SOUTH BASIN FERRY TERMINAL DEVELOPMENT AND AGRICULTURE BUILDING RESTORATION FEASIBILITY STUDY

Prepared for the San Francisco Bay Area Water Transit Authority
By ROMA Design Group

– FINAL REPORT –
September 28, 2007

ROMA

SOUTH BASIN FERRY TERMINAL DEVELOPMENT AND AGRICULTURE BUILDING RESTORATION FEASIBILITY STUDY
September 28, 2007

INTRODUCTION AND OVERVIEW

Purpose

There are a number of objectives that were addressed by the South Basin Ferry Terminal Development and Agriculture Building Restoration Feasibility Study. These objectives include:

- WTA's desire to pursue the construction of two additional multi-use ferry berthing facilities and the backland pedestrian and vehicular access site improvements related to them. These improvements were anticipated by and provided for in the previously prepared Master Plan for the Downtown Ferry Terminal.

- WTA's interest in investigating how this area and the facilities at the Downtown Ferry Terminal can more effectively become part of the Bay Area's emergency response system. This would include the possibility of creating and upgrading backland areas to "essential structure" status. In this way, the terminal could provide most effectively for the potential need for evacuation, transportation or provisioning backland support as well as for waterborne transportation. Because of its central location within the Bay Area and the number of berthing facilities and other transportation modes provided, the Ferry Building area provides an exceptional opportunity for creating an interconnected Bay Area emergency relief system.

- The Port of San Francisco's desire to enhance the viability and the potential revenues from this property and to capitalize further on the success of the Ferry Building area as a focus of development and activity.

- The Port and the public's desire to find the means to rehabilitate and restore historically significant aspects of the Agricultural Building. The building currently is in poor condition, continues to deteriorate and is susceptible to periodic flooding and potential damage or destruction in a major seismic event.

- The Port's desire for a comprehensive view of the potential of the area as a whole prior to proceeding with the next phase of the ferry terminal development and/or the use of this area for emergency evacuation purposes.

Process

This study has been undertaken by **ROMA Design Group** who both managed and orchestrated the process, and prepared the architectural and site development design concepts for the project. ROMA undertook this study in conjunction with a number of consultants, each of whom prepared a report or working paper, which is included in this document. The consultants that participated in this work effort include:

- **Moffatt & Nichol**, coastal engineers, who prepared the engineering studies and cost estimates for demolition, pile foundations and deck improvements for both the site improvements and for the Agriculture Building.

- **Simpson Gumpertz & Heger**, structural engineers, who prepared the engineering studies and cost estimates for the structural upgrade of the Agriculture Building and for the new construction associated with it.

- **Leland Saylor Associates**, cost estimators, who prepared the architectural, mechanical, plumbing and electrical cost estimates and compiled these with the structural estimates for the Agriculture Building improvements.

- **Page & Turnbull Inc.**, who prepared the historic resource analysis for the Agriculture Building.

- **Economic and Planning Systems**, who prepared the financial feasibility analysis for the Agriculture Building.

Conclusions

Based on the analysis undertaken herein, a number of questions related to the development of the South Basin Ferry Terminal area and to the feasibility of the Agriculture Building restoration were addressed. The first question had to do with whether private enterprise could pay for the restoration of the Agriculture Building. The second question had to do with the establishment of a scope and budget estimate for the construction of the South Basin Ferry Terminal improvements.

The conclusions related to both of these questions should provide a basis for decision-making and next steps. The conclusions are discussed in this report and are summarized in outline form below.

Feasibility Analysis for Ag Building Rehabilitation and Restoration

The conclusion of the feasibility analysis is that, whether partial or full restoration of the Agriculture Building were undertaken, neither would be feasible without a public investment of approximately 10 million dollars to overcome the gap between the cost of restoration and any potential revenues that may be achieved from redevelopment and adaptive reuse. The following summarizes the feasibility analysis:

Alternative 1 – Partial Rehabilitation

This alternative assumes that only the main west portion of the building would be preserved and rehabilitated and that a new three-story east portion would be added to the building. The north wall of the east portion of the original building could be retained and incorporated into the new construction. However, the south wing, which was an early addition to the original building and has been significantly modified over time, would not be retained. In this option, both the existing and the new building would be elevated to a new grade to prevent flooding and new pile foundations and other improvements would be made to bring it up to appropriate standards for new uses. In order to elevate the building in a historically appropriate manner and maintain the width of the Embarcadero Promenade, the building would need to be moved approximately 10 feet to the east when it is being raised and when the new foundation is being built.

In this alternative, it is assumed that the Amtrak facilities would continue as a tenant in the building and that a portion of the building (approximately 1,500 square feet) would be dedicated for the creation of a new waterfront transit information center with large public restroom facilities which are needed in the Ferry Building area not only to support all of the ferry terminals within the area but also the Ferry Plaza Farmer's Market and other public activities which attract large crowds of people. It was assumed that the remaining space in the building would be leased for market rate uses. Key aspects of this alternative are summarized as follows:

- **Size**: 57,320 square feet of gross floor area
  44,200 square feet gross leasable area

- **Construction Cost**: $40 million, which includes foundations and buildings, as well as soft cost, tenant improvements and builder fees

- **Capitalized Revenues**: $30 million, capitalized at 7%

- **Funding Gap:** $10 million. If the west wing is eligible for historic tax credits, then the gap would be reduced to $7.8 million and if both the west and east wing were eligible for historic tax credits, then the gap would be reduced to $4.4 million

- **Port Ground Lease Revenues:** $300,000 per year assumed at 10% of net revenue not including the multiplier effect that the redevelopment of the Agriculture Building and the Ferry Terminal would have on existing percentage leases in the Ferry Building area

Alternative 2 – Full Rehabilitation

This alternative assumes that both the main west portion of the building as well as the south wing early addition and the north wall of the east portion of the building would be rehabilitated. The one-story eastern service portion of the building would be rebuilt to its original size and configuration. In this alternative, the building would also be elevated to avoid flooding, new pile foundations would be constructed and other structural, architectural, mechanical, electrical and plumbing improvements necessary for the adaptive reuse of the building would be made. As in the previous alternative, in order to elevate the building in a historically appropriate manner and maintain the width of the Embarcadero Promenade, the building would need to be moved approximately 10 feet to the east when it is being raised and when the new foundation is being built.

In this alternative, it was also assumed that the Amtrak offices would continue to be located in the building, but because of the limited size of the building, for analysis purposes we did not assume that a transit information center and a public restrooms would be included. In this alternative we assumed that all

of the space in the building would be leased for market rate uses. Key aspects of this alternative are summarized as follows:

- **Size:** 33,000 square feet of gross floor area
  30,000 square feet of gross leasable area

- **Construction Cost**: $39.3 million, which includes foundations and building, including soft cost, tenant improvements and builder's fee. Assuming a full historic tax credit of $5.7 million, the cost of the building would be reduced to $33.6 million.

- **Capitalized Revenues:** $22.8 million, capitalized at 7%

- **Funding Gap:** $10.8 million

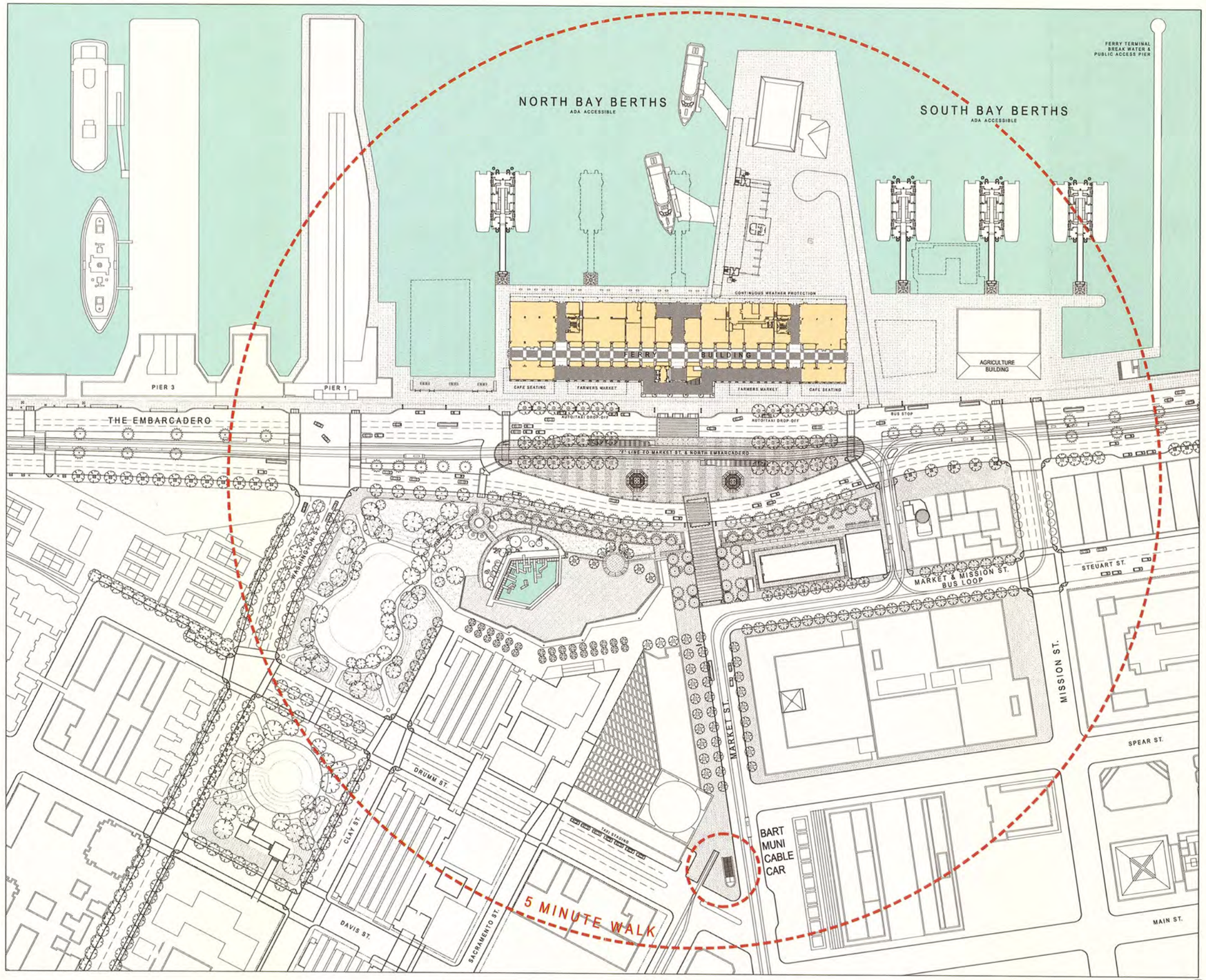
- **Port Ground Lease Revenues:** $225,000 per year assumed at 10% of net revenue not including the multiplier effect that the redevelopment of the Agriculture Building and the Ferry Terminal would have on existing percentage leases in the Ferry Building area

South Basin Ferry Terminal Development Costs

Several alternatives were analyzed for development of the South Basin Ferry Terminal facilities. All of the alternatives assumed that two new floats with gangways and portals that would allow for the berthing of four vessels would be constructed. The alternatives varied however in the amount of backland and site related improvements that would be made. These ranged from the most minimal necessary to provide for pedestrian access to improvement of and widening of all the existing apron areas and the infill of the existing land locked lagoon. With the more extensive site improvements not only better intermodal access to the ferry facilities would be provided but also space for emergency response purposes would be created. Both of these alternatives were based on the assumption that all improvements would be made to an "essential structure" level, that is to a level that would allow them to still be operational after a major seismic event. In addition all the alternatives assumed that the site would be regraded so that the direct access to the Ferry Terminals is at least at a 12 foot elevation above Mean Lower Low Water (MLLW) while conforming to the existing grades of the adjacent BART access structure edge and to the grades of the adjacent Embarcadero curb.

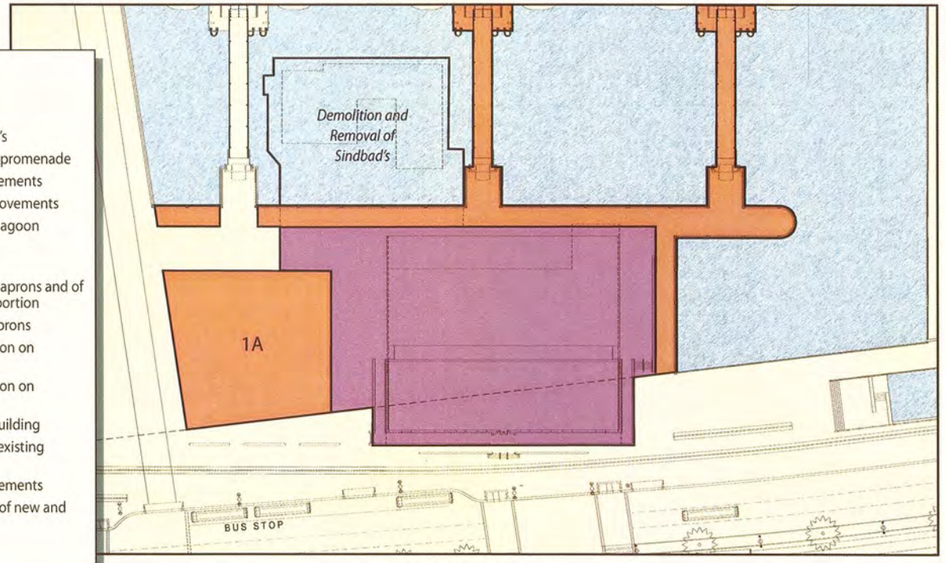
In addition to these backland site improvement alternatives, consideration was also given to the inclusion of the necessary subsidy to make the Agriculture Building restoration and adaptive reuse feasible. The inclusion of this subsidy as a part of the Ferry Terminal Development cost could be justified on the basis that, if the building were not upgraded, it could in a major seismic event impair operations of the ferry terminal and its associated emergency response facilities. The estimated cost of construction for budget purposes including soft and management costs are summarized as follows:

- **Ferry Terminal with Minimal Pedestrian Improvements**: $35 million
- **Ferry Terminal with Full Site Related Improvements**: $50 million
- **Ferry Terminal with Full Site and Building Subsidy**: $60 million



Downtown Ferry Terminal Master Plan Concept

Prepared for the Port of San Francisco and the Water Transit Authority by ROMA Design Group

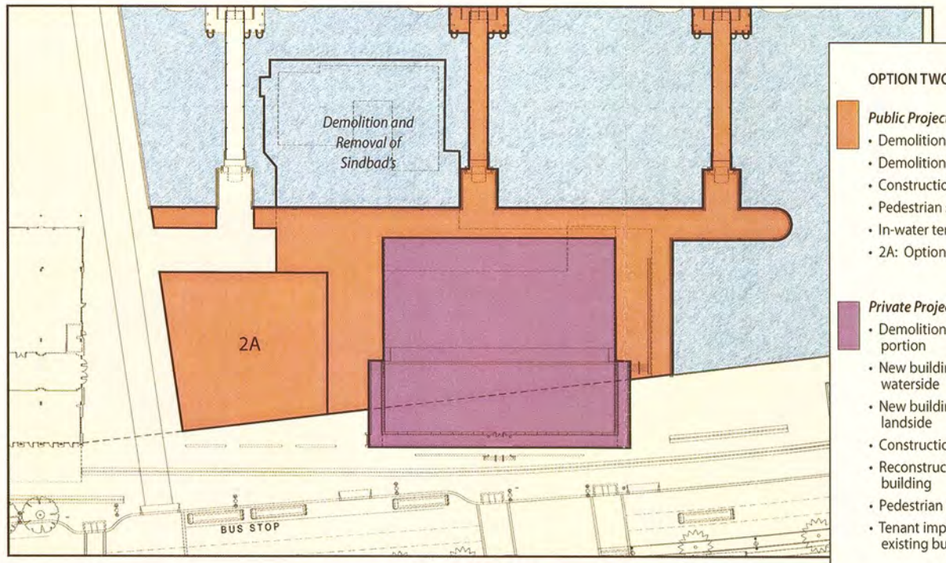


OPTION ONE

Public Projects:
- Demolition of Sindbad's
- Construct new narrow promenade
- Pedestrian site improvements
- In-water terminal Improvements
- 1A: Optional filling of lagoon

Private Projects:
- Demolition of existing aprons and of Ag. Bldg. single story portion
- Construction of new aprons
- New building foundation on waterside
- New building foundation on landside
- Construction of new building
- Reconstruction of the existing building
- Pedestrian site improvements
- Tenant improvements of new and existing building

OPTION 1

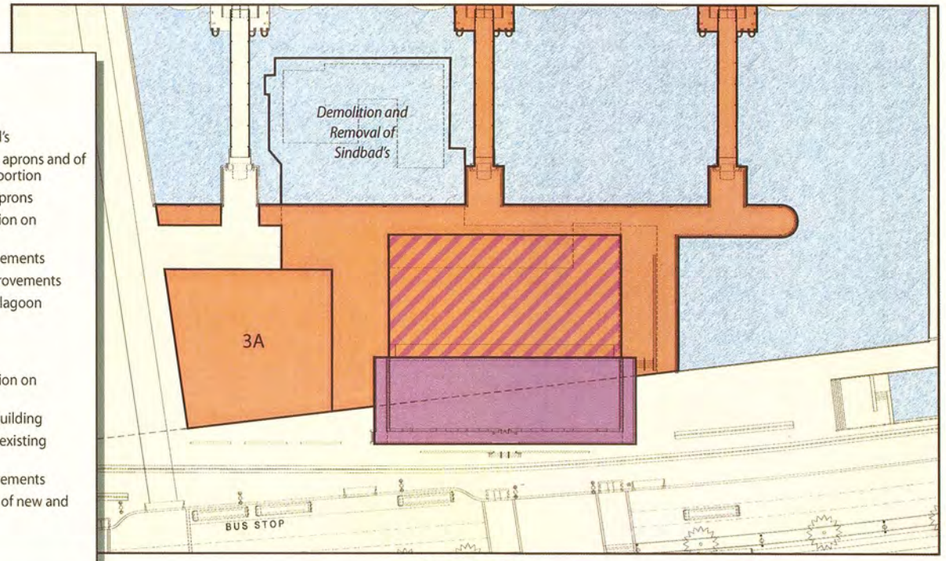


OPTION TWO

Public Projects:
- Demolition of Sindbad's
- Demolition of existing aprons
- Construction of new aprons
- Pedestrian site improvements
- In-water terminal Improvements
- 2A: Optional filling of lagoon

Private Projects:
- Demolition of Ag. Bldg. single story portion
- New building foundation on waterside
- New building foundation on landside
- Construction of new building
- Reconstruction of the existing building
- Pedestrian site improvements
- Tenant improvements of new and existing building

OPTION 2

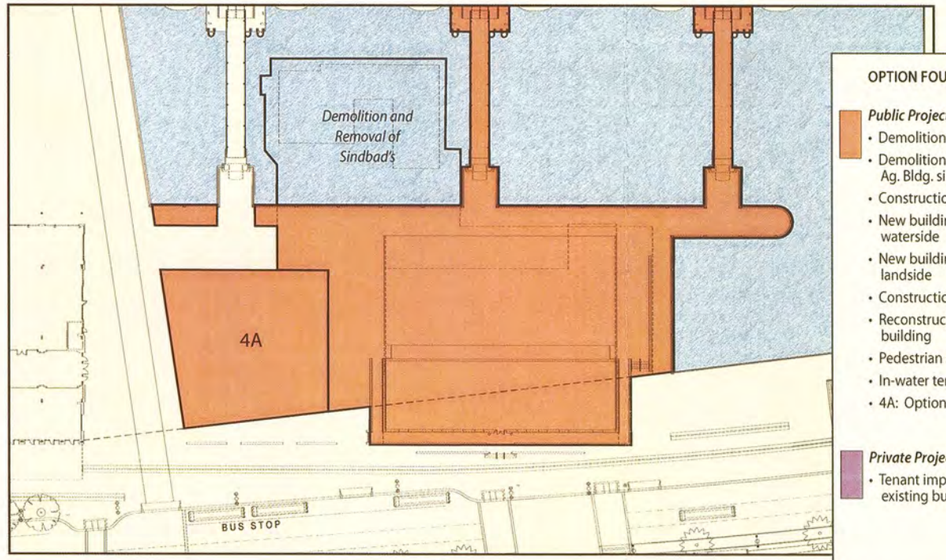


OPTION THREE

Public Projects:
- Demolition of Sindbad's
- Demolition of existing aprons and of Ag. Bldg. single story portion
- Construction of new aprons
- New building foundation on waterside
- Pedestrian site improvements
- In-water terminal Improvements
- 3A: Optional filling of lagoon

Private Project:
- New building foundation on landside
- Construction of new building
- Reconstruction of the existing building
- Pedestrian site improvements
- Tenant improvements of new and existing building

OPTION 3



OPTION FOUR

Public Projects:
- Demolition of Sindbad's
- Demolition of existing aprons and of Ag. Bldg. single story portion
- Construction of new aprons
- New building foundation on waterside
- New building foundation on landside
- Construction of new building
- Reconstruction of the existing building
- Pedestrian site improvements
- In-water terminal Improvements
- 4A: Optional filling of lagoon

Private Projects:
- Tenant improvements of new and existing building

OPTION 4

0 20 40 60ft

ALTERNATIVE IMPLEMENTATION STRATEGIES

South Basin Ferry Terminal Development and Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

AUGUST 17, 2007

FINANCIAL FEASIBILITY

Economic and Planning Systems

Economic &
Planning Systems
Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

MEMORANDUM

To: Boris Dramov, ROMA

From: Jim Musbach, Richard Berkson and Michael Nimon

Subject: Financial Feasibility Review – Agriculture Building Options; EPS #17046

Date: September 28, 2007

As you requested, we have evaluated the financial feasibility of options for the rehabilitation of the Agriculture Building, located on Port of San Francisco property adjacent to the Ferry Building. This memorandum summarizes our initial findings and describes key assumptions. Additional calculations and detailed assumptions are included in attachments.

The analysis is based on the cost estimates provided to EPS and on two alternatives demonstrated in **Appendix 3** and described below:

- Alternative 1, Partial Historic Rehabilitation: partial demolition of the building, assemblage of a new structure above the existing deck and construction of a new foundation under the remaining portion of the building. An additional 10,000 square feet of office space would be added as a result.

- Alternative 2, Full Historic Rehabilitation: preservation of the entire building, including restoration and retrofit of the foundation without any demolition of the building.

Each alternative includes four cost allocation options reflecting different funding levels of the private and public sectors, ranging from the minimal involvement of the public in option 1 to full participation in option 4. The focus of this memorandum is on option 2 and 3, which assume private development of the building and public development of site improvements.

Additional costs and revenue assumptions are derived from comparable development, independent research to estimate rents, and EPS assessment of factors affecting project economics. The analysis is preliminary, and will depend on further refinement of plan options, as well as method of financing, actual Port ground rent requirements, market conditions at the time of lease-up, and other factors that may affect the findings described herein.

SUMMARY OF FINDINGS

PARTIAL HISTORIC REHABILITATION

1. **Private development of the building does not generate sufficient value to fully cover building development costs**. Building development costs totaling approximately $39.7 million, including hard costs, soft costs and builder fees, are approximately $9.7 million short of being funded by the value of lease revenues. Funding Option 2 in **Attachment 1** illustrates this finding.

2. **Private development of the building potentially can be feasible if the new building foundation on the waterside is publicly funded, and if the project receives historic tax credits**. The public funding of the foundation on the waterside portion would eliminate about $9.2 million of private cost. Funding Option 3 in **Attachment 1** illustrates this finding. In addition, historic tax credits could further reduce costs by an estimated $2.2 million in order to achieve feasibility.

3. **Public costs would total approximately $60.0 million**. This cost includes the public improvements of $41.0 million, in addition to the building's waterside foundation cost noted above as necessary for private development feasibility of the building construction and leasing. The total costs also include about $6,450,900 (hard and soft costs) for optional construction of the lagoon infill, which includes the pier structure as well as topping slab, lighting and furniture allowances. These public costs are also shown in Funding Option 3 in **Attachment 1**.

FULL HISTORIC REHABILITATION

4. **Private development of the building produces a shortfall of $10.8 million, after accounting for the value of lease revenues**. This conclusion assumes that tax credits of approximately $5.7 million reduce private development costs. Funding Option 2 in **Attachment 2** illustrates this finding.

5. **Public funding of the new building foundation on the waterside could potentially achieve a feasible private development project.** Public funding of $10.8 million towards the foundation costs (which total about $15.9 million) would result in a feasible project. The conclusion assumes that the private development would receive $5.7 million of tax credits.

6. **Public costs would total approximately $60.5 million**. This cost includes the public contribution towards the building's foundation costs noted above, in addition to other public costs including optional construction of the lagoon infill.

KEY ASSUMPTIONS AND METHODOLOGY

DEVELOPMENT COSTS

- **Hard Costs** include construction of the building and public improvements and include a 30 percent construction contingency and indirect costs.

- **Soft Costs** include non-construction expenditures, including 5 percent of hard costs for planning and entitlement, 4 percent of hard costs for project management, 3 percent of hard costs for general and administrative, and 10 percent of hard costs for development contingency.

- **Tenant Improvements** are additional costs for tenant space buildout required to support assumed rents. These costs vary on market and economic conditions and are assumed at $50 per square foot for the ground floor retail and public spaces (WTA and Amtrack), $100 per square foot for restaurant, and $60 per square foot for office space.

- **Historic Tax Credits** are preservation tax credits applicable under the full historic rehabilitation alternative and are assumed at 20 percent of the new building foundation and reconstruction costs.

- **Builder Fees** of 7 percent of total costs are assumed in this analysis, including payment to a fee developer, as well as for public agency staff management, administration and financing costs for public improvements. The analysis makes no assumptions about specific funding sources or financing mechanisms, so the actual finance cost and fees could vary based on the amount of risk assumed by a developer, as well as the public agency's method of financing.

REVENUES

Lease Revenues are estimated based on the per square foot approach for the public spaces and upper story office. Amtrack and WTA are assumed to generate a below-market rent of $30 and $20 per square foot, respectively. The office component would generate a full service rent of $80 per square foot, 20 percent of which is allocated towards operating expenses. The retail and restaurant uses are assumed to have a triple net lease and pay the higher of the respective $60 and $70 per square foot rents or 7 percent from sales generated.

- **Rent to Port** – Expectations by the Port for ground rent are not known; for purposes of analysis, a ground lease equal to 10 percent of net revenue is assumed. The resulting rent ranges from $225,000 to $300,000 annually, depending on the alternative and amount of development. This result does not account for any changes associated with existing leases on the property.

- **Vacancy** – although all rentable space is likely to be occupied, a conservative approach of assuming 2 percent vacancy is used to reflect any potentially unoccupied space during turnover.

- **Capitalized Revenues** – A cap rate of 7 percent is applied to net revenues to estimate the potential value of the project.

Economic &
Planning Systems
Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

ATTACHMENT 1:

PARTIAL HISTORIC REHABILITATION

BERKELEY
2501 Ninth St., Suite 200
Berkeley, CA 94710-2515
www.epsys.com

Phone: 510-841-9190
Fax: 510-841-9208

SACRAMENTO
Phone: 916-649-8010
Fax: 916-649-2070

DENVER
Phone: 303-623-3557
Fax: 303-623-9049

Table 1
Agriculture Building Options **Alternative 1**
Partial Historic Rehabilitation

Item	Funding Entity		Total
	Public Funding	Private Funding	
Funding Option 1 - Minimum Initial Public Cost			
Total Building Revenue	$0	$29,962,000	$29,962,000
Total Construction Cost	($41,823,000)	($52,250,000)	($94,073,000)
Net Development	($41,823,000)	($22,288,000)	($64,111,000)
Funding Option 2 - Moderate Initial Public Cost			
Total Building Revenue	$0	$29,962,000	$29,962,000
Total Construction Cost	($50,816,000)	($39,665,000)	($90,481,000)
Net Development	($50,816,000)	($9,703,000)	($60,519,000)
Funding Option 3 - Maximum Public Site Work			
Total Building Revenue	$0	$29,962,000	$29,962,000
Total Construction Cost	($60,023,000)	($30,458,000)	($90,481,000)
Net Development	($60,023,000)	($496,000)	($60,519,000)
Funding Option 4 - Maximum Public Site Work and Building			
Total Building Revenue	$29,962,000	$0	$29,962,000
Total Construction Cost	($90,481,000)	$0	($90,481,000)
Net Development	($60,519,000)	$0	($60,519,000)

Source: Economic & Planning Systems, Inc.

Table 2

Agriculture Building Revenue Estimates **Alternative 1**

Partial Historic Rehabilitation

Item	Assumptions	Ground Floor (NNN) AMTRACK	WTA/Subsidized Public Space	Retail [1]	Restaurants [2]	Upper Floor Office (FS)	Total
Rent Assumptions							
Rentable Area [3]		3,370	656	3,862	8,630	26,579	43,097
Sales per sq.ft.		n/a	n/a	$450	$500	n/a	n/a
Total Annual Sales				$1,737,900	$4,315,000		
Lease Revenue as % of Sales	7%	$0	$0	$121,653	$302,050	$0	n/a
Minimum Rent per sq.ft.		$30	$20	$60	$70	$80	n/a
Total Minimum Rent		101,100	13,120	231,720	604,100	2,126,320	3,076,360
Building Revenue							
Total Lease Revenue [4]		$101,100	$13,120	$231,720	$604,100	$2,126,320	$3,076,360
(less) Operating Expenses [5]	20%	$0	$0	$0	$0	($425,264)	($425,264)
(less) Rent to Port	10%	(10,110)	(1,312)	(23,172)	(60,410)	(212,632)	($307,636)
(less) Commissions	6%	(6,066)	(787)	(13,903)	(36,246)	($127,579)	($184,582)
(less) Vacancy	2%	($2,022)	($262)	($4,634)	($12,082)	($42,526)	($61,527)
Subtotal		$82,902	$10,758	$190,010	$495,362	$1,318,318	$2,097,351
Total Revenues (Capitalized at 7%)		$1,184,314	$153,691	$2,714,434	$7,076,600	$18,833,120	$29,962,160

[1] Includes Bike Shop and Café.

[2] Includes Restaurant and Tenant Space.

[3] Square footage includes all building area and 1/2 of outside area.

[4] Assumes the greater of the Minimum Rent, or Lease Revenue as % of Sales rents.

[5] Applies to the upper floor office component only, assumed to have full service rents.

Source: Economic & Planning Systems, Inc.

Table 3
Agriculture Building Development Costs Alternative 1
Partial Historic Rehabilitation

Item	Assumptions	Funding Option 1			Funding Option 2			Funding Option 3			Funding Option 4		
		Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Hard Costs													
Demolition [1]		($232,500)	($4,136,000)	($4,368,500)	($4,368,500)	$0	($4,368,500)	($4,368,500)	$0	($4,368,500)	($4,368,500)	$0	($4,368,500)
Construction of New Aprons		$0	($4,600,000)	($4,600,000)	($10,462,500)	$0	($10,462,500)	($10,462,500)	$0	($10,462,500)	($10,462,500)	$0	($10,462,500)
Construction of New Promenade		($8,917,000)	$0	($8,917,000)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pedestrian Site Improvements [2]		($1,001,204)	($905,121)	($1,906,325)	($2,209,063)	$0	($2,209,063)	($2,209,063)	$0	($2,209,063)	($2,209,063)	$0	($2,209,063)
New Building Foundation on Waterside		$0	($7,052,500)	($7,052,500)	$0	($7,052,500)	($7,052,500)	($7,052,500)	$0	($7,052,500)	($7,052,500)	$0	($7,052,500)
New Building Foundation on Landside		$0	($2,635,000)	($2,635,000)	$0	($2,635,000)	($2,635,000)	$0	($2,635,000)	($2,635,000)	($2,635,000)	$0	($2,635,000)
Construction of New Building		$0	($9,902,160)	($9,902,160)	$0	($9,902,160)	($9,902,160)	$0	($9,902,160)	($9,902,160)	($9,902,160)	$0	($9,902,160)
Reconstruction of Existing Building		$0	($8,457,473)	($8,457,473)	$0	($8,457,473)	($8,457,473)	$0	($8,457,473)	($8,457,473)	($8,457,473)	$0	($8,457,473)
In Water Terminal Improvements [3]		($16,600,000)	$0	($16,600,000)	($16,600,000)	$0	($16,600,000)	($16,600,000)	$0	($16,600,000)	($16,600,000)	$0	($16,600,000)
Option: Lagoon Infill [4]		($5,287,618)	$0	($5,287,618)	($5,287,618)	$0	($5,287,618)	($5,287,618)	$0	($5,287,618)	($5,287,618)	$0	($5,287,618)
Subtotal		($32,038,322)	($37,688,254)	($69,726,576)	($38,927,681)	($28,047,133)	($66,974,814)	($45,980,181)	($20,994,633)	($66,974,814)	($66,974,814)	$0	($66,974,814)
Other Costs													
Soft Cost [5]	22%	($7,048,431)	($8,291,416)	($15,339,847)	($8,564,090)	($6,170,369)	($14,734,459)	($10,115,640)	($4,618,819)	($14,734,459)	($14,734,459)	$0	($14,734,459)
Tenant Improvements [6]		$0	($2,852,140)	($2,852,140)	$0	($2,852,140)	($2,852,140)	$0	($2,852,140)	($2,852,140)	($2,852,140)	$0	($2,852,140)
(less) Historic Tax Credits [7]	20%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal		($7,048,431)	($11,143,556)	($18,191,987)	($8,564,090)	($9,022,509)	($17,586,599)	($10,115,640)	($7,470,959)	($17,586,599)	($17,586,599)	$0	($17,586,599)
Builder Fees (% of total costs)	7% public 7% private	($2,736,073)	($3,418,227)	($6,154,299)	($3,324,424)	($2,594,875)	($5,919,299)	($3,926,707)	($1,992,591)	($5,919,299)	($5,919,299)	$0	($5,919,299)
Total Costs		($41,822,826)	($52,250,037)	($94,072,862)	($50,816,195)	($39,664,517)	($90,480,712)	($60,022,528)	($30,458,184)	($90,480,712)	($90,480,712)	$0	($90,480,712)

[1] Includes demolition of Sinbad's, of existing aprons, and the single story portion of the Ag. Building.
[2] Include topping slab, railing, granite steps, handrail, precast seat wall, site lighting, and site furniture.
[3] Includes portals, gangways, floats and dolphins installed as well as utilities and signage.
[4] Includes pier structure as well as topping slab, lighting and furniture allowances.
[5] Includes planning and entitlement (5%), project management (4%), general and administrative (3%), and contingency (10%).
[6] Assumes tenant improvements of $50 per square foot for the AMTRACK, WTA, and retail space, $100 per square foot for restaurant, and $60 per square foot for office space.
[7] Assumed to be 0.

Sources: Moffatt & Nichol, Saylor Associates, and Economic & Planning Systems, Inc.

Economic &
Planning Systems
Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

ATTACHMENT 2:

FULL HISTORIC REHABILITATION

BERKELEY
2501 Ninth St., Suite 200
Berkeley, CA 94710-2515
www.epsys.com

Phone: 510-841-9190
Fax: 510-841-9208

SACRAMENTO
Phone: 916-649-8010
Fax: 916-649-2070

DENVER
Phone: 303-623-3557
Fax: 303-623-9049

Table 1
Agriculture Building Options **Alternative 2**
Full Historic Rehabilitation

Item	Funding Entity		Total
	Public Funding	Private Funding	
Funding Option 1 - Minimum Initial Public Cost			
Total Building Revenue	$0	$22,847,000	$22,847,000
Total Construction Cost	($42,147,000)	($45,207,000)	($87,354,000)
Net Development	($42,147,000)	($22,360,000)	($64,507,000)
Funding Option 2 - Moderate Initial Public Cost			
Total Building Revenue	$0	$22,847,000	$22,847,000
Total Construction Cost	($49,745,000)	($33,622,000)	($83,367,000)
Net Development	($49,745,000)	($10,775,000)	($60,520,000)
Funding Option 3 - Maximum Public Site Work			
Total Building Revenue	$0	$0	$0
Total Construction Cost	$0	$0	$0
Net Development	$0	$0	$0
Funding Option 4 - Maximum Public Site Work and Building			
Total Building Revenue	$22,847,000	$0	$22,847,000
Total Construction Cost	($83,367,000)	$0	($83,367,000)
Net Development	($60,520,000)	$0	($60,520,000)

Source: Economic & Planning Systems, Inc.

Table 2
Agriculture Building Revenue Estimates **Alternative 2**
Full Historic Rehabilitation

Item	Assumptions	Ground Floor (NNN) AMTRACK	WTA/Subsidized Public Space	Retail [1]	Restaurants [2]	Upper Floor Office (FS)	Total
Rent Assumptions							
Rentable Area [3]		3,370	656	3,862	8,630	16,537	33,055
Sales per sq.ft.		n/a	n/a	$450	$500	n/a	n/a
Total Annual Sales				$1,737,900	$4,315,000		
Lease Revenue as % of Sales	7%	$0	$0	$121,653	$302,050	$0	n/a
Minimum Rent per sq.ft.		$30	$20	$60	$70	$80	n/a
Total Minimum Rent		101,100	13,120	231,720	604,100	1,322,960	2,273,000
Building Revenue							
Total Lease Revenue [4]		$101,100	$13,120	$231,720	$604,100	$1,322,960	$2,273,000
(less) Operating Expenses [5]	20%	$0	$0	$0	$0	($264,592)	($264,592)
(less) Rent to Port	10%	(10,110)	(1,312)	(23,172)	(60,410)	(132,296)	($227,300)
(less) Commissions	6%	(6,066)	(787)	(13,903)	(36,246)	($79,378)	($136,380)
(less) Vacancy	2%	($2,022)	($262)	($4,634)	($12,082)	($26,459)	($45,460)
Subtotal		$82,902	$10,758	$190,010	$495,362	$820,235	$1,599,268
Total Revenues (Capitalized at 7%)		$1,184,314	$153,691	$2,714,434	$7,076,600	$11,717,646	$22,846,686

[1] Includes Bike Shop and Café.
[2] Includes Restaurant and Tenant Space.
[3] Square footage includes all building area and 1/2 of outside area.
[4] Assumes the greater of the Minimum Rent, or Lease Revenue as % of Sales rents.
[5] Applies to the upper floor office component only, assumed to have full service rents.

