REQUEST FOR PROPOSALS
PIER 38 BULKHEAD REHABILITATION PROJECT

CITY AND COUNTY OF SAN FRANCISCO

Edwin M. Lee, Mayor

SAN FRANCISCO PORT COMMISSION

Doreen Woo Ho, President
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November 16, 2012

Request for Proposals

Pier 38 Bulkhead Rehabilitation Project

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Summary of Offering

Opportunity:	The Port of San Francisco is seeking submittals of proposals to rehabilitate the Pier 38 bulkhead structure and a limited portion of the Pier 38 shed (the "Pier 38 bulkhead building"). Respondents are invited, though not required, to also submit their qualifications for possible redevelopment of the entire or majority of the Pier 38.
Location:	Pier 38, at The Embarcadero and Townsend Street.
Capital Investment:	Investment in mechanical, electrical and plumbing upgrades, Americans with Disabilities Act ("ADA"), egress, structural and other improvements required to rehabilitate the Pier 38 bulkhead building. Seismic upgrade of the pier is not assumed. Business terms will reflect the private investment required.
Historic Building:	Rehabilitation of Pier 38 must be consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties.
Lease Duration:	The lease term is expected to be 10 years or a term needed to amortize the rehabilitation of the Pier 38 bulkhead building capital investment.
Financial Terms:	Fair market rent with periodic rent increases.
Selection Process:	Following evaluation of minimum qualifications, the Port will evaluate proposals for the rehabilitation of the Pier 38 bulkhead building from respondents outlined in this RFP. Port staff will recommend to the Port Commission the most qualified respondent based upon the evaluation criteria stated herein.
Submittal Due Date:	Proposals must be delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111 no later than 5:00 pm PST on **February 22, 2013**.
Pre-Submittal Meeting/ Pier 38 Tour:	**December 11, 2012**
Contact:	John Doll, Port of San Francisco Pier 1, San Francisco, CA 94111 (415) 274-0639 john.doll@sfport.com

I. THE OPPORTUNITY

A. Overview

Through this Request for Proposals ("RFP"), the Port of San Francisco seeks statements of qualifications and proposals from respondents interested in rehabilitating and re-tenanting the Pier 38 bulkhead building (collectively and hereafter, the "Rehabilitation Concept"). The Port's goal is to perform needed health and safety upgrades to the Pier 38 bulkhead building to permit re-occupancy as soon as possible without triggering an expensive pier seismic upgrade or a lengthy entitlement process. A Port-funded Creegan & D'Angelo conditions study illustrating various alternatives on how the Pier 38 bulkhead building may be developed is attached to this RFP.

The Port also understands that there may be a long-term development opportunity for the entire or majority of Pier 38, not just the Pier 38 bulkhead building, because of its proximity to existing or proposed waterfront facilities and existing development. Any long-term development for the entire or majority of Pier 38 will necessitate an expensive seismic upgrade and most likely a lengthy entitlement process.

This RFP is for rehabilitation of the bulkhead building only. However, respondents to this RFP will have to demonstrate that the rehabilitation to the Pier 38 bulkhead building will not inhibit the potential long-term redevelopment of Pier 38 (i.e., respondents must consider ways the bulkhead building project might be designed and operated that allows for a phased redevelopment of Pier 38).

After the successful completion and operation of the Pier 38 bulkhead building, the Port Commission, in its sole and absolute discretion, may elect, but is not obligated, to work with the selected respondent for a long-term redevelopment plan of the entirety or majority of Pier 38.

B. The Offering

The Port seeks qualified respondents to submit statements of qualifications and written proposals for the Rehabilitation Concept. Respondents may consider the information provided by the attached Creegan & D'Angelo's "Final Report regarding Pier 38 Building Code Compliance and Occupancy Study." This Final Report includes repair options that were based on repair options that would not trigger a pier seismic upgrade.

The intent of this RFP is to solicit respondents with demonstrated experience in rehabilitating, developing, leasing, and operating facilities similar to Pier 38. An ideal candidate would have experience with historic rehabilitation of waterfront structures, an ability to attract financial resources, an ability to identify and secure uses and activities, and a demonstrated ability to

operate and manage real estate projects once completed. In addition, such a candidate would have a proven track record of working with public agencies to achieve the Port's objectives set forth in this RFP.

Responses to the RFP must include a Rehabilitation Concept implementation strategy to repair and re-tenant the Pier 38 bulkhead building as soon as feasible. Under the Rehabilitation Concept, the following uses and activities are encouraged:

- Restaurants, visitor-serving commercial, entertainment and cultural uses
- Office, high technology in particular, development uses that support adaptive reuse
- Maritime uses that complement location and adjacent waterfront development

The Rehabilitation Concept for the Pier 38 bulkhead building will require substantial investment to bring back to active use. The selected respondent will be expected, among other things, to remedy structural deficiencies, replace or repair mechanical, electrical and plumbing systems, address egress and ADA issues, and construct any other improvement needed to meet the City's building code requirements as well as other regulatory requirements, including consistency with the Secretary Standards.

The Port will require that the Rehabilitation Concept be funded through private sector investment and that the Port expects the successful respondent to fund physical improvements and provide for on-going operating/maintenance costs as well as provide security for the entire pier. The negotiated lease between the Port and a successful respondent will be at fair market rent. The lease term is expected to be 10 years or a term needed to amortize the Rehabilitation Concept investment.

As noted above, respondents must also demonstrate how the Rehabilitation Concept will not hinder a long-term reuse of Pier 38. In other words, respondents must ensure that the short-term construction (e.g., building and pier engineering) and operation (e.g., accessibility) will not hinder possible subsequent redevelopment of the entire or majority of Pier 38.

II. PIER 38 BACKGROUND

The Port of San Francisco's Pier 38 was first built in 1908 and was utilized as a break bulk storage facility. The original superstructure was comprised of a shed of exposed steel construction and concrete roof decking. A later 1932 addition to the Pier was added at the east end of the pier with a slightly wider footprint utilizing wood decking in lieu of concrete at the roof. Between 1934 and 1936, the bulkhead building fronting The Embarcadero was constructed to house office space. It was constructed as a separate steel frame structure with exposed wood framed walls and floors and sits directly in the front of the original shed. Pier 38 is a contributing resource to the Port of San Francisco Embarcadero Waterfront Historic District and as such is considered a qualified historic building or property subject to the California Historic Building Code.

In January 1996, Pier 38 Maritime Recreational Center and Carl Ernst (collectively, the "Prior Tenant") entered into a 20-year lease for the entire Pier 38 site. Starting in 1999, portions of the bulkhead building and shed were built-out for restaurant use (but never occupied) and office space use without permits.

As a result of unlawful detainer action initiated by the Port, the Prior Tenant was evicted from Pier 38 and surrendered possession on or about August 1, 2011. On September 2, 2011, the Port's Chief Harbor Engineer declared the Pier 38 shed, office spaces and north apron unsuitable for any occupancy due to health and safety violations. Occupants were asked to vacate the premises on September 30, 2011. By October 20, 2011, all occupants housed in the Pier 38 bulkhead building and pier shed were vacated. However, as of issuance of this RFP, three vessels remain moored at Pier 38, without Port approval.

As attached, recent Port Commission staff reports provide additional Pier 38 background information regarding closure, reuse options and solicitation options.

III. REGULATORY CONTEXT

The Port Commission will consider approval of any transaction agreements for Pier 38. A lease will be subject to Section 9.118(c) of the San Francisco City Charter that requires approval of the Board of Supervisors for leases in excess of ten years or anticipated revenues of $1 million or more in total revenue. The following information is intended to provide a regulatory context; it is not meant to be an exhaustive summary.

A. Waterfront Land Use Plan

Pier 38 is located in the South Beach/China Basin Waterfront Area in the Port's Waterfront Land Use Plan ("Waterfront Plan"). The Waterfront Plan identifies the following objectives for the South Beach/China Basin Waterfront Area:

- Preserve and rationalize existing industrial maritime activities in the area.
- Preserve and improve existing maritime uses that provide focal points for public enjoyment of commercial and recreation oriented maritime activities.
- Promote activities and public access to make the waterfront inviting and safe, and improve the living environment of the new and emerging Rincon Hill, South Beach and Mission Bay neighborhoods.
- Take advantage of proximity to downtown San Francisco by providing attractions for the general public, while respecting the needs of adjacent residents.
- Create an integrated series of public access improvements that extend a shoreline PortWalk through the area, and provide a unifying pedestrian connection between South Beach and Mission Bay at China Basin Channel.
- Establish high standards in the design of new development that give rise to a new architectural identity for the shoreline north of China Basin Channel.

Pier 38 is also part of the South Beach Harbor Mixed Use Opportunity Area under the Waterfront Plan, which includes the following Development Standards:

- Permit expansion of excursion boat operations and recreational boating activities at Pier 38.
- Permit consolidation of maritime support services at Pier 38.
- Permit interim uses on Pier 38 until long-term uses of these facilities can be realized.
- Apply "Good Neighbor" standards to bars, restaurants which sell alcohol, large fast food restaurants, and assembly and entertainment uses on Pier 38, unless the Port Commission makes a specific finding that a particular condition is unnecessary or infeasible.
- The design of any new development on Pier 38 should provide appropriate buffers, setback or other design solutions for open air bars, restaurants, and nighttime

entertainment activities that front The Embarcadero as necessary to mitigate noise impacts from such uses on residential neighbors.

The Waterfront Plan identifies the following acceptable uses for Pier 38: ferry and excursion boats, maritime office, maritime support services, recreational boating and water use, ship repair, temporary and ceremonial berthing, water taxis, public access, museums, retail (including restaurants), artists/designers, and wholesale trade with accessory uses of parking and storage.

B. State Lands Commission and the Public Trust

Like the majority of Port properties, Pier 38 was historically composed of tide and submerged lands owned by the State and subject to the common law public trust doctrine. Public trust lands are held on behalf of the people of the State for purposes of navigation, fisheries and commerce. Tide and submerged lands remain subject to the trust even after they have been filled, unless the trust is terminated by the Legislature. Pier 38 and other State sovereign lands were transferred in 1969 to the City pursuant to the Burton Act, subject to the trust and other requirements of the Burton Act. The California State Lands Commission ("State Lands") has oversight and enforcement authority over Port Commission development projects and, as reflected in recent San Francisco waterfront projects, is frequently asked to affirm a particular project's consistency with the public trust.

The public trust generally prohibits certain uses (e.g., general office, housing, many types of retail, commercial, and non-water-oriented recreational uses) in favor of maritime, open space, environmental restoration and visitor-serving facilities (including tourist retail, hotels, and parking areas). State Lands has recognized preservation of historic maritime facilities as a public trust activity provided substantial public trust uses are part of the project and the public has ample access to view the historic preservation. Accordingly, State Lands has been willing to allow some portion of historic structures to include non-trust uses, where those uses will generate revenue to finance pier repair and rehabilitation consistent with the Secretary of the Interior Standards for Historic Rehabilitation, public trust uses are part of the project, and public access to view the historic features of the structure. Non-trust uses are typically prohibited in facilities constructed on trust property.

C. Port Maritime Industry Preservation Policy

This policy guides the Port Commission in determining whether to rehabilitate any one of its assets and attests to the Port's commitment to protect the Port's remaining natural deep water berths for active maritime uses. The policy requires that such berths be used by seaworthy vessels and encourages development and/or rehabilitation of Port assets that include improvements to maritime deep water berthing facilities.

D. Environmental Review

As required by the California Environmental Quality Act ("CEQA"), any proposed project that may have an environmental impact will undergo environmental review; the CEQA process may not be waived by the Port Commission or the Board of Supervisors. Respondents must comply with all CEQA requirements before the Port Commission or the Board of Supervisors will consider project approval and/or lease execution.

E. Historic Preservation Process

Pier 38 is a contributing resource to the Port of San Francisco's Embarcadero Waterfront Historic District which is listed in the National Register of Historic Places. As part of the District's nomination, the Port developed Historic Preservation Review Guidelines ("Guidelines") to define how the Secretary of the Interior's Standards for Rehabilitation ("Secretary's Standards") should be interpreted and applied to the repair of historic pier substructures, such as Pier 38, to ensure its responsible management and stewardship. The Guidelines define parameters for the repair, maintenance or alterations to Pier 38's pile foundations, substructures, deck and the bulkhead wharf upon which Pier 38 resides.

F. San Francisco Bay Conservation and Development Commission ("BCDC")

BCDC is a state agency that has jurisdiction over the San Francisco Bay and the first 100 feet inland from its shoreline. BCDC regulates new development, as well as improvements and use of Port structures, within its jurisdiction to ensure, among other things, that maximum feasible public access to and along the Bay is provided. For major leases and most renovation of Port structures, BCDC along with its Design Review Board reviews these projects in conformance with the BCDC San Francisco Bay Plan and the San Francisco Waterfront Special Area Plan and issues a Major Permit with the leaseholder and Port as co-applicants.

IV. DEVELOPMENT OBJECTIVES

The Port has defined these development objectives for the Pier 38 Rehabilitation Concept:

- Repair the Pier 38 bulkhead building which may include: remedy structural deficiencies, replace or repair mechanical, electrical and plumbing systems, and construct any other improvements, including egress and ADA, needed to meet the City's building code requirements as well as other regulatory requirements, including consistency with the Secretary Standards.

- Develop the most effective implementation strategy to quickly re-tenant the Pier 38 bulkhead building in order to achieve the Port's goal of bringing it back into economic use and provide an on-going revenue stream to the Port.

- Encourage the re-tenanting of the Pier 38 bulkhead building to include: office, high technology uses, visitor-serving commercial, entertainment and cultural uses, and, maritime uses that complement adjacent waterfront development.

- Continue the redevelopment of the South Beach waterfront from the Bay Bridge to AT&T Ballpark, by reviving this historic structure, and helping knit Pier 38 into the South Beach neighborhood by bringing people and business activity to the waterfront.
- Demonstrate how the short-term Pier 38 bulkhead building rehabilitation will not inhibit a long-term reuse of Pier 38 (i.e., ensure that the short-term construction and operation would not hinder possible subsequent redevelopment of the entirety or majority of Pier 38).
- Develop a plan to improve the physical appearance of the bulkhead building and pier shed.
- Require that any adaptive reuse will be consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties ("Secretary Standards").
- Require a sustainable development program that minimizes the reliance on private automobiles, uses energy efficiently and, as possible, includes alternative energy sources that comply with the City's Green Building Standards.
- Secure private financial investment to rehabilitate and revive the Pier 38 bulkhead building in the near term.

- Provide business and employment opportunities for local workers and businesses during the design, construction and operation phases of the Pier 38 bulkhead building.

- Provide security for the entire Pier 38.

V. MINIMUM QUALIFICATIONS & EVALUATION CRITERIA

A. Minimum Qualifications

Each respondent must meet the following minimum requirements for consideration of its Rehabilitation Concept. The Port will not consider or evaluate submittals from respondents that do not meet these minimum requirements:

1. A minimum of 10 years' experience in commercial real estate development
2. Successful completion of at least 3 real estate development projects of similar size and scope to the project proposed, at least one of which must be historic preservation project documented to have met with Secretary Standards
3. Superior credit history and demonstrated ability to finance the project proposed on commercially reasonable terms from equity or debt from bona fide financial institutions

Any submittal that does not demonstrate that the respondent meets these minimum requirements by the Submittal Due Date will be considered non-responsive, its Rehabilitation Concept will not be reviewed or evaluated, and such respondent will not be eligible for award of the contract. All respondents that meet the minimum requirements will have their respective submittals scored by an evaluation committee on the following criteria:

B. Evaluation Criteria

Evaluation of the submittals from all respondents that meet minimum qualifications will focus on the capability of the respondent and the strength of the Rehabilitation Concept proposed. The evaluation criteria below will be used to assess the relative strength of each submittal.

1. <u>Developer Qualifications</u> (25 Points)
    a. Respondent's track record in successfully rehabilitating and developing projects of comparable size, land use, visibility and expense, especially for projects located in the San Francisco Bay Area
    b. Experience of respondent's team members and key personnel
    c. Experience with waterfront and/or historic preservation projects, in particular with meeting Secretary Standards
    d. Experience with projects in identifying and securing target tenants, defining the scope, structuring the transactions, securing necessary approvals, and managing the construction process
    e. Demonstrated ability to operate and maintain real estate projects once completed, including sustaining occupancy and addressing on-going operational needs
    f. Proven ability to work with public agencies to achieve development

g. Track record of local hiring and participation of locally owned businesses in prior projects

h. Demonstrated ability to work with local organizations and/or address community concerns

i. Demonstrated understanding, ability and flexibility to obtain key approvals in a complex political and regulatory context

2. Financial Capability (15 points)

   Demonstration that the respondent has the required equity and/or the ability to attract equity or debt for projects similar in scope and cost to the proposed Rehabilitation Concept as evidenced by:

   a. Financing of comparable projects

   b. Access to sufficient debt and equity, including risk equity, for the project proposed

   c. Ability to offer guarantees of bonding arrangements to ensure timely completion of the proposed project

   d. On-going relationships with financial sources

3. Proposed Design, Construction and Tenant Program (40 points)

   a. Strategy to re-tenant the bulkhead building with uses that best meets the Development Objectives

   b. Design and construction plan to ensure the repairs to the bulkhead building will be consistent with the City's building code and Secretary Standards.

   c. Strategy to obtain approvals for the proposed design and construction, as noted above in the Regulatory Context

   d. Demonstrated strength of real estate market for proposed tenant use

   e. Demonstration of how the short-term Pier 38 bulkhead building rehabilitation will not inhibit a long-term reuse of Pier 38 (i.e., ensure that the short-term construction and operation would not hinder possible subsequent redevelopment of the entirety or majority of Pier 38).

4. Proposed Financial Terms (20 Points)

   a. Cash flow projections that demonstrate the project, once operational, will meet all lease, debt service, and operating expenses

   b. Proposed annual rent structure to the Port

C. Interviews

Following the submittal process, the most qualified respondents may be invited to interviews with an evaluation panel. Interviews will consist of standard questions asked of selected respondents, and specific questions regarding individual Rehabilitation Concept proposals. Written submittals and interviews will be worth 100 points. The lead staff of the respondent should be present for the interview as well as the lead staff of any partners.

VI. SOLICITATION SCHEDULE

A. Schedule

The Port reserves the right to modify the schedule.

- Issuance of RFP: November 16, 2012
- Pre-submittal meeting and Pier 38 tour: December 11, 2012
- Deadline for submission of written questions: December 21, 2013
- Submittal due date: February 22, 2013
- Port Commission consideration: Spring 2013

B. Questions Regarding RFP

Any requests for information concerning, or clarification of, this RFP must be submitted in writing before December 21, 2013 to John Doll, Port of San Francisco by email to john.doll@sfport.com.

Responses to all questions directed to Port staff either at the pre-submittal meeting or writing will be posted on the Port's website for this RFP. Respondents are presumed to have received any and all information contained in this RFP or posted on the Port's website for this RFP. Accordingly, the Port strongly recommends that parties consult the Port's website frequently to determine if new information relating to this RFP is available.

C. Pre-Submittal Meeting/Pier 38 Tour

Interested parties are strongly encouraged to attend the pre-submittal meeting on December 11, 2012 at 10 am the Port's offices, Pier 1 (The Embarcadero and Washington Street) in San Francisco. Port staff will address questions and provide any new information then available. Following the presentation, Port staff will lead a tour of Pier 38 at 1:30 pm on December 11. Please RSVP to john.doll@sfport.com to attend the pre-submittal meeting and Pier 38 tour.

VII. SUBMITTAL REQUIREMENTS

A. Time and Place for Submission of Proposals

Proposals must be delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111 for receipt no later than 5:00 pm PST on February 22, 2013.

The following items must be included in your responses and packaged in a box or envelope clearly marked: "Request for Proposals: Pier 38 Bulkhead Rehabilitation Project" and addressed to the attention of John Doll, Development Project Manager:

1) Proposal must include original printed proposal with five (5) copies. Please do not bind, other than with a staple, the application and additional pages and do not submit in a binder or other folder.

2) One CD-ROM containing entire contents of responses, including all attachments. The CD-ROM and electronic files on the CD-ROM must be labeled with the proposer's name. All files should be submitted in unprotected PDF or Word format.

Proposals that are not received at the designated address before the specified deadline will not be accepted. Facsimile reproductions of proposals also will not be accepted.

B. Submittal Format

There are three components to the required submittal:

1. A "Project Summary" that introduces the respondent and describes the Rehabilitation Concept proposed.
2. A "Technical Information" submittal that provides materials to be used in the evaluation that will not be made public during the evaluation process.
3. A "Confidential Financial Materials" submittal to evaluate financial capacity of the respondent.

The Project Summary must be formatted to allow the Port to post them on the Port's website (with a maximum file size of 5 megabytes).

The Technical Information submittal must include the respondent team description, qualifications, pro-forma and other information. These documents are subject to the Sunshine Ordinance (Administrative Code Section 67.24(e)), and all responses and other communication from interested parties must be open to inspection by the public upon request immediately after a lease is awarded.

Each respondent should submit one copy of its financial information in a separate sealed envelope, designated "Financial Materials". Each respondent must clearly mark any of the financial materials that it in good faith believes to be a trade secret or confidential proprietary information protected from disclosure under applicable law. To the extent permitted by law, the Port Commission will attempt to maintain the confidentiality of financial materials marked confidential and/or proprietary, but respondents are cautioned that, in accordance with the Sunshine Ordinance, responses and other communications from interested parties must be open to inspection by the public upon request immediately after a lease is awarded. Proprietary financial information submitted by a respondent in response to this RFP will not be disclosed until and unless that respondent is awarded the lease.

Submittals must be prepared and submitted in an organized manner. Information must be printed on recycled paper, double-sided to the greatest extent possible. Page numbers are required and tab dividers would be appreciated.

C. Submittal Contents

1. Project Summary

a) Development Entity

Describe the respondent and team members.

b) Developer Qualifications

Describe waterfront and/or historic preservation projects of comparable size, land use, visibility and expense, especially for Bay Area projects undertaken by the respondent and team members.

c) Pier 38 Rehabilitation Concept

(1) Describe the proposed Rehabilitation Concept. Demonstrate its constructability and explain what uses and activities will occur and how they meet the Port's development objectives.

(2) Summarize the Rehabilitation Concept in one table showing uses and capital investment.

(3) Describe use program.

(4) Identify any synergies or conflicts with existing or planned adjacent waterfront development.

d) Rehabilitation Strategy to Ensure a Successful Project

(1) Describe the proposed Rehabilitation Concept plan and how respondent will address integrating modern building systems into an historic structure.

(2) Provide a site plan showing proposed uses.

(3) Explain proposed sources and uses of capital investment; describe the operational and management plan for the proposed rehabilitation.

(4) Provide a schedule and strategy to secure regulatory approvals for the proposed project through occupancy.

(5) Explain how once the construction and re-tenanting/operation is accomplished, a long-term reuse of Pier 38 might be seamlessly phased.

2. Technical Information

a) Development Entity and Team

(1) Identify and describe the development entity submitting a proposal for the project. Include the responsibilities, name, address, telephone and email address of the principal developer (and relevant joint venture partners), and any other information, including references, about the development entity that may be pertinent to this opportunity. Joint ventures are acceptable, as long as one organization is designated as the lead development entity. List any and all joint venture partners, limited partners, members, or other equity holders and their percentage interests and capital/equity committed to the entity. Provide federal tax identification number and date of incorporation or organization. Indicate which members, if any, of the development entity, and or joint venture partners, and/or team members are local business enterprises ("LBE") as defined by San Francisco Administrative Code Chapter 14B.

(2) Please indicate the architect, general contractor and other critical consultants that are proposed for this project.

(3) Identify the person(s) in charge of negotiations, the limits of their negotiation authority, and key personnel who will be involved in decision-making and day-to-day management.

(4) Describe the intended role of each team member and key personnel in the implementation of the project and the responsible entity in the organizational structure for entitlement phase, construction stage and on-going property management.

(5) Discuss plans to include LBEs as partners, consultants, and contractors. Please indicate whether the development team includes any LBE equity partners and, if so, what percent of capital investment each is anticipated to contribute.

(6) Identify selected consultants, including licensed design professionals, and identify the lead person with each consultant.

(7) Include resumes for all key personnel for the respondent and consultants/contractors.

b) Disclosures

Provide answers to the following questions:

(1) Is the development entity or any principal owners in the proposed project involved in any litigation or disputes that could result in a financial settlement having a materially adverse effect on the respondent's financial condition? If yes, please explain.

(2) Does the development entity or any principal owners in the proposed project have any off-balance sheet liabilities, such as corporate or personal loan guarantees? If yes, please provide details of these items.

(3) Has the development entity or any named individual in the proposed project ever filed for bankruptcy or had projects that have been foreclosed, or transferred to a creditor in lieu of foreclosure, or projects where the developer renegotiated or refinanced permanent project debt which resulted in a relaxation of either financial or other covenant or other terms and conditions of the existing debt on the project? If yes, please list the dates and circumstances.

c) Developer Qualifications

(1) Provide a list of developments in which the company or principal(s) has (have) been involved, indicating the product type, date, size, cost, location and the role of the respondent in each development.

(2) Describe in greater detail the respondent's involvement in at least three similar development projects to that proposed, including product type, dates, locations, financing, size, total development cost, performance schedule including timeframe from transaction agreement to completion, marketing, and sales performance, and contact references on successfully completed similar developments. Indicate the role of the respondent in each project. Provide photographs of the project(s) if available.

(3) Identify historic preservation experience of the respondent and of the key consultants.

(4) List all current projects in design or development phase and capital commitment required of respondent for each.

(5) Discuss respondent's experience in meeting local business subcontracting goals on other projects.

d) Project Pro-Forma and Expected Sources of Funds

(1) Propose a financial structure for the Rehabilitation Concept. Discuss respondent's proposed lease terms.

(2) Provide a static pro forma for the Rehabilitation Concept illustrating total project investment, expected average annual occupancy rate, total revenues, operating expenses, net operating income, debt service, and return to equity at stabilization.

(3) Provide an overall development budget, including all hard and soft costs (including contingencies) from preconstruction through occupancy. Explain the basis for the cost estimates.

(4) Include market justification that clearly supports revenue assumptions and the viability of proposed tenancies. Submit detailed market information for any specialized or non-standardized use.

(5) Indicate the source(s) and amount of debt and equity (including working capital) identified for the proposed project. Describe the respondent's current relationships with investors and lenders and ability to obtain necessary capital for the proposed development.

(6) State the proposed guarantees, bonds, or other mechanisms to be used to ensure timely completion of the proposed project.

3. <u>Confidential Financial Materials</u>

Submittal must include one copy of the respondent's financial information in a separate sealed envelope designated "Confidential Financial Materials". The following information must be provided:

(a) Financial Statements

Provide the most recent available credit report and financial statements for the past two years of each principal partner and joint venture participant for each entity. Financial statements shall include balance sheets, income statements, statements of changes in financial position or cash flows, and all notes to the financial statements. Financial statements must be identified as audited, reviewed compiled or company prepared. Financial statements prepared by recognized accounting firms are preferred. The Port reserves the right to ask for additional financial statements for other periods.

(b) Real Estate Portfolio

Provide the composition of the current real estate portfolio either owned or managed by each principal partner or joint venture partner, listing the following for each project: project name, type, location, project size (rentable area), date completed, value, original and current debt, role (developer, operator, property manager, etc.), ownership interest and occupancy rate over a 10-year period. Identify any project with negative cash flow, amount of developer's recourse debt, any non-performing loans, and the amount of guarantees and/or contingent liabilities.

(c) Pipeline

List and describe all current projects in respondent's pipeline including status, development schedule and financial commitments required of respondent.

(d) Lender Relationships

Describe the respondent's current relationships with lenders and ability to obtain necessary financing for the development proposed, including recent history in obtaining financial commitments, detailing type of project, financing source, amounts committed, etc.

(e) Proof of Equity

Provide evidence of the respondent's liquid assets, or some acceptable form of equity, equal to the permanent equity requirements as well as funds required for the pre-development costs.

4. Earnest Money Deposit

Each respondent must submit with its response an earnest money deposit in the amount of $15,000, payable to the Port of San Francisco in the form of a cashier's

or certified check. Submittals received without the earnest money shall be deemed non-responsive. Earnest money will be refunded, without interest, to each respondent not selected for exclusive negotiations. The earnest money deposit of the respondent selected for exclusive negotiation will be non-refundable, whether or not exclusive negotiations result in the agreement.

5. Submittal Deadline

The Port must receive each submittal, including the earnest money deposit and all other required materials, in a sealed envelope before the Submittal Due Date. All responses must be addressed to the attention of John Doll and marked "Pier 38 Rehabilitation Project" and delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111.

VIII. SELECTION PROCESS AND AWARD

A. Selection Process Generally

Port staff will review all responses timely submitted to determine whether they are complete and responsive to this RFP. Only submittals that are complete, responsive and meet all requirements of this RFP and that are submitted by respondents meeting minimum qualifications will be evaluated during the selection process.

The Port will send a letter to any respondent whose submittal is deemed non-responsive and will indicate the reason(s) that the submittal is deemed non-responsive. The letter will be dated and deposited for delivery by first-class mail on the same date.

The Port Commission is the sole decision-maker regarding the selection, in its sole discretion, and the Port Commission reserves the right to reject any or all submittals or to terminate this process at any time. The Port Commission will consider selection of the respondent(s) with which to enter into a lease at a duly noticed public hearing. The Port Commission, acting in its proprietary capacity as landlord, has authority to approve a lease and related documents for the lease of and rehabilitation of the Pier 38 bulkhead building.

The Port reserves the right to request clarification from individual respondents and to request that some or all respondents maker presentation to Port staff, the Port Commission, community groups and/or others. The Port further reserves the right to make an award without further clarification of submittals received.

B. Evaluation Process

Complete and responsive submittals from qualified respondents (i.e., those that meet the minimum qualifications) will be reviewed in detail. If warranted, the Port may request additional information from some or all of the respondents. **Submittals from respondents that do not meet the minimum qualifications will not be further evaluated**.

The evaluation criteria stated in Section V above will be used to consider the submittals. The submittals (except for the financial materials) may be reviewed by an evaluation panel consisting of individuals with experience in real estate economics, land use planning, architecture/urban design, City/Port staff and its consultants. The evaluation panel will score submittals in accordance to the evaluation criteria stated in Section V above, taking in consideration information from reference checks and interviews. Written submittals and interviews will be worth 100 points.

C. Port Commission Determination

Port staff will recommend to the Port Commission a respondent to advance to lease negotiations. Upon Port Commission selection of the respondent, Port staff will negotiate the terms of a lease agreement to further refine the rehabilitation and re-tenanting of the Pier 38 bulkhead building.

IX. OTHER TERMS AND CONDITIONS

A. Respondent's Duty to Investigate

It is the sole responsibility of the selected respondent to investigate and determine the condition of Pier 38 bulkhead building, including existing and planned utility connections, and the suitability of the conditions for any proposed improvements and use.

The information presented in this RFP and in any report or other information provided by the Port is provided solely for the convenience of the interested parties. It is the responsibility of interested parties to assure themselves that the information contained in this RFP or other documents is accurate and complete. The Port and its advisors provide no representations, assurances, or warranties pertaining to the accuracy of the information.

Respondents are responsible for reviewing all portions of this RFP and any other information provided by the Port in relation to this RFP. Respondents are to notify the Port in writing of any ambiguity, discrepancy, omission, or other error in this RFP promptly after discovery, but in no event later than 15 business days before the deadline to submit submittals. An interested party that does not give timely notice to the Port will be deemed to have waived any ambiguity, discrepancy, omission, or other error in this RFP. Modifications and clarifications will be made by addenda as provided in Section IX.B below.

B. Conditional Nature of Offering

The Port's issuance of this RFP is not a promise or agreement that the Port Commission will actually enter into any contract. The Port expressly reserves the right at any time to:

1. Waive any technical defect or informality in any submittal or submittal procedure that does not affect or alter the submittal's substantive provisions;
2. Reject any or all submittals;
3. Suspend any and all aspects of the process indicated in this RFP;
4. Amend this RFP;
5. Terminate this RFP and issue a new request for interest, qualifications or proposals;
6. Request some or all respondents to revise submittals;
7. Select a tenant by any other means;
8. Offer new leasing opportunities in the area at any time;
9. Extend deadlines for accepting submittals, or accept amendments to submittals after expiration of deadlines; or
10. Decide not to pursue this offering.

The Port's failure to object to an error, omission, or deviation in any submittal will in no way

modify this RFP or excuse respondents from full compliance with the requirements of this RFP.

The Port may modify, clarify, and change this RFP by issuing one or more written addenda. Addenda will be posted on the Port's website, and notice of the posting will be sent by electronic mail to each party receiving an RFP. The Port will make reasonable efforts to notify interested parties in a timely manner of modifications to this RFP but each respondent assumes the risk of submitting its submittal on time and obtaining all addenda and information issued by the Port. Therefore, the Port strongly encourages interested parties to register as an interested party and check the Port's web page for this RFP frequently.

C. Respondent Selection Does Not Guarantee Project Approval

The Port Commission's selection of a respondent and authorization to commence exclusive negotiations may not be construed as an approval of the proposed project.

The Port will not enter into any LDDA or lease for any of the Pier 38 bulkhead building project until environmental review under the California Environmental Quality Act ("CEQA") is complete. Changes to the proposed project may occur or be required during the course of public review of the proposed project, during the extensive approval processes that will follow CEQA review, and in response to other City, Port, and public concerns that may arise, and those changes may require additional CEQA review if the changes have not already been analyzed. If a project is found to cause significant adverse impacts, the Port retains absolute discretion to require additional environmental analysis, and to: (1) modify the project to mitigate significant adverse environmental impacts; (2) select feasible alternatives that avoid significant adverse impacts of the proposed project; (3) require the implementation of specific measures to mitigate the significant adverse environmental impacts of the project, as identified upon environmental evaluation in compliance with applicable environmental law; (4) reject the project as proposed if the economic and social benefits do not outweigh otherwise unavoidable significant adverse impacts of the project; or (5) approve the project upon a finding that the economic and social benefits of the project outweigh otherwise unavoidable significant adverse impacts.

The Port is issuing this RFP in its capacity as a landowner with a proprietary interest in Pier 38 bulkhead building as a whole, and not as a regulatory agency of the City. The Port's status as an agency of the City will not in any way limit any selected respondent's obligation to obtain requisite approvals from City departments (including the Port), boards, or commissions with jurisdiction over a proposed project.

Under the San Francisco Charter, no officer or employee of the City and County of San Francisco, including the Port, has authority to commit the Port to any project until the Port Commission has approved the transaction following completion of CEQA review and, if required, the San Francisco Board of Supervisors has approved the lease.

D. Objections

1. RFP Terms

Should any interested party object on any ground to any provision or legal requirement in this RFP, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 14 calendar days after this RFP is issued. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

2. Notice of Non-Responsiveness

Should a respondent object on any ground to a determination that its submittal is non-responsive to this RFP, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 7 calendar days after the date of the letter notifying the respondent of the Port's determination of non-responsiveness. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

3. Selection of Respondent

Should any interested party object on any ground to the Port Commission's authorization to proceed with negotiations with a selected respondent, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 7 calendar days after the date of the Port Commission hearing at which the decision was made. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

4. Delivery and Form of Objections

Objections must be submitted in writing, addressed to John Doll, Development Project Manager, Port of San Francisco, Pier 1, San Francisco, CA 94111, and delivered to the Port by personal delivery or overnight courier during business hours (8:00 a.m. to 5:00 p.m.) to the Port's main reception area in Pier 1, or by first class mail by the dates due to be considered. If an objection is mailed, the objector bears the risk of non-delivery by the deadlines specified above. Objections should be transmitted by a means that will provide written confirmation of the date the Port received the objections.

E. Claims Against the Port

No respondent will obtain by its response to this RFP, and separately by its response waives, any claim against the Port by reason of any or all of the following: any aspect of this RFP, any part of the selection process, any informalities or defects in the selection process, the rejection of any or all submittals, the acceptance of any submittal, approval or disapproval of plans or drawings, entering into any transaction documents, the failure to enter into a lease or LDDA, any statements, representations, acts, or omissions of the Port, the exercise of any discretion set forth in or concerning any of the above, and any other matters arising out of all or any of the above.

F. Sunshine Ordinance

All communications about this RFP are subject to the San Francisco Sunshine Ordinance and other public records laws. Neither the Port nor the City will be responsible under any circumstances for any damages or losses incurred by a respondent or any other person or entity because of the Port's release of information in response to a public records disclosure request. In accordance with Section 67.24(e)(1) of the San Francisco Administrative Code:

Contracts, contractors' bids, responses to requests for submittals and all other records of communications between the Port and persons or firms seeking contracts will be open to inspection immediately after a contract has been awarded. Nothing in this ordinance requires the disclosure of a private person's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit. Information covered by this provision will be made available to the public upon request.

G. Financial Obligations

Each respondent is responsible for all costs incurred in responding to this RFP. The Port has no financial responsibility for any costs incurred by a respondent in responding to this RFP. The Port will not pay a finder's or broker's fee in connection with this RFP. Respondents will be solely responsible for the payment of all fees to any real estate broker(s) with whom the respondent has contracted.

H. Submittals Become Port Property

All submittals submitted will become the property of the Port and may be used by the Port in any way deemed appropriate.

I. Nondiscrimination Policy

The Port of San Francisco does not discriminate on the basis of disability in employment or in the admission and access to its programs or activities. Wendy Proctor, ADA Coordinator, Port of San Francisco, Pier 1, San Francisco, CA 94111, has been designated to coordinate and carry out the Port's compliance with the nondiscrimination requirements of Title II of the Americans with Disabilities Act (42 U.S.C. §§ 1201 et seq.) ("ADA"). Information concerning the provisions of, and the rights provided under, the ADA is available from the ADA Coordinator. Chapters 12B of the San Francisco Administrative Code and the implementing rules and regulations will be incorporated into the lease. Copies of these documents are available upon request at the HRC office and their website: www.sf-hrc.org.

J. Interpretation

For the purposes of this RFP, the terms "include," "included" and "including" will be deemed to be followed by the words "without limitation" or "but not limited to," and, where required by the context, the singular includes the plural and vice versa, and the feminine gender includes the masculine and vice versa. Section and paragraph headings used in this RFP are for reference only and are not to be used to interpret the provisions of this RFP.

Project Location Map

Pier 38 RFP

Appendix B

Pier 38 Building Code Compliance and Occupancy Study

Port of San Francisco

Final Report
January 13, 2012

YEI ENGINEERS, INC.

Creegan+D'Angelo
INFRASTRUCTURE ENGINEERS

Michael Tauber Architecture

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1.0 EXECUTIVE SUMMARY

Creegan + D'Angelo/FE Jordan JV (C+D/FEJ) was retained to inspect and document the condition of Pier 38 at the time the Port took over the property from the existing master tenant on August 1, 2011. Findings of the initial inspection indicated that the building had mechanical, electrical, fire and life safety code violations and was unsafe for it's current occupancy as office space. Notice was given to the tenants of unsafe conditions. Subsequent inspections by the Port, SF DPW, and SFFD confirmed the findings. The Port issued eviction notice to all occupants of Pier 38. The Port took immediate action to repair hazardous conditions and close hazardous areas to the public.

During the week of August 22, 2011, the C+D team, including Michael Tauber Architecture and YEI Engineers, conducted a detailed investigation of the occupancy and code violations. A report summarizing the findings was presented to the Port on August 26, 2011. The report included occupancy calculations for the shed, and office space built in the shed. This study established a baseline occupancy according to approved construction permits and original construction drawings. The Port Building Code, Chapter 34, seismic upgrade triggers for the building were also defined as part of the study.

In October 2011 C+D/FEJ performed inspections of the as-built conditions of the building that had been constructed without permits or inspection. In conjunction with the inspections, C+D was tasked with preparing two options for office occupancy and their associated maximum allowable parking in the shed. The study considered repairs and other code compliance construction required for each alternative. A preliminary Code Compliance and Occupancy Study was presented to the Port on November 8, 2011. While developing the two options, Architectural, Mechanical, Electrical and Structural code violations that require modification or replacement were identified.

The intent of the Code Compliance and Occupancy Study is to allow tenants to re-occupy Pier 38 in a similar fashion as its previous high tech incubator use, which was primarily office use, with some assembly space as well as parking within the shed building. In order to issue an occupancy permit the following goals have to be met:

- Correct Code Violations to Comply with the Port Building Code
- Satisfy Public Access Requirements set forth by BCDC
- Maximize Port Real Estate Asset
- Refrain from triggering a Pier seismic upgrade

Pier 38 currently has three conditions that require code compliance repair, regardless of which option is selected.

1. South Apron – Timber railing, decking, framing, and support piles are badly deteriorated and require structural repairs. This area has been closed to public access and does not represent an immediate hazard. The extent of repair depends on the amount of parking.
2. Marina facilities – The light duty finger piers on the north side of Pier 38 are in poor condition and cannot serve as permanent boat berths. The facilities have been closed to public access and must either be removed or repaired.

3. A portion of the concrete deck inside the shed adjacent to the former boat-lift has collapsed and is covered with steel traffic plates. The deck must be repaired as part of any alternative that includes parking in the shed.

This report describes the minimum Architectural, Access and Egress, Mechanical, Electrical and Structural changes for the specified occupancy building code compliance. The construction will result in shell and core space that can be leased to future tenants, but does not provide all the specific utility service required for a new tenant. The tenant improvements, within individual suites or floors, have to be designed and constructed to provide code compliant floor plans, power, communication, circulation, access and other features that satisfy the tenant. The tenant will be required to submit plans and obtain a building permit from the Port of San Francisco Building Department and complete construction in compliance with Port Building Code, Inspection and Permit requirements.

Code Compliant Occupancy – Option 1
Option 1 permits office occupancy (B) only, no assembly space, on the first and second floor, along with 70,200 square feet of parking within the Shed (228 spaces). Option 1 can be separated into four different alternatives:

1a. First Floor Office Occupancy only – Estimated Cost = $1.58 million
1b. First Floor Office Occupancy with Maximum Parking – Estimated Cost = $4.33 million
1c. First and Second Floor Office Occupancy Only – Estimated Cost = $3.41 million
1d. First and Second Floor Office Occupancy with Maximum Parking – Estimated Cost = $6.17 million

Code Compliant Occupancy – Option 2
Option 2 matches the previous use of Pier 38 as closely as possible by allowing 4,478 square feet of space on the second floor to be classified as assembly occupancy (A3) with the remaining space for office occupancy (B). However, the assembly space reduces the allowable parking area to 19,600 square feet (40 spaces) compared to 70,200 square feet (228 spaces) in Option 1. Option 2 can be separated into two different alternatives:

2a. First and Second Floor Office with Assembly Occupancy – Estimated Cost = $3.55 million
2b. First and Second Floor Office with Assembly Occupancy and Parking – Estimated Cost = $4.27 million

The square foot cost for improvements for code compliance and occupancy permit is approximately $128/SF regardless of which alternative of Option 1 or 2 is chosen. The cost associated with parking within the shed is approximately $39/SF regardless of the extent of parking.

In addition to the building improvements, this report identifies the required upgrades necessary to improve reliability and utilize the Marina Pier at an estimated cost of $910,000. The Port has the option to completely remove the existing Marina Pier for approximately $401,000.

2.0 PROJECT PURPOSE

The Port of San Francisco in conjunction with outside consultants identified a number of life safety and accessibility deficiencies with Pier 38 as noted in previous reports. As a result of these findings, The Port has retained Creegan + D'Angelo Engineers [C+D] as Prime consultant with sub consultants Michael Tauber Architecture [MTA] and YEI engineers [YEI] (the design team) to assess conceptual alternatives for the use of Pier 38 while maximizing parking space available and avoiding seismic upgrade triggers for the building and pier. Within the scope of work the design team was asked to define the items that would be required to bring the building into conformance with current codes and assign corresponding cost estimates for the design schemes. In addition to building alternatives, this report identifies the required structural upgrades necessary to utilize the marina/pier and a conceptual proposal for repair of damage to the pier deck in the third bay of the shed.

Drawings representing the Architectural alternatives can be found in Section 6, a narrative defining required mechanical/plumbing/sprinkler, electrical and structural work can be found under each of those discipline headings. In addition, prior to the design work, the design team surveyed the existing conditions preparing as built drawings to form the basis of the alternatives. Selective demolition was performed by the Port to uncover building assemblies for the design team to verify conformance with permitted but non inspected construction work on the site; areas of deficiencies have been noted in this report under the scope of work drawings in the architectural alternatives section, see drawings A4 – A6 and A8 – A10.

3.0 BACKGROUND/HISTORY

It is the design team's understanding, in discussions with Port Historic Preservationist Mark Paez, that The Port of San Francisco's Pier 38's shed structure was first built in 1908 and was utilized as a break bulk storage facility. The original super structure was comprised of a shed of exposed steel construction and concrete roof decking with piers of wood below. A later 1932 addition to the Pier was added at the east end of the Pier with a slightly wider footprint utilizing wood decking in lieu of concrete at the roof. Between 1934 and 1936 the bulkhead building fronting the Embarcadero was constructed to house office space. It was constructed as a separate steel framed structure with exposed wood framed walls and floors and sits directly in front of the original shed. The Pier is a contributing part of Port of San Francisco Embarcadero Historic District and as such is considered a qualified historical building or property subject to the California Historic Building Code.

The building has been subject to many years of additions and changes in use by the former master lessee that have not been permitted, approved or inspected by the Port of San Francisco. Among other violations, space last submitted for permit as non occupied space had been converted to office uses, office spaces had been converted from storage uses and restaurant uses, and additions have been performed without final inspection verifying building construction methods and code compliance. In addition, the building was built out with a number of life safety issues and a lack of code complying accessibility to the second floor and in various locations on the first floor.

Prior to this report The Port engaged C+D and its sub consultants in a number of tasks related to Pier 38 including the following:

1. Condition Survey with Recommended Actions – August 16, 2011

   C+D was retained to visit Pier 38 as soon as the master leaseholder was notified of eviction, August 1, 2011, in order to assess the existing condition of the property. The field team included structural, mechanical, electrical, fire safety, and architectural experts accompanied by personnel from various departments of the Port of San Francisco. The purpose of this initial visit was to document existing conditions with video and photographs, assess hazardous conditions, and make recommendations for repairs or changes in immediate occupancy.

2. Occupancy Study – August 26, 2011

   C+D was asked to review the current building occupancy and compare it to the historical building occupancy and the current Port of San Francisco Building Code. This study was performed by Michael Tauber Architecture.

3. Life Safety/Health Hazard Assessment – September 2, 2011

   Further studies into the life safety and health hazards present in the building and marine facilities were conducted by the Port of San Francisco with the assistance of the San Francisco Department of Public Works, the San Francisco Fire Department, and C+D. This study was requested to confirm the findings of the initial surveys and studies.

4. Town Hall Meeting – September 16, 2011

A town hall meeting was conducted by the Port of San Francisco in conjunction with the San Francisco Department of Public Works, the San Francisco Fire Department, and the Office of the Mayor, to describe the current situation at Pier 38 to the public.

5. Code Compliance and Alternatives Study

This report is based on the previous surveys and studies described above.

4.0 EXISTING CONDITIONS

4.1 ARCHITECTURAL

4.1.1 USE

The building is divided into two parts, as noted earlier; the bulkhead fronting the Embarcadero and the shed pier structure extending east over the bay which was used as break bulk storage. Starting in 1999 a portion of the shed was built-out, first with only storage uses above, with ceiling framing for the restaurant uses (which were never occupied as such) below, then later without permit into office spaces. The office spaces were connected to the bulkhead by creating an opening in the concrete wall of the original shed and adding stairs between them. The stairs as part of a non-historic renovation are not permitted in a path of egress travel; in addition the head height between stairs and opening was less than the code permitted. Within the former shed space the floor was framed in the center at a higher elevation to permit the passage of boats below.

Figure 1 - Opening in Concrete Wall

Prior to eviction of tenants by the Port on September 30th 2011, the building had occupancies on two stories most recently used as high tech incubator office space that was at times also used for large parties, a use that the building was not designed for in terms of number of means of egress, required number of restrooms and fire protection between spaces. The second floor is not currently accessible to the disabled as it is currently served by two main historic stairs one near the vehicular entry and one at the south end near Pier 40. The exit stairs out of the second floor north portion of the bulkhead was not built to code and the exit stair out of the former shed requires passage under a steel brace for the roof truss whose height above the floor is less than code permitted.

On the ground floor, the northern office space, designed to be a restaurant has never had the final flooring installed and currently has a series of floor drains which extend above the floor by 1-2 inches creating a tripping hazard. The exterior doors to the north and south aprons are 2-3 inches above the floor line, which is non code compliant and a life safety issue. Much of the

path of travel is uneven and non code complaint – all doors require level floor one either side of the door, this is not the case in many conditions.

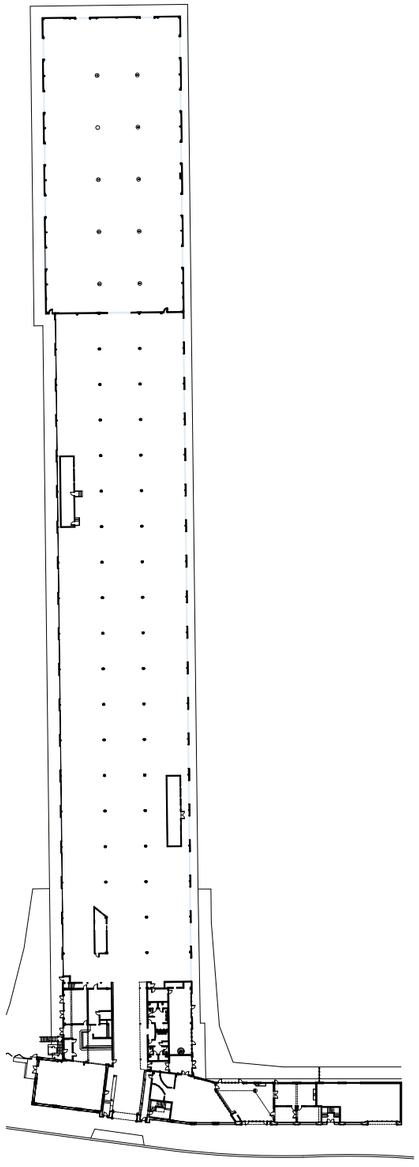
See Figure A1 for existing use diagrams and Figure A2 for existing use occupancy diagrams.

4.1.2 PARKING

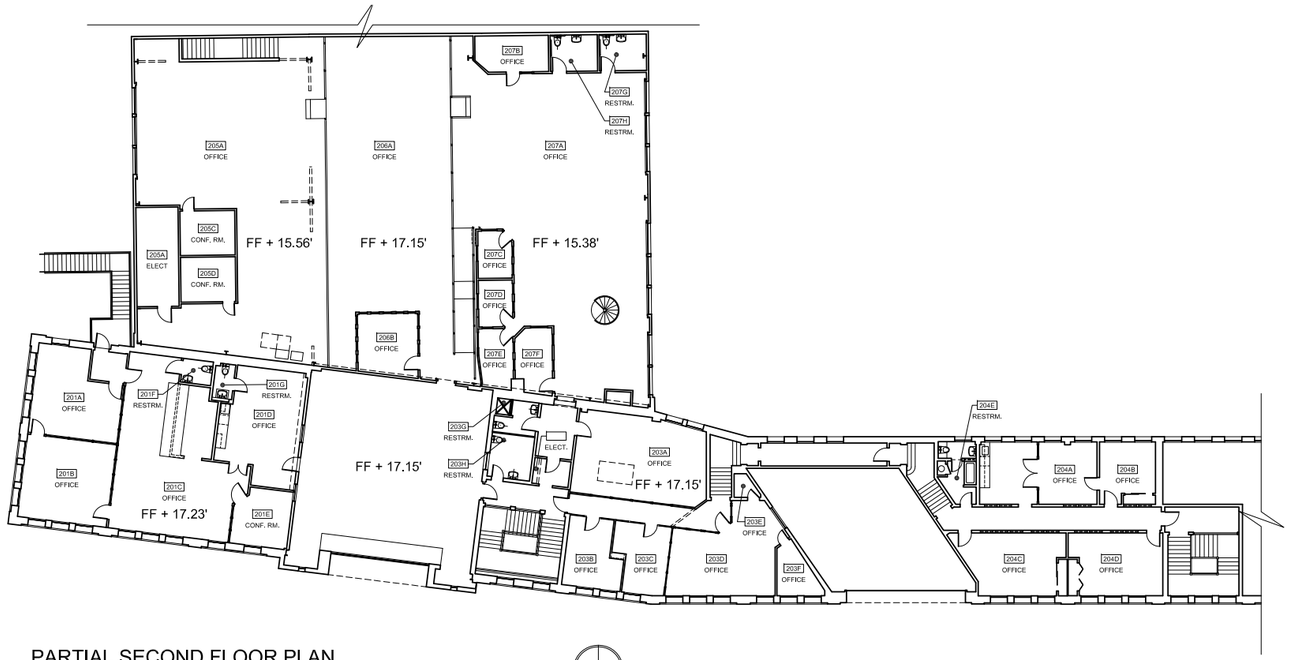
The shed was being used for parking both tenants and visitors during events at neighboring AT&T Park. The code limits the allowable area that can be used for parking and allowable area within a mixed use building, these were exceeded during events. In addition, the portion of the shed that was being used for parking was not provided with automatic sprinklers. Without sprinklering the parking use in the shed, corridors in the building are out of code compliance as they are required to be rated; they are not. In addition, in a non fully sprinklered building, separations between the parking use and the business (office) use are required to be 2 hour rated; they are built to one hour construction.

4.1.3 PLUMBING COUNTS

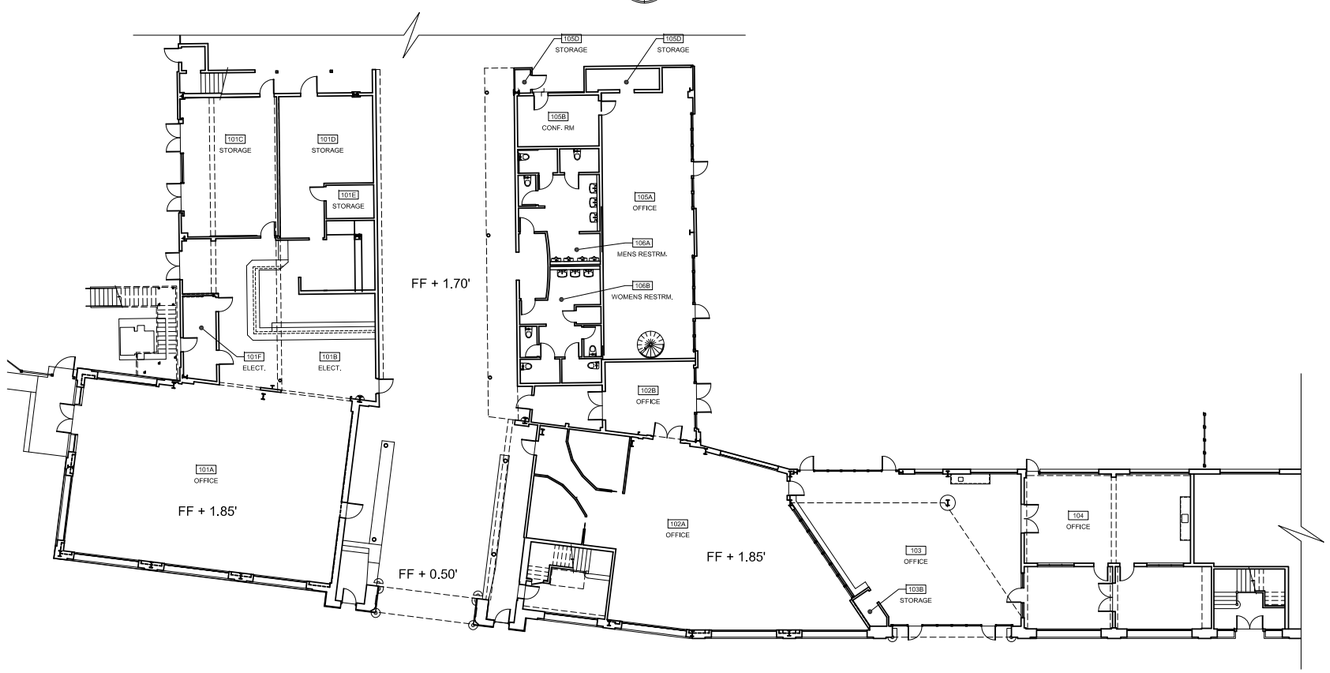
While the building has a large bank of accessible bathrooms on the first floor, the second floor is limited in the numbers of toilets and has only one single stall non-accessible shared facility. The remaining stalls in the second floor are within tenant spaces.



FIRST FLOOR PLAN
scale: 1/128" = 1'-0"



PARTIAL SECOND FLOOR PLAN
scale: 1/32" = 1'-0"



PARTIAL FIRST FLOOR PLAN
scale: 1/32" = 1'-0"

EXISTING USE AS OF 9.30.11 AREA DIAGRAM

ROOM NO.	ROOM NAME	SQ. FT.
101A	OFFICE	2173
101B	OFFICE	1209
101C	OFFICE	586
101D	OFFICE	471
101E	STORAGE	71
101F	MECHANICAL	123
102A	OFFICE	2023
102B	CONFERENCE RM.	295
103A	OFFICE	1036
103B	STORAGE	30
104	OFFICE	1207
105A	OFFICE	1099
105B	CONFERENCE RM.	185
105C	STORAGE	17
105D	STORAGE	70
106A	MENS RESTRM.	375
106B	WOMENS RESTRM.	377
	TOTAL FIRST FLOOR MINUS PARKING + APRONS	11347

ROOM NO.	ROOM NAME	SQ. FT.
201A	OFFICE	307
201B	OFFICE	330
201C	OFFICE	803
201D	OFFICE	379
201E	CONFERENCE RM.	140
201F	RESTROOM	32
201G	RESTROOM	34
202	OFFICE	1527
203A	OFFICE	482
203B	OFFICE	159
203C	OFFICE	152
203D	OFFICE	375
203E	STORAGE	21
203F	STORAGE	79
203G	RESTROOM	63
203H	RESTROOM	84
204A	OFFICE	326
204B	OFFICE	156
204C	OFFICE	274
204D	OFFICE	265
204E	RESTROOM	97
205A	OFFICE	2135
205B	MECHANICAL	156
205C	CONFERENCE RM.	109
205D	CONFERENCE RM.	109
206A	OFFICE	1878
206B	CONFERENCE RM.	163
207A	OFFICE	2273
207B	STORAGE	115
207C	CONFERENCE RM.	70
207D	CONFERENCE RM.	68
207E	CONFERENCE RM.	85
207F	CONFERENCE RM.	102
207G	RESTROOM	76
207H	RESTROOM	76
	TOTAL SECOND FLOOR	13500

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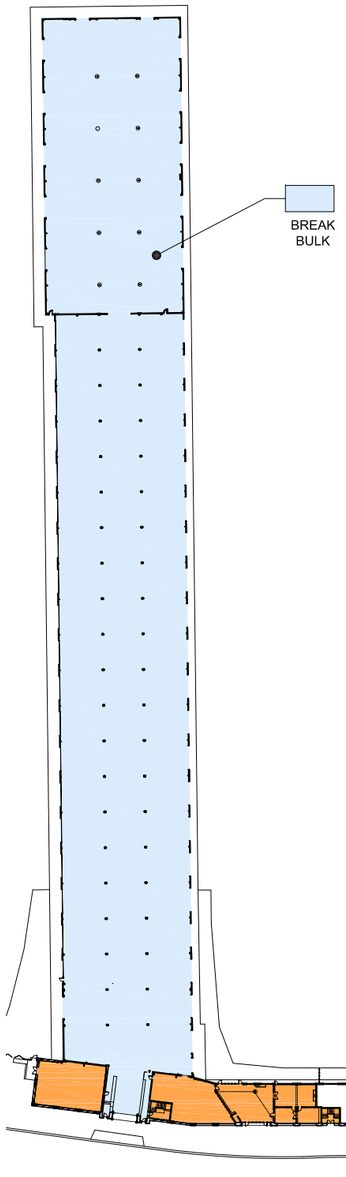
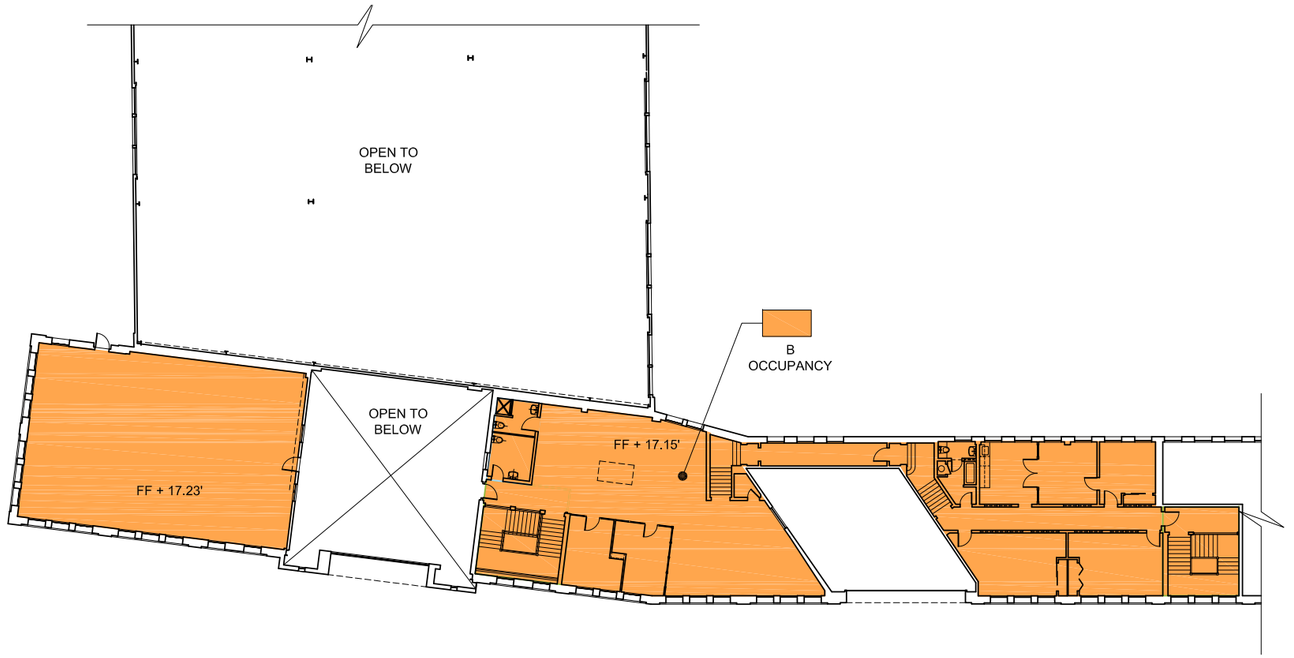
PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

OCCUPANCY + ALLOWABLE AREA DIAGRAMS

EXISTING USE AS OF 9.30.11 - AREA DIAGRAM
01.13.12



FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/128" = 1'-0"



PARTIAL SECOND FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

EXISTING USE AREA/OCCUPANT LOAD

OCC.	USE	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
S-2	BREAK BULK	99132	250	397	LOAD FACTOR ASSIGNED BY PORT OF SF
B	BUSINESS AREA	7253	100 GROSS	73	INCLUDES CIRCULATION
SECOND FLOOR					
B	BUSINESS AREA	6349	100 GROSS	64	INCLUDES CIRCULATION & RESTROOMS
FIRST + SECOND FLOOR					
		112984		534	
	EXISTING USE OCCUPANT LOAD + 100			634	SEISMIC TRIGGER

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PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

OCCUPANCY + ALLOWABLE AREA DIAGRAMS

ORIGINAL USE AREA/OCCUPANCY DIAGRAM
01.13.12

4.2 STRUCTURAL

4.2.1 BULKHEAD

The bulkhead portion of the structure is generally unmodified from the original construction; which consisted of steel trusses supported by steel columns with intermediate steel beams that support the second floor timber joists and framing. Exterior walls are concrete while interior walls are timber framed. Manufactured wood I-joists and steel support framing have been added on the second floor over the shed entrance creating additional office space.

4.2.2 SHED PIER

The shed supported by the pier extending over the bay is of similar construction to the bulkhead with steel trusses supported by steel columns and concrete exterior walls. Significant unpermitted tenant improvements have been made in the western portion of the shed to create two floors of office space. Modifications include:

- Addition of timber walls and steel beams supported by steel columns to support the second floor.
- Multi level second floor framing consisting of 18" I-joists and 2X6 timber joists of various spans.

A portion of the shed pier concrete slab, in the vicinity of the vessel loading area on the north side, is missing due to severe deterioration. The hole has been covered by a steel plate.

Figure 2 - Hole in Concrete Deck

4.2.3 NORTH AND SOUTH APRON

The existing aprons are comprised of two parts; the original concrete deck extending beyond the shed wall and an additional timber framed portion not built in conjunction with the original pier. The concrete deck extends approximately 10 feet beyond the north wall and 6 feet beyond

the south wall. The timber portion of the aprons consist of 4X12 decking over 4x12 joists supported by 12X12 bent cap beams with timber piles. A chain link fence closes off the aprons approximately 2 bays into the shed, with the area to the east being red tagged, separating the aprons into two areas.

The north apron from the bulkhead to the chain link fence is in good condition with minor instances of rotten decking. The south apron from the bulkhead to the chain link fence is in poor condition with multiple missing piles, crushed bent cap beams and rotten joists and decking. Railings are provided on the north and south aprons, up to the chain link fence, by 4X4 timber posts with 2X railings and wire mesh; railing attachment is provided by lag screws from posts to joists.

Beyond the chain link fence, the timber aprons are severely deteriorated to the extent that some portions are no longer present.

4.3 MECHANICAL

4.3.1 HVAC

The heating, ventilating and air conditioning (HVAC) for the occupied pier areas consists of under-ceiling gas-fire unit heaters, above-ceiling suspended recirculating heating and ventilating units (HVUs) with gas-fired inline furnaces, and rooftop recirculating air handlers with in-line gas-fired furnaces. The above ceiling units are connected to supply and return ducting routed to serve nearby rooms. Rooftop air handlers, unit heater and suspended ceiling ventilation heating units airflows and heating capacities are not verified due to inaccessibility.

The first floor 101, 102, 103, 104, and 105 rooms are provided heating from concealed above-ceiling or exposed below ceiling slab HVUs. Exposed ceiling rooms are provided with rotational ceiling fans. Room 103A is provided with a below-ceiling slab unit heater.

The second floor room 206A also has a wall mounted exhaust air fan, rotational ceiling fans, and makeshift hinged plywood pressure-relief dampers. 20” x 30” supply duct risers from a north and south side pair of rooftop air handlers are ducted down into room 206A, with ductwork distribution and supply air registers serving room 206A and the various 205 and 206 rooms. The north air handler supply and return ducts continue to proceed down through the second floor to additionally serve the first floor.

The second floor electrical/mechanical room 205B is cooled with two refrigerant split-system wall mount fan coils, and a small packaged wall mounted air conditioner above the door.

Room 202 is provided heating by a unit heater, and open supply and return duct from an HVU above room 201D ceiling. Fours rotational ceiling fans are provided below the room roof. The 201, 203, and 204 rooms are served by above-ceiling HVU’s.

4.3.2 PLUMBING

Men’s restroom 106A is provided with a hose bib, three wall mount lavatories with manually operated faucets, four urinals and three floor-mounted water closets with manually operated flush valves. Women’s Restroom 106B is provided with a hose bib, three wall mount lavatories

with manually operated faucets and four floor-mounted water closets with manually operated flush valves.

A low profile water heater is installed above-ceiling, and provides domestic hot water heating to the first floor.

On the second floor, two unisex restrooms by room 201C are each provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve. Another two unisex restrooms by room 203A are each provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve.

Counter break sinks are provided in room 201D and the room adjacent to 204A.

Additionally, a unisex restroom by room 204A is provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve. The adjacent restroom is provided with a storage type water heater to supply the lavatory and sink.

4.3.3 FIRE PROTECTION

A 6" fire protection pipe is routed in the transit shed below the rafters along the column support channels from the shed east end, to the fire water pump room in the transit shed. Supply fire water piping main is routed from the fire pumps to the first and second floor occupied areas. Sprinkler branch headers installed on both floors below ceiling slab/roof. Exposed ceiling rooms are provided wet-type sprinkler coverage with upright sprinkler heads, and rooms provided with ceilings are sprinkled with either flush pendant or sidewall sprinkler heads.

4.3.4 FIRE ALARM SYSTEM

There is a modern Fire Alarm panel inside the water pump room on the deck that is located near Room 101D. There were no visible smoke detectors, horn/strobes, nor pull stations. There is a sprinkler system throughout the entire building except a section of the parking area.

4.4 ELECTRICAL

Existing incoming electrical service is underground provided by PG&E, and connects to a 12KV to 480V transformer, mounted on the North side of the Pier. The rating of the existing Main PG&E transformer could not be verified. The Main Distribution Center in the first floor is separated into two (2) sections, one is a 480V/2000A section, and the other one is a 480V/600A section, both of which are unlabeled. It appears that the only section that is in current use is the 2000A section because the 600A section was closed and no load could be verified. The 2000A section is connected to the Electrical Room in the second floor.

4.4.1 POWER DISTRIBUTION

In the Electrical room, there are three (3) 480V to 208/120V unlabeled transformers that are connected to the main panels which feed other sub panels as follows: (Note: Several sub panels were unlabeled and missing panel schedules)

PANEL DPA – Serves Panels DBC, DPB, DPE (all three in 2nd floor Electrical Room) and UNLABELED (in the far East wing of the deck).
PANEL DBC – Serves Panels K and KA (both in Room 101F), and Unlabeled panel (near 1st floor bathrooms).
PANEL DPB – Serves Panels L2 (in Room 101C), P1, West Print and Unlabeled (all three in Closet on 2nd floor next to Room 203A), Unlabeled (in Room 202), Unlabeled (in bathroom of Room 201C) and Unlabeled (in 1st floor passage way – Room 103A)
PANEL DPE – connects to mechanical loads in the deck
PANEL UNLABELED – connects to mechanical loads in the deck

Backup power was not available in this building.

4.4.2 LIGHTING

Each room had different lighting that had been installed by previous tenants, such as chandeliers, rail mounted spot lighting, and high bay. There was some egress lighting.

4.4.3 FIRE ALARM SYSTEM

There is a modern Fire Alarm panel inside the water pump room on the deck that is located near Room 101D. There were no visible smoke detectors, horn/strobes, nor pull stations. There is a sprinkler system throughout the entire building except a section of the parking area.

4.5 MARINE

C+D made site observations of the marina structures at Pier 38 on Monday, August 22, 2011. C+D measured the size of the floating finger pier(s), guide pile locations, and the electric power panels & outlet locations. Figure MA-1 illustrates the existing pier size and location, gangway access, and ramp float.

Pier access is by an aluminum gangway and ramp system supported on a float that is fixed in position by six guide piles. The ramp floats are light duty plastic tubs filled with foam. The guide piles are 12 inch diameter steel pipe piles. The wall thickness and length and depth of the piles into the soil is not documented. The aluminum gangway and ramp system was manufactured by Hallsten Corporation, Sacramento, California. C+D contacted John Hallsten (916-331-7211) and Hallsten provided the shop drawings for the access gangway and ramp system, attached as Appendix C.

The ramp system allows access to a 385 ft. long floating finger pier. This is a continuous timber pier supported on plastic tub, foam filled floats. The manufacturer and type of the floats is not documented. The finger pier is fixed in location by 16 – 12 inch diameter steel guide piles. The wall thickness, length and embedment depth of the piles is not known. The Pier width is six (6) ft. wide. Pier deck area is 2,310 square feet.

A floating pier is located next to the ramp system which is 6 feet wide and 89 feet long. It is located from the Pier 38 apron to finger pier. See the attached Figure MA-1 for location plan. Pier Deck area is 534 square feet.

NORTH

PLAN
1"=40'

MARINA

DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: 11/8/11
SCALE: AS NOTED

REV.	DATE	DESCRIPTION	APP'D	SCH.	DATE	DESCRIPTION
1						
2						
3						
4						
5						
6						
7						

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PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-1
OF 3 SHEETS

PROJECT NO.
209010.10

5.0 CODE COMPLIANCE

5.1 ARCHITECTURAL – OCCUPANCY, ALLOWABLE AREA AND LIFE SAFETY

5.1.1 CODES AND ACCESSIBILITY

Pier 38 is potentially eligible for Code compliance to the California Historic Building Code (CHBC) as it is a qualified historic building or property. Under Section 8-302.4 exception 1, Historic buildings may be unlimited in area without fire –resistive area separation walls when provided with an automatic sprinkler. John Aires, Chief Building Inspector of the Port of San Francisco, has noted that the building will not be granted unlimited area, however Option 1 within this report utilizes a compromise position, approved by the Chief Building Inspector in the PCP007 alternate means request dated 01/5/12, of providing sprinklers in the shed area where there currently are none and allowing more area for parking than permitted by the California Building Code but less than the California Historic Building Code permits (designed to a square footage limit). Option 2 does not utilize the Historic Building code and the architectural design work has been designed to meet the 2010 Port of San Francisco Building Code which is based on the 2010 California Building Code with Port of San Francisco modifications. The plumbing count is based on the 2010 California Plumbing Code.

As a (B) office occupancy, the California Building Code requires that all portions of the building be made accessible unless there is an unreasonable hardship or legal or physical constraints will not allow compliance per Section 1105B. Options presented in this report will provide two Limited Use Limited Access (LULA) elevators within the building, while making all non-historic paths of travel accessible. In the Port Code Procedure (PCP) 007 alternative means request filed with the Port on 01/05/12, The Chief Building Inspector for the Port has granted the use of the Historic Southern bulkhead set of stairs that allowed trains to pass underneath and the other historic, non compliant stairs to be used with the provision of upgrading the handrails to current code and providing new contrast striping at the stairs to meet current code.

5.1.2 SEISMIC UPGRADE AND OCCUPANCY

The Port of San Francisco has identified the need to seismically upgrade pier buildings when the occupant load increases by more than 10% and the occupancy count increases by more than 100. The base line occupancy count in this case was the use of the building as of 1934 when the building in its current footprint was used as Break Bulk storage throughout the shed and office within the Bulkhead structure facing the Embarcadero.

MTA evaluated the baseline condition identifying a baseline occupancy count of 534 for both floors combined; see “original use area/occupancy diagram” in Section 4**.** Therefore, the trigger for seismic upgrade is an occupancy count of more than 634 for both floors combined and an increase of 54 occupants. The occupancy count was calculated by multiplying the areas of each type of space by the occupant load factor found in Table 1004.1 of the California Building Code (CBC), based on use for each space, see proposed use area/occupancy diagram for each scheme. The design team proposed occupancy for the portion of the shed east of parking to be limited to 3 port maintenance persons only and identified as “existing bulk storage building vacated due to disrepair”. This designation, occupancy and occupant count has been approved via the Port’s PCP 007 alternatives means request.

Both schemes presented in this report have kept the occupancy count at 634, eliminating the need to seismically upgrade the pier.

5.1.3 CONSTRUCTION TYPE

The design team has identified the building as a Type IIB construction for the purpose of evaluating allowable areas, as it has an exposed non-rated primary structural frame as noted in Table 601 of the CBC.

The design team provided the Port with explorative demolition plans to demolish particular areas of Pier 38 to assist in verifying construction type. MTA reviewed the explorative demolition and found a number of wall assemblies that differed from the assemblies shown on submitted permit drawings. While the wall assemblies that are required to be rated for the new work appear to be constructed in a nature that would meet the requirements with one layer of 5/8" thick gypsum board both sides of 2X wood frame studs, in some instances the 5/8" gypsum board was not clearly labeled as type "x" as required to created a one hour wall (no stamp was found on the gypsum board or on the edge of the boards). This would require further removal of additional gypsum board for verification purposes or a complete replacement in those locations.

5.1.4 ALLOWABLE AREA

The allowable area permitted in a building is defined by each floor and is limited by the building construction type and the occupancy within each floor as defined by Table 503 of the CBC. In mixed use occupancy on each floor, each occupancy must be evaluated separately for allowable area based on the construction type and the sum of the actual over the allowable area of all occupancies must be less than 1. In the shed the (S-2) occupancy not used for parking will need to be fenced off and vacated except for maintenance use and will be assigned an occupant load of 3 as permitted by the Port of San Francisco PCP007 application dated 01/05/12.

The individual area of each occupancy type can be tripled in a two story building if the building is fully sprinklered. A frontage increase can be added if 25% or more of the building perimeter is on a public way or open space having a minimum width of 20 feet or more. This frontage increase will not apply to the Pier 38 as the ICC and San Francisco Fire Department have determined on other Pier structures that the 20 feet must be used for apparatus to fight fire and a fire boat cannot be counted on, therefore the width is limited to the width of the aprons which are less than 20 feet.

5.1.5 PARKING

The options presented in this report assume new sprinklers will be added throughout the original 1908 structure that is currently not accommodated with sprinklers to minimize the costs of upgrading the existing non conforming wall assemblies between the parking area and business (office) use and to avoid the need to fire rate corridors within the building. Additionally sprinklering will be required as a measure to increase the allowable parking area in option 1 as approved in the PCP 007 alternative means request dated 1/5/12.

The allowable parking size for Pier 38 is determined by a function of the smaller of the allowable square footage permitted as defined by the occupant load seismic trigger limit and keeping within the allowable area per floor as defined by the CBC for a mixed use building.

It is assumed in this report that the parking areas will be naturally ventilated. Initial calculations of the proportion of openings to wall area appear to be adequate to meet code compliance by keeping the existing roll up doors welded permanently open (as approved by the Chief Building Inspector in PCP007 alternative means request dated 1/5/2012). Other similar Port of San Francisco Piers have had natural ventilation approved by the Port's building Inspection division by permitting testing of the actual air quality within the shed to ensure sufficient air exchanges. The cost estimate included with this report does not include mechanically ventilating the parking areas. Further notes on the requirements for ventilation of the parking areas can be found in the mechanical section of this report.

5.1.6 STAIRS

New enclosed fire rated exit stairs are proposed with the two options in this report, which will avoid the current life safety head clearance issues, while meeting the CBC requirement that the stairs be enclosed. The exterior exit stairs exiting from the northern end of the second floor of the bulkhead will be replaced to meet the 7" code compliant riser height. This stair was installed with 7-1/2" risers, which were not code compliant at the time of the permit for their installation but were never inspected by the Port as part of a final inspection.

5.1.7 PUBLIC ACCESS TO THE PIER

A previous permit was taken out with the Bay Conservation and Development Commission (BCDC) regarding public pedestrian access to Pier 38 assuming the Pier was to be fully developed per the previous master lease holders plans. As understood in a meeting at the Port of San Francisco with David Beaupre, with Planning and Development at the Port of San Francisco, the plan should continue to provide access via gates at the north and south aprons. If no work is done to expand the Marina and the use stays as they were last used as of September 30 2011, Mr. Beaupre thought that BCDC would allow the aprons to be a minimum of 10 feet wide on the south and north with the aprons widening to a minimum of 12 feet near the office portions of the building and 13 feet as the apron turns to the south on the south side. If the Marina is expanded, Mr. Beaupre thought that BCDC would expect that the aprons should conform to the amended exhibit A BCDC Permit no. 5-92 amendment number two dated January 6, 2005 with wider aprons. In either case, new ten foot wide stripped access aisles will be provided at the juncture between the parking and the office uses on the first floor and at the east end of the new proposed parking configuration to provide access to both sides of the building and aprons. The aprons will need to be repaired/rebuilt to provide access to the new east pedestrian stripped walk within the shed. The structural portion of this report will discuss that work in greater detail. The Port's Chief Building Inspector has approved limiting the eastern extent of the rebuilt aprons to the east end of the public access path as noted above.

The Port will need to decide how to best secure the parking lot area after public access hours. This report assumes that a new pedestrian door and storefront system will be installed in the roll up door bays to the west. Other options include locking the gates at the North and South aprons and replacing the existing roll up door with a smaller one that accommodates the new width of the opening created by the exit stair egress. This roll up door would be required to remain open during public access hours. Any decision on the access will involve whether the parking area can be classified by the Port as an open or mechanically ventilated garage. If mechanically vented the storefront system may be more desirable aesthetically and in terms of weather tightness.

The portion of the shed east of the parking in both schemes will be defined as an "existing bulk storage building vacated due to disrepair" as approved by the Port of San Francisco Chief Building Inspector in PCP 007 dated 01/05/12. This will be assigned an occupancy of three and not count towards the area calculations for the floor. As this is not counted as part of the area for the floor, the building will not be required to have two hour fire walls erected to limit area.

5.2 STRUCTURAL

Additions within the bulkhead and pier shed are out of code compliance because they were not properly permitted and inspected during construction. Additionally, the 2X6 second floor joists in the shed area do not have sufficient capacity for the current assembly occupant use, see note 14 of Figure SK2.2 in section 6. Due to deterioration, the south apron along with the red tagged portions of both aprons do not have sufficient capacity for code required loading, see Figures SK1.1 and SK2.1 in section 6.

5.3 MECHANICAL

The suspended HVUs and unit heaters are not seismically braced, in violation of California and San Francisco building codes. Bracing shall comply with the latest CBC and California Mechanical Code (CMC) seismic bracing requirements, and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

The water heater above the first floor ceiling does not meet California Plumbing Code (CPC) installation requirements. Plumbing vent and drain lines were found uncapped and exposed to the rooms inside the building, in violation of CPC. Suspended horizontal plumbing piping throughout the occupied areas was not sufficiently provided with hangers and seismic bracing, in violation of CBC and CPC requirements. All new work shall comply with the latest CBC, CMC and CPC seismic bracing requirements, and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

Building code requires that an enclosed parking garage larger than 12,000 square feet be provided with automatic fire sprinklers. The wet sprinkler coverage work that shall be performed, shall comply with the latest CBC and California Fire Code (CFC) fire protection requirements, and NFPA (National Fire Protection Agency) 88A Standard for Parking Structures fire protection coverage and installation requirements. Fire protection piping shall be installed with proper hanger and bracing support in accordance with NFPA and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

If the parking garage is not provided sufficient natural ventilation area with enough perimeter natural ventilation openings, as approved by the Port, the Building Code requires that an enclosed storage type parking garage larger than 500 square feet be provided with mechanical ventilation. Air changes per hour in the garage should be between four to six, and meet the minimum required by carbon monoxide (CO) emission standards. The ventilation fan, ductwork, and air inlets and outlet sizes and locations shall comply with the latest CMC installation requirements and ASHRAE 62-2004 Ventilation for Acceptable Indoor Air Quality Standard and ASHRAE handbook for HVAC Applications for CO emissions. Ventilation fans and ductwork shall be installed with proper hanger and bracing support in accordance with SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

5.4 ELECTRICAL

Many of the upgrades that were performed to the individual tenant spaces were in violation of various installation and performance codes set forth by the National Electrical Code (NEC). The work that shall be performed, shall comply with the latest codes as stated on the 2011 version (NEC 2011).

5.5 MARINE

The finger pier guide piles were easily moved and displaced laterally by one man manually pushing with force applied five feet above the deck. Therefore the lateral load capacity and stiffness may be too low. It is our opinion that the type of pier floats and limited number of guide piles in a site exposed to San Francisco Bay long wind and wave fetch from the North and East are vulnerable to damage and will have poor performance. Pier construction of this type may be appropriate for light/small water craft berths and moorings in non-storm, non-heavy sea condition in a lake or sheltered location, but not as currently configured. Under 50 ft. motor boats or sail boats could use this pier for temporary berth and mooring when there are no storms or high wind/wave conditions. The pier does not have reliable mooring for small boats during high wind and wave conditions. The existing large ship berthed/moored at the finger pier with mooring lines to guide piles is a hazard and mooring could fail and the vessel could cause damage to property or be a life safety risk to other vessels on the bay. The ship should be removed and located to an anchorage suitable for a vessel of this size and displacement. There is an additional large ship moored at the end of Pier 38. Both of the large ships, one berthed at the light duty pier, and one improperly moored to building columns in the Pier 38 shed building, should be moved from Pier 38 by the owner. If the owners will not move the ships to another location that provides adequate berth and mooring, the Port may use the California Abandoned Vessel Abatement Program and Funds to obtain grants for removal of the ships. More information about this program is available: http://www.dbw.ca.gov/Funding/AWAF.aspx.

The existing Pier 36 is slated to be demolished in 2012. Removal of this pier will remove a structure which provides some protection from wind and wave conditions that affect the Pier 38 marina especially for North, Northwest, and Northeast wind and wave. The expected performance of the existing piers is “poor” with a high risk for failure and damage.

6.0 ALTERNATIVES

MTA evaluated the existing building and has identified two options to bring the building up to current code while maximizing the parking space available and avoiding a seismic upgrade to the structure. The schemes vary in the utilization of the CHBC, the approach to phasing, the use of the second floor, the designation of use as Assembly or Business (office) occupancies and the amount of corresponding allowed parking. The parking area is defined as S-2 occupancy with an occupant load factor of one person to 250 square feet of floor area. Option 1, with only B occupancy yields 70,200 square feet of parking while Option 2 yields 19,600 square feet of parking.

6.1 OPTION 1 – BASIC CODE COMPLIANCE

6.1.1 ARCHITECTURAL

Refer to Figure A3 - Proposed Use Area/ Occupancy Diagram – Option 1

6.1.1.1 USE

Uses on both floors will be limited to B (office) occupancies (other than the parking). The B occupancy has an occupant load of 1 person in 100 square feet. The total square footage for the B occupancy within the building including corridors, bathrooms, and stairs is 27,929.

6.1.1.2 PARKING

This scheme utilizes The California Historic Building Code to increase allowable area beyond the California Building Code. The limiting factor for the maximum square footage for parking in this option is staying below the seismic trigger of more than 634 occupants for the building. The parking is maximized at 70,200 square feet. This includes the drive aisle from the Embarcadero and the two 10’ wide striped pedestrian access aisles.

6.1.1.3 PLUMBING COUNTS

A smaller number of fixtures are required in this “B” occupancy only scheme based on occupancy classification. New men’s and women’s bathrooms are provided on the second floor for access by all tenants. The smaller number of required fixtures means more generous space within the rooms and a preferred more private door configuration.

In the northern most wing of the bulkhead on the second floor a single stall bathroom will need to be gutted and reconfigured to provide a single unisex bathroom. This has not been included in the provided plumbing count as shown on the proposed use area/occupancy diagram.

6.1.1.4 PARTIAL LIST OF SCOPE OF WORK

Refer to Figures A4 – A6 - Scope of Work – Option 1 first and second floor drawings

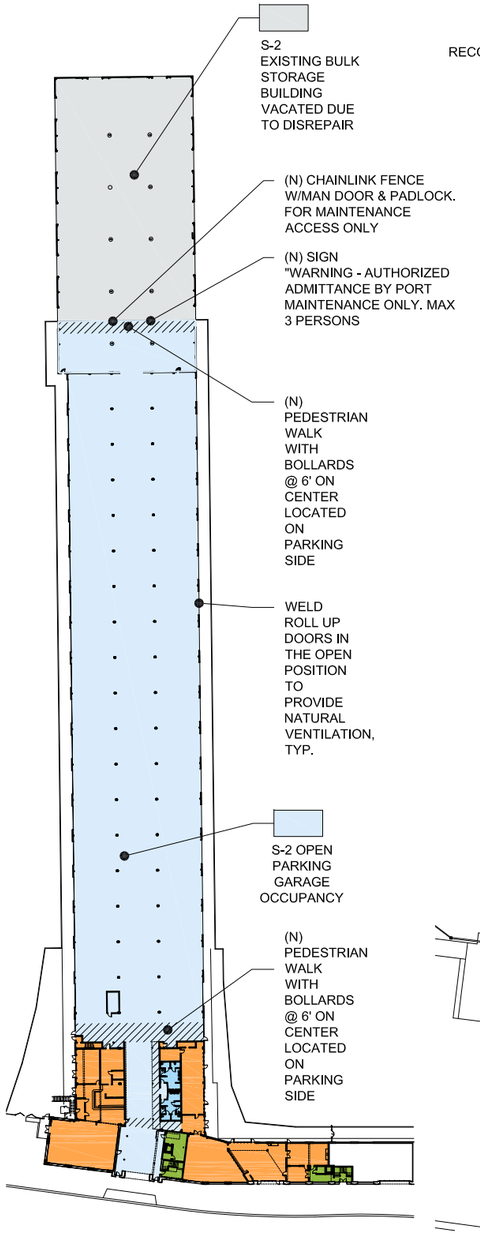
First floor (Figures A4 and A5):

- Add new LULA elevators and elevator machine room in two locations, create lobbies.
- Reconstruct north and south aprons to the eastern extent of a new pedestrian walk at the eastern end of the parking. Level aprons to provide code compliant path of travel.

- Regrade sidewalk outside of historic south stairwell at promenade along the Embarcadero for ½" threshold at door.
- New level landings added outside all doors.
- Permanent concrete ramp to be added to the north side of the bulkhead.
- Hand railings added to the ramp near drive aisle.
- Create vestibule/foyer for access to north side offices from shed.
- Reconstruct exit stairs from second floor on north side of building to meet maximum code riser height (7")
- Add striping at pedestrian path through parking areas.
- Add new storefront with man door to west end roll up door for access control.
- Add fence and man gate with pad lock at east end of parking with new signage "Warning Authorized admittance by port maintenance only. Maximum 3 persons".
- Float new concrete floor in the north office area and/or lower existing floor drain locations.
- Reconstruct sidewalk outside of southern exit stairs/ doors for level landing.
- Remove temporary structures in the shed.
- Add insulation at piping at all lavatories.
- Replace all non labeled fire rated doors and frames in walls between B (office) occupancies and S-2 (parking) occupancy.
- Extend/Rebuild existing wall of north exit stair from second floor former shed space.
- Create level landing at door into main historic stair by reconfiguring floor.
- New sprinklers in the 1908 original portion of the shed to bring building into fully sprinklered category.
- Add signage on all three sides of the exterior wall of the "vacated" Bulk storage portion of the shed – to "keep out- Port of san Francisco maintenance only"

Second floor (Figure A6):

- Rebuild north exit stair from northernmost bulkhead office space.
- Rebuild one hour enclosed north east exit stair to avoid head knocker condition, extend walls at shed to roof of shed.
- Add new ramp between bulkhead and former shed space. Create vestibule for entrance into office space.
- Add new ramp in north side of former shed space to make accessible path of travel.
- Remove selected partitions to open up space for new tenants.
- Remove non conforming single stall toilets.
- Add contrast striping to the stairs and code conforming railings at historic stairs.
- Remove all non wood floor finishes throughout.
- Remove non code compliant spiral stair.
- Provide railings under all structural braces where head clearance is non code compliance.
- Remove portion of corridor wall in southern most portion of Bulkhead to create elevator lobby.
- Level floor as required between office spaces in bulkhead.



FIRST FLOOR OCCUPANCY DIAGRAM

scale: 1/128" = 1'-0"

PARTIAL SECOND FLOOR PLAN (FUTURE TENANT IMPROVEMENT WORK UNDER SEP. PERMIT)

scale: 1/32" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM

scale: 1/32" = 1'-0"

PROPOSED USE OCCUPANT LOAD

OCC.	USE [1]	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
B	OFFICE	12334	100 GROSS	124	INCLUDES CORE, CIRCULATION, AND RESTROOMS
S-2	BULK STORAGE (VACATED)	23971		3	ASSIGNED OCCUPANT LOAD PER SF PORT ALT MEANS PCP-007
TOTAL FIRST FLOOR (WITHOUT PARKING)		36305		127	
SECOND FLOOR					
B	OFFICE	15595	100 GROSS	156	INCLUDES CORE, CIRCULATION, ELECTRICAL, AND RESTROOMS
TOTAL SECOND FLOOR		15595			
TOTAL FIRST + SECOND FLOOR (WITHOUT PARKING)				283	
	EXISTING USE OCCUPANT LOAD + 100			634	SEISMIC TRIGGER
S-2	OPEN PARKING	70200	200	351	
TOTAL W/PARKING				634	

PROPOSED USE ALLOWABLE/ACTUAL AREA

NOTE:

THIS SCHEME ASSUMES THE APPLICATION OF THE STATE HISTORIC BUILDING CODE WHICH ALLOWS FOR UNLIMITED AREA IN BUILDINGS PROVIDED WITH AN AUTOMATIC SPRINKLER PER CHBC SECTION 8-302.4 EXCEPTION 1. THE SCHEME WILL LIMIT THE AREA OF THE BUILDING TO THE SEISMIC TRIGGER OF OVER 634 OCCUPANTS.

PLUMBING FIXTURE COUNT [5]

				WATER CLOSETS			LAVATORIES	
OCC.	SQ. FT.	LOAD FACTOR	OCC. LOAD	MALE	FEMALE	URINALS	MALE	FEMALE
B	22353	200	112					
TOTAL OCC. LOAD + FIXTURES REQ'D			112	4	5	2	2	2
TOTAL FIXTURES PROVIDED				6	6	4	6	5

FOOTNOTES

1. USE PER CBC TABLE 1004.1.1.
2. NOT USED
3. NOT USED
4. N OT USED
5. PER CPC TABLE 4-1.

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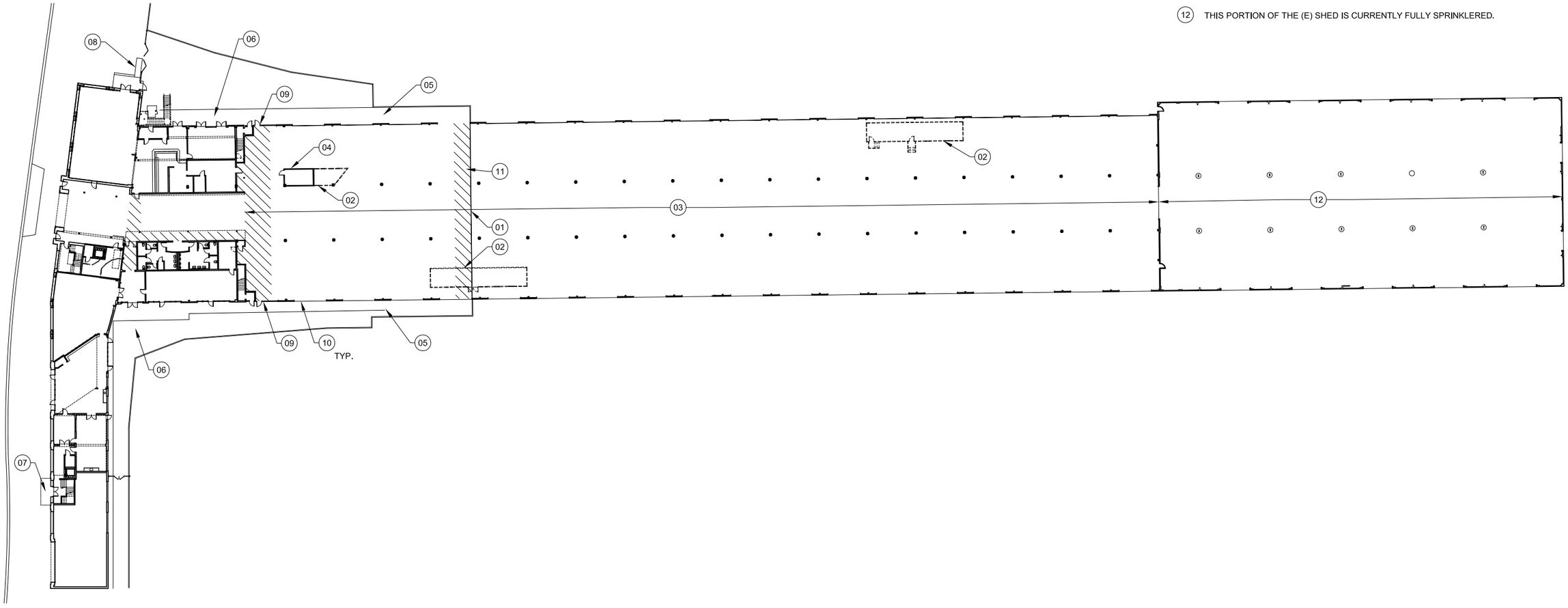
PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

OCCUPANCY + ALLOWABLE AREA DIAGRAMS

PROPOSED USE AREA/OCCUPANCY DIAGRAM - OPTION 1
01.13.12

KEY NOTES:

01. (N) CHAINLINK FENCE W/MAN DOOR & PADLOCK. SIGN ON DOOR "FOR MAINTENANCE PURPOSES ONLY". LOCATION OF FENCE VARIES BETWEEN OPTION 1 AND OPTION2 SCHEMES.
02. REMOVE (E) TRAILER/STRUCTURES.
03. PROVIDE (N) SPRINKLER HEADS AT SHED.
04. (E) PUMP HOUSE TO REMAIN.
05. REBUILD CONCRETE APRON, LENGTH VARIES DEPENDING ON OPTION. SEE STRUCTURAL NARRATIVE.
06. REPAVE APRON FOR LEVEL SURFACE (ADA COMPLIANCE).
07. REPAVE SIDEWALK FOR ¾" THRESHOLD AT DOOR.
08. (N) PERMANENT 1:12 CONCRETE RAMP W/ GUARDS AND HANDRAILS.
09. (N) ALUMINUM STOREFRONT FULL HEIGHT OF ROLL UP DOORS (+/- 14' TALL).
10. (E) ROLL UP DOORS TO REMAIN AND LEFT OPEN FOR NATURAL VENTILATION OF PARKING. AREA
11. (N) STRIPED PEDESTRIAN PATH - 10' WIDE MIN. AND VEHICLE BARRIER BOLLARDS. LOCATION VARIES WITH OPTION 1 AND OPTION 2.
12. THIS PORTION OF THE (E) SHED IS CURRENTLY FULLY SPRINKLERED.



FIRST FLOOR PLAN - BOTH OPTIONS
scale: 1/64" = 1'-0"

NORTH

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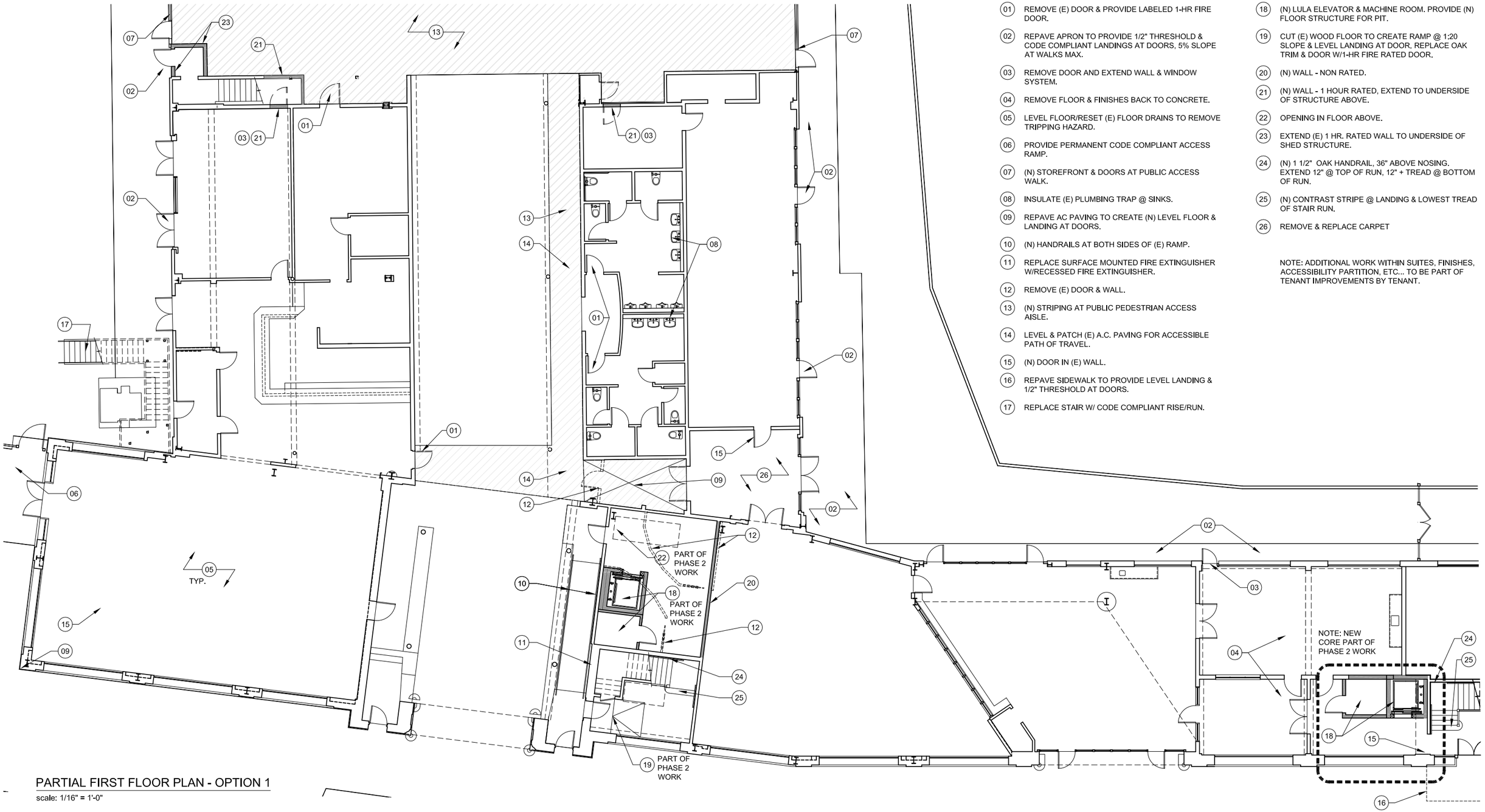
PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

SCOPE OF WORK - SHED - OPTION 1 AND 2

SCOPE OF WORK
01.13.12

A4



PARTIAL FIRST FLOOR PLAN - OPTION 1

scale: 1/16" = 1'-0"

KEY NOTES:

01 REMOVE (E) DOOR & PROVIDE LABELED 1-HR FIRE DOOR.

02 REPAVE APRON TO PROVIDE 1/2" THRESHOLD & CODE COMPLIANT LANDINGS AT DOORS, 5% SLOPE AT WALKS MAX.

03 REMOVE DOOR AND EXTEND WALL & WINDOW SYSTEM.

04 REMOVE FLOOR & FINISHES BACK TO CONCRETE.

05 LEVEL FLOOR/RESET (E) FLOOR DRAINS TO REMOVE TRIPPING HAZARD.

06 PROVIDE PERMANENT CODE COMPLIANT ACCESS RAMP.

07 (N) STOREFRONT & DOORS AT PUBLIC ACCESS WALK.

08 INSULATE (E) PLUMBING TRAP @ SINKS.

09 REPAVE AC PAVING TO CREATE (N) LEVEL FLOOR & LANDING AT DOORS.

10 (N) HANDRAILS AT BOTH SIDES OF (E) RAMP.

11 REPLACE SURFACE MOUNTED FIRE EXTINGUISHER W/RECESSED FIRE EXTINGUISHER.

12 REMOVE (E) DOOR & WALL.

13 (N) STRIPING AT PUBLIC PEDESTRIAN ACCESS AISLE.

14 LEVEL & PATCH (E) A.C. PAVING FOR ACCESSIBLE PATH OF TRAVEL.

15 (N) DOOR IN (E) WALL.

16 REPAVE SIDEWALK TO PROVIDE LEVEL LANDING & 1/2" THRESHOLD AT DOORS.

17 REPLACE STAIR W/ CODE COMPLIANT RISE/RUN.

18 (N) LULA ELEVATOR & MACHINE ROOM. PROVIDE (N) FLOOR STRUCTURE FOR PIT.

19 CUT (E) WOOD FLOOR TO CREATE RAMP @ 1:20 SLOPE & LEVEL LANDING AT DOOR. REPLACE OAK TRIM & DOOR W/1-HR FIRE RATED DOOR.

20 (N) WALL - NON RATED.

21 (N) WALL - 1 HOUR RATED, EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.

22 OPENING IN FLOOR ABOVE.

23 EXTEND (E) 1 HR. RATED WALL TO UNDERSIDE OF SHED STRUCTURE.

24 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

25 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

26 REMOVE & REPLACE CARPET

NOTE: ADDITIONAL WORK WITHIN SUITES, FINISHES, ACCESSIBILITY PARTITION, ETC... TO BE PART OF TENANT IMPROVEMENTS BY TENANT.

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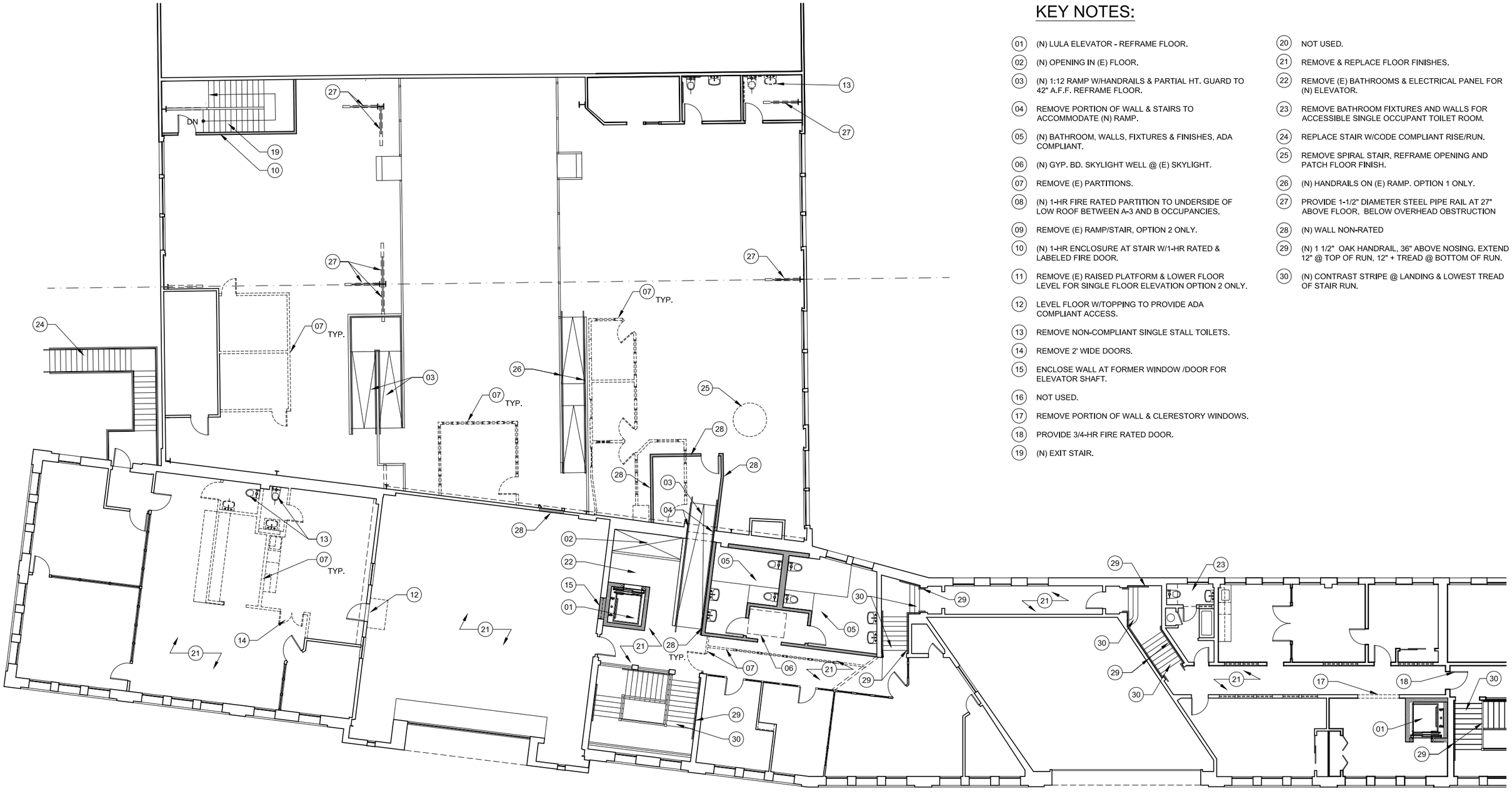
PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

BULKHEAD

SCOPE OF WORK - OPTION 1
01.13.12

A5



KEY NOTES:

01 (N) LULA ELEVATOR - REFRAME FLOOR.
02 (N) OPENING IN (E) FLOOR.
03 (N) 1:12 RAMP W/HANDRAILS & PARTIAL HT. GUARD TO 42" A.F.F. REFRAME FLOOR.
04 REMOVE PORTION OF WALL & STAIRS TO ACCOMMODATE (N) RAMP.
05 (N) BATHROOM, WALLS, FIXTURES & FINISHES, ADA COMPLIANT.
06 (N) GYP. BD. SKYLIGHT WELL @ (E) SKYLIGHT.
07 REMOVE (E) PARTITIONS.
08 (N) 1-HR FIRE RATED PARTITION TO UNDERSIDE OF LOW ROOF BETWEEN A-3 AND B OCCUPANCIES.
09 REMOVE (E) RAMP/STAIR, OPTION 2 ONLY.
10 (N) 1-HR ENCLOSURE AT STAIR W/1-HR RATED & LABELED FIRE DOOR.
11 REMOVE (E) RAISED PLATFORM & LOWER FLOOR LEVEL FOR SINGLE FLOOR ELEVATION OPTION 2 ONLY.
12 LEVEL FLOOR W/TOPPING TO PROVIDE ADA COMPLIANT ACCESS.
13 REMOVE NON-COMPLIANT SINGLE STALL TOILETS.
14 REMOVE 2' WIDE DOORS.
15 ENCLOSE WALL AT FORMER WINDOW /DOOR FOR ELEVATOR SHAFT.
16 NOT USED.
17 REMOVE PORTION OF WALL & CLERESTORY WINDOWS.
18 PROVIDE 3/4-HR FIRE RATED DOOR.
19 (N) EXIT STAIR.
20 NOT USED.
21 REMOVE & REPLACE FLOOR FINISHES.
22 REMOVE (E) BATHROOMS & ELECTRICAL PANEL FOR (N) ELEVATOR.
23 REMOVE BATHROOM FIXTURES AND WALLS FOR ACCESSIBLE SINGLE OCCUPANT TOILET ROOM.
24 REPLACE STAIR W/CODE COMPLIANT RISE/RUN.
25 REMOVE SPIRAL STAIR, REFRAME OPENING AND PATCH FLOOR FINISH.
26 (N) HANDRAILS ON (E) RAMP. OPTION 1 ONLY.
27 PROVIDE 1-1/2" DIAMETER STEEL PIPE RAIL AT 27" ABOVE FLOOR, BELOW OVERHEAD OBSTRUCTION
28 (N) WALL NON-RATED
29 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.
30 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

SECOND FLOOR PLAN - OPTION 1
scale: 1/16" = 1'-0"

NOTE:
ALL WORK THIS FLOOR TO BE BUILT AS PART OF A SECOND PHASE TENANT IMPROVEMENT

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BULKHEAD

SCOPE OF WORK - OPTION 1
01.13.12

6.1.2 STRUCTURAL

A number of structural upgrades must be performed to meet the code requirements triggered by Option 1. These requirements are shown in Figures SK1.1 and SK1.2 with additional details provided in the structural schematics included as Appendix B. The structural upgrade items required for Option 1 are:

1. South Apron – up to chain link fence: The 4x12 decking needs to be replaced along with approximately 20% of the 4x12 joists due to deterioration. An asphalt topping will also be required to provide a uniform surface.
2. North Apron – up to chain link fence: Minimal replacement of the decking will be required. An asphalt topping will also be required to provide a uniform surface.
3. Apron Extension – beyond chain link fence: The existing timber aprons on the north and south sides that have been red tagged, beyond the chain link fence, must be removed, leaving only the concrete portion of each apron. The existing concrete portion of the apron on the north side, which is 10 feet wide, has sufficient width to meet BCDC public access requirements; however the south concrete portion of the apron is only 6 feet wide, requiring an additional 4 foot width of timber apron. This will require new 14" diameter piles (length of each pile: 90'), 12X12 cap beams, 4X12 joists @ 12" O.C. and 4X12 decking. An asphalt topping will also be added for a uniform walking surface.
4. Concrete Deck Repair: There is a hole in the concrete deck located in the proposed parking area, which is currently covered by a steel plate. The hole will need to be repaired.
5. New Elevator Pit and Shafts: Two new elevators are required to meet egress requirements. This will require modifying the existing framing for the new floor openings as well as modification of the concrete deck (i.e., will be lowered). The elevator shaft will be a wood framed wall system with rails to support the new elevators.
6. Bent Cap Replacement: Three bent caps require replacement. One bent cap is crushed from overstressing and the others appear to have severe deterioration.
7. Replace Missing Piles: Three piles were missing and must be replaced to adequately support the bent cap.
8. Reconfigure Existing North Exit Stairway: The south end of the existing opening will be partially infilled; the west side will require new framing and existing framing modifications to support the new opening.
9. Apron Railing: The existing rail, extending to the existing chain link fence, on both the north and south apron does not meet code requirements. The rail will be removed and replaced with the new railings extending the length of the apron extension.
10. Circular Stair Removal: The existing circular stairs will be removed. As a result, the floor will be infilled with new framing.

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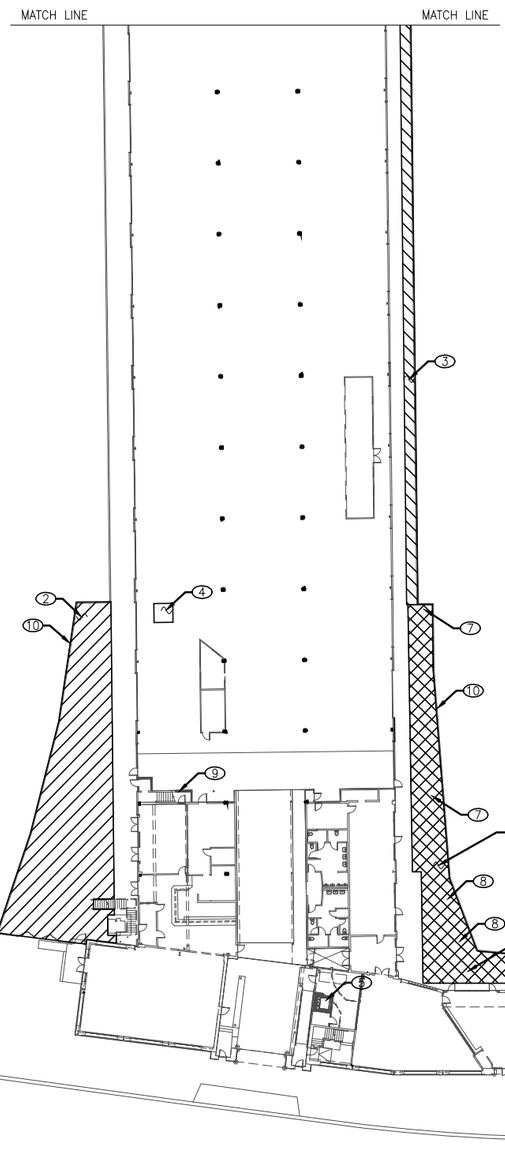

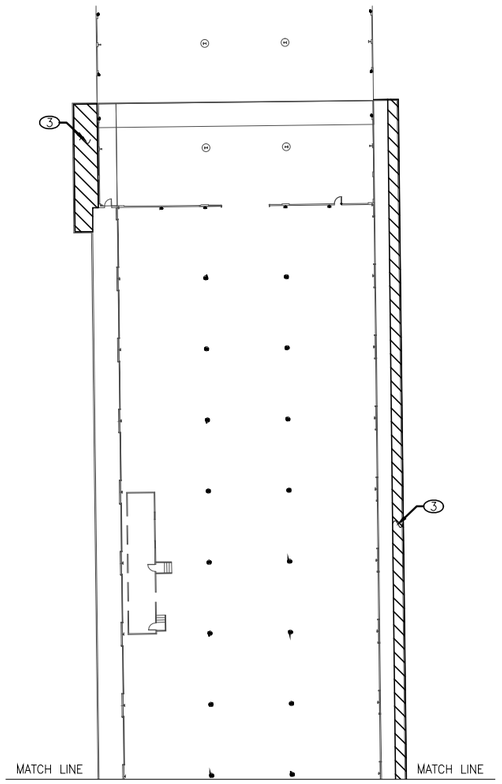

(1) KEY NOTES:

1. SOUTH APRON: REPLACE 4X12 DECKING AND 20% OF 4X12 JOISTS @ 12" O.C. PLACE ASPHALT TOPPING (~4").
2. NORTH APRON: REPLACE DECKING AS REQUIRED. PLACE ASPHALT TOPPING (~4").
3. APRON EXTENSION: REPLACE DETERIORATED BENTS WITH (N) 14"Ø PILES (L=90'), 12X12 CAP BEAMS, 4X12 JOISTS @ 12" O.C. AND 4X12 DECKING. BENTS TO BE SPACED @ 15'-0" O.C. SEE 11/SK4 FOR DETAILS.
4. CONCRETE DECK REPAIR: ASSUME 15' X 8' X 12", SEE 1/SK3 TO 4/SK3
5. (N) ELEVATOR PIT & SHAFT, SEE 6/SK3, 8/SK3, SK5, AND SK7
6. BENT CAP REPLACEMENT AT BULKHEAD, SEE 2/SK4
7. BENT CAP REPLACEMENT, BENTS 5 & 7, SEE 10/SK4
8. INSTALL MISSING PILE, SEE 6/SK4 AND/OR 7/SK4
9. RECONFIGURE (E) NORTH EXIT STAIRWAY: PARTIAL INFILL OF (E) OPENING AT SOUTH END AND ENLARGING OF OPENING ON WEST SIDE, INSTALL (N) FRAMING FOR WEST SIDE ENLARGEMENT
10. REMOVE & REPLACE (E) RAIL, SEE 8/SK4 AND 9/SK4
11. REMOVE CIRCULAR STAIR AND INFILL HOLE
12. INSTALL (N) SOUTH EXIT STAIRWAY: INSTALL (N) FRAMING AROUND OPENING
13. REMOVE AND REPLACE (E) 18" TJI FOR LOWERED FLOOR LEVEL
14. INSTALL (N) 2X6 FLOOR JOISTS IN BETWEEN (E) 2X6 JOISTS @ 16" O.C.
15. INSTALL (N) FRAMING FOR PLACEMENT OF RAMP

NOTE:
1. THE DETAILS SHOWN ON THE SK SHEETS ARE SKETCHES IN NATURE AND MAY NOT RESEMBLE THOSE SHOWN IN CONSTRUCTION DOCUMENTS. THESE DETAILS ARE ONLY INTENDED TO PROVIDE A GENERAL UNDERSTANDING OF WHAT MAY BE REQUIRED AND DIMENSIONS MAY NOT BE ENTIRELY ACCURATE.

2. SEE ARCH. DWGS FOR DIMENSIONS AND LOCATION OF ARCH. WORK.

3. OPTION 1: INCLUDES KEY NOTE ITEMS 1 TO 11.

4. OPTION 2: INCLUDES KEY NOTE ITEMS 1 TO 15.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: C+D	DATE: 01/13/12
DRAWN: C+D	DATE: 01/13/12
CHECKED: C+D	DATE: 01/13/12

APPROVED BY
SAN FRANCISCO PORT COMMISSION
DATE: _____
_____
CHIEF HARBOR ENGINEER

SCALE: 1/32"=1'-0"
SHEET OF SHEETS: 1 OF 10

PIER 38
CODE COMPLIANCE

FIRST FLOOR PLAN - OPTION 1
STRUCTURAL CODE COMPLIANCE SCHEMATIC

CONTRACT NO. -
DRAWING NO. SK1.1
FILE NO. -
REV. NO. 0

VIEW: PLOT1

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NORTH

(1) KEY NOTES:

1. SOUTH APRON: REPLACE 4X12 DECKING AND 20% OF 4X12 JOISTS @ 12" O.C. PLACE ASPHALT TOPPING (~4").
2. NORTH APRON: REPLACE DECKING AS REQUIRED. PLACE ASPHALT TOPPING (~4").
3. APRON EXTENSION: REPLACE DETERIORATED BENTS WITH (N) 14"Ø PILES (L=90'), 12X12 CAP BEAMS, 4X12 JOISTS @ 12" O.C. AND 4X12 DECKING. BENTS TO BE SPACED @ 15'-0" O.C. SEE 11/SK4 FOR DETAILS.
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12. INSTALL (N) SOUTH EXIT STAIRWAY: INSTALL (N) FRAMING AROUND OPENING
13. REMOVE AND REPLACE (E) 18" TJI FOR LOWERED FLOOR LEVEL
14. INSTALL (N) 2X6 FLOOR JOISTS IN BETWEEN (E) 2X6 JOISTS @ 16" O.C.
15. INSTALL (N) FRAMING FOR PLACEMENT OF RAMP

NOTE:
1. THE DETAILS SHOWN ON THE SK SHEETS ARE SKETCHES IN NATURE AND MAY NOT RESEMBLE THOSE SHOWN IN CONSTRUCTION DOCUMENTS. THESE DETAILS ARE ONLY INTENDED TO PROVIDE A GENERAL UNDERSTANDING OF WHAT MAY BE REQUIRED AND DIMENSIONS MAY NOT BE ENTIRELY ACCURATE.

2. SEE ARCH. DWGS FOR DIMENSIONS AND LOCATION OF ARCH. WORK.

3. OPTION 1: INCLUDES KEY NOTE ITEMS 1 TO 11.

4. OPTION 2: INCLUDES KEY NOTE ITEMS 1 TO 15.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: C+D DATE: 01/13/12
DRAWN: C+D DATE: 01/13/12
CHECKED: C+D DATE: 01/13/12

APPROVED BY
SAN FRANCISCO PORT COMMISSION
DATE: _____
_____
CHIEF HARBOR ENGINEER

SCALE: 1/16"=1'-0"
SHEET OF SHEETS: 2 OF 10

PIER 38
CODE COMPLIANCE

SECOND FLOOR PLAN – OPTION 1
STRUCTURAL CODE COMPLIANCE SCHEMATIC

CONTRACT NO. –
DRAWING NO. SK1.2
FILE NO. –
REV. NO. 0

VIEW: PLOT1

6.1.3 MECHANICAL

The existing plumbing cold water and sewer utility line sizes should be sufficient for continued service to the Pier.

Notes:

a. This option will require the installation of two (2) elevators, and elevator machine room.
b. Scope of work in the mechanical section includes: HVAC, plumbing, and fire protection.

6.1.3.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Remove and relocate existing first floor water heater to closet or accessible suspended platform, with tank bracing.
- Provide overhead fire sprinkler branch piping and sprinkler heads from existing six inch fire pump discharge pipeline, to provide sprinkler coverage to the parking garage.
- Provide mechanical ventilation exhaust fan(s), overhead exhaust duct and air inlets and outlet(s) throughout garage to provide minimum required ventilation rates, if natural ventilation is not accepted as code compliant by Port.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Provide new sewer, vent, domestic cold and hot water piping to new restroom plumbing fixtures, and connect to existing main building pipes.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers.
- Provide automatic wet-type fire sprinkling, sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer.
- Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or wall exhaust fan with intake grille, in machine room for hydraulic machinery cooling.

Second Floor:

- Remove the makeshift plywood hinged air reliefs, and blank off and properly fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface.
- Demolish existing distribution ductwork and outlets to partitioned rooms planned for removal in room 205 and 206 areas. Provide new ductwork and supply air outlets to supply the enlarged open areas of room 205 and 206.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.

- Remove all un-used plumbing piping, and seal off any existing vent and sewer open pipeline terminations.
- Provide automatic wet-type fire sprinkling for elevator shaft.
- Provide new sewer, vent, domestic cold and hot water to new restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers. Provide fire dampers on supply and return ductwork crossing one hour fire rated walls.

6.1.4 ELECTRICAL

This option will provide access to both first and second floor. This will require the site to be ADA compliant therefore new elevators will need to be installed. Total office spaces for the first and second floor are: 12334 sq. ft. and 15595 sq. ft. respectively. Using an estimated load density of 9.2 W/sq.ft, the calculated loads for the occupancy will be: 113.5 KW for first floor, 143.5 KW for second floor resulting in a total of 256.9 KW. This power divided by 480V equals 535.3A, which is less than the 2000A section in the Main Distribution Center; therefore, there should be no need to have PG&E upgrade the service to the Pier.

Notes:

a. This option will require the installation of two (2) elevators, and depending on the final design, the elevator's required power will not trigger an upgrade to PG&E service.
b. Scope of work in the electrical section includes: Power distribution, Lighting and Fire Alarm.

6.1.4.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Replace the existing distribution center in the first floor due to its deteriorated state.
- For office space 101, provide two new electrical panels to replace the damaged panels K and KA, that are located on the wall adjacent to the main distribution center, matching the existing load capacity.
- For office space 103, provide one new electrical panel to replace the small lighting and receptacle panel that is located in the south wall of office space 103. This panel will be upgraded to a larger capacity panel to prevent the need to using a double breaker as it is currently being done.
- Provide new lighting design in the parking area to achieve an average foot-candle (ft-cd) level of five ft-cd as per Illuminating Engineering Society (IES) Recommended Maintained Horizontal Illuminances for Covered Parking Garages.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

Second Floor:

- Remove and relocate the electrical panel from the bathroom in office space 201C. New panel will be flush mounted in eastern wall of office 201D and will be connected to all loads from removed panel.
- Remove the electrical panels from the Core1 area. This area will have the new elevator. Provide a new lockable panel that will accommodate all the loads from the removed panels, install flush mounted in the proposed Core1 area and connect to all loads from removed panels.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

6.1.5 MARINE

6.1.5.1 EXISTING MARINA RELIABILITY IMPROVEMENTS

Figure MA-2 illustrates “minimum” improvements that are recommended to improve the reliability of the existing pier. The improvements include:

- (8) new 14 inch diameter by 80 foot long steel pipe piles.
- New 385 foot long by 10 foot wide high performance finger pier.
- Repair connection to Pier.
- (10) temporary mooring berths for light pleasure craft, less than 50 feet in length.

The improved pier would allow temporary berths for up to twelve small (under 80 ft) motorboats or sailboats. New mooring cleats have to be connected to the pier floats. Providing power and water utilities to the pier is optional. This is not constructed for permanent vessel berths without a wave attenuation structure.

