



SAN FRANCISCO PLANNING DEPARTMENT

Certificate of Appropriateness Case Report

HEARING DATE: MAY 2, 2018

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Filing Date: March 20, 2018
Case No.: 2018-003886COA
Project Address: **Martin Luther King Jr. Drive, Golden Gate Park**
Historic Landmark: No. 210: Murphy Windmill and Millwright's Cottage
Zoning: P (Public)
OS (Open Space) Height and Bulk District
Block/Lot: 1700/001
Applicant: Dan Mauer, Project Manager, Capital Improvements Division
San Francisco Recreation and Park Department
30 Van Ness Avenue, 3rd Floor
San Francisco, CA 94102
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PROPERTY DESCRIPTION

The **Murphy Windmill and Millwright's Cottage**, are located in Golden Gate Park, on the north side of Martin Luther King Jr. Drive between John F. Kennedy Drive and the Great Highway, identified as a portion of Assessor's Block 1700, Lot 001. The subject property, including the windmill, cottage and landscaped open space setting surrounding the two structures was locally designated as San Francisco Landmark No. 210 under Article 10 of the Planning Code in May 2000. Made possible through a donation from banker Samuel G. Murphy, the eight-sided, six-story, Murphy Windmill was the largest in the world when it was designed and constructed by engineer J. Charles Henry Stutt between 1905 and 1907. Able to pump 40,000 gallons of well water a day for park irrigation, the Murphy Windmill (as well as its companion Dutch Windmill built in 1902) was critical to the transformation of acres of scrub and sand dunes into Golden Gate Park. It continued to be working mill until approximately 1935. The Millwright's Cottage is a free-standing, Georgian Revival cottage with Craftsman influences designed in 1909 by the Reid Brothers Architects, and built as a residence for the millwright (caretaker) of the windmill. Authorized under Certificate of Appropriateness Case No. 2001.0732A, reconstruction of the Murphy Windmill and renovation of the adjacent Millwright's Cottage was completed in 2011. The property is within a P (Public) Zoning District and an OS (Open Space) Height and Bulk District.

PROJECT DESCRIPTION

During the seven years since the reopening of the Murphy Windmill, numerous safety issues have been identified through operator experience and a City commissioned workplace safety survey, with reference to OSHA standards, that were not foreseen at the time of the rehabilitation as authorized in 2001. The

proposed project involves the following safety upgrades to the Windmill designed to comply with OSHA requirements. No alterations are proposed to the Millwright's Cottage.

EXTERIOR:

Gallery – Level 3

- Increase the gallery handrail extension to 42 inches. The handrail surrounding the gallery was designed based on historic photographs. The height was made less than the code required 42 inches to create clearance for the turning radius of the sail stocks. It has since been found that the stocks will clear the railing if it is increased in height by 5 inches.
- Add a 4-inch high wood toe kick at the bottom of the railing where it meets the gallery deck. OSHA requires toe kicks at the bottom of guardrails to prevent falls. This is especially important because the railing angles outward per the original design.
- Replace weathered gallery deck level wood entry doors. Two wooden doors leading from Level 3 to the outside gallery deck have weathered in marine environment and are leaking. The project includes replacement using the identical design replicated in weather resistant materials.

Main entry door at grade

- Install LED downlight exterior lights at the main door for safety illumination as required by code.

Sails / Stocks

- Add tie-offs for fall protection on the stocks

Fan Tail

- Augment the fantail's open steel deck with additional light bracing to stiffen and reduce deflection in the steel grating surface.
- Replace the existing loose aluminum ladder with a permanently fixed ladder of the same size and appearance.
- Add tie-offs, hand holds, and cables for fall protection. Please note: in 2001 the original wooden fantail was removed and replaced as part of the restoration.

INTERIOR:

Stairs / Openings

- Replace all existing interior wooden stairs with OSHA compliant painted steel stairs handrails and guard rails/paneling.
- Remove small sections of floor surface on all levels to allow for vertical, code compliant head clearance, in areas of new stair openings.

Please note: Replacement and redesign of the original wood stairs to meet Building Code and allow access to the gallery level (gallery level proposed to be cut back to a mezzanine) was previously conditionally approved as part of the 2001 Certificate of Appropriateness review. However, the stairs were replaced in-kind as part of the in the restoration project completed in 2011 for budgetary reasons, therefore the approved improvements to the stairs were not implemented.

Concrete pump beds

- Remove concrete water pump beds in anticipation of creating space for interpretive exhibits. The pump bed footprint consumes most of the ground level square footage, and the intent is to create a future area for interpretive exhibits open to the public. This item was previously approved in 2001.

Miscellaneous recommended safety upgrades

- Increase interior lighting levels by replacing incandescent fixtures with brighter LED or compact fluorescent fixtures.
- Add guardrails at Levels 6 & 7 in the proximity of openings to below.
- Add floor level signage designations.

OTHER ACTIONS REQUIRED

No other actions are required for approval of the associated building permit application.

COMPLIANCE WITH THE PLANNING CODE PROVISIONS

The proposed project complies with all aspects of the Planning Code.

APPLICABLE PRESERVATION STANDARDS

ARTICLE 10

Pursuant to Section 1006.2 of the Planning Code, unless exempt from the Certificate of Appropriateness requirements or delegated to Planning Department Preservation staff through the Administrative Certificate Appropriateness process, the Historic Preservation Commission is required to review any applications for the construction, alteration, removal, or demolition of any designated Landmark for which a City permit is required. Section 1006.6 states that in evaluating a request for a Certificate of Appropriateness for an individual landmark or a contributing building within a historic district, the Historic Preservation Commission must find that the proposed work is in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, as well as the designating Ordinance and any applicable guidelines, local interpretations, bulletins, related appendices, or other policies.

THE SECRETARY OF THE INTERIOR'S STANDARDS

Rehabilitation is the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values. The Rehabilitation Standards provide, in relevant part(s):

Standard 1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

The proposed project would retain the subject property's use as an operational and functioning windmill and public open space, and would maintain the area's historic character. In general, the interior and exterior alterations proposed succeed in replacing existing elements with compatible in-kind materials that maintain the overall dimensions and configuration of the Windmill's

historic design as restored in 2011. In those areas where additional railing, sail reconfiguration or other safety equipment is required, minimal material is removed and spatial relationships are maintained. However, the proposed steel for the interior stairs and steel mesh panel are not in keeping with the character of the historic structure. This aspect of the project should be revised. Nonetheless, the stairs will be maintained in their historic configuration and location, and the character of the windmill as a whole will not be changed as a result of the project.

Standard 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

The proposed project would not alter the historic character of the Windmill. The most evident exterior alteration proposed is to the gallery railing. The new wood extenders would sit on each side of the existing vertical supports and the top cap of the railing is proposed to be in-kind wood, at the same size as existing. Overall this is a minimal visible modification to the exterior facade and the addition will not result in the loss of distinctive materials. The door replacements in-kind, the new lighting, as well as the addition of the toe-kick at the gallery, and the steel grate platform, permanent ladder, and tie-offs at the fantail, do not impact the features, spaces and spatial relationships that characterize the landmark. At the interior, the removal of the concrete water pump beds was anticipated in 2001; it is not a feature that characterizes a property. Despite the replacement of the stairs and removal of small sections of floor surface to allow for vertical, code compliant head clearance, the overall size and proportion of the stairs and landings would be consistent with the previous restoration, and would not alter the Windmill's character-defining spatial relationships at each floor level. As noted above, the proposed steel for the interior stairs and steel mesh panel are not in keeping with the character of the historic structure. This aspect of the project should be revised; the metal stairs should be replaced in wood or alternately be clad with wood, and the mesh paneling should be of a different, but compatible material.

Standard 3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

The project would not create a false sense of historical development. The safety upgrades would be of their own time, but as a whole are compatible with the restored historic character of the Windmill. The proposed project will not create a false sense of history and no conjectural features will be added.

Standard 5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

No distinctive materials, features, finishes, construction or craftsmanship examples that characterize the property as restored would be significantly altered or removed from the landmark. Work is limited to safety upgrades and the proposed project retains all of the property's exterior character-defining features. As previously described, new wood extenders are proposed to be added to the gallery railing, but these vertical supports and the top cap are proposed to be in-kind in wood, at the same size as existing. This aspect of the project will not result in the loss of distinctive materials. Other upgrades do not alter existing features or finishes; lighting and safety additions to the sails, and fantail have minimal attachments in existing locations that are

marginally visible. The wooden doors at the gallery level will be replaced in-kind. The existing interior stairs were replaced in-kind as part of the restoration project completed in 2011. Overall, the renovation of these stairs and removal of portions of the floor would not alter character-defining materials, features, finishes, and construction techniques. As noted above the steel stairs and related steel elements are not in keeping with the character of the historic structure, and this aspect of the project should be revised.

- Standard 6.** Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

The project proposes replacement of two weathered gallery deck level wood entry doors leading from Level 3 to the outside gallery deck. The project includes replacement of the doors using the identical design replicated in weather resistant materials in compliance with Standard 6.

- Standard 9.** New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

See discussions under Standards 1, 2, and 5 above. Overall, proposed new work will be differentiated yet compatible and will result in minimal change to the character-defining features of the restored Windmill, specifically as viewed from the open space surrounding the building. Alterations to the gallery railing and replacement doors will be detailed to match the historic materials, features and spatial relationships that characterize the subject property. New lighting at the entry will be differentiated but be compatible with the historic materials. On balance, the proposed safety additions are compatible with the Windmill's historic character and materials.

- Standard 10.** New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

On balance the proposed work will not alter the overall form and integrity of the landmark, and aside from the interior stair elements (see discussion above), new additions be constructed of compatible materials, and detailed to match the proportion and detailing of existing historic features without risking impairment to the essential form and integrity of the historic landmark. As described above, the bulk of the restored Windmill will remain intact, new safety equipment will be added in areas where failing equipment is already in place, or in areas that are minimally visible. The extension to the Gallery railing could theoretically be removed in the future without impact to the essential form and integrity of the Windmill.

PUBLIC/NEIGHBORHOOD INPUT

The Department has received no public correspondence related to this project.

STAFF ANALYSIS

The Murphy Windmill's character-defining features were described in the 1998 case report attached to the 2000 designating ordinance, but elements were not specifically listed. Based on the case report and a 2003 Historic Structure Report prepared for the restoration (please see attached exhibit), the character-defining features of the Murphy Windmill include:

(Please note: character-defining features of the Millwright's Cottage are not included below, as there is no work proposed to the cottage.)

In General:

- The Windmill serves as a picturesque, scenic landscape element in a contrived pastoral setting, that includes trees, low shrubs and grass with low vegetation.

Windmill Exterior

- Eight sided, six story structure with a configuration consisting of three parts: a concrete base, a wood tower and a cap.
- Scored concrete base with double-hung wood windows.
 - Base is original.
 - Base windows.
 - Steel entrance door with a lintel above reading "Gift of Samuel G. Murphy, May 1905".
- Wood tower clad in blue slate shingles.
- Wooden copper clad rotating cap.
- Sail stocks and sail grid.
- Fantail (set a right angle to the main sails), and supporting structure geared to turn the cap.
- Wooden gallery decking, and railing surrounding the exterior of the structure at the third level, supported by struts just above the concrete base.
- Wood gallery door.

Windmill Interior

- Heavy wood-frame support structure tapering inwards.
- Six wood floors -- levels one and two housed in the concrete base; three, four and five in the wood tower; and level six in the cap.
- Wood open riser stairs, which circle up around the perimeter of the building.

Based on the requirements of Article 10 and the Secretary of Interior's Standards for Rehabilitation, staff has determined that the proposed work is compatible with the character-defining features of the Murphy Windmill and Millwright's Cottage, Landmark No. 210. The new safety equipment, gallery railing, exterior lighting and upgrades to the sail, stocks and fantail would not alter the character-defining features of the structure and could be removed in the future without impacting the integrity of the property. Staff finds the project consistent with the Murphy Windmill's character and that the essential form and integrity of the landmark will be unimpaired by the proposed project. The character-defining features of the property will remain, and the historic design and configuration of the windmill will be retained and the new materials will match the character of the restored landmark. Despite the proposed replacement of the stairs and removal of small sections of floor surface to allow for vertical, code

compliant head clearance, the overall size and proportion of the stairs and landings would be consistent with the previous restoration, and would not alter the Windmill's character-defining spatial relationships at each floor level. The proposed steel for the interior stairs and steel mesh panel are not in keeping with the character of the historic structure. This aspect of the project should be revised as indicated in the Condition of Approval included below. The removal of the concrete water pump beds was anticipated in 2001; it is not a feature that characterizes a property. Moreover, the removal of the pump beds will allow for the installation of a future interpretative exhibit open to public where visitors will be able to experience the historic volume of the windmill and view materials and features related to its original construction and historic use.

Conditions of Approval

1. *That prior to issuance of Building permits, the final material including the replacement material for the metal stairs and the mesh paneling, will be forwarded for review and approval by Planning Department Preservation Staff. As referenced previously, the interior stairs should be replaced in wood or alternately be clad with wood, and the steel mesh panel should be replaced with wood or another compatible material.*

ENVIRONMENTAL REVIEW STATUS

The Planning Department has determined that the proposed project is exempt/excluded from environmental review, pursuant to CEQA Guideline Sections 15301 (Class One – Minor Alteration) because the project includes a minor alteration of an existing structure that meets the Secretary of the Interior's Standards.

PLANNING DEPARTMENT RECOMMENDATION

Planning Department staff recommends APPROVAL WITH CONDITIONS of the proposed project as it appears to meet the Secretary of the Interior Standards for Rehabilitation.

ATTACHMENTS

Draft Motion
Parcel Map
1998 Sanborn Map
Zoning Map
Site Photographs
Landmark No. 210 Designating Ordinance
2003 Historic Structure Report
Project Sponsor Submittal
- COA Application
- Historical Review Packet



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Historic Preservation Commission Draft Motion

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ADOPTING FINDINGS FOR A CERTIFICATE OF APPROPRIATENESS FOR PROPOSED WORK DETERMINED TO BE APPROPRIATE FOR AND CONSISTENT WITH THE PURPOSES OF ARTICLE 10, TO MEET THE STANDARDS OF ARTICLE 10, TO MEET THE SECRETARY OF INTERIOR'S STANDARDS FOR REHABILITATION, FOR THE PROPERTY LOCATED ON A PORTION LOT 001 IN ASSESSOR'S BLOCK 1700, WITHIN A P (PUBLIC) ZONING DISTRICT AND AN OS (OPEN SPACE) HEIGHT AND BULK DISTRICT.

PREAMBLE

WHEREAS, on March 20, 2018 Dan Mauer of the San Francisco Recreation and Parks Department ("Project Sponsor") filed an application with the San Francisco Planning Department (hereinafter "Department") for a Certificate of Appropriateness for alterations to the Murphy Windmill to comply with OSHA standards, including at the exterior: the extension of the gallery railing, the addition of a toe-kick at the bottom of the gallery railing, the replacement of deteriorated exterior gallery level wood doors with in-kind weather resistant materials, the addition of tie-offs for fall protection on the stocks, safety additions to the fan tail (steel bracing and cables for fall protection), and exterior lights at the entrance; and at the interior: the replacement of the existing wooden stairs and safety paneling, removal of the concrete water pump beds, and the removal of small sections of the floor surface on all levels for head clearance.

WHEREAS, the Project was determined by the Department to be categorically exempt from environmental review. The Historic Preservation Commission ("Commission") has reviewed and concurs with said determination.

WHEREAS, on May 2, 2018, the Commission conducted a duly noticed public hearing on the current project, Case No. 2018-003886COA ("Project") for its appropriateness.

WHEREAS, in reviewing the Application, the Commission has had available for its review and consideration case reports, plans, and other materials pertaining to the Project contained in the Department's case files, has reviewed and heard testimony and received materials from interested parties during the public hearing on the Project.

MOVED, that the Commission hereby grants the Certificate of Appropriateness, in conformance with the plans dated March 26, 2018 labeled Exhibit A on file in the docket for Case No. 2018-003886COA based on the following findings:

CONDITIONS OF APPROVAL

1. Specifications for replacement material for the metal stairs and the mesh paneling will be forwarded for review and approval by Planning Department Preservation Staff prior to the issuance of Building Permit Applications. The interior stairs should be replaced in wood or alternately be clad with wood, and the steel mesh panel should be replaced with wood or another compatible material.

FINDINGS

Having reviewed all the materials identified in the recitals above and having heard oral testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and constitute findings of the Commission.
2. Findings pursuant to Article 10:

The Historic Preservation Commission has determined that the proposed work is compatible with the character of the landmark as described in the designation report.

- That the proposed project is compatible with the Murphy Windmill and Millwright's Cottage, Landmark No. 210 since the project does not affect the design and form of the site.
- That the project would maintain the existing use of the park as a public open space and would maintain the windmill's historic character.
- That the proposed project maintains and does not alter or destroy the windmill's character-defining features or materials.
- The proposed project meets the requirements of Article 10.

- On balance, the proposed project meets the following Secretary of Interior's Standards for Rehabilitation: The proposed project meets the following *Secretary of Interior's Standards for Rehabilitation*:

Standard 1.

A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

Standard 2.

The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

Standard 3.

Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

Standard 5.

Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

Standard 6.

Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

Standard 9.

New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

Standard 10.

New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

3. **General Plan Compliance.** The proposed Certificate of Appropriateness is, on balance, consistent with the following Objectives and Policies of the General Plan:

I. URBAN DESIGN ELEMENT

THE URBAN DESIGN ELEMENT CONCERNS THE PHYSICAL CHARACTER AND ORDER OF THE CITY, AND THE RELATIONSHIP BETWEEN PEOPLE AND THEIR ENVIRONMENT.

GOALS

The Urban Design Element is concerned both with development and with preservation. It is a concerted effort to recognize the positive attributes of the city, to enhance and conserve those attributes, and to improve the living environment where it is less than satisfactory. The Plan is a definition of quality, a definition based upon human needs.

OBJECTIVE 1

EMPHASIS OF THE CHARACTERISTIC PATTERN WHICH GIVES TO THE CITY AND ITS NEIGHBORHOODS AN IMAGE, A SENSE OF PURPOSE, AND A MEANS OF ORIENTATION.

POLICY 1.3

Recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts.

OBJECTIVE 2

CONSERVATION OF RESOURCES WHICH PROVIDE A SENSE OF NATURE, CONTINUITY WITH THE PAST, AND FREEDOM FROM OVERCROWDING.

POLICY 2.4

Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

POLICY 2.5

Use care in remodeling of older buildings, in order to enhance rather than weaken the original character of such buildings.

POLICY 2.7

Recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character.

The goal of a Certificate of Appropriateness is to provide additional oversight for buildings and districts that are architecturally or culturally significant to the City in order to protect the qualities that are associated with that significance.

The proposed project qualifies for a Certificate of Appropriateness and therefore furthers these policies and objectives by maintaining and preserving the character-defining features of the Murphy Windmill and Millwright's Cottage, Landmark Number 210 for the future enjoyment and education of San Francisco residents and visitors.

4. The proposed project is generally consistent with the eight General Plan priority policies set forth in Section 101.1 in that:

- A) The existing neighborhood-serving retail uses will be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses will be enhanced:

The proposed project will have no effect on existing neighborhood-serving retail uses.

- B) The existing housing and neighborhood character will be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods:

The proposed project will strengthen neighborhood character by respecting the character-defining features of the site and landmark in conformance with the Secretary of the Interior's Standards.

- C) The City's supply of affordable housing will be preserved and enhanced:

The project will not affect the City's affordable housing supply.

- D) The commuter traffic will not impede MUNI transit service or overburden our streets or neighborhood parking:

The proposed project will not result in commuter traffic impeding MUNI transit service or overburdening the streets or neighborhood parking.

- E) A diverse economic base will be maintained by protecting our industrial and service sectors from displacement due to commercial office development. And future opportunities for resident employment and ownership in these sectors will be enhanced:

The proposed project will not have any impact on industrial and service sector jobs.

- F) The City will achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

The project will have no effect on preparedness against injury and loss of life in an earthquake. The work will be executed in compliance with all applicable construction and safety measures.

- G) That landmark and historic buildings will be preserved:

The proposed project is in conformance with Article 10 of the Planning Code and the Secretary of the Interior's Standards.

- H) Parks and open space and their access to sunlight and vistas will be protected from development:

The proposed project will not impact the access to sunlight or vistas for the parks and open space.

5. For these reasons, the proposal overall, is appropriate for and consistent with the purposes of Article 10, meets the standards of Article 10, and the Secretary of Interior's Standards for Rehabilitation, General Plan and Prop M findings of the Planning Code.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby **GRANTS a Certificate of Appropriateness** for the property located at Lot 001 in Assessor's Block 1700 for proposed work in conformance with the plans labeled Exhibit A on file in the docket for Case No. 2018-003886COA.

APPEAL AND EFFECTIVE DATE OF MOTION: The Commission's decision on a Certificate of Appropriateness shall be final unless appealed within thirty (30) days. Any appeal shall be made to the Board of Appeals, unless the proposed project requires Board of Supervisors approval or is appealed to the Board of Supervisors as a conditional use, in which case any appeal shall be made to the Board of Supervisors (see Charter Section 4.135).

Duration of this Certificate of Appropriateness: This Certificate of Appropriateness is issued pursuant to Article 10 of the Planning Code and is valid for a period of three (3) years from the effective date of approval by the Historic Preservation Commission. The authorization and right vested by virtue of this action shall be deemed void and canceled if, within 3 years of the date of this Motion, a site permit or building permit for the Project has not been secured by Project Sponsor.

THIS IS NOT A PERMIT TO COMMENCE ANY WORK OR CHANGE OF OCCUPANCY UNLESS NO BUILDING PERMIT IS REQUIRED. PERMITS FROM THE DEPARTMENT OF BUILDING INSPECTION (and any other appropriate agencies) MUST BE SECURED BEFORE WORK IS STARTED OR OCCUPANCY IS CHANGED.

I hereby certify that the Historical Preservation Commission ADOPTED the foregoing Motion on May 2, 2018.

Jonas P. Ionin
Commission Secretary

AYES: X

NAYS: X

ABSENT: X

ADOPTED: May 2, 2018

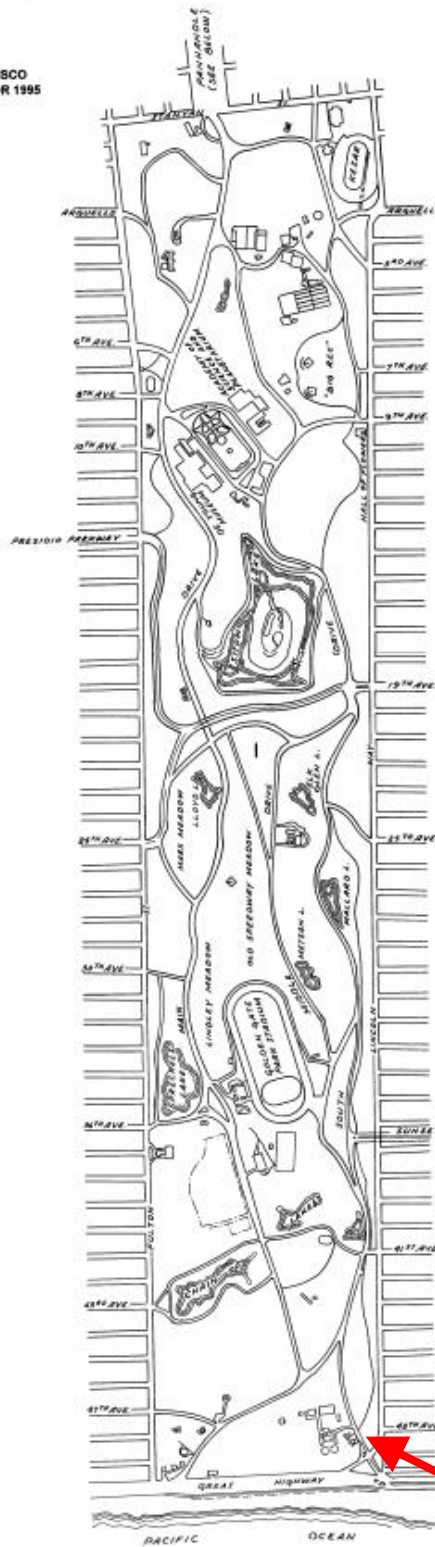
Parcel Map



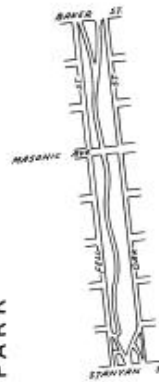
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1700
GOLDEN GATE PARK

NO SCALE



GOLDEN GATE PARK



PANHANDLE

SUBJECT PROPERTY

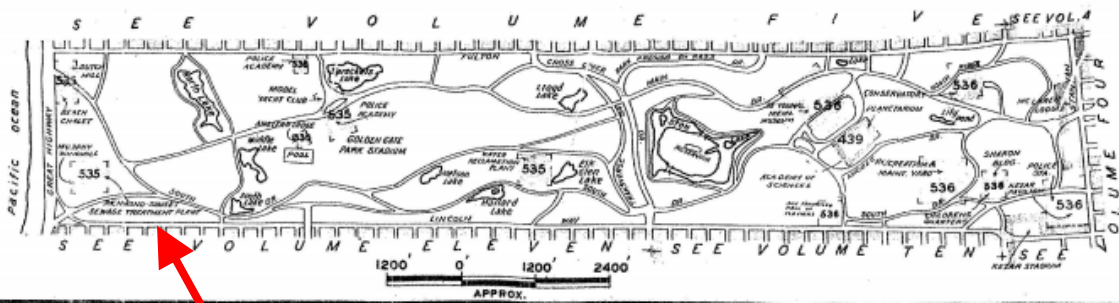
Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill



Sanborn Map*

THESE SANBORN MAPS ARE DATED TO THE MID 1990's
USE ONLY FOR HISTORICAL CONTEXT

(P-8184)
SAN FRANCISCO, CAL. VOL. 5
535
"A"
JULY 1959
GOLDEN GATE PARK



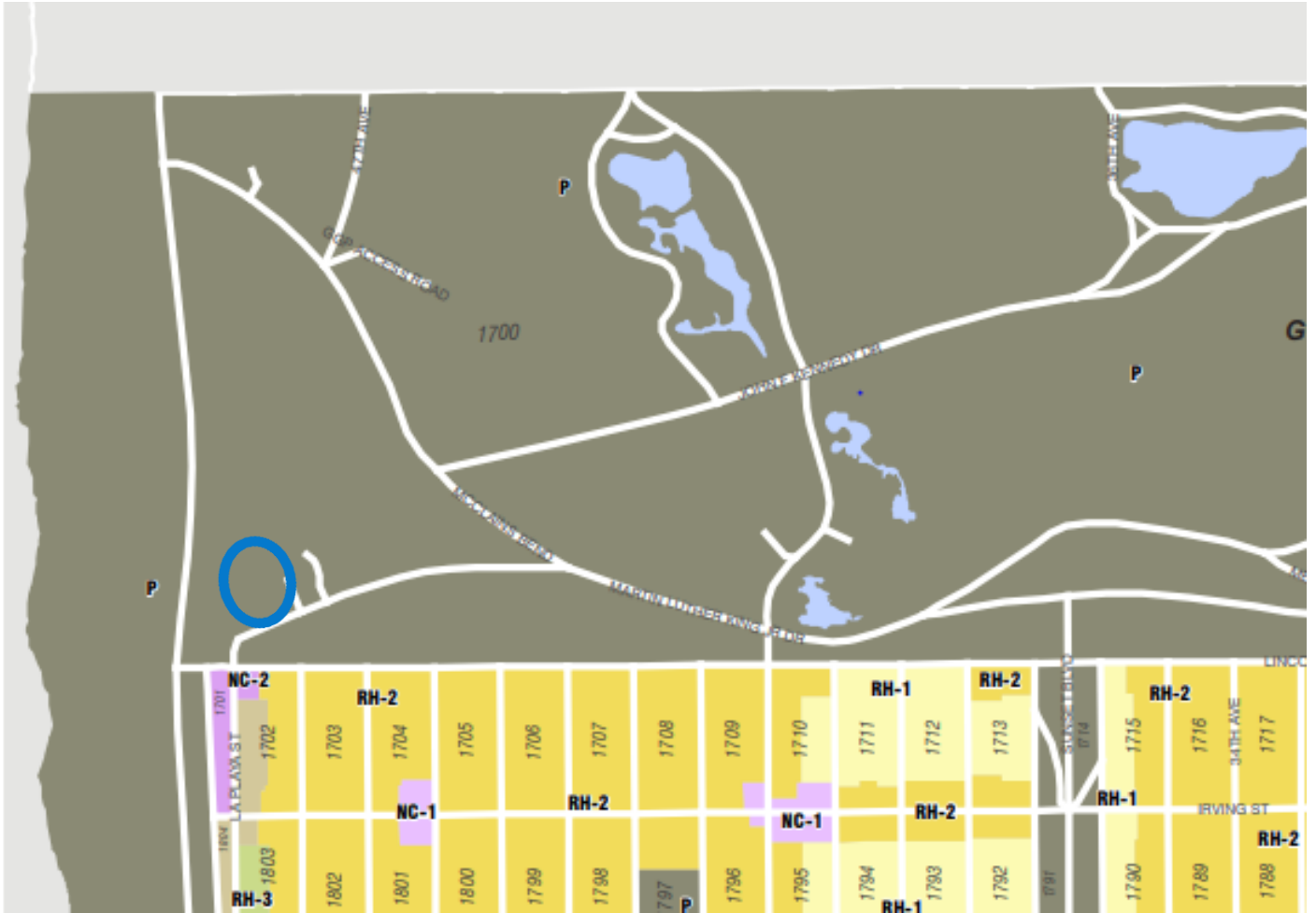
SUBJECT PROPERTY

*The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.



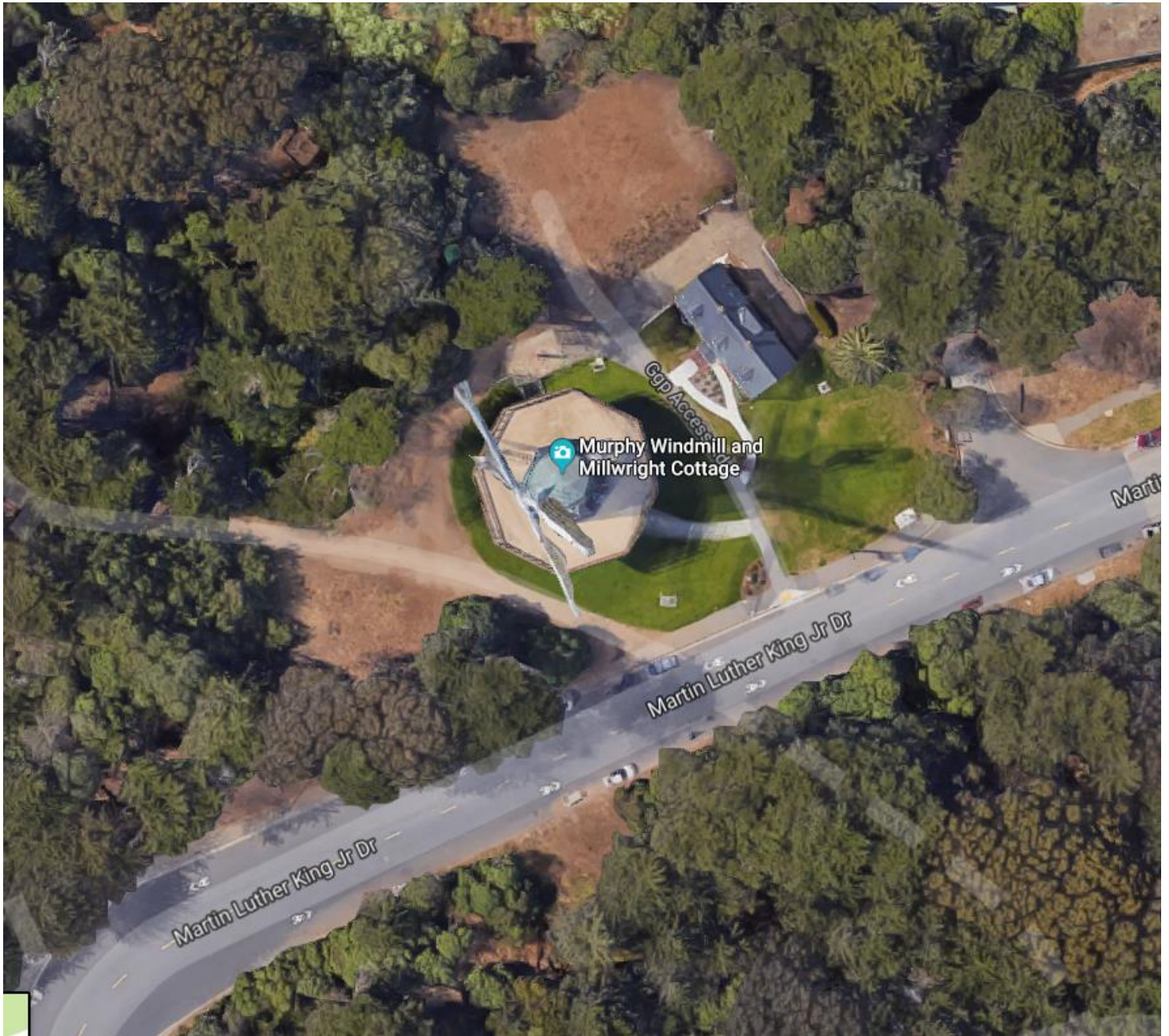
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Murphy Windmill

Zoning Map



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Aerial Photo



Certificate of Appropriateness
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Murphy Windmill

Site Photo



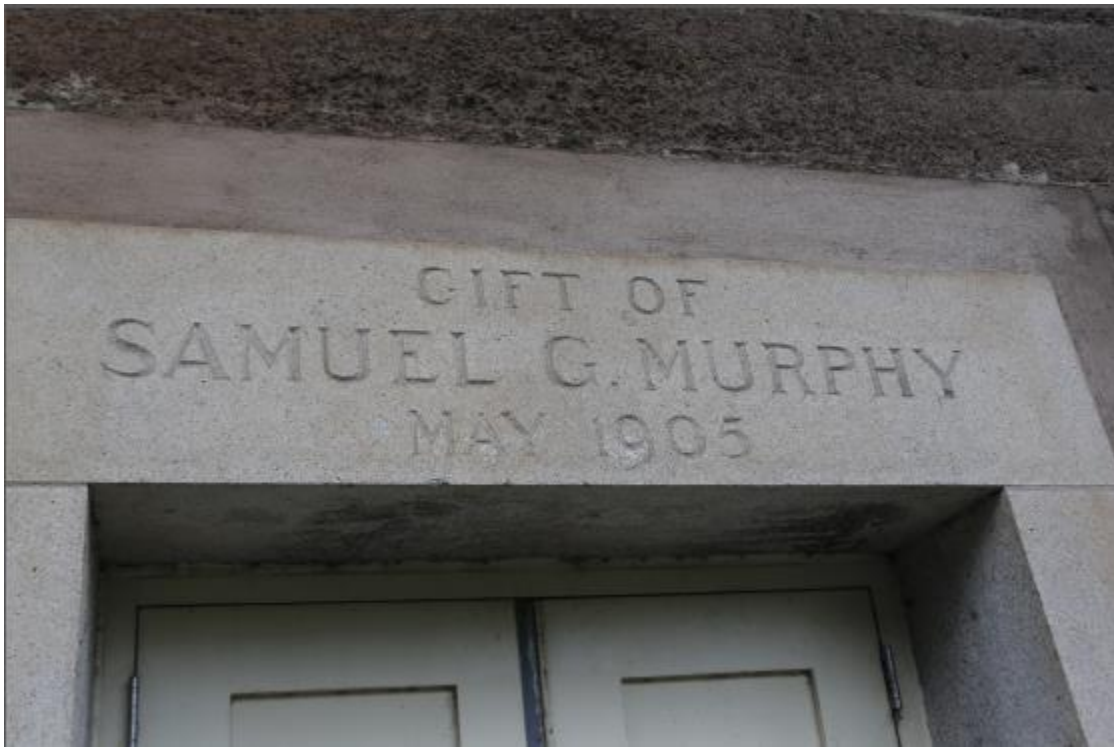
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Murphy Windmill

Site Photo



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – entry and pump beds



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – stairs and floor



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo - stairs



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – gallery doors



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – gallery railing



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – gallery railing / toe-kick location



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – gallery railing



Certificate of Appropriateness
Case Number 2018-003886COA
Murphy Windmill

Site Photo – sails



Certificate of Appropriateness
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Murphy Windmill

1 [Landmarks]

2 DESIGNATING THE MURPHY WINDMILL AND MILLWRIGHT'S COTTAGE, AT THE
3 WEST END OF GOLDEN GATE PARK, AS LANDMARK NO. 210 PURSUANT TO
4 ARTICLE 10 OF THE PLANNING CODE.

5
6 Be it ordained by the People of the City and County of San
7 Francisco:

8
9 Section 1. The Board of Supervisors hereby finds that the Murphy
10 Windmill and Millwright's Cottage, at the west end of Golden Gate
11 Park, a portion of Lot 001 in Assessor's Block 1700, has a special
12 character and special historical, architectural and aesthetic
13 interest and value, and that its designation as a Landmark will
14 further the purposes of, and conform to the standards set forth in
15 Article 10 of the Planning Code.

16
17 (a) Designation: Pursuant to Section 1004 of the Planning Code,
18 Chapter II, Part II of the San Francisco Municipal Code,
19 the Murphy Windmill and Millwright's Cottage, is hereby
20 designated as Landmark No. 210. This designation has been
21 fully approved by Resolution No. 14994 of the Planning
22 Commission, which Resolution is on file with the Clerk of
23 the Board of Supervisors under File No. 000530 and

24
25 Supervisors Becerril, Bierman, Newsom, Brown

1 docket 1998.857L, and is incorporated in this
2 designation ordinance as though fully set forth.
3

4 Section 2. The property shall be subject to following further
5 controls and procedures, pursuant to Planning Code Section
6 1004(c)(3), in addition to those generally set forth in Article 10
7 of the Planning Code:
8

9 (a) Alterations that Require a Certificate of Appropriateness: The
10 following alterations shall require Certificate of
11 Appropriateness approval pursuant to the Planning Code,
12 Sections 1005 through 1006.8:
13

14 (1) A plan or proposal involving the introduction, moving,
15 removal, replacement or significant alteration to the
16 appearance of Major Fixed Elements. Major Fixed Elements
17 shall mean:

- 18 (A) Buildings, Sheds, Shelters, arbors, pavilions;
19 (B) Monuments, sculpture, ornamental fountains, masonry and
20 concrete benches;
21 (C) Fencing, railing, gates, barriers, walls;
22 (D) Designated playground areas;
23 (E) Hard-edged, raised planting beds;
24
25

1 (2) The introduction, moving, removal, replacement or
2 alteration of Minor Fixed Elements. Minor Fixed Elements
3 shall mean:

4 (A) Lamps;

5 (B) Benches, except as provided in (a)(1)(B) above;

6 (C) Drinking fountains;

7 (D) Trash receptacles;

8 (E) Signs and plaques;

9 (F) Play equipment within an existing playground area;

10 (G) Soft-edged planting beds;

11 (H) Plants, shrubs and trees with a trunk diameter of less
12 than six inches measured at chest height.

13 (3) Temporary installations. Temporary Installations shall
14 mean:

15 (A) Movable furniture;

16 (B) Tents;

17 (C) Temporary art installations and displays;

18 (D) Portable performance stages and equipment.

19 (4) Minor Changes to the Existing Pavement Plan. Minor Changes
20 to the Existing Paving Plan shall mean:

21 (A) Repaving and resurfacing with same material;

22 (B) Introduction of paved surface to area(s) not paved at
23 designation, cumulatively totaling less than 1,000
24 square feet in area.
25



City and County of San Francisco

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-1689

Tails Ordinance

File Number: 000530

Date Passed:

1

Ordinance designating the Murphy Windmill and Millwright's Cottage, at the west end of Golden Gate Park, as Landmark No. 210 pursuant to Article 10 of the Planning Code.

May 15, 2000 Board of Supervisors — PASSED, ON FIRST READING

Ayes: 11 - Ammiano, Becerril, Bierman, Brown, Katz, Kaufman, Leno, Newsom, Teng, Yaki, Yee

May 22, 2000 Board of Supervisors — FINALLY PASSED

Ayes: 9 - Ammiano, Becerril, Bierman, Brown, Kaufman, Leno, Teng, Yaki, Yee
Absent: 2 - Katz, Newsom

LANDMARKS PRESERVATION ADVISORY BOARD
1660 MISSION STREET, 5TH FLOOR
SAN FRANCISCO, CA 94103



CASE REPORT

HISTORIC BUILDING NAME: Murphy Windmill and Murphy Millwright's Cottage

OWNER: Recreation and Park Department
McLaren Lodge, Golden Gate Park
501 Stanyan Street
San Francisco, California 94117

POPULAR BUILDING NAME: Murphy Windmill and Murphy Millwright's Cottage

ORIGINAL USE: The Murphy Windmill was constructed to pump water for irrigating Golden Gate Park. The Murphy Millwright's Cottage was constructed to house the Murphy Windmill's attendant.

CURRENT USE: The Murphy Windmill is abandoned. The Murphy Millwright's Cottage is a residence.

STYLE: The Murphy Windmill is based upon traditional Dutch windmill design. The Murphy Millwright Cottage is designed in the Georgian Revival style, with "Dutch" and Arts and Crafts details.

NUMBER OF STORIES: Murphy Windmill: six. Murphy Millwright's Cottage: one-and-a-half.

EXTERIOR MATERIALS: Murphy Windmill: concrete, slate shingles and copper sheathing. Murphy Millwright's Cottage: brick, wood and slate.

BLOCK & LOT: 1700

ZONING: Park

ARCHITECTS: Murphy Windmill: J.C.H. Stutt, Consulting Mechanical Engineer.
Murphy Millwright's Cottage: The Reid Brothers, Architects

CONSTRUCTION DATE: Murphy Windmill: 1905-07, Murphy Millwright's Cottage: 1909-10

LANDMARK NO: 210

LPAB VOTE: 7-0

STATEMENT OF SIGNIFICANCE:

Together, the Murphy Windmill and the Murphy Millwright's Cottage constitute a unique historical, engineering and architectural landmark in the western reaches of Golden Gate Park. The Murphy Windmill is a sophisticated example of hydraulic engineering, as well as a picturesque element within a contrived pastoral landscape. When completed in 1907, it was the largest windmill ever constructed and it pumped as much as 40,000 gallons of water per hour for irrigation purposes. The Murphy Windmill was a critical agent in the transformation of acres of scrub and sand dunes into Golden Gate Park. Although a visually unassuming structure, the Murphy Millwright's Cottage is a rare example of a free-standing, Georgian Revival cottage in San Francisco. It was designed in 1909, by the Reid Brothers, Architects, one of the most influential and important firms to work in San Francisco during the first decade of the twentieth century. The Reid Brothers donated their services to the Parks Commission, designing the cottage as a residence for the on-site windmill attendant. Although a functional structure, the Murphy Millwright's Cottage was intended to augment the "Old World" pastoral associations created by the windmill. The Murphy Windmill and Murphy Millwright's Cottage have historical significance by virtue of their association with individuals such as Samuel G. Murphy, a noted philanthropist and president of the First National Bank of San Francisco, as well as John McLaren, the San Francisco Parks Superintendent from 1890 until his death in 1943.