Source: Economic & Planning Systems, Inc.

Table 3
Agriculture Building Development Costs **Alternative 2**
Full Historic Rehabilitation

Item	Assumptions	Funding Option 1			Funding Option 2			Funding Option 3 [1]			Funding Option 4		
		Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
Hard Costs													
Demolition [2]		($232,500)	($3,370,000)	($3,602,500)	($3,602,250)	$0	($3,602,250)	$0	$0	$0	($3,602,500)	$0	($3,602,500)
Construction of New Aprons		$0	($4,600,000)	($4,600,000)	($10,462,500)	$0	($10,462,500)	$0	$0	$0	($10,462,500)	$0	($10,462,500)
Construction of New Promenade		($8,917,000)	$0	($8,917,000)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pedestrian Site Improvements [3]		($1,249,570)	($905,121)	($2,154,691)	($2,154,689)	$0	($2,154,689)	$0	$0	$0	($2,154,689)	$0	($2,154,689)
New Building Foundation [4]		$0	($12,195,400)	($12,195,400)	$0	($12,195,400)	($12,195,400)	$0	$0	$0	($12,195,400)	$0	($12,195,400)
Reconstruction [4]		$0	($16,405,121)	($16,405,121)	$0	($16,405,121)	($16,405,121)	$0	$0	$0	($16,405,121)	$0	($16,405,121)
In Water Terminal Improvements [5]		($16,600,000)	$0	($16,600,000)	($16,600,000)	$0	($16,600,000)	$0	$0	$0	($16,600,000)	$0	($16,600,000)
Option: Lagoon Infill [6]		($5,287,619)	$0	($5,287,619)	($5,287,619)	$0	($5,287,619)	$0	$0	$0	($5,287,619)	$0	($5,287,619)
Subtotal		($32,286,689)	($37,475,642)	($69,762,331)	($38,107,058)	($28,600,521)	($66,707,579)	$0	$0	$0	($66,707,829)	$0	($66,707,829)
Other Costs													
Soft Cost [7]	22%	($7,103,072)	($8,244,641)	($15,347,713)	($8,383,553)	($6,292,115)	($14,675,667)	$0	$0	$0	($14,675,722)	$0	($14,675,722)
Tenant Improvements [8]		$0	($2,249,620)	($2,249,620)	$0	($2,249,620)	($2,249,620)	$0	$0	$0	($2,249,620)	$0	($2,249,620)
Historic Tax Credits [9]	20%	$0	$5,720,104	$5,720,104	$0	$5,720,104	$5,720,104	$0	$0	$0	$5,720,104	$0	$5,720,104
Subtotal		($7,103,072)	($4,774,157)	($11,877,229)	($8,383,553)	($2,821,630)	($11,205,183)	$0	$0	$0	($11,205,238)	$0	($11,205,238)
Builder Fees (% of total costs)	7% public 7% private	($2,757,283)	($2,957,486)	($5,714,769)	($3,254,343)	($2,199,551)	($5,453,893)	$0	$0	$0	($5,453,915)	$0	($5,453,915)
Total Costs		($42,147,044)	($45,207,285)	($87,354,329)	($49,744,954)	($33,621,702)	($83,366,656)	$0	$0	$0	($83,366,982)	$0	($83,366,982)

[1] Not applicable for this alternative.
[2] Includes demolition of Sinbad's, of existing aprons, and the single story portion of the Ag. Building.
[3] Include topping slab, railing, granite steps, handrail, precast seat wall, site lighting, and site furniture.
[4] Includes east, west, and south wings.
[5] Includes portals, gangways, floats and dolphins installed as well as utilities and signage.
[6] Includes pier structure as well as topping slab, lighting and furniture allowances.
[7] Includes planning and entitlement (5%), project management (4%), general and administrative (3%), and contingency (10%).
[8] Assumes tenant improvements of $50 per square foot for the AMTRACK, WTA, and retail space, $100 per square foot for restaurant, and $60 per square foot for office space.
[9] Applies to New Building Foundation and Reconstruction Costs.

Sources: Moffatt & Nichol, Saylor Associates, and Economic & Planning Systems, Inc.

Economic &
Planning Systems
Real Estate Economics
Regional Economics
Public Finance
Land Use Policy

ATTACHMENT 3:

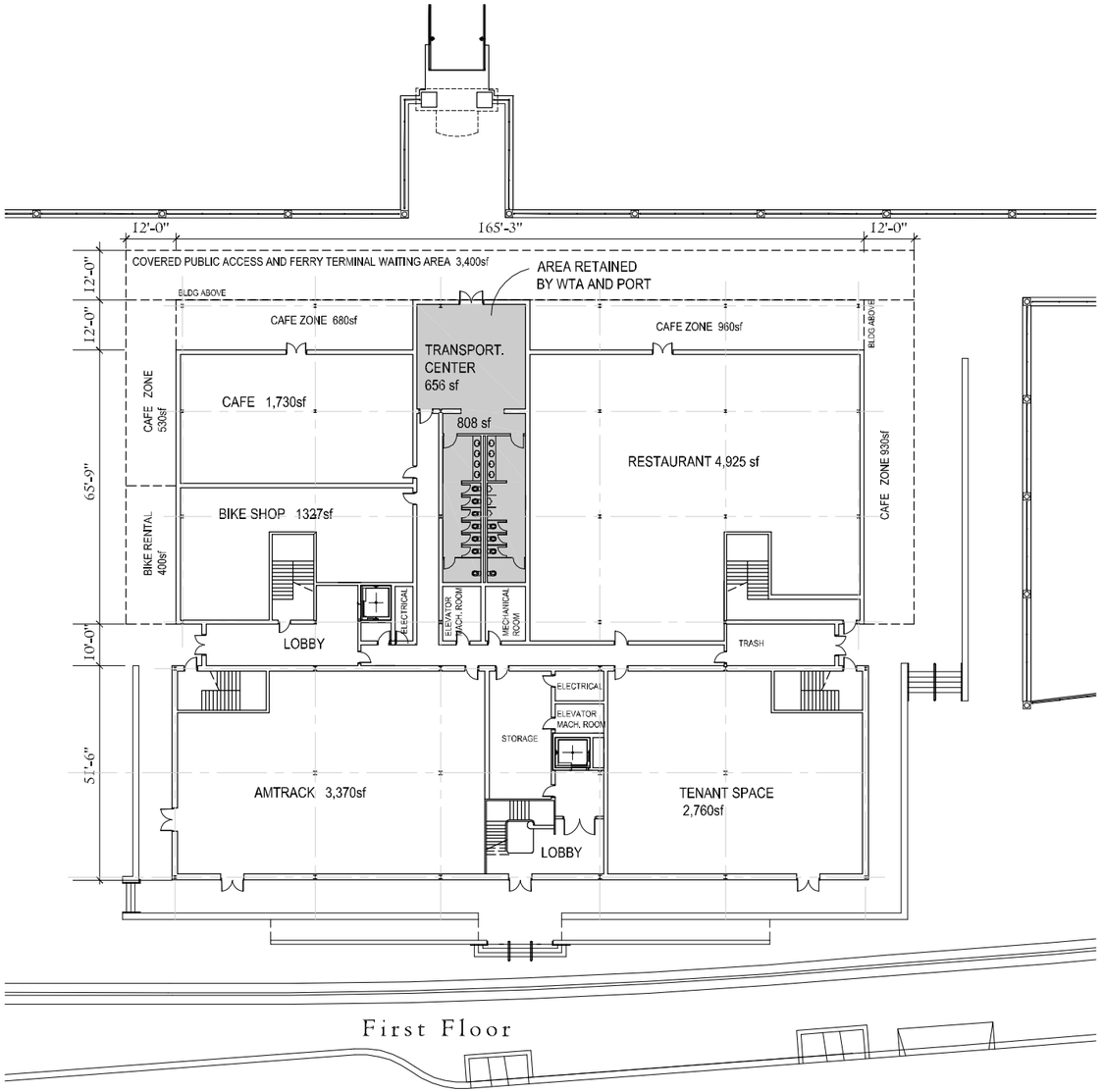
AGRICULTURE BUILDING DRAWINGS

BERKELEY
2501 Ninth St., Suite 200
Berkeley, CA 94710-2515
www.epsys.com
Phone: 510-841-9190
Fax: 510-841-9208

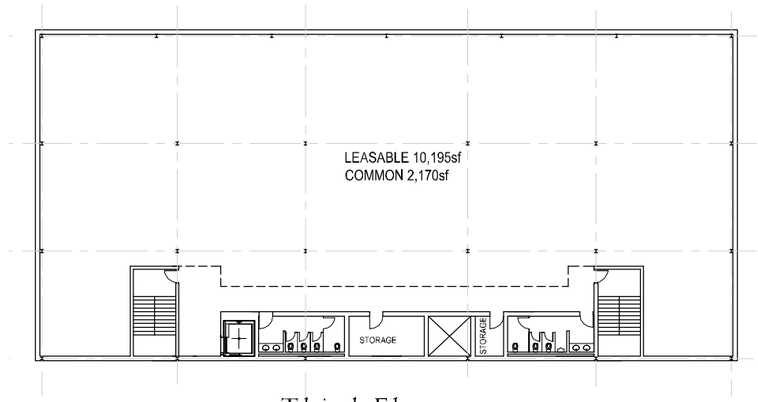
SACRAMENTO
Phone: 916-649-8010
Fax: 916-649-2070

DENVER
Phone: 303-623-3557
Fax: 303-623-9049

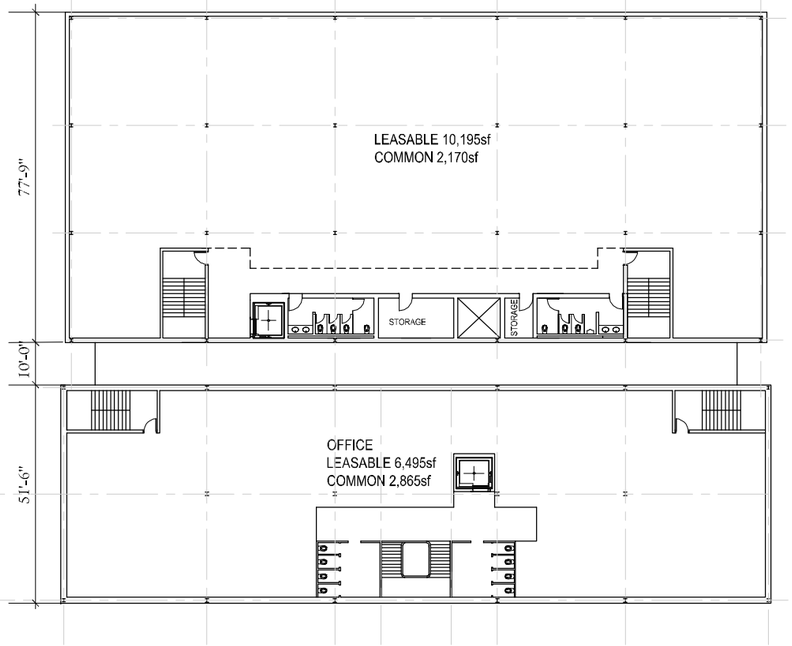
Figure 1



First Floor



Third Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

PLAN-ALTERNATIVE I-PARTIAL HISTORIC REHABILITATION

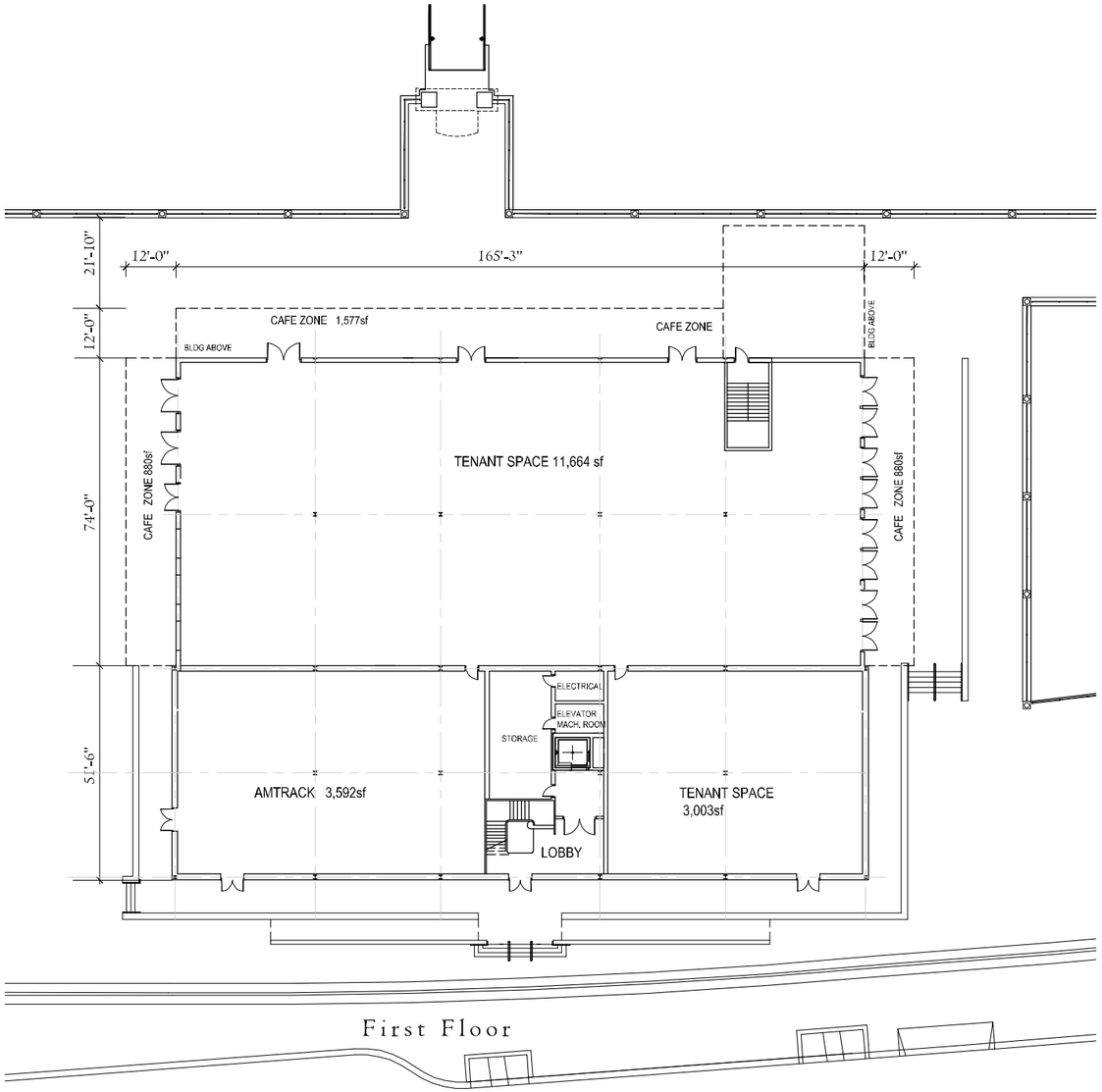
0 16 32 48 ft

Agriculture Building Restoration

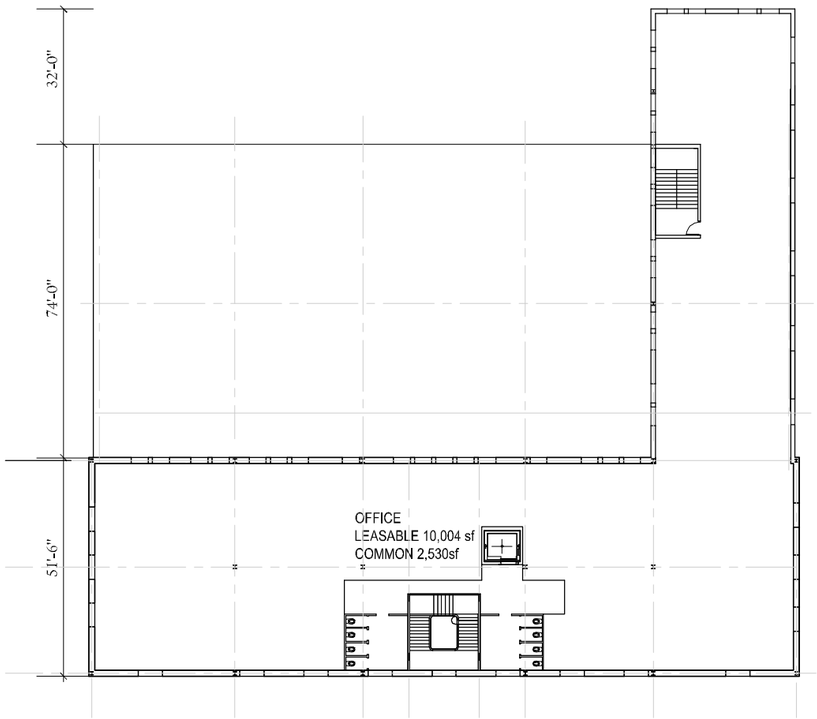
Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007

Figure 2



First Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

PLAN-ALTERNATIVE 2 - FULL HISTORIC REHABILITATION

0 16 32 48 ft

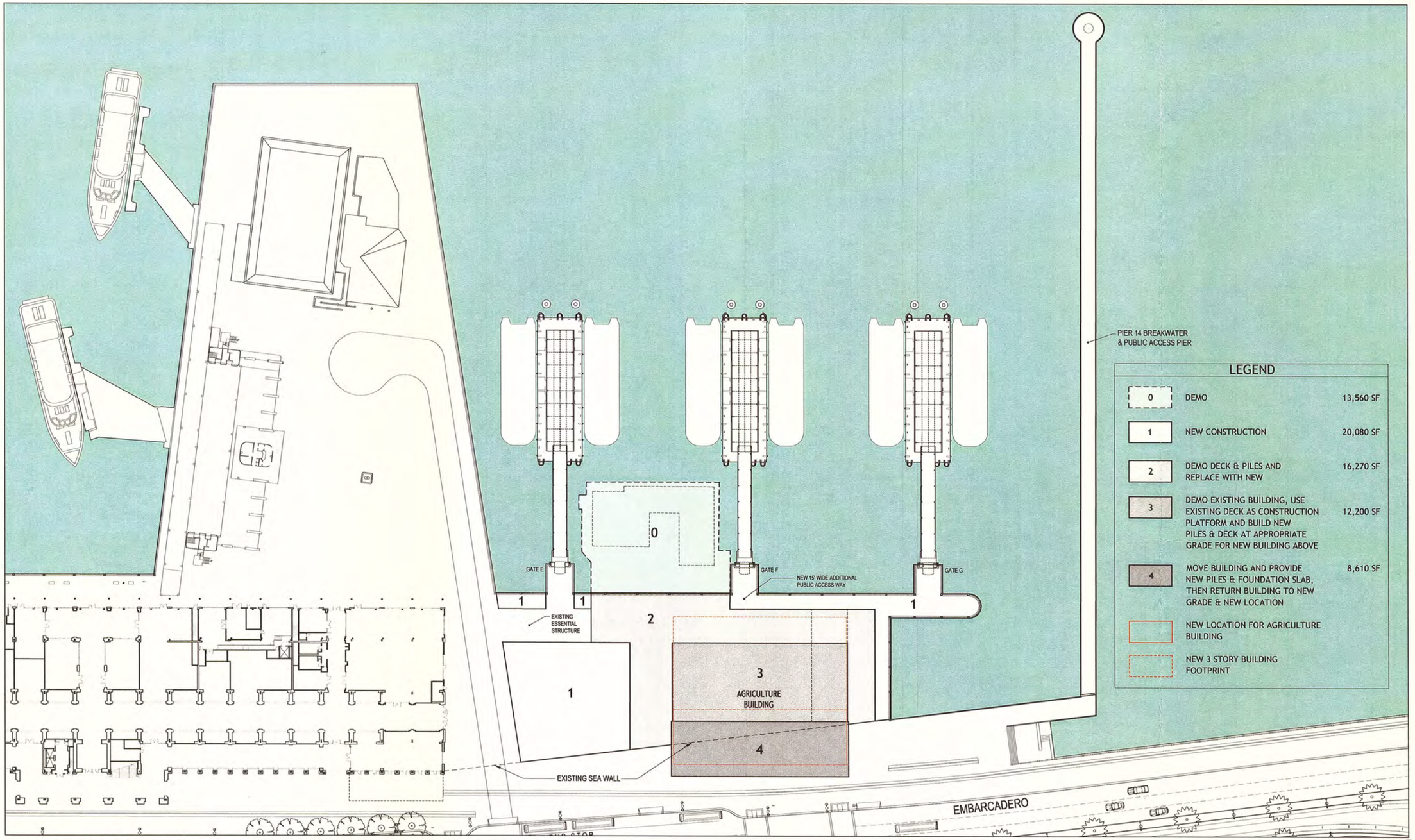
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007

PLANS

ROMA Design Group



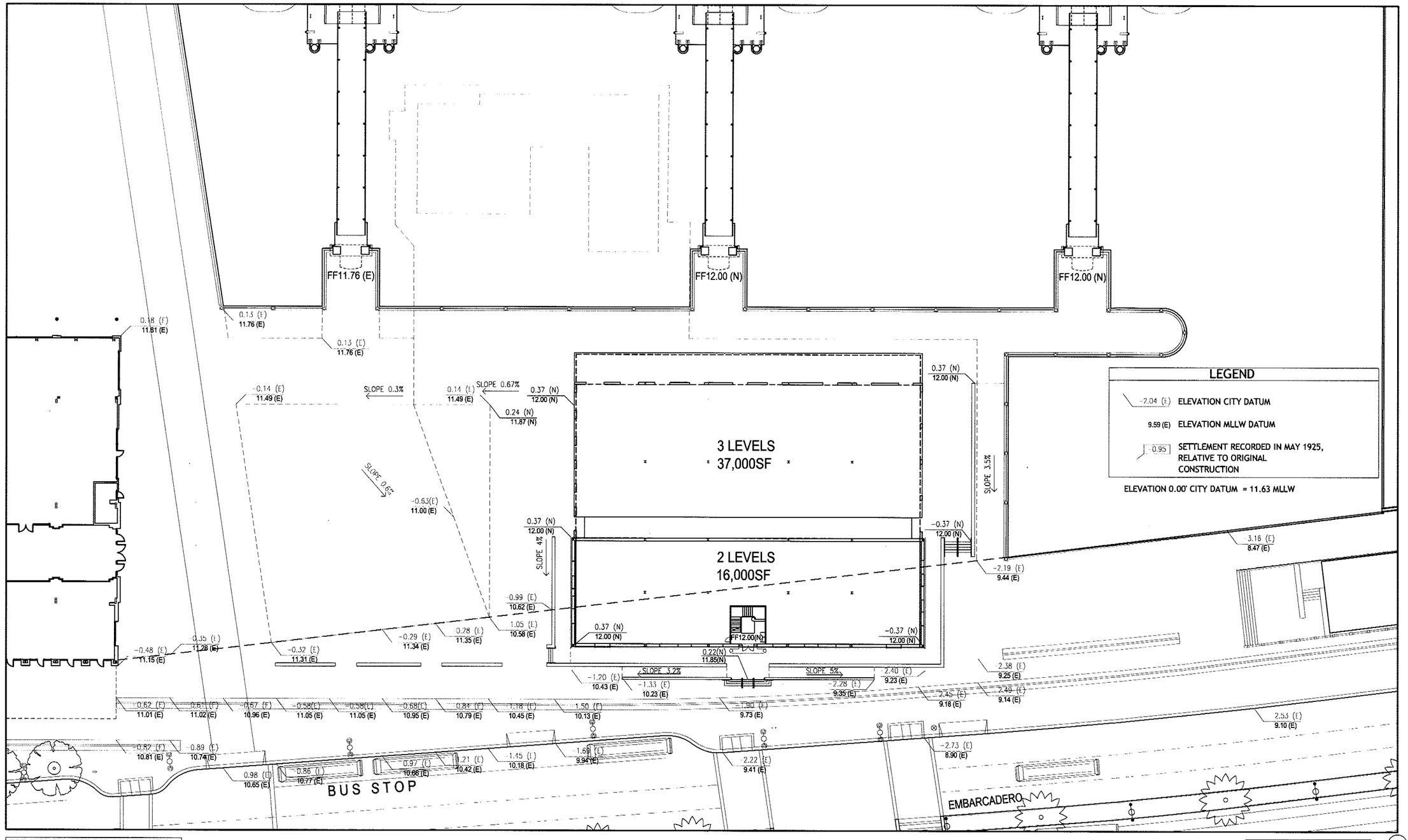
PRELIMINARY - NOT FOR CONSTRUCTION

SITE FOUNDATION & BUILDING RECONSTRUCTION PLAN

Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007



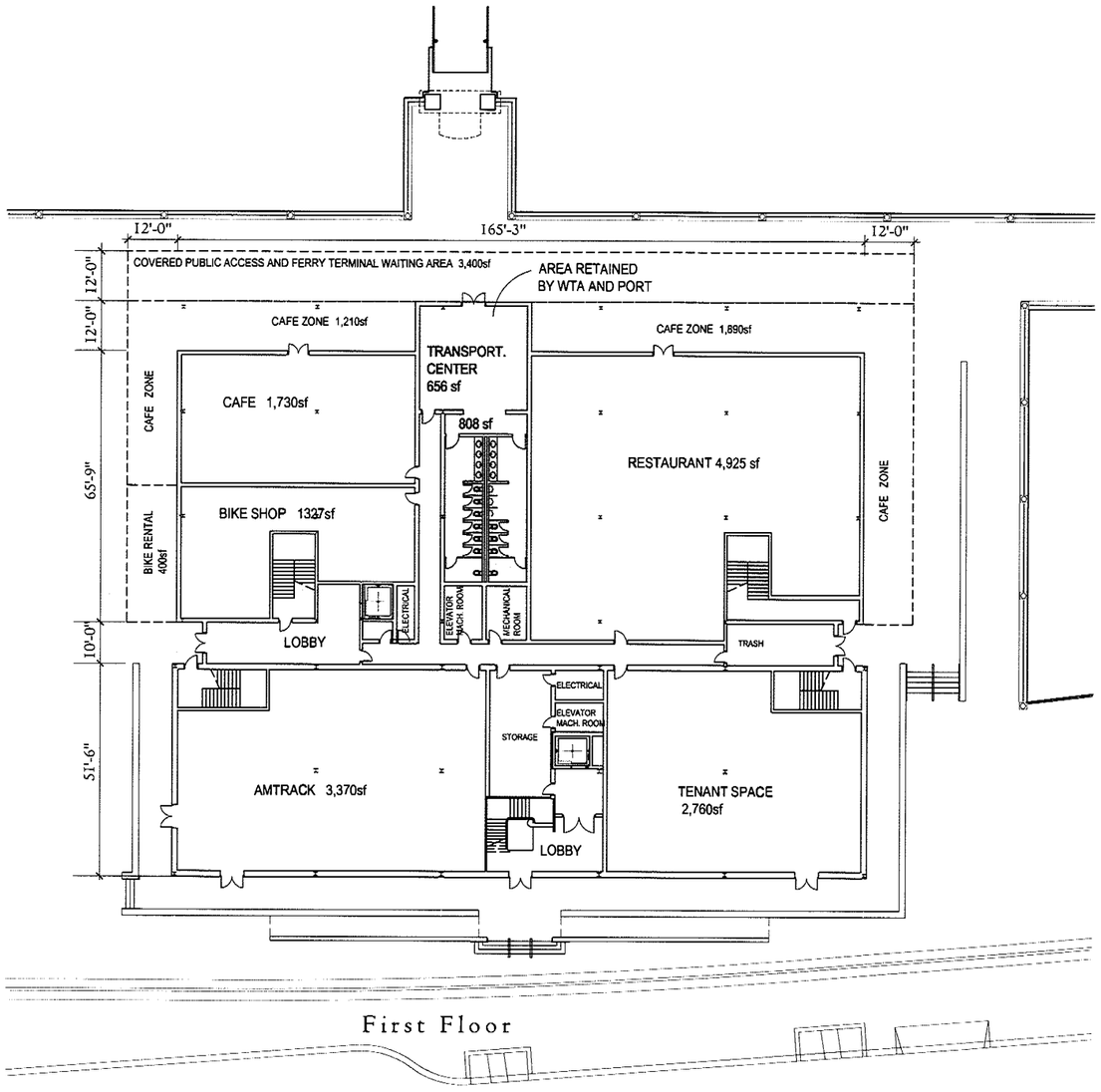
PRELIMINARY - NOT FOR CONSTRUCTION

GRADING PLAN

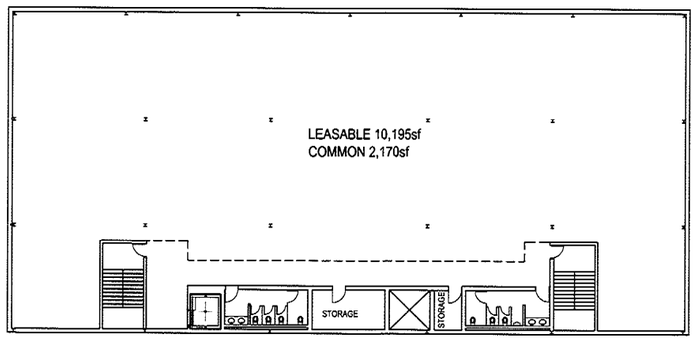
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

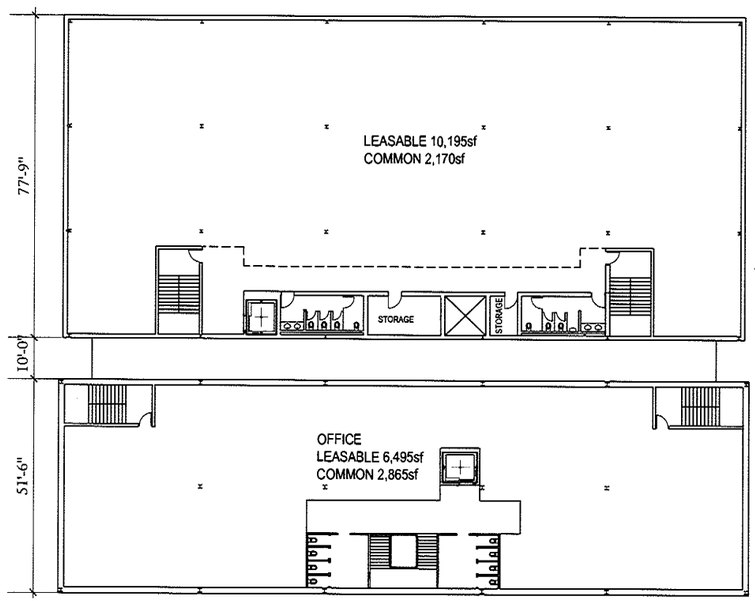
SEPTEMBER 2007



First Floor



Third Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

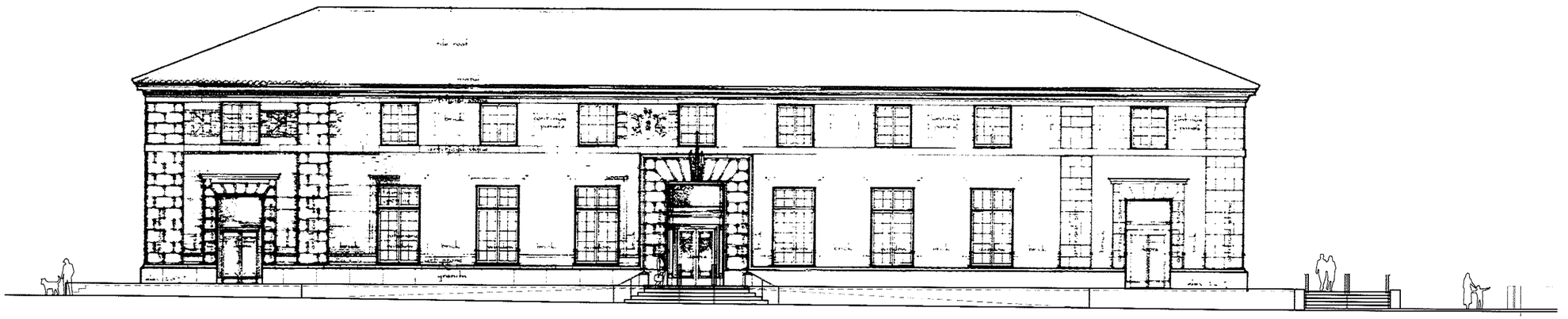
PLAN-ALTERNATIVE I-PARTIAL HISTORIC REHABILITATION

0 16 32 48 ft

Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007



West Elevation

South Elevation

PRELIMINARY - NOT FOR CONSTRUCTION

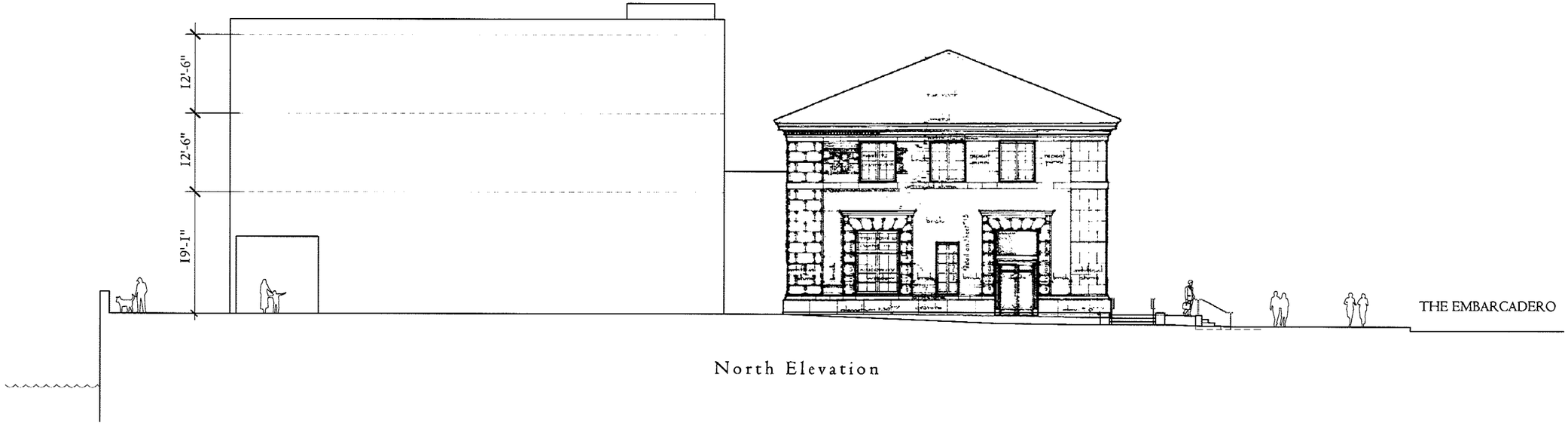
ELEVATIONS - ALTERNATIVE I - PARTIAL HISTORIC REHABILITATION

0 8' 16' 24'

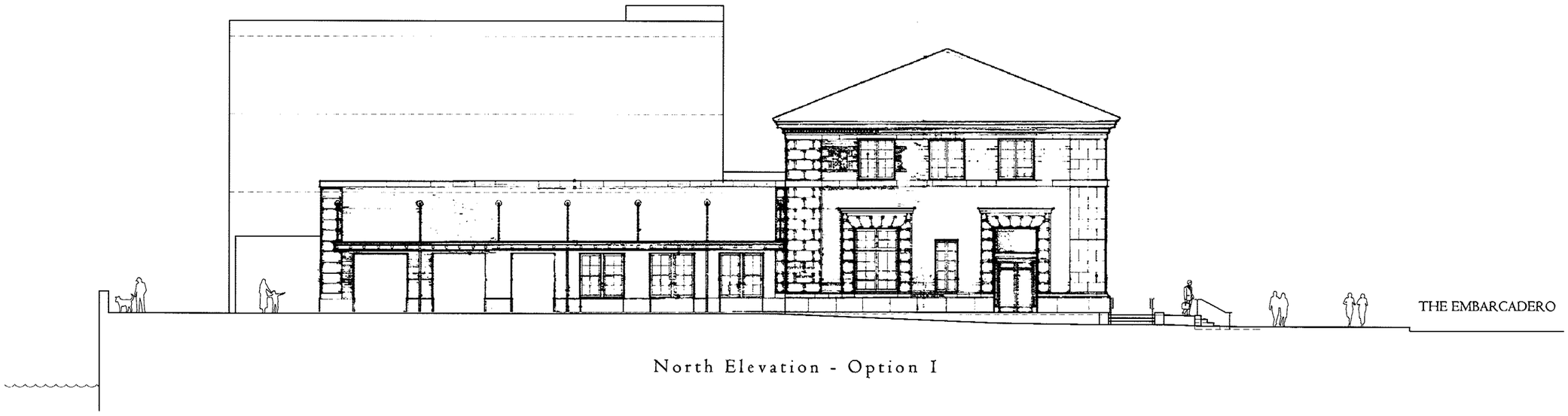
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007



North Elevation



North Elevation - Option I

PRELIMINARY - NOT FOR CONSTRUCTION

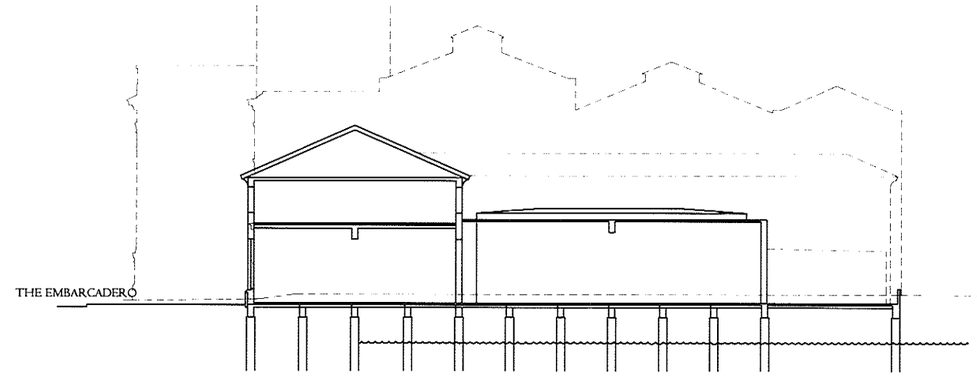
0 8' 16' 24'