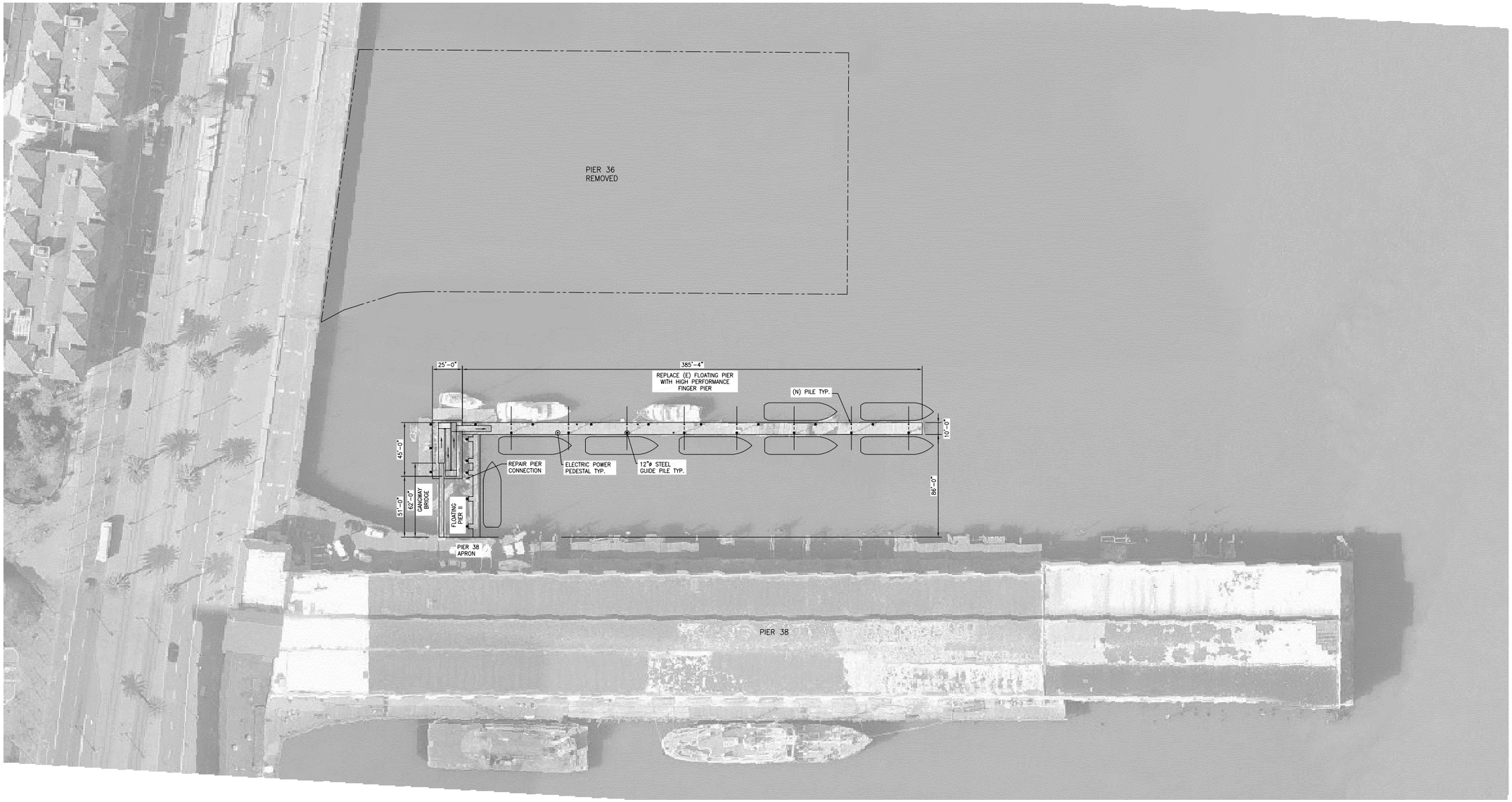
6.1.5.2 IMPROVED PIER 38 MARINA

A permanent boat marina should have a wave attenuation floating or fixed breakwater, finger piers and berths that protect the vessels and allow mooring vessels with bow and stern lines connected to mooring cleats fixed on the pier. Figure MA-3 is one possible configuration that includes improved public access, a floating breakwater, and berths for 18 motor or sail boats up to 100 feet in length. The Port may consider accommodating larger vessels on the waterfront because this facility would make the Port of San Francisco attractive to international vessels that could visit the city, find temporary berths on the waterfront. A marina at this location could complement the Brannan Street Wharf and will be an asset for national and International America’s Cup visitors.

The marina piers, piles and structure system are engineered and constructed to have the strength to support the mooring loads and the wind, wave, and current forces generated inside a “protected” marina.

The floating piers are engineered by a naval architect that can model the hydrodynamic response of the piers to storm wind and wave and current conditions, and engineer the floating piers and guide piles for reliable performance. The configuration can be changed to provide improved Public Access on the water.

BILL OF MATERIALS			
MEMBER	SIZE	AMOUNT	NOTE
STEEL PIPE PILE	14"ø X 80'	8	NEW
HIGH PERFORMANCE FINGER PIER	385' X 10'	1	REPLACE EXISTING
PIER CONNECTION	–	1	REPAIR
MOORING BERTHS FOR LIGHT PLEASURE CRAFT L ≤ 50FT	–	10	TEMPORARY



NORTH

PLAN
1"=40'

IMPROVE MARINA PERFORMANCE

DESIGNED BY:		REV.	DATE	DESCRIPTION	APPR'D
DRAWN BY:					
CHECKED BY:					
DATE:	11/8/11				
SCALE:	AS NOTED				

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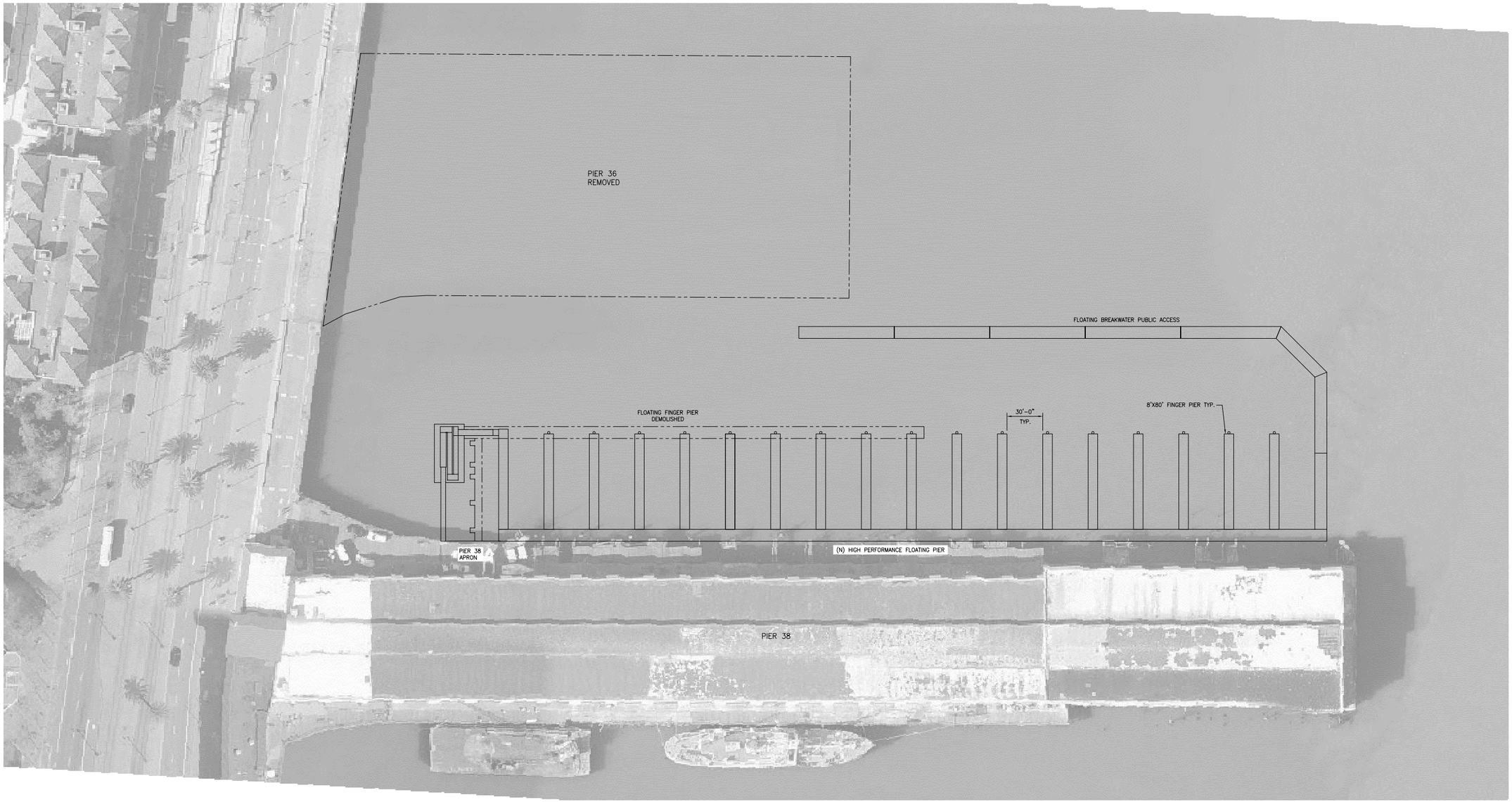
PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-2
OF 3 SHEETS

PROJECT NO.
209010.10

BILL OF MATERIALS			
MEMBER	SIZE	AMOUNT	NOTE
CONCRETE PILE	14"ø X 80'	18	NEW
HIGH PERFORMANCE PIER	680' X 10'	1	NEW
FLOATING BREAKWATER	450' X 10'	1	NEW
FINGER PIERS	80' X 8'	18	NEW
BOAT SLIPS	30' X 80'	18	NEW



NORTH

PLAN
1"=40'

MODIFIED MARINA AND FLOATING BREAKWATER

NO.	DESCRIPTION	DATE	APP'D	SCH.

DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: 11/8/11
SCALE: AS NOTED

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PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-3
OF 3 SHEETS

PROJECT NO.
209010.10

6.1.6 COST ESTIMATE – OPTION 1

The following table shows the code compliance construction cost for Option1, which is broken into four alternatives depending on extent of utilization.

Option 1a – Only first floor office space, no parking or second floor
Option 1b – First floor office space along with maximum allowable parking, no second floor
Option 1c – Only first and second floor office space, no parking
Option 1d – First and second floor office space with maximum allowable parking

	Project Costs			
	Tenant Space		Shed Parking	Total Cost
	First Floor	Second Floor		
Option 1a - First Floor Only	$ 1,580,221	$ -	$ -	$ 1,580,221
Option 1b - First Floor with Maximum Parking	$ 1,580,221	$ -	$ 2,753,594	$ 4,333,815
Option 1c - First and Second Floor Office	$ 1,580,221	$ 1,834,148	$ -	$ 3,414,369
Option 1d - First and Second Floor Office with Max Parking	$ 1,580,221	$ 1,834,148	$ 2,753,594	$ 6,167,963

Construction costs include markups for: design and estimating contingencies (15%), general conditions and requirements (10%), payment and performance bonds (2%), general contractor's fee (5%) and project soft costs (25%).

The cost for marina repair or demolition is in addition to the above and is:

	Marina Costs			
	Direct Cost	Mark-Up 35.5%	Soft Cost 25%	Total Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

* Note: Marina Costs are in addition to project costs for Options 1 and 2

6.2 OPTION 2 – CODE COMPLIANCE + PARTIAL ASSEMBLY OCCUPANCY

6.2.1 ARCHITECTURAL

Refer to Figure A7 - Proposed Use Area/ Occupancy Diagram – Option 2

6.2.1.1 USE

The goal for this scheme is to provide occupancy that is as close to the way the space was being used prior to the 30 September 2011 eviction while maximizing parking on the first floor level and avoiding the seismic trigger. The occupancy type that most closely resembles that prior occupancy is A-3. MTA identified the largest space available to assign an A-3 occupancy by breaking the single use space that was built out within the original shed on the second floor into two leasable spaces with a new one hour fire rated wall between them. This creates 4,478 square feet of A-3 occupancy. The new wall would be located to the south of the existing truss and should extend to the underside of the lower concrete roof deck. The space over the drive aisle on the first floor which was accessed via stairs and a ramp would be reframed at a lower elevation to create a single floor level for all of the spaces in the former shed. The code requires

that the smaller of the two spaces (B occupancy) have a new exit stair/enclosure added to provide a second means of egress as the common path of egress travel exceeded the code allowable 100 feet (when building is sprinklered). The remainder of the second floor will be identified as (b) office occupancy which precludes the spaces being used as "party" assembly spaces. The total area of the B occupancy including circulation, toilets is 23,165 square feet.

6.2.1.2 PARKING

The limiting factor for the maximum square footage of parking in this option is the occupant load and the seismic trigger. The trade off on the inclusion of the A-3 occupancy is an increased occupant count for the building proper. The A-3 assembly space has an occupant load factor of one person in 15 net square feet. The B occupancy has an occupant load factor of one person per 100 gross square feet. The significance of that is the higher the occupant count the less parking is allowed due to the limitation of staying below the seismic trigger number of 634 occupants. The parking is maximized at 19,600 square feet, about one quarter that of Option 1. This includes the drive aisle from the Embarcadero and the two 10' wide striped pedestrian access aisles. The occupant load is 634.

6.2.1.3 PLUMBING COUNTS

Another requirement of increased occupant load and the A-3 occupancy is an increase in the number of required plumbing fixtures. The diagram shown in the proposed use area/occupancy diagram Option 2 meets the required fixtures for the building by trading off urinals above the required number for toilets as allowed for in the California plumbing code.

In the northern most wing of the bulkhead on the second floor a single stall bathroom will need to be gutted and reconfigured to provide a single unisex bathroom. This has not been included in the provided plumbing count as shown on the proposed use area/occupancy diagram.

6.2.1.4 PARTIAL LIST OF SCOPE OF WORK

Refer to Figures A8 – A10 - Scope of Work – Option 2 first and second floor drawings.

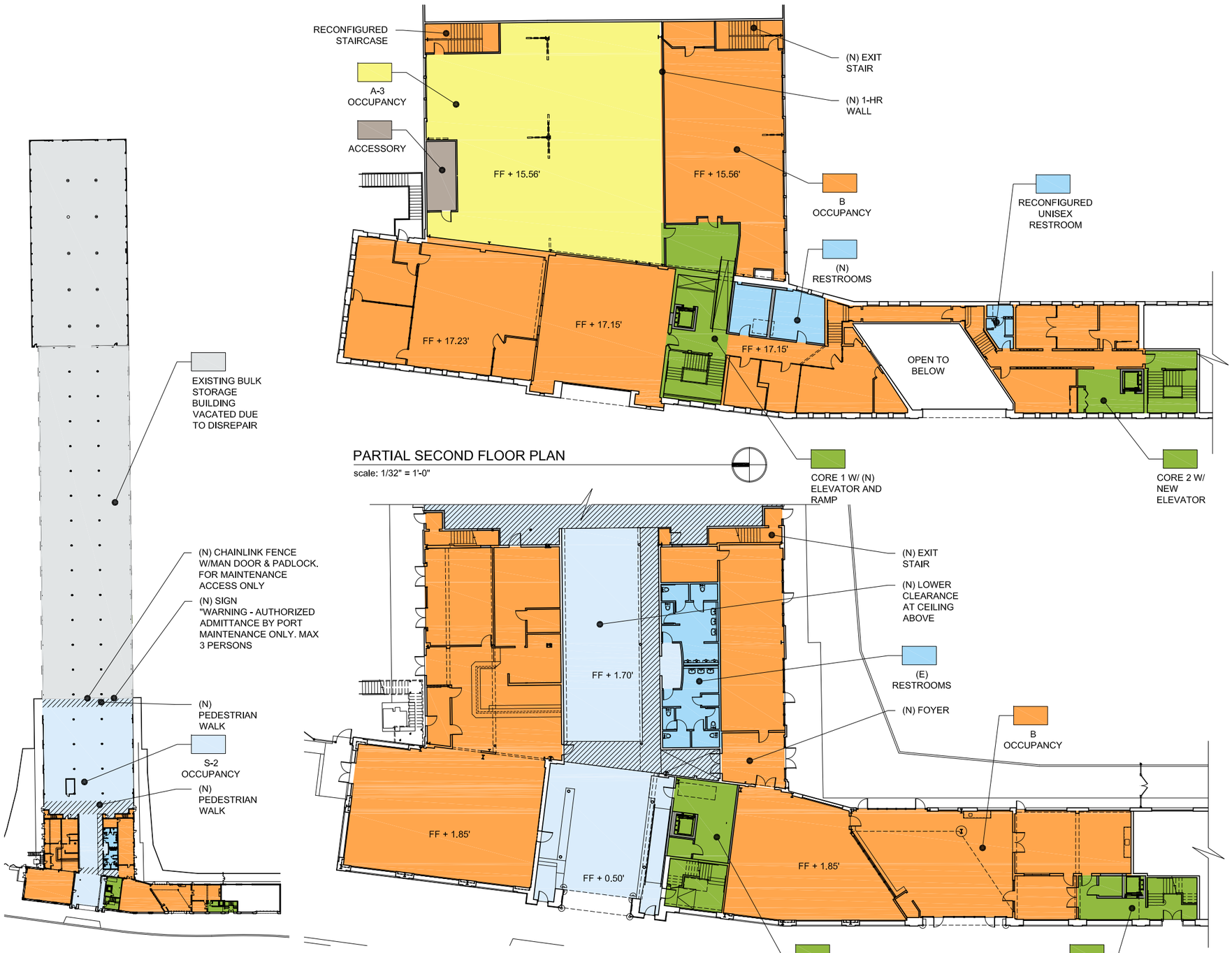
First floor (Figures A8 and A9):

- Add new LULA elevators and elevator machine room in two locations, create lobbies.
- Regrade sidewalk outside of historic south stairwell at promenade along the Embarcadero for ½" threshold at door.
- Reconstruct north and south aprons to the eastern extent of a new pedestrian walk at the eastern end of the parking. Level aprons to provide code complaint path of travel.
- New Level landings added outside all doors.
- Permanent concrete ramp to be added to the north side of the bulkhead.
- Hand Railings added to the ramp near drive aisle.
- Create vestibule/foyer for access to north side offices from shed.
- Reconstruct exit stairs from second floor on north side of building to meet maximum code riser height (7")
- Add striping at pedestrian path through parking areas.
- Add new storefront with man door to west end roll up door for access control.
- Add fence and man gate with pad lock at east end of parking with new signage "warning authorized admittance by port maintenance only. Maximum 3 persons".

- Float new concrete floor in the north office area and/or lower existing floor drain locations.
- Reconstruct sidewalk outside of southern exit stairs/ doors for level landing.
- Remove temporary structures in the shed.
- Add insulation at piping at all lavatories.
- Replace all non-labeled fire rated doors and frames in walls between B occupancies and S-2 occupancy.
- Extend/Rebuild existing wall of north exit stair from second floor former shed space.
- Create level landing at door into main historic stair by reconfiguring floor.
- New sprinklers in 1908 original shed to bring building into fully sprinklered category.
- Add signage on all three sides of the exterior wall of the "existing bulk storage vacated due to disrepair" portion of the shed – to "keep out- Port of san Francisco maintenance only"

Second floor (Figure A10):

- Rebuild north exit stair from northernmost bulkhead office space.
- Rebuild one hour enclosed north east exit stair to avoid head knocker condition, extend walls at shed to roof of shed.
- Add new ramp between bulkhead and former shed space. Create vestibule for entrance into office space.
- Add one hour wall between B occupancy and A-3 occupancy in the former shed space.
- Add new exit stair from B occupancy at south east corner of former shed space.
- Add new ramp in north side of former shed space to make accessible path of travel.
- Remove selected partitions to open up space for new tenants.
- Remove non conforming single stall toilets.
- Add contrast striping to the stairs and code conforming railings at historic stairs.
- Remove all non wood floor finishes throughout.
- Remove non code compliant spiral stair.
- Provide railings under all structural braces where head clearance is non code compliance.
- Remove portion of corridor wall in southern most portion of Bulkhead to create elevator lobby.
- Level floor as required between office spaces in bulkhead.



PARTIAL SECOND FLOOR PLAN
scale: 1/32" = 1'-0"

FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/128" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

PROPOSED USE/OCCUPANT LOAD CALCULATIONS

OCC.	USE [1]	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
B	OFFICE	12334	100 GROSS	124	INCLUDES CORE, CIRCULATION, AND RESTROOMS
S-2	BULK SHIPPING (VACATED)	75870		3	ASSIGNED OCCUPANT LOAD PER SF PORT ALT MEANS PCP-007
TOTAL FIRST FLOOR (WITHOUT PARKING)		88204		127	
SECOND FLOOR					
B	OFFICE	10831	100 GROSS	109	INCLUDES CORE, CIRCULATION, AND RESTROOMS
A3	ASSEMBLY/OFFICE	4478	15 NET	299	
	ELECTRICAL ROOM	187	300 GROSS	1	ACCESSORY
TOTAL SECOND FLOOR		15496		409	
TOTAL FIRST + SECOND FLOOR (WITHOUT PARKING)				536	
EXISTING USE OCCUPANT LOAD + 100				634	
S-2	PARKING	19600	200	98	
TOTAL W/PARKING				634	

PROPOSED USE AREA

OCC.	ALLOWABLE AREA [2]	ALLOWABLE AREA INCREASES: FULLY SPRINKLERED	ALLOWABLE AREA INCREASES: FRONTAGE INCREASE [3]	TOTAL ALLOWABLE AREA	ACTUAL AREA	ACTUAL/ ALLOWABLE AREA
FIRST FLOOR						
B	23000	46000	0	69000	12334	0.178754
S-2	26000	52000	0	78000	19600	0.251282
S-2	VACATED PORTION OF BUILDING; DOES NOT COUNT TOWARDS ALLOWABLE AREA				75870	
TOTAL ACTUAL/ALLOWABLE AREA RATIO						0.430036
SECOND FLOOR						
B	23000	46000	0	69000	10661	0.154507
A-3	9500	19000	0	28500	4478	0.157123
TOTAL ACTUAL/ALLOWABLE AREA RATIO						0.311630

PLUMBING FIXTURE COUNT [5]

				WATER CLOSETS			LAVATORIES	
OCC.	SQ. FT.	LOAD FACTOR	OCC. LOAD	MALE	FEMALE	URINALS	MALE	FEMALE
B	17085	200	86	3	4	1	2	2
A-3	4478	30	150	4	5	2	2	2
TOTAL OCC. LOAD + FIXTURES REQ'D			236	7	9	3	4	4
TOTAL FIXTURES PROVIDED				5	9	6	5	5

FOOTNOTES

1. USE PER CBC TABLE 1004.1.1.
2. FOR TYPE IIB CONSTRUCTION PER CBC TABLE 503.
3. FRONTAGE INCREASE NOT PERMITTED AS ONLY 10'-6" APRON ALLOWED TO BE CONSIDERED AT 3 SIDES < 20' PER CBC 506.2. EMBARCADERO FRONTAGE IS LESS THAN 25% OF PERIMETER.
4. S-2 IS REQUIRED TO BE FULLY SPRINKLERED IF "ENCLOSED" PARKING GARAGE AND FIRE AREA EXCEEDS 12,000 SF.
5. PER CPC TABLE 4-1. EA. URINAL IN EXCESS OF MIN ALLOWS FOR REDUCTION IN WC. PLUMBING COUNT DOES NOT INCLUDE UNISEX RESTROOM AT SOUTH WING OF SECOND FLOOR

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OCCUPANCY + ALLOWABLE AREA DIAGRAMS

PROPOSED USE AREA/OCCUPANCY DIAGRAM - OPTION 2
01.13.12

KEY NOTES:

01 (N) CHAINLINK FENCE W/MAN DOOR & PADLOCK. SIGN ON DOOR "FOR MAINTENANCE PURPOSES ONLY".

02 REMOVE (E) TRAILER/STRUCTURES.

03 PROVIDE (N) SPRINKLER HEADS AT SHED.

04 (E) PUMP HOUSE TO REMAIN.

05 REBUILD CONCRETE APRON, LENGTH VARIES DEPENDING ON OPTION. SEE STRUCTURAL NARRATIVE.

06 REPAVE APRON FOR LEVEL SURFACE (ADA COMPLIANCE).

07 REPAVE SIDEWALK FOR ¾" THRESHOLD AT DOOR.

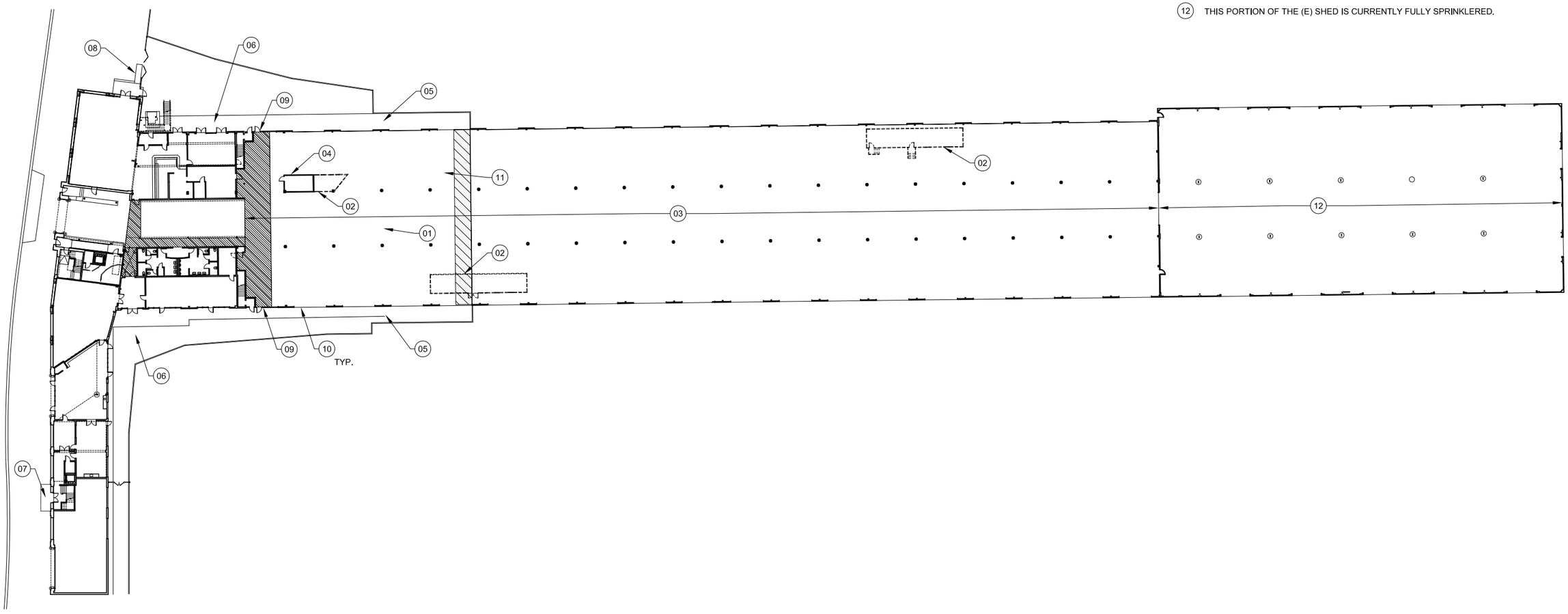
08 (N) PERMANENT 1:12 CONCRETE RAMP W/ GUARDS AND HANDRAILS.

09 (N) ALUMINUM STOREFRONT FULL HEIGHT OF ROLL UP DOORS (+/- 14' TALL).

10 (E) ROLL UP DOORS TO REMAIN AND LEFT OPEN FOR NATURAL VENTILATION OF PARKING. AREA

11 (N) STRIPED PEDESTRIAN PATH - 10' WIDE MIN.

12 THIS PORTION OF THE (E) SHED IS CURRENTLY FULLY SPRINKLERED.



FIRST FLOOR PLAN - BOTH OPTIONS
scale: 1/64" = 1'-0"

NORTH

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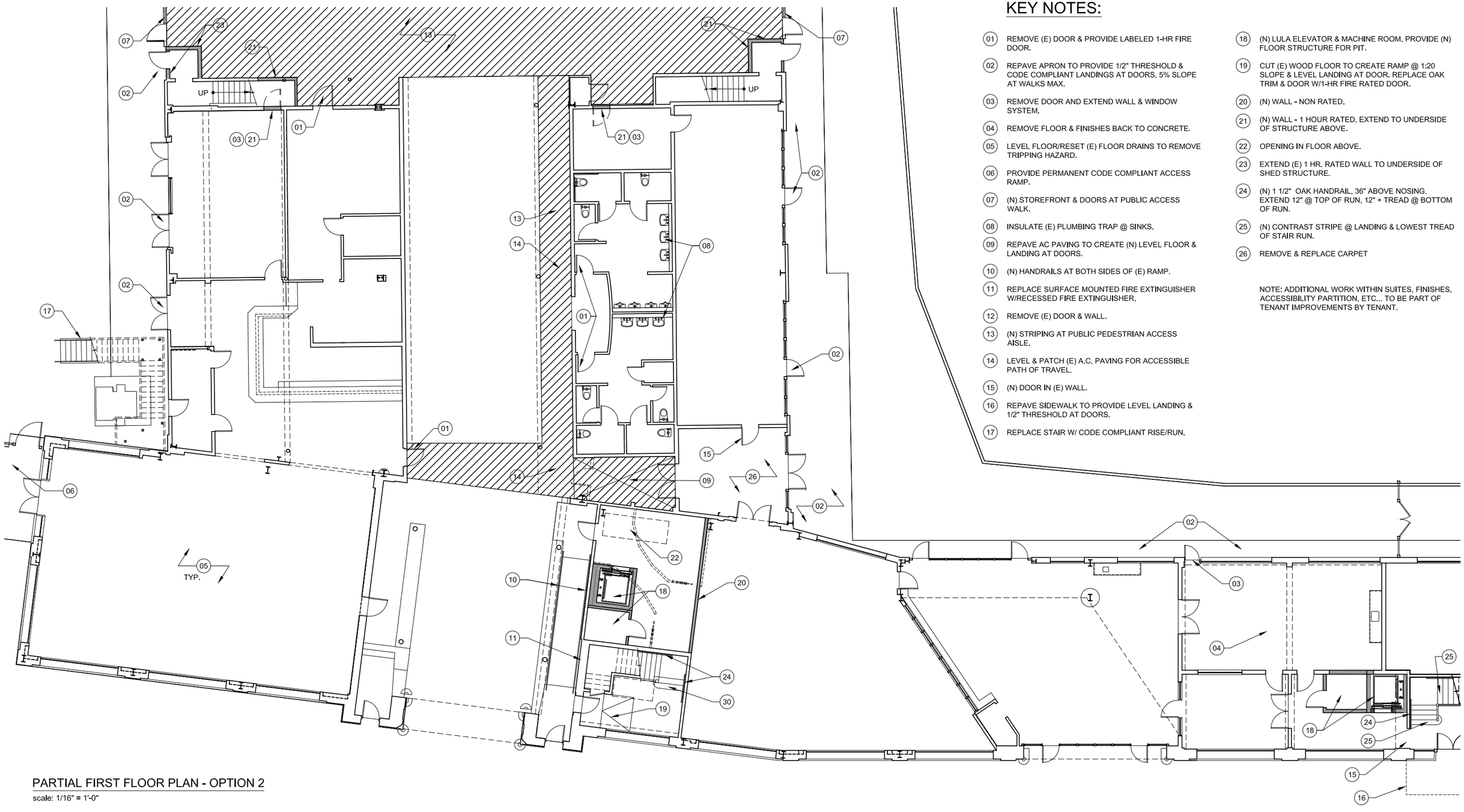
SCOPE OF WORK - SHED - OPTION 1 AND 2

SCOPE OF WORK
01.13.12

A8



PARTIAL FIRST FLOOR PLAN - OPTION 2

scale: 1/16" = 1'-0"

KEY NOTES:

01 REMOVE (E) DOOR & PROVIDE LABELED 1-HR FIRE DOOR.

02 REPAVE APRON TO PROVIDE 1/2" THRESHOLD & CODE COMPLIANT LANDINGS AT DOORS, 5% SLOPE AT WALKS MAX.

03 REMOVE DOOR AND EXTEND WALL & WINDOW SYSTEM.

04 REMOVE FLOOR & FINISHES BACK TO CONCRETE.

05 LEVEL FLOOR/RESET (E) FLOOR DRAINS TO REMOVE TRIPPING HAZARD.

06 PROVIDE PERMANENT CODE COMPLIANT ACCESS RAMP.

07 (N) STOREFRONT & DOORS AT PUBLIC ACCESS WALK.

08 INSULATE (E) PLUMBING TRAP @ SINKS.

09 REPAVE AC PAVING TO CREATE (N) LEVEL FLOOR & LANDING AT DOORS.

10 (N) HANDRAILS AT BOTH SIDES OF (E) RAMP.

11 REPLACE SURFACE MOUNTED FIRE EXTINGUISHER W/RECESSED FIRE EXTINGUISHER.

12 REMOVE (E) DOOR & WALL.

13 (N) STRIPING AT PUBLIC PEDESTRIAN ACCESS AISLE.

14 LEVEL & PATCH (E) A.C. PAVING FOR ACCESSIBLE PATH OF TRAVEL.

15 (N) DOOR IN (E) WALL.

16 REPAVE SIDEWALK TO PROVIDE LEVEL LANDING & 1/2" THRESHOLD AT DOORS.

17 REPLACE STAIR W/ CODE COMPLIANT RISE/RUN.

18 (N) LULA ELEVATOR & MACHINE ROOM. PROVIDE (N) FLOOR STRUCTURE FOR PIT.

19 CUT (E) WOOD FLOOR TO CREATE RAMP @ 1:20 SLOPE & LEVEL LANDING AT DOOR. REPLACE OAK TRIM & DOOR W/1-HR FIRE RATED DOOR.

20 (N) WALL - NON RATED.

21 (N) WALL - 1 HOUR RATED, EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.

22 OPENING IN FLOOR ABOVE.

23 EXTEND (E) 1 HR. RATED WALL TO UNDERSIDE OF SHED STRUCTURE.

24 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

25 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

26 REMOVE & REPLACE CARPET

NOTE: ADDITIONAL WORK WITHIN SUITES, FINISHES, ACCESSIBILITY PARTITION, ETC... TO BE PART OF TENANT IMPROVEMENTS BY TENANT.

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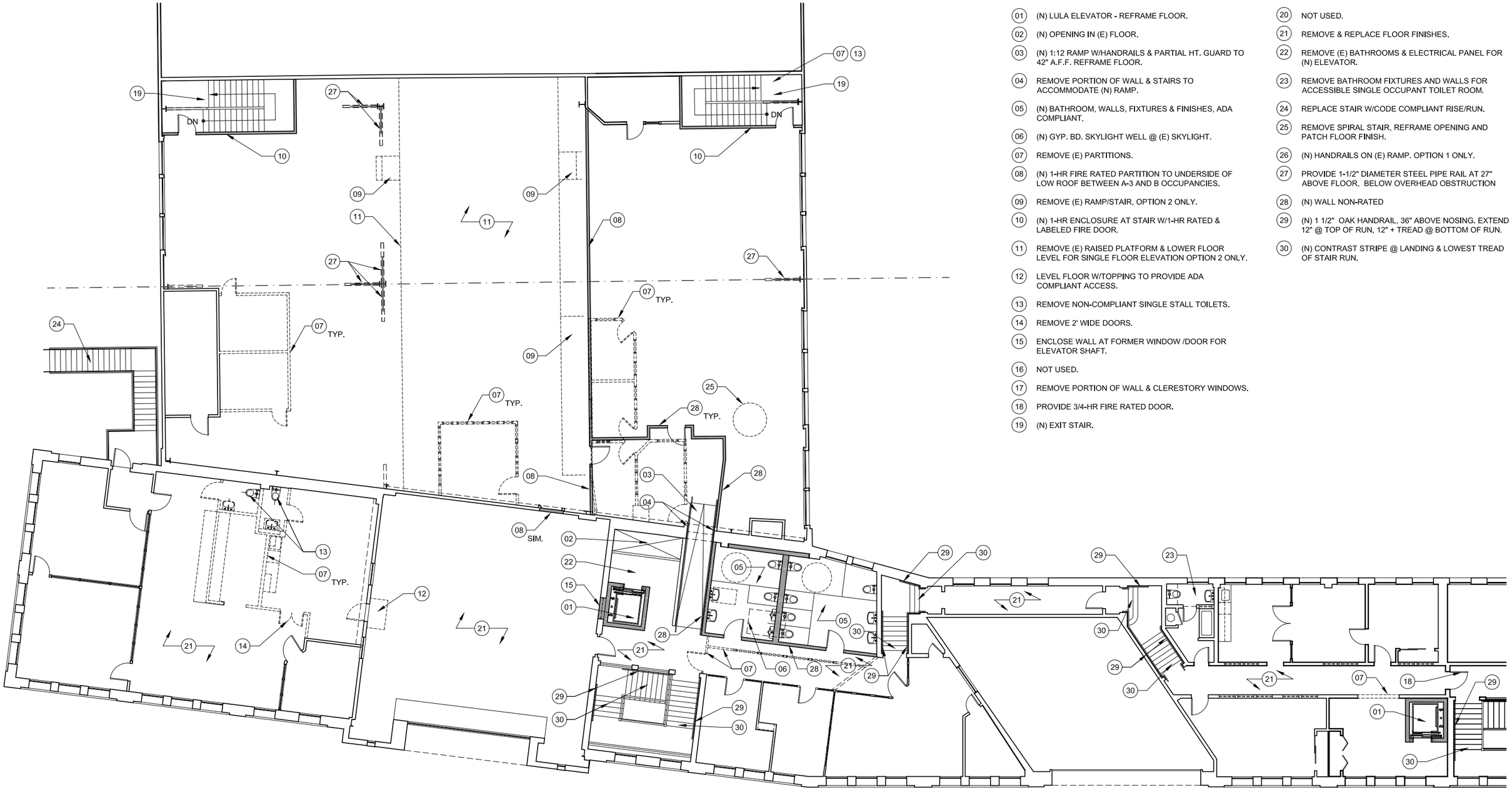
BULKHEAD

SCOPE OF WORK - OPTION 2
01.12.13



SECOND FLOOR PLAN - OPTION 2

scale: 1/16" = 1'-0"

KEY NOTES:

01 (N) LULA ELEVATOR - REFRAME FLOOR.

02 (N) OPENING IN (E) FLOOR.

03 (N) 1:12 RAMP W/HANDRAILS & PARTIAL HT. GUARD TO 42" A.F.F. REFRAME FLOOR.

04 REMOVE PORTION OF WALL & STAIRS TO ACCOMMODATE (N) RAMP.

05 (N) BATHROOM, WALLS, FIXTURES & FINISHES, ADA COMPLIANT.

06 (N) GYP. BD. SKYLIGHT WELL @ (E) SKYLIGHT.

07 REMOVE (E) PARTITIONS.

08 (N) 1-HR FIRE RATED PARTITION TO UNDERSIDE OF LOW ROOF BETWEEN A-3 AND B OCCUPANCIES.

09 REMOVE (E) RAMP/STAIR, OPTION 2 ONLY.

10 (N) 1-HR ENCLOSURE AT STAIR W/1-HR RATED & LABELED FIRE DOOR.

11 REMOVE (E) RAISED PLATFORM & LOWER FLOOR LEVEL FOR SINGLE FLOOR ELEVATION OPTION 2 ONLY.

12 LEVEL FLOOR W/TOPPING TO PROVIDE ADA COMPLIANT ACCESS.

13 REMOVE NON-COMPLIANT SINGLE STALL TOILETS.

14 REMOVE 2' WIDE DOORS.

15 ENCLOSE WALL AT FORMER WINDOW /DOOR FOR ELEVATOR SHAFT.

16 NOT USED.

17 REMOVE PORTION OF WALL & CLERESTORY WINDOWS.

18 PROVIDE 3/4-HR FIRE RATED DOOR.

19 (N) EXIT STAIR.

20 NOT USED.

21 REMOVE & REPLACE FLOOR FINISHES.

22 REMOVE (E) BATHROOMS & ELECTRICAL PANEL FOR (N) ELEVATOR.

23 REMOVE BATHROOM FIXTURES AND WALLS FOR ACCESSIBLE SINGLE OCCUPANT TOILET ROOM.

24 REPLACE STAIR W/CODE COMPLIANT RISE/RUN.

25 REMOVE SPIRAL STAIR, REFRAME OPENING AND PATCH FLOOR FINISH.

26 (N) HANDRAILS ON (E) RAMP. OPTION 1 ONLY.

27 PROVIDE 1-1/2" DIAMETER STEEL PIPE RAIL AT 27" ABOVE FLOOR, BELOW OVERHEAD OBSTRUCTION

28 (N) WALL NON-RATED

29 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

30 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

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BULKHEAD

SCOPE OF WORK - OPTION 2
01.13.12

6.2.2 STRUCTURAL

The structural scope of work between Option 1 and 2 is similar in nature. Option 2, however, includes four more items (Items 11 to 14 below), see Figures SK2.1 and SK2.2. The structural scope of work for Option 2 is as follows:

1. South Apron – up to chain link fence: The 4x12 decking needs to be replaced along with approximately 20% of the 4x12 joists due to deterioration. An asphalt topping will also be required to provide a uniform surface.
2. North Apron – up to chain link fence: Minimal replacement of the decking will be required. An asphalt topping will also be required to provide a uniform surface.
3. Apron Extension – beyond chain link fence: The existing timber aprons on the north and south sides that have been red tagged, beyond the chain link fence, must be removed, leaving only the concrete portion of each apron. The existing concrete portion of the apron on the north side, which is ten feet wide, has sufficient width to meet BCDC public access requirements; however the south concrete portion of the apron is only six feet wide, requiring an additional four foot width of timber apron. This will require new 14" diameter piles (length of each pile: 90'), 12X12 cap beams, 4X12 joists @ 12" O.C. and 4X12 decking. An asphalt topping will also be added for a uniform walking surface.
4. Concrete Deck Repair: There is a hole in the concrete deck located in the proposed parking area, which is currently covered by a steel plate. The hole will need to be repaired.
5. New Elevator Pit and Shafts: Two new elevators are required to meet egress requirements. This will require modifying the existing framing for the new floor openings as well as modification of the concrete deck (i.e., will be lowered). The elevator shaft will be a wood framed wall system with rails to support the new elevators.
6. Bent Cap Replacement: Three bent caps require replacement. One bent cap is crushed from overstressing and the others appear to have severe deterioration.
7. Replace Missing Piles: Three piles were missing and must be replaced to adequately support the bent cap.
8. Reconfigure Existing North Exit Stairway: The south end of the existing opening will be partially infilled; the west side will require new framing and existing framing modifications to support the new opening.
9. Apron Railing: The existing rail, extending to the existing chain link fence, on both the north and south apron does not meet code requirements. The rail will be removed and replaced with the new railings extending the length of the apron extension.
10. Circular Stair Removal: The existing circular stairs will be removed. As a result, the floor will be infilled with new framing.
11. Install New South Exit Stairway: The existing framing will be modified and new members will be installed to support the new opening.
12. Lower Floor: The existing 18” engineered timber joists will need to be removed and replaced in order to lower the floor level.
13. Strengthen Floor: New 2x6 floor joists at 16” on center will need to be added to the existing 2x6 floor joists at 16” on center floor increased load rating.
14. Ramp Installation: The existing floor framing will be modified and new members will also be added to place a new ramp.

REPLACE WITH STRUCTURAL OPTION 2 FIRST FLOORS

REPLACE WITH STRUCTURAL OPTION 2 SECOND FLOORS

6.2.3 MECHANICAL

The existing plumbing cold water and sewer utility line sizes should be sufficient for continued service to the Pier.

Notes:

a. This option will require the installation of two elevators, and two elevator machine rooms.
b. Scope of work in the mechanical section includes: HVAC, plumbing, and fire protection.

6.2.3.1 PARTIAL LIST OF SCOPE OF WORK

- Remove and relocated existing first floor water heater to closet or suspended platform, with tank bracing.
- Provide overhead fire sprinkler branch piping and sprinkler heads from existing six inch fire pump discharge pipeline, to provide sprinkler coverage to the parking garage.
- Provide mechanical ventilation exhaust fan(s), overhead exhaust duct and air inlets and outlet(s) throughout garage to provide minimum required ventilation rates, if natural ventilation is not accepted as code compliant by Port.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Demolish non-compliant plumbing fixtures, and sewer, vent, domestic cold and hot water from fixtures back to main pipelines, and cap. Provide new sewer, vent, domestic cold and hot water to new ADA compliant restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers.
- Provide automatic wet-type fire sprinkling, sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer.
- Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or wall exhaust fan with intake grille, in Core2 machine room for hydraulic machinery cooling. Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or ducted exhaust to wall or roof exhaust fan, in Core 1 machine room for hydraulic machinery cooling.

Second Floor:

- Remove the makeshift plywood hinged air reliefs, and blank off and properly fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface.
- Provide separately temperature controlled and duct distribution systems to serve the split A-3 and B occupancies.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.

- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Remove all un-used plumbing piping, and seal off any existing vent and sewer open pipeline terminations.
- Provide automatic wet-type fire sprinkling for elevator shaft.
- Demolish non-compliant plumbing fixtures, and sewer, vent, domestic cold and hot water from fixtures back to main pipelines, and cap. Provide new sewer, vent, domestic cold and hot water to new ADA compliant restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers. Provide fire dampers on supply and return ductwork crossing one hour fire rated walls.

6.2.4 ELECTRICAL

This option will provide access to both first and second floor. This will require the site to be ADA compliant therefore new elevators will need to be installed. Total office spaces for the first and second floor are: 12334 sq. ft. and 10831 sq. ft. respectively. Using an estimated load density of 9.2 W/sq.ft, the calculated loads for the occupancy will be: 113.5 KW for first floor, 99.7 KW for second floor resulting in a total of 213.2 KW. This power divided by 480V equals 444.2A, which is less than the 2000A section in the Main Distribution Center, therefore, there should be no need to have PG&E upgrade the service to the Pier.

Notes:

a. This option will require the installation of two elevators, and depending on the final design, the elevator's required power will not trigger an upgrade to PG&E service.
b. Scope of work in the electrical section includes: Power distribution, Lighting and Fire Alarm.

6.2.4.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Replace the existing distribution center in the first floor due to its deteriorated state.
- For office space 101, provide two new electrical panels to replace the damaged panels K and KA, that are located on the wall adjacent to the main distribution center, matching the existing load capacity.
- For office space 103, provide one new electrical panel to replace the small lighting and receptacle panel that is located in the south wall of office space 103. This panel will be upgraded to a larger capacity panel to prevent the need to using a double breaker as it is currently being done.
- Provide new lighting design in the parking area to achieve an average foot-candle (ft-cd) level of five ft-cd as per Illuminating Engineering Society (IES) Recommended Maintained Horizontal Illuminances for Covered Parking Garages.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location

- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

Second Floor:

- Remove and relocate the electrical panel from the bathroom in office space 201C. New panel will be flush mounted in eastern wall of office 201D and will be connected to all loads from removed panel.
- Remove the electrical panels from the Core1 area. This area will have the new elevator. Provide a new lockable Panel that will accommodate all the loads from the removed panels, install flush mounted in the proposed Core1 area and connect to all loads from removed panels.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

6.2.5 MARINE

Refer to Option 1 Marine alternatives.

6.2.6 COST ESTIMATE – OPTION 2

The following table shows the code compliance construction cost for Option2, which is broken into 2 alternatives depending on extent of utilization.

Option 2a – First floor office space, second floor office and assembly space, and no parking
Option 2b – First floor office space, second floor office and assembly space, and maximum parking

	Project Costs			
	Tenant Space		Shed	Total
	First Floor	Second Floor	Parking	Cost
Option 2a - First and Second Floor Office and Assembly	$ 1,580,221	$ 1,971,108	$ -	$ 3,551,329
Option 2b - First and Second Floor Office and Assembly with Parking	$ 1,580,221	$ 1,971,108	$ 719,106	$ 4,270,434

Construction costs include markups for: design and estimating contingencies (15%), general conditions and requirements (10%), payment and performance bonds (2%), general contractor's fee (5%) and project soft costs (25%).

The cost for Marina repair or demolition is in addition to the above and is:

	Marina Costs			
	Direct Cost	Mark-Up 35.5%	Soft Cost 25%	Total Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

* Note: Marina Costs are in addition to project costs for Options 1 and 2

6.3 PHASED CONSTRUCTION

Both options can be done in two phases broken into work to be completed on the first floor in the first phase and all work to make the second floor accessible conducted in the second phase.

6.3.1 PHASE 1 – FIRST FLOOR OCCUPANCY ONLY

Upgrade egress and accessibility on the first floor within the first phase as noted in the scope of work in the options descriptions. A wall would be built to create a separation for the second phase installation of the new LULA elevators, elevator lobbies and a new pit at the historic main stair from the south bulkhead office space. A new foyer for the office spaces on the south side of the bulkhead would be created.

6.3.2 PHASE 2 – SECOND FLOOR OCCUPANCY

In the second phase, the second floor would be made available to lease. Work would include with the installation of two LULA elevators as well as the upgrades for egress, path of travel and restrooms noted in the second floor scope of work in each of the options in the narrative above and as shown on the scope of work drawings. Within the second floor scope of work the floor structure would need to be reframed to accommodate a new ramp, the elevators and an opening to the floor below.

Assumptions and Exclusions

- BCDC will approve extending north and south aprons to east side of parking only, not requiring the extension of the aprons to the east end of the Pier.
- The historic stairwells, including the south one – technically pier 40, are allowed to remain and be used as part of the egress system.
- The southern portion of the second floor of the bulkhead will be served by a single unisex accessible restroom.
- The two stairs in the southern portion of the bulkhead second floor winding around the original train pass through are to remain and be part of the egress path of travel although the path of travel is not level.
- All work that is proposed to be modified from previously submitted plans will be approved by the port without requirements or changes based on historic building code or planning review.
- The parking in the shed will be naturally ventilated.
- Modifications within the individual tenant spaces will be part of separate tenant improvement permits and be required to be code.
- Existing Bulkhead framing from original construction is adequate for office live load, which was the original design intent.
- The seismic capacity and demand of the existing structure was not included in the structural review.

7.0 CONCLUSIONS

The two schemes presented in this report are both viable with inherent trade offs depending on the direction the Port would like to head. There is a premium for creating assembly occupancy (A-3) space, as shown in Option 2, in terms of cost - additional toilet facilities, exits, added fire protection and lowering a portion of the existing second floor level, and lost revenue in the form of smaller allowable parking.

The B office occupancy only building, as shown in Option 1, limits the type of tenants to traditional office use and away from spaces that are also used for parties similar to the last occupied use. The benefit of a B occupancy only building is that it allows for almost four times the amount of parking.

For the purpose of this report, only Option 1 was shown as being constructed in two phases, however either scheme could be constructed in that manner, as a means of reducing initial capital outlay.

Tenant space upgrade is estimated to cost $128 per square foot regardless of which option is chosen. Parking is estimated to cost $39 per square foot regardless of its extent.

Appendix A – Cost Estimate

Code Compliance Construction Cost - Office Occupancy Only

		Direct Costs			Mark-Up	Soft Costs	Project Cost
		Building	Apron	Total	35.5%	25%	Total
1	First Floor Only	$ 761,122	$ 223,553	$ 984,675	$ 349,377	$ 246,169	$ 1,580,221
2	First and Second Floor	$ 1,904,025	$ 223,553	$ 2,127,578	$ 754,897	$ 531,895	$ 3,414,369
3	Parking	$ 244,000	$ 1,471,833	$ 1,715,833	$ 608,803	$ 428,958	$ 2,753,594

Option 1 Total Project Cost (2 phases) with Parking = $ 6,167,963

Code Compliance Construction Cost - Office Occupancy with Second Floor Assembly

		Direct Costs			Mark-Up	Soft Costs	Project Cost
		Building	Apron	Total	35.5%	25%	Total
1	First Floor Only	$ 761,122	$ 223,553	$ 984,675	$ 349,377	$ 246,169	$ 1,580,221
2	First and Second Floor	$ 1,989,368	$ 223,553	$ 2,212,921	$ 785,178	$ 553,230	$ 3,551,329
3	Parking	$ 244,000	$ 204,093	$ 448,093	$ 158,990	$ 112,023	$ 719,106

Option 2 Project Cost (single phase) with Parking= $ 4,270,434

Project Mark-Ups

Design and Estimating Contingencies	15%
General Conditions and Requirements	10%
Payment and Performance Bonds	2%
General Contractor's Fee (OH&P)	5%
Total	35.5%

Soft Costs

Project Total Soft Cost	25%

Pier 38 Cost and Area Summary

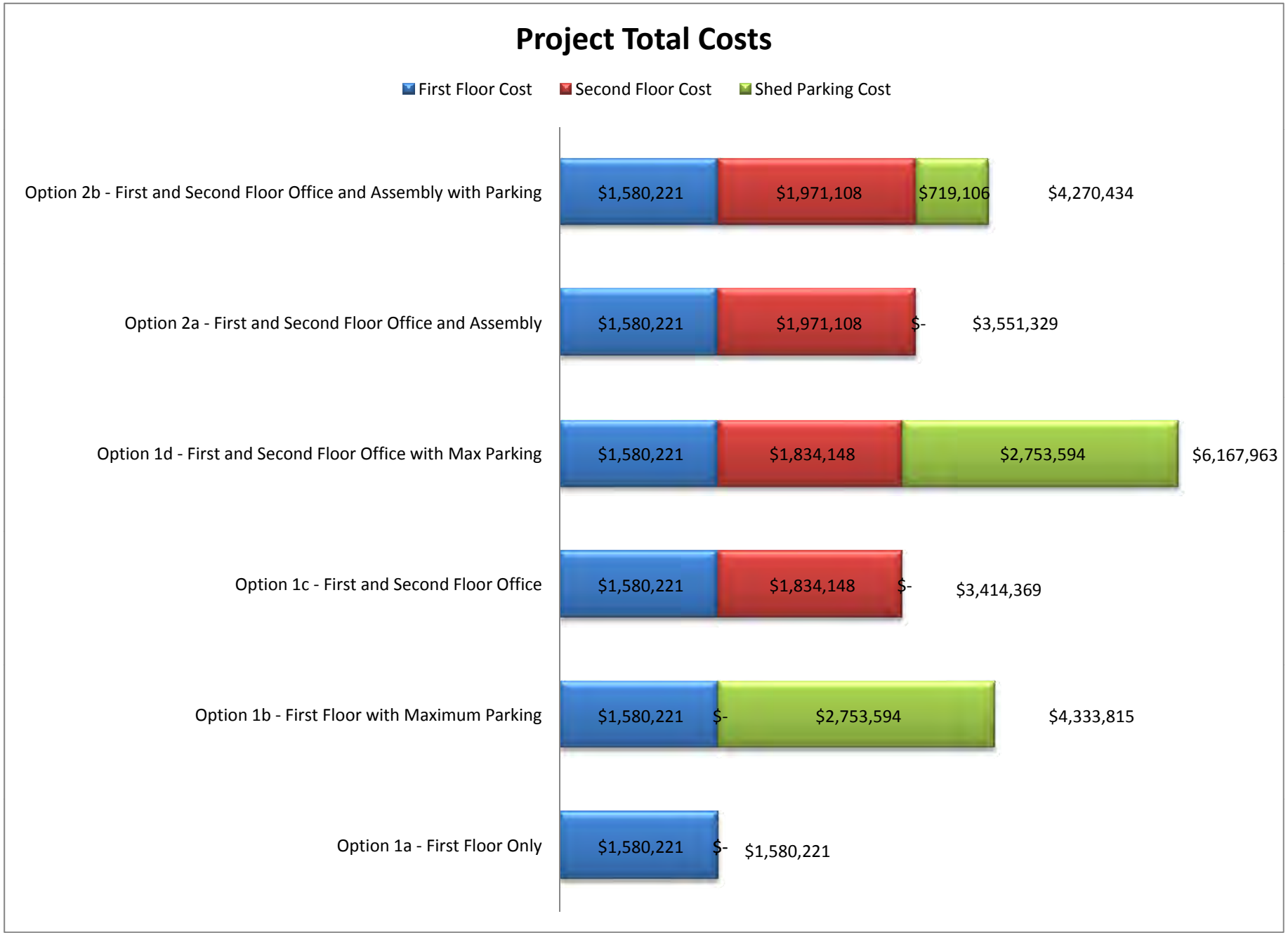
	Project Costs			
	Tenant Space		Shed	Total
	First Floor	Second Floor	Parking	Cost
Option 1a - First Floor Only	$ 1,580,221	$ -	$ -	$ 1,580,221
Option 1b - First Floor with Maximum Parking	$ 1,580,221	$ -	$ 2,753,594	$ 4,333,815
Option 1c - First and Second Floor Office	$ 1,580,221	$ 1,834,148	$ -	$ 3,414,369
Option 1d - First and Second Floor Office with Max Parking	$ 1,580,221	$ 1,834,148	$ 2,753,594	$ 6,167,963
Option 2a - First and Second Floor Office and Assembly	$ 1,580,221	$ 1,971,108	$ -	$ 3,551,329
Option 2b - First and Second Floor Office and Assembly with Parking	$ 1,580,221	$ 1,971,108	$ 719,106	$ 4,270,434

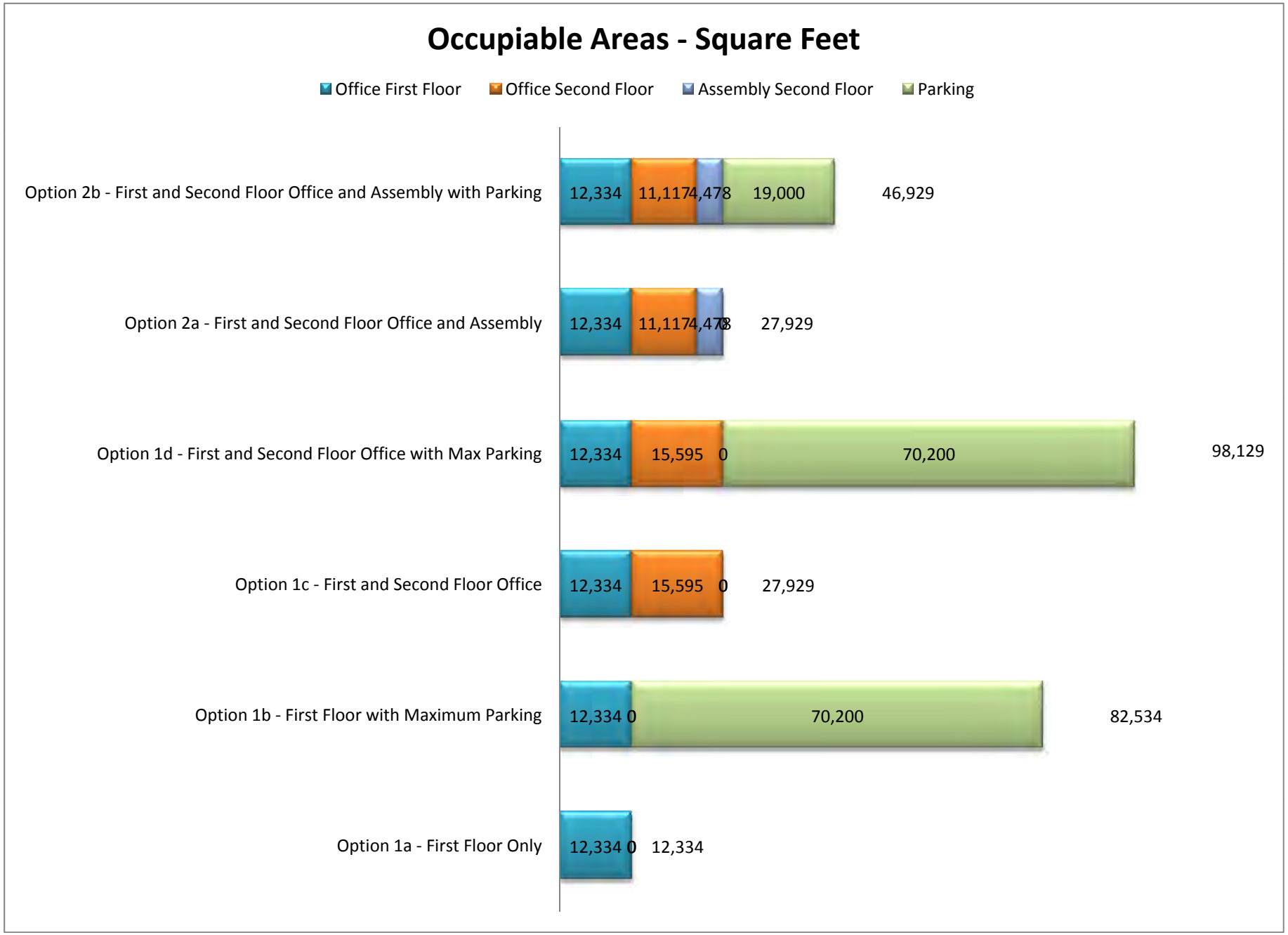
	Occupiable Areas					
	Office		Assembly	Tenant	Shed	Grand
	First Flr	Second Flr	Second Flr	Total	Parking	Total
Option 1a - First Floor Only	12,334	0	0	12,334	0	12,334
Option 1b - First Floor with Maximum Parking	12,334	0	0	12,334	70,200	82,534
Option 1c - First and Second Floor Office	12,334	15,595	0	27,929	0	27,929
Option 1d - First and Second Floor Office with Max Parking	12,334	15,595	0	27,929	70,200	98,129
Option 2a - First and Second Floor Office and Assembly	12,334	11,117	4,478	27,929	0	27,929
Option 2b - First and Second Floor Office and Assembly with Parking	12,334	11,117	4,478	27,929	19,000	46,929

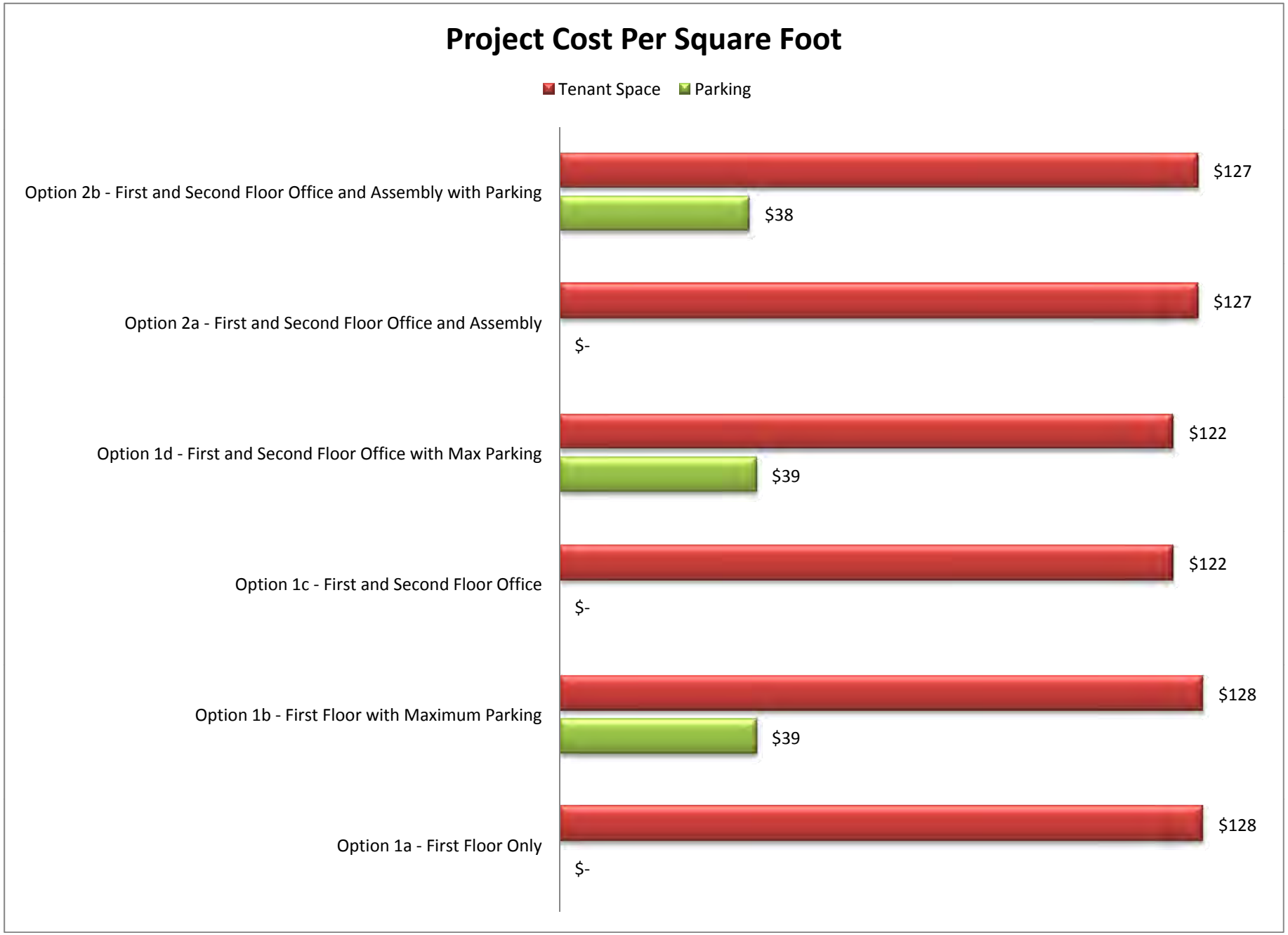
	Project Cost/ Sqaure Foot			
	Building			Parking
	First	Second	Combined	Additional
Option 1a - First Floor Only	$ 128	$ -	$ 128	$ -
Option 1b - First Floor with Maximum Parking	$ 128	$ -	$ 128	$ 39
Option 1c - First and Second Floor Office	$ 128	$ 118	$ 122	$ -
Option 1d - First and Second Floor Office with Max Parking	$ 128	$ 118	$ 122	$ 39
Option 2a - First and Second Floor Office and Assembly	$ 128	$ 126	$ 127	$ -
Option 2b - First and Second Floor Office and Assembly with Parking	$ 128	$ 126	$ 127	$ 38

	Marina Costs			
	Direct	Mark-Up	Soft Cost	Total
	Cost	35.5%	25%	Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

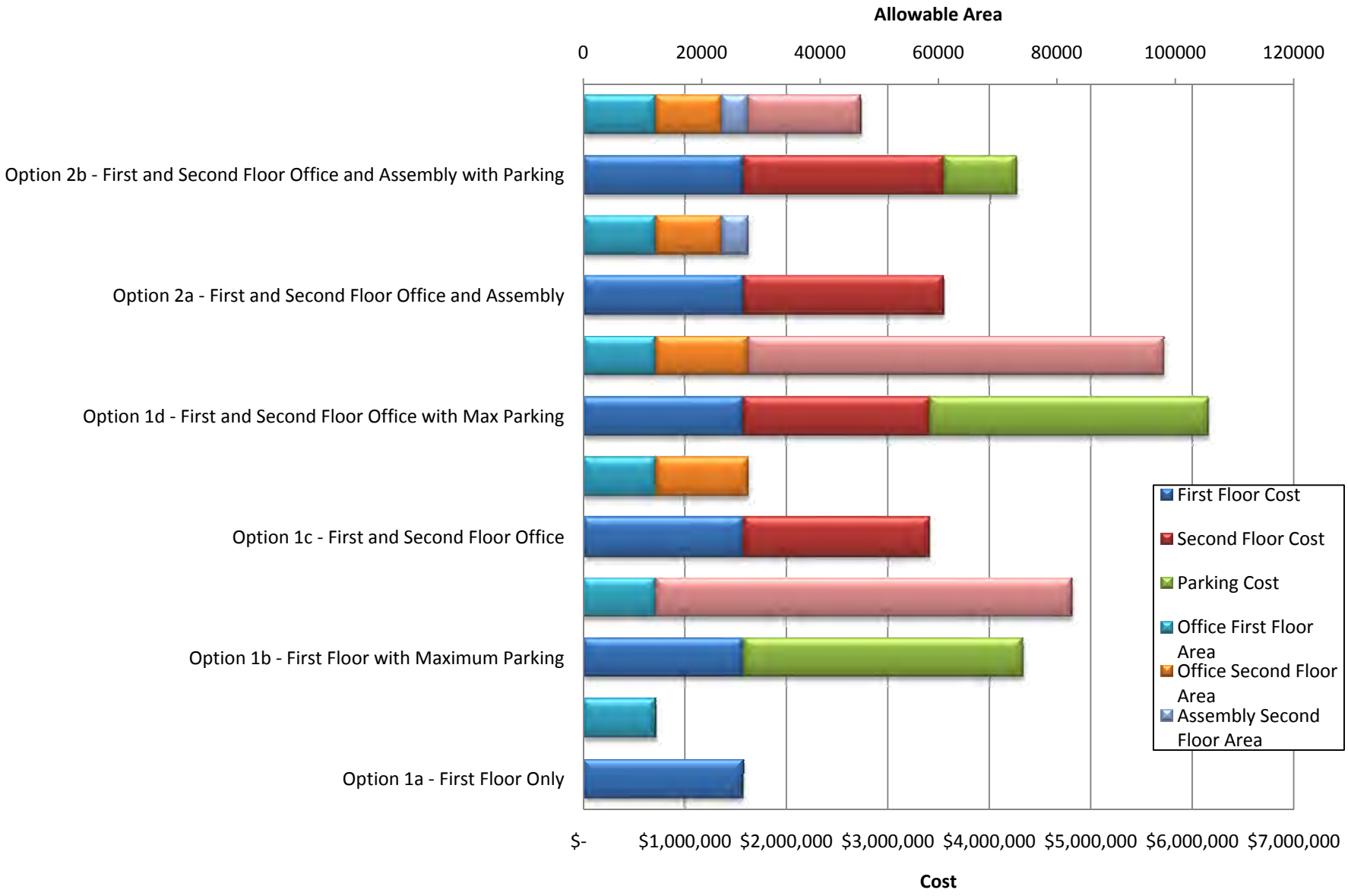
* Note: Marina Costs are in addition to project costs for Options 1 and 2


Project Total Costs
First Floor Cost
Second Floor Cost
Shed Parking Cost
Option 2b - First and Second Floor Office and Assembly with Parking
$1,580,221
$1,971,108
$719,106
$4,270,434
Option 2a - First and Second Floor Office and Assembly
$1,580,221
$1,971,108
$-
$3,551,329
Option 1d - First and Second Floor Office with Max Parking
$1,580,221
$1,834,148
$2,753,594
$6,167,963
Option 1c - First and Second Floor Office
$1,580,221
$1,834,148
$-
$3,414,369
Option 1b - First Floor with Maximum Parking
$1,580,221
$-
$2,753,594
$4,333,815
Option 1a - First Floor Only
$1,580,221
$-
$1,580,221


Occupiable Areas - Square Feet
Office First Floor
Office Second Floor
Assembly Second Floor
Parking
Option 2b - First and Second Floor Office and Assembly with Parking
12,334
11,117
4,478
19,000
46,929
Option 2a - First and Second Floor Office and Assembly
12,334
11,117
4,478
27,929
Option 1d - First and Second Floor Office with Max Parking
12,334
15,595
0
70,200
98,129
Option 1c - First and Second Floor Office
12,334
15,595
0
27,929
Option 1b - First Floor with Maximum Parking
12,334
0
70,200
82,534
Option 1a - First Floor Only
12,334
0
12,334


Project Cost Per Square Foot
Tenant Space
Parking
Option 2b - First and Second Floor Office and Assembly with Parking
$127
$38
Option 2a - First and Second Floor Office and Assembly
$127
$-
Option 1d - First and Second Floor Office with Max Parking
$122
$39
Option 1c - First and Second Floor Office
$122
$-
Option 1b - First Floor with Maximum Parking
$128
$39
Option 1a - First Floor Only
$128
$-

Project Total Costs and Allowable Areas



PIER 38 BUILDING CODE COMPLIANCE AND OCCUPANCY STUDY SAN FRANCISCO, CA

ESTIMATE OF PROBABLE CONSTRUCTION COST (AN OPINION OF PROBABLE CONSTRUCTION COST)

Owner
SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO

Prepared for
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www.mleecorp.com

Date: 12/15/2011 R1

file: 1005 Pier 38

PIER 38 BUILDING CODE COMPLIANCE

SAN FRANCISCO, CA

ESTIMATE OF PROBABLE CONSTRUCTION COST
(AN OPINION OF PROBABLE CONSTRUCTION COST)

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Date: 12/15/2011 R1

PORT OF SAN FRANCISCO
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
PREAMBLE

Date: 12/15/2011 R1

1 The estimate, which represents our opinion of probable construction cost, consists of the following integral sections:
- a Preamble
- b Grand Summary
- c Estimate Summaries
- d Estimate Details

Please see Table of Contents for details

2 The estimate is based on the following:
- a A set of Preliminary set of drawings, a total of 20 sheets, prepared by Creegan+D'Angelo, dated Dec 5, 2011 and received by us on Dec 6, 2011
- b A set of Preliminary technical specifications, prepared by Creegan+D'Angelo, dated Dec 5, 2011 and received by us on Dec 6, 2011
- c Clarifications from designers

3 The estimate includes the following scope of work:
- a Code compliance and occupancy study of an existing building
- b Associated apron/sitework

4 The gross floor area used in this estimate is
- a Gross floor area (for estimating purposes) is 31,625 GSF

5 The estimate specifically excludes the following items:
- a Furniture, fittings, equipment (FF&E) except fixed FF&E as part of the building system
- b Permit and plan check fees
- c Administration costs such as bidding, advertising and contract award
- d Professional fees for architect, engineers, consultants, construction management and other soft costs
- e Costs for independent testing and inspection
- f Construction change orders
- g Cost escalation beyond the assumed construction schedule
- h Art work enhancements

It is assumed that the above items, if needed, are included elsewhere in the owner's overall project budget.

6 The estimate is based on the following assumptions:
- a The work will be constructed as two phases under one general contract. Only Option 1 has being shown for this purpose.
- b All work will be done during regular working hours; no overtime work has been allowed.

c Unit costs are based on prevailing wage rates.
d Construction period to be determined

7 The estimate is based on estimated prices current as of December 2011, with 4 to 6 responsible and responsive bids under a competitive bidding environment for a fixed price lump sum contract. Experience shows fewer bidders may result in higher bids, and conversely more bidders may result in lower bids.

8 The following is a list of some items that may affect the cost estimate:
a Modifications to the scope of work or assumptions included in this estimate
b Special phasing requirements
c Restrictive technical specifications or excessive contract conditions
d Any specified item of equipment, material, or product that cannot be obtained from at least three different sources
e Any other non-competitive bid situations.

9 a The estimate has been prepared using accepted estimating practices and it represents our opinion of probable construction costs based on a fair-market competitive bidding situation. Since we have no control over market conditions and other factors which may affect the bid prices, we cannot and do not warrant or guarantee that the bid or final cost will not deviate from our estimate.

10 Abbreviations used in the estimate:
cy = cubic yard
ea = each
gsf = gross square foot
lb = pound
lf = linear foot
lfr=linear foot riser = stair width x no. of risers
loc=location
ls = lump sum
NIC = Not In (this) Contract
sf = square foot
sfca = square foot contact area
pr = pair
bf = board feet

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
GRAND ESTIMATE SUMMARY

Line #	Description	Estimated Amount	GSF	$/GSF
1	**Building**			
	Option 1 Phase I Estimate	**$1,378,000**	**14,636**	**$94.20**
	Option 1 Phase II Estimate	**$1,548,000**	**16,989**	**$91.10**
	Option 2 Estimate	**$3,026,000**	**31,625**	**$95.70**
2	**Apron/Sitework**			
	Option 1 Estimate	**$763,000**	**14,486**	**$52.70**
	Option 2 Estimate	**$426,000**	**10,810**	**$39.40**
3	**Marina**	**$768,500**		

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble", "Estimate Summaries", and "Estimate Details" for assumptions, exclusions, qualifications and scope of work.

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
BUILDING ESTIMATE SUMMARY

CSI Div	Item		Option 1 Phase I Total $	Option 1 Phase II Total $	Option 2 Total $
	From attached details:				
2	Site Construction (for Building)		73,675	106,655	199,104
3	Concrete		12,000	33,450	45,450
4	Masonry	None			
5	Metals		51,900	46,625	93,525
6	Wood & Plastics		40,924	98,618	208,081
7	Thermal & Moisture Protection		11,151	16,378	18,766
8	Doors & Windows		48,225	16,950	67,375
9	Finishes		12,112	117,951	151,613
10	Specialties		5,070	17,400	26,620
11	Equipment	None			
12	Furnishings	None			
13	Special Construction	None			
14	Conveying System			170,000	170,000
15	Mechanical		538,093	363,939	920,867
16	Electrical		223,972	154,937	331,967
	Direct Cost- Building		1,017,122	1,142,903	2,233,368
	Design & Estimating Contingencies	15%	152,600	171,400	335,000
	Subtotal		1,169,722	1,314,303	2,568,368
	General Conditions & Requirements	10%	117,000	131,400	256,800
	Payment & Performance Bonds	2%	25,700	28,900	56,500
	Subtotal		1,312,422	1,474,603	2,881,668
	General Contractor's Fee (OH&P)	5%	65,600	73,700	144,100
	Total Estimated Construction Cost		1,378,022	1,548,303	3,025,768
	Cost escalation	TBD			
	TOTAL ESTIMATED BUILDING CONSTRUCTION COST		1,378,022	1,548,303	3,025,768
	Rounded-off		**1,378,000**	**1,548,000**	**3,026,000**

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble" and 'Estimate Details" for assumptions, exclusions, qualifications and scope of work,

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
APRON/SITE ESTIMATE SUMMARY

	Description		Estimated Construction Cost Option 1	Estimated Construction Cost Option 2
	Apron/Site work Direct Cost From Attached Details:			
	See separate section for Building			
	2.1 Selective Apron/Site Demolition		78,137	62,267
	2.2 Paving, Handrail & Aprons		485,050	252,009
	Direct Cost- Site works		563,187	314,276
	Design & Estimating Contingencies	15%	84,500	47,100
	Subtotal		647,687	361,376
	General Conditions & Requirements	10%	64,800	36,100
	Payment & Performance Bonds	2%	14,200	7,900
	Subtotal		726,687	405,376
	General Contractor's Fee (OH&P)	5%	36,300	20,300
	Total Estimated Construction Cost		762,987	425,676
	Cost escalation	TBD		
	Total Estimated Sitework Construction Cost		762,987	425,676
	Rounded-off		**763,000**	**426,000**

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble" & "Details" for a complete scope of work, qualifications & exclusions.

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
	Division 2- Site Construction (for Building)								
1	Architectural Demolition								
2	Partition	94	5,349	5,887	sf	2.50	235	13,373	14,718
3	Floor finish	1,133	4,116	7,645	sf	1.50	1,700	6,174	11,468
4	Level floor/reset (E) floor drains	2,847		2,847	sf	1.25	3,559		3,559
5	Level & patch (E) AC paving for accessible path of travel	522		522	sf	2.00	1,044		1,044
6	Level landing at door, 40 sf	1		1	ea	450.00	450		450
7	(E) door, single	8	18	26	ea	75.00	600	1,350	1,950
8	(E) door, double		1	1	ea	120.00		120	120
9	(E) metal roll-up door	2		2	ea	850.00	1,700		1,700
10	Metal spiral stair, 14' high	1		1	ea	2,500.00	2,500		2,500
11	Exterior stairs, 14' high	1		1	ea	2,500.00	2,500		2,500
12	North stairs	1		1	ea	3,000.00	3,000		3,000
13	Makeshift plywood hinged air reliefs		1	1	ls	450.00		450	450
14	(E) handrail at stairs		244	244	lf	5.00		1,220	1,220
15	Structural Demolition								
16	Cut (E) wood floor for new stair and ramp	161		321	sf	15.00	2,415		4,815
17	Cut portion of (E) concrete wall for new ramp, 28 sf		1	1	ea	750.00		750	750
18	Concrete slab and topping for elevator pit		160	160	sf	30.00		4,800	4,800
19	Wood floor w/ associated wood joists for elevator		128	128	sf	15.00		1,920	1,920
20	Concrete beam for elevator		16	16	lf	150.00		2,400	2,400
21	(E) raised platform 18" TJI, included ramp/stair			2,040	sf	15.00			30,600
22	Plumbing Demolition								

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
23	WC		6	7	ea	85.00		510	595
24	Lavatory		6	7	ea	85.00		510	595
25	Shower		1	1	ea	250.00		250	250
26	Cap and plug (E) sanitary sewer, vent, domestic hot water piping		13	15	ea	1,200.00		15,600	18,000
27	Remove and relocate existing first floor water heater to closet or accessible suspended with tank bracing	1		1	ea	550.00	550		550
28	Remove and relocate existing second floor water heater to closet or accessible suspended with tank bracing		1	1	ea	550.00		550	550
29	Remove sewer, vent, domestic cold and hot water from fixtures back to main pipelines	1	1	1	ls	10,000.00	10,000	10,000	10,000
30	Cap sewer, vent, domestic cold and hot water from fixtures	1	1	1	ls	5,000.00	5,000	5,000	5,000
31	Remove all un-used plumbing piping	1	1	1	ls	5,000.00	5,000	5,000	5,000
32	Mechanical Demolition								
33	Demolish existing ductwork and outlets	14,636	16,989	31,625	gsf	2.00	29,272	33,978	63,250
34	Electrical Demolition								
35	Remove (E) electrical panel from the bathroom		1	1	ea	600.00		600	600
36	Remove (E) electrical panel K and KA	2		2	ea	600.00	1,200		1,200
37	Remove (E) small lighting and receptacle panel	1		1	ea	450.00	450		450
38	Remove (E) Distribution Center at first floor	1		1	ea	1,000.00	1,000		1,000
39	Remove the Electrical Panels from the Core1 area.		1	1	ea	600.00		600	600

PORT OF SAN FRANCISCO									
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ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
40	Misc electrical items	1	1	1	ls	1,500.00	1,500	1,500	1,500
41									
42	----------				----------		----------	----------	----------
43	**Division 2 - Total**						**73,675**	**106,655**	**199,104**
44									
45									
46	**Division 3 - Concrete**								
47	Concrete deck repair, 15'x8'x8"	120		120	sf	100.00	12,000		12,000
48	Elevator pit								
49	Concrete		10	10	cy	2,000.00		20,000	20,000
50	Dowels		130	130	ea	65.00		8,450	8,450
51	Misc concrete		1	1	ls	5,000.00		5,000	5,000
52									
53	----------				----------		----------	----------	----------
54	**Division 3 - Total**						**12,000**	**33,450**	**45,450**
55									
56									
57	**Division 4 - Masonry**				**None**				
58									
59									
60	**Division 5 - Metal**								
61	Support for Stair	1		1	ls	40,000.00	40,000		40,000
62	Handrail at ramp	46	160	206	lf	150.00	6,900	24,000	30,900
63	1 1/2" diam steel pipe rail		37	37	lf	125.00		4,625	4,625
64	HSS at elevator		1	1	ls	8,000.00		8,000	8,000
65	Guide rail at elevator		1	1	ls	5,000.00		5,000	5,000
66	Misc iron	1	1	1	ls	5,000.00	5,000	5,000	5,000
67									

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
68	----------	----------	----------	----------	----------	----------	----------	----------	----------
69	**Division 5 - Total**						**51,900**	**46,625**	**93,525**
70									
71									
72	**Division 6 - Carpentry**								
73	Wood stair, 28 risers, 4' wide	1		1	ea	12,000.00	12,000		12,000
74	Guardrail at stair	64		64	lf	125.00	8,000		8,000
75	Reframe floor for new ramp		224	80	sf	30.00		6,720	2,400
76	Reframe floor at new elevator opening		2	2	ea	2,000.00		4,000	4,000
77	Reframe north stairs to new layout	1		1	ea	5,000.00	5,000		5,000
78	Wood stairs at south side			1	ea	18,000.00			18,000
79	18" TJI at second floor			2,040	sf	20.00			40,800
80	Plywood sheathing at second floor			2,040	sf	2.50			5,100
81	2x6 floor joist			360	sf	6.00			2,160
82	Infill at spiral stair opening	1		1	ea	1,200.00	1,200		1,200
83	Infill at north stair opening	1		1	ea	1,200.00	1,200		1,200
84	Enclose wall at former window/ door		1	1	ea	1,500.00		1,500	1,500
85	Interior wood framing, 2x6	566	2,935	5,012	sf	4.50	2,547	13,208	22,554
86	Wood framing at elevator		2,176	2,176	sf	5.50		11,968	11,968
87	15/32" Plywood sheathing for elevator wall		2,176	2,176	sf	2.50		5,440	5,440
88	HD U14		36	36	ea	145.00		5,220	5,220
89	1 1/2" oak handrail		244	244	lf	155.00		37,820	37,820
90	Miscellaneous rough carpentry	14,636	16,989	31,625	sf	0.75	10,977	12,742	23,719
91									
92	----------	----------	----------	----------	----------	----------	----------	----------	----------
93	**Division 6 - Total**						**40,924**	**98,618**	**208,081**
94									
95									

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
96	**Division 7 - Thermal & Moisture Protection**								
97	Interior insulation at partition	566	5,111	7,188	sf	1.15	651	5,878	8,266
98	Fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface	1	1	1	ls	5,000.00	5,000	5,000	5,000
99	Seal off any existing vent and sewer open pipeline terminations	1	1	1	ls	3,000.00	3,000	3,000	3,000
100	Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls	1	1	1	ls	2,500.00	2,500	2,500	2,500
101									
102	----------				----------		----------	----------	----------
103	**Division 7 - Total**						**11,151**	**16,378**	**18,766**
104									
105									
106	**Division 8 - Doors & Windows**								
107	Interior door								
108	Interior HM door/frame/hardware:								
109	Single	1	6	7	ea	1,725.00	1,725	10,350	12,075
110	Fire rated door								
111	Single	5	3	9	ea	2,200.00	11,000	6,600	19,800
112	Exterior door								
113	Fire rated door								
114	Single	1		1	ea	2,500.00	2,500		2,500
115	Exterior aluminum glazing, storefront	224		224	sf	125.00	28,000		28,000
116	Premium for single door	2		2	ea	2,500.00	5,000		5,000
117									

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
118	----------						----------	----------	----------
119	**Division 8 - Total**						**48,225**	**16,950**	**67,375**
120									
121									
122	**Division 9 - Finishes**								
123	Wall finishes:								
124	Gypsum board 5/8" x-type rated	1,132	3,456	7,466	sf	2.00	2,264	6,912	14,932
125	Gypsum board 5/8", partition		4,590	4,728	sf	1.85		8,492	8,747
126	Shaft liner, 1" thick		2,176	2,176	sf	2.50		5,440	5,440
127	Ceramic tile		1,566	1,566	sf	20.00		31,320	31,320
128	Cementitious backer		1,566	1,566	sf	3.00		4,698	4,698
129	Flooring:								
130	Ceramic tile		398	398	sf	20.00		7,960	7,960
131	Sealed concrete	135		135	sf	2.50	338		338
132	Carpet	295		295	sf	4.00	1,180		1,180
133	Flooring at 2nd floor		928	2,968	sf	6.00		5,568	17,808
134	Flooring at new ramp		224	80	sf	7.00		1,568	560
135	Patch floor at spiral stair	1		1	ea	600.00	600		600
136	Contrast stripe		8	8	ea	150.00		1,200	1,200
137	Floor base:								
138	Rubber base	240	349	804	lf	4.00	960	1,396	3,216
139	Ceramic tile		174	174	lf	20.00		3,480	3,480
140	Ceiling:								
141	Gypsum board		1,600	1,600	sf	15.00		24,000	24,000
142	Gypsum board skylight well at (E) skylight, 24 sf		1	1	ea	1,250.00		1,250	1,250
143	Painting:								
144	Interior painting								

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
145	Gypsum board, partition	1,132	6,480	10,628	sf	1.00	1,132	6,480	10,628
146	Gypsum board, (E) partition		5,406	5,650	sf	1.00		5,406	5,650
147	Gypsum board, ceiling	761	1,755	2,609	sf	1.20	913	2,106	3,131
148	Door & frame, single	5	9	15	ea	75.00	375	675	1,125
149	(N) striping at public pedestrian access aisle	8,699		8,699	sf	0.50	4,350		4,350
150									
151	----------	----------	----------	----------	----------	----------	----------	----------	----------
152	**Division 9 - Total**						**12,112**	**117,951**	**151,613**
153									
154									
155	**Division 10 - Specialties**								
156	Toilet partitions								
157	Standard		2	5	ea	1,200.00		2,400	6,000
158	Disabled		2	2	ea	1,500.00		3,000	3,000
159	Urinal screen			1	ea	550.00			550
160	Toilet accessories		3	3	rm	2,500.00		7,500	7,500
161	Replace surface mounted fire extinguisher w/ recessed fire extinguisher		1	1	ea	1,500.00		1,500	1,500
162	Chain link fence	102		102	lf	35.00	3,570		3,570
163	Man door and padlock	1		1	ea	1,500.00	1,500		1,500
164	Misc specialties		1	1	ls	3,000.00		3,000	3,000
165									
166	----------	----------	----------	----------	----------	----------	----------	----------	----------
167	**Division 10 - Total**						**5,070**	**17,400**	**26,620**
168									
169									
170	**Division 11 - Equipment**				**None**				

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
171									
172	**Division 12 - Furnishing**				**None**				
173									
174	**Division 13 - Special Construction**				**None**				
175									
176									
177	**Division 14 - Conveying System**								
178	Hydraulic elevator, 2 stops		2	2	ea	85,000.00		170,000	170,000
179									
180	----------	----------	----------	----------	----------	----------	----------	----------	----------
181	**Division 10 - Total**							**170,000**	**170,000**
182									
183									
184	**Division 15 - Mechanical**								
185	15.1 Plumbing								
186	Fixtures								
187	WC		2	5	ea	1,150.00		2,300	5,750
188	WC, ADA		3	3	ea	1,250.00		3,750	3,750
189	Urinal			2	ea	850.00			1,700
190	Lavatory & faucet		5	5	ea	950.00		4,750	4,750
191	Rough-in, all fixtures		10	15	ea	925.00		9,250	13,875
192	Instantaneous electric water heater		1	1	ea	1,500.00		1,500	1,500
193	Insulate (E) plumbing trap at sinks	6		6	ea	250.00	1,500		1,500
194	Waste and vent system	14,636	16,989	31,625	gsf	4.00	58,544	67,956	126,500
195	Gas system	14,636	16,989	31,625	gsf	0.75	10,977	12,742	23,719
196	Domestic hot and cold water system	14,636	16,989	31,625	gsf	3.00	43,908	50,967	94,875

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
197	Provide sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer		1	1	ls	5,000.00		5,000	5,000
198	Testing, sterilization & cleaning, Option 1	1	1		ls	1,000.00	1,000	1,000	
199	Testing, sterilization & cleaning, Option 2			1	ls	2,000.00			2,000
200	Shop drawings & submittals, Option 1	1	1		ls	4,000.00	4,000	4,000	
201	Shop drawings & submittals, Option 2			1	ls	8,000.00			8,000
202									
203	15.2 HVAC								
204	Provide separately temperature controlled and duct distribution systems to serve the split A-3 and B occupancies			1	ls	10,000.00			10,000
205	Provide fire dampers on supply and return ductwork crossing 1 hour fire rated walls	14,636	16,989	31,625	gsf	0.50	7,318	8,495	15,813
206	Mechanical system, core & shell only, including seismic restraint, allowance	14,636	16,989	31,625	gsf	8.00	117,088	135,912	253,000
207									
208	15.3 Sprinkler system								
209	Automatic fire sprinkler system at shed	61,000		61,000	sf	4.00	244,000		244,000
210	Provide overhead fire sprinkler branch piping and sprinkler heads from existing 6" fire pump discharge pipeline, to provide sprinkler coverage to the parking garage	1		1	ea	5,000.00	5,000		5,000
211	Provide upright heads in exposed ceiling rooms and pendant heads in rooms with ceilings	14,636	16,989	31,595	sf	3.00	43,908	50,967	94,785

PORT OF SAN FRANCISCO									
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY								Date: 12/15/2011 R1	
ESTIMATE OF PROBABLE CONSTRUCTION COST									
BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
212	Connect to existing fire sprinkler branch and main headers	1	1	1	ea	850.00	850	850	850
213	Provide automatic wet-type fire sprinkling for elevator shaft		1	1	ls	4,500.00		4,500	4,500
214									
215	----------				----------		----------	----------	----------
216	**Division 15 - Total**						**538,093**	**363,939**	**920,867**
217									
218									
219	**Division 16 - Electrical**								
220	Power system	14,636	16,989	31,625	gsf	4.50	65,862	76,451	142,313
221	Lighting system, parking, high bay	38,000		19,000	gsf	2.50	95,000		47,500
222	Lighting system, core & shell	761	1,755	2,609	gsf	6.00	4,566	10,530	15,654
223	Lighting system, tenant area				none				
224	Telephone/data system	14,636	16,989	31,625	gsf	1.00	14,636	16,989	31,625
225	Fire alarm and security system	14,636	16,989	31,625	gsf	3.00	43,908	50,967	94,875
226									
227	----------				----------		----------	----------	----------
228	**Division 16 - Total**						**223,972**	**154,937**	**331,967**

PORT OF SAN FRANCISCO						Date: 12/15/2011 R1	
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY							
ESTIMATE OF PROBABLE CONSTRUCTION COST							
APRON/SITE DIRECT COST DETAILS							
Line	**Description of Work**	**Option 1**	**Option 2**	**Unit**	**Unit Cost**	**Option1**	**Option 2**
		Quantity	**Quantity**			**Estimated Total $**	**Estimated Total $**
	Division 2 Site work and Demolition						
1							
2	**2.1 Selective Apron/Site Demolition**						
3	Building demolition		See building section				
4	Hardscape Demolition:						
5	Aprons						
6	Remove apron extension	1,151	93	sf	15.00	17,265	1,395
7	Remove 4x12 decking	3,036	3,036	sf	5.00	15,180	15,180
8	Remove 4x12 joist	607	607	sf	4.50	2,732	2,732
9	Remove 12x12 bent cap	52	52	lf	25.00	1,300	1,300
10	Remove apron railing	366	366	lf	10.00	3,660	3,660
11	Remove (E) trailer/structure	3	3	ea	10,000.00	30,000	30,000
12	Misc demolition	1	1	ls	8,000.00	8,000	8,000
13							
14	----------			----------	----------	----------	----------
15	Subtotal					78,137	62,267
16							
17							
18	**2.2 Paving, Handrail & Aprons**						
19	Asphalt topping at aprons, 4" thick	7,623	7,226	sf	6.00	45,738	43,356
20	Aprons						
21	4x12 decking	4,301	3,904	sf	12.00	51,612	46,848
22	4x12 joists	1,000	800	sf	10.00	10,000	8,000
23	12x12 cap beam	102	62	lf	40.00	4,080	2,480
24	14" diameter pile, 90' long	13	5	ea	18,000.00	234,000	90,000
25	Wood railing, 5'-2" high	604	421	lf	65.00	39,260	27,365
26	Stainless steel bracket	10	2	ea	8,000.00	80,000	16,000
27	Post-installed stainless steel anchor	20	4	ea	150.00	3,000	600
28	Concrete ramp	177	177	sf	50.00	8,850	8,850
29	Guardrail/Handrails at concrete ramp	40	40	lf	200.00	8,000	8,000
30	Repave sidewalk for 1/2" threshold at door	102	102	sf	5.00	510	510
31							
32	----------			----------	----------	----------	----------
33	Subtotal					485,050	252,009
34							

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PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY					
ESTIMATE OF PROBABLE CONSTRUCTION COST					
MARINA DIRECT COST DETAILS					
Line	**Description of Work**	**Quantity**	**Unit**	**Unit Cost**	**Estimated**
				Total	**Total $**
	Marina work				
1	14" diam by 80 foot long steel pipe piles	8	ea	15,000.00	120,000
2	High performance finger pier, 385' L x 10' W	3,850	sf	100.00	385,000
3	Repair connection to Pier	1	ea	50,000.00	50,000
4	Cleats for temporary mooring berth	25	ea	500.00	12,500
5					
6	----------	----------	----------	----------	----------
7	Subtotal				567,500
	Add Markup			0.35	201,000
	Total Construction Cost				768,500

Apron Cost Estimate Updated for Revised Apron Layouts

DEMO

	Option 1	Option 2	Option 1 Hist	Unit Cost	Option 1 Total	Option 2 Total	Option 1 Hist Total	No Parking Option	Unit Cost	No Parking Total
Remove Apron Extension	6075	1524	12913	$15.00	$91,125.00	$22,860.00	$193,695.00	0	$15.00	$0.00
Remove 4x12 decking	3036	3036	3036	$5.00	$15,180.00	$15,180.00	$15,180.00	2494	$5.00	$12,470.00
Remove 4x12 joists	607	607	607	$4.50	$2,731.50	$2,731.50	$2,731.50	500	$4.50	$2,250.00
Remove 12x12 bent cap	52	52	52	$25.00	$1,300.00	$1,300.00	$1,300.00	36	$25.00	$900.00
Remove apron railing	366	366	366	$10.00	$3,660.00	$3,660.00	$3,660.00	247	$10.00	$2,470.00
Remove (E) trailer structure	3	3	3	$10,000.00	$30,000.00	$30,000.00	$30,000.00	3	$10,000.00	$30,000.00
Misc Demo	1	1	1	$8,000.00	$8,000.00	$8,000.00	$8,000.00	1	$8,000.00	$8,000.00
					$151,996.50	$83,731.50	$254,566.50			$56,090.00

INSTALL

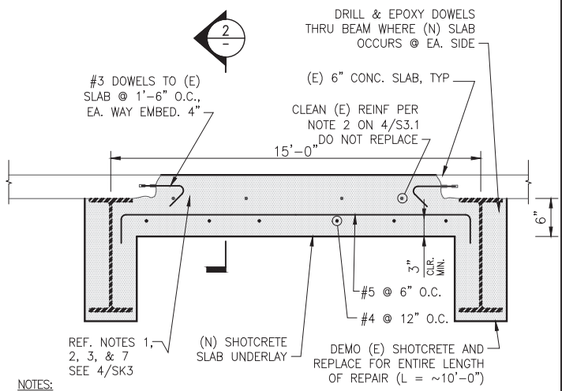
	Option 1	Option 2	Option 1 Hist	Unit Cost	Option 1 Total	Option 2 Total	Option 1 Hist Total	No Parking Option	Unit Cost	No Parking Total
Asphalt topping	8145	7445	9860	$6.00	$48,870.00	$44,670.00	$59,160.00	5470	$6.00	$32,820.00
4x12 decking	3992	3287	5707	$12.00	$47,904.00	$39,444.00	$68,484.00	3089	$12.00	$37,068.00
4x12 joists	1563	858	3278	$10.00	$15,630.00	$8,580.00	$32,780.00	625	$10.00	$6,250.00
12x12 cap beam	137	77	272	$40.00	$5,480.00	$3,080.00	$10,880.00	36	$40.00	$1,440.00
14" diameter pile	20	8	47	$18,000.00	$360,000.00	$144,000.00	$846,000.00	3	$18,000.00	$54,000.00
SS Bent Cap Bracket	17	5	36	$8,000.00	$136,000.00	$40,000.00	$288,000.00	0	$8,000.00	$0.00
Post Installed SS anchor	34	10	72	$150.00	$5,100.00	$1,500.00	$10,800.00	0	$150.00	$0.00
wood railing	870	512	1467	$65.00	$56,550.00	$33,280.00	$95,355.00	285	$65.00	$18,525.00
concrete ramp	177	177	177	$50.00	$8,850.00	$8,850.00	$8,850.00	177	$50.00	$8,850.00
ramp guardrail	40	40	40	$200.00	$8,000.00	$8,000.00	$8,000.00	40	$200.00	$8,000.00
repave sidewalk	102	102	102	$5.00	$510.00	$510.00	$510.00	102	$5.00	$510.00
					$692,894.00	$331,914.00	$1,428,819.00			$167,463.00

Demo + Install	**$844,890.50**	**$415,645.50**	**$1,683,385.50**	**$223,553.00**

Appendix B – Structural Schematics

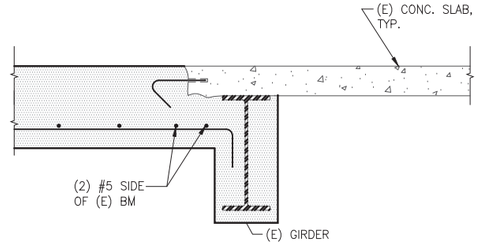
NOT FOR CONSTRUCTION

Creegan+D'Angelo INFRASTRUCTURE ENGINEERS
170 Columbus Ave., Suite 240
San Francisco, CA 94133
Tel (415) 834-2010
Fax (415) 834-2011
www.cdengineers.com



NOTES:
A. SHORE AS REQ'D
B. (E) REINF NOT SHOWN FOR CLARITY
C. SEE PLAN FOR LOCATIONS OF REPAIRS

CRITICAL SHOTCRETE SLAB REPAIR 1
3/4"=1'-0"
shotcrete slab at beam



NOTES:
(E) REBAR NOT SHOWN FOR CLARITY

CRITICAL SHOTCRETE SLAB REPAIR 2
NTS
shotcrete slab strengthening

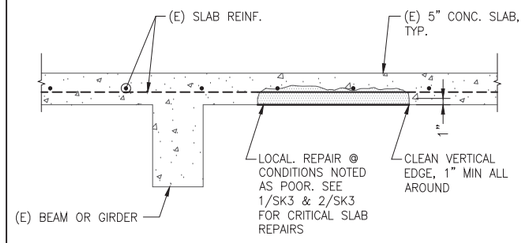
TYPICAL REPAIR METHODOLOGY

1. REMOVE ALL UNSOUND CONCRETE WITH A BUSH HAMMER.
2. CLEAN EXPOSED CORRODED REBAR W/ ABRASIVE BLASTING, WIRE WHEEL OR GRINDING. REPLACE REBAR AS REQ'D.
3. TREAT EXPOSED CORE CONCRETE W/ SIKA ARMATEC 110, TYFO CIS OR EQUAL.
4. PATCH SPALLED AND AREAS OF REMOVED CONCRETE WITH:
   - SIKACRETE 211 (FORMED & POURED); OR
   - SIKA 223 (HAND APPLIED); OR
   - SIKACEM 103F (SPRAY APPLIED); OR EQUAL.
5. EPOXY INJECT CRACKS WITH:
   - < 1/8" WIDE: SIKADUR 35;
   - > 1/8" WIDE: SIKADUR 35 OR SIKADUR INJECTION GEL; OR EQUAL.
6. SEAL FINISHED CONCRETE SURFACE W/ SIKAGUARD 62 OR EQUAL.
7. PROVIDE PASSIVE CORROSION PROTECTION WITH SENTINEL GL BY EUCLID OR WITH GALVASHIELD XP BY SIKA @ 1'-6" OC FOR SLAB, AT EA. END & EA. FACE OF EA. REPAIRED PILE, SLAB, BEAM, GIRDER AND STRUT.

SHEET NOTES 3
1/2"=1'-0"
typical pile repair

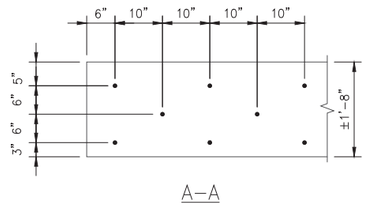
REPAIR METHODOLOGY FOR LOCALIZED SLAB REPAIR

1. REMOVE ALL UNSOUND CONCRETE WITH A BUSH HAMMER.
2. PROVIDE 1" MINIMUM CLEAN VERTICAL EDGE ALL AROUND REPAIR AREA
3. CLEAN EXPOSED CORRODED REBAR W/ ABRASIVE BLASTING, WIRE WHEEL OR GRINDING.
4. TREAT EXPOSED CORE CONCRETE W/ SIKA ARMATEC 110, TYFO CIS OR EQUAL.
5. PATCH SPALLED AND AREAS OF REMOVED CONCRETE WITH:
   - SIKACRETE 211 (FORMED & POURED); OR
   - SIKA 223 (HAND APPLIED); OR
   - SIKACEM 103F (SPRAY APPLIED); OR EQUAL.
6. SEAL FINISHED CONCRETE SURFACE W/ SIKAGUARD 62 OR EQUAL.
7. PROVIDE PASSIVE CORROSION PROTECTION WITH SENTINEL GL BY EUCLID OR WITH GALVASHIELD XP BY SIKA @ 1'-6" OC FOR AROUND OPENING.

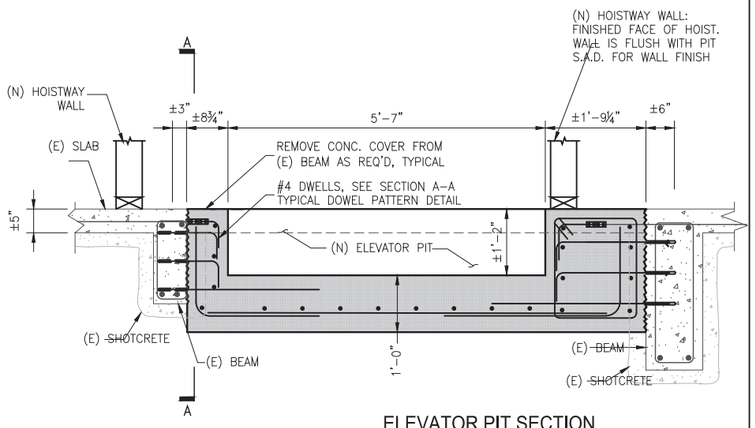


NOTES:
(E) REBAR IN BEAM/GIRDER NOT SHOWN FOR CLARITY

LOCALIZED SLAB REPAIR 4
NTS
localized slab strengthening

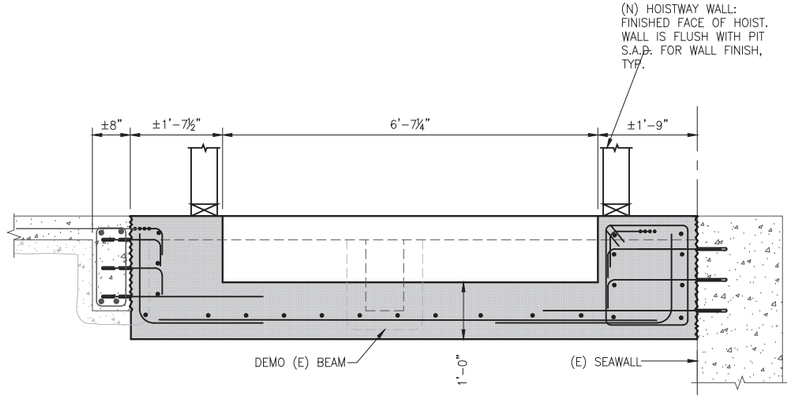


A–A
TYPICAL DOWEL STAGGER PATTERN IN (E) BEAM



ELEVATOR PIT SECTION
3/4"=1'-0"
PIT SECTION_REV 4

6



ELEVATOR PIT SECTION
3/4"=1'-0"
PIT SECTION_DET 8

8

NO.	DATE	DESCRIPTION	BY	APP.

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SAN FRANCISCO PORT COMMISSION
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CHIEF HARBOR ENGINEER

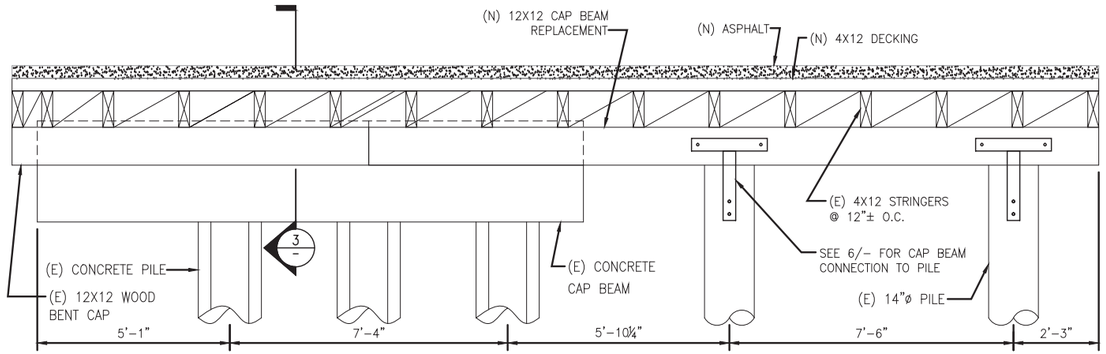
SCALE: AS NOTED
SHEET OF SHEETS: 5 OF 10

PIER 38
CODE COMPLIANCE

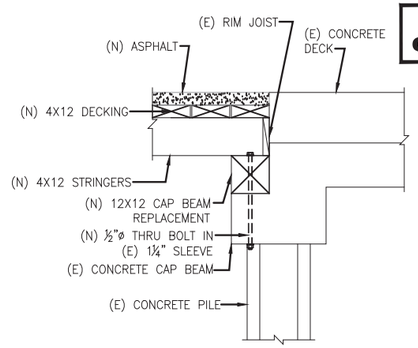
SUBSTRUCTURE REPAIR DETAILS

CONTRACT NO.	–
DRAWING NO.	SK3
FILE NO.	–
REV. NO.	–

VIEW: PLOT1



BENT CAP REPAIR 2
1/2"=1'–0"
E BENT CAP REPAIR



CAP BEAM REPLACEMENT SECTION 3
1/2"=1'–0"
X_BENT CAP REPAIR SECTION

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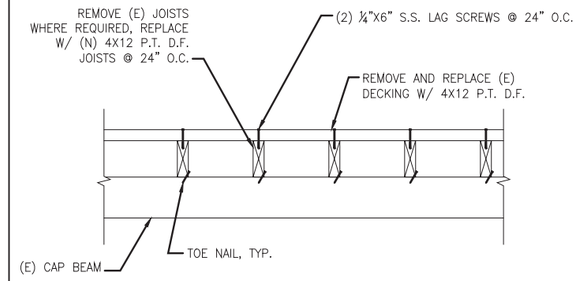
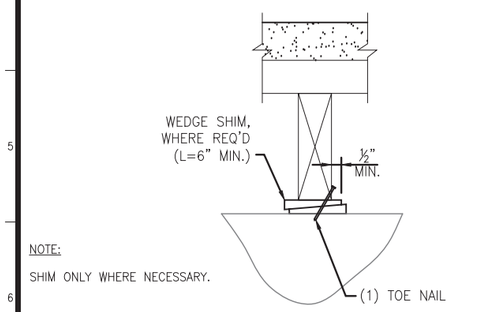
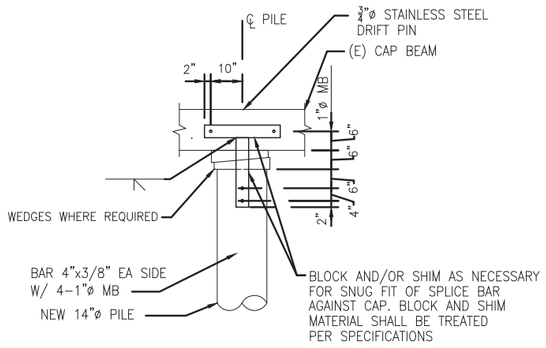


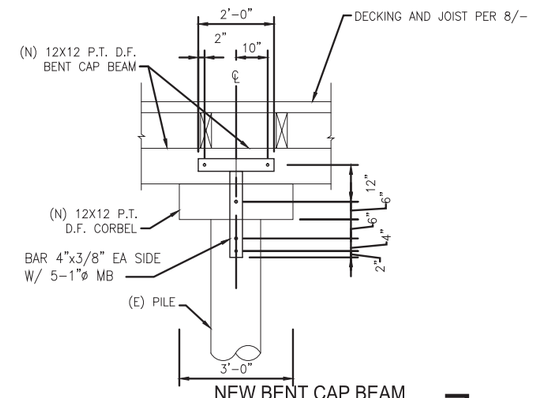
JOIST & DECKING REPLACEMENT 4
1/2"=1'–0"
JOIST & DECK REPLACEMENT



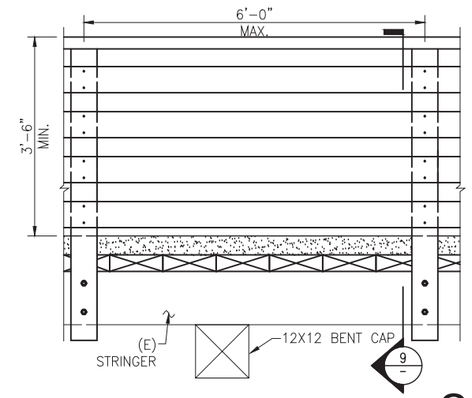
TYPICAL SHIM DETAIL 5
1–1/2"=1'–0"
SHIM DETAIL



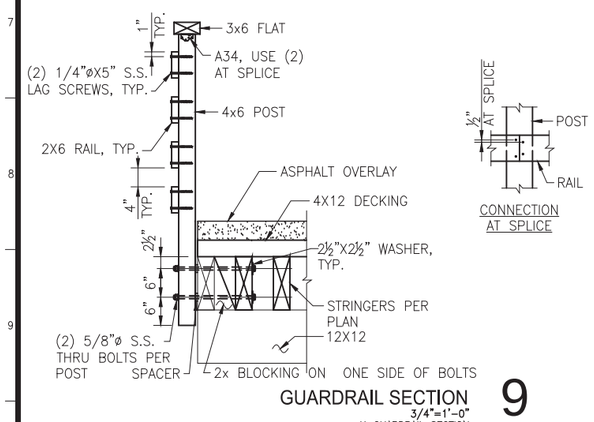
NEW PILE - CAP BEAM CONNECTION 6
1/2"=1'–0"
PILE CAP BEAM CONNECTION



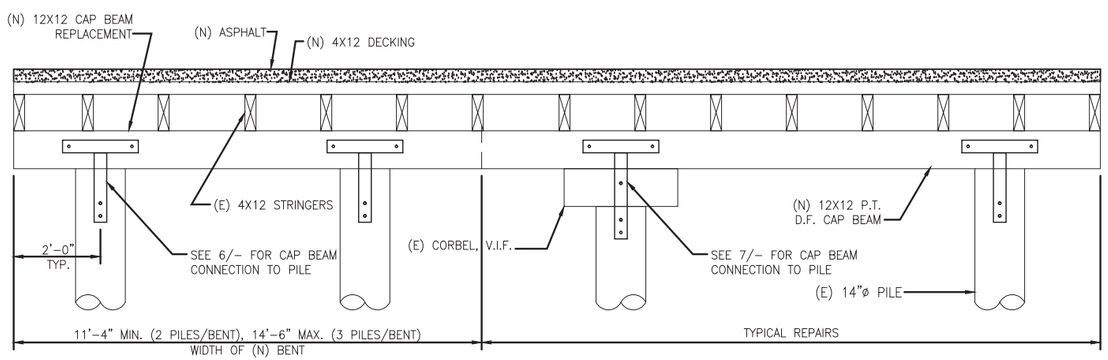
NEW BENT CAP BEAM AT CORBEL 7
1/2"=1'–0"
BEAM AT CORBEL



GUARDRAIL DETAIL 8
3/4"=1'–0"
X_GUARDRAIL DETAIL



GUARDRAIL SECTION 9
3/4"=1'–0"
X_GUARDRAIL SECTION



NEW BENT CAP 11
1/2"=1'–0"
NEW BENT CAP BEAM

NO.	DATE	DESCRIPTION	BY	APP.

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DEPARTMENT OF ENGINEERING

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APPROVED BY SAN FRANCISCO PORT COMMISSION
DATE: _____
_____ CHIEF HARBOR ENGINEER

SCALE: AS NOTED
SHEET OF SHEETS 6 OF 10

PIER 38
CODE COMPLIANCE

SUBSTRUCTURE REPAIR DETAILS

CONTRACT NO. –
DRAWING NO. SK4
FILE NO. –
REV. NO. –

VIEW: PLOT1

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San Francisco, CA 94133
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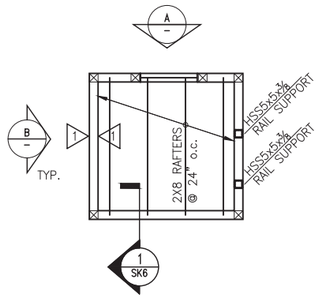
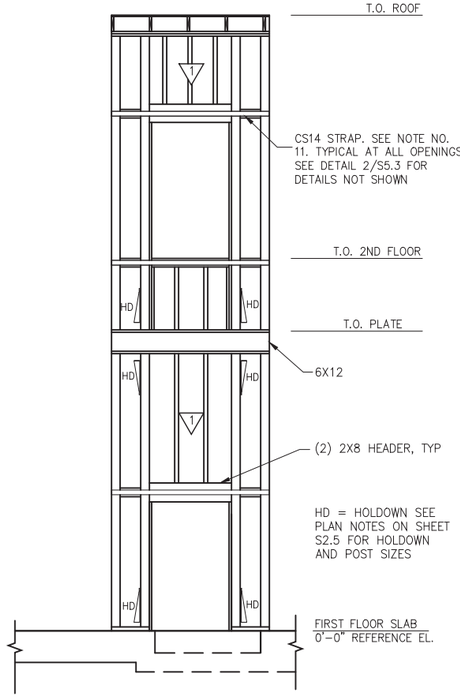
1 SHEARWALL: ½" APA-RATED OSB STRUCTURAL SHEATHING EA. SIDE ON ALL WALLS OF ELEV. HOISTWAY. SEE DETAILS AND SCHEDULE ON SHEET S5.3



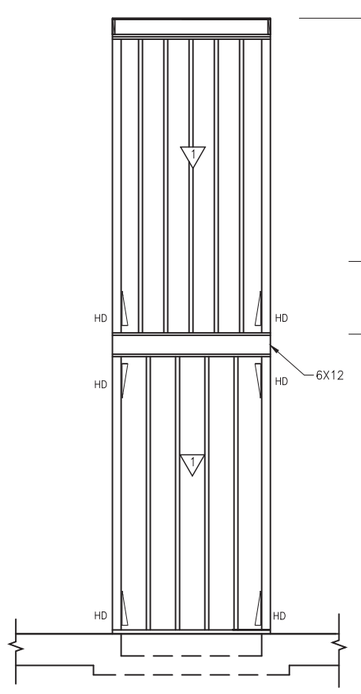
HOISTWAY ROOF FRAMING PLAN
1/4"=1'-0"

1



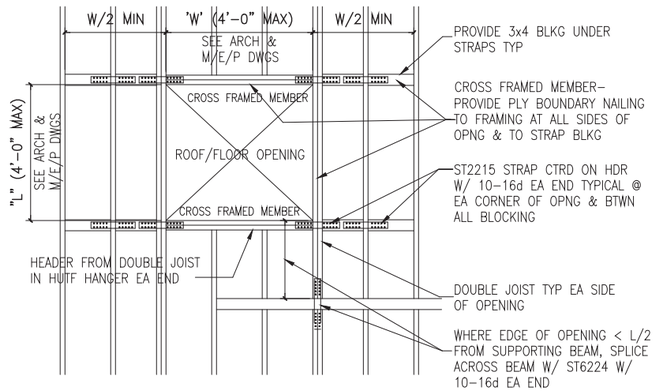
HOISTWAY FRAMING ELEVATION
1/4"=1'-0"

A



HOISTWAY FRAMING ELEVATION
1/4"=1'-0"

B



4 TYP ROOF/FLOOR OPENING DETAIL

WOOD FRAMING NOTES

1. 1 DENOTES ½"APA-RATED OSB STRUCTURAL I SHEATHING. PLYWOOD EXTENDS FULL HEIGHT OF THE WALL. SEE DETAILS AND SCHEDULES ON S5.4
2. FLOOR TO FLOOR HOLDOWN TIES ARE REQUIRED AT EACH END OF SHEAR WALL AND AT LOCATIONS NOTED THUS: HD ALL HOLDOWNS TO BE ON 6x6 POST U.N.O.. SEE DETAILS ON SHEET S5.2.
3. SEE TYPICAL WOOD DETAILS ON SHEETS S5.2 AND S5.3.
4. PROVIDE PANEL EDGE NAILING AT ALL POSTS AT HOLDOWN LOCATIONS
5. SEE ARCH. DWGS. FOR EXACT LOCATION OF WINDOWS AND DOORS.
6. ALL NEW WOOD FRAMED BEARING WALLS ARE 2x6 @ 16" O.C. TYP. U.N.O. USE 3x6 STUDS AT SHEAR WALLS
7. ROOF SHEATHING IS 5/8" CDX PLYWOOD w/ 10d NAILS AT 4" o.c., PROVIDE BLOCKING.
8. WHERE NOTED ON PLAN, REINFORCE OPENINGS IN SHEAR WALLS WITH METAL STRAPS. SEE DETAIL 4

NO.	DATE	DESCRIPTION	BY	APP.

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APPROVED BY SAN FRANCISCO PORT COMMISSION
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CHIEF HARBOR ENGINEER

SCALE: AS NOTED
SHEET OF SHEETS: 7 OF 10

PIER 38
CODE COMPLIANCE

ELEVATOR FRAMING

CONTRACT NO. –
DRAWING NO. SK5
FILE NO. –
REV. NO. –

VIEW: PLOT1

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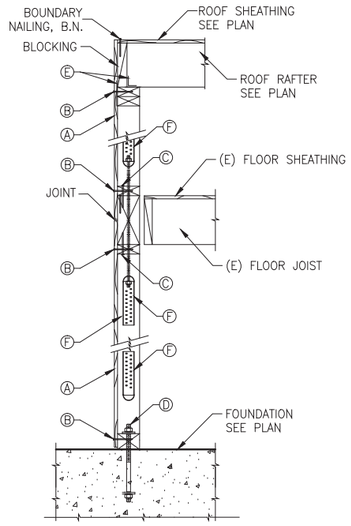
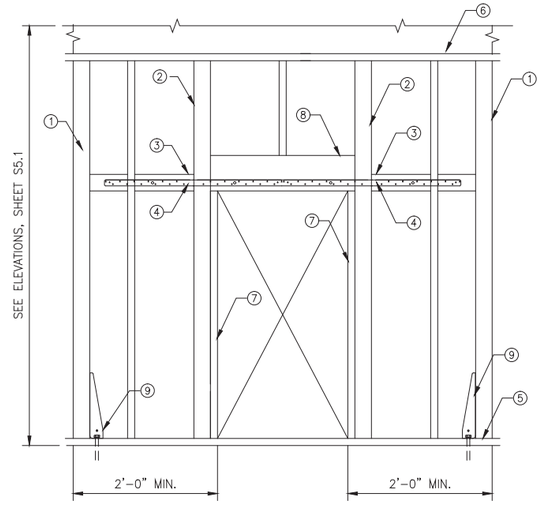


SHEARWALL SCHEDULE

MARK	SHEATHING Ⓐ	EDGE NAILING (E.N.) [1,2,3] Ⓑ	ALL STUDS & BLOCKING AT ABUTTING PANEL EDGES [3]	SILL PLATE [5,6]	BOTTOM PLATE ATTACHMENT [5,6]		SHEAR TRANSFER/ FRAMING ANCHORS Ⓔ	HOLDOWN ANCHOR Ⓕ	ALLOWABLE CAPACITY
					SHEAR NAILING (S.N.) TO WOOD Ⓒ	ANCHOR BOLTING TO CONCRETE Ⓓ			
1	15/32" APA RATED OSB STRUCTURAL I SHEATHING EACH SIDE [1]	10d @ 4"o.c.	3x	3x	16d @ 4"o.c.	¾"ø @ 32"o.c.	A35 or LTP5 @ 16" o.c.	PER PLAN	600 PLF

1. FOR DOUBLE-SIDED WALLS, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
2. BLOCK ALL PANEL EDGES.
3. NAILING SHALL BE STAGGERED AT ABUTTING PANEL EDGES AND SILL PLATE WHEN NAIL SPACING IS LESS THAN 6" o.c.
4. FIELD NAILING AT INTERMEDIATE FRAMING MEMBERS SHALL BE 10d @ 12" o.c. (F.N.)
5. BOTTOM PLATE SHALL BE 3x PRESSURE PRESERVATIVE TREATED ON CONCRETE OR MASONRY. PROVIDE ¼"x3"x3" PLATE WASHERS.
6. FASTENERS AND HARDWARE IN CONCTACT WITH CONCRETE AND/OR TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.

SHEARWALL SCHEDULE 1
3/4"=1'-0"
CADD FILE



① 6X POST, EDGE NAILING PER SHEAR WALL SCHEDULE
② 6X POST, w/ EDGE NAILING PER SHEAR WALL SCHEDULE
③ 4X BLOCKING, w/ EDGE NAILING PER SHEAR WALL SCHEDULE
④ 1½"X14 GA FULL LENGTH STRAP w/ 10d NAILS @ 3½" o.c. PLACED OVER PLYWOOD SHEATHING (CS14 OR EQUAL)
⑤ 3X SILL PLATE PER SHEAR WALL SCHEDULE
⑥ 2X TOP PLATE
⑦ 2X TRIMMER
⑧ HEADER
⑨ HOLD DOWN PER PLAN

PERFORATED SHEARWALL DETAIL 2
3/4"=1'-0"
CADD FILE

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PIER 38
CODE COMPLIANCE

WOOD FRAME DETAILS

CONTRACT NO. –
DRAWING NO. SK6
FILE NO. –
REV. NO. –

VIEW: PLOT1

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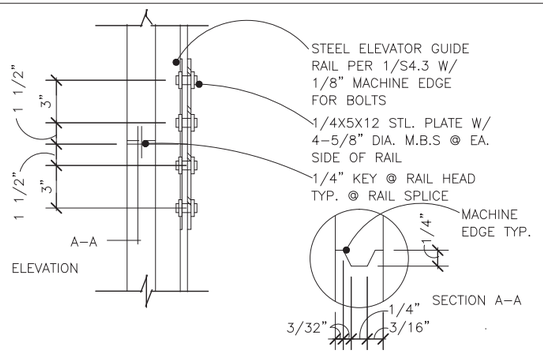
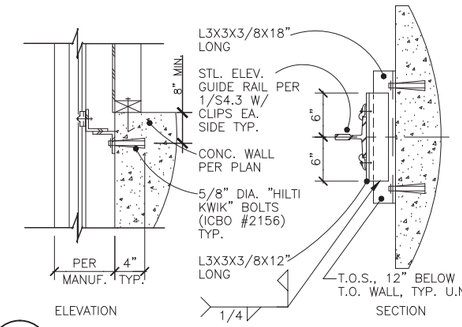
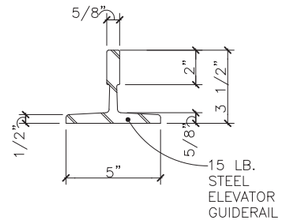


7 / SK7 ELEV. RAIL SPLICE [LOCATE 5'-2" ABOVE 2ND FLOOR]
NO SCALE

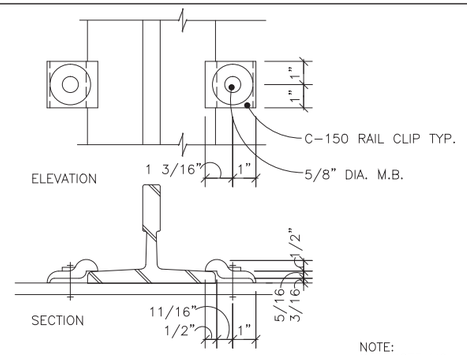


4 / SK7 ELEV. RAIL SUPPORT AT CONCRETE WALL
NO SCALE



NOTE NO. 1:
MANUFACTURER TO SUBMIT STRUCTURAL CALCS FOR ELEVATOR GUIDERAIL SECTION, CONNECTIONS AND SPLICES. SIZES INDICATED ARE A MINIMUM UNLESS LARGER SIZE IS REQUIRED BY MANUFACTURER.

