FIELD OBSERVATIONS

I. INTRODUCTION

The following observations were made by SIEGEL & STRAIN Architects during field investigations in preparation for an Historic Structures Report (HSR) covering the Naval Architecture Building (historic name: the Drawing Building), by John Galen Howard (Fig. 6). The building was built in two successive phases beginning in 1914 (Fig. 7). The original – Phase I - building comprises the westernmost 75 ft. and will be referred to as the Drawing Building. Phase II – originally approximately 100 ft. in length – will be referred to as the Addition. Approximately one half of the Addition was removed in 1930 to make way for the construction of Davis Hall (George Kelham, 1931). The current building, which includes the entire Drawing Building and the remaining half of the Addition, will be referred to by the name of the University program currently occupying the structure - the Naval Architecture Building (NAB). The NAB has been occupied successively by various University programs: Architecture (1914-1923) providing north lit studios for life drawing and drafting, Art (1923-1930), Engineering (1930-1951), City and Regional Planning (1951-1964) and Naval Architecture (1964-present). The building’s name has changed over time to reflect its occupants. Additional information regarding the Naval Architecture Building and the history of programs associated with it are found in the Historical Summary included in this report.

When evaluating the significance and condition of buildings, Architectural Historians use a scale to rate the architectural and historic value of the building, its rooms or spaces, as well as individual features. The typical rating scale employs four categories: “Very Significant,” “Significant,” “Contributing,” and “Non-Contributing.” The definition of each category is further described on page 32 of this report. The Architectural Historian’s use of the term “Very Significant” or “Significant” does not necessarily equate to the same meaning as used by the California Environmental Quality Act (CEQA). Even though the term “Significant” is used in two of these categories; the fact that a space or building feature is called “Very Significant” or “Significant” in the Historic Structures Report does not of
Figure 8. The Drawing Building (1) and the Addition (2) (photo: Bancroft Library, UC Berkeley)

Figure 9. After demolition of the eastern half of the Addition (+/- 1932)
Note: New door and stairway at the West Facade (photo: Bancroft Library, UC Berkeley)
necessity mean that the alteration or removal of that space or the entire structure would meet the CEQA criteria for what is called a “Significant impact on the environment.”

II. GENERAL DESCRIPTION

The Naval Architecture Building (NAB) is situated on the northern edge of the Berkeley campus. It is rectangular in plan, approximately 37 ft. wide and 120 ft. long, with its primary axis running east / west, parallel to Hearst Avenue immediately to the north. The building has a simple two story (three story at the Addition) gable roofed section with the longitudinal ridge beam offset to the north. This establishes a higher top plate at the northern facade which in turn allows for significantly larger windows in the north facing studios along Hearst Avenue (Fig. 10).

The NAB is a wood frame structure clad in cedar shingles. The 2 x 6 exterior wall framing members (16 inches on center) are clad at the exterior with 1 x 4 tongue and groove horizontal sheathing which is in turn covered with dark stained cedar shingles. This exterior wall framing system is exposed at most of the interior of the building. Horizontal Douglas Fir tongue and groove sheathing is also sometimes used as an interior finish material – particularly along the corridors (Fig. 11). The floor system of the NAB is supported by a post and beam structural system – usually with knee braces (Fig. 12).

The NAB was constructed during two building campaigns in 1914 and 1918. Phase I of the NAB consisted of a 37 ft. by 75 ft. rectangular two story building. Phase II extended the original building up the hill to the east. Although a larger building, three stories and 37 ft. by 100 ft.; the Addition none the less continues the design and details of Phase I. The plans for Phase II are dated 1918 and refer to this phase as the “Addition.” As will be described later, a substantial portion of the Addition was removed in 1930 to make way for the new Engineering Materials Laboratory (now called Davis Hall or Davis Hall North) by then campus architect George Kelham. (see “Davis Hall, Historic Structures Report,” SIEGEL & STRAIN, Architects, 7 September 2001)
III. SITE

The NAB remains in its original location. The long rectangular building steps up once, at Phase II, as it extends eastward up the hill (Fig. 13). It is parallel to and set back from Hearst Avenue to the north. The approximately 40 ft. deep setback is heavily vegetated with California Live Oaks. Several mature eucalyptus trees form a grove on the southern side of the building. Significant landscape elements are described in “Notes on Site Landscaping” – see appendix. The eastern end of the building, severely truncated in 1930, presents a nearly blank shingle wall to the cast-in-place concrete structure of Davis Hall (George Kelham, 1931) barely three feet away. The western end of the NAB faces a recently landscaped area between it and Northgate Hall (“The Ark,” John Galen Howard, 1908 with subsequent additions by Howard, Jory & Steilberg, and restoration by Stoller). It is particularly noteworthy that the NAB’s front doors face the campus to the south rather than Hearst Avenue to the north. This was the original orientation of the Drawing Building and was further reinforced by the placement of the entrance for the Addition, also on the south façade.