ELEVATIONS - ALTERNATIVE I - PARTIAL HISTORIC REHABILITATION

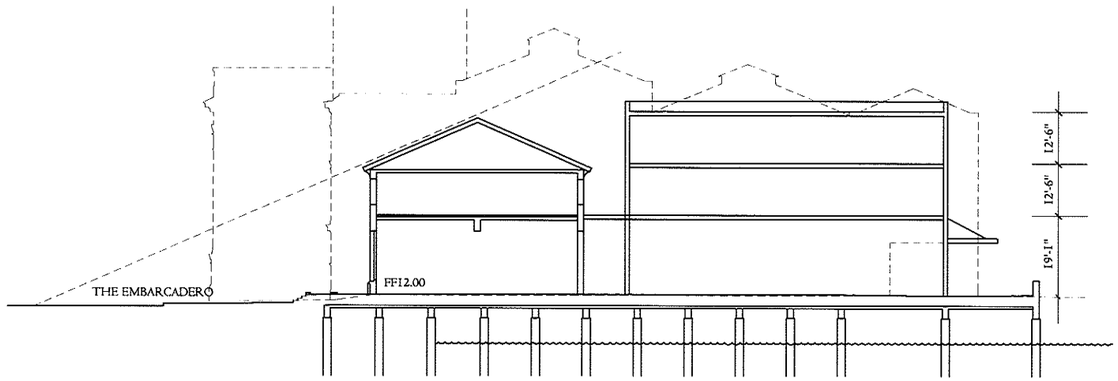
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

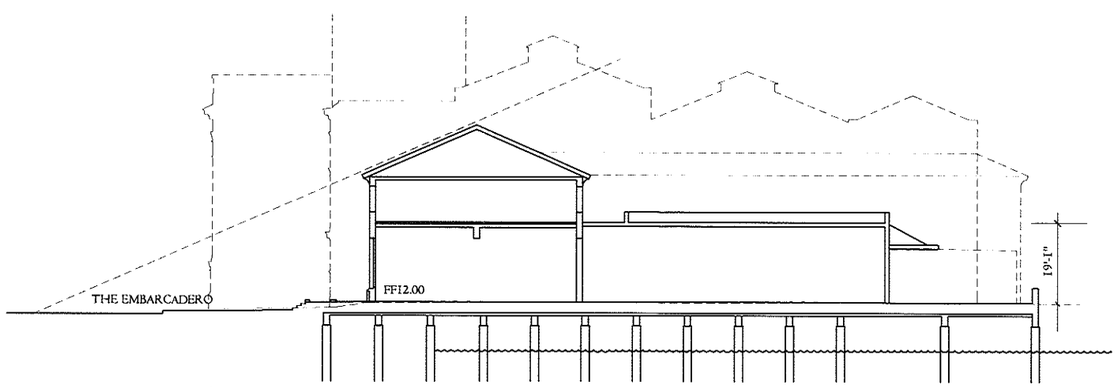
SEPTEMBER 2007



Existing Building



Proposed Building - ALTERNATIVE I - PARTIAL HISTORIC REHABILITATION



Proposed Building - ALTERNATIVE 2 - FULL HISTORIC REHABILITATION

PRELIMINARY - NOT FOR CONSTRUCTION

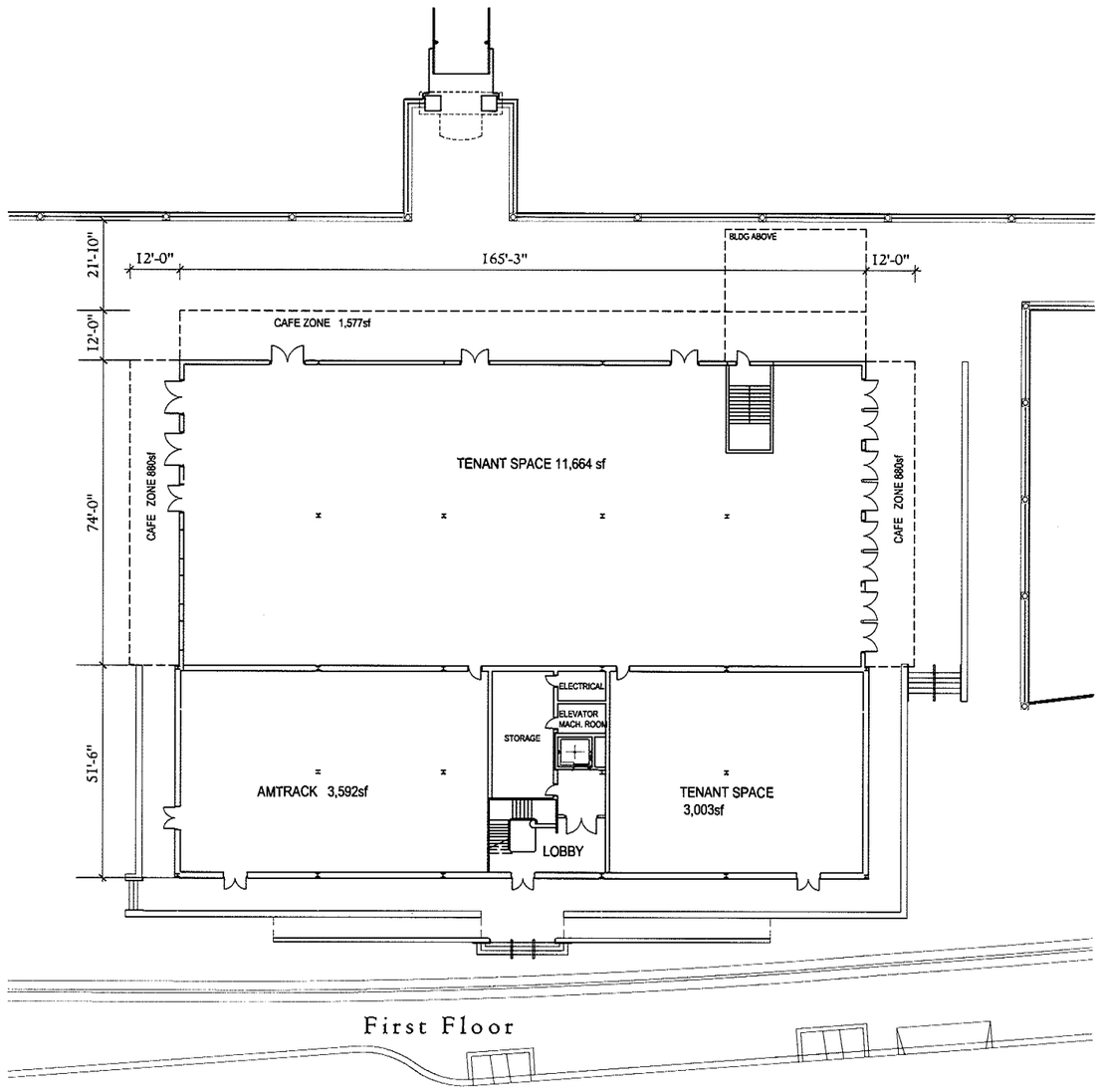
0 16' 32' 48'

SECTIONS

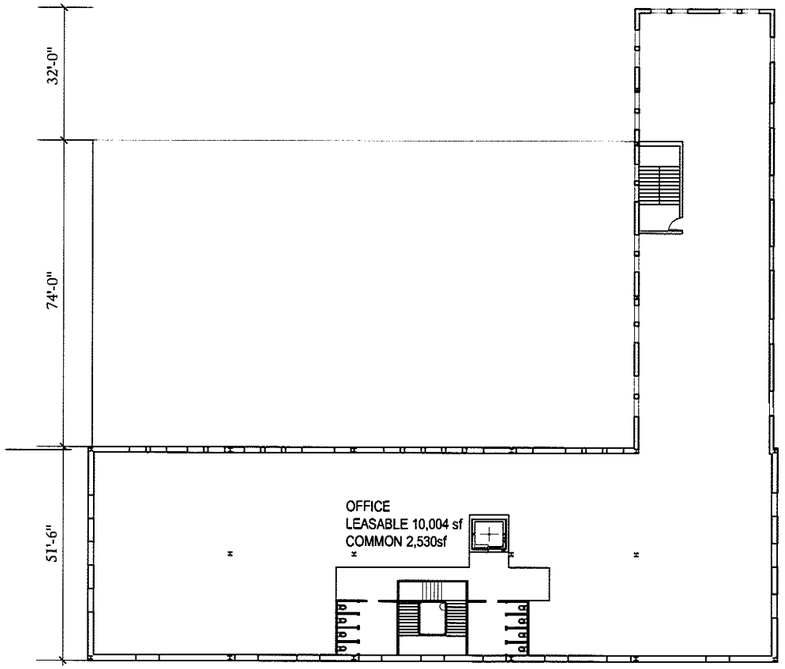
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007



First Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

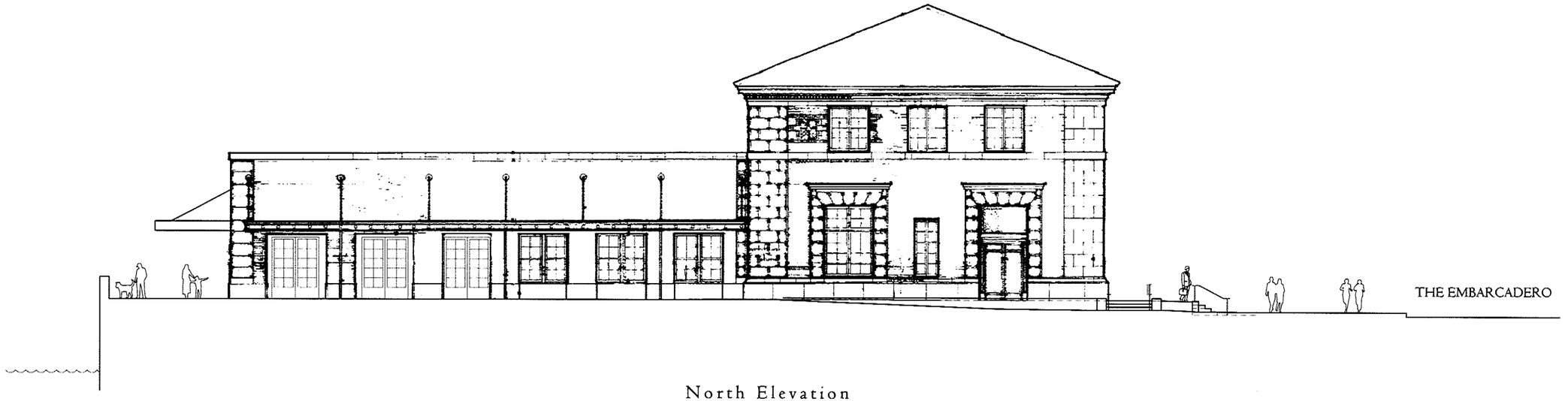
PLAN-ALTERNATIVE 2 - FULL HISTORIC REHABILITATION

0 16 32 48 ft

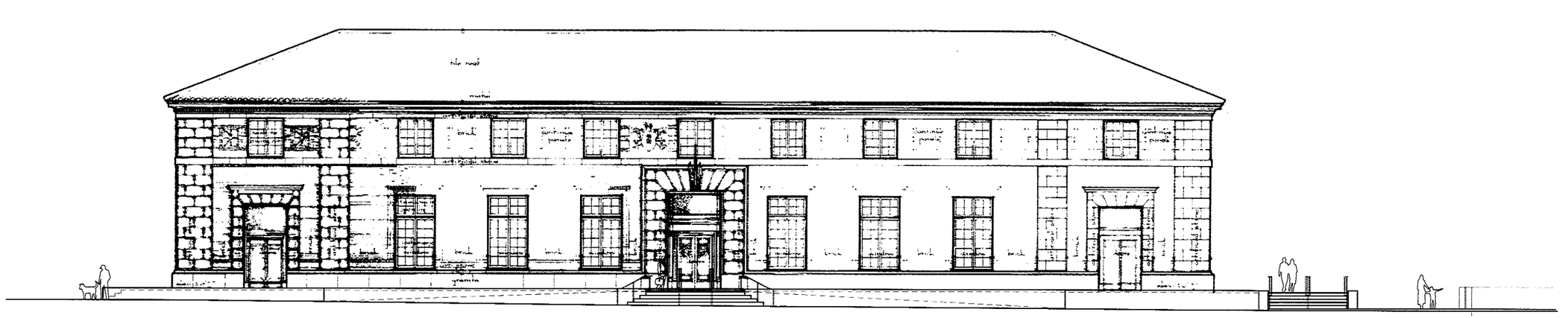
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007



North Elevation



West Elevation

PRELIMINARY - NOT FOR CONSTRUCTION

0 8' 16' 24'

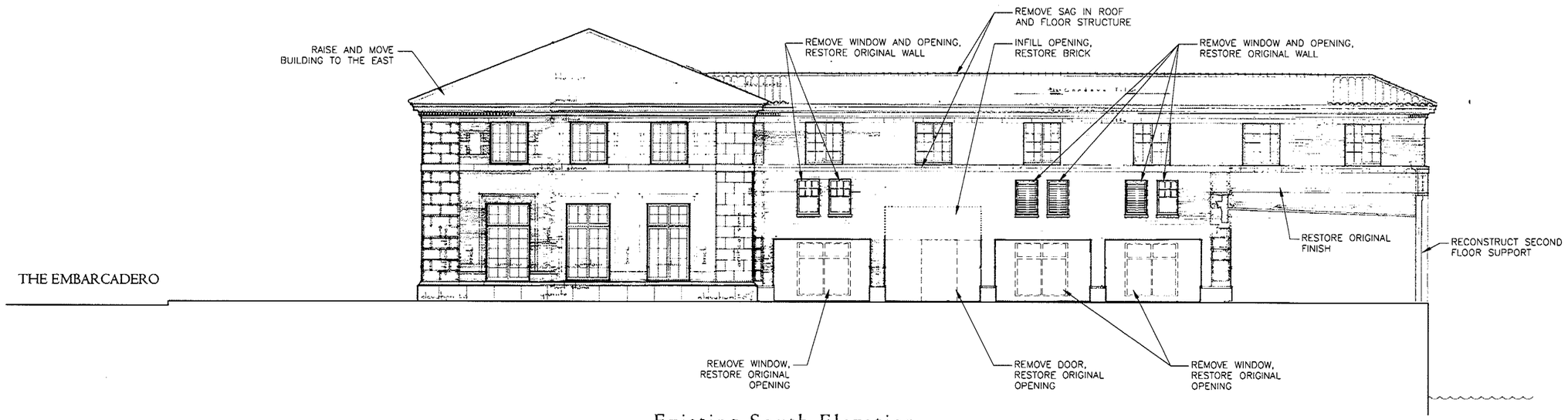
ELEVATIONS - ALTERNATIVE 2 - FULL HISTORIC REHABILITATION

Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007

Restored South Elevation



Existing South Elevation

PRELIMINARY - NOT FOR CONSTRUCTION

0 8' 16' 24'

ELEVATIONS - ALTERNATIVE 2 - FULL HISTORIC REHABILITATION

Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

SEPTEMBER 2007

FOUNDATION
UPGRADE CONCEPT

Moffatt & Nichol

MOFFATT & NICHOL
2001 North Main St, Ste 360, Walnut Creek, CA 94596
Ph: 925-944-5411 ; Fax: 925-944-4732

MEMORANDUM

To: Ivana Micic, ROMA

From: Bo Jensen / Scott Butler

Date: 11 June 2007 (Rev 2, 5 September 2007)

Subj: Agriculture Building Restoration – Foundation Upgrade Concepts

M&N File No: 6210

---

1. Introduction and Background

As part of the Downtown Ferry Terminal project, various concepts were investigated as to the best approach for rehabilitation and reuse for the Agriculture Building. M&N was asked by ROMA to assist in developing concepts and costs for the required foundation upgrades as well as the sequencing of foundation work for rehabilitation of the Agriculture Building. The alternatives considered in this study included the construction of Gates F and G for the Downtown Ferry Terminal and the associated demolition of wharf structures in this area.

2. Overview of Existing Foundation Conditions

The Agriculture Building and foundation was constructed in 1914. The foundation condition has been generally described as poor to fair based on previous field investigations and studies. The focus of this study and previous studies has been on the concrete wharf structure surrounding the Agriculture Building (referred to in this report as the 'apron') and the foundation directly under the Agriculture Building. There are three aprons – on the east, north and south sides. An overview of the Agriculture building foundation and surrounding apron is presented below. Refer to the reports noted in Attachment 3 for further information on the foundation description and condition.

2.1. Apron Surrounding Agriculture Building

The concrete apron on the east side of the building is in poor condition and has been blocked off to vehicle traffic due to its reduced capacity to support load. In many locations the bottom steel reinforcement has corroded through entirely leaving only the top steel reinforcement which drastically reduces the capacity of the concrete structure.

The north apron consists of both a timber framed section and a concrete section. The concrete portion is a section about 10 feet wide immediately adjacent to the north wall of the building. The timber framing (decking, stringers and pile caps) on the north apron is in fair to good condition, with the exception of the north ends of the pile caps that are exposed to the weather, which have extensive rot. The concrete portion of the

apron on the north side of the building is in fair condition and is serviceable for automobile parking and pedestrian foot traffic.

The concrete apron on the south side of the building is in fair condition and remains serviceable for automobile parking.

2.2. Agriculture Building Foundation

The general condition of the Agriculture Building's supporting wharf is poor to fair. The portion of the structure below the building itself is in better condition than the surrounding aprons. The bottom reinforcement steel on many of the beams is exposed and is corroding. The original construction provided approximately 1-1/4 inches of concrete cover over the bottom reinforcement exposed to the saltwater. This is inadequate cover by today's standards and significant spalling of the concrete has occurred due to corrosion of the reinforcement. Gunite repairs completed in 1957 cover up what must have been significant corrosion of the reinforcement at the time the repairs were made. This reinforcement was likely cleaned before the gunite was applied (to improve the thickness of cover); however, the reinforcement continues to corrode in this environment as evidenced by spalled gunite in many locations. At these locations no reinforcement repair was observed that might have indicated that reinforcement lost to corrosion was replaced as part of the 1957 repairs.

3. Alternatives for Agriculture Building Foundation Restoration

Two alternatives have been discussed for restoring the Agriculture Building foundation. Alternative 1 involves demolishing the eastern (back) portion of the building, moving the remaining Agriculture Building to reconstruct the foundation, and then moving the building into its final location on the new foundation system. Alternative 2 would involve demolishing only the one-story eastern portion of the Agriculture Building and upgrade the foundation piles and deck with the Agriculture Building in place (including the South Annex). In both alternatives, the building will be raised 2 feet and moved 8 feet east from its present location

3.1. Alternative 1: Partial Building Move & Restoration

For Alternative 1, the approach would be to demolish the eastern portion of the Agriculture Building (including the 1918 era South Annex) so that the deck and piles underneath could be replaced. The new structure would be constructed above the existing deck thereby using the existing deck as a work platform. The portion of the Agriculture Building that remains (the 50' x 170' rectangular portion that fronts the Embarcadero, referred to as the "West Wing") would be temporarily moved onto the rebuilt deck so that its new foundation could be constructed. After the foundation work is completed, the building would be moved into place and lowered onto its new foundation.

The work has been broken down into the following five phases. Sketches of the five phases described below, are shown in Attachment 1.

- *Phase 1: Demolition*
  Demolish the Agriculture Building Annex and Sinbad's. Demolish Sinbad's foundation wharf, and the apron around the Annex. Brace and support the north façade and move onto the driveway apron.

- *Phase 2: Replace Foundation*
  Replace foundation (deck and piles) under portion of the Agriculture Building that was removed.

- *Phase 3: Construct Public Access way*
  Rebuild pile-supported public access way in front of Ferry Gates F & G. To provide bus turnaround, the "lagoon" area could also be filled in with piles and decking in this phase as an optional item. If the lagoon is filled in, the north façade could be moved over this new deck area to facilitate the rebuilding of the driveway apron. The façade could be stored upright or laid flat.

- *Phase 4: Move and Restore Agriculture Building Foundation*
  Lift and move Agriculture Building onto rebuilt deck structure. Rebuild the Agriculture Building foundation at a higher elevation (land and water side areas). Move building onto new foundation. Note that the current plan calls for the final resting place of the Agriculture Building to be approximately 10 feet east of its existing position.

- *Phase 5: Rebuild / Strengthen Driveway*
  A new building could be constructed behind the original Agriculture Building after this phase.

3.2. Alternative 2: Upgrade Building In Place (including South Annex)

Since the Agriculture Building is on the National Register of Historical places, its preservation as one structure is an important consideration in any foundation upgrade scheme. A second alternative that was considered is to restore and retrofit the West Wing and the 1918 South Annex together without moving the entire building to restore the foundation.

The project phases would be similar to Alternative 1 with the following modifications:

- Only the one-story, eastern portion of the Agricultural Building (approx 9,400 sf) would be demolished. The 1918 South Annex would remain and would be part of the overall Agricultural Building restoration project.

- The building foundations would be restored with the buildings in their present location. After the new foundations were constructed, the building would be raised 2 feet and relocated on the new foundations 8 feet east of its present location.

Sketches and descriptions of one building foundation approach are included in Attachment 2. Note that Attachment 2 shows only one approach – other foundation concepts are feasible and should be developed as part of a future optimization process, should the project move forward.

4. Construction Approach

The following sections describe the construction approach assumed as the basis for our cost estimate presented in Section 5.

4.1. Alternative 1

4.1.1. Demolition

The demolition of the existing wharf area will in all likelihood be accomplished using excavator mounted hydraulic demolition hammers. The debris will be transported to a landfill or recycling operation location. Once the existing wharf is demolished, the piles can be installed for the area where the existing agriculture building is located. In order to facilitate the construction work, part of the agriculture building will have been demolished prior to beginning the wharf construction, and only the western historic area will remain. A temporary closure wall will have been added to the east side of the remaining west wing of the Agriculture Building since this side of the building will be exposed after the demolition.

4.1.2. Pile and Deck Construction

The existing deck will be left in place to save costs and to be used as a working platform. Some areas of the deck where the piles are located will be saw cut and demolished as necessary to allow for the installation of the piles. Some existing piles that may conflict with the new piles may have to be removed. The piles will be driven using crane mounted hydraulic hammers and the maximum reach will be 75 feet. Once the piles are installed, the new deck can be constructed above the existing deck. The new deck will be raised approximately two feet above the existing deck. Additional beams will be added to the structure to support the agriculture building when it is temporarily moved onto this structure. The new wharf area on the waterside of the existing wharf can then be constructed. Since this part of the wharf was completely demolished the construction will take place over water. The piles can be installed, the deck constructed, and the concrete work for the gate structures completed.

4.1.3. Lagoon Area Deck In-fill

If the deck in the lagoon area is constructed and the driveway area demolished and reconstructed it should be done at the same time as the new wharf area is constructed. Otherwise access to the lagoon area will be difficult and the costs for construction will likely be higher. The driveway area will be completely demolished probably using excavator mounted hydraulic demolition hammers.

Then piles will be installed and the deck constructed for the lagoon area and the driveway area in the same manner as the new wharf area.

4.1.4. Agriculture Building Move and Foundation Upgrade

Once the construction of the above areas is complete, the agriculture building can be temporarily moved to the east so that its foundation can be reconstructed. This reconstruction will likely involve the replacement of the existing piles with longer piles and constructing new grade beams. This work will probably be done using land based equipment. After this work is completed, the agriculture building can be moved back onto its newly reconstructed and improved foundation.

4.2. Alternative 2

The main construction approach for Alternative 2 will be similar to Alternative 1; however, unlike Alternative 1, the building foundation upgrade will be complicated by the fact that most of the work will be done inside the existing building. Specialized low-height drilling and equipment will likely be required and will add to the overall cost.

The foundation concept for Alternative 2 includes six different types for foundations (see sketch in Attachment 2).

Type 1:

These foundations will be installed inside the building (before it has been raised) using specialized low-height drilling and casing equipment. The foundations will be cast-in- place concrete piles with reinforcing and a cast-in-place pile cap for the building column base plates.

As an alternative, there may be an opportunity to drive some of these piles through the roof of the Agriculture building – one on each side of the column line using conventional pile driving equipment. A girder would then span between the piles to carry the existing building column load in its new location.

Type 2:

These foundations will be required in the locations where the new location of an interior column lands over the seawall. In this case, we have assumed that no building columns can bear directly on top of the seawall; therefore, a girder will be required to span over the seawall and support the existing building column. The girder will be supported on driven piles – one on each side of the seawall.

Type 3:

Before the building is moved, these foundation piles at the east side of the building can be driven through the existing deck using conventional pile driving equipment. After the concrete cap is poured, the building can be moved over and set down on the new supports.

Type 4:

These foundations are required at the north and south wall of the Agriculture building where the walls of the building preclude installation of piled footings directly underneath the wall. In this case, a type 1 footing would be installed inside the building and a type 3 piled footing installed outside the building footprint. A girder would span between the two piles and support the building point load as required.

Type 5:

These will be required at the South Annex Building. Steel piles (say, 32" dia) would be driven on the outside of the Annex Building walls; at each column line. A concrete cap / corbel would then be installed on top of the pile to carry the building column loads at their new locations. A transverse floor framing beam is integrated into the pile cap structure and will be used to tie the caps together as well as provide support for secondary floor framing. This support and framing approach does not rely on the existing pier slab and piles for support; therefore not additional structural upgrades are required. Refer to section shown on SK-1.

Type 6:

Two piles and a cap beam will be required at the end of the South Annex Building to support the far eastern side of the building in its new location. This support structure could be integrated into the new apron structure planned for the Gate F & G ferry berth project.

5. Cost Estimates

Conceptual construction costs have been developed for Alternative 1 & 2. As no design has been done, the estimates are for budgetary purposes only and are based on typical unit costs for similar construction. Estimate details are provided in Attachment 3.

Alternative 1: Restore West Wing Only

Phase	Amount
Phase 1: Demolition	$3,871,900
Phase 2: Upgrade / Replace Deck Foundation	$7,052,500
Phase 3: Construct Public Access way + Terminal Gates	$8,602,500
Phase 4: Restore Ag Building Foundation	$2,635,000
Phase 5: Rebuild Driveway	$1,860,000
Option: Fill lagoon area with new piles and decking	$4,882,500
Total	**$28,904,400**

Alternative 2: Restore West Wing and South Annex

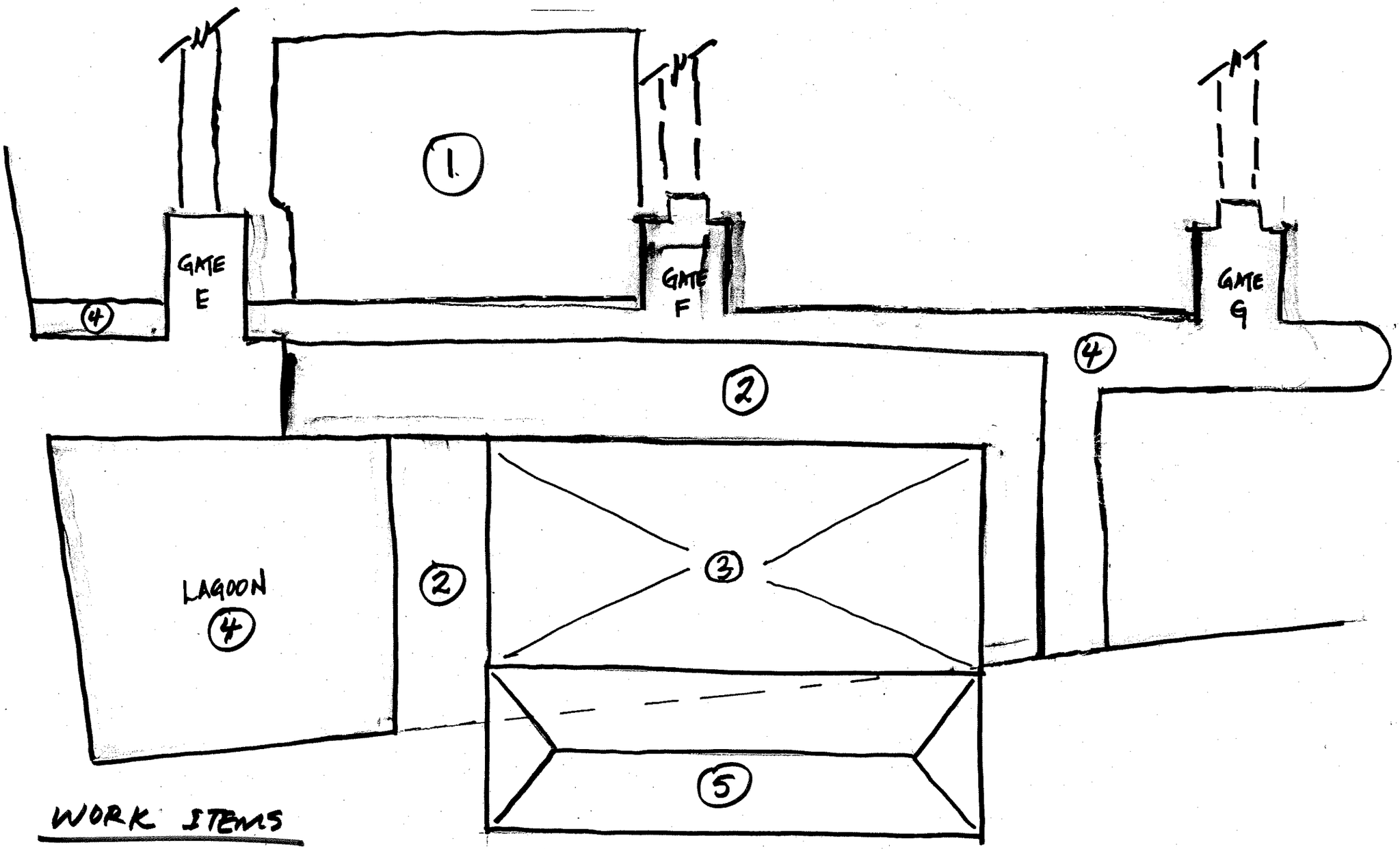
Phase	Amount
Phase 1: Demolition	$3,137,200
Phase 2: Upgrade / Replace Deck Foundation	$5,006,500
Phase 3: Construct Public Access way	$8,602,500
Phase 4: Restore Ag Building Foundation (incl. South Annex)	$7,188,900
Phase 5: Rebuild Driveway	$1,860,000
Option: Fill lagoon area with new piles and decking	$4,882,500
Total	**$30,677,600**

These costs include a contingency of 30% and indirect costs.

Note that the above costs do not include restoration of the Agriculture Building interior or exterior. Also, costs to reinforce or move the buildings are not included. Demolition estimates do not include removal or disposal of hazardous materials.

Attachment 1: Sketches of Agriculture Building Construction Phases for Alt 1
Attachment 2: Building Foundation Sketches for Alt 2
Attachment 3: Cost estimate Back-up

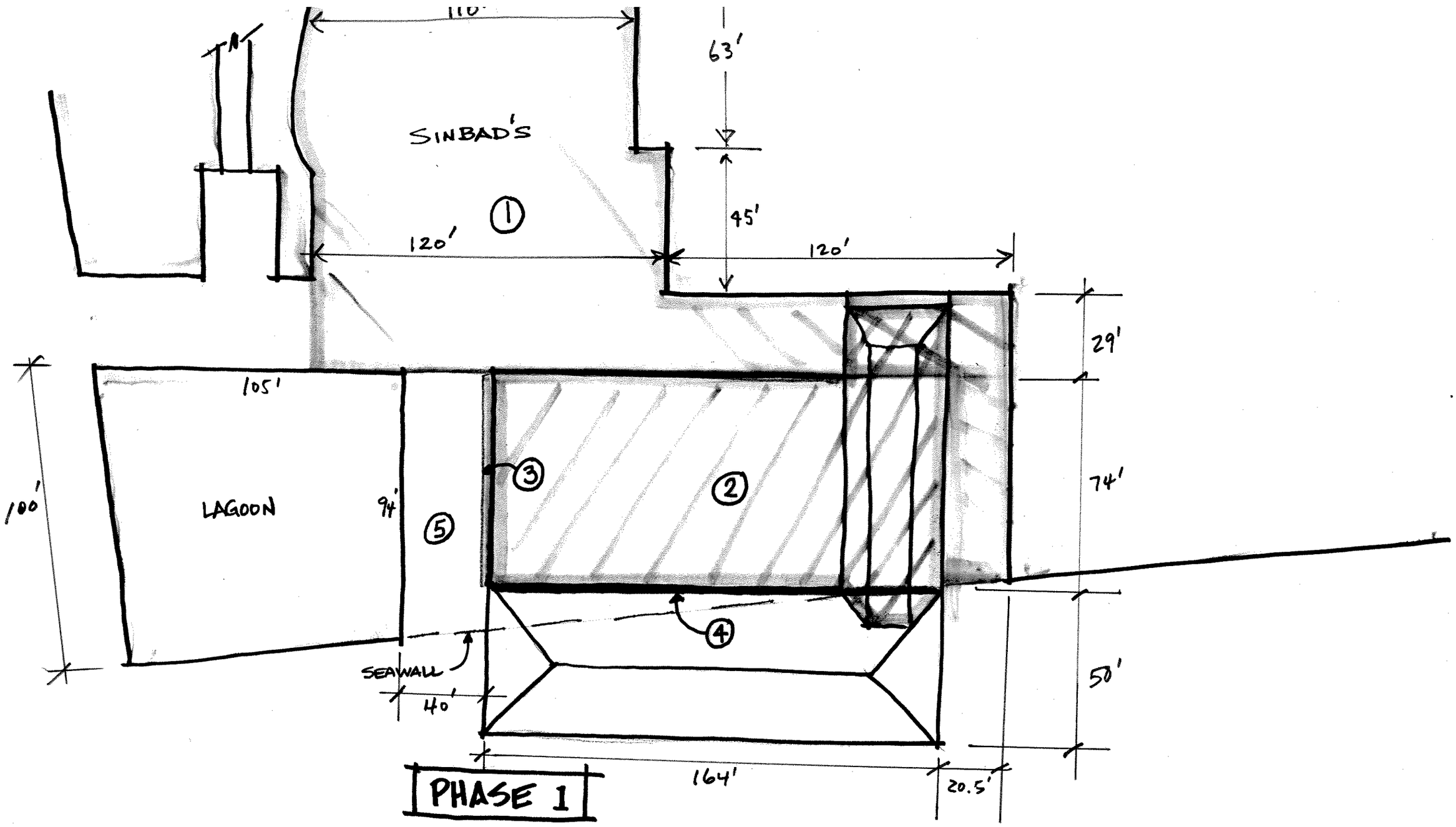
ATTACHMENT 1: Alternative 1
Construction Phases



WORK ITEMS

1. DEMO
2. DEMO + REPLACE
3. (N) DECK OVER (E)
4. (N) DECK
5. (N) FOUNDATION

AG BLDG.



PHASE 1

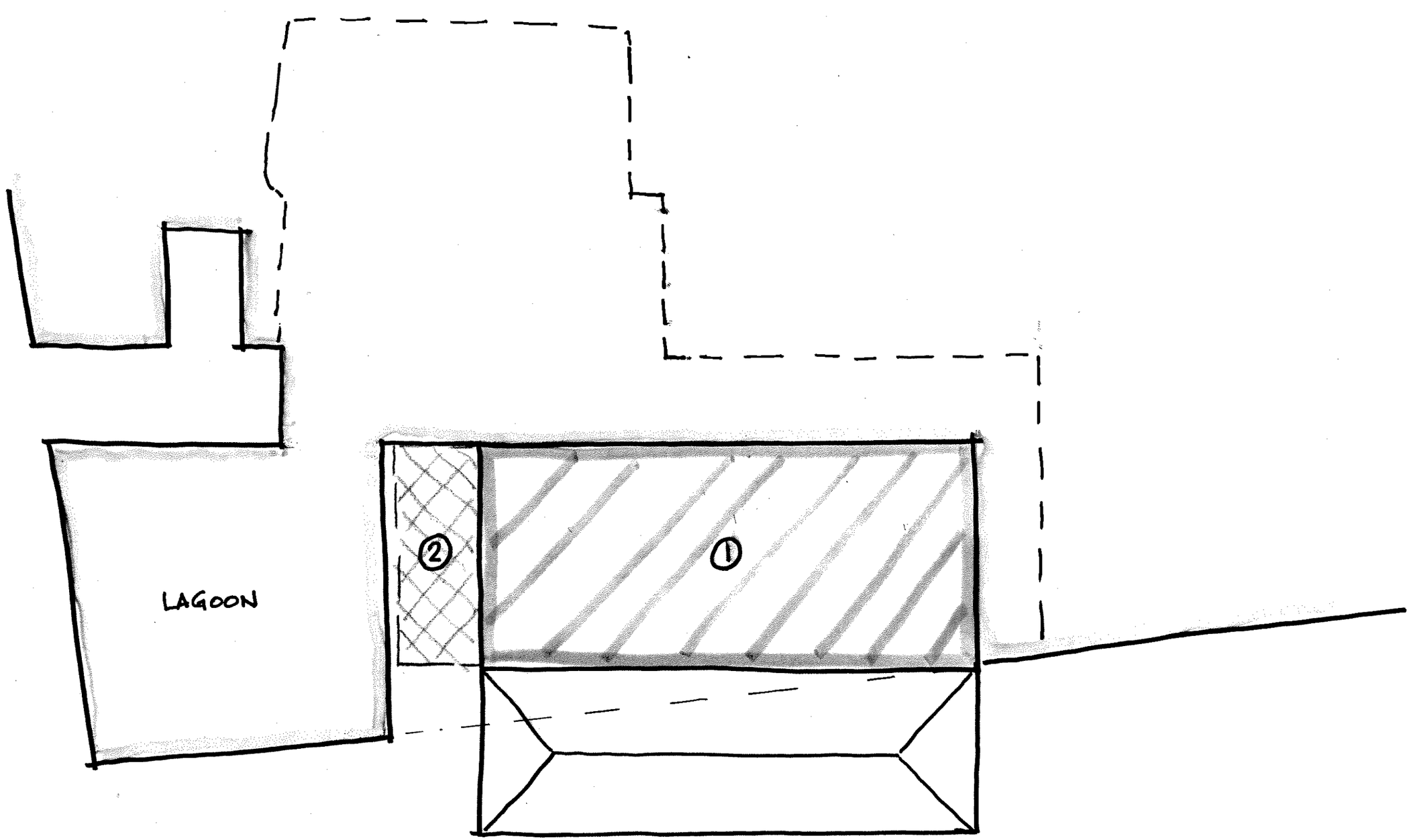
① DEMO PILES & DECK

② DEMO BUILDING ONLY, DECK TO REMAIN

③ BRACE AND PRESERVE NORTH FAÇADE

④ CONSTRUCT CLOSURE WALL FOR AG. BLDG.