CRITERIA

A. ARCHITECTURE:

1. Style-Significant as an example of a particular style, type or convention.

Rating: Murphy Windmill-E (Excellent example if few survive)

Rating: Murphy Millwright's Cottage-VG (Good Example if few survive)

Parks Commission minutes from 1905 refer to the Murphy Windmill as being in the "Dutch style." The windmill is a sophisticated example of wind-powered hydraulic engineering. Although based upon Dutch technological precedent, the Murphy Windmill is a utilitarian structure with no unnecessary stylistic embellishments.

Parks Commission minutes from 1909 ambiguously refer to the Murphy Millwright's Cottage as

being in the "Dutch style." It is difficult to ascertain whether they meant Dutch or Dutch Colonial but regardless of the classification, the stylistic features of the cottage share more in common with the Georgian Revival style. Interest in indigenous colonial American architecture had grown considerably during the 1880s and 1890s, as a result of the 1876 Centennial Exhibition. The genesis and popularity of the Georgian Revival style has commonly been attributed to the firm of McKim, Mead and White, whose pioneering Georgian Revival residences in Newport, Rhode Island of the 1880s and 1890s greatly influenced an entire generation of American architects. Local San Francisco builders did adopt various motifs of the Colonial and Georgian Revival styles after 1900, but these features were merely applied to the facade of the typical San Francisco rowhouse.

Georgian Revival dwellings typically feature rectangular plans, symmetrical facades, brick exterior finishes and restrained classical detailing. Common Georgian Revival architectural motifs include: gable-roof dormers, fan lights and porticoes featuring broken pediments and Doric columns. The Murphy Millwright's Cottage embodies many features typical of the Georgian Revival style, including: symmetrically arranged elevations, exterior brickwork in the Flemish Bond pattern and a portico with a broken pediment and Doric columns and a denticulated cornice. However, the Murphy Millwright's Cottage also displays Arts and Crafts detailing on the interior and in the arrangement of lights in the window sashes.

2. Use/Type/Construction-Significant as an example of a particular material, method of construction, occupancy type, or use.

Rating: Murphy Windmill-E (Excellent example if few survive)

Rating: Murphy Millwright's Cottage-E (Excellent example if few survive)

The Murphy Windmill is an extremely rare building type in San Francisco and in the United States. In 1968, architectural historian Laurence J. Turner counted only seventeen authentic working windmills nationwide. This figure included the Dutch and Murphy Windmills in San Francisco.

Like the Dutch Windmill, the Murphy Windmill was constructed to pump water from subterranean reserves to a reservoir located two miles east at Strawberry Hill. The water was then used to irrigate introduced plantings in Golden Gate Park. The Murphy Windmill fulfilled its utilitarian function for only a short time. Once powered by the winds of the Pacific, electric pumps replaced the wind-operated pumps in the Murphy and Dutch Windmills by 1912. Nonetheless, both windmills and their associated cottages were maintained for many years thereafter as landscape features.

The Murphy Windmill is ninety-seven feet tall with an octagonal concrete foundation thirty-seven feet in diameter and extending upward thirty feet. Above the thirty-foot line, the tower becomes an octagonal, wood-frame structure supported by eight posts of Oregon pine. The exterior finish of the tower consists of wood sheathing and slate shingles. The dome comprises the top fifteen feet of the Murphy Windmill tower. This dome once rotated on a massive gear, allowing it to follow the direction of the winds. The dome contains the wind shaft, brake wheel, crown wheel and the main and thrust bearings. The dome's frame is Oregon pine with copper sheathing. After years of neglect and vandalism the Murphy Windmill is missing several important components, most notably the gallery (the wooden walkway that once projected from the tower and is still extant on the Dutch Windmill), as well as the sails and the fan-tail.

Although the Dutch and Murphy Windmills were built to fulfill the utilitarian function of pumping

water, they were also valued for their picturesque qualities by park officials. Built as faithful replicas of Dutch windmills, both windmills in Golden Gate Park served as romantic garden "follies" long after their practical function had ceased.

The Murphy Millwright's Cottage was built as a residence for the millwright of the Murphy Windmill in Golden Gate Park. It was the millwright's responsibility to act as the caretaker of the facility. The millwright had to make sure that the bearings were oiled regularly and that the emergency brake was applied when necessary. The millwright was compelled to live on-site in order to carry out maintenance and to forestall serious damage caused by sudden storms. For this reason the Park commissioners decided in February, 1909 to build a cottage for the windmill attendant. Like the Murphy Windmill, the Millwright's Cottage was also to serve as a landscape feature. According to Park Commission minutes from 1909, the cottage was to be designed in a picturesque "Dutch" mode, in order to harmonize with the Murphy Windmill.

The Murphy Millwright's Cottage is a story-and-a-half masonry residence without a basement. The footprint of the structure measures 52' 9" in the north-south direction and 24' 3" in the east-west direction, enclosing almost 2560 gross square feet. The Millwright's Cottage features a slate-covered, pitched roof with side-facing gables and bearing walls of brick, laid in a Flemish bond pattern. The interior framing is supported by 8" x 8" and 10" x 10" posts set upon concrete footings. The floors consist of tongue and groove decking supported by 4" x 4" timber joists. The roof structure consists of 2"x 6" rafters spaced 16" on center, with 1" x 6" sheathing. The type of construction utilized for the Millwright's Cottage would have been significantly more expensive than balloon frame construction techniques more commonly used for residential construction during the period. The structure of the Millwright's Cottage has more in common with contemporary mill and warehouse construction techniques.

3. Date Built-Significant as an example of a particular period in San Francisco's history/Of particular age in relationship to periods of development of buildings in the area.

Rating: Murphy Windmill-E (Built before 1906)

Rating: Murphy Millwright's Cottage-VG (Built 1909-10)

The Murphy Windmill was designed in 1905 but due to problems arising from the 1906 Earthquake and Fire, the Parks Commission was not able to begin construction until early 1907.

The Murphy Millwright's Cottage was constructed between December 1909 and early 1910.

4. Architects-Designed or built by an architect, designer, engineer or builder who has made a significant contribution to the history or development of the community, state or nation.

Rating: Murphy Windmill-G (Architect or engineer identified and known but of no particular importance)

Rating: Murphy Millwright's Cottage-E (Architect of particular importance to the history of the community)

Until recently the designers of the Murphy Windmill and the Murphy Millwright's Cottage have remained unknown. However, research undertaken by San Francisco Architectural Heritage has brought to light the designers of both structures.

The Murphy Windmill was designed by Mr. J.C.H. Stutt in 1905. Mr. Stutt was a mechanical engineer, with offices located at 417 Montgomery Street in San Francisco. According to Lukas Jozef

Verbij, a windmill restoration expert from the Netherlands, the Murphy Windmill is very similar to the nearby Dutch Windmill, although the Murphy Windmill is somewhat larger. Alpheus Bull of Standard Electric Company designed the Dutch Windmill in 1902 but he was not involved with the design of the Murphy Windmill. Nonetheless, it is likely that Stutt based the design of the Murphy Windmill on that of the Dutch Windmill, making improvements where necessary. At this point no other structures designed by J.C.H. Stutt have been discovered.

The Reid Brothers, Architects, of San Francisco designed the Murphy Millwright's Cottage for the Parks Commission in 1909. Although the Hotel del Coronado in San Diego is probably their best-known work, the Reid Brothers (James and Merritt) carried out the majority of their work in San Francisco. The Reid Brothers became one of the pre-eminent architectural firms on the West Coast. The firm's strong political connections, as well as their ability to execute large commercial buildings, allowed the brothers to play an important role in the rebuilding of San Francisco after the 1906 Catastrophe. Many of the Reid Brothers' most prominent commissions were commercial blocks and hotels, but the firm was extremely versatile and they designed a wide range of other building types, such as private residences, motion picture theaters and churches. The Reid Brothers worked in a variety of styles, although Neoclassical Revival was their favored mode. Some of their most notable commissions include the Fairmont Hotel of 1906 (San Francisco Landmark #185), the Cliff House of 1909, the California-Pacific Building of 1910, the Colombo Building of 1913 and the First Congregational Church of 1914 (San Francisco Landmark #177).

The Murphy Millwright's Cottage is one of the Reid Brothers' lesser-known commissions. Nonetheless, despite its small size and unpretentious appearance, the Murphy Millwright's Cottage displays the same concerns with craftsmanship and high-quality design that typically characterize their more prominent commissions. The Reid Brothers designed the Murphy Millwright's Cottage for the City free of charge, as evidenced by Park Commission minutes from February 1908, in which the Commissioners thanked the Reid Brothers "for their generous kindness in donating their services to the commission."

5. Design-Quality of composition, detailing and ornament; distinguished by innovation, rarity, uniqueness.

Rating: Murphy Windmill-E

Rating: Murphy Windmill Cottage-VG

The Murphy Windmill is a six-story, octagonal structure with a concrete base, slate shingle-clad wood walls and a copper dome. The gallery, fan-tail and sails are now missing. The Murphy Windmill is an unusual structure by virtue of its dual role as a practical machine and scenic landscape element. According to Lukas Jozef Verbij, the Dutch windmill restoration expert, the design of the Murphy Windmill displays a thorough familiarity with Dutch windmill technology. Although the engineer, Mr. J.C.H. Stutt, may have examined windmills in the Netherlands, he developed unique technical innovations that set the Murphy Windmill apart from its European counterparts. These innovations allowed Stutt to design the world's largest windmill and boldly place it next to the ocean, where it would be subjected to severe weather conditions. The Murphy Windmill featured the longest sails of any windmill ever constructed and, interestingly, the sail stock was made from a single, continuous, 114-foot long section of Oregon pine.

The Murphy Millwright's Cottage has a symmetrical plan organized around a central staircase. There are three rooms on the first level, and two on the second level. The disposition of space

recalls the traditional "hall and parlor" arrangement of late eighteenth-century domestic architecture of the Mid-Atlantic colonies. The entrance on the west elevation provides access to a narrow hall. To the north of the hall is a large kitchen with a bathroom and pantry. A door from the pantry leads to the dining room. To the south of the entrance hall is the living room. A short flight of stairs opening into the hall connects the main floor with the upper floor where the bedrooms are located.

The west elevation is the primary public facade of the Millwright's Cottage. It is the most formal elevation and features the bulk of the building's decorative architectural detail. The west elevation is three bays in width and symmetrically arranged, with the entrance/portico in the center bay. The entrance consists of a "Dutch-style" divided panel door with triangular lights. The entrance is framed by a small, classically detailed entry portico with Doric columns, a broken pediment and a raked cornice. The portico is flanked by two, single-sash, nine-light windows. Ten-over-one, double-hung sash windows are located in the left and right bays of the facade. Three gable-roofed dormers protrude from the roof and two interior chimneys are symmetrically placed along the ridge beam.

The fenestration pattern on the east or rear elevation is asymmetrical. A shed-roof dormer, with four, nine-light casement windows, rises from the center of the roof. The north and the south elevations of the Millwright's Cottage are almost identical; both feature two double-hung windows on the first story and one centered in the face of the gable on the second floor.

The design quality of the Murphy Millwright's Cottage is subtle and restrained and its crisp Georgian Revival exterior contrasts with the more exuberant styles popular for residential architecture in San Francisco around the turn of the century.

6. Interior-Interior arrangement, finish, craftsmanship and/or use detail is/are particularly attractive or unique.

Rating: Murphy Windmill-F/P

Rating: Murphy Millwright's Cottage-G

The interior of the Murphy Windmill consists of six floor levels, concrete on the bottom level and wood on the remaining five levels. A circular staircase links each level and provides access to the dome. The interior finish materials are utilitarian and consist of concrete for a distance of thirty feet from the ground. Above the thirty-foot level the interior structure consists of eight posts of Oregon pine which extend forty-seven feet upward to the bottom of the dome. The dome houses the wind shaft, the brake wheel, pit wheel and the main and thrust bearings. Most of this mechanism is corroded due to the fact that the copper sheathing is missing in many places.

The interior of the Murphy Millwright's Cottage has remained largely intact since its construction. The interior is simple but makes use of sturdy, high-quality materials and building techniques. The durable nature of the design is proven by the current condition of the cottage interior, which is surprisingly sound after little maintenance for over ninety years. The walls are plumb and display little evidence of cracking as a result of settling. The interior trim, door surrounds and window moldings are flat-sawn and made from various softwoods such as Oregon pine and redwood. The simple dark-stained interior woodwork is not designed in the Georgian vocabulary like the exterior but instead betrays an Arts and Crafts sensibility. The interior partition walls are composed of 2" x 4" studs, redwood lathe and plaster. The floors are mostly concealed under carpets but they are made of softwood tongue-and-groove planking. The sheathing of the ceiling in the kitchen and some

walls is also composed of tongue-and-groove redwood paneling; other ceilings are plaster. Most of the woodwork remains unpainted, with the exception of the reception foyer. Some original interior finishes remain, such as the lincrusta on the stairwell walls and canvas duck, which remains behind the wallpaper in some rooms. The doors and windows retain their original, unpainted metal hardware.

B. HISTORIC CONTEXT

7. Persons-Associated with the life or activities of a person, group or institution that has made a significant contribution to the community, state or nation.

Rating: Murphy Windmill and Murphy Millwright's Cottage-VG (Persons of primary importance loosely connected with the buildings)

The Murphy Windmill and the Murphy Millwright's Cottage are both closely associated with the lives of several prominent and other notable San Franciscans. Leading citizens who played a significant role in building the cottage include the Reid Brothers, Architects, Park Commission Superintendent John McLaren, Commissioner Adolph Spreckels and most important, businessman and philanthropist Samuel G. Murphy. The cottage is also associated with the resident millwrights and other park employees whose work and expertise assisted in the creation and upkeep of Golden Gate Park.

Samuel G. Murphy, the President of the First National Bank and local philanthropist, stepped forward on May 5, 1905, with a donation of \$20,000 to underwrite the cost of a second windmill in Golden Gate Park. His money and work led to the construction of the Murphy Windmill and the Murphy Millwright's Cottage two years later. Samuel G. Murphy was part of a group of wealthy San Francisco businessmen who engaged in public philanthropy. He was born November 6, 1836, in Guilford, North Carolina, to a poor farming family. After several years of hard work, he became a successful tobacco trader in the years preceding the Civil War. Murphy served "with distinction" with the Confederate Army during the war but had to retire from combat after being badly injured. After the Civil War, Murphy worked in New York City as a commission agent for Southern cotton planters. Samuel, or S.G. as he is usually referred to, visited San Francisco for the first time in 1876. According to contemporary accounts, he immediately became enamored with the city and moved there permanently in 1877. Initially Murphy was employed as a cashier with the Pacific Bank. After rising through the ranks in various local banks, he was offered the presidency of the First National Bank of San Francisco in 1888. Murphy remained in this post until 1906, when Rudolph Spreckels succeeded him.

Like many other American philanthropists during the late nineteenth century, Murphy competed with fellow prominent citizens to fund diverse projects that would further the public good as well as add to their own prestige. Although interested in other projects, Murphy devoted most of his attention toward Golden Gate Park. Golden Gate Park was Murphy's favorite destination in San Francisco and he spent early mornings and holidays riding along its back roads. According to Murphy, he directed his gift of \$20,000 to the Park Commission for construction of a windmill because he wished to see Golden Gate Park made the "most beautiful spot in the world." He realized that providing a reliable system of irrigation would contribute immeasurably to this goal.

The Murphy Windmill and Murphy Millwright's Cottage are also associated with Parks Superintendent John McLaren, the man who directed the course of affairs in Golden Gate Park for fifty-three

years. Born in Stirling, Scotland in 1846, McLaren learned his trade in Edinburgh's Botanical Gardens. He came to California in 1870 and began gardening and tree planting for William Ralston and the other landed barons of San Mateo County. Shortly thereafter, Park Superintendent William Hammond Hall chose McLaren to be Assistant Superintendent. From 1886 to 1943 he served as Superintendent of Parks. The "man who lived to plant a million trees" was a staunch backer of projects that would enhance the attractiveness of the park and its horticultural collections. He was a strong backer of the construction of both the Dutch and Murphy Windmills and he played a significant role in selecting their design.

The Murphy Millwright's Cottage stands as a monument to the little-known millwrights and other residents of the Murphy Millwright's Cottage whose labor has contributed toward the development of Golden Gate Park. Various millwrights inhabited the structure from 1909 until the early fifties, maintaining the structure and machinery even after it was no longer being used for pumping water. Millwright Charles Kamp occupied the Murphy Windmill Cottage for twenty-nine years, from 1923 until 1952, even after the electric pumps had superseded the wind-powered apparatus. From 1952 to the present, two generations of the O'Neill family have resided in the Murphy Millwright's Cottage. The senior O'Neill was employed as a gardener with the Parks Department.

8. Events-Associated with events that have made a significant contribution to the community, state or nation

Rating: Murphy Windmill and Murphy Millwright's Cottage-VG (Event of primary importance intimately connected with the buildings)

When construction of Golden Gate Park began in 1871, much of the thousand-acre tract of land stretching westward from Stanyan Street to the ocean was a windswept expanse consisting of sand dunes and scrub vegetation. Imported topsoil and water were needed to keep the introduced plantings alive in such a harsh environment. From the 1870s until 1900, the Parks Commission purchased water from the Spring Valley Water Company but the sandy soil quickly soaked up the water and the average bills were over a thousand dollars a month. State engineers and others knew about the existence of vast reserves of fresh water under the park but due to political infighting an adequately functioning pumping apparatus was not constructed until 1902, when the Dutch Windmill was completed.

The Dutch Windmill was so successful that a second one was soon called for. On May 5, 1905, Parks Commissioner Reuben Lloyd announced that "a friend" would give \$20,000 for an additional windmill. A month later, Commissioner Lloyd reported Samuel G. Murphy had made the contribution "for the purpose of erecting a new Dutch windmill at the southwestern end of the park." The gift was accepted and it was decided that the new windmill would be named after its benefactor. Commissioner William Metson made a motion to retain "Engineer Stutt" to prepare plans and specifications. On August 18, 1905, Superintendent McLaren put the project out to bid and one month later Fulton Iron Works won the contract with the lowest bid of \$6,500. Other firms donated materials and labor. Commissioner William J. Dingee provided the concrete and Raymond Granite Company offered to donate granite for window and door lintels. On March 6, 1906, the contract for pumps and mechanical systems was awarded to the firm of Pope and Talbot. Pope and Talbot also contributed the 114 foot long sail stock. Unfortunately, the destruction and refugee crisis triggered by the 1906 Earthquake put plans for the windmill on hold until later on that year. The final major contribution came in the form of copper, a donation by Louis Sloss, to be used for sheathing the

dome. The Murphy Windmill was completed in 1907. It was five feet taller than the Dutch Windmill and pumped 40,000 gallons per hour. Together, the windmills supplied the reservoir on Strawberry Hill with 1.5 million gallons of water a day.

Shortly after the Murphy Windmill was completed, it became apparent that a residence for an on-site attendant would be needed. Proposals for a "millwright's cottage" first appear in the Park Commission Minutes of February 1908. The bureaucratic wheels of the Park Commission turned slowly and it was not until a year later that any further action was taken on the project. Murphy approached the Reid Brothers, Architects, and asked them to draw up preliminary sketches for an attendant's house. On February 5th, 1908, Murphy and the Reid Brothers met with Superintendent McLaren and the rest of the Park Commission and unveiled sketches of an "artistic" "Dutch cottage." On April 7 of the same year, Superintendent McLaren requested that the Reid Brothers prepare working drawings and specifications for the cottage. On July 7, 1909, Superintendent McLaren and the Park Commission Secretary opened the project for bid and the job of constructing the Murphy Millwright's Cottage was awarded to the Andrew Wilke Company, who won with a bid of \$3,384.00. By late December, the workers for the Andrew Wilke Company began to pour the concrete foundation walls. In January 1910, the bricklayers began erecting the walls and shortly thereafter the carpenters set the rafters and beams in place.

The Murphy Windmill and Murphy Millwright's Cottage have remained on their site for almost a century. Although the electric pump made the Dutch and Murphy Windmills obsolete, the windmills and their cottages continued to be maintained for almost half a century afterward. After the mid-Fifties the windmills and their associated structures did not fare as well. In 1954, the Dutch Windmill's millwright's cottage was demolished and both windmills were allowed to deteriorate. By the late Fifties, plans were unveiled to demolish the windmills. However, this was not done and throughout the Sixties a movement led by Eleanor Rossi Crabtree, the daughter of former Mayor Angelo Rossi, sought funds for the restoration of the windmills. By 1978 she had raised \$76,000 for the restoration, earning her an Award of Merit from Mayor George Moscone. The Dutch Windmill was restored in 1978 using the money Crabtree had raised but the Murphy Windmill has continued to languish without restoration until the present day.

9. Patterns-Associated with or illustrative of broad patterns of the City's cultural, social, political or economic history or development

Rating: Murphy Windmill and Murphy Millwright's Cottage-E (Patterns of primary importance connected with the buildings)

The Murphy Windmill and Murphy Millwright's Cottage are associated with several diverse cultural and technological patterns in American culture. The two associated structures symbolize, in physical form, the methods utilized to transform 1,017 acres of sand dunes and scrub on the western reaches of the city into one of the most lush and beautiful parks in America. The creation of Golden Gate Park was one of the crowning achievements of what has become known as the "Parks Movement." Led by such influential park designers as Frederick Law Olmsted and Calvert Vaux, the Parks Movement viewed public parks as invaluable urban amenities, useful for ameliorating living conditions in the socially turbulent, nineteenth-century American city. Olmsted visited San Francisco in 1865 to evaluate the possibility of creating a major urban park akin to New York's Central Park in the primary metropolis of the West Coast. While doubting the possibility of creating a lush "green-sward" amongst the sand dunes of the Outside Lands, Olmsted never wavered in his position that San Francisco was in dire need of recreational open space. He wrote:

No city in the world needs such recreation grounds more than San Francisco. Until some provision is made to meet this need, however successful and impressive the business growth of San Francisco may be, it will not be an attractive and impressive place for families and homes.

By the early 1870s, Golden Gate Park had been established and contrary to Olmsted's doubts, the Park Commission gradually converted the sand dunes of the Outside Lands into a lush, vegetated paradise. Nonetheless, this conversion was not possible without the millions of gallons of water supplied by the colossal Dutch and Murphy Windmills. The windmills and their resident attendants were indispensable elements in the creation of Golden Gate Park. Preservation of the windmills and the lone surviving Murphy Millwright's Cottage is essential for commemorating this history.

The architecture of the Murphy Windmill and Murphy Millwright's Cottage relate to the long tradition of "Picturesque" European and American park design. The windmill and cottage, with their romantic "Dutch" design elements and their location in a remote pastoral glade link the complex to the tradition of landscape design practiced in mid-eighteenth-century England by figures such as Capability Brown and William Kent. Although there is no written evidence to confirm that the Parks Commission or the Reid Brothers were deliberately quoting historical sources of this kind, the appearance and location of the pastoral windmill and cottage do evoke rustic park "follies" constructed in eighteenth-century English gardens, such as Stourhead or Kew Gardens.

The Murphy Windmill and the Murphy Millwright's Cottage can also be associated with the once-prevalent trend of public philanthropy, practiced during the later nineteenth and early twentieth centuries. When capital was locally based, leading businessmen and philanthropists often found pleasure in donating money and other resources to improve the cultural and physical environments of their cities as a way to display their success and/or gratitude toward their communities.

C. PHYSICAL CONTEXT

10. Continuity-Contributes to the continuity or character of the street, neighborhood or area
Rating: Murphy Windmill and Murphy Millwright's Cottage-E (Of particular importance in establishing the dominant character of the area)

The Murphy Windmill and Murphy Millwright's Cottage relate to, and are contributing elements within the managed landscape of Golden Gate Park. The Park Commission has succeeded in providing a diverse array of attractions for park visitors, such as the Japanese Tea Gardens, the Conservatory of Flowers and the De Young and Asian Art Museums, through which a variety of cultures and environments may be experienced. The Murphy Windmill and the Murphy Millwright's Cottage evoke the rural landscape of Northern Europe, particularly the Netherlands. Other Park structures, such as the Rustic Arbor, the Log Cabin of the Association of Pioneer Women of California and the Adirondack-style Boat House at Stow Lake, were consciously designed to recall rural or wild settings. The Murphy Windmill and Murphy Millwright's Cottage are soundly within these traditions.

11. Setting-Setting and/or landscape contributes to the continuity or character of the street, neighborhood or area
Rating: Landscape of Murphy Windmill and Murphy Millwright's Cottage-VG (Compatible with the dominant character of the area)

Located in the southwest corner of Golden Gate Park, the Murphy Windmill and Murphy Millwright's Cottage sit not far from the Great Highway and Ocean Beach. Although once located in an open landscape visible from the ocean, an informal setting of fields, shrubs and cypress now characterize the setting. A large stand of shrubbery separates the cottage from the windmill. The immediate setting is substantially overgrown and should be pruned back to allow the two structures to be viewed together as an ensemble, as they were historically. Nonetheless, the cypress that have grown up around the two structures are very characteristic of the vegetation introduced into Golden Gate Park during the first quarter of the twentieth century. There are currently approximately ten cypress trees and several other assorted shrubs and small trees on the site. There are also two, non-historic sheds within the boundaries of the site.

12. Visual Significance-Significant as a visual landmark to the neighborhood, city, region or nation as a whole

Rating: Murphy Windmill-VG (Conspicuous and familiar structure in the context of the city and region)

Rating: Murphy Millwright's Cottage: G (Conspicuous and familiar structure in the context of the neighborhood)

The Dutch and Murphy Windmills are prominent visual landmarks within Golden Gate Park and San Francisco. Visitors to San Francisco frequently remark upon their surprise at seeing the twin windmills from the Great Highway. The Murphy Windmill is also well-known to most city residents as a prominent and picturesque monument. Stripped of its sails, gallery and many of its slate shingles, the windmill has still inspired many to lobby for its restoration.

The Murphy Millwright's Cottage, though less visible in its present state, is also important as a visual landmark in the neighborhood. Visitors to the park are often pleased to encounter the little brick cottage at the foot of the Murphy Windmill. The simple, domestic appearance of the cottage appeals to park visitors and acts as a counterpoint to the large-scale windmill. The Murphy Millwright's Cottage works in tandem with the Murphy Windmill to evoke a bygone era and a distant pastoral landscape not typically encountered in the dense urban setting of San Francisco.

D. Integrity

13. Alterations-The degree to which the property has retained original materials from which its significance is derived or which characterizes its period of significance

Rating: Murphy Windmill and Murphy Millwright's Cottage-E (No changes or very minor changes)

The Murphy Windmill and the Murphy Millwright's Cottage have both undergone very few changes. In 1947 the original sails of the windmill were replaced when the entire structure underwent a restoration. The Murphy Millwright's Cottage has not undergone any significant exterior or interior changes.

E. Threats to Site

Indicate any known threats that may apply

The Murphy Windmill, and to a lesser extent, the Murphy Millwright's Cottage are threatened by lack of maintenance.

REPRESENTATION IN EXISTING SURVEYS

California State Register: No

DCP '76: 2

Here Today Page: No

Heritage: No

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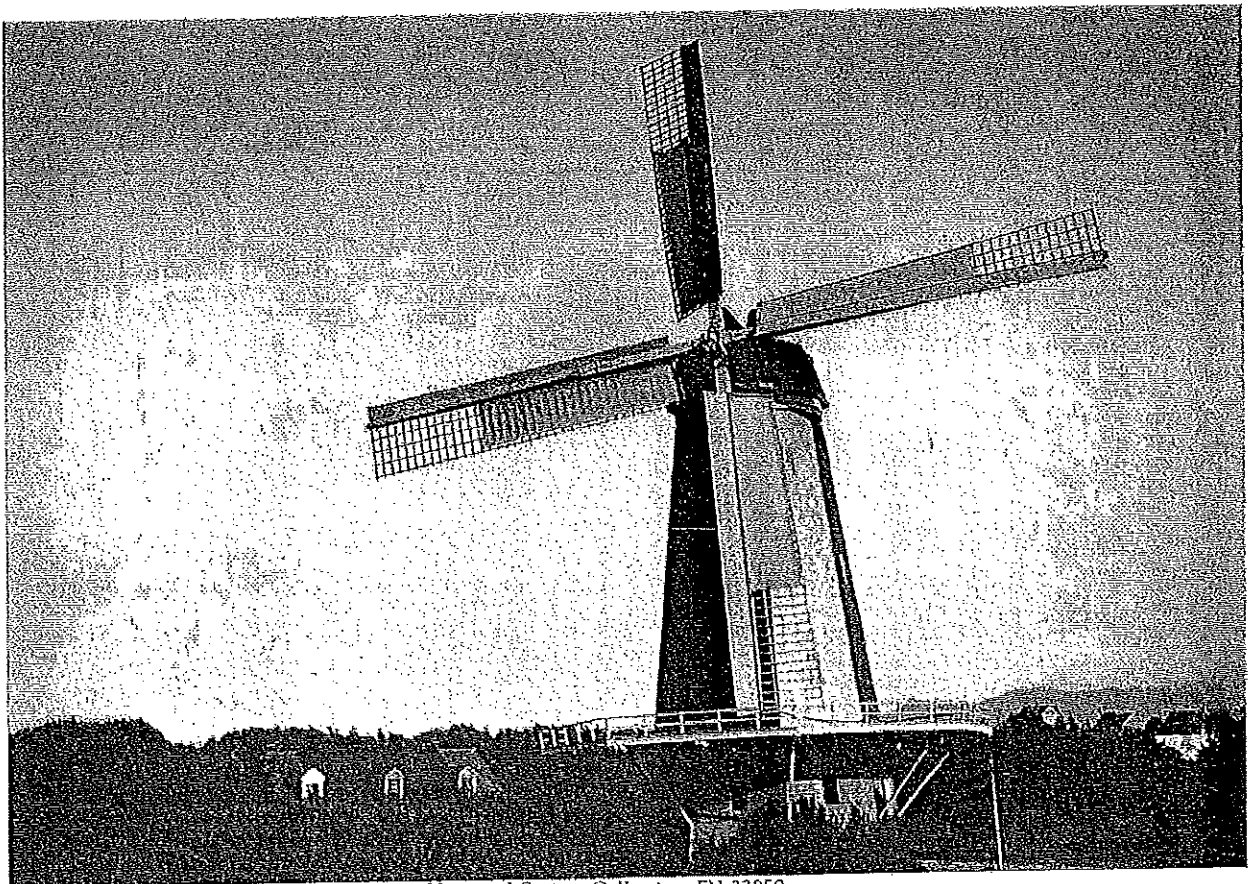
San Francisco Board of Supervisors. Resolution #658-74. January 29, 1975.

Historic Structure Report

MURPHY WINDMILL

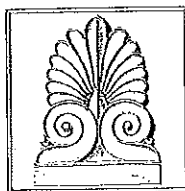
Golden Gate Park
San Francisco, California

December 19, 2003



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Prepared for
City and County of San Francisco
Recreation and Parks Department



CAREY & CO., INC.
ARCHITECTURE

Historic Structures Report

**MURPHY WINDMILL
GOLDEN GATE PARK**

San Francisco, California

December 19, 2003

Prepared for
City and County of San Francisco
Recreation and Parks Department

Prepared by
Carey & Co. Inc.

Historic Structure Report

**MURPHY WINDMILL
GOLDEN GATE PARK
San Francisco, California**

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INTRODUCTION

Purpose

The Murphy windmill was constructed in Golden Gate Park in 1905, the gift of Samuel G. Murphy, President of the First National Bank of San Francisco. It was originally used to pump irrigation water from wells drilled in the southwestern corner of the park. The design, by a Bay Area engineer named J.C.H. Stut, incorporated mechanical elements of Dutch as well as other European windmills along with his own innovations unique to this structure. Among the largest of its type in the world, the Murphy Windmill was designated San Francisco landmark No. 210 in July, 2000.

The structure is currently in a severe state of disrepair, to the extent that the City is in danger of losing it as a cultural resource. In August of 2000, a nonprofit organization, The Campaign to Save the Golden Gate Park Windmills, was formed to save the Murphy Windmill and repair the North Windmill. The effort to save the Murphy Windmill was launched in partnership with the City of San Francisco.

This Historic Structure Report is intended to provide the City of San Francisco Recreation and Parks Department with a guide for the future rehabilitation and maintenance of Murphy Windmill at Golden Gate Park

The following are included in this report:

- A history of Murphy Windmill, including period of significance;
- A Chronology of Construction;
- An Architectural Evaluation, including exterior and interior building descriptions;
- Treatment Guidelines.

In March of 2002, The City of San Francisco Recreation and Parks Department asked Carey & Co. to prepare a proposal for the repair and rehabilitation of the Murphy Windmill.

Methodology

Carey & Co. made several trips to the Murphy Windmill in May and June, 2002. During those visits, staff conducted a floor-by-floor survey, recording all features. The exterior was similarly surveyed, with features and conditions annotated onto elevation drawings. Historical research supplemented field visits. In addition to reviewing information provided by the City of San Francisco, research was conducted at the following repositories: California Historical Society; the City and County of San Francisco Bureau of Architecture; the San Francisco History Center at the San Francisco Public Library; the Bancroft Library at the University of California, Berkeley; the Golden Gate Park Public Information Office; the Foundation for San Francisco's Architectural Heritage; and the Oakland Public Library.

Evaluation System

Historic value entails a professional judgment of the historic significance of each component based upon research of historic documents and on-site observation. Although significance is normally evaluated in a four-tiered hierarchical system and features are assigned a value based on this system, in the case of the Murphy Windmill this method was found inappropriate. Carey & Co. determined that, due to the lack

of traditional architectural details and the integral function of the Windmill, the Murphy Windmill is *very significant* in its entirety. *Very Significant* is defined as follows: The space or components are central to the building's architectural and historic character. In addition, the space or component displays a very high level of craftsmanship, or is constructed of an intrinsically valuable material. The character of spaces, materials, proportion, form and mass shall not be altered.

The Windmill was also evaluated for integrity and condition. For a property to qualify as historically significant under the National Register's Criteria for Evaluation, it must retain "historic integrity of those features necessary to convey its significance."¹ While a property's significance relates to its role within a specific historic context, its integrity refers to "a property's physical features and how they relate to its significance."² To determine if a property retains the physical characteristics corresponding to its historic context, the National Register has identified seven aspects of integrity. These aspects are location; design; setting; materials; workmanship; feeling; and association.³ Since integrity is based on a property's significance within a specific historic context, an evaluation of a property's integrity can only occur after historic significance has been established.⁴

The term "condition," as used by Carey & Co. in relation to a structure and its corresponding elements, refers only to the physical state of the building materials and features as surveyed and analyzed by a qualified professional. The assessment of a material's condition is not founded upon historical significance or integrity, but rather on the technical observations of the material's physical status in reference to issues such as deterioration, structural stability or failure thereof, corrosion, water damage etcetera. A building may be determined to be in overall poor physical condition, while exhibiting historical features and physical characteristics that lend to the separate determination of a structure's historical significance and integrity.

ENDNOTES

¹ *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin, no. 15 (Washington, D.C.: United States Department of the Interior, 1997): 3.

² *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin, no. 15 (Washington, D.C.: United States Department of the Interior, 1997): 44.

³ *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin, no. 15 (Washington, D.C.: United States Department of the Interior, 1997): 44-45.

⁴ *How to Apply the National Register Criteria for Evaluation*, National Register Bulletin, no. 15 (Washington, D.C.: United States Department of the Interior, 1997): 45.

BACKGROUND

PROPERTY HISTORY

The Murphy Windmill is located on the western edge of Golden Gate Park in San Francisco, California. The 95-foot-tall windmill was designed and constructed between 1905 and 1907. It is the second of the two windmills built in Golden Gate Park, the first being the North, or Dutch, Windmill. The Murphy Windmill is commonly believed to be the largest windmill of its kind in the world. The two windmills were built to irrigate Golden Gate Park, which, until then, was acres of sand dunes. The mills pumped water from underground aquifers into Strawberry Hill, bringing much-needed fresh water to the dry, sandy soils of the Park.

THE WINDMILLS

The idea of building a windmill in Golden Gate Park to supply it with fresh water had been discussed since 1883, when test wells were first drilled. In 1887, John McLaren became the supervisor of Golden Gate Park, and was an outspoken advocate of the windmill proposal, despite the general opinion that fresh water could not possibly be found that close to the ocean. He finally persuaded the Park Commissioners to build a windmill in 1902.¹ Prior to the construction of the windmills, the Park was supplied with water by Spring Valley Water Co., who opposed the windmill idea because of their lucrative contract.²

The North Windmill was first proposed in December of 1901, and plans and specifications were requested. Superintendent McLaren, along with Mr. Adolph Spreckles and Mr. Reuben Lloyd, both Park Commissioners, had been advocating for the construction of a windmill in the Park for some time. In April of 1902, he reported to the Commissioners that it was possible to secure 20,000 gallons of water per hour from a windmill. Following a discussion, the order was given to build a windmill at a cost of \$14,000.00.³

The north windmill was designed by Alpheus Bull, Jr., a San Francisco mechanical engineer. It is possible that Bull was employed by the Union Iron Works of San Francisco at the time he designed the structure, however other accounts note his place of employment at the time as the Standard Electric Company.⁴ Bids submitted for the iron work were reviewed on June 6, 1902, and Fulton Iron Works won the contract with the low bid of \$3,100.00. Pope and Talbot donated the Oregon pine spars for the mill. The structure was completed in 1902.⁵

The North Windmill provided the first pumped water through Golden Gate Park. Prior to the construction of the North Windmill, sprinkling wagons, hired from Spring Valley Water Co. at \$1050.00 a month, hauled water through the park to keep the dust down and irrigate 70 acres.⁶

Bids were received for the transmission for the mill and its installation on February 13, 1903. A design for a Dutch cottage residence for the millwright was approved by the Commissioners on July 10, 1903. In August of that year, Superintendent McLaren reported that the total cost of the windmill was

\$18,160.96. A second pump, also with a capacity of 20,000 gallons per hour, was ordered in September; Dow Pump Co. received the contract in February of 1904.⁷

THE MURPHY WINDMILL

The construction of the Murphy Windmill was made possible by Samuel G. Murphy, a wealthy San Francisco banker and philanthropist. Murphy donated \$20,000 for the construction of the windmill in 1905, in order to make Golden Gate Park "the most beautiful spot in the world."⁸ In addition to the donation by Murphy, others donations contributed to the construction, including 300 barrels of cement by Commissioner Dingee; granite for the window sills and door lintels by Raymond Granite Co.; and copper sheathing for the cap by Louis Sloss.⁹ In June of 1905, J.C.H. Stut, an engineer from Oakland, was hired by the Park Commission to prepare the plans and specifications for the new windmill, for a fee of \$300. His plans were approved in August of that year, and Superintendent McLaren was directed to proceed immediately with the construction.

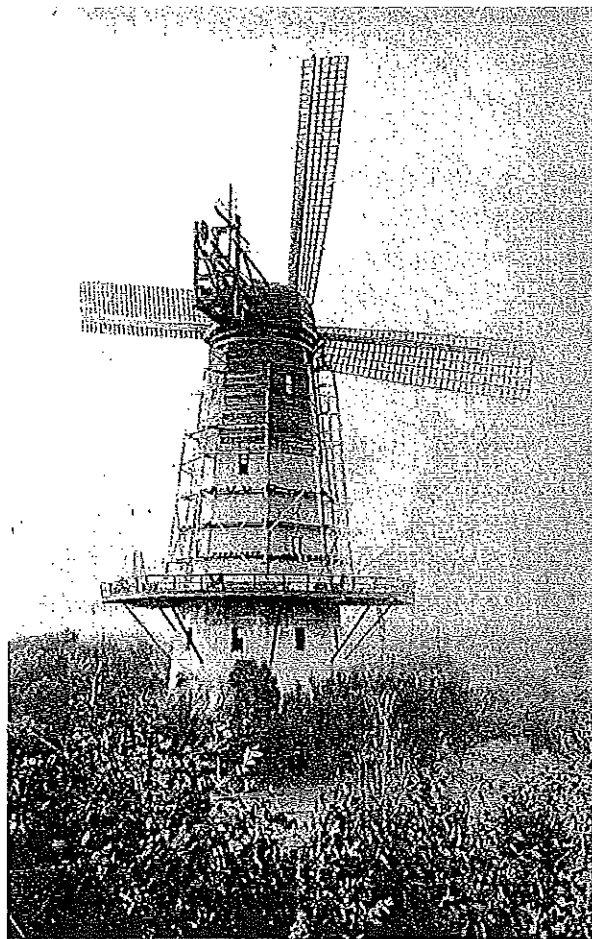


Figure 1: The windmill under construction, 1907. California Historical Society, gift of Miss Elizabeth Boyter (2-1955); FN-32851.

J. Charles Henry (J.C.H.) Stut, born in Germany, began his career in San Francisco as a draftsman for the Union Iron Works, the same company Alpheus Bull may have been working for when he designed the North Windmill.¹⁰ It is possible the two men knew each other, and shared information concerning the design of the windmills.