At the time NAB was constructed, the north campus environment was substantially different from what it is today. Early buildings were residential in style and character, even the larger buildings such as Cloyne Court, 2600 Ridge Road at Leroy (John Galen Howard, 1904) and College Hall (Fig. 14), a private dormitory at Hearst and Galey (current site of Parking Structure H) were both covered in brown shingles. The original North campus environment also contained a number of other wooden structures including the Northgate Hall (Fig. 15 - John Galen Howard, 1908), the Home Economics Building (Fig. 16 - demolished to make way for Davis Hall in 1930) and Leuschner Observatory (Fig. 17 - Clinton Day, 1895).

Today the environs around the NAB include additional historic structures, the Protor Apartment Building, 1865 Euclid (John Galen Howard, 1912), Beta Theta Pi Fraternity, 1879 Leroy (Ernest Coxhead, 1893) and Allenoke, 2601 Ridge Road (Ernest Coxhead, 1903). Some more recent interventions which have dramatically changed the character of the neighborhood include Davis Hall (George Kelham, 1930) and (SOM, 1966), Etchevery Hall (SOM, 1962-64), Soda Hall (Edward Larabee Barnes, 1992-94), Parking Structure H at Gayley Road and Cory Hall.
Naval Architecture Building

Historic Name: Drawing Building

Architect: John Galen Howard (1914)

Figure 15. Northgate Hall

Figure 16. Home Economics Building (demolished) adjacent to Drawing Building (photo: Bancroft Library, UC Berkeley)

Figure 17. Leuschner Observatory (demolished) (photo: Ehrich, Photographic Guide to UC Berkeley)
IV. EXTERIOR

The *partie* of the NAB as expressed on its facades remains substantially intact. The two and three story north facing facades have large glazed areas which express their use as drawing studios. The south facing facades have smaller windows as befitting the smaller scaled offices and models' rooms which were originally located on that side of the building. Further descriptions will be covered in the discussions of the individual facades. Additional information concerning the physical condition and structural integrity of the NAB is found in the March 20, 1992 *Evaluation of Various Seismic Performance Ratings* by David Logan Messinger and Associates (see appendix).

**North Façade Very Significant, Good Condition**

The façade of the original two story Drawing Building was approximately 72 ft. long. The height of the façade varies from 27 ft. to 35 ft. as the grade drops off to the west. The building contained two large studios (25 ft. by 60 ft. by 14 ft. high), one on each floor. Each studio is expressed on the north façade by thirteen tall (3 ft. wide by 10 ft. tall) double hung multi-lite (9 over 9) windows (Fig. 18). These windows are still intact and generally in good condition. The restrooms were placed on intermediate levels off the stair landings. Their location was expressed on the north façade by the use of smaller scale double hung windows. The men’s restroom, being in the basement and partially below grade, retains an original pair of smaller multi-lite (3 over 3) double hung windows. The women’s restroom (# 107) contains an original double hung window (6 over 6). The custodian’s quarters (room # 203) contains a pair of double hung windows (6 over 6). It is unclear whether this was a later alteration or, perhaps, a change made during construction. A crawl space vent located approximately 16 ft. to the east of the original end wall also appears to be original. A fire escape, shed dormer and a wall louver over the women’s restroom window have been added (Fig. 19) - other alterations to the north façade have been minimal.

The façade of the Addition is approximately one half of its original length. Its original façade was approximately 100 ft. long (50 ft. remains) and had twenty windows on each of the upper two levels. The windows of the Addition matched the style and proportions of those in the Drawing Building (approximately 3 ft. wide by 10 ft. tall). The win-

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*Figure 18. Studio Windows on North Façade*

*Figure 19. Fire Escape added to North Façade*
dows were apportioned ten per studio. These studios, at 25 ft. by 48 ft. were slightly smaller than those in the Drawing Building. The façade of the first level of the Addition had ten shorter multi lite (6 over 6) double hung windows which defined the single studio space at that level. A crawl space was located under the eastern most portion of the Addition. Although the Addition lost half its length in 1930 when that portion of the site was cleared for Davis Hall, the NAB retains its stylistic integrity. The only major additive element to the exterior of the Addition has been the metal fire escape.