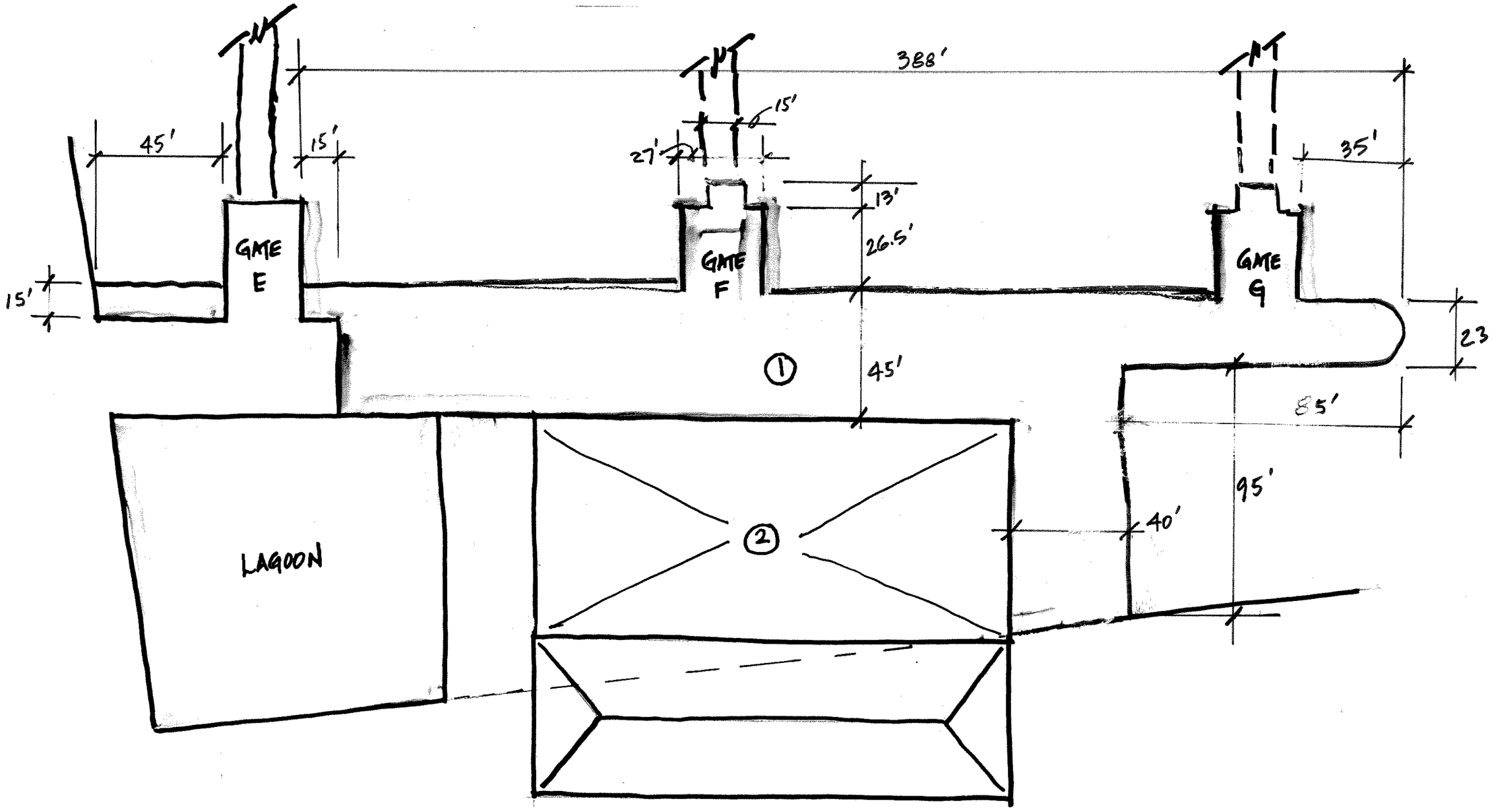
⑤ DECK / DRIVEWAY TO REMAIN THIS PHASE



PHASE 2

① ADD PILES, UPGRADE DECK

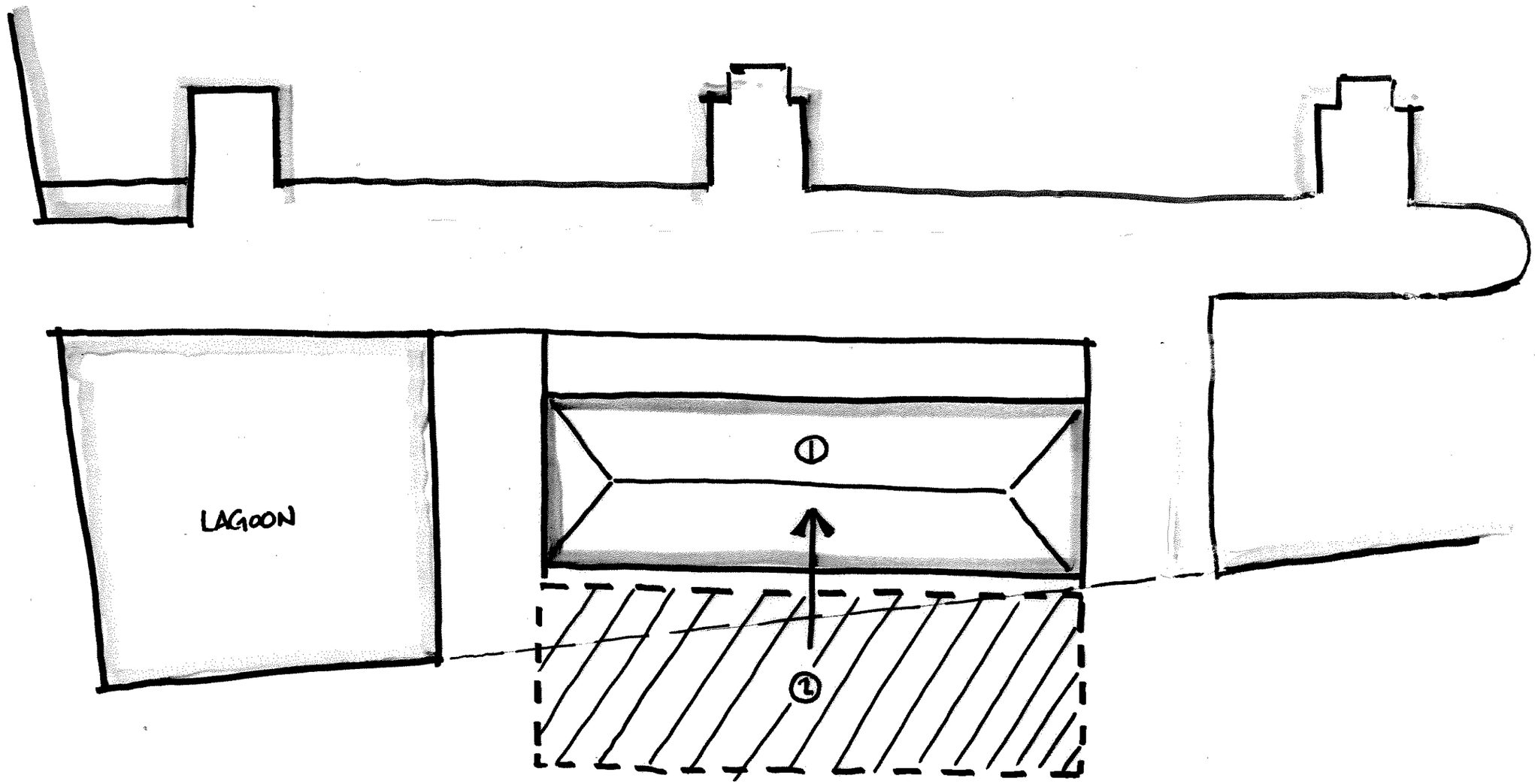
② LAYDOWN AREA FOR NORTH AG. BLDG FAÇADE



PHASE 3

① REBUILD ~~30'~~ 45' WIDE PUBLIC ACCESS WAY

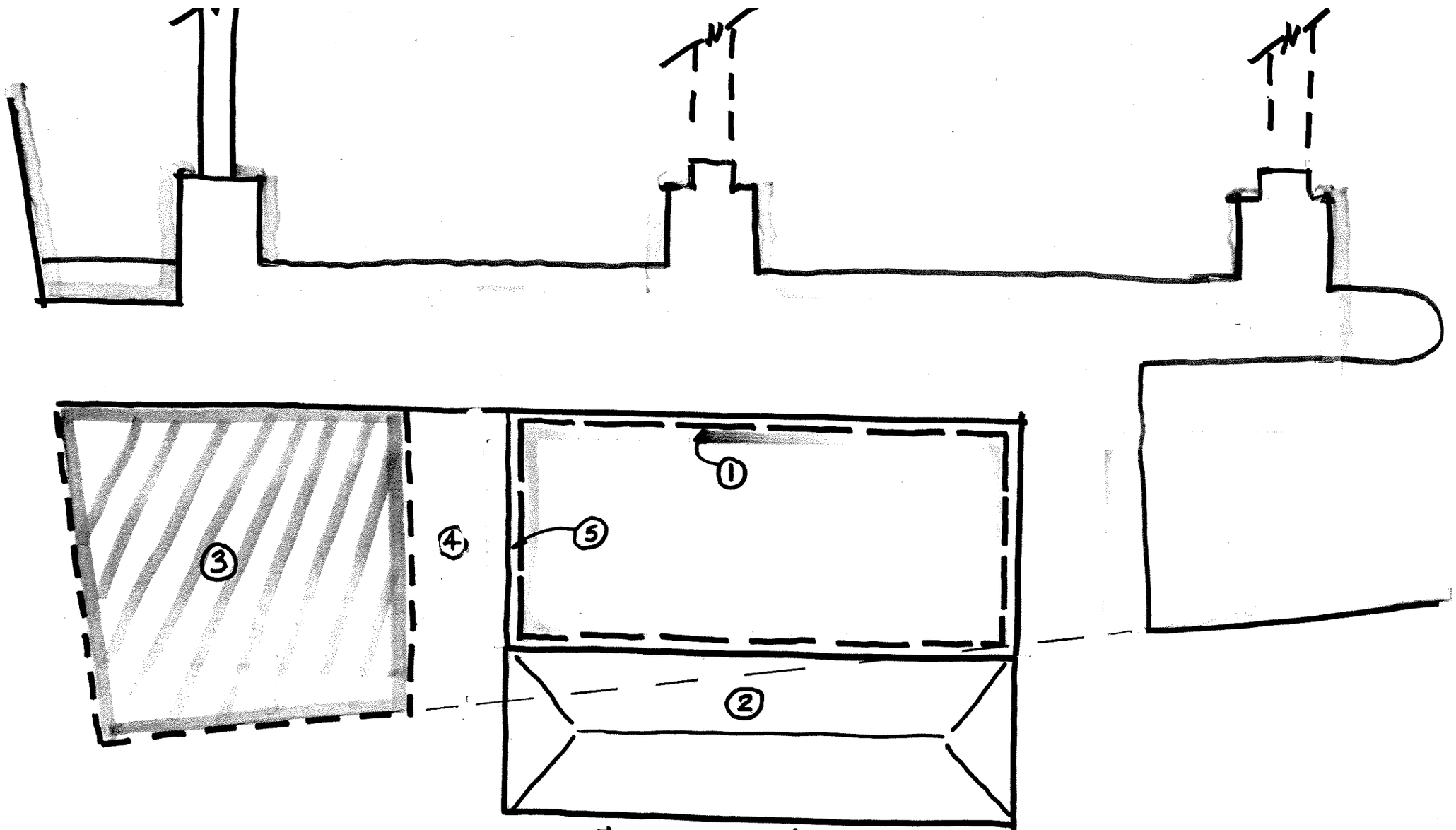
② NEW UPGRADED DECK & PILES (PHASE 2) FOR FUTURE BUILDING



PHASE 4

① LIFT AND MOVE AG BLDG. ONTO STRENGTHENED DECK AREA

② REPAIR/IMPROVE AG BLDG. FOUNDATION AND MOVE BUILDING BACK OVER FOUNDATION



PHASE 5

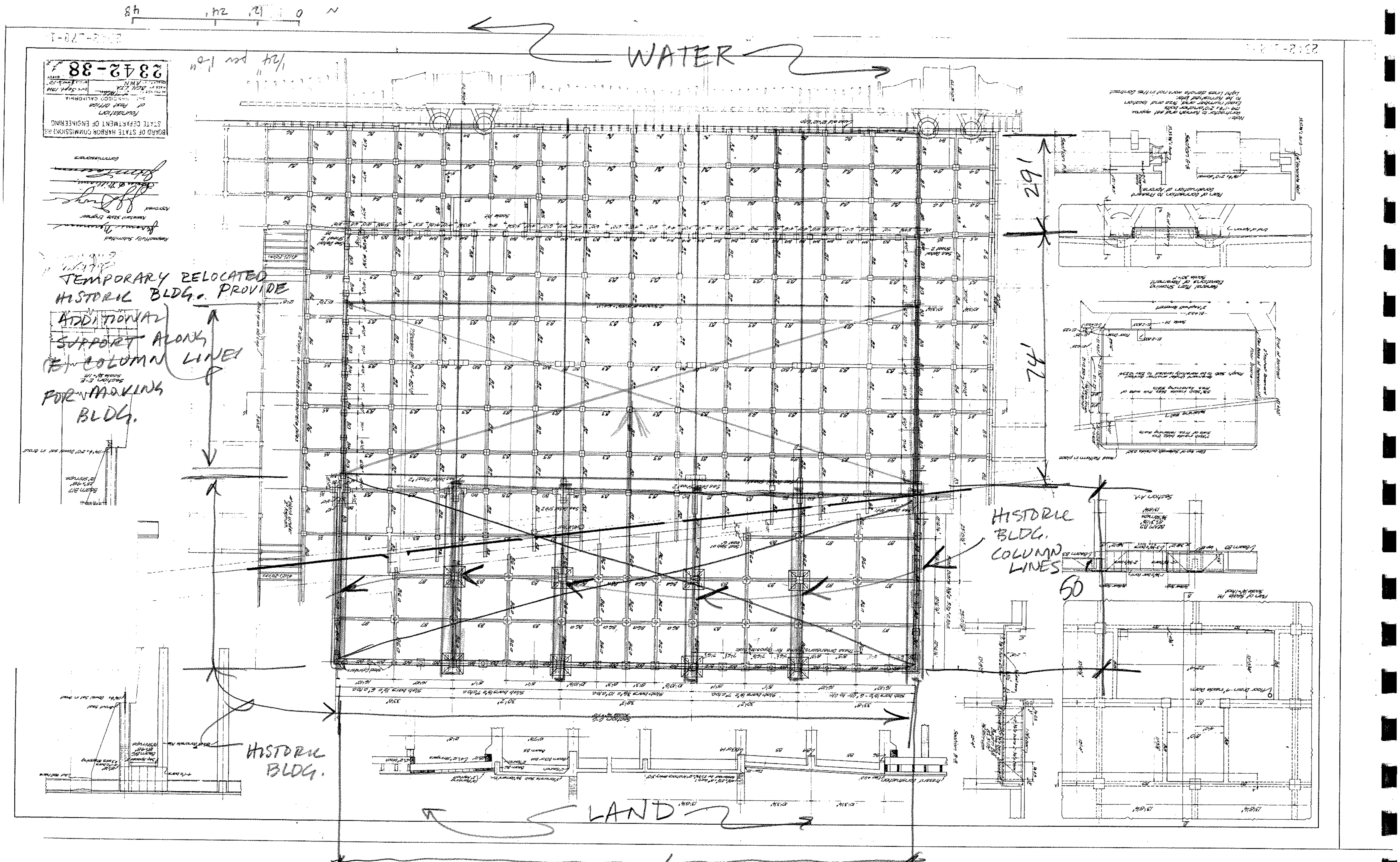
① OUTLINE OF NEW AG BUILDING ANNEX

② RESTORED AG BLDG ON NEW FOUNDATION

⑤ ⑧ FILL IN LAGOON AREA W/ NEW PILES AND DECK
(POSSIBLY INCLUDED W/ ④)

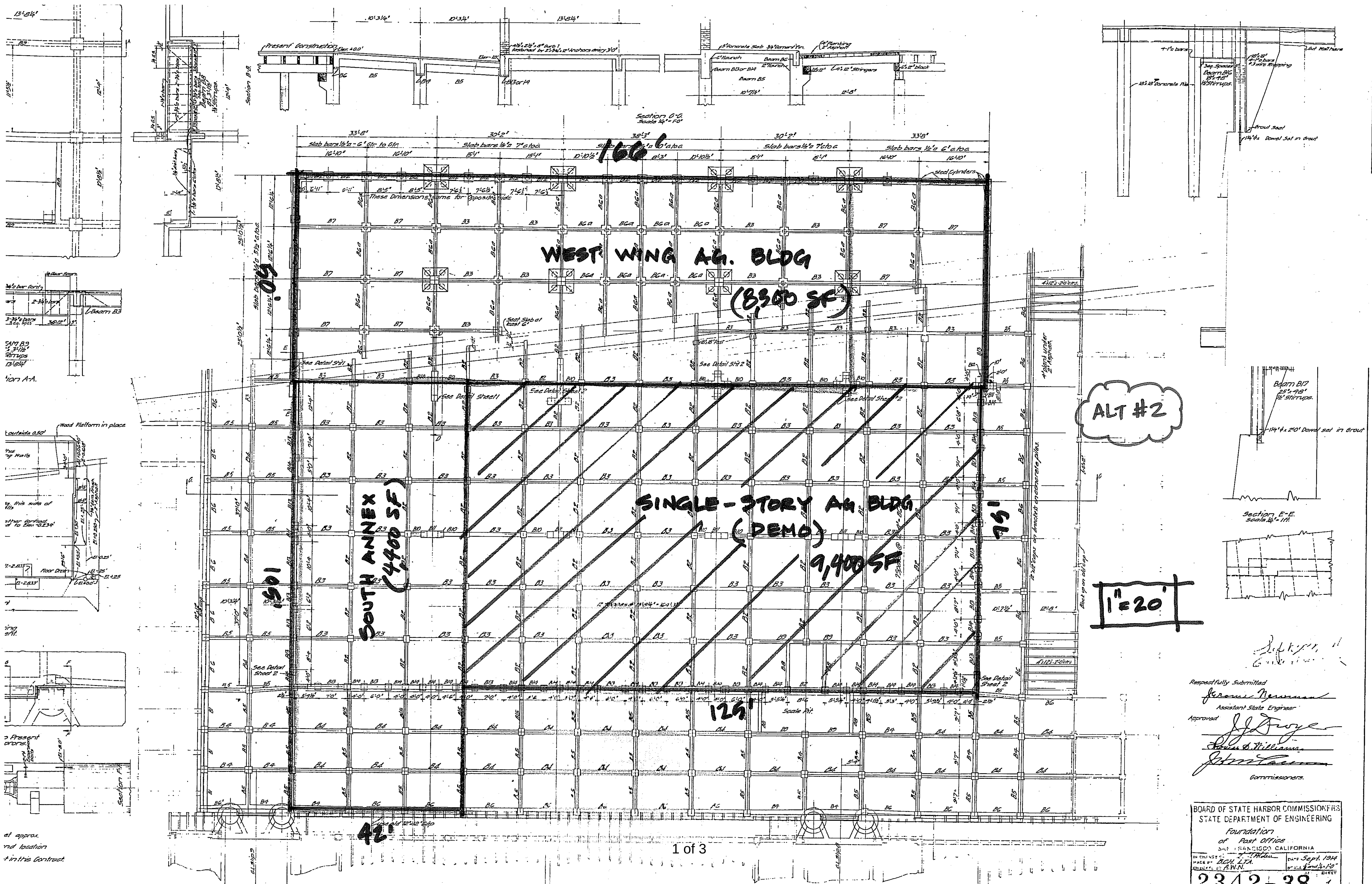
④ REBUILD/STRENGTHEN DRIVEWAY

③ ⑤ TILT-UP RESTORED FAÇADE



WATER
2342-38
BOARD OF STATE HARBOR COMMISSIONERS
STATE DEPARTMENT OF ENGINEERING
Foundation of Post Office
SAN FRANCISCO CALIFORNIA
TEMPORARY RELOCATED HISTORIC BLDG. PROVIDE ADDITIONAL SUPPORT ALONG (E) COLUMN LINES FOR MAKING BLDG.
192'
74'
HISTORIC BLDG. COLUMN LINES
50
HISTORIC BLDG.
LAND
164'

ATTACHMENT 2: Alternative 2
Foundation Concept Sketches


WEST WING AG. BLDG
(8,300 SF)
SINGLE-STORY AG BLDG
(DEMO)
9,400 SF
SOUTH ANNEX
(4,400 SF)
ALT #2
1"=20'
166'
60'
105'
75'
125'
42'
Section C-C.
Scale 1/4" = 1'-0"
Section E-E.
Scale 1/4" = 1ft.
Section A-A.
Respectfully Submitted
Assistant State Engineer
Approved
Commissioners.
BOARD OF STATE HARBOR COMMISSIONERS
STATE DEPARTMENT OF ENGINEERING
Foundation
of Post Office
SAN FRANCISCO CALIFORNIA
Sept. 1914

NEW LOCATION FOR WALL OF "WEST WING"

SEAWALL

℄ NEW BUILDING LOCATION

NEW BUILDING WALL LOCATION

8'

8'

Floor Drain -4" inside Diam.

Plan of Scale Pt.
Scale ½"=1 Foot

Section A-A.

Beam B9
Beam B3
BEAM B9
6-3 #11's
3/8" Stirrups
13'6½"

Section B-B

Section C-C
Scale ½"=1'0"

Section D-D
Scale ½"=1'0"

Section E-E
Scale ½"=1'0"

Retaining Wall in Place.

Grout Seat

Dowel Set in Grout

Steel Grinders

Slab bars ½"ø - 6" Ctr to Ctr.
Slab bars ½"ø 7" c to c.
Slab bars ⅜"ø 10" c to c.
Slab bars ½"ø 7" c to c.
Slab bars ½"ø 6" c to c.

These Dimensions same for opposite side

See Detail Sheet 2

See Detail Sheet 1

See Detail Sheet "2

Scale Pt.

Beam B17
6-3 #11
12" Stirrups.

4-1" bars

1½"ø x 2'0" Dowel set in grout

4" Short Ladder 2 Rail Type

Plan Top of Sidewalk outside 0.50'

Wood Platform in place

Retaining Wall

Rough Slab To be horizontally levelled to Elev. "E"

Permanent Water another Contract

2" Asphalt Pavement

Floor Drain

Scale Pt.

Plan of Connection to Present Construction at Aprons

Section G-G

Section F-F

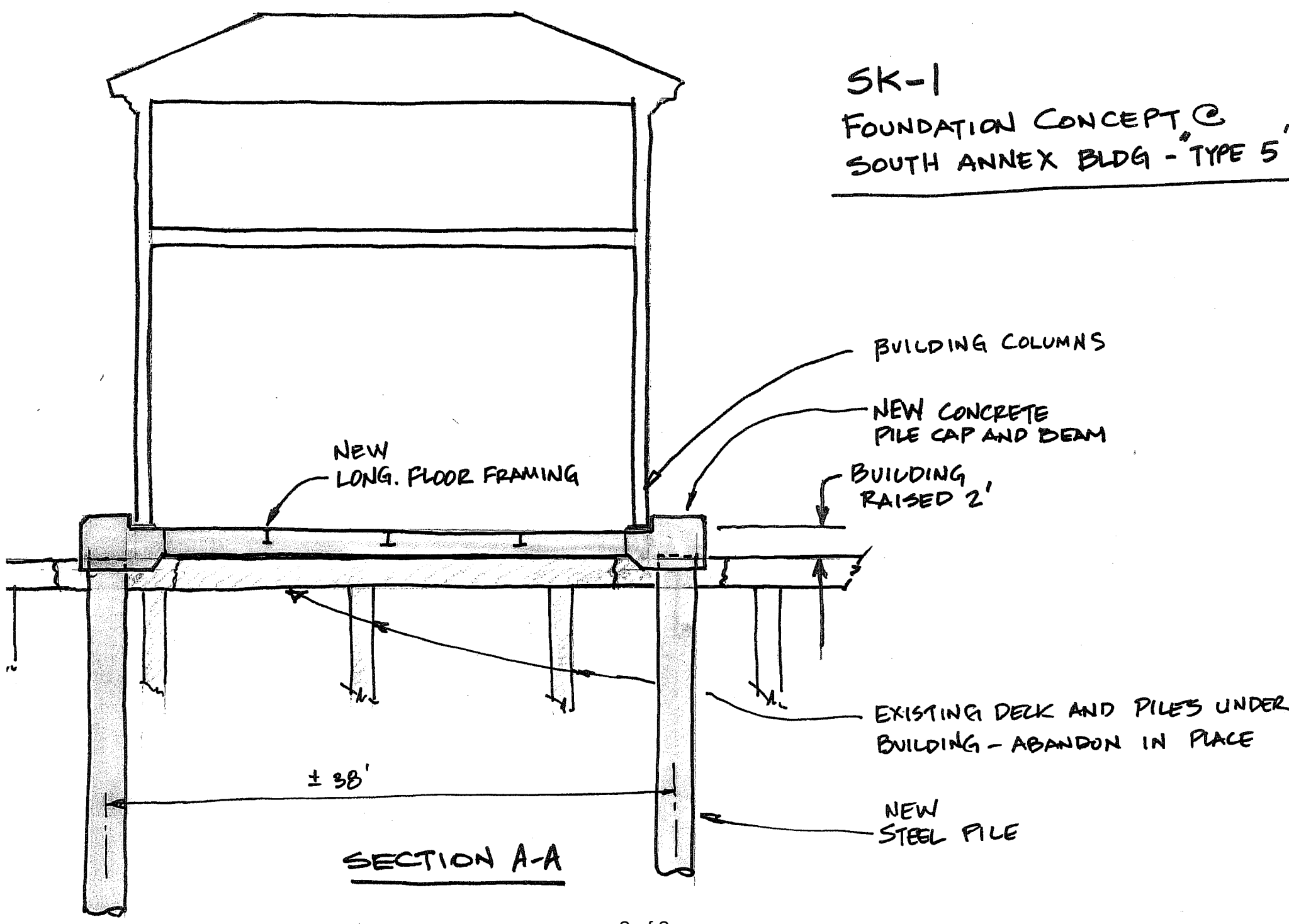
Note:-
Contractor to furnish and set approx. 174 - 1½" x 2'0" anchor bolts. Exact number and size and location to be furnished later. Light lines denote work not in this Contract.

2 = Foundation Type

Respectfully Submitted
Jerome Waldie
Assistant State Engineer
Approved
J. J. Deuel
Louis S. Williams
John Tarman
Commissioners.

BOARD OF STATE HARBOR COMMISSIONERS
STATE DEPARTMENT OF ENGINEERING
Foundation
of Post Office
at SAN FRANCISCO CALIFORNIA
IN CHARGE OF ARCHITECT
PLACE BY BGH. LTH. DATE Sept. 1914
DRAWN BY AWN. SCALE 1 inch = 10'
2342-38 SHEET 1 of 2

16 Aug 2007 AG BLDG FOUNDATION PLAN CONCEPT - ALT 2


SK-1
FOUNDATION CONCEPT @
SOUTH ANNEX BLDG - TYPE 5'
BUILDING COLUMNS
NEW CONCRETE
PILE CAP AND BEAM
NEW
LONG. FLOOR FRAMING
BUILDING
RAISED 2'
EXISTING DECK AND PILES UNDER
BUILDING - ABANDON IN PLACE
± 38'
NEW
STEEL PILE
SECTION A-A

ATTACHMENT 3: Cost Estimates

Project Title: Agricultural Building Study
Alternative 1: Retain West Wing Only - move building to restore foundation.

Estimated By:
Firm: M & N
Est: Name: MOD

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Date: May 21, 2007
Rev 1 June 22 2007

Estimate Summary

ITEM NO.	ITEM DESCRIPTION					AMOUNT
	Phase One					$3,871,900
	Phase Two					$7,052,500
	Phase Three					$8,602,500
	Phase Four					$2,635,000
	Phase Five					$1,860,000
	Option: Fill Lagoon area with piles and decking					$4,882,500
		SUBTOTAL				
			Total			**$28,904,400**

NOTES: THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol **Date: May 21, 2007**

Project Title: Agricultural Building Study **Estimated By:** **Checked By:**
Alt 1 **Firm: M & N** **Status of Design:**
Est: Name: MOD **Conceptual**

Phase One

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demo Sinbad's*	SF	6,000	$25.00	$150,000	$0.00	$0	$25.00	$150,000
	Demo Ag Bldg South Annex and one-story portion*	SF	13,800	$35.00	$483,000	$0.00	$0	$35.00	$483,000
	Demo Piles and Deck	SF	22,000	$45.00	$990,000	$35.00	$770,000	$80.00	$1,760,000
	Saw cut Concrete (allow)	LF	350	$100.00	$35,000	$200.00	$70,000	$300.00	$105,000
					$0		$0	$0.00	$0
	* Excludes removal and disposal of hazardous material				$0		$0	$0.00	$0
		SUBTOTAL			$1,658,000		$840,000		$2,498,000
						Contractor Markup (15%)			$374,700
						Gen OH and Field OH (10%)			$249,800
						Contingency (30%)			$749,400
						TOTAL			$3,871,900

NOTES:

THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Date: May 21, 2007

Project Title: Agricultural Building Study
Alt 1

Estimated By:
Firm: M & N
Est: Name: MOD

Checked By:
Status of Design:
Conceptual

Phase Two

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demo Portions of Deck for Pile Installation	SF	2,000	$45.00	$90,000	$35.00	$70,000	$80.00	$160,000
	Construct New Deck over Existing and Add new Piles	SF	12,500	$175.00	$2,187,500	$125.00	$1,562,500	$300.00	$3,750,000
	Additional Support for Building	SF	3,000	$125.00	$375,000	$75.00	$225,000	$200.00	$600,000
	Construct Seismic Joint	LF	200	$100.00	$20,000	$900.00	$180,000	$1,000.00	$200,000
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$2,582,500		$1,967,500		$4,550,000
						Contractor Markup (15%)			$682,500
						Gen OH and Field OH (10%)			$455,000
						Contingency (30%)			$1,365,000
						TOTAL			$7,052,500

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Date: May 21, 2007

Project Title: Agricultural Building Study
Alt 1

Estimated By:
Firm: M & N
Est: Name: MOD

Checked By:
Status of Design:
Conceptual

Phase Three

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Construct New Wharf and Terminal Gates	SF	18,500	$175.00	$3,237,500	$125.00	$2,312,500	$300.00	$5,550,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
		SUBTOTAL			$3,237,500		$2,312,500		$5,550,000
						Contractor Markup (15%)			$832,500
						Gen OH and Field OH (10%)			$555,000
						Contingency (30%)			$1,665,000
						TOTAL			$8,602,500

NOTES:

THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Date: May 21, 2007

Project Title: Agricultural Building Study
Alt 1

Estimated By:
Firm: M & N
Est: Name: MOD

Checked By:
Status of Design:
Conceptual

Phase Four

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Rebuild Building Foundation	SF	8,500	$125.00	$1,062,500	$75.00	$637,500	$200.00	$1,700,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$1,062,500		$637,500		$1,700,000
						Contractor Markup (15%)			$255,000
						Gen OH and Field OH (10%)			$170,000
						Contingency (30%)			$510,000
						TOTAL			$2,635,000

Does not include cost to reinforce or move building

NOTES:

THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Date: May 21, 2007

Project Title: Agricultural Building Study
Alt 1

Estimated By:
Firm: M & N
Est: Name: MOD

Checked By:
Status of Design:
Conceptual

Phase Five

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demolish Driveway	SF	4,000	$45.00	$180,000	$35.00	$140,000	$80.00	$320,000
	Rebuild Driveway	SF	4,000	$175.00	$700,000	$125.00	$500,000	$300.00	$1,200,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$700,000		$500,000		$1,200,000
						Contractor Markup (15%)			$180,000
						Gen OH and Field OH (10%)			$120,000
						Contingency (30%)			$360,000
						TOTAL			$1,860,000

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Project Title: Agricultural Building Study
Alt 1

Estimated By:
Firm: M & N
Est: Name: MOD

Checked By:
Status of Design:
Conceptual

Date: May 21, 2007
Rev 1 June 22, 2007

Phase Five

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Construct New Pier Structure in Lagoon Area	SF	10,500	$175.00	$1,837,500	$125.00	$1,312,500	$300.00	$3,150,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$1,837,500		$1,312,500		$3,150,000
						Contractor Markup (15%)			$472,500
						Gen OH and Field OH (10%)			$315,000
						Contingency (30%)			$945,000
						TOTAL			$4,882,500

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

A-E Firm Name:
Moffatt and Nichol

Date: 5 September 2007

Estimated By:
Firm: M & N
Est: Name: SCB

Checked By:
Status of Design:
Conceptual

Project Title: Agricultural Building Study
Alternative 2 - Building in Place + Retain South Annex

Estimate Summary

ITEM NO.	ITEM DESCRIPTION					AMOUNT
	Phase One					$3,137,200
	Phase Two					$5,006,500
	Phase Three					$8,602,500
	Phase Four					$7,188,900
	Phase Five					$1,860,000
	Option: Fill Lagoon area with piles and decking					$4,882,500
		SUBTOTAL				
			Total			**$30,677,600**

NOTES: THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase One

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demo Sinbad's*	SF	6,000	$25.00	$150,000	$0.00	$0	$25.00	$150,000
	Demo one-story portion of Ag Bldg*	SF	9,400	$35.00	$329,000	$0.00	$0	$35.00	$329,000
	Demo Piles and Deck	SF	18,000	$45.00	$810,000	$35.00	$630,000	$80.00	$1,440,000
	Saw cut Concrete (allow)	LF	350	$100.00	$35,000	$200.00	$70,000	$300.00	$105,000
					$0		$0	$0.00	$0
	* Excludes removal and disposal of hazardous material				$0		$0	$0.00	$0
		SUBTOTAL			$1,324,000		$700,000		$2,024,000
						Contractor Markup (15%)			$303,600
						Gen OH and Field OH (10%)			$202,400
						Contingency (30%)			$607,200
						TOTAL			$3,137,200

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase Two

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demo Portions of Deck for Pile Installation	SF	2,000	$45.00	$90,000	$35.00	$70,000	$80.00	$160,000
	Construct New Deck over Existing and Add new Piles	SF	8,100	$175.00	$1,417,500	$125.00	$1,012,500	$300.00	$2,430,000
	Additional Support for Building	SF	3,000	$125.00	$375,000	$75.00	$225,000	$200.00	$600,000
	Construct Seismic Joint	LF	200	$100.00	$20,000	$900.00	$180,000	$1,000.00	$200,000
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$1,812,500		$1,417,500		$3,230,000
						Contractor Markup (15%)			$484,500
						Gen OH and Field OH (10%)			$323,000
						Contingency (30%)			$969,000
						TOTAL			$5,006,500

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase Three

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Construct New Wharf and Terminal Gates	SF	18,500	$175.00	$3,237,500	$125.00	$2,312,500	$300.00	$5,550,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
		SUBTOTAL			$3,237,500		$2,312,500		$5,550,000
						Contractor Markup (15%)			$832,500
						Gen OH and Field OH (10%)			$555,000
						Contingency (30%)			$1,665,000
						TOTAL			$8,602,500

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase Four

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
1	Ag Building West Wing Foundation Rebuild (with building in place)	SF	8,500	$250.00	$2,125,000	$130.00	$1,105,000	$380.00	$3,230,000
	Assumes using specialized low-height equipement inside the building to								$0
	construct the new foundations *								$0
									$0
2	Foundation for the South Annex Building	SF	4,400	$200.00	$880,000	$120.00	$528,000	$320.00	$1,408,000
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$3,005,000		$1,633,000		$4,638,000
						Contractor Markup (15%)			$695,700
						Gen OH and Field OH (10%)			$463,800
						Contingency (30%)			$1,391,400
						TOTAL			$7,188,900

*Assume a 100% increase in labor and 75% increase in materials & equip compared to the Alternative 1 (building moved out of the way)

Does not include cost for reinforcing or moving building.

NOTES:

THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase Five

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Demolish Driveway	SF	4,000	$45.00	$180,000	$35.00	$140,000	$80.00	$320,000
	Rebuild Driveway	SF	4,000	$175.00	$700,000	$125.00	$500,000	$300.00	$1,200,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$700,000		$500,000		$1,200,000
						Contractor Markup (15%)			$180,000
						Gen OH and Field OH (10%)			$120,000
						Contingency (30%)			$360,000
						TOTAL			$1,860,000

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

Project Title: Agricultural Building Study
Alt 2

Estimated By:
Firm: M & N
Est: Name: SCB

A-E Firm Name:
Moffatt and Nichol
Checked By:
Status of Design:
Conceptual

Phase Five

				LABOR COST		MATERIAL COST		TOTAL COST	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
	Construct New Pier Structure in Lagoon Area	SF	10,500	$175.00	$1,837,500	$125.00	$1,312,500	$300.00	$3,150,000
					$0		$0	$0.00	$0
					$0		$0	$0.00	$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
									$0
		SUBTOTAL			$1,837,500		$1,312,500		$3,150,000
						Contractor Markup (15%)			$472,500
						Gen OH and Field OH (10%)			$315,000
						Contingency (30%)			$945,000
						TOTAL			$4,882,500

NOTES:
THIS COST ESTIMATE IS AN OPINION OF CONSTRUCTION COST MADE BY THE CONSULTANT. IN PROVIDING OPINIONS OF CONSTRUCTION COST, IT IS RECOGNIZED THAT NEITHER THE CLIENT NOR THE CONSULTANT HAS CONTROL OVER THE COSTS OF LABOR, EQUIPMENT, OR MATERIALS, OR OVER CONTRACTORS' METHODS OF DETERMINING PRICES OR BIDDING. THIS OPINION OF CONSTRUCTION COST IS BASED ON THE CONSULTANT'S REASONABLE PROFESSIONAL JUDGMENT AND EXPERIENCE AND DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, THAT CONTRACTORS' BIDS OR NEGOTIATED PRICES OF THE WORK WILL NOT VARY FROM THE CLIENT'S BUDGET OR FROM ANY OPINION OF COST PREPARED BY THE CONSULTANT.