Stut was resident of Oakland, California. His father, Henry C.H. Stut, was a blacksmith for Hendry & Co., and is listed in the 1876 Oakland City Directory as both Henry Stut and Henry Stutt. The following year he appears only as Stut. J.C.H. Stut first appears in the City Directory in 1880, as a draftsman, and this listing continues through 1891. In 1892, he's listed as a mechanical engineer with an office at 217 Sansome, in San Francisco. In 1911, Stut is listed as a consulting mechanical engineer with offices located at 417 Montgomery, Rooms 406 to 409. Stut was a consulting engineer for the reconstruction of the Geary Street cable line as an electric railroad in April 1901. He was sent by City Engineer C.E. Grunsky to the east coast to study the underground conduit streetcar systems of New York City and Washington, D.C.¹¹ Stut died on May 6, 1914, at the age of 63, leaving his wife Emma M. Stut and four daughters, Bertha, Emma C., Edna and Nelda.¹²

Stut's drawings of the windmill and the drawings from the Dow Pump Engine Co. are revealing in several ways. Stut's original drawings for the tower structure of the Murphy Windmill are almost an exact copy of Alpheus Bull Jr.'s design for the North Windmill. In Stut's design, several details differ, including the roof line, the fan tail, and the operating mechanism. Interestingly, neither of the windmills were built as originally designed. Stut's original design for the tower of the windmill, dated July 18, 1905, shows a smock mill with gently inward-curved sides above the base. The operating mechanism is thoroughly delineated and detailed, but the tower's structural design is vague and apparently incomplete. The only

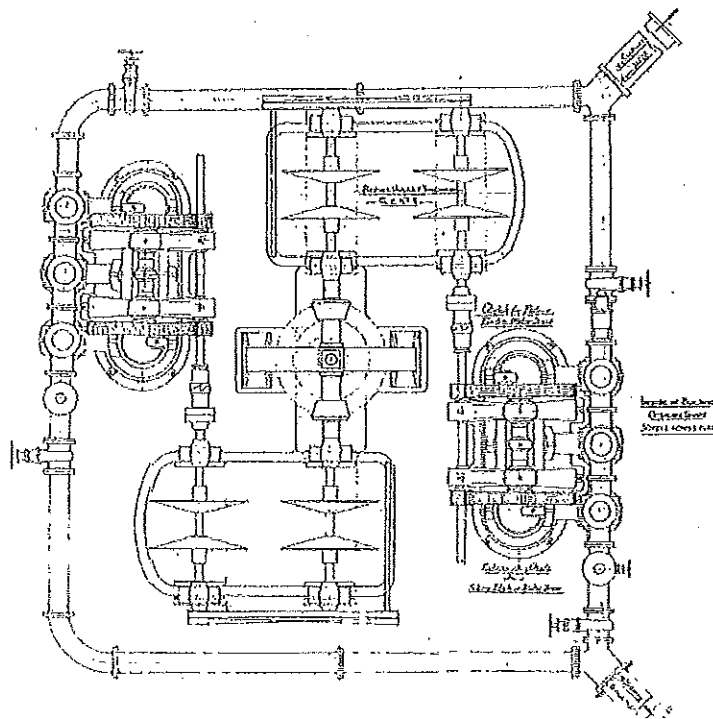


Figure 2: Dow Pumping Co.'s schematic for the Murphy Windmill pump. The future electric motor could be installed at the bottom right.

structural element shows a 6" steel (curved) Z-bar column. The remainder of the supporting structure for the Murphy Windmill is not shown and Stut's intentions are unclear. The design was changed between July 18, 1905, and 1907, when the windmill tower was constructed of wood with straight sides. The reasons for Stut's design change was not found in the records, but it may be related either to cost or the effects of the 1906 earthquake.¹³

Dow Pumping Co.'s drawings are interesting because they included mechanisms within the wind-powered pumps that allowed them to accommodate the future addition of electric motors (figure 2). They designed their pumps with a clutch and an extension shaft, indicating on the drawing that these were included for the "future electric motor drive." This inclusion suggests that motors were intended as part of the original design. An article in the *Pacific Service* magazine details the installation of replacement motors, rather than the initial electrification of the windmills.¹⁴

Stut specified on his drawings of the operating mechanism the materials he recommended for the construction of the metal components. Many of the components were simply noted as "wrought," presumably meaning wrought iron. He indicated that the sleeve for the operating brake was to be made of cast iron, and the fork was to be made from cast steel. The brake band was supposed to be made from steel. Stut also indicated that the supporting ring, gears, track and wheels were to be manufactured from "100 pounds per yard, Penn. Steel Co." Other materials include galvanized cast iron and "best Oregon pine."¹⁵

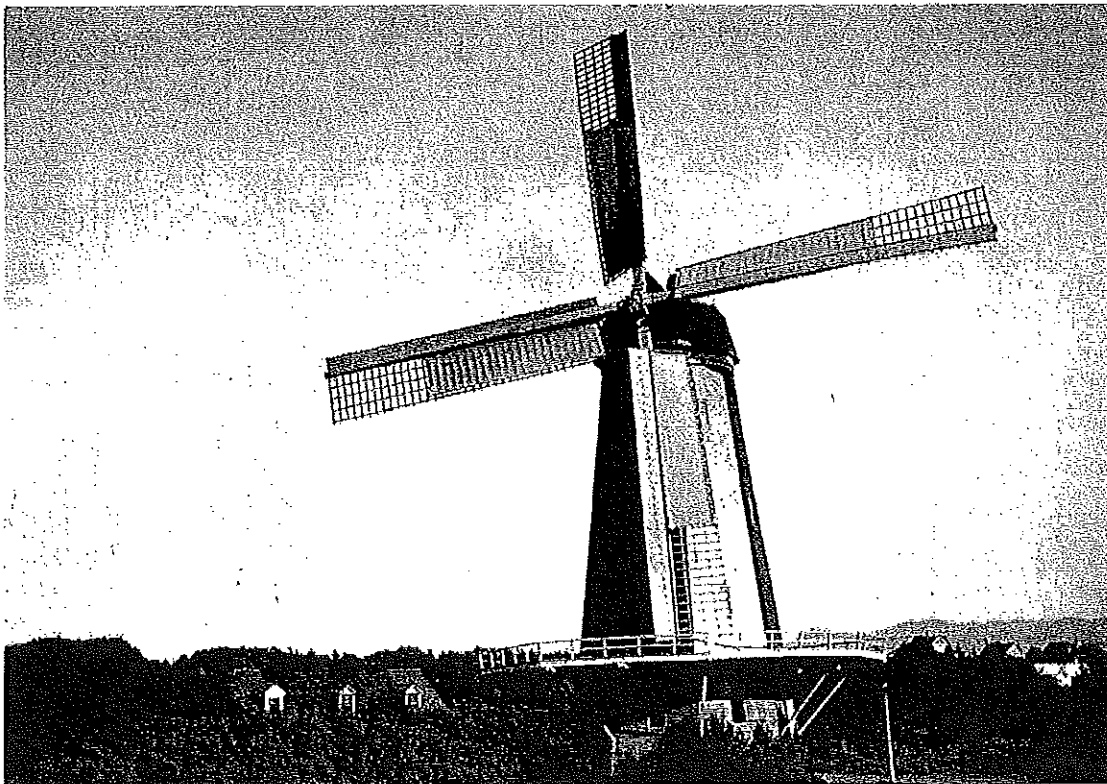


Figure 3: Murphy Windmill, c. 1920. California Historical Society, San Francisco Historical Society Collection; PN-32850

The question of Stut's acquaintance with windmill design has been raised many times. It is possible that he was exposed to windmills in Europe, prior to immigrating to the United States with his family. One of the most significant features of the Murphy Windmill is that all of the machinery is made of iron and steel. The gears and machinery in a Dutch windmill are made of wood, including the bearings. Stut's father was a blacksmith, and it is possible that he was able to translate the wood mechanisms to steel based on his knowledge of blacksmithing and its associated materials.

Many of the companies that had a part in the construction of the North Windmill took on the same role in the construction of the Murphy Windmill. In September of 1905, Fulton Iron Works again received the low bid for the windmill machinery, at \$6500. Pope & Talbot again donated the spars for the windmill in March, 1906; Dow Pumping Co. received the contract for the pumps.¹⁶

The 1906 earthquake and fire delayed the construction of the Murphy Windmill, and it was not begun until 1907. The Commission minutes following the earthquake are concerned with repairing the damaged structures and the erection of refugee shacks. Construction of the Murphy Windmill was completed in 1907, and a dedication ceremony was held on April 11, 1908.¹⁷

WATER DISTRIBUTION

The Dutch and Murphy windmills pumped water from an aquifer located approximately 200 feet below the surface. The location of the original well is unknown, however a pump at the bottom of the well shaft brought the water up into a sump, or storage area, just west of the windmill (figure 4). The well pump was probably electric, with a motor at the top of the shaft. The pump likely ran all the time, shutting off only when the sump was full. The windmill would run for about twelve hours a day, pulling water from the sump. The windmill then drew the water from the sump with a positive displacement, or

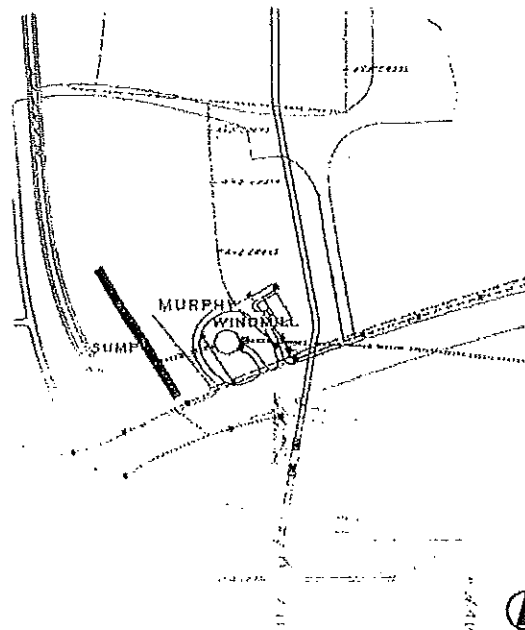


Figure 4: C. 1916 map of Golden Gate Park notes the location of the sump for the Murphy Windmill; the location of the original well is not noted.

piston-type, pump and pushed it up to the reservoir at Strawberry Hill. The reservoir at Strawberry Hill then provided irrigation to all of the Park east of 19th Avenue; the overflow traveled down the waterfall into Stowe Lake provided water to the Park west of 19th Avenue.¹⁸

There is apparently no detailed description of the pumping system used in the Murphy Windmill; however, a description of the Dutch Windmill's system, installed in 1913, appears in a 1914 *Pacific Service* article:

In a dry season the sump, 12 feet deep...has a mill capacity for two sets of pumps for twelve hours, and drains the back hills through springs in the following period...The turntable weighs 12 tons; hub, shaft and bevel gear 18 tons; the vertical 5" transmission through five floors and four solid couplings 6.5 tons, revolving on a ball-bearing immersed in oil.

Operating in mesh with the bevel gear at the foot of the shaft revolve two bevel gears on the ends of shafts connected to adjustable cone-shaped pulleys (in two parts), belt-connected to the gear shaft, meshed to the gears on the pumps. The transmission belt is made up of sections (two pieces of wood 14" x 3 1/2" bolted together with leather belt between), the friction power being taken from the ends of the same on the cone pulleys. By operating a cleaver-screw hand-device, at the same time that the driver cone pulley is separated (lessening the pulley diameter) the driven cone is drawn together, thereby adjusting the speed to the velocity of the wind. Beyond the limit of the adjusting device the sails on the arms must be shortened, allowing the wind to go through the lattice work of the frame.

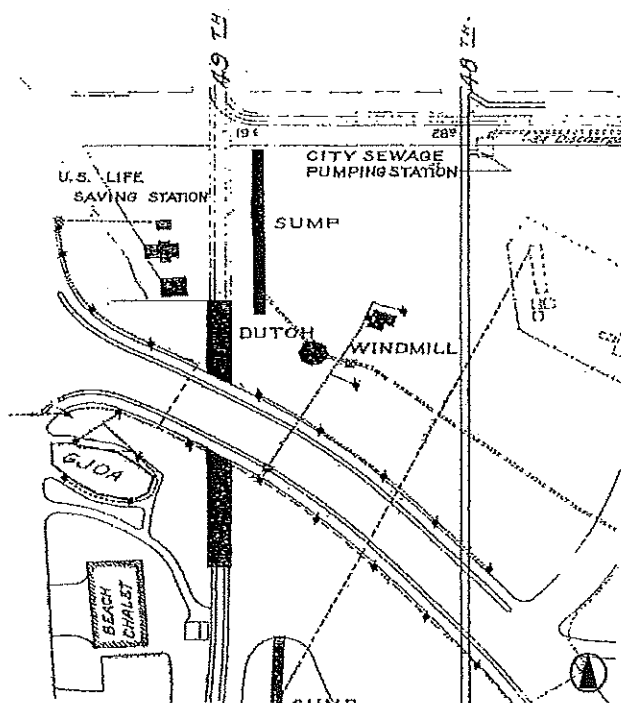


Figure 5: The same 1916 map also notes the location of the Dutch Windmill's sump.

The pumping equipment consists of two Dow Vertical Triplex Power Pumps, 8" x 10" plungers, three stage and 45 R.P.M. with 6.52 G.P.R. The capacity of the mill with wind power is limited to 80 lbs. pressure, and with the development of Lincoln Park a pressure of 180 pounds (corresponding to approximately a head of 400 feet) was needed, necessitating additional power. For this purpose, the Pacific Gas and Electric Company installed a 60 horsepower G.E. 2,200 volt, 2-phase, 900 R.P.M. motor for each pump, thereby giving sufficient power to accommodate the limit in capacity of the machinery installed. With a rawhide shrouded pinion on the motor for direct connection, the motor by one screw on the base may mesh with the gear on the shaft for the motor drive when additional pressure is needed or the velocity of the wind is insufficient to operate the mill under 80 pounds of pressure. With limited space for the 2,400 volt compartment, the installation was made with absolute safety by the Farnsworth Electric Works under plans and specifications submitted by our industrial Department...¹⁹

The electric motors described above were installed in the North Windmill to augment the power of the windmill, improving their reliability, rather than fully replacing the wind-driven motors.

The article goes on to mention that electrification of the Murphy windmill pumps is planned for the near future. This was accomplished by October of 1916, described in another article from *Pacific Service Magazine*: "We have recently installed a 75 H.P., 480 volt, 2 phase motor to operate the pumps of the Murphy windmill..."²⁰

One of the spars of the Murphy mill was also repaired prior to 1920 (figure 6). The repair can be seen in a 1920 photograph, on the left horizontal spar (figure 7). A scarf joint with binding repair can be seen, and a chunk of wood is missing below the repair.

A second well was sunk for the Murphy Windmill in 1926, to a depth of 231 feet; the pump was set at 200 feet. The original well probably had a similar configuration, but may not have reached quite as deep. This well head, still extant today, is located northwest of the Millwright's house. The pump house

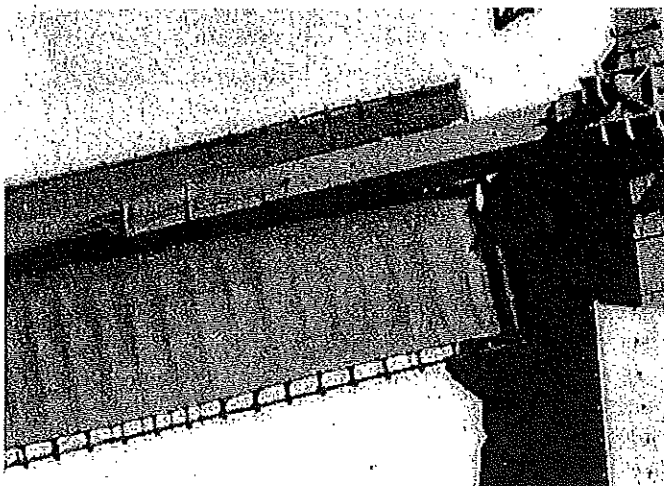


Figure 6: The repair on one of the spars of the windmill, c. 1920. California Historical Society, San Francisco Historical Society Collection; FN-32850, Detail.

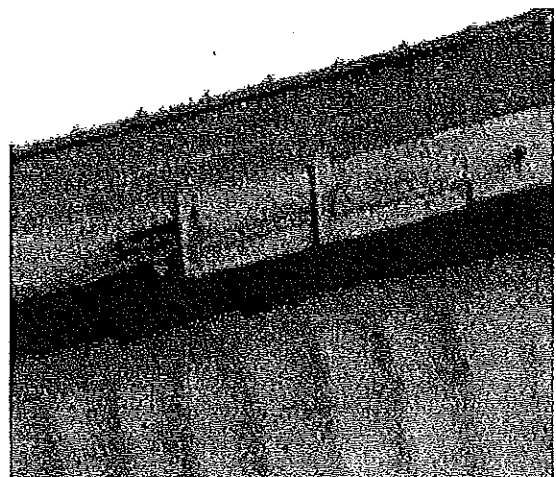


Figure 7: Detail of the repair, c. 1920. California Historical Society, San Francisco Historical Society Collection; FN-32850, Detail.

for this well is behind the windmill in an underground bunker. The piping used to pump water from the windmills to Strawberry Hill is the same piping installed at the beginning of the twentieth century when the windmills were constructed.²¹

It is unclear when the windmills ceased to be used for pumping water, but the common belief is that they were relieved from service around 1935.²²

A new well has recently been sunk to take the place of the 1926 well, which is reaching the end of its life. The new, more powerful well will fill a new central pumping station. The 1926 well has the potential to be reused in association with a restored Murphy Windmill, however it is not likely that the water drawn could be pumped into the irrigation system of the Park.²³

1940s AND BEYOND

The windmills were not well documented between the early nineteen teens and the 1940s. At that time, a number of newspaper articles appear recording the restoration of the Murphy Windmill. According to Raymond Clarey's book *The Making of Golden Gate Park*, an estimate of \$3000 was submitted by Bart Rolph for the renovation of windmill, and this amount was placed in the 1940-41 Park budget.²⁴ In 1943, it was reported that the Park Commission requested the City Purchaser of Supplies to sell the machinery in both windmills. One of the spars was reported by Superintendent Girod was dry rotted and in danger of falling. In October of 1944, the Board decided to petition the Mayor for \$800 in emergency funds to have it removed. Their request was granted in November of that year, and the J. Philip Murphy Co. was awarded the contract, with the low bid of \$750.²⁵ In 1947, \$20,000 was approved for the restoration of the windmill, and placed in the budget. A contract was awarded in 1948 to Wellnitz & DeNarde for the rehabilitation, with a low bid of \$28,885.²⁶ It is assumed that it was during Wellnitz & DeNarde's rehabilitation work that the sails were replaced. In an article found in the Golden Gate Park Vertical Files at the San Francisco History Room with no author or source, it states that the city had a 114 foot spar of 6 tons of laminated wood to replace "two windmill blades eaten away by termites five years ago," and that the installation would be complete in November.²⁷ The new spar was shipped by train from Portland, Oregon by train. According to an article written by Krista Hauser, it was so large that it took up three railroad cars and entangled traffic all afternoon.²⁸ According to a 1968 letter from the Golden Gate Park Public Information Office, the new spars were provided by Timber Structures, Inc.²⁹

A 1955 newspaper article mentions that vandals broke into the windmills several years earlier, and did enough damage that the windows and doors were sealed to prevent further damage.³⁰ This is corroborated by another author-less document entitled "Dutch Windmills-Golden Gate Park (1954)" that states "Vandalism became such a problem at the windmill and at the unused small brick caretaker's house adjacent to it, that all openings in the windmill were cemented in such a manner as to prevent entry and the house was completely demolished earlier this year."³¹ This passage refers to the cottage at the North Windmill, demolished in 1954, however it can be assumed that the openings in the Murphy Windmill were similarly sealed at this time.

Since the 1948 restoration, there have been several attempts to rehabilitate the Murphy Windmill. It was initially included in Mrs. Eleanor Rossi Crabtree's campaign to restore the windmills of Golden Gate Park, begun in the late 1960s. However, as the restoration costs rose and city officials allegedly grew more uncooperative, the Murphy Windmill was dropped from the plan.

During this time, various estimates were made concerning the restoration of both mills, and initial investigation was performed on the North and Murphy Windmills. A 1971 memo to Mrs. Crabtree lists the work performed to that point on both mills, including (on the Murphy Windmill): a relatively complete examination of the windmill; preliminary cost estimates; drawings; strength tests performed on samples of the concrete base; dry rot examination performed on the main girders; preliminary plans; complete and detailed measurements taken, up to and including the first floor and exterior decking; materials list; contact made with several slate shingle suppliers. The memo goes on to recommend that a thorough and detailed survey must be made of the interior and exterior, and the Recreation and Parks Department was preparing to "break an access opening through the three-foot-thick concrete base of the Mill so that the scope of the cleanup operation can be evaluated." This seems to indicate that, along with the windows, the one entrance to the Murphy Windmill had been sealed with concrete as well, although there is no evidence for this. The preliminary estimated cost for the restoration of the North Windmill is given at the end, and, including the plans and specifications, amounted to \$147,000.³² The restoration of the North Windmill was coordinated by Department of Public Works engineer Wayne Person and contractor Michael Westling.³³

The Murphy Windmill and Millwright's Cottage was nominated for San Francisco Landmark status in 2000, and approved as a city landmark on July 2 of that year. It is very likely that the windmill is eligible for the California Register of Historic Resources and the National Register of Historic Places, and nominations should be pursued as soon as possible.

CURRENT REHABILITATION

The current rehabilitation project, already underway, is a three-phase project. Phase One of the project involves the cataloguing and dismantling of the wood and iron elements of the Windmill and the restoration of the cap elements. The cap and associated elements were removed between June 24 and June 26, 2002. This includes the wood roof structure, wood cladding, wood dunnage, and the iron windmill mechanism, as well as the iron and wood fan tail elements on the ground. The cap elements were transported to Holland by ship, to be restored by the Dutch millwright Lucas Verbij. Each piece of the cap and its elements were catalogued prior to deconstruction. The stocks and sail structures, which were removed in 1966 and left on the ground, are too severely decayed to be restored; replacements will be manufactured in Holland.

After the cap removal, the slate shingle cladding and remaining copper flashing will be removed from the tower, and wooden tower will be dismantled. All of the wooden and iron elements of the tower will be catalogued prior to dismantling, including the windows. Each wooden element will receive a unique catalogue number. Those elements that are severely decayed will be replaced in kind during Phase Two, and the remaining elements will be salvaged.

Phase Two of the project will involve developing the rehabilitation strategy and coordinating the project. Specifications for the reconstruction of the windmill will be formulated, as will drawings. Determination regarding elements needing replacement will be made at this stage, and sources obtained.

Phase Three will involve the careful reconstruction of the windmill.

PERIOD OF SIGNIFICANCE

The Murphy Windmill was constructed in 1907, and underwent very few changes throughout its working life. The windmill continued to be a working mill until circa 1935, when it was permanently shut down. It underwent a restoration in 1948, during which its sails were replaced. In light of the very few changes made to the structure since its construction in 1907, Carey & Co. has determined the period of significance to be from 1907 to 1935, the time during which the windmill was serving its intended purpose, to pump water into the irrigation system of Golden Gate Park.

CHRONOLOGY OF CONSTRUCTION

1883: Test wells were drilled.

1901, *October 3*: The first official mention of any windmill in Park Commission minutes.

1902: The North Windmill was completed.

1905, *May 5*: It was announced by Commissioner Lloyd at the Park Commission meeting that a "friend" would give \$20,000 for an additional windmill. A motion was then made and approved for the Superintendent to select a site.

1905, *June 2*: Reported that Samuel G. Murphy willing to donate \$20,000 for the construction of the second windmill in Golden Gate Park. It was decided that the mill would be named in honor of the donor. A motion was made by Commissioner Metson for Engineer Stut to prepare the plans and specifications. Stut received a fee of \$300 for his plans.

1905, *August 4*: Stut's plans for the Murphy Windmill were approved by the Park Commission, and the Superintendent was ordered to proceed immediately.

1905, *August 18*: Specifications for the windmill were presented, approved and adopted by the Park Commission. The secretary was directed to advertise for bids to install the machinery.

1905, *September 1*: Commissioner Lloyd reported to the Commissioners that more time was needed to secure a low and accurate bid on the machinery for the windmill, and that he had authorized an extension of one week.

1905, *September 15*: In response to the advertisement for bids for the windmill machinery, the following were received: Union Iron Works, \$6980; Union Machine Co., \$7883; Krogh Manufacturing Co., \$9143.00; Fulton Iron Works, \$6500. Fulton Iron works receives the contract. Commissioner Metson motioned for the plans and specifications for the pumps prepared and advertised. The motion was approved.

Commissioner Dingee donated 300 barrels of cement for the construction; Commissioner Reuben H. Lloyd reported that Raymond and Co. had offered the granite for the window sills and door lintels.

1906, *March 2*: The secretary was authorized to advertise for bids for the pumps for the Murphy Windmill. Thanks are extended to Pope & Talbot for their donation of the 114' sails. The sails were 2' square at the center and 8" at the tips.

1906, *April 18*: San Francisco earthquake.

1906, August 17: Dow Pumping Co.'s specifications and drawings for the pumps for the mill are accepted.

1906, November 2: The Commission extended thanks to Louis Sloss for his donation of the copper for the cap of the Murphy Windmill.

1907, January 11: The superintendent reported to the Board of Supervisors that it would cost \$9513 to grade the ground and construct a reservoir for the Murphy Windmill. Superintendent McLaren was directed to proceed with the grading of the ground as soon as the weather would permit.

1907: Construction completed.

1908, January 22: Fulton Iron Works paid for their work from the Murphy Fund.

1908, April 11: A dedication ceremony took place at the windmill.

1908: Superintendent McLaren was ordered to consult with Reid brothers about plans for a Dutch cottage as a residence for millwright at Murphy Windmill.

1909, September 8: Contract for cottage awarded to Andrew Wilke for \$3,383.

1913: Electric motors, potentially replacements for earlier motors, were installed in the Dutch Windmill.

1914, May 6: J.C.H. Stut died.

1915: Murphy Windmill appears in the car chase scene of Charlie Chaplin's "A Jitney Elopment."

1916: Electric motors, also likely replacement motors, were installed in the Murphy Windmill.

C. 1935: The windmills were relieved from service.

1940: \$3,000 placed in 1940-41 budget for the renovation of Murphy Windmill.

1943, May 27: Reported that the Park Commission requested the City Purchaser of Supplies to sell the machinery in both windmills.

1944, October: Superintendent Girod reported one of the spars on the Windmill was dry rotted and in danger of falling off. The Board decided to petition the city for emergency funds in the amount of \$800 to have it removed.

1944, November: The Mayor approved a request for emergency funds. The contract was awarded to J. Philip Murphy Co., for \$750.

1945: The North Windmill was dismantled.

1947: \$20,000 was approved for the restoration of the Windmill.

1948, May 20: A contract in the amount of \$28,885 was awarded to Wellnitz & DeNarde for the restoration of Murphy Windmill.

1948, October 14: Reported that there was a \$28,000 program to rehabilitate the Murphy Windmill, and that the City had a 114-foot spar, consisting of six tons of laminated wood, to replace "two windmill blades eaten away five years ago by termites." Installation was to be complete by November of that year.

1954: Millwright's cottage at North Windmill demolished.

1958, July 13: Reported that the City, due to lack of funds, was preparing to tear down both windmills, unless the \$30,000 needed to repair the Murphy Windmill could be found.

1966, March 21: The sails were dismantled and taken off of the Murphy Windmill.

1968: \$369,000 beautification fund awarded to the City, \$15,000 of which was allocated for rehabilitation of windmills. \$150,000 estimated for restoration of both windmills.

1968, June 4: Recreation and Parks Department puts bond issue before the voters, containing item for rehabilitation of windmills in the amount of \$135,000.

1969, July 31: Estimate sent to Joseph M. Caverly, General Manager of Recreation and Parks Department, for restoration of windmills. Estimates were provided for motor-driven spars, fixed spars and wind-driven spars.

1975, January 29: The Board of Supervisors voted unanimously to restore the windmills (Resolution #658-74).



Figure 8: The removal of the cap and machinery, June 26, 2002.

1992, September 28: Proposal submitted by Z.B. Doros to San Francisco Recreation and Park Department to turn the Murphy Windmill into a art gallery and café.

1995: Golden Gate Park Master Plan recommends demolition of Murphy Millwright's Cottage.

2000, March 28: Supervisor Alicia Becerril proposed creating a city landmark by protecting the Murphy Windmill and millwright's cottage.

2000, July 2: Murphy Windmill and Millwright's Cottage officially become San Francisco City Landmark 210.

2001, August 24: Certificate of Appropriateness issued for the restoration of Murphy Windmill by the San Francisco Planning Department.

2002, June 26: Cap removed and prepared for shipment to Netherlands for restoration.

ENDNOTES

¹ Volta Torrey, *Wind-Catchers: American Windmills of Yesterday and Tomorrow* (Brattleboro, VT: Stephen Greene Press, 1976), p.148-150.

² Raymond Clary, "North or "Dutch" Windmill in Golden Gate Park Near the Great Highway and Fulton Street," np, August 11, 1981, p.1. Courtesy Leon Smith, millwright, Golden Gate Park.

³ "Dutch Windmill," na, nd. Courtesy Leon Smith, millwright, Golden Gate Park.

⁴ Raymond Clary, "North or "Dutch" Windmill in Golden Gate Park Near the Great Highway and Fulton Street," np, August 11, 1981, p.1. Courtesy Leon Smith, millwright, Golden Gate Park, and Landmarks Preservation Advisory Board, Case Report for hearing on August 15, 2001, Case No. 2001.0732A, Landmark No. 210, Assessor's Block 1700, Lot 001P.

⁵ Raymond Clary, "North or "Dutch" Windmill in Golden Gate Park Near the Great Highway and Fulton Street," np, August 11, 1981, p.1. Courtesy Leon Smith, millwright, Golden Gate Park.

⁶ Raymond Clary, *The Making of Golden Gate Park: The Early Years: 1865-1906* (San Francisco: Don't Call it Frisco Press, 1984) p. 149.

⁷ "Dutch Windmill," na, nd. Courtesy Leon Smith, millwright, Golden Gate Park.

⁸ Landmarks Preservation Advisory Board, Case Report for hearing on August 15, 2001, Case No. 2001.0732A, Landmark No. 210, Assessor's Block 1700, Lot 001P.

⁹ "Landmark Designation of the Murphy Windmill and Millwright's Cottage," San Francisco Planning Commission, February 24, 2000.

¹⁰ Marriage, Birth and Death Notices, *Oakland Tribune*, May 9, 1914.

¹¹ *The People's Railway: A History of the Municipal Railway of San Francisco*, Anthony Perles (Glendale, CA: Interurban Press, 1987) p. 15.

¹² Marriage, Birth and Death Notices, *Oakland Tribune*, May 9, 1914.

¹³ "Windmill for Golden Gate Park." Drawing by J.C.H. Stut, M.E., July 18, 1905. Courtesy City of San Francisco Bureau of Architecture.

¹⁴ "Proposed Pumping Installation for the S.G. Murphy Windmill, Golden Gate Park." Drawing by George E. Dow Pumping Engine Co., San Francisco, California. Courtesy City of San Francisco Bureau of Architecture.

¹⁵ "Detail of Windmill for Golden Gate Park." Drawing by J.C.H. Stut, M.E., July 18, 1905. Courtesy City of San Francisco Bureau of Architecture.

¹⁶ "Murphy Windmill Restoration Project, Introduction," na, nd.

¹⁷ Christopher Pollock, *San Francisco's Golden Gate Park* (Portland: East Winds Press, 2001) p. 124.

¹⁸ Leon Smith, Engineer, interview by the author, Golden Gate Park, 11 August 2003.

¹⁹ A.L. Harris, "Pacific Service" as an Aid to Nature in Golden Gate Park," *Pacific Service Magazine*, December 1914, p.2.

²⁰ *Pacific Service Magazine*, Vol. VIII, No. 5, October 1916, na.

²¹ Leon Smith, Engineer, interview by the author, Golden Gate Park, 11 August 2003.

²² "Restoring the Old Windmills," *San Francisco Examiner*, na, May 25, 1966.

²³ Leon Smith, Engineer, interview by the author, Golden Gate Park, 11 August 2003.

²⁴ Clarey, Raymond. *The Making of Golden Gate Park, The Growing Years: 1906-1950* (San Francisco: Don't Call it Frisco Press, 1987) p. 129.

²⁵ Ibid, p. 156.

²⁶ Ibid, p. 165.

²⁷ Newspaper article, no author, no source, October 14, 1948. San Francisco Public Library, Golden Gate Park Vertical Files.

²⁸ Krista Hiser, "A Tale of Two Windmills," np. Courtesy San Francisco Recreation and Parks Department.

²⁹ A. Clyde Eide, letter to Miss Joyce Jansen, Public Information Officer, Recreation and Parks Department, November 9, 1968. Courtesy Golden Gate Park Public Information Office.

³⁰ "Gene McAteer Tilts with Park Windmill," na, January 31, 1955. San Francisco Public Library Windmill Vertical File.

³¹ "Dutch Windmills-Golden Gate Park (1954)," no source, na.

³² S. M. Tatarian, Director of Public Works, City of San Francisco, to Mrs. Allison Crabtree, March 19, 1971.

³³ Russ Cone, "Tilting at City Hall: Saga of a Windmill," *San Francisco Examiner*, November 11, 1981.

ARCHITECTURAL EVALUATION

The Murphy Windmill is an eight sided, six story structure across from Ocean Beach, at the western edge of Golden Gate Park. The 95-foot-tall structure consists of three parts: a concrete base, a wood tower and a cap. The wood tower is clad with Pennsylvania blue slate shingles. The cap and associated machinery are made of steel, and the dome's supporting structure and roof is wood. The cap was originally clad with copper.

The Golden Gate Park windmills are a type of mill called smock mills. A smock mill is a many sided wood mill, usually built on a brick base. Commonly smock mills have an eight-sided frame made up of a series of cant posts, which are held together by tie beams and ledges mortised into them. Between the cant posts and tie beams are vertical studs and diagonal braces. This type of framing results in a very strong structure. An iron cap tops the mill, which rotates on a curb, and carries the sails, a fantail and a brake wheel. An outside stage gives the millwright access to the sails and the striking gear. Unlike a post mill, where the entire mill rotates with the wind, only the cap rotates in a smock mill. The result is that a smock mill is much stronger, allowing it to be bigger and taller. Smock mills are built on a high base to lift it up high enough to catch the wind. The high base also protects the wood members from ground water.¹

A windmill's sails rotate on a windshaft. On the opposite end of the windshaft is the brake wheel, which contains the gears, and drives the machinery. To turn, the sails must be facing the direction from which the wind is blowing. On the exterior, the stocks form a cross on the windshaft. The stocks carry the whips, which bear the framework for the sails. Cloth sails are carried by bars mortised into the whips. The sails are set at an angle to the disc created by the revolving whips, the ideal being a constant of 20 degrees. A tangential force is exerted to push the sails away from the wind, thereby turning it. The larger the sail area, the greater the force exerted, and the faster the sails will turn. A sail must complete between 12 and 15 revolutions of the windshaft per minute to pump efficiently. However, productivity is not necessarily increased by going faster than this, due to the stress created on the machinery.²

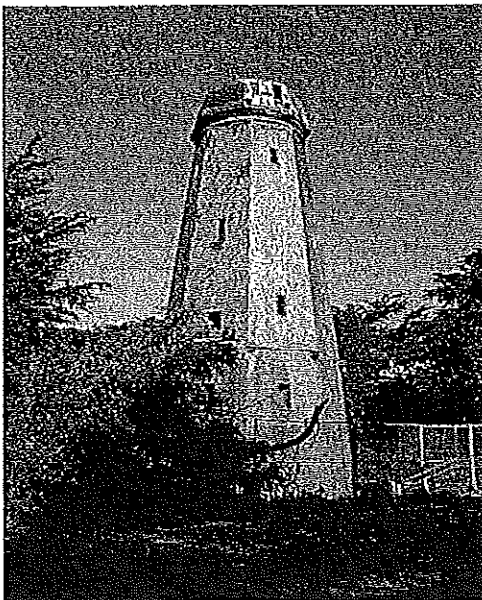


Figure 9: The Murphy Windmill is a smock mill.

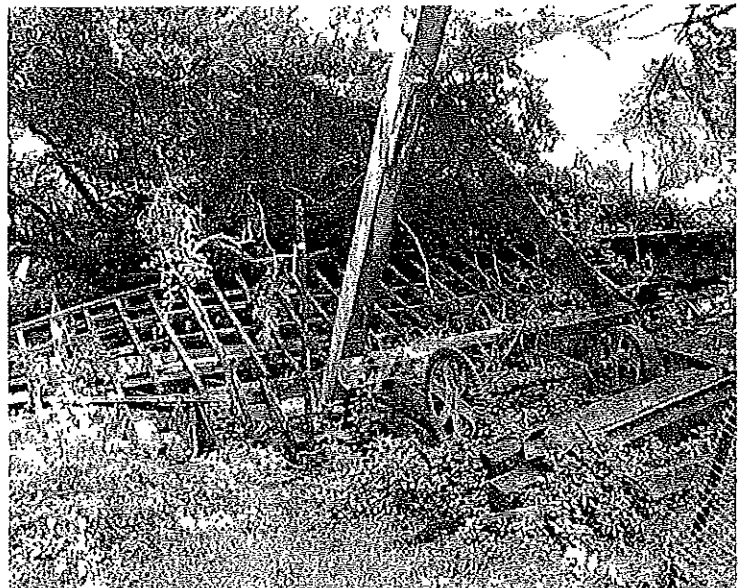


Figure 10: The delapidated remains of the sails and fantail.

The sails are tied on at the inner end, or heel, of the sail frame. They can also be attached to rings on an iron rail. The sails can be adjusted by lines to increase or reduce the surface area, thus increasing or reducing power. This is called reefing, and there are four settings: first reef, sword point, dagger point and full sail. Weathered sails are angled at about 20 degrees at the inner end and flatten to about five degrees at the tip for efficiency. The variation of the angle of the sails is supposed to increase the aerodynamic efficiency, but makes the sails harder to start. Backstays are fitted to strengthen the sail and maintain the pitch of the bars.³

The fantail is a secondary windmill set at a right angle to the main sails. It is geared through a worm or spur pinion to turn the cap of the mill on the curb. When the wind shifts to one side, the fly starts to spin and turns the cap to bring the main sweeps to face the wind.⁴

EXTERIOR DESCRIPTION

The area around the Murphy windmill is surrounded by a chain link fence. Trees, low shrubs and grass grow both inside and outside the perimeter of the fence. Low vegetation also grows at the base of the mill on the north sides (D, E, F), which receive very little direct sun. The remains of the fantail and sails are on the ground, inside the fence on the east side (figure 10).

The first two stories of the mill are scored concrete (figure 12). Windows once punctured each panel at the first story, but have since been filled with brick and stuccoed with pink concrete. The concrete

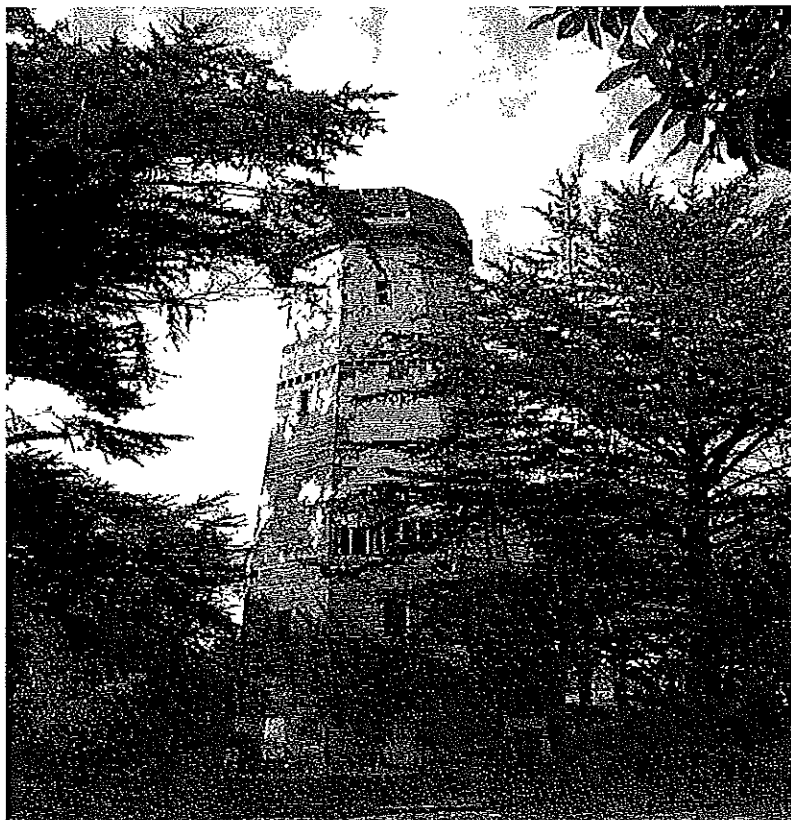


Figure 11: The mill is surrounded by trees on several sides.

base, stained by dirt and biological growth, was also pinkish in color. The windows on the second level were not bricked over, but boarded over on the inside. Chicken wire was also placed on the inside, and a woven, fence-like material on the outside. The wood and glazing has disappeared from several of these windows, leaving the interior open to the elements.

The entrance doorway, on the southeast face (Panel A), is made of unpolished granite. The lintel reads "Gift of Samuel G. Murphy, May 1905." The entry to the mill is secured by a non-historic padlocked metal gate (figure 13).

Wooden decking once surrounded the exterior of the structure at the third level, just above the concrete base. The rotted decking was deemed dangerous and cut off in the 1960s. The joists were simply chainsawed off, and left exposed in place. The ends of the joists can still be seen at each corner of the structure, as well as pockets for knee braces below. There are two doors that opened onto the decking from the third floor, one directly above the entrance (Panel A), and another on the north side (Panel C).

Above the concrete, the mill is constructed of wood cladding covered in slate shingles. Horizontal tongue-and-groove siding, made of Douglas Fir, forms the exterior structure of the building. Bluish-grey Pennsylvania slate shingles are hung over the wood.

A steel rotating ring with a wooden, copper-clad cap tops the structure, housing much of the operating mechanism of the mill. The cap and operating mechanism were removed in June 2002 and shipped to Holland, where they will be restored.

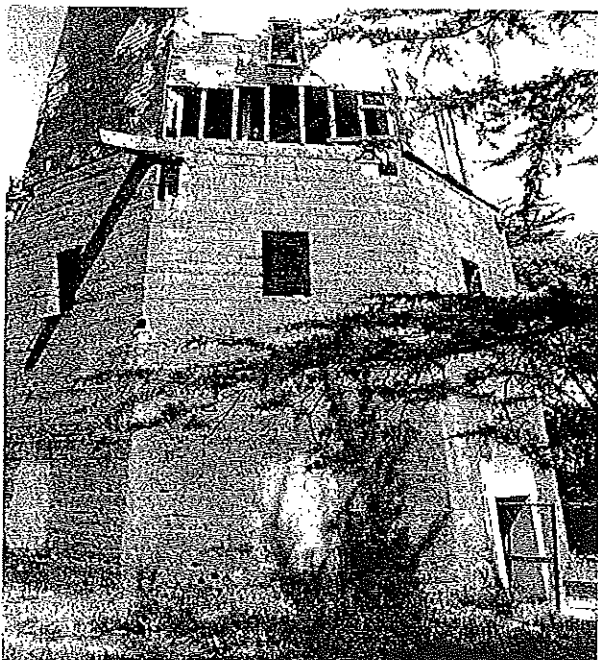


Figure 12: The base of the windmill is concrete. Notice the ground level windows have been sealed.