The north façade of the NAB is considered Very Significant. Of particular note is the fenestration: the original multi lite double hung wooden sash and hardware, their number and arrangement. The fire escapes and the shed dormer at room # 202 / 202a are Non-Contributing.

East Façade  Non-Contributing, Poor Condition

The nearly blank east façade presents a curious situation. The wall as it exists today was not originally intended as an exterior façade, does not match the façade it replaced when the Addition was partially demolished and has been further altered – perhaps twice. Currently the two story end wall is blank except for a pair of tall windows on the upper level – in room # 300 – and a single replacement window in room # 209 (Fig. 20). The upper windows were probably relocated from the adjacent north wall when it was demolished in 1930 and, at some later date, have been boarded up from the inside to create wall space for a blackboard in the classroom.

South Façade  Significant, Fair Condition

The combined south façades clearly show the division of the NAB into its two components. The two story Drawing Building with a carefully composed, asymmetrical facade occupies the western portion. The adjacent three story Addition presents a somewhat awkward façade with its entry squeezed into the eastern corner. The extreme awkwardness of the entry is due primarily to the fact that the current façade is only one half its original length (Fig. 21).
The Drawing Building façade is substantially intact (Fig. 22). There is a band of smaller multi lite (6 over 6) double hung windows at the second level. Their arrangement reflects the original plan of the spaces at this level. The first pair of windows lit a corner office (#200b), the next two (out of a grouping of four) lit a second office (#200a), while the last two (out of a grouping of four) lit what was the foyer to the studio. A single window lit the landing at the top of the stair while a pair of tall, triple hung (6 over 6 over 6 - of differing proportions) lit the stair itself. The first floor windows mirror those of the upper floor with the exception of a single window at the east which lights the basement landing which leads to the men’s room. Asymmetrical on the façade, but directly under the foyer window, is the entry porch. The projecting gable porch roof covers a single panel door with multi pane side lites. The porch, columns, door and windows are rendered in a simple Craftsman style. Minor changes to this façade have included awnings, surface wiring and a window mounted air conditioner – all of which are reversible. The steps and handrails have also been modified in attempts to comply with handicap access requirements. An odd skylight sits on the south slope of the roof (Fig. 23). It is probably original and once served as the only ventilation to the custodian’s toilet room (#203).

All the remaining original elements on the south façade are Very Significant and should be retained. Any building restoration should include the removal of the awning, air conditioner and surface wiring. Various utility items should also be more sensitively incorporated. These include utility meters and lock boxes. The condition of the south façade is only Fair because it is on the weather side of the building. The roof and wall shingles show signs of serious deterioration. The entry porch itself shows signs of wear and lack of maintenance.
The south façade of the Addition has incurred greater changes over time (Fig. 24). The original façade was more balanced than what exists today. The windows on the third floor continue to reflect the spaces behind them although a curious change took place on the stair leading from the second to third floors. When the Addition was truncated the run of the stair had to be shortened. This was accomplished by eliminating the landing located at the taller of the two stair windows. The modified stair stringer now crosses in front of the window (Fig. 25 & 30) and is clearly visible in the Janitor’s Closet (Room # 208). The fenestration at the ground floor originally consisted of three windows to the left of the entry door. They aligned with the three taller windows immediately above. At the time of the remodeling of the first floor, four additional windows were added to serve new office spaces. The resulting row of seven windows is somewhat ungainly. The entry porch itself is a near match to the entry porch at the Drawing Building although attempts have been made to adapt it for handicap access.

All remaining original portions of the Addition are Significant and should be retained, including the original windows and entry porch. The shingles around the porch are severely deteriorated due to water damage and are in need of replacement.
West Façade  *Significant, Fair Condition*

The Drawing Building is almost devoid of decoration inside and out with the notable exception of the Georgian inspired balcony and pedimented French doors on the west façade (Fig. 26). It is worth noting that this façade faces Howard’s earlier work; North Gate Hall. These significant architectural elements on the second floor remain intact, but are seriously deteriorated. The first floor originally contained a single multi lite (6 over 6) double hung window which has since been replaced by an entry door to room # 102. This entrance also required a porch and stair for access. While these are not unattractively done, they are somewhat heavier in scale than what Howard himself might have designed and consequently are considered only *Contributing*. The awnings at the corner window are later additions and are *Non-Contributing*.

