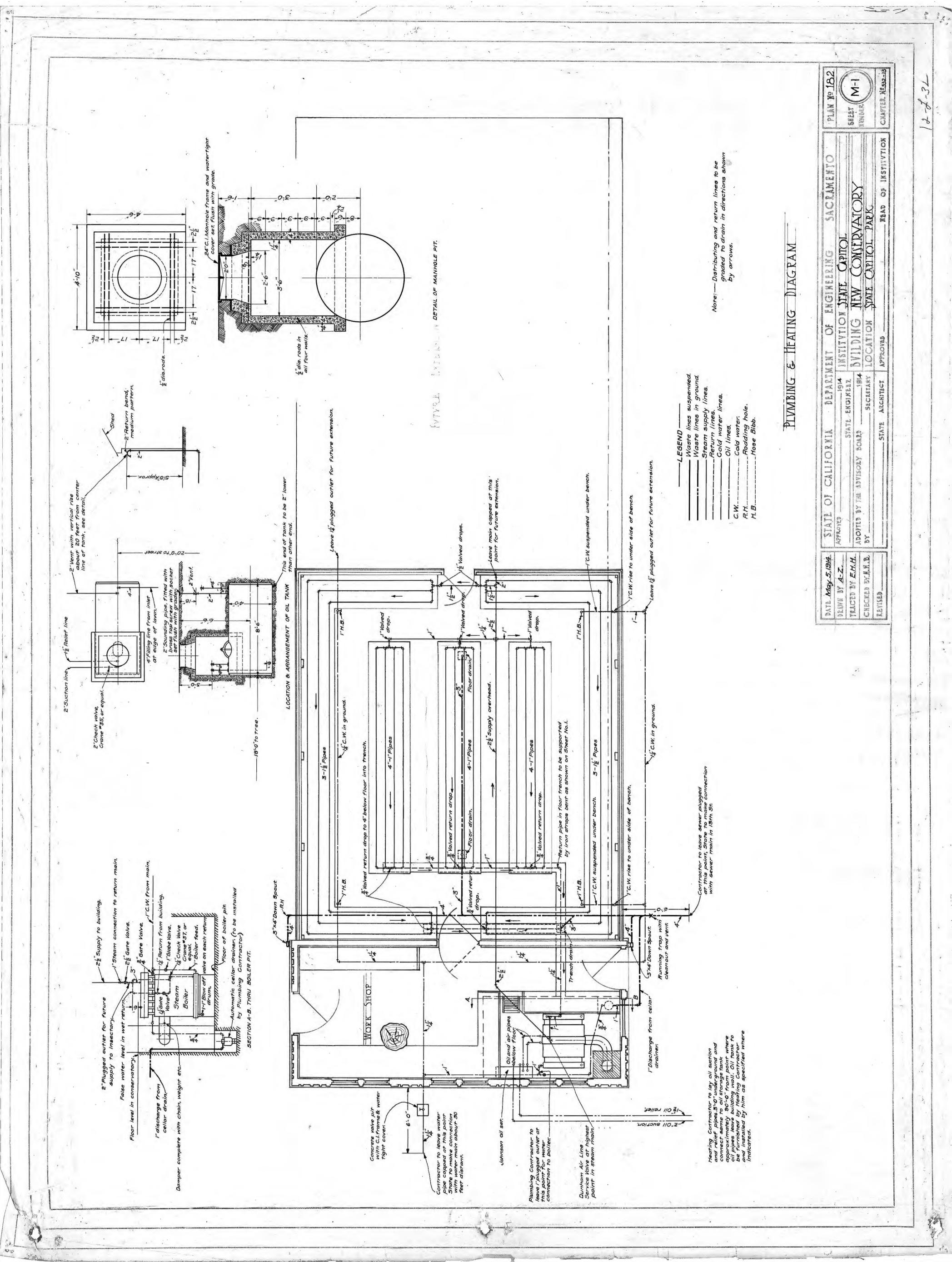












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Appendix H: 1948 Partial Park Plot Plan