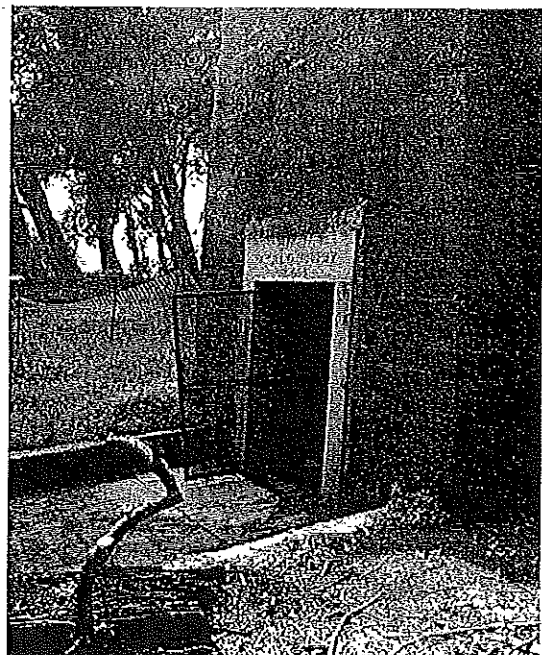


Figure 13: The granite doorway is sealed with a non-historic metal gate.

INTERIOR DESCRIPTION

The interior of Murphy Windmill is an octagonal floor plan (figure 14). Levels one and two are housed in the concrete base; three, four and five in the wood tower; and level six in the cap.

The primary tower of the windmill is a square inscribed inside an octagon. Eight posts support the structure, four primary and four secondary. Four main posts rise up to the cap, tapering inwards. These posts are then horizontally and diagonally braced, providing the central construction. Secondary posts are then added around the square formed by the main posts, providing additional bearing for the cap. When sheathed, the resulting shape is a tapered octagon. This is shape defines the windmill. The metal ring that the cap rested on was placed at the top of the octagon, accentuating the round shape of the cap. Horizontal members tie the posts together and are coincident with the floor levels. The horizontal members are butted against the posts and held in compression by iron tie rods. There appears to be no traditional joint, such as a mortise and tenon or splice plate, between the horizontal and vertical members. The exterior gallery was supported by a braced beam system, consisting of horizontal members spanning the entire width of the gallery and mill. Floor joists spanned between the gallery beams, over which wood deck boards were applied.

The first level housed the pumps, used to draw the water from the sump and pump it into the reservoir. The floor and walls are concrete construction, and the concrete pads, where the pumps once stood, rest in the center of the floor (figure 15). The walls were painted, and a dado stretches from the floor up approximately five feet to below the windows. This dado was several different colors; orange, green, red and white are visible. The upper walls are painted as well. The unfinished ceiling consists of the floorboards of the floor above. An early lighting fixture hangs from the center of the ceiling. Seven wood, one-over-one double-hung windows puncture the concrete walls, one through each panel. The windows, once painted green, were filled with brick. An electrical panel was installed over the window in Panel G, and was pulled back when the window was sealed. To the east of the granite entrance are

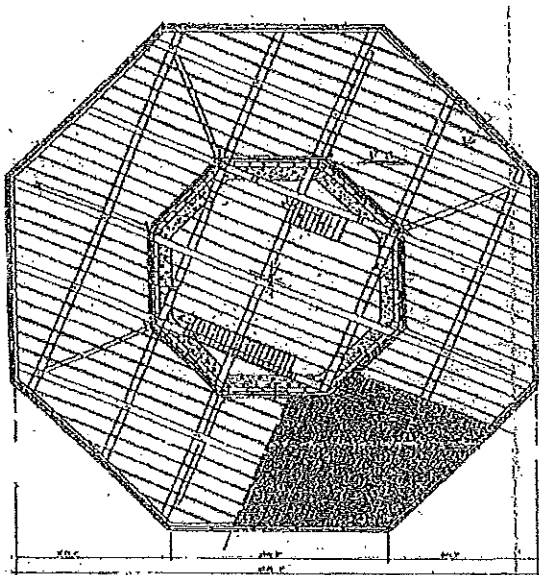


Figure 14: The windmill has an octagonal floor plan.

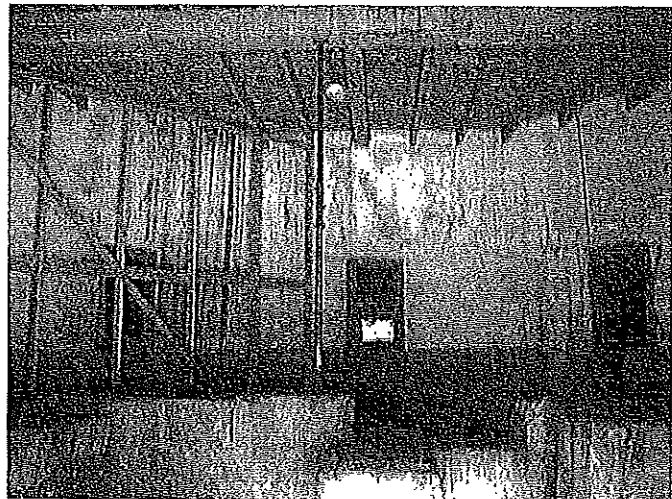


Figure 15: The first level housed the pumps, which sat on concrete pads.

painted wood open riser stairs, which circle up around the perimeter of the building. Underneath the stairs is a set of built-in wood shelves, also painted. Pipes, beginning below the stairs, follow the east wall, turn west and cross the floor.

The walls of level two are bare, scored concrete. The floors consist of 3 3/8" tongue-and-groove Douglas fir boards. Wood double-hung windows (53" H x 33" W) penetrate each panel. The windows on Panels C, F and G have lost their glazing. The stairs pass over Panels C, D and E, and are painted red at this level. Exposed electrical work runs over Panel A.

Levels three, four and five consist of horizontal wood siding (figure 16). The octagonal structure is supported by foursquare bracing, four sets per floor, each set spanning two panels. Beams on the ceiling bolt in above and attach to separate lines in the corners. The floors are 3 3/8" Douglas Fir boards. The walls consist of exposed horizontal Douglas Fir cladding. Each level has four small, wood double-hung, one-over-one windows, located 64" from the floor. Two doors on level three open to the exterior. Wood doors in panels A and C of level three open to the exterior deck area. Stairs rise in a circular fashion along the perimeter of the structure. The ceilings consist of the exposed joists and floorboards of the level above.

The cap houses the machinery to turn the cap and sails and run the pumps. The machinery is made of steel, and consists of a brake-wheel, gears and fantail. The cap rotates on the curb, which is also made of steel. A windshaft extends from the cap down through the center of the structure to the pumps. The windshaft was powered by the sail, which in turn powered the pumps.

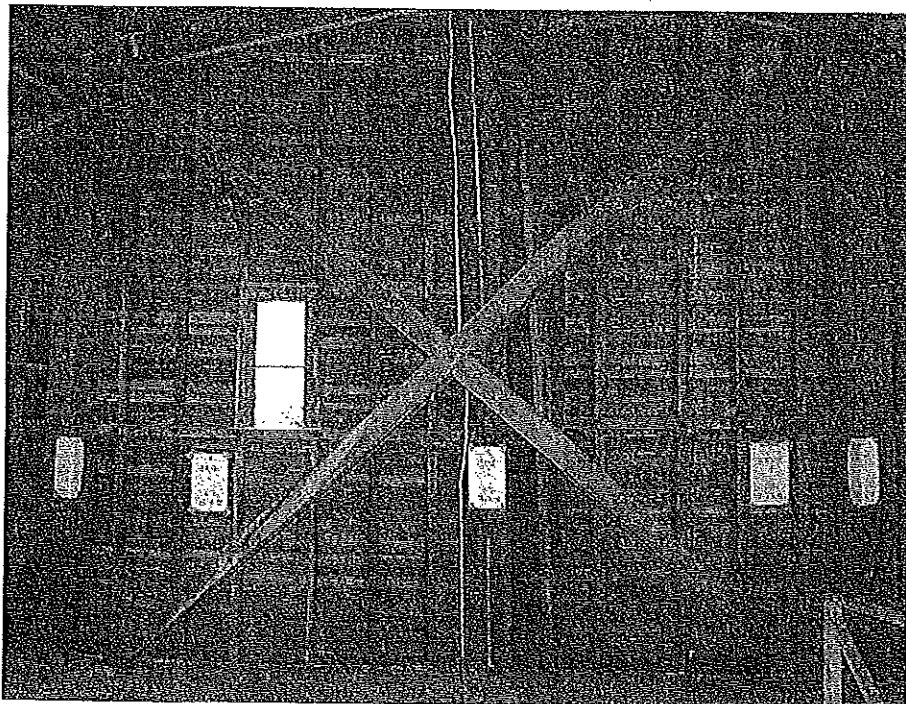


Figure 16: Levels three, four and five are clad with horizontal siding. Two of the main posts can be seen here with diagonal bracing.

ENDNOTES

¹Suzanne Beedell, *Windmills* (New York: Charles Scribner's Sons, 1975), p.128.

²Ibid, p.27.

³Ibid, p.27.

⁴Ibid, p.38.

CONDITIONS AND RECOMMENDATIONS

APPROACH

Any work to Murphy Windmill should have a minimal impact on the building's historic fabric. Deficiencies that threaten life and safety, or that are causing deterioration must be corrected. The value of any other improvements should be weighed against the value of the building's integrity. The historic fabric and character-defining features of this building have been described in the previous section of this report. The following recommendations provide a general philosophy applicable to any future improvement project.

Since the windmill will ultimately be used as an interpretive center, focusing on both the history and the architecture of the Murphy Windmill and Golden Gate Park, work on the windmill must be held to an especially high standard. We recommend using the Secretary of the Interior's Standards for Restoration, rather than Rehabilitation, for this building. The expressed goal of the Standards for Restoration is to make the building appear as it did during its most significant time in history. We have defined that period as 1907 to circa 1935. We have reproduced these standards below.

1. A property will be used as it was historically or be given a new use which reflects the property's restoration period.
2. Materials and features from the restoration period will be retained and preserved. The removal of materials or alteration of features, spaces, and spatial relationships that characterize the period will not be undertaken.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate and conserve materials and features from the restoration period will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Materials, features, spaces, and finishes that characterize other historical periods will be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize the restoration period will be preserved.
6. Deteriorated features from the restoration period will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials.
7. Replacement of missing features from the restoration period will be substantiated by documentary and physical evidence. A false sense of history will not be created by adding conjectural features, features from other properties, or by combining features that never existed together historically.
8. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
9. Archeological resources affected by a project will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
10. Designs that were never executed historically will not be constructed.

GENERAL EXTERIOR RECOMMENDATIONS

MATERIAL REPAIRS

The exterior of the Murphy Windmill retains a very high degree of integrity, with exceptionally few alterations. The impact of any alterations must be carefully analyzed and weighed against the integrity of the historic resource. Due to the building's high degree of integrity, alterations to the exterior should be minimized. However, long-term preservation depends upon a sound building envelope. Exterior recommendations are provided to guide long-term maintenance efforts.

Survey all exterior materials at close range to identify and locate all deterioration and deficiencies. Survey slate shingle and wood cladding and roof elements from a cherry picker, ladders or scaffolding to identify missing or failed flashing, and failed roofing and cladding systems. Stabilize and repair existing historically important materials. Stabilize, repair and replace all deteriorated or missing components in kind where required. Minimize the impact of visible modifications to the exterior facade.

The Windmill is divided into two sections by direction and condition: the Windward (ocean) side and the Leeward (north) side. Each of these sections has a set of conditions that stand out as being more prevalent than on the other sections. While the conditions are the same, their intensity in each section differs.

WINDWARD (OCEAN) SIDE: PANELS E, G AND H

The Ocean Side is so named because it faces west, toward Ocean Beach and the Pacific Ocean. Because of this exposure, it bears the brunt of the weather and force coming off the ocean. Conditions

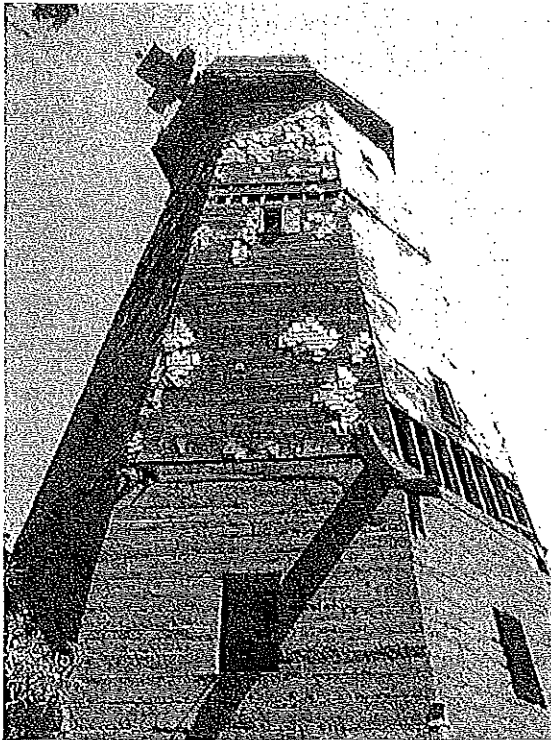


Figure 17: The windward side has lost many shingles and cladding.

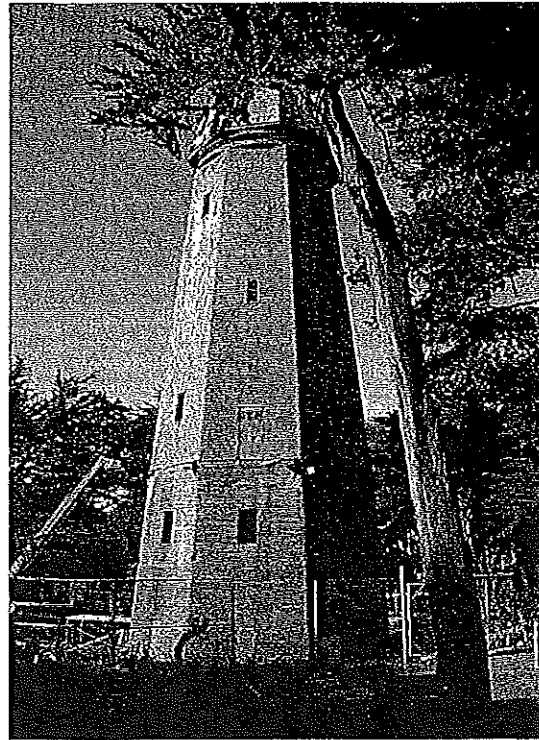


Figure 19: The leeward side of the windmill.

that characterize these three panels are heavy loss of shingles; extensive dry rot; loss of wood cladding; and biological growth (figure 17). These three panels are in the most precarious condition structurally. Dry rot has decimated the exposed wood cladding and members, and is continuing to eat the wood away.

LEEWARD SIDE: PANELS A, B, C, D AND E

This section, while not fully protected from the ravages of the wind, has survived fairly intact (figure 18). The north side receives the least amount of sunlight, as it is surrounded and protected by trees. The tree cover provides a shaded and damp environment, fostering biological growth. Vegetation surrounds the base of the structure as well. Biological growth of various colors, including bright green, grey and red, flourishes on the slate, shingles and wood on the bottom half of panel C, and all of panels D and E. The eastern half of these panels is fully protected from the ocean winds, and have retained the majority of their shingles, protecting the structure below. They also receive direct sunlight, drying the surface and protecting it from biological growth. All deteriorating conditions are present, however not in the same intensity as the other section.

CONCRETE

Description: The base of the windmill, encompassing the first two levels, is concrete. The concrete was originally pink, but is covered in biological growth and stained (figure 19).

Condition: The walls appear to be in good condition. The aggregate used was very large, which could be contributing to spalls and water infiltration. Various types of conditions are common to concrete, including cracks, spalls, erosion and staining. Although these conditions are not present in a significant quantity on the base of the Murphy Windmill, they could pose a problem in the future. Staining could pose an immediate problem after the removal of the biological growth. General recommendations have been included for reference.

Recommendation: Clean the concrete (See recommendation under "Staining"). Survey the concrete regularly, inspecting for cracks, spalls, erosion and stains. In general, repairs should duplicate, as closely as possible, the original construction to assure that the repair is physically and aesthetically compatible with the existing material. Original surface textures should be duplicated as closely as possible in the repair. Original details and mix components that may have had deleterious effects should be avoided. The concrete analysis tests will determine the appropriateness of the original concrete mix.

General Concrete Repair Methodology:

1. Begin with a field survey to identify and locate all problems. Map cracks, spalls, stains and other conditions on elevations and floor plans.
2. Conduct in-situ tests as appropriate. These include sounding the concrete to identify voids and loose material, and using moisture meters to identify water infiltration and migration patterns.
3. Collect samples for laboratory tests. Recommended tests include petrographic analysis, strength tests, and chemical tests for chlorides and other components. Laboratory testing is essential not only to

determine the characteristics and composition of the original concrete mix formulations, but also in identifying the nature and underlying causes of many of the observed problems.

4. Monitor the deficiencies. For instance, apply calibrated crack monitors to selected cracks to gauge their activity level.

5. Make sure any patch material is physically and visually compatible with surrounding existing material. Repair material should match the composition of the original material as closely as possible.

Cracks

1. Remove any loose material. Test with wooden mallet to identify loose or unstable areas.
2. Repair cracks less than 1/16 inches wide with a mix of cement and water.
3. Repair cracks greater than 1/16 inches with a mixture of cement, sand and water. Field test crack prior to patching to determine whether the crack should be routed (widened and deepened) minimally prior to patching. Patch material must be compatible with surrounding material as determined in laboratory tests described above.

Spalls

1. Remove loose material.
2. Prepare area to be patched by roughening the surface with a hammer or chisel. Wet area to be patched, and keep moist for at least one hour prior to patching.
3. Encourage bond between patch and substrate by scrubbing substrate with cement paste, or by applying a liquid bonding agent.
4. Patch the area with approved compatible material, matching the original in strength, aggregate, color, and texture. Match surface to surrounding texture.

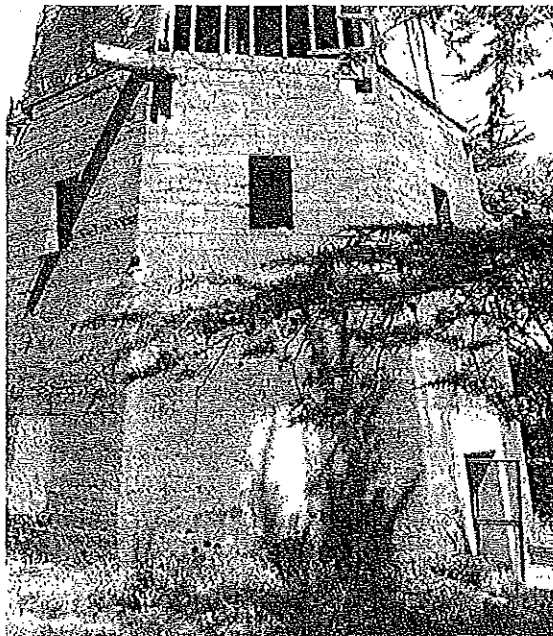


Figure 19: The large aggregate used in the concrete base has resulted in some minor spalling.

Concrete Erosion

1. Diagnose cause of erosion and correct if possible. If cause is coursing water, consider installing drip grooves to undersides of overhanging edges.
2. If erosion is substantial, over one-and-one-half inches of lost surface material, replace lost surface material with a compatible patch as described above.

Stains

1. Determine type and source of stain. If the stain is efflorescence, determine and eliminate the source of water.
2. Remove non-historic, nonfunctional metal attachments. Patch subsequent holes as described above under Spalls. Replace functional attachments with noncorrosive attachments, if problem continues to persist.
3. Remove stain using the gentlest means possible. Test the area first to make sure the base material is not harmed and that significant paint materials are not impacted. Use gentlest cleaning method possible, beginning with water and a bristle brush. Mild detergent or tri-sodium-phosphate solutions should be tried next. Use proprietary chemical cleaners designed for concrete as a last resort only if necessary.

WOOD CLADDING AND ELEMENTS

Description: Wood cladding encloses the upper four stories of the windmill, including the roof, and is covered by slate shingles. The roof was originally sheathed in copper.

Condition: Deterioration is primarily caused by water damage and exposure to the elements. The wood cladding is missing in some areas, particularly on the windward side. It is also subject to dry rot and biological growth (figure 20).

Recommendation: The cladding and elements were removed during Phase I of the restoration project. Each piece should be inspected prior to the reconstruction of the building. Determine the cause of deterioration and remedy before repairing wood elements.

1. Survey existing condition of all wood elements.
2. Remove all dirt, debris, and miscellaneous attachments.
3. Repair where possible, replace deteriorated wood elements in kind as required.

SLATE SHINGLES

Description: The exterior of levels three, four and five are covered in Pennsylvania blue slate shingles.

Condition: A majority of the shingles on the windward side of the building are gone. The leeward side exhibits less loss. Some shingles are hanging askew, and can simply be rehung.

Recommendation: Rehang the loose shingles.

1. Survey the existing condition of all slate-clad panels.
2. Rehang existing shingles or replace missing shingles in kind.

COPPER ROOFING

Description: The roof of the cap was originally sheathed in copper.

Condition: The copper roofing material on the cap of the windmill is missing and scheduled to be replaced.

Recommendation: Appropriate maintenance is critical to the cap's long-term survival. Copper is highly resistant to corrosion caused by exposure to salt water or the atmosphere, due to the protective patina formed when copper combines with hydrogen sulfide and oxygen or sulfur dioxide. This combination forms the distinctive green protective copper carbonate or copper sulfate patina. Copper can, however, be corroded by rainwater that has become acidic through contact with wood shingles or biological growth. Copper sheet roofing is subject to mechanical breakdown of individual metal units caused by insufficient provisions for thermal expansion and contraction, inadequate sheet thickness, improper fastenings, excessively large sheet size, insufficient substructure, and erosion caused by particle abrasion or the velocity effect of aerated water. Thermal stressing causes copper and its protective patina to become friable, which will eventually result in cracking and bulging. Once cracks have occurred, the sheathing has failed as a watertight membrane.¹

The roof should be thoroughly inspected on a regular basis (once a year), and any protective films should be removed immediately upon installation.

1. Survey existing condition of all copper elements, examining soldered areas for faults.
2. Clean the exposed metal surfaces of substances that would interfere with uniform oxidation and weathering.
3. Replace missing components to match original, if necessary.

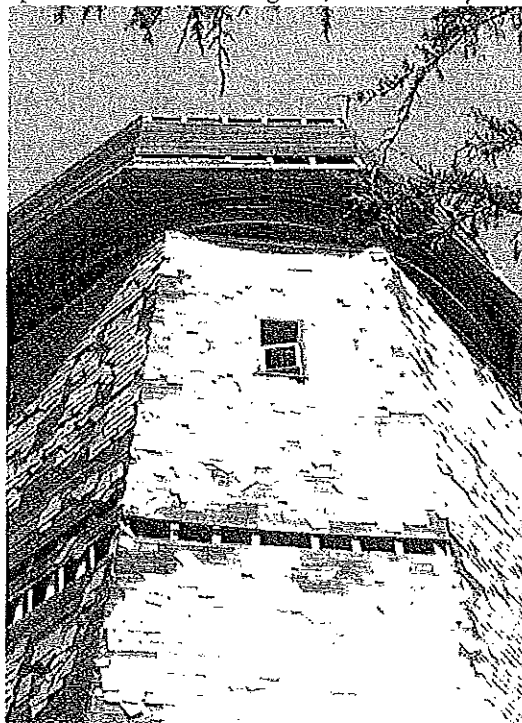


Figure 20: The cladding and shingles are falling off due to neglect.

WOOD WINDOWS

Description: Wood one-over-one double-hung windows penetrate the windmill on every story.

Condition: The windows are in poor condition. Lack of maintenance, dry rot and continuous exposure to the elements have left them severely deteriorated (figure 21).

Recommendation: Restore existing wood windows. Replace deteriorated wood sash and frame components in kind. Replace, missing, broken, or inappropriate glazing. Some windows are repairable, with restoration limited to cleaning, paint removal, and replacing selected, severely deteriorated elements. Repair windows as follows:

1. Survey existing condition of all wood windows.
2. Remove all dirt, debris, and miscellaneous attachments.
3. Remove paint to obtain clean surface.
4. Repair, or replace deteriorated wood elements in kind as required.
5. Restore window to proper operation.
6. Install new hardware, where missing, to match original.
7. Install new glazing where cracked or missing.
8. Prepare wood surfaces, prime, and paint.

SPALLED GRANITE

Description: The window surrounds and the entry surround are composed of unpolished granite (figure 22).

Condition: Due to the exposure of the granite to the harsh elements of ocean weather, the granite is disaggregating and spalling in small areas.

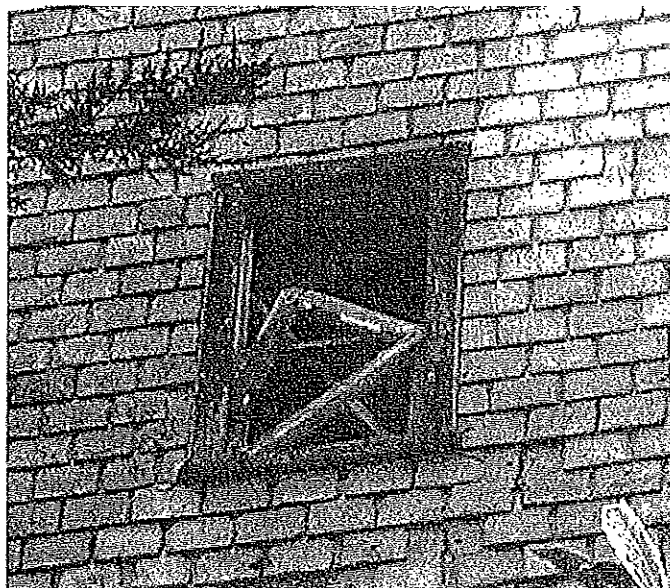


Figure 21: The windows are in poor condition.

Recommendation: Repair spalls in granite. Stone spalls are unsightly, can allow pooling of water, and can perhaps allow water to penetrate into the wall. Water can cause rusting and eventual failure of the ferrous metal reinforcement which holds the stone in place. Spalls at horizontal surfaces are especially susceptible to this type of water damage.

Three options are outlined for repair of these areas. Option I represents a more permanent repair with better appearance but it is more costly than Option II. Repair stone with one of the following methods:

Option I: Replace In Kind

1. Carefully remove entire block to be replaced as indicated on construction documents.
2. Verify with structural engineer the number and placement of new stone anchorage.
3. Set new stone and repoint. Mortar color, type and tool to match original.

Option II: Dutchman Replacement

1. Carefully saw cut and remove area to be repaired. All surfaces to be plumb, true, and level.
2. Cut replacement block of matching stone to fit within area that has been removed. Allow for flush joints.
3. Clean surfaces to completely remove all dirt and staining.
4. Verify with Structural Engineer where epoxy, pins, and other attachments are required.
5. Set dutchman and repoint. Mortar color, type, and tool to match original.

Option III: Restoration Mortar Patch

1. Mask and protect adjacent surfaces.
2. Remove all loose or cracked material back to sound material.
3. Clean and prepare surface to accept patch material.

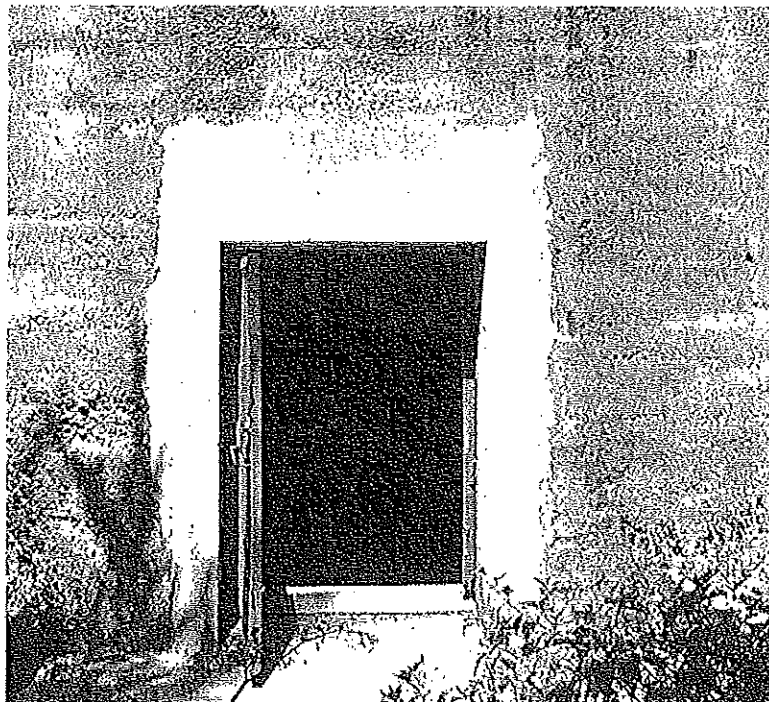


Figure 22: Minor repair work is needed on the granite door frame.

4. Verify with Structural Engineer where pins are required.
5. Mix restoration mortar to match existing adjacent original surface as recommended by manufacturer.
6. Apply patch material and build up as required to match original surface profile.
7. Cure patch as recommended by manufacturer.
8. Finish patch flush with adjacent surface.

BIOLOGICAL GROWTH

Description/Condition: Biological growth includes algae, lichen, and fungi, including dry rot. The beginnings of these problems are evident in the staining visible at damp areas of the exterior. Biological organisms are not only unsightly but can, especially in the case of dry rot, cause serious damage. Dry rot is the decay of wood caused by the fungus *Serpula lacrymans*. It grows in long thin yellow fibers inside the wood, attacking the cellulose and hemicellulose to break it down into its sugar components. This breakdown causes shrinkage, loss of strength and cracking.

Recommendations: Survey all exterior siding and woodwork, both to locate active infestations and to identify and locate sources of moisture ingress. Treat active infestations as follows:

1. Growths other than dry rot may be treated with a fungicide.
2. Active dry rot infestations may be treated as follows:
 - a. Replace severely deteriorated members in kind. Pretreat new wood with wood preservative, and back-prime prior to installation.
 - b. Treat minor deterioration with repeated applications of liquid wood preservative. Then apply epoxy consolidant and epoxy paste filler prior to painting.

VEGETATION

Description: Vegetation is heavy on the leeward side of the windmill.

Condition: Heavy vegetation and lack of sunlight holds moisture close to the building and promotes the development of biological growth.

Recommendation: Remove or trim vegetation adjacent to the building. Cut back trees, bushes and vines in contact with the building. Swinging tree branches could cause impact damage. Roots can damage building foundations, underground building services, and drainage systems. Additionally, vegetation holds moisture against the building, providing an ideal climate for biological growth.

METAL FLASHINGS

Description/Condition: All existing metal flashings have been removed.

Recommendation: Replace flashing in poor condition with compatible watertight flashings.

1. Survey roof for areas with missing flashing and flashing in poor condition.
2. Replace missing and poor flashings with new watertight flashings. Select new copper flashing or flashing of a material that is compatible with copper.

DRAINAGE

Description: No drainage system currently exists.

Recommendation: Install a drainage system. Ensure drainage away from walls at grade. If necessary, regrade adjacent to the walls or install footing drains.

SOILING AND STAINING

Description: The building, particularly the concrete base, is stained.

Condition: The general soiling that exists on the building exterior is the result of biological growth and soil runoff. In addition, localized problems include corrosion stains and animal droppings. Besides being an aesthetic issue, these residues could cause permanent staining and deposit water-soluble salts that attack architectural materials.

Recommendation: Clean the building. Tests should be performed to establish the most appropriate and gentlest method for cleaning and removing stains.



Figure 23: Water staining is visible on the wood cladding.

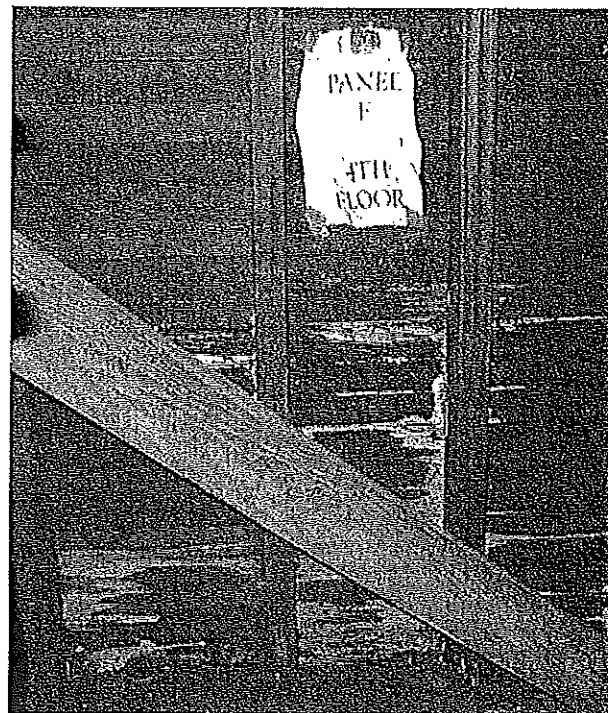


Figure 24: Dry rot is fairly widespread.

GENERAL INTERIOR RECOMMENDATIONS

As with exteriors, *The Secretary of the Interiors Standards for Restoration* should provide the framework for all interior work at the Murphy Windmill. *The Uniform Code for Building Conservation* and *The State Historical Building Code* should be used as the prevailing codes. Where scheduled improvements will result in extensive disturbance of existing important spaces, a professional architectural photographer should be retained to record the spaces prior to the start of construction. In addition, the following are recommended approaches for rehabilitating historic interiors, excerpted from *Preservation Brief 18: Rehabilitating Interiors in Historic Buildings—Identifying and Preserving Character—Defining Elements*:

1. Retain and preserve floor plans and interior spaces that are important in defining the overall historic character of the building. This includes the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, reception halls, entrance halls, double parlors, theaters, auditoriums, and important industrial or commercial use spaces. Put service functions required by the building's new use, such as bathrooms, mechanical equipment, and office machines, in secondary spaces.
2. Avoid subdividing spaces that are characteristic of a building type or style or that are directly associated with specific persons or patterns of events. Space may be subdivided both vertically through the insertion of new partitions or horizontally through insertion of new floors or mezzanines. The insertion of new additional floors should be considered only when they will not damage or destroy the structural system or obscure, damage, or destroy character-defining spaces, features, or finishes. If rooms have already been subdivided through an earlier insensitive renovation, consider removing the partitions and restoring the room to its original proportions and size.
3. Avoid making new cuts in floors and ceilings where such cuts would change character-defining spaces and the historic configuration of such spaces. Inserting of a new atrium or a lightwell is appropriate only in very limited situations where the existing interiors are not historically or architecturally distinguished.
4. Avoid installing dropped ceilings below ornamental ceilings or in rooms where high ceilings are part of the building's character. In addition to obscuring or destroying significant details, such treatments will also change the space's proportions. If dropped ceilings are installed in buildings that lack character-defining spaces, such as mills and factories, they should be well set back from the windows so they are not visible from the exterior.
5. Retain and preserve interior features and finishes that are important in defining the overall historic character of the building. This might include columns, doors, cornices, baseboards, fireplaces and mantels, paneling, light fixtures, elevator cabs, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stenciling, marbleizing, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings.
6. Retain stairs in their historic configuration and location. If a second means of egress is required, consider constructing new stairs in secondary spaces. The application of fire-retardant coatings, such as intumescent paints; the installation of fire suppression systems, such as sprinklers; and the construction of glass enclosures can in many cases permit retention of stairs and other character-defining features.

7. Retain and preserve visible features of early mechanical systems that are important in defining the overall historic character of the building, such as radiators, vents, fans, grilles, plumbing fixtures, switch plates, and lights. If new heating, air conditioning, lighting and plumbing systems are installed, they should be done in a way that does not destroy character-defining spaces, features and finishes. Ducts, pipes, and wiring should be installed as inconspicuously as possible: in secondary spaces, in the attic or basement if possible, or in closets.
8. Avoid "furring out" perimeter walls for insulation purposes. This requires unnecessary removal of window trim and can change a room's proportions. Consider alternative means of improving thermal performance, such as installing insulation in attics and basements and adding storm windows.
9. Avoid removing paint and plaster from traditionally finished surfaces, to expose masonry and wood. Conversely, avoid painting previously unpainted millwork. Repairing deteriorated plasterwork is encouraged. If the plaster is too deteriorated to save, and the walls and ceilings are not highly ornamented, gypsum board may be an acceptable replacement material. The use of paint colors appropriate to the period of the building's construction is encouraged.
10. Avoid using destructive methods—propane and butane torches or sandblasting—to remove paint or other coatings from historic features. Avoid harsh cleaning agents that can change the appearance of wood.

INTERIOR CONDITIONS AND RECOMMENDATIONS

MOISTURE CONTROL

Description: Moisture intrusion is a serious problem in any deteriorated structure. Moisture, in the form of water vapor and liquid water, is entering the Murphy Windmill in assorted places, including the floors, window openings, and roof (figure 23). This moisture is the cause of several degenerative conditions, both from the moisture directly and the organisms it supports.



Figure 25: Dry rot has spread to structural members.

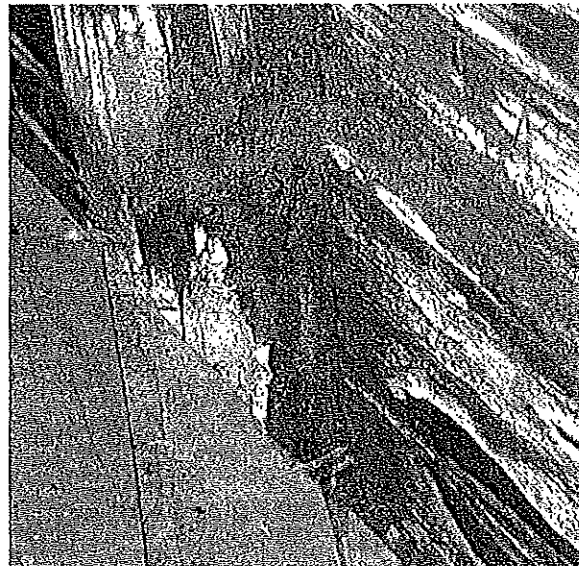


Figure 26: The presence of high moisture levels is necessary for the growth of fungus.

Condition: The full scale deterioration of the roof over time resulted in its large-scale failure. The failure of the roof and window openings allowed large amounts of liquid water to penetrate into the structure. A second point of entry for liquid water are the sash pockets on the window frames. Water vapor penetration must also be addressed. Water vapor can enter through any area that is not weather tight. It can enter through any opening to the exterior, as well as any deteriorated element with both an exterior and interior exposure. Without proper ventilation, water vapor can cause a significant amount of damage in an indirect way. The presence of moisture is necessary for the growth of fungus, including dry rot and mildew, as well as for insects. The presence of these destructive forces is evident throughout the structure (figure 26).

Recommendation: Seal the building properly. Once sealed, provide proper ventilation. Moisture levels must be kept below 60% to prevent the growth of fungus, and the moisture content of wood below 20% to prevent dry rot.

FLOORS

Description: Flooring material within the building's period of significance include 3 3/8" Douglas Fir flooring.

Condition: The floors vary in condition from fair to poor. The wood floors are repairable.

Recommendation: Inspect floor for dry rot and other damage. Retain, repair and clean wood floors. Replace in kind where required.

1. Survey finishes on all floors.
2. Retain, repair and clean all wood floors. Patch damaged areas in kind.

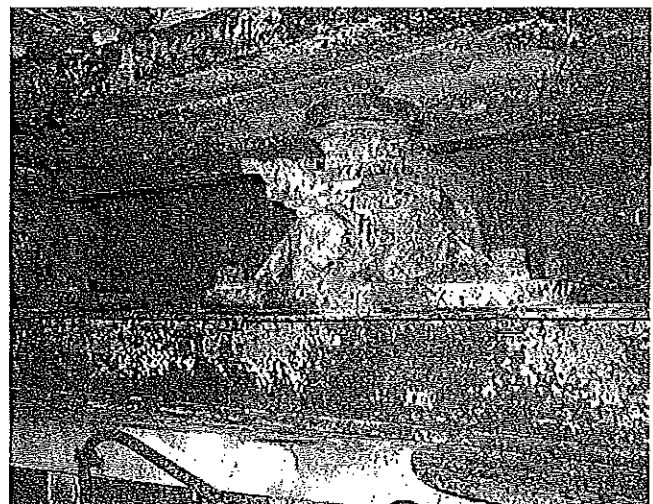


Figure 27: The iron and steel mechanisms have severely deteriorated.

IRON AND STEEL MECHANISMS

Description: The operating mechanisms of the windmill, located in the cap, are steel.

Condition: These components have been removed and will be restored in the Netherlands. The existing components are severely deteriorated, due to the lack of maintenance and proximity to ocean weathering capabilities (figure 27).

Recommendation: The metal components must be rigorously maintained in order to function properly and resist the ravages of elements and time.

1. Survey the metal components on a regular basis for corrosion.
2. Maintain the finish on the metal components. Coatings and paint are designed to be a sacrificial coating, with the purpose of protecting the object below. Coatings will protect the metal from corrosion, ensuring the life of the mechanisms.
3. Inspect metal fasteners for metal fatigue. Replace in kind where necessary.

LIGHT FIXTURES

Description: One light fixture, possibly original, exists on the first level.

Condition: The one existing light fixture is in fair condition.

Recommendation: Preserve, repair and reuse original light fixtures. Replace inappropriate fixtures with compatible efficient fixtures wherever possible. When choosing new fixtures, install period appropriate fixtures. Interior light quality directly affects the perception of both space and material finishes.

1. Retain all original fixtures.
2. Thoroughly research period appropriate fixtures, choosing the most suitable fixtures for installation.
3. Balance energy conservation with building conservation and the sympathetic treatment of interior spaces. Utilize the State Historical Building Code exemption from Title 24 energy requirements.

PEST CONTROL

Description: The windmill is currently home to a large population of ravens and pigeons.

Condition: Bird droppings and other evidence of animal activity is present throughout the windmill.