V. INTERIOR

The sparseness of the interior with its exposed framing at the exterior walls, ceilings and under the stairs reflects both the modesty of the budget and the aesthetic of the Bay Region Tradition which prized an honesty of materials and their expression. The original plan was very utilitarian and clearly expressed on the exterior. The studios were located on the north side of the building and had large expanses of windows to capture the north light. The few small offices and changing rooms for the models were located at the corners of the south façade while circulation space occupied the remainder of the southern exposures. Much of the interior post and beam structural system remains visible. The interior partitions, often covered on one side with 1x4 horizontal sheathing which is similar to the exterior sheathing, divided the studios from the circulation space. The original interior surfaces, both walls and ceilings, were left as unfinished wood (Fig. 27).

**Drawing Building - First Floor**

Many changes have been made to the Drawing Building’s interior over the course of its lifespan. The interiors, which were once dominated by the spacious drawing studios, have now been subdivided by both temporary office partitions and with full height wood framed walls. The remnants of the larger spaces are still clearly visible.

**General Observations:**

Interior partitions have been greatly altered throughout - both in terms of configuration and finishes. Many unfinished wood surfaces have been painted to increase light reflectivity.
Significant Features:
- Entry porch / lobby
- Original unfinished wood @ walls and ceiling
- Original battleship linoleum floor where extant
- Interior stairway / circulation areas along south wall
- Exposed wall framing system
- Post and beam structure where visible
- Multi lite (6 over 6) sash @ north windows – and other original sash,
- Room 102a appears to retain its original configuration as an office.
- The Stairway configuration is unaltered at the Drawing Building.

Drawing Building - Second Floor

General Observations:
Interior partitions have been greatly altered throughout - both in terms of configuration and finishes. Many unfinished wood surfaces have been painted to increase light reflectivity.

Significant Features:
- Original battleship linoleum floor where extant
- Interior stairway / circulation areas along south wall
- Exposed wall framing system
- Post and beam structure where visible
- Volume of original studio space @ room # 200 and 202 which were originally combined into one space. (dormer @ 202 / 202a not contributing) (Fig. 28).
- Multi lite (6 over 6) sash @ north windows –and other original sash
- Room 200b appears to retain its original configuration as an office.
- Walls surrounding the stairway are in their original location although the balustrade at room 206 has been filled in

The Addition - First Floor

General Observations:
Interior partitions have been greatly altered throughout - both in terms of configuration and finishes. Many unfinished wood surfaces have been painted to increase light reflectivity. Further changes have included the insertion of open office area and lowering of ceiling @ rooms #108-118. None of original interior spaces exist. Stairway from level 1 to level 2 has been removed. Windows on south side significantly altered – 4 windows added.

Significant Features:
- Post and beam structure where visible (Fig. 29).
The Addition - Second Floor

General Observations:
Interior partitions have been greatly altered throughout - both in terms of configuration and finishes. Many unfinished wood surfaces have been painted to increase light reflectivity. Stairway from level 1 to level 2 removed. Stairway from level 2 to level 3 altered (abandoned landing visible in janitor’s closet # 208) (Fig. 30).

Significant Features:
- Winding stair to room # 203, the former residence for on site custodian (Fig. 31)
- Skylight in room # 203, the original custodian’s toilet / shower (Fig. 23)
- Volume of original studio at room #204
- Sink in room # 204 (Fig. 32)
- Multi lite (9 over 9) sash @ north windows – and other original sash.
- Exposed wall framing system
- Post and beam structure where visible
- Battleship linoleum floor where extant
- Interior stairway / circulation areas along south wall.

The Addition - Third Floor

General Observations:
Interior partitions have been greatly altered throughout - both in terms of configuration and finishes. Many unfinished wood surfaces have been painted to increase light reflectivity. Stairway from level 2 to level 3 altered.
Significant Features:
- The volume of room # 300 is perhaps the best remaining example of the studios that were once the main feature of this building (Fig. 33).
- Multi lite (9 over 9) sash @ north windows – and other original sash.
- Exposed wall framing system.
- Rooms 300A, B and C are in the location of the original office and models' rooms although the demising walls have been relocated.