CONCEPTUAL STRUCTURAL DESIGN

Simpson Gumpertz & Heger

T A B L E O F C O N T E N T S

CONTENTS

FIGURES

SUMMARY OF A CONCEPTUAL STRUCTURAL DESIGN FOR THE REHABILITATION OF THE AGRICULTURAL BUILDING, EMBARCDERO SAN FRANCISCO, CALIFORNIA

1. INTRODUCTION

This is a report of our conceptual structural design for the rehabilitation of the Agricultural Building located to the south of the Ferry Building on the Embarcadero in San Francisco, California. The rehabilitation is part of a Master Plan for a portion of the waterfront between the Ferry Building and Pier 14 Breakwater. The Master Plan is being prepared by a team consisting of ROMA Design Group, prime, Moffat & Nichols, Marine Engineers, and Simpson Gumpertz & Heger, Structural Engineers.

1.1 Objective

The objective of this study is to evaluate the structural feasibility of saving, renovating, and raising historically significant portions of the Agricultural Building while reconstructing the underlying pier and foundation system. We evaluate three options in this study. The options are:

- Save the West Wing only (Alternative 1)
- Save the North Wall of the East Wing (Option)
- Save the West and South Wings, and the North Wall of the East Wing (Alternative 2).

1.2 Scope of Work

Our scope of work is as follows:

- Perform a cursory site review.
- Review architectural and structural drawings, reports, and other documents available for our review.
- Perform limited independent calculations to aid in our assessment of those elements for which we judge spot calculations to be meaningful and appropriate, if any.

- Prepare a conceptual structural design.

- Prepare a written report of our findings.

1.3 Documents Available for Our Review

The following Documents were available for our review:

"Preliminary Report on Agriculture Building and Substructure General Conditions", Prepared by Structus, Inc. and dated June 25, 2001.

Drawing No.	Title

Drawings for "1914 Post Office Substructure," dated September, 1914:

2342-278-1	Foundation of Post Office
2343-278-1	Foundation of Post Office
2370-278-1	Foundation of Post Office

Drawings for "1914 Post Office Building," dated October 1914:

2375-278-1	Plans for Post Office
2376-278-1	Plans for Post Office
2377-278-1	Plans for Post Office
2378-278-1	Plans for Post Office
2379-278-1	Plans for Post Office

Drawings for "1914 Post Office Building," dated November 5, 1914:

2382-278-1	Plans for Post Office
2383-278-1	Plans for Post Office
2384-278-1	Plans for Post Office
2385-278-1	Plans for Post Office
2386-278-1	Plans for Post Office
2387-278-1	Plans for Post Office
2388-278-1	Plans for Post Office
2389-278-1	Plans for Post Office

Drawings for "1915 Drainage Tunnel Addition," dated March 5, 1915:

2392-278-1	Foundation of Post Office, Revised Plan Showing Tunnel

Drawings for "1918 Building Addition," dated June 18, 1918:

3361-278-1	Extension of the Post Office
3362-278-1	Extension of the Post Office
3363-278-1	Extension of the Post Office

Drawings for "1918 Building Addition," dated June 28, 1918:

3364-40 Plans for the Extension to the Post Office

Drawings for “1919 to 1921 Observation of Floor Elevations,” dated February 1919:

3553-26 Observation of Floor Elevations on Lower Floor of Ferry Post Office Building

Drawings for “1925 Foundation Reconstruction,” dated August 13, 1925:

3998-38 Plans for Reconstructing the Foundation of the Post Office Building

Drawings for “1940 First Floor Reconstruction,” dated September 25, 1940

5422-38 Plans for Reconstruction of 1st Floor of Agriculture Buildilng

Drawings for “1957 Gunite Repairs to Substructure,” dated September 24, 1957:

6353-278-1 Gunite Repairs to Substructure Agriculture Building

Drawings for “1961 Building Alteration,” dated April 6, 1961:

6721-278-1 Alterations to Agricultural Building, Schedules – Location Plan
6722-278-1 Alterations to Agricultural Building, Floor Plans
6723-278-1 Alterations to Agricultural Building, Framing Plans and Details
6724-278-1 Alterations to Agricultural Building, Ceiling Framing Plan – Section - Details
6725-278-1 Alterations to Agricultural Building, Elevations – Window Details
6726-278-1 Alterations to Agricultural Building, Details
6727-278-1 Alterations to Agricultural Building, Cabinet Details
6728-278-1 Alterations to Agricultural Building, Heating and Plumbing Plan
6730-278-1 Alterations to Agricultural Building, Electrical Plan
6731-278-1 Alterations to Agricultural Building, Misc. Mech. & Elect. Details
6732-278-1 Alterations to Agricultural Building, Telephone Systems Plan

Drawings for “1963 Building Alteration,” dated June 18, 1963:

6986-278-1 S.F. Port Authority Testing Lab, Agricultural Building
6986-278-1 S.F. Port Authority Testing Lab, Agricultural Building, Details and Electrical Plan
6986-278-1 S.F. Port Authority Testing Lab, Agricultural Building, Mechanical Plans

2. PROJECT DESCRIPTION

2.1 General

The project consists of redeveloping a portion of the waterfront between the Ferry Building and Pier 14 Breakwater.

One component of the project is the Agricultural Building. The Agricultural Building was constructed circa 1914 as a United States Post Office building. It has undergone a number of additions, modifications, and renovations over the years.

The building straddles a sea wall that runs diagonally approximately northwest to southeast under the west wing of the building. The building is supported on a pile supported pier over water to the east of the sea wall and a pile supported foundation system in soil to the west of the sea wall. The pier is in an advanced state of deterioration and the entire foundation system has settled differentially. The approximate range of settlement is between 6 in. and 18 in. based on survey data from taken from 1918 and 1925. The actual current settlement may be higher. There have been reports of flooding in the building under conditions of high tide and accompanying storm conditions.

The purpose of this study is to explore options for saving historically significant portions of the Agricultural Building, reconstructing portions of the existing pier, and developing new piers to expand the existing ferry terminal. A more complete description of the scope of the project is contained in the portion of the report prepared by ROMA.

2.2 Building Description

For purposes of this study, we break the building down into three components: the west wing, the south wing and the east wing. The three components comprise a single interconnected building. For purposes of this study we break the foundation system into four areas: the area under the west wing, the area under the south and east wings, the south apron, and the lagoon infill. The components are shown in Figure 1.

The west wing is a two-story portion. The roof consists of clay tile roofing over straight, 2x sheathing spanning between structural steel channel beams. The beams span between steel

trusses which in turn span between steel girder trusses. The trusses are supported on steel columns. The second floor consists of finishes and concrete fill over a 3-1/4 in. thick concrete slab spanning between steel beams which span between steel girders and steel columns. The girders frame into steel columns. There are small mezzanines suspended from the second floor. The ground floor consists of a structurally supported concrete slab and beam system which is supported on wood piles to the west of the sea wall and concrete piles to the east of the sea wall. The exterior walls consist of approximately 17 in. thick unreinforced brick masonry infill with areas of terra cotta rustication and a granite band along the base. The brick and granite are in reasonable good condition. Many of the terra cotta pieces are cracked. The west wing has been identified as one of the most historically significant portions of the building.

The east wing is a one-story portion. The roof consists of roofing over a 2 in. thick concrete slab spanning between steel beams which span between steel girders and steel columns. The girders frame into steel columns. There are two large skylights in the roof and small mezzanines suspended from the roof. The ground floor consists of a structurally supported concrete slab and beam system which is supported on concrete piles. The north exterior walls (the south exterior wall is the exterior wall of the south wing) consist of approximately 13 in. thick unreinforced brick masonry infill with areas of terra cotta rustication and a granite band along the base. The brick and granite are in reasonable good condition. Many of the terra cotta pieces are cracked. The east exterior wall is an approximately 6-3/4 in. thick concrete wall. The north wall of the east wing has been identified as historically significant. In this study we provide a discussion of the steps necessary to save and renovate the north wall of the east wing as an option.

The two-story south wing was added in 1918. The roof consists of clay tile roofing over straight, 2x sheathing spanning between steel trusses which span the width of the wing and are supported on steel girder trusses. The girder trusses are supported on steel columns. The second floor construction varies. The easternmost bay of the south wing projects over a portion of the pier and is open to the outside below. The remainder of the second floor is enclosed. The floor construction of the easternmost bay consists of finishes and concrete fill over a 3 in. thick concrete spanning between steel beams which span between steel girders and steel columns. The girders frame into steel columns. The construction of the remainder of the second floor is a patchwork of different elements. The second floor of the 1918 addition was constructed over the 1914 roof structure. The 1914 roof structure consists of a 2 in. thick concrete slab spanning between steel beams which span between steel girders and steel columns. The girders frame into steel columns. There were two large skylights in the 1914

roof. Where the skylights occurred, the skylights were filled with a 2 in. thick concrete slab and steel framing. Elements of this steel framing are suspended from the new (1918) roof with steel rods. A system of wood sleepers was added over the 1914 roof and skylight infill to provide a flat surface for the floor. The elevation of the finished floor in the south wing is approximately 2 feet higher than that of the west wing. There is a mezzanine covering approximately one-half of the floor plate area suspended from the second floor. The ground floor consists of a structurally supported concrete slab and beam system which is supported on concrete piles. The exterior walls consist of approximately 13 in. thick unreinforced brick masonry infill from the ground floor to second floor and 4 in. unreinforced brick veneer backed by 4 in. hollow clay tile infill from the second floor to the new (1918) roof. There are areas of terra cotta rustication and a granite band along the base similar to the west wing. The exterior south wall was modified circa 1961. The modifications included enlarging and infilling openings. There are large cracks in the brick in some locations on the south façade. The cracks occur predominantly near embedded steel column locations suggesting that the embedded steel columns are corroding and expanding, thereby displacing the brick. Many of the terra cotta pieces are damaged or poorly repaired. The south wing has been identified as having some historical significance, but the wing is not original and major modifications have been made to the south façade. In this study we provide a discussion of the steps necessary to save and renovate the south wing along with the west wing and north wall of the east wing

3. STRUCTURAL ASSESSMENT OF WEST AND SOUTH WINGS

We performed an assessment of the pertinent structural systems of the west wing based on information obtained from our review of the design drawings and our walkthrough. No finishes were removed. In certain cases we performed independent calculations to spotcheck various elements and/or systems. Each of the following subsections summarizes our findings, conclusions, and recommendations for a specific structural system. We did not perform a separate structural assessment of the south wing. Rather, we extrapolate our findings for the west wing and apply them to the south wing. Our recommendations are conceptual in nature and based on cursory investigation, as appropriate for conceptual design.

3.1 Gravity Load-resisting System

We did not perform independent calculations for the gravity load-carrying members. However, based on observations, the performance of the gravity load-resisting system, with the exception of the foundations, appears to have been satisfactory to date. Although significant settlement has been documented, there are no outward signs of significant distress resulting from the settlement.

3.2 Foundations

The evaluation of the pile supported pier and foundation systems are in the scope of Moffat & Nichols and are discussed in more detail in their section of the report.

3.3 Wind/Seismic – Primary Structure

We performed a limited seismic evaluation of the west wing to identify the major seismic deficiencies using the methodology outlined in FEMA 356, “Prestandard and Commentary for the Seismic Rehabilitation of Buildings,” by the Federal Emergency Management Agency.

We identified the following deficiencies:

- There is no vertical lateral load-resisting element at the east side of the west wing from the ground to second floor.

- The exterior unreinforced masonry infill walls from the ground to second floor are inadequate in shear.

- The exterior unreinforced masonry infill walls from the second floor to roof are inadequate in shear.

- The roof diaphragms are inadequate in shear.

To correct the deficiencies, we propose the following work:

West Wing Only

- Add approximately 40 ft of 8 in. thick concrete shear wall at the east side of the west wing from the ground to second floor (Figure 2).

- Remove the interior wythe of brick for the full height of the west wall from the ground to second floor. Remove a second wythe of brick over a height of 3 ft starting at the base of the wall. Install dowels into the remaining brick masonry. Apply a layer of reinforced shotcrete to the interior of the wall equal to the thickness of the removed brick. Work to occur over the full length of the west wall (Figures 2 and 4).

- Remove the first two interior wythes of brick for the full height of the north and south walls from the ground to second floor. Install dowels into the remaining brick masonry. Apply a layer of reinforced shotcrete to the interior of the wall equal to the thickness of the removed brick. Work to occur over the full length of the walls (Figure 2).

- Remove the interior wythe of brick for the full height of the exterior walls from the second floor to roof. Install dowels into the remaining brick masonry. Apply a layer of reinforced shotcrete to the interior of the wall equal to the thickness of the removed brick. Work to occur over the full length of the north and south walls and over a length of approximately 60 ft of the east and west walls (Figure 2).

- Add plywood to the underside of the roof sheathing, or, if the tile roof is to be removed, to the upper side of the roof sheathing.

West Wing plus South Wing

In addition to or in lieu of the work described above for the west wing,

- Add approximately 40 ft of 12 inch, in lieu of 8 inch, thick concrete shear wall at the east side of the west wing from the ground to second floor (Figure 3).
- Add approximately 40 ft of 8 in. thick concrete shear wall at the east end of the south wing from the ground to second floor (Figure 3).
- Add approximately 10 ft of 8 in. thick concrete shear wall at the east end of the south wing from the second floor to roof (Figure 3).
- Remove the interior wythe of clay tile or brick for the full height of the exterior walls from the second floor to roof. Install dowels into the remaining brick masonry. Apply a layer of reinforced shotcrete to the interior of the wall equal to the thickness of the removed brick. Work to occur over the full length of the north and south walls (Figure 3).
- Add plywood to the underside of the roof sheathing, or, if the tile roof is to be removed, to the upper side of the roof sheathing.

4. CONCEPTUAL DESIGN

We prepare the conceptual design for three options in this study. The options are:

- Save the West Wing only (Alternative 1)
- Save the North Wall of the East Wing (Option)
- Save the West and South Wings, and the North Wall of the East Wing (Alternative 2).

The three options are discussed below.

4.1 West Wing Only (Alternative 1)

The concept for saving the west wing of the building involves lifting and moving the west wing to the east to entirely expose the pier below the west wing in order to reconstruct the pier without interference from the existing building. After reconstruction of the pier, the existing building will be moved to its final position approximately 8 feet to the east of its present location and at an elevation approximately 2 feet higher than its present elevation.

This concept entails the following steps:

- Demolish the south and east wings of the existing building (Figure 5).
- Selectively demolish portions of the eastern side of the pier, drive new piles and reconstruct the pier, using the existing pier as a work platform to the extent possible (Figure 6). The reconstructed pier will be designed to accommodate the moving loads from the west wing. This work is described in more detail in the report by Moffat & Nichols.
- Install the shotcrete on the walls between the ground and second floor walls as described in Section 3.3 above. The shotcrete serves as the seismic strengthening of the walls, increases the robustness of the walls, and provides a system that allows the walls to be lifted with the steel frame of the building.
- Install steel framing to brace the bottoms of the steel columns and to serve as a ‘lifting frame.’ This framing will be installed approximately 1 to 3 ft above the existing ground floor.

- Lift and re-level the building through a process of sequenced jacking and cribbing. (Figure 7)

- Install structural steel ‘rail’ beams running east and west under the existing building column lines. At the western portion of the foundation system the ‘rail’ beams must span between existing pile groups. At the reconstructed eastern portion of the pier the ‘rail’ beams are merely fillers above the pier to provide a level rolling surface (Figure 8).

- Install construction rollers and roll the west wing to the eastern portion of the pier (Figure 9).

- Selectively demolish portions of the western side of the pier and remaining foundation system, drive new piles and reconstruct the foundation system (Figure 10).

- Move the west wing to its new location and elevation (Figure 11).

- Complete the retrofit of the west wing.

4.2 North Wall of East Wing (Option)

This option consists of saving and reusing the north wall of the east wing. The concept for saving this wall entails the following steps:

- Remove the interior wythe of brick for the full height of the exterior wall. Install dowels into the remaining brick masonry. Apply a layer of reinforced shotcrete to the interior of the wall equal to the thickness of the removed brick.

- Lift the wall, using the new shotcrete layer for the lifting anchorages.

- Move the wall to the newly constructed Lagoon Infill. Brace in upright position or lay flat.

- Move back to final position as part of the construction of the new building.

4.3 West and South Wings and North Wall of East Wing (Alternative 2)

This alternative includes saving the west and south wings and the north wall of the east wing. The concept for saving the north wall is the same as described above in Section 4.2. The

concept for saving both the west and south wings of the building involves reconstructing the portions of the existing pier below these wings with the existing building in place. After partial reconstruction of the pier, the building will be lifted and moved to its final position approximately 8 feet to the east of its present location and at an elevation approximately 2 feet higher than its present elevation. In addition to moving the existing building, the architect wishes to lower the second floor in the south wing such that the finished floor in both wings is at the same elevation.

This concept entails the following steps:

- Demolish the east wing of the existing building, saving the north wall.
- Selectively demolish portions of the eastern side of the pier, drive new piles and reconstruct the pier, using the existing pier as a work platform to the extent possible. Add piles and selectively reconstruct the existing pier under and around the west wing. The reconstructed and reinforced pier will be designed to accommodate the lifting and moving loads from the west and south wings. This work is described in more detail in the report by Moffat & Nichols.
- Install the shotcrete on the walls between the ground and second floor walls as described in Section 3.3 above. The shotcrete serves as the seismic strengthening of the walls, increases the robustness of the walls, and provides a system that allows the walls to be lifted with the steel frame of the building.
- Install steel framing to brace the bottoms of the steel columns and to serve as a 'lifting frame.' This framing will be installed approximately 1 to 3 ft above the existing ground floor.
- Lift and re-level the building through a process of sequenced jacking and cribbing. (Figure 7)
- Install structural steel 'rail' beams running east and west under the existing building column lines. The extent of the 'rail' beams will be less than that for the option of saving the west wing only since the building will be moved approximately 8 feet rather than approximately 70 feet.
- Install construction rollers and roll the west and south wings to their final location. Lower the wings and reconnect to the reconstructed pier.

- Reconstruct the remaining portions of the pier below the two wings.
- Remove the second floor framing from the south wing. Reframe the second floor at the new elevation (Figure 12).
- Complete the retrofit of the two wings.

I:\Projects\2007\077092-RABF\00rabf\Report\r01jfs99.doc

FIGURES

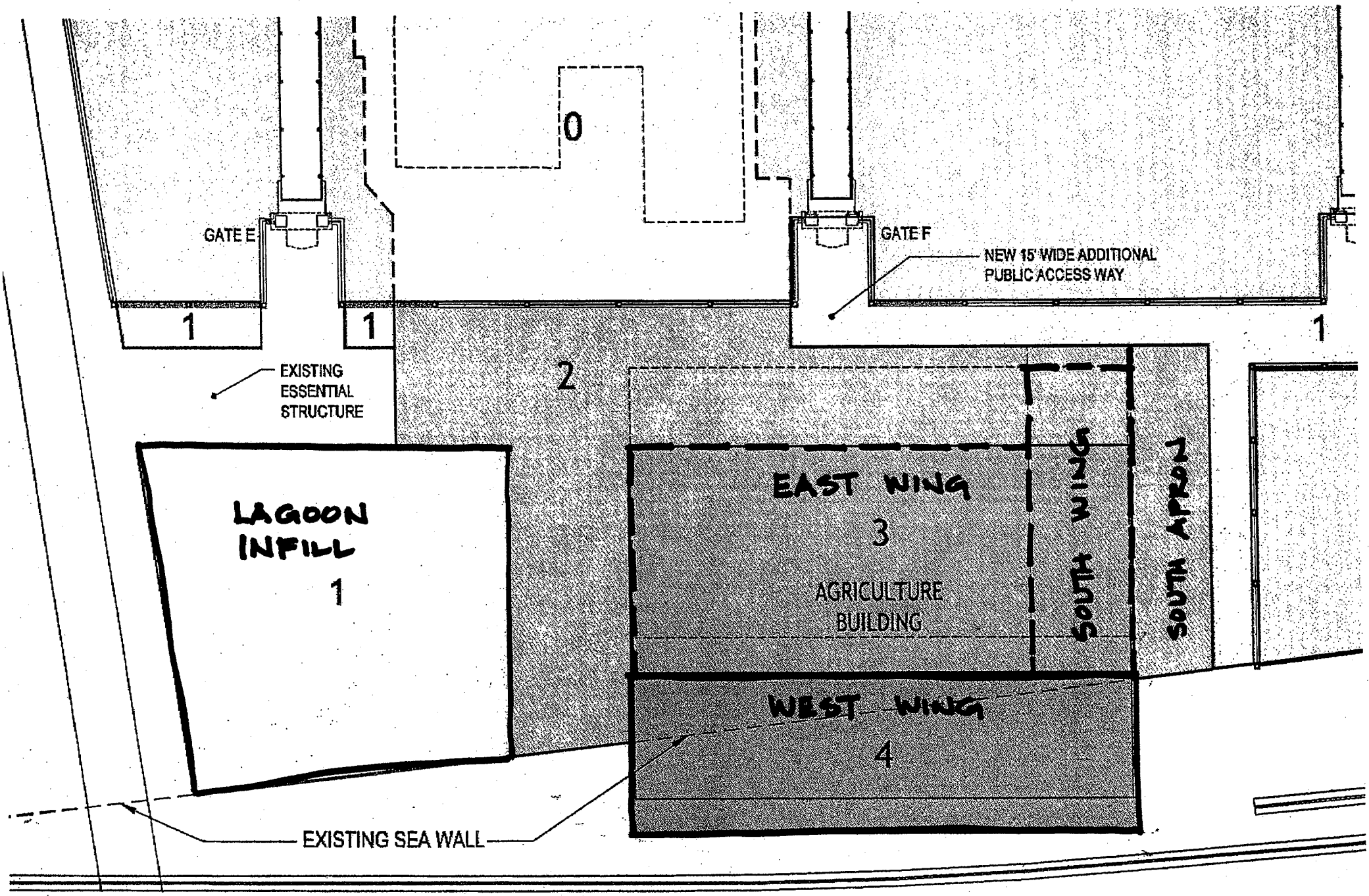
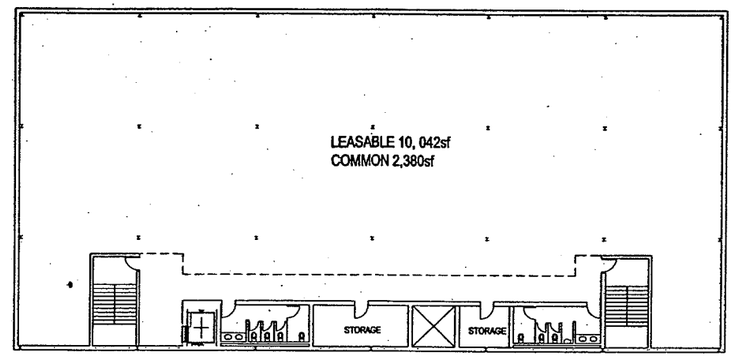
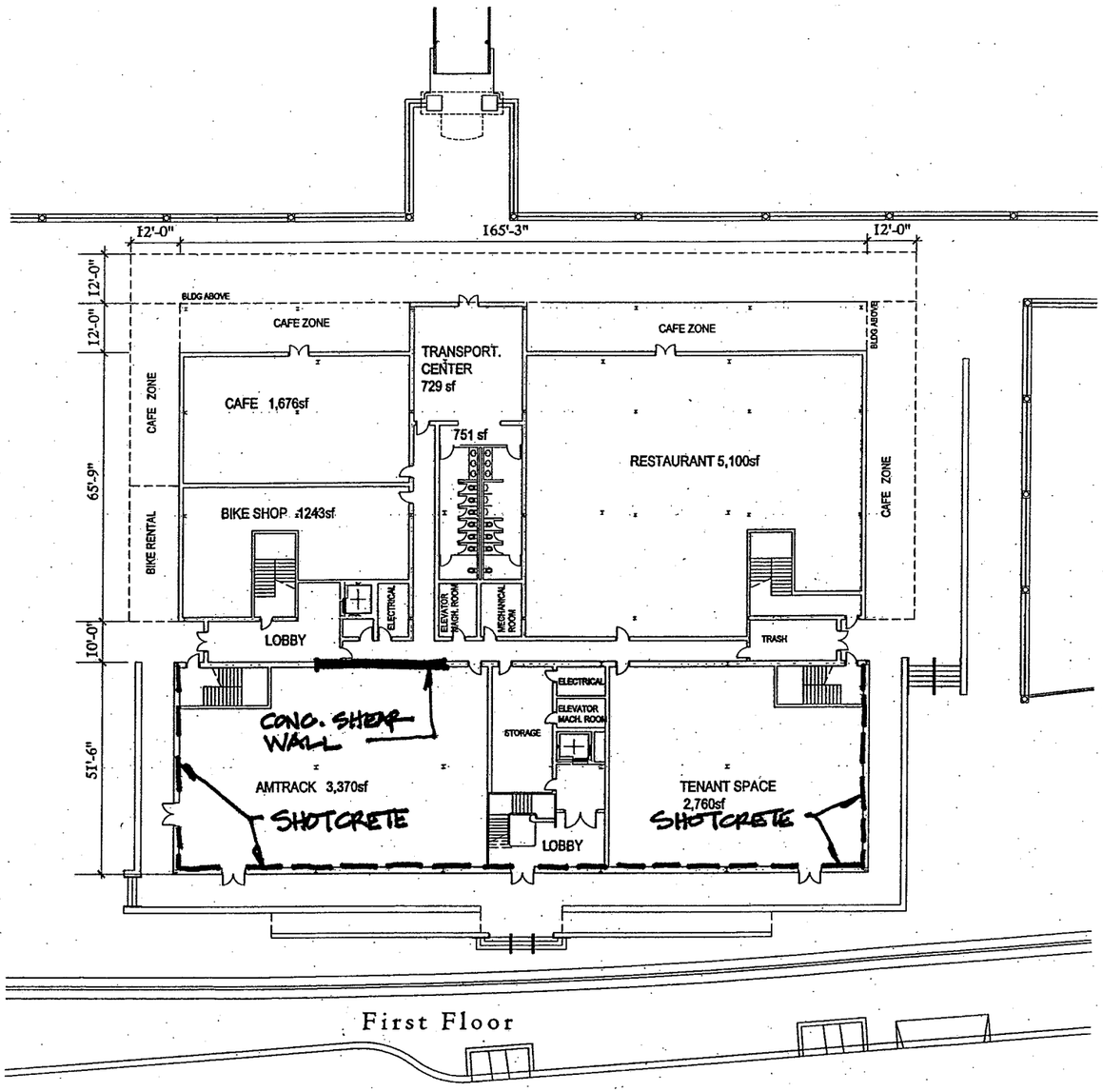

0
GATE E
GATE F
NEW 15' WIDE ADDITIONAL
PUBLIC ACCESS WAY
1
1
1
EXISTING
ESSENTIAL
STRUCTURE
2
LAGOON
INFILL
1
EAST WING
3
AGRICULTURE
BUILDING
SOUTH WING
SOUTH WING
WEST WING
4
EXISTING SEA WALL

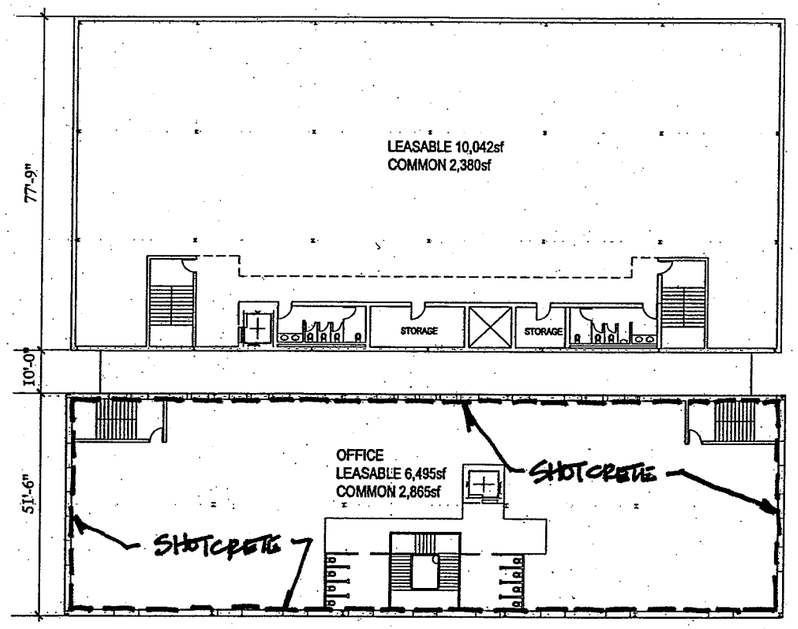
FIGURE 1



Third Floor



First Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

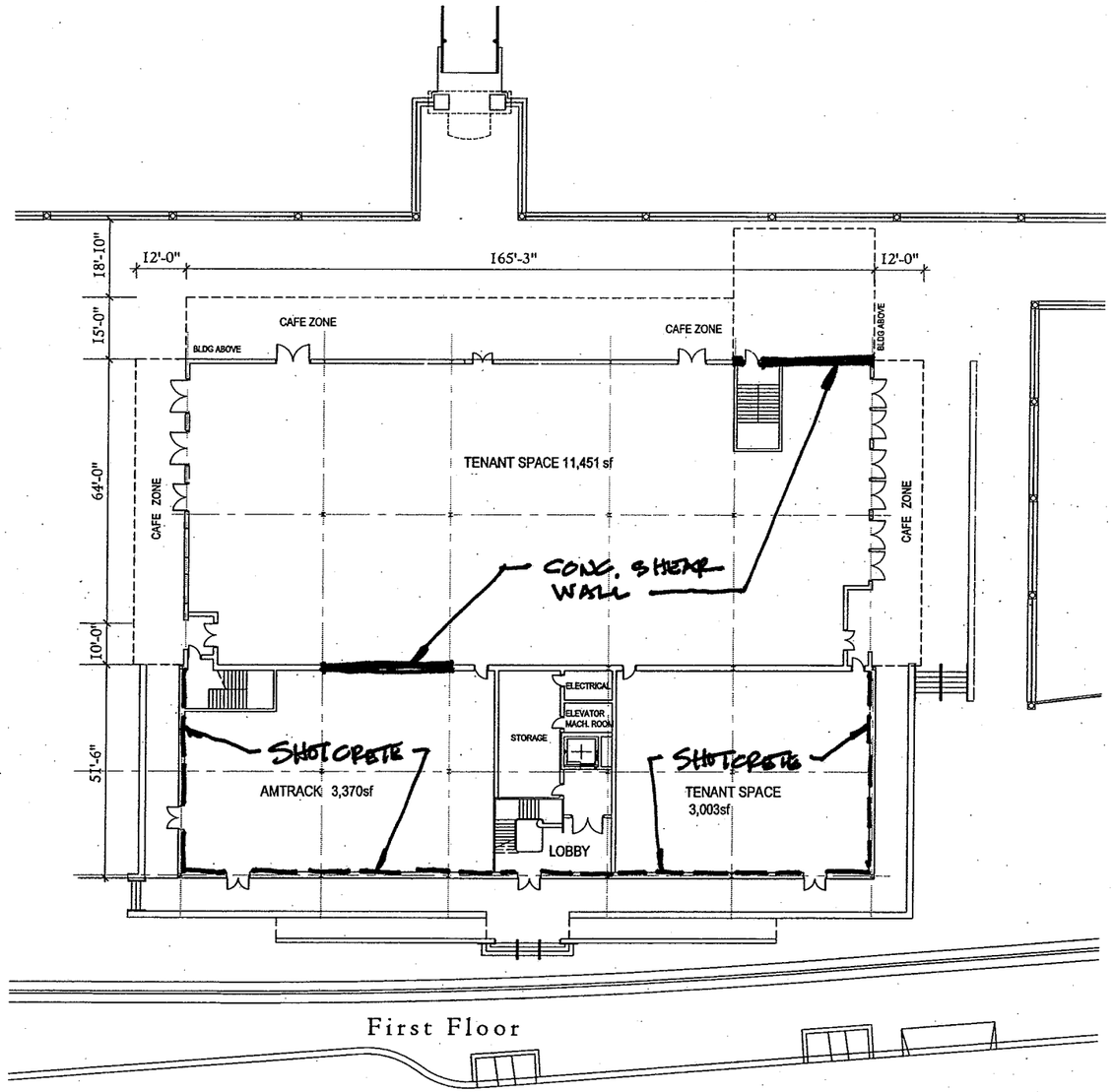
0 16 32 48 ft

PLAN – ALTERNATIVE 1 – FIGURE 2

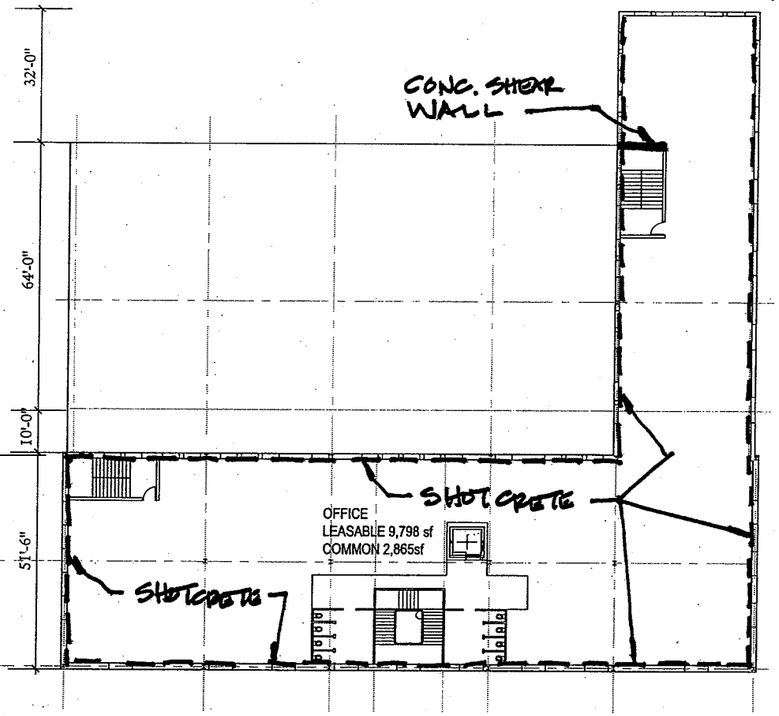
Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

JUNE 22 2007



First Floor



Second Floor

PRELIMINARY - NOT FOR CONSTRUCTION

PLAN – ALTERNATIVE 2 – FIGURE 3

Agriculture Building Restoration

Prepared for the San Francisco Bay Area Water Transit Authority by ROMA Design Group in association with Moffatt & Nichol

JULY 26 2007

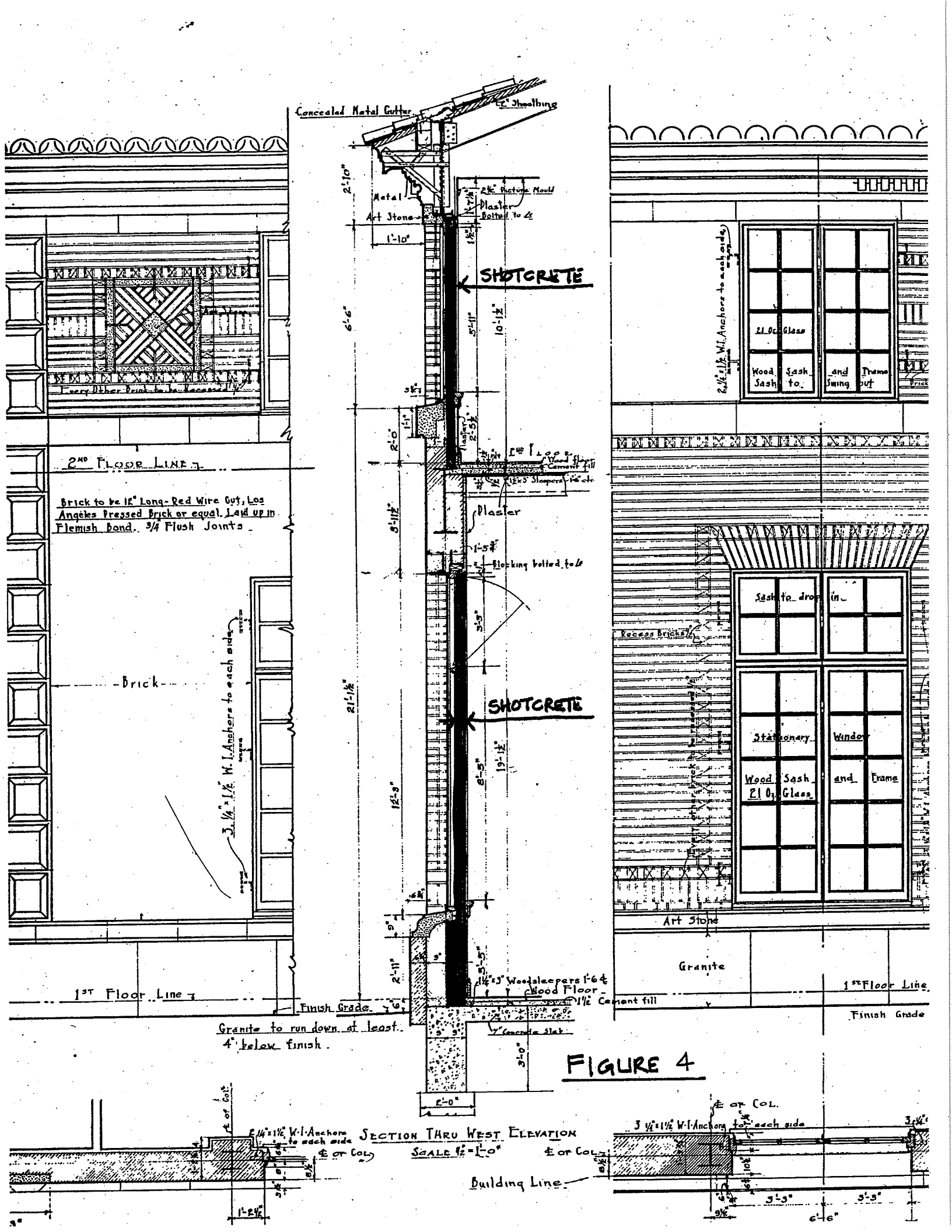


FIGURE 4

SECTION THRU WEST ELEVATION

SCALE ½"=1'-0"