Recommendation: Remove ravens, pigeons, crows, bats, mice, bees, wasp nests, and other pests. While most of the pests listed above present more of an inconvenience than a health hazard, some present a serious problem. Bats and pigeons, for example, have been linked to ornithosis, histoplasmosis, and meningitis. Their careful removal and cleaning of excrement is a high priority. Control pests and clean as follows.

1. Establish a program to remove all bats, pigeons, mice, wasp nests, beehives, and other pests from the building.
2. Clean the building. Close attention should be paid to the proper cleaning of pigeon and bat guano. Improper cleaning can result in health hazards for future occupants and damage the building.

3. Seal chimney flues and air vents with wire mesh.
4. Seal all additional possible entry points.
5. Fumigate for insects.
6. Arrange for a termite inspection.

ENDNOTES

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- "Views and Vistas of the John McLaren Society," Windmills Restoration Edition, 1971.
- "Windmill Restoration, Howard Lim," October 22, 1980. Courtesy San Francisco Bureau of Architecture.

CREDITS

CITY AND COUNTY OF SAN FRANCISCO

Lena Ch'en, Project Manager

Lucas Verbij, Verbij Joogmade, B.V., Windmill Design and Construction Since 1868.

CAREY & CO., INC.

Alice Carey, Principal

Bill Sugaya, Project Coordinator

Charles Duncan, Project Manager

Kathleen Forrest, Architectural Conservator

Johanna Street, Project Captain

Kimberly Butt, Preservation Specialist

Tess Kornfield, Intern

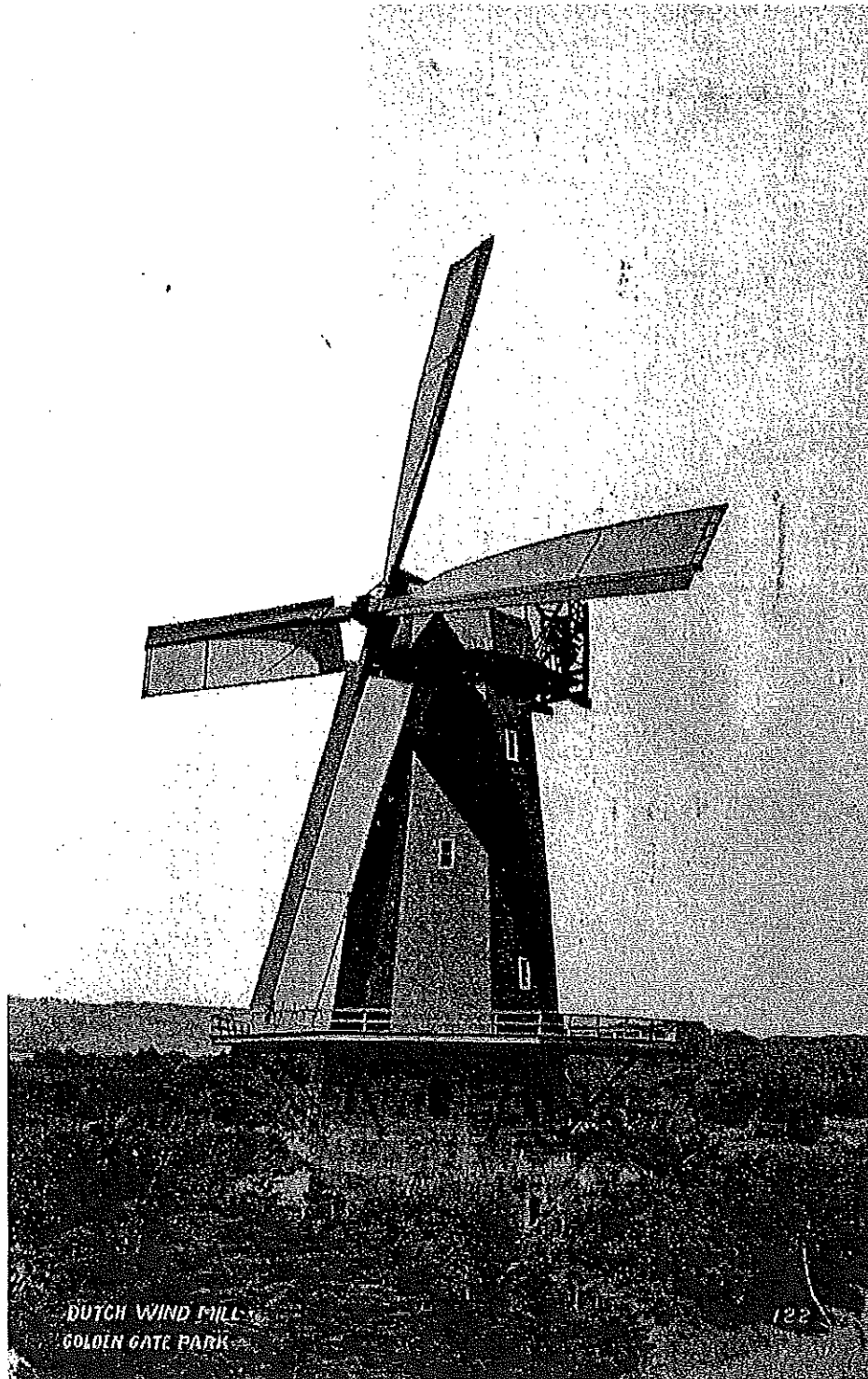
APPENDIX A
HISTORIC PHOTOGRAPHS



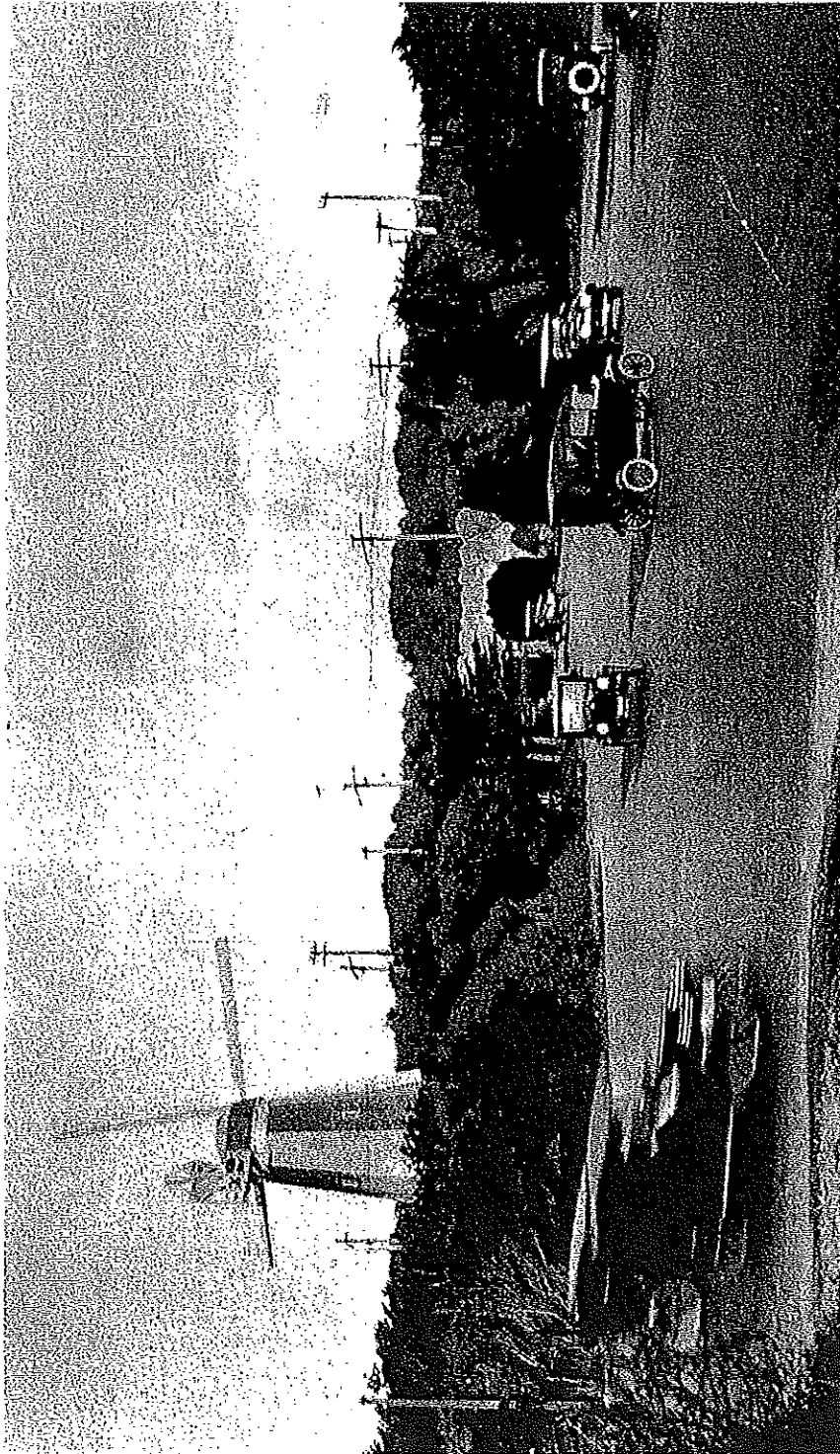
The Murphy Windmill under construction. California Historical Society, gift of Miss Elizabeth Boyter (2-1955); FN-32851.



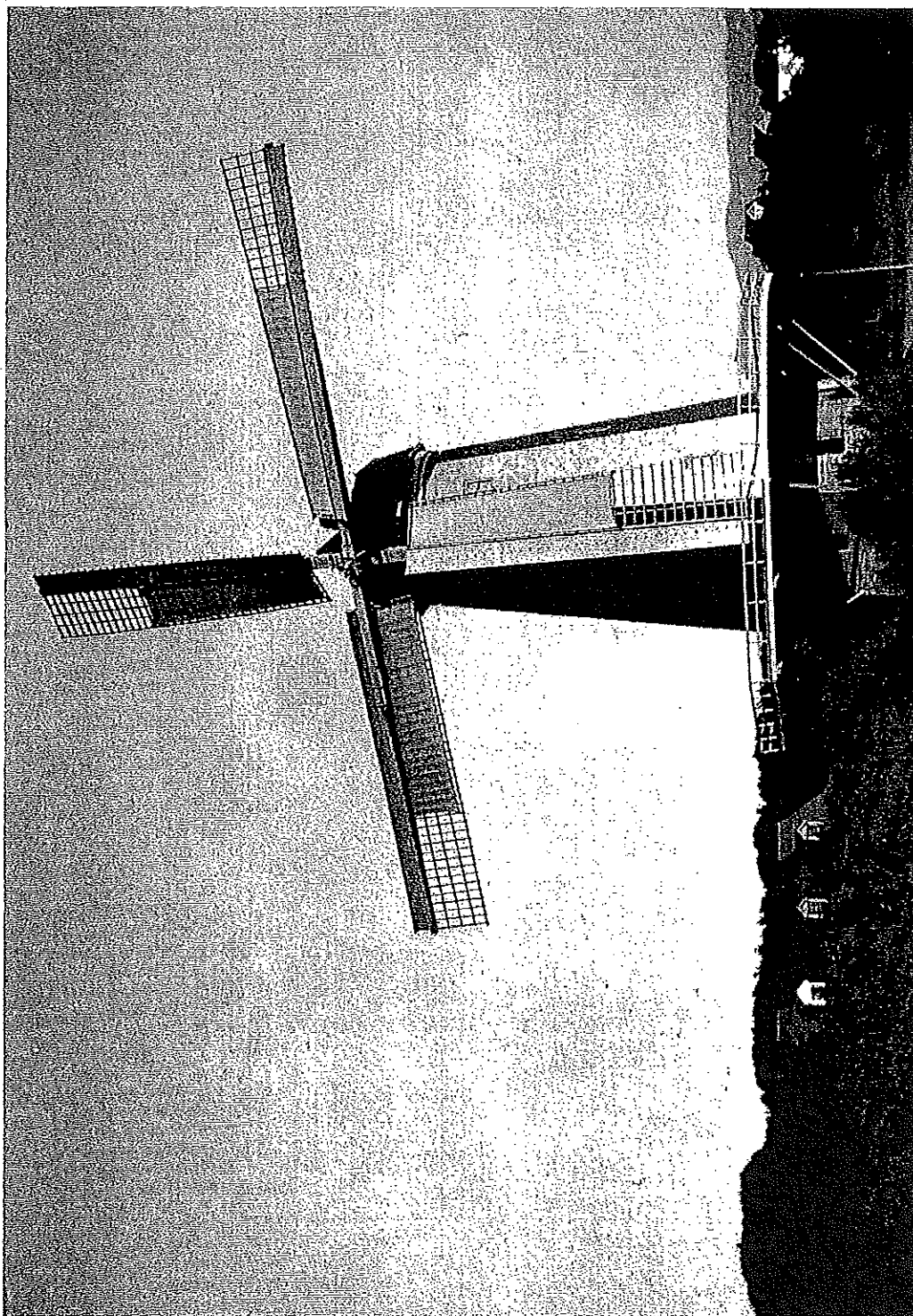
1907, November 5. San Francisco History Center, San Francisco Public Library.



A postcard dated 1911. California Historical Society; FN-35177.



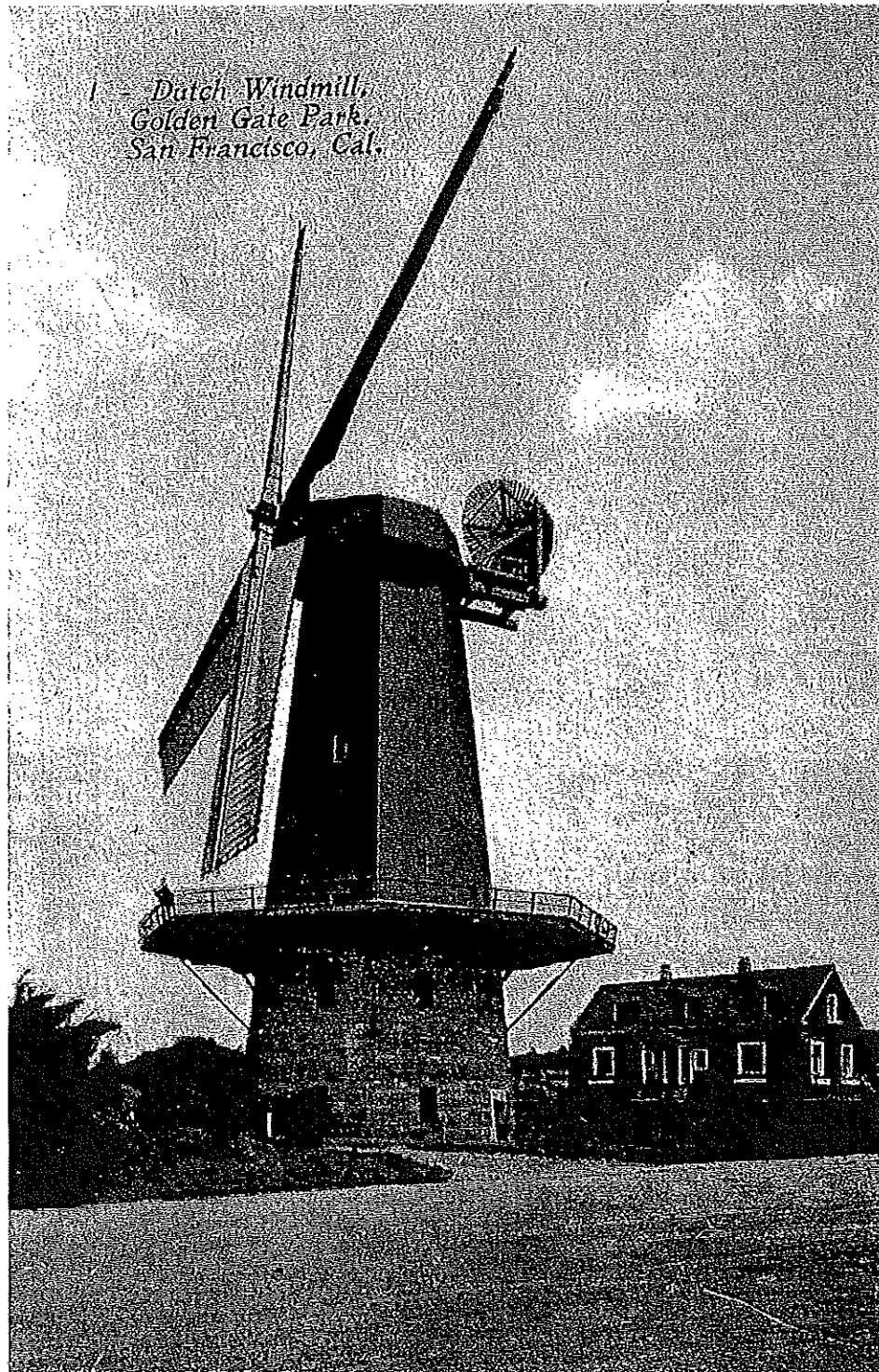
The Murphy Windmill during the late nineteen-teens or twenties. California Historical Society; FN-24858.



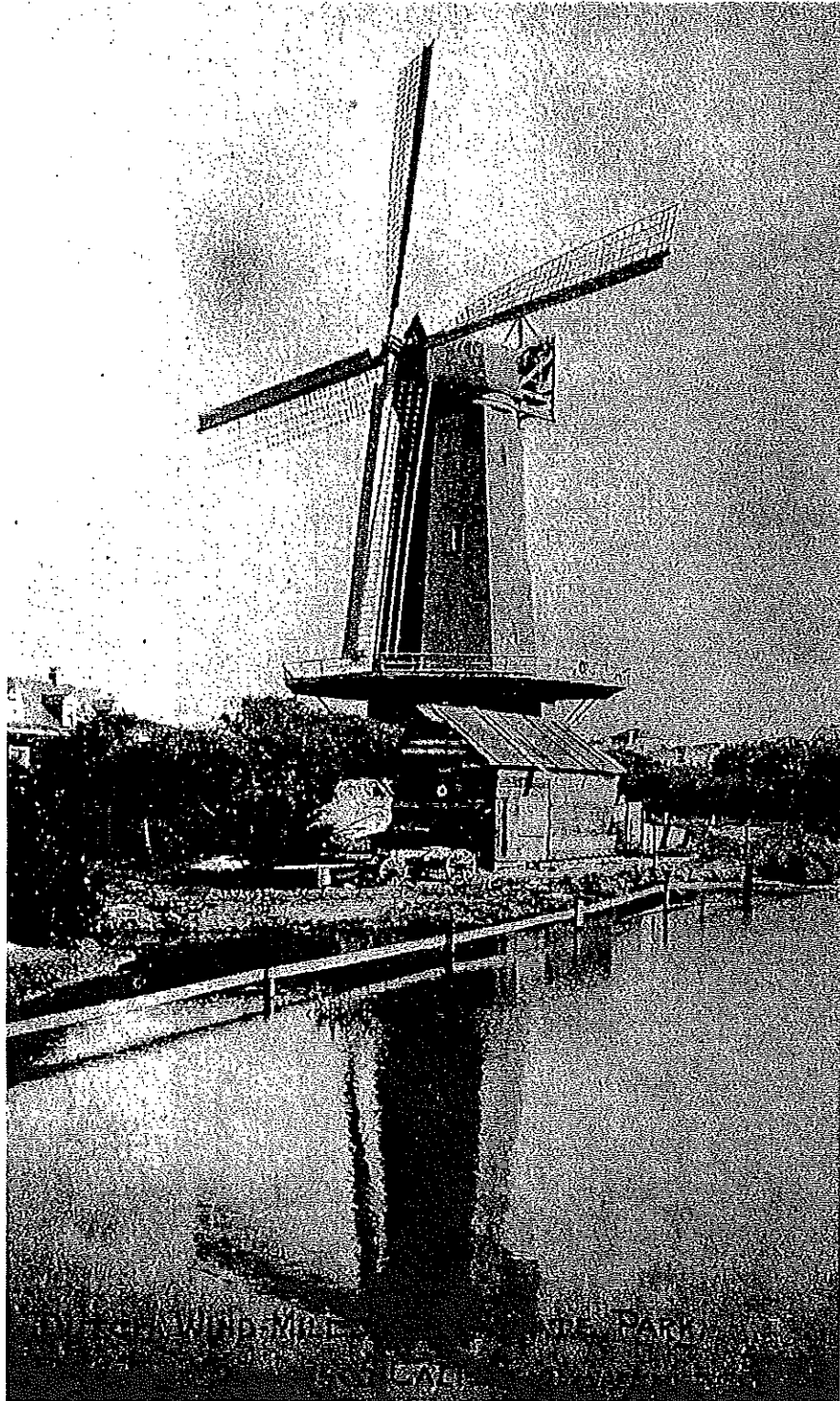
C. 1920. *California Historical Society, San Francisco Historical Society Collection; FN-32850.*



C. 1926. California Historical Society, MSS 1616-Wiggins; FN-21080.



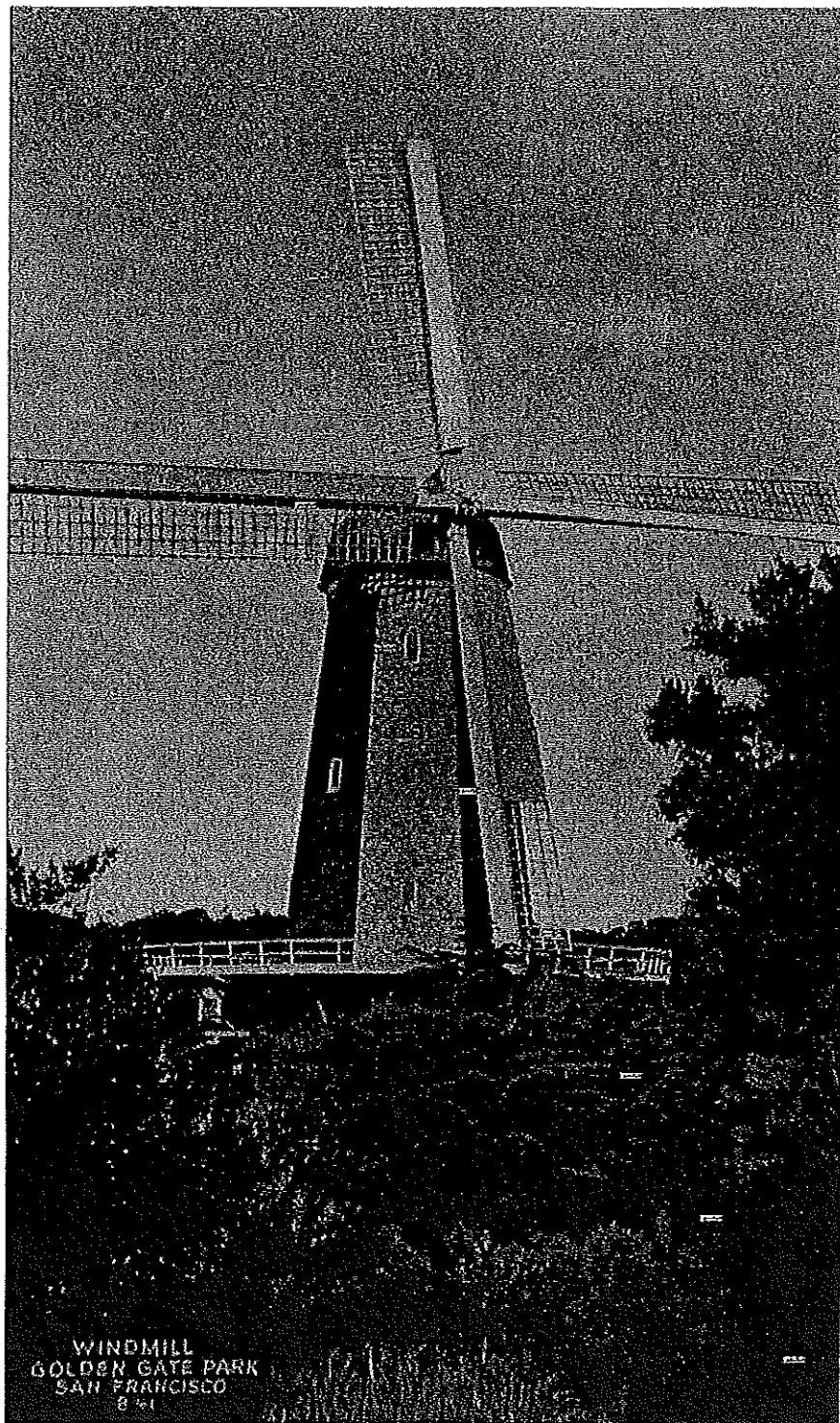
Postcard, no date. California Historical Society; FN-35178.



Postcard, no date. California Historical Society; FN-35179.



No date. California Historical Society; FN-35182.



Postcard, no date. California Historical Society; FN-35175.



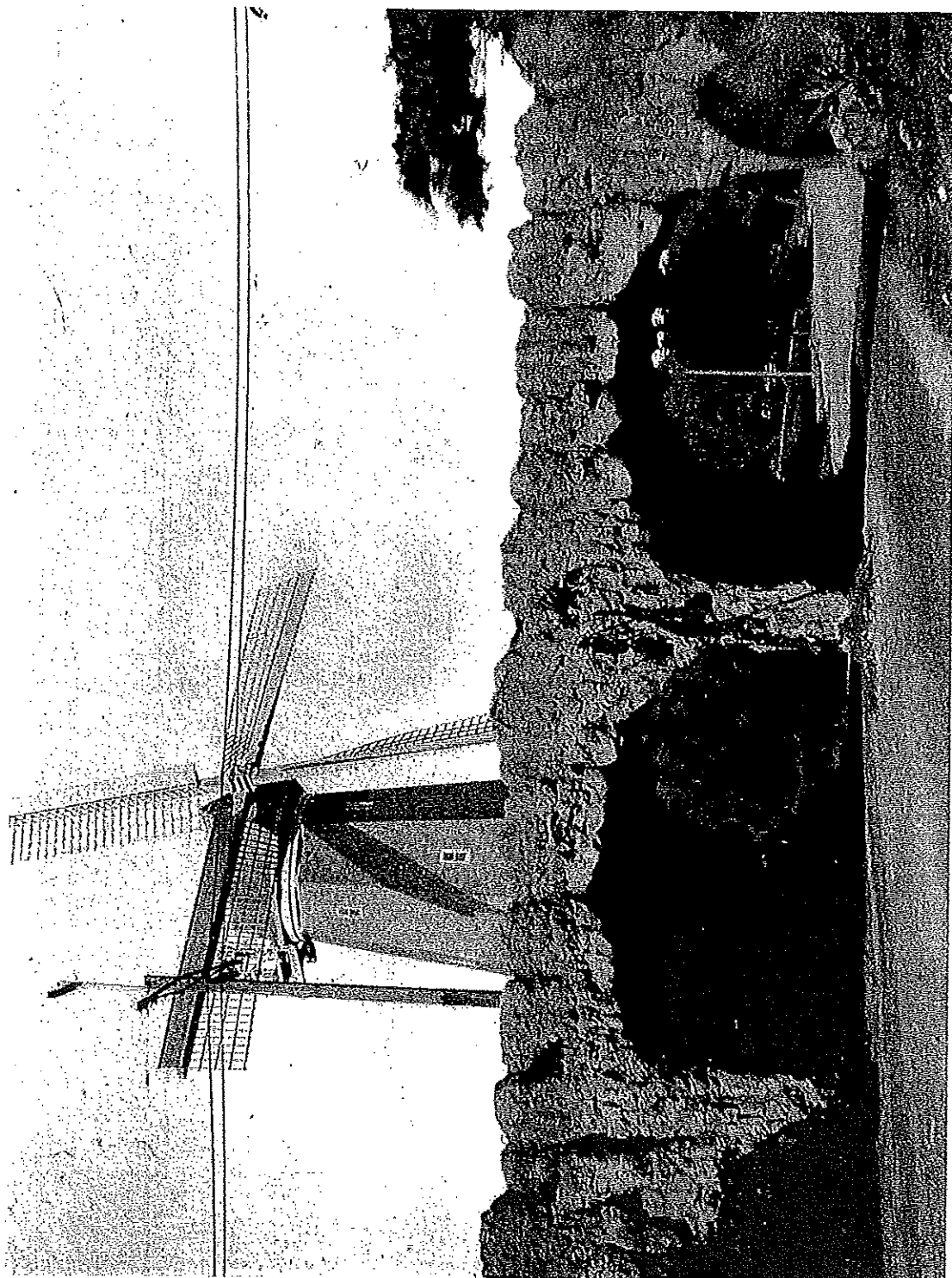
DUTCH WINDMILL, WESTERN ENTRANCE TO GOLDEN GATE PARK, SAN FRANCISCO, CALIF.

93

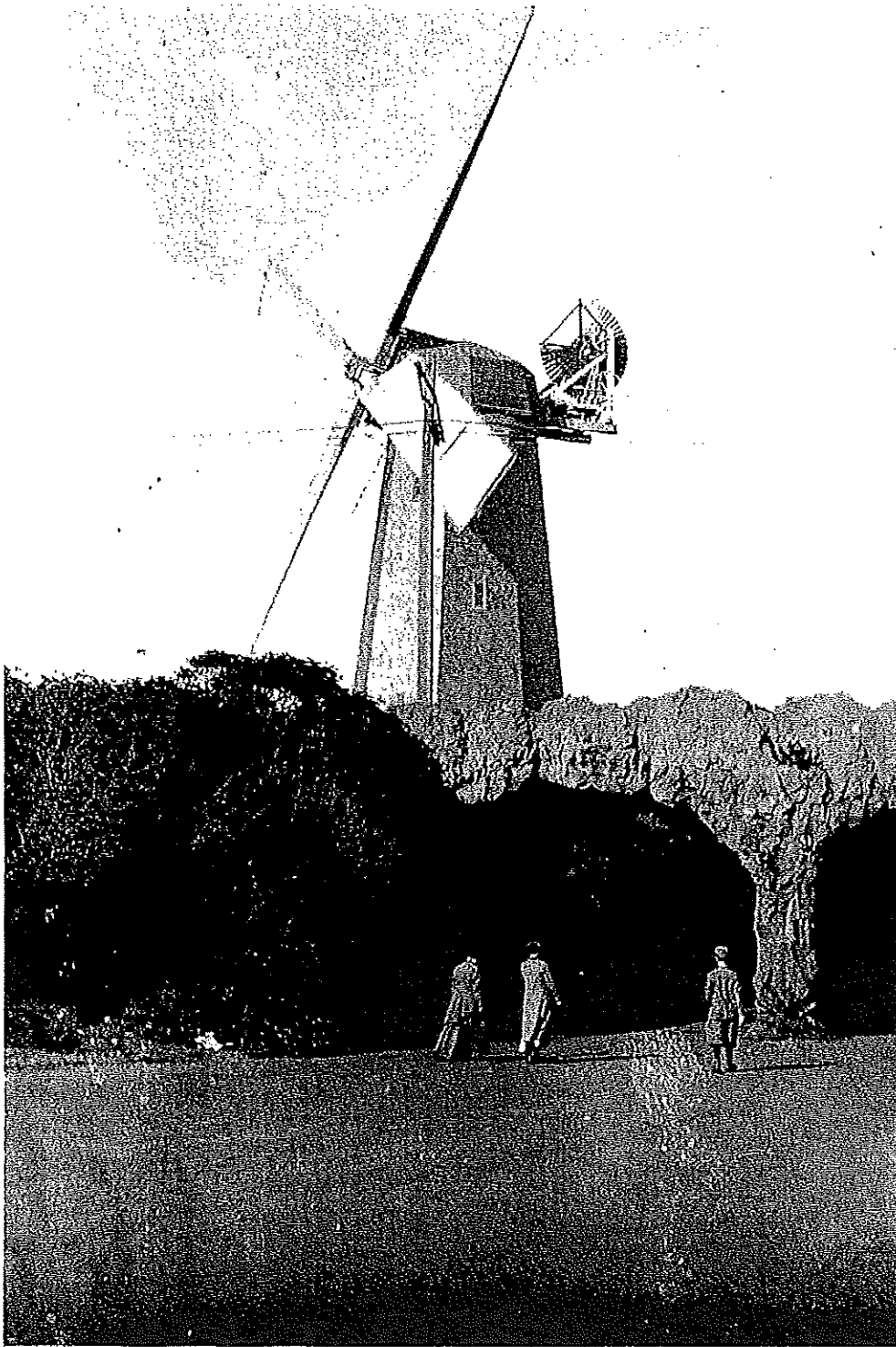
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© STANLEY A. PILTZ

No date. California Historical Society; FN-35176.



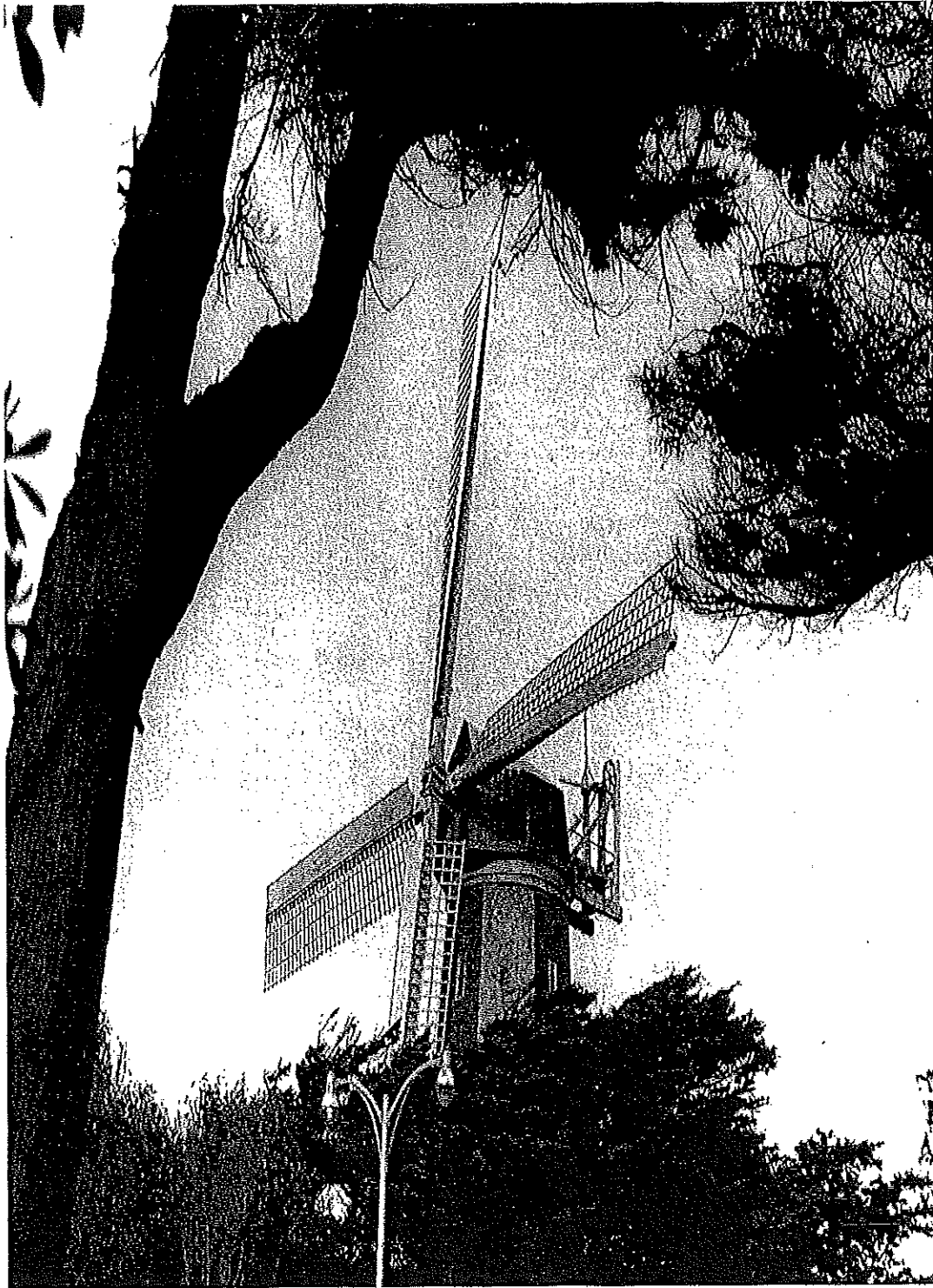
No date. California Historical Society; FN-35180.



No date. California Historical Society; FN-35181.



May 23, 1943. San Francisco History Center, San Francisco Public Library.



January 17, 1958. San Francisco History Center, San Francisco Public Library.

APPLICATION FOR Certificate of Appropriateness

1 Owner/Applicant Information

PROPERTY OWNER'S NAME:

City and County of San Francisco - Recreation and Park Department

PROPERTY OWNER'S ADDRESS:

San Francisco Recreation and Park Department
City and County of San Francisco
300 Van Ness Avenue, 3rd Floor
San Francisco, CA 94102

TELEPHONE:

()

EMAIL:

APPLICANT'S NAME:

Dan Mauer, Project Manager, Capital Improvements Division, S.F. Recreation and Park Department

Same as Above ☐

APPLICANT'S ADDRESS:

San Francisco Recreation and Park Department
City and County of San Francisco
300 Van Ness Avenue, 3rd Floor
San Francisco, CA 94102

TELEPHONE:

(415) 581-2542

EMAIL:

dan.mauer@sfgov.org

CONTACT FOR PROJECT INFORMATION

CONTACT PERSON'S ADDRESS:

TELEPHONE:

()

EMAIL:

Same as Above ☒

2 Location and Classification

STREET ADDRESS OF PROJECT:

Martin Luther King Jr. Way

ZIP CODE:

94121

CROSS STREETS:

Lincoln Way / Great Highway / John F. Kennedy Drive

ASSESSORS BLOCK/LOT:

1700 / 001

LOT DIMENSIONS:

N/A

LOT AREA (SQ. FT.):

4,195,976

ZONING DISTRICT:

Public Use

HEIGHT/BULK DISTRICT:

Open Space

ARTICLE 10 LANDMARK NUMBER:

210

HISTORIC DISTRICT:

Golden Gate Park NRHP District

3 Project Description

Exterior - Gallery rail alteration / replace exterior doors / reduced canvas sail configuration / safety additions to the Fan Tail

Interior - new metal interior stairs / upgraded lighting fixtures / Miscellaneous safety upgrades

Not yet filed

Building Permit Application No. _____

Date Filed: _____

4. Project Summary Table

If you are not sure of the eventual size of the project, provide the maximum estimates.

GROSS SQUARE FOOTAGE (GSF)	EXISTING USES	EXISTING USES TO BE RETAINED	NET NEW CONSTRUCTION AND/OR ADDITION	PROJECT TOTALS
Residential				
Retail				
Office				
Industrial / PDR Production, Distribution, & Repair				
Parking				
Other (Specify Use)	Operating windmill	Yes	Safety upgrades / repairs	No change
Total GSF				

PROJECT FEATURES	EXISTING USES	EXISTING USES TO BE RETAINED	NET NEW CONSTRUCTION AND/OR ADDITION	PROJECT TOTALS
Dwelling Units				
Hotel Rooms				
Parking Spaces				
Loading Spaces				
Number of Buildings	One	Yes	No change	No change
Height of Building(s)	100 feet	Yes	No change	No change
Number of Stories	Six	Yes	No change	No change

Please provide a narrative project description, and describe any additional project features that are not included in this table:

Exterior - Code compliance improvements to exterior Gallery railing. Replace deteriorated existing non-historic doors at entry and gallery level. Additions to Fan Tail, and Sail Stocks for operator safety.

Interior - Replace existing non-historic stairs with OSHA and CBC compliant metal stairs for operator safety. Replace existing non-historic lighting with new fixtures providing higher illumination. Install new metal guard rails and machinery guards.

Please see a detailed project scope and narrative in the project packet.

Findings of Compliance with Preservation Standards

FINDINGS OF COMPLIANCE WITH PRESERVATION STANDARDS		YES	NO	N/A
1	Is the property being used as it was historically?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Does the new use have minimal impact on distinctive materials, features, spaces, and spatial relationship?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Is the historic character of the property being maintained due to minimal changes of the above listed characteristics?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Are the design changes creating a false sense of history of historical development, possible from features or elements taken from other historical properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Are there elements of the property that were not initially significant but have acquired their own historical significance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Have the elements referenced in Finding 5 been retained and preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Have distinctive materials, features, finishes, and construction techniques or examples of fine craftsmanship that characterize the property been preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are all deteriorating historic features being repaired per the Secretary of the Interior Standards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Are there historic features that have deteriorated and need to be replaced?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Do the replacement features match in design, color, texture, and, where possible, materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Are any specified chemical or physical treatments being undertaken on historic materials using the gentlest means possible?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Are all archeological resources being protected and preserved in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Do exterior alterations or related new construction preserve historic materials, features, and spatial relationships that are characteristic to the property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Are exterior alterations differentiated from the old, but still compatible with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	If any alterations are removed one day in the future, will the forms and integrity of the historic property and environment be preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please summarize how your project meets the Secretary of the Interior's *Standards for the Treatment of Historic Properties*, in particular the *Guidelines for Rehabilitation* and will retain character-defining features of the building and/or district:

The interior project elements are safety upgrades which are not visible from the exterior. The exterior upgrades, to the Gallery railing involve a minor dimensional change in height and the addition of a toe kick at the Gallery deck level that will maintain the original design color and materiality and have no impact on the historic character of the railing. The operator safety upgrades involve the installation of tie off points, at the Sail Stocks and Fan Tail which will have no visual impact. A permanent ladder will replace a temporary ladder at the Fan Tail and structural angles will stiffen the Fantail Deck. The Fan Tail is ninety feet above the ground, and the additions will have no visual impact. All proposed work is reversible, and the historic character of the structure will be maintained.

Findings of Compliance with General Preservation Standards

In reviewing applications for Certificate of Appropriateness the Historic Preservation Commission, Department staff, Board of Appeals and/or Board of Supervisors, and the Planning Commission shall be governed by *The Secretary of the Interior's Standards for the Treatment of Historic Properties* pursuant to Section 1006.6 of the Planning Code. Please respond to each statement completely (Note: Attach continuation sheets, if necessary). Give reasons as to *how* and *why* the project meets the ten Standards rather than merely concluding that it does so. IF A GIVEN REQUIREMENT DOES NOT APPLY TO YOUR PROJECT, EXPLAIN WHY IT DOES NOT.

1. The property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships;
The property will be used as it was historically as an operating windmill and as a major contributing historic element to Golden Gate Park. No change of use is proposed as part of the scope of work.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided;

The proposed project generally involves safety upgrades that are additive. The safety upgrades will not cause the removal of materials, or alter features, spaces or spatial relationships. The non-historic wooden stairs installed during the restoration project will be replaced with metal stairs that will generally follow the original stair pattern with concessions to new geometries required for code compliant safety. The only element being removed is the concrete pump bed on the interior ground floor. This removal was previously approved in the original C of A for the rehabilitation project (Case Report No. 2001.0732A) in 2001. The removal was not implemented at that time.