![Figure 33. Room #300](image)

VI. MISSING ELEMENTS

Clearly the most obvious missing element is the eastern 50 ft. section of the Addition demolished in 1930. The second floor contained the single largest studio space of the entire structure. The demolition of this wing is most apparent on the south façade where the entry porch, once near the center of the elevation, now sits awkwardly at the extreme end.

A substantial qualitative loss has occurred wherever the interior finishes of the building – the exposed natural wood structural system – have been painted, covered with wall board or otherwise altered. Much of the beauty and significance of the original building was in its directness and simplicity of materials and finishes. Another qualitative loss occurred where the large open studios have been subdivided into smaller offices.

The removal of the stairway from level 1 to level 2 of the Addition has also compromised the clarity of the circulation of the original building. The relocation of the stairway leading from level 2 to level 3 of the Addition has caused a subtle mis-alignment of the façade and the interior.
VI. CONCLUSIONS

The NAB is a Very Significant contributor to the architectural context of the Northside. The NAB along with Northgate Hall and Cloyne Court are surviving remnants of a much larger grouping of buildings which reflected the tenets of the early Bay Region Tradition. Today, NAB, Northgate, Protor Apartments and Beta Theta Pi Fraternity anchor what was once a residential buffer zone between the University and the district of single family homes to the north.

The NAB is also Very Significant in the context of the University itself. First, it represents one of the few remaining shingled works by John Galen Howard, the University's first campus architect. Second, its informal character and rustic setting offer something of a foil to the more formal "Glade" in front of Doc Library. Finally, the NAB has served as an incubator to a number of significant University programs.

Its period of significance can be considered to be 1914 to 1930. These coincide with the date of the first construction campaign and the demolition of half the Addition to make way for the construction of Davis Hall.

Many of the specific elements worthy of note and therefore of preservation and restoration have been mentioned in the observations covering individual spaces. Here we will attempt to generalize regarding the NAB’s significant features and how they might best be treated.

Exterior:
Three of the building’s four facades (north, south and west) are stylistically intact – even after the partial demolition of the Addition in 1930. The most significant is the north façade which is most clearly representative of the NAB’s architectural style, building function and period of significance. The tall, multi lite windows are the most significant character defining features of the building. The alterations to this façade – the roof dormer, wall louver and fire escape are considered Non-Contributing. The character defining features of the south façade include the original windows and the two Craftsman style entry porches. The west façade’s principal feature is the second floor balcony with pedimented French door. The east façade is Non-Contributing.

The question of how might the east façade be altered in subsequent building campaigns is a good one. One possibility would be to reconstruct the 50 ft. portion removed in 1931. The drawings for this building exist and its reconstruction could be achieved without conjecture (see plans for original building, Figures: 44 - 45).
By way of contrast to the masonry buildings on the campus, the exterior building fabric – the current wood shingles - are not to be considered as character defining features in and of themselves - shingles were not considered as a permanent siding material and may already have been replaced at least once. What is significant is that a wood shingle exterior with a natural finish be utilized for any proposed renovation. In the process, later alterations such as awnings, window air conditioner and external wiring should be removed. The roofing material should receive similar consideration; original cedar shingle roofing may still exist under replacement layers of roofing and should be replaced in kind if possible.

**Interior:**
The two most important character defining features of the interior are the volume of the studio spaces and the exposed structural system with a natural wood finish. All efforts should be taken to preserve those original features which still remain and reconstruct those which have been lost. The circulation space which exists along the south side of the building carries with it the next highest level of significance. The relationship between the stairways and their adjacent windows should be retained.

The simple and direct quality of the original finishes – battleship linoleum flooring, unfinished wood, simple stair rail pickets and balusters, straight forward hardware and light fixtures should be reinforced during any future renovation. The NAB also contains its original steam heat radiators which should be preserved. (see: Steam Heating Plans dated 1918 – Figures: 47 - 48)

Of special note, even though not within the scope of this Historic Structure Report, is the collection of approximately six ships’ models (Figures: 35 - 40). which are displayed at various locations throughout the building. While not original to the Drawing Building, they have definitely acquired a significance as part of the Naval Architecture program and should be properly cataloged and preserved.
Figure 35. "H. T. Harper" (Room 300)

Figure 36. "Made available to University of California by Standard Oil of California" (Room 300)

Figure 37. "Herbert G. Wylie" (Corridor at Room 204)

Figure 38. "No Name" (Corridor at Room 202)

Figure 39. "Water Witch" (Corridor at Room 201)

Figure 40. "No Name" (First / Second Floor landing)