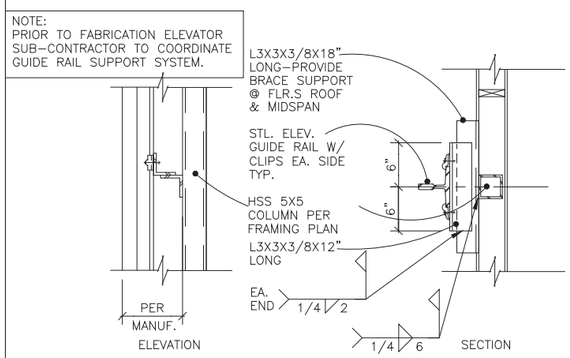
1 / SK7 15 LB ELEVATOR GUIDE RAIL
SC: NONE



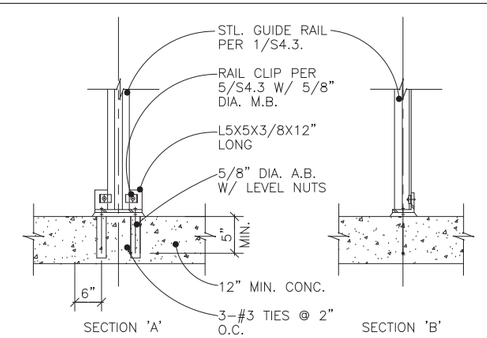
NOTE:
SEE NOTE NO. 1 ON DETAIL 1/S4.3

5 / SK7 ELEV. RAIL CLIP DETAIL
NO SCALE

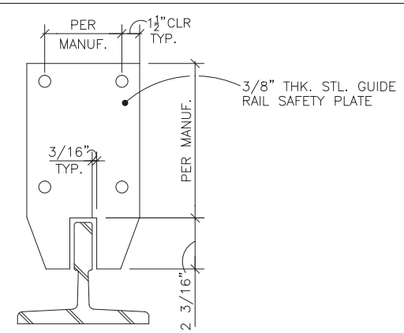
NOTE:
PRIOR TO FABRICATION ELEVATOR SUB-CONTRACTOR TO COORDINATE GUIDE RAIL SUPPORT SYSTEM.



2 / SK7 ELEV. RAIL SUPPORT AT WOOD FRAMED WALL
NO SCALE



6 / SK7 TYP. ELEV. RAIL BASE
NO SCALE



3 / SK7 ELEV. SAFTEY GUIDE PLATE
NO SCALE

NO.	DATE	DESCRIPTION	BY	APP.

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CHIEF HARBOR ENGINEER

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PIER 38
CODE COMPLIANCE

ELEVATOR DETAILS

CONTRACT NO. _
DRAWING NO. SK7
FILE NO. _
REV. NO. _

VIEW: PLOT1

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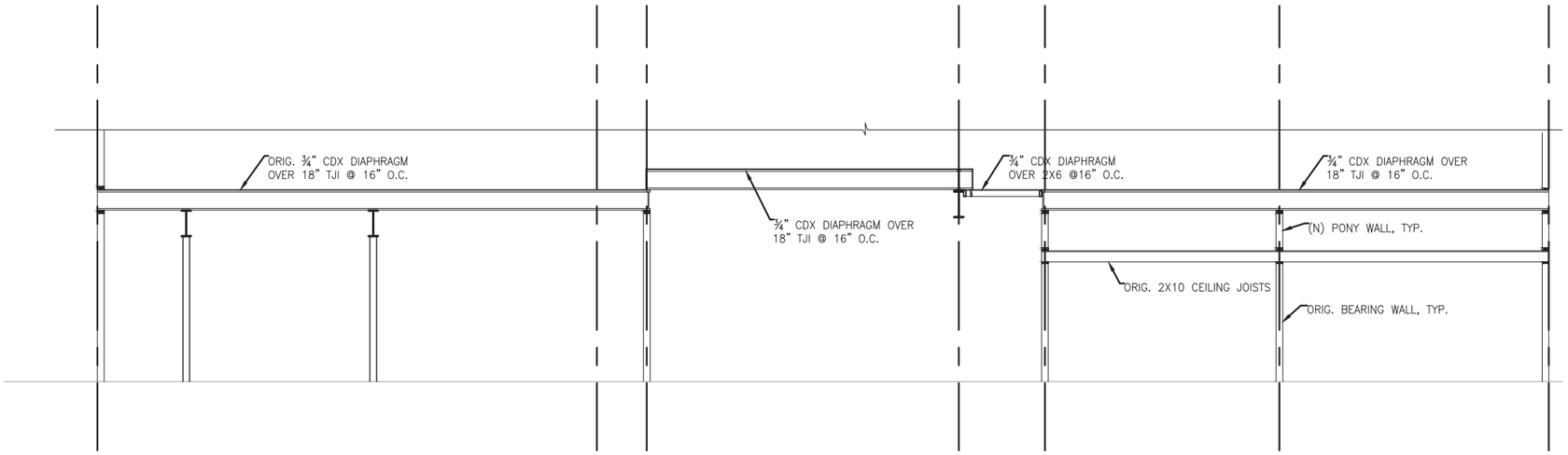

EXISTING SECTION 1
3/16"=1'-0"

NO.	DATE	DESCRIPTION	BY	APP.

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_____ CHIEF HARBOR ENGINEER

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SHEET OF SHEETS 10 OF 10

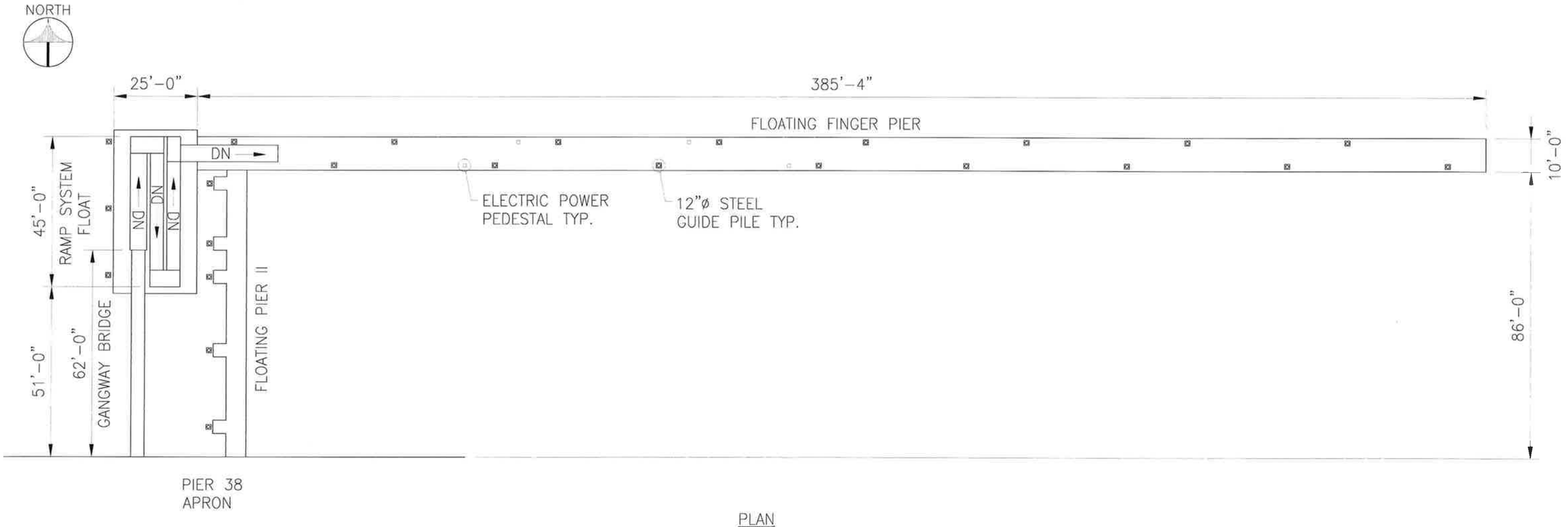
PIER 38
CODE COMPLIANCE

SECTION

CONTRACT NO. –
DRAWING NO. SK8
FILE NO. –
REV. NO. –

VIEW: PLOT1

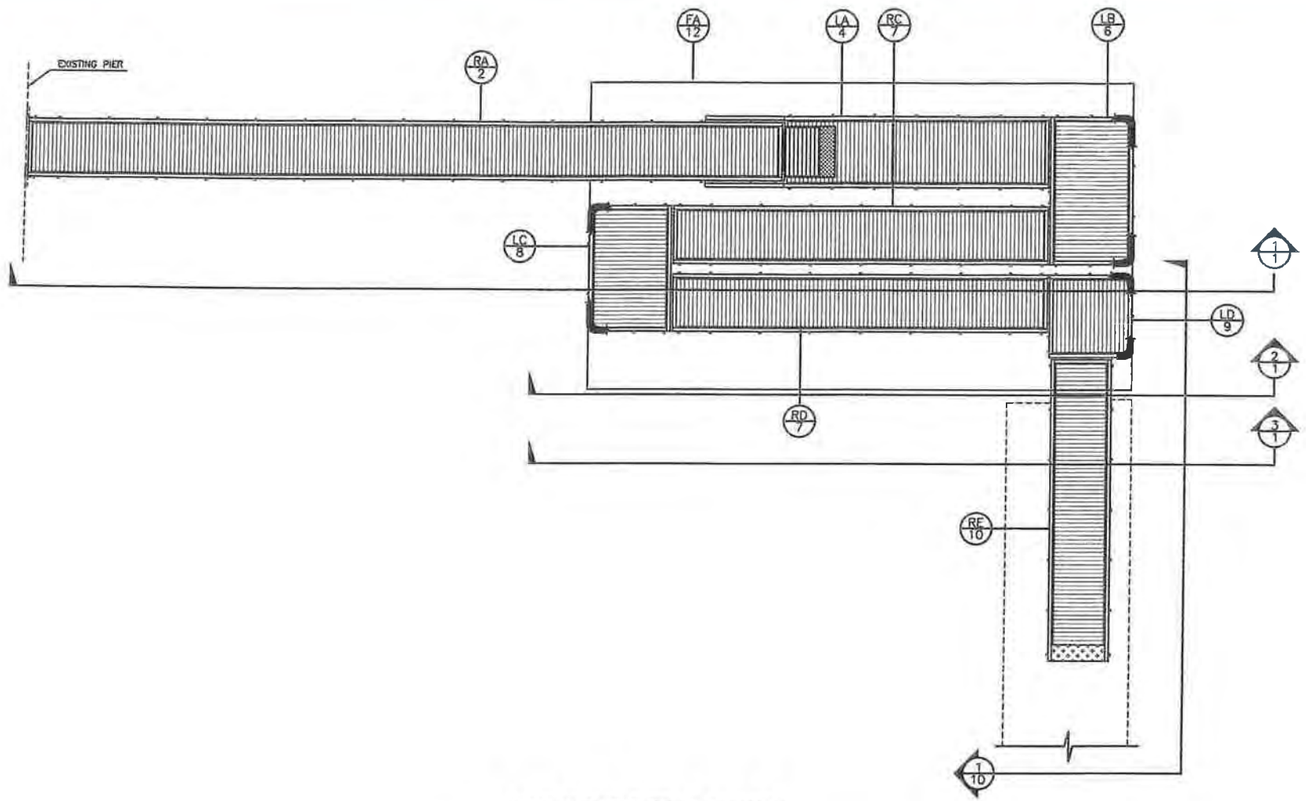
Appendix C - Marine



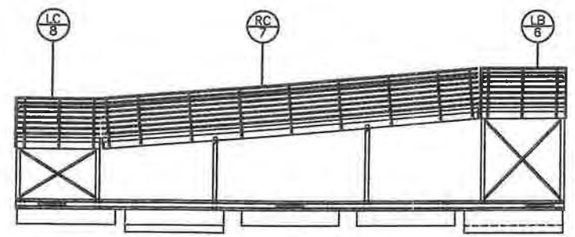
PLAN
1"=30'

PIER 38
MARINE STRUCTURES

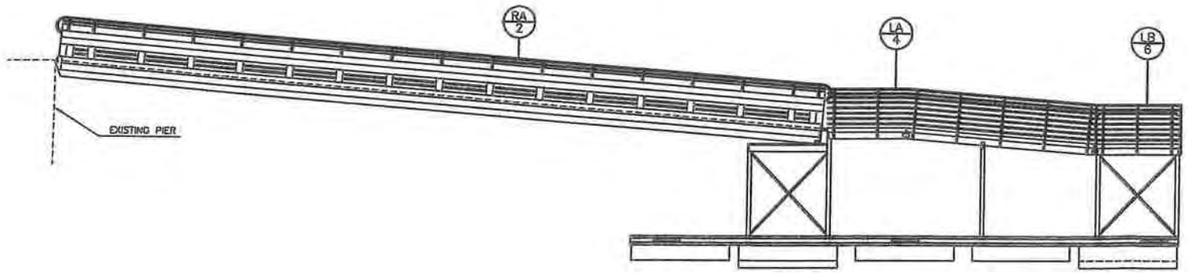
No.	Revision
1	12 AUG 97 RKL
2	03 SEP 97 RKL
3	01 OCT 97 RKL
4	12 FEB 98 RKL



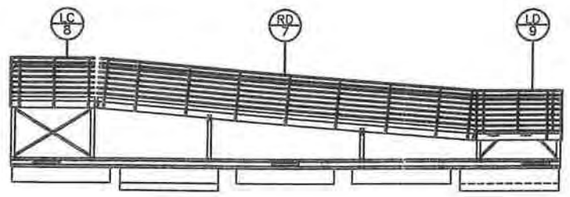
ALUMINUM RAMP SYSTEM – PLAN VIEW
SCALE: 3/16" = 1'-0"



SECTION VIEW 2/1
SCALE: 3/16" = 1'-0"



SECTION VIEW 1/1
SCALE: 3/16" = 1'-0"



SECTION VIEW 3/1
SCALE: 3/16" = 1'-0"

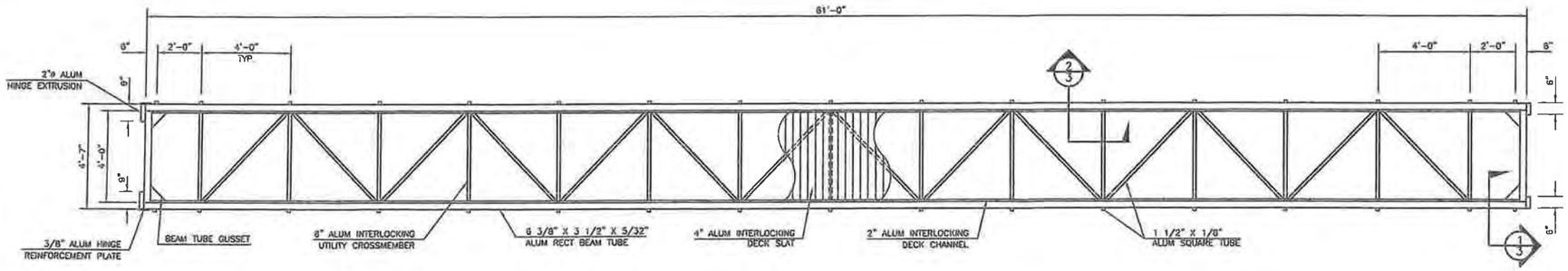
HALLSTEN
CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

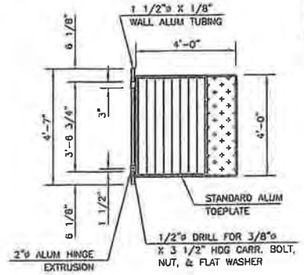
RAMP SYSTEM LAYOUT

PIER 38
ALUMINUM GANGWAY AND RAMP SYSTEM
SAN FRANCISCO, CA

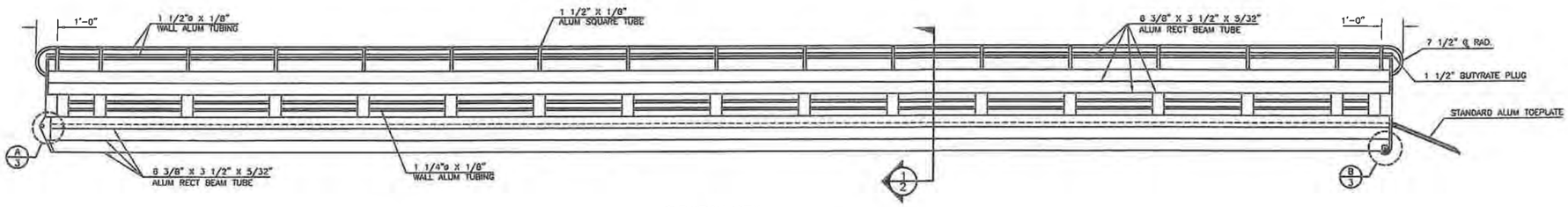
Date:	21 JUL 97
Scale:	AS NOTED
Designed by:	J. HALLSTEN
Drawn by:	R. LAU
Sheet:	1 of 13
Dwg. No.:	8495

No.	Revision
1	01 OCT 97 RKL
2	13 FEB 98 RKL

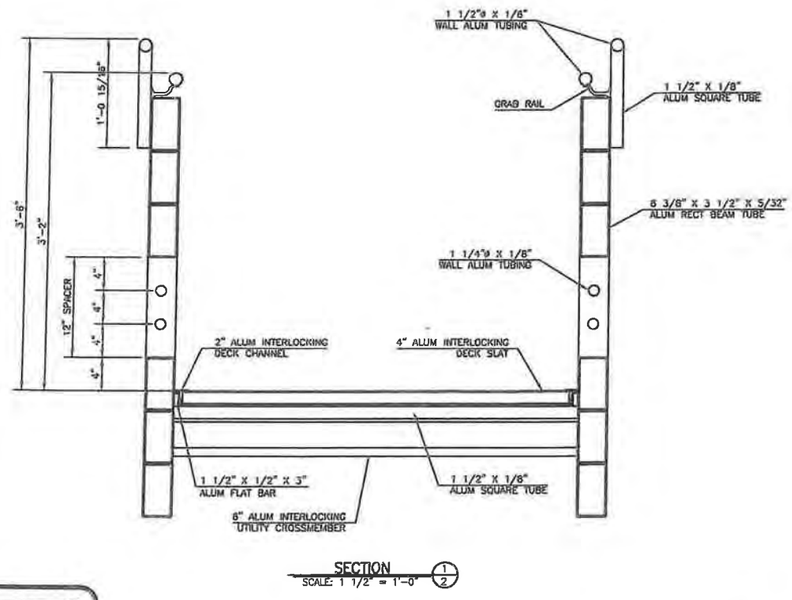




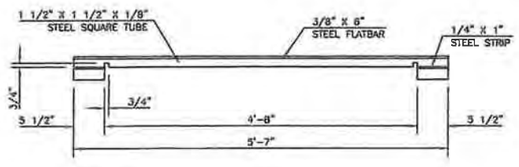
4'-0" X 61'-0" ALUMINUM GANGWAY-PLAN VIEW
SCALE: 3/8" = 1'-0"
MAKE (1) ONE



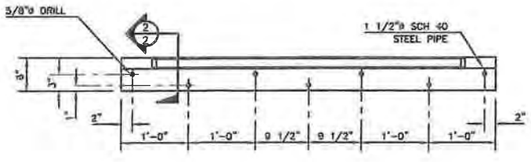
ELEVATION VIEW
SCALE: 3/8" = 1'-0"



SECTION
SCALE: 1 1/2" = 1'-0"
1/2

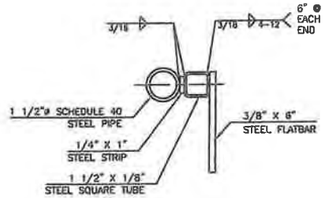


TOP VIEW



FRONT VIEW

ON-SHORE HINGE ASSEMBLY
SCALE: 1" = 1'-0"
MAKE (1) ONE



SECTION
SCALE: 3" = 1'-0"
2/2

NOTE:
PROVIDE 2" OF BEAM SEAM WELD PER FOOT OF BEAM LENGTH

NOTE:
1) TOP OF ALUMINUM DECKING IS RIBBED AND SANDBLASTED TO A COMMERCIAL FINISH FOR A NON-SKID SURFACE.
2) ALL STEEL PARTS TO BE HOT-DIP GALVANIZED AFTER FABRICATION.

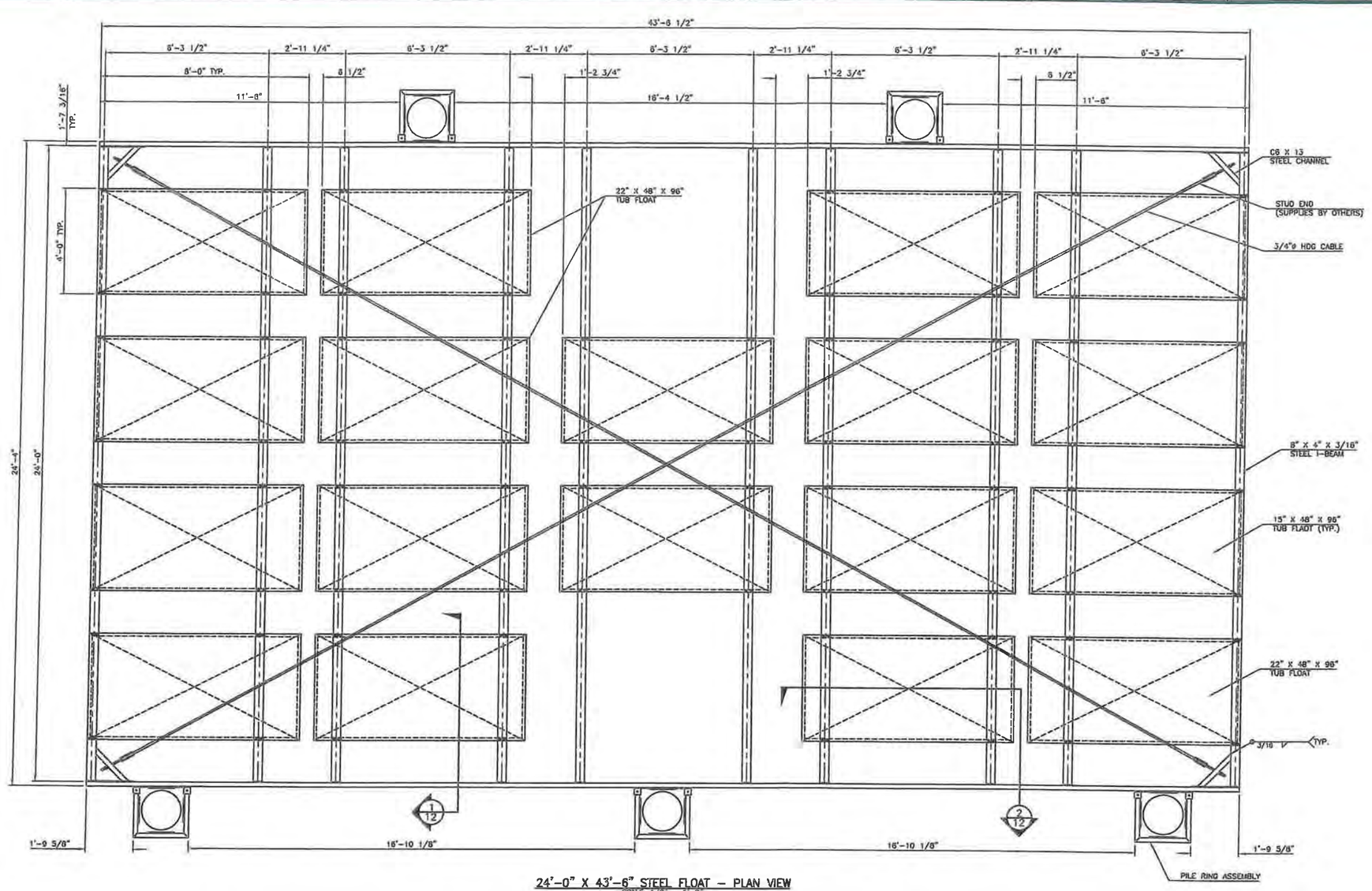
HALLSTEN CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

4'-0" X 61'-0" ALUMINUM GANGWAY

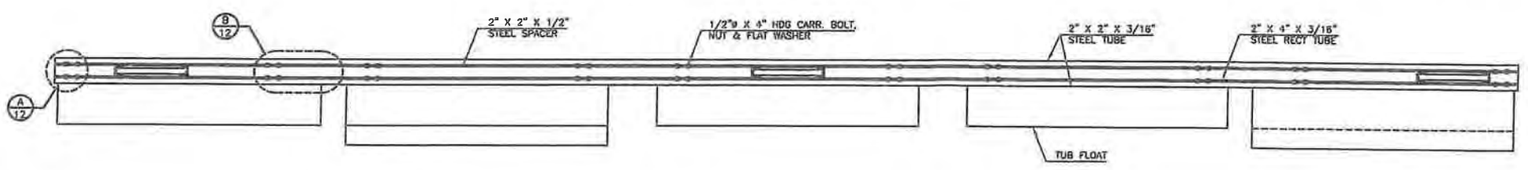
PIER 38
ALUMINUM GANGWAY AND RAMP SYSTEM
SAN FRANCISCO, CA

Date:	21 JUL 97
Scale:	AS NOTED
Designed by:	J. HALLSTEN
Drawn by:	R. LAU
Sheet:	2 of 13
Dwg. No.:	8495

No.	Revision



24'-0" X 43'-6" STEEL FLOAT - PLAN VIEW
SCALE: 1/2" = 1'-0"
MAKE (1) ONE



ELEVATION VIEW
SCALE: 1/2" = 1'-0"

NOTE:
1) ALL STEEL PARTS TO BE HOT-DIP GALVANIZED AFTER FABRICATION.

HALLSTEN CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

24'-0" X 43'-6" STEEL FLOAT

PIER 38
ALUMINUM GANGWAY AND RAMP SYSYEM
SAN FRANCISCO, CA

Date:	10 FEB 98
Scale:	AS NOTED
Designed by:	P. BISHOP
Drawn by:	R. LAU
Sheet:	11 of 13
Dwg. No.:	8495

05-Ramp to Finger Pier

05A-Moored Ship

05B-Damaged Power Pedestal

06-Large Ship Mooring

01-Gangway Bridge & Ramp System Float

02-Gangway Bridge

03-Ramp & Gangway Bridge

04-Access Ramp & Finger Pier

07-Finger Pier

08-Steel Guide Pile

09-Electric Power Pedestal

10-Floating Pier II

11-Finger Pier II

MEMORANDUM

September 6, 2012

TO: MEMBERS, PORT COMMISSION
Hon. Doreen Woo Ho, President
Hon. Kimberly Brandon, Vice President
Hon. Willie Adams
Hon. Leslie Katz

FROM: Monique Moyer
Executive Director

SUBJECT: Informational presentation on the Request for Proposals (RFP) for a Master Tenant Opportunity at Pier 38 (located at Delancey Street and The Embarcadero)

DIRECTOR'S RECOMMENDATION: Informational Only – No Action Required

SUMMARY

Port staff proposes that the reuse of Pier 38 be subject to a competitive selection process soliciting a development entity to perform needed health and safety upgrades and lease the upgraded portions of the facility. Because Port staff is still assessing the long-term disposition of Pier 38, respondents should also be screened for their capabilities and qualifications to undertake the long-term redevelopment of Pier 38. After seeking Port Commission approval, Port staff proposes to issue the Request for Proposals (RFP) in October 2012.

BACKGROUND

On August 1, 2011, the Port took possession of Pier 38 from the Pier 38 Maritime Recreation Center and Carl Ernst. On September 2, 2011, the Port's Chief Harbor Engineer declared Pier 38 Shed, office spaces and the north apron dock area unsuitable for any occupancy due to existing health and safety violations. Occupants were asked to vacate the premises on September 30, 2011. By October 20, 2011, all occupants housed in the Pier 38 bulkhead building and pier shed were vacated. However, three vessels remain moored at Pier 38, despite the Port's safety concerns.

Since that time, Mr. Ernst has filed an appeal to the Port's repossession of Pier 38. The resolution to this appeal is still pending. A more complete background of the closure and repossession of Pier 38 is detailed in the Port's staff report of October 20, 2011.[1]

In May 1997, the California Department of Boating and Waterways ("DBW") loaned $1.465 million to Pier 38 Maritime Recreation Center to make improvements to Pier 38. As part of the loan agreement the Port entered into a Consent to Hypothecation of Lease and Agreement ("Hypothecation Agreement") with DBW – allowing DBW certain rights to assume the lease and operate Pier 38 or assign the lease (with the Port's consent) to a third party to operate Pier 38 and continue to make payments to repay the loan. Though the loan and the Hypothecation Agreement remain outstanding DBW has taken no actions to assume the lease. Port staff will continue to work with representatives of DBW to resolve their rights under the Hypothecation Agreement.

On October 25, 2011, Port staff recommended next steps, one of which was the retention of Creegan & D'Angelo to perform a detailed investigation of the then existing conditions of the pier, develop options for future use of the facility, and preliminary cost estimates for each of the options. These investigations included demolition of selected walls and flooring to expose hidden electrical, plumbing and structural installations to determine whether prior construction methods were done properly and conformed to Building Code requirements.

At the January 13, 2012 Port Commission meeting, staff presented an informational update regarding an engineering study that was performed. In coordination with Port staff, Creegan & D'Angelo established the maximum occupant load allowed for each option based upon not triggering a seismic upgrade, by determining the occupant load for office areas in the bulkhead structure and establishing how much parking could be included within the shed. A seismic pier upgrade was not considered as an option due to its high cost. Creegan & D'Angelo findings regarding these options including their cost estimates for bulkhead structure re-occupancy and limited pier shed improvements are outlined in the Port's staff report of January 13, 2012[2].

In addition, Creegan & D'Angelo developed two options for the marina portion of Pier 38. Since the existing marina float was not designed for wave exposure and its current condition is very poor, Creegan & D'Angelo recommended that either the marina floats be demolished for $338,704 or demolish the floats and replace them with a temporary berthing float for small vessels for a cost of $768,858.

In the October 20, 2011 staff report, staff also identified four long-term reuse strategies for Pier 38:

1. Port "Public Works" Project: Port funds all or a portion of the necessary improvements and the Port's real estate staff could lease the pier to individual tenants, similar to Pier 9, Pier 50 and the majority of the Port's leasable assets.

[1] http://www.sfport.com/modules/showdocument.aspx?documentid=2403

[2] http://www.sfport.com/modules/showdocument.aspx?documentid=3231

2. Master Tenant Project: Through a competitive selection process, the Port selects a private entity who would fund all or a portion of the repairs for occupancy of the bulkhead structure; this entity leases to individual tenants, similar to the Piers 19-23 Foreign Trade Zone.

3. Master Developer Project: Through a competitive selection process, the Port selects a Master Developer who would fund all or a portion of the repairs; this entity would lease the entire pier structure to end-users similar to projects as Pier 1 or Piers 1 ½ -5.

4. No Project: Pier 38 remains shuttered until market conditions, legal status, and regulatory conditions make it feasible to proceed with repair/development of Pier 38.

At that time, Port staff presented these options for consideration by the Port Commission.

PORT GOALS AND OBJECTIVES

Port staff now recommends that the reuse of Pier 38 be put out to a competitive selection process soliciting a master tenant to perform needed health and safety upgrades and lease the upgraded portions of the facility. Port staff believes that this approach achieves the immediate goal to re-tenant the bulkhead building because it relies upon private capital and expertise to expedite the rehabilitation of the bulkhead building. The Port recommends that re-tenanting and subsequent development of Pier 38 proceed with a private partner.

The solicitation will seek a respondent to develop a strategy to fund improvements that will allow re-occupancy of the bulkhead structure with limited pier shed improvements. The RFP will require respondents to propose the most effective implementation strategy to re-tenant the bulkhead building in order to achieve the Port's goal of bringing the bulkhead building back into economic use and provide an on-going revenue stream to the Port.

The RFP will encourage these re-tenanting uses in the bulkhead building: 1) restaurants and visitor-serving commercial, entertainment and cultural uses, 2) office, high technology uses, and/or 3) maritime uses that complement adjacent waterfront development. These uses would continue the Port's Waterfront Land Use Plan's goal of continuing the redevelopment of the South Beach waterfront from the Bay Bridge to AT&T Ballpark, reviving this historic structure and helping knit Pier 38 into the South Beach neighborhood by bringing people and business activity to the waterfront.

Finally, this approach will require a respondent to propose a strategy to repair and re-tenant the bulkhead structure, but will qualify respondents for later consideration of the long-term reuse of the entirety or the majority of Pier 38. Long-term feasibility of the rehabilitation of the entire pier including its substructure will necessitate the funding of an expensive seismic upgrade and a lengthy entitlement process. Because Port staff is still assessing the long-term disposition of the Pier 38, it would be advantageous to

partner with an entity that has the capabilities and qualifications to undertake a long-term redevelopment of the pier. This solicitation process would evaluate the qualifications of respondents, but long-term pier redevelopment proposals would have to be considered by a subsequent Port Commission action.

Therefore, Port staff recommends a solicitation approach where the bulkhead structure repair and re-tenanting be accomplished in the short-term with a partner that has the qualifications to undertake a long-term redevelopment of the pier, if feasible. Through the solicitation process, the Port will ask respondents to propose short-term re-tenanting solutions of the bulkhead building and provide qualifications for the long-term redevelopment of the pier.

OVERVIEW OF OPPORTUNITY

If approved, the RFP would be issued in October 2012 and seek a respondent with demonstrated experience in rehabilitating, developing, and operating facilities similar to Pier 38. An ideal candidate would have experience with historic rehabilitation of waterfront structures, an ability to identify and secure target tenants, and a demonstrated ability to operate and maintain real estate facilities once completed. In addition, such a candidate should have a proven ability of working with public agencies to achieve results desired by the Port.

As noted above, a response to the RFP will include a short-term implementation strategy of the Pier 38 bulkhead structure. The RFP will evaluate respondents' qualifications to undertake the development of the remaining pier structure in the long-term.

The Port assumes that the rehabilitation of Pier 38 will be funded through private sector investment and expects that the successful candidate will fund physical improvements, and provide for on-going operating/maintenance costs as well as provide security for the pier.

The negotiated transaction of the bulkhead building between the Port and a successful respondent will be at fair market rent; the interim lease term will be 10 years. The Port may include an option to extend for an additional period to be negotiated and exercised at the Port's discretion.

SELECTION PROCESS

Port staff recommends a selection process consisting of the following steps:

1. **Request for Proposals** – Staff will prepare an RFP requiring submittal of long-term re-use qualifications, a short-term proposal to re-tenant the bulkhead building, including a financial proposal. Respondents would be required to tender an earnest money deposit that would be refundable to all respondents except the one with whom the Port enters into exclusive negotiations.

2. **Evaluation of Proposals –** Proposals will be screened for responsiveness to the RFP. Responsive proposals from qualified respondents will undergo technical evaluation. Following this review, staff would recommend the highest ranked candidate to the Port Commission. The Port Commission would select a candidate and direct staff to enter into exclusive negotiations.

3. **Approval of Transaction** - Upon completion of any required environmental review and finalization of negotiations by Port staff, the Port Commission would consider the lease and related documents. Given its term, the lease will also be subject to approval by the San Francisco Board of Supervisors.

SELECTION CRITERIA

The Port intends to select a candidate for the Pier 38 project based on the information contained in the responses to the RFP, an investigation of the entity's financial capability, past projects and performance, interviews (if Port staff elects to hold such interview) and other pertinent factors.

Evaluation of the submitted proposals will require technical real estate and planning analysis. In particular, the following criteria are identified for proposal evaluation. The evaluation weighting of these factors will be specified in the RFP.

Experience, Qualifications, and Financial Capability for Re-Tenanting of the Bulkhead Building and the Long-Term Development of Pier 38

- Experience with projects of comparable size, land use, visibility and expense, especially for projects located in the San Francisco Bay Area
- Experience of respondent's team members and key personnel
- The respondent's ability to fund the proposed project
- The respondent's overall financial track record

Proposed Development Design and Tenant Program of the Bulkhead Building

- The design and architectural quality and constructability of the proposed design concept for the bulkhead structure
- The respondent's demonstration to re-tenant the bulkhead structure with uses consistent with the Port's goals and objectives
- The reasonableness and feasibility of the respondent's proposed re-tenanting concept in achieving the Port's objectives
- The probability of obtaining approvals for the proposed design, given the physical and legal constraints on development

Proposed Financial Terms for Tenant Program of the Bulkhead Building

- The proposed annual rent for the site
- Private investment in Port property
- The term of the interim lease
- Additional revenues from all participation structures proposed

PROJECTED RFP SCHEDULE

To properly advertise the RFP opportunity and to allow interested parties sufficient time to perform reasonable due diligence and prepare detailed proposals, Staff proposes the following RFP schedule:

Port Commission authorization to issue RFP	September 25, 2012
Issue RFP	October 2012
Tentative submittal deadline	January 15, 2013
Evaluation of proposals	Early 2013
Port Commission approval of ENA with selected respondent	Spring 2013
Port Commission lease approval	Summer 2013
Board of Supervisors' lease approval	Summer 2013

This schedule is an estimate and may vary on factors beyond Port's Staff's control. Staff will update the Port Commission on the response to the RFP and schedule for evaluation.

SUMMARY

Port staff recommends that the Port Commission direct staff to return to the Commission with a resolution authorizing issuance of an RFP to rehabilitate the Pier 38 bulkhead structure and limited pier shed improvements for re-occupancy while allowing the Port, in conjunction with this entity, to consider the long-term reuse of the entirety or the majority of the pier structure. After Port Commission approval, Port staff will incorporate Port Commission input and issue the Request for Proposals (RFP) in October 2012.

Prepared by: John Doll, Project Manager
Planning & Development

For: Byron Rhett, Deputy Director
Planning & Development

MEMORANDUM

September 20, 2012

TO: MEMBERS, PORT COMMISSION
Hon. Doreen Woo Ho, President
Hon. Kimberly Brandon, Vice President
Hon. Willie Adams
Hon. Leslie Katz

FROM: Monique Moyer
Executive Director

SUBJECT: Request authorization to issue a Request for Proposals to Rehabilitate and Re-Tenant the Pier 38 Bulkhead Building located at Delancey Street and The Embarcadero.

DIRECTOR'S RECOMMENDATION: Approve Attached Resolution

SUMMARY

On September 11, 2012, Port Commissioners inquired whether there was a way to accomplish the short-term objective to rehabilitate and re-tenant the bulkhead building as quickly as feasible, but also develop a means to determine a long-term plan for Pier 38. Port Commissioners indicated the priority of improving the appearance of the Pier 38 shed and pier commensurate with the proposed upgrades to the South Beach waterfront.

The September 5, 2012 staff report has been updated to address the Port Commission's comments. Such updates are underlined hereafter.

Port staff recommends that the reuse of the Pier 38 bulkhead building be subject to a competitive selection process to solicit a development entity to perform needed health and safety upgrades to the Pier 38 bulkhead building such that it can be re-tenanted as quickly as feasible. All respondents to the selection process will be evaluated primarily on their ability to rehabilitate and re-tenant the bulkhead building in the most expedited way.

In addition to re-tenanting proposals, respondents may submit qualifications and demonstrate their ability to undertake long-term redevelopment of Pier 38. In this case, a respondent will have to demonstrate that they have the capacity themselves or enter into a partnership that would allow for bulkhead rehabilitation and long-term redevelopment for the remaining Pier 38. Any long-term pier redevelopment proposal would have to be considered by a subsequent Port Commission action.

THIS PRINT COVERS CALENDAR ITEM NO. 9D

If the attached resolution is approved, Port staff will issue the Request for Proposal (RFP) in October 2012. Responses will be due in February 2013.

BACKGROUND

The Pier 38 structure is divided into two parts: the two story bulkhead office building fronting the Embarcadero and the pier shed extending east over the Bay which was used as break bulk storage. Starting in 1999, a portion of the shed was built-out, initially used for storage above and conceived as restaurant use (but never occupied) below, then later without permits into office spaces.

Recent Port Commission staff reports provide important Pier 38 background information including the following:

- **Pier 38 Closure:** Port Staff reported on the background regarding the eviction proceedings and site conditions that led to closure of Pier 38 in October 2011.[1]

- **Pier 38 Reuse Options:** Port Staff reported on options to bring Pier 38 into Code Compliance in January 2012.[2]

- **Pier 38 Solicitation Options:** Port Staff reported on the trade-offs between soliciting a development entity to rehabilitate and re-tenant the Pier 38 bulkhead building only versus an entity to redevelop the entire Pier 38 on September 11, 2012.[3]

At the January 13, 2012 Port Commission meeting, staff presented an informational update regarding a Creegan & D'Angelo engineering study that established the maximum occupant load allowed without triggering a seismic upgrade. A seismic pier upgrade was not considered as a short-term re-tenanting option due to its high cost (i.e., in excess of approximately $20 million).

Creegan & D'Angelo analyzed several options including: 1) creating office occupancy space (without any assembly occupancy space) within the improved areas of the first and second floors and 2) creating office space and an assembly area on the second floor within the improved area. Please refer to the attached Exhibit 1 for the respective programs, cost estimates, and floor plans.

At the September 11, 2012 Port Commission hearing, staff identified four long-term reuse options for Pier 38.[4] Two options, the public works and the no project options, were not recommended. The other two options are discussed below.

[1] http://www.sfport.com/modules/showdocument.aspx?documentid=2403

[2] http://www.sfport.com/modules/showdocument.aspx?documentid=3231

[3] http://sfport.com/modules/showdocument.aspx?documentid=4638

[4] http://www.sfport.com/modules/showdocument.aspx?documentid=4638

- **The "master tenant" option** would allow a development entity to focus on the bulkhead building reconstruction and, because it would not change its use or trigger a pier seismic upgrade, would get the bulkhead building back into economic use in the most expedited way, but it would not specifically address redevelopment of the remaining pier. Because of the short-term nature, the Port would typically enter into a lease for approximately 10 years.

- **The "master developer" option** would allow a development entity to develop an overall plan to lease the entire pier, but require an initial bulkhead building phase to be accomplished. By evaluating the feasibility of the entire pier, this approach would necessitate an expensive seismic pier upgrade and a lengthy environmental review process. Because of the environmental review process, this may not be the most expeditious approach to re-tenant the bulkhead building. Because of the required investment and higher risk, the Port would typically enter into a 50-66 year lease.

Port Commissioners inquired whether there was a way to accomplish the short-term objective to rehabilitate and re-tenant the bulkhead building as quickly as feasible, but also develop a means to determine a long-term plan for Pier 38. Port Commissioners indicated the priority of improving the appearance of the Pier 38 shed and pier commensurate with the proposed upgrades to the South Beach waterfront.

Port Commissioners also inquired whether it was possible to engage two developers, one for the short-term bulkhead building repair and another for the long-term redevelopment of the remaining pier--and whether this could be practically accomplished without disrupting the bulkhead tenants.

PIER 38 PROJECT OBJECTIVES

In response to the input provided by the Port Commissioners, staff proposes to establish Project objectives for Pier 38. These include:

Project Objectives:

- Develop a competitive selection process to solicit a development entity
- Quickly repair and re-tenant the Pier 38 bulkhead building
- Generate economic activity to the South Beach area
- Allow the opportunity for re-occupancy of former high technology office tenants as well as encourage other uses permitted in the Waterfront Land Use Plan
- Allow a development entity to propose the repair and re-tenanting of the Pier 38 bulkhead building only under the "master tenant" approach or allow a development entity or a development team to propose to repair and re-tenant the Pier 38 bulkhead building and be qualified for later pier redevelopment, if feasible, under the "master developer" approach
- Develop a plan to improve the physical appearance of the bulkhead building and/or the pier shed

Port staff recommends that the reuse of the Pier 38 bulkhead building be subject to a competitive selection process to solicit a development entity to perform needed health

and safety upgrades to the Pier 38 bulkhead building such that it can be re-tenanted as quickly as feasible.

A respondent to the solicitation process may submit either as a "master tenant" to accomplish the repair and re-tenanting of the Pier 38 bulkhead building with no obligation to address long-term redevelopment or as a "master developer" to rehabilitate the bulkhead building and demonstrate their qualifications to undertake long-term redevelopment of Pier 38. In the latter case, a respondent will have to demonstrate it has the capacity itself or enter into a partnership that would allow for bulkhead rehabilitation and long-term redevelopment for the remaining Pier 38.

The solicitation process will specifically call for responses to:

1) For both "master tenant" and "master developer" submittals, the respondent must submit qualifications to undertake the bulkhead building and develop a proposal to plan and fund improvements in order to re-occupy the bulkhead building with limited pier shed improvements, generally informed by the rehabilitation options provided by Creegan & D'Angelo. The respondent will have to determine the most effective implementation strategy to quickly re-tenant the bulkhead building in order to achieve the Port's goal of bringing the bulkhead building back into economic use and provide an on-going revenue stream to the Port.

2) Encourage the re-tenanting of the bulkhead building to include: office, high technology uses, visitor-serving commercial, entertainment and cultural uses, and, maritime uses that complement adjacent waterfront development. These uses would continue the Port's Waterfront Land Use Plan's goal of continuing the redevelopment of the South Beach waterfront from the Bay Bridge to AT&T Ballpark, reviving this historic structure and helping knit Pier 38 into the South Beach neighborhood by bringing people and business activity to the waterfront.

3) If submitting as a "master developer", the respondent must submit qualifications to undertake the complete Pier 38 redevelopment or allow a respondent to create a development team with one development entity to undertake the bulkhead building rehabilitation and another entity to later propose a long-term redevelopment implementation plan for Pier 38. Long-term feasibility of the rest of the pier will necessitate the funding of an expensive seismic pier upgrade and a lengthy entitlement process. While the RFP would qualify this entity, any long-term pier redevelopment proposal would have to be considered by a subsequent Port Commission action.

4) Under the "master tenant" approach, require the development entity to lease the bulkhead building and limited pier shed space. The respondent will be responsible to make improvements to the physical appearance of the bulkhead building and, depending of the amount of pier shed space proposed, improvements to the pier shed. Under the "master developer" approach, require the development entity to lease the entire Pier 38, excluding the maritime areas (i.e., boat ramps) and submit a plan to improve and maintain the physical appearance of the pier shed.

OVERVIEW OF OPPORTUNITY

If approved, the RFP would be issued in October 2012 to solicit a respondent with demonstrated experience in rehabilitating, developing, and operating facilities similar to Pier 38. An ideal candidate would have experience with historic rehabilitation of waterfront structures, an ability to identify and secure target tenants, and a demonstrated ability to operate and maintain real estate projects once completed. In addition, such a candidate should have a proven ability of working with public agencies to achieve results desired by the Port.

As noted above, a response to the RFP will include a short-term implementation strategy of the Pier 38 bulkhead structure. The RFP will allow a respondent to submit qualifications to undertake developing the remaining pier structure in the long-term. This blended approach creates the possibility that a “master tenant” can be selected separate from a “master developer.”

The Port will require that the rehabilitation of Pier 38 will be funded through private sector investment and that the Port expects the successful respondent to fund physical improvements and provide for on-going operating/maintenance costs as well as provide security for the entire pier.

The negotiated lease between the Port and a successful respondent will be at fair market rent and the lease term will be subject to negotiation.

Staff’s proposed Selection Process and Selection Criteria and schedule are shown in Exhibit 2.

RECOMMENDATION

Port staff recommends that the Port Commission authorize and direct staff to issue an RFP for an entity to rehabilitate the Pier 38 bulkhead building and limited pier shed improvements for re-occupancy while qualifying this entity to consider the long-term reuse of the entire or the majority of the pier structure.

If the attached resolution is approved, Port staff will issue the RFP in October 2012.

Prepared by: John Doll, Project Manager
Planning & Development

Jonathan Stern, Assistant
Deputy Director
Planning & Development

For: Byron Rhett, Deputy Director
Planning & Development

Exhibit 1 -- Pier 38 Option Table & Diagrams
Exhibit 2 -- RFP Parameters

Exhibit 1 – Pier 38 Option Table & Diagrams

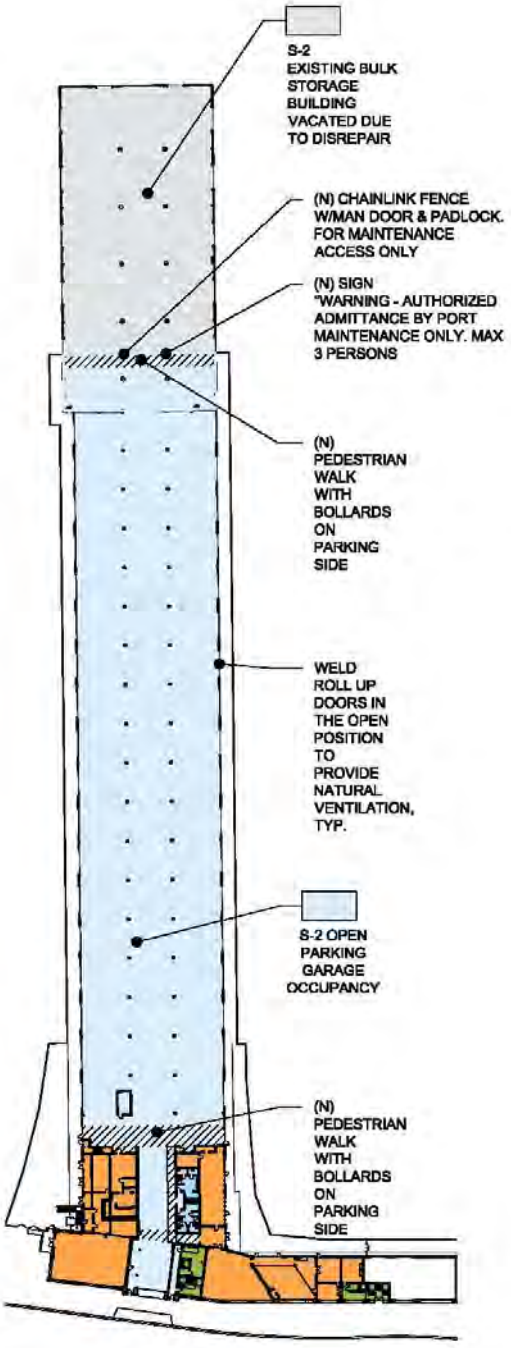
PIER 38 COSTS AND EXPECTED RETURN

Below is a summary table of the various options studied showing the cost, expected yearly rental return, and expected return period studied in the Creegan + D'Angelo/F.E. Jordan Joint Venture Code Compliance & Occupancy Study.

Option #	Option	Cost	Expected Yearly Return
1a	First Floor Only 12,334 s.f. office space	$1.7 Million	$370,000
1b	First Floor with Parking 12,334 s.f. office space 70,200 s.f. parking inside shed with estimated 228 parking spaces	$4.6 Million	$730,000
1c	First and Second Floor Office 27,929 s.f. office space	$3.6 Million	$840,000
1d	First and Second Floor Office with Parking 27,929 s.f. office space 70,200 s.f. parking inside shed with estimated 228 parking spaces	$6.5 Million	$1,200,000
2a	First and Second Floor Office and Assembly 4,478 s.f. assembly occupancy space on second floor 23,451 s.f. office space combined on first and second floors	$3.7 Million	$840,000
2b	First and Second Floor Office and Assembly with Parking 4,478 s.f. assembly occupancy space on second floor 23,451 s.f. office space combined on first floor and second floor. 19,000 s.f. parking inside shed with estimated 40 parking spaces	$4.5 Million	$900,000

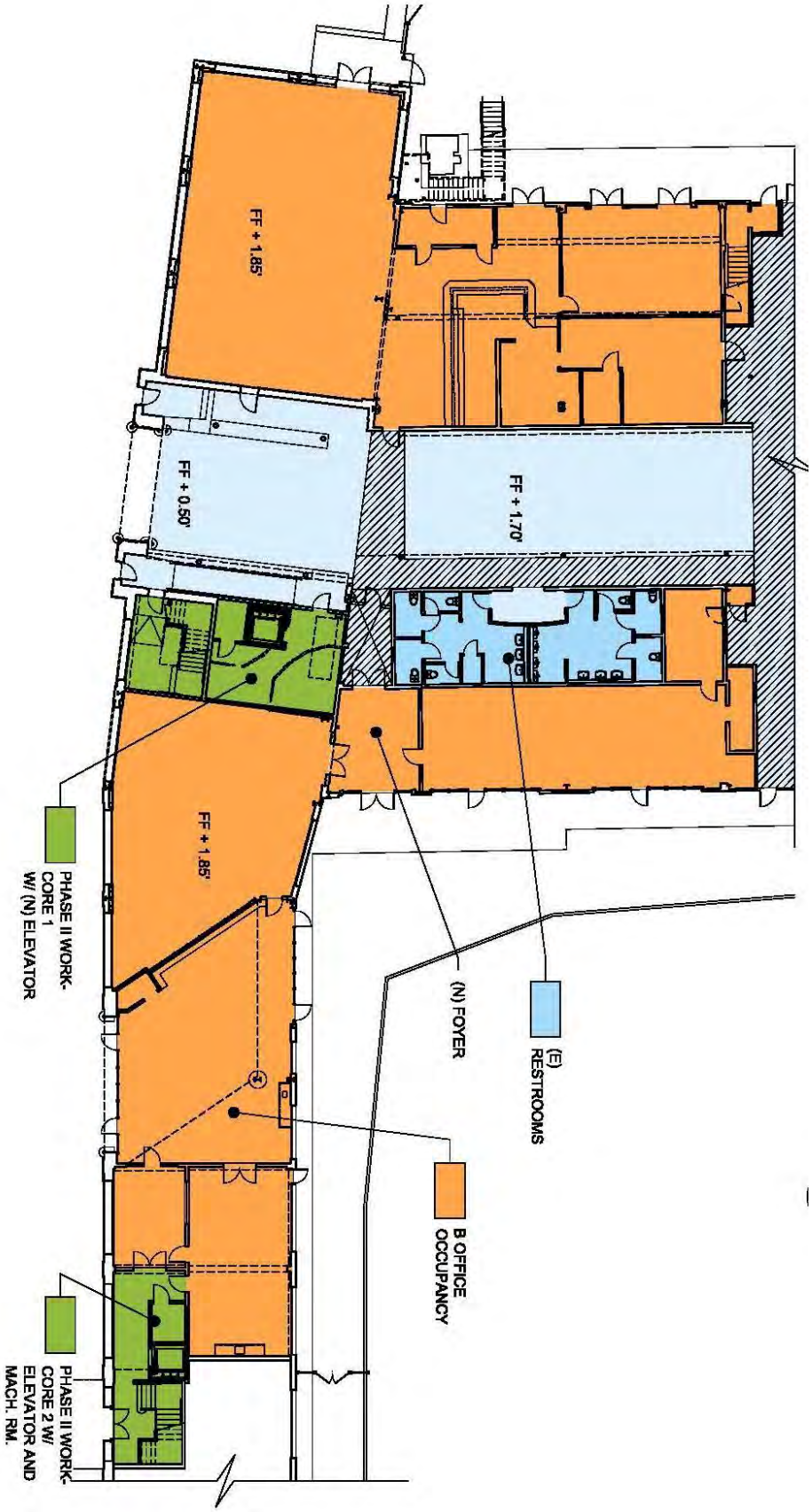
Option 1

First Floor



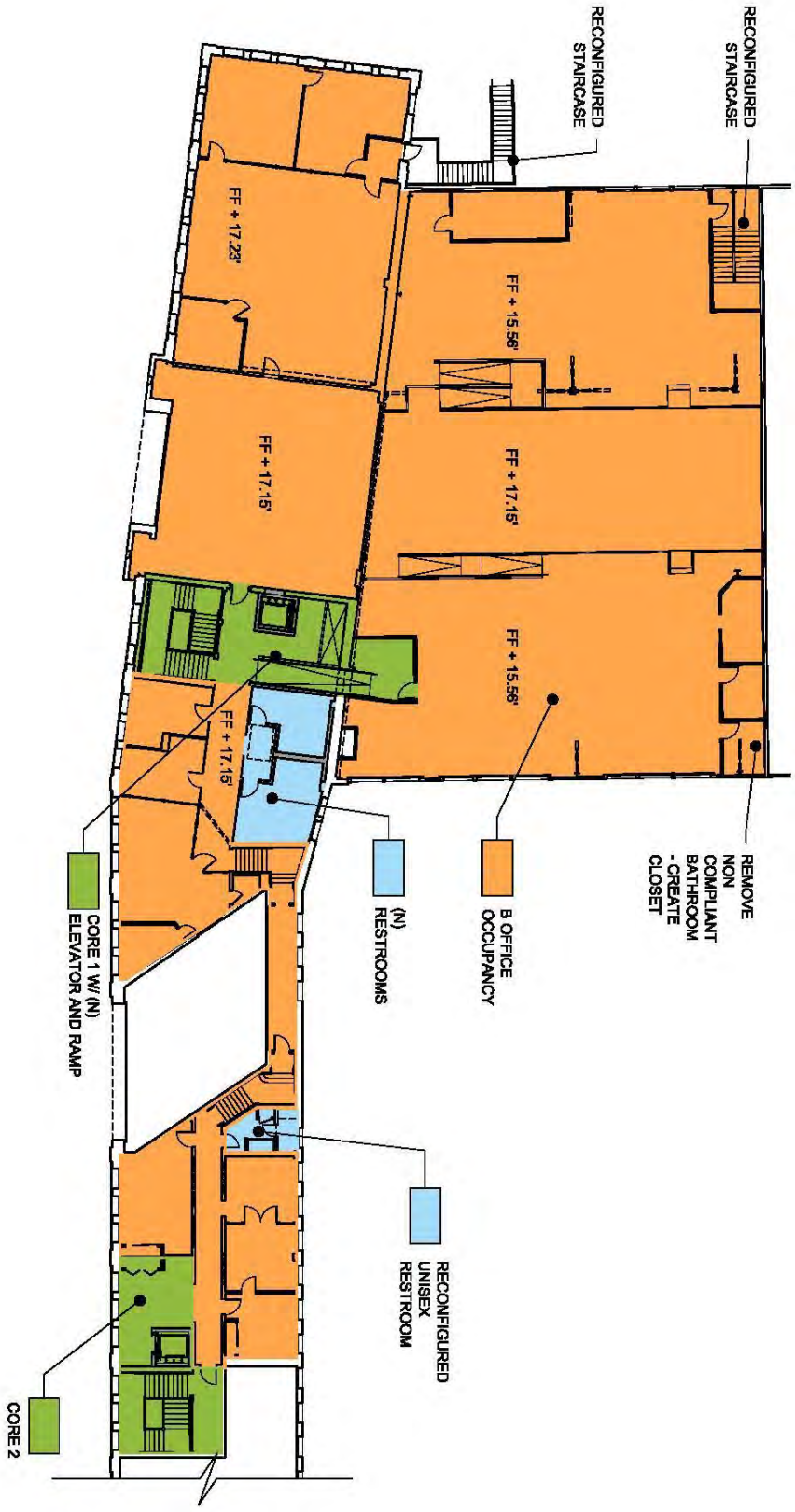
Option 1

Zoomed In View of Partial Portion of First Floor



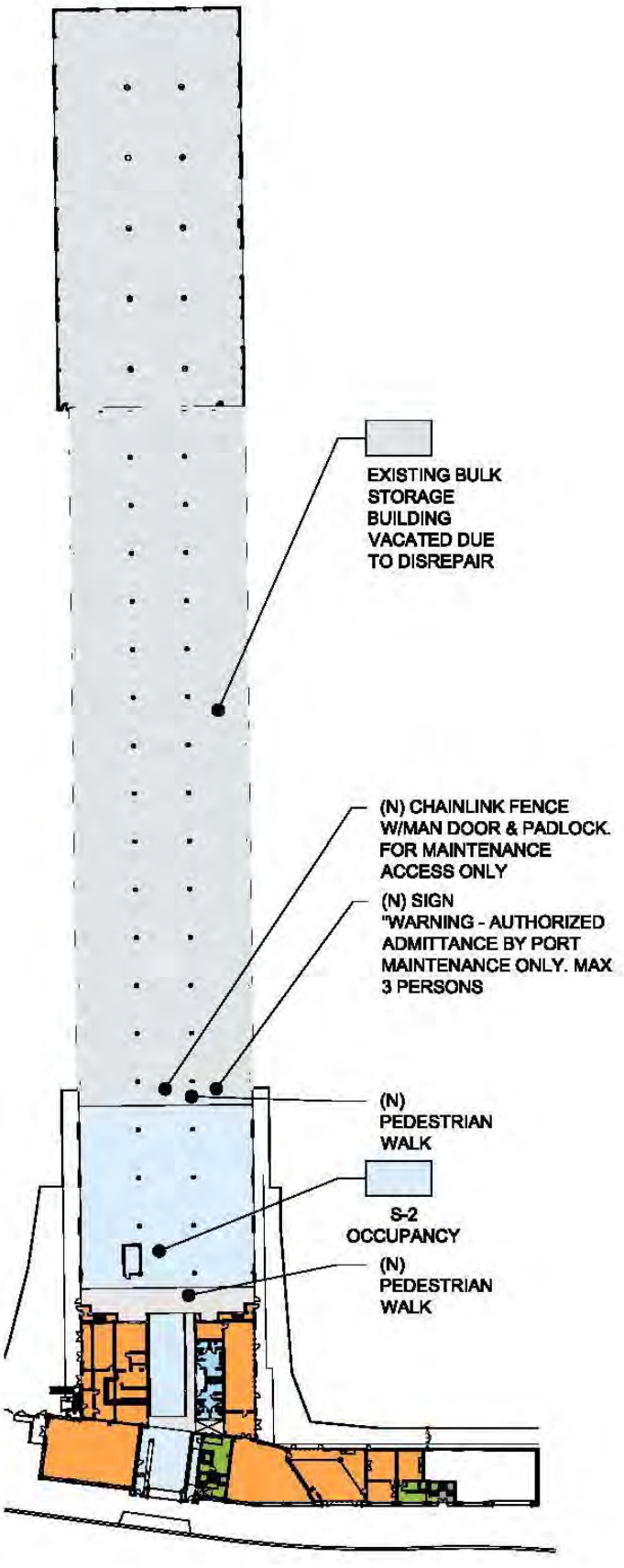
Option 1

Zoomed In View of Partial Portion of Second Floor



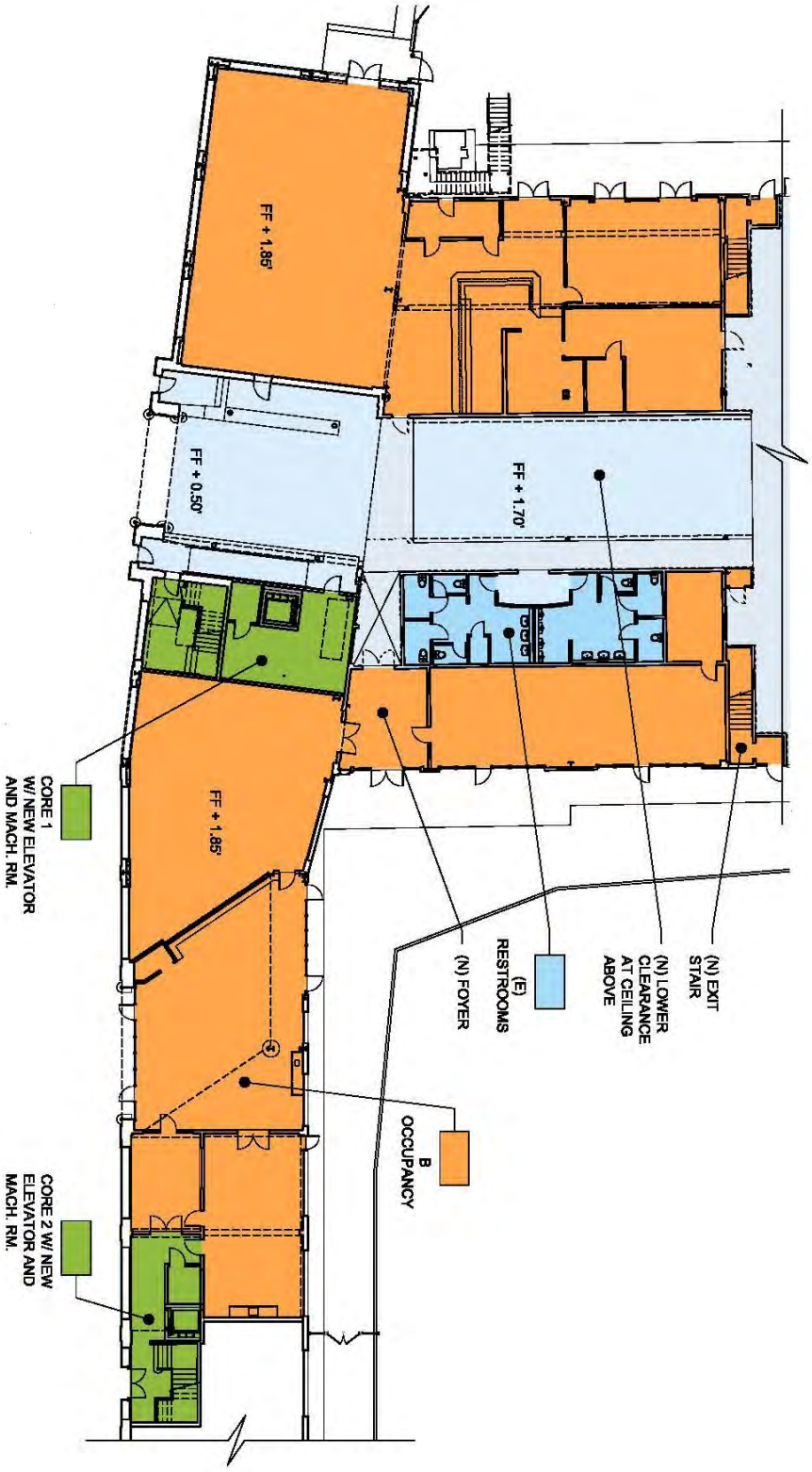
Option 2

First Floor



Option 2

Zoomed In View of Partial Portion of First Floor



Option 2

Zoomed In View of Partial Portion of Second Floor

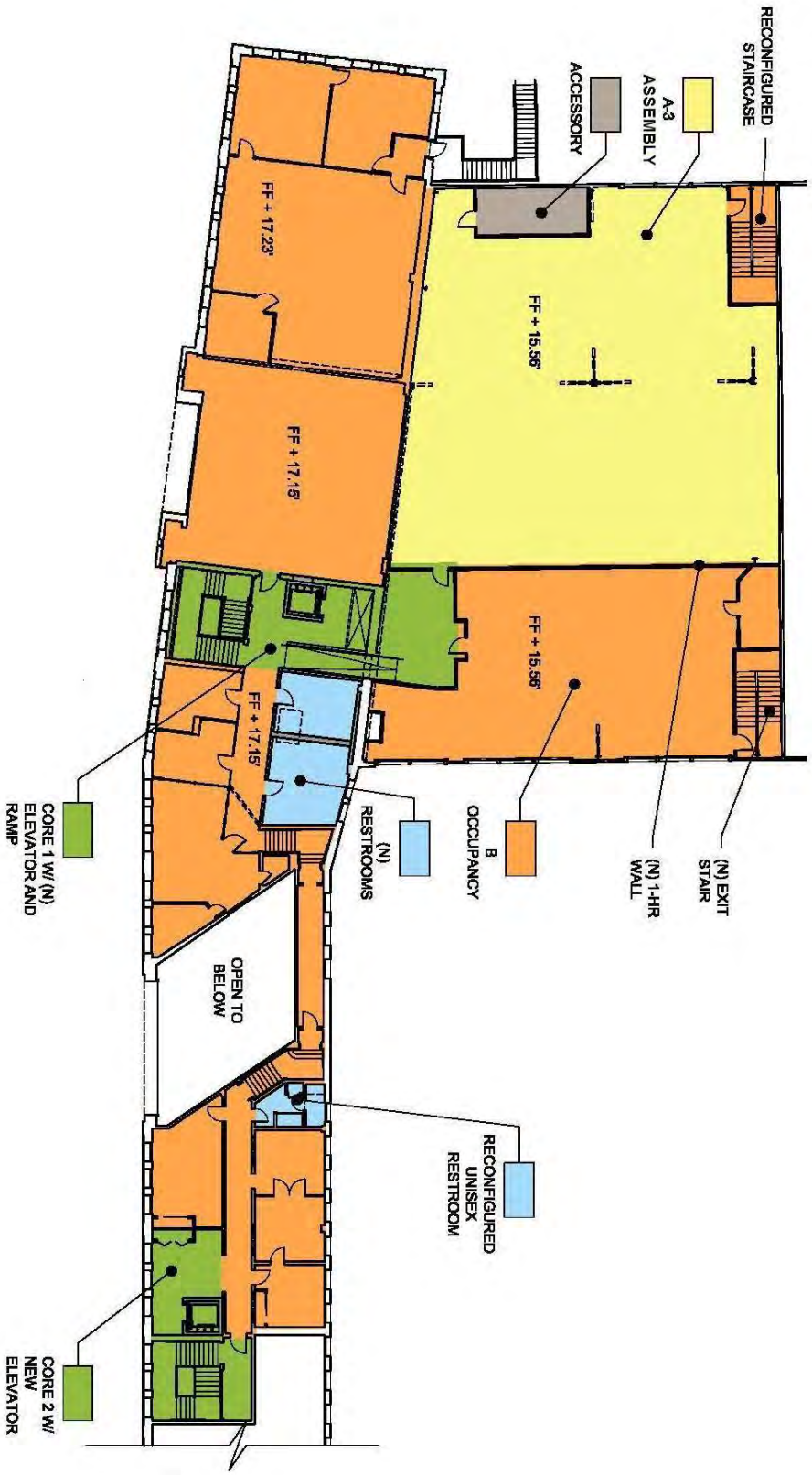


Exhibit 2 – RFP PARAMETERS

SELECTION PROCESS

Port staff recommends a selection process consisting of the following steps:

1. **Request for Proposals** – Staff will complete an RFP requiring submittal of qualifications and a proposal to re-tenant the bulkhead building in the near term, including a financial proposal. Respondents will be required to tender an earnest money deposit that will be refundable to all respondents except the one selected by the Port Commission.

2. **Evaluation of Proposals –** Proposals will be screened for responsiveness to the RFP. Responsive proposals from qualified respondents will undergo technical evaluation. Following this review, staff will recommend the highest ranked candidate to the Port Commission. The Port Commission will select a candidate, if any, and direct staff to enter into exclusive negotiations.

3. **Approval of Transaction** - Upon completion of any required environmental review and finalization of negotiations by Port staff, the Port Commission will consider the lease and related documents. Given the likely term, the lease will also be subject to approval by the San Francisco Board of Supervisors.

SELECTION CRITERIA

Port staff intends to recommend for Port Commission consideration a candidate for Pier 38 project based on the information contained in the responses to the RFP, an investigation of the entity's financial capability, past projects and performance, interviews (if Port staff elects to hold such interview) and other pertinent factors.

Evaluation of the submitted proposals will require technical real estate and planning analysis. In particular, the following criteria are identified for proposal evaluation. The evaluation weighting of these factors will be specified in the RFP.

<u>Experience, Qualifications, and Financial Capability</u>

- Experience with projects of comparable size, land use, visibility and expense, especially for projects located in the San Francisco Bay Area
- Experience of respondent's team members and key personnel, either as a single or joint venture development entity
- The respondent's ability to fund the proposed project
- The respondent's overall financial track record

<u>Proposed Development Design and Tenant Program</u>

- The design and architectural quality and constructability of the proposed design concept for the bulkhead building
- Improvements to improve the appearance of the Pier 38 shed
- The respondent's ability to re-tenant the bulkhead building with uses consistent with the Port's goals and objectives

- The reasonableness and feasibility of the respondent's proposed re-tenanting concept in achieving the Port's objectives
- The probability of obtaining approvals for the proposed design, given the physical and legal constraints on development

Proposed Financial Terms for Tenant Program

- The proposed annual rent structure
- Private investment in Port property
- The term of the interim lease

PROJECTED RFP SCHEDULE

To properly advertise the RFP opportunity and to allow interested parties sufficient time to perform reasonable due diligence and prepare detailed proposals, Staff proposes the following RFP schedule:

Issue RFP	October 2012
Tentative submittal deadline	February 2013
Evaluation of proposals	Early March 2013
Port Commission approval of ENA with selected respondent	Spring 2013
Port Commission lease approval	Summer 2013
Board of Supervisors' lease approval	Summer 2013

This schedule is an estimate and may vary on factors beyond Port's Staff's control. Staff will update the Port Commission on the response to the RFP and schedule for evaluation.

PORT COMMISSION
CITY AND COUNTY OF SAN FRANCISCO

RESOLUTION NO. 12-74

WHEREAS, Charter Section B3.581 empowers the Port Commission with the authority and duty to use, conduct, operate, maintain, regulate and control the lands within Port jurisdiction; and

WHEREAS, The Port owns in trust the Pier 38 site, consisting of approximately 68,000 square feet of shed space, 28,000 square feet of apron space, 7,800 square feet of bulkhead office space, and 180,000 square feet of water space, located at Delancey Street and The Embarcadero in the South Beach Harbor Mixed Use Opportunity Area of the South Beach/China Basin Waterfront area of the Waterfront Land Use Plan ("Waterfront Plan') adopted by the Port Commission; and

WHEREAS, Pier 38 is a contributing resource to the Embarcadero National Historic District and the Pier 38 bulkhead building is also recognized by San Francisco's Architectural Heritage as a notable and architectural resource; and

WHEREAS, In January 1996, the Port and Pier 38 Maritime Recreation Center and Carl Ernst (collectively, the "Prior Tenant") entered into a 20-year lease, under Port Lease No.12120, as amended, for the entirety of Pier 38 and the Prior Tenant subsequently subleased portions of Pier 38 to other parties; and

WHEREAS, As a result of unlawful detainer action initiated by the Port, the Prior Tenant was evicted from Pier 38 and surrendered possession on or about August 1, 2011; and

WHEREAS, Subsequent to eviction, Port Engineering Division staff, with the assistance of Creegan & D'Angelo/F.E. Jordan Joint Venture ("C+D") performed rapid assessments of Pier 38 and discovered unsafe conditions related to egress, accessibility, and the electrical, plumbing, mechanical and structural systems at Pier 38 and to protect the health and safety of the occupants and the public, the Port's Chief Harbor Engineer declared Pier 38 unsuitable for occupancy and all occupants were asked to vacate the premises; and

WHEREAS, Since October 20, 2011, Pier 38 has been vacant, with exception of three vessels moored without Port approval; and

WHEREAS, On January 13, 2012, Port staff presented to the Port Commission an informational update regarding the C+D engineering study of the estimated costs (ranging from $1.7 million to $6.5 million) and the expected annual return to Port of various options to repair and reoccupy all or portions of the Pier 38 bulkhead building and potentially the shed for parking, all without triggering a seismic upgrade as further described in the staff report of January 13, 2012; and

WHEREAS, It is in the Port's interest to repair and re-occupy the Pier 38 bulkhead building as soon as possible as it would promote public use and continue the rehabilitation of the South Beach Waterfront from the Bay Bridge to AT&T Ballpark, revive this historic structure and help knit Pier 38 into the South Beach neighborhood by bringing people to the Bay's edge; and

WHEREAS, Given other pressing needs, the Port does not have the capital resources at this time to undertake the rehabilitation of the Pier 38 bulkhead building as a public works project; and

WHEREAS, City policy encourages competitive bidding for leasing opportunities unless impractical or infeasible; and

WHEREAS, At the September 11, 2012 Port Commission hearing, the Port Commissioners inquired of Port staff whether there was a way to accomplish the short-term objective to quickly rehabilitate and re-tenant the Pier 38 bulkhead building, while also developing a means to determine a long-term plan for Pier 38; and

WHEREAS, Port staff recommends that publicly soliciting proposals through a request for proposals ("RFP") process for the lease of the Pier 38 bulkhead building and for a portion of the shed, which lease will require the successful respondent to immediately repair and rehabilitate the Pier 38 bulkhead building and possibly a portion of the shed, will garner the best market response and provide the Port with the best opportunity to meet its overall goals for the Pier 38 site; and

WHEREAS, Issuance of an RFP does not commit the Port to proceeding with any lease or lease development project, and the Port cannot approve a lease or development agreement for the project until after environmental review has been completed in compliance with the California Environmental Quality Act; now, therefore, be it

RESOLVED, That the Port Commission has reviewed the goals and objectives for Pier 38 and the proposed selection criteria for the respondent and authorizes Port staff to issue an RFP and manage the solicitation process consistent with the goals and objectives and the proposed selection criteria, as further described in the staff report accompanying this resolution.

I hereby certify that the Port Commission at its meeting of September 25, 2012 adopted the foregoing Resolution.

_____
Secretary

MEMORANDUM

October 20, 2011

TO: MEMBERS, PORT COMMISSION
Hon. Kimberly Brandon, President
Hon. Ann Lazarus, Vice President
Hon. Francis X. Crowley
Hon. Doreen Woo Ho
Hon. Leslie Katz

FROM: Monique Moyer
Executive Director

SUBJECT: Informational Update on Status of Pier 38 Closure and Next Steps

DIRECTOR'S RECOMMENDATION: Informational Only

The purpose of this item is to provide the Port Commission and the public with an update on the closure of Pier 38, Port staff's actions to date and next steps.

BACKGROUND

In January 1996, the Port and Pier 38 Maritime Recreation Center and Carl Ernst entered into a 20-year lease with two 5-year options, under Port Lease No. 12120, as amended, for the entirety of Pier 38 consisting of 68,000 square feet of shed space, 28,000 square feet of apron space, 7,800 square feet of Pier Bulkhead office space and 180,000 square feet of non-exclusive water space to be used as a maritime recreation center.

In May 1997, the California Department of Boating and Waterways ("DBW") loaned $1.465 million to Pier 38 Maritime Recreation Center to make improvements to Pier 38. As part of the loan agreement DBW holds a lien against the Pier 38 Maritime Recreation Center lease. Also, as part of the loan agreement the Port entered into a Consent to Hypothecation of Lease and Agreement ("Hypothecation Agreement") with DBW – allowing DBW certain rights to assume the lease and operate Pier 38 or assign the lease (with the Port's consent) to a third party to operate Pier 38 and continue to make payments to repay the loan. The loan and the Hypothecation Agreement remain outstanding granting to DBW the right to request the Port enter into a new lease with DBW or its nominee subject to DBW agreeing to cure all defaults of the former tenant.

On October 7, 2004, the Port served Pier 38 Maritime Recreation Center and Carl Ernst with an Unlawful Detainer action. In December 2005, pursuant to Port Commission Resolution 05-75, the Port and Pier 38 Maritime Recreation Center and Carl Ernst entered into a Settlement Agreement, resolving certain outstanding issues. In March 2007, after further disputes arose the Port again served Pier 38 Maritime Recreation Center and Carl Ernst with an Unlawful Detainer action which the court dismissed in September 2007 because of technical flaws in the Port's notice to pay rent or quit. In November 2007, the Port again served Pier 38 Maritime Recreation Center and Carl Ernst with a 3-day notice to cure or quit and on November 5, 2007 Pier 38 Maritime Recreation Center filed for bankruptcy protection and reorganization. On August 7, 2009, the bankruptcy trustee rejected rights to possession under the lease, and the court converted the case to a liquidation proceeding. On November 5, 2009, the Port served Carl Ernst, as the individual tenant, with an Unlawful Detainer action. On July 6, 2011, after a jury trial, the court granted judgment in favor of the Port. Carl Ernst subsequently vacated the facility by midnight July 31, 2011. The Port took possession of Pier 38 on August 1, 2011. On September 1, 2011, Carl Ernst filed an appeal of the July 2011 decision which lawsuit is still pending.

On August 1, 2011, the date the Port took possession of Pier 38, the Port's engineering consultant Creegan + D'Angelo/F.E. Jordan Joint Venture ('C+D") performed a rapid assessment condition survey to document the existing conditions of the facility. A second site visit was made by C+D with Port staff on August 11, 2011 to further investigate unsafe and non-code compliant issues that were discovered in the first survey. Following these site visits the Port closed and barricaded the dock area along the North Apron and a portion of public access area along the South Apron. On August 16, 2011, C+D issued a report titled "Pier 38 Condition Survey with Recommended Actions" ("Condition Survey Report"). The Condition Survey Report stated that there were a number of unsafe conditions related to (i) egress, (ii) accessibility and (iii) electrical, plumbing, mechanical and structural systems of the facility.

On August 17, 2011, as a result of the report, Port engineering staff immediately posted red "unsafe" placards on the outside of the building and at the various spaces within the facility. Additionally, Port Maritime staff posted 72 Hour notices to vacate the Pier 38 berths on all vessels. Notices were hand delivered at Pier 38 to the responsible parties for the vessels *Aurora* and *Fir*. The responsible party for the vessel *Chaleur* received and acknowledged an email notification of the 72 Hour notice to vacate berth.

Following receipt of the Condition Survey Report, Port staff then tasked C+D to develop a conceptual level repair strategy and related cost estimate for bringing Pier 38 into Building Code compliance. After their evaluation, C+D issued the "Pier 38 Occupancy Study" report ("Occupancy Study") on August 26, 2011. The Occupancy Study outlined a long list of required repairs to address the various code violations which are initially estimated to cost $2,620,193. This is only a rough estimate of the cost of repairs, and the estimate is subject to change based on the more thorough inspection of the facility to be performed as described below. Due to the extent of the required repairs and the amount of disruption the repairs would cause to the facility and the facility's utility systems, it was determined that the repairs could not be safely made while Pier 38 was occupied. On September 2, 2011, in response to the Port's posting of "unsafe" placards

at Pier 38, the City's Fire Marshall inspected Pier 38 and issued a Notice of Violation to the Port. Various members of the Port's engineering division carefully studied the reports from C+D and the City Fire Marshall and respectively concurred with C+D's respective findings.

On September 2, 2011, the Port's Chief Harbor Engineer declared the Pier 38 Shed and Office spaces and the North Apron Dock area unsuitable for any occupancy due to numerous health and safety violations that existed throughout the building. Members of the Port's engineering division posted notices requiring immediate vacation of the premises. The occupants were asked to vacate the premises as soon as possible and were informed that the Port desired to close Pier 38 by September 30, 2011. The Port's Deputy Director of Real Estate immediately made telephone contact with as many key occupants as were known to the Port at that time given that Mr. Ernst had never disclosed their identities to the Port. On September 6, 2011 (following the Labor Day weekend), Port real estate and maritime staff were posted on-site at Pier 38 and delivered letters[1] to all available occupants explaining the condition of Pier 38 and the need to vacate the facility effective September 30, 2011 due to unsafe conditions identified by the Chief Harbor Engineer and the City's Fire Marshal.

On August 11, 2011 Port's Maritime staff conducted its initial inventory of vessels located at Pier 38 both in dry storage and in the water. There were twenty-five vessels total, sixteen in dry storage and nine in the water. By August 17, twenty-one vessels had been removed from Pier 38. One sailboat, with no owner of record, abandoned in dry storage and three in the water, the *Fir*, the *Aurora* and the *Chaleur,* remain*.* On September 29, 2011, the Port's Maritime staff visited the *Fir*, *Aurora* and *Chaleur*, the three remaining vessels moored at Pier 38. Port Maritime staff performed a visual assessment of the 3 vessels to ascertain the general conditions of the vessels and discuss their relocation efforts as follows:

1. The *Fir* was found to be in a non operable condition, not capable of moving under its own power and steerage with at least one person living aboard as a caretaker. Port staff offered to the *Fir* an alternative berth at Pier 50 on a month to month basis which was declined. The *Fir* counter proposed relocating to Pier 28 south, however the Port declined this proposal as the Pier 28 apron and moorings are in a red tagged condition. The owner of the *Fir* states that he does not have plans to move the *Fir* from Pier 38.

2. The *Aurora* was found to be in a non operable condition, not capable of moving under its own power and steerage. The *Aurora* has at least three persons living aboard the vessel as caretakers, and numerous volunteers visit the vessel on a regular basis to help with repair of the vessel. The *Aurora's* representative states that he has plans to move the vessel, by towing it to an undisclosed location

[1] The letter provided contact information for Port staff, encouraged occupants to call with questions, invited occupants to consider relocating to other Port property and asked occupants to sign and acknowledge their intent to vacate.

"near the Port of Stockton" sometime within the next two months.

3. The *Chaleur* and its owner representative did not respond to Port staff's meeting request. The *Chaleur* is moored on the floating dock facility of Pier 38. The vessel was not boarded and therefore its condition remains in suspense. Observations by Port staff to date have found no evidence of persons living aboard the vessel. The *Chaleur's* owner representative has remained non responsive to posted notices, emails and phone calls regarding his plans to move the vessel.

As of the writing of this report, all 3 vessels remain moored at Pier 38, one at great structural risk to the Port's property. The Port has allowed access to the vessels through Pier 38, at first by posting security guards at the Port's sole expense and secondly by providing access through a combination lock. However, given the work that the Port is undertaking, all future access to the vessels will need to be made by water or by escorted appointment with Port staff during business hours. All three vessel owners have been continuously reminded of their obligation to remove their belongings from Pier 38 and have been encouraged to contact the Port regularly with respect to the status of their efforts to vacate their vessels from Pier 38.

The Port is extremely grateful to all of the Pier 38 occupants who quickly responded to the Port's requests to vacate regardless of the inconveniences to them and their businesses. By October 1, 2011, the majority of the occupants housed in the Pier 38 shed and Bulkhead Building had vacated the facility. Port staff made special arrangements, including the on-site posting of 24-hour security guards to allow many of the occupants to access and/or move their belongings following the September 30, 2011 date. In particular, Automattic and EuroSail requested and received additional time. As of this writing, all belongings of the occupants, with the exception of the three vessel owners, were removed from Pier 38, and the Port has resumed its customary security patrol of the facility, rather than the dedicated posting of round-the-clock guards.

Three previous occupants of Pier 38 have signed long-term leases at other Port facilities: Lab Zero is now at Pier 9; Shelter Belt Construction is at Pier 50 as is Overstreet Associates (newspaper publishers).

IMMEDIATE NEXT STEPS

Port Engineering has retained C+D to perform a detailed investigation and make field measurements of the existing conditions to develop plans of the existing construction and to develop options for the future use of the facility. Such investigation will require demolition of selected walls and flooring to expose hidden electrical, plumbing and structural installations for inspections to assure construction methods were performed properly and that the installations conform to Code requirements.

C+D has been asked to fully investigate the extent of the repairs required to be made to facilitate the following repair options:

Option 1:	Repair of core and shell of the 1st story bulkhead structure only
Option 2:	Repair of core and shell of the 1st and 2nd story bulkhead structure only
Option 3:	Modifications required to allow maximum amount of shed parking to Options 1 and 2 above
Option 4:	Marina evaluation and repair cost
Option 5:	Modifications needed to satisfy BCDC's Public Access requirements and cost

These options have been designed to limit the amount of repair, modification and the number of occupants so as not to trigger a seismic upgrade under the Building Code. A seismic upgrade would add significant cost to the project. Currently, the Port's 10-Year Capital Plan estimates the seismic upgrade costs of Pier 38 at $16 million.

C+D will develop each option and initially estimate the costs to perform the work. Port staff will return to the Port Commission to present the results of such findings so that the Port Commission may evaluate its repair options and provide Port staff with its preferred repair option. Thereafter, C+D will develop plans, specifications and a detailed cost estimate for that option. C+D will later provide construction support for the construction of the repairs.

Assuming that the investigations proceed as planned, and the findings are in the range of what is already anticipated, the approximate project schedule for the completion of each of the following tasks is listed below:

Document As-Built Conditions	November 2011
Project Options and Cost Estimates	December 2011
Port Commission Review & Selection of Preferred Option	January 2012
Develop Plans, Specifications, and Estimates for Selected Alternative	April 2012
Advertise for Bid	May 2012
Start Construction	July 2012
Finish Construction	To be determined

The construction duration will depend on the selected option.

As noted above, access to Pier 38 was secured as of 5:00 p.m. on September 30, 2011 against all unauthorized access and limited to Port staff and C+D representatives. The owner representatives of the 3 vessels are required to contact Port Maritime staff for escorted access or, if capable, they may board their vessels via water side that does not require accessing Pier 38 or its aprons. The Port will continue contact with the vessels' owner representatives to keep informed of their independent actions to vacate Pier 38. Port Maritime staff will also support the owner representatives' applications for a US Coast Guard tow permit to a location outside of Port of San Francisco jurisdiction. Port Maritime staff will continue to monitor the vessel conditions for evidence of use as a residence, seaworthiness and illegal discharges to the waters of the Bay. Finally, the

Port will pursue all remedies available to it to compel the owner representatives' compliance with the order of the Port to remove the vessels.

POLICIES AND PROCEDURES RELATED TO PORT COMMISSION DETERMINATIONS FOR PIER 38

As discussed above, as of the writing of this Staff Report the extent of the repairs required to be made, and the corresponding permits and entitlements needed to bring Pier 38 back into use are not yet known. Port staff's ability to make recommendations to the Port Commission and the public regarding future use of Pier 38 will be driven by factors such as the extent of the scope of the repairs, the time required to make them, the cost and resources to make the repairs and the extent of the regulatory approvals needed to permit re-occupancy of Pier 38.

Long-term use of Pier 38 is subject to a number of key polices and regulations, several of which are summarized below.

Waterfront Land Use Plan Policies

Pier 38 is located in the South Beach/China Basin Waterfront Area in the Port's Waterfront Land Use Plan ("Waterfront Plan"), which identifies the following fundamental objectives for the area:

- Preserve and rationalize existing industrial maritime activities in the area.
- Preserve and improve existing maritime uses that provide focal points for public enjoyment of commercial and recreation oriented maritime activities.
- Promote activities and public access to make the waterfront inviting and safe, and improve the living environment of the new and emerging Rincon Hill, South Beach and Mission Bay neighborhoods.
- Take advantage of proximity to downtown San Francisco by providing attractions for the general public, while respecting the needs of adjacent residents.
- Create an integrated series of public access improvements that extend a shoreline PortWalk through the area, and provide a unifying pedestrian connection between South Beach and Mission Bay at China Basin Channel.
- Establish high standards in the design of new development that give rise to a new architectural identity for the shoreline north of China Basin Channel**.**

Pier 38 is also a part of the South Beach Harbor Mixed Use Opportunity Area under the Waterfront Plan, which includes the following Development Standards:

- Permit expansion of excursion boat operations and recreational boating activities at Pier 38.
- Permit consolidation of maritime support services at Pier 38.
- Permit interim uses on Pier 38 until long-term uses of these facilities can be realized.

- Apply "Good Neighbor" Standards[2] to bars, restaurants which sell alcohol, large fast food restaurants, and assembly and entertainment uses on Pier 38, unless the Port Commission makes a specific finding that a particular condition is unnecessary or infeasible.
- The design of any new development on Pier 38 should provide appropriate buffers, setbacks or other design solutions for open air bars, restaurants, and nighttime entertainment activities that front The Embarcadero as necessary to mitigate noise impacts from such uses on residential neighbors.

The Waterfront Plan identifies the following acceptable uses for Pier 38: ferry and excursion boats, maritime office, maritime support services, recreational boating and water use, ship repair, temporary and ceremonial berthing, water taxis, public access, museums, retail (including restaurants), artists/designers, and wholesale trade with accessory uses of parking and storage.

State Lands Commission and the Public Trust

Pier 38 is subject to the public trust. In California, the public trust doctrine generally limits uses of trust lands to those that are water-dependent or related, including commerce, fisheries, navigation, environmental preservation and recreation. Uses that enable public enjoyment of the Bay, including public parks and open space, hotels, restaurants, shops and supporting parking area are also promoted under the public trust. Ancillary or incidental uses that directly promote trust uses, are directly supportive and necessary for trust uses, or that accommodate the public's enjoyment of trust lands are also permitted. Non-water oriented private uses such as general office, private recreation facilities, and residential uses are not considered public trust uses.

Any development at Pier 38 would require a public trust strategy acceptable to the State Lands Commission.

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[2] Good Neighbor Standards include the following

a) Any indoor and/or outdoor activity located within 300 feet of a residential unit shall, during the period from 10:00 p.m. to 6:00 a.m., ensure that sound levels emanating from such activities do not exceed the acceptable noise levels established by the San Francisco Noise Ordinance. Police Code, Article 29.
b) The tenant shall post interior signs and request that patrons leaving the premises after 10:00 p.m. leave the establishment and the neighborhood in a quiet, peaceful and orderly fashion and not litter or block driveways in the neighborhood. The tenant shall alert the San Francisco Police Department if exiting patrons are causing a disturbance.
c) All garbage receptacles shall be enclosed and no garbage shall be put on the sidewalk for collection, except as permitted by Article 5.1 of the Public Works Code.
d) The tenant shall keep sidewalks fronting the premises clean of debris and litter and shall walk a 100ft. radius from the premises sometime between thirty minutes after closing and 8:00a.m. the following morning to pick up and dispose of any discarded trash left by area patrons.
e) The tenant shall designate a neighborhood liaison contact person whose name and phone number shall be made available to the Port and to neighborhood associations in the area.

The Waterfront Land Use Plan (Chapter 5) calls for the following Port Commission process to realize the development opportunities envisioned in the Waterfront Plan:

1. Port Commission identify site to be developed and proposed development concepts
2. Advisory Group consultation and feasibility analysis to refine development concepts
3. Port Commission approval of solicitation process
4. Issue Request for Proposals to identify developer
5. Port Commission selects developer
6. Entitlement process, including CEQA environmental review and design review
7. Port Commission approval of transaction
8. Board of Supervisors' approval of transaction

Since the approval of the Waterfront Plan, two additional review points for the Board of Supervisors have been added to the process:

9. Board of Supervisors' approval of fiscal feasibility review prior to the commencement of CEQA review if public funds are included in the project
10. Board of Supervisors' review of a term sheet for development transactions over $10 million.

Competitive Bidding Policies

As discussed above, the Waterfront Plan (Chapter 5) provides direction to competitively bid development opportunities. Any transaction developing Pier 38 would include a long term lease – thus, the City's Administrative Code and Charter sections that apply to leases, exchanges, and conveyances of property are relevant here. Leases for maritime uses do not require Board of Supervisors' approval.

The Board of Supervisors' policy in favor of competitively bidding leases is stated in Section 2.6-1 of the City's Administrative Code, and the City's requirement for competitively bidding the sale or other transfer of fee title of any real estate is stated in Section 23.3 of the City's Administrative Code. If the Port decides to lease Pier 38 without competitive bidding, compliance with the Board of Supervisors' policy for leasing would require a showing that bidding was impractical or impossible. The Board of Supervisors, however, may also deviate from its policy by approving the lease(s) by resolution without such findings.

The Port has the ability to enter into a direct negotiation with one or more of the former occupants of Pier 38. To do so would require the Port Commission, and later the Board of Supervisors, to find that such a sole source negotiation met one of the above stated exceptions from the competitive bidding policies. At times, this "Sole Source Waiver" is secured by Board of Supervisors' resolution prior to any negotiation. Essentially such a resolution is a statement that the Board of Supervisors will not reject the transaction later strictly because it was not competitively bid. Examples of this include the Port's development agreements with The Exploratorium and the International Women's Museum.

Port Retail Leasing Policy

This Port Commission Policy requires that all retail and/or restaurant space for lease at the Port be offered through a competitive bidding process. The Policy allows for limited waivers to this bidding requirement for existing retail tenants wishing to renew or extend their lease and for non-retail tenants seeking to add retail uses to their leasehold. These waivers are only considered when the tenant proposes to make capital improvements, the proposed use is consistent with the Port's Waterfront Land Use Plan, or the Port Commission first approves a resolution authorizing Port staff to enter into a sole source negotiation for a retail use. Based on the circumstances at Pier 38 the Port Commission may consider treating the former occupants of Pier 38 as existing occupants under this policy.

Port Maritime Industry Preservation Policy

This Policy guides the Port Commission in determining whether to rehabilitate any one of its assets and attests to the Port's commitment to protect the Port's remaining natural deepwater berths for active maritime uses by requiring that such berths be utilized by vessels which are seaworthy, (able to leave berth under their own power) and encourage development and/or rehabilitation of Port assets that enhance current water-dependent commercial uses and promote Port development/historic rehabilitation projects that incorporate physical improvements to maritime deepwater berthing facilities.

Development Offering Process

The process for a development offering is similar for a direct negotiation or a competitive solicitation. If the Port Commission directs staff to begin a development process for Pier 38, the first step is community and stakeholder outreach to design development criteria for Pier 38. Issues to be considered include:

- Uses required, preferred and allowed on the site
- Public Access requirements and compliance with other regulations and policies (including BCDC policies regarding parking over water)
- Guidance in design, community benefit, and other components of the project

Following public testimony and debate, the Port Commission would act to authorize issuance of a Request For Proposals for the site with specified development criteria. The Port has the ability to enter into a direct negotiation with a prospective developer of Pier 38. To do so would require the Port Commission, and later the Board of Supervisors, to find that such a sole source negotiation met one of the above stated exceptions from the competitive bidding policies. At times, this "Sole Source Waiver" is secured by Board of Supervisors resolution prior to any negotiation. Essentially such a resolution is a statement that the Board of Supervisors will not reject the transaction later strictly because it was not competitively bid. Examples of this include the Port's development agreements with The Exploratorium and the International Women's Museum.

CEQA Process

As required by the California Environmental Quality Act ("CEQA"), alternatives to the proposed project intended to avoid or reduce one or more of the project's significant environmental effects likely will be analyzed in an Environmental Impact Report ("EIR"). Options for development will be considered to address the public trust status and the separate ownership of the two sites. The CEQA process may not be waived by the Port Commission or the Board of Supervisors.

Historic Preservation Process

Pier 38 is a contributing resource to the Port of San Francisco's Embarcadero Waterfront Historic District which is listed on the National Register of Historic Places. As part of the District nomination, the Port developed Historic Preservation Review Guidelines (Guidelines) to define how the Secretary of the Interior's Standards for Rehabilitation (Secretary's Standards) should be interpreted and applied to the historic resources such as Pier 38 to ensure its responsible management and stewardship. The Guidelines define parameters for the repair, maintenance or alterations to Pier 38's pile foundations, substructures and deck and the bulkhead wharf upon which the Pier 38 structure sits.

San Francisco Bay Conservation and Development Commission (BCDC)

The BCDC is a state agency with permit authority over the Bay and its shoreline regulating filling, dredging, and changes in use in San Francisco Bay. BCDC regulates new development within 100 feet of the shoreline (as well as improvements and use of Port structures) to ensure that maximum feasible public access to and along the Bay is provided and preserve that the limited amount of shoreline property suitable for regional high priority water-oriented uses (ports, water-related industry, water-oriented recreation, airports, and wildlife areas) is reserved for these purposes. Landside uses and structural changes are governed by BCDC's plans and regulations. For major leases and all renovation of Port structures, BCDC along with its Design Review Board reviews these projects for conformance with the San Francisco Bay Plan and the San Francisco Waterfront Special Area Plan and issues a Major Permit with the lease holder and Port as co-applicants each responsible for conditions of the Permit

LONG-TERM REUSE OPTIONS FOR FURTHER CONSIDERATION

Port staff has identified 4 primary long-term reuse options for Pier 38 which are summarized below to assist the Port Commission and the public in thinking about the long-term use of Pier 38:

1) **Port "Public Works" Project:** Port would fund all or a portion of the repairs in order to enter into a combination of short and/or long-term leases for occupancy of the berth(s) and/or the shed space and/or the bulk head building. In an ideal scenario, the Port could fund all needed repairs and be the Master Lessor of Pier 38, as the Port is with Pier 9, Pier 50 and the majority of the Port's leasable assets. This option would also need authority from Port budget and capital plan processes to allocate

and spend Port funds to improve all necessary improvements.

2) **Port Selects a Master Tenant:** Port selects a Master Tenant to fund all or a portion of the repairs to issue a combination of leases for occupancy of the berth(s) and/or the shed space and/or the bulk head building. In an ideal scenario, the Master Tenant could fund all needed repairs and be the Master Lessor of Pier 38, as the Port has done previously with the Foreign Trade Zone at Piers 19-23. This option would necessitate a competitive development solicitation process to satisfy Port real estate and competitive policies for selecting a Master Tenant, unless waived by the Port Commission and the Board of Supervisors.

3) **Port Selects a Master Developer:** Port selects a Master Developer to devise a development/reuse plan, fund all repairs and improvements to support such development plan, and lease all or a portion of the facility to end users. This option would necessitate a competitive development solicitation process to satisfy Port planning and competitive policies for selecting a developer and/or development plan.

4) **Facility Remains Shuttered**. Based on the overall expense of recommissioning Pier 38 or the realities of obtaining acceptable regulatory approvals and satisfying Department of Boating & Waterways rights pursuant to its Hypothecation Agreement, Pier 38 may remain shuttered until market conditions, legal status and regulatory conditions make it feasible to proceed with repair or development of Pier 38.

In each of these options the Port must adhere to the following regulatory compliance/decision maker authorization to issue short or long-term leases or commence a development project:

i. Port building codes including ADA & Fire regulations
ii. NPS/SHPO Historic Preservation regulations
iii. consistency with provisions of the Waterfront Land Use Plan and City's General Plan
iv. BCDC regulatory requirements
v. State Lands Commission requirements particularly for conformance with the Public Trust
vi. Port Retail Leasing policy
vii. Port Maritime Industry Preservation policy
viii. City Administrative Code competitive bidding requirements for non-maritime leases
ix. California Environmental Quality Act provisions
x. Port Commission and/or Board of Supervisors' provisions for approving leases; etc.
xi. Department of Boating & Waterways rights pursuant to its Hypothecation Agreement

SUMMARY

As discussed above, there are several options for reuse of the Pier 38 facility which will be further evaluated and presented to the Port Commission and the public for review. Before such options can be fully evaluated, Port staff recommends that its engineering consultant, C+D complete its work in thoroughly evaluating viable repair options and related cost estimations. In the interim, Port staff will continue to work with the vessel owner representatives to ensure immediate compliance with the Port's order for the remaining 3 vessels to vacate Pier 38. Port staff will also work with representatives of DBW to resolve their rights under the Hypothecation Agreement. Finally, Port staff will continue to address all outstanding litigation related to Pier 38 and/or Carl Ernst.

Prepared by: Jonathan Stern, Assistant Deputy Director
Planning & Development

Ed Byrne
Chief Harbor Engineer

Susan Reynolds, Deputy Director
Real Estate

Elliott Riley, Sr. Property Manager
Real Estate

John Davey, Assistant Deputy Director
Maritime

MEMORANDUM

January 13, 2012

TO: MEMBERS, PORT COMMISSION
Hon. Kimberly Brandon, President
Hon. Ann Lazarus, Vice President
Hon. Francis X. Crowley
Hon. Doreen Woo Ho
Hon. Leslie Katz

FROM: Monique Moyer
Executive Director

SUBJECT: Informational Update on Engineering Investigation to Bring Pier 38 into Code Compliance

DIRECTOR'S RECOMMENDATION: Informational Only; No Action Required

The purpose of this item is to provide the Port Commission and the public with an update on the engineering investigation to bring Pier 38 into code compliance.

BACKGROUND

As a result of the legal action taken by the Port, the master lessee, Mr. Carl Ernst lost control of the Pier 38 Facility and was evicted from the premises on August 1st, 2011. Since then, Port Engineering Division Staff, with the assistance of Port's as-needed consultant, Creegan + D'Angelo/F.E. Jordan Joint Venture(C+D) has performed a number of rapid assessments and discovered a number of unsafe conditions related to egress, accessibility, and the electrical, plumbing, mechanical and structural systems of the facility. To protect the health and safety of the occupants and the public, Port's Chief Harbor Engineer declared the Pier 38 Shed and Office spaces and North Apron Dock area unsuitable for any occupancy and occupants were asked to vacate the premises.

Following the vacancy, Port Engineering retained C+D to perform a detailed investigation and make field measurements and develop plans of the existing construction and develop alternatives for the future use of the facility. The investigations required demolition of selected walls and flooring to expose hidden electrical, plumbing and structural installations to determine whether construction methods were proper and conform to Code requirements.

C+D's scope of work was to fully investigate the following items:

Item 1:	Repair alternatives for the core and shell of the 1st story bulkhead structure (includes built out portion of the shed)
Item 2:	Repair alternatives for the core and shell of the 2nd story bulkhead structure (includes built out portion of the shed)
Item 3:	Modifications required to allow maximum amount of shed parking
Item 4:	Modifications needed to satisfy BCDC's Public Access requirements and cost
Item 5:	Marina evaluation including estimates for marina repairs as well as complete demolition

BUILDING OCCUPANCY OPTIONS

With consideration of these items, C+D and its sub-consultants, Michael Tauber Architecture, YEI Engineers, and M. Lee Corporation have prepared a study of options for Pier 38. The options were developed after considering the existing conditions of the building including accessibility, additions and alterations constructed without building permits or inspections, and occupancy.

Port staff and C+D established the maximum occupant load allowed for each option noted below based upon not triggering a seismic upgrade, then studied and determined the occupant load for the improved, built out office space areas, again based on the options noted below, and then determined the remaining allowed occupant load to establish how much parking could be included within the shed. Additional occupant load that could be achieved from a seismic retrofit was not considered as an option due to the high cost.

Two options were developed which satisfy the goals noted in Items 1 through 4 listed above. Item 5 regarding the marina evaluation is addressed in a separate section below.

Option 1 includes creating office occupancy space (without any assembly occupancy space) within the improved areas of the first and second floor. Option 2 includes creating office space and an assembly area on the second floor within the improved areas. Please refer to the attached Exhibit #1.

Each option includes construction of two new elevators and elevator machine rooms at two separate locations, and repair and improvement of the north and south aprons on each side of the improved shed area for exiting and public access. A new pedestrian walkway will also be constructed at the eastern extent of the building for public access. New sprinklers will be added to the building. The non-code compliant spiral stair will be removed.

Option 1 includes estimates for two phases. The two phases include repair/ improvement of the first floor during the first phase followed by repair/improvement of the second floor in the second phase. Option 2 was estimated using a single

repair/improvement phase. The costs for providing BCDC public access are included in each option.

COST AND EXPECTED RETURN

Below is a summary table of the various options studied showing the cost, expected yearly rental return, and expected return period.

Option #	Option	Cost	Expected Yearly Return
1a	First Floor Only 12,334 s.f. office space	$1.7 Million	$370,000
1b	First Floor with Parking 12,334 s.f. office space 70,200 s.f. parking inside shed with estimated 228 parking spaces	$4.6 Million	$730,000
1c	First and Second Floor Office 27,929 s.f. office space	$3.6 Million	$840,000
1d	First and Second Floor Office with Parking 27,929 s.f. office space 70,200 s.f. parking inside shed with estimated 228 parking spaces	$6.5 Million	$1,200,000
2a	First and Second Floor Office and Assembly 4,478 s.f. assembly occupancy space on second floor 23,451 s.f. office space combined on first and second floors	$3.7 Million	$840,000
2b	First and Second Floor Office and Assembly with Parking 4,478 s.f. assembly occupancy space on second floor 23,451 s.f. office space combined on first floor and second floor. 19,000 s.f. parking inside shed with estimated 40 parking spaces	$4.5 Million	$900,000

MARINA OPTIONS

In 1997, the California Department of Boating and Waterways (“DBW”) loaned $1.465 million to Pier 38 Maritime Recreation Center to make marina improvements to Pier 38.

This loan may have been the primary source of funding for the marina float to the North of Pier 38 as well as other maritime equipment used by the previous leaseholder. DBW retains the right to request the Port enter into a new maritime lease with DBW (or its nominee). Therefore it is unknown if the Port can make changes at this time to the maritime equipment financed by DBW's loan.

The existing marina float mentioned above was not designed for the wave exposure it is subjected to at its current location nor the large ships it has been handling. The marina floats are also in very poor condition. If DBW's loan issue is able to be resolved and the Port is able to make changes, the floats must either be demolished or repaired and modified to increase their durability and accomplish an acceptable level of performance for any future use to be allowed.

C+D developed two options for the marina: 1) completely remove the existing marina or 2) upgrade the marina to allow for temporary berthing of small vessels during non-storm events.

The second option would result in an improved float system that allows for short term berthing for up to twelve small (under 80 ft.) motorboats or sailboats. Power and utilities would not be provided as the berths would be designed for short term docking.

The cost for the marina options are:

Option	Option	$
1	Demolish existing marina	$338,704
2	Demolish existing marina and build temporary berthing	$768,858

FURTHER STEPS

Port staff will further evaluate the options discussed above and confirm anticipated revenues and costs. Based on feedback, options may be adjusted slightly. Port staff will return to the Commission with a recommendation of a preferred option for approval.

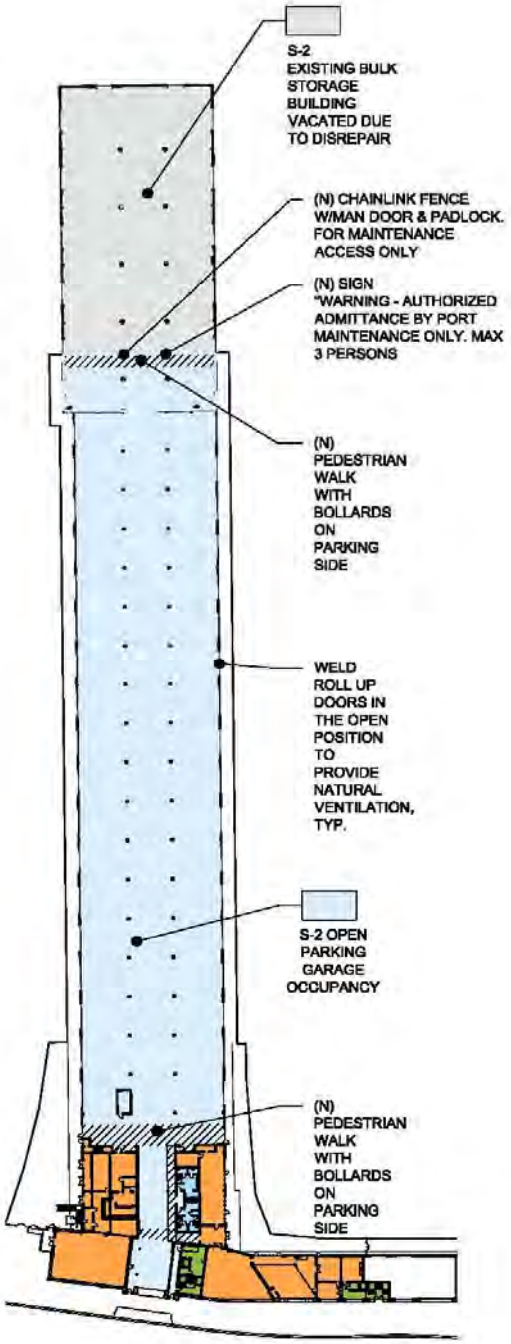
Prepared by: Peter Luong, Associate Civil Engineer

Prepared for: Ed Byrne, Chief Harbor Engineer

Exhibit #1 – Option 1 and Option 2 Layouts

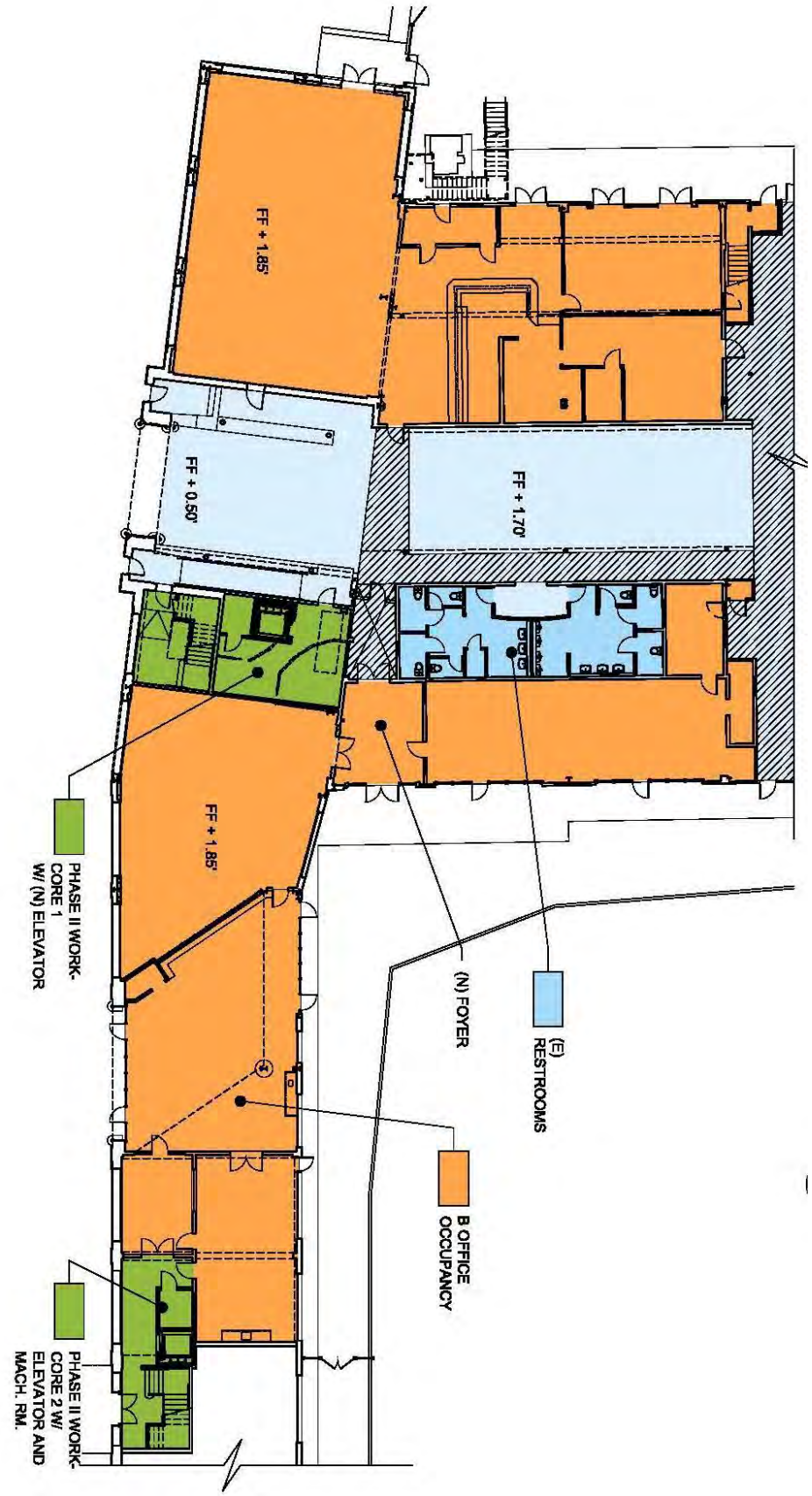
Option 1

First Floor



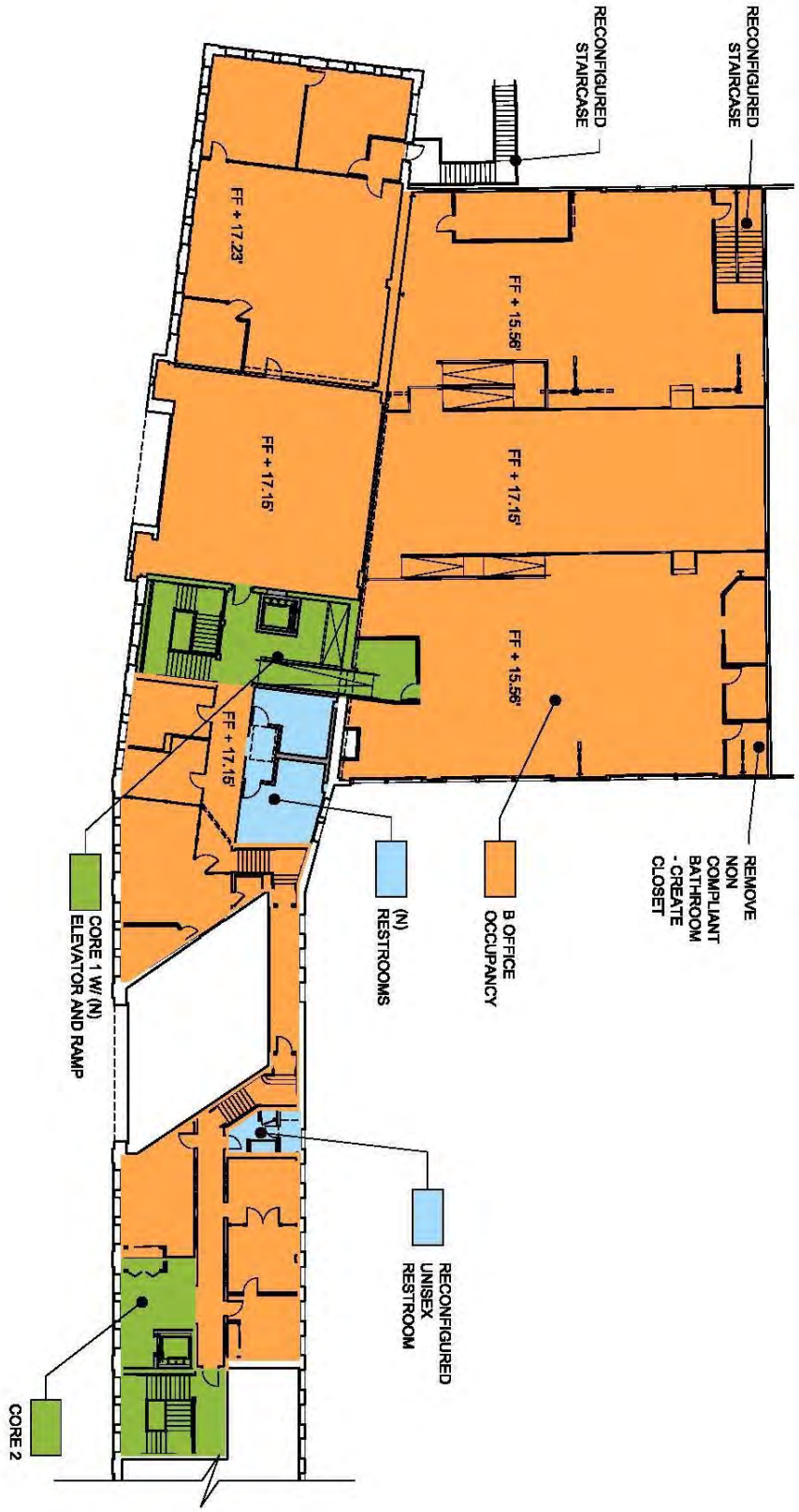
Option 1

Zoomed In View of Partial Portion of First Floor



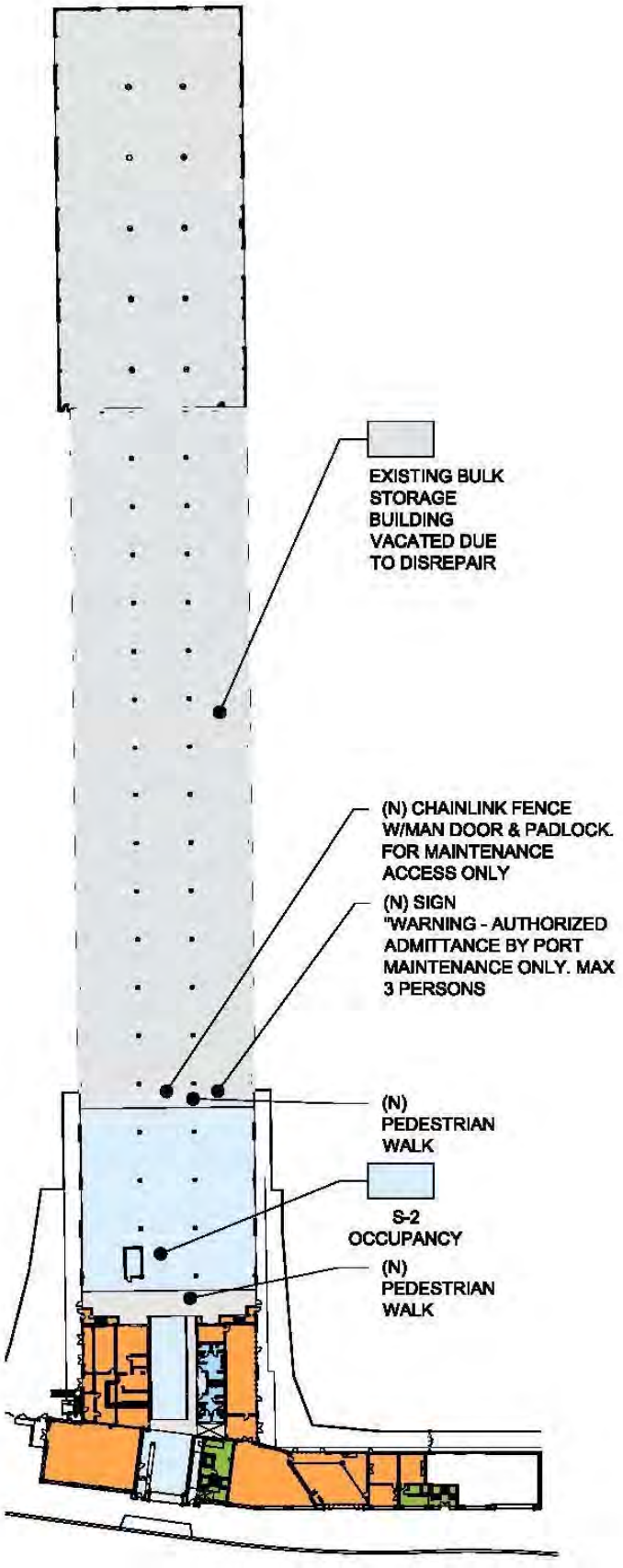
Option 1

Zoomed In View of Partial Portion of Second Floor



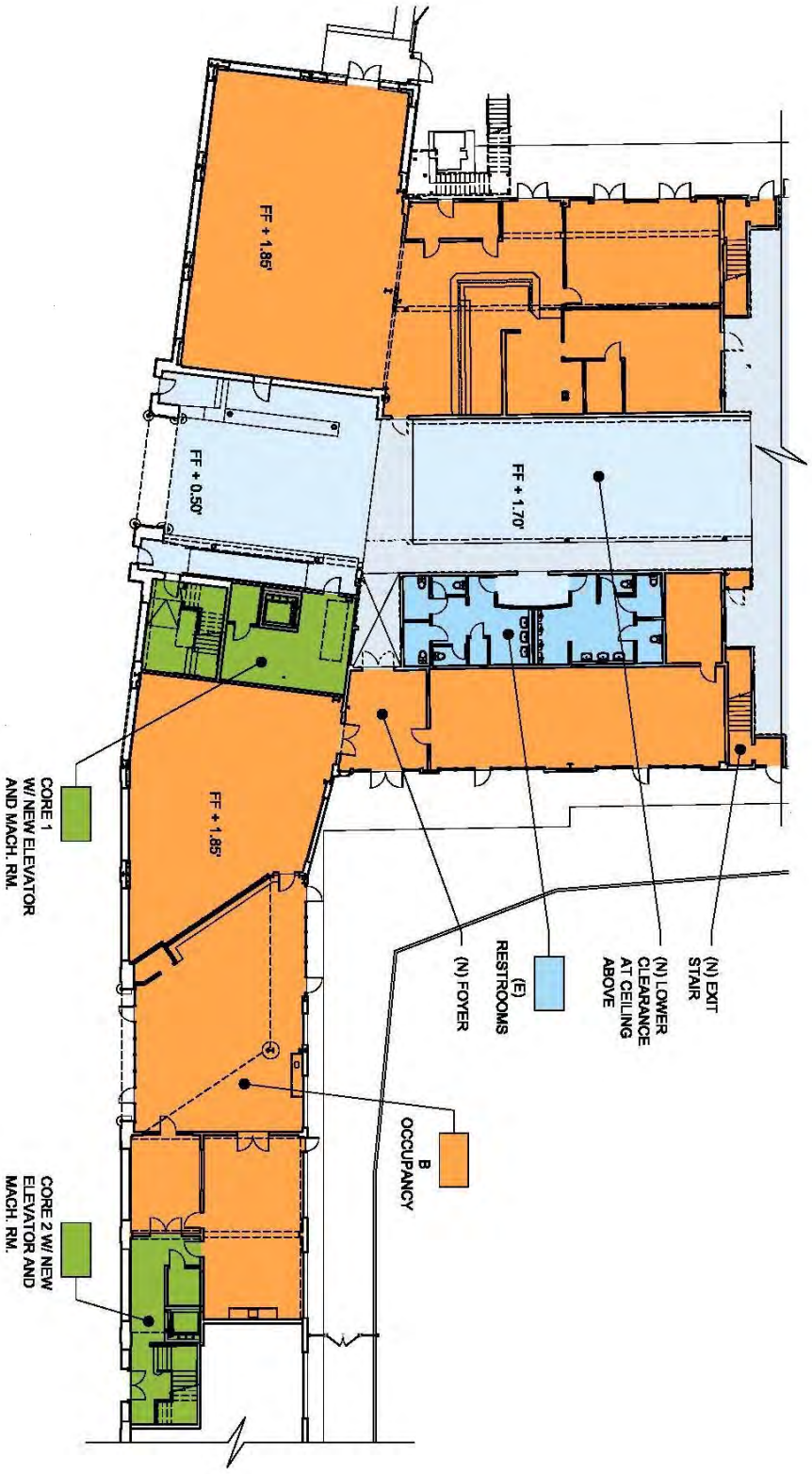
Option 2

First Floor



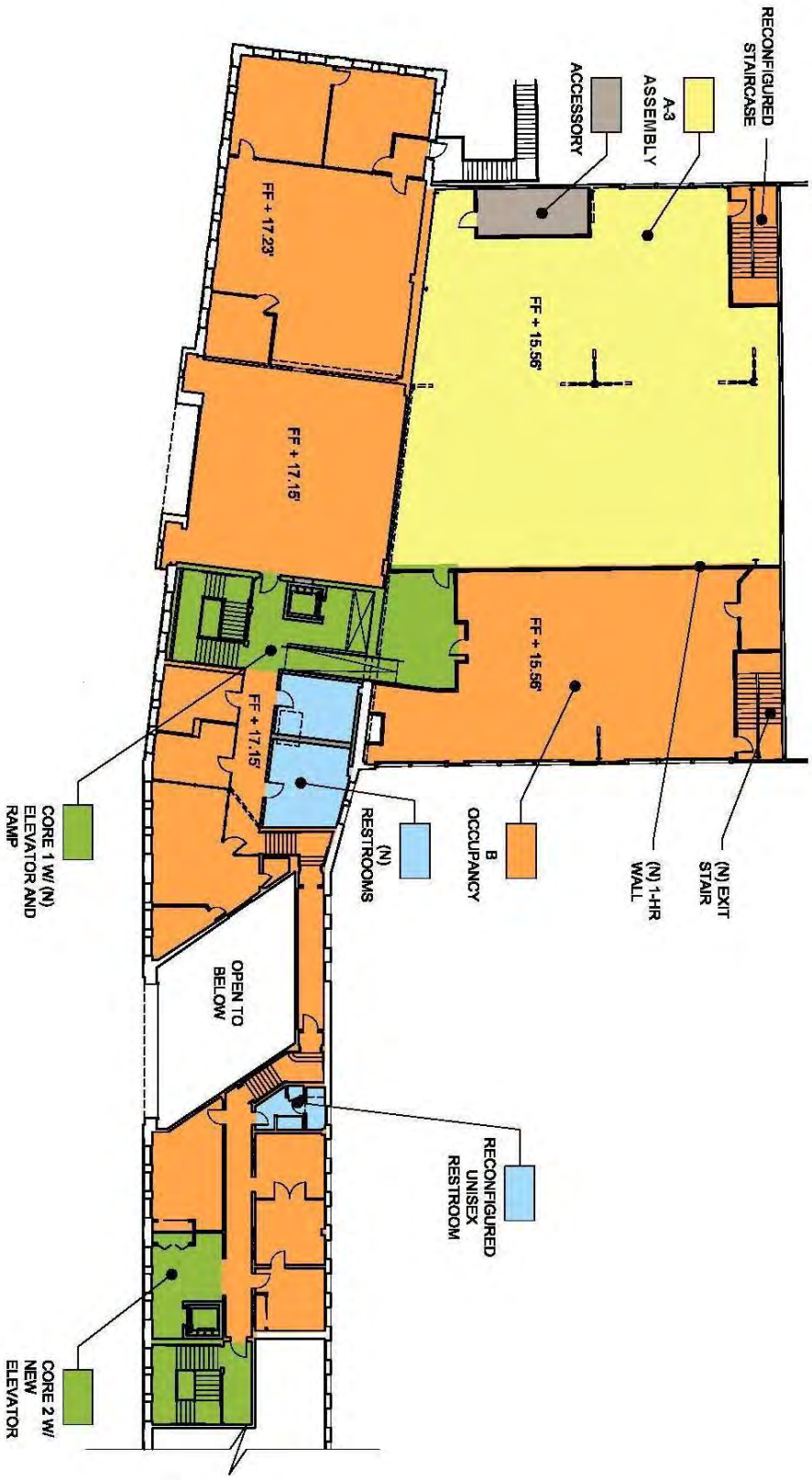
Option 2

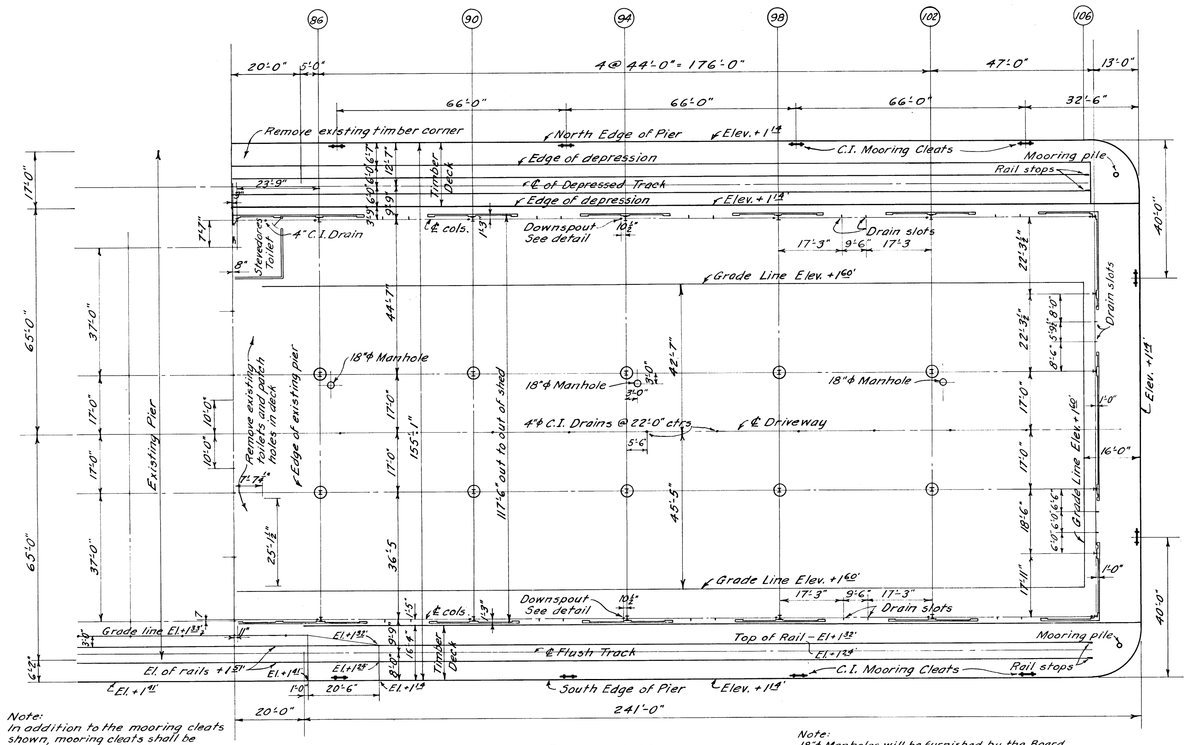
Zoomed In View of Partial Portion of First Floor



Option 2

Zoomed In View of Partial Portion of Second Floor



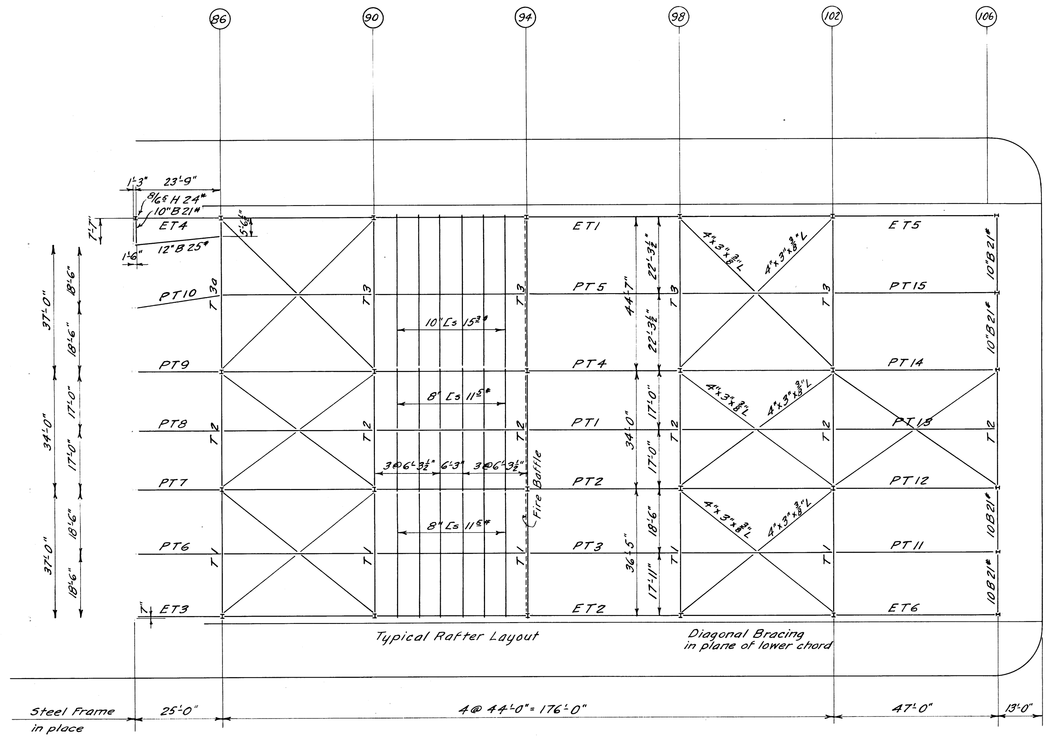


Note:
In addition to the mooring cleats shown, mooring cleats shall be furnished and placed on the south side extension at Bents No. 5-16-28-40-52-64 and 76.