3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken;

This project proposes operator safety upgrades. There are no elements in the project that will create a false sense of historical development, or add conjectural features.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved;

Apart from the recent work associated with the Windmill's rehabilitation, there have been no changes to the structure that have acquired historic significance.

5. Distinctive materials, features, finishes, and construction techniques or examples of fine craftsmanship that characterize a property will be preserved;

All distinctive materials, features, finishes and construction techniques will remain unaltered in the course of the proposed safety upgrade work.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence;

The rehabilitation project completed in 2011 addressed and reversed the severely deteriorated state of the Murphy Windmill. All work adhered to the Secretary of the Interior's Standards for the Treatment of Historic Properties - Rehabilitation Treatment. This project proposes adding operator safety features without altering the historic fabric or character of the building.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used;

Cleaning using chemical or physical treatments is not in the project scope.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken;

This project does not involve ground disturbing activity, and no archeological resources are contained within the windmill itself.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment;

The project scope does not contain new additions, but rather alterations designed to improve operator safety as well as door replacements due to weathering, and security. The proposed increased height in the Gallery railing (maximum five inches) will be accomplished using the same materials currently used in the railing. The replacement doors will be of the same design replicated in more weather resistant materials. The new interior stairs will be steel and will be clearly differentiated from the wood stairs built as part of the rehabilitation completed in 2011. There is no work proposed that will affect materials, features, size, scale proportion or massing because of the small scale of the alterations.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would not be impaired;

There are no building additions or adjacent new construction in the proposed scope of work. All safety upgrades are small in scale, additive, and reversible.

PLEASE NOTE: For all applications pertaining to buildings located within Historic Districts, the proposed work must comply with all applicable standards and guidelines set forth in the corresponding Appendix which describes the District, in addition to the applicable standards and requirements set forth in Section 1006.6. In the event of any conflict between the standards of Section 1006.6 and the standards contained within the Appendix which describes the District, the more protective shall prevail.

Priority General Plan Policies Findings

Proposition M was adopted by the voters on November 4, 1986. It requires that the City shall find that proposed projects and demolitions are consistent with eight priority policies set forth in Section 101.1 of the City Planning Code. These eight policies are listed below. Please state how the project is consistent or inconsistent with each policy. Each statement should refer to specific circumstances or conditions applicable to the property. Each policy must have a response. IF A GIVEN POLICY DOES NOT APPLY TO YOUR PROJECT, EXPLAIN WHY IT DOES NOT.

1. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses enhanced;

The proposed project is small in scope and primarily involves safety upgrades contained within the footprint of the structure. It will have no bearing on neighborhood serving retail uses.

2. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods;

The proposed project scope will have no impact on housing or neighborhood character.

3. That the City's supply of affordable housing be preserved and enhanced;

The proposed project will have no impact on affordable housing.

4. That commuter traffic not impede Muni transit service or overburden our streets or neighborhood parking;

The proposed project does not contain a traffic generating component.

5. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced;

The proposed project has no bearing on neighborhood economics, nor will it cause displacement due to commercial office development.

6. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake;

The Windmill rehabilitation project completed in 2011 included structural upgrades responding to lateral (wind and seismic) loads. The current proposed project scope involves operational safety upgrades unrelated to earthquake preparedness.

7. That landmarks and historic buildings be preserved; and

The Murphy Windmill as San Francisco Landmark #210. A major rehabilitation project was completed in 2011 saving the building from imminent collapse. The current proposed project includes safety upgrades and minor repairs and replacement of non-historic elements which adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties.

8. That our parks and open space and their access to sunlight and vistas be protected from development.

The proposed project will have no effect on open space, access to sunlight, or vistas.

Estimated Construction Costs

TYPE OF APPLICATION

Certificate of Appropriateness

OCCUPANCY CLASSIFICATION

U - Utility and Miscellaneous Groups - Tower

BUILDING TYPE

Type V

TOTAL GROSS SQUARE FEET OF CONSTRUCTION

Approximately 4,200 gross square feet interior space

BY PROPOSED USES

Windmill operation

ESTIMATED CONSTRUCTION COST

Budget - approximately \$600,000

ESTIMATE PREPARED BY

Construction Documents have not been generated. This application is for historical review only.

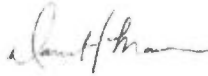
FEE ESTABLISHED

Applicant's Affidavit

Under penalty of perjury the following declarations are made:

- a. The undersigned is the owner or authorized agent of the owner of this property.
- b. The information presented is true and correct to the best of my knowledge.
- c. Other information or applications may be required.

Signature.



Digitally signed by Dan Mauer
DN: cn=Dan Mauer, o=Rec Park
Dept, ou=Capital Division,
email=dan.mauer@sfgov.org, c=US
Date: 2018.03.16 14:03:35 -07'00'

Date: March 16, 2018

Print name, and indicate whether owner, or authorized agent:

Dan Mauer, Owner

Owner / Authorized Agent (circle one)

Certificate of Appropriateness Application Submittal Checklist

The intent of this application is to provide Staff and the Historic Preservation Commission with sufficient information to understand and review the proposal. Receipt of the application and the accompanying materials by the Planning Department shall only serve the purpose of establishing a Planning Department file for the proposed project. After the file is established, the Department will review the application to determine whether the application is complete or whether additional information is required for the Certificate of Appropriateness process. Applications listed below submitted to the Planning Department must be accompanied by this checklist and all required materials. The checklist is to be completed and **signed by the applicant or authorized agent**.

REQUIRED MATERIALS (please check correct column)	CERTIFICATE OF APPROPRIATENESS
Application, with all blanks completed	<input checked="" type="checkbox"/>
Site Plan	<input checked="" type="checkbox"/>
Floor Plan	<input checked="" type="checkbox"/>
Elevations	<input checked="" type="checkbox"/>
Prop. M Findings	<input checked="" type="checkbox"/>
Historic photographs (if possible), and current photographs	<input checked="" type="checkbox"/>
Check payable to Planning Department	<input checked="" type="checkbox"/>
Original Application signed by owner or agent	<input checked="" type="checkbox"/>
Letter of authorization for agent	<input type="checkbox"/>
Other: Section Plan, Detail drawings (i.e. windows, door entries, trim), Specifications (for cleaning, repair, etc.) and/or product cut sheets for new elements (i.e. windows, doors)	<input checked="" type="checkbox"/>

NOTES

- ☐ Required Material. Write "N/A" if you believe the item is not applicable, (e.g. letter of authorization is not required if application is signed by property owner.)
☒ Typically would not apply. Nevertheless, in a specific case, staff may require the item.

PLEASE NOTE: The Historic Preservation Commission will require additional copies each of plans and color photographs in reduced sets (11" x 17") for the public hearing packets. If the application is for a demolition, additional materials not listed above may be required. All plans, drawings, photographs, mailing lists, maps and other materials required for the application must be included with the completed application form and cannot be "borrowed" from any related application.

For Department Use Only

Application received by Planning Department:

By:

Date:

FOR MORE INFORMATION
Call or visit the San Francisco Planning Department



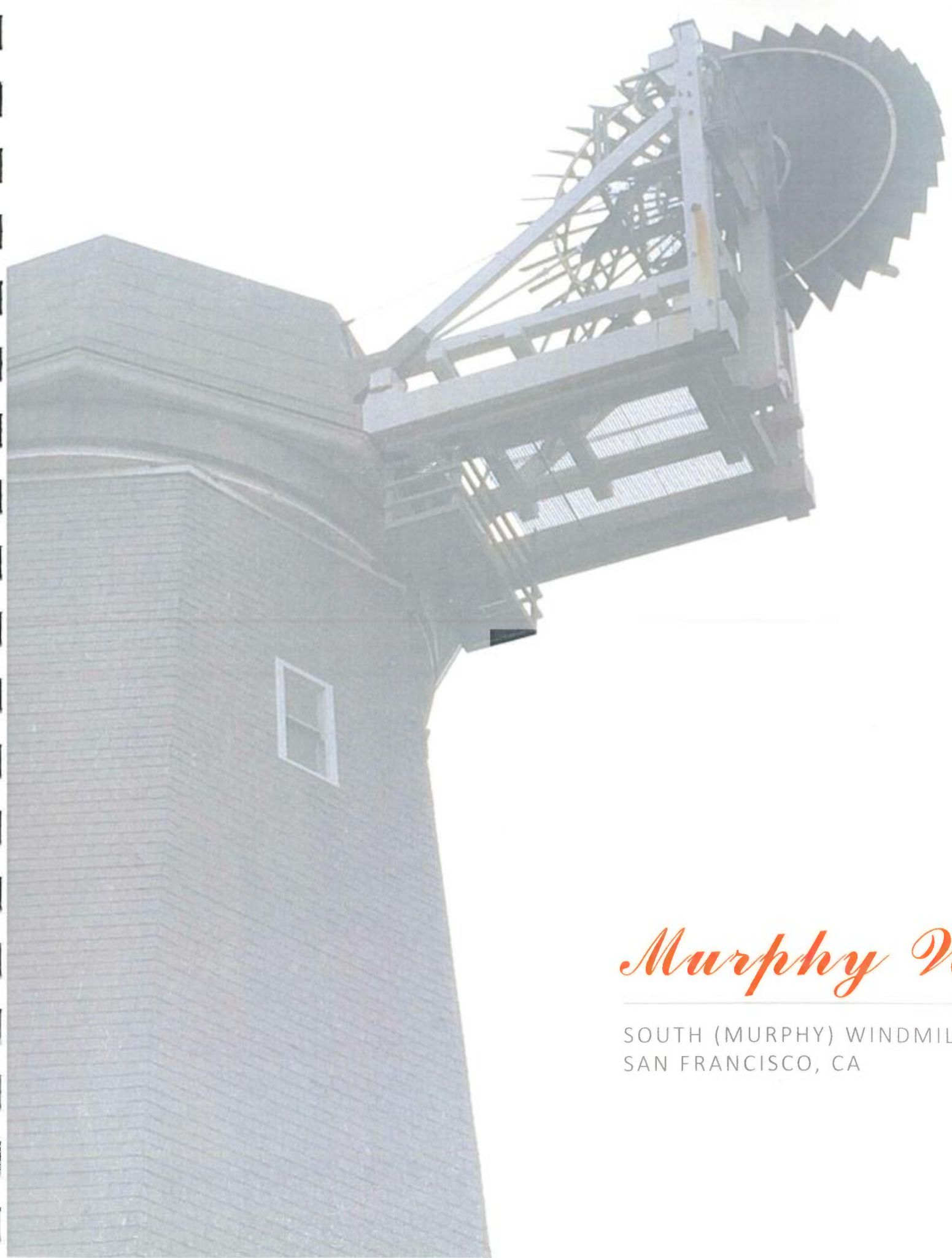
Central Reception
1650 Mission Street, Suite 400
San Francisco CA 94103-2479

TEL: **415.558.6378**
FAX: **415.558-6409**
WEB: <http://www.sfplanning.org>

Planning Information Center (PIC)
1660 Mission Street, First Floor
San Francisco CA 94103-2479

TEL: **415.558.6377**

Planning staff are available by phone and at the PIC counter.
No appointment is necessary.



Murphy Windmill

SOUTH (MURPHY) WINDMILL, GOLDEN GATE PARK
SAN FRANCISCO, CA

03.26.2018

HISTORICAL REVIEW

PAULETT TAGGART
ARCHITECTS

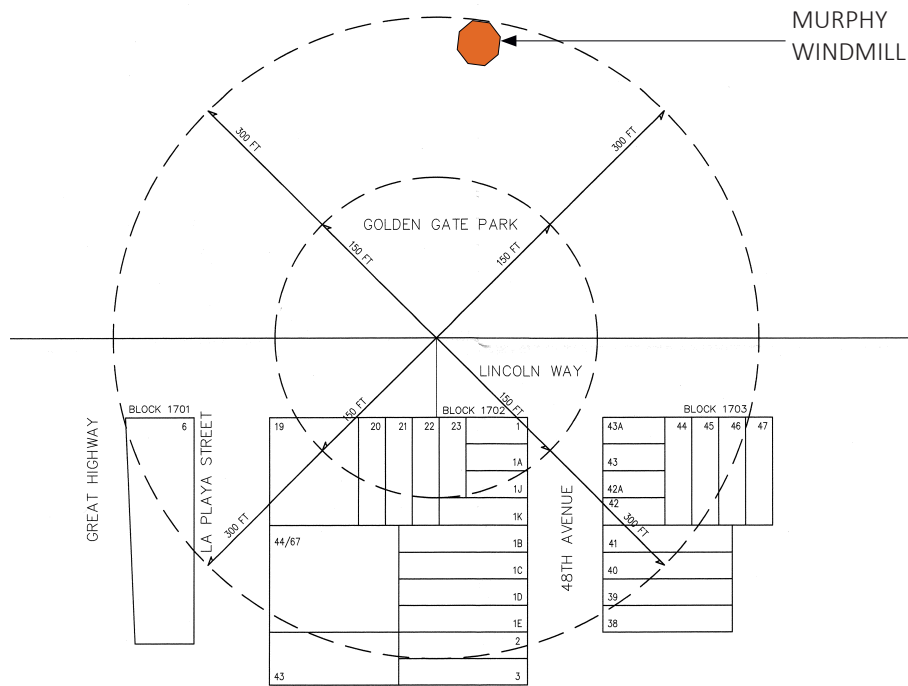
SOUTH MURPHY WINDMILL, GOLDEN GATE PARK SAN FRANCISCO, CA

DRAWING INDEX

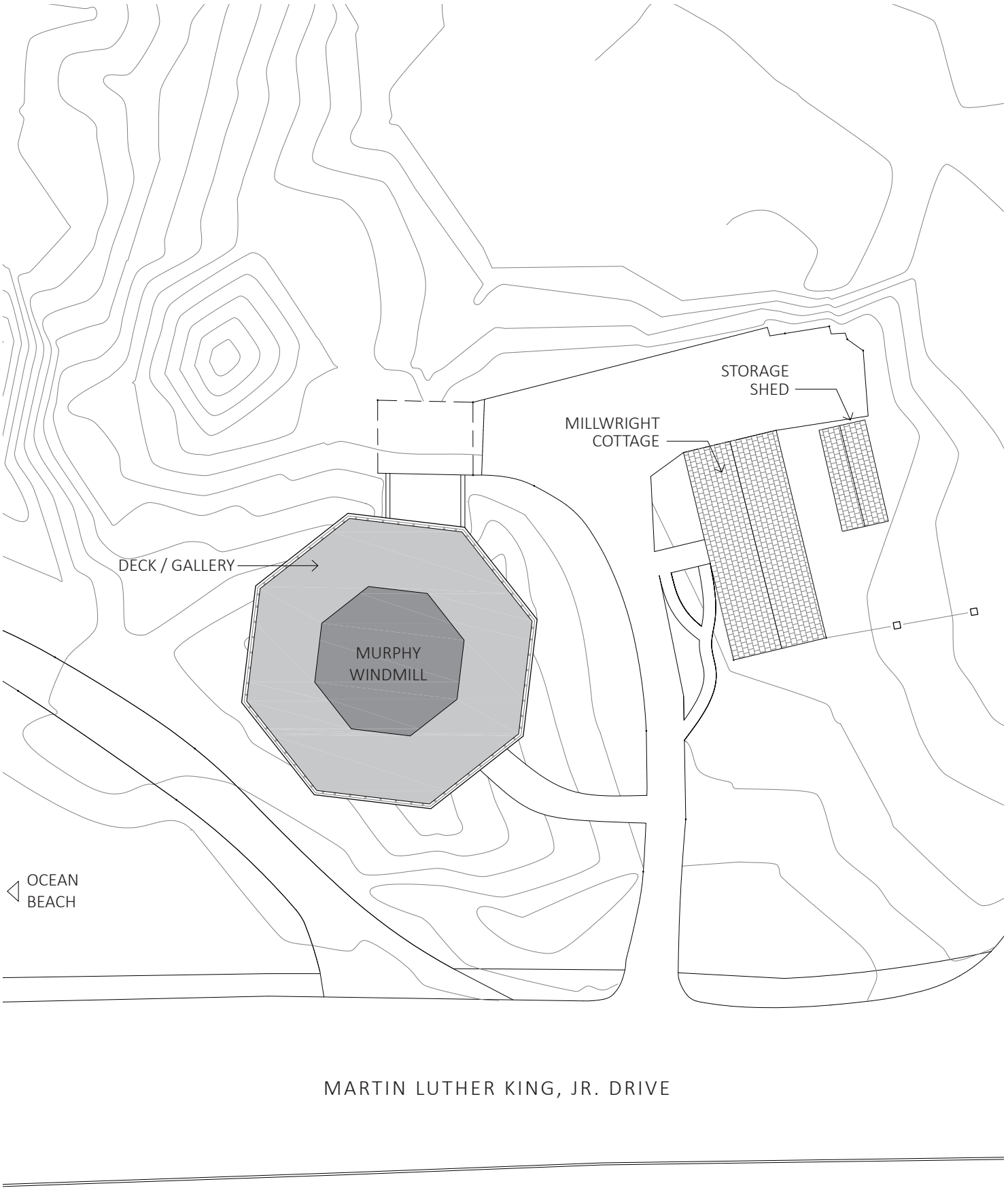
- A0.1 SITE PLAN
- A0.2 SCOPE NARRATIVE
- A0.3 SCOPE ELEVATION
- A0.4 CHARACTER DEFINING ELEMENTS
- A0.5 PHOTOS
- A0.6 EXTERIOR RAILING DETAIL
- A0.7 FAN TAIL DETAIL
- A0.8 ENTRY LIGHTING

- A1.0 LEVEL 1 STAIR
- A2.0 LEVEL 2 STAIR
- A3.0 LEVEL 3 STAIR
- A4.0 LEVEL 4 STAIR
- A5.0 LEVEL 5 STAIR
- A6.0 LEVEL 6 STAIR
- A6.1 STAIR STRUCTURE CONCEPT

- APPENDIX
- A. CMPROS EXECUTIVE SUMMARY
 - B. OSHA CONSULTATION REPORT
 - C. SECT. OF INT. STANDARDS
 - D. LANDMARK PRESERVATION ADVISORY BOARD CASE REPORT
 - E. 2001 CERTIFICATE OF APPROPRIATENESS



NOTIFICATION MAP
N.T.S.
PREPARED BY RADIUS SERVICES



SITE PLAN
1/8" = 1'-0"
0 1' 4'

PROJECT SCOPE NARRATIVE

By the year 2000, the Murphy Windmill had deteriorated to the point that it was in danger of imminent collapse. The San Francisco Recreation and Park Department (SFRPD) embarked on a rehabilitation project with the goal of returning the Windmill to operating condition. The project received a Certificate of Appropriateness (Case no. 2001.0732A filed July 24, 2001) in 2001 using the Rehabilitation guidelines from the Secretary of the Interior’s Standards for the Treatment of Historic Properties. The project was successfully completed and opened in 2011. Since the opening, specially trained SFRPD personnel have operated and maintained the Windmill and its historic 1908 running gear for public display. During the ensuing seven years, numerous safety issues have been identified through operator experience and a City commissioned workplace safety survey, with reference to OSHA standards, that were not foreseen at the time of the rehabilitation. This Certificate of Appropriateness application seeks to remedy those deficiencies with safety upgrades designed to comply with OSHA and be implemented in the context of the Secretary’s Standards using the Rehabilitation Treatment. The specific project elements are as follows:

Exterior:
Gallery – level 3:

- Gallery hand rail extension to code compliant 42 inches high.
Commentary: (Safety issue) The hand rail surrounding the gallery was designed based on historic photographs. The height was made less than the code required 42 inches to create clearance for the turning radius of the sail stocks. It has since been found that the stocks will clear the railing if it is increased in height by 5 inches to meet code.
- Add a 4 inch high wood toe kick at the bottom of the railing where it meets the gallery deck.
Commentary: (Safety issue) OSHA requires toe kicks at the bottom of guardrails to prevent falls. This is especially important at the Windmill because the railing angles outward per the original design.
- Replace weathered Gallery deck level wood entry doors.
Commentary: (Repair issue) Two wooden doors leading from Level 3 to the outside Gallery deck have weathered in marine environment and are leaking. The project includes replacement using the identical design replicated in weather resistant materials.

Main entry door at grade:

- Install exterior lights at door for safety illumination.
Commentary: (Safety / security issue) Exterior lights illuminating the main entrance at grade is required by code. An illuminated front door may also help reduce attempted break-ins.

Sails / Stocks:

- Add tie-offs for fall protection on the stocks (see commentary above).

Fan Tail:

- Augment fantail’s open steel deck with additional light bracing to stiffen and reduce deflection in the steel grating surface.
- Replace the existing loose aluminum ladder with a permanently fixed ladder of the same size and appearance.
- Add tie-offs, hand holds, and cables for fall protection.
Commentary: (Safety issue) By the start of the project in rehabilitation in 2001, the original wooden fantail had been removed and was lying on the ground at the base of the Windmill. Its remnants were used as patterns for its replication in steel and wood. Operational experience and a workplace safety survey have revealed the need for the enhanced safety measures described above. The Fan Tail is approximately 90 feet above the ground, and the additions, which are primarily hardware, will not impinge on the visual character of the machinery.

Interior:
Stairs / Openings

- Replace all existing interior wooden stairs with OSHA compliant painted steel stairs handrails and guard rails.
- Remove small sections of floor surface on all levels to allow for vertical, code compliant head clearance, in areas of new stair openings.
Commentary: (Safety issue) Stair replacement was previously conditionally approved as part of the C of A review for the 2001 rehabilitation project. The proposed designs were to be reviewed by the LPC when complete. The original wood stairs were replaced in-kind in the rehabilitation project completed in 2011 for budgetary reasons. The scheme for improved access stairs was not implemented.

Concrete pump beds

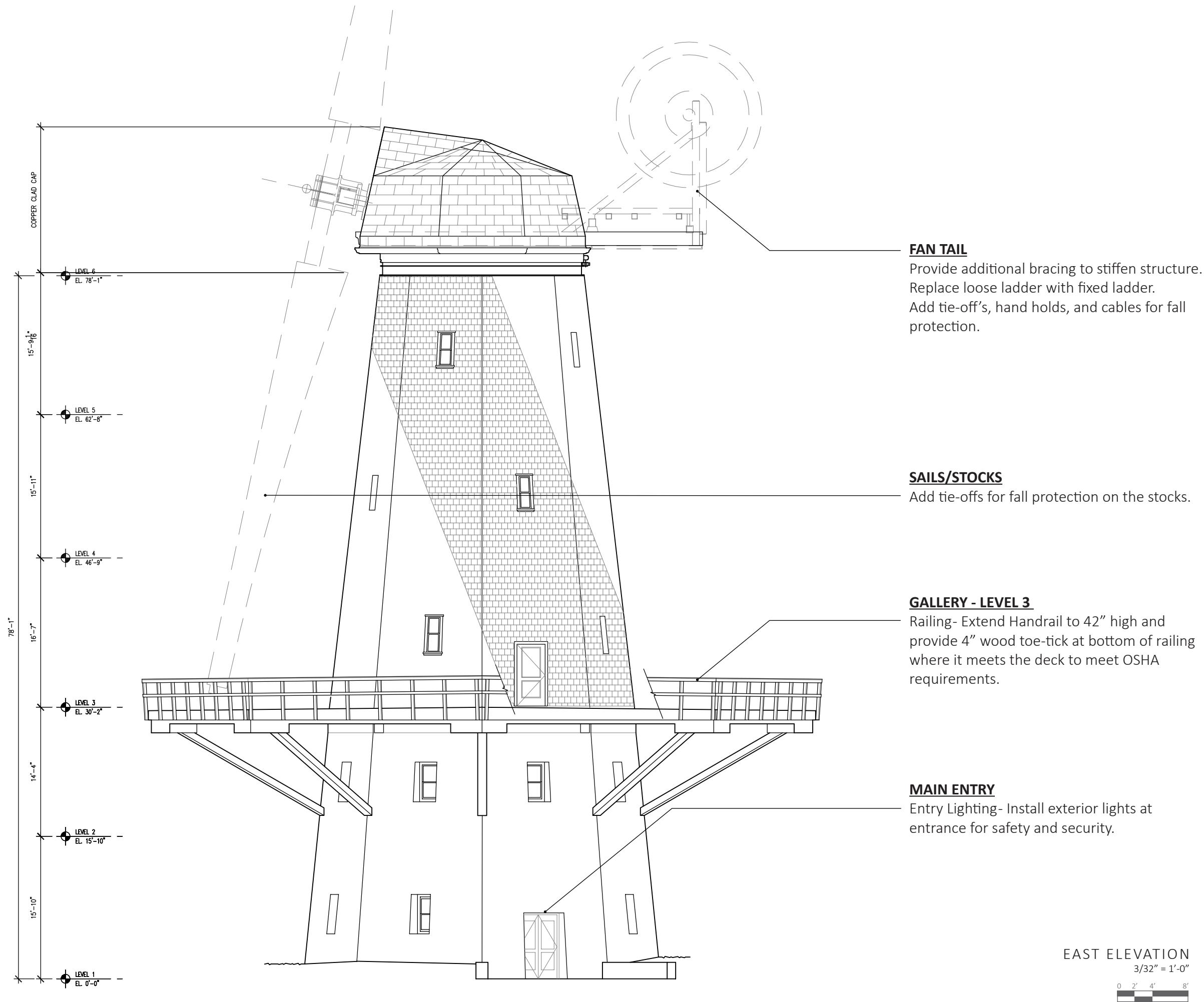
- Remove concrete water pump beds in anticipation of creating space for interpretive exhibits. The pump bed footprint consumes most of the ground level square footage, and the intent is to create a future area for interpretive exhibits open to the public.
Commentary: (Interpretive issue) This item was previously approved as part of the 2001 C of A review submitted for the Windmill rehabilitation project.

Miscellaneous recommended safety upgrades

- Increase lighting levels replacing incandescent fixtures with brighter LED or compact fluorescent fixtures.
- Add guardrails at Levels 6 & 7 in the proximity of openings to below.
- Add floor level signage designations.

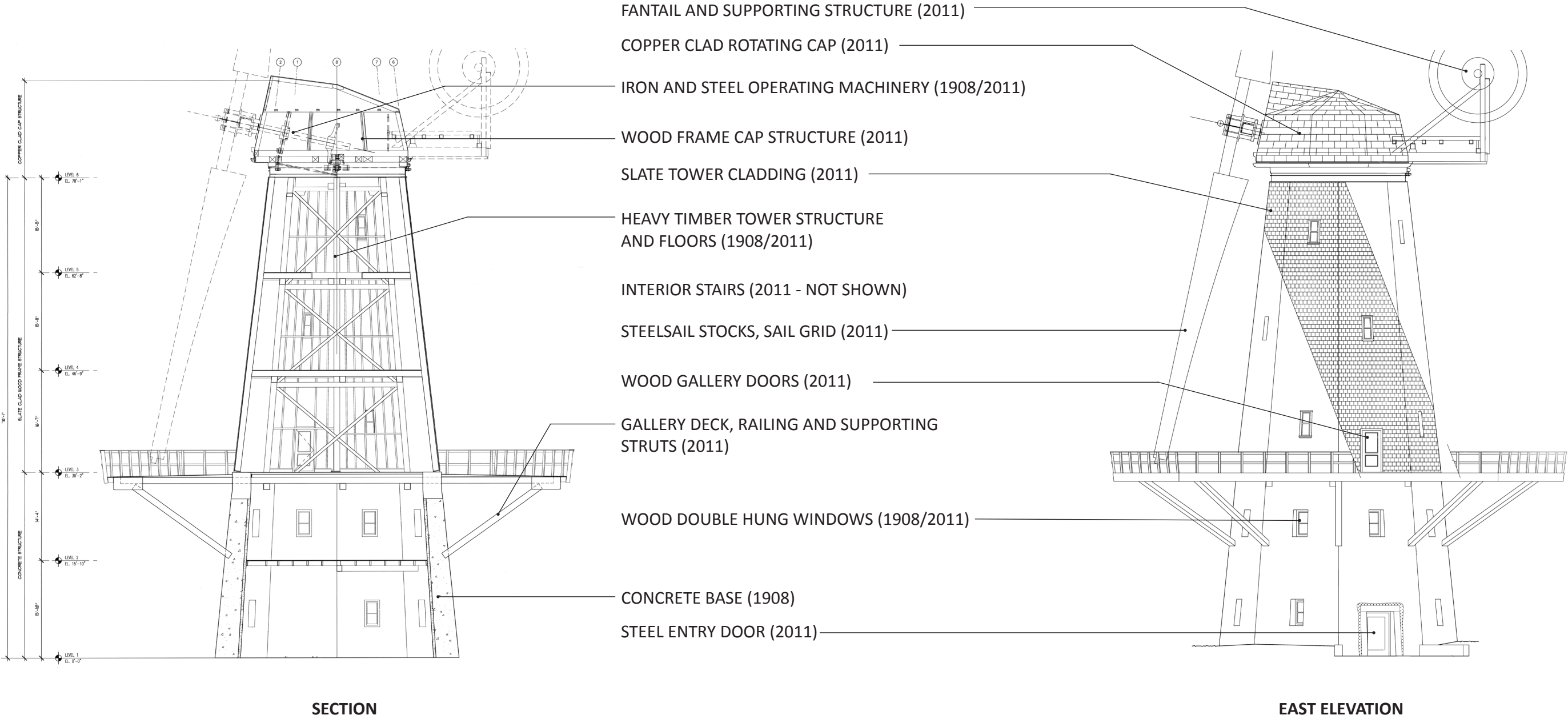
Prepared by Charlie Duncan on 2/20/2018
Historic Preservation Architect
Interactive Resources

SCOPE



CHARACTER DEFINING ELEMENTS

A character defining feature is a prominent or distinctive aspect, quality, or characteristic of a historic property that contributes significantly to its physical character. The common methodology used for analyzing historic buildings is a hierarchical rating system which passes judgement on the value of each component. The Murphy Windmill; however, is a building that is also a machine, including building components that move. By definition, machines are dynamically balanced assemblies of parts forming an integrated system. Each part contributes equally to the machine’s work. This identification of the Murphy Windmill’s Character Defining Features will; therefore, treat each feature with equal importance. The dates following each feature indicate if the feature was replaced (2011), or if it is original (1908).



PHOTOS

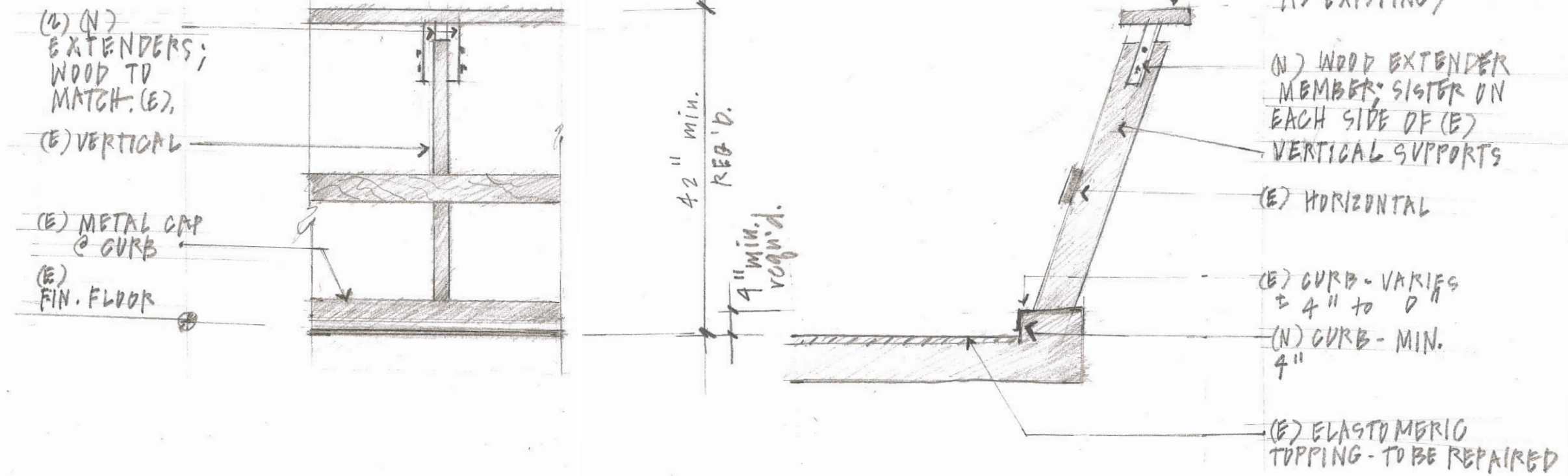


- 1 1910. http://www.outsidelands.org/murphy_windmill.php
- 2 1914. source unknown.
- 3 1922. <http://opensfhistory.org/NeighborhoodPhotos/ALL/windmill>
- 4 2011. <http://www.nileguide.com/destination/blog/san-francisco-bay-area/2011/09/20/windmills-in-golden-gate-park/>
- 5 2013. <https://www.flickr.com/photos/23711298@N07/9778815005/in/photostream/>
- 6 2013. <https://www.flickr.com/photos/23711298@N07/9778902393>

PHOTOS

HISTORICAL REVIEW

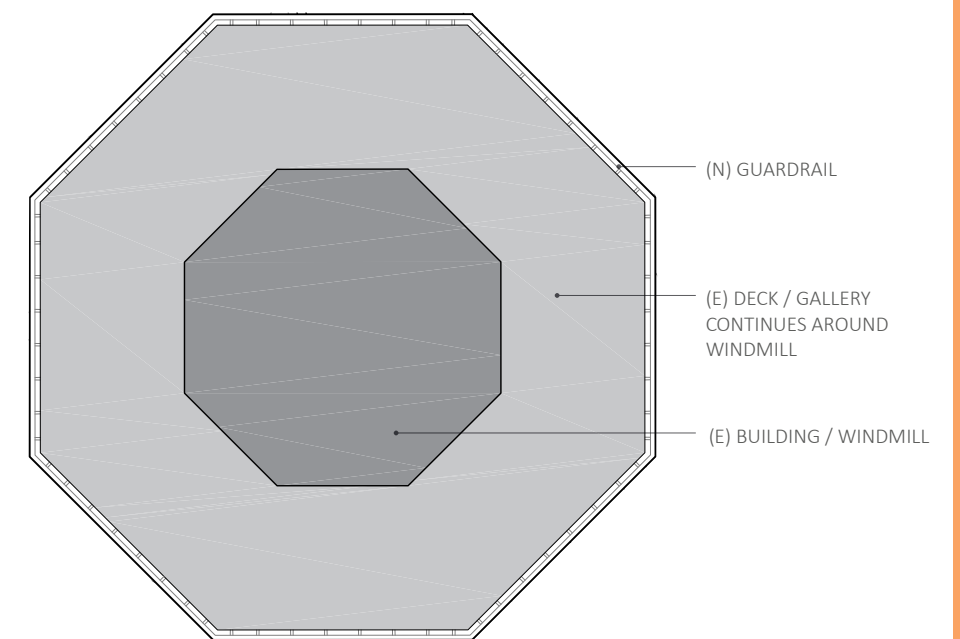
EXTERIOR RAILING



PROPOSED GUARDRAIL SECTION & ELEVATION
3/4" = 1'-0"



EXISTING DECK/GALLERY RAILING

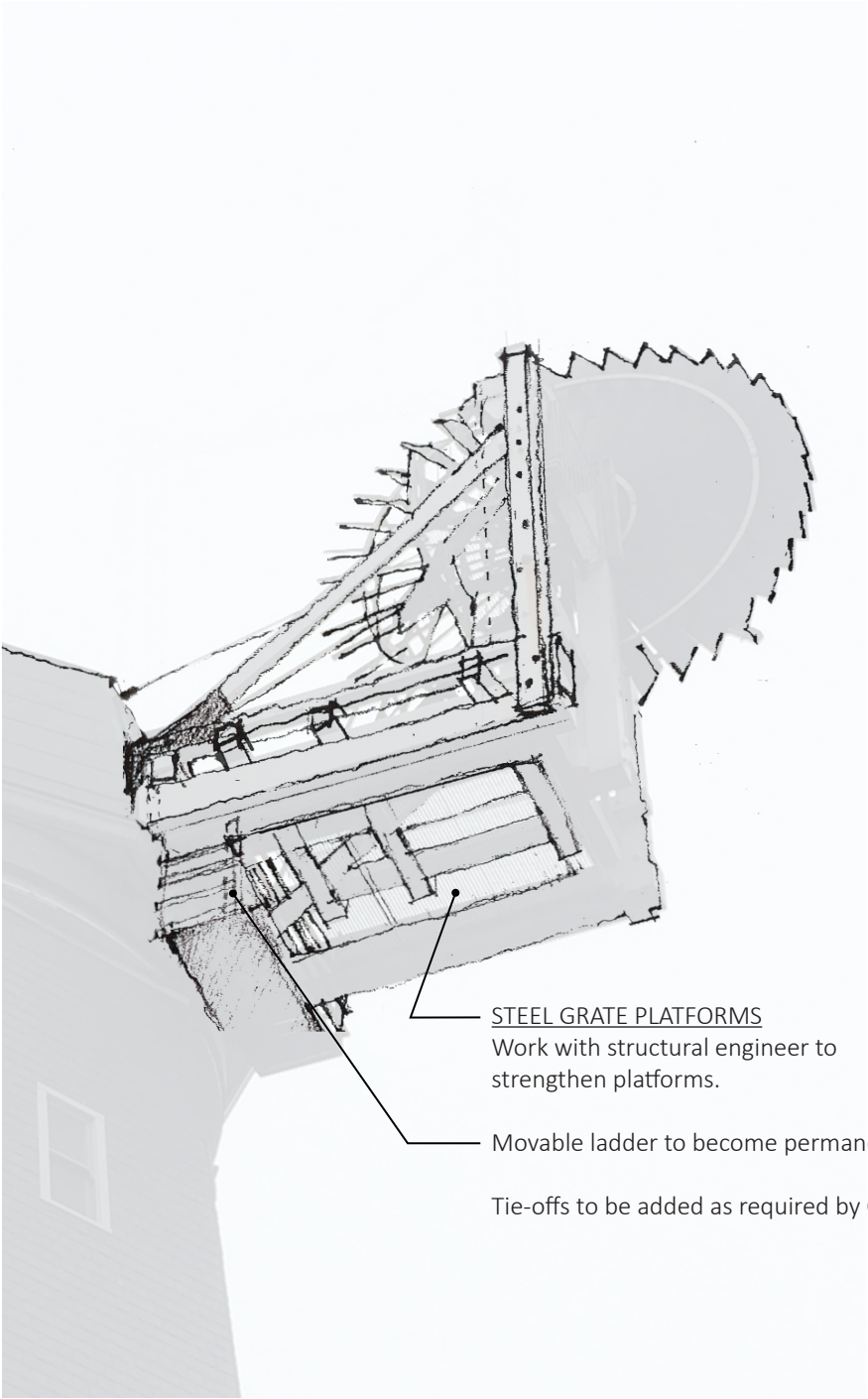


DECK / GALLERY
N.T.S.

FANTAIL



EXISTING



PROPOSED- OSHA REQUIREMENTS

FANTAIL

ENTRY LIGHTING

BeveLED BLOCK® Downlight — BLRD5



BEVELED BLOCK® DOWNLIGHT



usailighting.com/block

Keep ceiling height right where it is! Specifically designed to work with surface-mounted conduit and junction boxes, BeveLED BLOCK has a modern look that's perfect for lofts, offices, and open architectural spaces. Also available with solid-sides styling shown above, Block also creates a finished look when recessed conduit is possible.

FEATURES

- High performance architectural lighting solution for industrial or exposed concrete ceiling types where recessed lighting is not an option
- Convenient conduit cutouts provide access for surface-mounted conduit to pass through the luminaire
- Smooth, modular solid and keyhole slots are interchangeable and user configurable to allow for simple on site customization in the field.
- BeveLED BLOCK is available in a range of standard and custom colors to complement your project, whether an industrial or refined look is desired.
- Industry leading illumination and craftsmanship

BEVELED BLOCK DOWNLIGHT PERFORMANCE DATA

LED COLOR CHOICES

DELIVERED* PERFORMANCE:	Classic White								Warm Glow Dimming		
	9W		12W		16W		24W		16W		
Color Rendering Index	80+ CRI	90+ CRI	80+ CRI	90+ CRI	80+ CRI	90+ CRI	80+ CRI	90+ CRI	80+ CRI	90+ CRI	
Source Lumens:	1150	900	1300	1025	1725	1350	2400	1875	1275	1025	
Lumens Per Watt:	93	68	86	67	86	67	80	63	69	55	
Delivered Lumens:	775	600	1025	800	1375	1075	1925	1500	1100	875	
*Performance data based on 3000K, 80+ CRI											
CORRELATED COLOR TEMPERATURE	Classic White						Warm Glow Dimming				
	2200K		2700K		3000K		3500K		4000K		
Color Rendering Index:	80+		80+ 90+		80+ 90+		80+		80+		
Multiplier for Lumen Output: 0.72			0.94 0.78		1.00 0.78		1.00		1.06		
									0.94 0.79	1.00 0.81	1.00

Page 1

usailighting.com
info@usailighting.com

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1126 River Road
New Windsor, NY 12553

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Patents pending, USAI, BeveLED BLOCK and Warm Glow Dimming
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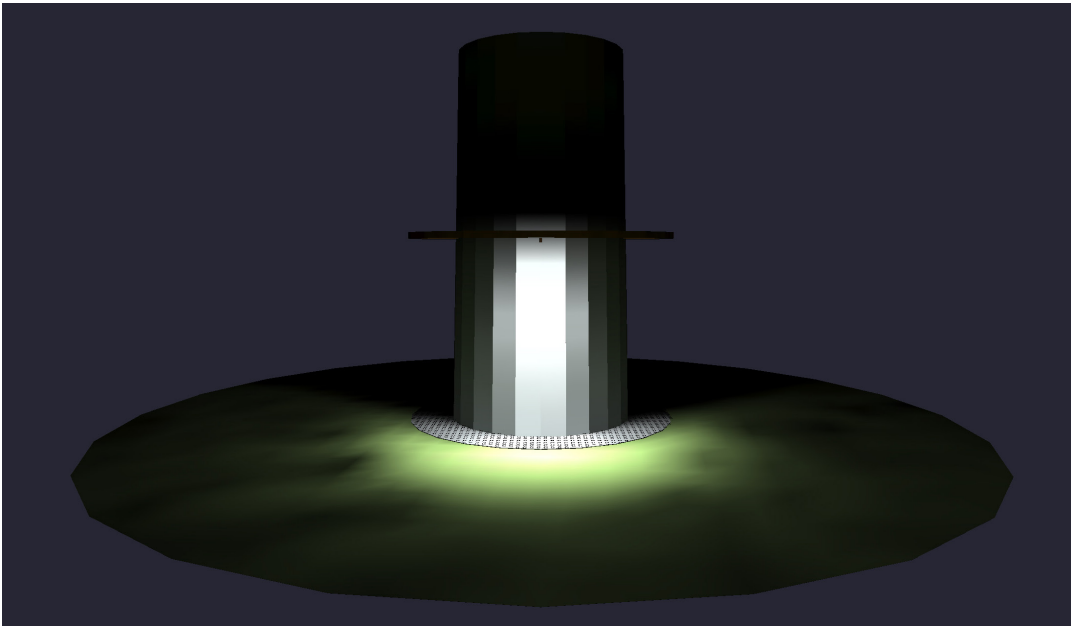
LIGHTING CONCEPT

Entry lighting is required for emergency lighting at a minimum of 1 foot-candle. Proposed light fixture to be mounted below Level three deck in between wood joists, above existing concrete walls.