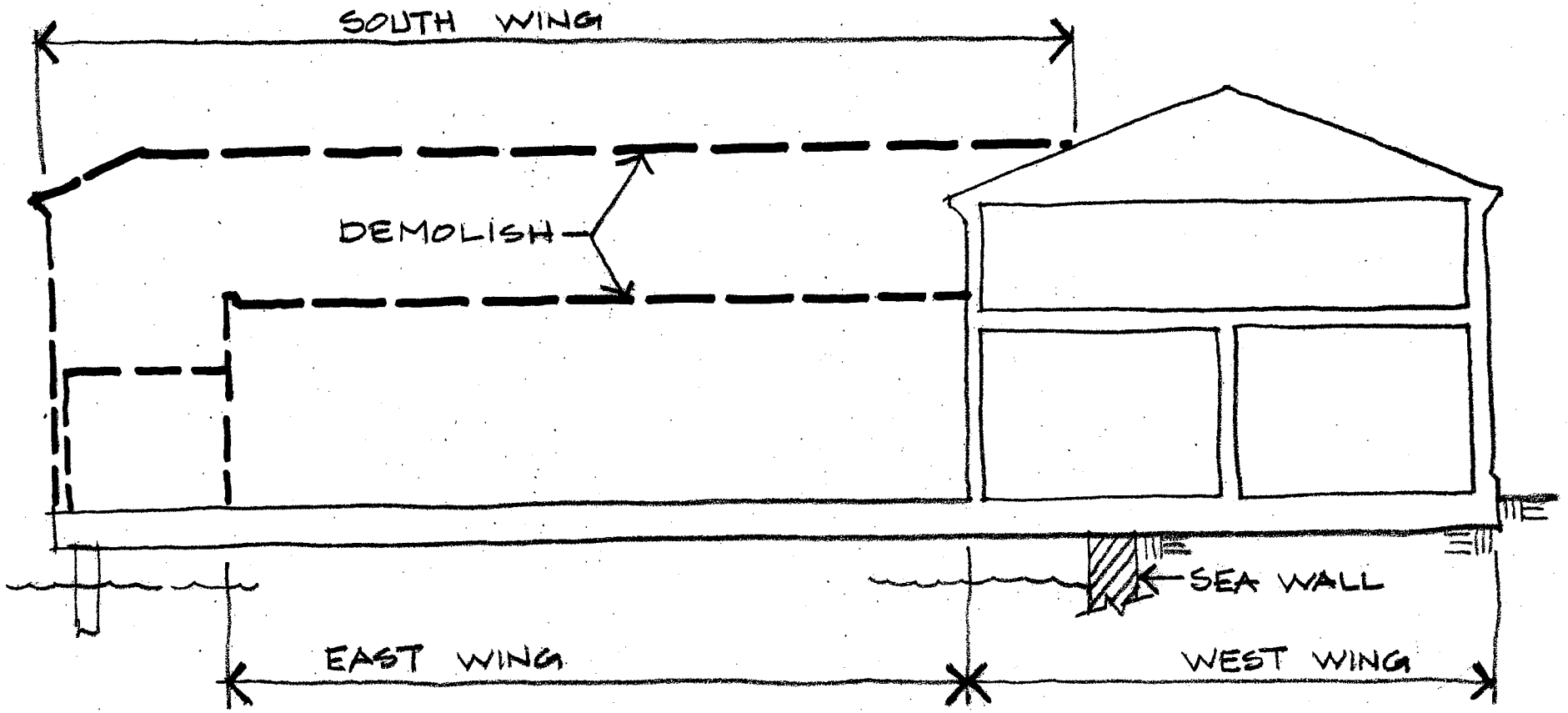


FIGURE 5

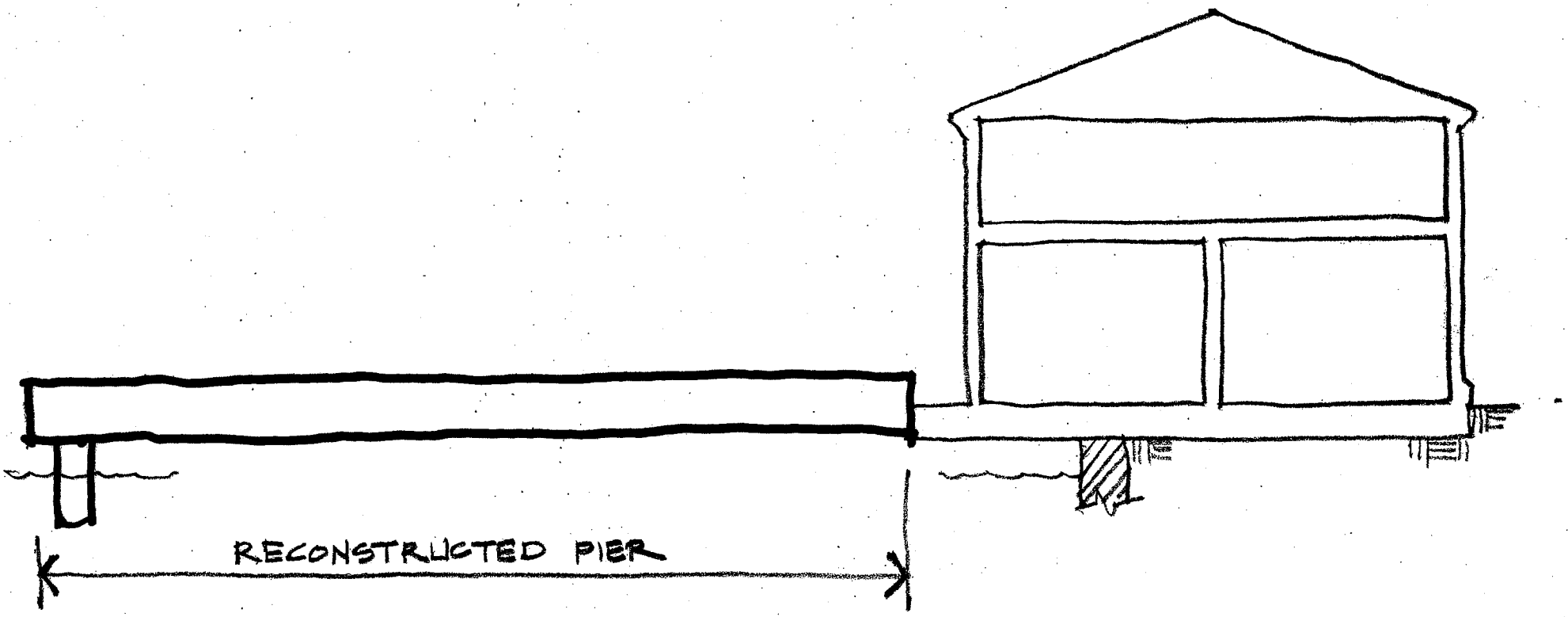


FIGURE 6

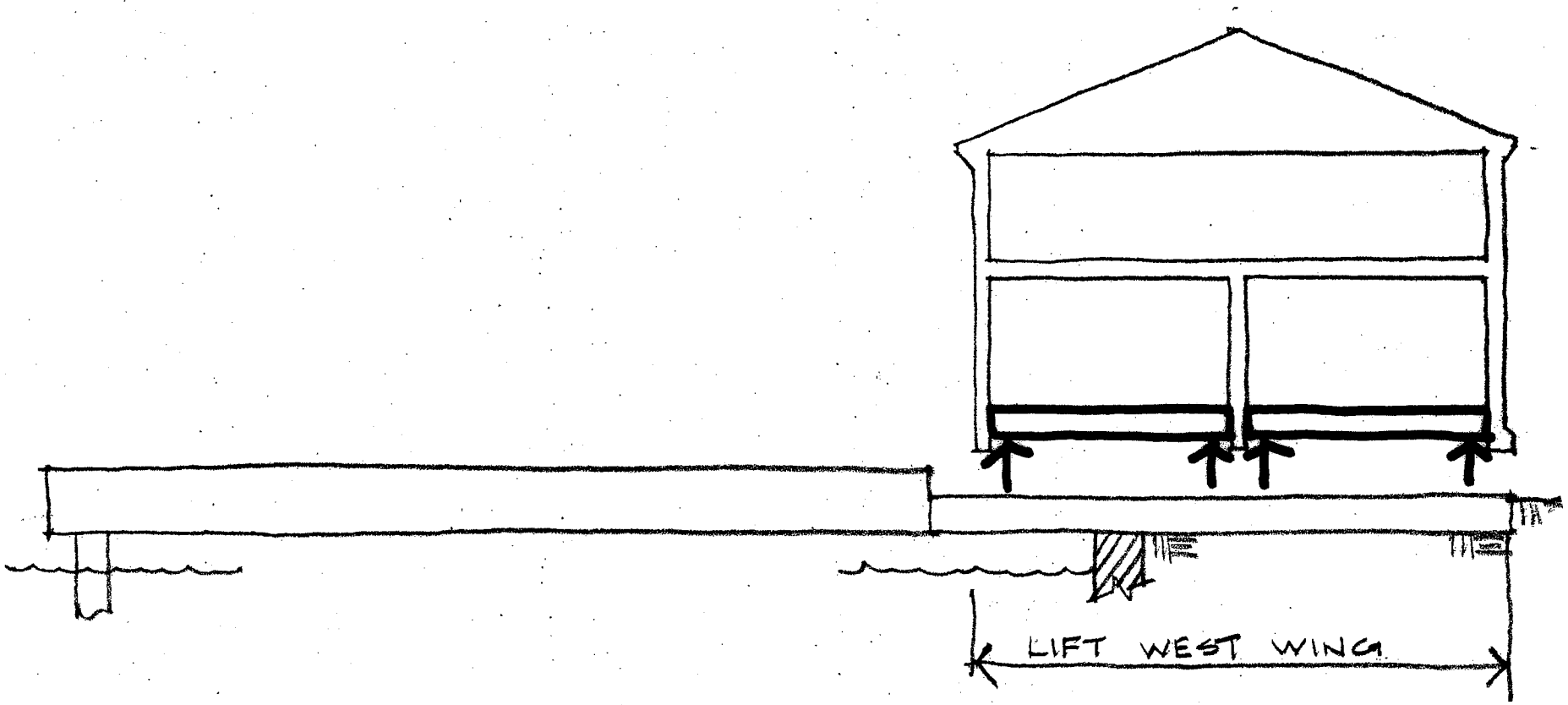


FIGURE 7

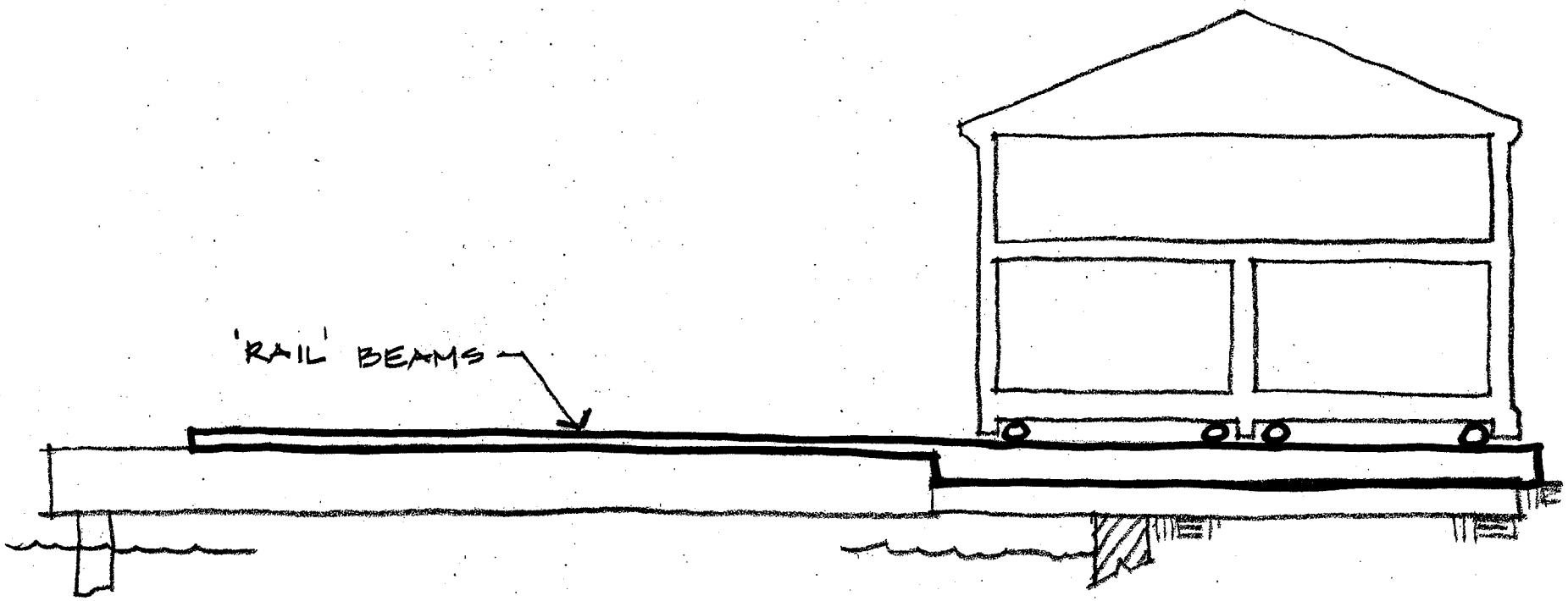


FIGURE 8

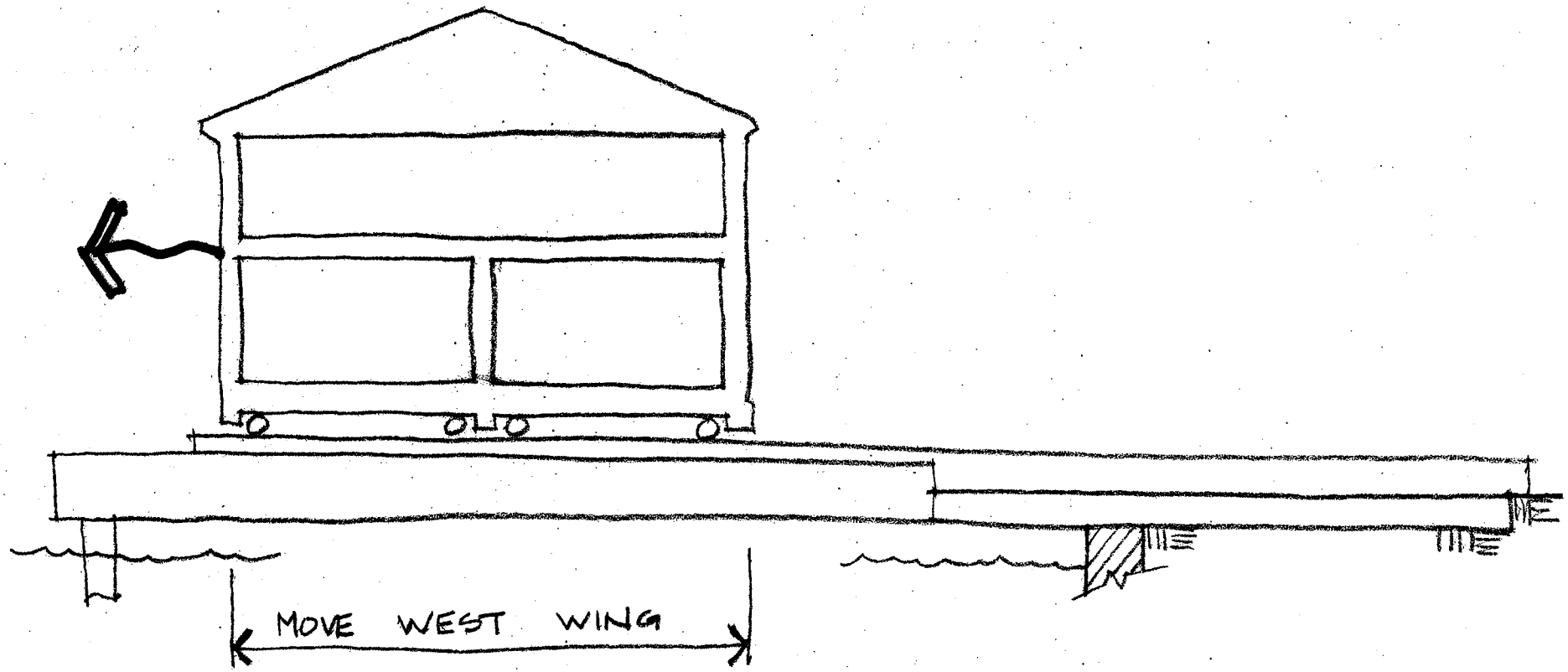


FIGURE 9

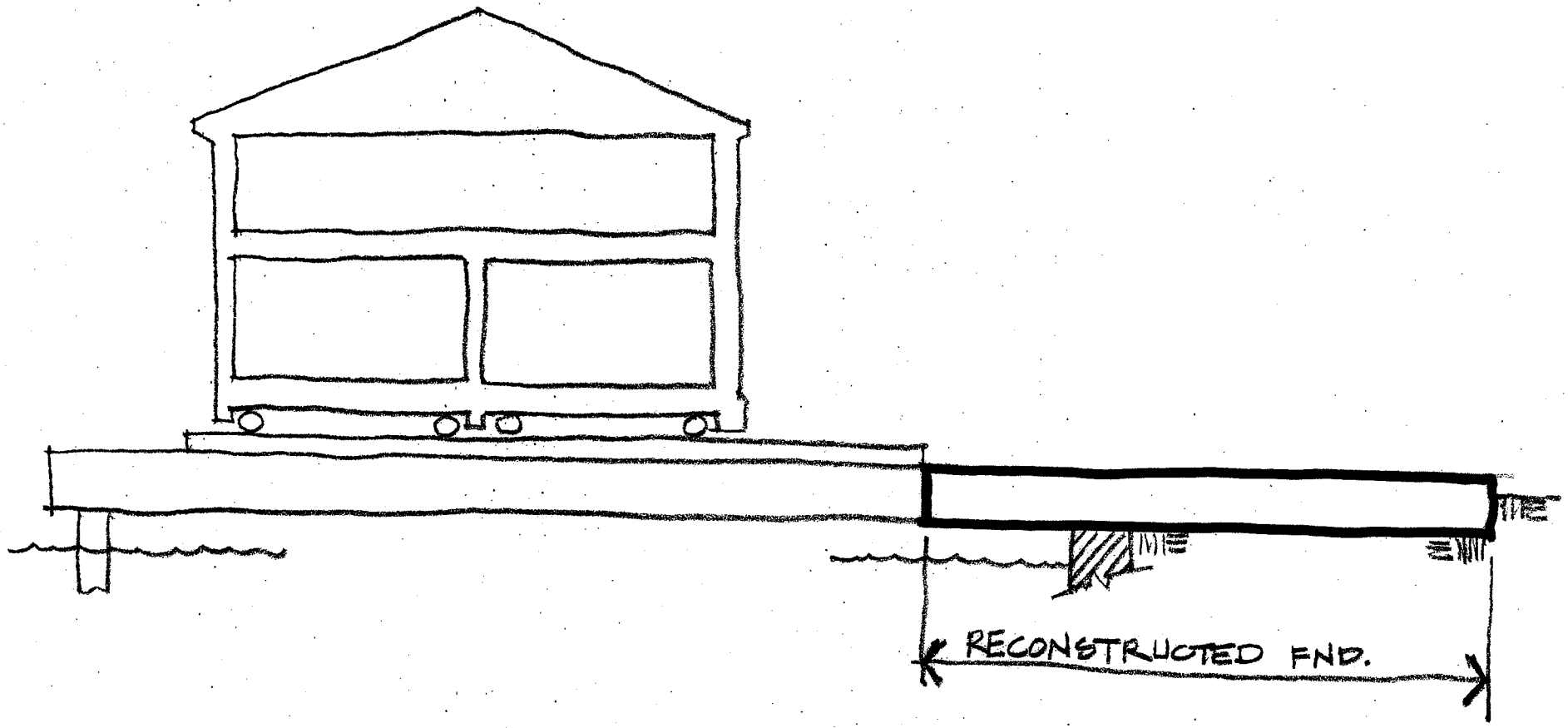


FIGURE 10

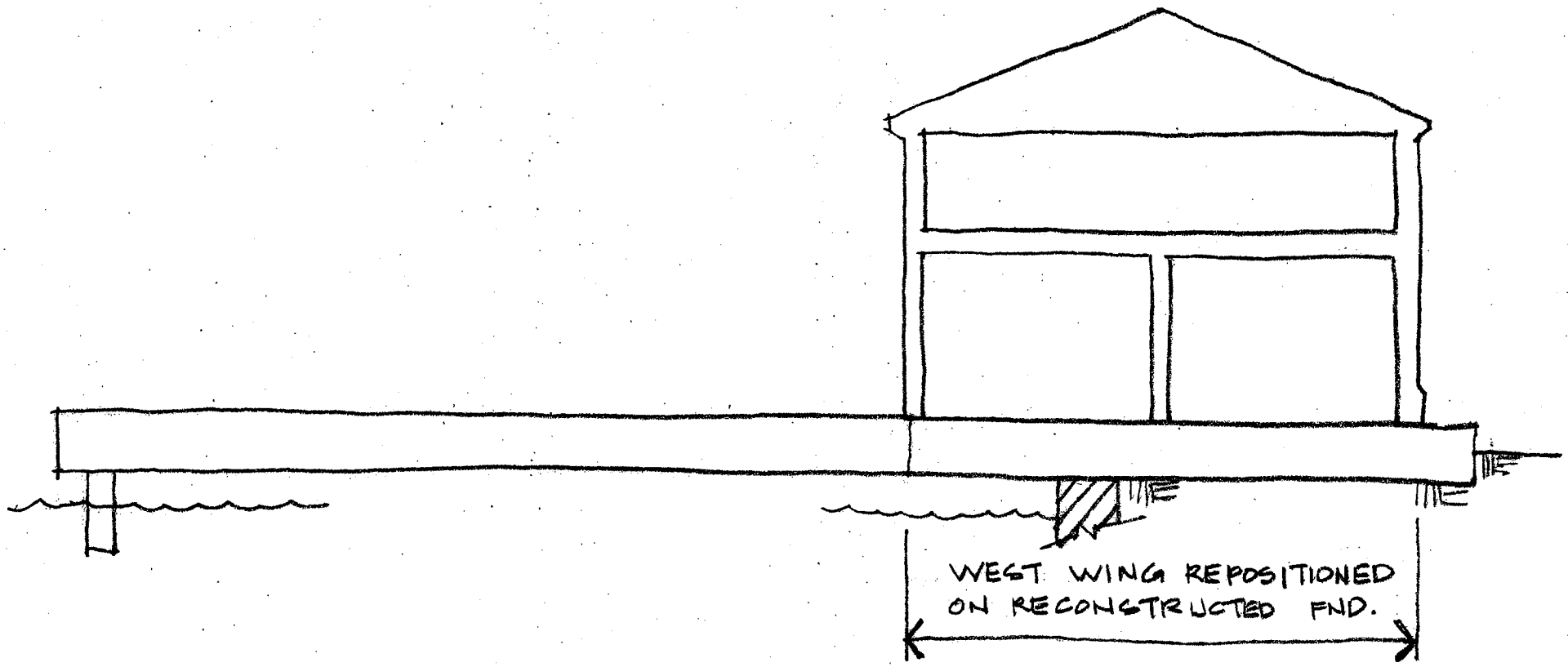


FIGURE 11.

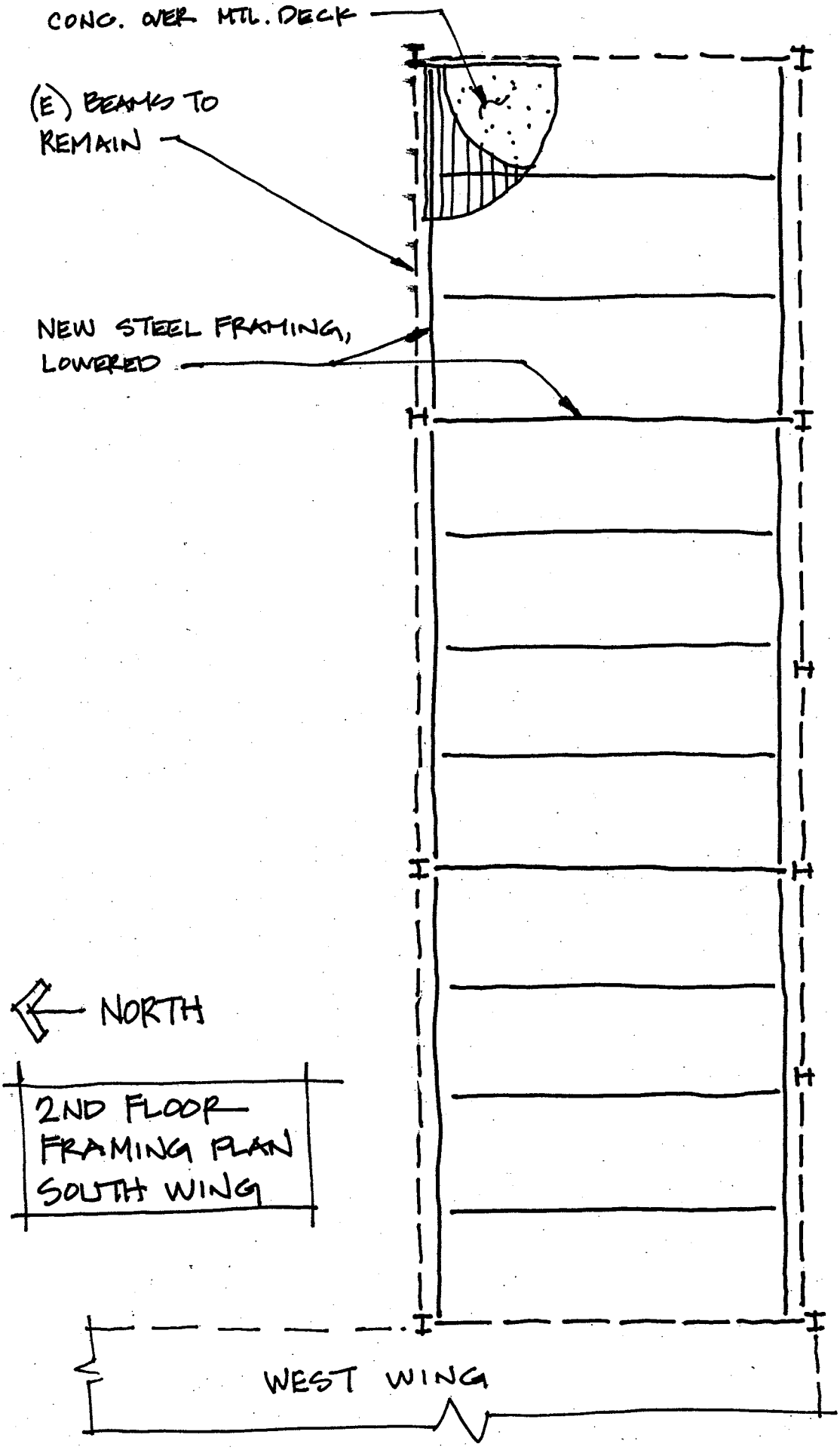

CONC. OVER MTL. DECK
(E) BEAMS TO REMAIN
NEW STEEL FRAMING, LOWERED
NORTH
2ND FLOOR FRAMING PLAN SOUTH WING
WEST WING

FIGURE 12

Simpson Gumpertz & Heger Inc.
Consulting Engineers

SHEET NO.
PROJECT NO. 077092.00
DATE 9/6/07
BY JFS
CHECKED BY

CLIENT
SUBJECT Agricultural Building – West Wing (Alternative 1)

Item										Quanity		Unit Cost		
Demolition														
	Lower level brick - west									800	CF	$30	$24,000.00	
	Lower level brick - north and south									850	CF	$30	$25,500.00	
	Upper level brick wythe									900	CF	$30	$27,000.00	
	Misc. structural demo									1	LS	$25,000	$25,000.00	
Lower Exterior walls														
	Dowels	3500	sq ft	2	sq ft/dowel					1750	dowels	$50	$87,500.00	
	Shotcrete									94	CY	$2,500	$236,000.00	
	Conn at base of wall	270	ft							270	ft	$250	$67,500.00	
Upper Exterior walls														
	Dowels	2700	sq ft	2	sq ft/dowel					1350	dowels	$50	$67,500.00	
	Shotcrete									33	CY	$2,500	$82,500.00	
Concrete Shear wall		0.6667	ft	40	ft	19	ft			23.5	CY	$1,500	$35,200.00	
Lifting Frame		1265	lin ft	159	plf					100.6	tons	$3,000	$302,000.00	
Rail Beams		300	lin ft	320	plf					48.0	tons	$3,000	$144,000.00	
Cut, Lift, and Relevel		24	men	8	hr	20	days	100	$/hr	1	LS	$384,000	$384,000.00	
Roll		24	men	8	hr	5	days	100	$/hr	1	LS	$96,000	$96,000.00	
Lower		24	men	8	hr	10	days	100	$/hr	1	LS	$192,000	$192,000.00	
Roof Plywood										10,000	sq ft	$15	$150,000.00	
													$1,945,700.00	
Contingency												30%	$583,710.00	
													$2,529,410.00	
													16,700	SF
													$151.46	SF

Simpson Gumpertz & Heger Inc.
Consulting Engineers

SHEET NO.
PROJECT NO. 077092.00
DATE 9/6/07
BY JFS
CHECKED BY

CLIENT
SUBJECT Agricultural Building – West and South Wings and North Wall Of East Wing (Alternative 2)

Item											Quanity		Unit Cost			
Cost of work for South Wing																
Demolition																
	Lower brick wythe										95	CF	$30		$2,850.00	
	Upper brick wythe										200	CF	$30		$6,000.00	
	Misc. structural demo										1	LS	$25,000		$25,000.00	
Lower Exterior walls																
	Dowels		900	sq ft	2	sq ft/dowel					450	dowels	$50		$22,500.00	
	Shotcrete										11	CY	$2,500		$27,300.00	
	Conn at base of wall		20	ft							20	ft	$250		$5,000.00	
Upper Exterior walls																
	Dowels		1600	sq ft	2	sq ft/dowel					800	dowels	$50		$40,000.00	
	Shotcrete										25	CY	$2,500		$62,500.00	
Concrete Shear wall			0.6667	ft	40	ft	19	ft			23.5	CY	$1,500		$35,200.00	
			0.3333	ft	40	ft	19	ft			11.7	CY	$1,500		$17,600.00	
			0.6667	ft	10	ft	10	ft			3.1	CY	$1,500		$4,630.00	
Secondary framing			160	lin ft	120	plf					9.6	tons	$5,000		$48,000.00	
Lifting Frame			460	lin ft	159	plf					36.6	tons	$3,000		$110,000.00	
Rail Beams			360	lin ft	320	plf					57.6	tons	$3,000		$173,000.00	
Cut, Lift, and Relevel			14	men	8	hr	20	days	100	$/hr	1	LS	$224,000		$224,000.00	
Roll			14	men	8	hr	5	days	100	$/hr	1	LS	$56,000		$56,000.00	
Lower			14	men	8	hr	10	days	100	$/hr	1	LS	$112,000		$112,000.00	
Roof Plywood											3,500	sq ft	$15		$52,500.00	
Remove and Replace 2nd Floor											3,500	sq ft	$50		$175,000.00	
Repair brick where displaced											1	LS	$25,000		$25,000.00	
Repair corroded steel columns											1	LS	$25,000		$25,000.00	
Cost from West Wing Only															$1,945,700.00	
Minus one move (roll)															-$48,000.00	
Cost from North Wall															$186,200.00	
															$3,332,980.00	
Contingency														30%	$999,894.00	
															$4,332,874.00	
															23,700	SF
															$182.82	SF

Simpson Gumpertz & Heger Inc.
Consulting Engineers

CLIENT

SUBJECT Agricultural Building – North Wall of East Wing (Option)

SHEET NO.
PROJECT NO. 077092.00
DATE 9/6/07
BY JFS
CHECKED BY

Item											Quanity		Unit Cost		
Demolition															
	Brick wythe										400	CF	$30		$12,000.00
	Misc. structural demo										1	LS	$25,000		$25,000.00
Lower Exterior walls															
	Dowels		1200	sq ft	2	sq ft/dowel					600	dowels	$50		$30,000.00
	Shotcrete										15	CY	$2,500		$37,000.00
Lifting Frame			450	lin ft	88	plf					19.8	tons	$3,000		$59,400.00
Cut, Lift, and Move			8	men	8	hr	2	days	100	$/hr	1	LS	$12,800		$12,800.00
Brace											1	LS	$10,000		$10,000.00
															$186,200.00
Contingency													30%		$55,860.00
															$242,060.00

OPINION
OF
PROBABLE COST

Saylor Associates

Leland Saylor
Associates
A Certified DVBE

OPINION OF PROBABLE COST

AGRICULTURAL BUILDING

SAN FRANCISCO, CA

LSA JOB NUMBER:
07-025A R4 OPTION 1

September 21, 2007

ALTERNATIVE 1
PARTIAL HISTORIC REHABILITATION

PREPARED FOR
ROMA DESIGN
BY LELAND SAYLOR ASSOCIATES

595 Market Street, Suite 400 | San Francisco | California | 94105
415-291-3200 | 415-291-3201 (f) | www.lelandsaylor.com

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**OPINION OF COST SUMMARY**	ESTIMATE DATE:	**9/21/2007**
		PROJECT GSF:	**59,028**

TABLE OF CONTENTS

Leland Saylor Associates
A Certified DVBE

PROJECT:	**AGRICULTURAL BUILDING**	JOB NUMBER:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY:	**LS**
CLIENT:	**ROMA DESIGN**	BID DATE:	**TBD**
DESCRIPTION:	**AGRICULTURAL, NEW OFFICE BUILDING AND SITEWORK**	ESTIMATE DATE:	**9/21/2007**

PREFACE AND NOTES TO THE OPINION OF COST

1.0 PROJECT SYNOPSIS

1.1 TYPE OF STUDY:

TABLE OF CONTENTS

1.2 PROJECT DESCRIPTION:

Construction Type:	II, F.R.
Foundation Type:	ALL FOUNDATIONS BY OTHERS
Exterior Wall Type:	BRICK & TERRACOTTA, EXISTING; ALL GLAZED, NEW
Roof Type:	TERRACOTTA TILE, HISTORIC; EPDM SINGLE PLY, NEW
Stories Below Grade:	NONE
Stories Above Grade:	TWO STORIES, HISTORIC; 3 STORIES, NEW
Sitework:	SITEWORK BY OTHERS; MINIMUM SITE UTILITIES
Plumbing System:	EQUIPMENT, FIXTURES, ACCESSORIES, VALVES & SPECIALTIES, PERMITS, TEST & CLEAN
Mechanical System:	EQUIPMENT, CONTROLS, DUCTWORK, PIPING, INSULATION, SPECIALTIES, PERMITS, TEST & BALANCE
Fire Protection System:	STANDPIPES, SPRINKLERS, HOSE RACKS, MANIFOLDS, ALARM & VALVETREE, PERMITS & TEST
Electrical Service:	EQUIPMENT, EMERGENCY GEAR, FEEDERS, LIGHTING, DEVICES, SPECIAL SYSTEMS

PREFACE AND NOTES TO THE OPINION OF COST

1.3 GENERAL NOTES REGARDING PROJECT:

Historical building consists of a steel frame covered with three or four wythes of brick and decorated with terracotta trim in stone shapes. The building is an historical landmark built in 1914 and added to in 1918. More recently, minor changes have been made to the building and repairs to the brick and terracotta have been carried out. The building is partially on piles and beams on the water side of the bay, and splits the sea wall from north-west to south-east. The piles and girders are deteriorated, and the building sank unevenly 6-18" between 1918 and 1925. No current records of the building's elevations are available. The goal is to raise the slab on which the building rests by 2', to eventually sit evenly on the new base pile foundation, girders, and mat slab. The building's walls are un-reinforced brick, and will be fitted with concrete shear walls and moved so that a new foundation can be built. It will then be moved back to its current location, reinforced, and made ready for new tenants.

A new building will be built where the previous east section was removed. It will be built after the historic building has been returned and placed in its original position. This new building will be a basic steel structure covered with glazed materials, three stories above ground, and with the first floor for retail ventures and the second and third for offices.

The annex will be demolished, with the exception of the north wall which will be saved and moved 10 feet to the north supported by suport bracing of the New Building marquis.

2.0 DEFINITIONS

2.1 OPINION OF COST:

COSTS COMPILED FROM CONCEPT DRAWINGS BY THE ARCHITECT WITH NO DETAIL OR SPECIFICATIONS, AND THE ESTIMATOR'S BEST JUDGMENT.

PREFACE AND NOTES TO THE OPINION OF COST

2.2 ESTIMATE OF COST:

An Estimate of Cost is prepared from a survey of the quantities of work - items prepared from written or drawn information provided at the design-development, working drawing or bid-documents stage of the design. Historical costs, information provided by contractors and suppliers, plus judgmental evaluation by the Estimator are used as appropriate as the basis for pricing. Allowances as appropriate will be included for items of work which are not indicated on the design documents provided that the Estimator is made aware of them, or which, in the judgment of the Estimator, are required for completion of the work. We cannot, however, be responsible for items or work of an unusual nature of which we have not been informed.