General Plan

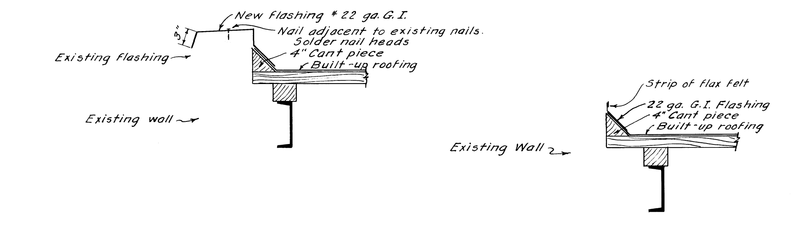
Scale: 1"=20'-0"

Note:
18"ϕ Manholes will be furnished by the Board and are to be set by the Contractor.
Rail stops or bumpers will be furnished by the Board and set by the Contractor.



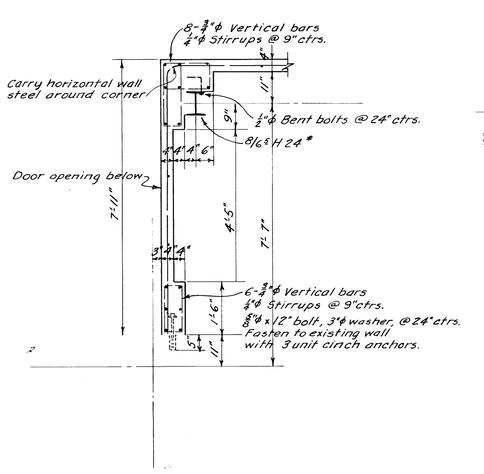
Roof Framing Plan

Scale: 1"=20'-0"



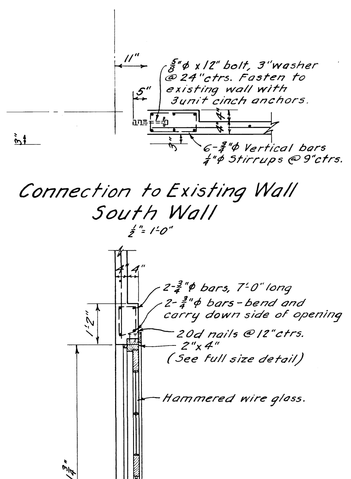
Flashing of Roof to Existing Structure

1"=1'-0"



Connection to Existing Wall North Wall

½"=1'-0"

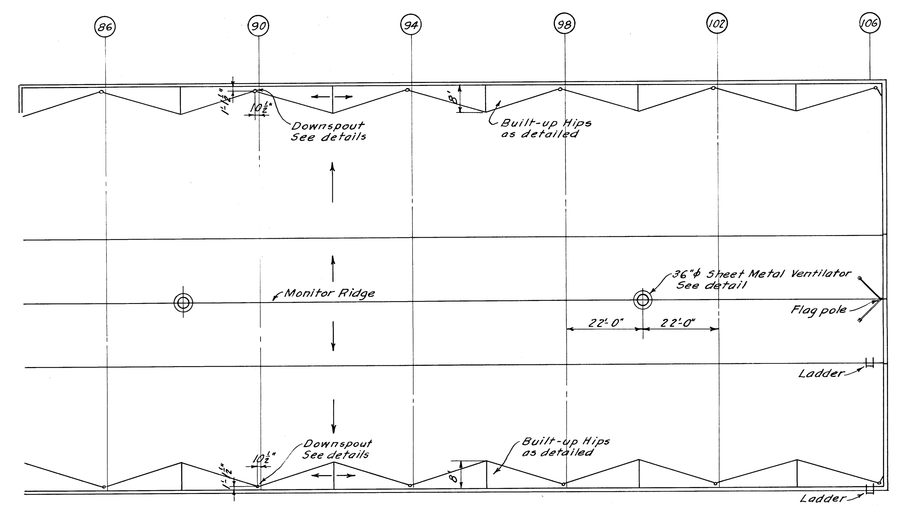


Connection to Existing Wall South Wall

½"=1'-0"

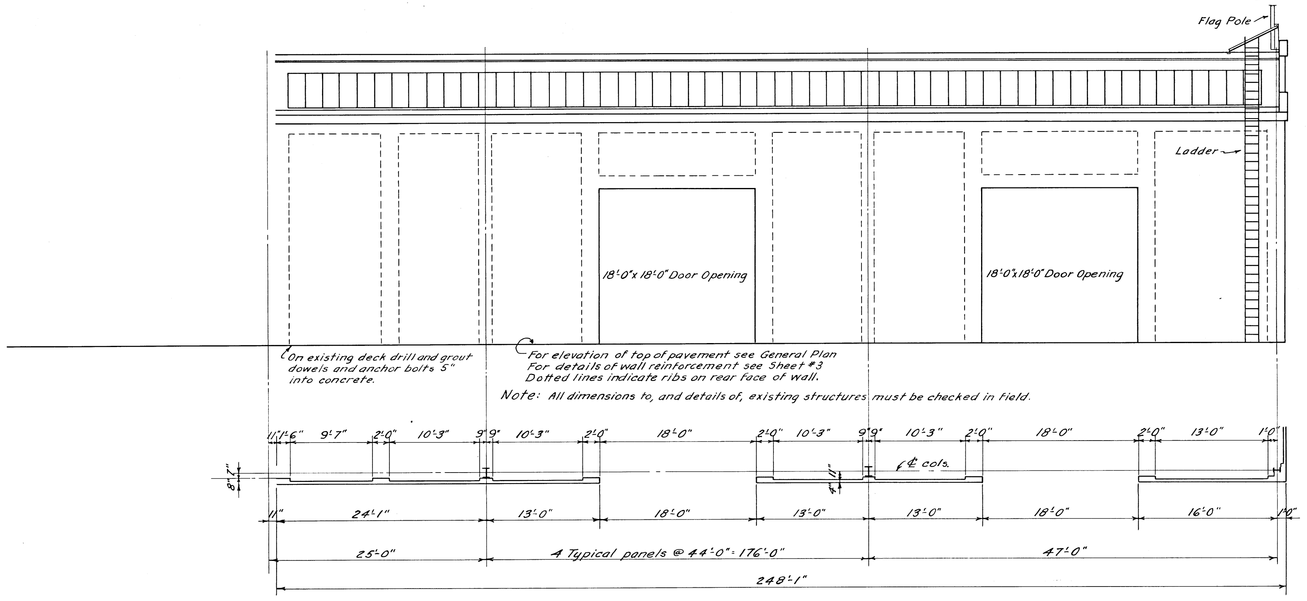
Section A-A

½"=1'-0"



Roof Plan

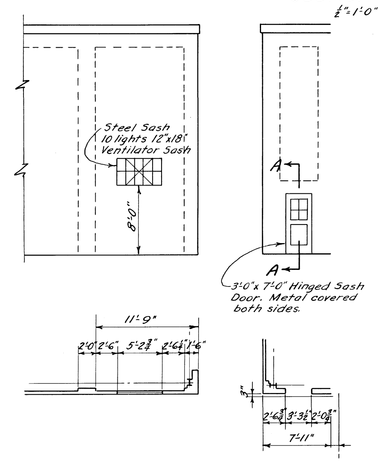
Scale: 1"=20'-0"



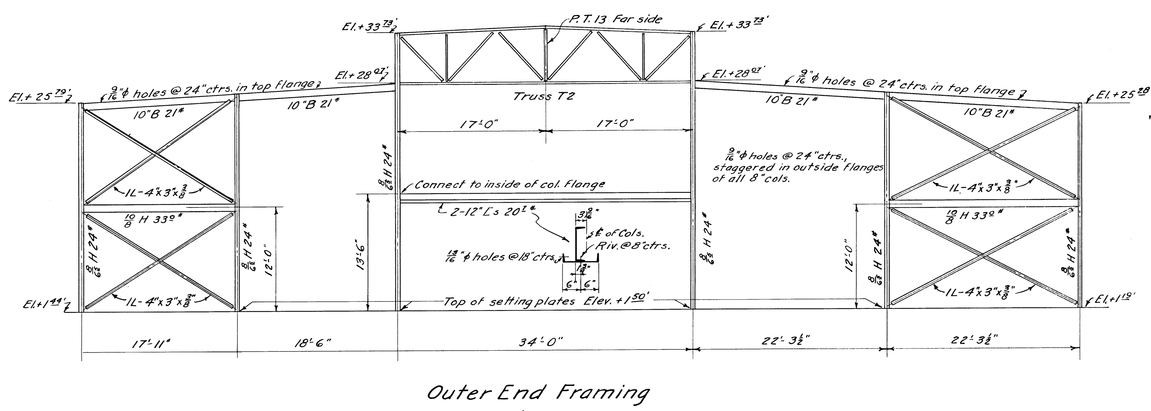
South Elevation

(North wall similar except connection to existing structure)

⅛"=1'-0"

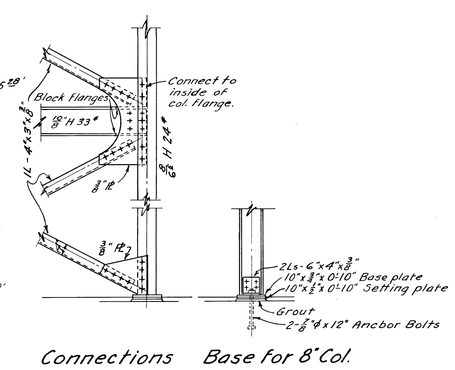


Elevation Inner End - North Wall



Outer End Framing

⅛"=1'-0"



Connections For Bracing

½"=1'-0"

Base for 8" Col.

½"=1'-0"

Respectfully submitted,
Frank G. White
Chief Engineer.

Approved,
Jos. J. Tynan
Commissioners.

PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

ALTERATIONS & ADDITIONS TO PIER NO. 38.

IN CHARGE OF A.W. Nordwell	DATE June 18, 1931
MADE BY S.A. Sedgwick	
CHECKED BY T.H. Blackwell	SCALE Indicated
DRAWING NO. 5011-11	DRAWER NO.
	SHEET NO. 1 OF 8

5011-38-1

5011-38-1

Rafter Detail

Detail of Edge of Monitor

Truss T3

Truss T2

Truss T1

Detail of Connection For Diagonal Bracing

Connection for 12'B Truss T3a

Detail of Connection for Diagonal Bracing

Typical Trusses
Scale: 3/8"=1'-0"

Typical Detail for Purlin Trusses
Scale: 3/8"=1'-0"

Typical Detail For Eave Trusses
Scale: 3/8"=1'-0"

Purlin Trusses - Outer End

Purlin Trusses Connecting with Existing Structure

Purlin Trusses Connection to Existing Cols.

Eave Trusses - Outer End

Eave Trusses-ET3

ET3-Connection to Existing Col.

Eave Truss-ET4

End Panel-PT13

General Note for Structural Steel:

All connections are to be riveted with 7/8"ϕ rivets unless otherwise noted.
All gusset plates are 3/8" thick.
Connection brackets are to be cut from beam having 3/8" web.
Unless otherwise noted fasten long leg of angle to gusset plate.
Rafters and all beams carrying nailing strips are to be punched with 3/4"ϕ holes @ 24" ctrs.
Trusses over 30ft span are to be cambered by lengthening the top chord at interior panels 1/8" per panel, end panels adjusted to suit.
Bottoms of all columns are to be milled and are to have full bearing on base plates. Base and setting plates are to be straight, rivets thru base plates are to be countersunk and chipped flush. Setting plates are to be placed at correct elevation on cement grout.
All dimensions to, and details of, existing structure are to be checked in field.
Paint: One shop coat of Red Lead, one field coat of Aluminun Graphite, as specified.

RESPECTFULLY SUBMITTED.
Harold M. White
CHIEF ENGINEER.

APPROVED.
COMMISSIONERS.

PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

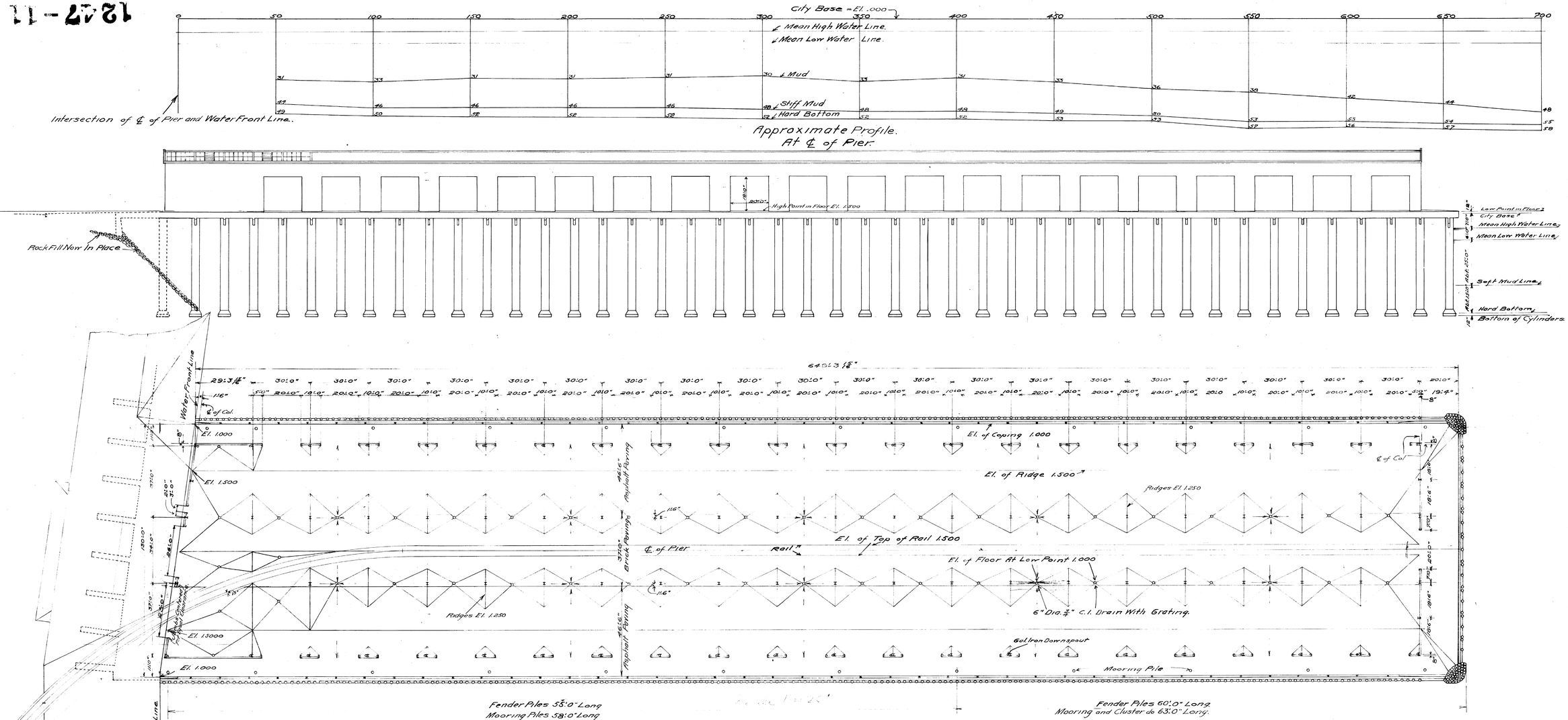
ALTERATIONS & ADDITIONS TO PIER NO. 38.

IN CHARGE OF A.W. Nordwall | DATE June 18, 1931
MADE BY G.A.S.
CHECKED BY J.U.W. Nordwall | SCALE Indicated
DRAWING NO. | DRAWER NO. | SHEET NO.
5012-11 | 2 OF 8

5012-38-1

5012-38-1

12 27-11



Board of State Harbor Commissioners
Department of Engineering

Floor Plan and Elevations.

PIER Nº 38.
San Francisco Cal.
Oct 15, 1908.

Approved Oct 15 1908.
W. U. Hayward
W. E. Dennison
Thos. J. Kennedy
Commissioners

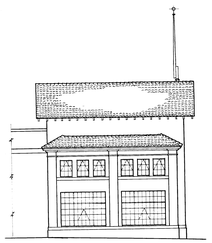
Respectfully Submitted
Ralph Parker
Assistant State Engineer.

In Charge J.G.L.
Made By H.P.W.
Checked By

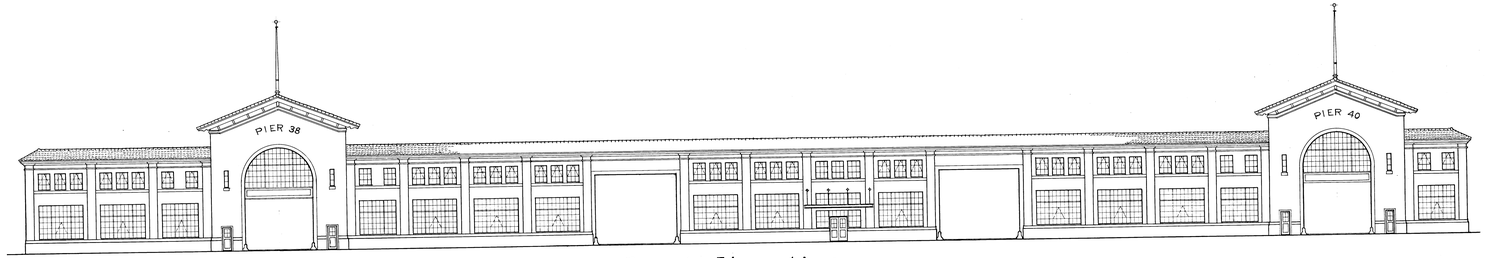
1247-38-3 (2)

1247-38-3

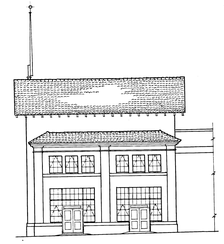
12 27-11



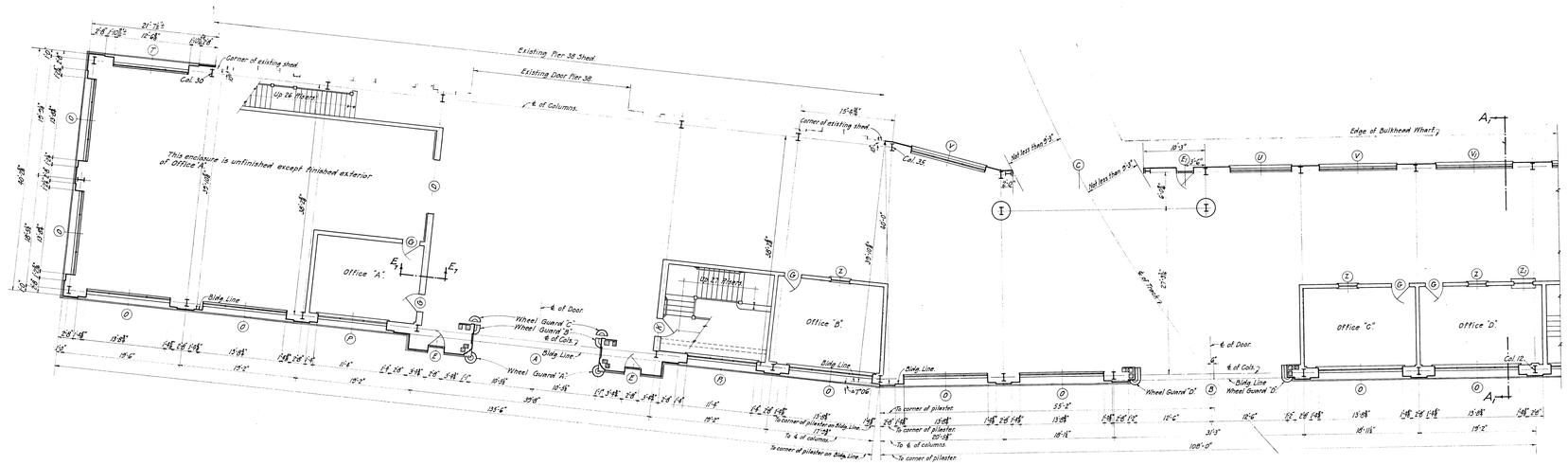
North End Elevation
Scale 1/8" = 1'-0"



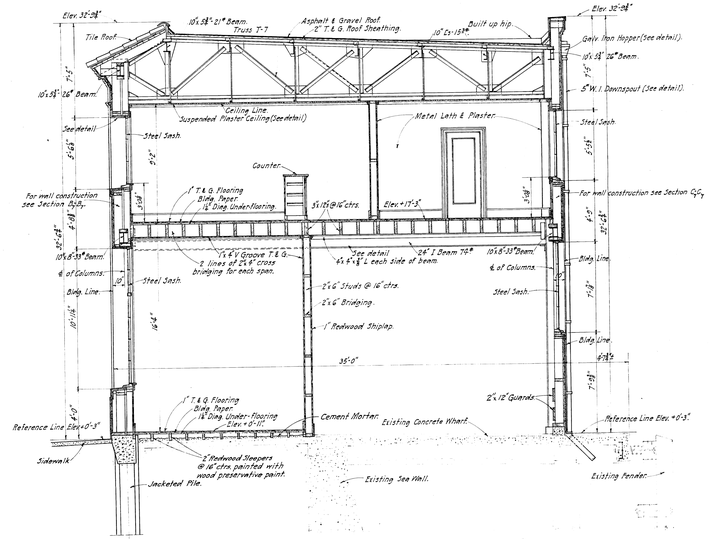
Front Elevation
Scale 1/8" = 1'-0"



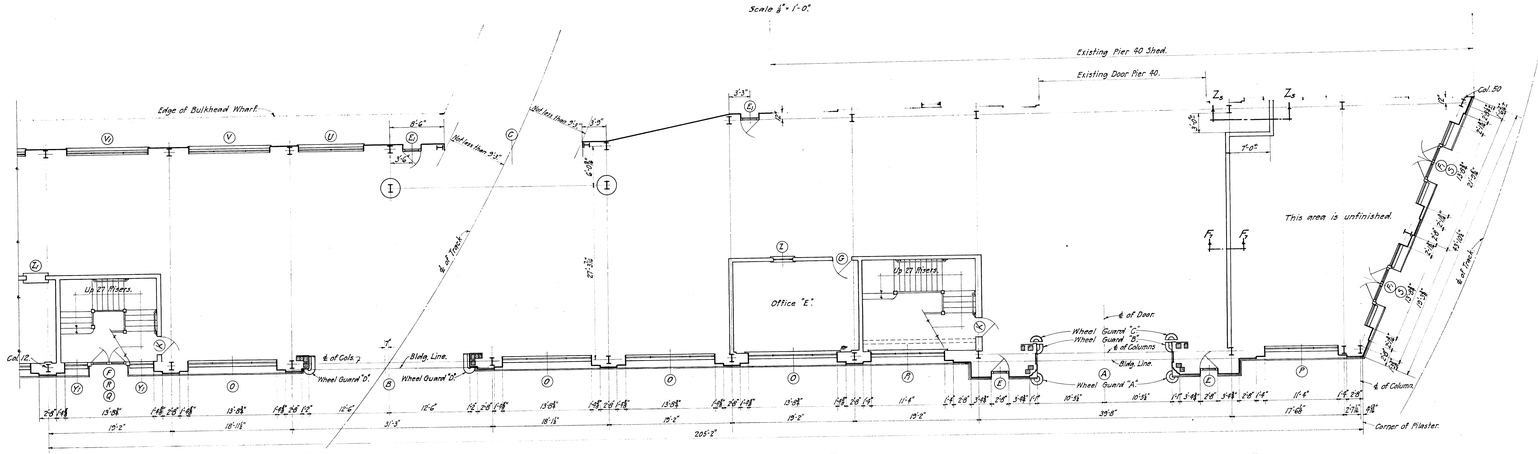
South End Elevation.
Scale 1/8" = 1'-0"



First Floor Plan - North Portion
Scale 1/8" = 1'-0"



Section A,-A,
Scale 1/4" = 1'-0"



First Floor Plan - South Portion.
Scale 1/8" = 1'-0"

GENERAL NOTE.

Dimensions of exterior walls and openings are to finished surface unless otherwise noted.
Wherever wooden sills rest on concrete they shall be of weather seasoned heart structural gyncle redwood of the sizes shown on the plans.
Underside of all wooden posts and columns and entire surface of all wooden sills resting on concrete shall be painted with wood preservative paint.
Wherever finished O.F. is shown on plans it signifies No1 clear kiln dried Douglas fir S.4.S.
Wherever finished redwood is shown on plans it signifies clear dry redwood S.4.S.
All bolts are 3/4" unless otherwise noted.
All rivets are 7/8" unless otherwise noted.
All washers, unless otherwise noted, shall be cast iron or malleable iron washers approved by the Chief Engineer.
All washers are to be dipped in red lead paint before erection and shall finally be given a finished coat of Tithanox or olive green graphite paint, depending on location.
Lengths of all angles, unless otherwise noted, shall conform to width of sizes on surfaced lumber.
All wooden nailing strips shall be bolted to steel sections with 1/2" carriage bolts, spaced at 24" ctrs. staggered for double row of bolts and at 24" ctrs. for single row of bolts.
Contractor shall provide two lines of 2"x 8" cross bridging at third point of all second floor joist spans.
All flashing shall be NT 22g. Galvanized iron except where lead or copper flashings are noted.
Steel Rolling Doors and door guide angles are not in Building Contract.
Full size details of all windows, hinged doors, mouldings and cornices will be furnished to the Contractor as needed.
Subscripts to section letters indicate sheet on which the section is shown.
Existing work is shown in light lines thus.
Contractor shall verify all dimensions on job.
All offices marked A, B, C, D and E shall be sheathed on walls and ceilings with 1/4" V Groove T & G. and be floored with double flooring as specified.
Fasten all C.I. door thresholds to concrete with 3-3/4 cinch anchors, (2 Unit).
All window sills shall receive a prime coat of Tithanox paint.

REVISED Jan. 16, 1935.

RESPECTFULLY SUBMITTED. Frank G. White, CHIEF ENGINEER.

APPROVED, June 28, 1934.
[illegible] COMMISSIONERS.

PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS.
DEPARTMENT OF ENGINEERING.

PLANS FOR BULKHEAD BUILDING AT PIERS NO. 38 AND NO. 40.

IN CHARGE OF H.A. Fisher	DATE June 18, 1934.
MADE BY E.Jackson	SCALE As Indicated
CHECKED BY H.Fisher	DRAWING NO. 5301-11
GRAWER NO.	SHEET NO. 1 OF 20

5301-38-1

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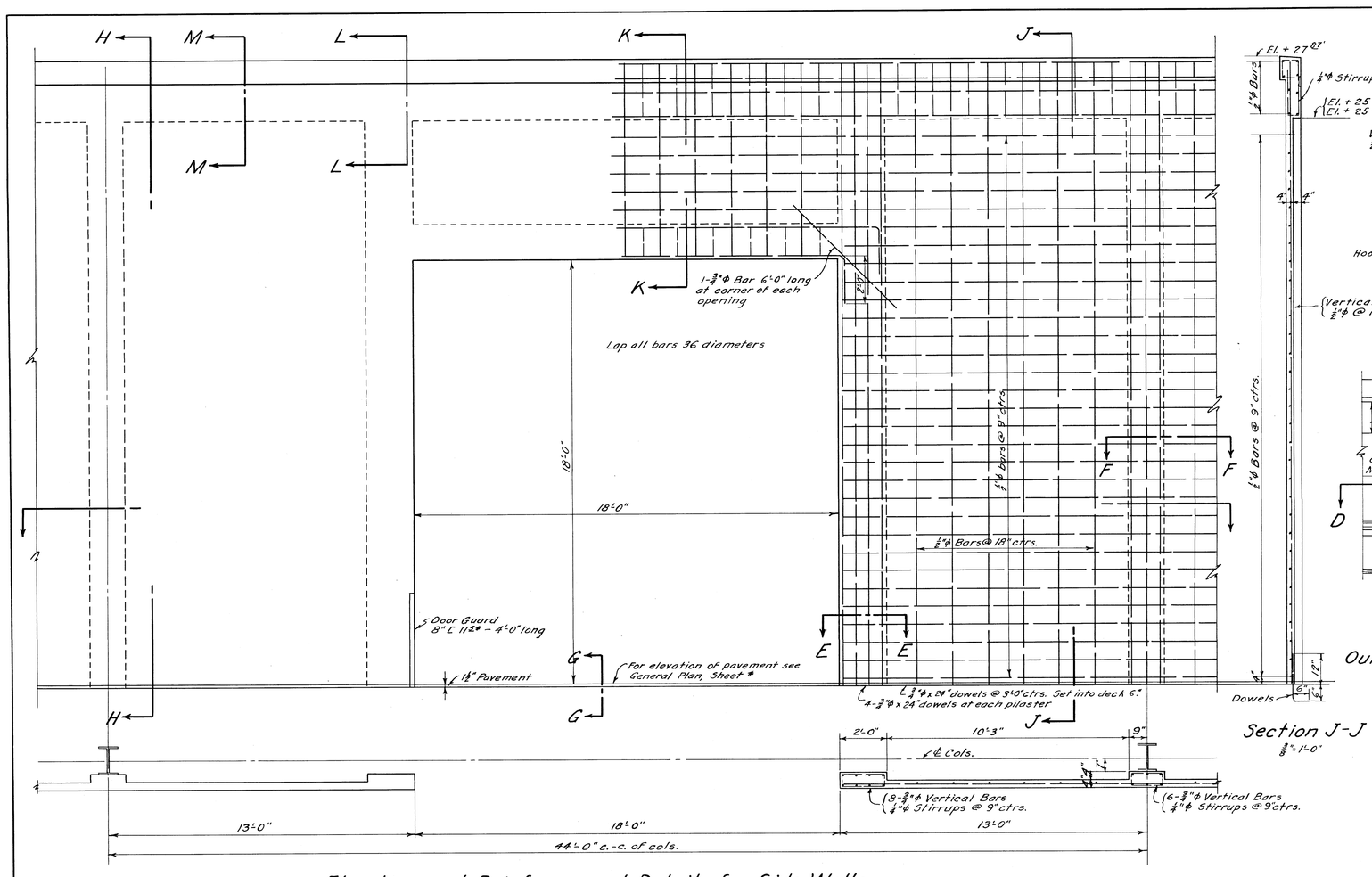

Elevation and Reinforcement Details for Side Walls

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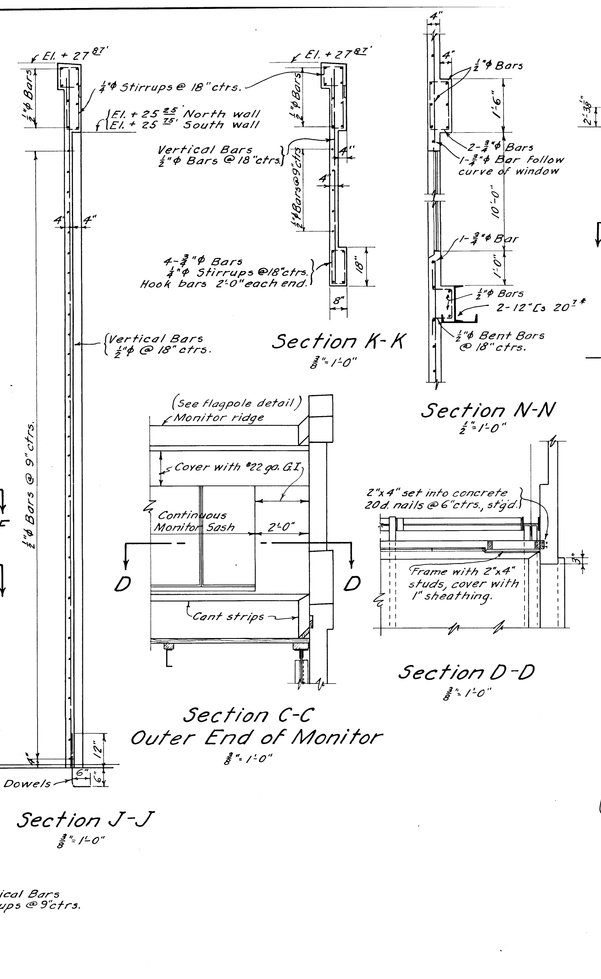

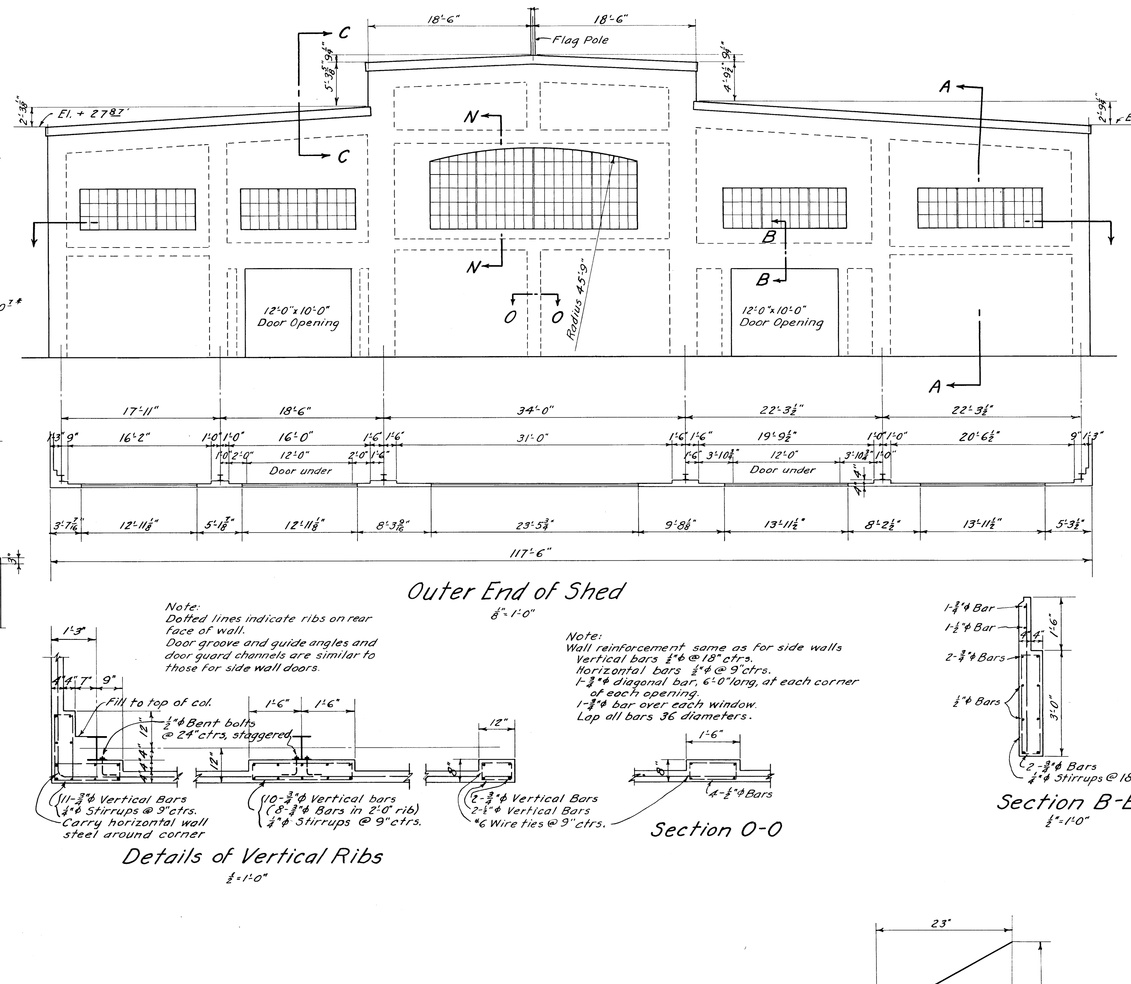

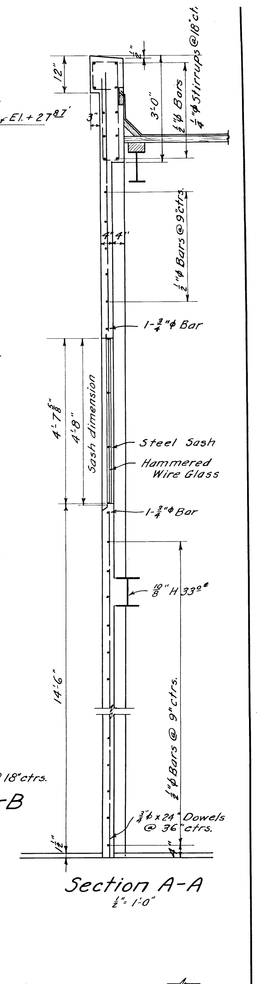

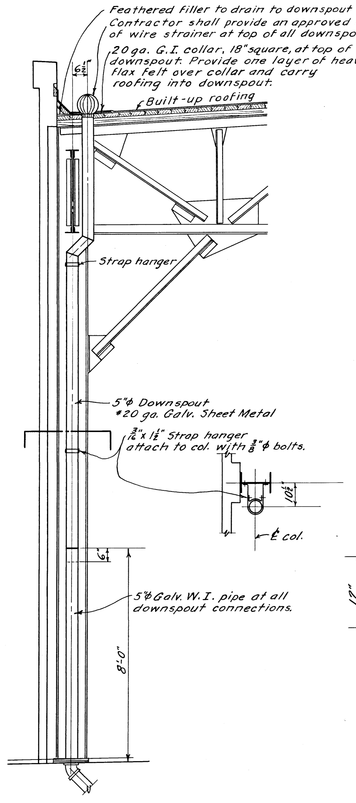

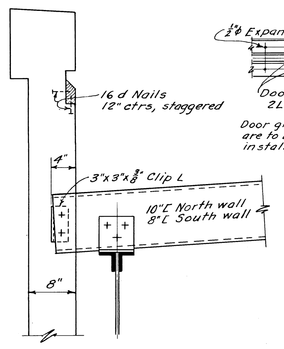

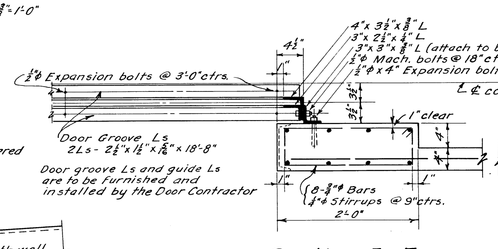

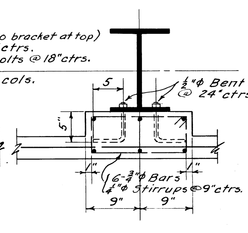

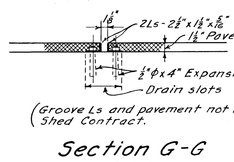

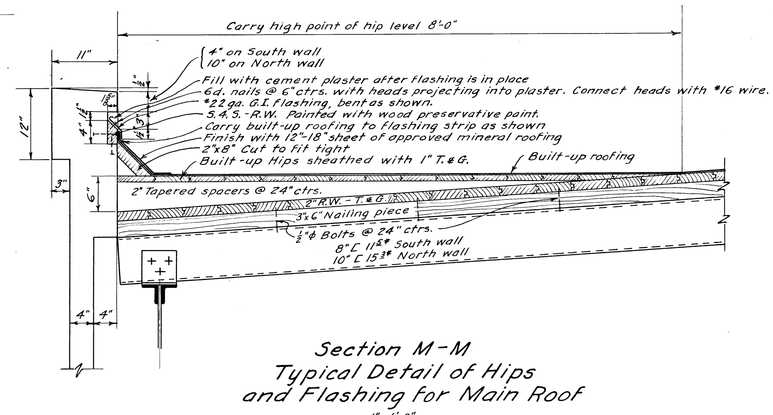

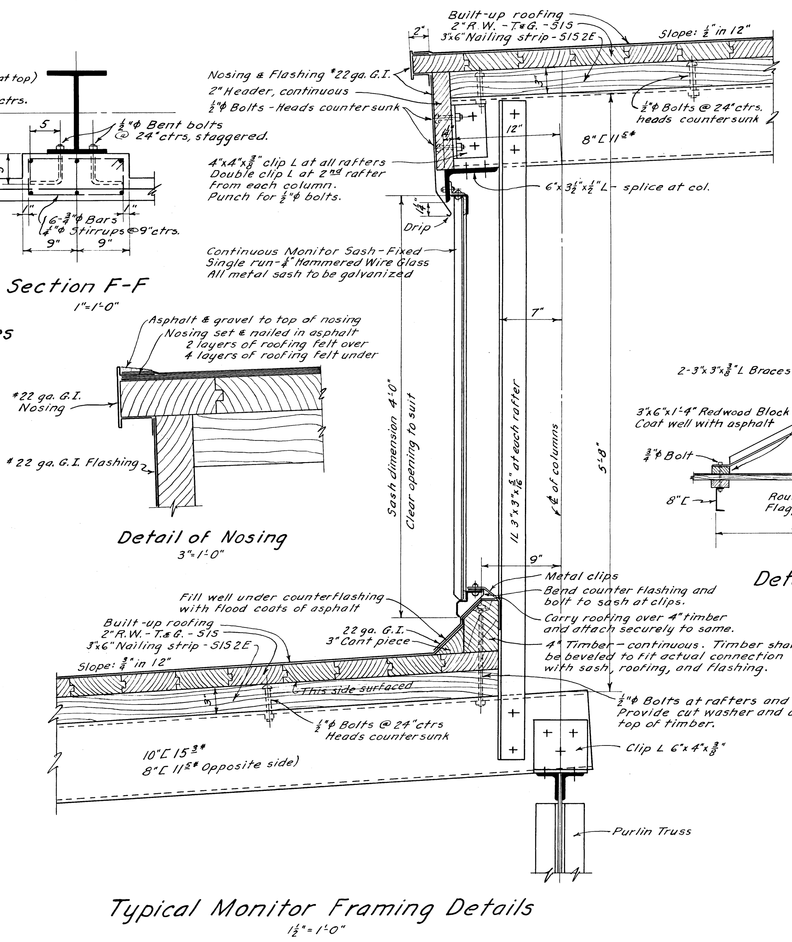

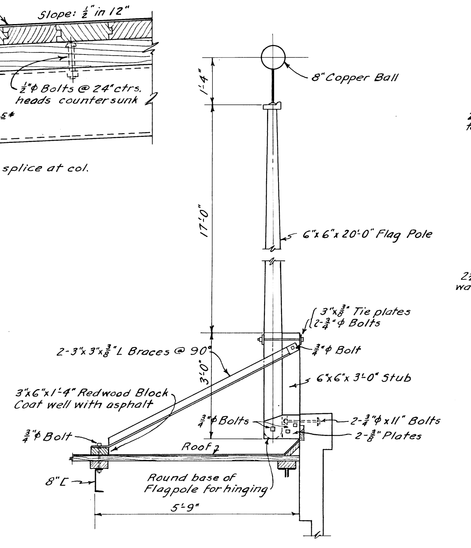

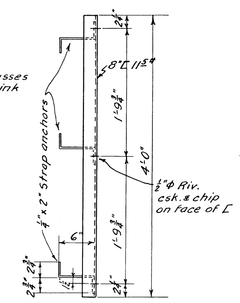

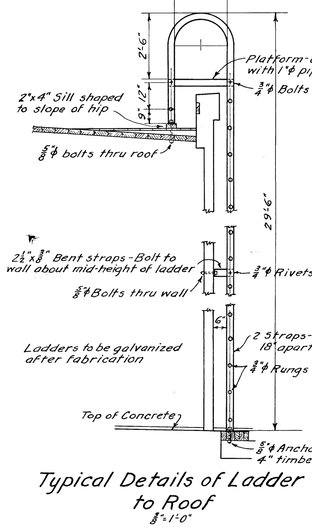

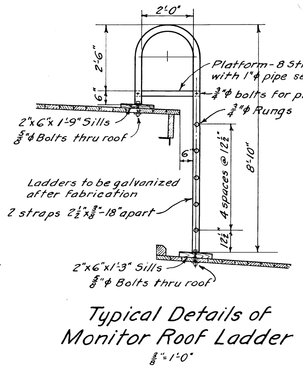

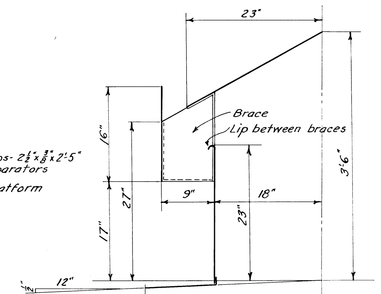

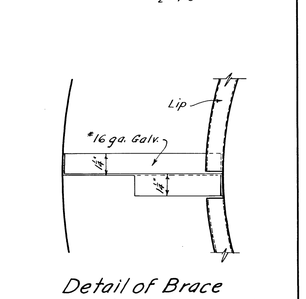

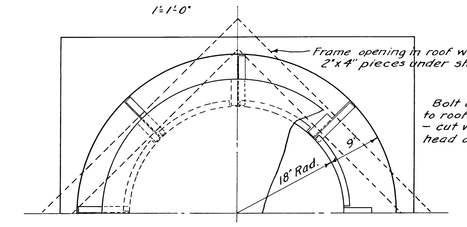

RESPECTFULLY SUBMITTED.

Frank G. White
CHIEF ENGINEER.

APPROVED.

COMMISSIONERS.

PORT OF SAN FRANCISCO
BOARD OF
STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

ALTERATIONS & ADDITIONS TO PIER NO. 38.

IN CHARGE OF A.W. Nordwall	DATE June 18, 1931
MADE BY G.A.S.	
CHECKED BY A.W. Nordwall	SCALE Indicated
DRAWING NO. 5013-11	DRAWER NO.
	SHEET NO. 3 OF 8

REQUEST FOR PROPOSALS
PIER 38 BULKHEAD REHABILITATION PROJECT

CITY AND COUNTY OF SAN FRANCISCO

Edwin M. Lee, Mayor

SAN FRANCISCO PORT COMMISSION

Doreen Woo Ho, President
Kimberly Brandon, Vice President
Willie Adams, Commissioner
Leslie Katz, Commissioner

Monique Moyer, Executive Director

November 16, 2012

Request for Proposals

Pier 38 Bulkhead Rehabilitation Project

Table of Contents

Summary of Offering

Opportunity:	The Port of San Francisco is seeking submittals of proposals to rehabilitate the Pier 38 bulkhead structure and a limited portion of the Pier 38 shed (the "Pier 38 bulkhead building"). Respondents are invited, though not required, to also submit their qualifications for possible redevelopment of the entire or majority of the Pier 38.
Location:	Pier 38, at The Embarcadero and Townsend Street.
Capital Investment:	Investment in mechanical, electrical and plumbing upgrades, Americans with Disabilities Act ("ADA"), egress, structural and other improvements required to rehabilitate the Pier 38 bulkhead building. Seismic upgrade of the pier is not assumed. Business terms will reflect the private investment required.
Historic Building:	Rehabilitation of Pier 38 must be consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties.
Lease Duration:	The lease term is expected to be 10 years or a term needed to amortize the rehabilitation of the Pier 38 bulkhead building capital investment.
Financial Terms:	Fair market rent with periodic rent increases.
Selection Process:	Following evaluation of minimum qualifications, the Port will evaluate proposals for the rehabilitation of the Pier 38 bulkhead building from respondents outlined in this RFP. Port staff will recommend to the Port Commission the most qualified respondent based upon the evaluation criteria stated herein.
Submittal Due Date:	Proposals must be delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111 no later than 5:00 pm PST on **February 22, 2013**.
Pre-Submittal Meeting/ Pier 38 Tour:	**December 11, 2012**
Contact:	John Doll, Port of San Francisco Pier 1, San Francisco, CA 94111 (415) 274-0639 john.doll@sfport.com

I. THE OPPORTUNITY

A. Overview

Through this Request for Proposals ("RFP"), the Port of San Francisco seeks statements of qualifications and proposals from respondents interested in rehabilitating and re-tenanting the Pier 38 bulkhead building (collectively and hereafter, the "Rehabilitation Concept"). The Port's goal is to perform needed health and safety upgrades to the Pier 38 bulkhead building to permit re-occupancy as soon as possible without triggering an expensive pier seismic upgrade or a lengthy entitlement process. A Port-funded Creegan & D'Angelo conditions study illustrating various alternatives on how the Pier 38 bulkhead building may be developed is attached to this RFP.

The Port also understands that there may be a long-term development opportunity for the entire or majority of Pier 38, not just the Pier 38 bulkhead building, because of its proximity to existing or proposed waterfront facilities and existing development. Any long-term development for the entire or majority of Pier 38 will necessitate an expensive seismic upgrade and most likely a lengthy entitlement process.

This RFP is for rehabilitation of the bulkhead building only. However, respondents to this RFP will have to demonstrate that the rehabilitation to the Pier 38 bulkhead building will not inhibit the potential long-term redevelopment of Pier 38 (i.e., respondents must consider ways the bulkhead building project might be designed and operated that allows for a phased redevelopment of Pier 38).

After the successful completion and operation of the Pier 38 bulkhead building, the Port Commission, in its sole and absolute discretion, may elect, but is not obligated, to work with the selected respondent for a long-term redevelopment plan of the entirety or majority of Pier 38.

B. The Offering

The Port seeks qualified respondents to submit statements of qualifications and written proposals for the Rehabilitation Concept. Respondents may consider the information provided by the attached Creegan & D'Angelo's "Final Report regarding Pier 38 Building Code Compliance and Occupancy Study." This Final Report includes repair options that were based on repair options that would not trigger a pier seismic upgrade.

The intent of this RFP is to solicit respondents with demonstrated experience in rehabilitating, developing, leasing, and operating facilities similar to Pier 38. An ideal candidate would have experience with historic rehabilitation of waterfront structures, an ability to attract financial resources, an ability to identify and secure uses and activities, and a demonstrated ability to

operate and manage real estate projects once completed. In addition, such a candidate would have a proven track record of working with public agencies to achieve the Port's objectives set forth in this RFP.

Responses to the RFP must include a Rehabilitation Concept implementation strategy to repair and re-tenant the Pier 38 bulkhead building as soon as feasible. Under the Rehabilitation Concept, the following uses and activities are encouraged:

- Restaurants, visitor-serving commercial, entertainment and cultural uses
- Office, high technology in particular, development uses that support adaptive reuse
- Maritime uses that complement location and adjacent waterfront development

The Rehabilitation Concept for the Pier 38 bulkhead building will require substantial investment to bring back to active use. The selected respondent will be expected, among other things, to remedy structural deficiencies, replace or repair mechanical, electrical and plumbing systems, address egress and ADA issues, and construct any other improvement needed to meet the City's building code requirements as well as other regulatory requirements, including consistency with the Secretary Standards.

The Port will require that the Rehabilitation Concept be funded through private sector investment and that the Port expects the successful respondent to fund physical improvements and provide for on-going operating/maintenance costs as well as provide security for the entire pier. The negotiated lease between the Port and a successful respondent will be at fair market rent. The lease term is expected to be 10 years or a term needed to amortize the Rehabilitation Concept investment.

As noted above, respondents must also demonstrate how the Rehabilitation Concept will not hinder a long-term reuse of Pier 38. In other words, respondents must ensure that the short-term construction (e.g., building and pier engineering) and operation (e.g., accessibility) will not hinder possible subsequent redevelopment of the entire or majority of Pier 38.

II. PIER 38 BACKGROUND

The Port of San Francisco's Pier 38 was first built in 1908 and was utilized as a break bulk storage facility. The original superstructure was comprised of a shed of exposed steel construction and concrete roof decking. A later 1932 addition to the Pier was added at the east end of the pier with a slightly wider footprint utilizing wood decking in lieu of concrete at the roof. Between 1934 and 1936, the bulkhead building fronting The Embarcadero was constructed to house office space. It was constructed as a separate steel frame structure with exposed wood framed walls and floors and sits directly in the front of the original shed. Pier 38 is a contributing resource to the Port of San Francisco Embarcadero Waterfront Historic District and as such is considered a qualified historic building or property subject to the California Historic Building Code.

In January 1996, Pier 38 Maritime Recreational Center and Carl Ernst (collectively, the "Prior Tenant") entered into a 20-year lease for the entire Pier 38 site. Starting in 1999, portions of the bulkhead building and shed were built-out for restaurant use (but never occupied) and office space use without permits.

As a result of unlawful detainer action initiated by the Port, the Prior Tenant was evicted from Pier 38 and surrendered possession on or about August 1, 2011. On September 2, 2011, the Port's Chief Harbor Engineer declared the Pier 38 shed, office spaces and north apron unsuitable for any occupancy due to health and safety violations. Occupants were asked to vacate the premises on September 30, 2011. By October 20, 2011, all occupants housed in the Pier 38 bulkhead building and pier shed were vacated. However, as of issuance of this RFP, three vessels remain moored at Pier 38, without Port approval.

As attached, recent Port Commission staff reports provide additional Pier 38 background information regarding closure, reuse options and solicitation options.

III. REGULATORY CONTEXT

The Port Commission will consider approval of any transaction agreements for Pier 38. A lease will be subject to Section 9.118(c) of the San Francisco City Charter that requires approval of the Board of Supervisors for leases in excess of ten years or anticipated revenues of $1 million or more in total revenue. The following information is intended to provide a regulatory context; it is not meant to be an exhaustive summary.

A. Waterfront Land Use Plan

Pier 38 is located in the South Beach/China Basin Waterfront Area in the Port's Waterfront Land Use Plan ("Waterfront Plan"). The Waterfront Plan identifies the following objectives for the South Beach/China Basin Waterfront Area:

- Preserve and rationalize existing industrial maritime activities in the area.
- Preserve and improve existing maritime uses that provide focal points for public enjoyment of commercial and recreation oriented maritime activities.
- Promote activities and public access to make the waterfront inviting and safe, and improve the living environment of the new and emerging Rincon Hill, South Beach and Mission Bay neighborhoods.
- Take advantage of proximity to downtown San Francisco by providing attractions for the general public, while respecting the needs of adjacent residents.
- Create an integrated series of public access improvements that extend a shoreline PortWalk through the area, and provide a unifying pedestrian connection between South Beach and Mission Bay at China Basin Channel.
- Establish high standards in the design of new development that give rise to a new architectural identity for the shoreline north of China Basin Channel.

Pier 38 is also part of the South Beach Harbor Mixed Use Opportunity Area under the Waterfront Plan, which includes the following Development Standards:

- Permit expansion of excursion boat operations and recreational boating activities at Pier 38.
- Permit consolidation of maritime support services at Pier 38.
- Permit interim uses on Pier 38 until long-term uses of these facilities can be realized.
- Apply "Good Neighbor" standards to bars, restaurants which sell alcohol, large fast food restaurants, and assembly and entertainment uses on Pier 38, unless the Port Commission makes a specific finding that a particular condition is unnecessary or infeasible.
- The design of any new development on Pier 38 should provide appropriate buffers, setback or other design solutions for open air bars, restaurants, and nighttime

entertainment activities that front The Embarcadero as necessary to mitigate noise impacts from such uses on residential neighbors.

The Waterfront Plan identifies the following acceptable uses for Pier 38: ferry and excursion boats, maritime office, maritime support services, recreational boating and water use, ship repair, temporary and ceremonial berthing, water taxis, public access, museums, retail (including restaurants), artists/designers, and wholesale trade with accessory uses of parking and storage.

B. State Lands Commission and the Public Trust

Like the majority of Port properties, Pier 38 was historically composed of tide and submerged lands owned by the State and subject to the common law public trust doctrine. Public trust lands are held on behalf of the people of the State for purposes of navigation, fisheries and commerce. Tide and submerged lands remain subject to the trust even after they have been filled, unless the trust is terminated by the Legislature. Pier 38 and other State sovereign lands were transferred in 1969 to the City pursuant to the Burton Act, subject to the trust and other requirements of the Burton Act. The California State Lands Commission ("State Lands") has oversight and enforcement authority over Port Commission development projects and, as reflected in recent San Francisco waterfront projects, is frequently asked to affirm a particular project's consistency with the public trust.

The public trust generally prohibits certain uses (e.g., general office, housing, many types of retail, commercial, and non-water-oriented recreational uses) in favor of maritime, open space, environmental restoration and visitor-serving facilities (including tourist retail, hotels, and parking areas). State Lands has recognized preservation of historic maritime facilities as a public trust activity provided substantial public trust uses are part of the project and the public has ample access to view the historic preservation. Accordingly, State Lands has been willing to allow some portion of historic structures to include non-trust uses, where those uses will generate revenue to finance pier repair and rehabilitation consistent with the Secretary of the Interior Standards for Historic Rehabilitation, public trust uses are part of the project, and public access to view the historic features of the structure. Non-trust uses are typically prohibited in facilities constructed on trust property.

C. Port Maritime Industry Preservation Policy

This policy guides the Port Commission in determining whether to rehabilitate any one of its assets and attests to the Port's commitment to protect the Port's remaining natural deep water berths for active maritime uses. The policy requires that such berths be used by seaworthy vessels and encourages development and/or rehabilitation of Port assets that include improvements to maritime deep water berthing facilities.

D. Environmental Review

As required by the California Environmental Quality Act ("CEQA"), any proposed project that may have an environmental impact will undergo environmental review; the CEQA process may not be waived by the Port Commission or the Board of Supervisors. Respondents must comply with all CEQA requirements before the Port Commission or the Board of Supervisors will consider project approval and/or lease execution.

E. Historic Preservation Process

Pier 38 is a contributing resource to the Port of San Francisco's Embarcadero Waterfront Historic District which is listed in the National Register of Historic Places. As part of the District's nomination, the Port developed Historic Preservation Review Guidelines ("Guidelines") to define how the Secretary of the Interior's Standards for Rehabilitation ("Secretary's Standards") should be interpreted and applied to the repair of historic pier substructures, such as Pier 38, to ensure its responsible management and stewardship. The Guidelines define parameters for the repair, maintenance or alterations to Pier 38's pile foundations, substructures, deck and the bulkhead wharf upon which Pier 38 resides.

F. San Francisco Bay Conservation and Development Commission ("BCDC")

BCDC is a state agency that has jurisdiction over the San Francisco Bay and the first 100 feet inland from its shoreline. BCDC regulates new development, as well as improvements and use of Port structures, within its jurisdiction to ensure, among other things, that maximum feasible public access to and along the Bay is provided. For major leases and most renovation of Port structures, BCDC along with its Design Review Board reviews these projects in conformance with the BCDC San Francisco Bay Plan and the San Francisco Waterfront Special Area Plan and issues a Major Permit with the leaseholder and Port as co-applicants.

IV. DEVELOPMENT OBJECTIVES

The Port has defined these development objectives for the Pier 38 Rehabilitation Concept:

- Repair the Pier 38 bulkhead building which may include: remedy structural deficiencies, replace or repair mechanical, electrical and plumbing systems, and construct any other improvements, including egress and ADA, needed to meet the City's building code requirements as well as other regulatory requirements, including consistency with the Secretary Standards.

- Develop the most effective implementation strategy to quickly re-tenant the Pier 38 bulkhead building in order to achieve the Port's goal of bringing it back into economic use and provide an on-going revenue stream to the Port.

- Encourage the re-tenanting of the Pier 38 bulkhead building to include: office, high technology uses, visitor-serving commercial, entertainment and cultural uses, and, maritime uses that complement adjacent waterfront development.

- Continue the redevelopment of the South Beach waterfront from the Bay Bridge to AT&T Ballpark, by reviving this historic structure, and helping knit Pier 38 into the South Beach neighborhood by bringing people and business activity to the waterfront.
- Demonstrate how the short-term Pier 38 bulkhead building rehabilitation will not inhibit a long-term reuse of Pier 38 (i.e., ensure that the short-term construction and operation would not hinder possible subsequent redevelopment of the entirety or majority of Pier 38).
- Develop a plan to improve the physical appearance of the bulkhead building and pier shed.
- Require that any adaptive reuse will be consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties ("Secretary Standards").
- Require a sustainable development program that minimizes the reliance on private automobiles, uses energy efficiently and, as possible, includes alternative energy sources that comply with the City's Green Building Standards.
- Secure private financial investment to rehabilitate and revive the Pier 38 bulkhead building in the near term.

- Provide business and employment opportunities for local workers and businesses during the design, construction and operation phases of the Pier 38 bulkhead building.

- Provide security for the entire Pier 38.

V. MINIMUM QUALIFICATIONS & EVALUATION CRITERIA

A. Minimum Qualifications

Each respondent must meet the following minimum requirements for consideration of its Rehabilitation Concept. The Port will not consider or evaluate submittals from respondents that do not meet these minimum requirements:

1. A minimum of 10 years' experience in commercial real estate development
2. Successful completion of at least 3 real estate development projects of similar size and scope to the project proposed, at least one of which must be historic preservation project documented to have met with Secretary Standards
3. Superior credit history and demonstrated ability to finance the project proposed on commercially reasonable terms from equity or debt from bona fide financial institutions

Any submittal that does not demonstrate that the respondent meets these minimum requirements by the Submittal Due Date will be considered non-responsive, its Rehabilitation Concept will not be reviewed or evaluated, and such respondent will not be eligible for award of the contract. All respondents that meet the minimum requirements will have their respective submittals scored by an evaluation committee on the following criteria:

B. Evaluation Criteria

Evaluation of the submittals from all respondents that meet minimum qualifications will focus on the capability of the respondent and the strength of the Rehabilitation Concept proposed. The evaluation criteria below will be used to assess the relative strength of each submittal.

1. <u>Developer Qualifications</u> (25 Points)
    a. Respondent's track record in successfully rehabilitating and developing projects of comparable size, land use, visibility and expense, especially for projects located in the San Francisco Bay Area
    b. Experience of respondent's team members and key personnel
    c. Experience with waterfront and/or historic preservation projects, in particular with meeting Secretary Standards
    d. Experience with projects in identifying and securing target tenants, defining the scope, structuring the transactions, securing necessary approvals, and managing the construction process
    e. Demonstrated ability to operate and maintain real estate projects once completed, including sustaining occupancy and addressing on-going operational needs
    f. Proven ability to work with public agencies to achieve development

g. Track record of local hiring and participation of locally owned businesses in prior projects

h. Demonstrated ability to work with local organizations and/or address community concerns

i. Demonstrated understanding, ability and flexibility to obtain key approvals in a complex political and regulatory context

2. Financial Capability (15 points)

   Demonstration that the respondent has the required equity and/or the ability to attract equity or debt for projects similar in scope and cost to the proposed Rehabilitation Concept as evidenced by:

   a. Financing of comparable projects

   b. Access to sufficient debt and equity, including risk equity, for the project proposed

   c. Ability to offer guarantees of bonding arrangements to ensure timely completion of the proposed project

   d. On-going relationships with financial sources

3. Proposed Design, Construction and Tenant Program (40 points)

   a. Strategy to re-tenant the bulkhead building with uses that best meets the Development Objectives

   b. Design and construction plan to ensure the repairs to the bulkhead building will be consistent with the City's building code and Secretary Standards.

   c. Strategy to obtain approvals for the proposed design and construction, as noted above in the Regulatory Context

   d. Demonstrated strength of real estate market for proposed tenant use

   e. Demonstration of how the short-term Pier 38 bulkhead building rehabilitation will not inhibit a long-term reuse of Pier 38 (i.e., ensure that the short-term construction and operation would not hinder possible subsequent redevelopment of the entirety or majority of Pier 38).

4. Proposed Financial Terms (20 Points)

   a. Cash flow projections that demonstrate the project, once operational, will meet all lease, debt service, and operating expenses

   b. Proposed annual rent structure to the Port

C. Interviews

Following the submittal process, the most qualified respondents may be invited to interviews with an evaluation panel. Interviews will consist of standard questions asked of selected respondents, and specific questions regarding individual Rehabilitation Concept proposals. Written submittals and interviews will be worth 100 points. The lead staff of the respondent should be present for the interview as well as the lead staff of any partners.

VI. SOLICITATION SCHEDULE

A. Schedule

The Port reserves the right to modify the schedule.

- Issuance of RFP: November 16, 2012
- Pre-submittal meeting and Pier 38 tour: December 11, 2012
- Deadline for submission of written questions: December 21, 2013
- Submittal due date: February 22, 2013
- Port Commission consideration: Spring 2013

B. Questions Regarding RFP

Any requests for information concerning, or clarification of, this RFP must be submitted in writing before December 21, 2013 to John Doll, Port of San Francisco by email to john.doll@sfport.com.

Responses to all questions directed to Port staff either at the pre-submittal meeting or writing will be posted on the Port's website for this RFP. Respondents are presumed to have received any and all information contained in this RFP or posted on the Port's website for this RFP. Accordingly, the Port strongly recommends that parties consult the Port's website frequently to determine if new information relating to this RFP is available.

C. Pre-Submittal Meeting/Pier 38 Tour

Interested parties are strongly encouraged to attend the pre-submittal meeting on December 11, 2012 at 10 am the Port's offices, Pier 1 (The Embarcadero and Washington Street) in San Francisco. Port staff will address questions and provide any new information then available. Following the presentation, Port staff will lead a tour of Pier 38 at 1:30 pm on December 11. Please RSVP to john.doll@sfport.com to attend the pre-submittal meeting and Pier 38 tour.

VII. SUBMITTAL REQUIREMENTS

A. Time and Place for Submission of Proposals

Proposals must be delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111 for receipt no later than 5:00 pm PST on February 22, 2013.

The following items must be included in your responses and packaged in a box or envelope clearly marked: "Request for Proposals: Pier 38 Bulkhead Rehabilitation Project" and addressed to the attention of John Doll, Development Project Manager:

1) Proposal must include original printed proposal with five (5) copies. Please do not bind, other than with a staple, the application and additional pages and do not submit in a binder or other folder.

2) One CD-ROM containing entire contents of responses, including all attachments. The CD-ROM and electronic files on the CD-ROM must be labeled with the proposer's name. All files should be submitted in unprotected PDF or Word format.

Proposals that are not received at the designated address before the specified deadline will not be accepted. Facsimile reproductions of proposals also will not be accepted.

B. Submittal Format

There are three components to the required submittal:

1. A "Project Summary" that introduces the respondent and describes the Rehabilitation Concept proposed.
2. A "Technical Information" submittal that provides materials to be used in the evaluation that will not be made public during the evaluation process.
3. A "Confidential Financial Materials" submittal to evaluate financial capacity of the respondent.

The Project Summary must be formatted to allow the Port to post them on the Port's website (with a maximum file size of 5 megabytes).

The Technical Information submittal must include the respondent team description, qualifications, pro-forma and other information. These documents are subject to the Sunshine Ordinance (Administrative Code Section 67.24(e)), and all responses and other communication from interested parties must be open to inspection by the public upon request immediately after a lease is awarded.

Each respondent should submit one copy of its financial information in a separate sealed envelope, designated "Financial Materials". Each respondent must clearly mark any of the financial materials that it in good faith believes to be a trade secret or confidential proprietary information protected from disclosure under applicable law. To the extent permitted by law, the Port Commission will attempt to maintain the confidentiality of financial materials marked confidential and/or proprietary, but respondents are cautioned that, in accordance with the Sunshine Ordinance, responses and other communications from interested parties must be open to inspection by the public upon request immediately after a lease is awarded. Proprietary financial information submitted by a respondent in response to this RFP will not be disclosed until and unless that respondent is awarded the lease.

Submittals must be prepared and submitted in an organized manner. Information must be printed on recycled paper, double-sided to the greatest extent possible. Page numbers are required and tab dividers would be appreciated.

C. Submittal Contents

1. Project Summary

a) Development Entity

Describe the respondent and team members.

b) Developer Qualifications

Describe waterfront and/or historic preservation projects of comparable size, land use, visibility and expense, especially for Bay Area projects undertaken by the respondent and team members.

c) Pier 38 Rehabilitation Concept

(1) Describe the proposed Rehabilitation Concept. Demonstrate its constructability and explain what uses and activities will occur and how they meet the Port's development objectives.

(2) Summarize the Rehabilitation Concept in one table showing uses and capital investment.

(3) Describe use program.

(4) Identify any synergies or conflicts with existing or planned adjacent waterfront development.

d) Rehabilitation Strategy to Ensure a Successful Project

(1) Describe the proposed Rehabilitation Concept plan and how respondent will address integrating modern building systems into an historic structure.

(2) Provide a site plan showing proposed uses.

(3) Explain proposed sources and uses of capital investment; describe the operational and management plan for the proposed rehabilitation.

(4) Provide a schedule and strategy to secure regulatory approvals for the proposed project through occupancy.

(5) Explain how once the construction and re-tenanting/operation is accomplished, a long-term reuse of Pier 38 might be seamlessly phased.

2. Technical Information

a) Development Entity and Team

(1) Identify and describe the development entity submitting a proposal for the project. Include the responsibilities, name, address, telephone and email address of the principal developer (and relevant joint venture partners), and any other information, including references, about the development entity that may be pertinent to this opportunity. Joint ventures are acceptable, as long as one organization is designated as the lead development entity. List any and all joint venture partners, limited partners, members, or other equity holders and their percentage interests and capital/equity committed to the entity. Provide federal tax identification number and date of incorporation or organization. Indicate which members, if any, of the development entity, and or joint venture partners, and/or team members are local business enterprises ("LBE") as defined by San Francisco Administrative Code Chapter 14B.

(2) Please indicate the architect, general contractor and other critical consultants that are proposed for this project.

(3) Identify the person(s) in charge of negotiations, the limits of their negotiation authority, and key personnel who will be involved in decision-making and day-to-day management.

(4) Describe the intended role of each team member and key personnel in the implementation of the project and the responsible entity in the organizational structure for entitlement phase, construction stage and on-going property management.

(5) Discuss plans to include LBEs as partners, consultants, and contractors. Please indicate whether the development team includes any LBE equity partners and, if so, what percent of capital investment each is anticipated to contribute.

(6) Identify selected consultants, including licensed design professionals, and identify the lead person with each consultant.

(7) Include resumes for all key personnel for the respondent and consultants/contractors.

b) Disclosures

Provide answers to the following questions:

(1) Is the development entity or any principal owners in the proposed project involved in any litigation or disputes that could result in a financial settlement having a materially adverse effect on the respondent's financial condition? If yes, please explain.

(2) Does the development entity or any principal owners in the proposed project have any off-balance sheet liabilities, such as corporate or personal loan guarantees? If yes, please provide details of these items.

(3) Has the development entity or any named individual in the proposed project ever filed for bankruptcy or had projects that have been foreclosed, or transferred to a creditor in lieu of foreclosure, or projects where the developer renegotiated or refinanced permanent project debt which resulted in a relaxation of either financial or other covenant or other terms and conditions of the existing debt on the project? If yes, please list the dates and circumstances.

c) Developer Qualifications

(1) Provide a list of developments in which the company or principal(s) has (have) been involved, indicating the product type, date, size, cost, location and the role of the respondent in each development.

(2) Describe in greater detail the respondent's involvement in at least three similar development projects to that proposed, including product type, dates, locations, financing, size, total development cost, performance schedule including timeframe from transaction agreement to completion, marketing, and sales performance, and contact references on successfully completed similar developments. Indicate the role of the respondent in each project. Provide photographs of the project(s) if available.

(3) Identify historic preservation experience of the respondent and of the key consultants.

(4) List all current projects in design or development phase and capital commitment required of respondent for each.

(5) Discuss respondent's experience in meeting local business subcontracting goals on other projects.

d) Project Pro-Forma and Expected Sources of Funds

(1) Propose a financial structure for the Rehabilitation Concept. Discuss respondent's proposed lease terms.

(2) Provide a static pro forma for the Rehabilitation Concept illustrating total project investment, expected average annual occupancy rate, total revenues, operating expenses, net operating income, debt service, and return to equity at stabilization.

(3) Provide an overall development budget, including all hard and soft costs (including contingencies) from preconstruction through occupancy. Explain the basis for the cost estimates.

(4) Include market justification that clearly supports revenue assumptions and the viability of proposed tenancies. Submit detailed market information for any specialized or non-standardized use.

(5) Indicate the source(s) and amount of debt and equity (including working capital) identified for the proposed project. Describe the respondent's current relationships with investors and lenders and ability to obtain necessary capital for the proposed development.

(6) State the proposed guarantees, bonds, or other mechanisms to be used to ensure timely completion of the proposed project.

3. <u>Confidential Financial Materials</u>

Submittal must include one copy of the respondent's financial information in a separate sealed envelope designated "Confidential Financial Materials". The following information must be provided:

(a) Financial Statements

Provide the most recent available credit report and financial statements for the past two years of each principal partner and joint venture participant for each entity. Financial statements shall include balance sheets, income statements, statements of changes in financial position or cash flows, and all notes to the financial statements. Financial statements must be identified as audited, reviewed compiled or company prepared. Financial statements prepared by recognized accounting firms are preferred. The Port reserves the right to ask for additional financial statements for other periods.

(b) Real Estate Portfolio

Provide the composition of the current real estate portfolio either owned or managed by each principal partner or joint venture partner, listing the following for each project: project name, type, location, project size (rentable area), date completed, value, original and current debt, role (developer, operator, property manager, etc.), ownership interest and occupancy rate over a 10-year period. Identify any project with negative cash flow, amount of developer's recourse debt, any non-performing loans, and the amount of guarantees and/or contingent liabilities.

(c) Pipeline

List and describe all current projects in respondent's pipeline including status, development schedule and financial commitments required of respondent.

(d) Lender Relationships

Describe the respondent's current relationships with lenders and ability to obtain necessary financing for the development proposed, including recent history in obtaining financial commitments, detailing type of project, financing source, amounts committed, etc.

(e) Proof of Equity

Provide evidence of the respondent's liquid assets, or some acceptable form of equity, equal to the permanent equity requirements as well as funds required for the pre-development costs.

4. Earnest Money Deposit

Each respondent must submit with its response an earnest money deposit in the amount of $15,000, payable to the Port of San Francisco in the form of a cashier's

or certified check. Submittals received without the earnest money shall be deemed non-responsive. Earnest money will be refunded, without interest, to each respondent not selected for exclusive negotiations. The earnest money deposit of the respondent selected for exclusive negotiation will be non-refundable, whether or not exclusive negotiations result in the agreement.

5. Submittal Deadline

The Port must receive each submittal, including the earnest money deposit and all other required materials, in a sealed envelope before the Submittal Due Date. All responses must be addressed to the attention of John Doll and marked "Pier 38 Rehabilitation Project" and delivered to the Port of San Francisco, Pier 1, San Francisco, CA 94111.

VIII. SELECTION PROCESS AND AWARD

A. Selection Process Generally

Port staff will review all responses timely submitted to determine whether they are complete and responsive to this RFP. Only submittals that are complete, responsive and meet all requirements of this RFP and that are submitted by respondents meeting minimum qualifications will be evaluated during the selection process.

The Port will send a letter to any respondent whose submittal is deemed non-responsive and will indicate the reason(s) that the submittal is deemed non-responsive. The letter will be dated and deposited for delivery by first-class mail on the same date.

The Port Commission is the sole decision-maker regarding the selection, in its sole discretion, and the Port Commission reserves the right to reject any or all submittals or to terminate this process at any time. The Port Commission will consider selection of the respondent(s) with which to enter into a lease at a duly noticed public hearing. The Port Commission, acting in its proprietary capacity as landlord, has authority to approve a lease and related documents for the lease of and rehabilitation of the Pier 38 bulkhead building.

The Port reserves the right to request clarification from individual respondents and to request that some or all respondents maker presentation to Port staff, the Port Commission, community groups and/or others. The Port further reserves the right to make an award without further clarification of submittals received.

B. Evaluation Process

Complete and responsive submittals from qualified respondents (i.e., those that meet the minimum qualifications) will be reviewed in detail. If warranted, the Port may request additional information from some or all of the respondents. **Submittals from respondents that do not meet the minimum qualifications will not be further evaluated**.

The evaluation criteria stated in Section V above will be used to consider the submittals. The submittals (except for the financial materials) may be reviewed by an evaluation panel consisting of individuals with experience in real estate economics, land use planning, architecture/urban design, City/Port staff and its consultants. The evaluation panel will score submittals in accordance to the evaluation criteria stated in Section V above, taking in consideration information from reference checks and interviews. Written submittals and interviews will be worth 100 points.

C. Port Commission Determination

Port staff will recommend to the Port Commission a respondent to advance to lease negotiations. Upon Port Commission selection of the respondent, Port staff will negotiate the terms of a lease agreement to further refine the rehabilitation and re-tenanting of the Pier 38 bulkhead building.

IX. OTHER TERMS AND CONDITIONS

A. Respondent's Duty to Investigate

It is the sole responsibility of the selected respondent to investigate and determine the condition of Pier 38 bulkhead building, including existing and planned utility connections, and the suitability of the conditions for any proposed improvements and use.

The information presented in this RFP and in any report or other information provided by the Port is provided solely for the convenience of the interested parties. It is the responsibility of interested parties to assure themselves that the information contained in this RFP or other documents is accurate and complete. The Port and its advisors provide no representations, assurances, or warranties pertaining to the accuracy of the information.

Respondents are responsible for reviewing all portions of this RFP and any other information provided by the Port in relation to this RFP. Respondents are to notify the Port in writing of any ambiguity, discrepancy, omission, or other error in this RFP promptly after discovery, but in no event later than 15 business days before the deadline to submit submittals. An interested party that does not give timely notice to the Port will be deemed to have waived any ambiguity, discrepancy, omission, or other error in this RFP. Modifications and clarifications will be made by addenda as provided in Section IX.B below.

B. Conditional Nature of Offering

The Port's issuance of this RFP is not a promise or agreement that the Port Commission will actually enter into any contract. The Port expressly reserves the right at any time to:

1. Waive any technical defect or informality in any submittal or submittal procedure that does not affect or alter the submittal's substantive provisions;
2. Reject any or all submittals;
3. Suspend any and all aspects of the process indicated in this RFP;
4. Amend this RFP;
5. Terminate this RFP and issue a new request for interest, qualifications or proposals;
6. Request some or all respondents to revise submittals;
7. Select a tenant by any other means;
8. Offer new leasing opportunities in the area at any time;
9. Extend deadlines for accepting submittals, or accept amendments to submittals after expiration of deadlines; or
10. Decide not to pursue this offering.

The Port's failure to object to an error, omission, or deviation in any submittal will in no way

modify this RFP or excuse respondents from full compliance with the requirements of this RFP.

The Port may modify, clarify, and change this RFP by issuing one or more written addenda. Addenda will be posted on the Port's website, and notice of the posting will be sent by electronic mail to each party receiving an RFP. The Port will make reasonable efforts to notify interested parties in a timely manner of modifications to this RFP but each respondent assumes the risk of submitting its submittal on time and obtaining all addenda and information issued by the Port. Therefore, the Port strongly encourages interested parties to register as an interested party and check the Port's web page for this RFP frequently.

C. Respondent Selection Does Not Guarantee Project Approval

The Port Commission's selection of a respondent and authorization to commence exclusive negotiations may not be construed as an approval of the proposed project.

The Port will not enter into any LDDA or lease for any of the Pier 38 bulkhead building project until environmental review under the California Environmental Quality Act ("CEQA") is complete. Changes to the proposed project may occur or be required during the course of public review of the proposed project, during the extensive approval processes that will follow CEQA review, and in response to other City, Port, and public concerns that may arise, and those changes may require additional CEQA review if the changes have not already been analyzed. If a project is found to cause significant adverse impacts, the Port retains absolute discretion to require additional environmental analysis, and to: (1) modify the project to mitigate significant adverse environmental impacts; (2) select feasible alternatives that avoid significant adverse impacts of the proposed project; (3) require the implementation of specific measures to mitigate the significant adverse environmental impacts of the project, as identified upon environmental evaluation in compliance with applicable environmental law; (4) reject the project as proposed if the economic and social benefits do not outweigh otherwise unavoidable significant adverse impacts of the project; or (5) approve the project upon a finding that the economic and social benefits of the project outweigh otherwise unavoidable significant adverse impacts.

The Port is issuing this RFP in its capacity as a landowner with a proprietary interest in Pier 38 bulkhead building as a whole, and not as a regulatory agency of the City. The Port's status as an agency of the City will not in any way limit any selected respondent's obligation to obtain requisite approvals from City departments (including the Port), boards, or commissions with jurisdiction over a proposed project.

Under the San Francisco Charter, no officer or employee of the City and County of San Francisco, including the Port, has authority to commit the Port to any project until the Port Commission has approved the transaction following completion of CEQA review and, if required, the San Francisco Board of Supervisors has approved the lease.

D. Objections

1. RFP Terms

Should any interested party object on any ground to any provision or legal requirement in this RFP, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 14 calendar days after this RFP is issued. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

2. Notice of Non-Responsiveness

Should a respondent object on any ground to a determination that its submittal is non-responsive to this RFP, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 7 calendar days after the date of the letter notifying the respondent of the Port's determination of non-responsiveness. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

3. Selection of Respondent

Should any interested party object on any ground to the Port Commission's authorization to proceed with negotiations with a selected respondent, that party must provide written notice to the Port setting forth with specificity the grounds for the objection no more than 7 calendar days after the date of the Port Commission hearing at which the decision was made. Failure to object in the manner and within the time set forth in this paragraph will constitute a complete and irrevocable waiver of any objection.

4. Delivery and Form of Objections

Objections must be submitted in writing, addressed to John Doll, Development Project Manager, Port of San Francisco, Pier 1, San Francisco, CA 94111, and delivered to the Port by personal delivery or overnight courier during business hours (8:00 a.m. to 5:00 p.m.) to the Port's main reception area in Pier 1, or by first class mail by the dates due to be considered. If an objection is mailed, the objector bears the risk of non-delivery by the deadlines specified above. Objections should be transmitted by a means that will provide written confirmation of the date the Port received the objections.

E. Claims Against the Port

No respondent will obtain by its response to this RFP, and separately by its response waives, any claim against the Port by reason of any or all of the following: any aspect of this RFP, any part of the selection process, any informalities or defects in the selection process, the rejection of any or all submittals, the acceptance of any submittal, approval or disapproval of plans or drawings, entering into any transaction documents, the failure to enter into a lease or LDDA, any statements, representations, acts, or omissions of the Port, the exercise of any discretion set forth in or concerning any of the above, and any other matters arising out of all or any of the above.

F. Sunshine Ordinance

All communications about this RFP are subject to the San Francisco Sunshine Ordinance and other public records laws. Neither the Port nor the City will be responsible under any circumstances for any damages or losses incurred by a respondent or any other person or entity because of the Port's release of information in response to a public records disclosure request. In accordance with Section 67.24(e)(1) of the San Francisco Administrative Code:

Contracts, contractors' bids, responses to requests for submittals and all other records of communications between the Port and persons or firms seeking contracts will be open to inspection immediately after a contract has been awarded. Nothing in this ordinance requires the disclosure of a private person's or organization's net worth or other proprietary financial data submitted for qualification for a contract or other benefit until and unless that person or organization is awarded the contract or benefit. Information covered by this provision will be made available to the public upon request.

G. Financial Obligations

Each respondent is responsible for all costs incurred in responding to this RFP. The Port has no financial responsibility for any costs incurred by a respondent in responding to this RFP. The Port will not pay a finder's or broker's fee in connection with this RFP. Respondents will be solely responsible for the payment of all fees to any real estate broker(s) with whom the respondent has contracted.

H. Submittals Become Port Property

All submittals submitted will become the property of the Port and may be used by the Port in any way deemed appropriate.

I. Nondiscrimination Policy

The Port of San Francisco does not discriminate on the basis of disability in employment or in the admission and access to its programs or activities. Wendy Proctor, ADA Coordinator, Port of San Francisco, Pier 1, San Francisco, CA 94111, has been designated to coordinate and carry out the Port's compliance with the nondiscrimination requirements of Title II of the Americans with Disabilities Act (42 U.S.C. §§ 1201 et seq.) ("ADA"). Information concerning the provisions of, and the rights provided under, the ADA is available from the ADA Coordinator. Chapters 12B of the San Francisco Administrative Code and the implementing rules and regulations will be incorporated into the lease. Copies of these documents are available upon request at the HRC office and their website: www.sf-hrc.org.

J. Interpretation

For the purposes of this RFP, the terms "include," "included" and "including" will be deemed to be followed by the words "without limitation" or "but not limited to," and, where required by the context, the singular includes the plural and vice versa, and the feminine gender includes the masculine and vice versa. Section and paragraph headings used in this RFP are for reference only and are not to be used to interpret the provisions of this RFP.

Project Location Map

Pier 38 RFP

Appendix B

Pier 38 Building Code Compliance and Occupancy Study

Port of San Francisco

Final Report
January 13, 2012

YEI ENGINEERS, INC.

Creegan+D'Angelo
INFRASTRUCTURE ENGINEERS

Michael Tauber Architecture

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1.0 EXECUTIVE SUMMARY

Creegan + D'Angelo/FE Jordan JV (C+D/FEJ) was retained to inspect and document the condition of Pier 38 at the time the Port took over the property from the existing master tenant on August 1, 2011. Findings of the initial inspection indicated that the building had mechanical, electrical, fire and life safety code violations and was unsafe for it's current occupancy as office space. Notice was given to the tenants of unsafe conditions. Subsequent inspections by the Port, SF DPW, and SFFD confirmed the findings. The Port issued eviction notice to all occupants of Pier 38. The Port took immediate action to repair hazardous conditions and close hazardous areas to the public.

During the week of August 22, 2011, the C+D team, including Michael Tauber Architecture and YEI Engineers, conducted a detailed investigation of the occupancy and code violations. A report summarizing the findings was presented to the Port on August 26, 2011. The report included occupancy calculations for the shed, and office space built in the shed. This study established a baseline occupancy according to approved construction permits and original construction drawings. The Port Building Code, Chapter 34, seismic upgrade triggers for the building were also defined as part of the study.

In October 2011 C+D/FEJ performed inspections of the as-built conditions of the building that had been constructed without permits or inspection. In conjunction with the inspections, C+D was tasked with preparing two options for office occupancy and their associated maximum allowable parking in the shed. The study considered repairs and other code compliance construction required for each alternative. A preliminary Code Compliance and Occupancy Study was presented to the Port on November 8, 2011. While developing the two options, Architectural, Mechanical, Electrical and Structural code violations that require modification or replacement were identified.

The intent of the Code Compliance and Occupancy Study is to allow tenants to re-occupy Pier 38 in a similar fashion as its previous high tech incubator use, which was primarily office use, with some assembly space as well as parking within the shed building. In order to issue an occupancy permit the following goals have to be met:

- Correct Code Violations to Comply with the Port Building Code
- Satisfy Public Access Requirements set forth by BCDC
- Maximize Port Real Estate Asset
- Refrain from triggering a Pier seismic upgrade

Pier 38 currently has three conditions that require code compliance repair, regardless of which option is selected.

1. South Apron – Timber railing, decking, framing, and support piles are badly deteriorated and require structural repairs. This area has been closed to public access and does not represent an immediate hazard. The extent of repair depends on the amount of parking.
2. Marina facilities – The light duty finger piers on the north side of Pier 38 are in poor condition and cannot serve as permanent boat berths. The facilities have been closed to public access and must either be removed or repaired.

3. A portion of the concrete deck inside the shed adjacent to the former boat-lift has collapsed and is covered with steel traffic plates. The deck must be repaired as part of any alternative that includes parking in the shed.

This report describes the minimum Architectural, Access and Egress, Mechanical, Electrical and Structural changes for the specified occupancy building code compliance. The construction will result in shell and core space that can be leased to future tenants, but does not provide all the specific utility service required for a new tenant. The tenant improvements, within individual suites or floors, have to be designed and constructed to provide code compliant floor plans, power, communication, circulation, access and other features that satisfy the tenant. The tenant will be required to submit plans and obtain a building permit from the Port of San Francisco Building Department and complete construction in compliance with Port Building Code, Inspection and Permit requirements.

Code Compliant Occupancy – Option 1
Option 1 permits office occupancy (B) only, no assembly space, on the first and second floor, along with 70,200 square feet of parking within the Shed (228 spaces). Option 1 can be separated into four different alternatives:

1a. First Floor Office Occupancy only – Estimated Cost = $1.58 million
1b. First Floor Office Occupancy with Maximum Parking – Estimated Cost = $4.33 million
1c. First and Second Floor Office Occupancy Only – Estimated Cost = $3.41 million
1d. First and Second Floor Office Occupancy with Maximum Parking – Estimated Cost = $6.17 million

Code Compliant Occupancy – Option 2
Option 2 matches the previous use of Pier 38 as closely as possible by allowing 4,478 square feet of space on the second floor to be classified as assembly occupancy (A3) with the remaining space for office occupancy (B). However, the assembly space reduces the allowable parking area to 19,600 square feet (40 spaces) compared to 70,200 square feet (228 spaces) in Option 1. Option 2 can be separated into two different alternatives:

2a. First and Second Floor Office with Assembly Occupancy – Estimated Cost = $3.55 million
2b. First and Second Floor Office with Assembly Occupancy and Parking – Estimated Cost = $4.27 million

The square foot cost for improvements for code compliance and occupancy permit is approximately $128/SF regardless of which alternative of Option 1 or 2 is chosen. The cost associated with parking within the shed is approximately $39/SF regardless of the extent of parking.

In addition to the building improvements, this report identifies the required upgrades necessary to improve reliability and utilize the Marina Pier at an estimated cost of $910,000. The Port has the option to completely remove the existing Marina Pier for approximately $401,000.

2.0 PROJECT PURPOSE

The Port of San Francisco in conjunction with outside consultants identified a number of life safety and accessibility deficiencies with Pier 38 as noted in previous reports. As a result of these findings, The Port has retained Creegan + D'Angelo Engineers [C+D] as Prime consultant with sub consultants Michael Tauber Architecture [MTA] and YEI engineers [YEI] (the design team) to assess conceptual alternatives for the use of Pier 38 while maximizing parking space available and avoiding seismic upgrade triggers for the building and pier. Within the scope of work the design team was asked to define the items that would be required to bring the building into conformance with current codes and assign corresponding cost estimates for the design schemes. In addition to building alternatives, this report identifies the required structural upgrades necessary to utilize the marina/pier and a conceptual proposal for repair of damage to the pier deck in the third bay of the shed.

Drawings representing the Architectural alternatives can be found in Section 6, a narrative defining required mechanical/plumbing/sprinkler, electrical and structural work can be found under each of those discipline headings. In addition, prior to the design work, the design team surveyed the existing conditions preparing as built drawings to form the basis of the alternatives. Selective demolition was performed by the Port to uncover building assemblies for the design team to verify conformance with permitted but non inspected construction work on the site; areas of deficiencies have been noted in this report under the scope of work drawings in the architectural alternatives section, see drawings A4 – A6 and A8 – A10.

3.0 BACKGROUND/HISTORY

It is the design team's understanding, in discussions with Port Historic Preservationist Mark Paez, that The Port of San Francisco's Pier 38's shed structure was first built in 1908 and was utilized as a break bulk storage facility. The original super structure was comprised of a shed of exposed steel construction and concrete roof decking with piers of wood below. A later 1932 addition to the Pier was added at the east end of the Pier with a slightly wider footprint utilizing wood decking in lieu of concrete at the roof. Between 1934 and 1936 the bulkhead building fronting the Embarcadero was constructed to house office space. It was constructed as a separate steel framed structure with exposed wood framed walls and floors and sits directly in front of the original shed. The Pier is a contributing part of Port of San Francisco Embarcadero Historic District and as such is considered a qualified historical building or property subject to the California Historic Building Code.

The building has been subject to many years of additions and changes in use by the former master lessee that have not been permitted, approved or inspected by the Port of San Francisco. Among other violations, space last submitted for permit as non occupied space had been converted to office uses, office spaces had been converted from storage uses and restaurant uses, and additions have been performed without final inspection verifying building construction methods and code compliance. In addition, the building was built out with a number of life safety issues and a lack of code complying accessibility to the second floor and in various locations on the first floor.

Prior to this report The Port engaged C+D and its sub consultants in a number of tasks related to Pier 38 including the following:

1. Condition Survey with Recommended Actions – August 16, 2011

   C+D was retained to visit Pier 38 as soon as the master leaseholder was notified of eviction, August 1, 2011, in order to assess the existing condition of the property. The field team included structural, mechanical, electrical, fire safety, and architectural experts accompanied by personnel from various departments of the Port of San Francisco. The purpose of this initial visit was to document existing conditions with video and photographs, assess hazardous conditions, and make recommendations for repairs or changes in immediate occupancy.

2. Occupancy Study – August 26, 2011

   C+D was asked to review the current building occupancy and compare it to the historical building occupancy and the current Port of San Francisco Building Code. This study was performed by Michael Tauber Architecture.

3. Life Safety/Health Hazard Assessment – September 2, 2011

   Further studies into the life safety and health hazards present in the building and marine facilities were conducted by the Port of San Francisco with the assistance of the San Francisco Department of Public Works, the San Francisco Fire Department, and C+D. This study was requested to confirm the findings of the initial surveys and studies.

4. Town Hall Meeting – September 16, 2011

A town hall meeting was conducted by the Port of San Francisco in conjunction with the San Francisco Department of Public Works, the San Francisco Fire Department, and the Office of the Mayor, to describe the current situation at Pier 38 to the public.

5. Code Compliance and Alternatives Study

This report is based on the previous surveys and studies described above.

4.0 EXISTING CONDITIONS

4.1 ARCHITECTURAL

4.1.1 USE

The building is divided into two parts, as noted earlier; the bulkhead fronting the Embarcadero and the shed pier structure extending east over the bay which was used as break bulk storage. Starting in 1999 a portion of the shed was built-out, first with only storage uses above, with ceiling framing for the restaurant uses (which were never occupied as such) below, then later without permit into office spaces. The office spaces were connected to the bulkhead by creating an opening in the concrete wall of the original shed and adding stairs between them. The stairs as part of a non-historic renovation are not permitted in a path of egress travel; in addition the head height between stairs and opening was less than the code permitted. Within the former shed space the floor was framed in the center at a higher elevation to permit the passage of boats below.

Figure 1 - Opening in Concrete Wall

Prior to eviction of tenants by the Port on September 30th 2011, the building had occupancies on two stories most recently used as high tech incubator office space that was at times also used for large parties, a use that the building was not designed for in terms of number of means of egress, required number of restrooms and fire protection between spaces. The second floor is not currently accessible to the disabled as it is currently served by two main historic stairs one near the vehicular entry and one at the south end near Pier 40. The exit stairs out of the second floor north portion of the bulkhead was not built to code and the exit stair out of the former shed requires passage under a steel brace for the roof truss whose height above the floor is less than code permitted.

On the ground floor, the northern office space, designed to be a restaurant has never had the final flooring installed and currently has a series of floor drains which extend above the floor by 1-2 inches creating a tripping hazard. The exterior doors to the north and south aprons are 2-3 inches above the floor line, which is non code compliant and a life safety issue. Much of the

path of travel is uneven and non code complaint – all doors require level floor one either side of the door, this is not the case in many conditions.

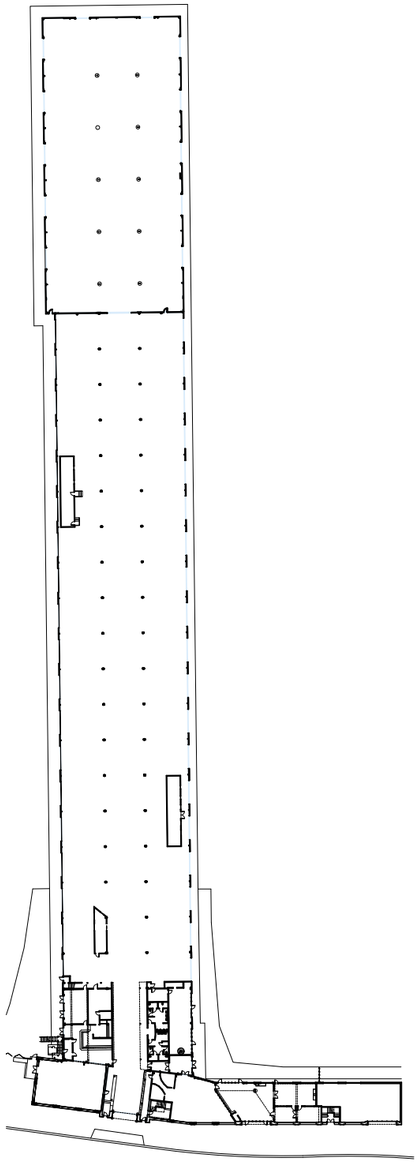
See Figure A1 for existing use diagrams and Figure A2 for existing use occupancy diagrams.

4.1.2 PARKING

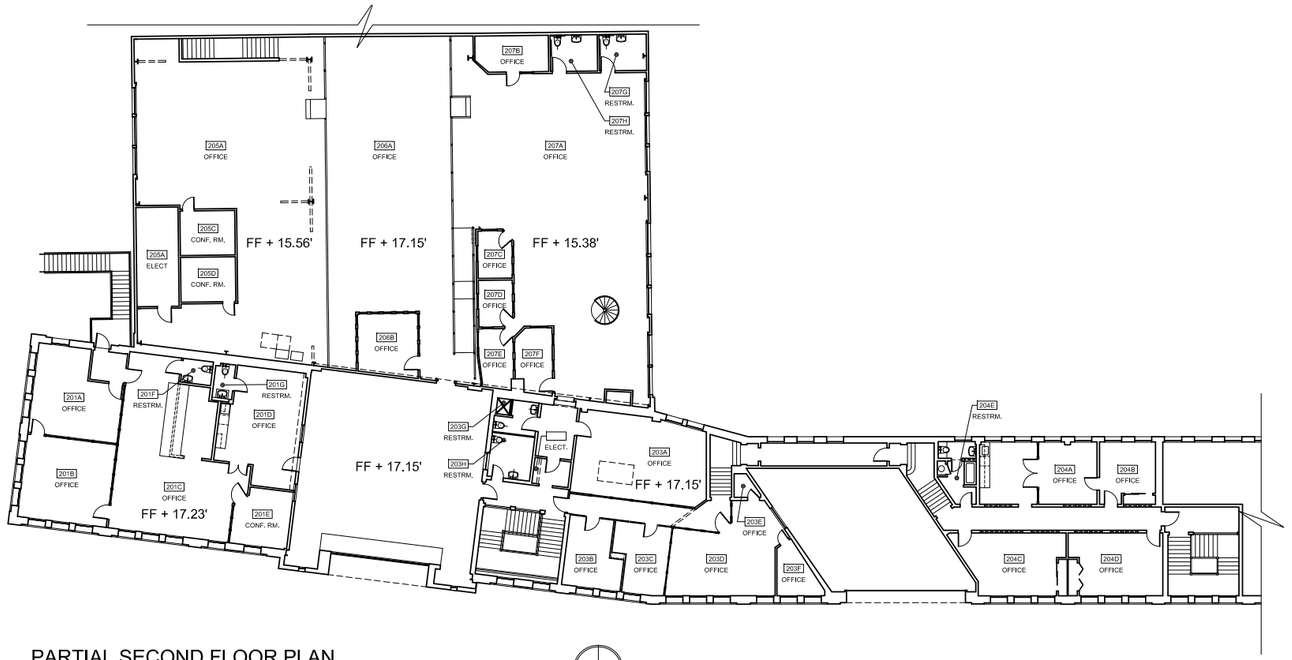
The shed was being used for parking both tenants and visitors during events at neighboring AT&T Park. The code limits the allowable area that can be used for parking and allowable area within a mixed use building, these were exceeded during events. In addition, the portion of the shed that was being used for parking was not provided with automatic sprinklers. Without sprinklering the parking use in the shed, corridors in the building are out of code compliance as they are required to be rated; they are not. In addition, in a non fully sprinklered building, separations between the parking use and the business (office) use are required to be 2 hour rated; they are built to one hour construction.

4.1.3 PLUMBING COUNTS

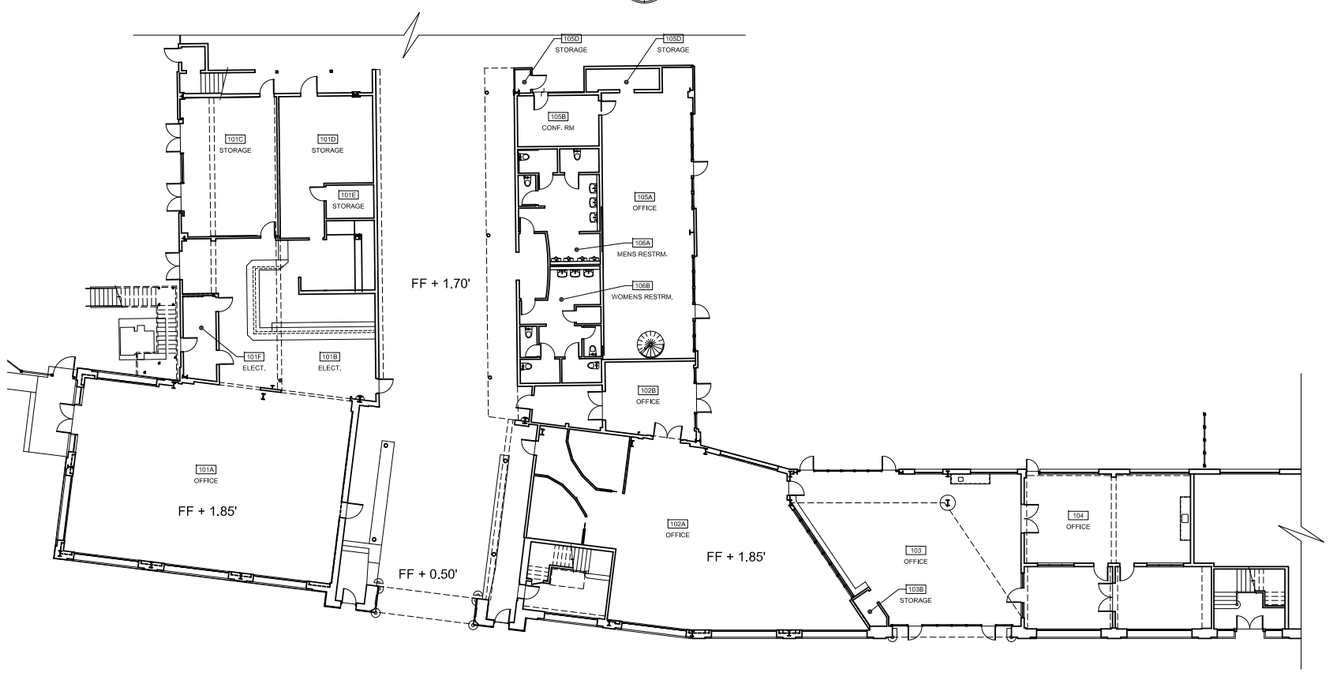
While the building has a large bank of accessible bathrooms on the first floor, the second floor is limited in the numbers of toilets and has only one single stall non-accessible shared facility. The remaining stalls in the second floor are within tenant spaces.



FIRST FLOOR PLAN
scale: 1/128" = 1'-0"



PARTIAL SECOND FLOOR PLAN
scale: 1/32" = 1'-0"



PARTIAL FIRST FLOOR PLAN
scale: 1/32" = 1'-0"

EXISTING USE AS OF 9.30.11 AREA DIAGRAM

ROOM NO.	ROOM NAME	SQ. FT.
101A	OFFICE	2173
101B	OFFICE	1209
101C	OFFICE	586
101D	OFFICE	471
101E	STORAGE	71
101F	MECHANICAL	123
102A	OFFICE	2023
102B	CONFERENCE RM.	295
103A	OFFICE	1036
103B	STORAGE	30
104	OFFICE	1207
105A	OFFICE	1099
105B	CONFERENCE RM.	185
105C	STORAGE	17
105D	STORAGE	70
106A	MENS RESTRM.	375
106B	WOMENS RESTRM.	377
	TOTAL FIRST FLOOR MINUS PARKING + APRONS	11347

ROOM NO.	ROOM NAME	SQ. FT.
201A	OFFICE	307
201B	OFFICE	330
201C	OFFICE	803
201D	OFFICE	379
201E	CONFERENCE RM.	140
201F	RESTROOM	32
201G	RESTROOM	34
202	OFFICE	1527
203A	OFFICE	482
203B	OFFICE	159
203C	OFFICE	152
203D	OFFICE	375
203E	STORAGE	21
203F	STORAGE	79
203G	RESTROOM	63
203H	RESTROOM	84
204A	OFFICE	326
204B	OFFICE	156
204C	OFFICE	274
204D	OFFICE	265
204E	RESTROOM	97
205A	OFFICE	2135
205B	MECHANICAL	156
205C	CONFERENCE RM.	109
205D	CONFERENCE RM.	109
206A	OFFICE	1878
206B	CONFERENCE RM.	163
207A	OFFICE	2273
207B	STORAGE	115
207C	CONFERENCE RM.	70
207D	CONFERENCE RM.	68
207E	CONFERENCE RM.	85
207F	CONFERENCE RM.	102
207G	RESTROOM	76
207H	RESTROOM	76
	TOTAL SECOND FLOOR	13500

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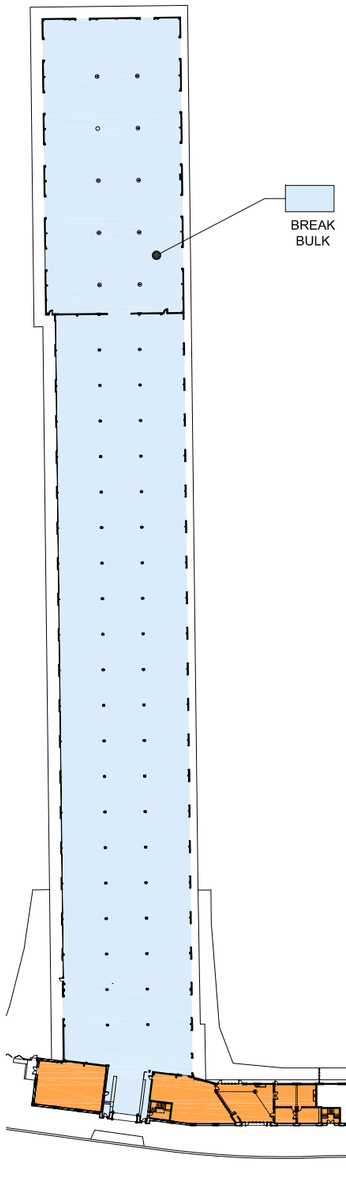
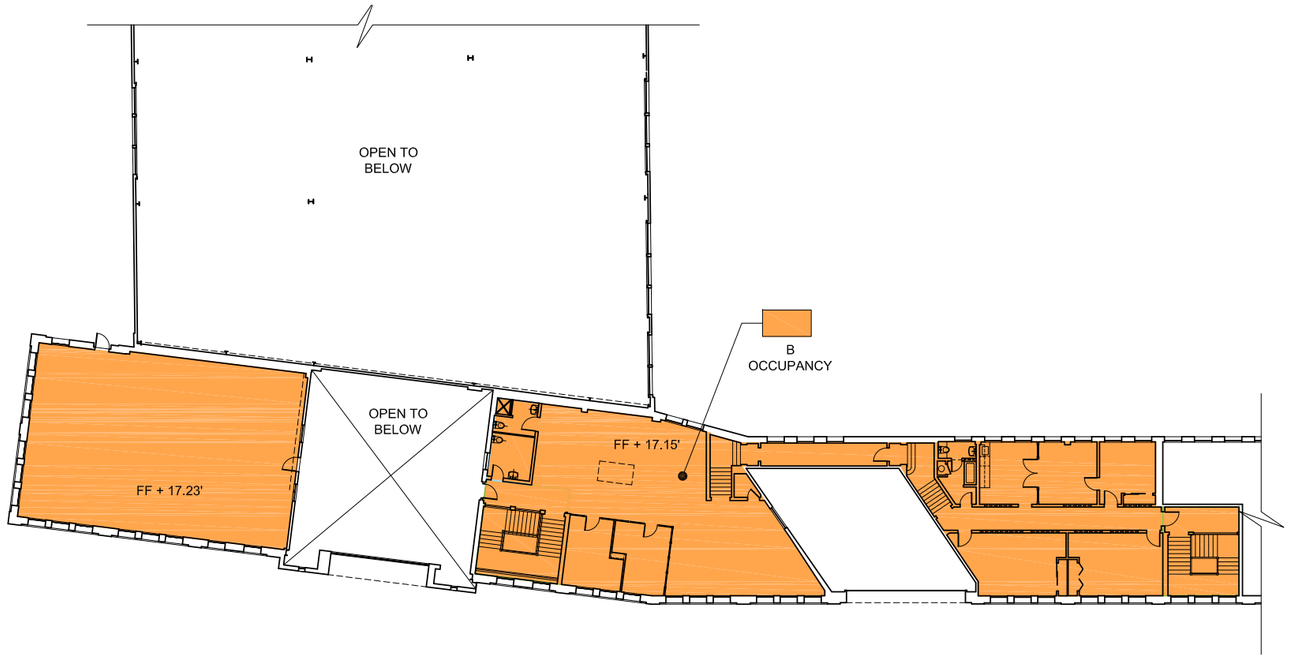
PIER 38 CODE COMPLIANCE
SAN FRANCISCO, CA

OCCUPANCY + ALLOWABLE AREA DIAGRAMS

EXISTING USE AS OF 9.30.11 - AREA DIAGRAM
01.13.12



FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/128" = 1'-0"



PARTIAL SECOND FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

EXISTING USE AREA/OCCUPANT LOAD

OCC.	USE	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
S-2	BREAK BULK	99132	250	397	LOAD FACTOR ASSIGNED BY PORT OF SF
B	BUSINESS AREA	7253	100 GROSS	73	INCLUDES CIRCULATION
SECOND FLOOR					
B	BUSINESS AREA	6349	100 GROSS	64	INCLUDES CIRCULATION & RESTROOMS
FIRST + SECOND FLOOR					
		112984		534	
	EXISTING USE OCCUPANT LOAD + 100			634	SEISMIC TRIGGER

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PIER 38 CODE COMPLIANCE
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OCCUPANCY + ALLOWABLE AREA DIAGRAMS

ORIGINAL USE AREA/OCCUPANCY DIAGRAM
01.13.12

4.2 STRUCTURAL

4.2.1 BULKHEAD

The bulkhead portion of the structure is generally unmodified from the original construction; which consisted of steel trusses supported by steel columns with intermediate steel beams that support the second floor timber joists and framing. Exterior walls are concrete while interior walls are timber framed. Manufactured wood I-joists and steel support framing have been added on the second floor over the shed entrance creating additional office space.

4.2.2 SHED PIER

The shed supported by the pier extending over the bay is of similar construction to the bulkhead with steel trusses supported by steel columns and concrete exterior walls. Significant unpermitted tenant improvements have been made in the western portion of the shed to create two floors of office space. Modifications include:

- Addition of timber walls and steel beams supported by steel columns to support the second floor.
- Multi level second floor framing consisting of 18" I-joists and 2X6 timber joists of various spans.

A portion of the shed pier concrete slab, in the vicinity of the vessel loading area on the north side, is missing due to severe deterioration. The hole has been covered by a steel plate.

Figure 2 - Hole in Concrete Deck

4.2.3 NORTH AND SOUTH APRON

The existing aprons are comprised of two parts; the original concrete deck extending beyond the shed wall and an additional timber framed portion not built in conjunction with the original pier. The concrete deck extends approximately 10 feet beyond the north wall and 6 feet beyond

the south wall. The timber portion of the aprons consist of 4X12 decking over 4x12 joists supported by 12X12 bent cap beams with timber piles. A chain link fence closes off the aprons approximately 2 bays into the shed, with the area to the east being red tagged, separating the aprons into two areas.

The north apron from the bulkhead to the chain link fence is in good condition with minor instances of rotten decking. The south apron from the bulkhead to the chain link fence is in poor condition with multiple missing piles, crushed bent cap beams and rotten joists and decking. Railings are provided on the north and south aprons, up to the chain link fence, by 4X4 timber posts with 2X railings and wire mesh; railing attachment is provided by lag screws from posts to joists.

Beyond the chain link fence, the timber aprons are severely deteriorated to the extent that some portions are no longer present.

4.3 MECHANICAL

4.3.1 HVAC

The heating, ventilating and air conditioning (HVAC) for the occupied pier areas consists of under-ceiling gas-fire unit heaters, above-ceiling suspended recirculating heating and ventilating units (HVUs) with gas-fired inline furnaces, and rooftop recirculating air handlers with in-line gas-fired furnaces. The above ceiling units are connected to supply and return ducting routed to serve nearby rooms. Rooftop air handlers, unit heater and suspended ceiling ventilation heating units airflows and heating capacities are not verified due to inaccessibility.

The first floor 101, 102, 103, 104, and 105 rooms are provided heating from concealed above-ceiling or exposed below ceiling slab HVUs. Exposed ceiling rooms are provided with rotational ceiling fans. Room 103A is provided with a below-ceiling slab unit heater.

The second floor room 206A also has a wall mounted exhaust air fan, rotational ceiling fans, and makeshift hinged plywood pressure-relief dampers. 20” x 30” supply duct risers from a north and south side pair of rooftop air handlers are ducted down into room 206A, with ductwork distribution and supply air registers serving room 206A and the various 205 and 206 rooms. The north air handler supply and return ducts continue to proceed down through the second floor to additionally serve the first floor.

The second floor electrical/mechanical room 205B is cooled with two refrigerant split-system wall mount fan coils, and a small packaged wall mounted air conditioner above the door.

Room 202 is provided heating by a unit heater, and open supply and return duct from an HVU above room 201D ceiling. Fours rotational ceiling fans are provided below the room roof. The 201, 203, and 204 rooms are served by above-ceiling HVU’s.

4.3.2 PLUMBING

Men’s restroom 106A is provided with a hose bib, three wall mount lavatories with manually operated faucets, four urinals and three floor-mounted water closets with manually operated flush valves. Women’s Restroom 106B is provided with a hose bib, three wall mount lavatories

with manually operated faucets and four floor-mounted water closets with manually operated flush valves.

A low profile water heater is installed above-ceiling, and provides domestic hot water heating to the first floor.

On the second floor, two unisex restrooms by room 201C are each provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve. Another two unisex restrooms by room 203A are each provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve.

Counter break sinks are provided in room 201D and the room adjacent to 204A.

Additionally, a unisex restroom by room 204A is provided with a hose bib, wall mount lavatory with manually operated faucet, and water closet with manually operated flush valve. The adjacent restroom is provided with a storage type water heater to supply the lavatory and sink.

4.3.3 FIRE PROTECTION

A 6" fire protection pipe is routed in the transit shed below the rafters along the column support channels from the shed east end, to the fire water pump room in the transit shed. Supply fire water piping main is routed from the fire pumps to the first and second floor occupied areas. Sprinkler branch headers installed on both floors below ceiling slab/roof. Exposed ceiling rooms are provided wet-type sprinkler coverage with upright sprinkler heads, and rooms provided with ceilings are sprinkled with either flush pendant or sidewall sprinkler heads.

4.3.4 FIRE ALARM SYSTEM

There is a modern Fire Alarm panel inside the water pump room on the deck that is located near Room 101D. There were no visible smoke detectors, horn/strobes, nor pull stations. There is a sprinkler system throughout the entire building except a section of the parking area.

4.4 ELECTRICAL

Existing incoming electrical service is underground provided by PG&E, and connects to a 12KV to 480V transformer, mounted on the North side of the Pier. The rating of the existing Main PG&E transformer could not be verified. The Main Distribution Center in the first floor is separated into two (2) sections, one is a 480V/2000A section, and the other one is a 480V/600A section, both of which are unlabeled. It appears that the only section that is in current use is the 2000A section because the 600A section was closed and no load could be verified. The 2000A section is connected to the Electrical Room in the second floor.

4.4.1 POWER DISTRIBUTION

In the Electrical room, there are three (3) 480V to 208/120V unlabeled transformers that are connected to the main panels which feed other sub panels as follows: (Note: Several sub panels were unlabeled and missing panel schedules)

PANEL DPA – Serves Panels DBC, DPB, DPE (all three in 2nd floor Electrical Room) and UNLABELED (in the far East wing of the deck).
PANEL DBC – Serves Panels K and KA (both in Room 101F), and Unlabeled panel (near 1st floor bathrooms).
PANEL DPB – Serves Panels L2 (in Room 101C), P1, West Print and Unlabeled (all three in Closet on 2nd floor next to Room 203A), Unlabeled (in Room 202), Unlabeled (in bathroom of Room 201C) and Unlabeled (in 1st floor passage way – Room 103A)
PANEL DPE – connects to mechanical loads in the deck
PANEL UNLABELED – connects to mechanical loads in the deck

Backup power was not available in this building.

4.4.2 LIGHTING

Each room had different lighting that had been installed by previous tenants, such as chandeliers, rail mounted spot lighting, and high bay. There was some egress lighting.

4.4.3 FIRE ALARM SYSTEM

There is a modern Fire Alarm panel inside the water pump room on the deck that is located near Room 101D. There were no visible smoke detectors, horn/strobes, nor pull stations. There is a sprinkler system throughout the entire building except a section of the parking area.

4.5 MARINE

C+D made site observations of the marina structures at Pier 38 on Monday, August 22, 2011. C+D measured the size of the floating finger pier(s), guide pile locations, and the electric power panels & outlet locations. Figure MA-1 illustrates the existing pier size and location, gangway access, and ramp float.

Pier access is by an aluminum gangway and ramp system supported on a float that is fixed in position by six guide piles. The ramp floats are light duty plastic tubs filled with foam. The guide piles are 12 inch diameter steel pipe piles. The wall thickness and length and depth of the piles into the soil is not documented. The aluminum gangway and ramp system was manufactured by Hallsten Corporation, Sacramento, California. C+D contacted John Hallsten (916-331-7211) and Hallsten provided the shop drawings for the access gangway and ramp system, attached as Appendix C.

The ramp system allows access to a 385 ft. long floating finger pier. This is a continuous timber pier supported on plastic tub, foam filled floats. The manufacturer and type of the floats is not documented. The finger pier is fixed in location by 16 – 12 inch diameter steel guide piles. The wall thickness, length and embedment depth of the piles is not known. The Pier width is six (6) ft. wide. Pier deck area is 2,310 square feet.

A floating pier is located next to the ramp system which is 6 feet wide and 89 feet long. It is located from the Pier 38 apron to finger pier. See the attached Figure MA-1 for location plan. Pier Deck area is 534 square feet.