SPECIFICATIONS

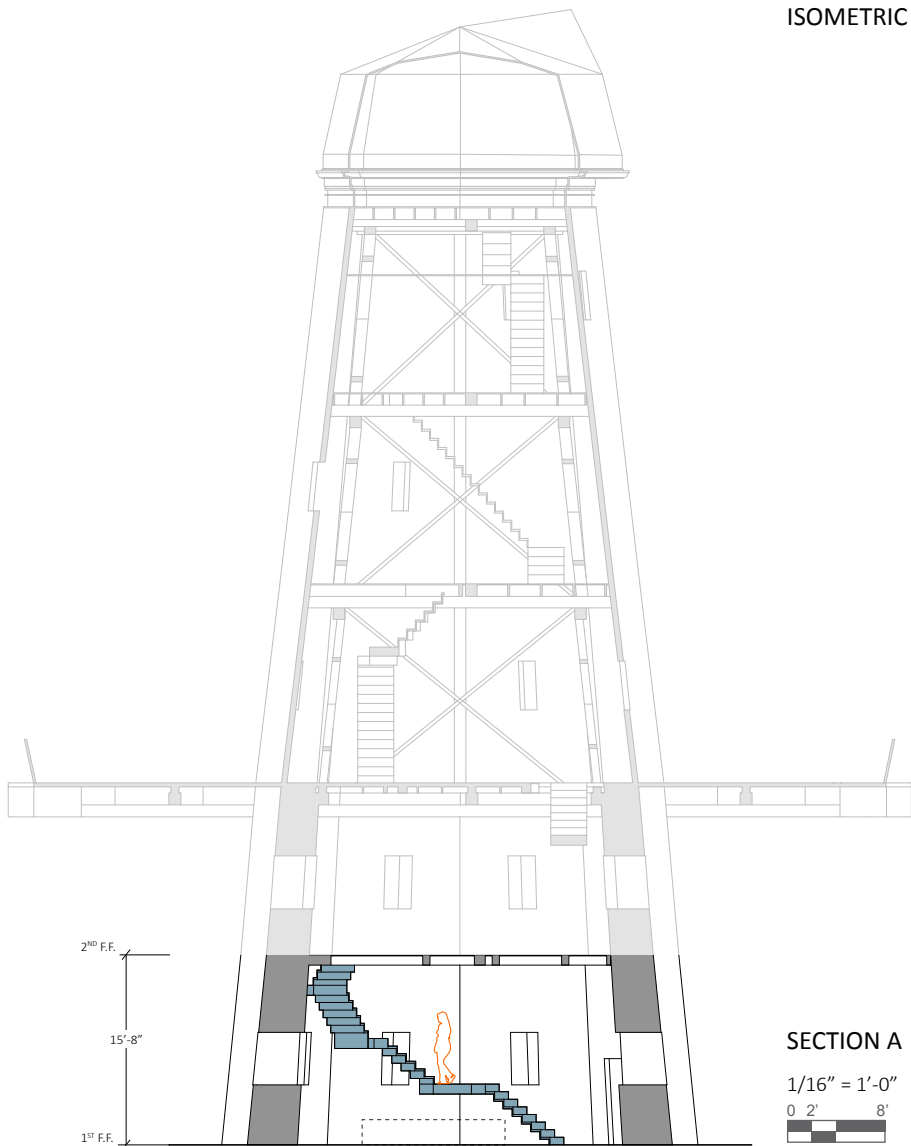
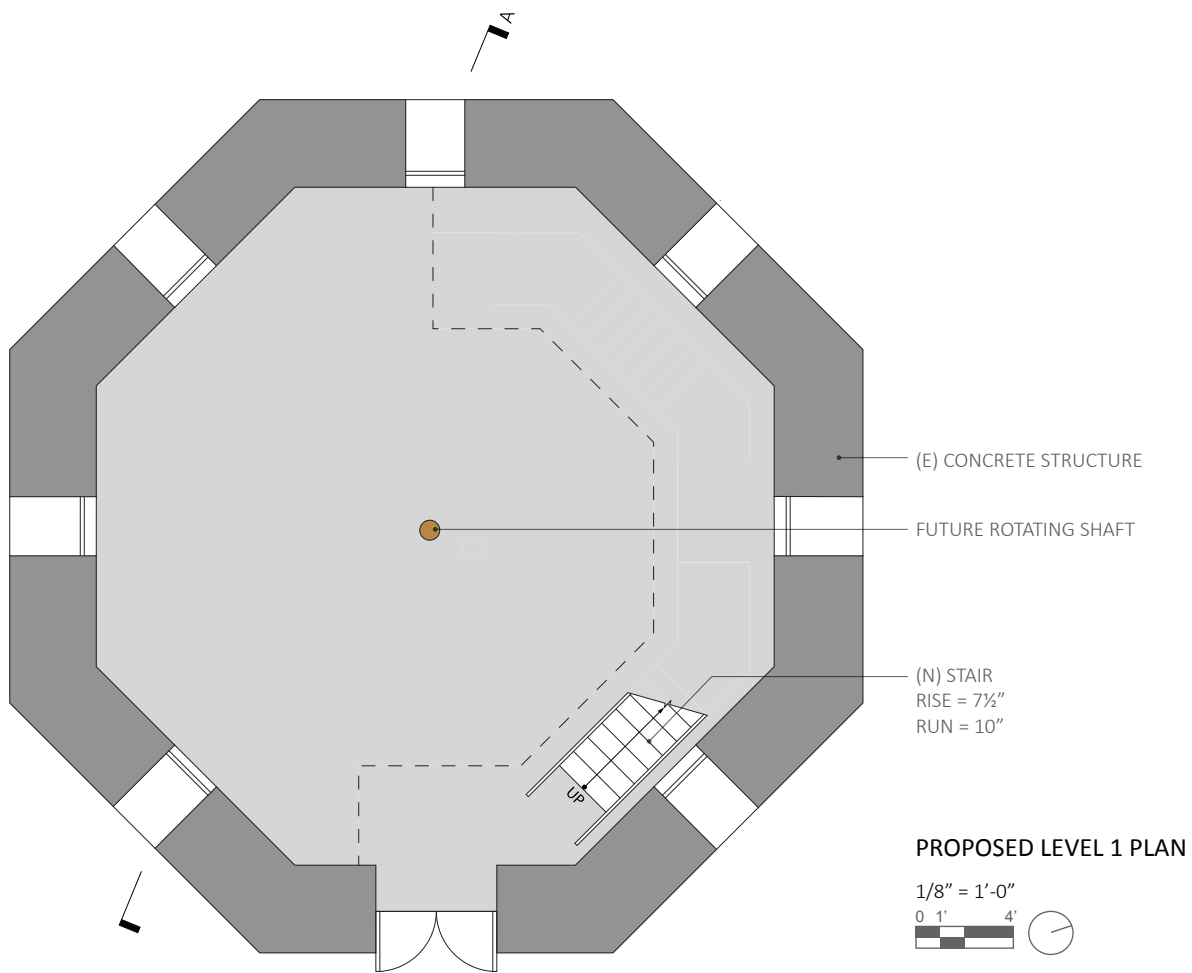
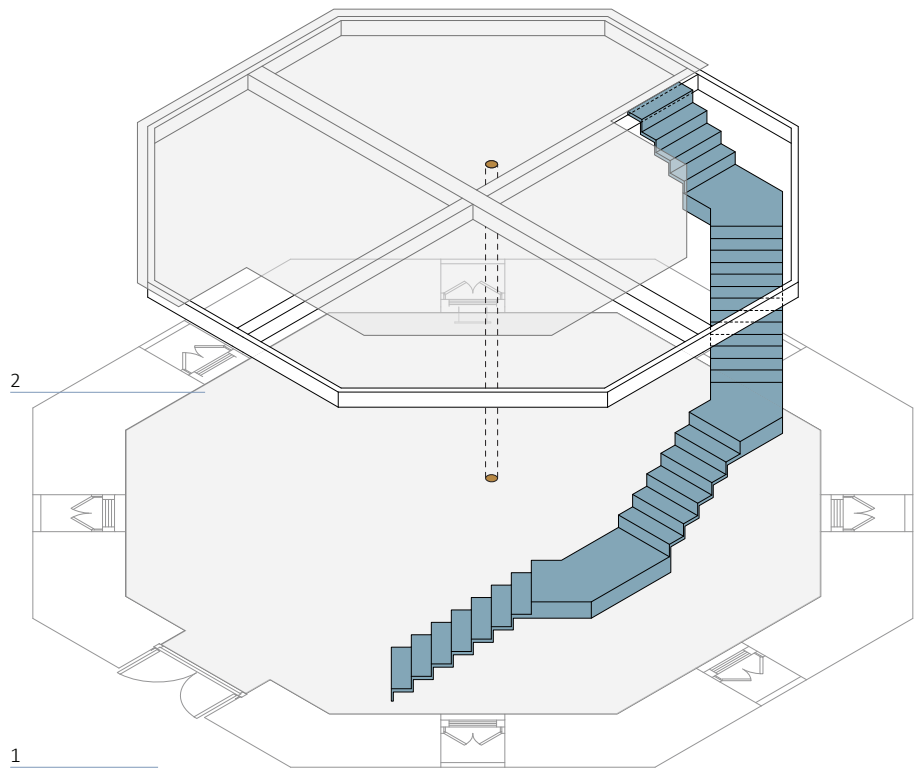
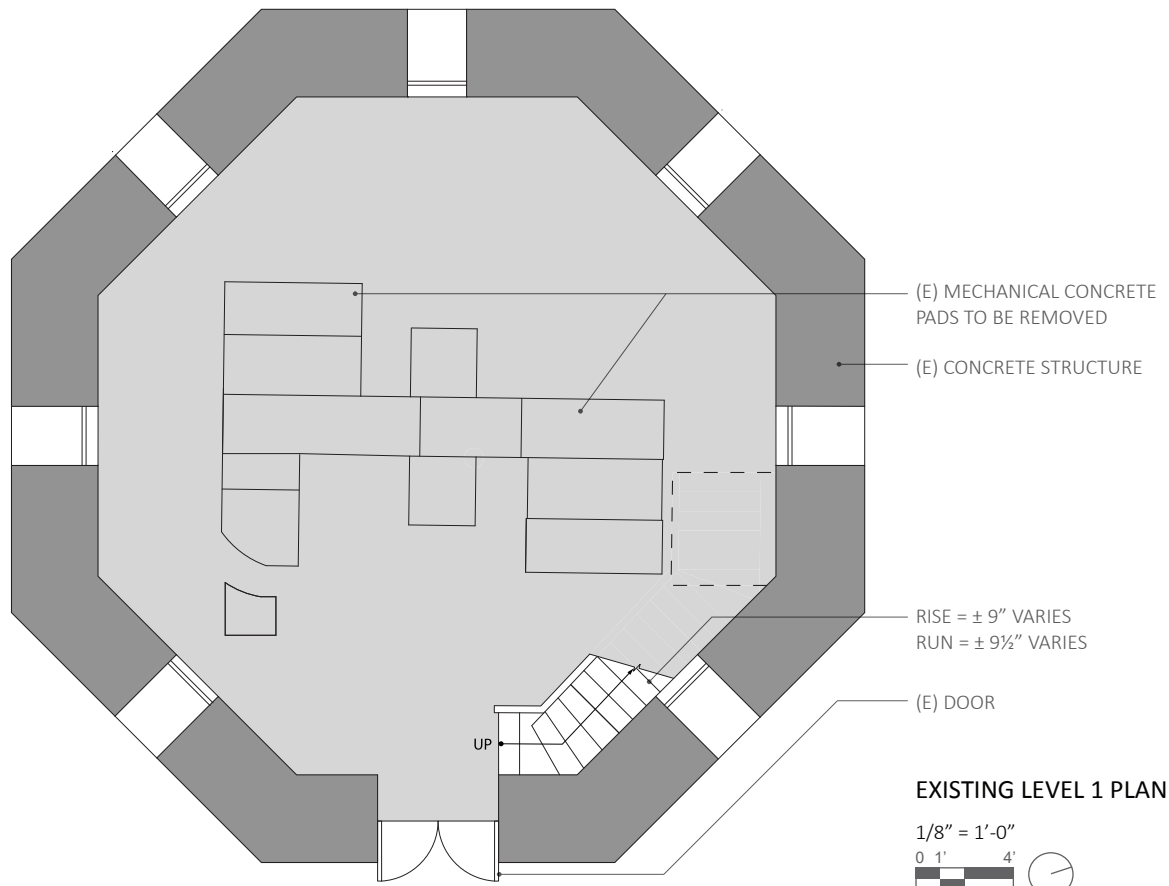
- USAi Block
- 12w +/- 2.5 foot-candles
- 25 degree beam spread
- 3,000K

LIGHTING STUDY

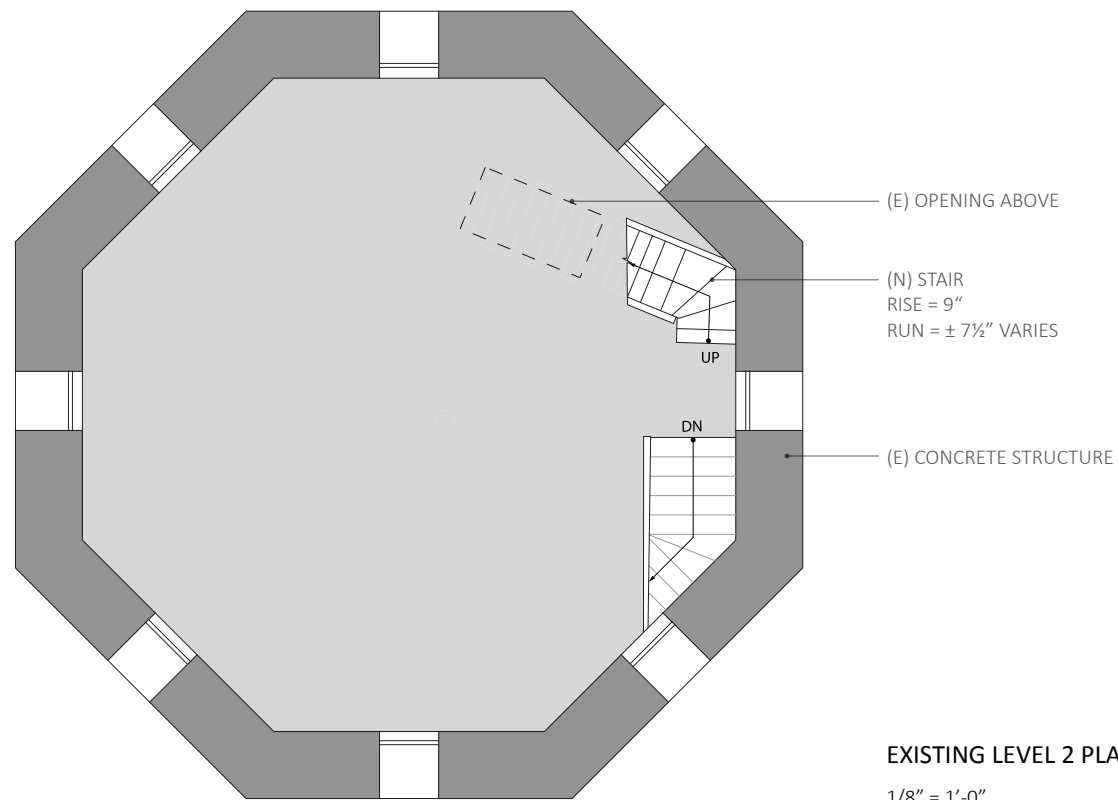


ENTRY LIGHTING

- Insufficient lighting
- Non-OSHA compliant Handrails/Guardrails
- (E) Stair is too steep
- Head clearance issue

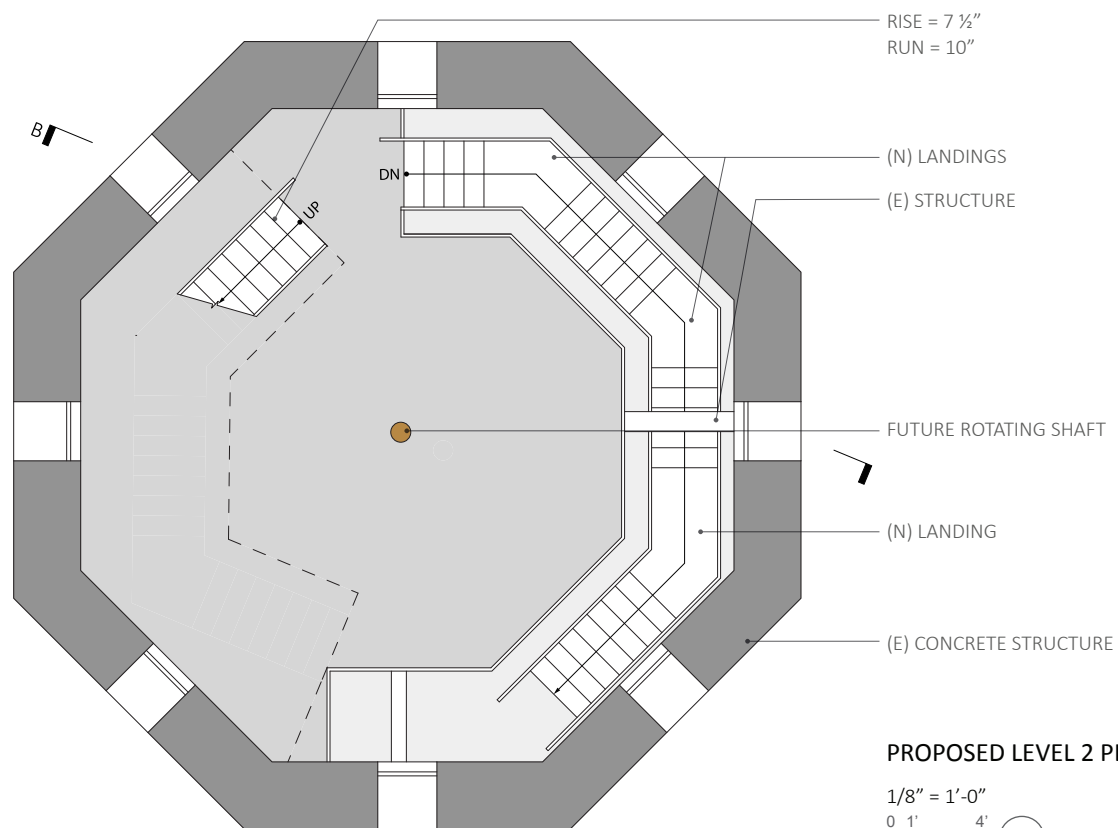


LEVEL 1



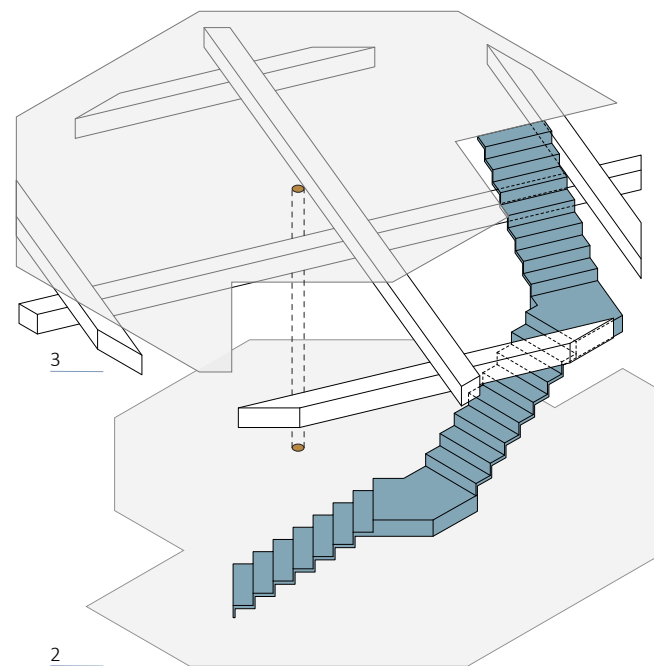
EXISTING LEVEL 2 PLAN

1/8" = 1'-0"
0 1' 4'

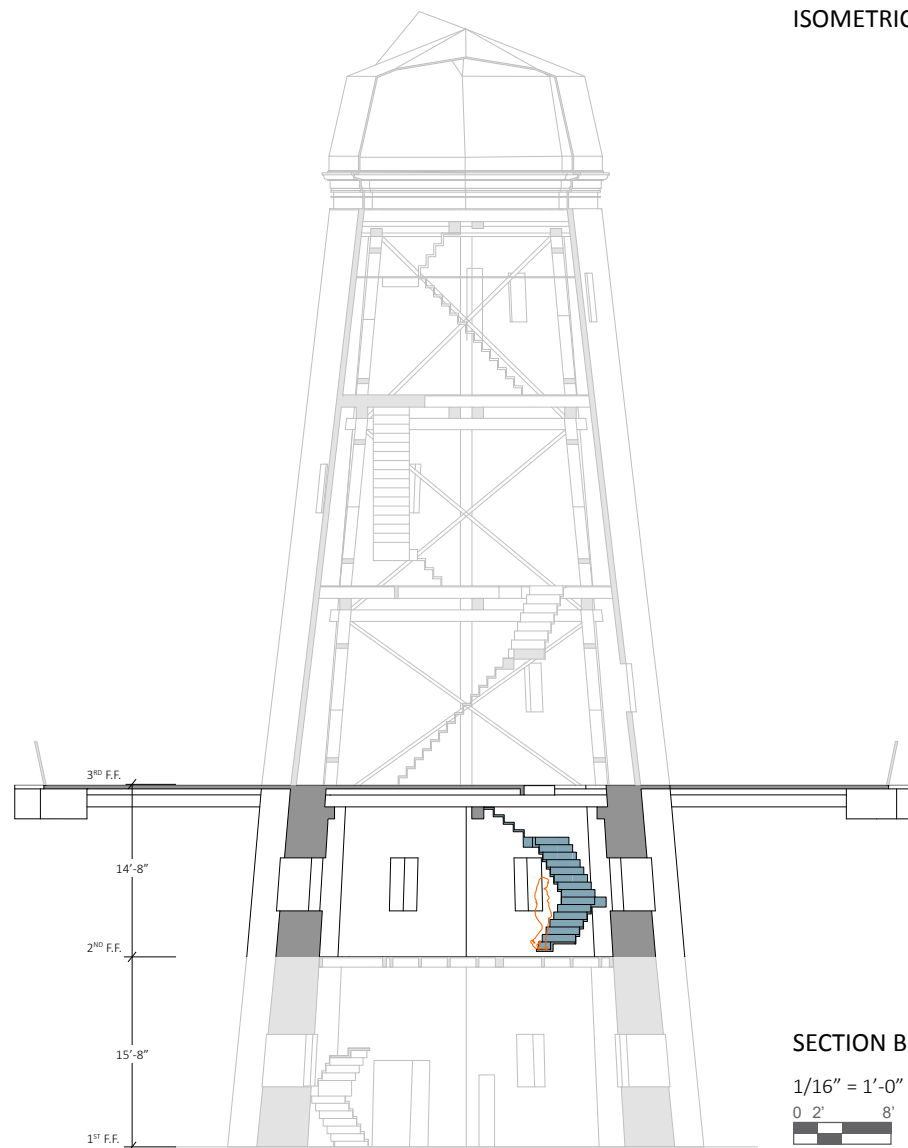


PROPOSED LEVEL 2 PLAN

1/8" = 1'-0"
0 1' 4'



PROPOSED ISOMETRIC



SECTION B

1/16" = 1'-0"
0 2' 8'

- (E) Stair is too steep
- (E) Trusses to remain
- Head clearance issue



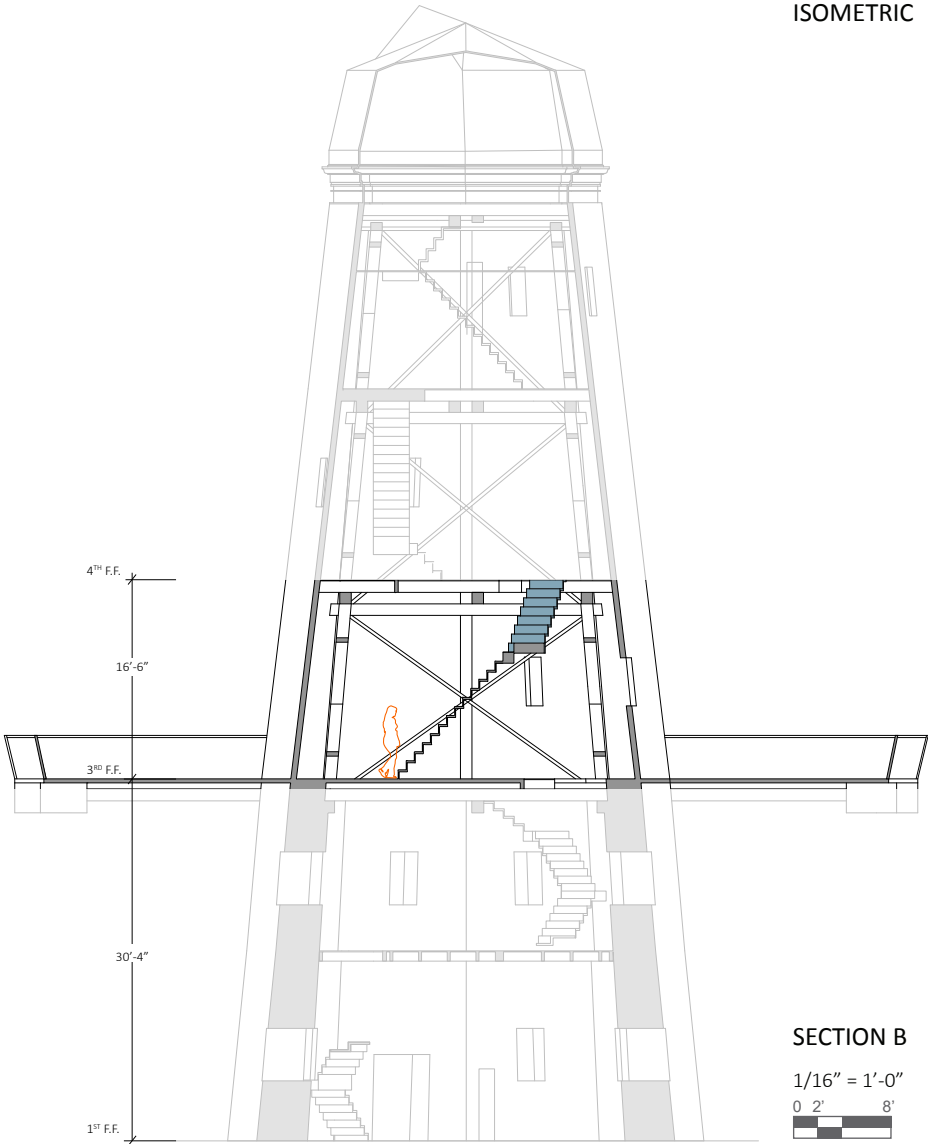
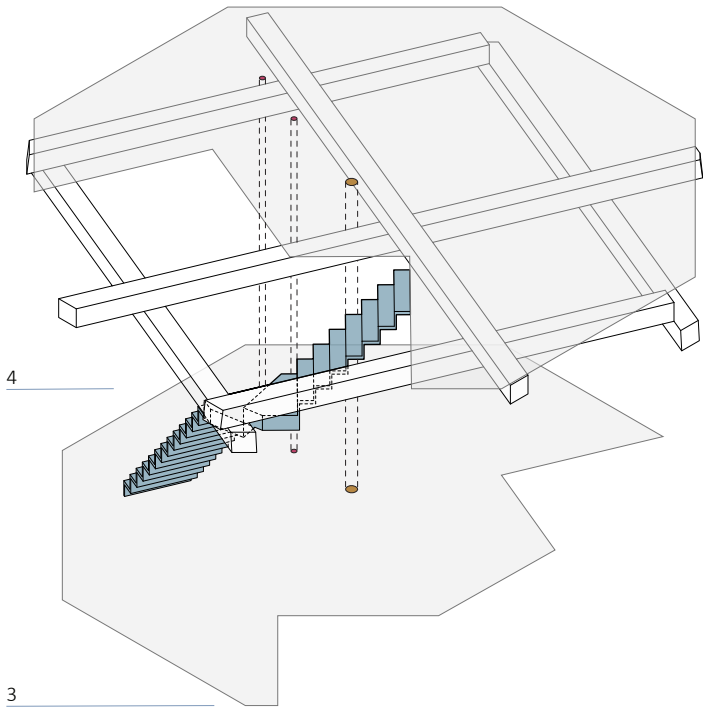
LEVEL 2

- (E) Stair is too steep
- (E) Trusses to remain
- (E) Brake rope & release to remain
- Head clearance issue

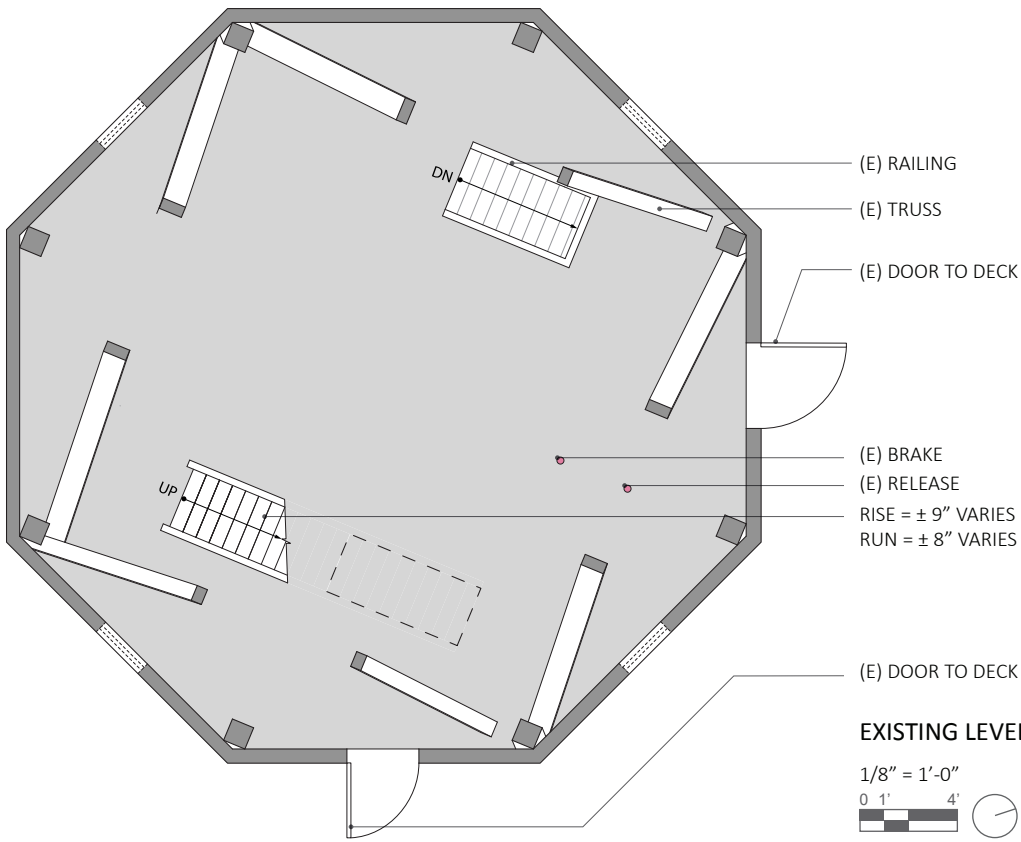


LEVEL 3

PROPOSED
ISOMETRIC

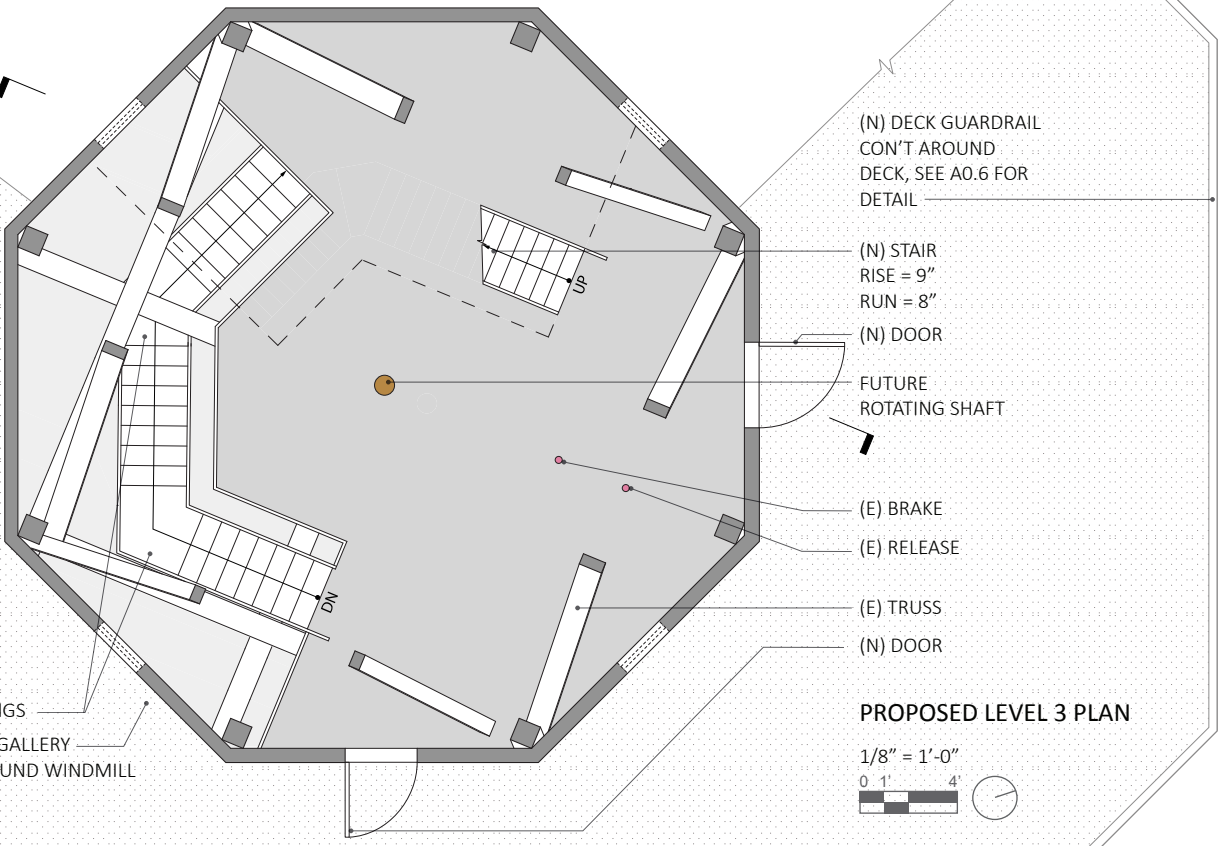


SECTION B
1/16" = 1'-0"
0 2' 8'



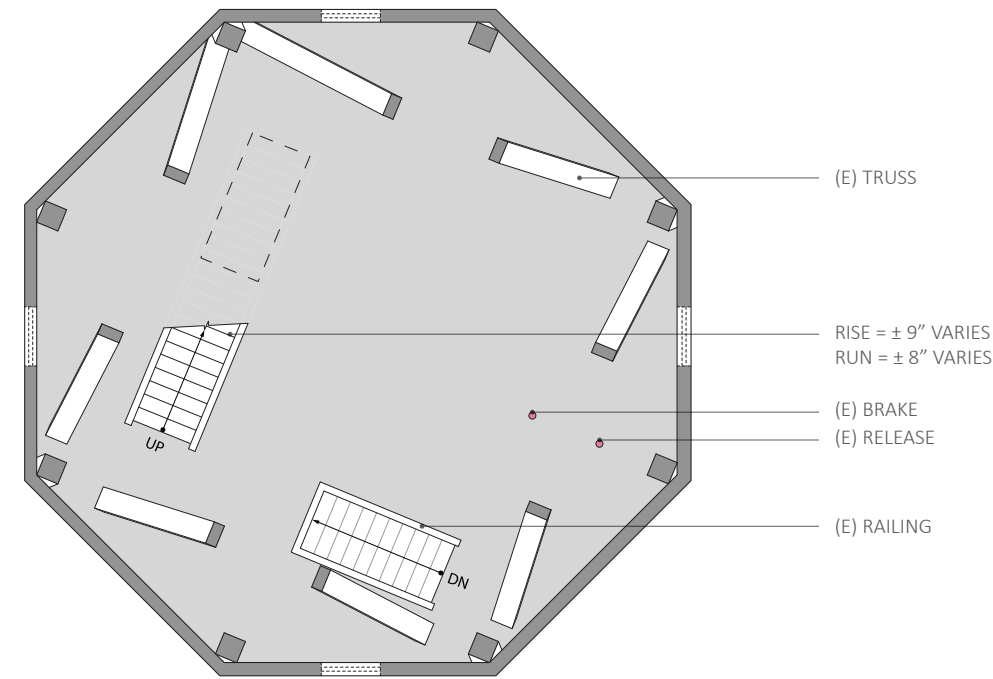
EXISTING LEVEL 3 PLAN

1/8" = 1'-0"
0 1' 4'



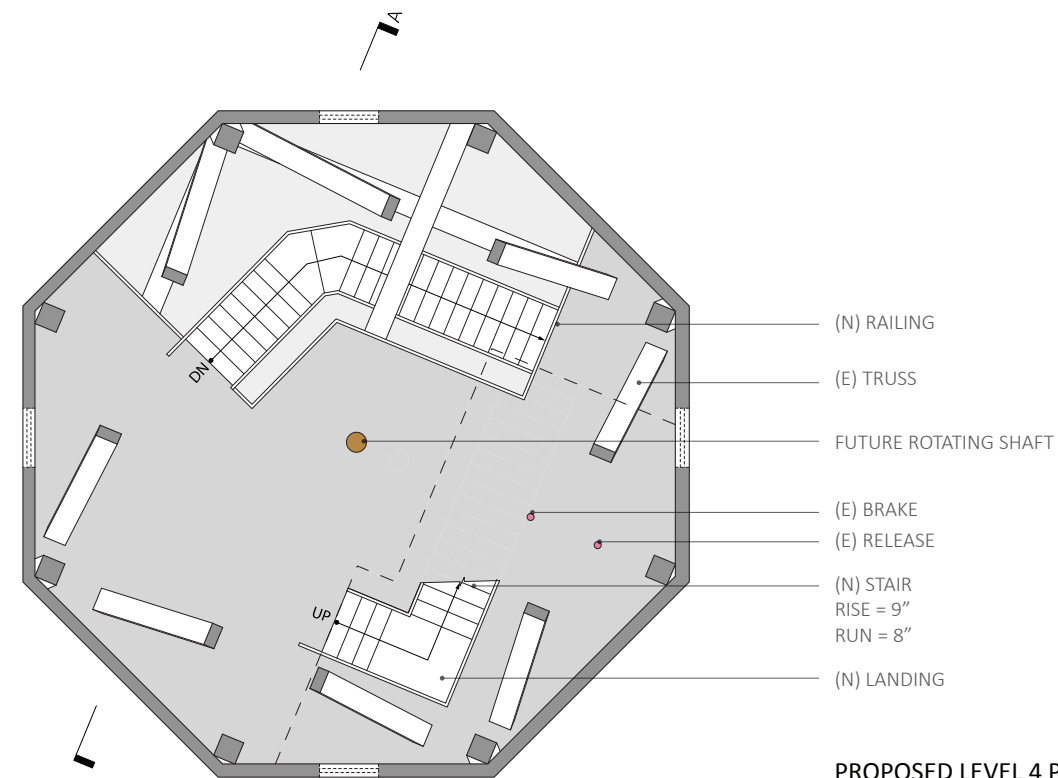
PROPOSED LEVEL 3 PLAN

1/8" = 1'-0"
0 1' 4'



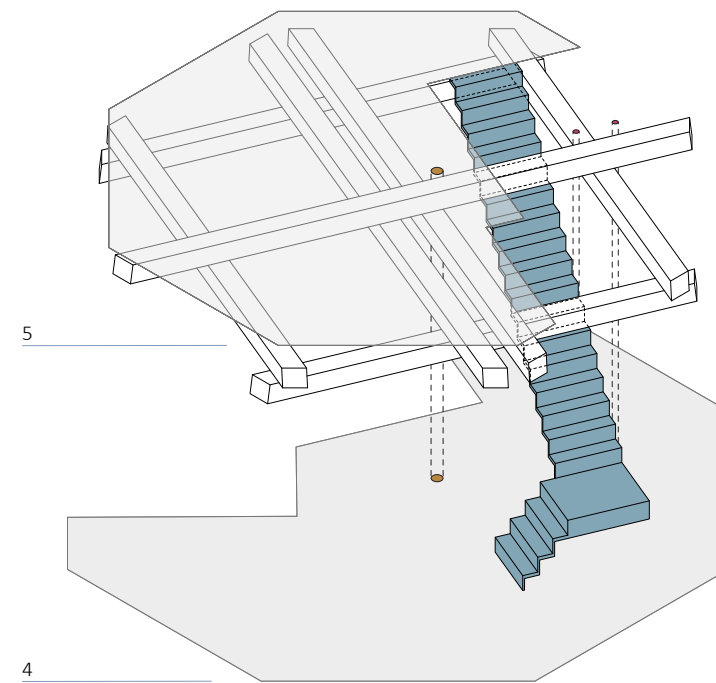
EXISTING LEVEL 4 PLAN

1/8" = 1'-0"
0 1' 4'