2.3 BID:

An offer to enter a contract to perform work for a fixed sum, to be completed within a limited period of time.

PREFACE AND NOTES TO THE OPINION OF COST

3.0 BIDS & CONTRACTS

3.1 MARKET CONDITIONS:

In the current market conditions for construction, our experience shows the following results on competitive bids, as a differential from Leland Saylor Associates final estimates:

NUMBER OF BIDS		PERCENTAGE DIFFERENTIAL
1	.....	+25 to 100%
2 - 3	.....	+10 to 25%
4 - 5	.....	0 to +10%
6 - 7	.....	0 to -10%
8 or more	.....	-10 to -20%

Accordingly, it is extremely important to ensure that a minimum of 4 to 5 valid bids are received. Since LSA has no control over the bid process, there is no guarantee that proposals, bids or construction cost will not vary from our opinions or our estimates. Please see Competitive Bidding Statement in the estimate detail section for more information.

PREFACE AND NOTES TO THE OPINION OF COST

4.0 ESTIMATE DOCUMENTS

4.1 This Estimate has been compiled from the following documents and information supplied:

DRAWINGS:

Architectural	Mechanical	Landscaping
Five	*None*	*None*
Structural	**Plumbing**	**Accessibility Standards**
None	*None*	*None*
Civil	**Electrical**	**Other**
None	*None*	*1914 Original drawings Partial Set (8ea)*

SPECIFICATIONS / PROJECT MANUAL:

None, but imagineering by the engineers with a group of figures for how the building foundation and the movement will take place.

COSTS PROVIDED BY OTHERS:

NONE

4.2 The user is cautioned that significant changes in the scope of the project, or alterations to the project documents after completion of the table of contents can cause major cost changes. In these circumstances, Leland Saylor Associates should be notified and an appropriate adjustment made to the table of contents.

PREFACE AND NOTES TO THE OPINION OF COST

5.0 GROSS SQUARE FEET

BUILDING	GSF
HISTORIC RENOVATION	17,234
NEW COMMERCIAL BUILDING, MIXED USI	40,240
TOTAL GROSS SQUARE FEET	57,474

6.0 WAGE RATES

6.1 This Estimate is based on prevailing wage-rates and conditions currently applicable in SAN FRANCISCO, CA.

7.0 PRORATE ADDITIONS TO THE ESTIMATE

7.1 GENERAL CONDITIONS: **10.00%**

An allowance based on 10.00% of the construction costs subtotal has been included for Contractor's General Conditions.

PREFACE AND NOTES TO THE OPINION OF COST

7.2 CONTINGENCY: 30.00%

An allowance based on 30.00% of the construction costs subtotal has been included for Design/Estimating Contingency.

NOTE: This allowance is intended to provide a Design Contingency sum only, for use during the design process. It is not intended to provide for a Construction Contingency sum.

7.3 ESCALATION: 0.00%

No allowance has been included in this estimate for construction material and labor escalation. No date of construction has been set.

Construction start date:	**UNKNOWN**
Construction period:	**NO ESTIMATE**
Mid-point of construction:	**NO ESTIMATE**
Annual escalation rate:	
Allowance for escalation:	

No allowance has been made for Code Escalation or Technological Escalation.

7.4 GEOGRAPHICAL FACTOR: 0.00%

This estimate is based on current market prices for work of a similar character, done in SAN FRANCISCO, CA. No adjustment is required for geographical location factor.

PREFACE AND NOTES TO THE OPINION OF COST

7.5 MARKET FACTOR: **0.00%**

We do not anticipate that market conditions applying at the projected bidding date for the project will be significantly different from current market conditions. No adjustments are therefore required for Market Factor.

7.6 SMALL JOB FACTOR **0.00%**

A Small Job Factor is included on jobs that total less than $1 million, therefore no Small Jobs Factor has been included in the estimate.

7.7 PHASING ALLOWANCE **5.00%**

A Phasing Allowance of 5.00% has been included in the prorates section of the estimate.

7.8 BONDS: **2.00%**

An allowance of 2.00% of the construction cost subtotal is included to provide for the cost of Payment and Performance Bonds, if required.

7.9 CONTRACTOR'S FEE: **8.00%**

An allowance based on 8.00% of the construction cost subtotal is included for Contractor's office Overhead and Profit. Office overhead of the contractor is always included with the fee.

All field overhead of the contractor is included in the General Conditions section of the estimate.

PROJECT:	**AGRICULTURAL BUILDING**	JOB NUMBER:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY:	**LS**
CLIENT:	**ROMA DESIGN**	BID DATE:	**TBD**
DESCRIPTION:	**AGRICULTURAL, NEW OFFICE BUILDING AND SITEWORK**	ESTIMATE DATE:	**9/21/2007**

PREFACE AND NOTES TO THE OPINION OF COST

8.0 SPECIAL NOTES PERTAINING TO THIS ESTIMATE

8.1 SPECIFIC INCLUSIONS:

The following items are specifically included in this estimate:

ONLY ITEMS LISTED BY THE ENGINEERS & ARCHITECT

8.2 SPECIFIC EXCLUSIONS:

The following items are specifically excluded from this estimate:

HAZMAT
SOIL REMEDIATION
A & E COSTS
GEOTECHNICAL WORK
CIVIL WORKS
FOUNDATIONS
PILES
GIRDERS
MAT SLAB
GRATES
PIERS
DEMOLITION

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	DEMOLITION			-	NONE
1.2	SITEWORK			26.18	451,210
2.1	SUBSTRUCTURE			4.70	80,969
3.0	STRUCTURE			140.27	2,417,330
4.1	ENCLOSURE, VERTICAL			55.19	951,108
4.2	ENCLOSURE, HORIZONTAL			13.44	231,621
4.3	SUPPORT ITEMS			11.02	189,872
5.1	INTERNALS, VERTICAL			19.40	334,345
5.2	INTERNALS, HORIZONTAL			11.22	193,403
5.3	FINISHES, SPECIAL			1.42	24,480
5.4	INTERIORS			-	NONE
6.0	SPECIALTIES			2.28	39,289
7.0	EQUIPMENT			-	NONE
8.0	SPECIAL CONSTRUCTION			-	NONE
9.0	CONVEYING			10.15	175,000
10.1	PLUMBING & FIRE PROTECTION			6.64	114,463
10.2	HVAC			18.06	311,203
11.0	ELECTRICAL			12.03	207,310
	TOTAL SITE & BUILDING			**331.99**	**5,721,602**
	PRORATES				
	General Conditions	10.00%			572,160
	Design Contingency	30.00%			1,716,481
	Escalation	0.00%			-
	Geographic Factor	0.00%			-
	Market Factor	0.00%			-
	Small Job Factor	0.00%			-
	Phasing Allowance	5.00%			286,080
	SUBTOTAL			**481.39**	**8,296,323**
	Bonds	2.00%			165,926
	Overhead and Profit	8.00%			663,706
	TOTAL PROJECT COSTS			**529.53**	**9,125,955**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL

Competitive Bidding

The prices in this Estimate are based on Competitive Bidding. Competitive Bidding is receiving responsive bids from at leost five (5) or more General Contractors and three (3) or more responsive bids from Major Subcontractors or Trades. Major Subcontractors are Structural Steel, Plaster / EIFS Contractors, Mechanical, Plumbing and Electrical Subcontractors.

Without Competitive Bidding, Contractor bids can and have ranged from 25%-to 100% over the prices in this Estimate, depending on the size of the job.

We urge you to notify your client of the existing difficult bidding climate, and work with them to ensure that the project is adequately publicized so that they can get the minimum number of bids for competitive bidding. Please contact LSA if you need ideas about how to publicize your project.

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	ALTERNATE #1				
	SAVE NORTH WALL OF ANNEX 74' X 21' OPTION				
	REMOVE ONE WYTHE OF BRICK, ADD NEW DOWELS 2" OCBW	1,554	SF	50.00	**77,700**
	SHOTCRETE INSIDE WALL 4"	1,554	SF	45.00	**69,930**
	ADD LIFTING FRAME	3,700	LB	5.00	**18,500**
	2 CRANES & LIFT BEAMS	1	LS	14,000.00	**14,000**
	MOVE WALL 10' NORTH AFTER LIFTING	1,554	SF	45.00	**69,930**
	POUR NEW FOUNDATION ON FORMS, BAR	9	CY	1,200.00	**10,800**
	REPLACE 2' GRANITE BASE	148	SF	35.00	**5,180**
	REPAIR ANY DAMAGED TERRACOTA	1	LS	10,000.00	**10,000**
	SUPPORT & BRACE FROM NEW BLD CANOPY	1	LS	20,000.00	**20,000**
	REINSTALL ONE WYTHE ON INSIDE WALL	1,554	SF	35.00	**54,390**
	TOTAL ALTERNATE	**1,554**	**SF**	**225.50**	**350,430**
	PRORATES	**59.50%**			**208,506**
	TOTAL ALTERNATE #1	**1,554**	**GSF**	**359.68**	**558,936**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	**DEMOLITION**				
	SUBTOTAL 1.1				**NONE**
1.2	**SITEWORK**				
	SERVICE SITE				
	CLEARING & GRUBBING				
	MASS EXCAVATION & FILL				
	EROSION CONTROL				
	STORM DRAINS				
	FIRE ROADS				
	GENERAL SITE				
	NON-DECORATIVE CONCRETE PAVING				
	ASPHALT PAVING				
	WALKS, DECORATIVE CONCRETE	3,554	SF	15.00	**53,310**
	CURBS				
	FINISH GRADING				
	HEADERS				
	BUMPERS				
	STRIPING				
	SCREEN WALLS				
	FLAG POLE, REPLACE	1	EA	1,000.00	**1,000**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	SITE UTILITIES				
	SEWER, RECONNECT	1	LS	2,300.00	**2,300**
	STORM DRAINS, RECONNECT	1	LS	2,300.00	**2,300**
	WATER, RECONNECT TO EXISTING	1	LS	3,000.00	**3,000**
	FIRE WATER, EXTEND AND RECONNECT	1	LS	3,800.00	**3,800**
	GAS, RECONNECT AND MOVE TO BLDG.				**BY PG&E**
	CATCH BASINS				**BY OTHERS**
	PRIMARY SERVICE AND EXTEND	1	LS	3,200.00	**3,200**
	TELEPHONE AND BACKBOARD	1	LS	3,500.00	**3,500**
	DATA	1	LS	2,000.00	**2,000**
	FIRE ALARM	1	LS	11,000.00	**11,000**
	TRANSFORMERS				**BY PG&E**
	LUMINARIES & LANDSCAPE LIGHTING	1	LS	100,000.00	**100,000**
	OFFSITE WORK				
	LIST EVERYTHING OUTSIDE THE PROPERTY LINES				**NONE**
	UNDERPINNING, SHORING & DEWATERING				**NONE**
	MISCELLANEOUS SITE IMPROVEMENTS				
	LANDSCAPE				
	IRRIGATION				
	HARDSCAPE				**SEE ABOVE**
	HANDRAIL	65	LF	400.00	**26,000**
	PRECAST SEAT WALL	380	LF	400.00	**152,000**
	FURNITURE & SIGNAGE	1	LS	50,000.00	**50,000**
	GRANITE STEPS	105	LF	360.00	**37,800**
	SUBTOTAL 1.2				**451,210**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
2.1	**SUBSTRUCTURE**				
	COMPLETED UNDER PREVIOUS CONTRACT				
	CAISSONS				
	FOUNDATIONS				
	PILE CAPS				
	GRADE BEAMS				
	SLABS ON GRADE 6", PREP FOR COLUMNS	8,523	SF	9.50	**80,969**
	SUBTOTAL 2.1				**80,969**
3.0	**STRUCTURE**				
	SELECTIVE DEMO BRICK WYTHES	8,208	SF	16.00	**131,328**
	COLUMNS, ADD TO EXISTING	85,230	LB	1.75	**149,153**
	STRUCTURAL BEAMS & GIRDERS, ADD	107,076	LB	2.05	**219,506**
	LIFTING BEAMS	68,256	LB	3.00	**204,768**
	METAL DECK, SEE 5.2				
	SHEAR WALLS 8" WITH DOWELS	1,170	SF	44.00	**51,480**
	SHEAR WALLS 4" WITH DOWELS	7,118	SF	32.00	**227,776**
	DOWELS	8,288	SF	15.00	**124,320**
	MOVE STRUCTURE TWICE				
	LIFTING FRAME (13474)	198,000	LB	1.50	**297,000**
	RAIL BEAMS	96,000	LB	1.50	**144,000**
	CUT, LIFT & RELEVEL	3,840	MH	100.00	**384,000**
	ROLL EAST	960	MH	100.00	**96,000**
	ROLL WEST	960	MH	100.00	**96,000**
	LOWER	1,920	MH	100.00	**192,000**
	EQUIPMENT AND SUPPLIES	1	LS	100,000.00	**100,000**
	SUBTOTAL 3.0				**2,417,330**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.1	**ENCLOSURE, VERTICAL**				
	ALL EXTERIOR WALL MATERIALS				
	TERRACOTTA REPLACEMENT	50	UNITS	2,500.00	**125,000**
	TERRACOTTA REPAIR	100	UNITS	750.00	**75,000**
	TERRACOTTA NEW	20	UNITS	2,500.00	**50,000**
	BRICK REPLACEMENT. SPECIAL SIZES & WIRE CUT	1,530	SF	44.00	**67,320**
	EAST WALL BRICK, WIRE CUT VENEER	1,650	SF	44.00	**72,600**
	EAST WALL MS, INSUL, GWB, PAINT, BASE	4,950	SF	21.00	**103,950**
	LEDGER	2,310	LB	2.20	**5,082**
	REMOVE, STORE & REPLACE GRANITE	534	SF	35.00	**18,690**
	WASHDOWN WITH WATER RINSE	8,010	SF	0.20	**1,602**
	COATINGS, SEALER	8,010	SF	0.38	**3,044**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 6 X 12	720	SF	110.00	**79,200**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 6 X 8	720	SF	110.00	**79,200**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 4 X 8	672	SF	110.00	**73,920**
	DOORS, COPPER WITH TRANSOM	3	PR	15,000.00	**45,000**
	WI FRAME & TRANSOMS	3	EA	7,000.00	**21,000**
	INTERIOR SURFACE OF EXTERIOR WALLS				
	REMOVE & REPLACE PLASTER, MS, REPLACE WITHIN, MS, GWB, PAINT, BASE	13,050	SF	8.50	**110,925**
	THERMAL INSULATION SOUND INSULATION	13,050	SF	1.50	**19,575**
	SUBTOTAL 4.1				**951,108**

PROJECT:	AGRICULTURAL BUILDING	LSA JOB NO:	07-025A R4 OPTION 1
LOCATION:	SAN FRANCISCO, CA	LSA JOB NO:	LS
CLIENT:	ROMA DESIGN	CHECKED BY:	MK
DESCRIPTION:	HISTORIC RENOVATION	ESTIMATE DATE:	9/21/2007
		GSF:	17,234

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.2	**ENCLOSURE, HORIZONTAL**				
	REMOVE & STORE TERRACOTTA ROOF (ASSUME 50% REPLACEMENT)	9,268	SF	6.50	**60,242**
	REPLACE ROOFING EXIST	4,634	SF	6.00	**27,804**
	REPLACE W/ NEW TC TILES	4,634	SF	10.00	**46,340**
	REMOVE, INSPECT & REPLACE COPPER GUTTER & CORNICE	454	LF	100.00	**45,400**
	TILE				
	ELASTOMERIC				
	INSULATION, HUNG. R30 RIGID FOAM	9,268	SF	4.50	**41,706**
	ROOF PENETRATIONS	6	EA	350.00	**2,100**
	WATERPROOFING @ CORNICE REMOVE & REPLACE INSIDE OF EXTERIOR WALLS, NEW MS, INSUL	2,170	SF	3.70	**8,029**
	SUBTOTAL 4.2				**231,621**
4.3	**SUPPORT ITEMS**				
	ALL ITEMS NOT CAPABLE OF CATEGORIZATION				
	MISC. IRON	17,324	SF	3.25	**56,303**
	SHEET METAL	17,234	SF	1.75	**30,160**
	OTHER THAN CLOSURES				
	ROUGH HARDWARE	17,234	SF	2.00	**34,468**
	CAULKING	17,234	SF	3.00	**51,702**
	MISC. PAINTING NOT ON INT./EXT. SURFACE OF STRUCT.	17,239	SF	1.00	**17,239**
	SEE SECTION 9 FOR STAIRS				
	SUBTOTAL 4.3				**189,872**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.1	**INTERNALS, VERTICAL**				
	REMOVE ALL TENANT FINISH WALLS, PLASTER, MET STUDS, PAINT	7,540	SF	3.50	**26,390**
	REMOVE & REPLACE ALL CORRIDOR WALLS	6,380	SF	16.25	**103,675**
	REMOVE & REPLACE COLUMN FINISHES MS, PLASTER, PAINT BASE	4,320	SF	20.75	**89,640**
	STEEL STUDS				
	WOOD STUDS				
	REMOVE & REPLACE BATHROOM WALLS DUAL STUDS	1,100	SF	24.50	**26,950**
	STAIRWELL WALLS, CMU	1,680	SF	28.00	**47,040**
	EMULSIONS				
	DOORS (INTERIOR), FIRE RATED	7	EA	1,950.00	**13,650**
	DOORS, STAIRWELL, 90 MIN	10	EA	2,700.00	**27,000**
	BORROWED LIGHTS				
	SOUND ISOLATION				
	FIRE STOPS				
	SUBTOTAL 5.1				**334,345**
5.2	**INTERNALS, HORIZONTAL**				
	TERRAZZO CORRIDOR FLOORING	760	SF	22.00	**16,720**
	MARBLE ENTRY FLOORING	450	SF	35.00	**15,750**
	MARBLE STAIR TREADS	40	EA	200.00	**8,000**
	REMOVE EXISTING CAST IRON STAIR	40	TREADS	50.00	**2,000**
	REPLACE MAIN STAIR	40	TREADS	500.00	**20,000**
	REPLACE W.I. & WOOD RAIL	1	LS	15,000.00	**15,000**
	GYPSUM WALLBOARD, CEILING	480	SF	5.60	**2,688**
	INSTALL NEW STAIRWAYS	2	EA	20,000.00	**40,000**
	SECOND FLOOR FP METAL DECK, 3" LIGHTWEIGHT CONCRETE	8,617	SF	8.50	**73,245**
	CORRIDOR, STAIR & BATH CEILING				
	SUBTOTAL 5.2				**193,403**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.3	**FINISHES, SPECIAL**				
	HARD SURFACES FOR WALLS AND TERRAZZO BATH FLOORS	228	SF	35.00	**7,980**
	TILE WALLS	1,100	SF	15.00	**16,500**
	SUBTOTAL 5.3				**24,480**
5.4	**INTERIORS**				
	CABINETS				
	DRAPES				
	OTHER ITEMS APPENDED TO WALLS, FLOORS, OR CEILINGS				
	BUILT-IN FURNITURE				
	BENCHES & THEATRE SEATING				
	SUBTOTAL 5.4				**NONE**
6.0	**SPECIALTIES**				
	CHALK AND TACK BOARD				
	TOILET PARTITIONS, RESTORE	10	EA	1,275.00	**12,750**
	TOILET ACCESSORIES	1	LS	2,400.00	**2,400**
	FOLDING AND DEMOUNTABLE PARTITIONS				
	FIRE EXTINGUISHERS	4	EA	350.00	**1,400**
	FIRE HOSE & HOSE CABINETS	8	EA	500.00	**4,000**
	MAIL SPECIALTIES				
	EMBEDDED ENTRY MATS	1	LS	1,500.00	**1,500**
	OTHER GENERAL BUILDING SPECIALTIES	17,239	SF	1.00	**17,239**
	SUBTOTAL 6.0				**39,289**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
7.0	**EQUIPMENT** ANY EQUIPMENT RELATED TO THE BUILDING: RESTAURANT, SCHOOL, CHURCH, BANK, HOSPITAL, GYM, SHOP, MATERIAL HANDLING				
	SUBTOTAL 7.0				**NONE**
8.0	**SPECIAL CONSTRUCTION** UNUSUAL ITEMS NOT A PART OF GENERAL CONST. POOLS INCINERATORS RADIOLOGY SHIELDING PEDESTAL FLOORS ETC.				
	SUBTOTAL 8.0				**NONE**
9.0	**CONVEYING** ELEVATORS DUMB-WAITERS ESCALATORS BELTS PNEUMATIC TUBE SYSTEMS CHUTES	1	EA	175,000.00	**175,000**
	SUBTOTAL 9.0				**175,000**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
10.1	**PLUMBING & FIRE PROTECTION**				
	ROUGH PLUMBING, INCLUDING PIPING, VALVES, AND SPECIALTIES & INSULATION	16	FIX	1,100.00	**17,600**
	EQUIPMENT WATER HEATER	1	EA	1,500.00	**1,500**
	PLUMBING FIXTURES	16	EA	1,500.00	**24,000**
	PLUMBING ACCESSORIES	1	LS	3,000.00	**3,000**
	TESTING & PERMITS & STERILIZATION	1	LS	2,000.00	**2,000**
	ALARM & VALVE TREE	1	EA	6,800.00	**6,800**
	FP SPRINKLERS COMPLETE / OCCUPIED AREA	3,400	SF	4.50	**15,300**
	SPRINKLERS, UNOCCUPIED AREA	15,094	SF	2.80	**42,263**
	PERMITS	1	LS	2,000.00	**2,000**
	SEWER, GAS, FIREWATER MORE THAN 5 FEET FROM BLDG. ARE TO BE INCLUDED WITH SITE UTILITIES				
	SUBTOTAL 10.1				**114,463**
10.2	**HVAC**				
	HVAC UNIT AIR COOLED	60	TONS	1,400.00	**84,000**
	BOILERS	1	EA	3,500.00	**3,500**
	AIR HANDLING TERMINAL DISTRIBUTION ITEMS VAV UNITS	34	EA	750.00	**25,500**
	CONTROLS & POINTS	17,234	SF	4.50	**77,553**
	VALVES	1	LS	3,500.00	**3,500**
	DUCT WORK, SHAFTS	9,800	LB	7.75	**75,950**
	REGISTERS & GRILLS	26	EA	100.00	**2,600**
	INSULATION	9,800	SF	2.00	**19,600**
	PIPING & INSULATION	1	LS	10,000.00	**10,000**
	PERMITS & TESTING	1	LS	9,000.00	**9,000**
	SUBTOTAL 10.2				**311,203**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
11.0	**ELECTRICAL**				
	MAIN SWITCH GEAR	1,000	AMPS	14.99	**14,990**
	PANEL BOARDS	4	EA	3,700.00	**14,800**
	TRANSFORMERS				
	EMERGENCY GENERATORS / SPLIT	400	KW	300.00	**120,000**
	FUEL SUPPLY	1	LS	10,000.00	**10,000**
	FIXTURES EXT & INTERIOR	60	EA	275.00	**16,500**
	CONDUIT & RACEWAY / FIXTURES	1,500	LF	5.60	**8,400**
	MISCELLANEOUS DEVICES	40	EA	110.00	**4,400**
	CONDUIT & RACEWAY / DEVICES	1,200	LF	5.60	**6,720**
	FEES	1		2,500.00	**2,500**
	PERMITS	1	LS	5,000.00	**5,000**
	FIRE & LIFE SAFETY SYSTEMS	1	LS	4,000.00	**4,000**
	INTRUSION SYSTEMS				
	CLOSED CIRCUIT T.V.				
	CARDKEY ACCESS SYSTEMS & DATA NETWORKS				
	ELECTRICAL SITE UTILITIES MORE THAN 5 FEET FROM BUILDING ARE TO BE INCLUDED UNDER SITE UTILITIES				
	SUBTOTAL 11.0				**207,310**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	DEMOLITION			-	NONE
1.2	SITEWORK			33.40	1,343,955
2.1	SUBSTRUCTURE			-	NONE
3.0	STRUCTURE			37.49	1,508,541
4.1	ENCLOSURE, VERTICAL			47.95	1,929,400
4.2	ENCLOSURE, HORIZONTAL			7.22	290,670
4.3	SUPPORT ITEMS			7.83	315,269
5.1	INTERNALS, VERTICAL			14.24	572,918
5.2	INTERNALS, HORIZONTAL			1.51	60,847
5.3	FINISHES, SPECIAL			2.09	84,182
5.4	INTERIORS			-	NONE
6.0	SPECIALTIES			1.82	73,110
7.0	EQUIPMENT			-	NONE
8.0	SPECIAL CONSTRUCTION			-	NONE
9.0	CONVEYING			5.74	231,000
10.1	PLUMBING & FIRE PROTECTION			5.43	218,363
10.2	HVAC			12.86	517,293
11.0	ELECTRICAL			8.27	332,585
	TOTAL SITE & BUILDING			**185.84**	**7,478,133**
	PRORATES				
	General Conditions	10.00%			747,813
	Design Contingency	30.00%			2,243,440
	Escalation	0.00%			-
	Geographic Factor	0.00%			-
	Market Factor	0.00%			-
	Small Job Factor	0.00%			-
	Phasing Allowance	5.00%			373,907
	SUBTOTAL			**269.47**	**10,843,293**
	Bonds	2.00%			216,866
	Overhead and Profit	8.00%			867,463
	TOTAL PROJECT COSTS			**296.41**	**11,927,622**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL

Competitive Bidding

The prices in this Estimate are based on Competitive Bidding. Competitive Bidding is receiving responsive bids from at least five (5) or more General Contractors and three (3) or more responsive bids from Major Subcontractors or Trades. Major Subcontractors are Structural Steel, Plaster / EIFS Contractors, Mechanical, Plumbing and Electrical Subcontractors.

Without Competitive Bidding, Contractor bids can and have ranged from 25%-to 100% over the prices in this Estimate, depending on the size of the job.

We urge you to notify your client of the existing difficult bidding climate, and work with them to ensure that the project is adequotely publicized so that they can get the minimum number of bids for competitive bidding. Please contact LSA if you need ideas about how to publicize your project.

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	**DEMOLITION**				
	SUBTOTAL 1.1				**NONE**
1.2	**SITEWORK**				
	SERVICE SITE				
	CLEARING & GRUBBING				
	MASS EXCAVATION & FILL				
	EROSION CONTROL				
	FIRE ROADS				
	GENERAL SITE				
	SITE UTILITIES				
	SEWER	175	LF	38.00	**6,650**
	STORM DRAINS	350	LF	33.00	**11,550**
	WATER	175	LF	55.00	**9,625**
	FIRE WATER	175	LF	60.00	**10,500**
	GAS	245	LF	40.00	**9,800**
	CATCH BASINS				**BY OTHERS**
	CONDUIT & WIRE	350	LF	66.00	**23,100**
	TELEPHONE	350	LF	30.00	**10,500**
	DATA	350	LF	21.00	**7,350**
	FIRE ALARM, SEE 11.0				
	TRANSFORMERS				**PG&E**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	SW. GEAR (SEE SECTION 11.0)				**NONE**
	VAULTS	1	LS	35,000.00	**35,000**
	LUMINARIES & LANDSCAPE LIGHTING	28	EA	2,000.00	**56,000**
	OPTIONAL SITE WORK				
	CONC. TOPPING SLABS	11,933	SF	15.00	**178,995**
	SITE FURNITURE, SIGNAGE	1	LS	50,000.00	**50,000**
	UNDERPINNING, SHORING & DEWATERING	1	LS	25,000.00	**25,000**
	MISCELLANEOUS SITE IMPROVEMENTS				
	LANDSCAPE, PATIO PLANTS	14	EA	1,800.00	**25,200**
	IRRIGATION, DRIP IRRIGATION	340	LF	8.50	**2,890**
	METAL RAILINGS	611	LF	800.00	**488,800**
	CONCRETE TOPPING SLAB	19,933	SF	15.00	**298,995**
	EXTERIOR FURNISHINGS				
	PRECAST CONCRETE SEAT WALL	82	LF	400.00	**32,800**
	STE PAVEMENT & SIGNS	1	LS	25,000.00	**25,000**
	GRANITE STEPS	65	LF	360.00	**23,400**
	STAINLESS STEAL HANDRAIL	32	LF	400.00	**12,800**
	SUBTOTAL 1.2				**1,343,955**
2.1	**SUBSTRUCTURE**				
	PILES				**BY OTHERS**
	CAISSONS				**BY OTHERS**
	FOUNDATIONS				**BY OTHERS**
	PILE CAPS				**BY OTHERS**
	GRADE BEAMS				**BY OTHERS**
	COLUMNS BELOW GRADE				**BY OTHERS**
	SUBTOTAL 2.1				**NONE**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
3.0	**STRUCTURE**				
	COLUMNS	281,680	LB	1.70	**478,856**
	STRUCTURAL BEAMS & GIRDERS	422,250	LB	1.70	**717,825**
	SLABS COMPOSITE, MET DECK, F.P., 3 1/2 LW CONC	40,240	SF	7.75	**311,860**
	SHEAR WALLS AS A COMPONENT OF EXTERIOR WALLS, SUCH AS PLYWOOD, ARE EXCLUDED AS SHEAR WALLS FOR THIS SECTION ONLY.				
	SUBTOTAL 3.0				**1,508,541**
4.1	**ENCLOSURE, VERTICAL**				
	ALL EXTERIOR DUAL WALL MATERIALS				
	EXTERIOR GLAZED WALL LOW "E ".	17,140	SF	110.00	**1,885,400**
	DOORS, STOREFRONT	8	PR	5,500.00	**44,000**
	SUBTOTAL 4.1				**1,929,400**
4.2	**ENCLOSURE, HORIZONTAL**				
	EPDM SINGLE PLY	12,540	SF	4.50	**56,430**
	SHEET METAL ENCLOSURES				
	INSULATION RIGID	12,540	SF	4.75	**59,565**
	ROOF PENETRATIONS	20	EA	450.00	**9,000**
	PARAPET	1,610	SF	7.50	**12,075**
	TEST ROOF, 2 DAYS & CERTIFY	1	LS	3,600.00	**3,600**
	LIVE, SADEM PLANTING, 1216 SF	12,000	SF	7.50	**90,000**
	IRRIGATION	12,000	SF	5.00	**60,000**
	SUBTOTAL 4.2				**290,670**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.3	**SUPPORT ITEMS**				
	MISC. IRON	40,240	SF	3.50	**140,840**
	SHEET METAL, REGLETS, COPING	40,240	SF	2.75	**110,660**
	OTHER THAN CLOSURES				
	ROUGH HARDWARE	1	LS	15,000.00	**15,000**
	CAULKING	1	LS	4,505.00	**4,505**
	MISC. PAINTING NOT ON INT./EXT. SURFACE OF STRUCT.	40,240	SF	1.10	**44,264**
	SUBTOTAL 4.3				**315,269**
5.1	**INTERNALS, VERTICAL**				
	CONCRETE MASONRY UNITS AT STAIRS	7,884	SF	26.00	**204,984**
	METAL STUDS, GWB INSUL PAINT	5,810	SF	14.24	**82,734**
	WOOD STUDS				
	MS, DOUBLE WALL, PLUMBING	7,880	SF	17.50	**137,900**
	PLUMBING WALLS	1,200	SF	27.50	**33,000**
	EMULSIONS				
	DOORS (INTERIOR) METAL, 60 MIN	14	EA	2,100.00	**29,400**
	DOORS (METAL) 90 MIN.	7	EA	2,700.00	**18,900**
	BORROWED LIGHTS				
	SOUND ISOLATION				
	FIRE STOPS / WALLS	6,600	SF	10.00	**66,000**
	SUBTOTAL 5.1				**572,918**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.2	**INTERNALS, HORIZONTAL**				
	ALL FLOOR COVERINGS, VINYL SHEET	5,140	SF	4.30	**22,102**
	ACOUSTICAL TILE				
	GYPSUM WALLBOARD	8,610	SF	4.50	**38,745**
	PLASTER				
	SOUND ISOLATION (OTHER THAN CONCRETE FILL)				
	SUBTOTAL 5.2				**60,847**
5.3	**FINISHES, SPECIAL**				
	HARD SURFACES FOR WALLS AND FLOORS				
	TERRAZZO FLOORS	1,710	SF	25.00	**42,750**
	TILE WALLS	2,402	SF	16.00	**38,432**
	GRANITE COUNTERS	15	LF	200.00	**3,000**
	DECORATIVE PAPER				
	PADDED WALLS				
	SUBTOTAL 5.3				**84,182**
5.4	**INTERIORS**				
	SUBTOTAL 5.4				**NONE**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
6.0	**SPECIALTIES**				
	TOILET PARTITIONS	20	EA	1,150.00	**23,000**
	URINAL SCREENS	6	EA	625.00	**3,750**
	TOILET ACCESSORIES	1	LS	5,400.00	**5,400**
	OTHER GENERAL BUILDING SPECIALTIES	40,960	SF	1.00	**40,960**
	SUBTOTAL 6.0				**73,110**
7.0	**EQUIPMENT**				
	ANY EQUIPMENT RELATED TO THE BUILDING: RESTAURANT, SCHOOL, CHURCH, BANK, HOSPITAL, GYM, SHOP, MATERIAL HANDLING				
	SUBTOTAL 7.0				**NONE**
8.0	**SPECIAL CONSTRUCTION**				
	SUBTOTAL 8.0				**NONE**
9.0	**CONVEYING**				
	ELEVATORS	1	EA	175,000.00	**175,000**
	STAIRS	7	FLIGHTS	8,000.00	**56,000**
	SUBTOTAL 9.0				**231,000**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
10.1	**PLUMBING & FIRE PROTECTION**				
	WATER HEATER/BOILER	1	EA	1,500.00	**1,500**
	STORAGE TANK	1	EA	850.00	**850**
	PUMP, CIRCULATING	1	EA	475.00	**475**
	ROUGH PIPE & INSULATION	44	EA	1,100.00	**48,400**
	VALVES & SPECIALTIES	1	LS	2,200.00	**2,200**
	FIXTURES	44	EA	1,100.00	**48,400**
	TESTING, PERMITS & STERILIZATION	1	LS	2,200.00	**2,200**
	ALARM & VALVE TREE	1	EA	6,800.00	**6,800**
	SPRINKLERS - OCCUPIED AREA	7,110	SF	3.30	**23,463**
	SPRINKLERS - UNOCCUPIED AREA	31,430	SF	2.50	**78,575**
	PERMITS & TEST	1	LS	5,500.00	**5,500**
	SEWER, GAS, FIREWATER MORE THAN 5 FEET FROM BLDG. ARE TO BE INCLUDED WITH SITE UTILITIES				
	SUBTOTAL 10.1				**218,363**
10.2	**HVAC**				
	HVAC UNIT	120	TONS	1,400.00	**168,000**
	BOILERS & STORAGE TANK	1	EA	5,600.00	**5,600**
	TERMINAL DISTRIBUTION ITEMS, VAV	70	EA	750.00	**52,500**
	CONTROLS & POINTS	40,260	SF	4.50	**181,170**
	VALVES & SPECIALTIES	1	LS	6,500.00	**6,500**
	DUCT WORK & SHAFTS	7,110	LB	7.75	**55,103**
	REGISTERS & GRILLS	72	EA	100.00	**7,200**
	INSULATION, DUCT. INTERNAL/EXTERNAL	7,110	SF	2.00	**14,220**
	PIPING & INSULATION	1	LS	27,000.00	**27,000**
	SUBTOTAL 10.2				**517,293**

PROJECT:	**NEW BUILDING**	LSA JOB NO:	**07-025A R4 OPTION 1**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**NEW COMMERCIAL BUILDING, MIXED USE**	ESTIMATE DATE:	**9/21/2007**
		GSF:	**40,240**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
11.0	**ELECTRICAL**				
	MAIN SWITCH GEAR	2,500	AMPS	14.99	**37,475**
	PANEL BOARDS	10	EA	3,700.00	**37,000**
	TRANSFORMERS				**PG&E**
	EMERGENCY GENERATORS / SPLIT	400	KW	300.00	**120,000**
	FUEL SUPPLY	1	LS	20,000.00	**20,000**
	FIXTURES, EXTERIOR & INTERIOR	150	EA	275.00	**41,250**
	CONDUIT & RACEWAY SYSTEMS / FIXTURES	3,750	LF	5.60	**21,000**
	MISCELLANEOUS DEVICES	120	EA	110.00	**13,200**
	CONDUIT & RACEWAY SYSTEMS / DEVICES	3,600	LF	5.60	**20,160**
	PERMITS & FEES	1	LS	9,000.00	**9,000**
	TESTING	1	LS	2,500.00	**2,500**
	FIRE & LIFE SAFETY SYSTEMS	1	LS	11,000.00	**11,000**
	INTRUSION SYSTEMS				
	CLOSED CIRCUIT T.V.				
	CARDKEY ACCESS SYSTEMS & DATA NETWORKS				
	ELECTRICAL SITE UTILITIES MORE THAN 5 FEET FROM BUILDING ARE TO BE INCLUDED UNDER SITE UTILITIES				
	SUBTOTAL 11.0				**332,585**

Leland Saylor
Associates
A Certified DVBE

OPINION OF PROBABLE COST

AGRICULTURAL BUILDING

SAN FRANCISCO, CA

LSA JOB NUMBER:
07-025A R5

September 25, 2007

ALTERNATIVE 2
FULL HISTORIC REHABILITATION

PREPARED FOR
ROMA DESIGN
BY LELAND SAYLOR ASSOCIATES

595 Market Street, Suite 400 | San Francisco | California | 94105
415-291-3200| 415-291-3201 (f) | www.lelandsaylor.com

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**OPINION OF COST SUMMARY**	ESTIMATE DATE:	**9/25/2007**
		PROJECT GSF:	**32,319**

TABLE OF CONTENTS

Leland Saylor
Associates
A Certified DVBE

PROJECT:	**AGRICULTURAL BUILDING**	JOB NUMBER:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY:	**LS**
CLIENT:	**ROMA DESIGN**	BID DATE:	**TBD**
DESCRIPTION:	**AGRICULTURAL, BUILDING AND SITEWORK**	ESTIMATE DATE:	**9/25/2007**

PREFACE AND NOTES TO THE OPINION OF COST

1.0 PROJECT SYNOPSIS

1.1 TYPE OF STUDY:

TABLE OF CONTENTS

1.2 PROJECT DESCRIPTION:

Construction Type:	II, F.R.
Foundation Type:	ALL FOUNDATIONS AND PILE CAPS ON 24" STEEL PILES BY OTHERS
Exterior Wall Type:	BRICK & TERRACOTTA, EXISTING; ALL GLAZED, NEW SHEAR WALLS WILL BE ADDED
Roof Type:	TERRACOTTA TILE, HISTORIC; EPDM SINGLE PLY, EAST & SOUTH
Stories Below Grade:	NONE
Stories Above Grade:	TWO STORIES, HISTORIC;WEST WING, TWO STORIES EAST WING & SOUTH WING, MEZZANINE EAST WING
Sitework:	SITEWORK BY OTHERS; MINIMUM SITE UTILITIES
Plumbing System:	EQUIPMENT, FIXTURES, ACCESSORIES, VALVES & SPECIALTIES, PERMITS, TEST & CLEAN
Mechanical System:	EQUIPMENT, CONTROLS, DUCTWORK, PIPING, INSULATION, SPECIALTIES, PERMITS, TEST & BALANCE
Fire Protection System:	STANDPIPES, SPRINKLERS, HOSE RACKS, MANIFOLDS, ALARM & VALVETREE, PERMITS & TEST
Electrical Service:	EQUIPMENT, EMERGENCY GEAR, FEEDERS, LIGHTING, DEVICES, SPECIAL SYSTEMS

PREFACE AND NOTES TO THE OPINION OF COST

1.3 GENERAL NOTES REGARDING PROJECT:

Historical building consists of a steel frame covered with four or five wythes of brick and decorated with terracotta trim in stone shapes. The building is an historical landmark built in 1914 and added to in 1918. More recently, minor changes have been made to the building and repairs to the brick and terracotta have been carried out. The building is partially on piles and beams on the water side of the bay, and splits the sea wall from north-west to south-east. The piles and girders are deteriorated, and the building sank unevenly 6-18" between 1918 and 1925. No current records of the building's elevations are available. The goal is to raise the slab on which the building rests by 2', to eventually sit evenly on the new base pile foundation, girders, and mat slab. The building's walls are un-reinforced brick, and will be fitted with concrete shear walls and moved so that a new foundation can be built, and made ready for new tenants.