NORTH

PLAN
1"=40'

MARINA

DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: 11/8/11
SCALE: AS NOTED

REV.	DATE	DESCRIPTION	APP'D	SCH.	DATE	DESCRIPTION
1						
2						
3						
4						
5						
6						
7						

Creegan+D'Angelo
INFRASTRUCTURE ENGINEERS
170 Columbus Ave, Suite 240
San Francisco, CA 94133
Tel (415) 834-2010
Fax (415) 834-2011
www.cdengineers.com

PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-1
OF 3 SHEETS

PROJECT NO.
209010.10

5.0 CODE COMPLIANCE

5.1 ARCHITECTURAL – OCCUPANCY, ALLOWABLE AREA AND LIFE SAFETY

5.1.1 CODES AND ACCESSIBILITY

Pier 38 is potentially eligible for Code compliance to the California Historic Building Code (CHBC) as it is a qualified historic building or property. Under Section 8-302.4 exception 1, Historic buildings may be unlimited in area without fire –resistive area separation walls when provided with an automatic sprinkler. John Aires, Chief Building Inspector of the Port of San Francisco, has noted that the building will not be granted unlimited area, however Option 1 within this report utilizes a compromise position, approved by the Chief Building Inspector in the PCP007 alternate means request dated 01/5/12, of providing sprinklers in the shed area where there currently are none and allowing more area for parking than permitted by the California Building Code but less than the California Historic Building Code permits (designed to a square footage limit). Option 2 does not utilize the Historic Building code and the architectural design work has been designed to meet the 2010 Port of San Francisco Building Code which is based on the 2010 California Building Code with Port of San Francisco modifications. The plumbing count is based on the 2010 California Plumbing Code.

As a (B) office occupancy, the California Building Code requires that all portions of the building be made accessible unless there is an unreasonable hardship or legal or physical constraints will not allow compliance per Section 1105B. Options presented in this report will provide two Limited Use Limited Access (LULA) elevators within the building, while making all non-historic paths of travel accessible. In the Port Code Procedure (PCP) 007 alternative means request filed with the Port on 01/05/12, The Chief Building Inspector for the Port has granted the use of the Historic Southern bulkhead set of stairs that allowed trains to pass underneath and the other historic, non compliant stairs to be used with the provision of upgrading the handrails to current code and providing new contrast striping at the stairs to meet current code.

5.1.2 SEISMIC UPGRADE AND OCCUPANCY

The Port of San Francisco has identified the need to seismically upgrade pier buildings when the occupant load increases by more than 10% and the occupancy count increases by more than 100. The base line occupancy count in this case was the use of the building as of 1934 when the building in its current footprint was used as Break Bulk storage throughout the shed and office within the Bulkhead structure facing the Embarcadero.

MTA evaluated the baseline condition identifying a baseline occupancy count of 534 for both floors combined; see “original use area/occupancy diagram” in Section 4**.** Therefore, the trigger for seismic upgrade is an occupancy count of more than 634 for both floors combined and an increase of 54 occupants. The occupancy count was calculated by multiplying the areas of each type of space by the occupant load factor found in Table 1004.1 of the California Building Code (CBC), based on use for each space, see proposed use area/occupancy diagram for each scheme. The design team proposed occupancy for the portion of the shed east of parking to be limited to 3 port maintenance persons only and identified as “existing bulk storage building vacated due to disrepair”. This designation, occupancy and occupant count has been approved via the Port’s PCP 007 alternatives means request.

Both schemes presented in this report have kept the occupancy count at 634, eliminating the need to seismically upgrade the pier.

5.1.3 CONSTRUCTION TYPE

The design team has identified the building as a Type IIB construction for the purpose of evaluating allowable areas, as it has an exposed non-rated primary structural frame as noted in Table 601 of the CBC.

The design team provided the Port with explorative demolition plans to demolish particular areas of Pier 38 to assist in verifying construction type. MTA reviewed the explorative demolition and found a number of wall assemblies that differed from the assemblies shown on submitted permit drawings. While the wall assemblies that are required to be rated for the new work appear to be constructed in a nature that would meet the requirements with one layer of 5/8" thick gypsum board both sides of 2X wood frame studs, in some instances the 5/8" gypsum board was not clearly labeled as type "x" as required to created a one hour wall (no stamp was found on the gypsum board or on the edge of the boards). This would require further removal of additional gypsum board for verification purposes or a complete replacement in those locations.

5.1.4 ALLOWABLE AREA

The allowable area permitted in a building is defined by each floor and is limited by the building construction type and the occupancy within each floor as defined by Table 503 of the CBC. In mixed use occupancy on each floor, each occupancy must be evaluated separately for allowable area based on the construction type and the sum of the actual over the allowable area of all occupancies must be less than 1. In the shed the (S-2) occupancy not used for parking will need to be fenced off and vacated except for maintenance use and will be assigned an occupant load of 3 as permitted by the Port of San Francisco PCP007 application dated 01/05/12.

The individual area of each occupancy type can be tripled in a two story building if the building is fully sprinklered. A frontage increase can be added if 25% or more of the building perimeter is on a public way or open space having a minimum width of 20 feet or more. This frontage increase will not apply to the Pier 38 as the ICC and San Francisco Fire Department have determined on other Pier structures that the 20 feet must be used for apparatus to fight fire and a fire boat cannot be counted on, therefore the width is limited to the width of the aprons which are less than 20 feet.

5.1.5 PARKING

The options presented in this report assume new sprinklers will be added throughout the original 1908 structure that is currently not accommodated with sprinklers to minimize the costs of upgrading the existing non conforming wall assemblies between the parking area and business (office) use and to avoid the need to fire rate corridors within the building. Additionally sprinklering will be required as a measure to increase the allowable parking area in option 1 as approved in the PCP 007 alternative means request dated 1/5/12.

The allowable parking size for Pier 38 is determined by a function of the smaller of the allowable square footage permitted as defined by the occupant load seismic trigger limit and keeping within the allowable area per floor as defined by the CBC for a mixed use building.

It is assumed in this report that the parking areas will be naturally ventilated. Initial calculations of the proportion of openings to wall area appear to be adequate to meet code compliance by keeping the existing roll up doors welded permanently open (as approved by the Chief Building Inspector in PCP007 alternative means request dated 1/5/2012). Other similar Port of San Francisco Piers have had natural ventilation approved by the Port's building Inspection division by permitting testing of the actual air quality within the shed to ensure sufficient air exchanges. The cost estimate included with this report does not include mechanically ventilating the parking areas. Further notes on the requirements for ventilation of the parking areas can be found in the mechanical section of this report.

5.1.6 STAIRS

New enclosed fire rated exit stairs are proposed with the two options in this report, which will avoid the current life safety head clearance issues, while meeting the CBC requirement that the stairs be enclosed. The exterior exit stairs exiting from the northern end of the second floor of the bulkhead will be replaced to meet the 7" code compliant riser height. This stair was installed with 7-1/2" risers, which were not code compliant at the time of the permit for their installation but were never inspected by the Port as part of a final inspection.

5.1.7 PUBLIC ACCESS TO THE PIER

A previous permit was taken out with the Bay Conservation and Development Commission (BCDC) regarding public pedestrian access to Pier 38 assuming the Pier was to be fully developed per the previous master lease holders plans. As understood in a meeting at the Port of San Francisco with David Beaupre, with Planning and Development at the Port of San Francisco, the plan should continue to provide access via gates at the north and south aprons. If no work is done to expand the Marina and the use stays as they were last used as of September 30 2011, Mr. Beaupre thought that BCDC would allow the aprons to be a minimum of 10 feet wide on the south and north with the aprons widening to a minimum of 12 feet near the office portions of the building and 13 feet as the apron turns to the south on the south side. If the Marina is expanded, Mr. Beaupre thought that BCDC would expect that the aprons should conform to the amended exhibit A BCDC Permit no. 5-92 amendment number two dated January 6, 2005 with wider aprons. In either case, new ten foot wide stripped access aisles will be provided at the juncture between the parking and the office uses on the first floor and at the east end of the new proposed parking configuration to provide access to both sides of the building and aprons. The aprons will need to be repaired/rebuilt to provide access to the new east pedestrian stripped walk within the shed. The structural portion of this report will discuss that work in greater detail. The Port's Chief Building Inspector has approved limiting the eastern extent of the rebuilt aprons to the east end of the public access path as noted above.

The Port will need to decide how to best secure the parking lot area after public access hours. This report assumes that a new pedestrian door and storefront system will be installed in the roll up door bays to the west. Other options include locking the gates at the North and South aprons and replacing the existing roll up door with a smaller one that accommodates the new width of the opening created by the exit stair egress. This roll up door would be required to remain open during public access hours. Any decision on the access will involve whether the parking area can be classified by the Port as an open or mechanically ventilated garage. If mechanically vented the storefront system may be more desirable aesthetically and in terms of weather tightness.

The portion of the shed east of the parking in both schemes will be defined as an "existing bulk storage building vacated due to disrepair" as approved by the Port of San Francisco Chief Building Inspector in PCP 007 dated 01/05/12. This will be assigned an occupancy of three and not count towards the area calculations for the floor. As this is not counted as part of the area for the floor, the building will not be required to have two hour fire walls erected to limit area.

5.2 STRUCTURAL

Additions within the bulkhead and pier shed are out of code compliance because they were not properly permitted and inspected during construction. Additionally, the 2X6 second floor joists in the shed area do not have sufficient capacity for the current assembly occupant use, see note 14 of Figure SK2.2 in section 6. Due to deterioration, the south apron along with the red tagged portions of both aprons do not have sufficient capacity for code required loading, see Figures SK1.1 and SK2.1 in section 6.

5.3 MECHANICAL

The suspended HVUs and unit heaters are not seismically braced, in violation of California and San Francisco building codes. Bracing shall comply with the latest CBC and California Mechanical Code (CMC) seismic bracing requirements, and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

The water heater above the first floor ceiling does not meet California Plumbing Code (CPC) installation requirements. Plumbing vent and drain lines were found uncapped and exposed to the rooms inside the building, in violation of CPC. Suspended horizontal plumbing piping throughout the occupied areas was not sufficiently provided with hangers and seismic bracing, in violation of CBC and CPC requirements. All new work shall comply with the latest CBC, CMC and CPC seismic bracing requirements, and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

Building code requires that an enclosed parking garage larger than 12,000 square feet be provided with automatic fire sprinklers. The wet sprinkler coverage work that shall be performed, shall comply with the latest CBC and California Fire Code (CFC) fire protection requirements, and NFPA (National Fire Protection Agency) 88A Standard for Parking Structures fire protection coverage and installation requirements. Fire protection piping shall be installed with proper hanger and bracing support in accordance with NFPA and SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

If the parking garage is not provided sufficient natural ventilation area with enough perimeter natural ventilation openings, as approved by the Port, the Building Code requires that an enclosed storage type parking garage larger than 500 square feet be provided with mechanical ventilation. Air changes per hour in the garage should be between four to six, and meet the minimum required by carbon monoxide (CO) emission standards. The ventilation fan, ductwork, and air inlets and outlet sizes and locations shall comply with the latest CMC installation requirements and ASHRAE 62-2004 Ventilation for Acceptable Indoor Air Quality Standard and ASHRAE handbook for HVAC Applications for CO emissions. Ventilation fans and ductwork shall be installed with proper hanger and bracing support in accordance with SMACNA's guidelines for seismic restraints of mechanical systems and piping systems.

5.4 ELECTRICAL

Many of the upgrades that were performed to the individual tenant spaces were in violation of various installation and performance codes set forth by the National Electrical Code (NEC). The work that shall be performed, shall comply with the latest codes as stated on the 2011 version (NEC 2011).

5.5 MARINE

The finger pier guide piles were easily moved and displaced laterally by one man manually pushing with force applied five feet above the deck. Therefore the lateral load capacity and stiffness may be too low. It is our opinion that the type of pier floats and limited number of guide piles in a site exposed to San Francisco Bay long wind and wave fetch from the North and East are vulnerable to damage and will have poor performance. Pier construction of this type may be appropriate for light/small water craft berths and moorings in non-storm, non-heavy sea condition in a lake or sheltered location, but not as currently configured. Under 50 ft. motor boats or sail boats could use this pier for temporary berth and mooring when there are no storms or high wind/wave conditions. The pier does not have reliable mooring for small boats during high wind and wave conditions. The existing large ship berthed/moored at the finger pier with mooring lines to guide piles is a hazard and mooring could fail and the vessel could cause damage to property or be a life safety risk to other vessels on the bay. The ship should be removed and located to an anchorage suitable for a vessel of this size and displacement. There is an additional large ship moored at the end of Pier 38. Both of the large ships, one berthed at the light duty pier, and one improperly moored to building columns in the Pier 38 shed building, should be moved from Pier 38 by the owner. If the owners will not move the ships to another location that provides adequate berth and mooring, the Port may use the California Abandoned Vessel Abatement Program and Funds to obtain grants for removal of the ships. More information about this program is available: http://www.dbw.ca.gov/Funding/AWAF.aspx.

The existing Pier 36 is slated to be demolished in 2012. Removal of this pier will remove a structure which provides some protection from wind and wave conditions that affect the Pier 38 marina especially for North, Northwest, and Northeast wind and wave. The expected performance of the existing piers is “poor” with a high risk for failure and damage.

6.0 ALTERNATIVES

MTA evaluated the existing building and has identified two options to bring the building up to current code while maximizing the parking space available and avoiding a seismic upgrade to the structure. The schemes vary in the utilization of the CHBC, the approach to phasing, the use of the second floor, the designation of use as Assembly or Business (office) occupancies and the amount of corresponding allowed parking. The parking area is defined as S-2 occupancy with an occupant load factor of one person to 250 square feet of floor area. Option 1, with only B occupancy yields 70,200 square feet of parking while Option 2 yields 19,600 square feet of parking.

6.1 OPTION 1 – BASIC CODE COMPLIANCE

6.1.1 ARCHITECTURAL

Refer to Figure A3 - Proposed Use Area/ Occupancy Diagram – Option 1

6.1.1.1 USE

Uses on both floors will be limited to B (office) occupancies (other than the parking). The B occupancy has an occupant load of 1 person in 100 square feet. The total square footage for the B occupancy within the building including corridors, bathrooms, and stairs is 27,929.

6.1.1.2 PARKING

This scheme utilizes The California Historic Building Code to increase allowable area beyond the California Building Code. The limiting factor for the maximum square footage for parking in this option is staying below the seismic trigger of more than 634 occupants for the building. The parking is maximized at 70,200 square feet. This includes the drive aisle from the Embarcadero and the two 10’ wide striped pedestrian access aisles.

6.1.1.3 PLUMBING COUNTS

A smaller number of fixtures are required in this “B” occupancy only scheme based on occupancy classification. New men’s and women’s bathrooms are provided on the second floor for access by all tenants. The smaller number of required fixtures means more generous space within the rooms and a preferred more private door configuration.

In the northern most wing of the bulkhead on the second floor a single stall bathroom will need to be gutted and reconfigured to provide a single unisex bathroom. This has not been included in the provided plumbing count as shown on the proposed use area/occupancy diagram.

6.1.1.4 PARTIAL LIST OF SCOPE OF WORK

Refer to Figures A4 – A6 - Scope of Work – Option 1 first and second floor drawings

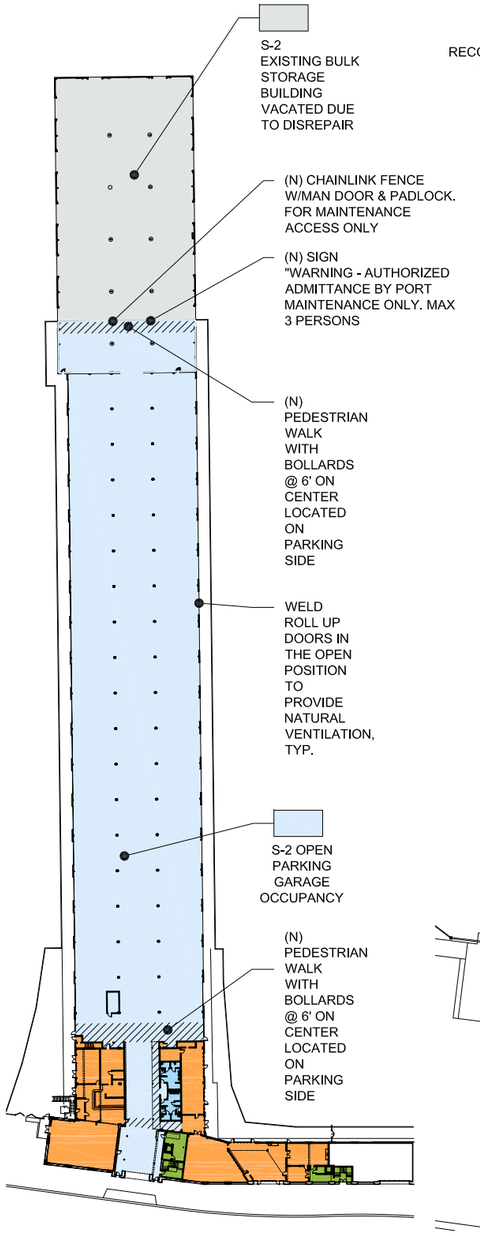
First floor (Figures A4 and A5):

- Add new LULA elevators and elevator machine room in two locations, create lobbies.
- Reconstruct north and south aprons to the eastern extent of a new pedestrian walk at the eastern end of the parking. Level aprons to provide code compliant path of travel.

- Regrade sidewalk outside of historic south stairwell at promenade along the Embarcadero for ½" threshold at door.
- New level landings added outside all doors.
- Permanent concrete ramp to be added to the north side of the bulkhead.
- Hand railings added to the ramp near drive aisle.
- Create vestibule/foyer for access to north side offices from shed.
- Reconstruct exit stairs from second floor on north side of building to meet maximum code riser height (7")
- Add striping at pedestrian path through parking areas.
- Add new storefront with man door to west end roll up door for access control.
- Add fence and man gate with pad lock at east end of parking with new signage "Warning Authorized admittance by port maintenance only. Maximum 3 persons".
- Float new concrete floor in the north office area and/or lower existing floor drain locations.
- Reconstruct sidewalk outside of southern exit stairs/ doors for level landing.
- Remove temporary structures in the shed.
- Add insulation at piping at all lavatories.
- Replace all non labeled fire rated doors and frames in walls between B (office) occupancies and S-2 (parking) occupancy.
- Extend/Rebuild existing wall of north exit stair from second floor former shed space.
- Create level landing at door into main historic stair by reconfiguring floor.
- New sprinklers in the 1908 original portion of the shed to bring building into fully sprinklered category.
- Add signage on all three sides of the exterior wall of the "vacated" Bulk storage portion of the shed – to "keep out- Port of san Francisco maintenance only"

Second floor (Figure A6):

- Rebuild north exit stair from northernmost bulkhead office space.
- Rebuild one hour enclosed north east exit stair to avoid head knocker condition, extend walls at shed to roof of shed.
- Add new ramp between bulkhead and former shed space. Create vestibule for entrance into office space.
- Add new ramp in north side of former shed space to make accessible path of travel.
- Remove selected partitions to open up space for new tenants.
- Remove non conforming single stall toilets.
- Add contrast striping to the stairs and code conforming railings at historic stairs.
- Remove all non wood floor finishes throughout.
- Remove non code compliant spiral stair.
- Provide railings under all structural braces where head clearance is non code compliance.
- Remove portion of corridor wall in southern most portion of Bulkhead to create elevator lobby.
- Level floor as required between office spaces in bulkhead.



FIRST FLOOR OCCUPANCY DIAGRAM

scale: 1/128" = 1'-0"

PARTIAL SECOND FLOOR PLAN (FUTURE TENANT IMPROVEMENT WORK UNDER SEP. PERMIT)

scale: 1/32" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM

scale: 1/32" = 1'-0"

PROPOSED USE OCCUPANT LOAD

OCC.	USE [1]	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
B	OFFICE	12334	100 GROSS	124	INCLUDES CORE, CIRCULATION, AND RESTROOMS
S-2	BULK STORAGE (VACATED)	23971		3	ASSIGNED OCCUPANT LOAD PER SF PORT ALT MEANS PCP-007
TOTAL FIRST FLOOR (WITHOUT PARKING)		36305		127	
SECOND FLOOR					
B	OFFICE	15595	100 GROSS	156	INCLUDES CORE, CIRCULATION, ELECTRICAL, AND RESTROOMS
TOTAL SECOND FLOOR		15595			
TOTAL FIRST + SECOND FLOOR (WITHOUT PARKING)				283	
	EXISTING USE OCCUPANT LOAD + 100			634	SEISMIC TRIGGER
S-2	OPEN PARKING	70200	200	351	
TOTAL W/PARKING				634	

PROPOSED USE ALLOWABLE/ACTUAL AREA

NOTE:

THIS SCHEME ASSUMES THE APPLICATION OF THE STATE HISTORIC BUILDING CODE WHICH ALLOWS FOR UNLIMITED AREA IN BUILDINGS PROVIDED WITH AN AUTOMATIC SPRINKLER PER CHBC SECTION 8-302.4 EXCEPTION 1. THE SCHEME WILL LIMIT THE AREA OF THE BUILDING TO THE SEISMIC TRIGGER OF OVER 634 OCCUPANTS.

PLUMBING FIXTURE COUNT [5]

				WATER CLOSETS			LAVATORIES	
OCC.	SQ. FT.	LOAD FACTOR	OCC. LOAD	MALE	FEMALE	URINALS	MALE	FEMALE
B	22353	200	112					
TOTAL OCC. LOAD + FIXTURES REQ'D			112	4	5	2	2	2
TOTAL FIXTURES PROVIDED				6	6	4	6	5

FOOTNOTES

1. USE PER CBC TABLE 1004.1.1.
2. NOT USED
3. NOT USED
4. N OT USED
5. PER CPC TABLE 4-1.

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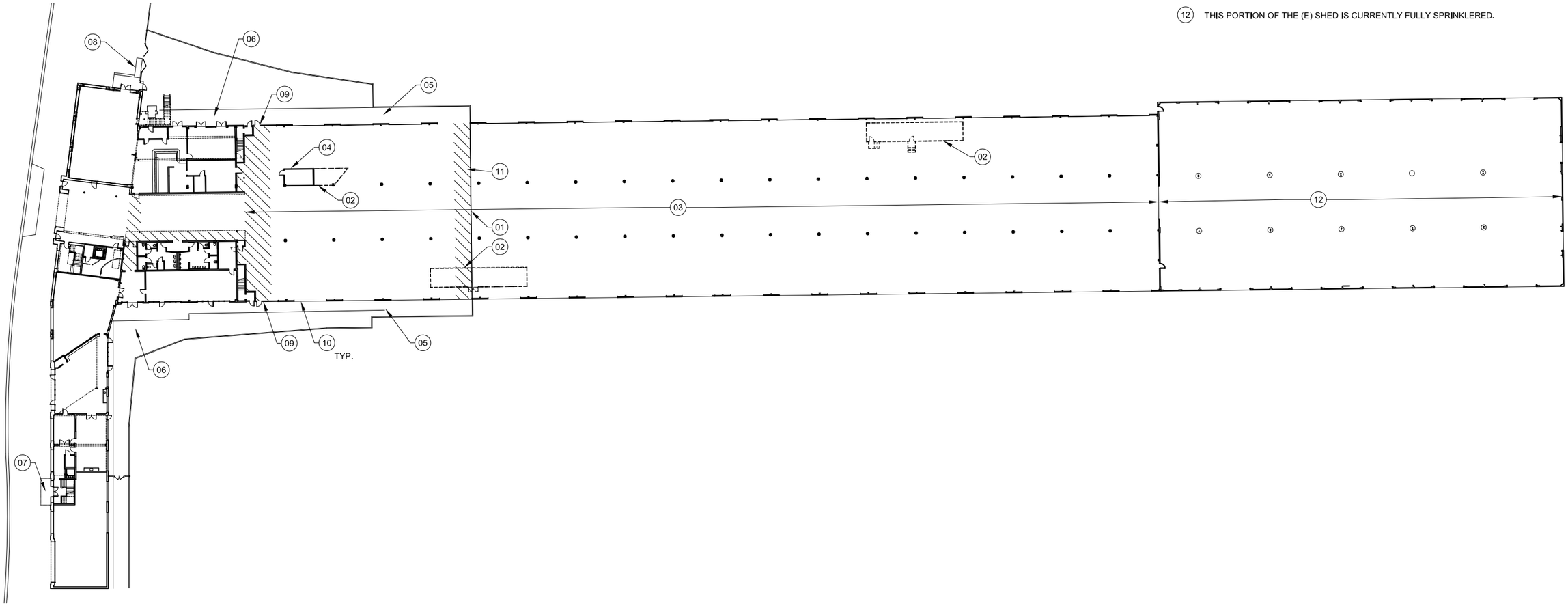
OCCUPANCY + ALLOWABLE AREA DIAGRAMS

PROPOSED USE AREA/OCCUPANCY DIAGRAM - OPTION 1
01.13.12

KEY NOTES:

01. (N) CHAINLINK FENCE W/MAN DOOR & PADLOCK. SIGN ON DOOR "FOR MAINTENANCE PURPOSES ONLY". LOCATION OF FENCE VARIES BETWEEN OPTION 1 AND OPTION2 SCHEMES.
02. REMOVE (E) TRAILER/STRUCTURES.
03. PROVIDE (N) SPRINKLER HEADS AT SHED.
04. (E) PUMP HOUSE TO REMAIN.
05. REBUILD CONCRETE APRON, LENGTH VARIES DEPENDING ON OPTION. SEE STRUCTURAL NARRATIVE.
06. REPAVE APRON FOR LEVEL SURFACE (ADA COMPLIANCE).
07. REPAVE SIDEWALK FOR ¾" THRESHOLD AT DOOR.
08. (N) PERMANENT 1:12 CONCRETE RAMP W/ GUARDS AND HANDRAILS.
09. (N) ALUMINUM STOREFRONT FULL HEIGHT OF ROLL UP DOORS (+/- 14' TALL).
10. (E) ROLL UP DOORS TO REMAIN AND LEFT OPEN FOR NATURAL VENTILATION OF PARKING. AREA
11. (N) STRIPED PEDESTRIAN PATH - 10' WIDE MIN. AND VEHICLE BARRIER BOLLARDS. LOCATION VARIES WITH OPTION 1 AND OPTION 2.
12. THIS PORTION OF THE (E) SHED IS CURRENTLY FULLY SPRINKLERED.



FIRST FLOOR PLAN - BOTH OPTIONS
scale: 1/64" = 1'-0"

NORTH

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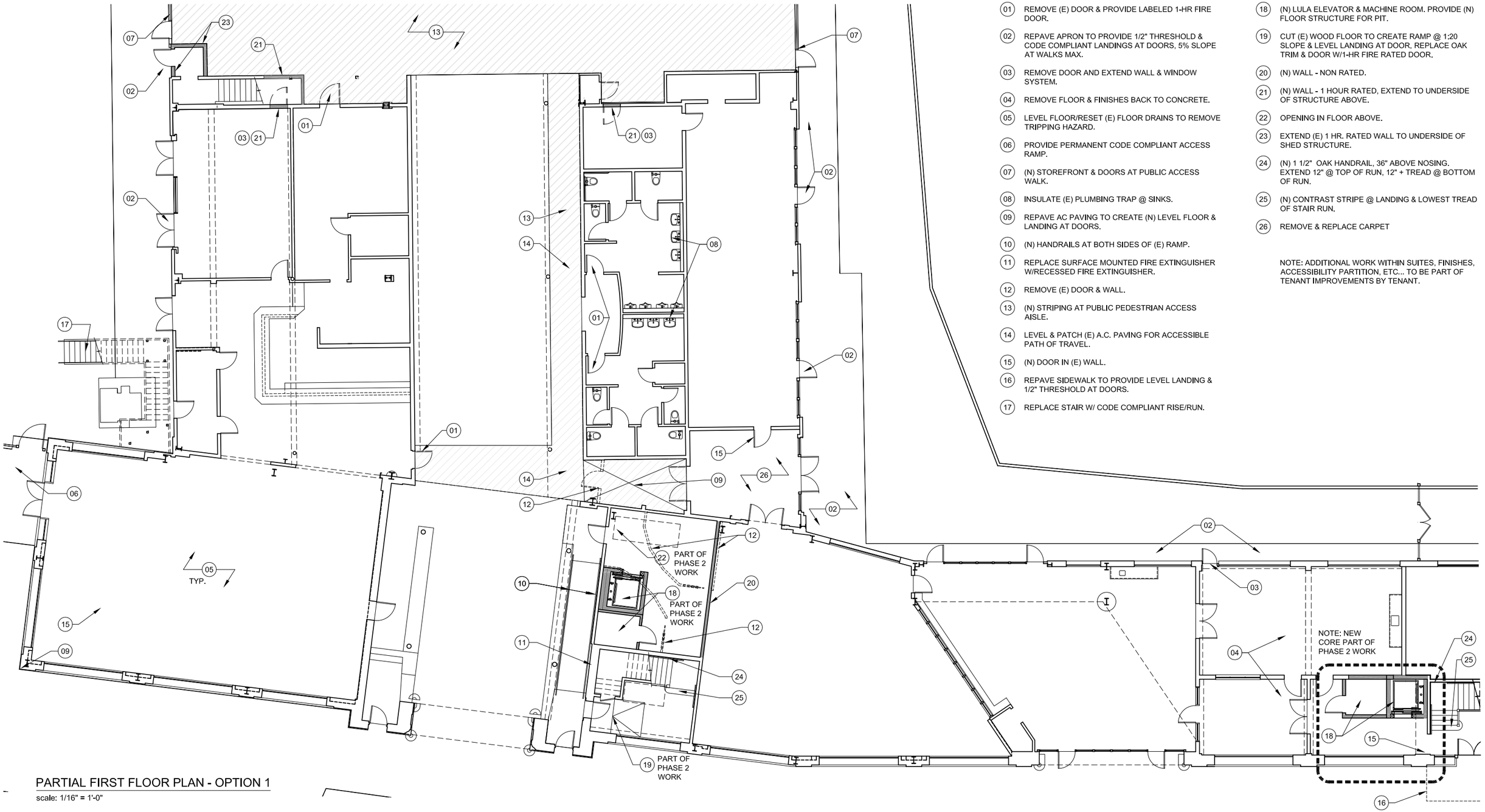
SCOPE OF WORK - SHED - OPTION 1 AND 2

SCOPE OF WORK
01.13.12

A4



PARTIAL FIRST FLOOR PLAN - OPTION 1

scale: 1/16" = 1'-0"

KEY NOTES:

01 REMOVE (E) DOOR & PROVIDE LABELED 1-HR FIRE DOOR.

02 REPAVE APRON TO PROVIDE 1/2" THRESHOLD & CODE COMPLIANT LANDINGS AT DOORS, 5% SLOPE AT WALKS MAX.

03 REMOVE DOOR AND EXTEND WALL & WINDOW SYSTEM.

04 REMOVE FLOOR & FINISHES BACK TO CONCRETE.

05 LEVEL FLOOR/RESET (E) FLOOR DRAINS TO REMOVE TRIPPING HAZARD.

06 PROVIDE PERMANENT CODE COMPLIANT ACCESS RAMP.

07 (N) STOREFRONT & DOORS AT PUBLIC ACCESS WALK.

08 INSULATE (E) PLUMBING TRAP @ SINKS.

09 REPAVE AC PAVING TO CREATE (N) LEVEL FLOOR & LANDING AT DOORS.

10 (N) HANDRAILS AT BOTH SIDES OF (E) RAMP.

11 REPLACE SURFACE MOUNTED FIRE EXTINGUISHER W/RECESSED FIRE EXTINGUISHER.

12 REMOVE (E) DOOR & WALL.

13 (N) STRIPING AT PUBLIC PEDESTRIAN ACCESS AISLE.

14 LEVEL & PATCH (E) A.C. PAVING FOR ACCESSIBLE PATH OF TRAVEL.

15 (N) DOOR IN (E) WALL.

16 REPAVE SIDEWALK TO PROVIDE LEVEL LANDING & 1/2" THRESHOLD AT DOORS.

17 REPLACE STAIR W/ CODE COMPLIANT RISE/RUN.

18 (N) LULA ELEVATOR & MACHINE ROOM. PROVIDE (N) FLOOR STRUCTURE FOR PIT.

19 CUT (E) WOOD FLOOR TO CREATE RAMP @ 1:20 SLOPE & LEVEL LANDING AT DOOR. REPLACE OAK TRIM & DOOR W/1-HR FIRE RATED DOOR.

20 (N) WALL - NON RATED.

21 (N) WALL - 1 HOUR RATED, EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.

22 OPENING IN FLOOR ABOVE.

23 EXTEND (E) 1 HR. RATED WALL TO UNDERSIDE OF SHED STRUCTURE.

24 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

25 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

26 REMOVE & REPLACE CARPET

NOTE: ADDITIONAL WORK WITHIN SUITES, FINISHES, ACCESSIBILITY PARTITION, ETC... TO BE PART OF TENANT IMPROVEMENTS BY TENANT.

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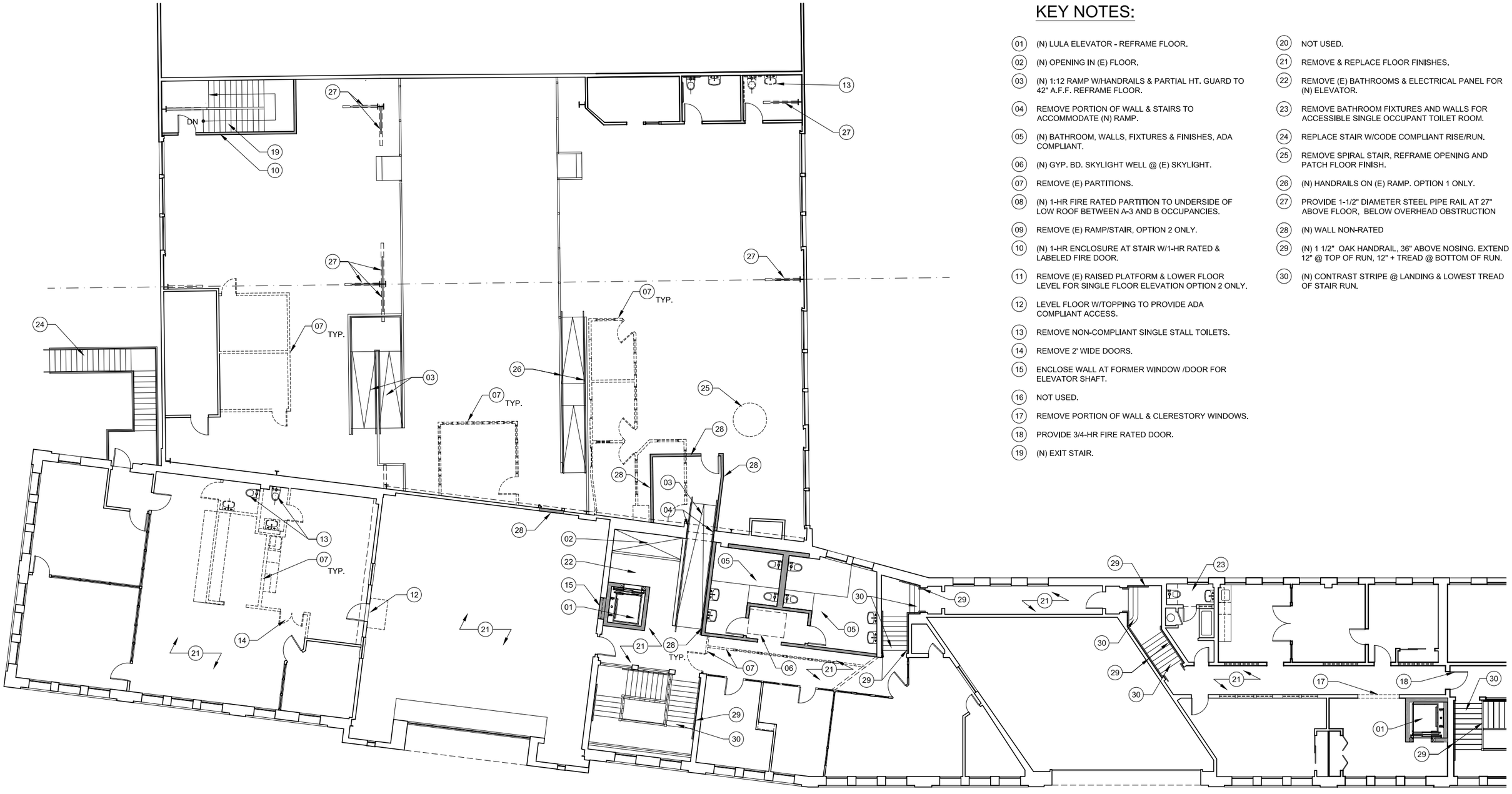
BULKHEAD

SCOPE OF WORK - OPTION 1
01.13.12

A5



KEY NOTES:

01 (N) LULA ELEVATOR - REFRAME FLOOR.
02 (N) OPENING IN (E) FLOOR.
03 (N) 1:12 RAMP W/HANDRAILS & PARTIAL HT. GUARD TO 42" A.F.F. REFRAME FLOOR.
04 REMOVE PORTION OF WALL & STAIRS TO ACCOMMODATE (N) RAMP.
05 (N) BATHROOM, WALLS, FIXTURES & FINISHES, ADA COMPLIANT.
06 (N) GYP. BD. SKYLIGHT WELL @ (E) SKYLIGHT.
07 REMOVE (E) PARTITIONS.
08 (N) 1-HR FIRE RATED PARTITION TO UNDERSIDE OF LOW ROOF BETWEEN A-3 AND B OCCUPANCIES.
09 REMOVE (E) RAMP/STAIR, OPTION 2 ONLY.
10 (N) 1-HR ENCLOSURE AT STAIR W/1-HR RATED & LABELED FIRE DOOR.
11 REMOVE (E) RAISED PLATFORM & LOWER FLOOR LEVEL FOR SINGLE FLOOR ELEVATION OPTION 2 ONLY.
12 LEVEL FLOOR W/TOPPING TO PROVIDE ADA COMPLIANT ACCESS.
13 REMOVE NON-COMPLIANT SINGLE STALL TOILETS.
14 REMOVE 2' WIDE DOORS.
15 ENCLOSE WALL AT FORMER WINDOW /DOOR FOR ELEVATOR SHAFT.
16 NOT USED.
17 REMOVE PORTION OF WALL & CLERESTORY WINDOWS.
18 PROVIDE 3/4-HR FIRE RATED DOOR.
19 (N) EXIT STAIR.
20 NOT USED.
21 REMOVE & REPLACE FLOOR FINISHES.
22 REMOVE (E) BATHROOMS & ELECTRICAL PANEL FOR (N) ELEVATOR.
23 REMOVE BATHROOM FIXTURES AND WALLS FOR ACCESSIBLE SINGLE OCCUPANT TOILET ROOM.
24 REPLACE STAIR W/CODE COMPLIANT RISE/RUN.
25 REMOVE SPIRAL STAIR, REFRAME OPENING AND PATCH FLOOR FINISH.
26 (N) HANDRAILS ON (E) RAMP. OPTION 1 ONLY.
27 PROVIDE 1-1/2" DIAMETER STEEL PIPE RAIL AT 27" ABOVE FLOOR, BELOW OVERHEAD OBSTRUCTION
28 (N) WALL NON-RATED
29 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.
30 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

SECOND FLOOR PLAN - OPTION 1
scale: 1/16" = 1'-0"

NOTE:
ALL WORK THIS FLOOR TO BE BUILT AS PART OF A SECOND PHASE TENANT IMPROVEMENT

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SAN FRANCISCO, CA

BULKHEAD

SCOPE OF WORK - OPTION 1
01.13.12

6.1.2 STRUCTURAL

A number of structural upgrades must be performed to meet the code requirements triggered by Option 1. These requirements are shown in Figures SK1.1 and SK1.2 with additional details provided in the structural schematics included as Appendix B. The structural upgrade items required for Option 1 are:

1. South Apron – up to chain link fence: The 4x12 decking needs to be replaced along with approximately 20% of the 4x12 joists due to deterioration. An asphalt topping will also be required to provide a uniform surface.
2. North Apron – up to chain link fence: Minimal replacement of the decking will be required. An asphalt topping will also be required to provide a uniform surface.
3. Apron Extension – beyond chain link fence: The existing timber aprons on the north and south sides that have been red tagged, beyond the chain link fence, must be removed, leaving only the concrete portion of each apron. The existing concrete portion of the apron on the north side, which is 10 feet wide, has sufficient width to meet BCDC public access requirements; however the south concrete portion of the apron is only 6 feet wide, requiring an additional 4 foot width of timber apron. This will require new 14" diameter piles (length of each pile: 90'), 12X12 cap beams, 4X12 joists @ 12" O.C. and 4X12 decking. An asphalt topping will also be added for a uniform walking surface.
4. Concrete Deck Repair: There is a hole in the concrete deck located in the proposed parking area, which is currently covered by a steel plate. The hole will need to be repaired.
5. New Elevator Pit and Shafts: Two new elevators are required to meet egress requirements. This will require modifying the existing framing for the new floor openings as well as modification of the concrete deck (i.e., will be lowered). The elevator shaft will be a wood framed wall system with rails to support the new elevators.
6. Bent Cap Replacement: Three bent caps require replacement. One bent cap is crushed from overstressing and the others appear to have severe deterioration.
7. Replace Missing Piles: Three piles were missing and must be replaced to adequately support the bent cap.
8. Reconfigure Existing North Exit Stairway: The south end of the existing opening will be partially infilled; the west side will require new framing and existing framing modifications to support the new opening.
9. Apron Railing: The existing rail, extending to the existing chain link fence, on both the north and south apron does not meet code requirements. The rail will be removed and replaced with the new railings extending the length of the apron extension.
10. Circular Stair Removal: The existing circular stairs will be removed. As a result, the floor will be infilled with new framing.

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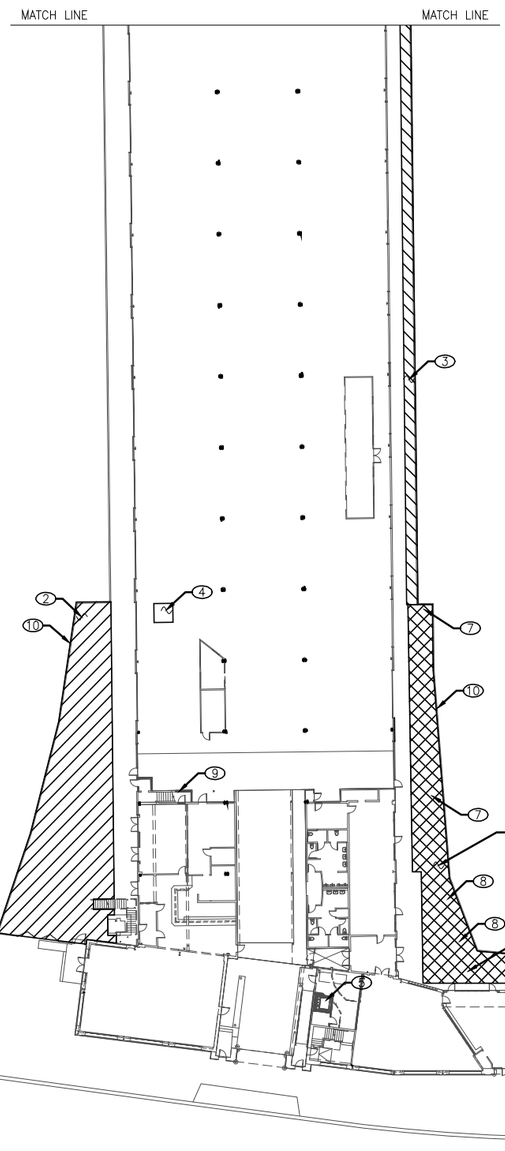

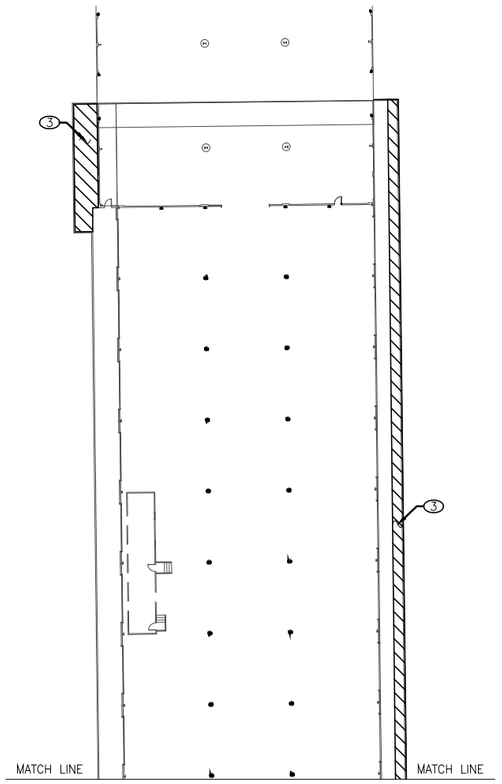

(1) KEY NOTES:

1. SOUTH APRON: REPLACE 4X12 DECKING AND 20% OF 4X12 JOISTS @ 12" O.C. PLACE ASPHALT TOPPING (~4").
2. NORTH APRON: REPLACE DECKING AS REQUIRED. PLACE ASPHALT TOPPING (~4").
3. APRON EXTENSION: REPLACE DETERIORATED BENTS WITH (N) 14"Ø PILES (L=90'), 12X12 CAP BEAMS, 4X12 JOISTS @ 12" O.C. AND 4X12 DECKING. BENTS TO BE SPACED @ 15'-0" O.C. SEE 11/SK4 FOR DETAILS.
4. CONCRETE DECK REPAIR: ASSUME 15' X 8' X 12", SEE 1/SK3 TO 4/SK3
5. (N) ELEVATOR PIT & SHAFT, SEE 6/SK3, 8/SK3, SK5, AND SK7
6. BENT CAP REPLACEMENT AT BULKHEAD, SEE 2/SK4
7. BENT CAP REPLACEMENT, BENTS 5 & 7, SEE 10/SK4
8. INSTALL MISSING PILE, SEE 6/SK4 AND/OR 7/SK4
9. RECONFIGURE (E) NORTH EXIT STAIRWAY: PARTIAL INFILL OF (E) OPENING AT SOUTH END AND ENLARGING OF OPENING ON WEST SIDE, INSTALL (N) FRAMING FOR WEST SIDE ENLARGEMENT
10. REMOVE & REPLACE (E) RAIL, SEE 8/SK4 AND 9/SK4
11. REMOVE CIRCULAR STAIR AND INFILL HOLE
12. INSTALL (N) SOUTH EXIT STAIRWAY: INSTALL (N) FRAMING AROUND OPENING
13. REMOVE AND REPLACE (E) 18" TJI FOR LOWERED FLOOR LEVEL
14. INSTALL (N) 2X6 FLOOR JOISTS IN BETWEEN (E) 2X6 JOISTS @ 16" O.C.
15. INSTALL (N) FRAMING FOR PLACEMENT OF RAMP

NOTE:
1. THE DETAILS SHOWN ON THE SK SHEETS ARE SKETCHES IN NATURE AND MAY NOT RESEMBLE THOSE SHOWN IN CONSTRUCTION DOCUMENTS. THESE DETAILS ARE ONLY INTENDED TO PROVIDE A GENERAL UNDERSTANDING OF WHAT MAY BE REQUIRED AND DIMENSIONS MAY NOT BE ENTIRELY ACCURATE.

2. SEE ARCH. DWGS FOR DIMENSIONS AND LOCATION OF ARCH. WORK.

3. OPTION 1: INCLUDES KEY NOTE ITEMS 1 TO 11.

4. OPTION 2: INCLUDES KEY NOTE ITEMS 1 TO 15.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: C+D	DATE: 01/13/12
DRAWN: C+D	DATE: 01/13/12
CHECKED: C+D	DATE: 01/13/12

APPROVED BY
SAN FRANCISCO PORT COMMISSION
DATE: _____
_____
CHIEF HARBOR ENGINEER

SCALE: 1/32"=1'-0"
SHEET OF SHEETS: 1 OF 10

PIER 38
CODE COMPLIANCE

FIRST FLOOR PLAN - OPTION 1
STRUCTURAL CODE COMPLIANCE SCHEMATIC

CONTRACT NO. -
DRAWING NO. SK1.1
FILE NO. -
REV. NO. 0

VIEW: PLOT1

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NORTH

(1) KEY NOTES:

1. SOUTH APRON: REPLACE 4X12 DECKING AND 20% OF 4X12 JOISTS @ 12" O.C. PLACE ASPHALT TOPPING (~4").
2. NORTH APRON: REPLACE DECKING AS REQUIRED. PLACE ASPHALT TOPPING (~4").
3. APRON EXTENSION: REPLACE DETERIORATED BENTS WITH (N) 14"Ø PILES (L=90'), 12X12 CAP BEAMS, 4X12 JOISTS @ 12" O.C. AND 4X12 DECKING. BENTS TO BE SPACED @ 15'-0" O.C. SEE 11/SK4 FOR DETAILS.
4. CONCRETE DECK REPAIR: ASSUME 8' X 8' X 8", SEE 1/SK3 TO 4/SK3
5. (N) ELEVATOR PIT & SHAFT, SEE 6/SK3, 8/SK3, SK5, AND SK7
6. BENT CAP REPLACEMENT AT BULKHEAD, SEE 2/SK4
7. BENT CAP REPLACEMENT, BENTS 5 & 7, SEE 10/SK4
8. INSTALL MISSING PILE, SEE 6/SK4 AND/OR 7/SK4
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13. REMOVE AND REPLACE (E) 18" TJI FOR LOWERED FLOOR LEVEL
14. INSTALL (N) 2X6 FLOOR JOISTS IN BETWEEN (E) 2X6 JOISTS @ 16" O.C.
15. INSTALL (N) FRAMING FOR PLACEMENT OF RAMP

NOTE:
1. THE DETAILS SHOWN ON THE SK SHEETS ARE SKETCHES IN NATURE AND MAY NOT RESEMBLE THOSE SHOWN IN CONSTRUCTION DOCUMENTS. THESE DETAILS ARE ONLY INTENDED TO PROVIDE A GENERAL UNDERSTANDING OF WHAT MAY BE REQUIRED AND DIMENSIONS MAY NOT BE ENTIRELY ACCURATE.

2. SEE ARCH. DWGS FOR DIMENSIONS AND LOCATION OF ARCH. WORK.

3. OPTION 1: INCLUDES KEY NOTE ITEMS 1 TO 11.

4. OPTION 2: INCLUDES KEY NOTE ITEMS 1 TO 15.

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: C+D DATE: 01/13/12
DRAWN: C+D DATE: 01/13/12
CHECKED: C+D DATE: 01/13/12

APPROVED BY
SAN FRANCISCO PORT COMMISSION
DATE: _____
_____
CHIEF HARBOR ENGINEER

SCALE: 1/16"=1'-0"
SHEET OF SHEETS: 2 OF 10

PIER 38
CODE COMPLIANCE

SECOND FLOOR PLAN – OPTION 1
STRUCTURAL CODE COMPLIANCE SCHEMATIC

CONTRACT NO. –
DRAWING NO. SK1.2
FILE NO. –
REV. NO. 0

VIEW: PLOT1

6.1.3 MECHANICAL

The existing plumbing cold water and sewer utility line sizes should be sufficient for continued service to the Pier.

Notes:

a. This option will require the installation of two (2) elevators, and elevator machine room.
b. Scope of work in the mechanical section includes: HVAC, plumbing, and fire protection.

6.1.3.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Remove and relocate existing first floor water heater to closet or accessible suspended platform, with tank bracing.
- Provide overhead fire sprinkler branch piping and sprinkler heads from existing six inch fire pump discharge pipeline, to provide sprinkler coverage to the parking garage.
- Provide mechanical ventilation exhaust fan(s), overhead exhaust duct and air inlets and outlet(s) throughout garage to provide minimum required ventilation rates, if natural ventilation is not accepted as code compliant by Port.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Provide new sewer, vent, domestic cold and hot water piping to new restroom plumbing fixtures, and connect to existing main building pipes.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers.
- Provide automatic wet-type fire sprinkling, sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer.
- Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or wall exhaust fan with intake grille, in machine room for hydraulic machinery cooling.

Second Floor:

- Remove the makeshift plywood hinged air reliefs, and blank off and properly fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface.
- Demolish existing distribution ductwork and outlets to partitioned rooms planned for removal in room 205 and 206 areas. Provide new ductwork and supply air outlets to supply the enlarged open areas of room 205 and 206.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.

- Remove all un-used plumbing piping, and seal off any existing vent and sewer open pipeline terminations.
- Provide automatic wet-type fire sprinkling for elevator shaft.
- Provide new sewer, vent, domestic cold and hot water to new restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers. Provide fire dampers on supply and return ductwork crossing one hour fire rated walls.

6.1.4 ELECTRICAL

This option will provide access to both first and second floor. This will require the site to be ADA compliant therefore new elevators will need to be installed. Total office spaces for the first and second floor are: 12334 sq. ft. and 15595 sq. ft. respectively. Using an estimated load density of 9.2 W/sq.ft, the calculated loads for the occupancy will be: 113.5 KW for first floor, 143.5 KW for second floor resulting in a total of 256.9 KW. This power divided by 480V equals 535.3A, which is less than the 2000A section in the Main Distribution Center; therefore, there should be no need to have PG&E upgrade the service to the Pier.

Notes:

a. This option will require the installation of two (2) elevators, and depending on the final design, the elevator's required power will not trigger an upgrade to PG&E service.
b. Scope of work in the electrical section includes: Power distribution, Lighting and Fire Alarm.

6.1.4.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Replace the existing distribution center in the first floor due to its deteriorated state.
- For office space 101, provide two new electrical panels to replace the damaged panels K and KA, that are located on the wall adjacent to the main distribution center, matching the existing load capacity.
- For office space 103, provide one new electrical panel to replace the small lighting and receptacle panel that is located in the south wall of office space 103. This panel will be upgraded to a larger capacity panel to prevent the need to using a double breaker as it is currently being done.
- Provide new lighting design in the parking area to achieve an average foot-candle (ft-cd) level of five ft-cd as per Illuminating Engineering Society (IES) Recommended Maintained Horizontal Illuminances for Covered Parking Garages.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

Second Floor:

- Remove and relocate the electrical panel from the bathroom in office space 201C. New panel will be flush mounted in eastern wall of office 201D and will be connected to all loads from removed panel.
- Remove the electrical panels from the Core1 area. This area will have the new elevator. Provide a new lockable panel that will accommodate all the loads from the removed panels, install flush mounted in the proposed Core1 area and connect to all loads from removed panels.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

6.1.5 MARINE

6.1.5.1 EXISTING MARINA RELIABILITY IMPROVEMENTS

Figure MA-2 illustrates “minimum” improvements that are recommended to improve the reliability of the existing pier. The improvements include:

- (8) new 14 inch diameter by 80 foot long steel pipe piles.
- New 385 foot long by 10 foot wide high performance finger pier.
- Repair connection to Pier.
- (10) temporary mooring berths for light pleasure craft, less than 50 feet in length.

The improved pier would allow temporary berths for up to twelve small (under 80 ft) motorboats or sailboats. New mooring cleats have to be connected to the pier floats. Providing power and water utilities to the pier is optional. This is not constructed for permanent vessel berths without a wave attenuation structure.

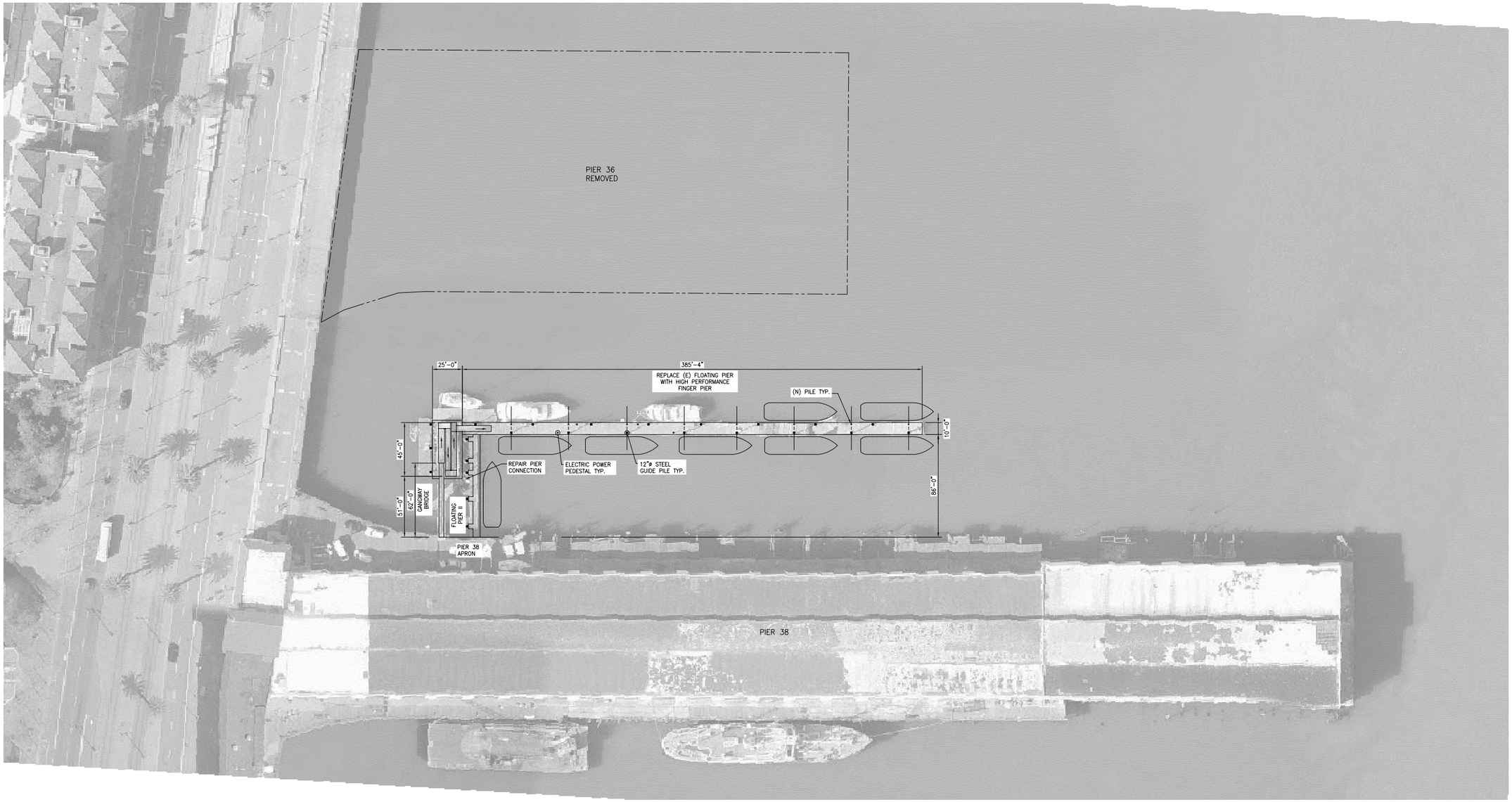
6.1.5.2 IMPROVED PIER 38 MARINA

A permanent boat marina should have a wave attenuation floating or fixed breakwater, finger piers and berths that protect the vessels and allow mooring vessels with bow and stern lines connected to mooring cleats fixed on the pier. Figure MA-3 is one possible configuration that includes improved public access, a floating breakwater, and berths for 18 motor or sail boats up to 100 feet in length. The Port may consider accommodating larger vessels on the waterfront because this facility would make the Port of San Francisco attractive to international vessels that could visit the city, find temporary berths on the waterfront. A marina at this location could complement the Brannan Street Wharf and will be an asset for national and International America’s Cup visitors.

The marina piers, piles and structure system are engineered and constructed to have the strength to support the mooring loads and the wind, wave, and current forces generated inside a “protected” marina.

The floating piers are engineered by a naval architect that can model the hydrodynamic response of the piers to storm wind and wave and current conditions, and engineer the floating piers and guide piles for reliable performance. The configuration can be changed to provide improved Public Access on the water.

BILL OF MATERIALS			
MEMBER	SIZE	AMOUNT	NOTE
STEEL PIPE PILE	14"ø X 80'	8	NEW
HIGH PERFORMANCE FINGER PIER	385' X 10'	1	REPLACE EXISTING
PIER CONNECTION	–	1	REPAIR
MOORING BERTHS FOR LIGHT PLEASURE CRAFT L ≤ 50FT	–	10	TEMPORARY



NORTH

PLAN
1"=40'

IMPROVE MARINA PERFORMANCE

DESIGNED BY:		REV.	DATE	DESCRIPTION	APPR'D
DRAWN BY:					
CHECKED BY:					
DATE:	11/8/11				
SCALE:	AS NOTED				

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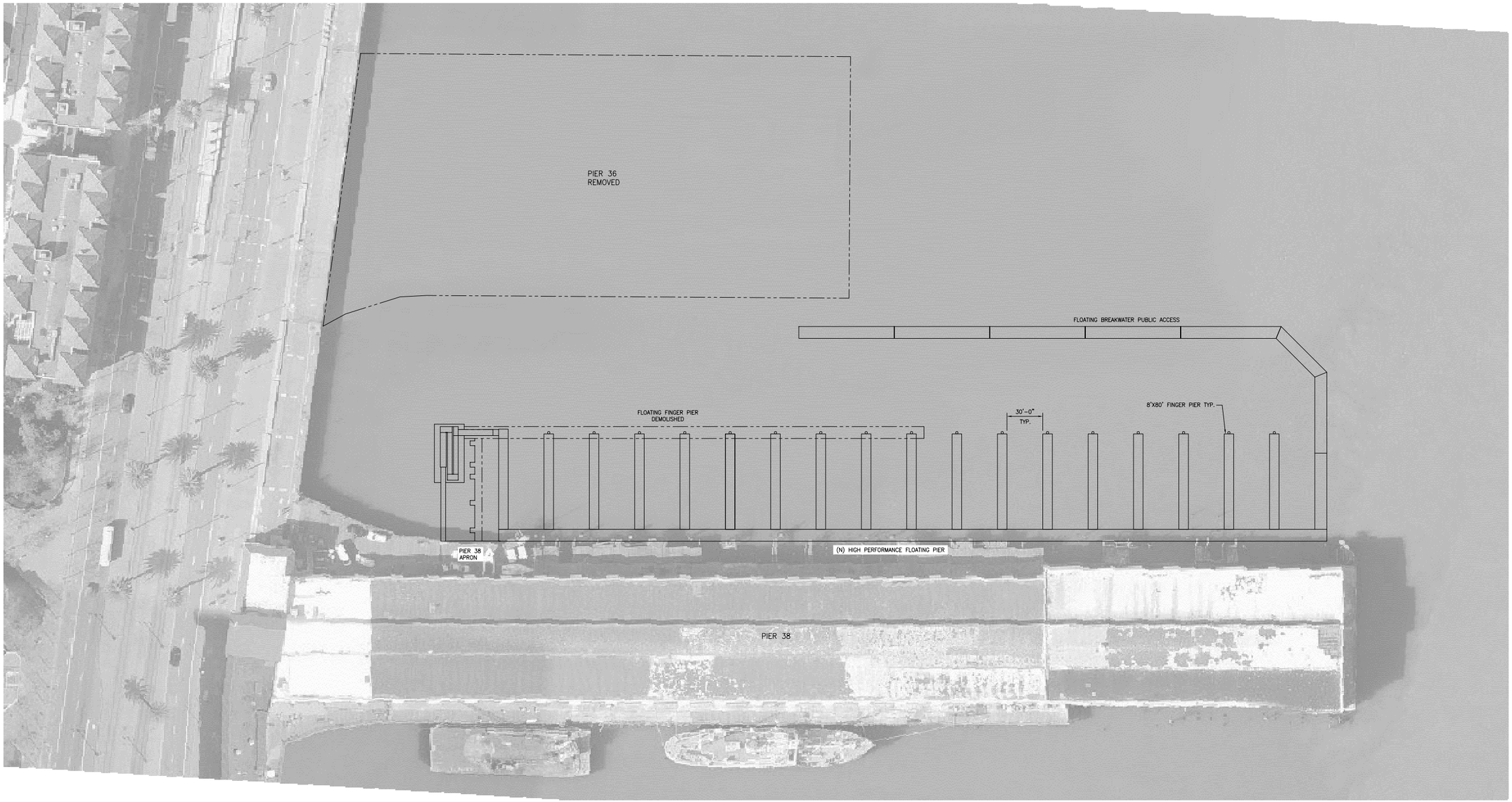
PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-2
OF 3 SHEETS

PROJECT NO.
209010.10

BILL OF MATERIALS			
MEMBER	SIZE	AMOUNT	NOTE
CONCRETE PILE	14"ø X 80'	18	NEW
HIGH PERFORMANCE PIER	680' X 10'	1	NEW
FLOATING BREAKWATER	450' X 10'	1	NEW
FINGER PIERS	80' X 8'	18	NEW
BOAT SLIPS	30' X 80'	18	NEW



NORTH

PLAN
1"=40'

MODIFIED MARINA AND FLOATING BREAKWATER

NO.	DESCRIPTION	DATE	APP'D	SCH.

DESIGNED BY:
DRAWN BY:
CHECKED BY:
DATE: 11/8/11
SCALE: AS NOTED

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PLAN
PIER 38 MARINE STRUCTURES
SAN FRANCISCO COUNTY California

SHEET NUMBER
MA-3
OF 3 SHEETS

PROJECT NO.
209010.10

6.1.6 COST ESTIMATE – OPTION 1

The following table shows the code compliance construction cost for Option1, which is broken into four alternatives depending on extent of utilization.

Option 1a – Only first floor office space, no parking or second floor
Option 1b – First floor office space along with maximum allowable parking, no second floor
Option 1c – Only first and second floor office space, no parking
Option 1d – First and second floor office space with maximum allowable parking

	Project Costs			
	Tenant Space		Shed Parking	Total Cost
	First Floor	Second Floor		
Option 1a - First Floor Only	$ 1,580,221	$ -	$ -	$ 1,580,221
Option 1b - First Floor with Maximum Parking	$ 1,580,221	$ -	$ 2,753,594	$ 4,333,815
Option 1c - First and Second Floor Office	$ 1,580,221	$ 1,834,148	$ -	$ 3,414,369
Option 1d - First and Second Floor Office with Max Parking	$ 1,580,221	$ 1,834,148	$ 2,753,594	$ 6,167,963

Construction costs include markups for: design and estimating contingencies (15%), general conditions and requirements (10%), payment and performance bonds (2%), general contractor's fee (5%) and project soft costs (25%).

The cost for marina repair or demolition is in addition to the above and is:

	Marina Costs			
	Direct Cost	Mark-Up 35.5%	Soft Cost 25%	Total Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

* Note: Marina Costs are in addition to project costs for Options 1 and 2

6.2 OPTION 2 – CODE COMPLIANCE + PARTIAL ASSEMBLY OCCUPANCY

6.2.1 ARCHITECTURAL

Refer to Figure A7 - Proposed Use Area/ Occupancy Diagram – Option 2

6.2.1.1 USE

The goal for this scheme is to provide occupancy that is as close to the way the space was being used prior to the 30 September 2011 eviction while maximizing parking on the first floor level and avoiding the seismic trigger. The occupancy type that most closely resembles that prior occupancy is A-3. MTA identified the largest space available to assign an A-3 occupancy by breaking the single use space that was built out within the original shed on the second floor into two leasable spaces with a new one hour fire rated wall between them. This creates 4,478 square feet of A-3 occupancy. The new wall would be located to the south of the existing truss and should extend to the underside of the lower concrete roof deck. The space over the drive aisle on the first floor which was accessed via stairs and a ramp would be reframed at a lower elevation to create a single floor level for all of the spaces in the former shed. The code requires

that the smaller of the two spaces (B occupancy) have a new exit stair/enclosure added to provide a second means of egress as the common path of egress travel exceeded the code allowable 100 feet (when building is sprinklered). The remainder of the second floor will be identified as (b) office occupancy which precludes the spaces being used as "party" assembly spaces. The total area of the B occupancy including circulation, toilets is 23,165 square feet.

6.2.1.2 PARKING

The limiting factor for the maximum square footage of parking in this option is the occupant load and the seismic trigger. The trade off on the inclusion of the A-3 occupancy is an increased occupant count for the building proper. The A-3 assembly space has an occupant load factor of one person in 15 net square feet. The B occupancy has an occupant load factor of one person per 100 gross square feet. The significance of that is the higher the occupant count the less parking is allowed due to the limitation of staying below the seismic trigger number of 634 occupants. The parking is maximized at 19,600 square feet, about one quarter that of Option 1. This includes the drive aisle from the Embarcadero and the two 10' wide striped pedestrian access aisles. The occupant load is 634.

6.2.1.3 PLUMBING COUNTS

Another requirement of increased occupant load and the A-3 occupancy is an increase in the number of required plumbing fixtures. The diagram shown in the proposed use area/occupancy diagram Option 2 meets the required fixtures for the building by trading off urinals above the required number for toilets as allowed for in the California plumbing code.

In the northern most wing of the bulkhead on the second floor a single stall bathroom will need to be gutted and reconfigured to provide a single unisex bathroom. This has not been included in the provided plumbing count as shown on the proposed use area/occupancy diagram.

6.2.1.4 PARTIAL LIST OF SCOPE OF WORK

Refer to Figures A8 – A10 - Scope of Work – Option 2 first and second floor drawings.

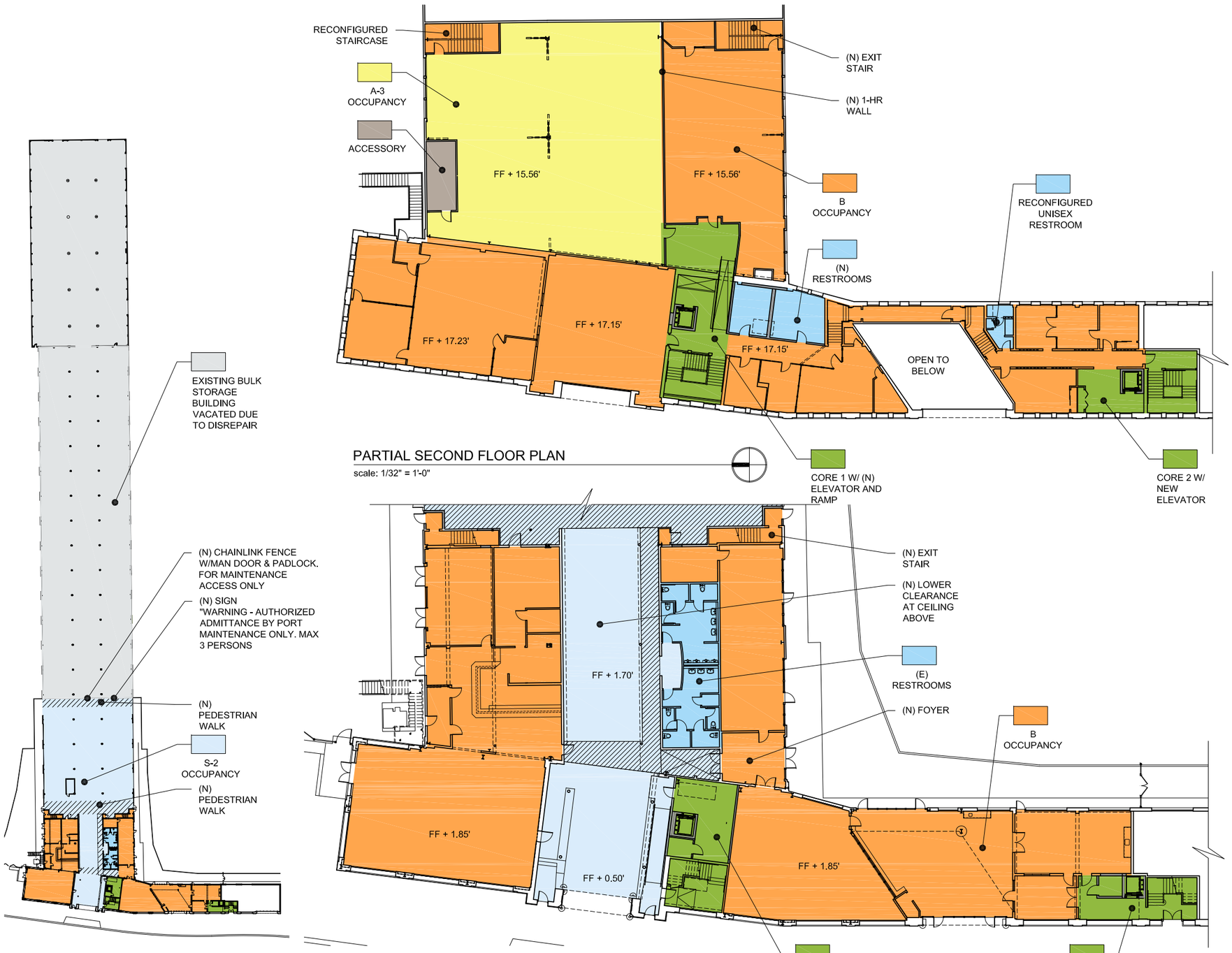
First floor (Figures A8 and A9):

- Add new LULA elevators and elevator machine room in two locations, create lobbies.
- Regrade sidewalk outside of historic south stairwell at promenade along the Embarcadero for ½" threshold at door.
- Reconstruct north and south aprons to the eastern extent of a new pedestrian walk at the eastern end of the parking. Level aprons to provide code complaint path of travel.
- New Level landings added outside all doors.
- Permanent concrete ramp to be added to the north side of the bulkhead.
- Hand Railings added to the ramp near drive aisle.
- Create vestibule/foyer for access to north side offices from shed.
- Reconstruct exit stairs from second floor on north side of building to meet maximum code riser height (7")
- Add striping at pedestrian path through parking areas.
- Add new storefront with man door to west end roll up door for access control.
- Add fence and man gate with pad lock at east end of parking with new signage "warning authorized admittance by port maintenance only. Maximum 3 persons".

- Float new concrete floor in the north office area and/or lower existing floor drain locations.
- Reconstruct sidewalk outside of southern exit stairs/ doors for level landing.
- Remove temporary structures in the shed.
- Add insulation at piping at all lavatories.
- Replace all non-labeled fire rated doors and frames in walls between B occupancies and S-2 occupancy.
- Extend/Rebuild existing wall of north exit stair from second floor former shed space.
- Create level landing at door into main historic stair by reconfiguring floor.
- New sprinklers in 1908 original shed to bring building into fully sprinklered category.
- Add signage on all three sides of the exterior wall of the "existing bulk storage vacated due to disrepair" portion of the shed – to "keep out- Port of san Francisco maintenance only"

Second floor (Figure A10):

- Rebuild north exit stair from northernmost bulkhead office space.
- Rebuild one hour enclosed north east exit stair to avoid head knocker condition, extend walls at shed to roof of shed.
- Add new ramp between bulkhead and former shed space. Create vestibule for entrance into office space.
- Add one hour wall between B occupancy and A-3 occupancy in the former shed space.
- Add new exit stair from B occupancy at south east corner of former shed space.
- Add new ramp in north side of former shed space to make accessible path of travel.
- Remove selected partitions to open up space for new tenants.
- Remove non conforming single stall toilets.
- Add contrast striping to the stairs and code conforming railings at historic stairs.
- Remove all non wood floor finishes throughout.
- Remove non code compliant spiral stair.
- Provide railings under all structural braces where head clearance is non code compliance.
- Remove portion of corridor wall in southern most portion of Bulkhead to create elevator lobby.
- Level floor as required between office spaces in bulkhead.



PARTIAL SECOND FLOOR PLAN
scale: 1/32" = 1'-0"

FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/128" = 1'-0"

PARTIAL FIRST FLOOR OCCUPANCY DIAGRAM
scale: 1/32" = 1'-0"

PROPOSED USE/OCCUPANT LOAD CALCULATIONS

OCC.	USE [1]	SQ. FT.	LOAD FACTOR	# OCC	NOTES
FIRST FLOOR					
B	OFFICE	12334	100 GROSS	124	INCLUDES CORE, CIRCULATION, AND RESTROOMS
S-2	BULK SHIPPING (VACATED)	75870		3	ASSIGNED OCCUPANT LOAD PER SF PORT ALT MEANS PCP-007
TOTAL FIRST FLOOR (WITHOUT PARKING)		88204		127	
SECOND FLOOR					
B	OFFICE	10831	100 GROSS	109	INCLUDES CORE, CIRCULATION, AND RESTROOMS
A3	ASSEMBLY/OFFICE	4478	15 NET	299	
	ELECTRICAL ROOM	187	300 GROSS	1	ACCESSORY
TOTAL SECOND FLOOR		15496		409	
TOTAL FIRST + SECOND FLOOR (WITHOUT PARKING)				536	
EXISTING USE OCCUPANT LOAD + 100				634	
S-2	PARKING	19600	200	98	
TOTAL W/PARKING				634	

PROPOSED USE AREA

OCC.	ALLOWABLE AREA [2]	ALLOWABLE AREA INCREASES: FULLY SPRINKLERED	ALLOWABLE AREA INCREASES: FRONTAGE INCREASE [3]	TOTAL ALLOWABLE AREA	ACTUAL AREA	ACTUAL/ ALLOWABLE AREA
FIRST FLOOR						
B	23000	46000	0	69000	12334	0.178754
S-2	26000	52000	0	78000	19600	0.251282
S-2	VACATED PORTION OF BUILDING; DOES NOT COUNT TOWARDS ALLOWABLE AREA				75870	
TOTAL ACTUAL/ALLOWABLE AREA RATIO						0.430036
SECOND FLOOR						
B	23000	46000	0	69000	10661	0.154507
A-3	9500	19000	0	28500	4478	0.157123
TOTAL ACTUAL/ALLOWABLE AREA RATIO						0.311630

PLUMBING FIXTURE COUNT [5]

				WATER CLOSETS			LAVATORIES	
OCC.	SQ. FT.	LOAD FACTOR	OCC. LOAD	MALE	FEMALE	URINALS	MALE	FEMALE
B	17085	200	86	3	4	1	2	2
A-3	4478	30	150	4	5	2	2	2
TOTAL OCC. LOAD + FIXTURES REQ'D			236	7	9	3	4	4
TOTAL FIXTURES PROVIDED				5	9	6	5	5

FOOTNOTES

1. USE PER CBC TABLE 1004.1.1.
2. FOR TYPE IIB CONSTRUCTION PER CBC TABLE 503.
3. FRONTAGE INCREASE NOT PERMITTED AS ONLY 10'-6" APRON ALLOWED TO BE CONSIDERED AT 3 SIDES < 20' PER CBC 506.2. EMBARCADERO FRONTAGE IS LESS THAN 25% OF PERIMETER.
4. S-2 IS REQUIRED TO BE FULLY SPRINKLERED IF "ENCLOSED" PARKING GARAGE AND FIRE AREA EXCEEDS 12,000 SF.
5. PER CPC TABLE 4-1. EA. URINAL IN EXCESS OF MIN ALLOWS FOR REDUCTION IN WC. PLUMBING COUNT DOES NOT INCLUDE UNISEX RESTROOM AT SOUTH WING OF SECOND FLOOR

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OCCUPANCY + ALLOWABLE AREA DIAGRAMS

PROPOSED USE AREA/OCCUPANCY DIAGRAM - OPTION 2
01.13.12

KEY NOTES:

01 (N) CHAINLINK FENCE W/MAN DOOR & PADLOCK. SIGN ON DOOR "FOR MAINTENANCE PURPOSES ONLY".

02 REMOVE (E) TRAILER/STRUCTURES.

03 PROVIDE (N) SPRINKLER HEADS AT SHED.

04 (E) PUMP HOUSE TO REMAIN.

05 REBUILD CONCRETE APRON, LENGTH VARIES DEPENDING ON OPTION. SEE STRUCTURAL NARRATIVE.

06 REPAVE APRON FOR LEVEL SURFACE (ADA COMPLIANCE).

07 REPAVE SIDEWALK FOR ¾" THRESHOLD AT DOOR.

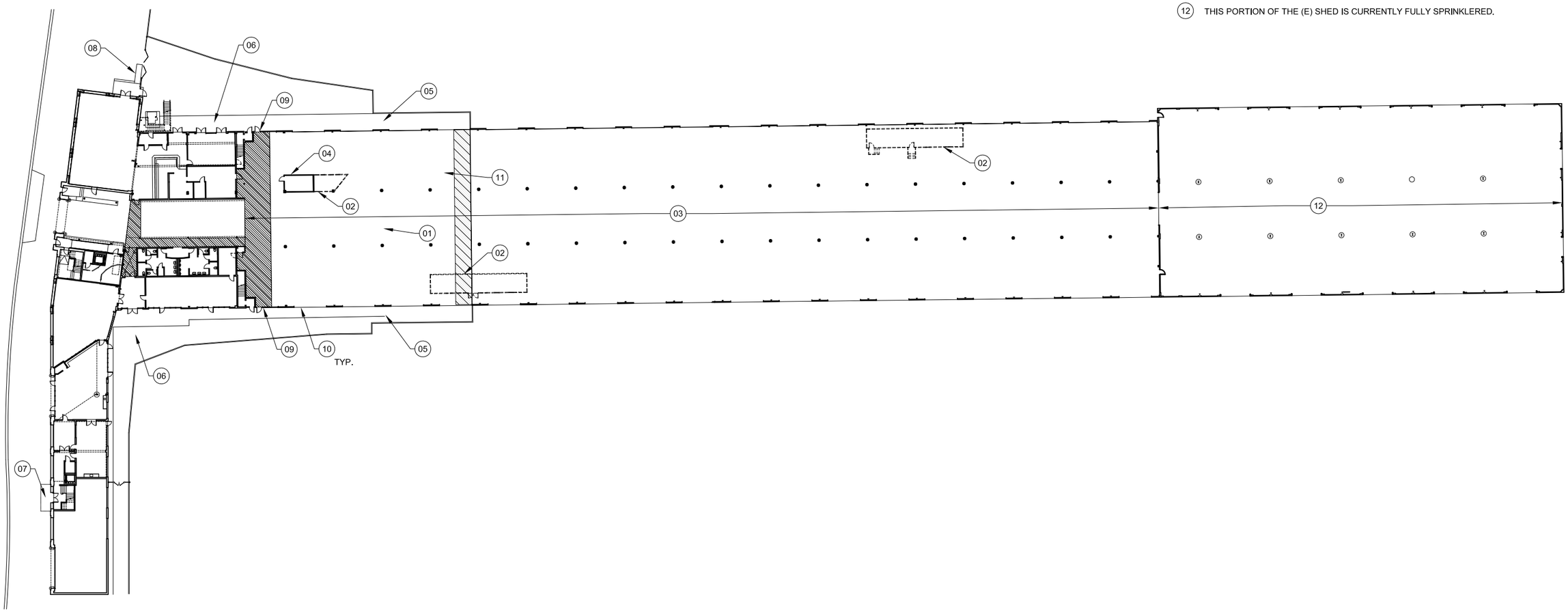
08 (N) PERMANENT 1:12 CONCRETE RAMP W/ GUARDS AND HANDRAILS.

09 (N) ALUMINUM STOREFRONT FULL HEIGHT OF ROLL UP DOORS (+/- 14' TALL).

10 (E) ROLL UP DOORS TO REMAIN AND LEFT OPEN FOR NATURAL VENTILATION OF PARKING. AREA

11 (N) STRIPED PEDESTRIAN PATH - 10' WIDE MIN.

12 THIS PORTION OF THE (E) SHED IS CURRENTLY FULLY SPRINKLERED.



FIRST FLOOR PLAN - BOTH OPTIONS
scale: 1/64" = 1'-0"

NORTH

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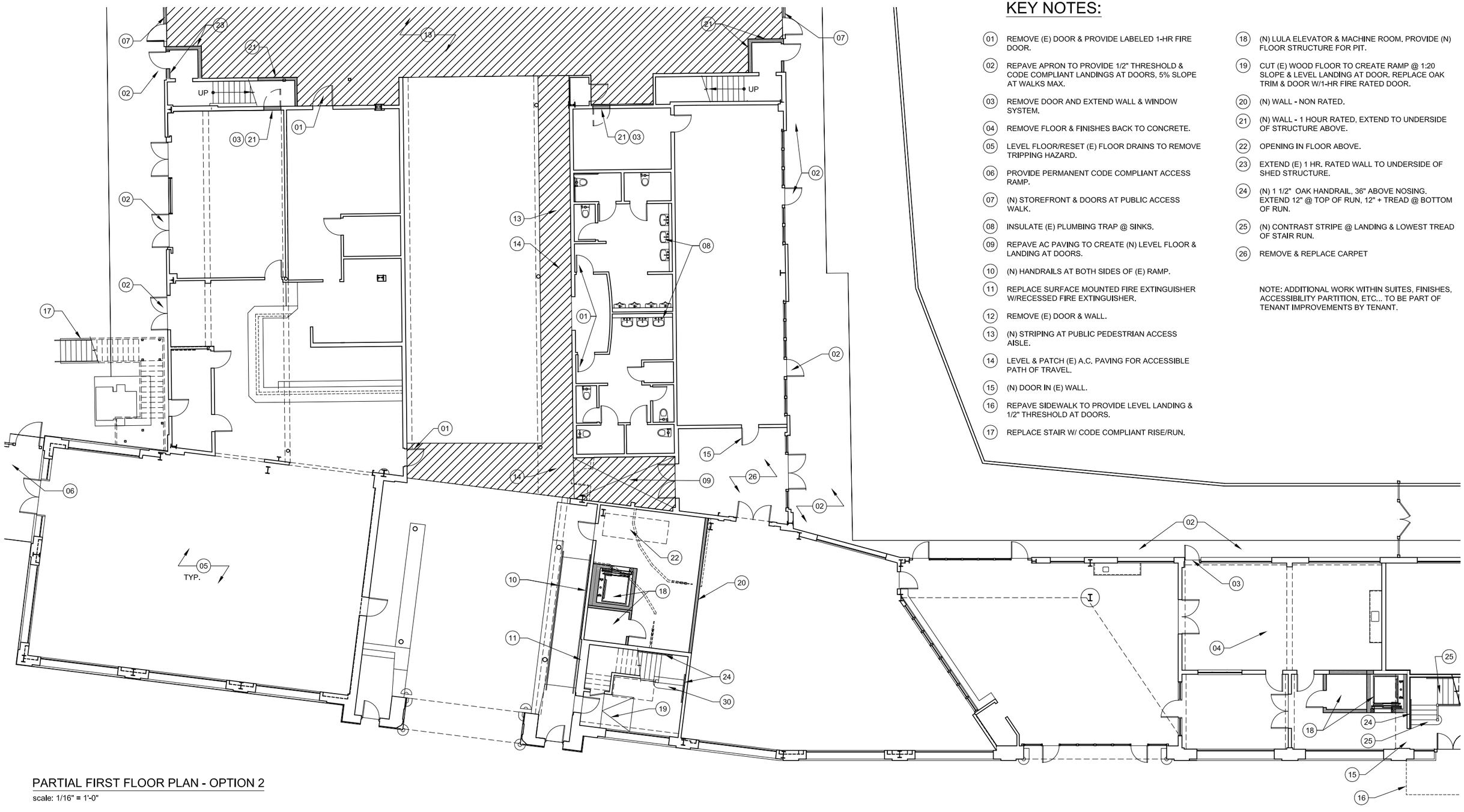
SCOPE OF WORK - SHED - OPTION 1 AND 2

SCOPE OF WORK
01.13.12

A8



PARTIAL FIRST FLOOR PLAN - OPTION 2

scale: 1/16" = 1'-0"

KEY NOTES:

01 REMOVE (E) DOOR & PROVIDE LABELED 1-HR FIRE DOOR.

02 REPAVE APRON TO PROVIDE 1/2" THRESHOLD & CODE COMPLIANT LANDINGS AT DOORS, 5% SLOPE AT WALKS MAX.

03 REMOVE DOOR AND EXTEND WALL & WINDOW SYSTEM.

04 REMOVE FLOOR & FINISHES BACK TO CONCRETE.

05 LEVEL FLOOR/RESET (E) FLOOR DRAINS TO REMOVE TRIPPING HAZARD.

06 PROVIDE PERMANENT CODE COMPLIANT ACCESS RAMP.

07 (N) STOREFRONT & DOORS AT PUBLIC ACCESS WALK.

08 INSULATE (E) PLUMBING TRAP @ SINKS.

09 REPAVE AC PAVING TO CREATE (N) LEVEL FLOOR & LANDING AT DOORS.

10 (N) HANDRAILS AT BOTH SIDES OF (E) RAMP.

11 REPLACE SURFACE MOUNTED FIRE EXTINGUISHER W/RECESSED FIRE EXTINGUISHER.

12 REMOVE (E) DOOR & WALL.

13 (N) STRIPING AT PUBLIC PEDESTRIAN ACCESS AISLE.

14 LEVEL & PATCH (E) A.C. PAVING FOR ACCESSIBLE PATH OF TRAVEL.

15 (N) DOOR IN (E) WALL.

16 REPAVE SIDEWALK TO PROVIDE LEVEL LANDING & 1/2" THRESHOLD AT DOORS.

17 REPLACE STAIR W/ CODE COMPLIANT RISE/RUN.

18 (N) LULA ELEVATOR & MACHINE ROOM. PROVIDE (N) FLOOR STRUCTURE FOR PIT.

19 CUT (E) WOOD FLOOR TO CREATE RAMP @ 1:20 SLOPE & LEVEL LANDING AT DOOR. REPLACE OAK TRIM & DOOR W/1-HR FIRE RATED DOOR.

20 (N) WALL - NON RATED.

21 (N) WALL - 1 HOUR RATED, EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.

22 OPENING IN FLOOR ABOVE.

23 EXTEND (E) 1 HR. RATED WALL TO UNDERSIDE OF SHED STRUCTURE.

24 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

25 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

26 REMOVE & REPLACE CARPET

NOTE: ADDITIONAL WORK WITHIN SUITES, FINISHES, ACCESSIBILITY PARTITION, ETC... TO BE PART OF TENANT IMPROVEMENTS BY TENANT.

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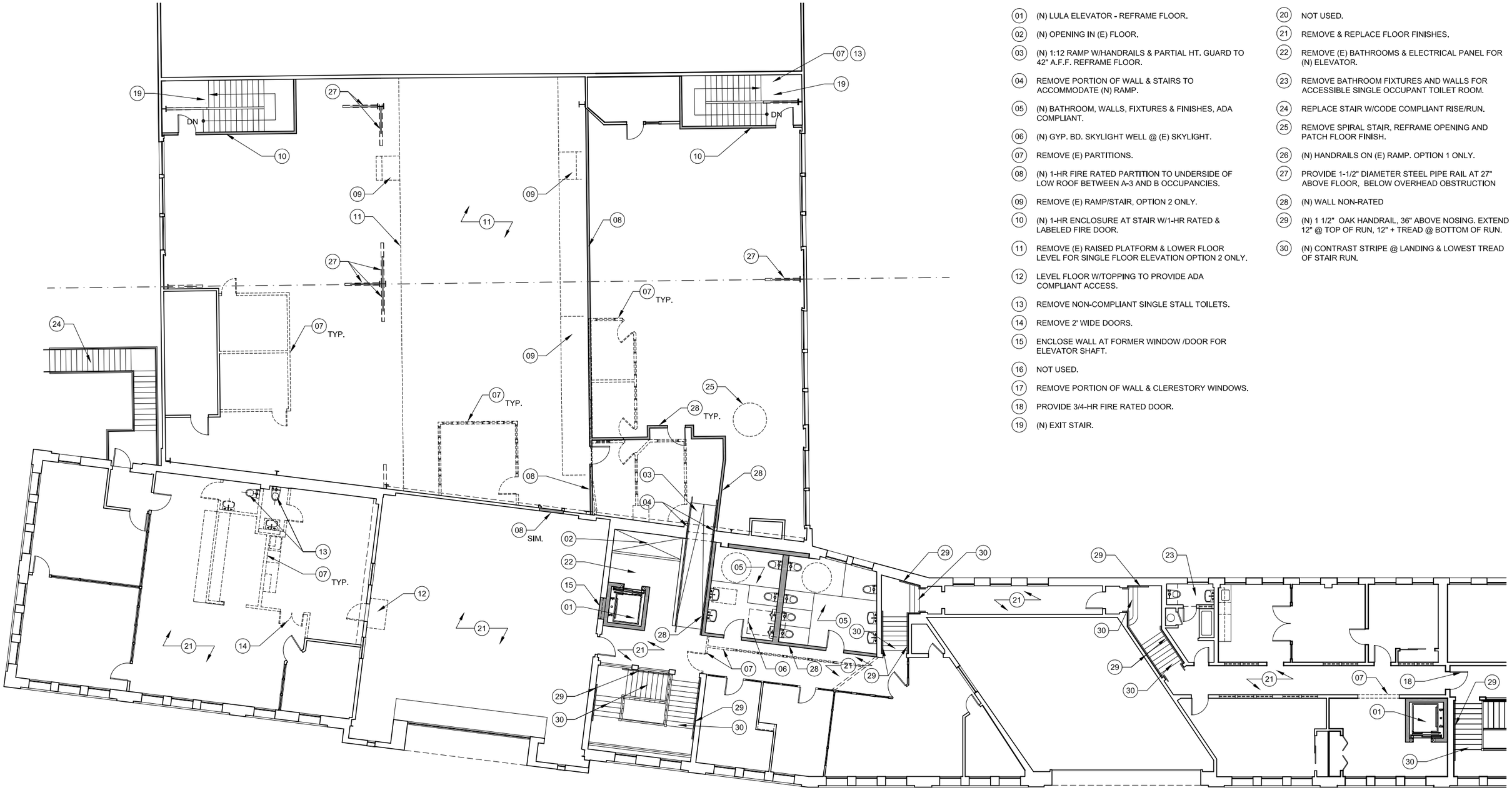
BULKHEAD

SCOPE OF WORK - OPTION 2
01.12.13



SECOND FLOOR PLAN - OPTION 2

scale: 1/16" = 1'-0"

KEY NOTES:

01 (N) LULA ELEVATOR - REFRAME FLOOR.

02 (N) OPENING IN (E) FLOOR.

03 (N) 1:12 RAMP W/HANDRAILS & PARTIAL HT. GUARD TO 42" A.F.F. REFRAME FLOOR.

04 REMOVE PORTION OF WALL & STAIRS TO ACCOMMODATE (N) RAMP.

05 (N) BATHROOM, WALLS, FIXTURES & FINISHES, ADA COMPLIANT.

06 (N) GYP. BD. SKYLIGHT WELL @ (E) SKYLIGHT.

07 REMOVE (E) PARTITIONS.

08 (N) 1-HR FIRE RATED PARTITION TO UNDERSIDE OF LOW ROOF BETWEEN A-3 AND B OCCUPANCIES.

09 REMOVE (E) RAMP/STAIR, OPTION 2 ONLY.

10 (N) 1-HR ENCLOSURE AT STAIR W/1-HR RATED & LABELED FIRE DOOR.

11 REMOVE (E) RAISED PLATFORM & LOWER FLOOR LEVEL FOR SINGLE FLOOR ELEVATION OPTION 2 ONLY.

12 LEVEL FLOOR W/TOPPING TO PROVIDE ADA COMPLIANT ACCESS.

13 REMOVE NON-COMPLIANT SINGLE STALL TOILETS.

14 REMOVE 2' WIDE DOORS.

15 ENCLOSE WALL AT FORMER WINDOW /DOOR FOR ELEVATOR SHAFT.

16 NOT USED.

17 REMOVE PORTION OF WALL & CLERESTORY WINDOWS.

18 PROVIDE 3/4-HR FIRE RATED DOOR.

19 (N) EXIT STAIR.

20 NOT USED.

21 REMOVE & REPLACE FLOOR FINISHES.

22 REMOVE (E) BATHROOMS & ELECTRICAL PANEL FOR (N) ELEVATOR.

23 REMOVE BATHROOM FIXTURES AND WALLS FOR ACCESSIBLE SINGLE OCCUPANT TOILET ROOM.

24 REPLACE STAIR W/CODE COMPLIANT RISE/RUN.

25 REMOVE SPIRAL STAIR, REFRAME OPENING AND PATCH FLOOR FINISH.

26 (N) HANDRAILS ON (E) RAMP. OPTION 1 ONLY.

27 PROVIDE 1-1/2" DIAMETER STEEL PIPE RAIL AT 27" ABOVE FLOOR, BELOW OVERHEAD OBSTRUCTION

28 (N) WALL NON-RATED

29 (N) 1 1/2" OAK HANDRAIL, 36" ABOVE NOSING. EXTEND 12" @ TOP OF RUN, 12" + TREAD @ BOTTOM OF RUN.

30 (N) CONTRAST STRIPE @ LANDING & LOWEST TREAD OF STAIR RUN.

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BULKHEAD

SCOPE OF WORK - OPTION 2
01.13.12

6.2.2 STRUCTURAL

The structural scope of work between Option 1 and 2 is similar in nature. Option 2, however, includes four more items (Items 11 to 14 below), see Figures SK2.1 and SK2.2. The structural scope of work for Option 2 is as follows:

1. South Apron – up to chain link fence: The 4x12 decking needs to be replaced along with approximately 20% of the 4x12 joists due to deterioration. An asphalt topping will also be required to provide a uniform surface.
2. North Apron – up to chain link fence: Minimal replacement of the decking will be required. An asphalt topping will also be required to provide a uniform surface.
3. Apron Extension – beyond chain link fence: The existing timber aprons on the north and south sides that have been red tagged, beyond the chain link fence, must be removed, leaving only the concrete portion of each apron. The existing concrete portion of the apron on the north side, which is ten feet wide, has sufficient width to meet BCDC public access requirements; however the south concrete portion of the apron is only six feet wide, requiring an additional four foot width of timber apron. This will require new 14" diameter piles (length of each pile: 90'), 12X12 cap beams, 4X12 joists @ 12" O.C. and 4X12 decking. An asphalt topping will also be added for a uniform walking surface.
4. Concrete Deck Repair: There is a hole in the concrete deck located in the proposed parking area, which is currently covered by a steel plate. The hole will need to be repaired.
5. New Elevator Pit and Shafts: Two new elevators are required to meet egress requirements. This will require modifying the existing framing for the new floor openings as well as modification of the concrete deck (i.e., will be lowered). The elevator shaft will be a wood framed wall system with rails to support the new elevators.
6. Bent Cap Replacement: Three bent caps require replacement. One bent cap is crushed from overstressing and the others appear to have severe deterioration.
7. Replace Missing Piles: Three piles were missing and must be replaced to adequately support the bent cap.
8. Reconfigure Existing North Exit Stairway: The south end of the existing opening will be partially infilled; the west side will require new framing and existing framing modifications to support the new opening.
9. Apron Railing: The existing rail, extending to the existing chain link fence, on both the north and south apron does not meet code requirements. The rail will be removed and replaced with the new railings extending the length of the apron extension.
10. Circular Stair Removal: The existing circular stairs will be removed. As a result, the floor will be infilled with new framing.
11. Install New South Exit Stairway: The existing framing will be modified and new members will be installed to support the new opening.
12. Lower Floor: The existing 18” engineered timber joists will need to be removed and replaced in order to lower the floor level.
13. Strengthen Floor: New 2x6 floor joists at 16” on center will need to be added to the existing 2x6 floor joists at 16” on center floor increased load rating.
14. Ramp Installation: The existing floor framing will be modified and new members will also be added to place a new ramp.

REPLACE WITH STRUCTURAL OPTION 2 FIRST FLOORS

REPLACE WITH STRUCTURAL OPTION 2 SECOND FLOORS

6.2.3 MECHANICAL

The existing plumbing cold water and sewer utility line sizes should be sufficient for continued service to the Pier.

Notes:

a. This option will require the installation of two elevators, and two elevator machine rooms.
b. Scope of work in the mechanical section includes: HVAC, plumbing, and fire protection.

6.2.3.1 PARTIAL LIST OF SCOPE OF WORK

- Remove and relocated existing first floor water heater to closet or suspended platform, with tank bracing.
- Provide overhead fire sprinkler branch piping and sprinkler heads from existing six inch fire pump discharge pipeline, to provide sprinkler coverage to the parking garage.
- Provide mechanical ventilation exhaust fan(s), overhead exhaust duct and air inlets and outlet(s) throughout garage to provide minimum required ventilation rates, if natural ventilation is not accepted as code compliant by Port.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.
- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Demolish non-compliant plumbing fixtures, and sewer, vent, domestic cold and hot water from fixtures back to main pipelines, and cap. Provide new sewer, vent, domestic cold and hot water to new ADA compliant restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers.
- Provide automatic wet-type fire sprinkling, sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer.
- Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or wall exhaust fan with intake grille, in Core2 machine room for hydraulic machinery cooling. Provide split-system refrigerant piped wall mounted air conditioning fan coil and outdoor condensing unit, or ducted exhaust to wall or roof exhaust fan, in Core 1 machine room for hydraulic machinery cooling.

Second Floor:

- Remove the makeshift plywood hinged air reliefs, and blank off and properly fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface.
- Provide separately temperature controlled and duct distribution systems to serve the split A-3 and B occupancies.
- Seismically brace all HVUs, unit heaters, and plumbing piping to be reused.

- Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls.
- Remove all un-used plumbing piping, and seal off any existing vent and sewer open pipeline terminations.
- Provide automatic wet-type fire sprinkling for elevator shaft.
- Demolish non-compliant plumbing fixtures, and sewer, vent, domestic cold and hot water from fixtures back to main pipelines, and cap. Provide new sewer, vent, domestic cold and hot water to new ADA compliant restroom plumbing fixtures, and connect to existing main pipelines.
- Relocate or provide new automatic wet-type fire sprinkler heads in reconfigured rooms, and connect to existing fire sprinkler branch and main headers. Provide upright heads in exposed ceiling rooms and pendent heads in rooms with ceilings.
- Relocate or provide new HVAC supply air outlets in reconfigured rooms, and connect to existing HVAC branch and main duct headers. Provide fire dampers on supply and return ductwork crossing one hour fire rated walls.

6.2.4 ELECTRICAL

This option will provide access to both first and second floor. This will require the site to be ADA compliant therefore new elevators will need to be installed. Total office spaces for the first and second floor are: 12334 sq. ft. and 10831 sq. ft. respectively. Using an estimated load density of 9.2 W/sq.ft, the calculated loads for the occupancy will be: 113.5 KW for first floor, 99.7 KW for second floor resulting in a total of 213.2 KW. This power divided by 480V equals 444.2A, which is less than the 2000A section in the Main Distribution Center, therefore, there should be no need to have PG&E upgrade the service to the Pier.

Notes:

a. This option will require the installation of two elevators, and depending on the final design, the elevator's required power will not trigger an upgrade to PG&E service.
b. Scope of work in the electrical section includes: Power distribution, Lighting and Fire Alarm.

6.2.4.1 PARTIAL LIST OF SCOPE OF WORK

First Floor:

- Replace the existing distribution center in the first floor due to its deteriorated state.
- For office space 101, provide two new electrical panels to replace the damaged panels K and KA, that are located on the wall adjacent to the main distribution center, matching the existing load capacity.
- For office space 103, provide one new electrical panel to replace the small lighting and receptacle panel that is located in the south wall of office space 103. This panel will be upgraded to a larger capacity panel to prevent the need to using a double breaker as it is currently being done.
- Provide new lighting design in the parking area to achieve an average foot-candle (ft-cd) level of five ft-cd as per Illuminating Engineering Society (IES) Recommended Maintained Horizontal Illuminances for Covered Parking Garages.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location

- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

Second Floor:

- Remove and relocate the electrical panel from the bathroom in office space 201C. New panel will be flush mounted in eastern wall of office 201D and will be connected to all loads from removed panel.
- Remove the electrical panels from the Core1 area. This area will have the new elevator. Provide a new lockable Panel that will accommodate all the loads from the removed panels, install flush mounted in the proposed Core1 area and connect to all loads from removed panels.
- Provide strobe/horn fire alarm units at each egress location and connect to existing fire alarm panel.
- Provide emergency exit signs with backup battery pack eat each egress location
- Provide smoke detectors in each room and connect to existing fire alarm panel.
- Provide fire alarm pull stations at each egress location and connect to existing fire alarm panel.

6.2.5 MARINE

Refer to Option 1 Marine alternatives.

6.2.6 COST ESTIMATE – OPTION 2

The following table shows the code compliance construction cost for Option2, which is broken into 2 alternatives depending on extent of utilization.

Option 2a – First floor office space, second floor office and assembly space, and no parking
Option 2b – First floor office space, second floor office and assembly space, and maximum parking

	Project Costs			
	Tenant Space		Shed	Total
	First Floor	Second Floor	Parking	Cost
Option 2a - First and Second Floor Office and Assembly	$ 1,580,221	$ 1,971,108	$ -	$ 3,551,329
Option 2b - First and Second Floor Office and Assembly with Parking	$ 1,580,221	$ 1,971,108	$ 719,106	$ 4,270,434

Construction costs include markups for: design and estimating contingencies (15%), general conditions and requirements (10%), payment and performance bonds (2%), general contractor's fee (5%) and project soft costs (25%).

The cost for Marina repair or demolition is in addition to the above and is:

	Marina Costs			
	Direct Cost	Mark-Up 35.5%	Soft Cost 25%	Total Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

* Note: Marina Costs are in addition to project costs for Options 1 and 2

6.3 PHASED CONSTRUCTION

Both options can be done in two phases broken into work to be completed on the first floor in the first phase and all work to make the second floor accessible conducted in the second phase.

6.3.1 PHASE 1 – FIRST FLOOR OCCUPANCY ONLY

Upgrade egress and accessibility on the first floor within the first phase as noted in the scope of work in the options descriptions. A wall would be built to create a separation for the second phase installation of the new LULA elevators, elevator lobbies and a new pit at the historic main stair from the south bulkhead office space. A new foyer for the office spaces on the south side of the bulkhead would be created.

6.3.2 PHASE 2 – SECOND FLOOR OCCUPANCY

In the second phase, the second floor would be made available to lease. Work would include with the installation of two LULA elevators as well as the upgrades for egress, path of travel and restrooms noted in the second floor scope of work in each of the options in the narrative above and as shown on the scope of work drawings. Within the second floor scope of work the floor structure would need to be reframed to accommodate a new ramp, the elevators and an opening to the floor below.

Assumptions and Exclusions

- BCDC will approve extending north and south aprons to east side of parking only, not requiring the extension of the aprons to the east end of the Pier.
- The historic stairwells, including the south one – technically pier 40, are allowed to remain and be used as part of the egress system.
- The southern portion of the second floor of the bulkhead will be served by a single unisex accessible restroom.
- The two stairs in the southern portion of the bulkhead second floor winding around the original train pass through are to remain and be part of the egress path of travel although the path of travel is not level.
- All work that is proposed to be modified from previously submitted plans will be approved by the port without requirements or changes based on historic building code or planning review.
- The parking in the shed will be naturally ventilated.
- Modifications within the individual tenant spaces will be part of separate tenant improvement permits and be required to be code.
- Existing Bulkhead framing from original construction is adequate for office live load, which was the original design intent.
- The seismic capacity and demand of the existing structure was not included in the structural review.

7.0 CONCLUSIONS

The two schemes presented in this report are both viable with inherent trade offs depending on the direction the Port would like to head. There is a premium for creating assembly occupancy (A-3) space, as shown in Option 2, in terms of cost - additional toilet facilities, exits, added fire protection and lowering a portion of the existing second floor level, and lost revenue in the form of smaller allowable parking.

The B office occupancy only building, as shown in Option 1, limits the type of tenants to traditional office use and away from spaces that are also used for parties similar to the last occupied use. The benefit of a B occupancy only building is that it allows for almost four times the amount of parking.

For the purpose of this report, only Option 1 was shown as being constructed in two phases, however either scheme could be constructed in that manner, as a means of reducing initial capital outlay.

Tenant space upgrade is estimated to cost $128 per square foot regardless of which option is chosen. Parking is estimated to cost $39 per square foot regardless of its extent.

Appendix A – Cost Estimate

Code Compliance Construction Cost - Office Occupancy Only

		Direct Costs			Mark-Up	Soft Costs	Project Cost
		Building	Apron	Total	35.5%	25%	Total
1	First Floor Only	$ 761,122	$ 223,553	$ 984,675	$ 349,377	$ 246,169	$ 1,580,221
2	First and Second Floor	$ 1,904,025	$ 223,553	$ 2,127,578	$ 754,897	$ 531,895	$ 3,414,369
3	Parking	$ 244,000	$ 1,471,833	$ 1,715,833	$ 608,803	$ 428,958	$ 2,753,594

Option 1 Total Project Cost (2 phases) with Parking = $ 6,167,963

Code Compliance Construction Cost - Office Occupancy with Second Floor Assembly

		Direct Costs			Mark-Up	Soft Costs	Project Cost
		Building	Apron	Total	35.5%	25%	Total
1	First Floor Only	$ 761,122	$ 223,553	$ 984,675	$ 349,377	$ 246,169	$ 1,580,221
2	First and Second Floor	$ 1,989,368	$ 223,553	$ 2,212,921	$ 785,178	$ 553,230	$ 3,551,329
3	Parking	$ 244,000	$ 204,093	$ 448,093	$ 158,990	$ 112,023	$ 719,106

Option 2 Project Cost (single phase) with Parking= $ 4,270,434

Project Mark-Ups

Design and Estimating Contingencies	15%
General Conditions and Requirements	10%
Payment and Performance Bonds	2%
General Contractor's Fee (OH&P)	5%
Total	35.5%

Soft Costs

Project Total Soft Cost	25%

Pier 38 Cost and Area Summary

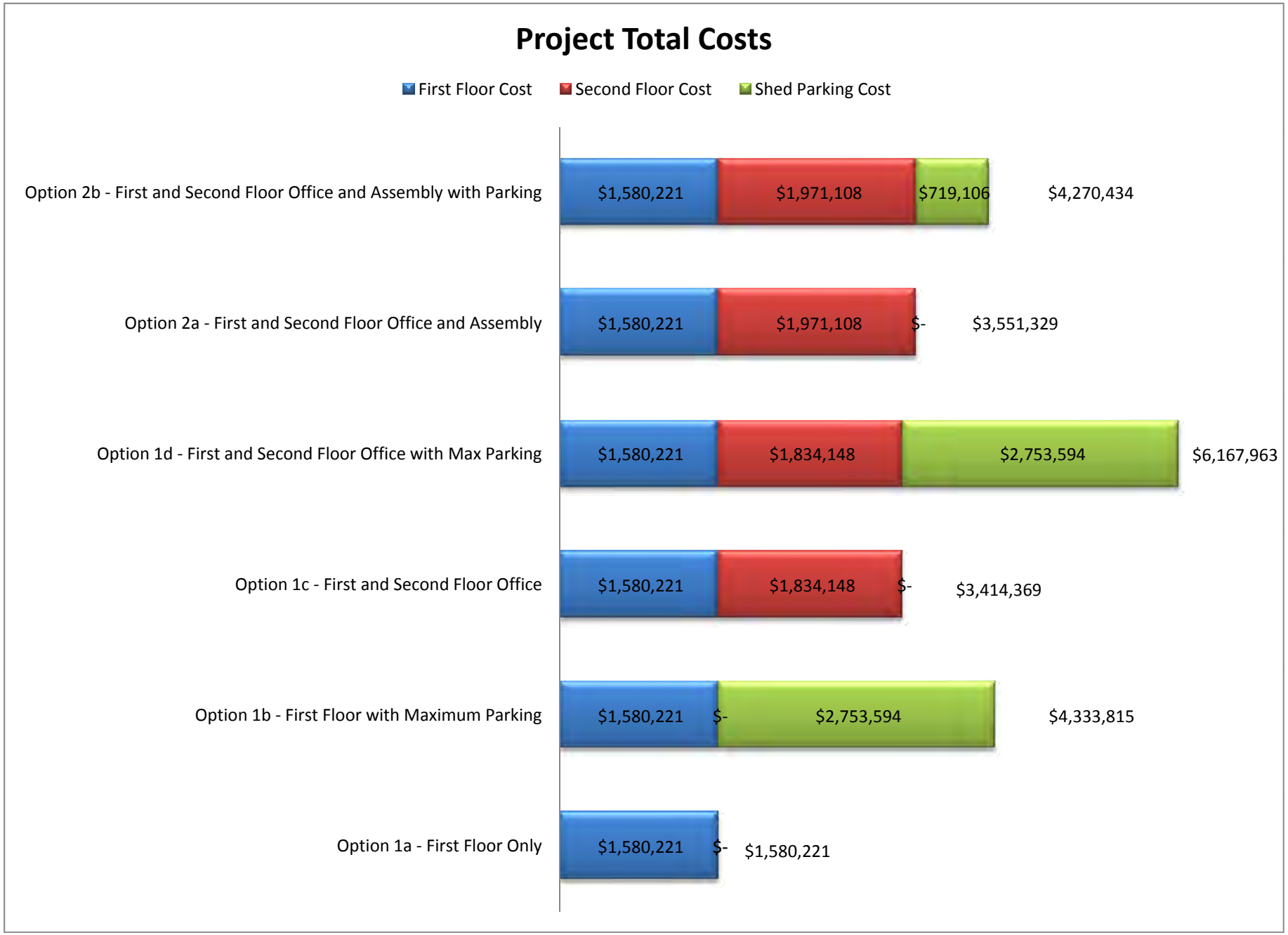
	Project Costs			
	Tenant Space		Shed	Total
	First Floor	Second Floor	Parking	Cost
Option 1a - First Floor Only	$ 1,580,221	$ -	$ -	$ 1,580,221
Option 1b - First Floor with Maximum Parking	$ 1,580,221	$ -	$ 2,753,594	$ 4,333,815
Option 1c - First and Second Floor Office	$ 1,580,221	$ 1,834,148	$ -	$ 3,414,369
Option 1d - First and Second Floor Office with Max Parking	$ 1,580,221	$ 1,834,148	$ 2,753,594	$ 6,167,963
Option 2a - First and Second Floor Office and Assembly	$ 1,580,221	$ 1,971,108	$ -	$ 3,551,329
Option 2b - First and Second Floor Office and Assembly with Parking	$ 1,580,221	$ 1,971,108	$ 719,106	$ 4,270,434

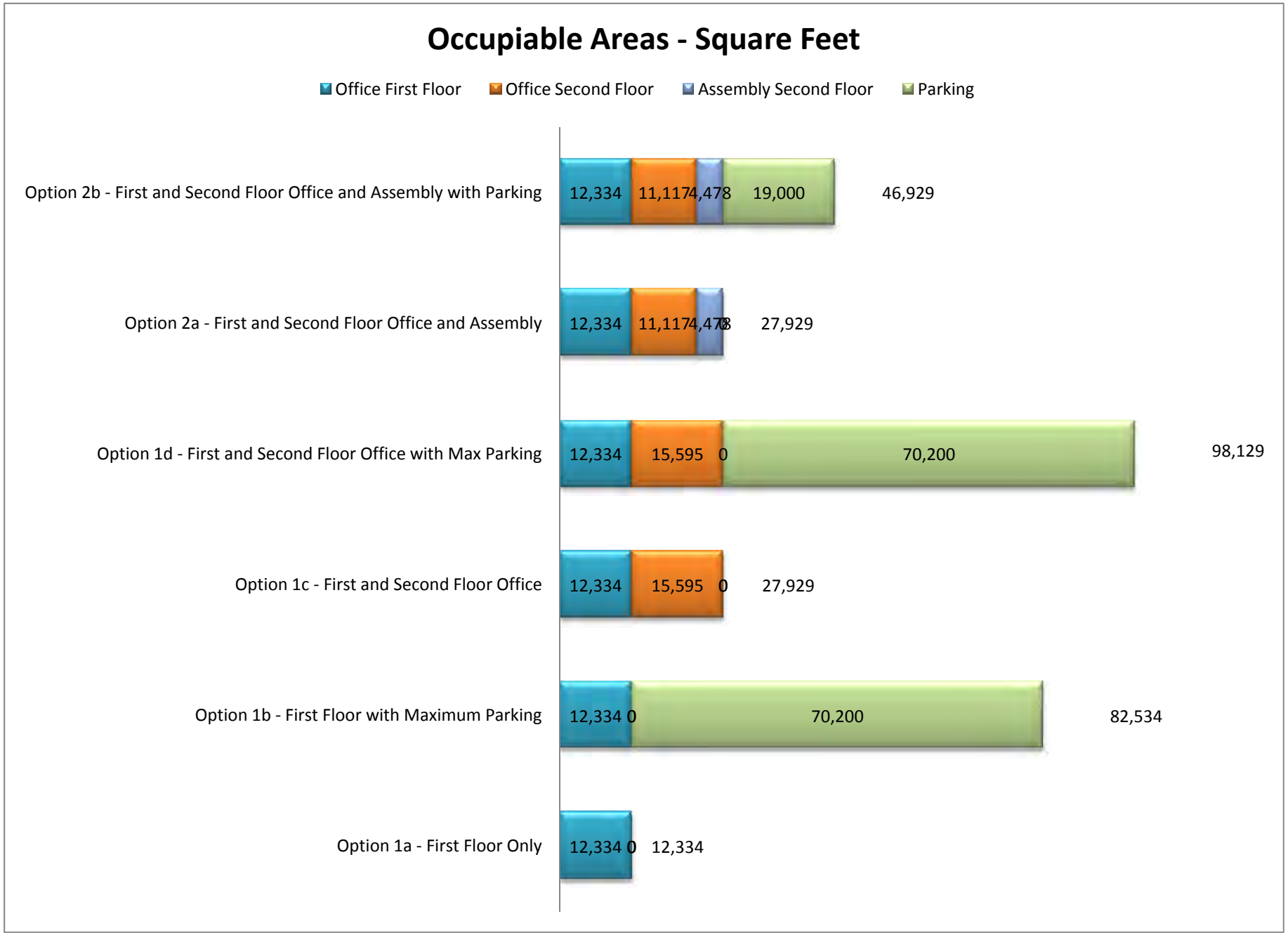
	Occupiable Areas					
	Office		Assembly	Tenant	Shed	Grand
	First Flr	Second Flr	Second Flr	Total	Parking	Total
Option 1a - First Floor Only	12,334	0	0	12,334	0	12,334
Option 1b - First Floor with Maximum Parking	12,334	0	0	12,334	70,200	82,534
Option 1c - First and Second Floor Office	12,334	15,595	0	27,929	0	27,929
Option 1d - First and Second Floor Office with Max Parking	12,334	15,595	0	27,929	70,200	98,129
Option 2a - First and Second Floor Office and Assembly	12,334	11,117	4,478	27,929	0	27,929
Option 2b - First and Second Floor Office and Assembly with Parking	12,334	11,117	4,478	27,929	19,000	46,929

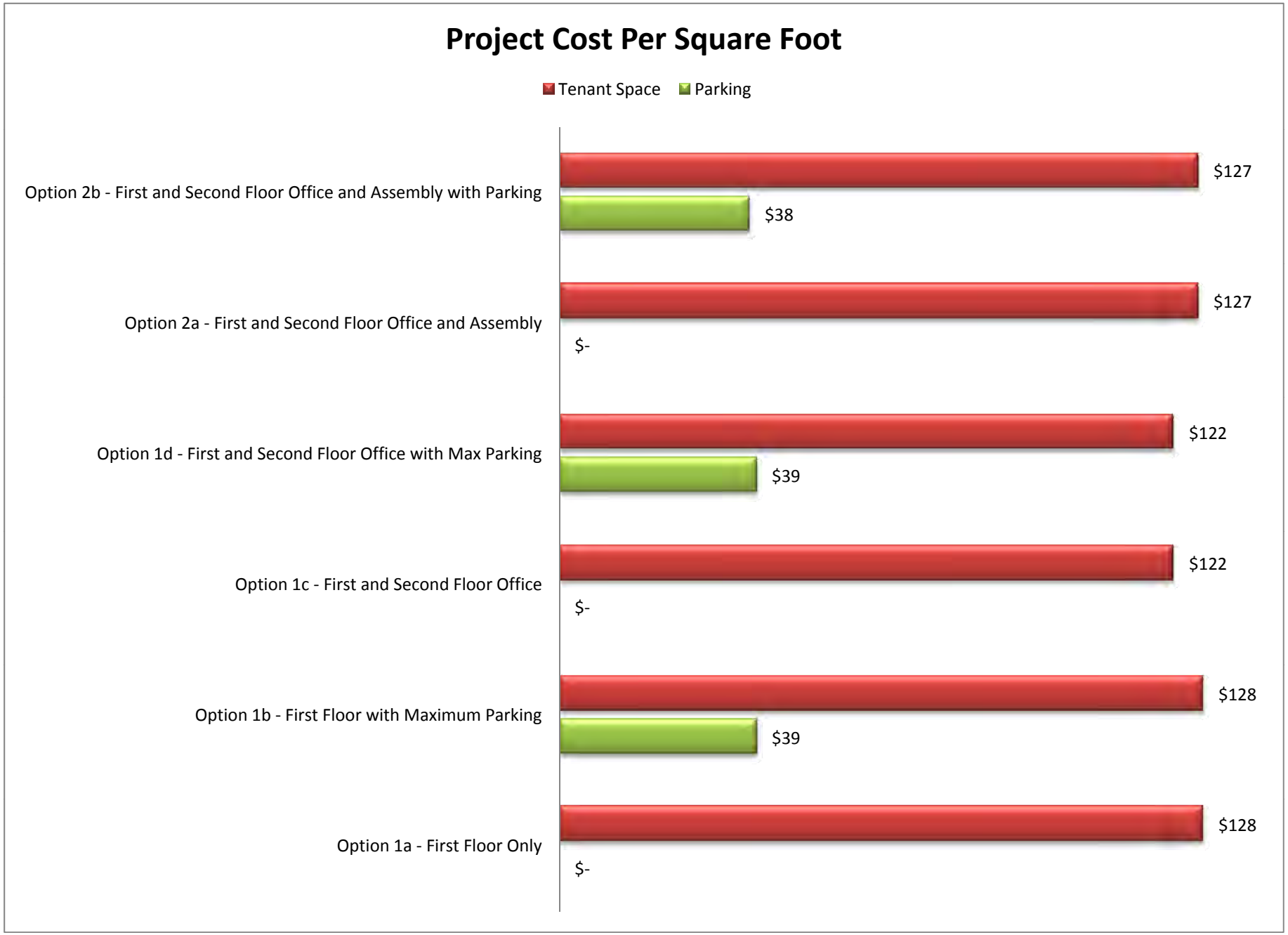
	Project Cost/ Sqaure Foot			
	Building			Parking
	First	Second	Combined	Additional
Option 1a - First Floor Only	$ 128	$ -	$ 128	$ -
Option 1b - First Floor with Maximum Parking	$ 128	$ -	$ 128	$ 39
Option 1c - First and Second Floor Office	$ 128	$ 118	$ 122	$ -
Option 1d - First and Second Floor Office with Max Parking	$ 128	$ 118	$ 122	$ 39
Option 2a - First and Second Floor Office and Assembly	$ 128	$ 126	$ 127	$ -
Option 2b - First and Second Floor Office and Assembly with Parking	$ 128	$ 126	$ 127	$ 38

	Marina Costs			
	Direct	Mark-Up	Soft Cost	Total
	Cost	35.5%	25%	Cost
Removal	$ 250,000	$ 88,704	$ 62,500	$ 401,204
Upgrade for Temporary Use	$ 567,500	$ 201,358	$ 141,875	$ 910,733

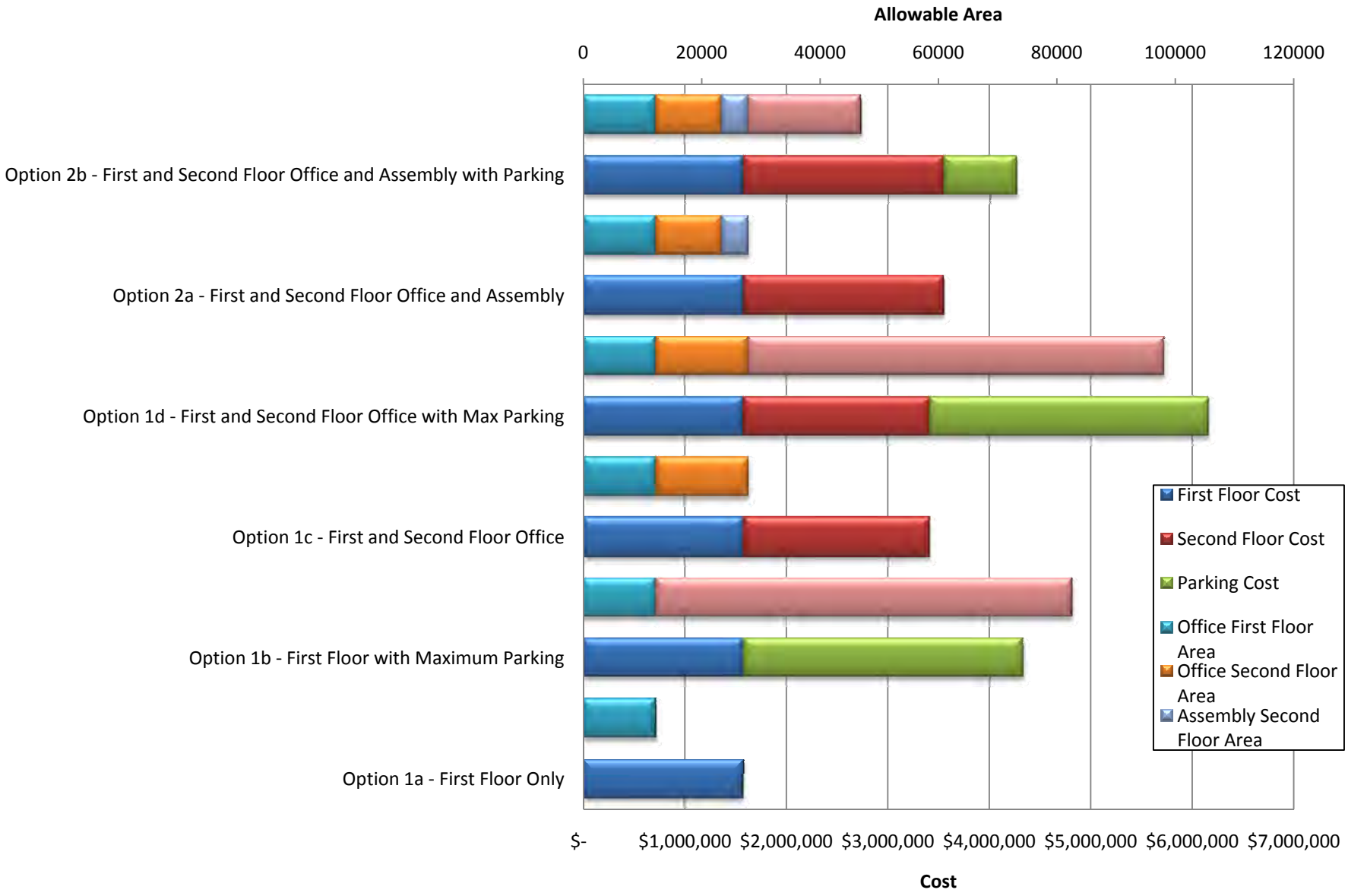
* Note: Marina Costs are in addition to project costs for Options 1 and 2


Project Total Costs
First Floor Cost
Second Floor Cost
Shed Parking Cost
Option 2b - First and Second Floor Office and Assembly with Parking
$1,580,221
$1,971,108
$719,106
$4,270,434
Option 2a - First and Second Floor Office and Assembly
$1,580,221
$1,971,108
$-
$3,551,329
Option 1d - First and Second Floor Office with Max Parking
$1,580,221
$1,834,148
$2,753,594
$6,167,963
Option 1c - First and Second Floor Office
$1,580,221
$1,834,148
$-
$3,414,369
Option 1b - First Floor with Maximum Parking
$1,580,221
$-
$2,753,594
$4,333,815
Option 1a - First Floor Only
$1,580,221
$-
$1,580,221


Occupiable Areas - Square Feet
Office First Floor
Office Second Floor
Assembly Second Floor
Parking
Option 2b - First and Second Floor Office and Assembly with Parking
12,334
11,117
4,478
19,000
46,929
Option 2a - First and Second Floor Office and Assembly
12,334
11,117
4,478
27,929
Option 1d - First and Second Floor Office with Max Parking
12,334
15,595
0
70,200
98,129
Option 1c - First and Second Floor Office
12,334
15,595
0
27,929
Option 1b - First Floor with Maximum Parking
12,334
0
70,200
82,534
Option 1a - First Floor Only
12,334
0
12,334


Project Cost Per Square Foot
Tenant Space
Parking
Option 2b - First and Second Floor Office and Assembly with Parking
$127
$38
Option 2a - First and Second Floor Office and Assembly
$127
$-
Option 1d - First and Second Floor Office with Max Parking
$122
$39
Option 1c - First and Second Floor Office
$122
$-
Option 1b - First Floor with Maximum Parking
$128
$39
Option 1a - First Floor Only
$128
$-

Project Total Costs and Allowable Areas



PIER 38 BUILDING CODE COMPLIANCE AND OCCUPANCY STUDY SAN FRANCISCO, CA

ESTIMATE OF PROBABLE CONSTRUCTION COST (AN OPINION OF PROBABLE CONSTRUCTION COST)

Owner
SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO

Prepared for
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Date: 12/15/2011 R1

file: 1005 Pier 38

PIER 38 BUILDING CODE COMPLIANCE

SAN FRANCISCO, CA

ESTIMATE OF PROBABLE CONSTRUCTION COST
(AN OPINION OF PROBABLE CONSTRUCTION COST)

Table of Contents: **Page Nos.**

Date: 12/15/2011 R1

PORT OF SAN FRANCISCO
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
PREAMBLE

Date: 12/15/2011 R1

1 The estimate, which represents our opinion of probable construction cost, consists of the following integral sections:
- a Preamble
- b Grand Summary
- c Estimate Summaries
- d Estimate Details

Please see Table of Contents for details

2 The estimate is based on the following:
- a A set of Preliminary set of drawings, a total of 20 sheets, prepared by Creegan+D'Angelo, dated Dec 5, 2011 and received by us on Dec 6, 2011
- b A set of Preliminary technical specifications, prepared by Creegan+D'Angelo, dated Dec 5, 2011 and received by us on Dec 6, 2011
- c Clarifications from designers

3 The estimate includes the following scope of work:
- a Code compliance and occupancy study of an existing building
- b Associated apron/sitework

4 The gross floor area used in this estimate is
- a Gross floor area (for estimating purposes) is 31,625 GSF

5 The estimate specifically excludes the following items:
- a Furniture, fittings, equipment (FF&E) except fixed FF&E as part of the building system
- b Permit and plan check fees
- c Administration costs such as bidding, advertising and contract award
- d Professional fees for architect, engineers, consultants, construction management and other soft costs
- e Costs for independent testing and inspection
- f Construction change orders
- g Cost escalation beyond the assumed construction schedule
- h Art work enhancements

It is assumed that the above items, if needed, are included elsewhere in the owner's overall project budget.