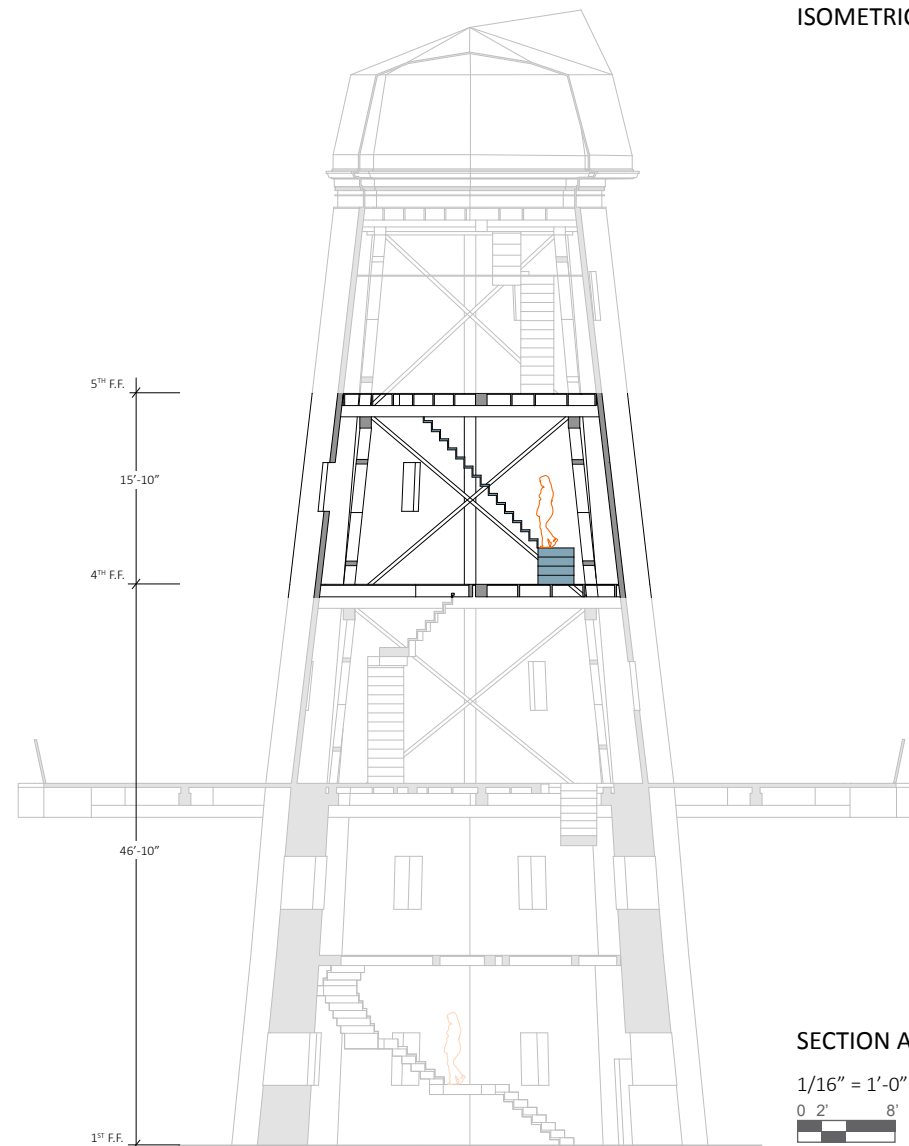


PROPOSED LEVEL 4 PLAN

1/8" = 1'-0"
0 1' 4'



PROPOSED
ISOMETRIC



SECTION A

1/16" = 1'-0"
0 2' 8'

- (E) Stair is too steep
- (E) Trusses to remain
- (E) Brake rope & release to remain
- Head clearance issue

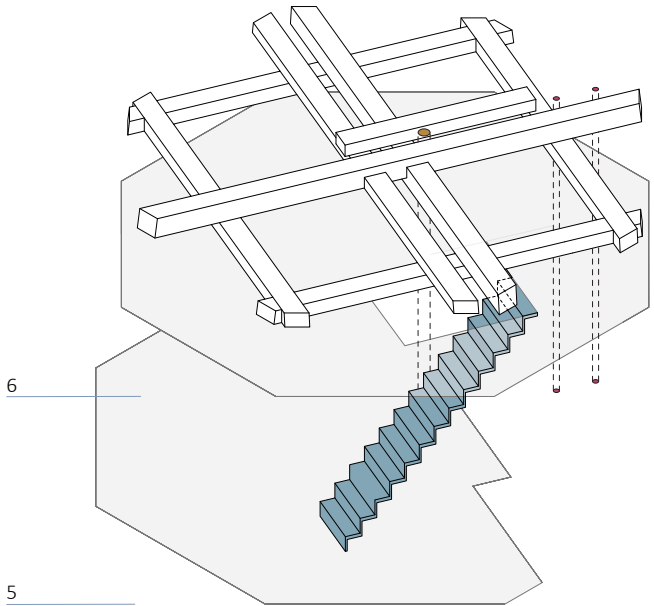


LEVEL 4

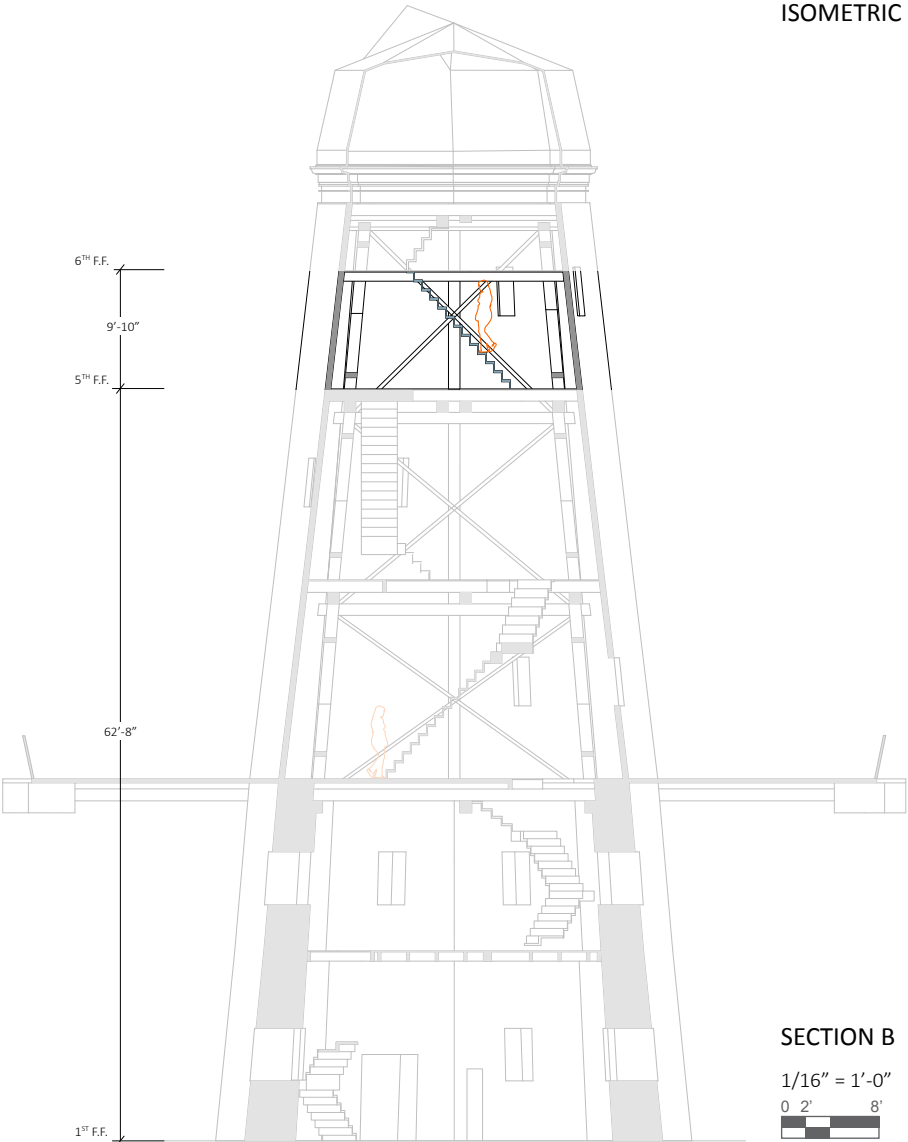
- (E) Stair is too steep
- (E) Trusses to remain
- (E) Brake rope & release to remain
- Head clearance issue



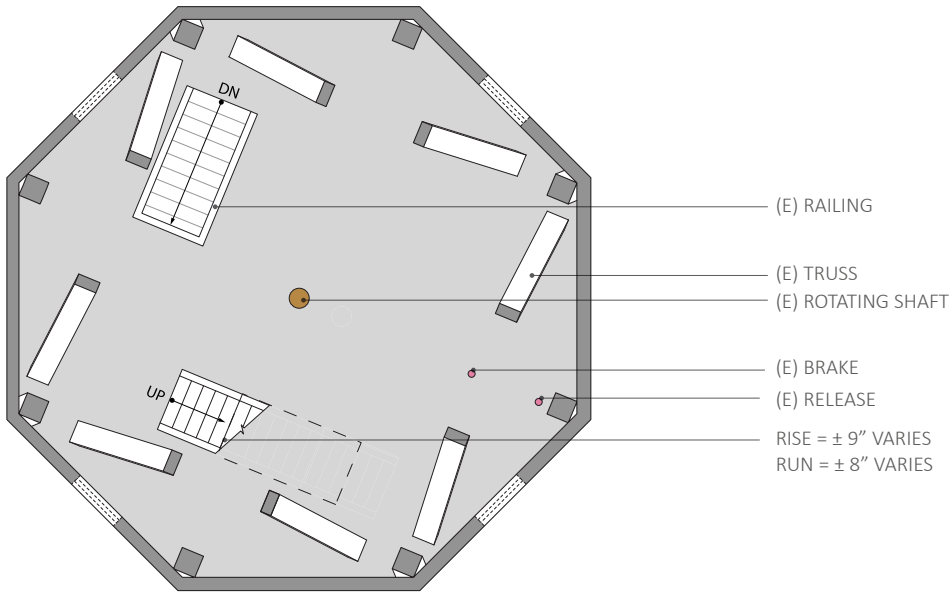
LEVEL 5



PROPOSED
ISOMETRIC

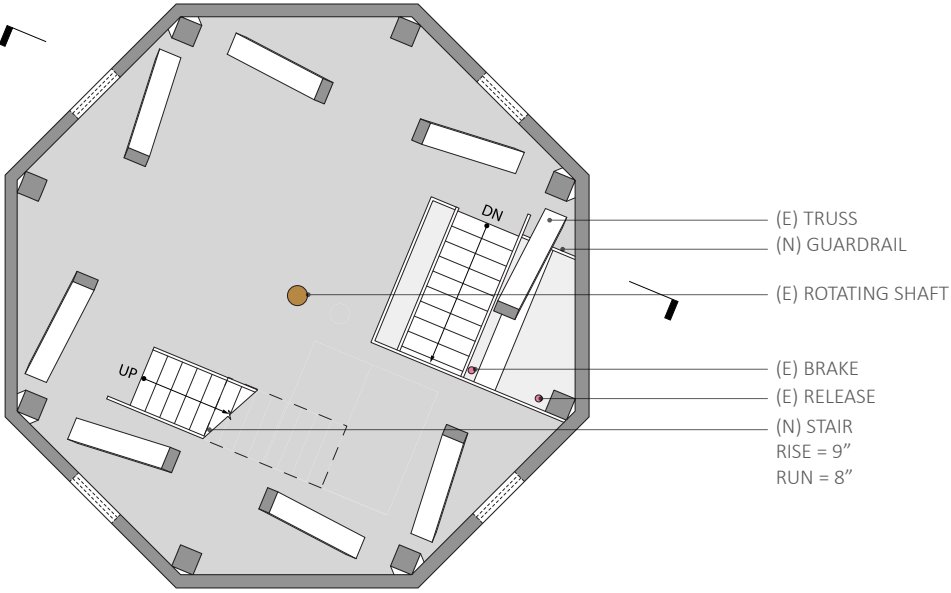


SECTION B
1/16" = 1'-0"
0 2' 8'



EXISTING LEVEL 5 PLAN

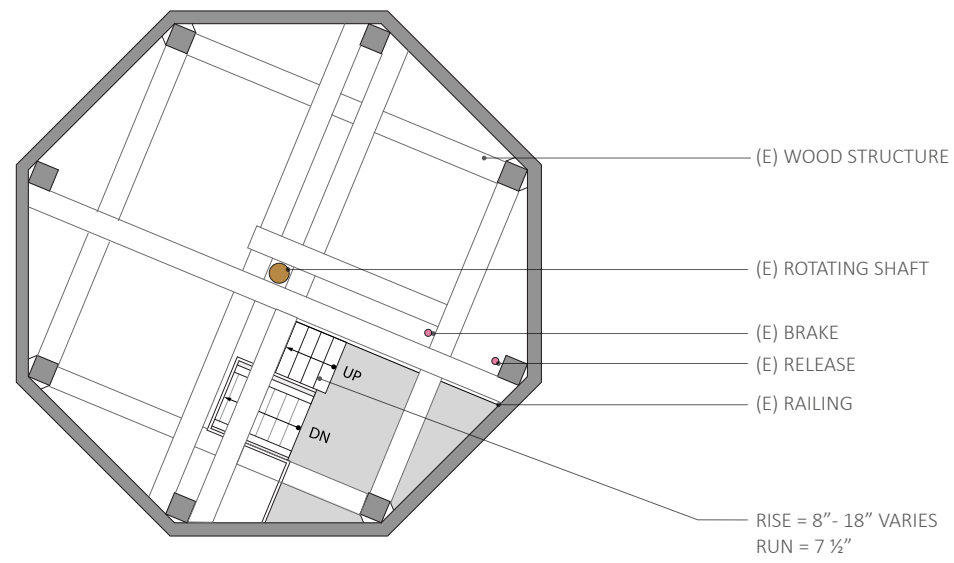
1/8" = 1'-0"
0 1' 4'



PROPOSED LEVEL 5 PLAN

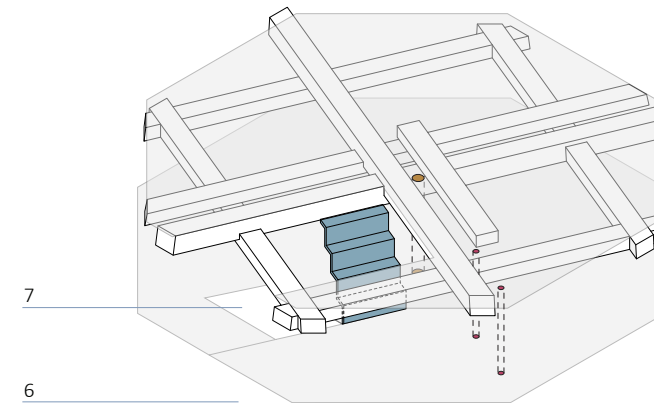
1/8" = 1'-0"
0 1' 4'

- (E) Stair is too steep
- (E) Trusses to remain
- (E) Brake rope & release to remain
- Head clearance issue



EXISTING LEVEL 6 PLAN

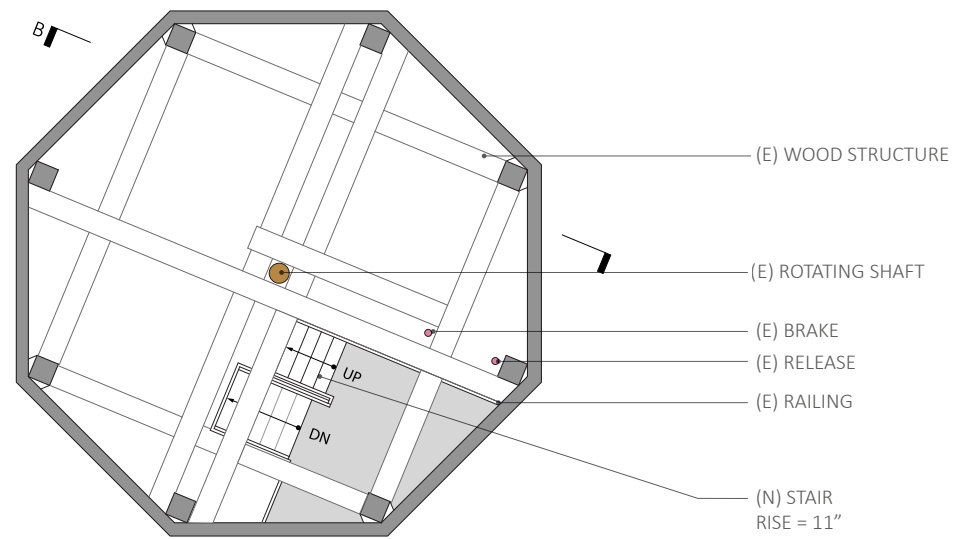
1/8" = 1'-0"
0 1' 4'



PROPOSED ISOMETRIC

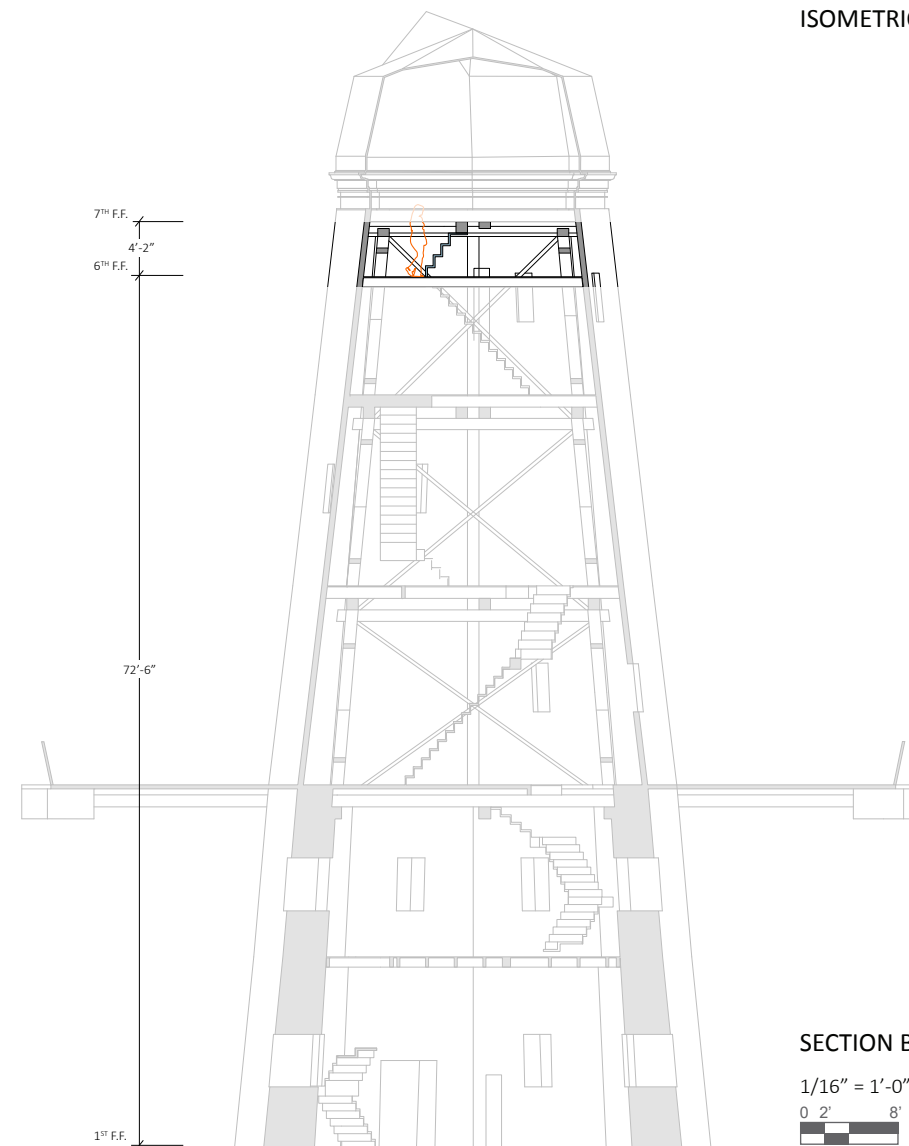


LEVEL 6



PROPOSED LEVEL 6 PLAN

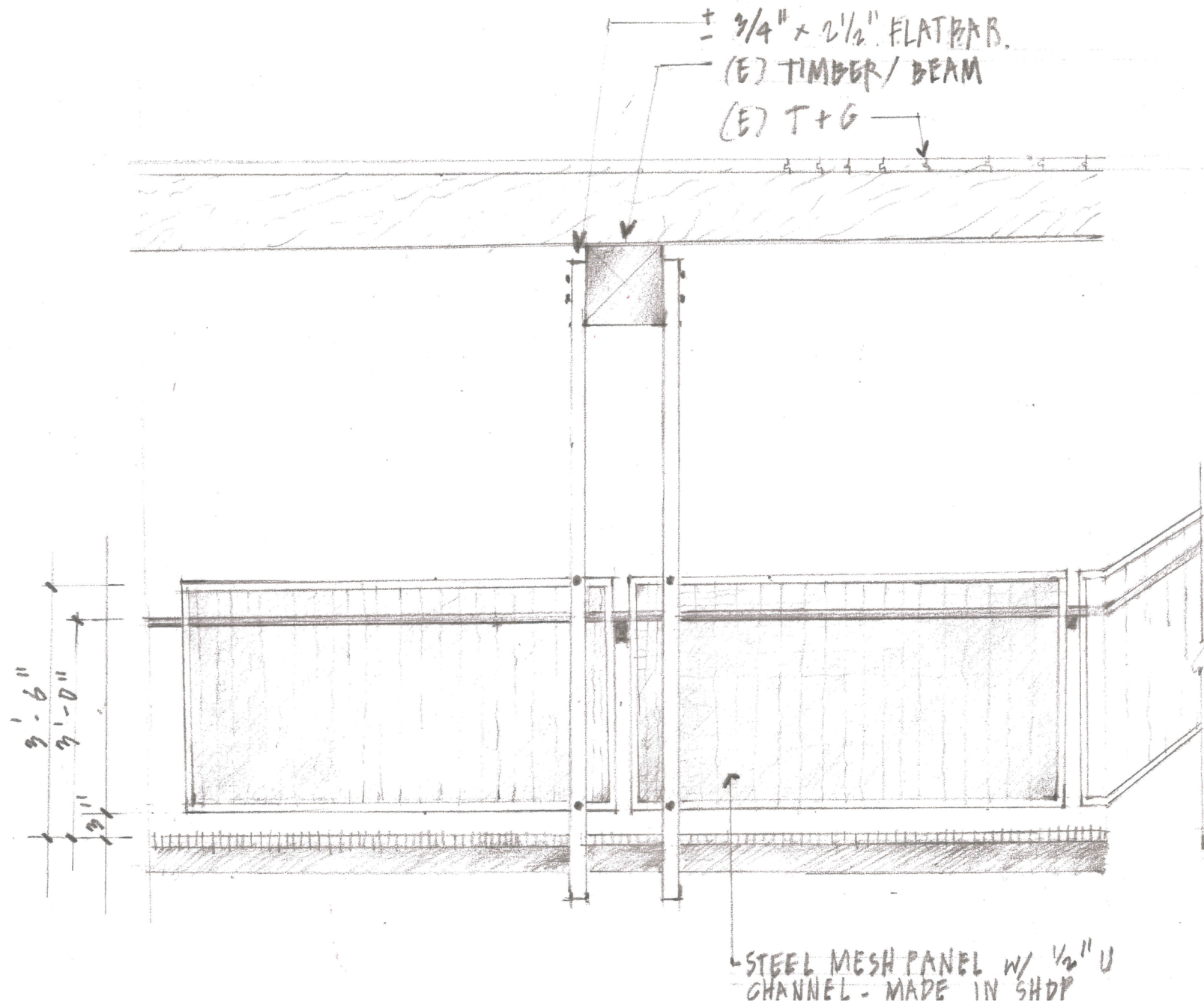
1/8" = 1'-0"
0 1' 4'



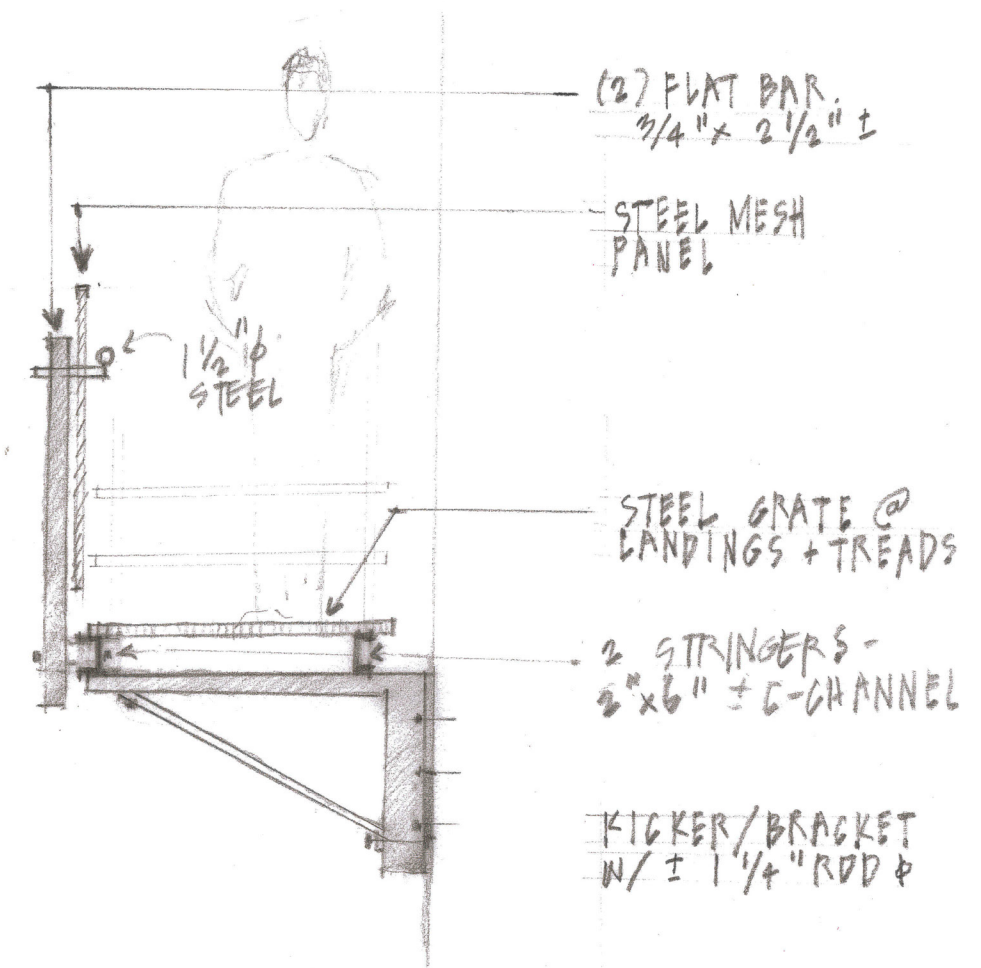
SECTION B

1/16" = 1'-0"
0 2' 8'

STAIR STRUCTURE CONCEPT



GUARDRAIL/LANDING ELEVATION AT TIMBER SUPPORTS
1/2" = 1'-0"
0 6" 1'



GUARDRAIL/LANDING SECTION AT BRACKET SUPPORTS
1/2" = 1'-0"
0 6" 1'

MATERIALS



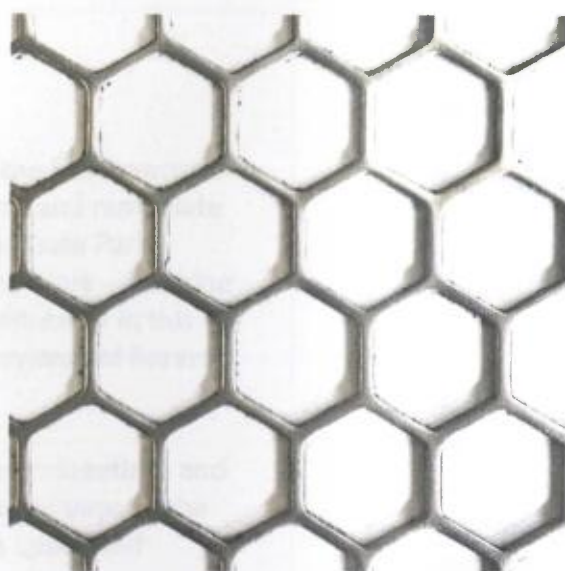
EXISTING CONDITION



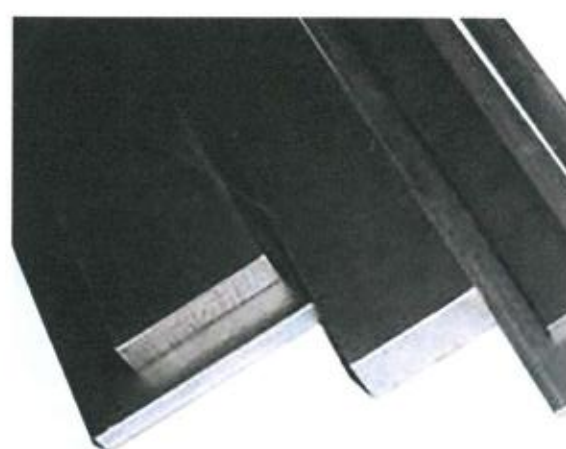
EXISTING CONCRETE



EXISTING WOOD



NEW STEEL MESH PANEL



NEW STEEL STAIR

PALETTE

Walls: existing concrete
existing wood framing - fir

Ceiling: existing wood timber
framing - fir

Stairs: new stair assembly -
painted black steel &
painted black steel mesh
panel



APPENDIX F

South (Murphy) Windmill, Golden Gate Park

Construction Management of Machine Guarding and Related Improvements

Final Report

Prepared for San Francisco Recreation and Parks Department

Prepared by C M Pros and Subconsultants

Authors: Russ Rasnic, PE, Ed Beard, PE and Robert Doane, RA, CMAA

AUGUST 15, 2013

EXECUTIVE SUMMARY

The Environment Safety and Health Division and the Operations Division of the San Francisco Department of Recreation and Parks have identified a need to survey, analyze and remediate various existing conditions at the historic South (Murphy) Windmill in Golden Gate Park. Specifically the rotating equipment is not presently equipped with physical barriers – machine guards - to prevent very severe injury to operators. Many of the concerns addressed in this report were raised by operational staff themselves through the established system of hazard analysis which provides for anonymous notifications.

Additionally, concerns were pointed out by operators, safety staff and others in meetings and on site visits as a part of ongoing focus on the safety of the Windmill. Conditions beyond the machine guarding concern have been found that are out of compliance with Codes and Standards, Best Practices and Operational Safety.

A Consultant, C M Pros, Inc was engaged to study conditions which pose the highest risk of serious injury or death, which is to say, the most urgent issues. The highest priorities were agreed upon by Environment Safety and Health Division and Operations Division in meetings with the Consultants and are listed in Table 1, Areas of Urgent Concern. A list of all areas of concern, including lower risk items which have been deferred, is given in Appendix B.

C M Pros reviewed drawings, conducted investigations on site, took pictures and video, measured, researched Codes and Standards, and interviewed staff. They analyzed, organized and summarized the results in this report. They have also made recommendations to improve the safety of the working environment inside the Windmill and on the Fan Tail and document those recommendations in this Final Report. The intent of this phase of the work is to provide the pre-design documentation that is needed to allow development of Construction Documents for the work involved in implementing the hazard mitigation measures foreseen.

At the outset of the study, Recreation and Parks directed C M Pros to address the issue of fall protection on an urgent basis. Investigations revealed that risks of falls could be addressed by installation of planking at Level 5 and 6, which removed the need for fall arrest harnesses on the interior of the tower. On the Fan Tail platform, additional investigation and engineering is needed and for this reason operators have been directed to defer maintenance on that part of the facility. This Final Report will address specific solutions to remaining fall hazards including on the Fan Tail and Platform.

During the course of fact-gathering, information was developed that public access to the tower – currently not allowed – has been and is being considered as part of a plan to turn the Windmill and the adjacent cottage into a museum. While a full study of this proposal is outside the scope of services, there were practical reasons to include consideration of it now.

Operational safety is regulated by OSHA and CalOSHA. The code requirements for the facility itself are contained in the Building Code and are based on the occupancy type foreseen. Because there are differences between codes, a decision was needed as to how to treat the potential for limited public access. While no comprehensive study is underway, it is recommended that some features, such as the stairways, which need to be rebuilt to eliminate hazards, be improved to meet the provisions governing public access as it is foreseen at this time.

Generally speaking, the alterations and safety enhancements we foresee will be located in the interior of the building, which is in accord with the recommendations of the Landmark Preservation Advisory Board. The only exception is on the Fan Tail platform where additional guardrails and floor infill will be very similar in appearance to those already in place. The hazards associated with the Deck at Level 3 were not included in the scope of this study.

As a result of our investigations we have identified a Zone of Operational Hazards, which consists of all the locations where operation of any of the windmill mechanisms has potentially dangerous consequences. So for example, releasing the sail brake (accomplished on Level 3) creates rotating equipment hazards on Levels 5.75 and 6, and risk of trauma from rotating sail blades on the exterior Deck. Identification and definition of this Zone has informed our recommendation that the major hazards be mitigated by lockout/tagout procedures using keys and locks specifically intended for condition such as those encountered in the Windmill. Traditional machine guarding utilizing covers to moving parts is also used on a limited basis when needed to supplement the lockout/tagout strategy.

The report also addresses in detail a range of other sources of potential injury to operators beyond those associated with operation of the windmill machinery. The most important of these is the stairways, which meet neither OSHA requirements nor Building Code.

Robert E. Downey CPP, CSP

7311 Santa Juanita avenue

Orangevale, Ca 95662

916-995-8792

December 1, 2017

Paulett Taggart Architects

Attn: Mr. Eric Robinson

725 Greenwich Street, 4th Floor

San Francisco CA 94133

Re: Stair Survey, Murphy Windmill

Dear Eric:

As you requested Kasey Elliott and I conducted a stair survey of existing wooden stairs at the Murphy Windmill. Our specific task was to determine whether or not the stairs as constructed were in compliance with Cal-OSHA standards. I would like to thank Kasey for her patience in recording all measurements taken during this survey and for preparing the attached report. The following observations are provided for each stair from grade to top of the structure and the specific Cal OSHA reference regarding violations is 8 CCR 3234 Fixed Industrial Stairs.

On positive notes, the stairs are solidly built with guardrails and midrails of the proper height and have been constructed at angles no greater than 50 degrees.

Stair 1 (grade to 2d floor)

1. This stair has a variation greater than ¼” In the total run of the stair. Top stair to 2d floor landing has nearly a 1 “variance.
2. Nosings do not extend uniformly beyond the risers by ½” to 1 inch
3. Wood stairs are not slip resistant*
4. At stair 12 the vertical clearance is less than 6’6”

Stair 2 (2d floor to 3d floor)

1. This stair has a variation greater than ¼’ in the total run of the stair.
2. Nosings do not extend uniformly beyond the risers
3. Wood stairs are not slip resistant*
4. At stairs 11 and 12 vertical clearance is less than 6’6”

Stair 3 (3d floor to 4th floor)

1. Riser variations exceed 1/4” in total run of the stair
2. Treads have no extended nosings
3. Vertical clearance is restricted at stairs 12 and 13

Stairs 4 and 5 (levels 4th floor to 5th floor and 5th to 5a)

1. Riser variations exceed ¼”
2. Nosings are not present or are not uniform in extension

Stair 6 (5a to ladders and mill equipment)

1. Top step to platform is 18” and requires installation of another stair tread
2. There are more than 4 stairs and a rail is required
3. Width of the stair is 24”and is not out of compliance but the stair could be made wider and allow easier access as well as the installation of a rail.

*Have not conducted a slip resistance test, so this is opinion only. However, the presence of grease and oil especially on the top stairs at levels 5 & 6 may add to a potential fall.

Thank you for the opportunity to assist in this effort. Please call should you have questions.

Sincerely,

Robert E. Downey

Robert E. Downey CPP, CSP

Red Consulting

SECRETARY OF INTERIOR’S STANDARDS FOR
REHABILITATION

The following Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

- 1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
- 2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
- 3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- 4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- 5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- 7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- 8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- 9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- 10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The Secretary of the Interior’s Standards for the Treatment of Historic Properties
U.S. Department of the Interior National Park Service- Technical Preservation Services
<https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf>

LANDMARKS PRESERVATION ADVISORY BOARD
Case Report for hearing on August 15, 2001

Case No. 2001.0732A
MARTIN LUTHER KING JUNIOR DRIVE
Murphy Windmill and Millwright’s Cottage,
Landmark No. 210
Assessor’s Block 1700, Lot 001
Certificate of Appropriateness to disassemble and then restore the Murphy Windmill and to provide an accessible entrance to the Millwright’s Cottage to convert the site into an educational museum of wind power.

DEPARTMENT CONTACT

Allison Borden, (415) 558-6321

REVIEWED BY

Elizabeth Gordon

APPLICANT AND FILING DATE

Cindy Sterry, Sterry Architecture, filing on behalf of the Campaign to Save the Golden Gate Park Windmills and the property owner, the Recreation and Park Department; July 24, 2001

PROPERTY DESCRIPTION

MARTIN LUTHER KING JUNIOR DRIVE, the Murphy Windmill and Millwright’s Cottage as well as the landscaped open space setting surrounding the two structures, Landmark No. 210, north side between John F. Kennedy Drive and the Great Highway, identified as a portion of Assessor’s Block 1700, Lot 001. The subject property is zoned P (Public Use) and is in the OS (Open Space) Height and Bulk District.

PROJECT DESCRIPTION

To fully restore the Murphy Windmill as a working windmill and educational center and the Millwright’s House as an educational museum of wind power. This work will include:

- Removal of the copper head (or dome) with associated turning system (support ring), the mechanical system (gears and bearings), the spars, the sails, and the fan-tail of the windmill. Some of these items will be shipped to Holland for restoration.
- Replacement of the windmill’s exterior slate shingles in-kind.
- Document, disassemble, and restore or replace wooden elements of the windmill structure and then re-assemble.
- Remove the concrete supports for the non-extant water pumps from the interior of the windmill to allow ADA accessibility.
- Redesign stairs on the interior of the windmill to meet current Building Code standards, and to allow access to the gallery level. The gallery level will be cut back

CERTIFICATE OF APPROPRIATENESS

Case No: 2001.0732A Assessor's Block: 1700 Lot: 001

Address of Property: Martin Luther King Junior Drive

Date Application Filed: July 24, 2001

City Landmark: Murphy Windmill and Millwright's Cottage, as well as the landscaped open space setting surrounding the two structures, LM #210

Description of Proposed Work: Alterations as detailed in Architectural Plans dated January, 2001 and labeled EXHIBIT A in the file docket for 2001.0732A: to allow the full restoration of the Murphy Windmill as a working windmill and educational center and the Millwright's House as an educational museum of wind power. This work will include:

- Removal of the copper head (or dome) with associated turning system (support ring), the mechanical system (gears and bearings), the spars, the sails, and the fan-tail of the windmill. Some of these items will be shipped to Holland for restoration.
- Replacement of the windmill's exterior slate shingles in-kind.
- Document, disassemble, and restore or replace wooden elements of the windmill structure and then re-assemble.
- Remove the concrete supports for the non-extant water pumps from the interior of the windmill to allow ADA accessibility.
- Redesign stairs on the interior of the windmill to meet current Building Code standards, and to allow access to the gallery level. The gallery level will be cut back to a mezzanine at the interior.
- Add an ADA-compliant entrance ramp at the façade (west elevation) of the Millwright's Cottage.

Action by the Landmarks Preservation Advisory Board on August 15, 2001: Recommendation of no significant impact and no potential detrimental effect on the Landmark per the findings in the record of the hearing, and subject to:

- Thorough documentation of all replacement parts used in restoring the Windmill.
- Consideration of the State Historic Building Code in the redesign of the stairs and gallery level at the interior of the Windmill. These details shall be brought back to the Landmarks Preservation Advisory Board prior to approval of any building permit for work on the interior of the Windmill.
- Use of compatible materials in constructing the ADA-complaint entrance ramp at the west elevation of the Millwright's Cottage, specifically that the exterior wall and cap be brick and the interior concrete to match the existing entry stairs.

Action by the Planning Department: APPROVED

I have reviewed the proposed work and the recommendation of the Landmarks Preservation Advisory Board and have determined that the proposed work would not have a significant impact upon, and would not be potentially detrimental to the Landmark.

Findings:

- Documentation, disassembly and restoration or replacement of damaged, deteriorated, or missing parts of the structure and its associated mechanical systems is necessary to stabilize the windmill and make it weatherproof. The proposed alterations are fully substantiated by documentary evidence and will not obstruct any character-defining, historic feature. Please see discussion under "The Secretary of Interior's Standards for Rehabilitation", above.
- The proposed accessibility ramps at the West elevation of the Millwright's Cottage are simple and straightforward in design and would not call attention to themselves nor convey a false sense of historic development. The proposed alterations are reversible and will not alter or obstruct any character-defining, historic feature.
- The overall exterior appearance of the Murphy Windmill and Millwright's Cottage will remain the same.
- The proposed alterations would enhance the safety, accessibility, functioning and utility of these historic resources and thereby assure their long-term preservation.
- For these reasons the proposal overall, is appropriate for and consistent with the purposes of Article 10, meets the standards of Article 10 and the Secretary of the Interior's Standards for Rehabilitation.

Aug. 29, 2001
Date


Gerald G. Green
Director of Planning

Duration of this Certificate of Appropriateness: This Certificate of Appropriateness is issued pursuant to Article 10 of the Planning Code and is valid for a period of three (3) years from the effective date of approval by the Director of Planning. Implementation of this Certificate of Appropriateness is accomplished by completion of construction work (verified by a job card signed by a Building Inspector) after issuance of an appropriate Building Permit.

Appeal: Any aggrieved person may appeal the action on this Certificate of Appropriateness by appealing the issuance of the Building Permit required to implement the proposed work. Contact the Board of Appeals (558-6720) for instructions on filing a permit appeal.

THIS IS NOT A PERMIT TO COMMENCE ANY WORK OR CHANGE OCCUPANCY (UNLESS NO BUILDING PERMIT IS OTHERWISE REQUIRED FOR THE WORK). PERMITS FROM THE DEPARTMENT OF BUILDING INSPECTION AND ANY OTHER APPROPRIATE AGENCIES MUST FIRST BE SECURED BEFORE WORK IS STARTED OR OCCUPANCY IS CHANGED.
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