6 The estimate is based on the following assumptions:
- a The work will be constructed as two phases under one general contract. Only Option 1 has being shown for this purpose.
- b All work will be done during regular working hours; no overtime work has been allowed.

c Unit costs are based on prevailing wage rates.
d Construction period to be determined

7 The estimate is based on estimated prices current as of December 2011, with 4 to 6 responsible and responsive bids under a competitive bidding environment for a fixed price lump sum contract. Experience shows fewer bidders may result in higher bids, and conversely more bidders may result in lower bids.

8 The following is a list of some items that may affect the cost estimate:
a Modifications to the scope of work or assumptions included in this estimate
b Special phasing requirements
c Restrictive technical specifications or excessive contract conditions
d Any specified item of equipment, material, or product that cannot be obtained from at least three different sources
e Any other non-competitive bid situations.

9 a The estimate has been prepared using accepted estimating practices and it represents our opinion of probable construction costs based on a fair-market competitive bidding situation. Since we have no control over market conditions and other factors which may affect the bid prices, we cannot and do not warrant or guarantee that the bid or final cost will not deviate from our estimate.

10 Abbreviations used in the estimate:
cy = cubic yard
ea = each
gsf = gross square foot
lb = pound
lf = linear foot
lfr=linear foot riser = stair width x no. of risers
loc=location
ls = lump sum
NIC = Not In (this) Contract
sf = square foot
sfca = square foot contact area
pr = pair
bf = board feet

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
GRAND ESTIMATE SUMMARY

Line #	Description	Estimated Amount	GSF	$/GSF
1	**Building**			
	Option 1 Phase I Estimate	**$1,378,000**	**14,636**	**$94.20**
	Option 1 Phase II Estimate	**$1,548,000**	**16,989**	**$91.10**
	Option 2 Estimate	**$3,026,000**	**31,625**	**$95.70**
2	**Apron/Sitework**			
	Option 1 Estimate	**$763,000**	**14,486**	**$52.70**
	Option 2 Estimate	**$426,000**	**10,810**	**$39.40**
3	**Marina**	**$768,500**		

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble", "Estimate Summaries", and "Estimate Details" for assumptions, exclusions, qualifications and scope of work.

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
BUILDING ESTIMATE SUMMARY

CSI Div	Item		Option 1 Phase I Total $	Option 1 Phase II Total $	Option 2 Total $
	From attached details:				
2	Site Construction (for Building)		73,675	106,655	199,104
3	Concrete		12,000	33,450	45,450
4	Masonry	None			
5	Metals		51,900	46,625	93,525
6	Wood & Plastics		40,924	98,618	208,081
7	Thermal & Moisture Protection		11,151	16,378	18,766
8	Doors & Windows		48,225	16,950	67,375
9	Finishes		12,112	117,951	151,613
10	Specialties		5,070	17,400	26,620
11	Equipment	None			
12	Furnishings	None			
13	Special Construction	None			
14	Conveying System			170,000	170,000
15	Mechanical		538,093	363,939	920,867
16	Electrical		223,972	154,937	331,967
	Direct Cost- Building		1,017,122	1,142,903	2,233,368
	Design & Estimating Contingencies	15%	152,600	171,400	335,000
	Subtotal		1,169,722	1,314,303	2,568,368
	General Conditions & Requirements	10%	117,000	131,400	256,800
	Payment & Performance Bonds	2%	25,700	28,900	56,500
	Subtotal		1,312,422	1,474,603	2,881,668
	General Contractor's Fee (OH&P)	5%	65,600	73,700	144,100
	Total Estimated Construction Cost		1,378,022	1,548,303	3,025,768
	Cost escalation	TBD			
	TOTAL ESTIMATED BUILDING CONSTRUCTION COST		1,378,022	1,548,303	3,025,768
	Rounded-off		**1,378,000**	**1,548,000**	**3,026,000**

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble" and 'Estimate Details" for assumptions, exclusions, qualifications and scope of work,

PORT OF SAN FRANCISCO **Date: 12/15/2011 R1**
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY
ESTIMATE OF PROBABLE CONSTRUCTION COST
APRON/SITE ESTIMATE SUMMARY

	Description		Estimated Construction Cost Option 1	Estimated Construction Cost Option 2
	Apron/Site work Direct Cost From Attached Details:			
	See separate section for Building			
	2.1 Selective Apron/Site Demolition		78,137	62,267
	2.2 Paving, Handrail & Aprons		485,050	252,009
	Direct Cost- Site works		563,187	314,276
	Design & Estimating Contingencies	15%	84,500	47,100
	Subtotal		647,687	361,376
	General Conditions & Requirements	10%	64,800	36,100
	Payment & Performance Bonds	2%	14,200	7,900
	Subtotal		726,687	405,376
	General Contractor's Fee (OH&P)	5%	36,300	20,300
	Total Estimated Construction Cost		762,987	425,676
	Cost escalation	TBD		
	Total Estimated Sitework Construction Cost		762,987	425,676
	Rounded-off		**763,000**	**426,000**

Prices in 2011 dollars
based on 4 to 6 competitive bids

Please read the attached "Preamble" & "Details" for a complete scope of work, qualifications & exclusions.

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
	Division 2- Site Construction (for Building)								
1	Architectural Demolition								
2	Partition	94	5,349	5,887	sf	2.50	235	13,373	14,718
3	Floor finish	1,133	4,116	7,645	sf	1.50	1,700	6,174	11,468
4	Level floor/reset (E) floor drains	2,847		2,847	sf	1.25	3,559		3,559
5	Level & patch (E) AC paving for accessible path of travel	522		522	sf	2.00	1,044		1,044
6	Level landing at door, 40 sf	1		1	ea	450.00	450		450
7	(E) door, single	8	18	26	ea	75.00	600	1,350	1,950
8	(E) door, double		1	1	ea	120.00		120	120
9	(E) metal roll-up door	2		2	ea	850.00	1,700		1,700
10	Metal spiral stair, 14' high	1		1	ea	2,500.00	2,500		2,500
11	Exterior stairs, 14' high	1		1	ea	2,500.00	2,500		2,500
12	North stairs	1		1	ea	3,000.00	3,000		3,000
13	Makeshift plywood hinged air reliefs		1	1	ls	450.00		450	450
14	(E) handrail at stairs		244	244	lf	5.00		1,220	1,220
15	Structural Demolition								
16	Cut (E) wood floor for new stair and ramp	161		321	sf	15.00	2,415		4,815
17	Cut portion of (E) concrete wall for new ramp, 28 sf		1	1	ea	750.00		750	750
18	Concrete slab and topping for elevator pit		160	160	sf	30.00		4,800	4,800
19	Wood floor w/ associated wood joists for elevator		128	128	sf	15.00		1,920	1,920
20	Concrete beam for elevator		16	16	lf	150.00		2,400	2,400
21	(E) raised platform 18" TJI, included ramp/stair			2,040	sf	15.00			30,600
22	Plumbing Demolition								

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
23	WC		6	7	ea	85.00		510	595
24	Lavatory		6	7	ea	85.00		510	595
25	Shower		1	1	ea	250.00		250	250
26	Cap and plug (E) sanitary sewer, vent, domestic hot water piping		13	15	ea	1,200.00		15,600	18,000
27	Remove and relocate existing first floor water heater to closet or accessible suspended with tank bracing	1		1	ea	550.00	550		550
28	Remove and relocate existing second floor water heater to closet or accessible suspended with tank bracing		1	1	ea	550.00		550	550
29	Remove sewer, vent, domestic cold and hot water from fixtures back to main pipelines	1	1	1	ls	10,000.00	10,000	10,000	10,000
30	Cap sewer, vent, domestic cold and hot water from fixtures	1	1	1	ls	5,000.00	5,000	5,000	5,000
31	Remove all un-used plumbing piping	1	1	1	ls	5,000.00	5,000	5,000	5,000
32	Mechanical Demolition								
33	Demolish existing ductwork and outlets	14,636	16,989	31,625	gsf	2.00	29,272	33,978	63,250
34	Electrical Demolition								
35	Remove (E) electrical panel from the bathroom		1	1	ea	600.00		600	600
36	Remove (E) electrical panel K and KA	2		2	ea	600.00	1,200		1,200
37	Remove (E) small lighting and receptacle panel	1		1	ea	450.00	450		450
38	Remove (E) Distribution Center at first floor	1		1	ea	1,000.00	1,000		1,000
39	Remove the Electrical Panels from the Core1 area.		1	1	ea	600.00		600	600

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
40	Misc electrical items	1	1	1	ls	1,500.00	1,500	1,500	1,500
41									
42	----------				----------		----------	----------	----------
43	**Division 2 - Total**						**73,675**	**106,655**	**199,104**
44									
45									
46	**Division 3 - Concrete**								
47	Concrete deck repair, 15'x8'x8"	120		120	sf	100.00	12,000		12,000
48	Elevator pit								
49	Concrete		10	10	cy	2,000.00		20,000	20,000
50	Dowels		130	130	ea	65.00		8,450	8,450
51	Misc concrete		1	1	ls	5,000.00		5,000	5,000
52									
53	----------				----------		----------	----------	----------
54	**Division 3 - Total**						**12,000**	**33,450**	**45,450**
55									
56									
57	**Division 4 - Masonry**				**None**				
58									
59									
60	**Division 5 - Metal**								
61	Support for Stair	1		1	ls	40,000.00	40,000		40,000
62	Handrail at ramp	46	160	206	lf	150.00	6,900	24,000	30,900
63	1 1/2" diam steel pipe rail		37	37	lf	125.00		4,625	4,625
64	HSS at elevator		1	1	ls	8,000.00		8,000	8,000
65	Guide rail at elevator		1	1	ls	5,000.00		5,000	5,000
66	Misc iron	1	1	1	ls	5,000.00	5,000	5,000	5,000
67									

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
68	----------	----------	----------	----------	----------	----------	----------	----------	----------
69	**Division 5 - Total**						**51,900**	**46,625**	**93,525**
70									
71									
72	**Division 6 - Carpentry**								
73	Wood stair, 28 risers, 4' wide	1		1	ea	12,000.00	12,000		12,000
74	Guardrail at stair	64		64	lf	125.00	8,000		8,000
75	Reframe floor for new ramp		224	80	sf	30.00		6,720	2,400
76	Reframe floor at new elevator opening		2	2	ea	2,000.00		4,000	4,000
77	Reframe north stairs to new layout	1		1	ea	5,000.00	5,000		5,000
78	Wood stairs at south side			1	ea	18,000.00			18,000
79	18" TJI at second floor			2,040	sf	20.00			40,800
80	Plywood sheathing at second floor			2,040	sf	2.50			5,100
81	2x6 floor joist			360	sf	6.00			2,160
82	Infill at spiral stair opening	1		1	ea	1,200.00	1,200		1,200
83	Infill at north stair opening	1		1	ea	1,200.00	1,200		1,200
84	Enclose wall at former window/ door		1	1	ea	1,500.00		1,500	1,500
85	Interior wood framing, 2x6	566	2,935	5,012	sf	4.50	2,547	13,208	22,554
86	Wood framing at elevator		2,176	2,176	sf	5.50		11,968	11,968
87	15/32" Plywood sheathing for elevator wall		2,176	2,176	sf	2.50		5,440	5,440
88	HD U14		36	36	ea	145.00		5,220	5,220
89	1 1/2" oak handrail		244	244	lf	155.00		37,820	37,820
90	Miscellaneous rough carpentry	14,636	16,989	31,625	sf	0.75	10,977	12,742	23,719
91									
92	----------	----------	----------	----------	----------	----------	----------	----------	----------
93	**Division 6 - Total**						**40,924**	**98,618**	**208,081**
94									
95									

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
96	**Division 7 - Thermal & Moisture Protection**								
97	Interior insulation at partition	566	5,111	7,188	sf	1.15	651	5,878	8,266
98	Fire and weather seal the closed off penetration, with weather rated paint or coating on the outside surface	1	1	1	ls	5,000.00	5,000	5,000	5,000
99	Seal off any existing vent and sewer open pipeline terminations	1	1	1	ls	3,000.00	3,000	3,000	3,000
100	Provide fire-rated wall fire stops or unrated wall seals on all un-sealed piping penetrations of walls	1	1	1	ls	2,500.00	2,500	2,500	2,500
101									
102	----------				----------		----------	----------	----------
103	**Division 7 - Total**						**11,151**	**16,378**	**18,766**
104									
105									
106	**Division 8 - Doors & Windows**								
107	Interior door								
108	Interior HM door/frame/hardware:								
109	Single	1	6	7	ea	1,725.00	1,725	10,350	12,075
110	Fire rated door								
111	Single	5	3	9	ea	2,200.00	11,000	6,600	19,800
112	Exterior door								
113	Fire rated door								
114	Single	1		1	ea	2,500.00	2,500		2,500
115	Exterior aluminum glazing, storefront	224		224	sf	125.00	28,000		28,000
116	Premium for single door	2		2	ea	2,500.00	5,000		5,000
117									

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
118	----------						----------	----------	----------
119	**Division 8 - Total**						**48,225**	**16,950**	**67,375**
120									
121									
122	**Division 9 - Finishes**								
123	Wall finishes:								
124	Gypsum board 5/8" x-type rated	1,132	3,456	7,466	sf	2.00	2,264	6,912	14,932
125	Gypsum board 5/8", partition		4,590	4,728	sf	1.85		8,492	8,747
126	Shaft liner, 1" thick		2,176	2,176	sf	2.50		5,440	5,440
127	Ceramic tile		1,566	1,566	sf	20.00		31,320	31,320
128	Cementitious backer		1,566	1,566	sf	3.00		4,698	4,698
129	Flooring:								
130	Ceramic tile		398	398	sf	20.00		7,960	7,960
131	Sealed concrete	135		135	sf	2.50	338		338
132	Carpet	295		295	sf	4.00	1,180		1,180
133	Flooring at 2nd floor		928	2,968	sf	6.00		5,568	17,808
134	Flooring at new ramp		224	80	sf	7.00		1,568	560
135	Patch floor at spiral stair	1		1	ea	600.00	600		600
136	Contrast stripe		8	8	ea	150.00		1,200	1,200
137	Floor base:								
138	Rubber base	240	349	804	lf	4.00	960	1,396	3,216
139	Ceramic tile		174	174	lf	20.00		3,480	3,480
140	Ceiling:								
141	Gypsum board		1,600	1,600	sf	15.00		24,000	24,000
142	Gypsum board skylight well at (E) skylight, 24 sf		1	1	ea	1,250.00		1,250	1,250
143	Painting:								
144	Interior painting								

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
145	Gypsum board, partition	1,132	6,480	10,628	sf	1.00	1,132	6,480	10,628
146	Gypsum board, (E) partition		5,406	5,650	sf	1.00		5,406	5,650
147	Gypsum board, ceiling	761	1,755	2,609	sf	1.20	913	2,106	3,131
148	Door & frame, single	5	9	15	ea	75.00	375	675	1,125
149	(N) striping at public pedestrian access aisle	8,699		8,699	sf	0.50	4,350		4,350
150									
151	----------	----------	----------	----------	----------	----------	----------	----------	----------
152	**Division 9 - Total**						**12,112**	**117,951**	**151,613**
153									
154									
155	**Division 10 - Specialties**								
156	Toilet partitions								
157	Standard		2	5	ea	1,200.00		2,400	6,000
158	Disabled		2	2	ea	1,500.00		3,000	3,000
159	Urinal screen			1	ea	550.00			550
160	Toilet accessories		3	3	rm	2,500.00		7,500	7,500
161	Replace surface mounted fire extinguisher w/ recessed fire extinguisher		1	1	ea	1,500.00		1,500	1,500
162	Chain link fence	102		102	lf	35.00	3,570		3,570
163	Man door and padlock	1		1	ea	1,500.00	1,500		1,500
164	Misc specialties		1	1	ls	3,000.00		3,000	3,000
165									
166	----------	----------	----------	----------	----------	----------	----------	----------	----------
167	**Division 10 - Total**						**5,070**	**17,400**	**26,620**
168									
169									
170	**Division 11 - Equipment**				**None**				

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
171									
172	**Division 12 - Furnishing**				**None**				
173									
174	**Division 13 - Special Construction**				**None**				
175									
176									
177	**Division 14 - Conveying System**								
178	Hydraulic elevator, 2 stops		2	2	ea	85,000.00		170,000	170,000
179									
180	----------	----------	----------	----------	----------	----------	----------	----------	----------
181	**Division 10 - Total**							**170,000**	**170,000**
182									
183									
184	**Division 15 - Mechanical**								
185	15.1 Plumbing								
186	Fixtures								
187	WC		2	5	ea	1,150.00		2,300	5,750
188	WC, ADA		3	3	ea	1,250.00		3,750	3,750
189	Urinal			2	ea	850.00			1,700
190	Lavatory & faucet		5	5	ea	950.00		4,750	4,750
191	Rough-in, all fixtures		10	15	ea	925.00		9,250	13,875
192	Instantaneous electric water heater		1	1	ea	1,500.00		1,500	1,500
193	Insulate (E) plumbing trap at sinks	6		6	ea	250.00	1,500		1,500
194	Waste and vent system	14,636	16,989	31,625	gsf	4.00	58,544	67,956	126,500
195	Gas system	14,636	16,989	31,625	gsf	0.75	10,977	12,742	23,719
196	Domestic hot and cold water system	14,636	16,989	31,625	gsf	3.00	43,908	50,967	94,875

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
197	Provide sump drain and drainage pipe for elevator shaft, with drainage ejector pump if elevator sump drain does not meet CPC slope requirements to gravity drain to existing sewer		1	1	ls	5,000.00		5,000	5,000
198	Testing, sterilization & cleaning, Option 1	1	1		ls	1,000.00	1,000	1,000	
199	Testing, sterilization & cleaning, Option 2			1	ls	2,000.00			2,000
200	Shop drawings & submittals, Option 1	1	1		ls	4,000.00	4,000	4,000	
201	Shop drawings & submittals, Option 2			1	ls	8,000.00			8,000
202									
203	15.2 HVAC								
204	Provide separately temperature controlled and duct distribution systems to serve the split A-3 and B occupancies			1	ls	10,000.00			10,000
205	Provide fire dampers on supply and return ductwork crossing 1 hour fire rated walls	14,636	16,989	31,625	gsf	0.50	7,318	8,495	15,813
206	Mechanical system, core & shell only, including seismic restraint, allowance	14,636	16,989	31,625	gsf	8.00	117,088	135,912	253,000
207									
208	15.3 Sprinkler system								
209	Automatic fire sprinkler system at shed	61,000		61,000	sf	4.00	244,000		244,000
210	Provide overhead fire sprinkler branch piping and sprinkler heads from existing 6" fire pump discharge pipeline, to provide sprinkler coverage to the parking garage	1		1	ea	5,000.00	5,000		5,000
211	Provide upright heads in exposed ceiling rooms and pendant heads in rooms with ceilings	14,636	16,989	31,595	sf	3.00	43,908	50,967	94,785

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BUILDING DIRECT COST ESTIMATE DETAILS									
Line	**Description of Work**	**Option 1 Phase I Quantity**	**Option 1 Phase II Quantity**	**Option 2 Quantity**	**Unit**	**Unit Cost**	**Option1 Phase I Estimated Total $**	**Option1 Phase II Estimated Total $**	**Option 2 Estimated Total $**
212	Connect to existing fire sprinkler branch and main headers	1	1	1	ea	850.00	850	850	850
213	Provide automatic wet-type fire sprinkling for elevator shaft		1	1	ls	4,500.00		4,500	4,500
214									
215	----------				----------		----------	----------	----------
216	**Division 15 - Total**						**538,093**	**363,939**	**920,867**
217									
218									
219	**Division 16 - Electrical**								
220	Power system	14,636	16,989	31,625	gsf	4.50	65,862	76,451	142,313
221	Lighting system, parking, high bay	38,000		19,000	gsf	2.50	95,000		47,500
222	Lighting system, core & shell	761	1,755	2,609	gsf	6.00	4,566	10,530	15,654
223	Lighting system, tenant area				none				
224	Telephone/data system	14,636	16,989	31,625	gsf	1.00	14,636	16,989	31,625
225	Fire alarm and security system	14,636	16,989	31,625	gsf	3.00	43,908	50,967	94,875
226									
227	----------				----------		----------	----------	----------
228	**Division 16 - Total**						**223,972**	**154,937**	**331,967**

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ESTIMATE OF PROBABLE CONSTRUCTION COST							
APRON/SITE DIRECT COST DETAILS							
Line	**Description of Work**	**Option 1**	**Option 2**	**Unit**	**Unit Cost**	**Option1**	**Option 2**
		Quantity	**Quantity**			**Estimated Total $**	**Estimated Total $**
	Division 2 Site work and Demolition						
1							
2	**2.1 Selective Apron/Site Demolition**						
3	Building demolition		See building section				
4	Hardscape Demolition:						
5	Aprons						
6	Remove apron extension	1,151	93	sf	15.00	17,265	1,395
7	Remove 4x12 decking	3,036	3,036	sf	5.00	15,180	15,180
8	Remove 4x12 joist	607	607	sf	4.50	2,732	2,732
9	Remove 12x12 bent cap	52	52	lf	25.00	1,300	1,300
10	Remove apron railing	366	366	lf	10.00	3,660	3,660
11	Remove (E) trailer/structure	3	3	ea	10,000.00	30,000	30,000
12	Misc demolition	1	1	ls	8,000.00	8,000	8,000
13							
14	----------			----------	----------	----------	----------
15	Subtotal					78,137	62,267
16							
17							
18	**2.2 Paving, Handrail & Aprons**						
19	Asphalt topping at aprons, 4" thick	7,623	7,226	sf	6.00	45,738	43,356
20	Aprons						
21	4x12 decking	4,301	3,904	sf	12.00	51,612	46,848
22	4x12 joists	1,000	800	sf	10.00	10,000	8,000
23	12x12 cap beam	102	62	lf	40.00	4,080	2,480
24	14" diameter pile, 90' long	13	5	ea	18,000.00	234,000	90,000
25	Wood railing, 5'-2" high	604	421	lf	65.00	39,260	27,365
26	Stainless steel bracket	10	2	ea	8,000.00	80,000	16,000
27	Post-installed stainless steel anchor	20	4	ea	150.00	3,000	600
28	Concrete ramp	177	177	sf	50.00	8,850	8,850
29	Guardrail/Handrails at concrete ramp	40	40	lf	200.00	8,000	8,000
30	Repave sidewalk for 1/2" threshold at door	102	102	sf	5.00	510	510
31							
32	----------			----------	----------	----------	----------
33	Subtotal					485,050	252,009
34							

PORT OF SAN FRANCISCO				Date: 12/15/2011 R1	
PIER 38 BUILDING CODE COMPLIANCE & OCCUPANCY STUDY					
ESTIMATE OF PROBABLE CONSTRUCTION COST					
MARINA DIRECT COST DETAILS					
Line	**Description of Work**	**Quantity**	**Unit**	**Unit Cost**	**Estimated**
				Total	**Total $**
	Marina work				
1	14" diam by 80 foot long steel pipe piles	8	ea	15,000.00	120,000
2	High performance finger pier, 385' L x 10' W	3,850	sf	100.00	385,000
3	Repair connection to Pier	1	ea	50,000.00	50,000
4	Cleats for temporary mooring berth	25	ea	500.00	12,500
5					
6	----------	----------	----------	----------	----------
7	Subtotal				567,500
	Add Markup			0.35	201,000
	Total Construction Cost				768,500

Apron Cost Estimate Updated for Revised Apron Layouts

DEMO

	Option 1	Option 2	Option 1 Hist	Unit Cost	Option 1 Total	Option 2 Total	Option 1 Hist Total	No Parking Option	Unit Cost	No Parking Total
Remove Apron Extension	6075	1524	12913	$15.00	$91,125.00	$22,860.00	$193,695.00	0	$15.00	$0.00
Remove 4x12 decking	3036	3036	3036	$5.00	$15,180.00	$15,180.00	$15,180.00	2494	$5.00	$12,470.00
Remove 4x12 joists	607	607	607	$4.50	$2,731.50	$2,731.50	$2,731.50	500	$4.50	$2,250.00
Remove 12x12 bent cap	52	52	52	$25.00	$1,300.00	$1,300.00	$1,300.00	36	$25.00	$900.00
Remove apron railing	366	366	366	$10.00	$3,660.00	$3,660.00	$3,660.00	247	$10.00	$2,470.00
Remove (E) trailer structure	3	3	3	$10,000.00	$30,000.00	$30,000.00	$30,000.00	3	$10,000.00	$30,000.00
Misc Demo	1	1	1	$8,000.00	$8,000.00	$8,000.00	$8,000.00	1	$8,000.00	$8,000.00
					$151,996.50	$83,731.50	$254,566.50			$56,090.00

INSTALL

	Option 1	Option 2	Option 1 Hist	Unit Cost	Option 1 Total	Option 2 Total	Option 1 Hist Total	No Parking Option	Unit Cost	No Parking Total
Asphalt topping	8145	7445	9860	$6.00	$48,870.00	$44,670.00	$59,160.00	5470	$6.00	$32,820.00
4x12 decking	3992	3287	5707	$12.00	$47,904.00	$39,444.00	$68,484.00	3089	$12.00	$37,068.00
4x12 joists	1563	858	3278	$10.00	$15,630.00	$8,580.00	$32,780.00	625	$10.00	$6,250.00
12x12 cap beam	137	77	272	$40.00	$5,480.00	$3,080.00	$10,880.00	36	$40.00	$1,440.00
14" diameter pile	20	8	47	$18,000.00	$360,000.00	$144,000.00	$846,000.00	3	$18,000.00	$54,000.00
SS Bent Cap Bracket	17	5	36	$8,000.00	$136,000.00	$40,000.00	$288,000.00	0	$8,000.00	$0.00
Post Installed SS anchor	34	10	72	$150.00	$5,100.00	$1,500.00	$10,800.00	0	$150.00	$0.00
wood railing	870	512	1467	$65.00	$56,550.00	$33,280.00	$95,355.00	285	$65.00	$18,525.00
concrete ramp	177	177	177	$50.00	$8,850.00	$8,850.00	$8,850.00	177	$50.00	$8,850.00
ramp guardrail	40	40	40	$200.00	$8,000.00	$8,000.00	$8,000.00	40	$200.00	$8,000.00
repave sidewalk	102	102	102	$5.00	$510.00	$510.00	$510.00	102	$5.00	$510.00
					$692,894.00	$331,914.00	$1,428,819.00			$167,463.00

Demo + Install	**$844,890.50**	**$415,645.50**	**$1,683,385.50**	**$223,553.00**

Appendix B – Structural Schematics

NOT FOR CONSTRUCTION

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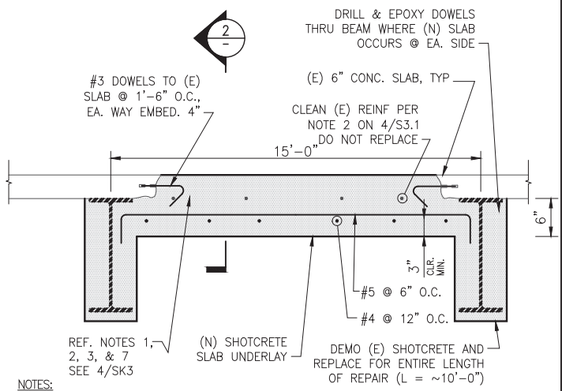
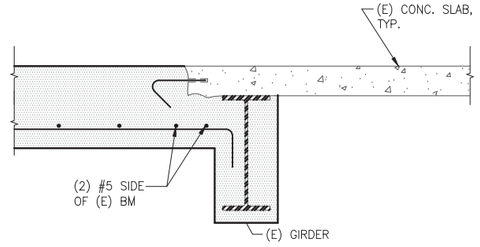


NOTES:
A. SHORE AS REQ'D
B. (E) REINF NOT SHOWN FOR CLARITY
C. SEE PLAN FOR LOCATIONS OF REPAIRS

CRITICAL SHOTCRETE SLAB REPAIR 1
3/4"=1'-0"
shotcrete slab at beam



NOTES:
(E) REBAR NOT SHOWN FOR CLARITY

CRITICAL SHOTCRETE SLAB REPAIR 2
NTS
shotcrete slab strengthening

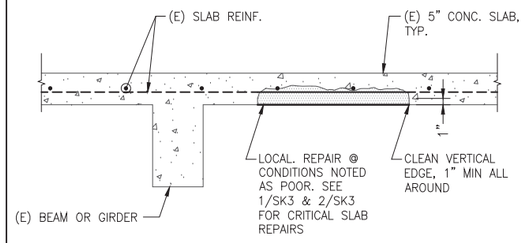
TYPICAL REPAIR METHODOLOGY

1. REMOVE ALL UNSOUND CONCRETE WITH A BUSH HAMMER.
2. CLEAN EXPOSED CORRODED REBAR W/ ABRASIVE BLASTING, WIRE WHEEL OR GRINDING. REPLACE REBAR AS REQ'D.
3. TREAT EXPOSED CORE CONCRETE W/ SIKA ARMATEC 110, TYFO CIS OR EQUAL.
4. PATCH SPALLED AND AREAS OF REMOVED CONCRETE WITH:
   - SIKACRETE 211 (FORMED & POURED); OR
   - SIKA 223 (HAND APPLIED); OR
   - SIKACEM 103F (SPRAY APPLIED); OR EQUAL.
5. EPOXY INJECT CRACKS WITH:
   - < 1/8" WIDE: SIKADUR 35;
   - > 1/8" WIDE: SIKADUR 35 OR SIKADUR INJECTION GEL; OR EQUAL.
6. SEAL FINISHED CONCRETE SURFACE W/ SIKAGUARD 62 OR EQUAL.
7. PROVIDE PASSIVE CORROSION PROTECTION WITH SENTINEL GL BY EUCLID OR WITH GALVASHIELD XP BY SIKA @ 1'-6" OC FOR SLAB, AT EA. END & EA. FACE OF EA. REPAIRED PILE, SLAB, BEAM, GIRDER AND STRUT.

SHEET NOTES 3
1/2"=1'-0"
typical pile repair

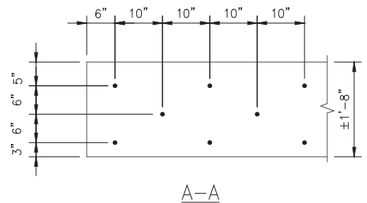
REPAIR METHODOLOGY FOR LOCALIZED SLAB REPAIR

1. REMOVE ALL UNSOUND CONCRETE WITH A BUSH HAMMER.
2. PROVIDE 1" MINIMUM CLEAN VERTICAL EDGE ALL AROUND REPAIR AREA
3. CLEAN EXPOSED CORRODED REBAR W/ ABRASIVE BLASTING, WIRE WHEEL OR GRINDING.
4. TREAT EXPOSED CORE CONCRETE W/ SIKA ARMATEC 110, TYFO CIS OR EQUAL.
5. PATCH SPALLED AND AREAS OF REMOVED CONCRETE WITH:
   - SIKACRETE 211 (FORMED & POURED); OR
   - SIKA 223 (HAND APPLIED); OR
   - SIKACEM 103F (SPRAY APPLIED); OR EQUAL.
6. SEAL FINISHED CONCRETE SURFACE W/ SIKAGUARD 62 OR EQUAL.
7. PROVIDE PASSIVE CORROSION PROTECTION WITH SENTINEL GL BY EUCLID OR WITH GALVASHIELD XP BY SIKA @ 1'-6" OC FOR AROUND OPENING.

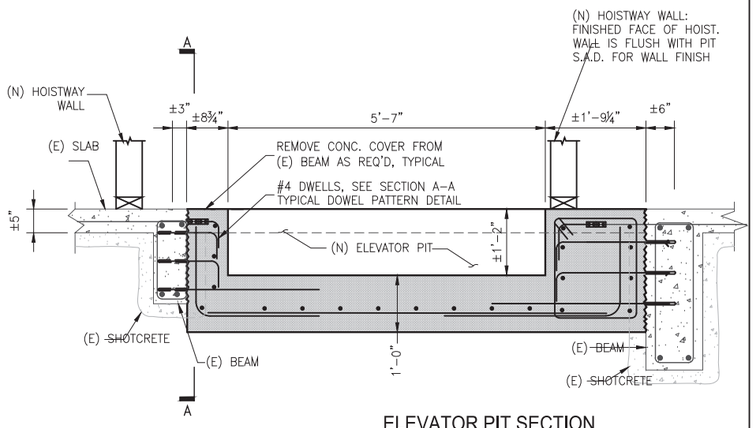


NOTES:
(E) REBAR IN BEAM/GIRDER NOT SHOWN FOR CLARITY

LOCALIZED SLAB REPAIR 4
NTS
localized slab strengthening

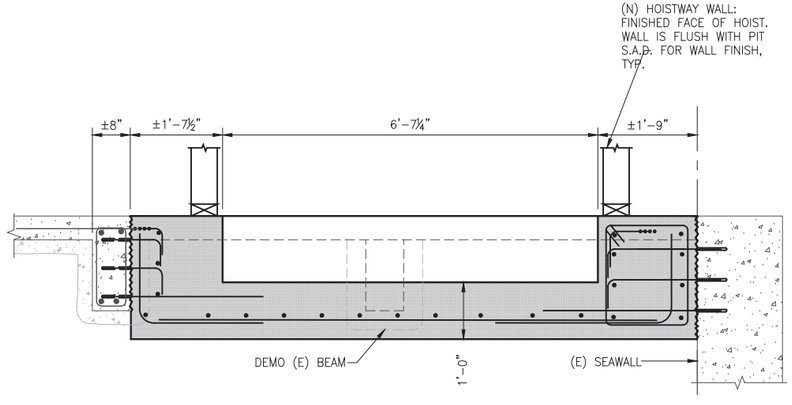


A–A
TYPICAL DOWEL STAGGER PATTERN IN (E) BEAM



ELEVATOR PIT SECTION
3/4"=1'-0"
PIT SECTION_REV 4

6



ELEVATOR PIT SECTION
3/4"=1'-0"
PIT SECTION_DET 8

8

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CHIEF HARBOR ENGINEER

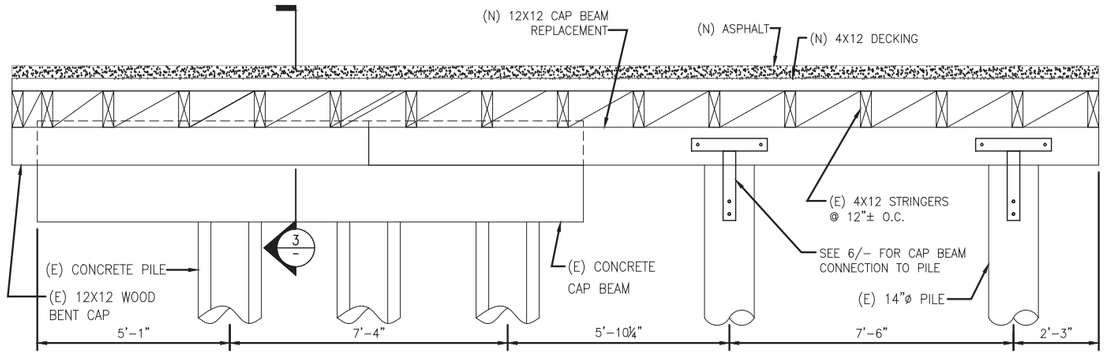
SCALE: AS NOTED
SHEET OF SHEETS: 5 OF 10

PIER 38
CODE COMPLIANCE

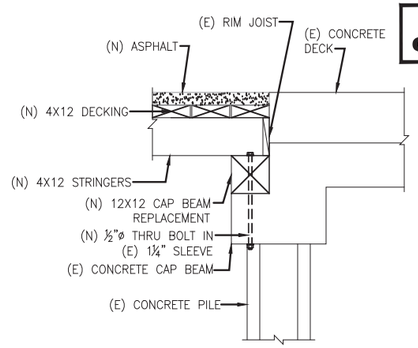
SUBSTRUCTURE REPAIR DETAILS

CONTRACT NO.	–
DRAWING NO.	SK3
FILE NO.	–
REV. NO.	–

VIEW: PLOT1



BENT CAP REPAIR 2
1/2"=1'–0"
E BENT CAP REPAIR



CAP BEAM REPLACEMENT SECTION 3
1/2"=1'–0"
X_BENT CAP REPAIR SECTION

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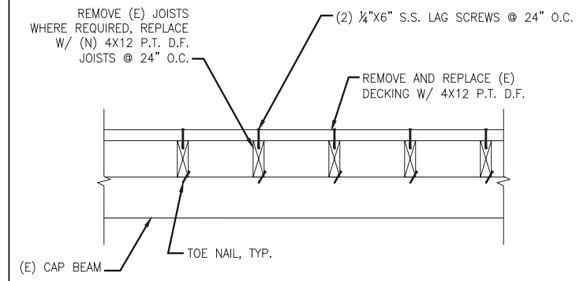
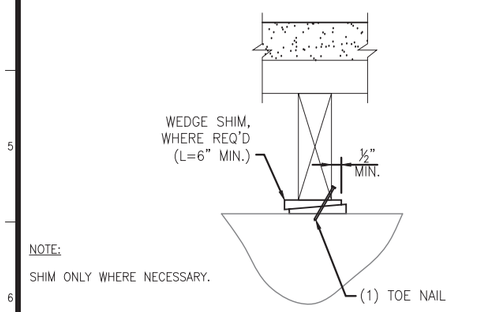
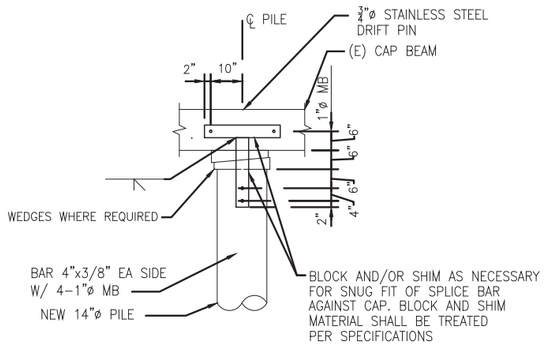


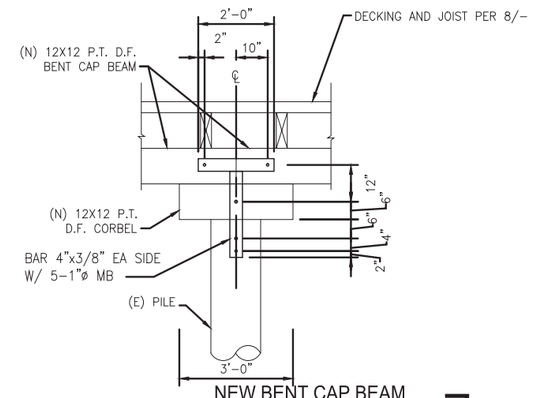
JOIST & DECKING REPLACEMENT 4
1/2"=1'–0"
JOIST & DECK REPLACEMENT



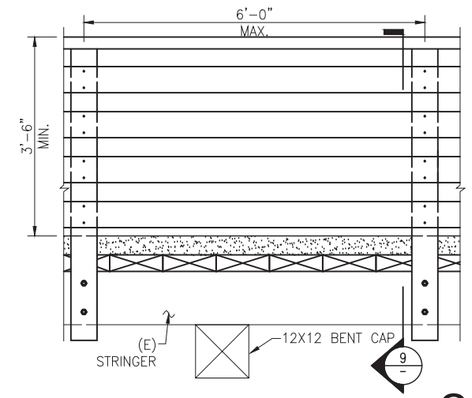
TYPICAL SHIM DETAIL 5
1–1/2"=1'–0"
SHIM DETAIL



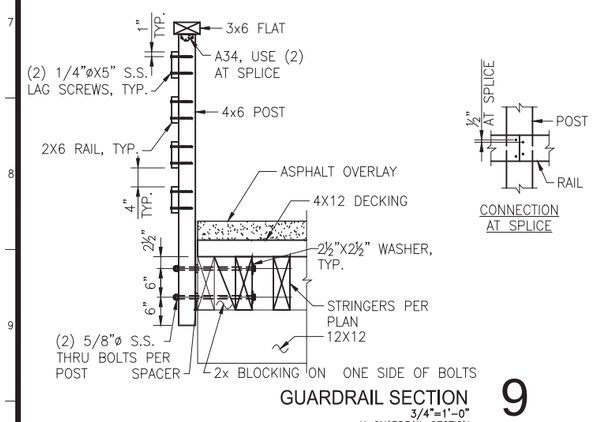
NEW PILE - CAP BEAM CONNECTION 6
1/2"=1'–0"
PILE CAP BEAM CONNECTION



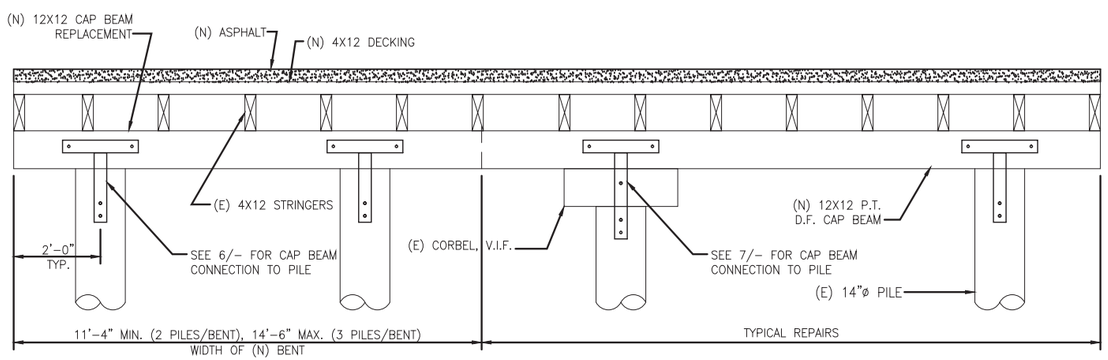
NEW BENT CAP BEAM AT CORBEL 7
1/2"=1'–0"
BEAM AT CORBEL



GUARDRAIL DETAIL 8
3/4"=1'–0"
X_GUARDRAIL DETAIL



GUARDRAIL SECTION 9
3/4"=1'–0"
X_GUARDRAIL SECTION



NEW BENT CAP 11
1/2"=1'–0"
NEW BENT CAP BEAM

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PIER 38
CODE COMPLIANCE

SUBSTRUCTURE REPAIR DETAILS

CONTRACT NO. –
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FILE NO. –
REV. NO. –

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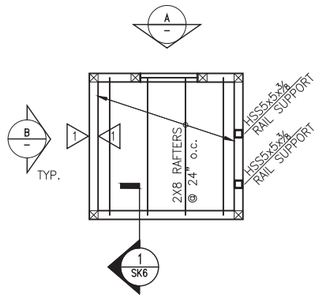
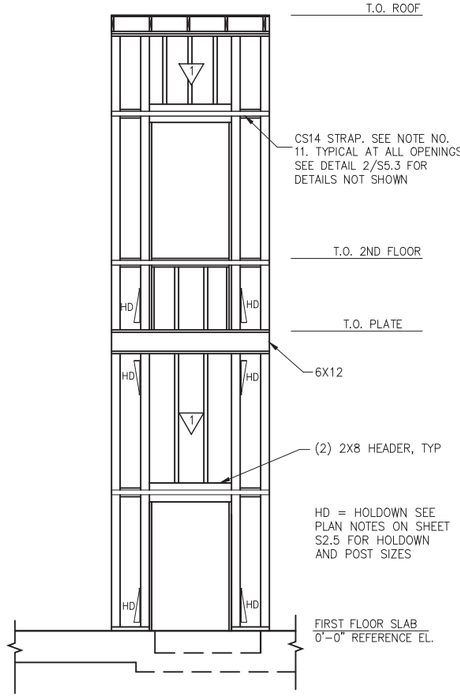
1 SHEARWALL: ½" APA-RATED OSB STRUCTURAL SHEATHING EA. SIDE ON ALL WALLS OF ELEV. HOISTWAY. SEE DETAILS AND SCHEDULE ON SHEET S5.3



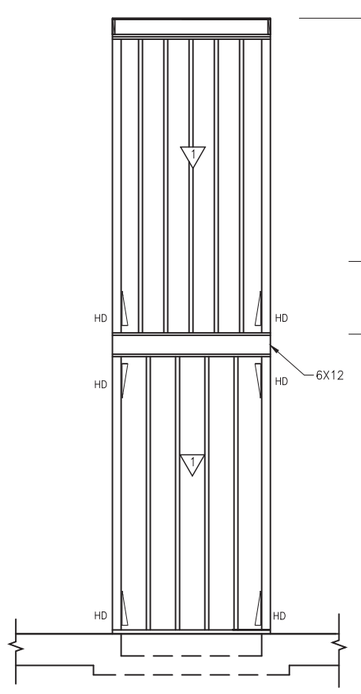
HOISTWAY ROOF FRAMING PLAN
1/4"=1'-0"

1



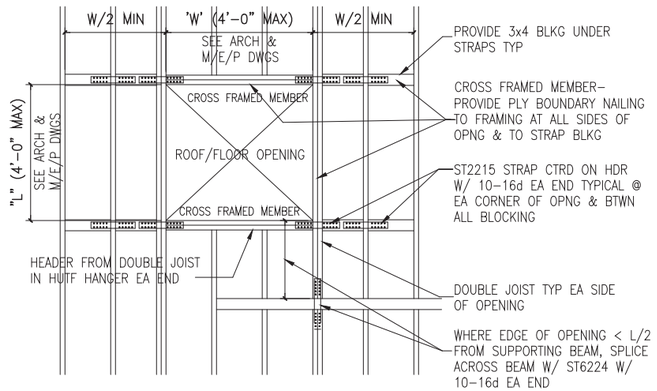
HOISTWAY FRAMING ELEVATION
1/4"=1'-0"

A



HOISTWAY FRAMING ELEVATION
1/4"=1'-0"

B



4 TYP ROOF/FLOOR OPENING DETAIL

WOOD FRAMING NOTES

1. 1 DENOTES ½"APA-RATED OSB STRUCTURAL I SHEATHING. PLYWOOD EXTENDS FULL HEIGHT OF THE WALL. SEE DETAILS AND SCHEDULES ON S5.4
2. FLOOR TO FLOOR HOLDOWN TIES ARE REQUIRED AT EACH END OF SHEAR WALL AND AT LOCATIONS NOTED THUS: HD ALL HOLDOWNS TO BE ON 6x6 POST U.N.O.. SEE DETAILS ON SHEET S5.2.
3. SEE TYPICAL WOOD DETAILS ON SHEETS S5.2 AND S5.3.
4. PROVIDE PANEL EDGE NAILING AT ALL POSTS AT HOLDOWN LOCATIONS
5. SEE ARCH. DWGS. FOR EXACT LOCATION OF WINDOWS AND DOORS.
6. ALL NEW WOOD FRAMED BEARING WALLS ARE 2x6 @ 16" O.C. TYP. U.N.O. USE 3x6 STUDS AT SHEAR WALLS
7. ROOF SHEATHING IS 5/8" CDX PLYWOOD w/ 10d NAILS AT 4" o.c., PROVIDE BLOCKING.
8. WHERE NOTED ON PLAN, REINFORCE OPENINGS IN SHEAR WALLS WITH METAL STRAPS. SEE DETAIL 4

NO.	DATE	DESCRIPTION	BY	APP.

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PIER 38
CODE COMPLIANCE

ELEVATOR FRAMING

CONTRACT NO. –
DRAWING NO. SK5
FILE NO. –
REV. NO. –

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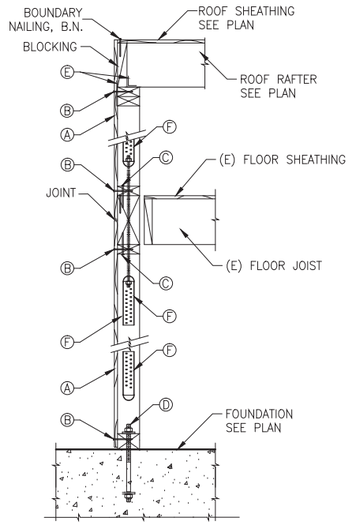
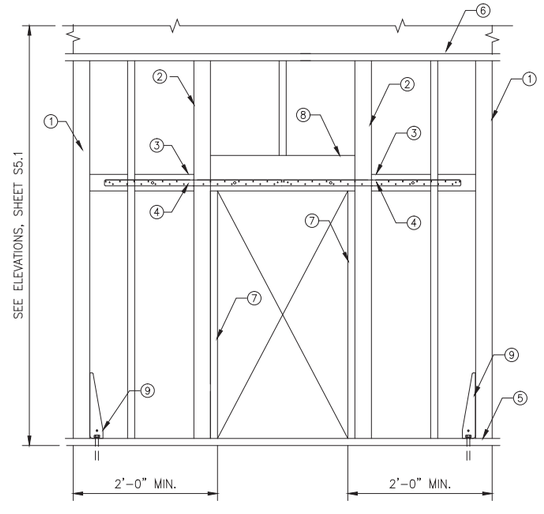


SHEARWALL SCHEDULE

MARK	SHEATHING Ⓐ	EDGE NAILING (E.N.) [1,2,3] Ⓑ	ALL STUDS & BLOCKING AT ABUTTING PANEL EDGES [3]	SILL PLATE [5,6]	BOTTOM PLATE ATTACHMENT [5,6]		SHEAR TRANSFER/ FRAMING ANCHORS Ⓔ	HOLDOWN ANCHOR Ⓕ	ALLOWABLE CAPACITY
					SHEAR NAILING (S.N.) TO WOOD Ⓒ	ANCHOR BOLTING TO CONCRETE Ⓓ			
1	15/32" APA RATED OSB STRUCTURAL I SHEATHING EACH SIDE [1]	10d @ 4"o.c.	3x	3x	16d @ 4"o.c.	¾"ø @ 32"o.c.	A35 or LTP5 @ 16" o.c.	PER PLAN	600 PLF

1. FOR DOUBLE-SIDED WALLS, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
2. BLOCK ALL PANEL EDGES.
3. NAILING SHALL BE STAGGERED AT ABUTTING PANEL EDGES AND SILL PLATE WHEN NAIL SPACING IS LESS THAN 6" o.c.
4. FIELD NAILING AT INTERMEDIATE FRAMING MEMBERS SHALL BE 10d @ 12" o.c. (F.N.)
5. BOTTOM PLATE SHALL BE 3x PRESSURE PRESERVATIVE TREATED ON CONCRETE OR MASONRY. PROVIDE ¼"x3"x3" PLATE WASHERS.
6. FASTENERS AND HARDWARE IN CONCTACT WITH CONCRETE AND/OR TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.

SHEARWALL SCHEDULE 1
3/4"=1'-0"
CADD FILE



① 6X POST, EDGE NAILING PER SHEAR WALL SCHEDULE
② 6X POST, w/ EDGE NAILING PER SHEAR WALL SCHEDULE
③ 4X BLOCKING, w/ EDGE NAILING PER SHEAR WALL SCHEDULE
④ 1½"X14 GA FULL LENGTH STRAP w/ 10d NAILS @ 3½" o.c. PLACED OVER PLYWOOD SHEATHING (CS14 OR EQUAL)
⑤ 3X SILL PLATE PER SHEAR WALL SCHEDULE
⑥ 2X TOP PLATE
⑦ 2X TRIMMER
⑧ HEADER
⑨ HOLD DOWN PER PLAN

PERFORATED SHEARWALL DETAIL 2
3/4"=1'-0"
CADD FILE

NO.	DATE	DESCRIPTION	BY	APP.

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PIER 38
CODE COMPLIANCE

WOOD FRAME DETAILS

CONTRACT NO. –
DRAWING NO. SK6
FILE NO. –
REV. NO. –

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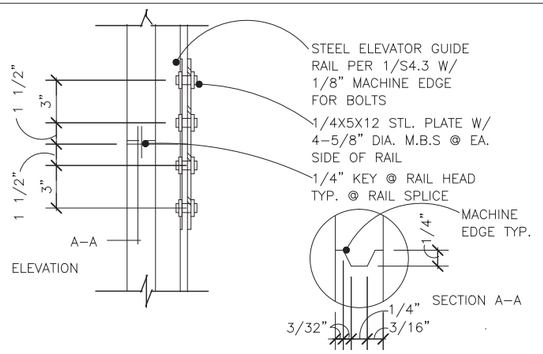
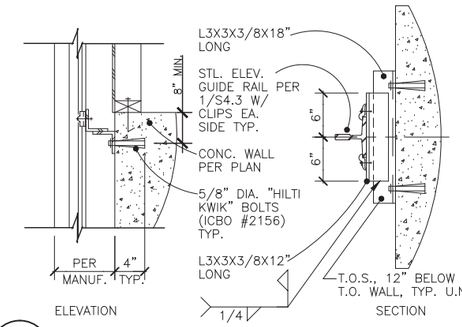
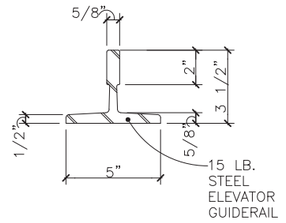


7 / SK7 ELEV. RAIL SPLICE [LOCATE 5'-2" ABOVE 2ND FLOOR]
NO SCALE

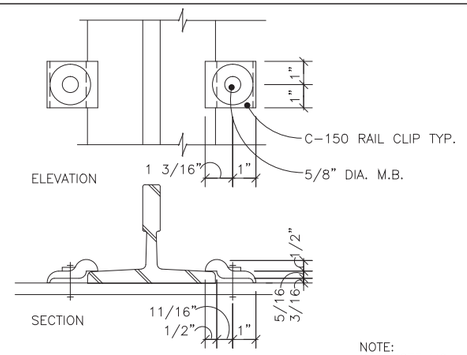


4 / SK7 ELEV. RAIL SUPPORT AT CONCRETE WALL
NO SCALE



NOTE NO. 1:
MANUFACTURER TO SUBMIT STRUCTURAL CALCS FOR ELEVATOR GUIDERAIL SECTION, CONNECTIONS AND SPLICES. SIZES INDICATED ARE A MINIMUM UNLESS LARGER SIZE IS REQUIRED BY MANUFACTURER.

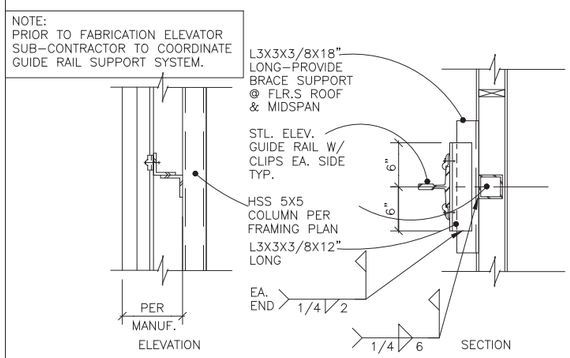
1 / SK7 15 LB ELEVATOR GUIDE RAIL
SC: NONE



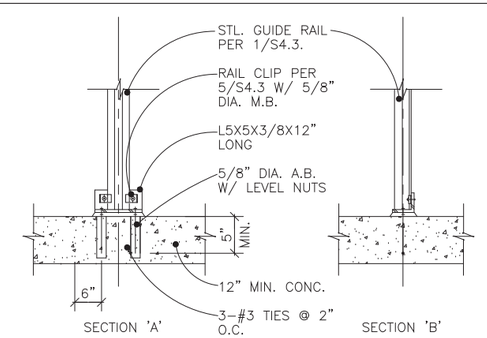
NOTE:
SEE NOTE NO. 1 ON DETAIL 1/S4.3

5 / SK7 ELEV. RAIL CLIP DETAIL
NO SCALE

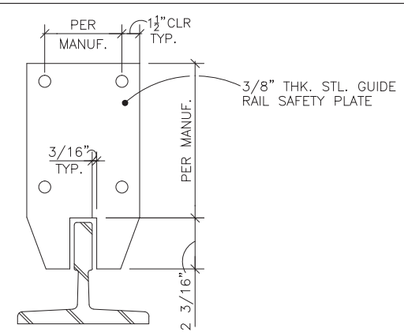
NOTE:
PRIOR TO FABRICATION ELEVATOR SUB-CONTRACTOR TO COORDINATE GUIDE RAIL SUPPORT SYSTEM.



2 / SK7 ELEV. RAIL SUPPORT AT WOOD FRAMED WALL
NO SCALE



6 / SK7 TYP. ELEV. RAIL BASE
NO SCALE



3 / SK7 ELEV. SAFTEY GUIDE PLATE
NO SCALE

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: C+D 11/09/11
DRAWN: C+D 11/09/11
CHECKED: C+D 11/09/11

APPROVED BY SAN FRANCISCO PORT COMMISSION
DATE: _____
CHIEF HARBOR ENGINEER

SCALE: AS NOTED
SHEET OF SHEETS: 9 OF 10

PIER 38
CODE COMPLIANCE

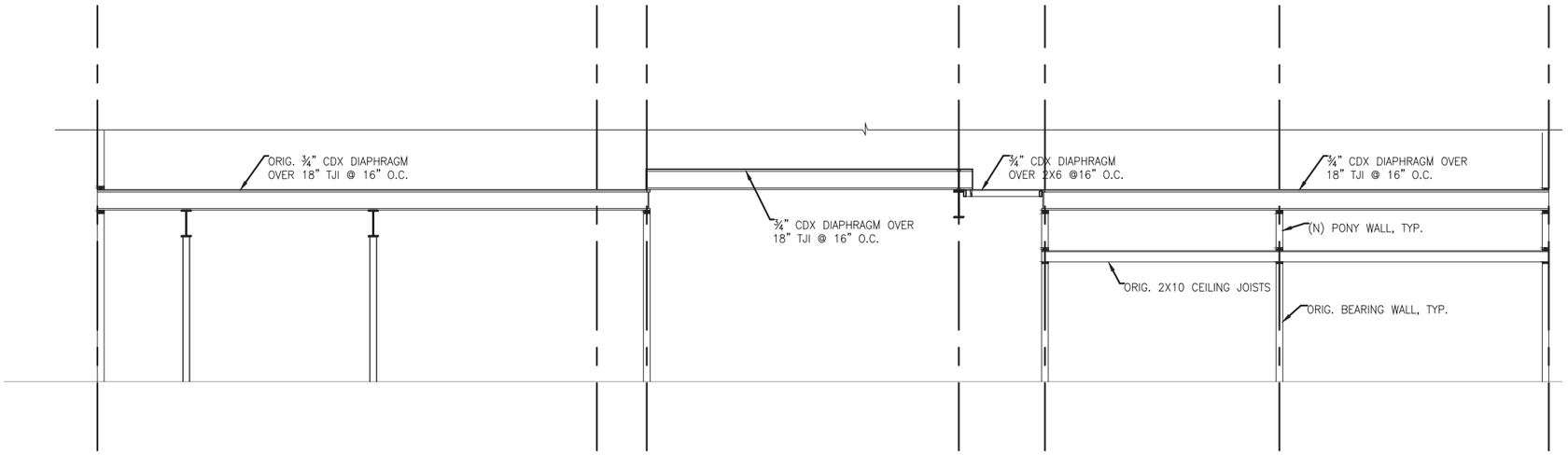
ELEVATOR DETAILS

CONTRACT NO. _
DRAWING NO. SK7
FILE NO. _
REV. NO. _

VIEW: PLOT1

NOT FOR CONSTRUCTION

Creegan+D'Angelo
INFRASTRUCTURE ENGINEERS
170 Columbus Ave., Suite 240
San Francisco, CA 94133
Tel (415) 834-2010
Fax (415) 834-2011
www.cdengineers.com



EXISTING SECTION 1
3/16"=1'-0"

NO.	DATE	DESCRIPTION	BY	APP.

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS

SAN FRANCISCO PORT COMMISSION
PORT OF SAN FRANCISCO
DEPARTMENT OF ENGINEERING

DESIGNED: DATE: C+D 11/09/11
DRAWN: DATE: C+D 11/09/11
CHECKED: DATE: C+D 11/09/11

APPROVED BY SAN FRANCISCO PORT COMMISSION
DATE: _____
_____ CHIEF HARBOR ENGINEER

SCALE: AS NOTED
SHEET OF SHEETS 10 OF 10

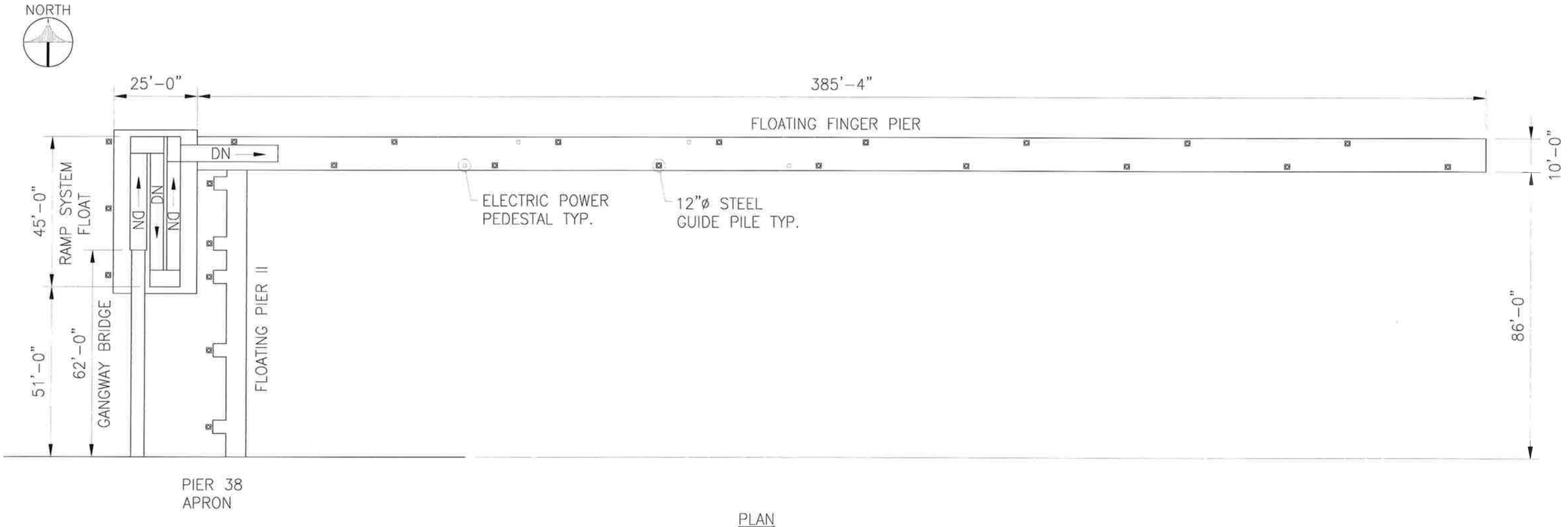
PIER 38
CODE COMPLIANCE

SECTION

CONTRACT NO. –
DRAWING NO. SK8
FILE NO. –
REV. NO. –

VIEW: PLOT1

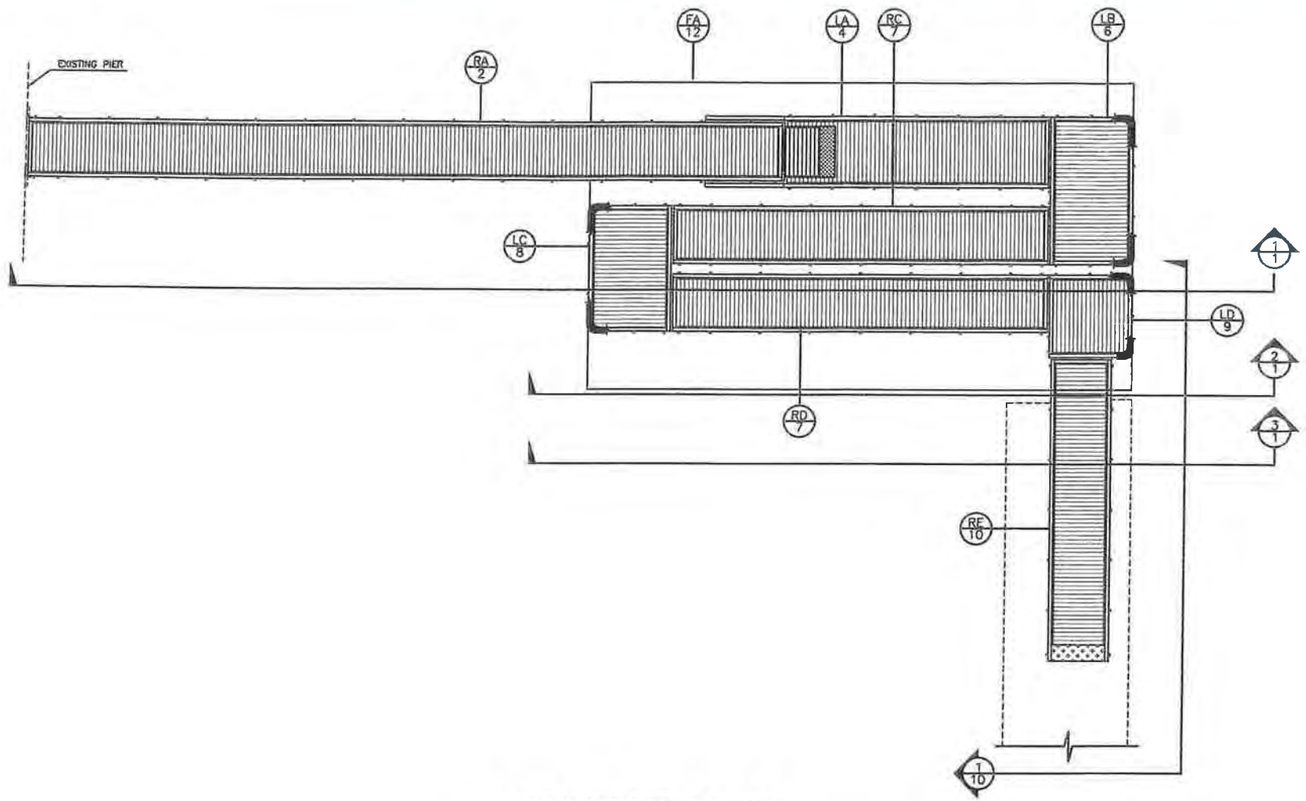
Appendix C - Marine



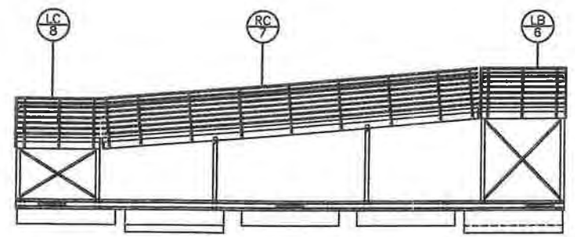
PLAN
1"=30'

PIER 38
MARINE STRUCTURES

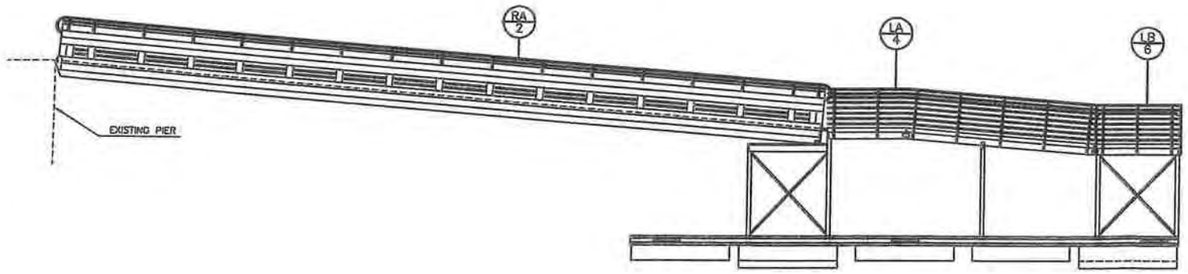
No.	Revision
1	12 AUG 97 RKL
2	03 SEP 97 RKL
3	01 OCT 97 RKL
4	12 FEB 98 RKL



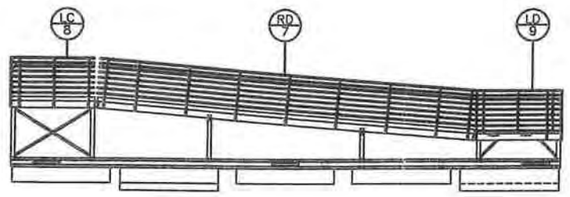
ALUMINUM RAMP SYSTEM – PLAN VIEW
SCALE: 3/16" = 1'-0"



SECTION VIEW 2/1
SCALE: 3/16" = 1'-0"



SECTION VIEW 1/1
SCALE: 3/16" = 1'-0"



SECTION VIEW 3/1
SCALE: 3/16" = 1'-0"

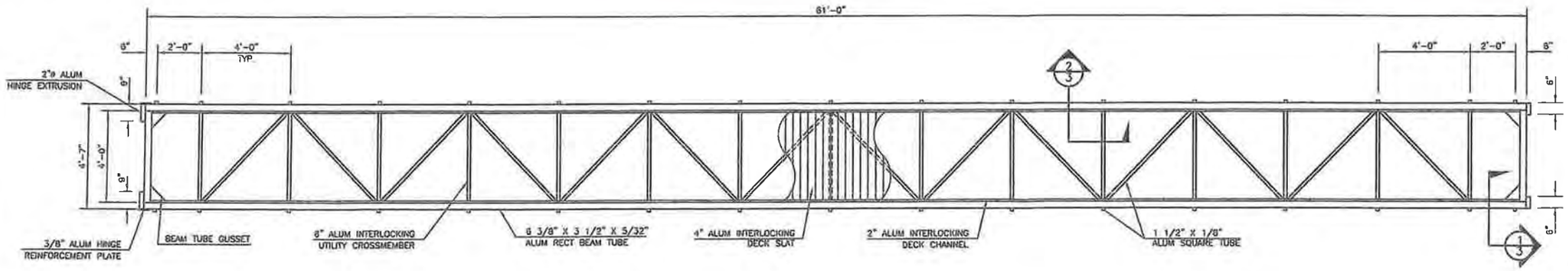
HALLSTEN
CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

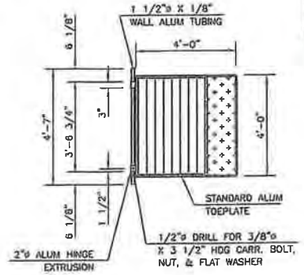
RAMP SYSTEM LAYOUT

PIER 38
ALUMINUM GANGWAY AND RAMP SYSTEM
SAN FRANCISCO, CA

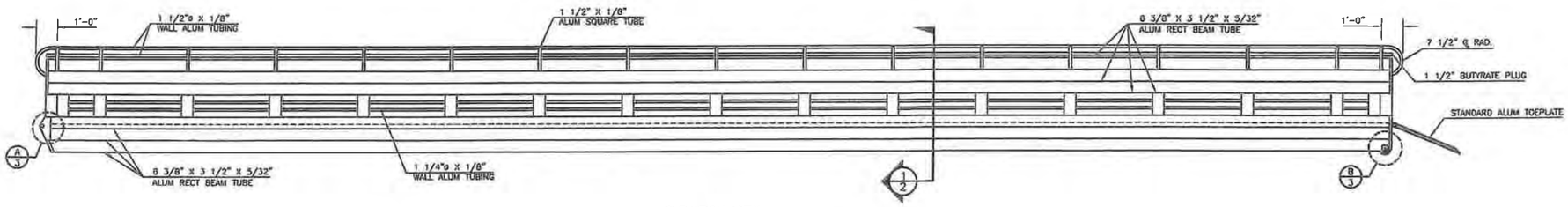
Date:	21 JUL 97
Scale:	AS NOTED
Designed by:	J. HALLSTEN
Drawn by:	R. LAU
Sheet:	1 of 13
Dwg. No.:	8495

No.	Revision
1	01 OCT 97 RKL
2	13 FEB 98 RKL

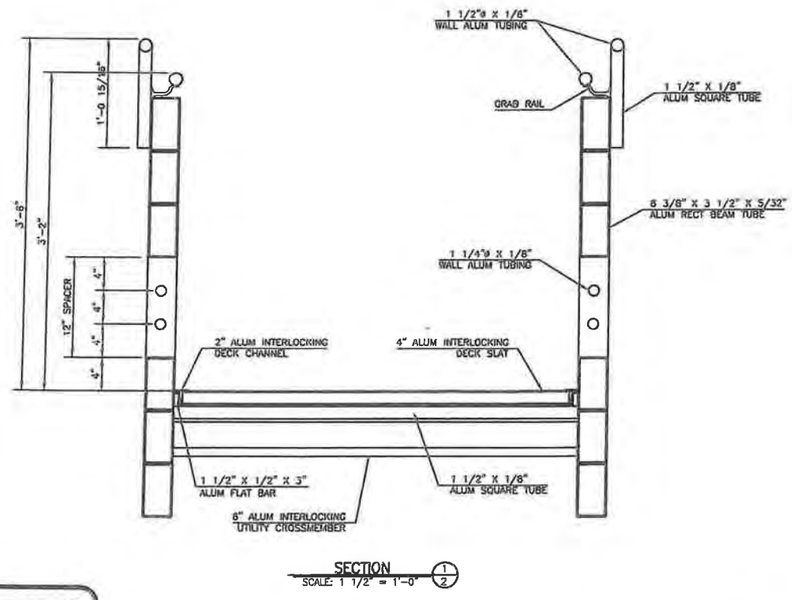




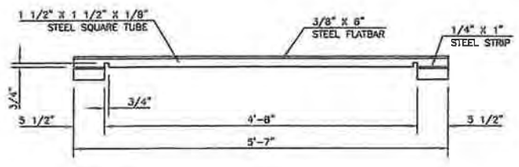
4'-0" X 61'-0" ALUMINUM GANGWAY-PLAN VIEW
SCALE: 3/8" = 1'-0"
MAKE (1) ONE



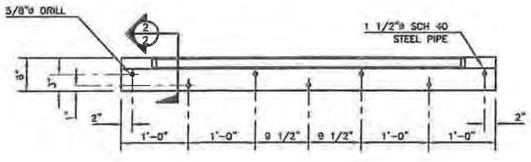
ELEVATION VIEW
SCALE: 3/8" = 1'-0"



SECTION
SCALE: 1 1/2" = 1'-0"
1/2

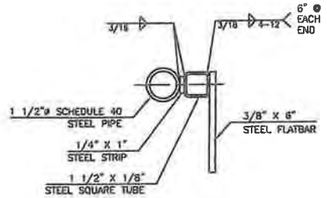


TOP VIEW



FRONT VIEW

ON-SHORE HINGE ASSEMBLY
SCALE: 1" = 1'-0"
MAKE (1) ONE



SECTION
SCALE: 3" = 1'-0"
2/2

NOTE:
PROVIDE 2" OF BEAM SEAM WELD PER FOOT OF BEAM LENGTH

NOTE:
1) TOP OF ALUMINUM DECKING IS RIBBED AND SANDBLASTED TO A COMMERCIAL FINISH FOR A NON-SKID SURFACE.
2) ALL STEEL PARTS TO BE HOT-DIP GALVANIZED AFTER FABRICATION.

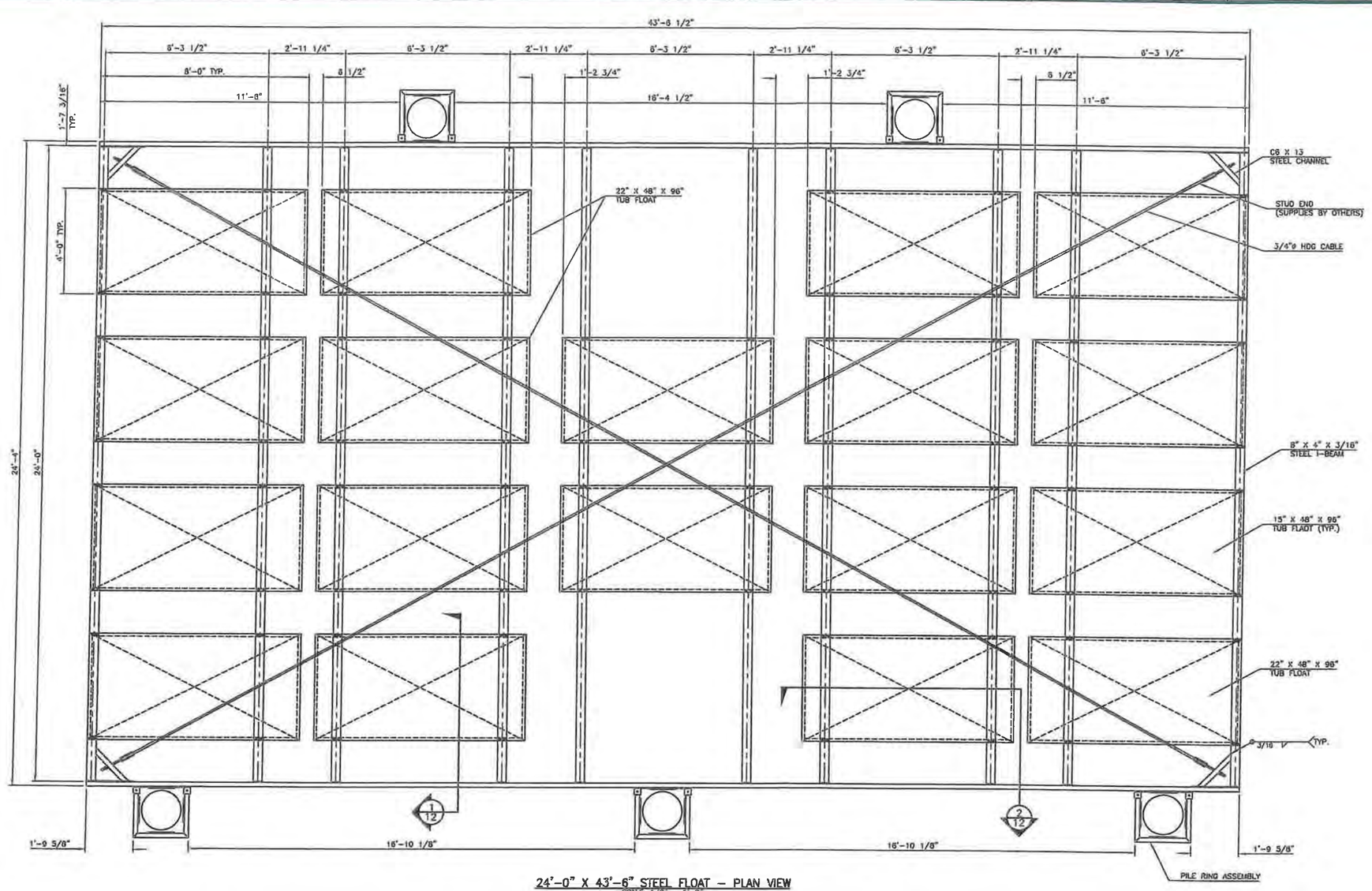
HALLSTEN CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

4'-0" X 61'-0" ALUMINUM GANGWAY

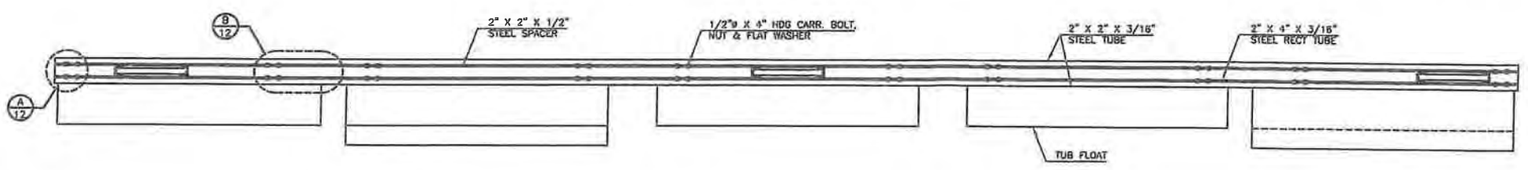
PIER 38
ALUMINUM GANGWAY AND RAMP SYSTEM
SAN FRANCISCO, CA

Date:	21 JUL 97
Scale:	AS NOTED
Designed by:	J. HALLSTEN
Drawn by:	R. LAU
Sheet:	2 of 13
Dwg. No.:	8495

No.	Revision



24'-0" X 43'-6" STEEL FLOAT - PLAN VIEW
SCALE: 1/2" = 1'-0"
MAKE (1) ONE



ELEVATION VIEW
SCALE: 1/2" = 1'-0"

NOTE:
1) ALL STEEL PARTS TO BE HOT-DIP GALVANIZED AFTER FABRICATION.

HALLSTEN CORPORATION
P.O. Box 41036, Sacramento, CA 95841 Tel (916) 331-7211 Fax (916) 331-7223

24'-0" X 43'-6" STEEL FLOAT

PIER 38
ALUMINUM GANGWAY AND RAMP SYSYEM
SAN FRANCISCO, CA

Date:	10 FEB 98
Scale:	AS NOTED
Designed by:	P. BISHOP
Drawn by:	R. LAU
Sheet:	11 of 13
Dwg. No.:	8495

05-Ramp to Finger Pier

05A-Moored Ship

05B-Damaged Power Pedestal

06-Large Ship Mooring

01-Gangway Bridge & Ramp System Float

02-Gangway Bridge

03-Ramp & Gangway Bridge

04-Access Ramp & Finger Pier

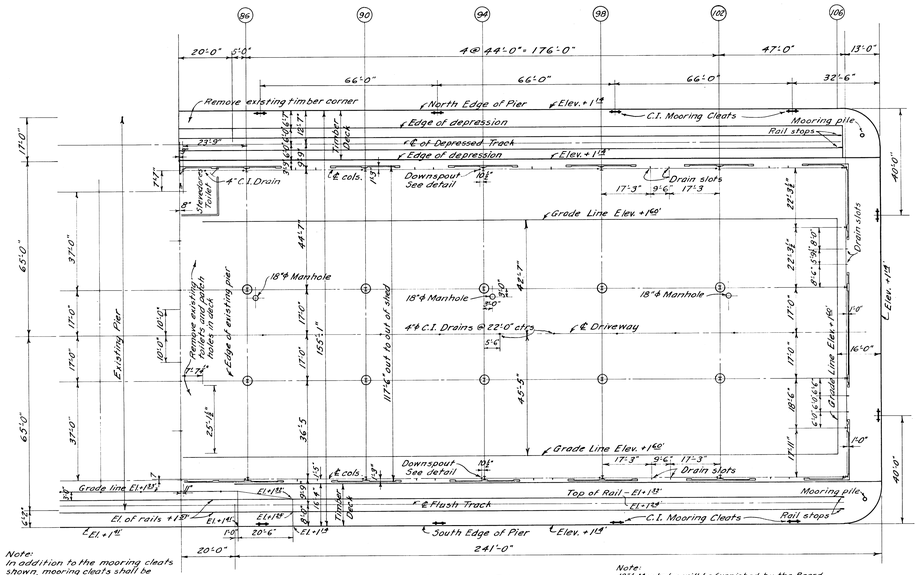
07-Finger Pier

08-Steel Guide Pile

09-Electric Power Pedestal

10-Floating Pier II

11-Finger Pier II

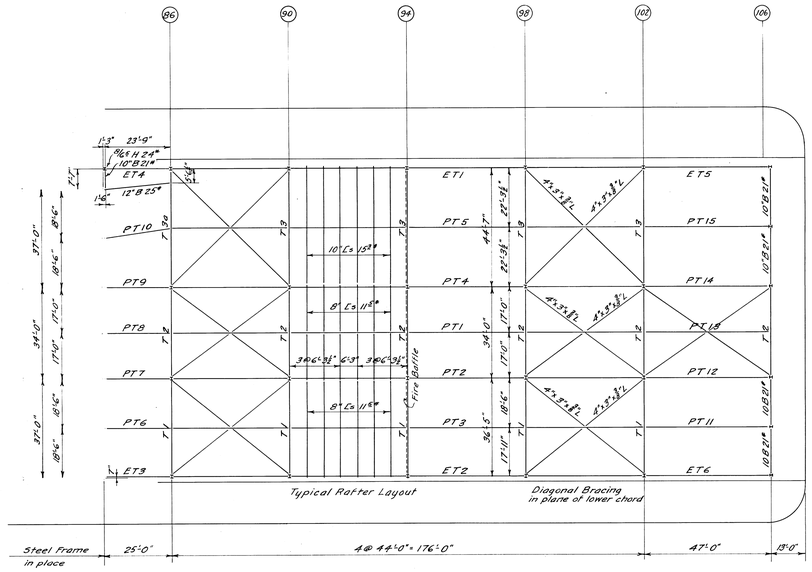


Note:
In addition to the mooring cleats shown, mooring cleats shall be furnished and placed on the south side extension at Bents No. 5-16-28-40-52-64 and 76.

General Plan

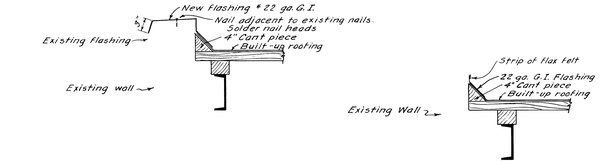
Scale: 1"=20'-0"

Note:
18"ϕ Manholes will be furnished by the Board and are to be set by the Contractor.
Rail stops or bumpers will be furnished by the Board and set by the Contractor.



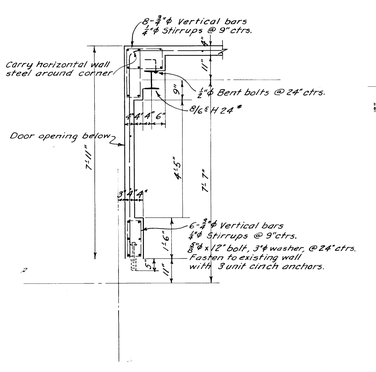
Roof Framing Plan

Scale: 1"=20'-0"



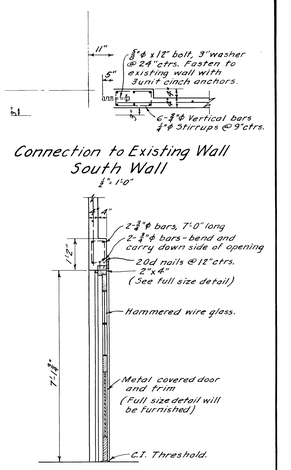
Flashing of Roof to Existing Structure

1"=1'-0"



Connection to Existing Wall South Wall

¾"=1'-0"

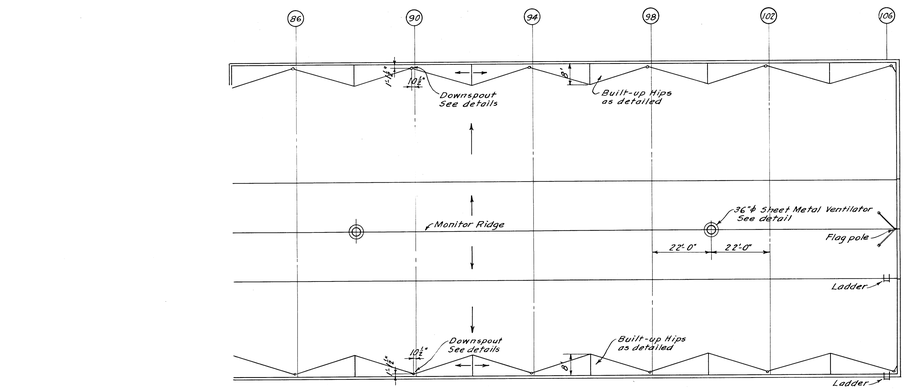


Section A-A

¾"=1'-0"

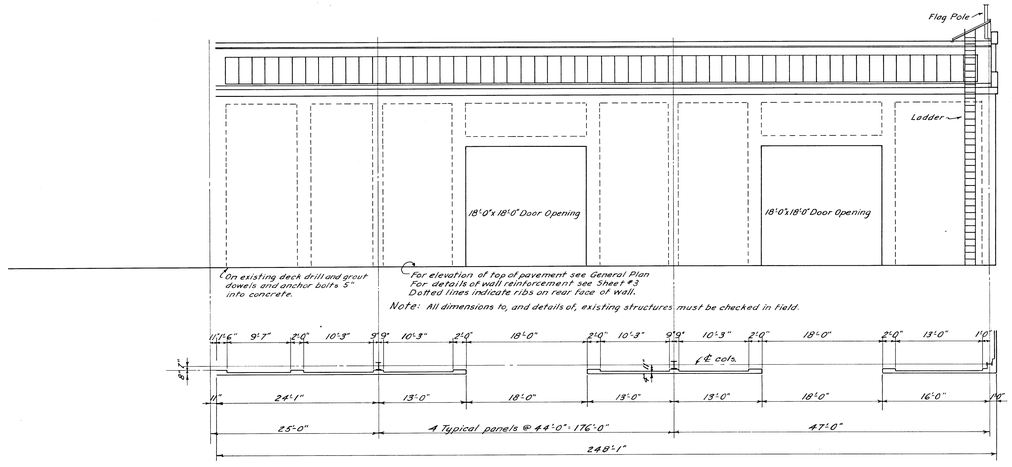
Connection to Existing Wall North Wall

¾"=1'-0"



Roof Plan

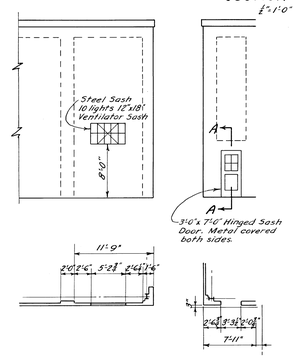
Scale: 1"=20'-0"



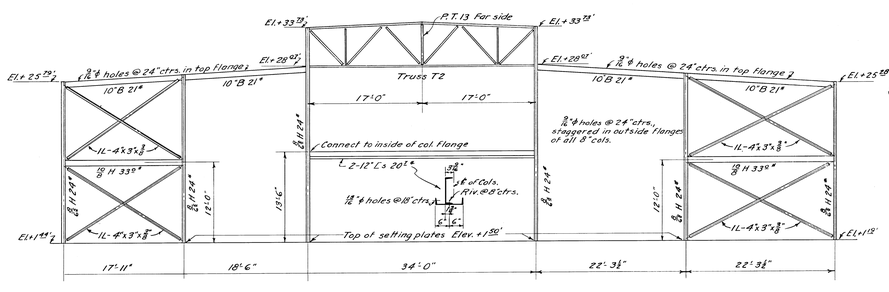
South Elevation

(North wall similar except connection to existing structure)

⅛"=1'-0"

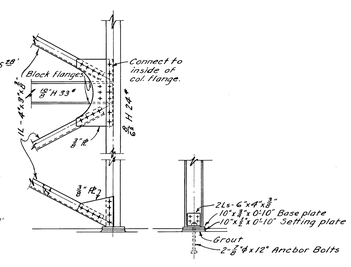


Elevation Inner End - North Wall



Outer End Framing

⅜"=1'-0"



Connections for Bracing

½"=1'-0"

Base for 8" Col.

½"=1'-0"

RESPECTFULLY SUBMITTED.
Frank G. White
CHIEF ENGINEER.

APPROVED.
COMMISSIONERS.

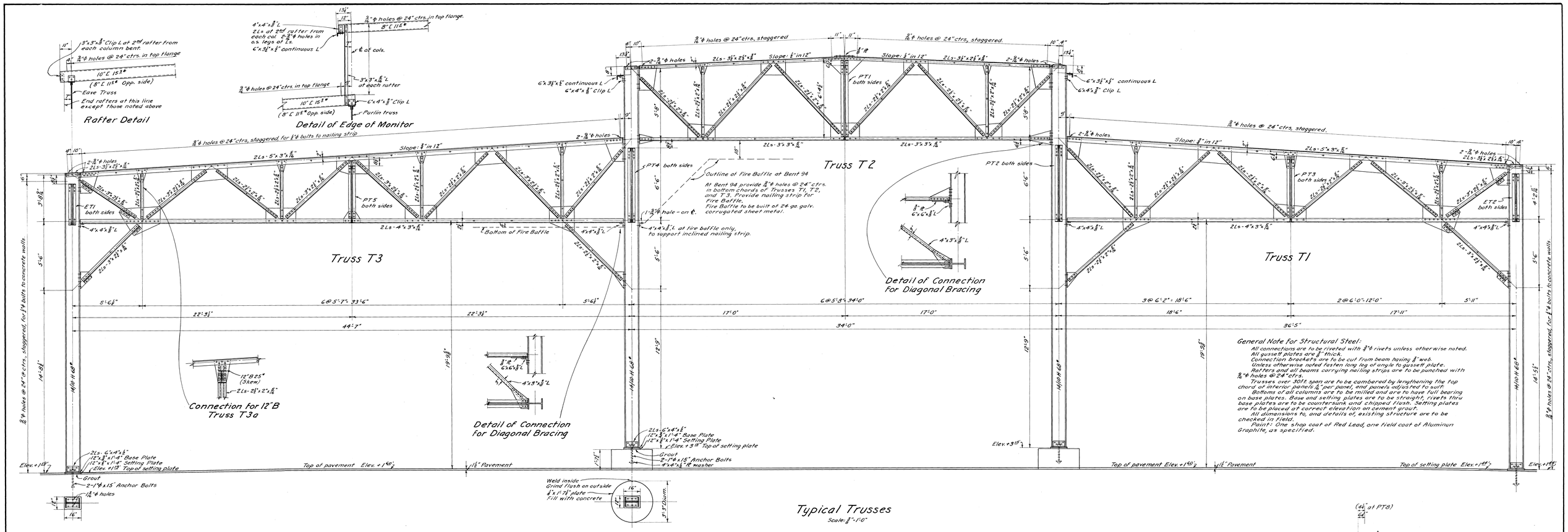
PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

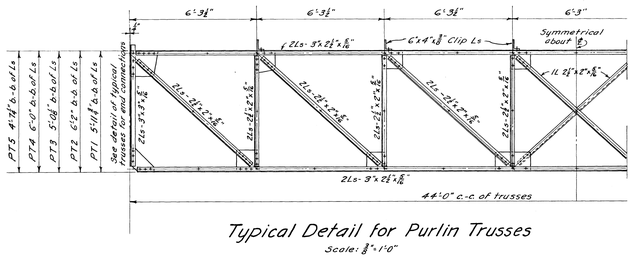
ALTERATIONS & ADDITIONS TO PIER NO. 38.

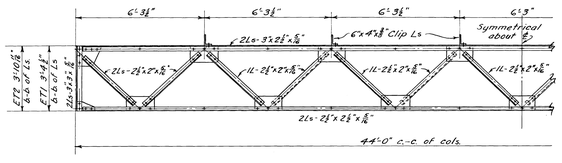
IN CHARGE OF A.W. Nordwall	
MADE BY C.A. Sedgwick	DATE June 18 1931
CHECKED BY C.J. Richmond	SCALE Indicated
DRAWING NO. 5011-11	DRAWER NO. SHEET NO. 1 OF 8

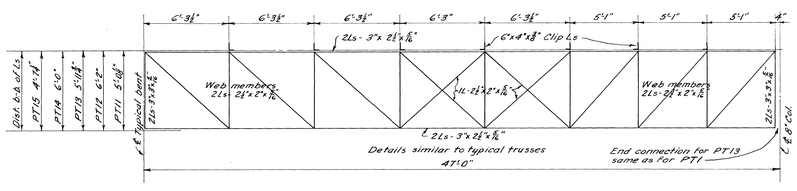
5011-38-1

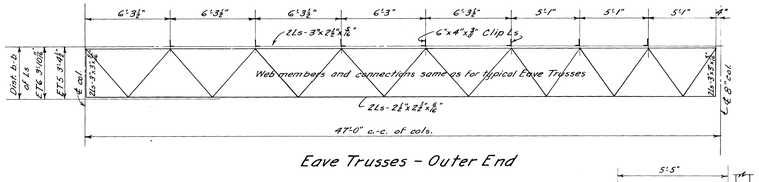
5011-38-1

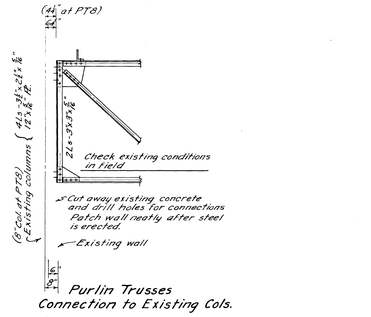


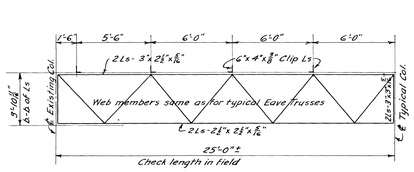


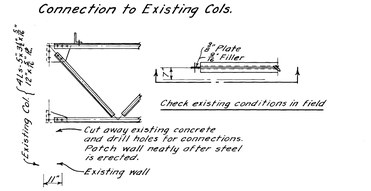


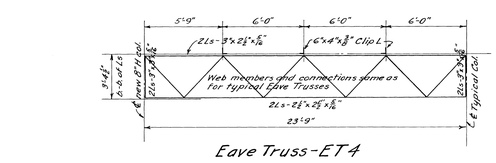


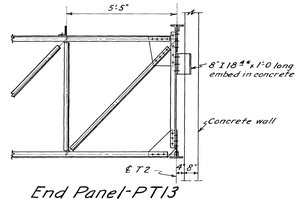












RESPECTFULLY SUBMITTED.
Frank B. White
CHIEF ENGINEER.

APPROVED.
COMMISSIONERS.

PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

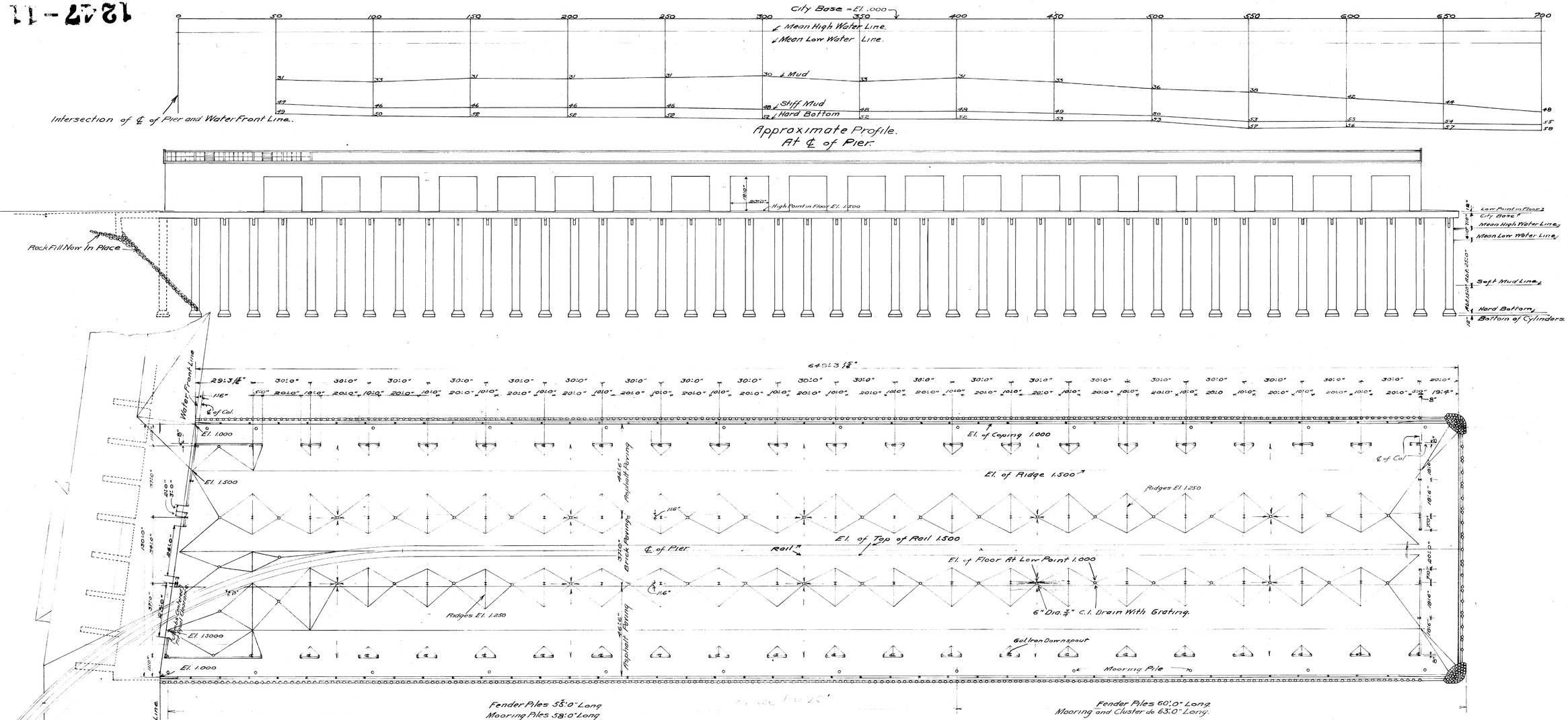
ALTERATIONS & ADDITIONS TO PIER NO. 38.

IN CHARGE OF	A.W. Nordwall		
MADE BY	O.A.S.	DATE	June 18, 1931
CHECKED BY	C.W. Crandall	SCALE	Indicated
DRAWING NO.	DRAWER NO.	SHEET NO.	
5012-11		2	OF 9

5012-38-1

5012-38-1

12 27-11



Board of State Harbor Commissioners
Department of Engineering

Floor Plan and Elevations.

PIER Nº 38.
San Francisco Cal.
Oct 15, 1908.

Approved Oct 15 1908.
W. U. Hayward
W. E. Dennison
Thos. J. Kennedy
Commissioners

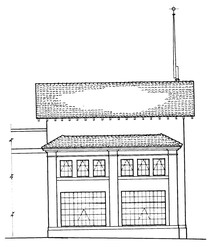
Respectfully Submitted
Ralph Parker
Assistant State Engineer.

In Charge J.G.L.
Made By H.P.W.
Checked By

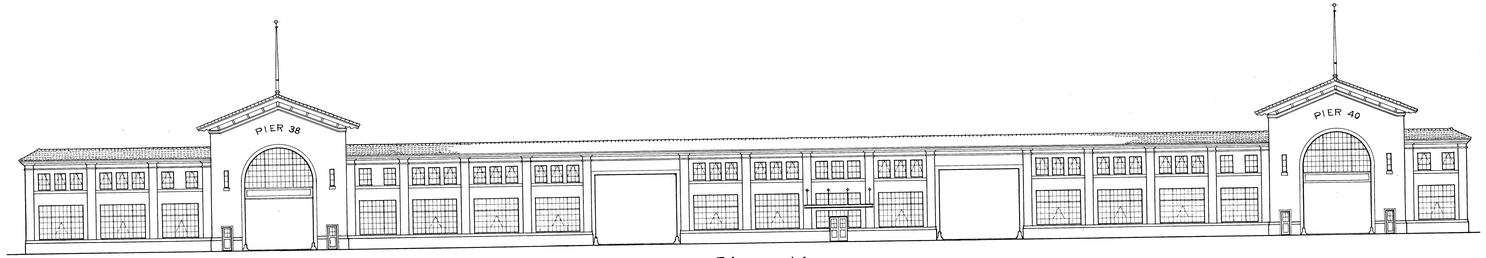
1247-38-3 (2)

1247-38-3

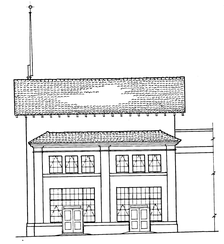
12 27-11



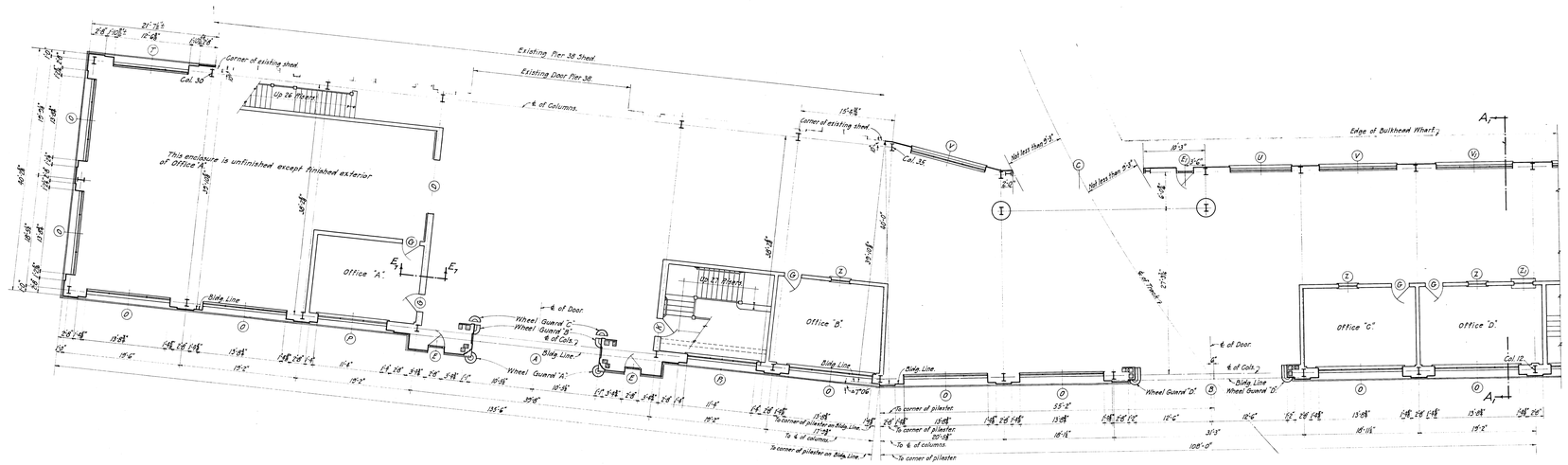
North End Elevation
Scale 1/8" = 1'-0"



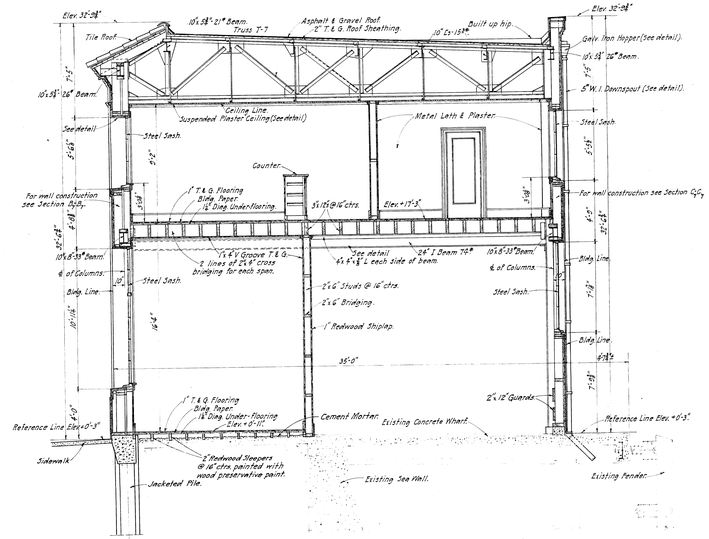
Front Elevation
Scale 1/8" = 1'-0"



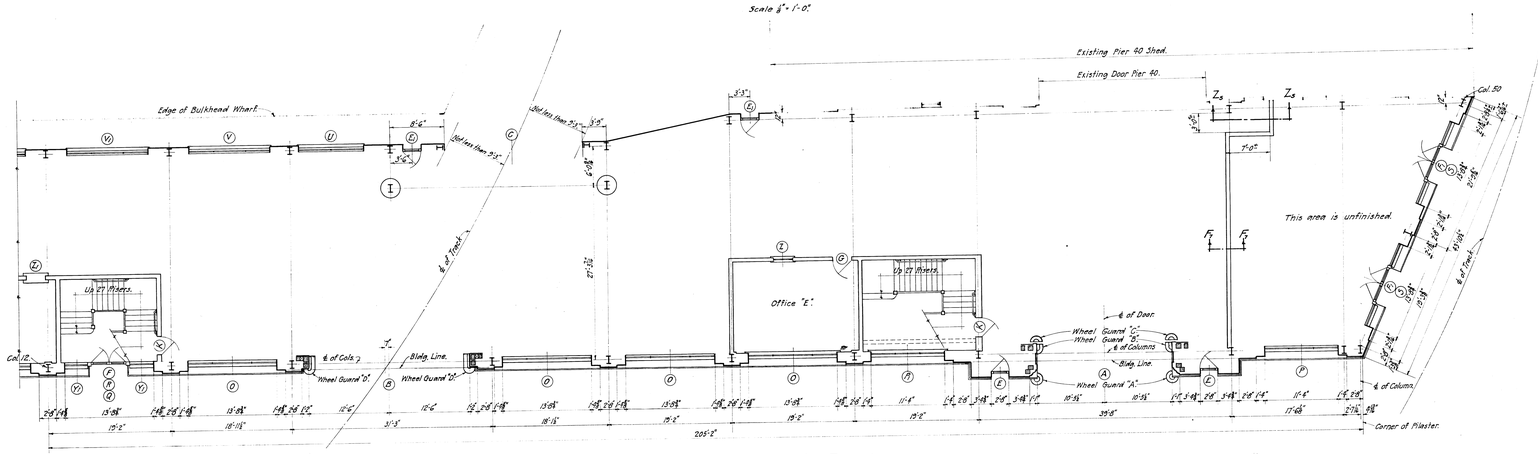
South End Elevation.
Scale 1/8" = 1'-0"



First Floor Plan - North Portion
Scale 1/8" = 1'-0"



Section A,-A,
Scale 1/4" = 1'-0"



First Floor Plan - South Portion.
Scale 1/8" = 1'-0"

GENERAL NOTE.

Dimensions of exterior walls and openings are to finished surface unless otherwise noted.
Wherever wooden sills rest on concrete they shall be of weather seasoned heart structural gyncle redwood of the sizes shown on the plans.
Underside of all wooden posts and columns and entire surface of all wooden sills resting on concrete shall be painted with wood preservative paint.
Wherever finished O.F. is shown on plans it signifies No1 clear kiln dried Douglas fir S.4.S.
Wherever finished redwood is shown on plans it signifies clear dry redwood S.4.S.
All bolts are 3/4" unless otherwise noted.
All rivets are 7/8" unless otherwise noted.
All washers, unless otherwise noted, shall be cast iron or malleable iron washers approved by the Chief Engineer.
All washers are to be dipped in red lead paint before erection and shall finally be given a finished coat of Tithanox or olive green graphite paint, depending on location.
Lengths of all angles, unless otherwise noted, shall conform to width of sizes on surfaced lumber.
All wooden nailing strips shall be bolted to steel sections with 1/2" carriage bolts, spaced at 24" ctrs. staggered for double row of bolts and at 24" ctrs. for single row of bolts.
Contractor shall provide two lines of 2"x 8" cross bridging at third point of all second floor joist spans.
All flashing shall be NT 22g. Galvanized iron except where lead or copper flashings are noted.
Steel Rolling Doors and door guide angles are not in Building Contract.
Full size details of all windows, hinged doors, mouldings and cornices will be furnished to the Contractor as needed.
Subscripts to section letters indicate sheet on which the section is shown.
Existing work is shown in light lines thus.
Contractor shall verify all dimensions on job.
All offices marked A, B, C, D and E shall be sheathed on walls and ceilings with 1/4" V Groove T & G. and be floored with double flooring as specified.
Fasten all C.I. door thresholds to concrete with 3-3/4 cinch anchors, (2 Unit).
All window sills shall receive a prime coat of Tithanox paint.

REVISED Jan. 16, 1935.

RESPECTFULLY SUBMITTED. Frank G. White, CHIEF ENGINEER.

APPROVED, June 28, 1934.
[illegible] COMMISSIONERS.

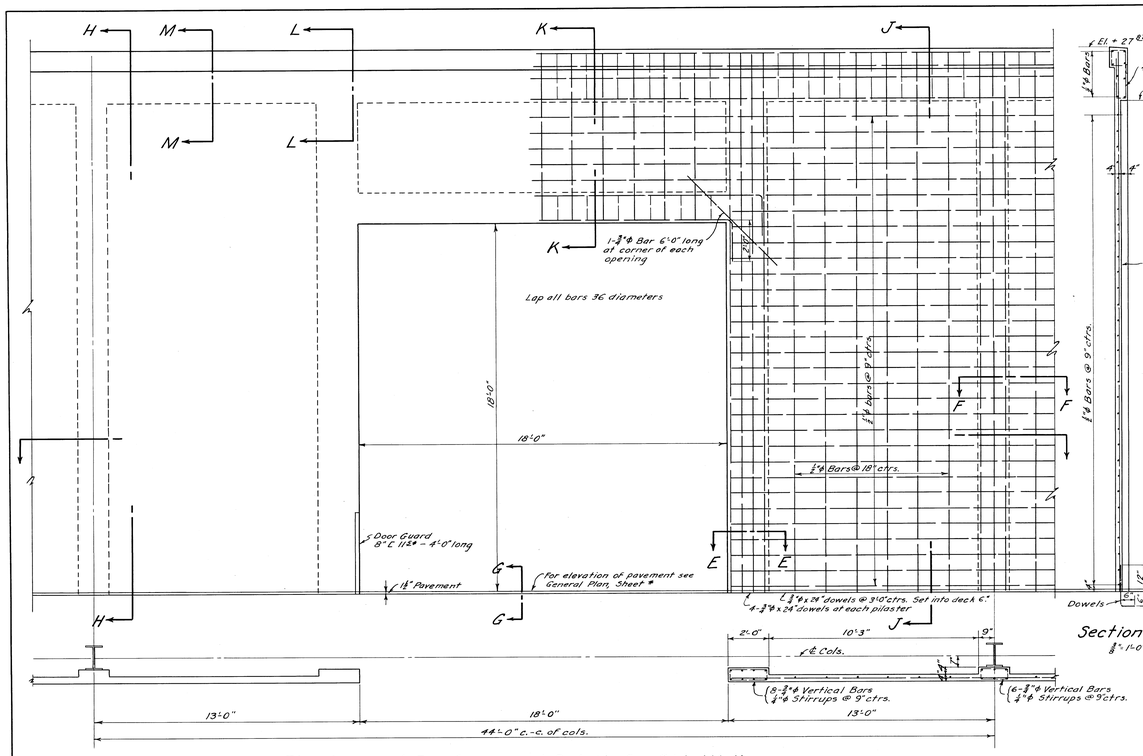
PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS.
DEPARTMENT OF ENGINEERING.

PLANS FOR BULKHEAD BUILDING AT PIERS NO. 38 AND NO. 40.

IN CHARGE OF H.A. Fisher	DATE June 18, 1934.
MADE BY E.Jackson	SCALE As Indicated
CHECKED BY H.Fisher	DRAWING NO. 5301-11
GRAWER NO.	SHEET NO. 1 OF 20

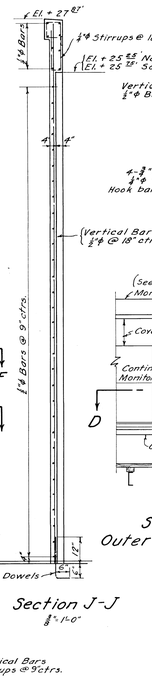
5301-38-1

5301-38-1



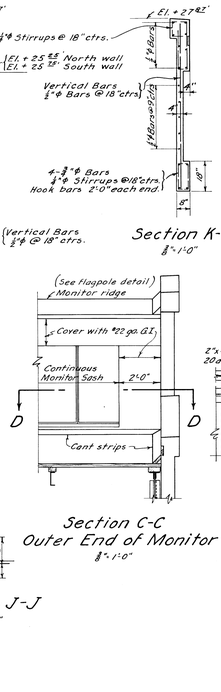
Elevation and Reinforcement Details for Side Walls

Scale: ⅜"=1'-0"



Section J-J

⅜"=1'-0"



Section K-K

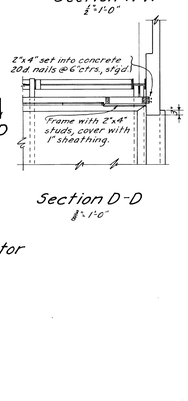
⅜"=1'-0"

Section N-N

⅜"=1'-0"

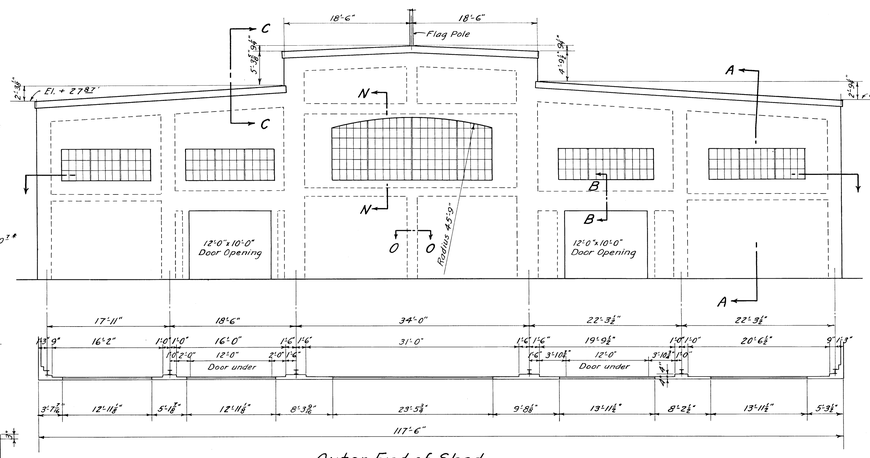
Section C-C
Outer End of Monitor

⅜"=1'-0"



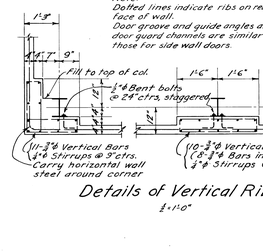
Section D-D

⅜"=1'-0"



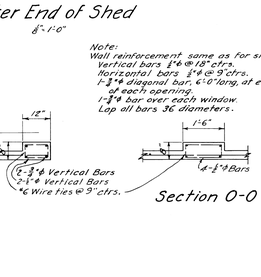
Outer End of Shed

⅛"=1'-0"

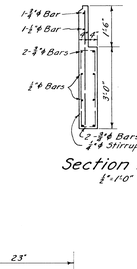


Details of Vertical Ribs

¾"=1'-0"

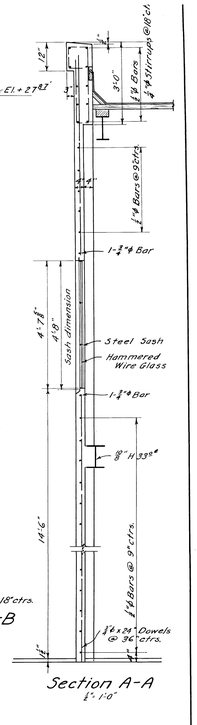


Section O-O



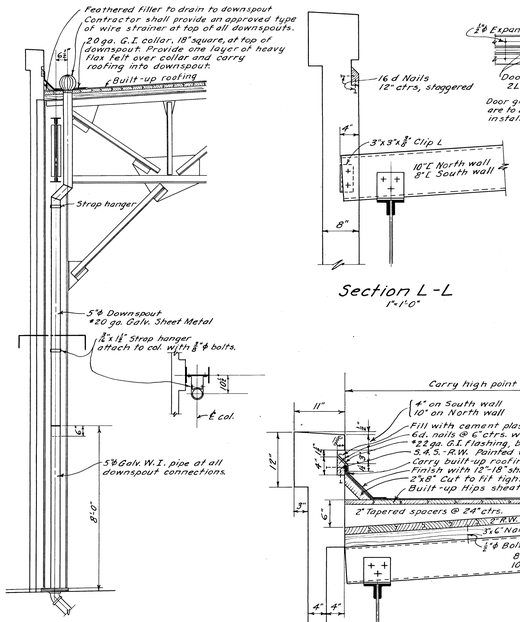
Section B-B

¾"=1'-0"



Section A-A

¾"=1'-0"

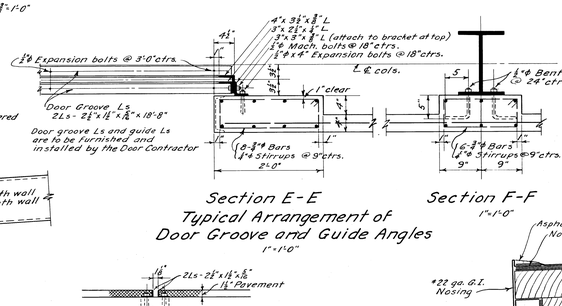


Section H-H
Typical Downspout Detail

¾"=1'-0"

Section L-L

1"=1'-0"

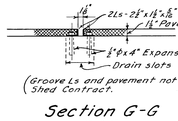


Section E-E
Typical Arrangement of
Door Groove and Guide Angles

1"=1'-0"

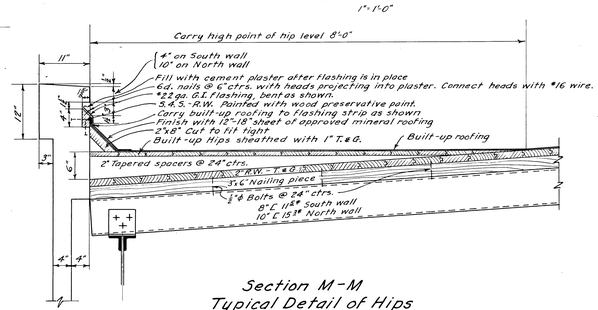
Section F-F

1"=1'-0"



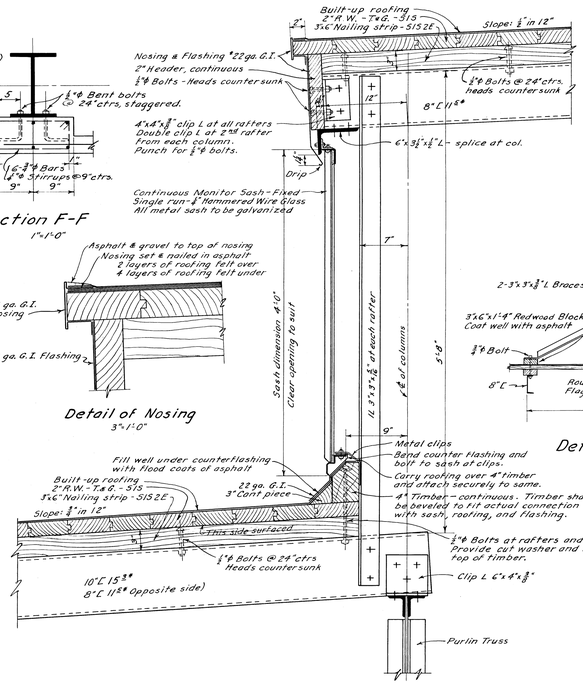
Section G-G

1"=1'-0"



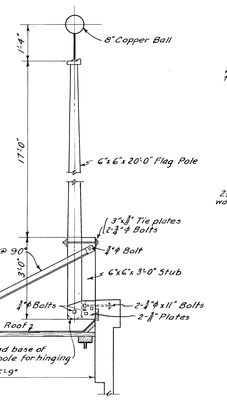
Section M-M
Typical Detail of Hips
and Flashing for Main Roof

1"=1'-0"



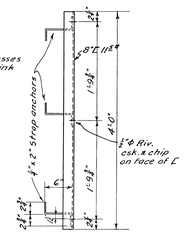
Typical Monitor Framing Details

½"=1'-0"



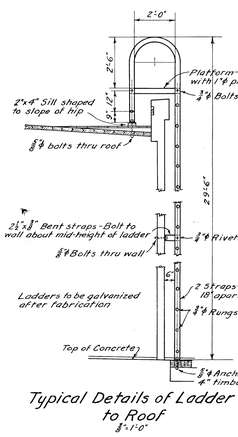
Detail of Flag Pole

¾"=1'-0"



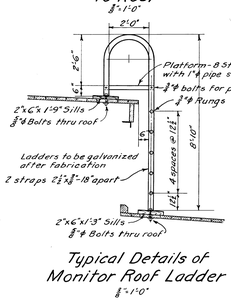
Detail of Door Guard

1"=1'-0"



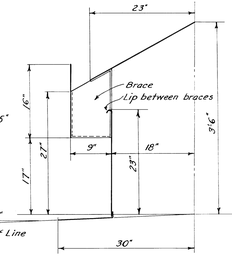
Typical Details of Ladder to Roof

¾"=1'-0"



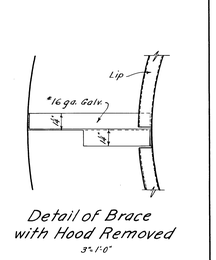
Typical Details of Monitor Roof Ladder

¾"=1'-0"



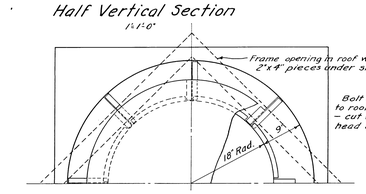
Half Vertical Section

1½"=1'-0"



Detail of Brace with Hood Removed

3"=1'-0"



Half Plan

1"=1'-0"

All sheet metal in ventilators to be #20 ga. Galv. except braces. Braces to be #16 ga. Galv.

Sheet Metal Ventilator Details

RESPECTFULLY SUBMITTED.
Frank G. White
CHIEF ENGINEER.

APPROVED.
COMMISSIONERS.

PORT OF SAN FRANCISCO
BOARD OF STATE HARBOR COMMISSIONERS,
DEPARTMENT OF ENGINEERING.

ALTERATIONS & ADDITIONS TO PIER NO. 38.

IN CHARGE OF A.W. Nordvelt	DATE June 18, 1931
MADE BY C.A.S.	
CHECKED BY C.H.L. Hendricks	SCALE Indicated
DRAWING NO. 5013-11	DRAWER NO.
	SHEET NO. 3 OF 8

Making San Francisco Bay Better

Permittees' Copy

PERMIT NO. 5-96
(Issued on October 24, 1996, As Amended Through January 28, 2005)
AMENDMENT NO. TWO

Pier 38 Maritime Recreation Center, Inc.
Pier 38
San Francisco, California 94107

ATTENTION: Carl Ernst

AND

The Port of San Francisco
Ferry Building
San Francisco, California 94111

ATTENTION: Monique Moyer, Executive Director

Ladies and Gentlemen:

On October 17, 1996, the San Francisco Bay Conservation and Development Commission, by a vote of 16 affirmative, 0 negative, and 0 abstentions, approved the resolution pursuant to which the original permit had been issued. Moreover, on April 8, 1998 and on January 28, 2005, ~~and~~ pursuant to Regulation Section 10822, the Executive Director approved Amendment Nos. One and Two, respectively, pursuant to which this amended permit is hereby issued:

I. **Authorization**

A. Subject to the conditions stated below, the permittees are granted permission to do the following, at Pier 38, at the Port of San Francisco, in the City and County of San Francisco:

1. **In the Bay:**

a. Install, use and maintain ~~two~~ one, approximately 10,593-square-foot ~~900~~ (approximately1,065 feet long, an increase of 165 feet from the original authorization) concrete and wooden floating dock, including gangways and concrete or steel pilings on the north side of the pier ~~and~~ one, approximately 8,405-square-foot ~~900~~ (approximately 920 feet long, an increase of 20 feet from the original authorization), concrete and wooden floating dock, including gangways and concrete or steel pilings on the south side of the pier, and one, 5,670-square-foot (approximately 315 feet long), floating dock along the eastern edge of the pier, totaling approximately ~~28,656~~ 28,229 square feet of floating fill, primarily for transient and permanent boat berthing . Maintenance of the 165-foot-long section of the northern floating dock, the 20-foot-long section of the southern floating dock and the 5,670-square-foot section of the eastern dock authorized in Amendment No. Two must be conducted consistent with Special Condition II-O (Amendment No. Two);

b. Extend, use and maintain an approximately 80-foot-long section of the existing pier apron, located behind the bulkhead building and south of the pier shed, approximately ~~10~~ 13-feet-wide, totaling approximately ~~800~~ 1,040 square feet of cantilevered fill, to provide improved public access connections to and from Pier 40;

c. Remove, replace and/or renovate, use and maintain approximately ~~35,850~~ 38,934 square feet (0.89 acres) of the existing pier apron for (1) continuous public access around the pier's perimeter (approximately ~~22,859~~ 25,943 square feet) and (2) for boat launching operations and staging areas (approximately 12,991 square feet); ~~and~~

~~d. Remove approximately 3,000 square feet of dilapidated pier apron on the south side of the pier;~~

d. Remove a 13,615-square-foot portion of the existing, dilapidated apron along the northern portion of the pier and repair, replace and maintain the remainder of the apron, 2,482 square feet, to be used for public access (Amendment No. Two); and

e. Install, use and maintain a 480-square-foot floating launch ramp to be used for kayak launching and landing activities along the northern portion of the pier (Amendment No. Two).

2. Within the 100-foot shoreline Band:

a. Renovate and restore, use and maintain the existing, approximately 90,000-square-foot pier shed primarily for a drystack boat storage facility, including uses incidental to the boat storage such as boat hoists, fueling facilities, boat sales, a boat sales showroom of not more than 7,500 square feet, a recreation area, lockers and changing rooms, an approximately 3,900-square-foot dining area, valet parking and customer circulation; ~~and~~

b. Renovate and restore, use and maintain the existing, approximately 20,000-square-foot bulkhead building for an approximately 2,500-square-foot maritime chandlery, food and beverage sales of not more than 5,000 square feet and administrative offices directly associated with the facility. These uses are further defined and limited by the lease between the Pier 38 Maritime Recreation Center, Inc., and the Port of San Francisco, page 3, "1.8 Permitted Use (Section 8.1)," dated May 30, 1996; and

c. Operate a kayak rental facility pursuant to the plan entitled "Operation Plan", prepared by Ted Choi of City Kayak, undated and received in the Commission's office on August 3, 2004. The rental facility shall be located along the northern portion of the pier in a location that does not interfere with public access along the pier perimeter and as indicated on the plan entitled, "Pier 38 Development Site Plan", Sheet A 2.00, prepared by Holey Associates, dated June 2, 2004 and received in the Commission's office on August 18, 2004. (Amendment No. Two)

B. This amended authority is generally pursuant to and limited by the permittees' application received July 19, 1996, ~~and~~ your letter dated March 3, 1998, requesting Amendment No. One, and your letters dated March 4, 2004, and June 7, 2004 requesting Amendment No. Two, including all accompanying and subsequently submitted correspondence, and subject

to the modifications required by the conditions herein. Your request for Amendment No. Three was combined with your request for Amendment No. Two and is included herein.

C. The work authorized by Amendment No. One was to ~~this amended permit must~~ commence by December 31, 1998, and ~~must~~ was to be diligently pursued to completion by December 31, 2001 unless the terms of this authorization ~~are~~ were changed by further amendment of this amended permit. Work authorized in Amendment No. Two must commence prior to June 1, 2006, or this amended permit will lapse and become null and void. Such work must also be diligently pursued to completion and must be completed by December 31, 2006, unless an extension of time is granted through further amendment of this amended permit.

D. The project authorized herein includes approximately ~~28,656~~ 28,229 square feet of new fill for floating docks, pile supported gangways and concrete or steel pilings, approximately ~~800~~ 1,040 square feet of new cantilevered fill for an improved public access connection, ~~and~~ approximately ~~35,850~~ 38,934 square feet of replacement fill for the renovation of the existing pier apron, a portion of which will provide a continuous public access path around the pier's perimeter and 480 square feet for a floating launch dock for kayak launching and landing purposes. The new floating docks and public access improvements will not have a significant adverse impact on the environment because they will be located on, amongst and/or adjacent to the existing development and piers within the San Francisco waterfront. In addition, the project will provide approximately ~~22,859~~ 25,943 square feet of new public access, including an exciting public access pathway which allows one to travel around the pier's perimeter.

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Specific Plans and Plan Review

1. **Plan Review.** No work whatsoever shall be commenced pursuant to this authorization, as amended, until final precise site, architectural, float and public access plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required shall be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.

   The improvements authorized ~~herein shall~~ in the original authorization and Amendment No. One were to be built generally in conformance with the plan entitled "Pier 38 Maritime Recreation Center, Inc.;" including Sheet AP-1a, prepared by Gary Gee Architects, as revised through March 4, 1998. Final Plans for the floating docks, including the siting, location and configuration of the south side dock, shall be approved by Pier 38 Maritime Recreation Center, Inc., the Port of San Francisco and the San Francisco Redevelopment Agency, and shall include documentation to that effect. ~~Final plans for the public access improvements shall be prepared and submitted for BCDC review in accordance with Special Condition II B, below.~~

The floating docks and public access authorized in Amendment No. Two shall generally conform with the plans entitled, "Pier 38 Development Site Plan", Sheet A 2.00 and "Pier 38 Development Public Access Plan", Sheet A 2.01, prepared by Holey Associates, dated June 2, 2004, and received in BCDC's office on August 18, 2004.

Site, architectural, float and public access plans shall include and clearly label the Mean High Tide Line (the shoreline), the line 100 feet inland of the shoreline, property lines, the boundaries of all areas that have been reserved for public access purposes and/or open space, details showing the location, types, dimensions, and materials to be used for all structures, restrooms, boat pump-out facilities, irrigation, landscaping, drainage, seating, parking, signs, lighting, fences, paths, trash containers, utilities and other proposed improvements.

Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

(a) completeness and accuracy of the plans in showing the features required above, particularly the shoreline, property lines, areas reserved or dedicated for public access, and the line 100-feet inland of the shoreline, and any other criteria required by this amended authorization;

(b) consistency of the plans with the recommendations of the Design Review Board;

(c) consistency of the plans with the terms and conditions of this authorization;

(d) consistency with legal instruments reserving proposed and required public access and open space areas; and

(e) assuring that any fill in the Bay does not exceed this authorization.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

2. **Conformity with Final Approved Plans.** All work, improvements, and uses shall conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization, as amended, has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the exterior of any constructed structure, outside fixture, lighting, fence, signage, landscaping, parking area, restroom, boat pump-out facility or public access area without first obtaining written approval of the change(s) by or on behalf of the Commission.

3. **Discrepancies Between Approved Plans and Special Conditions.** In case of any discrepancy between final approved plans and Special Conditions of this authorization or legal instruments approved pursuant to this authorization, the Special Condition or the legal instrument shall prevail. The permittees are responsible for assuring that all plans

accurately and fully reflect the Special Conditions of this authorization and any legal instruments submitted pursuant to this authorization.

B. Public Access

1. Area. The approximately ~~22,859~~ 25,943-square-foot area, along approximately 2,165-lineal feet of pier apron (the shoreline) as generally shown on Revised Exhibit "A" shall be made available exclusively to the public for unrestricted public access for walking, sitting, viewing, fishing, picnicking, and related purposes prior to using the floats authorized under Amendment No. Two excluding those components associated with the kayak rental facility. If the permittees wish to use the public access area for other than public access purposes, they must obtain prior written approval by or on behalf of the Commission.

   The overall proposal for public access for this project shall include:

   (a) New public access along the length of the pier apron including pathways, picnic tables, benches and handrails: approximately ~~22,059~~ 24,903 square feet;

   (b) New public access over the Bay for an improved pathway connection south to Pier 40: approximately ~~800~~ 1,040 square feet; and

   (c) Connections for improved customer and pedestrian circulation through the pier shed (during business hours) to the Embarcadero, the restrooms and the public access areas: approximately 3,400 square feet.

2. ~~Permanent Guarantee~~ Public Access Instrument. Prior to installation of the floats authorized under Amendment No. Two excluding those components associated with the kayak rental facility, the permittees shall, by instrument or instruments acceptable to counsel for the Commission, dedicate to a public agency or otherwise permanently guarantee such rights for the public to the new ~~22,859~~ approximately 25,943-square-foot public access areas as described in Special Condition II-B-1(a) and II-B-1-(b) above for so long as any floating docks, floating launch ramps, gangways and supporting structures authorized by this permit remains in place or so long as the permittees continue to use the property pursuant to this permit. The instrument(s) shall create rights in favor of the public which shall commence no later than after completion of construction of any public access improvements required by this authorization. Such instrument shall be in a form that meets recordation requirements of the City and County of San Francisco and shall include a legal description of the property being restricted and a map that clearly shows and labels the Mean High Tide Line, the property being restricted for public access, the legal description of the property and of the area being restricted for public access, and other appropriate landmarks and structural features of the site, and the location of the nearest public street and adjacent public access areas. Approval or disapproval of the instrument shall occur within 30 days after submittal for approval and shall be based on the following:

   a. Sufficiency of the instrument to create legally enforceable rights and duties to provide the public access area required by this authorization;

b. Inclusion of an exhibit to the instrument that clearly shows the area to be reserved with a legally sufficient description of the boundaries of such area; and

c. Sufficiency of the instrument to create legal rights in favor of the public for public access that will run with the land and be binding on any subsequent purchasers, licensees, and users.

3. **Recordation of the Instrument.** Within 30 days after approval of the instrument, ~~or within 30 days after approval of the applicable final map~~, the permittees shall record the instrument and shall provide evidence of recording to the Commission. No changes shall be made to the instrument after approval without the express written consent by or on behalf of the Commission.

4. **Improvements within the Total Public Access Area.**

a. The following interim public access amenities shall be installed and/or implemented by March 31, 2005: (1) open the gates on the north and south sides of the pier. These gates must remain open during business hours; (2) provide public access on the north side of the pier to the edge of the first bay in the building (as shown on Amended Exhibit A of the permit); (3) install two benches and one trash can on the north side of the pier; (4) create a 10-foot-wide crosswalk though the pier shed building. This crosswalk should be centered within the first bays in the building; (5) install signage within the pier shed building to minimize pedestrian/vehicular conflicts; (6) open and improve the public access pathway on the south side of the pier as far as is safely possible; (7) install two benches and one trash can on the south side; and (8) install a signage program to move the public from Herb Caen Way, along the north and/or south sides of the pier and through the pier shed building.

b. All the public access improvements listed below shall be installed prior to using the floats authorized under Amendment No. Two, excluding those components associated with the kayak rental facility, or by December 31, 2006, whichever is earlier,~~December 31, 2001, the estimated completion date of the third phase of the project,~~ unless an extension of time is granted by further amendment of ~~the~~ this amended permit. All of the public access improvements listed below shall ultimately be installed as part of the project~~, regardless of whether the permittees elect not to build the second or third phases of the project~~. The public access improvements ~~may~~ shall be installed ~~per the public access phases~~ as described below.

~~Prior to December 31, 1998, the permittees shall install the following improvements with the first 120 feet of the project (public access phase one), as generally shown on attached Revised Exhibit "A":~~

(a) ~~On both the north and south sides of the pier shed, the first (westernmost) 120 feet of the approximately 2,165 lineal foot long and 10 foot wide continuous pathway around the pier shed on the pier apron to the connections through the pier shed, with handrails and lighting~~ On the north, south and east sides of the pier, install a continuous 2,165-foot-long pathway around the pier shed, on the pier apron with handrails and lighting and with connections through the pier shed. The path shall be a minimum of ten (10) feet wide along the north apron, twelve (12) feet wide around

the outdoor dining areas at the northwest and southwest ends of the pier, the eastern portion of the south apron and along the entire east apron, and seventeen (17) feet wide along the south apron excluding the twelve (12)-foot-wide, 220-foot-long section at the southeast end of the apron (Amendment No. Two);

(b) An approximately ~~10~~ 13-foot-wide by 80-foot-long pier apron extension behind the southern portion of the bulkhead building to connect with the existing Pier 40 pier apron that is already improved for public access;

(c) A total of five (5) benches on the south side of the pier shed and a total of five (5) benches on the north side of the pier shed to provide views of the Bay and the San Francisco waterfront, with a total of six trash containers;

~~(c)~~ (d) Improved, open and inviting connections through the pier shed behind the bulkhead building and through the bulkhead building to the Embarcadero for public and customer circulation during business hours;

~~(d)~~ (e) Handicapped accessible public restrooms consistent with Special Condition II-C below; and

~~(e)~~ (f) No fewer than four public access and, when appropriate, Bay Trail signs, one at the beginning of each pathway on each side of the pier and one at each entrance of the public access through the bulkhead building. ~~the end of each pathway on each side of the pier. The signs placed at the end of the pathways shall be moved to the end of the pathways as the pathways are extended per the phasing of the project.~~

All fences and gates, including the barriers associated with the boat display area and the dining areas, are subject to final plan approval pursuant to Special Condition II-A above, and shall be designed to avoid adverse impacts on the public access areas, especially the promenade, the ~~30-foot-wide~~ marginal wharf area, and the art ribbon along the Embarcadero.

~~All uses of Pier 38 authorized herein that have been initiated prior to the public access improvements required in public access phase one shall be completely removed if such public access is not completed by December 31, 1998. Such uses can be resumed only upon the satisfactory completion of the public access phase one improvements required herein.~~

~~Prior to December 31, 1999, the permittees shall install the following improvements with the next 330 feet of the project (public access phase two), as generally shown on attached Exhibit "A":~~

~~(a) On both the north and south sides of the pier shed, the next 330 feet of the approximately 2,165 lineal foot long and 10 foot wide continuous pathway around the pier shed on the pier apron, with handrails and lighting;~~

~~(b) The first (westernmost) three seating areas within the "punch outs" on the south side of the pier shed and the first (westernmost) three picnic tables within the "punch outs" on the north side of the pier shed to provide views of the Bay and the San Francisco waterfront, with benches and trash containers;~~

~~Prior to December 31, 2000, the permittees shall install the following improvements within the next 230 feet of the project (public access phase three), as generally shown on attached Exhibit "A":~~

~~(a) On both the north and south sides of the pier shed, the third 230 feet of the approximately 2,165 lineal foot long and 10 foot wide continuous pathway around the pier shed on pier apron, with handrails and lighting;~~

~~(b) The final (easternmost) two seating areas within the "punch outs" on the south side of the pier shed and the final (easternmost) two picnic tables within the "punch outs" on the north side of the pier shed to provide views of the Bay and the San Francisco waterfront, with benches and trash containers.~~

~~Prior to December 31, 2001, the permittees shall install the following improvements to the end of the pier (public access phase four), as generally shown on attached Exhibit "A":~~

~~(a) On both the north and south sides of the pier shed, the final (easternmost) 220 feet of the approximately 2,165 lineal foot long and 10 foot wide continuous pathway around the pier shed on pier apron, with handrails, lighting; and~~

~~(b) The final (easternmost) public access improvements including signs and trash containers (if necessary).~~

The public access ~~Such~~ improvements authorized herein shall be consistent with the plans approved pursuant to Special Condition II-A of this authorization. ~~and~~ The public access improvements authorized in Amendment No. One to this permit were to substantially conform to the plans entitled "Pier 38 Maritime Recreation Center, Inc.;" including Sheet AP-1a, prepared by Gary Gee Architects, as revised through March 4, 1998.

The public access improvements authorized in Amendment No. Two to this permit shall substantially conform to the plans entitled "Pier 38 Development Site Plan", Sheet A 2.00 and "Pier 38 Development Public Access Plan", Sheet A 2.01, prepared by Holey Associates, dated June 2, 2004, and received in BCDC's office on August 18, 2004.

5. **Reasonable Rules and Restrictions.** The permittees may impose reasonable rules and restrictions for the use of the public access areas to correct particular problems that may arise. Such limitations, rules, and restrictions shall have first been approved by or on behalf of the Commission upon a finding that the proposed rules would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that the permittees have both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior.

6. **Maintenance.** The areas and improvements within the total ~~22,859~~ 25,943-square-foot area shall permanently maintained by and at the expense of, the permittees or their assignees. Such maintenance shall include, but is not limited to, repairs to all path surfaces; replacement of any trees or other plant materials that die or become unkempt; repairs or replacement as needed of any public access amenities such as restrooms,

signs, benches, picnic tables, drinking fountains, trash containers and lights; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; and assuring that the public access signs remain in place and visible. Within 30 days after notification by staff, the permittees shall correct any maintenance deficiency noted in a staff inspection of the site.

C. **Public Restrooms.** Prior to the opening of any retail establishment authorized herein, the permittees shall install public handicapped accessible restrooms fronting a publicly accessible area which are available to the public during business hours.

D. **Garbage Storage and Handling.** No garbage or trash enclosures shall be located, stored, or temporarily placed, for any period of time, in any public access areas described in Special Condition II-B above. Prior to the use of any structure authorized herein, the permittees shall submit plans, pursuant to Special Condition II-A, which describe in detail all trash storage locations and trash enclosure structures to be used as part of the project. Further, the garbage storage and handling plans shall include a discussion as how the facility's garbage, especially any garbage associated with any restaurant, will be handled in a manner that will not create any adverse impacts to any public access areas.

E. **Marina Conditions**

1. **Construction.** Construction standards for marina berths and associated facilities shall be at least equal to those established by the State Department of Boating and Waterways. All construction activity shall be performed to minimize turbidity and to prevent debris from drifting and presenting a pollution or navigation hazard.

2. **Waste Discharge.** The discharge of any solid or liquid wastes, including bilge water, grey water, or sewage, into the Bay within the marina basin is prohibited.

3. **Waste Facilities.** By December 31, ~~1998~~2006, or after 30 days of the installation of more than 800 lineal feet of any floats authorized herein, whichever is earlier, the permittees shall install a suitable facility for receiving and disposing of oily wastes, and a facility for pumping out vessel holding tanks and receiving wastes from portable toilets. Such facilities shall be constructed to all applicable codes and standards, shall be connected to onshore waste treatment facilities, and shall be maintained by the permittees in a safe and sanitary manner. Such facilities shall be available to boaters every day of the week and any fees for the use of the facilities shall be limited in amount to cover the cost of the operation of the facilities. A reasonable extension of the 30 day time limit can be granted by or on behalf of the Commission if the permittees can demonstrate funding for such facilities is pending before the Department of Boating and Waterway and is likely to be approved, but is not yet available.

4. **Marine Toilets.** The permittees shall make it a requirement of the use or occupancy of any berth that: (a) any vessel berthed, if equipped with a marine toilet, shall contain an adequate holding tank, incinerator recirculation device, or other equivalent device approved by applicable agencies to preclude discharge of wastes into the waters of the marina, or have the marine toilet rendered inoperable while any such vessel is moored in the marina; and (b) any violation of the waste discharge requirements of this authorization shall be cause for immediate cancellation of the right of such use or

occupancy. The permittees shall submit to the Commission a copy of the berthing agreement which shall set forth the requirements included in this condition.

5. **Enforcement Responsibility.** The permittees shall adequately enforce the requirements herein, and shall submit to the Commission the name, address, and telephone number of the person at the marina responsible for such enforcement.

6. **Enforcement Alternatives.** The Commission reserves the right, in the event of repeated or serious problems with waste discharges in violation of the requirements herein or in the event of laboratory test results that indicate the presence of materials associated with waste discharges, to require that onshore sewer lines be provided for each dock or that the permittees remove or cause to be removed permanently from the marina any vessels from which wastes have been discharged.

7. **Houseboats.** No houseboat or other structure used as a residence shall be permitted within the Pier 38 Maritime Recreation Center facilities.

8. **Live-aboards.** No vessel moored in the marina shall become a long-term place of residence. Any violation of this condition shall be grounds for immediate termination of the berthing rights of any such boat owner or boat occupant.

~~9. **Use of Berths.** Berths shall be rented to the general public without discrimination. Further, no right to use of any portion of the transient berthing floats shall be granted or otherwise transferred to an individual for a period that exceeds one week in duration unless otherwise authorized by the Commission.~~

F. **Herring Restrictions.** If work (including pile driving) occurs in the water during the herring spawning or hatching season (December through March), a professional biologist or other individual competent to identify herring spawning activity, shall inspect the project site three times a week during the construction operations occurring between December 1 and March 1 of any year. If herring spawning is detected by the on-site biologist or qualified individual, Department of Fish and Game personnel, or the Commission staff, all construction in the water shall cease for a minimum of 14 days and shall continue suspended until it can be determined by the on-site biologist or qualified individual, Department of Fish and Game personnel, or the Commission staff that the herring hatch has been completed and larval herring concentrations have left the site. To facilitate rapid and efficient communication under these circumstances, the permittees shall provide the Commission staff and Department of Fish and Game personnel with all necessary telephone, FAX, and pager numbers. Construction in the water may be resumed thereafter at the sole discretion of the permittees and the Commission staff, but shall be terminated if further spawning takes place at the site. (Amendment No. Two)

~~F.~~G. **Creosote Treated Wood.** No pilings or other wood structures that have been pressure treated with creosote shall be used in any area subject to tidal action in the Bay or any certain waterway, in any salt pond, or in any managed wetland within the Commission's jurisdiction as part of the project authorized herein.

~~G.~~H. **Notice to Contractor.** The permittees shall provide a copy of this amended permit to any contractor or person working in concert with the permittees to carry out the activities ~~authorized herein and shall point out the special conditions contained herein.~~

~~H.~~I. **Construction Operations.** All construction operations shall be performed to prevent construction materials from falling, washing or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittees shall immediately retrieve and remove such material at their expense.

~~I.~~K. **Debris Removal.** All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittees, their assigns, or successors in interest, or the owners of the improvements, shall remove such material, at their expense, within ten days after they have been notified by the Executive Director of such placement.

L. **Commission Jurisdiction Over Fill Area.** Notice is hereby given that, under the McAteer-Petris Act, the new pier apron constructed on replacement fill as well as other areas of the approved project that are within the Commission's jurisdiction under Section 66610(a) remain within that jurisdiction even after new fill or a substantial change in use, authorized by the Commission, may have changed the character of the area; so that the permittees or the permittee's successors in interest will require further action by or on behalf of the Commission prior to any future change of use or work within areas filled pursuant to this authorization.

M. **Abandonment.** If, at any time, the Commission determines that the improvements in the Bay authorized herein, have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that the improvements be removed by the permittees, their assignees or successors in interest, or by the owners of the improvements, within 60 days or such other reasonable time as the Commission may direct.

N. **Permit Recording.** The permittees shall record this document or a notice specifically referring to this document with the City and County of San Francisco within 60 days after execution of the amended permit issued pursuant to this authorization and shall, within 60 days after recordation, provide evidence of recordation to the Commission.

O. **In-Kind Repairs and Maintenance of Project Elements Authorized in Amendment No. Two.** Any in-kind repairs and maintenance of the project elements authorized under Amendment No. Two, including the 165-foot-long (approximately 1,650 square feet) extension along the northern dock, the 20-foot-long (approximately 200 square feet) extension along the southern dock, the entire 315-foot-long (approximately 5,670 square feet) eastern dock, the 2,482-square-foot portion of the northern pier apron and the 480-square-foot kayak launch ramp (authorized in Authorization Sections I-A-1-a, I-A-1-d and I-A-1-e) shall only utilize construction material that the Commission has approved for use in San Francisco Bay, by consulting with the California Department of Fish and Game (CDFG) and the Regional Water Quality Control Board. Such construction and repairs shall only occur during

months of the year approved by or on behalf of the Commission in consultation with the CDFG and NOAA Fisheries to avoid potential impacts to fish and wildlife. BCDC staff should be contacted to confirm current restrictions (Amendment No. Two).

III. Findings and Declarations

This amended permit is issued based on the Commission's findings and declaration that the authorized work is consistent with the McAteer-Petris Act, the *San Francisco Bay Plan*, the California Environmental Quality Act, and the Commission's amended management program for the San Francisco Bay segment of the California coastal zone for the following reasons:

A. Use. Amendment No. Two to this authorization involves revising the amended permit to reflect current plans for Pier 38. These include placing a 5,670-square-foot floating dock/wave attenuator along the eastern edge of the pier. Additionally, the permittees propose to remove a portion of the northernmost deteriorated float and repair the remaining portion of the float for an overall decrease in floating fill of 11,133 square feet and install, use and maintain a 480-square-foot floating dock that will be used to launch kayaks. Additionally, slight changes to the configuration and sizes of the floats on the north and south sides of the pier will occur.

Some changes to the public access that was previously authorized will also occur. These include increasing the public access width behind the Pier 38 bulkhead from ten to thirteen feet for the 80-foot-long public access connection behind the Pier 38 bulkhead and south of the shed which will improve public access to Pier 40, resulting in an additional 240 square feet of fill for public access purposes and increasing the width of the public access along the easternmost portion of the pier from ten to twelve feet, as well as increasing the public access width along the northern- and southernmost outdoor dining areas from ten to twelve feet.

Amendment No. Two changes the fill figures originally contained in the authorization from 28,656 square feet to 28,229 square feet for transient and permanent berthing, adding 480 square feet for the kayak launch float and from 800 square feet to 1,040 square feet for fill for public access. Changes to the amount of public access that will be provided with the amended project have been revised, from 22,859 square feet to 25,943 square feet. Since the changes resulting from Amendment No. Two do not involve substantial changes to the originally authorized project, the findings made for the original project and presented below hold true for the activities authorized in Amendment No. Two. The findings below have thus been revised to reflect the fill and public access estimates as a result of Amendment No. Two, but the rationale for finding the project consistent with the Commission's law and policies remains the same as originally authorized by the Commission. Because the main pier will require little or no structural upgrading to accommodate the project (see discussion under Safety of New Fills below), the majority of the new fill for the project will be for the new floating docks, piles and gangways, totaling approximately ~~28,656~~ 28,229 square feet and 480 square feet for the kayak launch float. The basic purpose of the new fill is to provide water access for the boating facility, a water-oriented use. The floats will also provide, for a fee, shoreline access to transient boaters and to the general public for boat tie up. The floats will not be open for public strolling and viewing because of safety and security concerns.

The replacement of the majority of the dilapidated pier apron is also considered new Bay fill. The new pier apron will be improved with a mix of public access and staging and operation areas for the berthing and launching of the boats. In addition, some minor fill, approximately ~~800~~ 1,040 square feet, is needing for public access purposes south of the pier shed building to connect the Pier 38 apron to the existing apron adjacent to the former Roastery and Café at Pier 40 on which public access now exists.

The project is subject to Bay Plan policies on Recreation which state, in part, that "[a]s the population of the Bay region increases, more people will use their leisure time in water-oriented recreation activities [and] water-oriented recreation facilities, such as marinas...should be provided to meet those needs...provided they would not preempt land or water needed for other priority uses, would be feasible from an engineering viewpoint, would not have significant adverse effects water quality, circulation...flushing...marshes or mudflats [and] fish and wildlife resources....[F]acilities should be located as close to major population centers as feasible [but] should not preempt sites needed for ports water-front industry, or airports." The recreation policies specific to marinas state, in part, that "(1) Marinas should be allowed at any suitable site on the Bay. Unsuitable sites are those that tend to fill up rapidly with sediment; have insufficient upland; contain valuable marsh, mudflat, or other wildlife habitat, or are subject to unusual amounts of fog. (2) Fill should be permitted for...boat berths [and] ramps....(3) No new marina should be permitted unless water quality is protected,...[and]...all projects approved should provide public amenities such as viewing areas, restrooms and public parking....Frequent dredging should be avoided."

The project is also subject to the *San Francisco Waterfront Special Area Plan*, which says that new or replacement fill on Pier 38 should be limited to commercial recreation, public recreation, open space, public access and/or a marina. Draft plans for the San Francisco waterfront include Pier 38 in the "South Beach Harbor Opportunity Area," more specifically recommending the pier for a waterfront mixed use, which includes uses such as recreational boating and water use, public access, retail and accessory parking.

The project~~, often referred to as a "drystack marina,"~~ will significantly promote water-oriented recreation. Pier 38 is not designated as a priority use area in the Bay Plan and because of the project's location in the midst of the developed, deepwater waterfront, the floats will have little or no affect on water circulation, flushing, marshes, mudflats or fish and wildlife. Further, the project is located adjacent to the redeveloping South Beach area of San Francisco, an area relatively protected from the coastal winds and fog. In addition, no adverse impacts to water quality are expected as the project will not necessitate any dredging, and nearly all of the fueling and maintenance of the boat will occur within the pier shed. Water quality will be further protected because the project, as conditioned, will also provide (1) restrooms that are available to the public, and (2) pump out facilities that are available to the public.

The Commission understands the concerns regarding whether or not the project will maintain adequate fairway for boat navigation between Pier 38 and Pier 40. As approved, the southerly dock could conflict with plans by the San Francisco Redevelopment Agency and the Pier 40 South Beach Marina for relatively large boat berthing along the north side of Pier 40. However, the Port of San Francisco and the Redevelopment Agency, two entities of

the City and County of San Francisco, are in the best positions to resolve this issue. Further, at this time, the permittees have agreed to build only one dock on the south side of the pier because the San Francisco Redevelopment Agency and the Pier 40 South Beach Marina may build a second dock. A second dock built by the San Francisco Redevelopment Agency and the Pier 40 South Beach marina would achieve the same desired objective of a second dock built by the permittees, which is to attract boats to the project site. Under the original authorization, ~~T~~the permittees ~~will also~~ were to phase the installation of the docks, constructing the north side docks first, and have stated that, for economic reasons, they will not build docks that are not needed (see discussion under "Minimum Necessary fills" below). The Commission finds that, if in the future, the south side dock is reconfigured to accommodate a new dock at Pier 40, such a modification would not create any adverse impacts in the Bay. However, to ensure that the originally authorized project did not create~~s~~ ~~no~~ adverse impacts on the fairway used for boat navigation between Pier 38 and Pier 40, the Commission finds that Special Condition II-A, "Final Plan Approval," ~~is~~ was needed, which requires that the final siting, size and configuration of the south side dock ~~is~~ be approved by Pier 38 Maritime Recreation Center, Inc., the Port of San Francisco, and the San Francisco Redevelopment Agency.

B. **Fill.** Section 66605 of the McAteer-Petris Act states, in part, provides that "further filling of San Francisco Bay should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas and should be limited to water-oriented uses (such as...water-oriented recreation...) or minor fill for improving shoreline appearance or public access to the Bay....That the fill in the Bay should be authorized only when no alternative location is available for such purposes....That the water area...to be filled should be the minimum necessary to achieve the purpose of the fill....That public health, safety and welfare require that fill be constructed with sound safety standards which afford reasonable protection to persons and property...."

Alternative Upland Location. The project includes fill for floating boat docks, renovation of the existing pier apron for public access and staging and operations, and a small amount to improve a public access connection to Pier 40. No alternative upland location exists for boat docks, as they need to be in the water to serve boats. Similarly, because of the existing design of the pier, no alternative upland location exists for a continuous public access path and staging and operation area around the pier shed. As for the fill for improved public access connection to Pier 40, the existing bulkhead building would need to be removed or remodeled to provide a connection of sufficient width without filling the Bay. However, the existing southern apron, immediately south of the project site, is already cantilevered out bayward of the bulkhead building. Therefore, the new fill for this connection is justified as it will mimic the existing cantilever to provide a uniform connection without changing the bulkhead building. Further, the Design Review Board found that this fill could qualify as minor fill to improve public access (see discussion under the Design Review Board below).

Minimum Necessary Fill. As discussed above, approximately ~~800~~ 1,040 square feet of new fill is needed to connect the existing narrow pier apron behind the bulkhead building to the wider pier apron immediately south of the project. In addition, the majority of the pier apron will be repaired, renovated or replaced with a new pier apron of the same size. The amount and configuration of the fill has been reviewed by the Commission and the Design Review

Board which both agree that this is the minimum necessary fill needed to provide adequate public access within the project.

The three new floats, ~~two~~ one on the north side of the pier that will be approximately 10,593 feet, one on the east side of the pier that will be ~~315 feet~~ 10,593 square feet, and one on the south side, that will be approximately ~~900 feet long~~8,405 square feet, running the length of the Pier. ~~The exterior floats will be 10 feet wide, the interior float on the north side will be 8 feet wide, and the floats will be configured for side tie-ups only. There will be two gangways, one on each side of the pier, and at least one of these gangways will be handicapped accessible. The side tie up configuration will result in less fill than an alternative configuration which would provide individual slips.~~ The floats along the north and south sides of the pier apron will be approximately 8 feet wide. The float along the east side of the pier will be 18 feet wide (Amendment No. Two).

An 8-foot-wide float is generally the minimum necessary to provide adequate and safe passage to and from the berthed boats for people, supplies and equipment. ~~The project includes 10 foot wide floats for the exterior because these floats need extra stability as they will not be protected by a breakwater. The 10 foot width will: (1) act as a "breakwater" by reducing waves adjacent to the pier where the majority of boarding will occur; (2) protect the inner floats from wave activity; (3) provide a safer, more stable float for transporting people, supplies and equipment in an area subject to wave action; and (4) will be stronger and more resilient to the wave activity.~~ The floats along the north and south sides of the pier apron will generally be eight feet wide. The float along the east side will be 18 feet wide. While 8 feet is generally the minimum necessary to provide adequate and safe passage, it is anticipated that very large boats will be moored at the eastern dock. Additional width is needed to accommodate these larger vessels. Additionally, the eastern dock will act as a wave attenuator, by reducing waves along the north and south sides of the pier where a majority of the berthing activities are anticipated to occur; thus additional width is necessary to property reduce wave energy (Amendment No. Two).

In addition, the original project was ~~is~~ designed to encourage as much transient boat berthing as possible. The ~~900 foot long~~ floats will provide ample space to encourage overnight stays for transient boat berths without inconveniencing day users, boat renters, prospective boat buyers, and the customers who are storing the boats inside the facility. Approximately 250 boats will be held inside the shed and a maximum of about 70 boats will be tied to the floats at a given time. The design will be more flexible than a typical marina with perpendicular boat slips because these floats can accommodate boats of any size. The goal of the project is to provide maximum flexibility to accommodate a range of boats~~, the smallest boats being about 25 feet long and the largest being about 35 feet long, and sailboats can also be accommodated on the transient docks~~.

~~The construction of the floats will occur in stages: the first 500 feet of the northern exterior float will be built first; then it will be extended to 900 feet. Second, the northern interior float will be built. Lastly, the south side float will be installed, the final design dependent on the progress of the Pier 40 plans. All the floats are anticipated to be in place by the end of the first phase of the project in 1999. All of the new floats, pursuant to Special Condition II.A, are subject to final plan approval to ensure that they do not exceed the amount of fill permitted in this authorization.~~

There is a large demand for transient boat berthing along the San Francisco waterfront. During most weekends and summer days with good weather, the adjacent South Beach Marina has to turn away large numbers of transient boaters. The demand for these transient berths is only projected to increase as the South Beach area continues to develop, especially in light of the ~~planned new~~ major league baseball park just down the street. ~~However, the permittees will only build the minimum floats necessary because of economic issues; they will not spend money to build floats that will not be used and will not make money. Thus, if after the first few years of operation the expected demand has not been met, the permittees will not construct some of the floats until they are needed.~~

Lastly, approximately ~~3,000~~ 11,133 square feet of fill in the form of the existing northern pier ~~apron~~ will be removed as part of the project, reducing the total amount of fill for the project. Overall, the project will result in approximately ~~26,456~~ 28,229 square feet of floating and cantilevered fill for permanent and transient berthing and 420 square feet for a kayak launch.

Mitigation. The *San Francisco Bay Plan* requires that permittees offset the unavoidable adverse impacts fill through a variety of mitigation techniques. While this project will result in a significant amount of new floating and cantilevered fill in the Bay, the Commission has generally not required permittees to create new Bay for the loss of Bay surface area by new floating boat docks or pile-supported or cantilevered fill for public access purposes. A report prepared by the Commission, entitled "Commission Mitigation Practices," dated 1987, states, in part, that mitigation has rarely been required for floating boat docks, whether proposed singly or in conjunction with a marina. Exceptions to this practice occur when floating boat docks are proposed in environmentally sensitive habitat areas. Further, in terms of pile-supported or cantilevered fill, the report states, in part, mitigation has generally not been required for small (less than 2,500 square feet) of pile-supported public access facilities.

As mentioned earlier, no significant environmental impacts are anticipated from the project, thus no mitigation to offset the loss of Bay surface are is required for the project. However, marina projects can have an adverse impact on water quality as boats, especially motor boats, have the potential to discharge oil, fuel and other human wastes. The project, by being a dry storage marina, will carry out a majority of its fueling and maintenance activities within the pier shed, thereby significantly reducing the risk of accidental discharge of fuel and oily waste in the Bay. In addition, the project, as conditioned, will include pump out stations to dispose of other wastes from both the boats stored in the facility as well as the transient boats.

Safety of Fills. The project will require little or no structural work under the pier for this project. The pier was originally designed to carry railroad cars and other heavy shipping equipment, loads much heavier that the loads expected from the drystack boat storage operation. Pier 38 was constructed before the existence of BCDC, thus the structure is within the Commission's shoreline band. Even so, a preliminary structural report for Pier 38, prepared by the Port of San Francisco, states, in summary, that only 67 of the 447 pilings under the original pier are showing signs of deterioration. The report mentions that the existing pier apron is in poor condition and should be replaced. In addition, the City and County of San Francisco evaluated the pier in light of potential geologic hazards in the

negative declaration prepared for the project. In summary, the negative declaration states that Pier 38, along with other San Francisco piers on concrete piles, did not suffer more than cosmetic or minor structural damage from the 1989 Loma Prieta earthquake. The negative declaration also notes the deteriorated condition of the existing pier apron, and suggests that it should be replaced. Further, Pier 38 was inspected after the earthquake by the Port Engineer, was allowed to continue its pre-earthquake operations, and did not require Federal Emergency Management Act funded work.

In conclusion, based on the above discussions and as conditioned herein, the Commission finds the fill is consistent with the Commission's laws and policies on the placement of fill in San Francisco Bay.

C. **Public Access.** Section 66602 of the McAteer-Petris Act states, that: "...existing public access to the shoreline and waters of the...[bay]...is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided...."

In assessing whether public access requirements should be included as a condition of a permit, the Commission considered the public access impacts created by the project itself in relation to the decisions contained in *Nollan et ux. v. California Costal Commission and Dolan et.ux. v. City of Tigard.* In these decisions, the U.S. Supreme Court held that a public agency must show (1) the nexus, or essential connection, and (2) the rational relationship between a permit condition and the public burden created by a private development project. In this case, the Commission evaluated the relative demand for existing and future public access that will be generated by the Pier 38 Maritime Recreation Center in relationship to the existing public access resources at the project site. The Pier 38 Maritime Recreation Center is largely designed to attract and accommodate significant numbers of patrons, visitors and employees in and around the pier. According to the final negative declaration certified for the Pier 38 Maritime Recreation Center, the project is estimated to generate approximately 3,793 total daily person trips based on the types of uses proposed. The restaurant facilities, the transient boat berthing, the chandlery, and the boat showroom will attract people from both the Embarcadero Promenade and the waters of San Francisco Bay into the facility, increasing the demand for, and impacting existing public access opportunities near the project site. It is expected that a certain number of new patrons, visitors, employees and residents will use the nearby shoreline before and after work and during lunch, thereby adding to the existing public access demand. In the absence of the new public access facilities as proposed and required herein, existing public access areas will become more crowded and the additional users will affect the quality of the existing public access experience.

Existing public access at the site includes the 25-foot-wide Embarcadero promenade and the 30-foot-wide marginal wharf area between the promenade and the shoreline, both in front of the Pier. Public access is currently not permitted to the pier or along the pier edges. As mentioned earlier, a major component of the project is the ~~22,859~~ 25,943 square feet of public access through and around the pier, the most exciting portion being the public access continuous pathway around the entire pier shed which will include "punch-outs" for viewing, seating and eating. The pathways will also connect to the Embarcadero through the bulkhead building and to the rear of the existing restaurant just to the south of the project.

In addition, additional public access opportunities and benefits will be created by the project. First, the transient boat docking and launching facilities will ideally make Pier 38 a "destination," thereby allowing people to access and enjoy the Bay, the waterfront, and San Francisco by boat. Further, boat owners in San Francisco will have a new place along the San Francisco waterfront to launch their boats. ~~Second, when the third phase of t~~The public access ~~is constructed around the entire pier, the public access areas at the end of the pier~~ will open up expansive public views of the Bay that are currently unavailable at the end of the pier. Lastly, the Maritime Recreation Center will hold special events which could promote public access, water-oriented recreation, and education about the Bay, its environment and the maritime industry. ~~It must be noted that the public access will be phased and will not extend all the way around the pier until the completion of the third phase of the project. Yet the greatest, if not the majority of the demand for public access will be created from the improvements associated with the first phase of the project. Therefore, Special Condition II-B-4 is needed to ensure that the public access as proposed is still installed in the event that the project is not built out as anticipated, thereby ensuring that the project as approved includes the maximum feasible public access consistent with the project.~~

Design Review Board. The Design Review Board gave the project a favorable review at its August 1, 1996 meeting. Still, the Design Review Board was concerned with several aspects of the project. Fist, the Board was concerned with the activities within the operation and staging areas adjacent to the public access areas. These activities include the use and storage of hoses, ropes, buckets and ladders and other boat maintenance supplies. Equipment will be frequently used or moved around these areas to service boats, and boating travel supplies, such as coolers, bait and tackle, fowl weather gear, duffel bags, backpacks, suitcases, etc., which will be pulled across the pier to the boats in the water. These areas must be separated from the public for reasons of safety and security. A major goal of the project is to have the boats in the water before the arrival of the clients, so the boats are ready to go when the boaters arrive.

Another Board concern focused on the boat display, which will be located outside on the Embarcadero in the zone near the art ribbon, and whether any fencing or gates will bar access to the Embarcadero or to the pier. The Board understood that it was usual for pier access to be closed for reasons of public safety and to prevent vandalism and that it was the intent of the permittees to provide the public access on the pier from dawn to dusk. Another concern was voiced regarding the public restrooms at the rear of the neighboring restaurant which could be a part of this project. The Board wanted reassurance that these facilities will be available to the public for the demand created by this project. The Board also reiterated the need to conceal the light sources to maintain distant views of the Bay. Thus, the project is required by Special Condition II-A and II-B to secure final plan approval of construction drawings to ensure that the existing and proposed public access areas will not be adversely affected by the operations and staging areas, fences, gates and the boat display which are adjacent to public access areas. Further, Special Condition II-C will ensure that public restrooms will be available and adequate to serve the project.

The Board, in conclusion, said the mix of retail, hoists, boats, and public access will make an exciting and unique area. The Board agreed that the operations and staging areas could be successfully blended with the public access areas and should not be narrowed to a lesser width.

In conclusion, the Commission, based on the above discussions and as conditioned herein, finds that the public access proposed and required herein is the maximum feasible public access consistent with the project.

D. Amendment No. One. Amendment No. One authorizes a refinement to: (1) the pier shed and bulkhead building floor plans; and (2) the configuration of the floating docks. In addition, Amendment No. One clarifies the authorization for the uses and areas within the pier shed and bulkhead building, and changes Exhibit "A" to Revised Exhibit "A" so that the amended permit better reflects the approved construction at the site. The revisions do not change the amount of fill authorized for the project or the amount of public access area required by the amended permit. Therefore, Amendment No. One does not represent a substantial change in use or a substantial enlargement of any feature, and is considered a minor repair or improvement which will not have a significant adverse impact on the Bay, present or future maximum feasible public access, a designated water-oriented priority land use area or on the environment.

E. Amendment No. Two. Amendment No. Two to the permit involves slightly changing the sizes of the floats on the north and south sides of the pier and putting a new float along the eastern edge of the pier. As is similar with the originally authorized project, the new fill will be floating and will replace existing pile-supported fill that is used for floats. Additionally, Amendment No. Two involves increasing the amount of public access previously required by 3,324 square feet by widening previously authorized public access and refining square footage calculations originally contained in the permit. Lastly, Amendment No. Two authorizes an after-the-fact kayak rental and amends the exhibit to the permit to accurately reflect the project. As such, the activities authorized in Amendment No. Two do not constitute a material alteration of the original project for which the Executive Director may issue an amendment to a permit pursuant to Government Code Section 66632(f) and Regulation Section 10711.

The permittees originally proposed a 380-foot-long and a 270-foot-long berth(s) along the northeast end of the pier. The new berths were to extend 270 feet and 160 feet, respectively, outside of the Pier 38 leasehold as of the original authorization contained in this amended permit. Figure 2 contained in the *San Francisco Waterfront Special Area Plan* (Special Area Plan) depicts the area within which the previously proposed berths would be located as an "Open Water Basin". The Special Area Plan's policies on the Open Water Basin between Pier 32 and Pier 38 state that, "Open Water Basins should be focal points of public use and enjoyment of the Northeast Waterfront. Open Water Basins should provide opportunities for physical access between the Bay and piers and should provide new and substantial Bay views from the boundary piers framing the Open Water Basins...." The policies further state, "Within Open Water Basins, limit new fill to:...(e) At Pier 38, recreational marina facilities permitted as of July 20, 2000.".

As of July 20, 2000, the recreational marina facilities permitted at Pier 38 were those contained in the original authorization and did not extend past the limits of the Pier 38 leasehold as represented to staff in 1998. Since the improvements authorized in Amendment No. Two do not extend into the Open Water Basin, the improvements are consistent with the Special Area Plan policies on Open Water Basins. If, in the future, the permittees request authorization from the Commission to provide berths along the northeast end of the pier that intrude into the Open Water Basin, amendment to the Special Area Plan would likely be required.

~~E.~~ F. **Public Trust.** ~~28,656~~ 28,229 square feet of fill authorized herein are for floating boat docks and a 420-square-foot kayak launch, ~~a~~ both water-oriented uses as defined by Section 66605 of the McAteer-Petris Act. Water-oriented uses are consistent with the public trust. Further, ~~800~~ 1,040 square feet of new cantilevered fill is authorized for public access purposes and an additional ~~35,850~~ 38,934 square feet of replacement fill is authorized for the renovation of the existing pier apron, the majority of which will be used for public access purposes Minor fill improve public access is allowed pursuant to Section 66605 of the McAteer-Petris Act. Thus, the Commission finds that the fill is consistent with the public trust.

~~F.~~ G. **Title.** The project is located entirely within the Port of San Francisco. The Port, a co-permittee for this project, has adequate title for the subject use on lands within its jurisdiction.

~~G.~~ H. **Environmental Review.** In its review of the amended permit application for the project, the City and County of San Francisco first conducted an initial study and, secondly, prepared and certified a final negative declaration pursuant to CEQA, dated February 2, 1996, for the project which found that no significant environmental impacts are anticipated from the project. Further, the refinements to the Pier Shed and Bulkhead building floor plans, and the floating docks, as approved in Amendment No. One herein, do not constitute a significant change to the project as analyzed in the original environmental impact review documents prepared for the project.

~~H.~~ I. **Conclusion.** For all the above reasons, the benefits of the project clearly exceed the detriment of the loss of water areas and the project will provide the maximum feasible public access to the Bay and its shoreline. Therefore, the project is consistent with the *San Francisco Bay Plan*, the McAteer-Petris Act, the Commission's Regulations, and the Commission's Amended Management Program for the San Francisco Bay segment of the California coastal zone.

IV. Standard Conditions

A. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittees of any obligations imposed by State or Federal law, either statutory or otherwise.

B. The attached Notice of Completion shall be returned to the Commission within 30 days following completion of the work.

C. Work must be performed in the precise manner and at the precise locations indicated in your applications as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

D. Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittees will be subject to the regulations of the Regional Water Quality Control Board in that region.

E. The rights, duties, and obligations contained in this amended permit are assignable. When the permittees transfer any interest in any property either on which the authorized activity will occur or which is necessary to the full compliance of one or more conditions to this amended permit, the permittees/transferor and the transferees shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignees execute and the Executive Director receives an acknowledgment that the assignees have read and understand the amended permit and agree to be bound by the terms and conditions of the amended permit, and the assignees are accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.

F. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

G. Unless otherwise provided in amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

H. Unless otherwise provided in this amended permit, any work authorized herein shall be completed within the time limits specified in this amended permit, or if no time limits are specified in the amended permit, within three years. If the work is not completed by the date specified in the amended permit, or if no date is specified, within three years from the date of the amended permit, the amended permit shall become null and void. If an amended permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this amended permit shall be removed by the permittees or their assignees upon receiving written notification by or on behalf of the Commission to remove the fill.

I. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittees or their assignees if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittees or their assignees if the amended permit has been assigned.

J. This amended permit shall not take effect unless the permittees execute the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

K. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit.

L. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction ~~up to the line of highest tidal action~~.

M. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, of special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittees or their assignees if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

WILL TRAVIS
Executive Director
San Francisco Bay Conservation and
Development Commission

WT/MBL/ra

cc: U. S. Army Corps of Engineers, Attn.: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn.: Certification Section
Environmental Protection Agency, Attn.: Mike Monroe, WTR-8
City and County of San Francisco Planning and Building Department
San Francisco Redevelopment Agency
Brian Connors, Attorney at Law

* *

Receipt acknowledged, contents understood and agreed to: PIER 38 MRE INC and OTHER ENTITY

Executed at PIER 38 MRE INC
SAN FRANCISCO CA 94107

On 2-2-05 By: Dave Ernst
Pres

Applicant

Title

Executed at Port of San Francisco, Pier 1

On 2-10-05 By: Monique L. Moyer
Executive Director

Port of San Francisco

Applicant

Title

Pier 38 RFP Questions and Answers:

1. Will the shed and bulkhead substructure be okay for the next 10 years?

   Except in the case of further damage from a major seismic event, Port Engineering Division believes that the shed and bulkhead substructure will need no significant investment during the next 10 years to support the uses for the bulkhead building contemplated in the RFP.

   The Port has recently completed an internal substructure detailed assessment of the Pier 38 bulkhead building area.

   Links to this assessment are on the Port's website:

   a. Pier 38 substructure condition assessment, dated October, 2012.
      i. *p38-beams&girders Layout1.pdf*
      ii. *p38-beams&girders Layout2.pdf*
      iii. *p38-beams&girders Layout3.pdf*
      iv. *p38-beams&girders Layout4.pdf*
      v. *Layout5 Typ Sections - Typ Sections.pdf*
      vi. *Bulkhead Bldg Layout6.pdf*

   b. Pier 38 Pile Survey, dated 1995
      i. *Pile layout and Quantities_1995.pdf*

   A conceptual seismic retrofit analysis of Pier 38 substructure and superstructure by Structus will be available by mid-February. The study is intended to support the Port's analysis of the long-term reuse of Pier 38. If any of Structus' findings change the conclusions of the Creegan & D'Angelo's report, they will be provided to potential RFP respondent so they may factor this new information into their RFP submittals.

2. Does the RFP include substructure repairs (i.e. apron repair and new marina as noted in the Creegan and D'Angelo report)?

   Egress requirements for bulkhead and shed area included in development proposals will determine the extent of apron repairs on each side of the pier.

   Construction of a new marina is not required under the current RFP.

3. Will Structus's Seismic Retrofit Study affect the current RFP?

   No. Structus is assessing the options for seismic retrofit. The RFP is for uses, as defined in the January 13, 2012 Creegan & D'Angelo report, that do not require seismic upgrade.

If any of Structus' findings change the conclusions of the Creegan & D'Angelo's report they will be provided to potential RFP respondent in advance of the RFP deadline.

4. Can apron repair be done with existing vessels moored at Pier 38?

   Depending on the extent of apron repair required for egress, the vessel moored on the south apron may need to be relocated.

5. What are the special requirements associated with Phase I and II projects that are required by the Port? (Please be specific between the two phases)

   Structural Improvements

   Phase 1:
   Please refer to Creegan & D'Angelo's report dated January 13, 2012 (pages 12, 20, 28, and 44) for structural improvements required to satisfy code compliance and occupancy analysis. Structural improvements include but are not limited to: repair of existing hole in concrete deck (if this is within the proposed lease area), apron repair as required for egress, installation of additional floor joists in the Bulkhead Building, substructure repair under the proposed footprint of work, new elevator shaft and elevator, repair of hole in concrete roof where roof was cut for mechanical equipment, etc.. The Port has recently completed a detailed assessment of the substructure. Please refer to Question 1 answer for links to this assessment.

   Phase 2 (remaining Pier Shed area):
   Depending upon the nature and extent of proposed occupancy and additions, seismic strengthening will likely be required for the shed superstructure and substructure, as determined by the Port Building Code seismic upgrade requirements.

6. Can the Port please provide a detailed list of the elements of the Pier 38 bulkhead and shed that are deemed historically significant?

   See the link entitled *Pier 38 Historical Description and Section 12* regarding Pier 38 as a contributing resource within the Embarcadero Historic District for information on the resource's character defining features.

7. While the RFP is for rehabilitating and re-tenanting the Pier 38 bulkhead building, the concepts in the attached "Code Compliance and Occupancy Study" include using portions of the shed building for parking, and the RFP requires provision of security for the entire pier. Is the lease expected to cover the entire pier? If so, what obligations will the Port retain relative to the shed structure, marina, and remaining boats attached to the marina and pier?

The Port assumes that a development entity for Phase 1 will provide security for the bulkhead building, as defined in the RFP, and for the rest of the pier, as negotiated with the Port.

The Port continues to work towards a solution with the owners of the remaining boats berthed at Pier 38.

8. Does the Port consider the uses called for in the RFP and laid out in the "Code Compliance and Occupancy Study" (in particular, General Office) consistent with the Waterfront Land Use Plan either interim or permanent uses?

   The uses called for in the RFP are consistent with the Waterfront Land Use Plan interim uses. See pages 73-75 of the Waterfront Land Use Plan.

9. What is the status of the California Department of Boating and Waterways (CalBoating) loan for Pier 38?

   Please see link to the *Hypothecation Agreement.* The Port has not had further discussions with CalBoating regarding any remedies or rights described in these agreements.

10. What LBE goals have been established or are likely to be established for the development entity and professional service providers/contractors?

    While this RFP does not include specific Local Business Enterprise (LBE) goals, the Port Commission has a policy of enhancing opportunities for San Francisco-based enterprises by encouraging the inclusion of LBEs in a Port project to the greatest extent possible. All potential respondents are encouraged to present in their proposals innovative ways to expand the economic opportunities for local businesses and San Francisco residents.

    Please review inclusion of LBEs as part of the submittal requirements on pages 17-18 of the RFP. As part of an agreement with the Port, LBE participation will be negotiated between the parties.

11. Please confirm that the BCDC permit for floating docks is valid. The exhibits are missing from the BCDC permit that was attached to your website. See text below from permit. Could you provide?

    The floating docks and public access authorized in Amendment No. Two shall generally conform with the plans entitled, "Pier 38 Development Site Plan", Sheet A 2.00 and "Pier 38 Development Public Access Plan", Sheet A 2.01, prepared by Holey Associates, dated June 2, 2004, and received in BCDC's office on August 18, 2004.

    Yes, this language is the most current BCDC Permit for floating docks at Pier 38.

However, the Port is seeking proposals only to rehabilitate the Pier 38 bulkhead building, as defined in the RFP. The RFP respondent selected to rehabilitate Pier 38 will be subject to a new or amended BCDC permit based on its premises and uses.

Please see link to: *Sheets A 2.00 and A 2.01*.

12. Are any drawings or other records of the alterations made by the previous tenant available, in particular, the second floor area over the entrance and extending back into the shed, and if so, how can they be accessed?

    The Port has no records that additional drawings or other materials were ever submitted for the alterations made by the prior tenant.

13. Can you confirm that the baseline occupancy count to be used when reviewing for the need to seismically upgrade per the Port of SF building code will be based on its use in 1934 when the "building in its current footprint was used as Break Bulk storage throughout the shed and office within the Bulkhead structure" per page 17 of the Pier 38 Code Compliance and Occupancy Study dated January 13, 2012?

    For seismic upgrade trigger calculations, break bulk occupancy factor of 250 SF per person shall be assumed with the exception of the historic bulkhead building. Assume an office occupancy per Port Building Code, Table 1004.1.1 Maximum Floor Allowances Per Occupant.

14. Are drawings of the substructure (piles, seawall, slab) available for review, and if so how can they be accessed?

    Yes.

    Links to the existing substructure drawings will be on the Port's Pier 38 project webpage:

    a. *1283-38-3.tif*
    b. *1239-38-3.tif*
    c. *1241-38-3.tif*
    d. *1242-38-3.tif*
    e. *1246-38-3.tif*
    f. *1247-38-3.tif*
    g. *2770-38-1.tif*
    h. *2771-38-1.tif*
    i. *3325-38-1.tif*
    j. *5014-38-1.tif*
    k. *5015-38-1.tif*

l. *5016-38-1.tif*
m. *5017-38-1.tif*
n. *5018-38-1.tif*
o. *5301-38-1.tif*
p. *5313-38-1.tif*
q. *5314-38-1.tif*
r. *5569-38-1.tif*
s. *5570-38-1.tif*
t. *1341-382-3.tif*
u. *1339-382-3.pdf*
v. *1340-39.pdf*
w. *1344-39.pdf*

15. Does the Port have available for review any past reports on the pier and/or buildings, and if so, how can they be accessed?

    The Port has information that has been provided by the Creegan & D'Angelo and forthcoming Structus reports as well as the links provided above to questions 1, 6 and 14.

16. Piers 38 and 40 bulkhead buildings appear structurally connected. For the purposes of this RFP, are we to assume that they are structurally separated?

    No.

    Pier 38 and Pier 40 bulkhead buildings are structurally connected.

17. The seismic upgrade triggers in the Port of SF building code and CBC are written for buildings. The bulkhead building is located half on land and half on the west end of the pier structure. If a seismic upgrade were triggered for the bulkhead building, would the pier structure also require seismic upgrading?

    Yes.

    If a seismic upgrade is triggered for the bulkhead building, the pier structure will require a seismic upgrade because they are connected. Whenever a seismic upgrade is triggered, it applies to the entire building including its foundation so it will also apply to substructure deck and piles.

GEOTECHNICAL CONSULTANTS, INC.
Geotechnical Engineering • Geology • Hydrogeology

STRUCTUS, Inc.
160 Pine Street, Suite 300
San Francisco, California 94111

January 28, 2013
Project No. SF12024

Attention: Fu-Lien (Henry) Chang, SE, CE

Subject: Geotechnical Memorandum
Pier 38 Seismic Retrofit
San Francisco, California

Dear Mr. Chang:

This memorandum presents our geotechnical recommendations for the seismic retrofit of Pier 38 in San Francisco, California. Our work was performed in accordance with our proposed scope of work e-mailed to you on October 12, 2012 and amended in a letter to you dated January 8, 2013. The purpose of our services is to provide geotechnical recommendations for the conceptual-level design of a seismic retrofit. Additional subsurface exploration and geotechnical analysis may be performed during a subsequent design-level study.

SUBSURFACE CONDITIONS

Our subsurface exploration consisted of one geotechnical boring (B-1) to a depth of approximately 100 feet below the mudline beneath the Pier 38 structure. The log of the drill hole and field and laboratory testing results from our Pier 38 field investigation is included in ***Attachment 1 – Supporting Geotechnical Data***. We also reviewed geotechnical borings and cross sections from past geotechnical studies and construction drawings provided to us by the Port of San Francisco and contained in our in-house files.

The subsurface conditions consist of approximately 32 feet of Young Bay Mud underlain by Quaternary-age alluvial/marine deposits. The Young Bay Mud is a soft, normally consolidated, plastic clay that is characterized by low shear strength and high compressibility. The alluvial/marine deposits consist of interbedded sands and clays. The sand layers are typically dense to very dense. The clay layers encountered consist of high plasticity clay associated with Older Bay Mud strata, a marine unit deposited during interglacial periods. The Older Bay Mud is overconsolidated and is typically stiff to very stiff. The closest historic boring that encountered bedrock is located at the east end of Pier 34, where bedrock was found at 225 feet below mean sea level (approximately -235 feet SFCD) (Schlocker, 1974).

The land to the west of the seawall was reclaimed from San Francisco Bay. According to previous reports (Harding Lawson Associates (HLA) et al., 1992), the seawall construction along this section of the waterfront occurred between 1907 and 1914, shortly after the

1906 San Francisco Earthquake. The early portions of the seawall (prior to the 1906 Earthquake) were reportedly constructed by dredging the soft mud to a depth varying from 20 to 35 feet below low water over a width of approximately 30 feet at the trench bottom, and filling the trench with rock (HLA et al., 1992). Additional rock was placed forming a wide base, so that the wall was 100 feet wide at a point 20 feet below low tide. As encountered in borings in the project vicinity, the fill behind the seawall consists of a mixture of clay, sand, gravel, cobbles and construction debris.

SOIL PROPERTIES

The subsurface conditions were grouped into idealized soils with similar strength and deformation characteristics for engineering analysis purposes. The properties of each soil group used in our geotechnical analyses are included in Table 1 – Soil Properties for Design.

TABLE 1 – SOIL PROPERTIES FOR DESIGN

Layer	Elevation (feet, SFCD)	Total Unit Weight, γ (pcf)	Cohesion, c (psf)	Friction Angle, ϕ (degrees)	Shear Wave Velocity, $v_{s,max}$ (m/sec)
FILL (af)					
Artificial Fill (Land Side)	0 to -12	125	0	28	270
Rock Dike (Land Side)	-12 to -40	130	0	32	360
YOUNG BAY MUD (Qybm)					
Normally Consolidated Unit	-19 to -48	90	Increases with depth from 100 to 370 psf	0	70
Partially Consolidated Unit	-48 to -51	95	1,000	0	140
UPPER LAYERED SEDIMENTS (Qul)					
Clayey Sand – Upper Unit	-51 to -59	135	0	37	300
Silty Sand – Middle Unit	-59 to -72	130	0	40	320
Sand – Lower Unit	-89 to -103	130	0	42	370
OLDER BAY MUD (Qobm)					
Clay – Upper Unit	-72 to -89	115	1,400	0	170
Clay – Lower Unit	-103 to -148	115	1,800	0	180
LOWER LAYERED SEDIMENTS (Qll)					
Clayey Sand	-148 to -235	125	0	42	360
FRANCISCAN COMPLEX BEDROCK (KJf)					
Bedrock	-235	140	0	45	760

SEISMIC HAZARDS

Strong Ground Shaking. To analyze and design for the effects of strong ground shaking, we developed acceleration response spectra in accordance with the Port of San Francisco Seismic Engineering Standard (2012). The Standard defines three levels of earthquake hazard: Basic Safety Earthquake 2 (BSE-2) which is equivalent to MCE_R of Section 11.4 of ASCE 7-10; BSE-1 which is equivalent to two-thirds of BSE-2; and BSE-R defined in Section 3418 of the 2010 California Building Code and equivalent to a seismic event having a 20 percent probability of exceedance in 50 years. The response spectra at these three earthquake hazard levels are included for both the pier structure and the bulkhead structure in ***Attachment 2 – Acceleration Response Spectra***.

Liquefaction and Seismic Settlement. The site is mapped within a liquefaction hazard zone by the California Geological Survey (CGS, 2000) as is all of the man-made land around the bay margin. HLA et al. (1992), in a study of liquefaction of the North Beach, Embarcadero Waterfront, South Beach and Upper Mission Creek areas, indicate that liquefaction-induced settlement along The Embarcadero in the project vicinity may be on the order of 3 to 12 inches. Additional borings can be conducted behind the seawall at Pier 38 to more fully evaluate the liquefaction potential.

Lateral Spread. HLA et al. (1992) have mapped the area immediately behind the seawall in the vicinity of Pier 38 to have potential lateral displacements on the order of 3 to 12 inches. Due to a weak bay mud layer at the base of the seawall at Piers 34 and 36, we conclude that lateral displacements approaching 20 inches are possible at this adjacent site during a BSE-2 level event (GTC, 2010). Additional borings can be conducted behind the seawall at Pier 38 to more fully evaluate the lateral spread potential.

LOAD DEFLECTION BEHAVIOR OF PILES

The existing Pier 38 was constructed in several phases. According to historic drawings (Board of State Harbor Commissioners, 1908; POSF, 1931; POSF, 1934) the original pier was constructed in about 1908, and extended approximately 650 feet into the San Francisco Bay from the waterfront line. The pier was extended an additional 240 feet bayward and 15 to 20 feet to the south during a circa 1931 addition, and the bulkhead building was added along the Embarcadero in approximately 1934. The foundations for the original Pier 38 (1908 construction) consist of belled cylindrical piers with a shaft diameter of 42 inches and bell diameters (excluding the cast iron bell) of between 63 and 75 inches. The majority of the cylindrical piers have a bell diameter of 69 inches. The cylinder lengths gradually increase from about 42 feet near the seawall to about 54 feet at the eastern edge of the 650-foot long steel and concrete pier. The subsurface profile shown on the plans indicate the cylindrical piers are founded in the “Hard Bottom” which would correspond to the Upper Layered Sediments of this study. The foundations for the 1931 pier addition consisted of 20” square precast concrete driven piles. The piers were tapered over the bottom 6 feet to a 10” by 20” rectangular cross

section. Concrete pile lengths varied from 53 feet to 79 feet. The bulkhead building (1934) is supported on timber piles with an upper precast concrete jacket.

We understand from the structural designers that the pier will likely need to be retrofitted with large-diameter steel pipe piles to increase lateral resistance. The conceptual-level retrofit design at the time of this geotechnical memorandum consists of eight clustered groups of piles with six to eight piles per group. The proposed retrofit piles consist of 6-foot diameter steel pipe with 1-inch thick walls. We evaluated ¾-inch thick walls for corrosion allowance. The piles in each group will be spaced at 21-foot centers.

As requested, we performed geotechnical analyses of the axial and lateral behavior of existing and proposed piles for the Pier 38 seismic retrofit. LPILE Plus Version 5.0 (Ensoft, 2004) was utilized to evaluate lateral load/deflection behavior and APILE Plus Version 5.0 (Ensoft, 2007) was utilized to evaluate unit skin friction resistance and vertical load/deflection behavior. The results of these analyses are provided in ***Attachment 3 – Load/Deflection Behavior of Piles***.

BULKHEAD STRUCTURE STABILITY

The bulkhead building at Pier 38 straddles the land and water with the bulkhead wharf approximately 15 feet from the western edge of the building. Provided that the land behind the bulkhead wharf does not spread laterally during a seismic event, passive pressures and friction will be mobilized along the structural elements embedded within the fill (e.g. pre-cast concrete jackets on pile foundations, wing walls for the bulkhead wharf, etc.). If lateral spreading occurs, the ground may actually load the structural elements rather than resisting movement. For stable ground conditions, the ultimate passive earth pressure resistance in the upper 8 feet of artificial fill behind the bulkhead wharf can be assumed to be equivalent to a fluid with a unit weight of 350 pounds per cubic foot (pcf). For the precast concrete pile jackets, the passive earth pressure resistance can be assumed to act over 2.5 times the width of the jacket as long as the pile spacing is at least this calculated width. We estimate that the displacement to achieve ultimate passive pressure resistance is approximately 5 percent of the embedded height, **h**. Oftentimes, the displacement to achieve ultimate passive earth pressures exceeds the allowable displacement of the structure. We estimate that approximately 85 percent of the ultimate passive resistance will be mobilized with a displacement of 2.5 percent of **h**, and 50 percent of the ultimate passive resistance will be mobilized with a displacement of 0.5 percent of **h**.

The stability of the bulkhead wharf will be aided by the frictional resistance along the wing walls in an east-west direction and along the back side of the concrete wharf structure in the north-south direction. A frictional pullout resistance of 80 psf can be assumed acting against the wing walls to resist movement in the east-west direction. Alternatively, the frictional pullout resistance can be calculated by taking 35 percent (friction factor of 0.35) of the earth pressure distribution on the structure. We estimate that an equivalent fluid pressure of 45 pcf can be used in estimating active earth pressures in the upper 8 feet (above the groundwater table), and

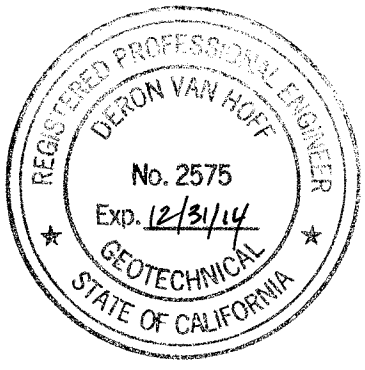
22.5 pcf below the groundwater table. If full passive pressures are assumed on the wing walls, then only 50 percent of the frictional resistance should be added for the depth of the wing walls as these two forces are not independent. This assumes 20-foot spacing between wing walls.

The displacement of the bulkhead wharf is also resisted by passive pressure on the embedded portion of the wharf and the lateral resistance of the existing timber piles. The passive pressure resistance on the face of the wharf should be evaluated with an ultimate passive pressure of 200 psf at the mudline and increasing by 100 psf per foot of embedment depth below the mudline. A lateral load versus displacement analysis (e.g. LPILE analysis) can be performed to evaluate the contribution of the timber piles to wharf stability if the timber piles are judged to be in sound condition. In the event that the existing timber piles fail because of exceeding shear or bending moment capacities, the friction along the base of the wall can be utilized to assess wharf stability. A coefficient of friction of 0.35 may be used for estimating the resistance due to base friction. The coefficient should be multiplied by the dead load only, and should account for the buoyant weight of the wharf for the submerged portion.

Due to the possibility of liquefaction and lateral spread, it would be prudent to include additional buttressing or seismic retrofit of the bulkhead wharf in the near shore area for the conceptual-level seismic retrofit. We anticipate that there would be some damage to existing timber piles should the site experience lateral spread during a strong seismic event. Additional evaluation of the liquefaction and lateral spread potential may be warranted during the design-level study.

CLOSURE

The conclusions and recommendations presented herein are for a conceptual-level seismic retrofit of the project as described. Additional subsurface exploration may be warranted for a design-level study. The findings and professional opinions presented in this memorandum are presented within the limits prescribed by the client, in accordance with generally accepted professional engineering and geologic practices. There is no other warranty, either express or implied.



Sincerely,
GEOTECHNICAL CONSULTANTS, INC.

1/29/13
Deron J. van Hoff, P.E., G.E.
Vice President

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ATTACHMENTS

Attachment 1 – Supporting Geotechnical Data
Attachment 2 – Acceleration Response Spectra
Attachment 3 – Load/Deflection Behavior of Piles

ATTACHMENT 1
SUPPORTING GEOTECHNICAL DATA

ATTACHMENT 1
SUPPORTING GEOTECHNICAL DATA

SUBSURFACE EXPLORATION

Subsurface exploration for our geotechnical study of the Pier 38 Seismic Retrofit project took place on December 6 and December 7, 2012. The subsurface exploration consisted of drilling one mud rotary boring (B-1). The boring was backfilled with cement grout. The following table shows the depth and approximate elevation of the boring.

TABLE A-1 – SUMMARY OF GEOTECHNICAL EXPLORATIONS

Exploration	Date Drilled	Approximate Surface Elevation (feet, SFCD [1])	Depth (feet)
B-1	12/6/12 - 12/7/12	+1.5 at top of pier deck	121.5

[1] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

The location of the subsurface exploration is shown on the attached Boring Location Plan. The log of the boring is presented as Plate A-1.1. The legend for the log is presented as Plate A-2.

The stratification lines shown on the boring log represent the approximate boundaries between soil types; the actual transition may be gradual. The boring location was estimated in the field by measuring from fixed site features. The surface elevation of the boring was estimated based on historic plans. The location and elevation of the boring should be considered accurate only to the degree implied by these methods.

SOIL SAMPLING METHODS

Soil sampling methods used during the exploration program were Standard Penetration Tests (SPTs), a 2.5-inch diameter split barrel sampler ("Modified California sampler"), and a Shelby tube sampler.

SPTs were performed using a 2-inch outside diameter, 1.375-inch inside diameter steel, split spoon sampler. The sampler was driven by repeated blows of a 140-pound safety hammer dropped approximately 30 inches onto the sampling rod to which the sampler was attached. The number of blows required to drive the sampler the last 12 inches of a total 18-inch drive is referred to as the SPT blow count or N-value, and is recorded on the drill hole log. Blow counts were recorded for the purpose of estimating relative soil densities.

The split barrel sampler was driven a total of 18 inches (or until refusal) per ASTM D1586. The sampler was lined with three six-inch long brass tubes with an inside diameter of

2.42 inches. The sampler was driven by repeated blows of a 140-pound safety hammer dropped approximately 30 inches on the drill rod to which the sampler was attached. The number of blows required to drive the sampler the last 12 inches of a total 18-inch interval is referred to as the blow count and is recorded on the boring log.

Samples were collected within the young bay mud by using thin walled Shelby tubes measuring 3 inches in diameter and 3 feet in length. The piston pressure required to advance the Shelby tube is indicated on the boring log.

LABORATORY TEST RESULTS

LABORATORY TESTING

Laboratory tests were performed on representative soil samples in order to define the engineering properties of the earth materials. Where ASTM Standards were used, the latest edition or revision for each test procedure was employed.

MOISTURE AND DENSITY DETERMINATIONS

Moisture content (per ASTM D2216) and dry density (per ASTM D7263) determinations were performed on representative samples to evaluate the natural water content and dry density of the soils encountered. The results are presented on the boring logs.

GRAIN SIZE DISTRIBUTION DATA

Grain-size distribution tests were conducted on representative samples. The tests were performed in accordance with ASTM D422 - Standard Method for Particle-Size Analysis of Soils. Results of these tests are included in this Attachment.

ATTERBERG LIMITS

Atterberg limits were performed on selected soil samples. Testing was performed in accordance with ASTM D4218 - Liquid Limit, Plastic Limit, and Plasticity Index of Soils. Results of these tests are presented on the boring logs, and included in this Attachment.

UNCONSOLIDATED UNDRAINED TRIAXIAL TESTS (TUU)

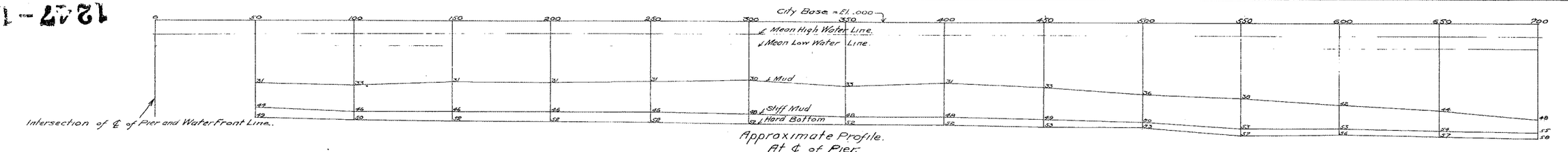
Unconsolidated undrained triaxial tests were performed on six soil samples. Testing was performed in accordance with Standard Test Method ASTM D2850 – Unconsolidated Undrained Triaxial Test on Cohesive Soils. The results of these tests are included in this Appendix.

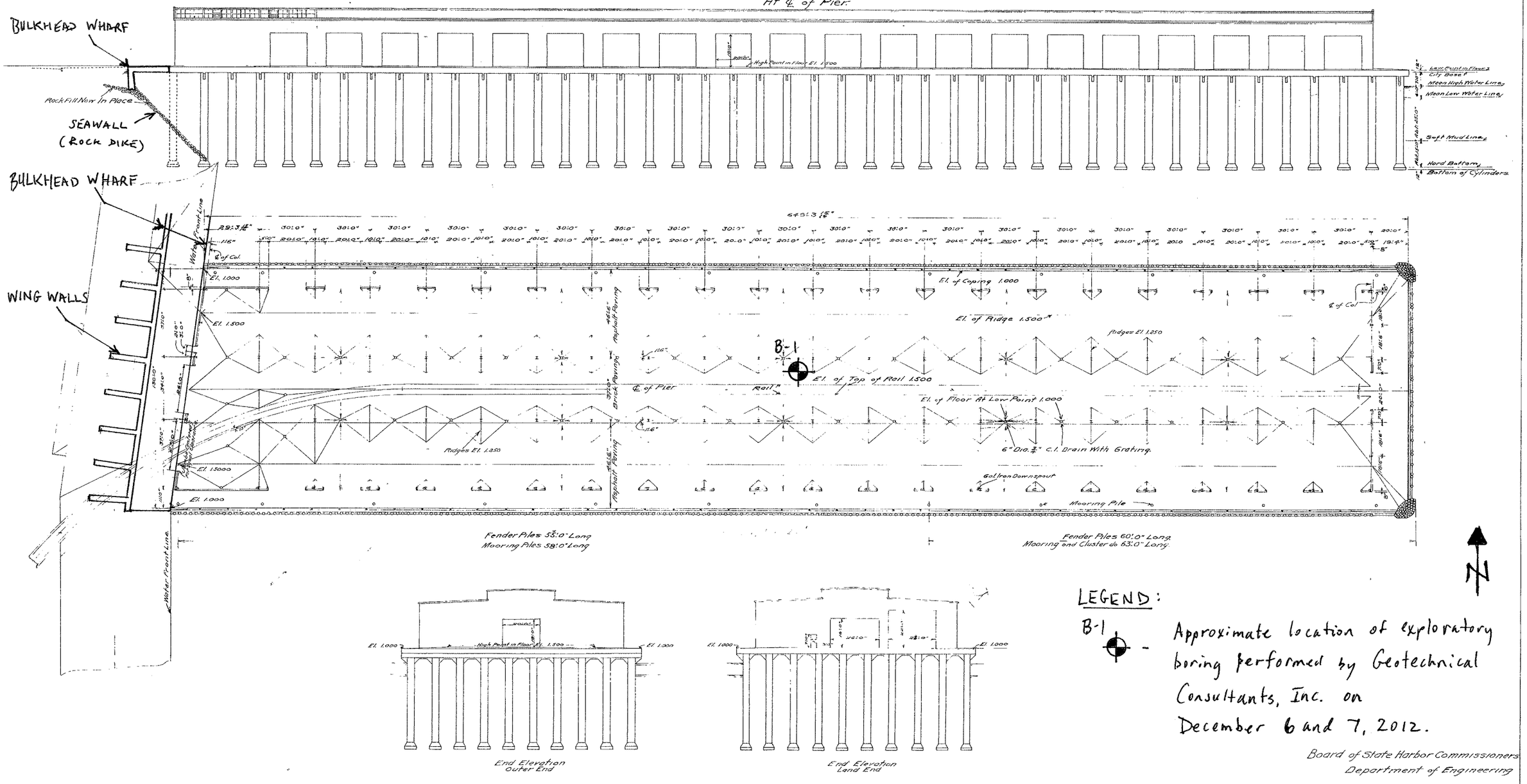
FIELD TEST RESULTS

FIELD VANE SHEAR TESTING

Field vane shear testing was performed within the Young Bay Mud with a Geonor H-10 Field Shear Vane Borer with a vane diameter of 66 mm and a vane length of 130 mm. The field vane shear tests were carried out in accordance with ASTM 2573-08. The field vane shear test results are included in this Attachment. The field vane shear test results are reported as measured in the field and do not include a correction factor.

12A7-11





LEGEND:

B-1 ⊕ - Approximate location of exploratory boring performed by Geotechnical Consultants, Inc. on December 6 and 7, 2012.

Board of State Harbor Commissioners
Department of Engineering

Floor Plan and Elevations.

PIER Nº 38.
San Francisco Cal.
Oct 15, 1908.

Approved Oct 15 1908.
W. U. Maynard
W. E. Dennison
Commissioners

Respectfully Submitted,
Ralph Barker
Assistant State Engineer.

In Charge J.G.L.
Made By H.P.W.
Checked By A.L.

1247-38-3 (2)

BORING LOCATION PLAN
PIER 38 SEISMIC RETROFIT

JANUARY 2013
SF12024

LOG OF DRILL HOLE

JOB NO.: SF12024 | LOGGED BY: M. Simpson | DRILL HOLE NO.: B-1
PROJECT: Pier 38 Seismic Retrofit | CHECKED BY: D. van Hoff | DRILLING DATE: December 6-7, 2012
LOCATION: Pier 38, San Francisco, CA | ELEVATION: +1.5 Feet
DRILLING METHOD: Rotary Wash, 4 7/8-inch dia., Lost Circulation required setting casing to depth 53 Feet | DATUM: SFCD

DEPTH (FEET)	SAMPLE	BLOW COUNT	TORVANE SHEAR STRENGTH (PSF)	POCKET PENETROMETER COMP. STRENGTH (TSF)	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT (%)	ATTERBERG LIMITS: PLASTIC LIMIT (%)	UNCONFINED SHEAR STRENGTH (PSF)	ADDITIONAL TESTS
						PIER DECK: 1.5 inches Asphalt Concrete, 4 inches Brick, 1 inch Sand, 8 inches Portland Cement Concrete.						
5												
10						San Francisco Bay Water Level at 1115 hrs, 12/6/2012						
15												
20		WOR		0.25		"YOUNG BAY MUD (Qybm)" FAT CLAY (CH), grayish black, wet (saturated), very soft, some silt, shell fragments. Shelby Tube recovery: 29"/30".	41	113	101	37		TUU
25												VS
												VS
30						Dark gray.						VS
35						Increasing shell fragments.						VS
												VS
40						SILTY CLAY (CL), dark gray, wet, soft, minor fine sand.						VS
												VS
45						46 Feet: end drilling 1640 hrs on 12/6/2012; resume drilling at 0800 hrs on 12/7/2012.						VS
		325 psi		0.3		Shelby Tube recovery: 32.5"/32.5".	47	74	30	17		TUU
50				4.2		Hard.						
		60		>4.5		"UPPER LAYERED SEDIMENTS (Qul)" CLAYEY SAND (SC), dark greenish gray, wet, dense, fine grained sand.	121	15				GS

LOG_DRILL_HOLE SF12024 PIER 38.GPJ GTC.GDT 1/29/13

LEGEND TO LOGS ON PLATE A-2

LOG OF DRILL HOLE

JOB NO.: SF12024 | LOGGED BY: M. Simpson | DRILL HOLE NO.: B-1
PROJECT: Pier 38 Seismic Retrofit | CHECKED BY: D. van Hoff | DRILLING DATE: December 6-7, 2012
LOCATION: Pier 38, San Francisco, CA | ELEVATION: +1.5 Feet
DRILLING METHOD: Rotary Wash, 4 7/8-inch dia., Lost Circulation required setting casing to depth 53 Feet | DATUM: SFCD

DEPTH (FEET)	SAMPLE	BLOW COUNT	TORVANE SHEAR STRENGTH (PSF)	POCKET PENETROMETER COMP. STRENGTH (TSF)	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT (%)	ATTERBERG LIMITS: PLASTIC LIMIT (%)	UNCONFINED SHEAR STRENGTH (PSF)	ADDITIONAL TESTS
60						"UPPER LAYERED SEDIMENTS (Qul)" CLAYEY SAND (SC), dark greenish gray, wet, dense, grading less fines. Brownish gray to olive gray.						
		40				SILTY SAND (SM), moderate yellowish brown, some orange mottling, moist, dense, fine grained sand.						
65		71				POORLY GRADED SAND with SILT (SP-SM), dark yellowish brown, wet, very dense, fine grained sand.	106	23				GS
70		39				SILTY SAND (SM), dark yellowish brown, wet, dense, fine grained sand.						
75		28		1.5		"OLDER BAY MUD (Qobm)" FAT CLAY (CH), dark greenish gray and medium bluish gray, some orange mottling, wet, stiff to very stiff, some silt, minor fine sand.	83	40	77	34		TUU
80		20		2.5		Dark greenish gray, some fine sand.						
85		6		1.0		Medium stiff, dark gray mottling, minor peat.						
90		41		2.5		"UPPER LAYERED SEDIMENTS (Qul)" CLAYEY SAND (SC), moderate yellowish brown, wet, dense, fine grained sand.	109	20				GS
95		63				POORLY GRADED SAND with SILT (SP-SM), moderate yellowish brown, moist, very dense, fine grained sand.						
100		50/5.5"				Dark yellowish brown.						GS
105						"OLDER BAY MUD (Qobm)" FAT CLAY (CH), dark greenish gray with some orange mottling, wet, stiff.						

LOG_DRILL_HOLE SF12024 PIER 38.GPJ GTC.GDT 1/29/13

LEGEND TO LOGS ON PLATE A-2

LOG OF DRILL HOLE

JOB NO.: SF12024
PROJECT: Pier 38 Seismic Retrofit
LOCATION: Pier 38, San Francisco, CA
DRILLING METHOD: Rotary Wash, 4 7/8-inch dia., Lost Circulation required setting casing to depth 53 Feet

LOGGED BY: M. Simpson
CHECKED BY: D. van Hoff

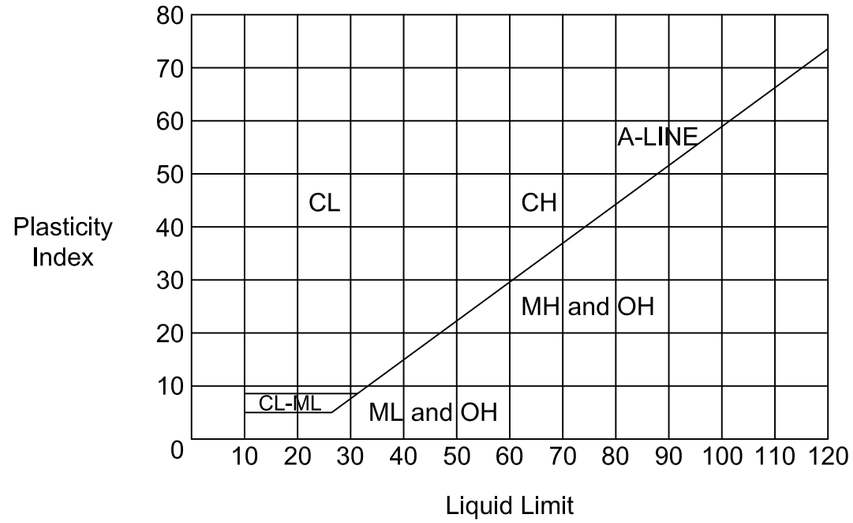
DRILL HOLE NO.: B-1
DRILLING DATE: December 6-7, 2012
ELEVATION: +1.5 Feet
DATUM: SFCD

DEPTH (FEET)	SAMPLE	BLOW COUNT	TORVANE SHEAR STRENGTH (PSF)	POCKET PENETROMETER COMP. STRENGTH (TSF)	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT (%)	ATTERBERG LIMITS: PLASTIC LIMIT (%)	UNCONFINED SHEAR STRENGTH (PSF)	ADDITIONAL TESTS
115		9		1.75		"OLDER BAY MUD (Qobm)" FAT CLAY (CH), dark greenish gray with some orange mottling, wet, stiff.						
120		7		1.75			70	54	91	33		TUU
125						NOTES: 1) Bottom of boring at 121.5 feet. 2) Depth measured from existing Pier 38 Deck. 3) Boring backfilled with cement grout and Pier Deck repaired on 12/7/2012. 4) Hammer efficiency of automatic hammer assumed to be 75 percent (C_E=1.25).						
130												
135												
140												
145												
150												
155												
160												

LOG_DRILL_HOLE SF12024 PIER 38.GPJ GTC.GDT 1/29/13

LEGEND TO LOGS ON PLATE A-2

PLASTICITY CHART - Used for Classification of Fine Grained Soils



BLOW COUNT - The number of blows required to drive the sampler the last 12 inches of an 18-inch drive. When the sampler is not advanced the last 12 inches, i.e. 100 blows in 9 inches, the notation is 100/9.

ADDITIONAL TESTS -

C:	Consolidation	GS:	Grain Size Distribution	SU:	Sulfate
CL:	Chloride	OC:	Organic Matter Content	TD:	Triaxial Compression, Drained
CORR:	Corrosion	pH:	Hydrogen Ion Concentration	TDy:	Triaxial Compression, Dynamic
CP:	Compaction	PM:	Permeability	TCU:	Triaxial Compression, Consolidated Undrained
DS:	Direct Shear	R:	R-Value	TUU:	Triaxial Compression, Unconsolidated Undrained
EL:	Elasticity Index	RS:	Resistivity	VS:	Field Vane Shear Test
EX:	Expansion	S:	Swell		
FC:	Fines Content (#200 Sieve Wash)	SE:	Sand Equivalent		
		SP:	Specific Gravity		

SAMPLE TYPES:

- MODIFIED CALIFORNIA SAMPLE
- DISTURBED SLEEVE
- UNSUCCESSFUL SLEEVE
- SHELBY TUBE
- STANDARD PENETRATION
- STANDARD PENETRATION NO RECOVERY
- ROCK or SOIL CORE
- B BULK SAMPLE

CAVING:

- LIGHT CAVING
- HEAVY CAVING

WATER LEVEL:

- STABILIZED or PARTIALLY STABILIZED GROUNDWATER LEVEL
- UNSTABILIZED GROUNDWATER LEVEL
- SEEPAGE LEVEL

UNIFIED SOIL CLASSIFICATION SYSTEM

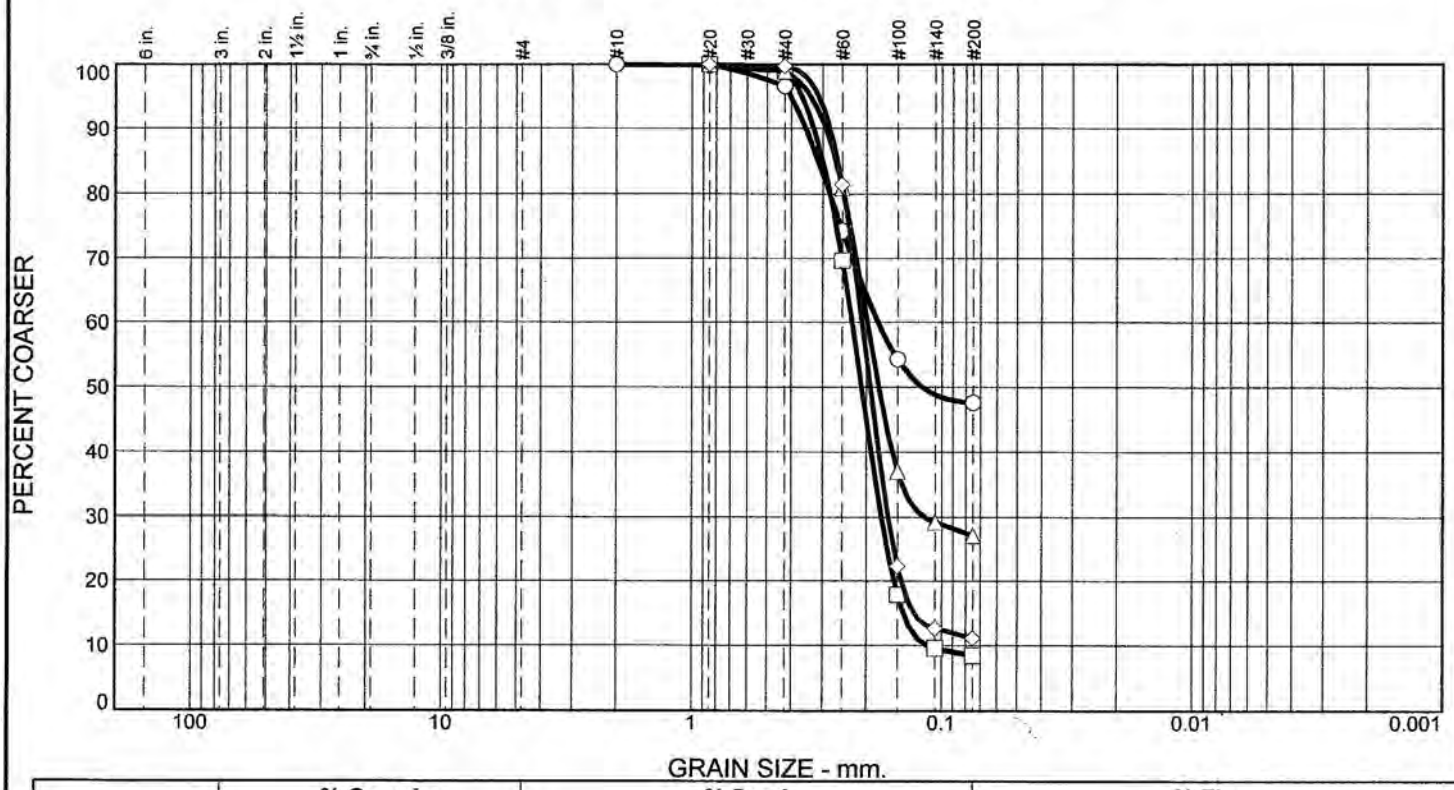
MAJOR DIVISION			GROUP SYMBOL	DESCRIPTION	GRAPHIC LOG
COARSE GRAINED SOILS Over 50% By Weight Coarser Than No.200 Sieve Size	GRAVELLY SOILS OVER 50% OF COARSE FRACTION LARGER THAN NO.4 SIEVE SIZE	CLEAN GRAVELLY SOILS LITTLE OR NO FINES	GW	well graded gravels or gravel-sand mixtures	
			GP	poorly graded gravels or gravel-sand mixtures	
		GRAVELLY SOILS WITH FINES OVER 12% FINES	GM	silty gravels or gravel-sand-silt mixtures	
			GC	clayey gravels or gravel-sand-clay mixtures	
	SANDY SOILS OVER 50% OF COARSE FRACTION SMALLER THAN NO.4 SIEVE SIZE	CLEAN SANDY SOILS LITTLE OR NO FINES	SW	well graded sands or gravelly sands	
			SP	poorly graded sands or gravelly sands	
		SANDY SOILS WITH FINES OVER 12% FINES	SM	silty sands or sand-silt mixtures	
			SC	clayey sands or sand-clay mixtures	
FINE GRAINED SOILS Over 50% By Weight Finer Than No.200 Sieve Size	SILTY AND CLAYEY SOILS LIQUID LIMIT LESS THAN 50		ML	inorganic silts, very fine sands, silty fine sands, clayey silts with slight plasticity	
			CL	inorganic clays, gravelly, sandy, silty, or lean clays, of low to medium plasticity	
			OL	organic clays or organic silts of low plasticity	
	SILTY AND CLAYEY SOILS LIQUID LIMIT GREATER THAN 50		MH	inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
			CH	inorganic clays of high plasticity, fat clays	
			OH	organic clays or organic silts of medium to high plasticity	
HIGHLY ORGANIC SOILS			Pt	peat or other highly organic soil, organic content greater than 60%	
				trash fill-landfill refuse (not a part of unified soil classification system)	

GEOTECHNICAL CONSULTANTS, INC.
500 Sansome Street, Suite 402
San Francisco, CA 94111

LEGEND TO LOGS

PLATE A - 2

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	3.4	49.0	47.6	
□	0.0	0.0	0.0	0.0	1.0	90.5	8.5	
△	0.0	0.0	0.0	0.0	1.1	71.8	27.1	
◇	0.0	0.0	0.0	0.0	0.2	88.6	11.2	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3128	0.1798	0.1192					
□			0.3002	0.2281	0.2089	0.1740	0.1422	0.1136	1.17	2.01
△			0.2653	0.198₁	0.1782	0.1175				
◇			0.2607	0.2080	0.1928	0.1633	0.1289			

Material Description	USCS	AASHTO
○ Bluish grey clayey fine SAND.	SC	
□ Olive brown fine SAND with SILT.	SP-SM	
△ Light olive brown clayey fine SAND.	SC	
◇ Olive brown fine SAND with SILT.	SP-SM	

Project No. SF12024 **Client:** Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit

○ **Location:** B-1 **Depth:** 53.5-54'

□ **Location:** B-1 **Depth:** 66-66.5'

△ **Location:** B-1 **Depth:** 91-91.5

◇ **Location:** B-1 **Depth:** 100.5-101.5'

Remarks:

○ F.M.=0.64

□ F.M.=0.98

△ F.M.=0.72

◇ F.M.=0.84

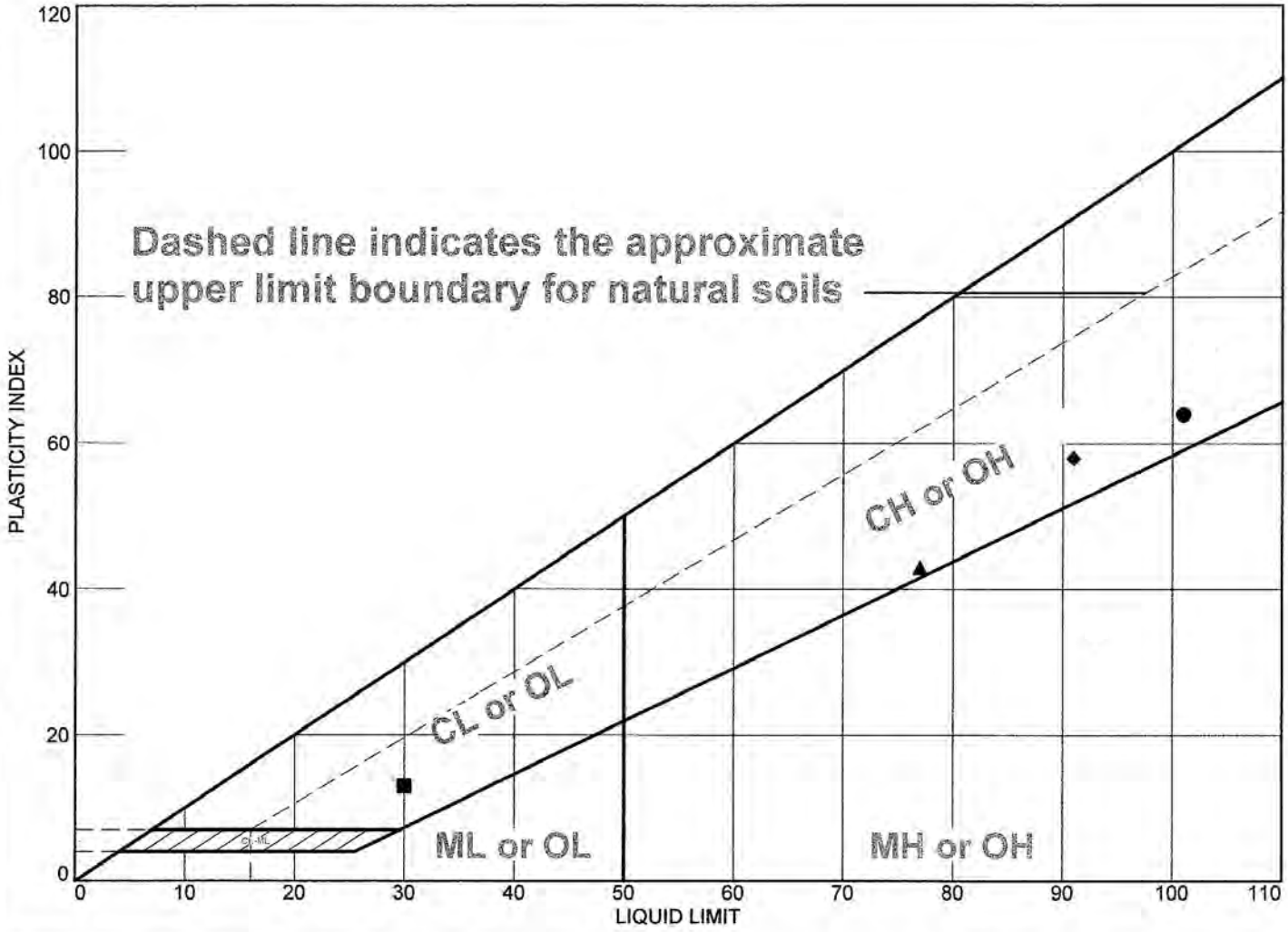
Soil Mechanics Lab

Oakland, California

Figure

Tested By: MA

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Black ORGANIC CLAY	101	37	64			CH-OH
■	Dark grey sandy CLAY.	30	17	13			CL
▲	Bluish grey FAT CLAY.	77	34	43			CH
◆	Dark grey FAT CLAY.	91	33	58			CH

Project No. SF12024 **Client:** Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit

San Francisco,CA.

● **Location:** B-1 **Depth:** 20.1-22.5(22')

■ **Location:** B-1 **Depth:** 48-50.75'(48.5')

▲ **Location:** B-1 **Depth:** 75.5-76'

◆ **Location:** B-1 **Depth:** 121-121.5'

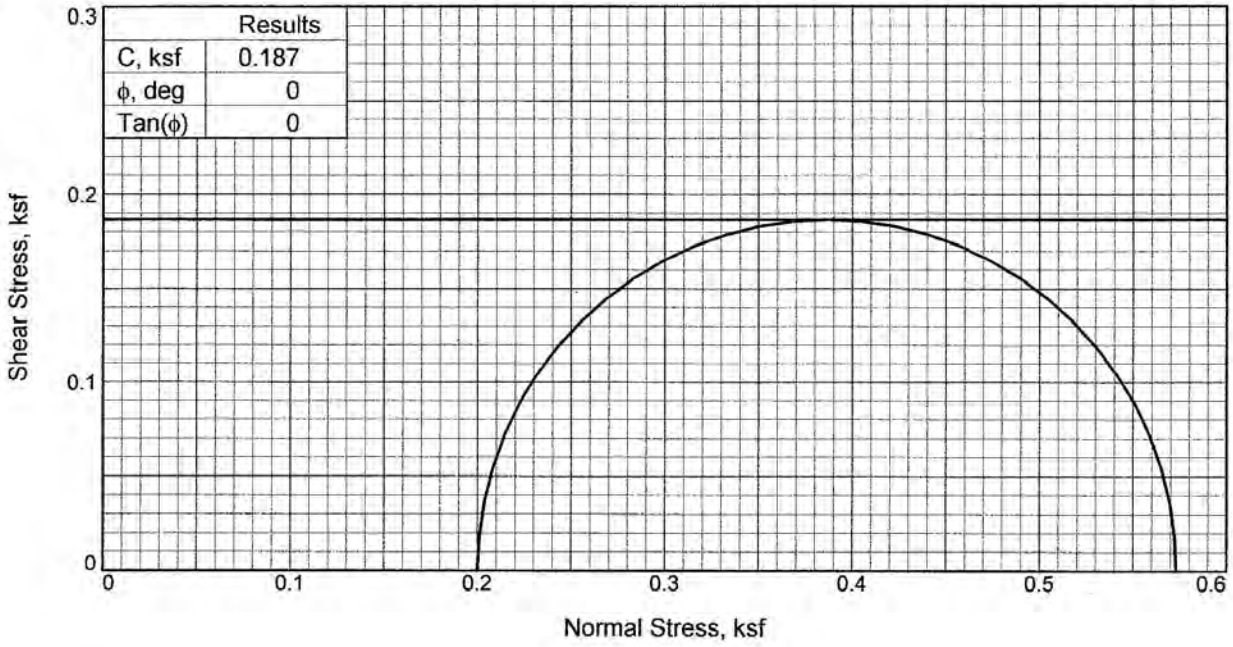
Remarks:

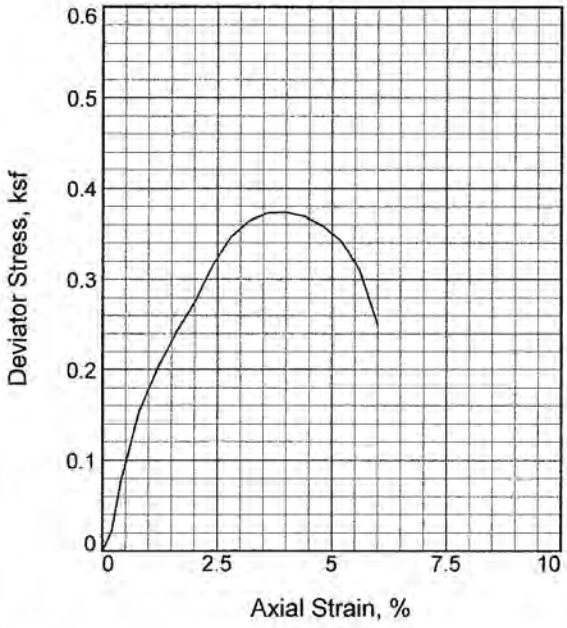
Soil Mechanics Lab

Oakland, California

Figure

Tested By: MA





Sample No.		1
Initial	Water Content, %	112.6
	Dry Density, pcf	40.9
	Saturation, %	97.3
	Void Ratio	3.1260
	Diameter, in.	2.88
	Height, in.	5.00
At Test	Water Content, %	115.8
	Dry Density, pcf	40.9
	Saturation, %	100.0
	Void Ratio	3.1260
	Diameter, in.	2.88
	Height, in.	5.00
Strain rate, in./min.		0.08
Back Pressure, ksf		0.000
Cell Pressure, ksf		0.200
Fail. Stress, ksf		0.373
Strain, %		3.6
Ult. Stress, ksf		
Strain, %		
σ_1 Failure, ksf		0.573
σ_3 Failure, ksf		0.200

Type of Test:
Unconsolidated Undrained

Sample Type: Shelby

Description: Very soft,black FAT CLAY with organics (CH)

LL= 101 **PL=** 37 **PI=** 64

Assumed Specific Gravity= 2.70

Remarks:

Figure _____

Client: Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit
San Francisco,CA.

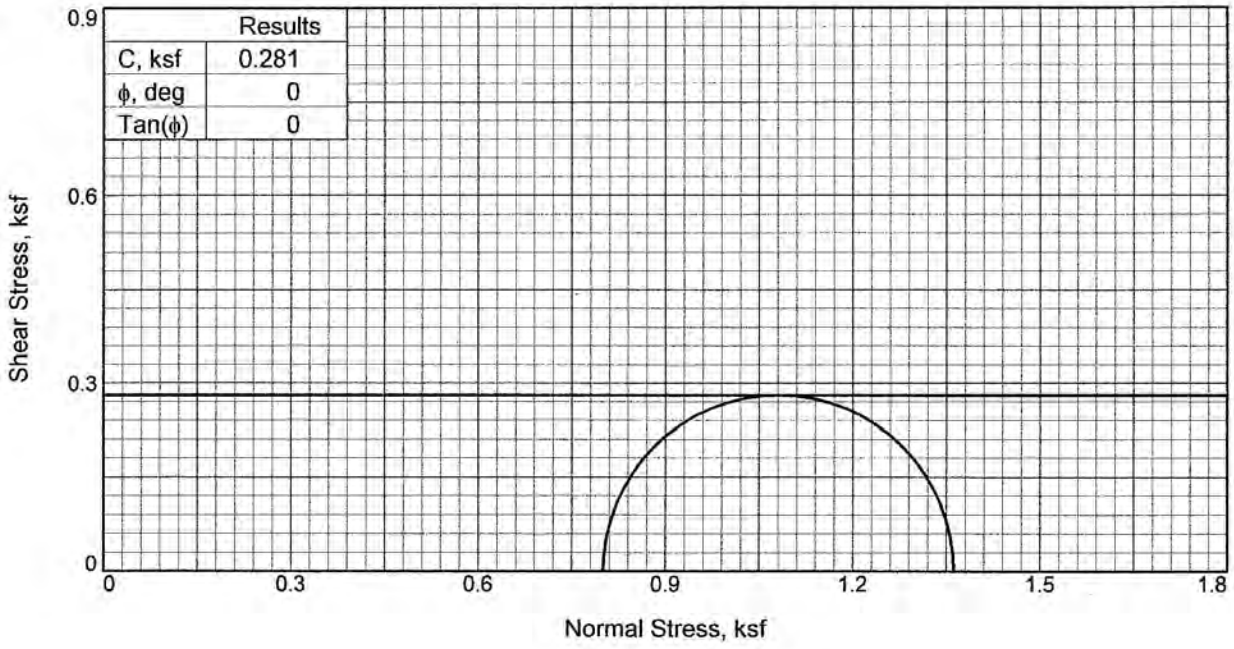
Location: B-1

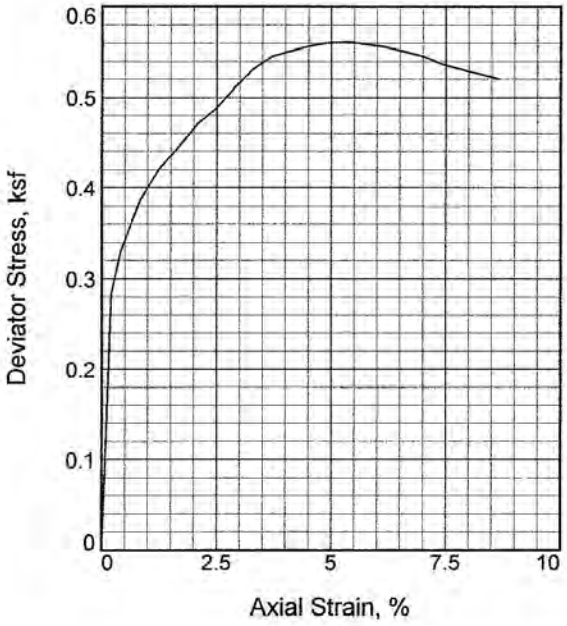
Depth: 20.1-22.5(22')

Proj. No.: SF12024 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Soil Mechanics Lab
Oakland, California

Tested By: MA _____ **Checked By:** _____





Sample No.		1
Initial	Water Content, %	47.1
	Dry Density, pcf	74.1
	Saturation, %	99.9
	Void Ratio	1.2733
	Diameter, in.	2.88
	Height, in.	4.85
At Test	Water Content, %	47.2
	Dry Density, pcf	74.1
	Saturation, %	100.0
	Void Ratio	1.2733
	Diameter, in.	2.88
	Height, in.	4.85
Strain rate, in./min.		0.08
Back Pressure, ksf		0.000
Cell Pressure, ksf		0.800
Fail. Stress, ksf		0.562
Strain, %		5.4
Ult. Stress, ksf		
Strain, %		
σ_1 Failure, ksf		1.362
σ_3 Failure, ksf		0.800

Type of Test:
Unconsolidated Undrained
Sample Type: Shelby
Description: Soft,dark grey sandy CLAY(CL)

LL= 30 **PL=** 17 **PI=** 13
Assumed Specific Gravity= 2.70
Remarks:

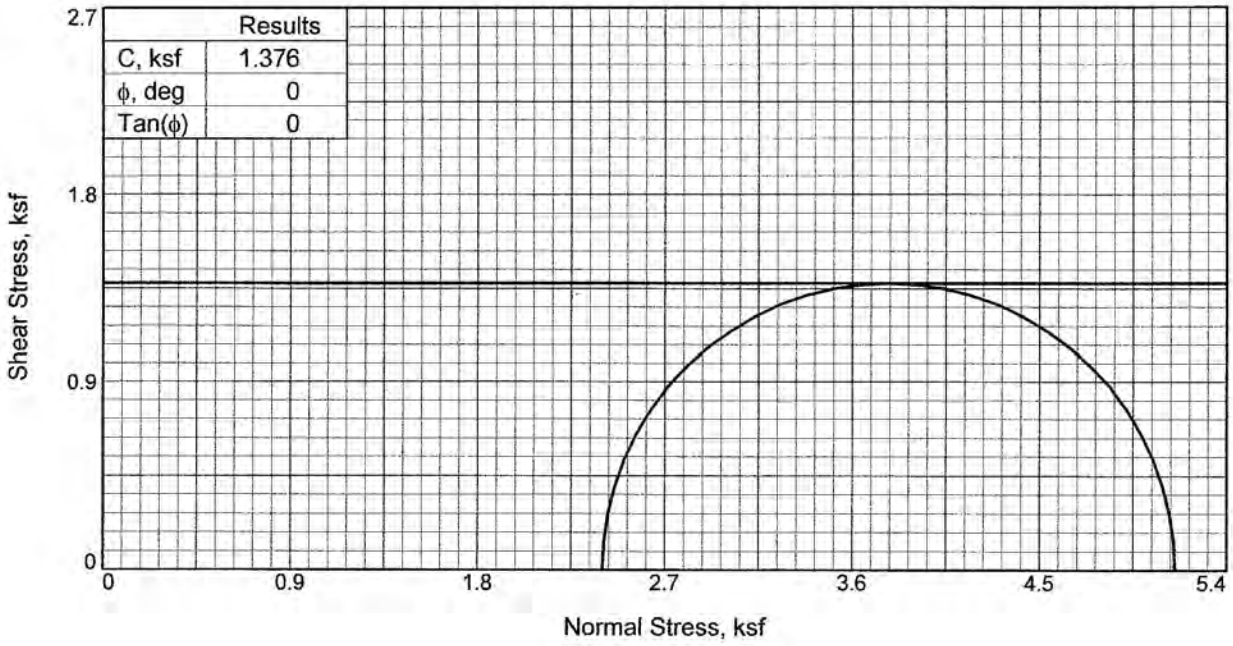
Figure _____

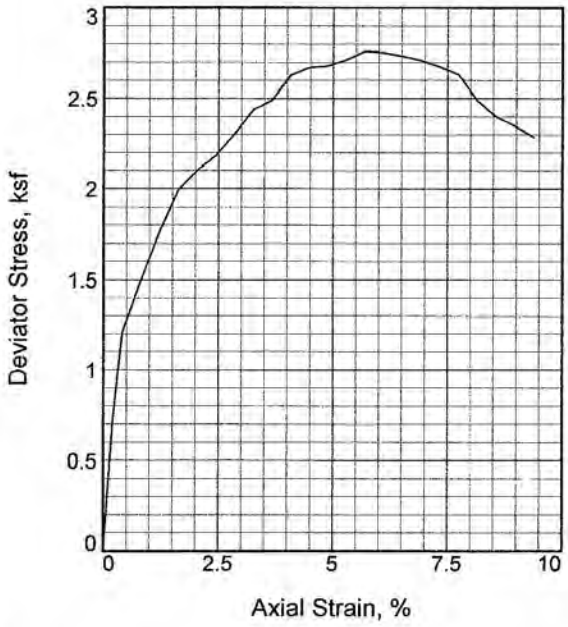
Client: Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit
San Francisco,CA.
Location: B-1
Depth: 48-50.75'(48.5')
Proj. No.: SF12024 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Soil Mechanics Lab
Oakland, California

Tested By: MA _____ **Checked By:** _____





Sample No.		1
Initial	Water Content, %	39.6
	Dry Density, pcf	83.2
	Saturation, %	104.2
	Void Ratio	1.0263
	Diameter, in.	2.42
	Height, in.	4.91
At Test	Water Content, %	38.0
	Dry Density, pcf	83.2
	Saturation, %	100.0
	Void Ratio	1.0263
	Diameter, in.	2.42
	Height, in.	4.91
Strain rate, in./min.		0.08
Back Pressure, ksf		0.000
Cell Pressure, ksf		2.400
Fail. Stress, ksf		2.752
Strain, %		6.1
Ult. Stress, ksf		
Strain, %		
σ_1 Failure, ksf		5.152
σ_3 Failure, ksf		2.400

Type of Test:
Unconsolidated Undrained
Sample Type: Mod.Cal.
Description: Stiff,bluish grey FAT CLAY(CH)

LL= 77 **PL=** 34 **PI=** 43
Assumed Specific Gravity= 2.70
Remarks:

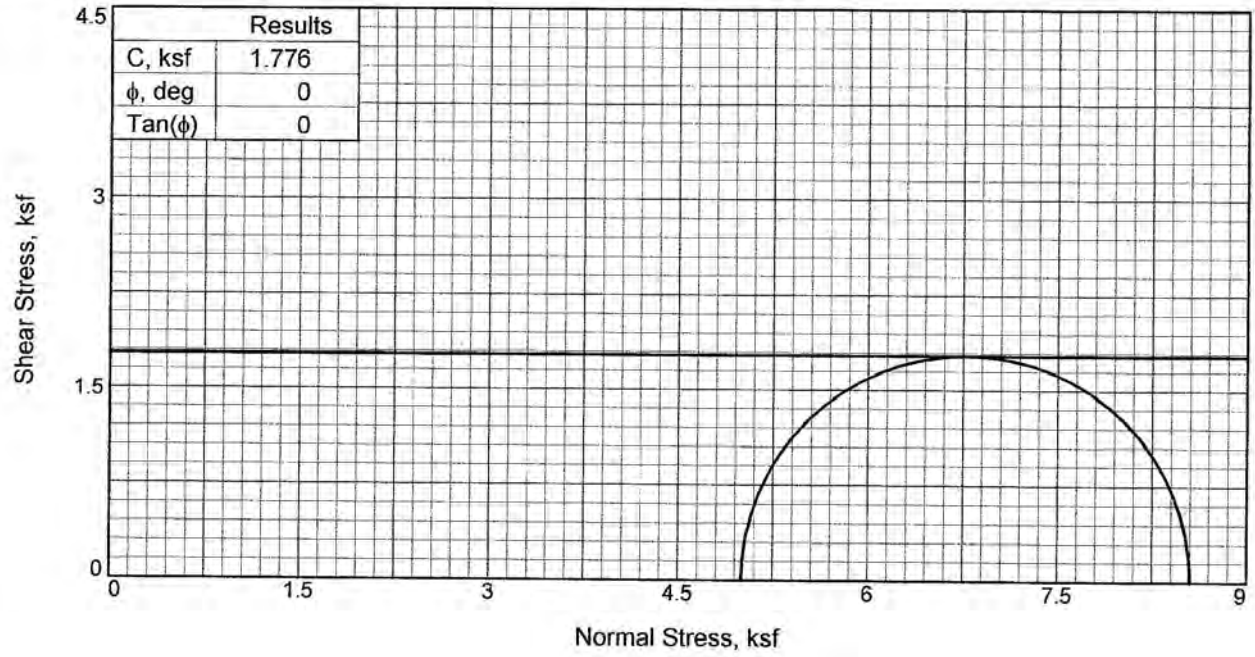
Figure _____

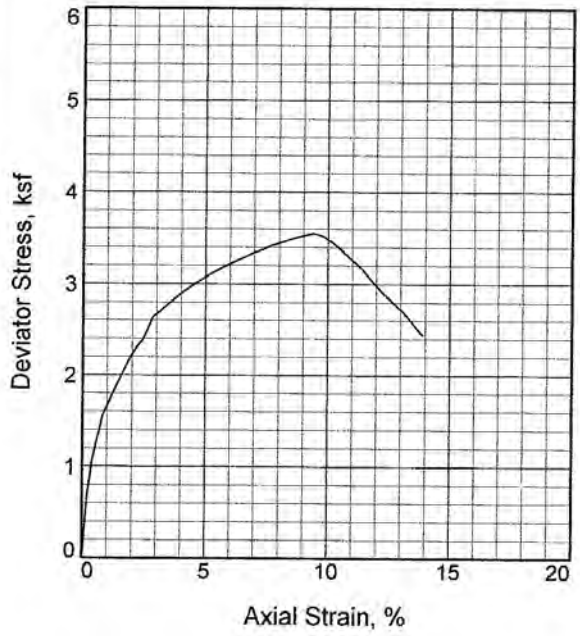
Client: Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit
San Francisco,CA.
Location: B-1
Depth: 75.5-76'
Proj. No.: SF12024 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Soil Mechanics Lab
Oakland, California

Tested By: MA _____ **Checked By:** _____





Sample No.		1
Initial	Water Content, %	53.7
	Dry Density, pcf	70.0
	Saturation, %	103.2
	Void Ratio	1.4068
	Diameter, in.	2.42
	Height, in.	4.90
At Test	Water Content, %	52.1
	Dry Density, pcf	70.0
	Saturation, %	100.0
	Void Ratio	1.4068
	Diameter, in.	2.42
	Height, in.	4.90
Strain rate, in./min.		0.08
Back Pressure, ksf		0.000
Cell Pressure, ksf		5.000
Fail. Stress, ksf		3.552
Strain, %		9.4
Ult. Stress, ksf		
Strain, %		
σ_1 Failure, ksf		8.552
σ_3 Failure, ksf		5.000

Type of Test:
Unconsolidated Undrained
Sample Type: Mod.Cal.
Description: Stiff,dark grey FAT CLAY(CH)

LL= 91 **PL=** 33 **PI=** 58
Assumed Specific Gravity= 2.70
Remarks:

Figure _____

Client: Geotechnical Consultants,Inc.

Project: Pier 38 Seismic Retrofit
San Francisco,CA.
Location: B-1
Depth: 121-121.5'
Proj. No.: SF12024 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Soil Mechanics Lab
Oakland, California

Tested By: MA _____ **Checked By:** _____

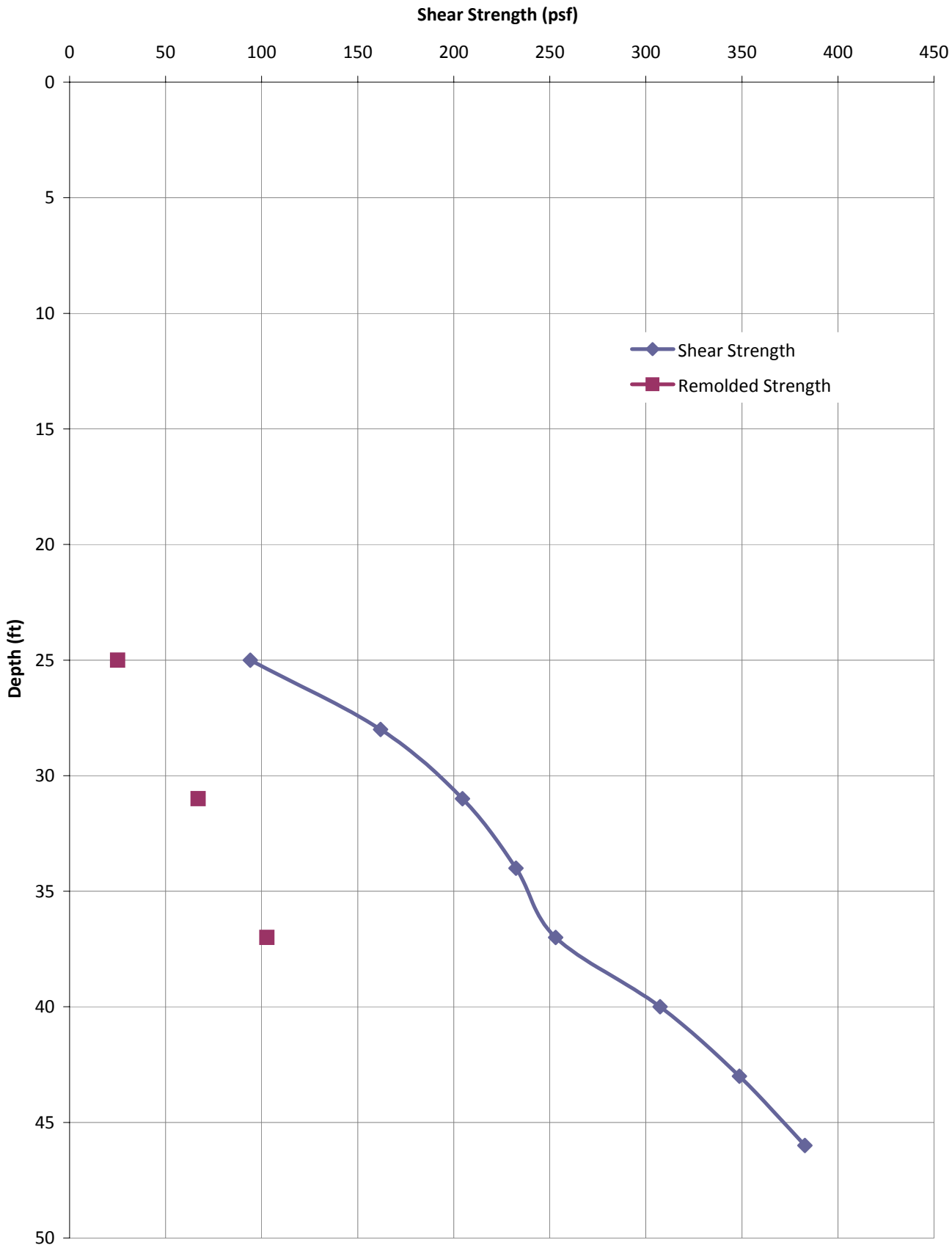
Pier 38 Boring B-1 Vane Shear Test

CLIENT	GTC
SITE	PIER 38
LOCATION	B-1
VANE TYPE	Geonor H-10
VANE DIAMETER, d (mm)	65
VANE LENGTH, l (mm)	130

DEPTH (m)	DEPTH (ft)	PEAK TORQUE READING (Nm)	SHEAR STRENGTH (kN/m^2)	SHEAR STRENGTH (psf)	REMOLDED PEAK DIAL READING (Nm)	REMOLDED SHEAR STRENGTH (kN/m^2)	REMOLDED SHEAR STRENGTH (psf)	SENSITIVITY
7.62	25.00	4.53	4.51	94.09	1.21	1.20	25.01	3.76
8.53	28.00	7.80	7.75	161.88				
9.45	31.00	9.86	9.79	204.56	3.23	3.21	66.94	3.06
10.36	34.00	11.20	11.13	232.37				
11.28	37.00	12.20	12.12	253.07	4.95	4.92	102.71	2.46
12.19	40.00	14.81	14.72	307.39				
13.11	43.00	16.81	16.70	348.74				
14.02	46.00	18.45	18.33	382.85				

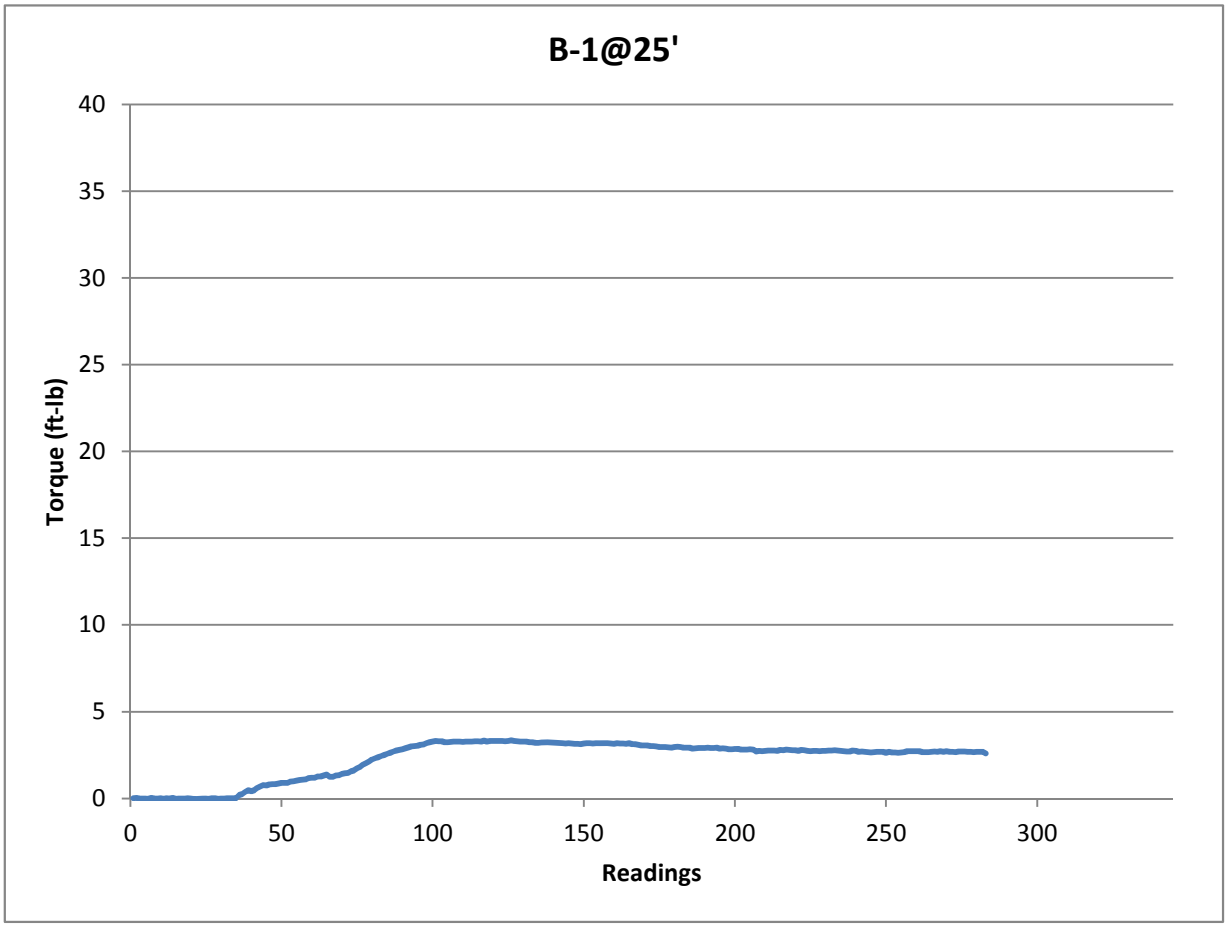
Pier 38 Boring B-1 Vane Shear Test

B-1



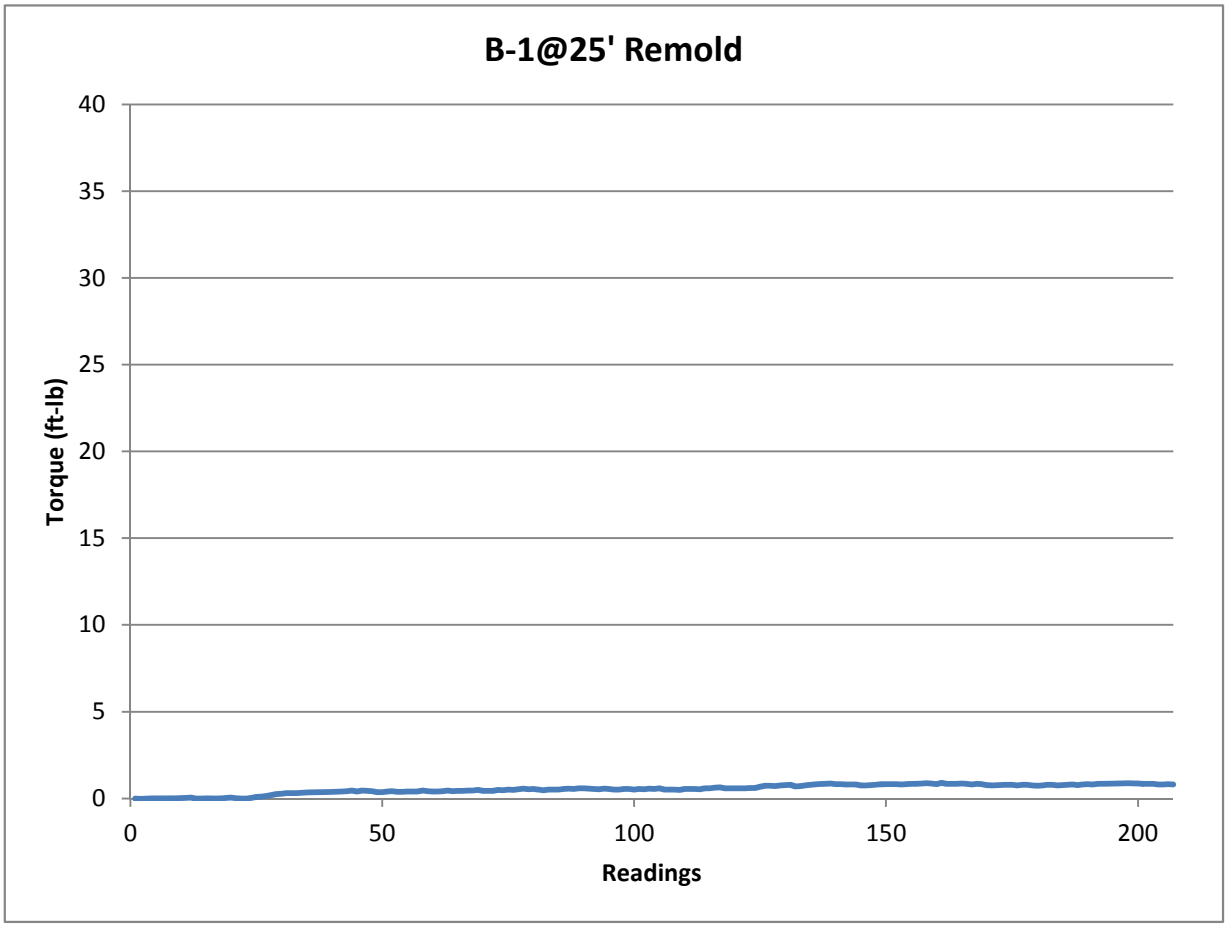
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.61993	-0.38616	0.233775	14.3073	3.344683	4.534722



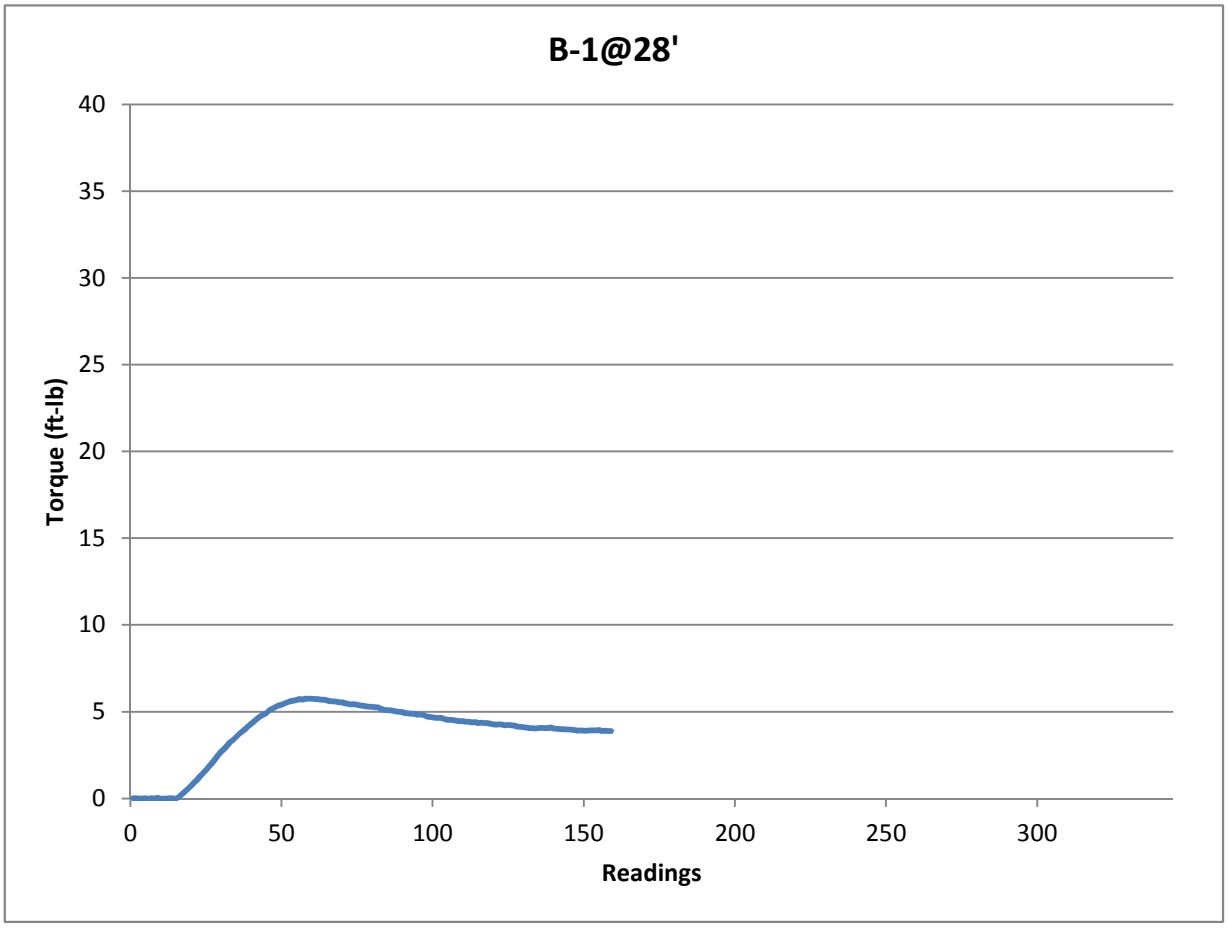
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.6088	-0.54666	0.062138	14.3073	0.88902	1.205334



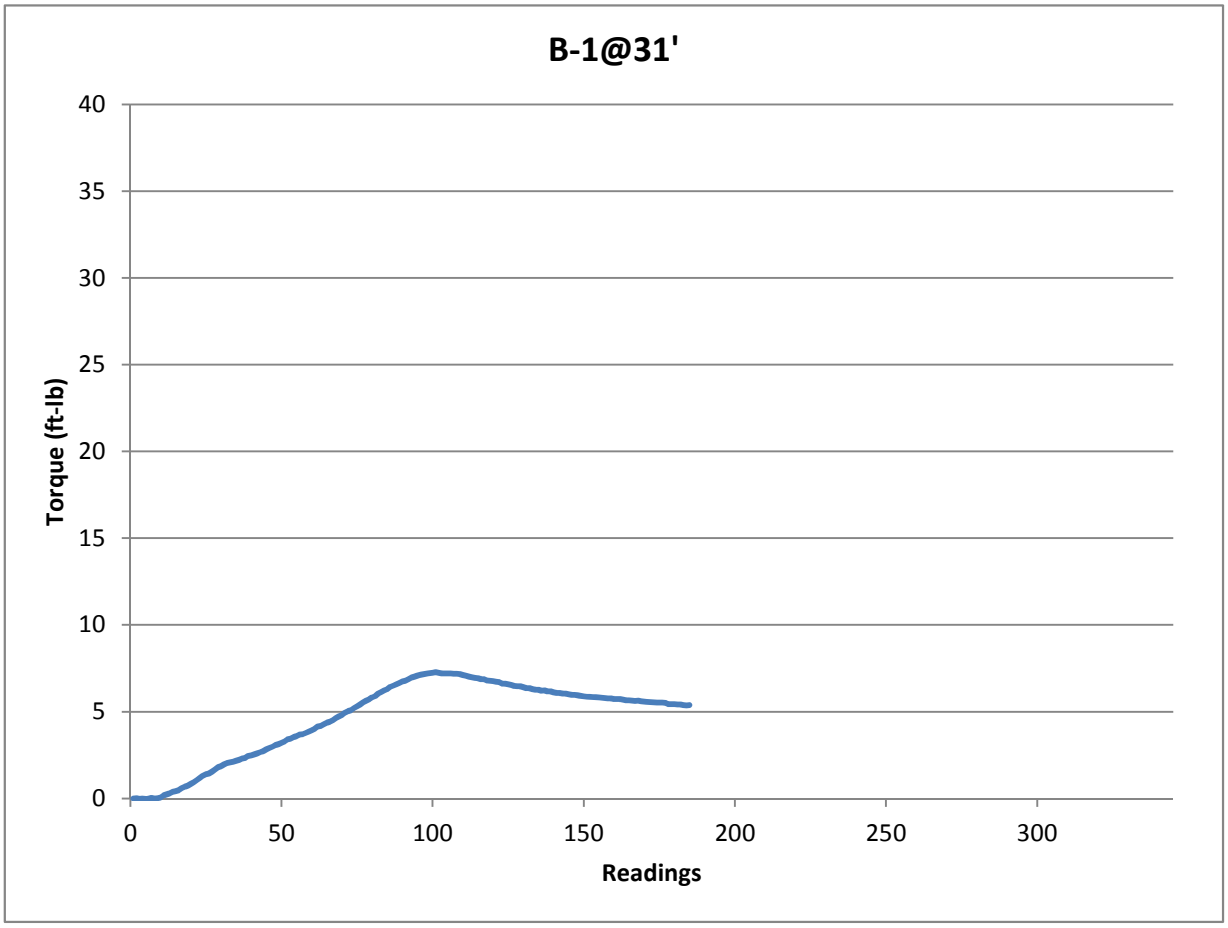
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.62695	-0.22474	0.402203	14.3073	5.754435	7.801863



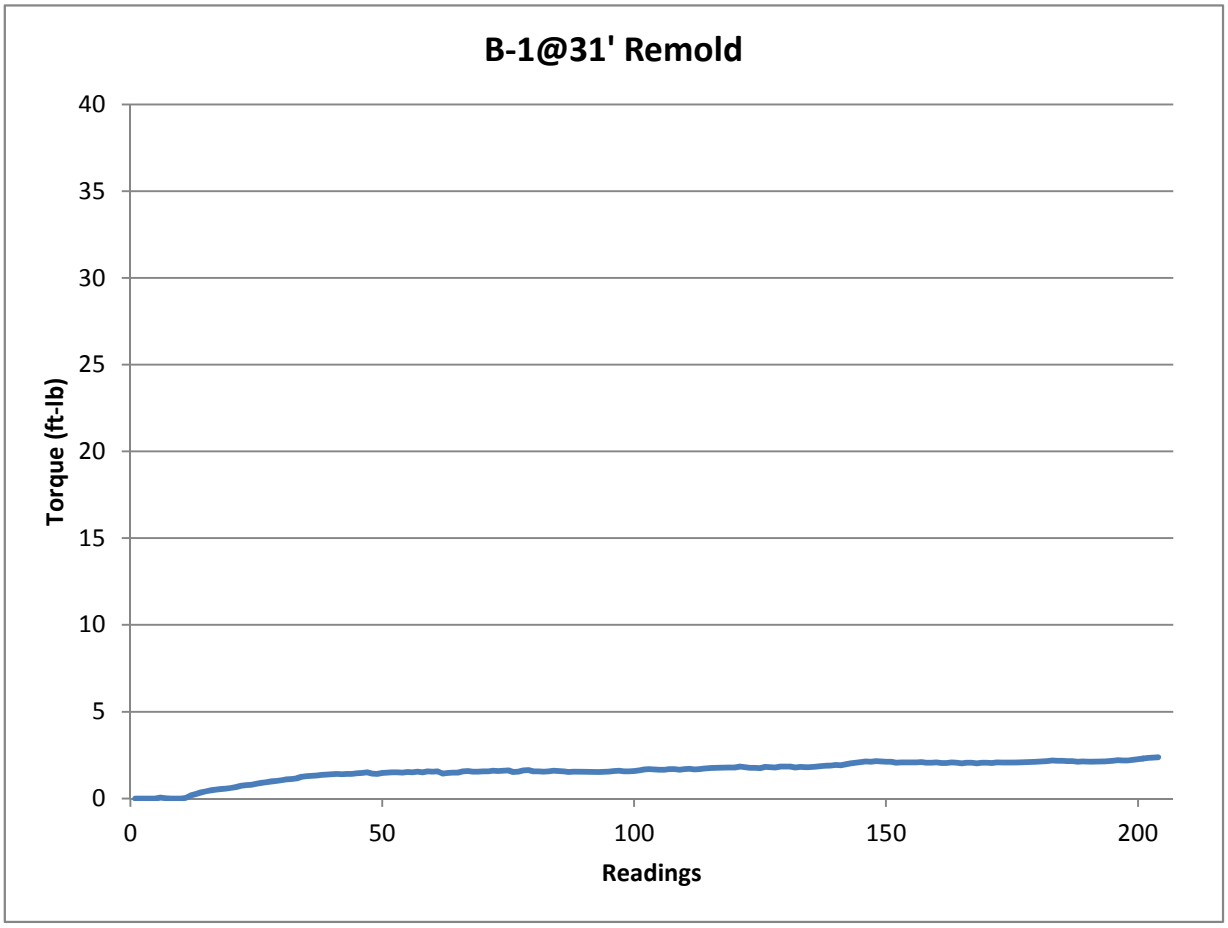
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.60869	-0.10047	0.508218	14.3073	7.271234	9.858339



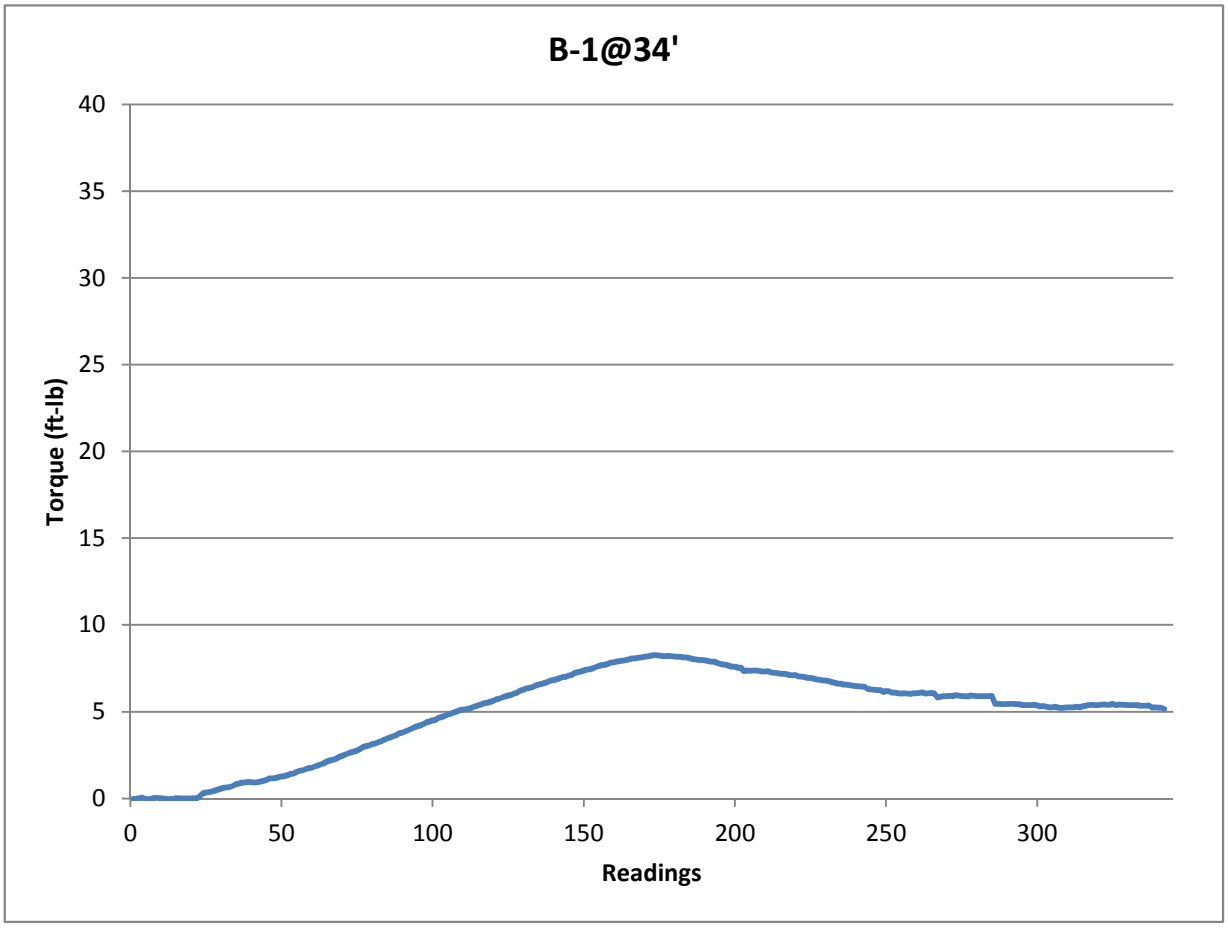
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.6113	-0.44499	0.166316	14.3073	2.379539	3.226178



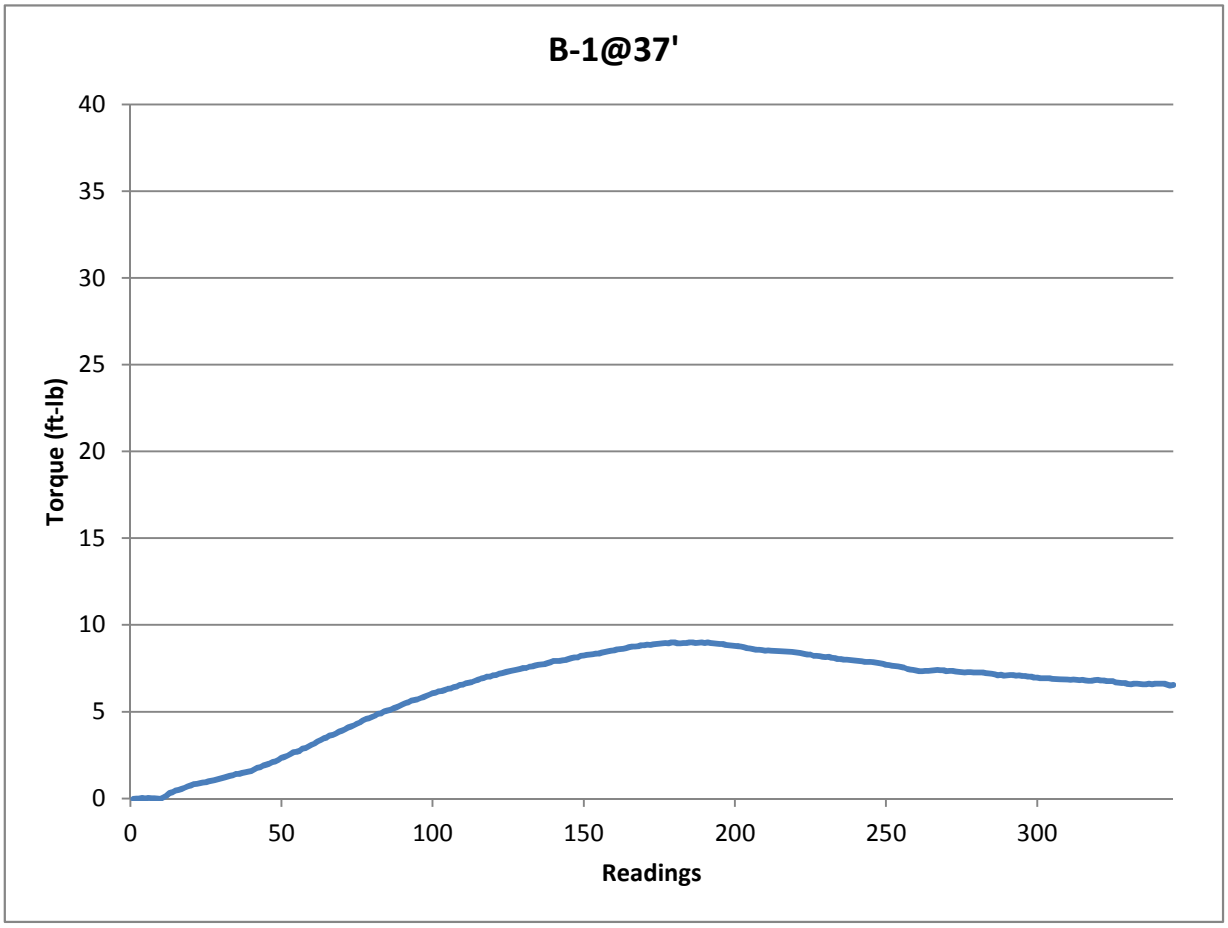
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.61387	-0.03654	0.577334	14.3073	8.260096	11.19904



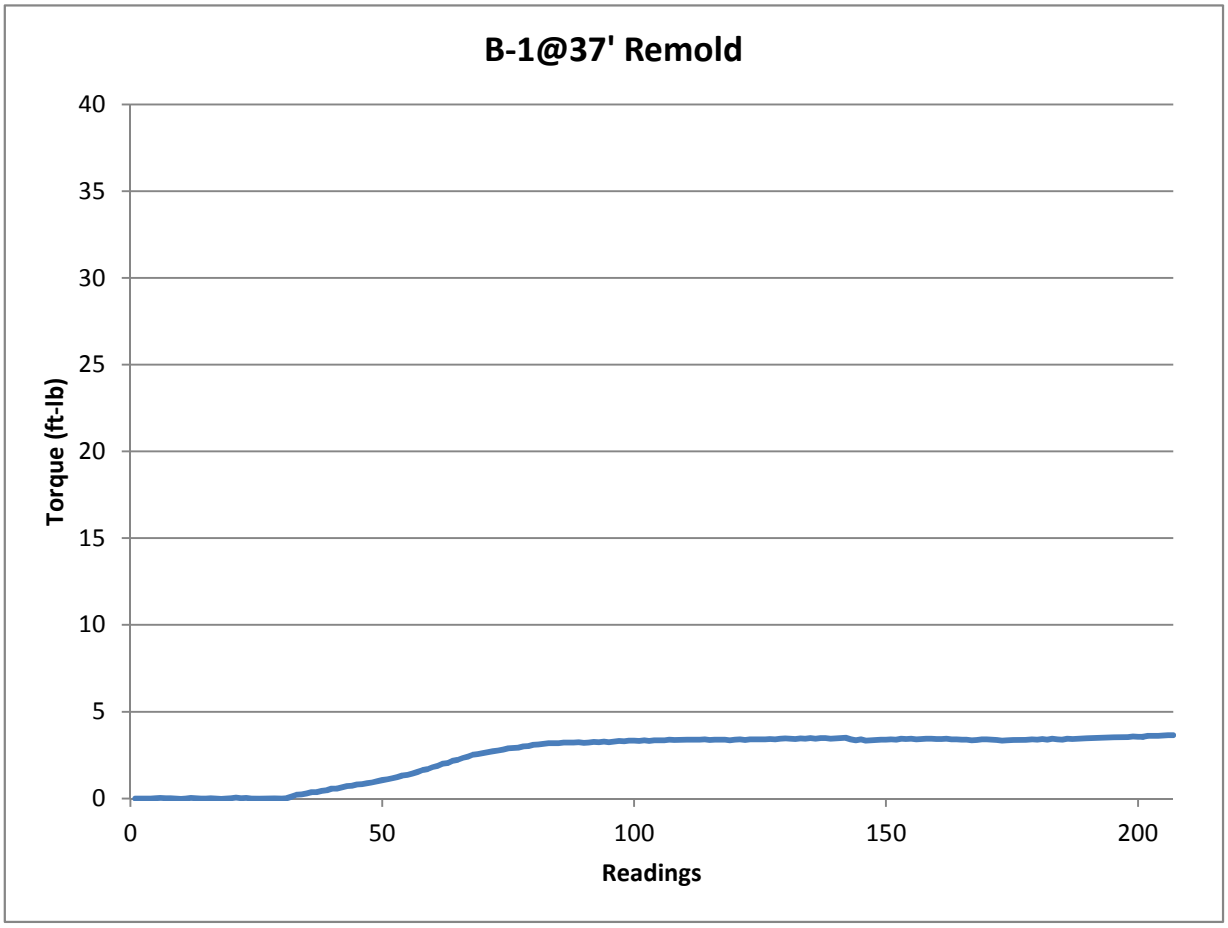
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.61618	0.012579	0.628759	14.3073	8.995838	12.19656



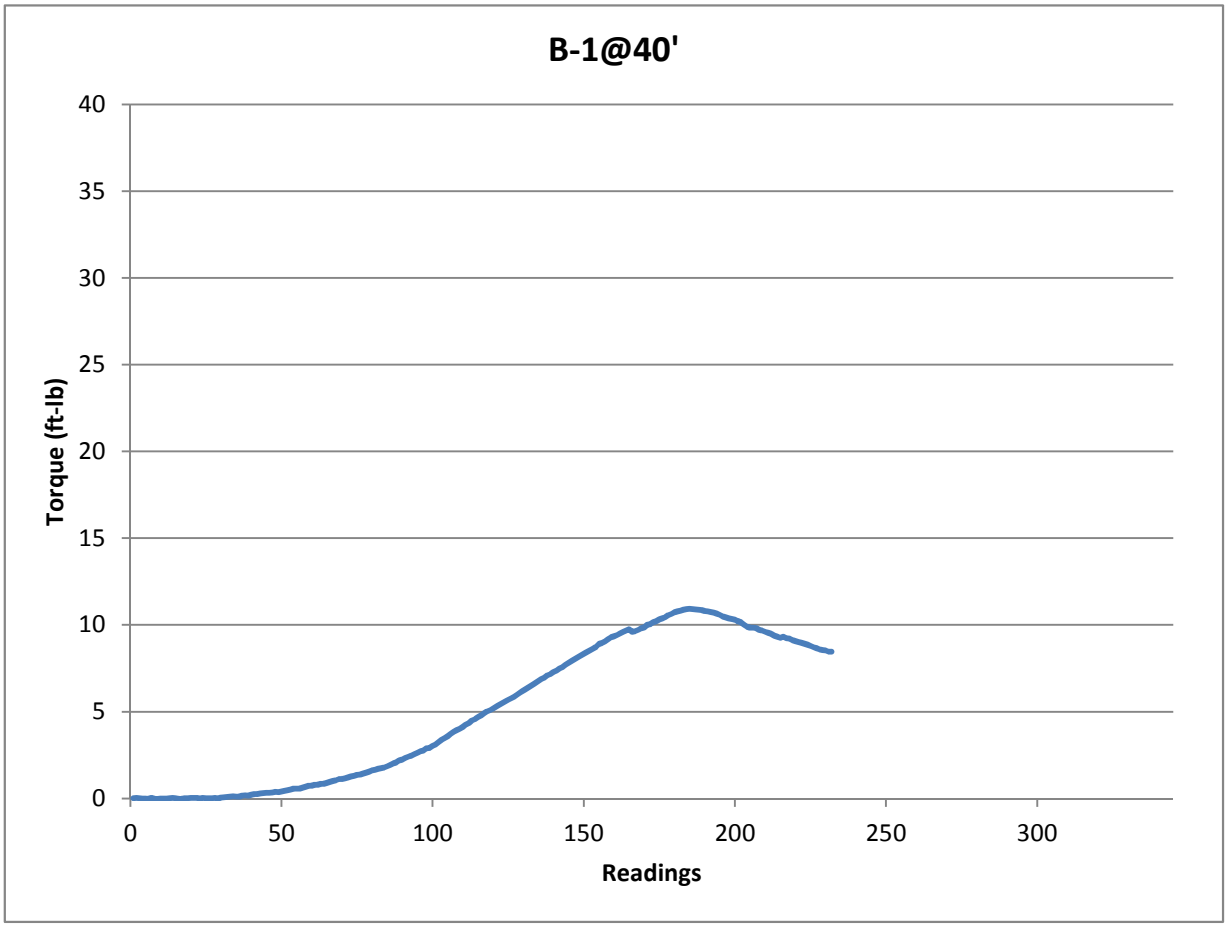
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.6027	-0.34751	0.255191	14.3073	3.651099	4.950161



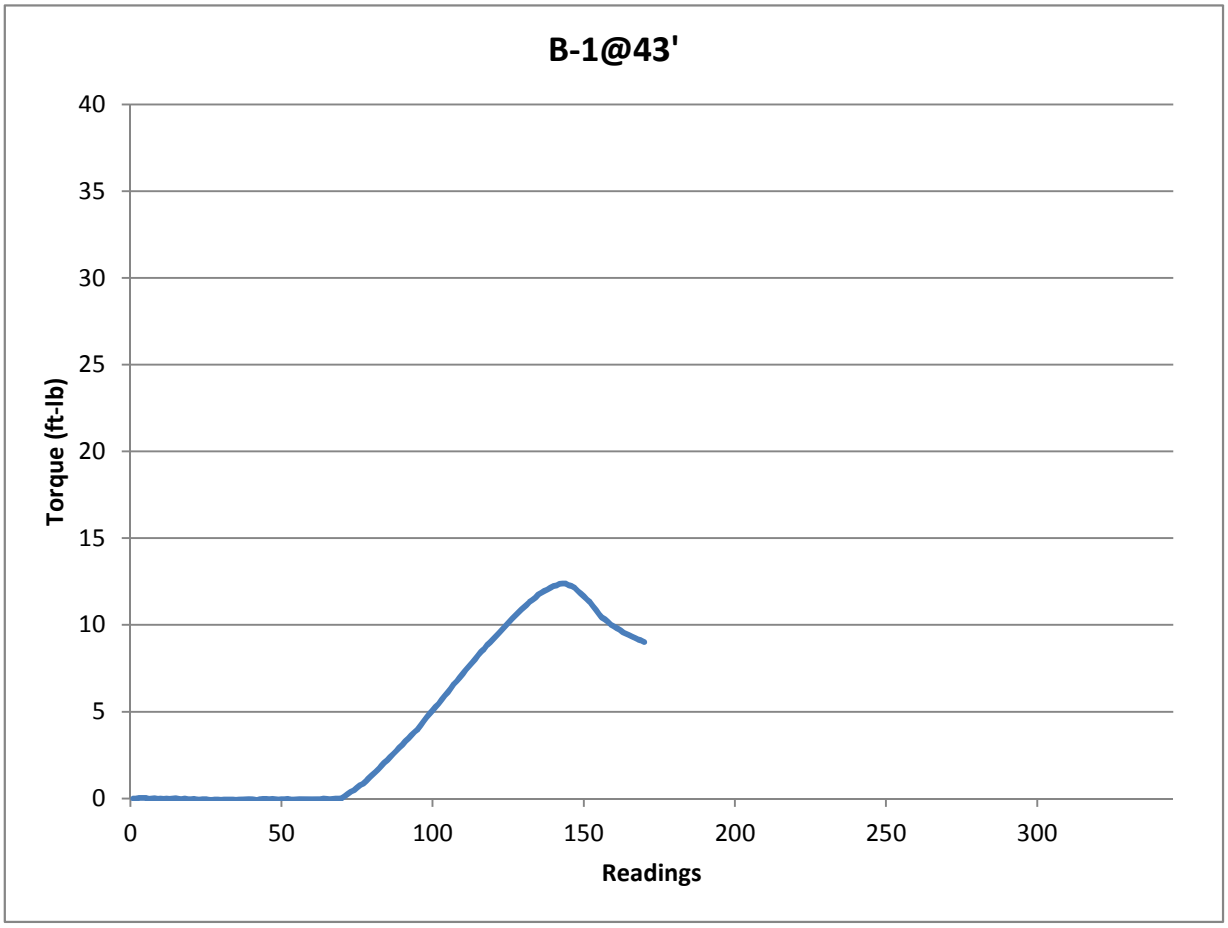
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.6258	0.137915	0.763716	14.3073	10.92671	14.81444



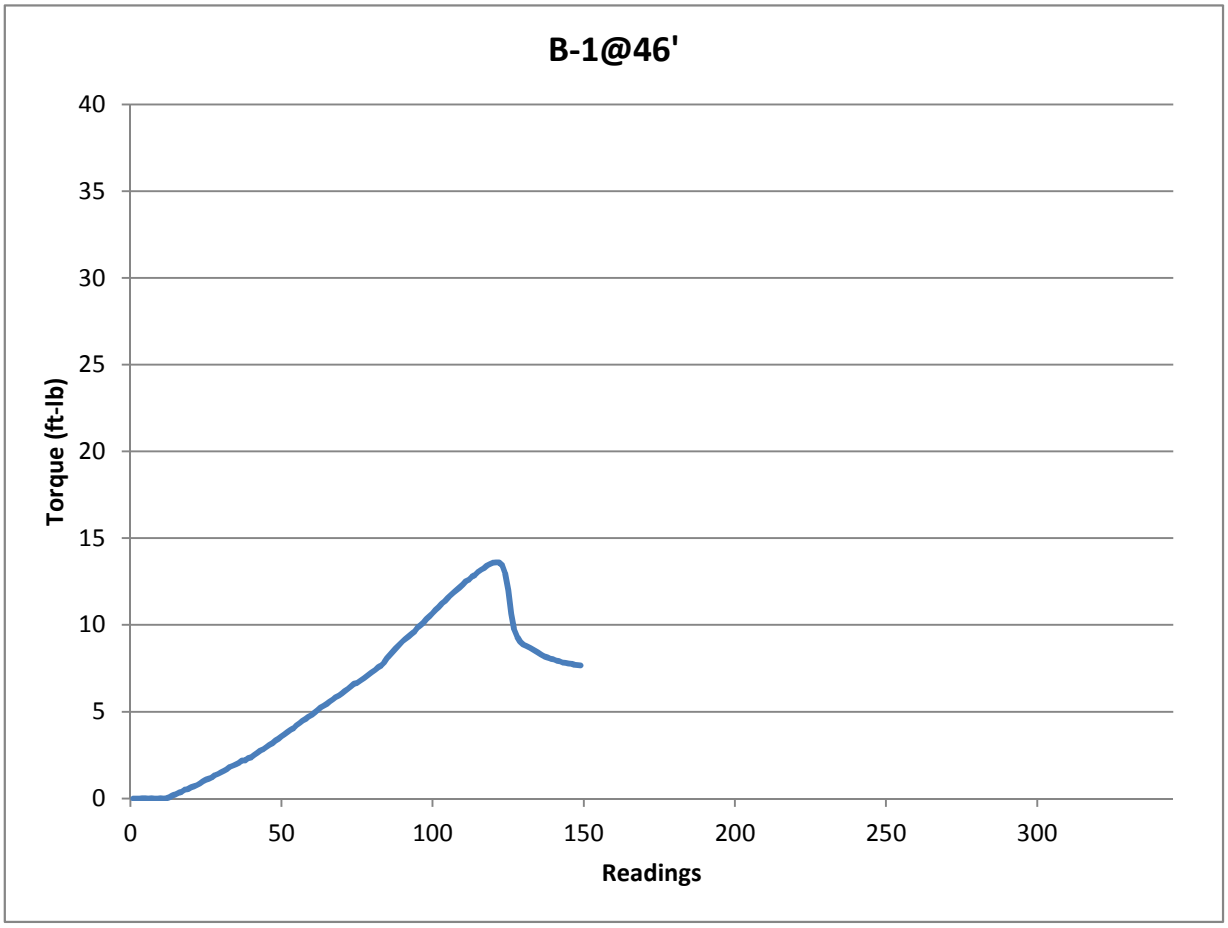
Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.60426	0.262195	0.866453	14.3073	12.3966	16.80732



Pier 38 Boring B-1 Vane Shear Test

Baseline mV	Peak Max mV	Difference mV	Calibration ft-lb/mV	Torque ft-lb	Torque N-m
-0.62295	0.328242	0.951188	14.3073	13.60893	18.45099



ATTACHMENT 2
ACCELERATION RESPONSE SPECTRA

ACCELERATION RESPONSE SPECTRA

We evaluated the mapped and site-specific horizontal acceleration response spectra (ARS) at 5% of critical damping for the purpose of seismic design in accordance with the Port of San Francisco Seismic Engineering Standard for Piers, Wharfs and Seawall Structures (POSF, 2012), herein referred to as the POSF Standard, and pertinent sections of ASCE 7-10, IBC 2012, and CBC 2010 as referenced in the POSF Standard. The site-specific ARS were developed for the risk-targeted Maximum Considered Earthquake (MCE_R) and Design levels, herein referred to in accordance with the POSF Standard as, Basic Safety Earthquake 2 (BSE-2) and BSE-1, respectively. At the Basic Safety Earthquake - Reduced (BSE-R) level, the site-specific ARS were developed for a uniform hazard level based on a 20% probability of exceedance within a 50-year period. The mapped risk-targeted horizontal ARS at 5% of critical damping were evaluated for BSE-2 and BSE-1 levels using the U.S. Seismic Design Maps Web Application (USGS, 2012) with references to ASCE 7-10, IBC 2012, and NEHRP 2009 codes. The USGS web application was developed based on the 2008 USGS seismic hazards database.

At the request of the structural designer, the ARS were developed at the bottom of the foundation elements for the Pier 38 offshore pier and at the ground surface for the Pier 38 bulkhead building. We understand that the structural designer will incorporate the response of the pier foundations within their structural model using soil springs to account for the soft, Young Bay Mud. The ARS at 5% of critical damping recommended for the BSE-2, BSE-1, and BSE-R seismic hazard levels for conceptual-level seismic retrofit design are included as **Figure A1.1** and **Figure A1.2** for the offshore pier and bulkhead building, respectively. The ARS are also tabulated in **Table A1.1** and **Table A1.2** for the offshore pier and bulkhead building, respectively. The site-specific and mapped horizontal ARS at 5% of critical damping are presented for the base of the foundation system at the offshore pier in **Figure A2.1** and at the ground surface of the bulkhead building in **Figure A2.2**. The determination of site-specific horizontal ARS at 5% of critical damping for BSE-2 is presented for the each of the two project sites in **Figure A3.1** and **Figure A3.2**.

SITE-SPECIFIC PROBABILISTIC SEISMIC HAZARD ASSESSMENT

Probabilistic seismic hazard assessment (PSHA) calculates the seismic hazard at the project site by combining the probabilities of earthquake scenarios of different magnitudes and site-to-fault distances with predictions of the resulting ground motion intensity (McGuire, 2004; Kramer, 1996). Uncertainties in ground motion predictions are addressed in the Next Generation Attenuation (NGA) ground motion prediction equations (GMPEs) which are documented in EERI (2008). Aleatory (random) uncertainties are treated by considering earthquake events with all possible magnitudes and distances. Epistemic uncertainties (due to inadequate knowledge) are accounted for in the GMPEs through a logic tree that assigns a specific weight to each of the

GMPEs (Petersen et al., 2008). Uncertainties in earthquake scenarios and GMPEs are incorporated in the PSHA.

PSHA at 5% of critical damping was carried out to evaluate the horizontal (geometric mean) spectral ground accelerations in accordance with the 2008 update of the U.S. National Seismic Hazard Maps (NSHM) (Petersen et al., 2008) and the companion 2008 NSHM PSHA interactive seismic de-aggregation available at https://geohazards.usgs.gov/deaggint/2008/index.php. In accordance with ASCE 7-10, the geometric mean ground spectral acceleration which was evaluated for the 2,475-year return period (2% probability of exceedance within a 50-year period) was converted to the probabilistic spectral response acceleration in the direction of maximum horizontal response at a risk-targeted level of 1% probability of collapse within a 50-year period. Factors ranging from 1.1 at periods below 0.2 second and 1.3 at periods above 1 second were used to convert the geometric mean ground spectral acceleration to the maximum rotated component of ground motion for the various seismic hazard levels. Also, site-specific risk coefficients ranging from 1.076 at periods below 0.2 second (C_{RS}) and 1.020 at periods above 1 second (C_{R1}) were used in converting spectral acceleration from a uniform hazard level based on a 2,475-year return period to a risk-targeted level of 1% probability of collapse within a 50-year period.

Estimated average shear wave velocities for the upper 30 m were used to generate the site-specific risk-targeted probabilistic spectral accelerations in the direction of maximum horizontal response. Based on site-specific data from our geotechnical exploration and laboratory testing program as well as data from adjacent sites (Pier 30/32, Brannan Street Wharf, South Beach Harbor), an average shear wave velocity of 230 m/s was estimated for the 30 m of subsoil located beneath the pier tip (bottom) at the offshore piers. In the absence of a site-specific boring at the bulkhead building, an average shear wave velocity of 270 m/s (approximately within the average of Site Class D) for the upper 30 m of subsoil beneath the building was estimated. This estimate is based on a relatively dense/stiff fill from historic dredging activities and seawall construction in the project vicinity.

Results from the site-specific PSHA at 5% of critical damping are presented for the risk-targeted level of 1% probability of collapse within a 50-year period as part of the determination of BSE-2 in **Figure A3.1** and **Figure A3.2**, and for the BSE-R level corresponding to a 20% probability of exceedance within a 50-year period in **Figure A2.1** and **Figure A2.2**.

DETERMINISTIC SEISMIC HAZARD ASSESSMENT

Deterministic seismic hazard assessment (DSHA) was performed for the project sites to develop site-specific horizontal ARS at 5% of critical damping for the maximum earthquake from a Moment Magnitude (M_w) M8.0 earthquake along a local segment of the San Andreas Fault using the closest source-to-site distance to the San Andreas Fault (POSF, 2012: Section

2.3.1.1.2). Based on the 2008 USGS fault database, a source-to-site site distance of 13.6 km was used in conjunction with the M8.0 earthquake for the Northern San Andreas Fault segment.

As in the case of PSHA, average site-specific shear wave velocities of 230 m/s (beneath foundations of offshore piers) and 270 m/s (bulkhead building) were estimated for the upper 30 m of subsurface materials. DSHA was carried out by assigning equal weighting to each of the four 2008 Next Generation Attenuation Ground Motion Predictive Equations (2008 NGA GMPEs): Abrahamson-Silva (AS08), Boore-Atkinson (BA08), Campbell-Bozorgnia (CB08) and Chiou-Youngs (CY08). The 2008 NGA GMPEs yielded geometric mean deterministic spectral accelerations at the 84th percentile level. Similar to the PSHA, factors ranging from 1.1 at periods below 0.2 second and 1.3 at periods above 1 second were used to convert the geometric mean ground spectral acceleration to the maximum rotated component of ground motion. Near-fault directivity effects were considered but were not included in the acceleration response spectra since the effects are considered to be small given the source-to-site distance of 13.6 km.

Results from the DSHA are presented for the project sites in **Figure A3.1** and **Figure A3.2** for the 84th percentile horizontal site-specific deterministic spectra at 5% of critical damping for the Northern San Andreas (M8.0) fault.

SITE-SPECIFIC AND MAPPED GROUND ACCELERATION RESPONSE SPECTRA

Site-Specific Horizontal Response Spectra (5% of Critical Damping):

In accordance with the POSF Standard and the pertinent sections of ASCE 7-10, IBC 2012 and CBC 2010 as referenced in the POSF Standard, BSE-2 (5% of critical damping) at a given period was determined based on the lesser of the 84th percentile deterministic spectral acceleration except as modified by the deterministic lower limit and the risk-targeted probabilistic spectral acceleration at a 1% in 50-year probability of collapse. The determination of BSE-2 spectra for the project sites are presented in **Figure A3.1** and **Figure A3.2**. The site-specific horizontal design (BSE-1) spectral acceleration (5% of critical damping) at a given period was determined as 2/3 times BSE-2 spectral acceleration. Site-specific deterministic BSE-2 and BSE-1 spectra should be compared with the deterministic lower limits in accordance with Sections 11.4.5 and 11.4.6 of ASCE 7-10. In accordance with Section 21.3 of ASCE 7-10, site-specific deterministic BSE-1 spectra should be compared with the lower limits corresponding to 80% of the mapped design spectra. BSE-R spectra were developed based on a 20% probability of exceedance within a 50-year period. The site-specific horizontal acceleration response spectra at 5% of critical damping for BSE-2, BSE-1 and BSE-R levels are presented in **Figure A1.1** and **Figure A1.2**, and summarized in **Table A1.1** and **Table A1.2**.

Mapped Horizontal Response Spectra (5% of Critical Damping):

In addition to site-specific BSE-2 and BSE-1 acceleration response spectra, mapped MCE_R and design acceleration response spectra were evaluated at 5% of critical damping for the project sites. The mapped design horizontal spectral accelerations were evaluated in accordance with ASCE 7-10, using the U.S. Seismic Design Maps Web Application (USGS, 2012) which required as input the site locations (coordinates) and site classification. Based on the estimated site-specific average shear wave velocities in the upper 30 m of subsurface materials, Site Class "D" was designated for the project sites. The mapped risk-targeted horizontal MCE_R at a specific period was determined by multiplying the corresponding design horizontal spectral acceleration with a factor of 1.5.

The mapped risk-targeted horizontal MCE_R acceleration response spectra are also presented for comparison with the corresponding site-specific risk-targeted horizontal MCE_R in **Figure A2.1** and **Figure A2.2**.

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TABLE A1.1 - SITE-SPECIFIC ARS AT FOUNDATION BOTTOM OF PIER 38 OFFSHORE PIERS

Period (s)	Site-Specific Risk-Targeted Horizontal Spectral Ground Acceleration, 5% of Critical Damping (g)		
	Site-Specific BSE-2 [1]	Site-Specific BSE-1 [1]	Site-Specific BSE-R
0	0.601	0.401	0.416
0.01	0.675	0.450	0.418
0.02	0.750	0.500	
0.03	0.825	0.550	
0.04	0.900	0.600	
0.05	0.975	0.650	
0.075	1.163	0.775	
0.1	1.350	0.900	0.707
0.12	1.500	1.000	
0.15	1.500	1.000	
0.2	1.500	1.000	0.908
0.25	1.500	1.000	
0.3	1.500	1.000	0.932
0.4	1.500	1.000	
0.5	1.500	1.000	0.864
0.6	1.500	1.000	
0.75	1.200	0.800	
1.0	1.099	0.733	0.656
1.5	0.913	0.609	
2.0	0.764	0.510	0.375
3.0	0.553	0.369	0.241
4.0	0.410	0.274	0.172
5.0	0.325	0.216	0.137

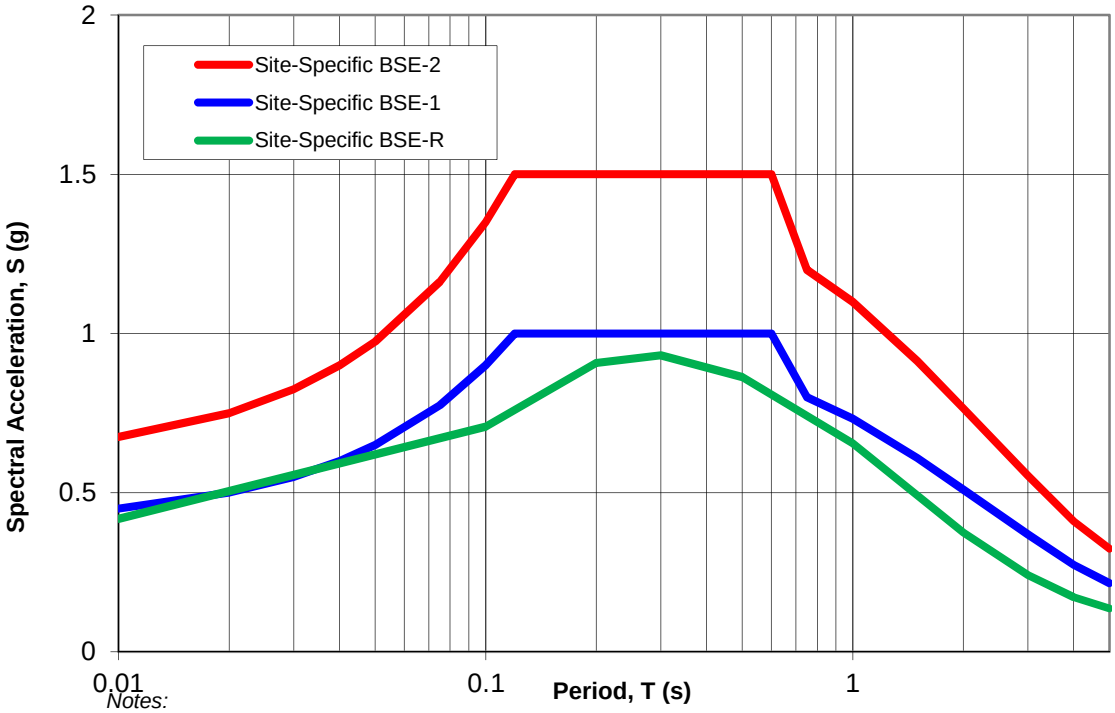
Note: [1] Spectra developed based on Site Class D with V_{s30} of 230 m/s for the 30 m of soil below the pier bottom.

TABLE A1.2 - SITE-SPECIFIC ARS AT GROUND SURFACE OF PIER 38 BULKHEAD BUILDING

Period (s)	Site-Specific Risk-Targeted Horizontal Spectral Ground Acceleration, 5% of Critical Damping (g)		
	Site-Specific BSE-2 [1]	Site-Specific BSE-1 [1]	Site-Specific BSE-R
0	0.601	0.401	0.423
0.01	0.675	0.450	0.424
0.02	0.750	0.500	
0.03	0.825	0.550	
0.04	0.900	0.600	
0.05	0.975	0.650	
0.075	1.163	0.775	
0.1	1.350	0.900	0.731
0.12	1.500	1.000	
0.15	1.500	1.000	
0.2	1.500	1.000	0.926
0.25	1.500	1.000	
0.3	1.500	1.000	0.938
0.4	1.500	1.000	
0.5	1.500	1.000	0.857
0.6	1.500	1.000	
0.75	1.200	0.800	
1.0	1.076	0.717	0.626
1.5	0.859	0.572	
2.0	0.696	0.464	0.339
3.0	0.494	0.329	0.216
4.0	0.364	0.243	0.154
5.0	0.287	0.191	0.121

Note: [1] Spectra developed based on average Site Class D with V_{s30} of 270 m/s for the upper 30 m of soil.

Pier 38 Project: Site-Specific Horizontal ARS (5% Damping)

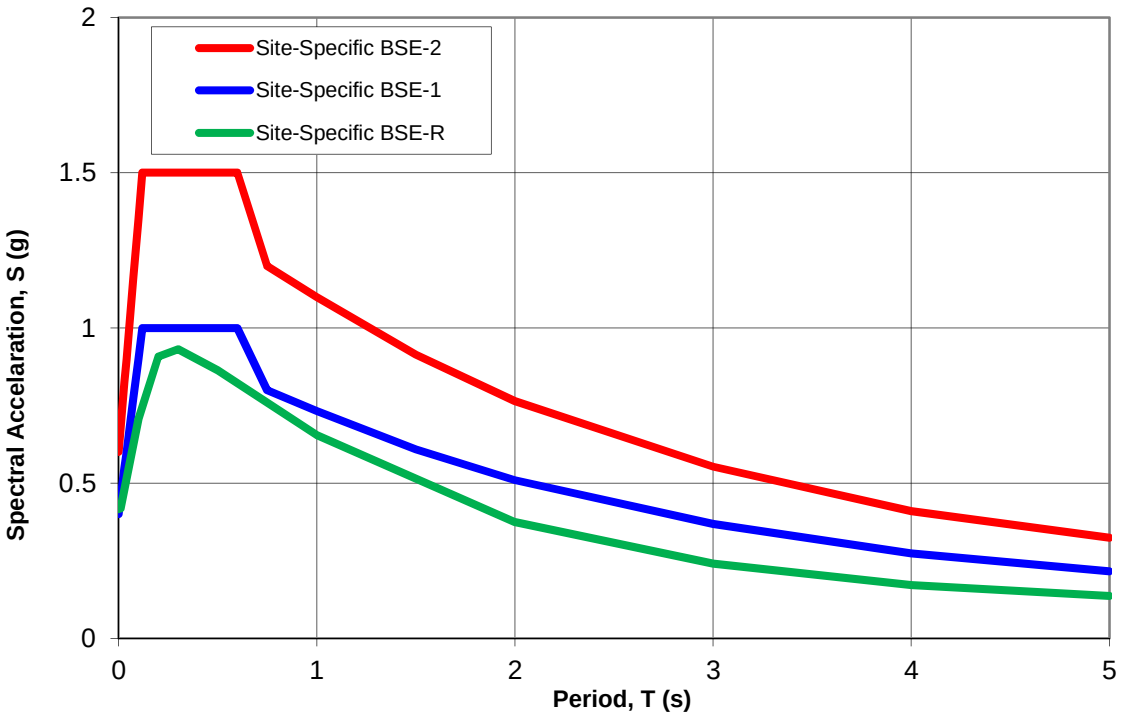


Notes:

1. Site-specific risk-targeted deterministic and probabilistic in accordance with ASCE 7-10 and POSF 2012.

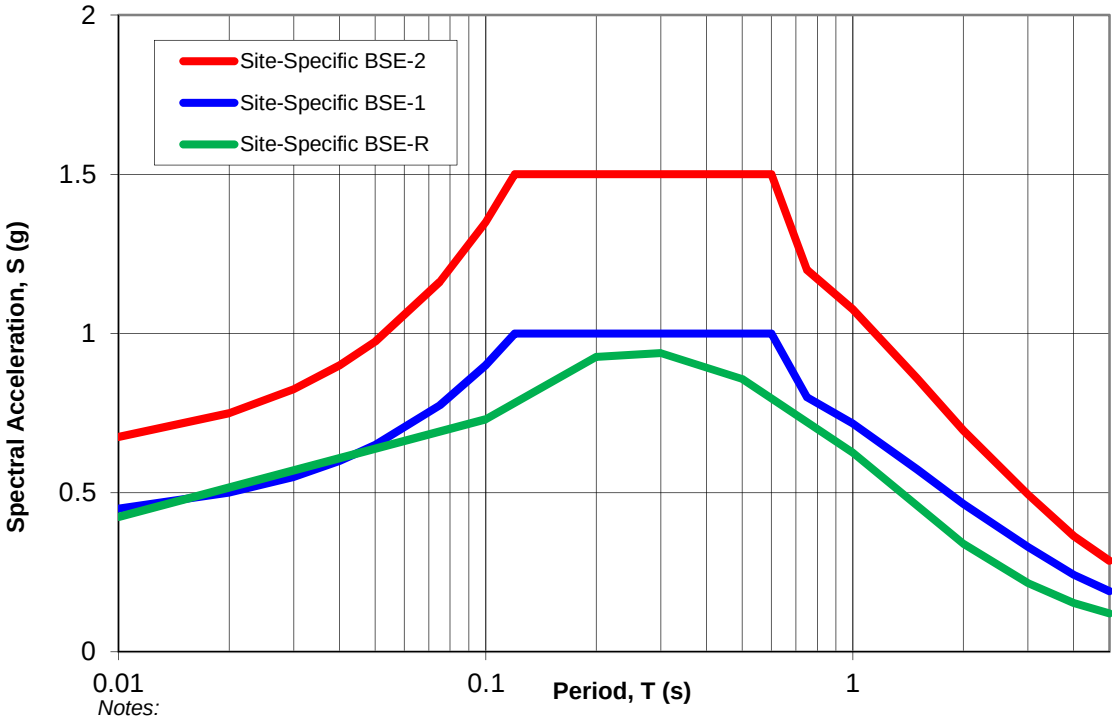
2. Spectra developed assuming Site Class D and/or Vs = 230 m/s for the 30 m of soil below pier bottom.

Pier 38 Project: Site-Specific Horizontal ARS (5% Damping)



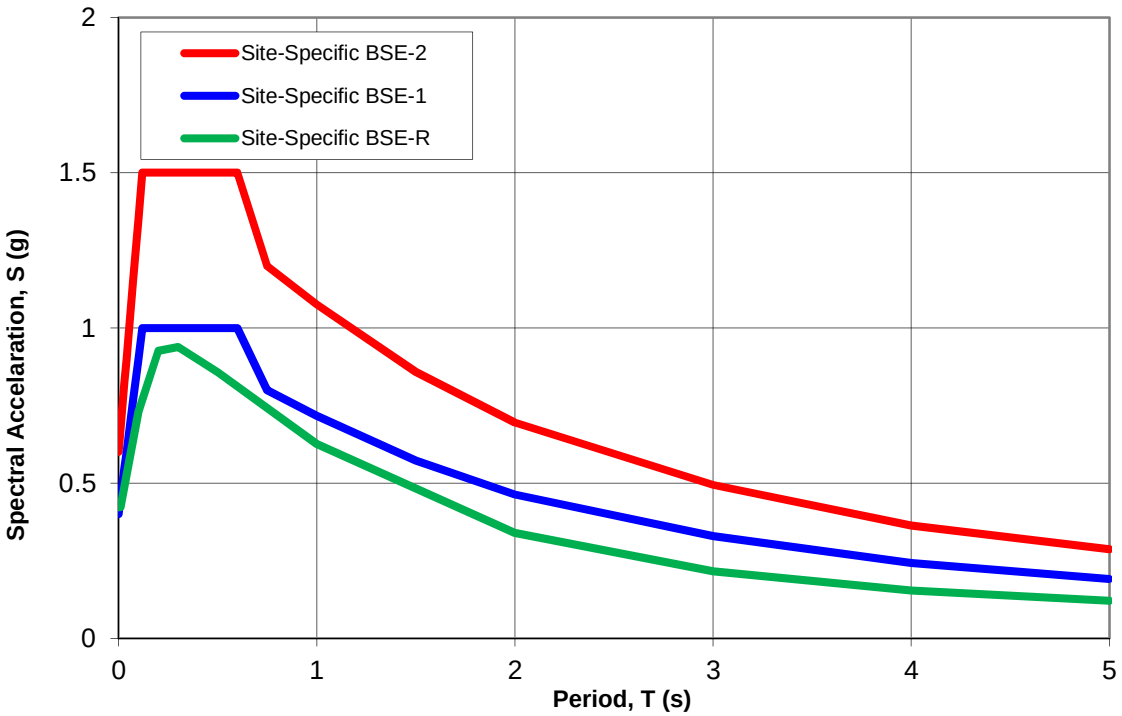
GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	SITE-SPECIFIC HORIZONTAL ARS (5% DAMPING): OFFSHORE PIERS	FIGURE
	PIER 38 PROJECT	A1.1
	JANUARY 2013	SF12024

Pier 38 Project: Site-Specific Horizontal ARS (5% Damping)



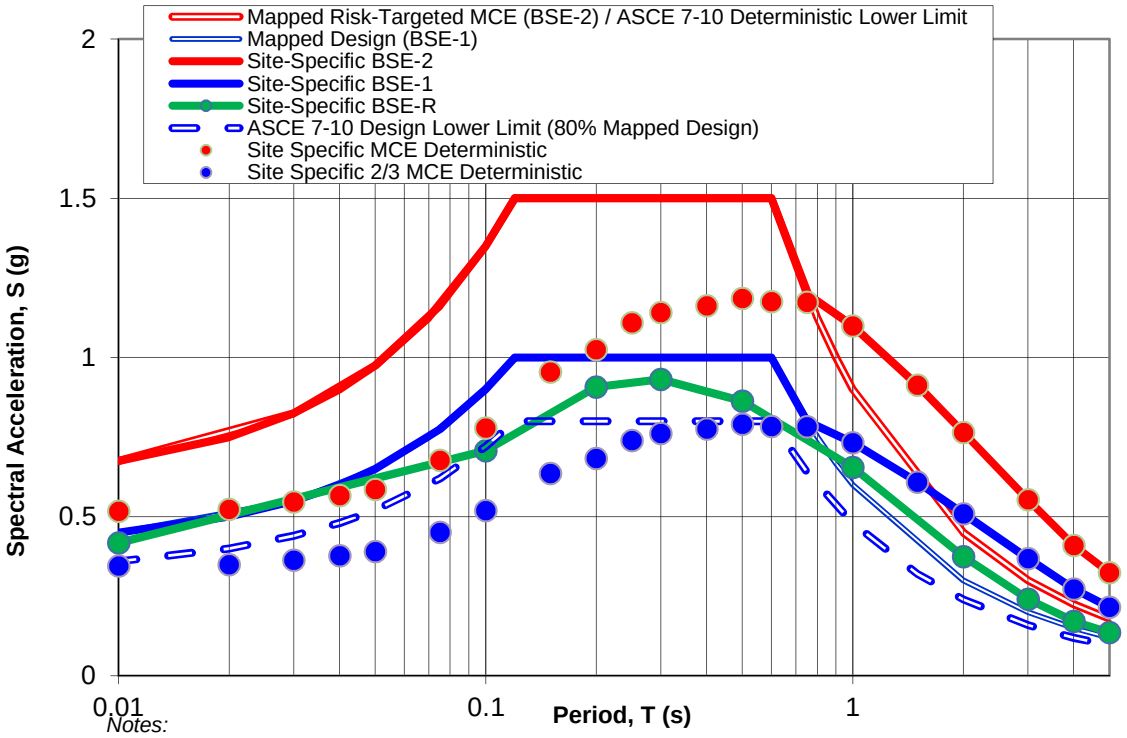
Notes:
1. Site-specific risk-targeted deterministic and probabilistic in accordance with ASCE 7-10 and POSF 2012.
2. Spectra developed assuming average Site Class D and/or Vs = 270 m/s for upper 30 m of soil.

Pier 38 Project: Site-Specific Horizontal ARS (5% Damping)



GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	SITE-SPECIFIC HORIZONTAL ARS (5% DAMPING): BULKHEAD BUILDING	FIGURE
	PIER 38 PROJECT	A1.2
	JANUARY 2013	SF12024

Pier 38 Project: Mapped and Site-Specific Horizontal ARS (5% Damping)

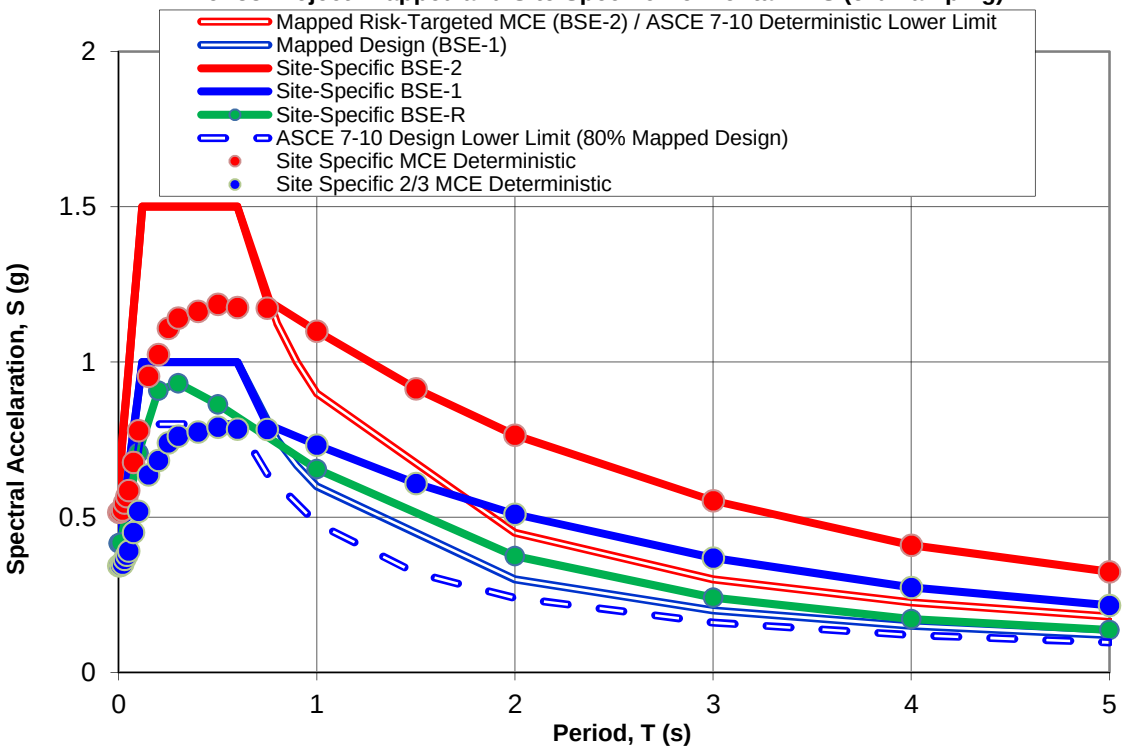


Notes:

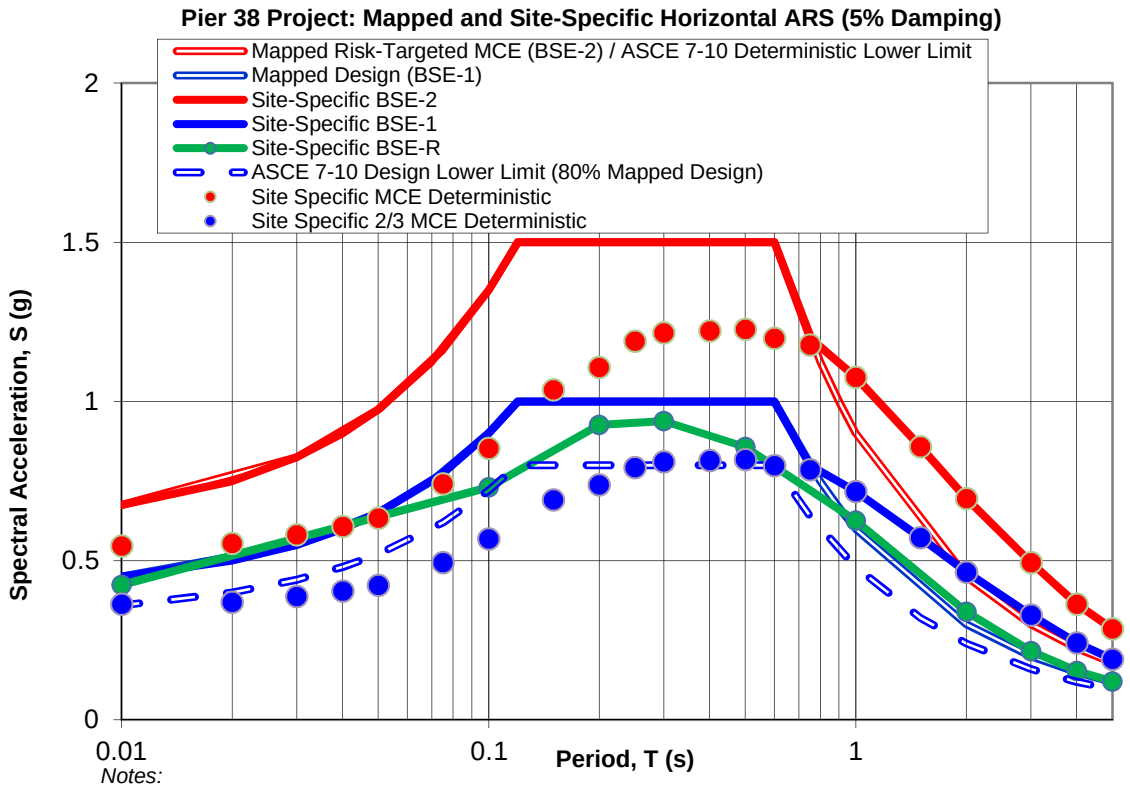
1. Site-specific risk-targeted deterministic and probabilistic in accordance with ASCE 7-10 and POSF 2012.

2. Spectra developed assuming Site Class D and/or Vs = 230 m/s for the 30 m of soil below pier bottom.

Pier 38 Project: Mapped and Site-Specific Horizontal ARS (5% Damping)



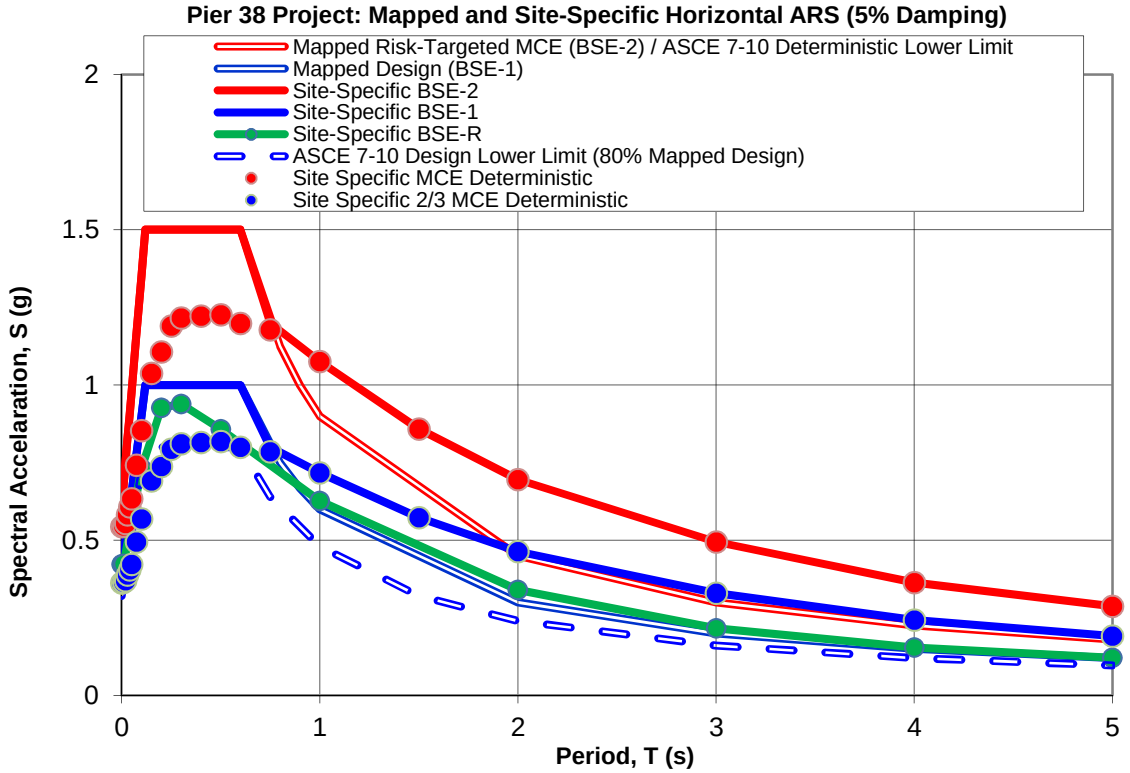
GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	**MAPPED & SITE-SPECIFIC HORIZONTAL ARS (5% DAMPING): OFFSHORE PIERS**	**FIGURE**
	PIER 38 PROJECT	**A2.1**
	JANUARY 2013	**SF12024**



Notes:

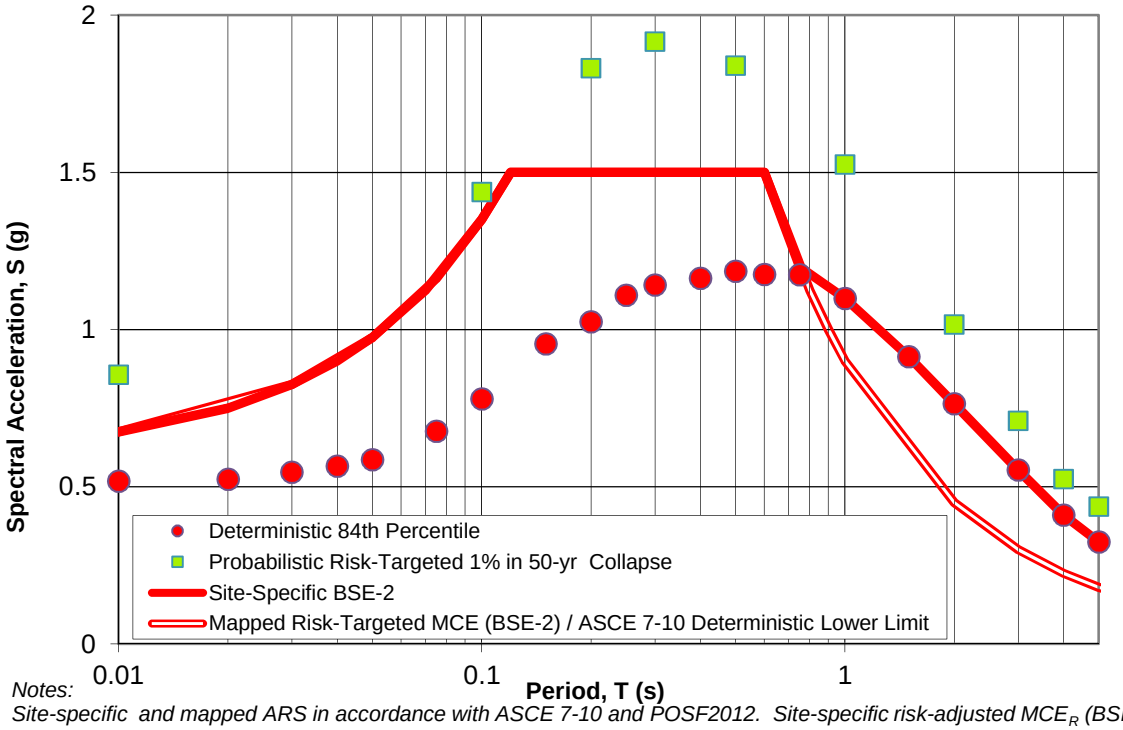
1. Site-specific risk-targeted deterministic and probabilistic in accordance with ASCE 7-10 and POSF 2012.

2. Spectra developed assuming average Site Class D and/or Vs = 270 m/s for upper 30 m of soil.



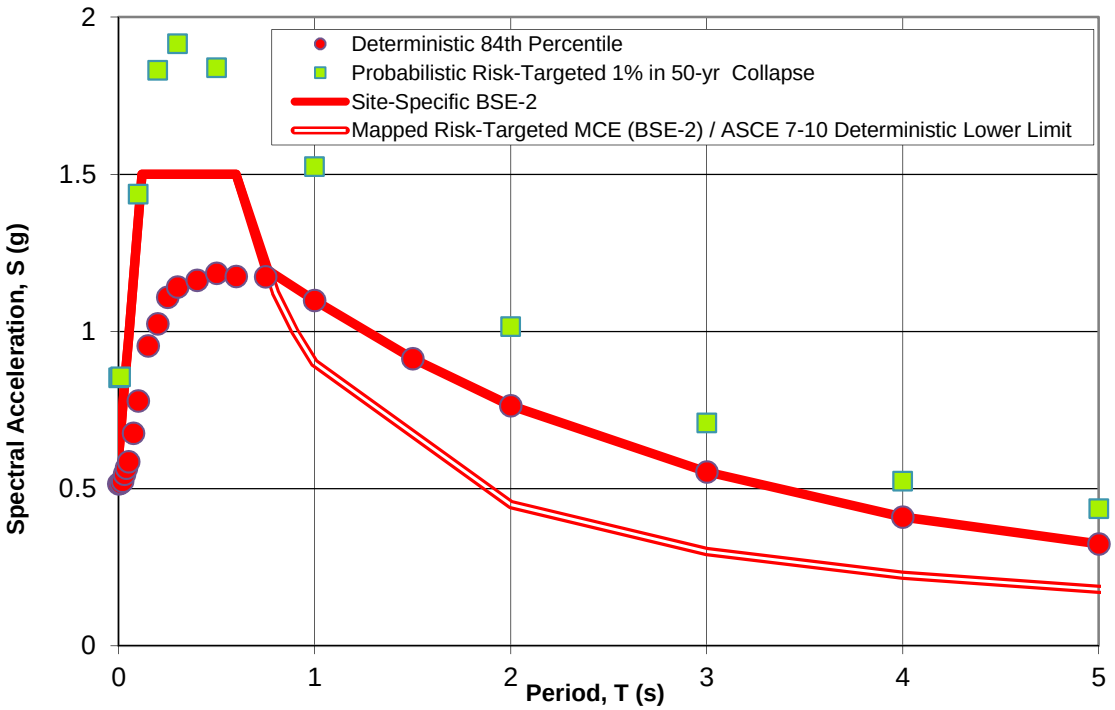
GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	MAPPED & SITE-SPECIFIC HORIZONTAL ARS (5% DAMPING): BULKHEAD BUILDING	FIGURE
	PIER 38 PROJECT	A2.2
	JANUARY 2013	SF12024

Pier 38 Project: Site-Specific ARS Determination (5% Damping)



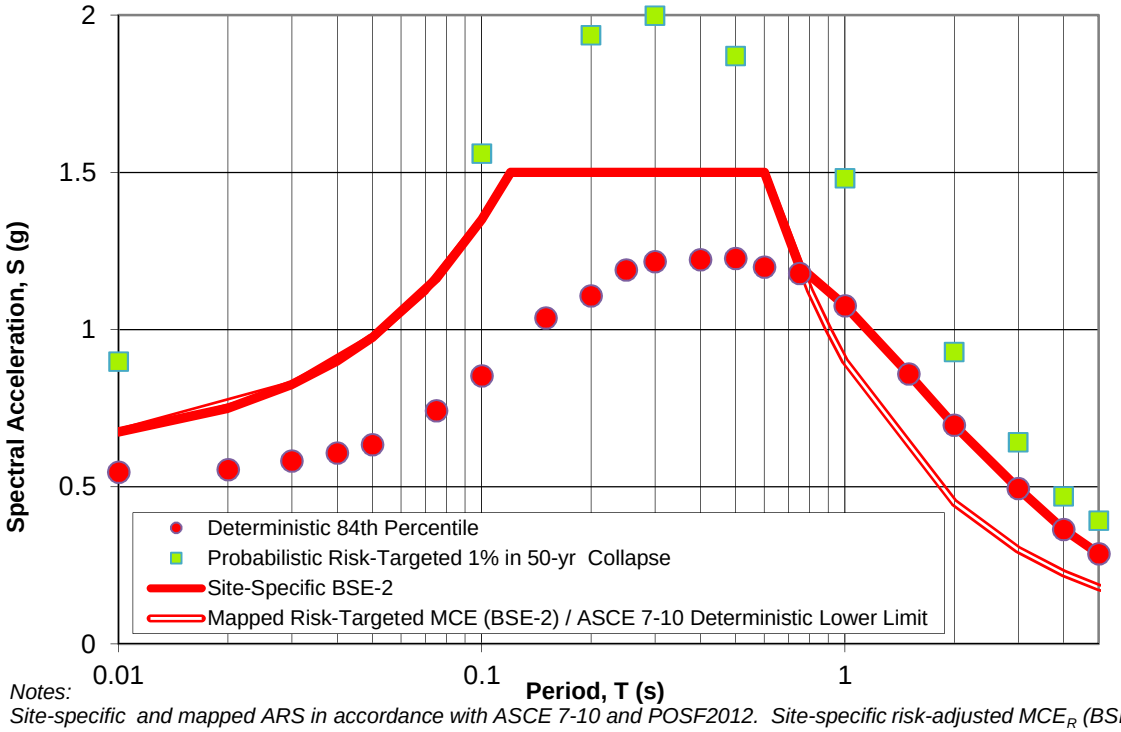
Notes:
Site-specific and mapped ARS in accordance with ASCE 7-10 and POSF2012. Site-specific risk-adjusted MCE_R (BSE-2) based on lesser of probabilistic and deterministic. Site-specific MCE deterministic subject to deterministic lower limits based on ASCE 7-10 mapped MCE_R. Refer to Figure A1.1 for site-specific design (BSE-1) based on the greater of 2/3 of site-specific MCE_R and 80% of mapped design spectra.

Pier38 Project: Site-Specific ARS Determination (5% Damping)



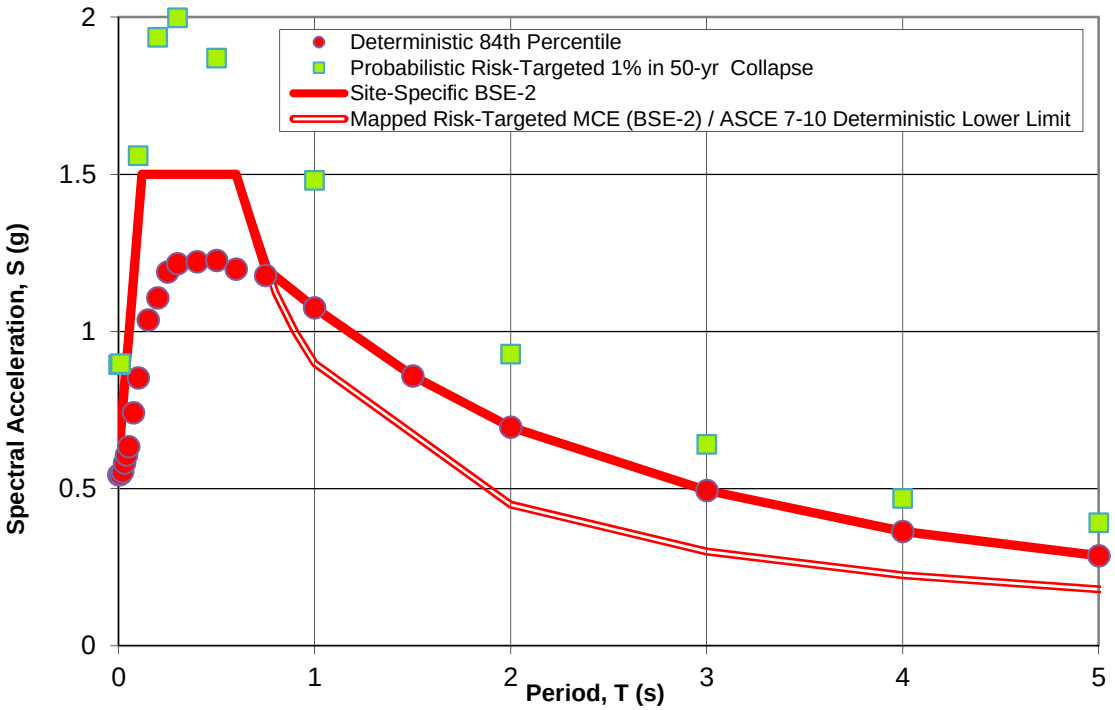
GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	**SITE-SPECIFIC MCE (BSE-2) ARS DETERMINATION: OFFSHORE PIERS**	**FIGURE**
	PIER 38 PROJECT	**A3.1**
	JANUARY 2013	**SF12024**

Pier 38 Project: Site-Specific ARS Determination (5% Damping)



Notes:
Site-specific and mapped ARS in accordance with ASCE 7-10 and POSF2012. Site-specific risk-adjusted MCE_R (BSE-2) based on lesser of probabilistic and deterministic. Site-specific deterministic subject to deterministic lower limits based on ASCE 7-10 mapped MCE_R. Refer to Figure A1.1 for site-specific design (BSE-1) based on the greater of 2/3 of site-specific MCE_R and 80% of mapped design spectra.

Pier38 Project: Site-Specific ARS Determination (5% Damping)



GEOTECHNICAL CONSULTANTS, INC. 500 Sansome Street, Suite 402 San Francisco, California 94111	**SITE-SPECIFIC MCE (BSE-2) ARS DETERMINATION: BULKHEAD BUILDING**	**FIGURE**
	PIER 38 PROJECT	**A3.2**
	JANUARY 2013	**SF12024**

ATTACHMENT 3
LOAD/DEFLECTION BEHAVIOR OF PILES

Pier 38 - Existing 42 in. Dia. Cylindrical Belled Piers - p-y Curves

0 ft depth [1] 42 in pile dia.		1 ft depth [1] 42 in pile dia.		2 ft depth [1] 42 in pile dia.		3 ft depth [1] 42 in pile dia.		4 ft depth [1] 42 in pile dia.		5 ft depth [1] 42 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.03	9	0.03	11	0.03	13	0.03	15	0.03	18	0.03	20
1.05	28	1.03	34	1.01	41	1.00	48	0.98	55	0.96	63
2.10	35	2.06	43	2.03	52	1.99	60	1.96	70	1.92	79
3.15	40	3.10	49	3.04	59	2.99	69	2.93	80	2.88	91
4.20	44	4.13	54	4.06	65	3.98	76	3.91	88	3.84	100
5.25	47	5.16	58	5.07	70	4.98	82	4.89	95	4.80	107
6.30	50	6.19	62	6.08	74	5.97	87	5.87	101	5.76	114
7.35	53	7.22	65	7.10	78	6.97	92	6.84	106	6.72	120
8.40	55	8.26	68	8.11	82	7.97	96	7.82	111	7.68	126
9.45	57	9.29	71	9.12	85	8.96	100	8.80	115	8.64	131
10.50	59	10.32	74	10.14	88	9.96	103	9.78	119	9.59	135
11.55	61	11.35	76	11.15	91	10.95	107	10.75	123	10.55	140
12.60	63	12.38	78	12.17	94	11.95	110	11.73	127	11.51	144
33.60	87	33.02	108	32.44	130	31.86	152	31.28	176	30.70	200
63.00	87	61.91	108	60.83	130	59.74	152	58.66	176	57.57	200
84.00	87	82.55	108	81.10	130	79.66	152	78.21	176	76.76	200

6 ft depth [1] 42 in pile dia.		7 ft depth [1] 42 in pile dia.		8 ft depth [1] 42 in pile dia.		9 ft depth [1] 42 in pile dia.		10 ft depth [1] 42 in pile dia.		12 ft depth [1] 42 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.03	22	0.03	25	0.03	28	0.03	30	0.03	33	0.03	39
0.94	71	0.92	79	0.91	87	0.89	96	0.87	104	0.83	123
1.88	89	1.85	99	1.81	110	1.77	120	1.74	131	1.67	154
2.82	102	2.77	113	2.72	125	2.66	138	2.61	150	2.50	177
3.77	112	3.69	125	3.62	138	3.55	152	3.48	166	3.33	195
4.71	121	4.62	135	4.53	149	4.44	163	4.34	178	4.16	210
5.65	128	5.54	143	5.43	158	5.32	174	5.21	189	5.00	223
6.59	135	6.46	151	6.34	166	6.21	183	6.08	199	5.83	234
7.53	141	7.39	157	7.24	174	7.10	191	6.95	209	6.66	245
8.47	147	8.31	164	8.15	181	7.98	199	7.82	217	7.49	255
9.41	152	9.23	170	9.05	187	8.87	206	8.69	225	8.33	264
10.36	157	10.16	175	9.96	193	9.76	212	9.56	232	9.16	273
11.30	162	11.08	180	10.86	199	10.64	219	10.43	239	9.99	281
30.12	224	29.54	250	28.97	276	28.39	303	27.81	331	26.65	389
56.48	224	55.40	250	54.31	276	53.22	303	52.14	331	49.97	389
75.31	224	73.86	250	72.41	276	70.97	303	69.52	331	66.62	389

Notes:

[1] Depth of Young Bay Mud below existing mudline.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Existing 42 in. Dia. Cylindrical Belled Piers - p-y Curves

14 ft depth [1] 42 in pile dia.		16 ft depth [1] 42 in pile dia.		18 ft depth [1] 42 in pile dia.		20 ft depth [1] 42 in pile dia.		22 ft depth [1] 42 in pile dia.		24 ft depth [1] 42 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.03	45	0.02	51	0.02	58	0.02	65	0.02	73	0.02	80
0.80	142	0.76	162	0.72	183	0.69	205	0.65	229	0.62	253
1.59	179	1.52	204	1.45	231	1.38	259	1.30	288	1.23	318
2.39	205	2.28	234	2.17	264	2.06	296	1.96	330	1.85	364
3.19	225	3.04	257	2.90	291	2.75	326	2.61	363	2.46	401
3.98	242	3.80	277	3.62	313	3.44	351	3.26	391	3.08	432
4.78	258	4.56	294	4.34	333	4.13	373	3.91	415	3.69	459
5.58	271	5.32	310	5.07	351	4.82	393	4.56	437	4.31	483
6.37	284	6.08	324	5.79	366	5.50	411	5.21	457	4.92	505
7.17	295	6.84	337	6.52	381	6.19	427	5.87	475	5.54	526
7.97	305	7.60	349	7.24	395	6.88	443	6.52	492	6.16	544
8.76	315	8.36	360	7.97	408	7.57	457	7.17	508	6.77	562
9.56	325	9.12	371	8.69	419	8.26	470	7.82	523	7.39	579
25.49	450	24.33	514	23.17	582	22.01	652	20.86	726	19.70	802
47.79	450	45.62	514	43.45	582	41.28	652	39.10	726	36.93	802
63.72	450	60.83	514	57.93	582	55.03	652	52.14	726	49.24	802

26 ft depth [1] 42 in pile dia.		28 ft depth [1] 42 in pile dia.		-49 ft SFCD [2] 42 in pile dia.		-50 ft SFCD [2] 42 in pile dia.		-51 ft SFCD [2] 57 in pile dia.		-52 ft SFCD [2] 69 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.02	88	0.02	95	0.01	237	0.01	241	0.08	611	0.10	958
0.58	278	0.54	298	0.39	747	0.39	759	0.16	823	0.19	1247
1.16	350	1.09	376	0.79	941	0.79	956	0.24	980	0.29	1456
1.74	401	1.63	430	1.18	1077	1.18	1095	0.32	1109	0.38	1624
2.32	441	2.17	473	1.58	1186	1.58	1205	0.40	1221	0.48	1768
2.90	475	2.72	510	1.97	1277	1.97	1298	0.48	1321	0.58	1895
3.48	505	3.26	542	2.36	1357	2.36	1379	0.55	1412	0.67	2009
4.06	531	3.80	570	2.76	1429	2.76	1452	0.63	1495	0.77	2114
4.63	556	4.34	596	3.15	1494	3.15	1518	0.71	1573	0.86	2211
5.21	578	4.89	620	3.54	1554	3.54	1579	0.79	1646	0.96	2301
5.79	599	5.43	642	3.94	1609	3.94	1635	0.87	1715	1.05	2386
6.37	618	5.97	663	4.33	1661	4.33	1688	0.95	1781	1.15	2467
6.95	636	6.52	683	4.73	1710	4.73	1738	1.54	2260	1.87	3053
18.54	882	17.38	947	12.60	2371	12.60	2410	2.14	2740	2.59	3640
34.76	882	32.59	947	23.63	2371	23.63	2410	59.14	2740	71.59	3640
46.34	882	43.45	947	31.50	2371	31.50	2410	116.14	2740	140.59	3640

Notes:

[1] Depth of Young Bay Mud below existing mudline.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Existing 20 in. sq. Tapered Tip Piles - p-y Curves

0 ft depth [1]		1 ft depth [1]		2 ft depth [1]		3 ft depth [1]		4 ft depth [1]		5 ft depth [1]	
22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.02	5	0.02	6	0.02	7	0.02	9	0.02	10	0.02	12
0.56	15	0.55	19	0.54	23	0.54	28	0.53	33	0.52	38
1.13	19	1.11	24	1.09	30	1.07	35	1.05	42	1.03	48
1.69	21	1.66	27	1.63	34	1.61	41	1.58	48	1.55	55
2.26	24	2.22	30	2.18	37	2.14	45	2.10	52	2.06	61
2.82	25	2.77	32	2.72	40	2.68	48	2.63	57	2.58	65
3.39	27	3.33	35	3.27	43	3.21	51	3.15	60	3.09	69
3.95	28	3.88	36	3.81	45	3.75	54	3.68	63	3.61	73
4.51	30	4.44	38	4.36	47	4.28	56	4.20	66	4.12	76
5.08	31	4.99	40	4.90	49	4.82	59	4.73	69	4.64	80
5.64	32	5.55	41	5.45	51	5.35	61	5.25	71	5.16	82
6.21	33	6.10	42	5.99	52	5.89	63	5.78	74	5.67	85
6.77	34	6.65	44	6.54	54	6.42	64	6.30	76	6.19	88
18.06	47	17.74	60	17.43	74	17.12	89	16.81	105	16.50	121
33.86	47	33.27	60	32.69	74	32.10	89	31.52	105	30.94	121
45.14	47	44.36	60	43.58	74	42.81	89	42.03	105	41.25	121

6 ft depth [1]		7 ft depth [1]		8 ft depth [1]		9 ft depth [1]		10 ft depth [1]		12 ft depth [1]	
22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.		22.57 in equiv. dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.02	14	0.02	16	0.02	18	0.02	19	0.01	22	0.01	26
0.51	44	0.50	49	0.49	55	0.48	61	0.47	68	0.45	81
1.01	55	0.99	62	0.97	70	0.95	77	0.93	85	0.90	102
1.52	63	1.49	71	1.46	80	1.43	88	1.40	98	1.34	117
2.02	69	1.98	78	1.95	88	1.91	97	1.87	108	1.79	129
2.53	75	2.48	84	2.43	94	2.38	105	2.33	116	2.24	139
3.04	79	2.98	90	2.92	100	2.86	112	2.80	123	2.69	148
3.54	83	3.47	94	3.41	106	3.34	117	3.27	130	3.13	155
4.05	87	3.97	99	3.89	110	3.81	123	3.74	136	3.58	163
4.55	91	4.47	103	4.38	115	4.29	128	4.20	141	4.03	169
5.06	94	4.96	106	4.86	119	4.77	132	4.67	146	4.48	175
5.56	97	5.46	110	5.35	123	5.24	136	5.14	151	4.92	181
6.07	100	5.95	113	5.84	126	5.72	140	5.60	155	5.37	186
16.19	139	15.88	157	15.57	175	15.25	195	14.94	215	14.32	258
30.35	139	29.77	157	29.19	175	28.60	195	28.02	215	26.85	258
40.47	139	39.69	157	38.91	175	38.14	195	37.36	215	35.80	258

Notes:

[1] Depth of Young Bay Mud below existing mudline.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Existing 20 in. sq. Tapered Tip Piles - p-y Curves

14 ft depth [1] 22.57 in equiv. dia.		16 ft depth [1] 22.57 in equiv. dia.		18 ft depth [1] 22.57 in equiv. dia.		20 ft depth [1] 22.57 in equiv. dia.		22 ft depth [1] 22.57 in equiv. dia.		24 ft depth [1] 22.57 in equiv. dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.01	30	0.01	35	0.01	38	0.01	40	0.01	43	0.01	46
0.43	96	0.41	111	0.39	119	0.37	127	0.35	135	0.33	144
0.86	121	0.82	139	0.78	150	0.74	160	0.70	171	0.66	181
1.28	138	1.23	160	1.17	171	1.11	183	1.05	195	0.99	207
1.71	152	1.63	176	1.56	189	1.48	202	1.40	215	1.32	228
2.14	164	2.04	189	1.95	203	1.85	217	1.75	232	1.65	246
2.57	174	2.45	201	2.33	216	2.22	231	2.10	246	1.98	261
3.00	183	2.86	212	2.72	227	2.59	243	2.45	259	2.32	275
3.42	192	3.27	221	3.11	238	2.96	254	2.80	271	2.65	287
3.85	199	3.68	230	3.50	247	3.33	264	3.15	282	2.98	299
4.28	206	4.09	238	3.89	256	3.70	274	3.50	292	3.31	310
4.71	213	4.49	246	4.28	264	4.07	283	3.85	301	3.64	320
5.14	219	4.90	253	4.67	272	4.44	291	4.20	310	3.97	329
13.70	304	13.08	351	12.45	377	11.83	404	11.21	430	10.58	456
25.68	304	24.52	351	23.35	377	22.18	404	21.01	430	19.85	456
34.24	304	32.69	351	31.13	377	29.57	404	28.02	430	26.46	456

26 ft depth [1] 22.57 in equiv. dia.		28 ft depth [1] 22.57 in equiv. dia.		-56 ft SFCD [2] 22.57 in equiv. dia.		-58 ft SFCD [2] 22.57 in equiv. dia.		-60 ft SFCD [2] 22.57 in equiv. dia.		-62 ft SFCD [2] 22.57 in equiv. dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.01	48	0.01	51	0.01	141	0.03	271	0.03	369	0.03	484
0.31	152	0.29	160	0.21	444	0.06	413	0.06	562	0.06	738
0.62	191	0.58	202	0.42	560	0.09	528	0.09	720	0.09	944
0.93	219	0.88	231	0.63	641	0.13	629	0.13	857	0.13	1125
1.25	241	1.17	254	0.85	705	0.16	720	0.16	982	0.16	1288
1.56	260	1.46	274	1.06	760	0.19	805	0.19	1097	0.19	1439
1.87	276	1.75	291	1.27	807	0.22	884	0.22	1204	0.22	1580
2.18	291	2.04	307	1.48	850	0.25	958	0.25	1306	0.25	1714
2.49	304	2.33	320	1.69	889	0.28	1030	0.28	1403	0.28	1841
2.80	316	2.63	333	1.90	924	0.31	1098	0.31	1496	0.31	1963
3.11	327	2.92	345	2.12	957	0.34	1163	0.34	1585	0.34	2080
3.42	338	3.21	356	2.33	988	0.38	1226	0.38	1671	0.38	2193
3.74	348	3.50	367	2.54	1017	0.61	1692	0.61	2307	0.61	3027
9.96	482	9.34	509	6.77	1411	0.85	2158	0.85	2942	0.85	3860
18.68	482	17.51	509	12.70	1411	23.42	2158	23.42	2942	23.42	3860
24.90	482	23.35	509	16.93	1411	45.99	2158	45.99	2942	45.99	3860

Notes:

[1] Depth of Young Bay Mud below existing mudline.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Existing 20 in. sq. Tapered Tip Piles - p-y Curves

-64 ft SFCD [2] 20.90 in equiv. dia.		-66 ft SFCD [2] 19.27 in equiv. dia.		-68 ft SFCD [2] 17.63 in equiv. dia.		-69 ft SFCD [2] 15.96 in equiv. dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0
0.03	614	0.03	723	0.02	854	0.02	832
0.06	936	0.05	1102	0.05	1532	0.04	1663
0.09	1197	0.08	1410	0.07	1960	0.07	2153
0.12	1426	0.11	1679	0.09	2335	0.09	2564
0.15	1634	0.13	1923	0.12	2674	0.11	2937
0.18	1825	0.16	2149	0.14	2988	0.13	3281
0.21	2004	0.19	2360	0.17	3282	0.16	3603
0.24	2174	0.21	2560	0.19	3559	0.18	3908
0.27	2335	0.24	2750	0.21	3823	0.20	4198
0.30	2490	0.27	2931	0.24	4076	0.22	4476
0.33	2638	0.29	3106	0.26	4319	0.24	4743
0.36	2782	0.32	3275	0.28	4554	0.27	5000
0.58	3839	0.52	4520	0.46	6285	0.43	6901
0.81	4896	0.72	5764	0.64	8015	0.60	8801
22.27	4896	19.99	5764	17.70	8015	16.56	8801
43.74	4896	39.25	5764	34.76	8015	32.52	8801

Notes:

[1] Depth of Young Bay Mud below existing mudline.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Leading Row

0 ft depth [1] 72 in pile dia.		1 ft depth [1] 72 in pile dia.		2 ft depth [1] 72 in pile dia.		3 ft depth [1] 72 in pile dia.		4 ft depth [1] 72 in pile dia.		5 ft depth [1] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.04	34	0.04	37	0.04	41	0.04	45	0.04	49	0.04	53
1.35	106	1.32	118	1.29	130	1.26	143	1.23	155	1.21	168
2.70	134	2.64	149	2.58	164	2.53	180	2.47	195	2.41	212
4.05	153	3.96	170	3.88	188	3.79	206	3.70	224	3.62	242
5.40	169	5.28	187	5.17	207	5.05	226	4.94	246	4.82	267
6.75	182	6.61	202	6.46	223	6.32	244	6.17	265	6.03	287
8.10	193	7.93	215	7.75	237	7.58	259	7.41	282	7.23	305
9.45	203	9.25	226	9.05	249	8.84	273	8.64	297	8.44	321
10.80	212	10.57	236	10.34	260	10.11	285	9.88	310	9.65	336
12.15	221	11.89	246	11.63	271	11.37	297	11.11	323	10.85	349
13.50	229	13.21	254	12.92	280	12.63	307	12.35	334	12.06	362
14.85	236	14.53	263	14.22	290	13.90	317	13.58	345	13.26	374
16.20	243	15.85	270	15.51	298	15.16	326	14.82	355	14.47	385
43.20	337	42.28	375	41.35	413	40.43	453	39.51	493	38.58	533
81.00	337	79.27	375	77.54	413	75.81	453	74.08	493	72.35	533
108.00	337	105.69	375	103.38	413	101.08	453	98.77	493	96.46	533

6 ft depth [1] 72 in pile dia.		7 ft depth [1] 72 in pile dia.		8 ft depth [1] 72 in pile dia.		9 ft depth [1] 72 in pile dia.		10 ft depth [1] 72 in pile dia.		12 ft depth [1] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.04	57	0.04	62	0.04	66	0.03	70	0.03	75	0.03	84
1.18	181	1.15	194	1.12	208	1.09	222	1.06	236	1.00	265
2.35	228	2.30	245	2.24	262	2.18	280	2.12	297	2.01	334
3.53	261	3.44	280	3.36	300	3.27	320	3.18	340	3.01	382
4.71	287	4.59	309	4.48	330	4.36	352	4.25	375	4.02	420
5.88	310	5.74	333	5.60	356	5.45	379	5.31	403	5.02	453
7.06	329	6.89	353	6.72	378	6.54	403	6.37	429	6.02	481
8.24	346	8.04	372	7.83	398	7.63	424	7.43	451	7.03	507
9.42	362	9.18	389	8.95	416	8.72	444	8.49	472	8.03	530
10.59	377	10.33	404	10.07	433	9.81	462	9.55	491	9.03	551
11.77	390	11.48	419	11.19	448	10.90	478	10.62	508	10.04	571
12.95	403	12.63	432	12.31	463	11.99	493	11.68	525	11.04	589
14.12	415	13.78	445	13.43	476	13.08	508	12.74	540	12.05	606
37.66	575	36.74	617	35.82	660	34.89	704	33.97	749	32.12	841
70.62	575	68.88	617	67.15	660	65.42	704	63.69	749	60.23	841
94.15	575	91.85	617	89.54	660	87.23	704	84.92	749	80.31	841

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Leading Row

14 ft depth [1] 72 in pile dia.		-48 ft SFCD [2] 72 in pile dia.		-50 ft SFCD [2] 72 in pile dia.		-52 ft SFCD [2] 72 in pile dia.		-54 ft SFCD [2] 72 in pile dia.		-56 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.03	94	0.02	239	0.02	251	0.10	1062	0.10	1248	0.10	1345
0.95	295	0.68	753	0.68	790	0.20	1340	0.20	1597	0.20	1762
1.89	371	1.35	949	1.35	995	0.30	1536	0.30	1844	0.30	2063
2.84	425	2.03	1086	2.03	1139	0.40	1692	0.40	2042	0.40	2308
3.78	468	2.70	1196	2.70	1254	0.50	1824	0.50	2211	0.50	2518
4.73	504	3.38	1288	3.38	1351	0.60	1940	0.60	2359	0.60	2703
5.68	536	4.05	1369	4.05	1435	0.70	2043	0.70	2491	0.70	2870
6.62	564	4.73	1441	4.73	1511	0.80	2137	0.80	2612	0.80	3023
7.57	589	5.40	1507	5.40	1580	0.90	2223	0.90	2724	0.90	3165
8.52	613	6.08	1567	6.08	1643	1.00	2304	1.00	2828	1.00	3298
9.46	635	6.75	1623	6.75	1702	1.10	2379	1.10	2925	1.10	3422
10.41	655	7.43	1675	7.43	1757	1.20	2449	1.20	3017	1.20	3540
11.35	675	8.10	1725	8.10	1809	1.95	2965	1.95	3687	1.95	4402
30.28	936	21.60	2392	21.60	2508	2.70	3480	2.70	4356	2.70	5264
56.77	936	40.50	2392	40.50	2508	74.70	3480	74.70	4356	74.70	5264
75.69	936	54.00	2392	54.00	2508	146.70	3480	146.70	4356	146.70	5264

-58 ft SFCD [2] 72 in pile dia.		-60 ft SFCD [2] 72 in pile dia.		-62 ft SFCD [2] 72 in pile dia.		-64 ft SFCD [2] 72 in pile dia.		-66 ft SFCD [2] 72 in pile dia.		-68 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.10	1413	0.10	1906	0.10	1956	0.10	1918	0.10	1776	0.10	1907
0.20	1908	0.20	2501	0.20	2637	0.20	2680	0.20	2593	0.20	2834
0.30	2275	0.30	2926	0.30	3139	0.30	3258	0.30	3235	0.30	3573
0.40	2576	0.40	3271	0.40	3553	0.40	3743	0.40	3785	0.40	4211
0.50	2838	0.50	3567	0.50	3912	0.50	4169	0.50	4275	0.50	4784
0.60	3071	0.60	3828	0.60	4231	0.60	4552	0.60	4722	0.60	5310
0.70	3283	0.70	4063	0.70	4521	0.70	4904	0.70	5137	0.70	5799
0.80	3478	0.80	4279	0.80	4789	0.80	5230	0.80	5525	0.80	6259
0.90	3660	0.90	4479	0.90	5038	0.90	5536	0.90	5892	0.90	6694
1.00	3831	1.00	4665	1.00	5272	1.00	5824	1.00	6241	1.00	7110
1.10	3992	1.10	4841	1.10	5492	1.10	6098	1.10	6574	1.10	7508
1.20	4146	1.20	5007	1.20	5702	1.20	6360	1.20	6894	1.20	7891
1.95	5268	1.95	6219	1.95	7236	1.95	8277	1.95	9246	1.95	10709
2.70	6390	2.70	7431	2.70	8771	2.70	10194	2.70	11597	2.70	13528
74.70	6390	74.70	7431	74.70	8771	74.70	10194	74.70	11597	74.70	13528
146.70	6390	146.70	7431	146.70	8771	146.70	10194	146.70	11597	146.70	13528

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Leading Row

-70 ft SFCD [2] 72 in pile dia.		-72 ft SFCD [2] 72 in pile dia.		-74 ft SFCD [2] 72 in pile dia.		-76 ft SFCD [2] 72 in pile dia.		-78 ft SFCD [2] 72 in pile dia.		-80 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.10	2102	0.01	545	0.01	562	0.01	578	0.01	595	0.01	612
0.20	3159	0.27	1715	0.27	1769	0.27	1822	0.27	1876	0.27	1929
0.30	4010	0.54	2161	0.54	2228	0.54	2296	0.54	2363	0.54	2430
0.40	4749	0.81	2474	0.81	2551	0.81	2628	0.81	2705	0.81	2782
0.50	5414	1.08	2723	1.08	2808	1.08	2892	1.08	2977	1.08	3062
0.60	6027	1.35	2933	1.35	3024	1.35	3116	1.35	3207	1.35	3299
0.70	6599	1.62	3117	1.62	3214	1.62	3311	1.62	3408	1.62	3505
0.80	7137	1.89	3281	1.89	3383	1.89	3486	1.89	3588	1.89	3690
0.90	7649	2.16	3430	2.16	3537	2.16	3644	2.16	3751	2.16	3858
1.00	8138	2.43	3568	2.43	3679	2.43	3790	2.43	3901	2.43	4012
1.10	8607	2.70	3695	2.70	3810	2.70	3926	2.70	4041	2.70	4156
1.20	9059	2.97	3815	2.97	3933	2.97	4052	2.97	4171	2.97	4290
1.95	12387	3.24	3927	3.24	4049	3.24	4172	3.24	4294	3.24	4416
2.70	15716	8.64	5445	8.64	5615	8.64	5785	8.64	5954	8.64	6124
74.70	15716	16.20	5445	16.20	5615	16.20	5785	16.20	5954	16.20	6124
146.70	15716	21.60	5445	21.60	5615	21.60	5785	21.60	5954	21.60	6124

-82 ft SFCD [2] 72 in pile dia.		-86 ft SFCD [2] 72 in pile dia.		-90 ft SFCD [2] 72 in pile dia.		-94 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0
0.01	629	0.01	630	0.10	3113	0.10	3960
0.27	1982	0.27	1984	0.20	4744	0.20	6035
0.54	2498	0.54	2500	0.30	6071	0.30	7723
0.81	2859	0.81	2862	0.40	7231	0.40	9199
1.08	3147	1.08	3150	0.50	8282	0.50	10535
1.35	3390	1.35	3393	0.60	9253	0.60	11770
1.62	3602	1.62	3606	0.70	10162	0.70	12927
1.89	3792	1.89	3796	0.80	11021	0.80	14020
2.16	3965	2.16	3969	0.90	11839	0.90	15061
2.43	4124	2.43	4128	1.00	12623	1.00	16058
2.70	4271	2.70	4275	1.10	13376	1.10	17016
2.97	4409	2.97	4413	1.20	14102	1.20	17940
3.24	4539	3.24	4543	1.95	19461	1.95	24757
8.64	6294	8.64	6300	2.70	24820	2.70	31574
16.20	6294	16.20	6300	74.70	24820	74.70	31574
21.60	6294	21.60	6300	146.70	24820	146.70	31574

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Trailing Rows

0 ft depth [1] 72 in pile dia.		1 ft depth [1] 72 in pile dia.		2 ft depth [1] 72 in pile dia.		3 ft depth [1] 72 in pile dia.		4 ft depth [1] 72 in pile dia.		5 ft depth [1] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.04	24	0.04	26	0.04	29	0.04	32	0.04	34	0.04	37
1.35	74	1.32	83	1.29	91	1.26	100	1.23	109	1.21	118
2.70	94	2.64	104	2.58	115	2.53	126	2.47	137	2.41	148
4.05	107	3.96	119	3.88	131	3.79	144	3.70	157	3.62	170
5.40	118	5.28	131	5.17	145	5.05	158	4.94	172	4.82	187
6.75	127	6.61	141	6.46	156	6.32	171	6.17	186	6.03	201
8.10	135	7.93	150	7.75	166	7.58	181	7.41	197	7.23	214
9.45	142	9.25	158	9.05	174	8.84	191	8.64	208	8.44	225
10.80	149	10.57	165	10.34	182	10.11	200	9.88	217	9.65	235
12.15	155	11.89	172	11.63	190	11.37	208	11.11	226	10.85	245
13.50	160	13.21	178	12.92	196	12.63	215	12.35	234	12.06	253
14.85	165	14.53	184	14.22	203	13.90	222	13.58	242	13.26	262
16.20	170	15.85	189	15.51	209	15.16	228	14.82	249	14.47	269
43.20	236	42.28	262	41.35	289	40.43	317	39.51	345	38.58	373
81.00	236	79.27	262	77.54	289	75.81	317	74.08	345	72.35	373
108.00	236	105.69	262	103.38	289	101.08	317	98.77	345	96.46	373

6 ft depth [1] 72 in pile dia.		7 ft depth [1] 72 in pile dia.		8 ft depth [1] 72 in pile dia.		9 ft depth [1] 72 in pile dia.		10 ft depth [1] 72 in pile dia.		12 ft depth [1] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.04	40	0.04	43	0.04	46	0.03	49	0.03	52	0.03	59
1.18	127	1.15	136	1.12	146	1.09	155	1.06	165	1.00	185
2.35	160	2.30	171	2.24	183	2.18	196	2.12	208	2.01	234
3.53	183	3.44	196	3.36	210	3.27	224	3.18	238	3.01	267
4.71	201	4.59	216	4.48	231	4.36	247	4.25	262	4.02	294
5.88	217	5.74	233	5.60	249	5.45	266	5.31	282	5.02	317
7.06	230	6.89	247	6.72	265	6.54	282	6.37	300	6.02	337
8.24	243	8.04	260	7.83	279	7.63	297	7.43	316	7.03	355
9.42	254	9.18	272	8.95	291	8.72	311	8.49	330	8.03	371
10.59	264	10.33	283	10.07	303	9.81	323	9.55	344	9.03	386
11.77	273	11.48	293	11.19	314	10.90	335	10.62	356	10.04	399
12.95	282	12.63	303	12.31	324	11.99	345	11.68	367	11.04	412
14.12	290	13.78	312	13.43	333	13.08	356	12.74	378	12.05	424
37.66	402	36.74	432	35.82	462	34.89	493	33.97	524	32.12	589
70.62	402	68.88	432	67.15	462	65.42	493	63.69	524	60.23	589
94.15	402	91.85	432	89.54	462	87.23	493	84.92	524	80.31	589

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Trailing Rows

14 ft depth [1] 72 in pile dia.		-48 ft SFCD [2] 72 in pile dia.		-50 ft SFCD [2] 72 in pile dia.		-52 ft SFCD [2] 72 in pile dia.		-54 ft SFCD [2] 72 in pile dia.		-56 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.03	65	0.02	167	0.02	176	0.10	743	0.10	874	0.10	942
0.95	206	0.68	527	0.68	553	0.20	938	0.20	1118	0.20	1233
1.89	260	1.35	664	1.35	697	0.30	1075	0.30	1291	0.30	1444
2.84	298	2.03	761	2.03	798	0.40	1185	0.40	1430	0.40	1616
3.78	327	2.70	837	2.70	878	0.50	1277	0.50	1548	0.50	1762
4.73	353	3.38	902	3.38	946	0.60	1358	0.60	1651	0.60	1892
5.68	375	4.05	958	4.05	1005	0.70	1430	0.70	1744	0.70	2009
6.62	395	4.73	1009	4.73	1058	0.80	1496	0.80	1829	0.80	2116
7.57	413	5.40	1055	5.40	1106	0.90	1556	0.90	1907	0.90	2216
8.52	429	6.08	1097	6.08	1150	1.00	1613	1.00	1980	1.00	2308
9.46	444	6.75	1136	6.75	1191	1.10	1665	1.10	2048	1.10	2396
10.41	459	7.43	1173	7.43	1230	1.20	1715	1.20	2112	1.20	2478
11.35	472	8.10	1207	8.10	1266	1.95	2075	1.95	2581	1.95	3082
30.28	655	21.60	1674	21.60	1756	2.70	2436	2.70	3049	2.70	3685
56.77	655	40.50	1674	40.50	1756	74.70	2436	74.70	3049	74.70	3685
75.69	655	54.00	1674	54.00	1756	146.70	2436	146.70	3049	146.70	3685

-58 ft SFCD [2] 72 in pile dia.		-60 ft SFCD [2] 72 in pile dia.		-62 ft SFCD [2] 72 in pile dia.		-64 ft SFCD [2] 72 in pile dia.		-66 ft SFCD [2] 72 in pile dia.		-68 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.10	989	0.10	1334	0.10	1369	0.10	1343	0.10	1243	0.10	1335
0.20	1336	0.20	1751	0.20	1846	0.20	1876	0.20	1815	0.20	1984
0.30	1592	0.30	2048	0.30	2198	0.30	2281	0.30	2264	0.30	2501
0.40	1803	0.40	2290	0.40	2487	0.40	2620	0.40	2649	0.40	2948
0.50	1986	0.50	2497	0.50	2738	0.50	2918	0.50	2993	0.50	3349
0.60	2150	0.60	2679	0.60	2962	0.60	3186	0.60	3306	0.60	3717
0.70	2298	0.70	2844	0.70	3165	0.70	3432	0.70	3596	0.70	4059
0.80	2435	0.80	2995	0.80	3352	0.80	3661	0.80	3868	0.80	4381
0.90	2562	0.90	3135	0.90	3527	0.90	3875	0.90	4124	0.90	4686
1.00	2682	1.00	3266	1.00	3690	1.00	4077	1.00	4369	1.00	4977
1.10	2795	1.10	3388	1.10	3845	1.10	4269	1.10	4602	1.10	5255
1.20	2902	1.20	3505	1.20	3991	1.20	4452	1.20	4826	1.20	5523
1.95	3688	1.95	4353	1.95	5065	1.95	5794	1.95	6472	1.95	7496
2.70	4473	2.70	5202	2.70	6139	2.70	7136	2.70	8118	2.70	9469
74.70	4473	74.70	5202	74.70	6139	74.70	7136	74.70	8118	74.70	9469
146.70	4473	146.70	5202	146.70	6139	146.70	7136	146.70	8118	146.70	9469

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 - Retrofit 6 ft. Dia. x ¾" Wall Steel Pipe Piles - p-y Curves - Trailing Rows

-70 ft SFCD [2] 72 in pile dia.		-72 ft SFCD [2] 72 in pile dia.		-74 ft SFCD [2] 72 in pile dia.		-76 ft SFCD [2] 72 in pile dia.		-78 ft SFCD [2] 72 in pile dia.		-80 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0	0	0	0	0
0.10	1471	0.01	381	0.01	393	0.01	405	0.01	417	0.01	429
0.20	2212	0.27	1201	0.27	1238	0.27	1275	0.27	1313	0.27	1350
0.30	2807	0.54	1513	0.54	1560	0.54	1607	0.54	1654	0.54	1701
0.40	3324	0.81	1732	0.81	1786	0.81	1840	0.81	1893	0.81	1947
0.50	3790	1.08	1906	1.08	1965	1.08	2025	1.08	2084	1.08	2143
0.60	4219	1.35	2053	1.35	2117	1.35	2181	1.35	2245	1.35	2309
0.70	4619	1.62	2182	1.62	2250	1.62	2318	1.62	2386	1.62	2454
0.80	4996	1.89	2297	1.89	2368	1.89	2440	1.89	2511	1.89	2583
0.90	5354	2.16	2401	2.16	2476	2.16	2551	2.16	2626	2.16	2701
1.00	5697	2.43	2497	2.43	2575	2.43	2653	2.43	2731	2.43	2809
1.10	6025	2.70	2587	2.70	2667	2.70	2748	2.70	2829	2.70	2909
1.20	6341	2.97	2670	2.97	2753	2.97	2837	2.97	2920	2.97	3003
1.95	8671	3.24	2749	3.24	2834	3.24	2920	3.24	3006	3.24	3091
2.70	11001	8.64	3812	8.64	3931	8.64	4049	8.64	4168	8.64	4287
74.70	11001	16.20	3812	16.20	3931	16.20	4049	16.20	4168	16.20	4287
146.70	11001	21.60	3812	21.60	3931	21.60	4049	21.60	4168	21.60	4287

-82 ft SFCD [2] 72 in pile dia.		-86 ft SFCD [2] 72 in pile dia.		-90 ft SFCD [2] 72 in pile dia.		-94 ft SFCD [2] 72 in pile dia.	
y (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)	**y** (inches)	**p** (lbs/in)
0	0	0	0	0	0	0	0
0.01	441	0.01	441	0.10	2179	0.10	2772
0.27	1388	0.27	1389	0.20	3321	0.20	4225
0.54	1748	0.54	1750	0.30	4249	0.30	5406
0.81	2001	0.81	2003	0.40	5062	0.40	6439
1.08	2203	1.08	2205	0.50	5797	0.50	7375
1.35	2373	1.35	2375	0.60	6477	0.60	8239
1.62	2522	1.62	2524	0.70	7113	0.70	9049
1.89	2655	1.89	2657	0.80	7715	0.80	9814
2.16	2775	2.16	2778	0.90	8288	0.90	10543
2.43	2887	2.43	2889	1.00	8836	1.00	11240
2.70	2990	2.70	2993	1.10	9363	1.10	11911
2.97	3086	2.97	3089	1.20	9872	1.20	12558
3.24	3177	3.24	3180	1.95	13623	1.95	17330
8.64	4406	8.64	4410	2.70	17374	2.70	22102
16.20	4406	16.20	4410	74.70	17374	74.70	22102
21.60	4406	21.60	4410	146.70	17374	146.70	22102

Notes:

[1] Depth of Young Bay Mud below mudline after dredging to 1908 elevations. Refer to Drawing No. 1247-11 of Pier No. 38 Drawings for elevations.

[2] Elevation relative to San Francisco City Datum (SFCD is 11.339 ft. above NAVD88)

Pier 38 Seismic Retrofit
Large-diameter Open-ended Pipe Piles
Ultimate Unit Skin Friction

Soil Layer	Depth below Mudline (ft)	Ultimate Unit Skin Friction [1]	
		Compression (psf)	Tension (psf)
Young Bay Mud (Q_{YBM}) - Normally Consolidated Unit	0 - 29	200 [2]	150
Young Bay Mud (Q_{YBM}) - Partially Consolidated Unit	29 - 32	900	650
Upper Layered Sediments (Q_{ul}) - Clayey Sand - Upper Unit	32 - 40	1000	700
Upper Layered Sediments ($Q_{u}l$) - Silty Sand - Middle Unit	40 - 53	2000	1450
Older Bay Mud (Q_{obm}) - Clay - Upper Unit	53 - 70	1200	850
Upper Layered Sediments ($Q_{u}l$) - Sand - Lower Unit	70 - 84	4200	3000
Older Bay Mud (Q_{obm}) - Clay - Lower Unit	84 - 129	1400	1000

Notes:

[1] Pile movement to achieve ultimate skin friction resistance is estimated to be ¼ inch.

[2] Neglect skin friction resistance in Young Bay Mud to calculate allowable compression capacities due to potential downdrag effects.