2.0 DEFINITIONS

2.1 OPINION OF COST:

COSTS COMPILED FROM CONCEPT DRAWINGS BY THE ARCHITECT WITH NO DETAIL OR SPECIFICATIONS, AND THE ESTIMATOR'S BEST JUDGMENT.

2.2 ESTIMATE OF COST:

An Estimate of Cost is prepared from a survey of the quantities of work - items prepared from written or drawn information provided at the design-development, working drawing or bid-documents stage of the design. Historical costs, information provided by contractors and suppliers, plus judgmental evaluation by the Estimator are used as appropriate as the basis for pricing. Allowances as appropriate will be included for items of work which are not indicated on the design documents provided that the Estimator is made aware of them, or which, in the judgment of the Estimator, are required for completion of the work. We cannot, however, be responsible for items or work of an unusual nature of which we have not been informed.

PREFACE AND NOTES TO THE OPINION OF COST

2.3 BID:

An offer to enter a contract to perform work for a fixed sum, to be completed within a limited period of time.

3.0 BIDS & CONTRACTS

3.1 MARKET CONDITIONS:

In the current market conditions for construction, our experience shows the following results on competitive bids, as a differential from Leland Saylor Associates final estimates:

NUMBER OF BIDS		PERCENTAGE DIFFERENTIAL
1	.....	+25 to 100%
2 - 3	.....	+10 to 25%
4 - 5	.....	0 to +10%
6 - 7	.....	0 to -10%
8 or more	.....	-10 to -20%

Accordingly, it is extremely important to ensure that a minimum of 4 to 5 valid bids are received. Since LSA has no control over the bid process, there is no guarantee that proposals, bids or construction cost will not vary from our opinions or our estimates. Please see Competitive Bidding Statement in the estimate detail section for more information.

PREFACE AND NOTES TO THE OPINION OF COST

4.0 ESTIMATE DOCUMENTS

4.1 This Estimate has been compiled from the following documents and information supplied:

DRAWINGS:

Architectural	**Mechanical**	**Landscaping**
Five	*None*	*None*
Structural	**Plumbing**	**Accessibility Standards**
None	*None*	*None*
Civil	**Electrical**	**Other**
None	*None*	*None*

SPECIFICATIONS / PROJECT MANUAL:

None, but imagineering by the engineers with a group of figures for how the building foundation and the movement will take place.

COSTS PROVIDED BY OTHERS:

NONE

4.2 The user is cautioned that significant changes in the scope of the project, or alterations to the project documents after completion of the table of contents can cause major cost changes. In these circumstances, Leland Saylor Associates should be notified and an appropriate adjustment made to the table of contents.

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **AGRICULTURAL, BUILDING AND SITEWORK**

JOB NUMBER: **07-025A R5**
PREPARED BY: **LS**
BID DATE: **TBD**
ESTIMATE DATE: **9/25/2007**

PREFACE AND NOTES TO THE OPINION OF COST

5.0 GROSS SQUARE FEET

BUILDING	GSF
HISTORIC RENOVATION, WEST WING	17,234
HISTORIC RENOVATION, EAST & SOUTH WINGS	15,085
TOTAL GROSS SQUARE FEET	32,319

6.0 WAGE RATES

6.1 This Estimate is based on prevailing wage-rates and conditions currently applicable in SAN FRANCISCO, CA.

7.0 PRORATE ADDITIONS TO THE ESTIMATE

7.1 GENERAL CONDITIONS: **10.00%**

An allowance based on 10.00% of the construction costs subtotal has been included for Contractor's General Conditions.

PREFACE AND NOTES TO THE OPINION OF COST

7.2 CONTINGENCY: 30.00%

An allowance based on 30.00% of the construction costs subtotal has been included for Design/Estimating Contingency.

NOTE: This allowance is intended to provide a Design Contingency sum only, for use during the design process. It is not intended to provide for a Construction Contingency sum.

7.3 ESCALATION: 0.00%

No allowance has been included in this estimate for construction material and labor escalation. No date of construction has been set.

Construction start date:	**UNKNOWN**
Construction period:	**NO ESTIMATE**
Mid-point of construction:	**NO ESTIMATE**
Annual escalation rate:	
Allowance for escalation:	

No allowance has been made for Code Escalation or Technological Escalation.

7.4 GEOGRAPHICAL FACTOR: 0.00%

This estimate is based on current market prices for work of a similar character, done in SAN FRANCISCO, CA. No adjustment is required for geographical location factor.

PREFACE AND NOTES TO THE OPINION OF COST

7.5 MARKET FACTOR: **0.00%**

We do not anticipate that market conditions applying at the projected bidding date for the project will be significantly different from current market conditions. No adjustments are therefore required for Market Factor.

7.6 SMALL JOB FACTOR **0.00%**

A Small Job Factor is included on jobs that total less than $1 million, therefore no Small Jobs Factor has been included in the estimate.

7.7 PHASING ALLOWANCE **5.00%**

A Phasing Allowance of 5.00% has been included in the prorates section of the estimate.

7.8 BONDS: **2.00%**

An allowance of 2.00% of the construction cost subtotal is included to provide for the cost af Payment and Performance Bonds, if required.

7.9 CONTRACTOR'S FEE: **8.00%**

An allowance based on 8.00% of the construction cost subtotal is included for Contractor's office Overhead and Profit. Office overhead of the contractor is always included with the fee.

All field overhead of the contractor is included in the General Conditions section of the estimate.

PROJECT:	**AGRICULTURAL BUILDING**	JOB NUMBER:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	PREPARED BY:	**LS**
CLIENT:	**ROMA DESIGN**	BID DATE:	**TBD**
DESCRIPTION:	**AGRICULTURAL, BUILDING AND SITEWORK**	ESTIMATE DATE:	**9/25/2007**

PREFACE AND NOTES TO THE OPINION OF COST

8.0 SPECIAL NOTES PERTAINING TO THIS ESTIMATE

8.1 SPECIFIC INCLUSIONS:

The following items are specifically included in this estimate:

ONLY ITEMS LISTED BY THE ENGINEERS & ARCHITECT

8.2 SPECIFIC EXCLUSIONS:

The following items are specifically excluded from this estimate:

HAZMAT
SOIL REMEDIATION
A & E COSTS
GEOTECHNICAL WORK
CIVIL WORKS
FOUNDATIONS
PILES
GIRDERS
MAT SLAB
GRATES
PIERS

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	DEMOLITION			-	NONE
1.2	SITEWORK			24.59	423,840
2.1	SUBSTRUCTURE			4.70	80,969
3.0	STRUCTURE			120.77	2,081,330
4.1	ENCLOSURE, VERTICAL			55.19	951,108
4.2	ENCLOSURE, HORIZONTAL			13.44	231,621
4.3	SUPPORT ITEMS			11.02	189,872
5.1	INTERNALS, VERTICAL			19.40	334,345
5.2	INTERNALS, HORIZONTAL			17.24	297,188
5.3	FINISHES, SPECIAL			1.42	24,480
5.4	INTERIORS			-	NONE
6.0	SPECIALTIES			2.28	39,289
7.0	EQUIPMENT			-	NONE
8.0	SPECIAL CONSTRUCTION			-	NONE
9.0	CONVEYING			10.15	175,000
10.1	PLUMBING & FIRE PROTECTION			6.64	114,463
10.2	HVAC			18.06	311,203
11.0	ELECTRICAL			12.03	207,310
	TOTAL SITE & BUILDING			**316.93**	**5,462,017**
	PRORATES				
	General Conditions	10.00%			546,202
	Design Contingency	30.00%			1,638,605
	Escalation	0.00%			-
	Geographic Factor	0.00%			-
	Market Factor	0.00%			-
	Small Job Factor	0.00%			-
	Phasing Allowance	5.00%			273,101
	SUBTOTAL			**459.55**	**7,919,924**
	Bonds	2.00%			158,398
	Overhead and Profit	8.00%			633,594
	TOTAL PROJECT COSTS			**505.51**	**8,711,917**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL

Competitive Bidding

The prices in this Estimate are based on Competitive Bidding. Competitive Bidding is receiving responsive bids from at least five (5) or more General Contractors and three (3) or more responsive bids from Major Subcontractors or Trades. Major Subcontractors are Structural Steel, Plaster / EIFS Contractars, Mechanical, Plumbing and Electrical Subcontractors.

Without Competitive Bidding, Contractor bids can and have ranged from 25%-to 100% over the prices in this Estimate, depending on the size of the job.

We urge you to notify your client of the existing difficult bidding climate, and work with them to ensure that the project is adequately publicized so that they can get the minimum number of bids for competitive bidding. Please contact LSA if you need ideas about how to publicize your project.

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	**DEMOLITION**				
	SUBTOTAL 1.1				**NONE**
1.2	**SITEWORK**				
	SERVICE SITE				
	CLEARING & GRUBBING				
	MASS EXCAVATION & FILL				
	EROSION CONTROL				
	STORM DRAINS				
	FIRE ROADS				
	GENERAL SITE				
	NON-DECORATIVE CONCRETE PAVING				
	ASPHALT PAVING				
	WALKS, DECORATIVE CONCRETE	3,554	SF	15.00	**53,310**
	CURBS				
	FINISH GRADING				
	HEADERS				
	BUMPERS				
	STRIPING				
	SCREEN WALLS				
	FLAG POLE, REPLACE	1	EA	1,000.00	**1,000**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	SITE UTILITIES				
	SEWER, RECONNECT	1	LS	2,300.00	**2,300**
	STORM DRAINS, RECONNECT	1	LS	2,300.00	**2,300**
	WATER, RECONNECT TO EXISTING	1	LS	3,000.00	**3,000**
	FIRE WATER, EXTEND AND RECONNECT	1	LS	3,800.00	**3,800**
	GAS, RECONNECT AND MOVE TO BLDG.				**BY PG&E**
	CATCH BASINS				**BY OTHERS**
	PRIMARY SERVICE AND EXTEND	1	LS	3,200.00	**3,200**
	TELEPHONE AND BACKBOARD	1	LS	3,500.00	**3,500**
	DATA	1	LS	2,000.00	**2,000**
	FIRE ALARM	1	LS	11,000.00	**11,000**
	TRANSFORMERS				**BY PG&E**
	LUMINARIES & LANDSCAPE LIGHTING	1	LS	20,000.00	**20,000**
	OFFSITE WORK				
	LIST EVERYTHING OUTSIDE THE PROPERTY LINES				**NONE**
	UNDERPINNING, SHORING & DEWATERING				**NONE**
	MISCELLANEOUS SITE IMPROVEMENTS				
	LANDSCAPE				
	IRRIGATION				
	HANDRAIL	65	LF	450.00	**29,250**
	PRECAST SEAT WALL	380	LF	400.00	**152,000**
	GRANITE STEPS	105	LF	360.00	**37,800**
	FENCING, SPECIAL DESIGN	102	LF	440.00	**44,880**
	HARDSCAPE				**SEE ABOVE**
	EXTERIOR FURNISHINGS	1	LS	50,000.00	**50,000**
	MONUMENTS & SIGNS	1	LS	4,500.00	**4,500**
	SUBTOTAL 1.2				**423,840**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
2.1	**SUBSTRUCTURE**				
	COMPLETED UNDER PREVIOUS CONTRACT				
	CAISSONS				
	FOUNDATIONS				
	PILE CAPS				
	GRADE BEAMS				
	SLABS ON GRADE 6", PREP FOR COLUMNS	8,523	SF	9.50	**80,969**
	SUBTOTAL 2.1				**80,969**
3.0	**STRUCTURE**				
	SELECTIVE DEMO BRICK WYTHES	8,208	SF	16.00	**131,328**
	COLUMNS, ADD TO EXISTING	85,230	LB	1.75	**149,153**
	STRUCTURAL BEAMS & GIRDERS, ADD	107,076	LB	2.05	**219,506**
	LIFTING BEAMS	68,256	LB	3.00	**204,768**
	METAL DECK, SEE 5.2				
	SHEAR WALLS 8" WITH DOWELS	1,170	SF	44.00	**51,480**
	SHEAR WALLS 4" WITH DOWELS	7,118	SF	32.00	**227,776**
	DOWELS	8,288	SF	15.00	**124,320**
	LIFT STRUCTURE & RELEVEL				
	LIFTING FRAME (13474)	198,000	LB	1.50	**297,000**
	CUT, LIFT & RELEVEL	3,840	MH	100.00	**384,000**
	LOWER	1,920	MH	100.00	**192,000**
	EQUIPMENT AND SUPPLIES	1	LS	100,000.00	**100,000**
	SUBTOTAL 3.0				**2,081,330**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, WEST WING**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.1	**ENCLOSURE, VERTICAL**				
	ALL EXTERIOR WALL MATERIALS				
	TERRACOTTA REPLACEMENT	50	UNITS	2,500.00	**125,000**
	TERRACOTTA REPAIR	100	UNITS	750.00	**75,000**
	TERRACOTTA NEW	20	UNITS	2,500.00	**50,000**
	BRICK REPLACEMENT. SPECIAL SIZES & WIRE CUT	1,530	SF	44.00	**67,320**
	EAST WALL BRICK, WIRE CUT VENEER	1,650	SF	44.00	**72,600**
	EAST WALL MS, INSUL, GWB, PAINT, BASE	4,950	SF	21.00	**103,950**
	LEDGER	2,310	LB	2.20	**5,082**
	REMOVE, STORE & REPLACE GRANITE	534	SF	35.00	**18,690**
	WASHDOWN WITH WATER RINSE	8,010	SF	0.20	**1,602**
	COATINGS, SEALER	8,010	SF	0.38	**3,044**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 6 X 12	720	SF	110.00	**79,200**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 6 X 8	720	SF	110.00	**79,200**
	DUAL GLAZED FENESTRATION, REPLACE WOOD SASH 4 X 8	672	SF	110.00	**73,920**
	DOORS, COPPER WITH TRANSOM	3	PR	15,000.00	**45,000**
	WI FRAME & TRANSOMS	3	EA	7,000.00	**21,000**
	INTERIOR SURFACE OF EXTERIOR WALLS				
	REMOVE & REPLACE PLASTER, MS, REPLACE WITHIN, MS, GWB, PAINT, BASE	13,050	SF	8.50	**110,925**
	THERMAL INSULATION SOUND INSULATION	13,050	SF	1.50	**19,575**
	SUBTOTAL 4.1				**951,108**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, WEST WING**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.2	**ENCLOSURE, HORIZONTAL**				
	REMOVE & STORE TERRACOTTA ROOF (ASSUME 50% REPLACEMENT)	9,268	SF	6.50	**60,242**
	REPLACE ROOFING EXIST	4,634	SF	6.00	**27,804**
	REPLACE W/ NEW TC TILES	4,634	SF	10.00	**46,340**
	REMOVE, INSPECT & REPLACE COPPER GUTTER & CORNICE	454	LF	100.00	**45,400**
	TILE ELASTOMERIC INSULATION, HUNG. R30 RIGID FOAM	9,268	SF	4.50	**41,706**
	ROOF PENETRATIONS	6	EA	350.00	**2,100**
	WATERPROOFING @ CORNICE REMOVE & REPLACE INSIDE OF EXTERIOR WALLS, NEW MS, INSUL	2,170	SF	3.70	**8,029**
	SUBTOTAL 4.2				**231,621**
4.3	**SUPPORT ITEMS**				
	ALL ITEMS NOT CAPABLE OF CATEGORIZATION				
	MISC. IRON	17,324	SF	3.25	**56,303**
	SHEET METAL	17,234	SF	1.75	**30,160**
	OTHER THAN CLOSURES				
	ROUGH HARDWARE	17,234	SF	2.00	**34,468**
	CAULKING	17,234	SF	3.00	**51,702**
	MISC. PAINTING NOT ON INT./EXT. SURFACE OF STRUCT.	17,239	SF	1.00	**17,239**
	SEE SECTION 9 FOR STAIRS				
	SUBTOTAL 4.3				**189,872**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.1	**INTERNALS, VERTICAL**				
	REMOVE ALL TENANT FINISH WALLS, PLASTER, MET STUDS, PAINT	7,540	SF	3.50	**26,390**
	REMOVE & REPLACE ALL CORRIDOR WALLS	6,380	SF	16.25	**103,675**
	REMOVE & REPLACE COLUMN FINISHES MS, PLASTER, PAINT BASE	4,320	SF	20.75	**89,640**
	STEEL STUDS				
	WOOD STUDS				
	REMOVE & REPLACE BATHROOM WALLS DUAL STUDS	1,100	SF	24.50	**26,950**
	STAIRWELL WALLS, CMU	1,680	SF	28.00	**47,040**
	EMULSIONS				
	DOORS (INTERIOR), FIRE RATED	7	EA	1,950.00	**13,650**
	DOORS, STAIRWELL, 90 MIN	10	EA	2,700.00	**27,000**
	BORROWED LIGHTS				
	SOUND ISOLATION				
	FIRE STOPS				
	SUBTOTAL 5.1				**334,345**
5.2	**INTERNALS, HORIZONTAL**				
	TERRAZZO CORRIDOR FLOORING	760	SF	22.00	**16,720**
	MARBLE ENTRY FLOORING	450	SF	35.00	**15,750**
	MARBLE STAIR TREADS	40	EA	200.00	**8,000**
	REMOVE EXISTING CAST IRON STAIR	40	TREADS	50.00	**2,000**
	REPLACE MAIN STAIR	40	TREADS	500.00	**20,000**
	REPLACE W.I. & WOOD RAIL	1	LS	15,000.00	**15,000**
	GYPSUM WALLBOARD, CEILING	480	SF	5.60	**2,688**
	INSTALL NEW STAIRWAYS	2	EA	20,000.00	**40,000**
	FIRST FLOOR MET DECK W/ LW CONC	12,210	SF	8.50	**103,785**
	SECOND FLOOR FP METAL DECK, 3" LIGHTWEIGHT CONCRETE	8,617	SF	8.50	**73,245**
	CORRIDOR, STAIR & BATH CEILING				
	SUBTOTAL 5.2				**297,188**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, WEST WING**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.3	**FINISHES, SPECIAL**				
	HARD SURFACES FOR WALLS AND TERRAZZO BATH FLOORS	228	SF	35.00	**7,980**
	TILE WALLS	1,100	SF	15.00	**16,500**
	SUBTOTAL 5.3				**24,480**
5.4	**INTERIORS**				
	CABINETS				
	DRAPES				
	OTHER ITEMS APPENDED TO WALLS, FLOORS, OR CEILINGS				
	BUILT-IN FURNITURE				
	BENCHES & THEATRE SEATING				
	SUBTOTAL 5.4				**NONE**
6.0	**SPECIALTIES**				
	CHALK AND TACK BOARD				
	TOILET PARTITIONS	10	EA	1,275.00	**12,750**
	TOILET ACCESSORIES	1	LS	2,400.00	**2,400**
	FOLDING AND DEMOUNTABLE PARTITIONS				
	FIRE EXTINGUISHERS	4	EA	350.00	**1,400**
	FIRE HOSE & HOSE CABINETS	8	EA	500.00	**4,000**
	MAIL SPECIALTIES				
	EMBEDDED ENTRY MATS	1	LS	1,500.00	**1,500**
	OTHER GENERAL BUILDING SPECIALTIES	17,239	SF	1.00	**17,239**
	SUBTOTAL 6.0				**39,289**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, WEST WING**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
7.0	**EQUIPMENT** ANY EQUIPMENT RELATED TO THE BUILDING: RESTAURANT, SCHOOL, CHURCH, BANK, HOSPITAL, GYM, SHOP, MATERIAL HANDLING				
	SUBTOTAL 7.0				**NONE**
8.0	**SPECIAL CONSTRUCTION** UNUSUAL ITEMS NOT A PART OF GENERAL CONST. POOLS INCINERATORS RADIOLOGY SHIELDING PEDESTAL FLOORS ETC.				
	SUBTOTAL 8.0				**NONE**
9.0	**CONVEYING** ELEVATORS DUMB-WAITERS ESCALATORS BELTS PNEUMATIC TUBE SYSTEMS CHUTES	1	EA	175,000.00	**175,000**
	SUBTOTAL 9.0				**175,000**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, WEST WING**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **17,234**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
10.1	**PLUMBING & FIRE PROTECTION**				
	ROUGH PLUMBING, INCLUDING PIPING, VALVES, AND SPECIALTIES & INSULATION	16	FIX	1,100.00	**17,600**
	EQUIPMENT WATER HEATER	1	EA	1,500.00	**1,500**
	PLUMBING FIXTURES	16	EA	1,500.00	**24,000**
	PLUMBING ACCESSORIES	1	LS	3,000.00	**3,000**
	TESTING & PERMITS & STERILIZATION	1	LS	2,000.00	**2,000**
	ALARM & VALVE TREE	1	EA	6,800.00	**6,800**
	FP SPRINKLERS COMPLETE / OCCUPIED AREA	3,400	SF	4.50	**15,300**
	SPRINKLERS, UNOCCUPIED AREA	15,094	SF	2.80	**42,263**
	PERMITS	1	LS	2,000.00	**2,000**
	SEWER, GAS, FIREWATER MORE THAN 5 FEET FROM BLDG. ARE TO BE INCLUDED WITH SITE UTILITIES				
	SUBTOTAL 10.1				**114,463**
10.2	**HVAC**				
	HVAC UNIT AIR COOLED	60	TONS	1,400.00	**84,000**
	BOILERS	1	EA	3,500.00	**3,500**
	AIR HANDLING TERMINAL DISTRIBUTION ITEMS VAV UNITS	34	EA	750.00	**25,500**
	CONTROLS & POINTS	17,234	SF	4.50	**77,553**
	VALVES	1	LS	3,500.00	**3,500**
	DUCT WORK, SHAFTS	9,800	LB	7.75	**75,950**
	REGISTERS & GRILLS	26	EA	100.00	**2,600**
	INSULATION	9,800	SF	2.00	**19,600**
	PIPING & INSULATION	1	LS	10,000.00	**10,000**
	PERMITS & TESTING	1	LS	9,000.00	**9,000**
	SUBTOTAL 10.2				**311,203**

PROJECT:	AGRICULTURAL BUILDING	LSA JOB NO:	07-025A R5
LOCATION:	SAN FRANCISCO, CA	LSA JOB NO:	LS
CLIENT:	ROMA DESIGN	CHECKED BY:	MK
DESCRIPTION:	HISTORIC RENOVATION, WEST WING	ESTIMATE DATE:	9/25/2007
		GSF:	17,234

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
11.0	**ELECTRICAL**				
	MAIN SWITCH GEAR	1,000	AMPS	14.99	**14,990**
	PANEL BOARDS	4	EA	3,700.00	**14,800**
	TRANSFORMERS				
	EMERGENCY GENERATORS / SPLIT	400	KW	300.00	**120,000**
	FUEL SUPPLY	1	LS	10,000.00	**10,000**
	FIXTURES EXT & INTERIOR	60	EA	275.00	**16,500**
	CONDUIT & RACEWAY / FIXTURES	1,500	LF	5.60	**8,400**
	MISCELLANEOUS DEVICES	40	EA	110.00	**4,400**
	CONDUIT & RACEWAY / DEVICES	1,200	LF	5.60	**6,720**
	FEES	1		2,500.00	**2,500**
	PERMITS	1	LS	5,000.00	**5,000**
	FIRE & LIFE SAFETY SYSTEMS	1	LS	4,000.00	**4,000**
	INTRUSION SYSTEMS				
	CLOSED CIRCUIT T.V.				
	CARDKEY ACCESS SYSTEMS & DATA NETWORKS				
	ELECTRICAL SITE UTILITIES MORE THAN 5 FEET FROM BUILDING ARE TO BE INCLUDED UNDER SITE UTILITIES				
	SUBTOTAL 11.0				**207,310**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	DEMOLITION			-	NONE
1.2	SITEWORK			79.91	1,205,490
2.1	SUBSTRUCTURE			5.37	80,969
3.0	STRUCTURE			183.16	2,762,993
4.1	ENCLOSURE, VERTICAL			56.68	855,084
4.2	ENCLOSURE, HORIZONTAL			11.78	177,695
4.3	SUPPORT ITEMS			11.00	165,935
5.1	INTERNALS, VERTICAL			15.54	234,375
5.2	INTERNALS, HORIZONTAL			21.61	325,943
5.3	FINISHES, SPECIAL			4.18	62,980
5.4	INTERIORS (TENANT FINISHES)			-	NONE
6.0	SPECIALTIES			3.90	58,839
7.0	EQUIPMENT			-	NONE
8.0	SPECIAL CONSTRUCTION			-	NONE
9.0	CONVEYING			-	NONE
10.1	PLUMBING & FIRE PROTECTION			7.59	114,463
10.2	HVAC			20.63	311,203
11.0	ELECTRICAL			13.94	210,308
	TOTAL SITE & BUILDING			**435.29**	**6,566,277**
	PRORATES				
	General Conditions	10.00%			656,628
	Design Contingency	30.00%			1,969,883
	Escalation	0.00%			-
	Geographic Factor	0.00%			-
	Market Factor	0.00%			-
	Small Job Factor	0.00%			-
	Phasing Allowance	5.00%			328,314
	SUBTOTAL			**631.16**	**9,521,102**
	Bonds	2.00%			190,422
	Overhead and Profit	8.00%			761,688
	TOTAL PROJECT COSTS			**694.28**	**10,473,212**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL

Competitive Bidding

The prices in this Estimate are based on Competitive Bidding. Competitive Bidding is receiving responsive bids from at least five (5) or mare General Contractors and three (3) or more responsive bids from Major Subcontractors or Trades. Major Subcontracto

Without Competitive Bidding, Contractor bids can and have ranged from 25%-to 100% over the prices in this Estimate, depending on the size of the job.

We urge you to notify your client of the existing difficult bidding climate, and work with them to ensure that the project is adequately publicized so that they can get the minimum number of bids for competitive bidding. Please contact LSA if you need id

PROJECT:	AGRICULTURAL BUILDING	LSA JOB NO:	07-025A R5
LOCATION:	SAN FRANCISCO, CA	LSA JOB NO:	LS
CLIENT:	ROMA DESIGN	CHECKED BY:	MK
DESCRIPTION:	HISTORIC RENOVATION, EAST & SOUTH WINGS	ESTIMATE DATE:	9/25/2007
		GSF:	15,085

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
1.1	**DEMOLITION**				
	SUBTOTAL 1.1				NONE
1.2	**SITEWORK**				
	SERVICE SITE				
	CLEARING & GRUBBING				
	MASS EXCAVATION & FILL				
	EROSION CONTROL				
	STORM DRAINS				
	FIRE ROADS				
	GENERAL SITE				
	NON-DECORATIVE CONCRETE PAVING				
	ASPHALT PAVING				
	WALKS, DECORATIVE CONCRETE				
	CURBS				
	FINISH GRADING				
	HEADERS				
	BUMPERS				
	STRIPING				
	SCREEN WALLS				

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
	SITE UTILITIES				
	CATCH BASINS				**BY OTHERS**
	PRIMARY SERVICE AND EXTEND	1	LS	3,200.00	**3,200**
	TELEPHONE AND BACKBOARD	1	LS	3,500.00	**3,500**
	DATA	1	LS	2,000.00	**2,000**
	FIRE ALARM	1	LS	11,000.00	**11,000**
	TRANSFORMERS				**BY PG&E**
	LUMINARIES & LANDSCAPE LIGHTING	1	LS	50,000.00	**50,000**
	OFFSITE WORK				
	LIST EVERYTHING OUTSIDE THE PROPERTY LINES				**NONE**
	UNDERPINNING, SHORING & DEWATERING				**NONE**
	MISCELLANEOUS SITE IMPROVEMENTS				
	LANDSCAPE				
	IRRIGATION				
	METAL RAILING	611	LF	800.00	**488,800**
	CONCRETE TOPPING SLAB	19,933	SF	15.00	**298,995**
	EXTERIOR FURNISHINGS				
	PRECAST CONCRETE W/ SEAT & BACK	82	LF	400.00	**32,800**
	FURNITURE & SIGNS	1	LS	25,000.00	**25,000**
	GRANITE STEPS	65	LF	360.00	**23,400**
	STAINLESS STEEL HANDRAIL	32	LF	400.00	**12,800**
	OPTIONAL SITEWORK				
	CONCRETE TOPPING SLAB	11,933	SF	15.00	**178,995**
	SITE FURNITURE & SIGNAGE	1	LS	25,000.00	**25,000**
	LIGHTING	1	LS	50,000.00	**50,000**
	SUBTOTAL 1.2				**1,205,490**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
2.1	**SUBSTRUCTURE**				
	COMPLETED UNDER PREVIOUS CONTRACT				
	CAISSONS				
	FOUNDATION BEAMS				
	PILE CAPS				
	GRADE BEAMS				
	SLABS ON GRADE 6", PREP FOR COLUMNS	8,523	SF	9.50	**80,969**
	SUBTOTAL 2.1				**80,969**
3.0	**STRUCTURE**				
	SELECTIVE DEMO BRICK WYTHES	8,904	SF	16.00	**142,464**
	COLUMNS, ADD TO EXISTING	101,330	LB	1.75	**177,328**
	STRUCTURAL BEAMS & GIRDERS, ADD	107,076	LB	2.05	**219,506**
	LIFTING BEAMS	68,256	LB	3.00	**204,768**
	METAL DECK, SEE 5.2				
	SHEAR WALLS 4" WITH DOWELS	8,904	SF	32.00	**284,928**
	DOWELS	10,600	SF	20.00	**212,000**
	REPLACE MARQUIS	3,150	SF	100.00	**315,000**
	LIFT STRUCTURE & RELEVEL				
	LIFTING FRAME (13474)	234,000	LB	1.50	**351,000**
	CUT, LIFT & RELEVEL	5,420	MH	100.00	**542,000**
	LOWER	2,140	MH	100.00	**214,000**
	EQUIPMENT AND SUPPLIES	1	LS	100,000.00	**100,000**
	SUBTOTAL 3.0				**2,762,993**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.1	**ENCLOSURE, VERTICAL**				
	ALL EXTERIOR WALL MATERIALS				
	TERRACOTTA REPLACEMENT	30	UNITS	2,500.00	**75,000**
	TERRACOTTA REPAIR	75	UNITS	750.00	**56,250**
	TERRACOTTA NEW	40	UNITS	2,500.00	**100,000**
	BRICK REPLACEMENT. SPECIAL SIZES & WIRE CUT	3,000	SF	44.00	**132,000**
	EAST WALL BRICK, WIRE CUT VENEER	1,650	SF	44.00	**72,600**
	EAST WALL MS, INSUL, GWB, PAINT, BASE	6,300	SF	21.00	**132,300**
	LEDGER	4,600	LB	2.20	**10,120**
	WASHDOWN WITH WATER RINSE	8,300	SF	0.20	**1,660**
	COATINGS, SEALER	8,300	SF	0.38	**3,154**
	DUAL GLAZED STOREFRONT REPLACE EXISTING	1,600	SF	110.00	**176,000**
	INTERIOR SURFACE OF EXTERIOR WALLS				
	REMOVE & REPLACE PLASTER, MS, REPLACE WITHIN, MS, GWB, PAINT, BASE	9,600	SF	8.50	**81,600**
	THERMAL INSULATION	9,600	SF	1.50	**14,400**
	SOUND INSULATION				**NONE**
	SUBTOTAL 4.1				**855,084**

PROJECT:	AGRICULTURAL BUILDING	LSA JOB NO:	07-025A R5
LOCATION:	SAN FRANCISCO, CA	LSA JOB NO:	LS
CLIENT:	ROMA DESIGN	CHECKED BY:	MK
DESCRIPTION:	HISTORIC RENOVATION, EAST & SOUTH WINGS	ESTIMATE DATE:	9/25/2007
		GSF:	15,085

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
4.2	**ENCLOSURE, HORIZONTAL**				
	REMOVE & STORE TERRACOTTA ROOF (ASSUME 50% REPLACEMENT)	3,100	SF	6.50	**20,150**
	REPLACE ROOFING EXIST	1,550	SF	6.00	**9,300**
	REPLACE W/ NEW TC TILES	1,550	SF	10.00	**15,500**
	REMOVE, INSPECT & REPLACE COPPER GUTTER & CORNICE	280	LF	100.00	**28,000**
	TILE				
	ELASTOMERIC ROOF, EDPM	9,620	SF	5.50	**52,910**
	INSULATION, HUNG. R30 RIGID FOAM	9,268	SF	4.50	**41,706**
	ROOF PENETRATIONS	6	EA	350.00	**2,100**
	WATERPROOFING @ CORNICE REMOVE & REPLACE INSIDE OF EXTERIOR WALLS, NEW MS, INSUL	2,170	SF	3.70	**8,029**
	SUBTOTAL 4.2				**177,695**
4.3	**SUPPORT ITEMS**				
	ALL ITEMS NOT CAPABLE OF CATEGORIZATION				
	MISC. IRON	15,085	SF	3.25	**49,026**
	SHEET METAL	15,085	SF	1.75	**26,399**
	OTHER THAN CLOSURES				
	ROUGH HARDWARE	15,085	SF	2.00	**30,170**
	CAULKING	15,085	SF	3.00	**45,255**
	MISC. PAINTING NOT ON INT./EXT. SURFACE OF STRUCT.	15,085	SF	1.00	**15,085**
	SEE SECTION 9 FOR STAIRS				
	SUBTOTAL 4.3				**165,935**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, EAST & SOUTH WINGS**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.1	**INTERNALS, VERTICAL**				
	REMOVE ALL TENANT FINISH WALLS, PLASTER, MET STUDS, PAINT	6,000	SF	3.50	**21,000**
	REMOVE & REPLACE ALL CORRIDOR WALLS	1	LS	50,000.00	**50,000**
	REMOVE & REPLACE COLUMN FINISHES MS, PLASTER, PAINT BASE	2,880	SF	20.75	**59,760**
	STEEL STUDS				
	WOOD STUDS				
	REMOVE & REPLACE BATHROOM WALLS DUAL STUDS	650	SF	24.50	**15,925**
	STAIRWELL WALLS, CMU	1,680	SF	28.00	**47,040**
	EMULSIONS				
	DOORS (INTERIOR), FIRE RATED	7	EA	1,950.00	**13,650**
	DOORS, STAIRWELL, 90 MIN	10	EA	2,700.00	**27,000**
	BORROWED LIGHTS				
	SOUND ISOLATION				
	FIRE STOPS				
	SUBTOTAL 5.1				**234,375**
5.2	**INTERNALS, HORIZONTAL**				
	GYPSUM WALLBOARD, CEILING	15,085	SF	5.60	**84,476**
	INSTALL NEW STAIRWAYS	2	EA	20,000.00	**40,000**
	1ST FLOOR MET DECK W/ LW CONC	15,085	SF	8.50	**128,223**
	SECOND FLOOR FP METAL DECK, 3" LIGHTWEIGHT CONCRETE	8,617	SF	8.50	**73,245**
	CORRIDOR, STAIR & BATH CEILING				
	SUBTOTAL 5.2				**325,943**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, EAST & SOUTH WINGS**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
5.3	**FINISHES, SPECIAL**				
	HARD SURFACES FOR WALLS	228	SF	35.00	7,980
	TERRAZZO BATH FLOORS	1,100	SF	35.00	38,500
	TILE WALLS	1,100	SF	15.00	16,500
	SUBTOTAL 5.3				62,980
5.4	**INTERIORS (TENANT FINISHES)**				
	CABINETS				
	DRAPES				
	OTHER ITEMS APPENDED TO WALLS, FLOORS, OR CEILINGS				
	BUILT-IN FURNITURE				
	BENCHES & THEATRE SEATING				
	SUBTOTAL 5.4				NONE
6.0	**SPECIALTIES**				
	CHALK AND TACK BOARD				
	TOILET PARTITIONS	20	EA	1,275.00	25,500
	TOILET ACCESSORIES	1	LS	4,800.00	4,800
	FOLDING AND DEMOUNTABLE PARTITIONS				
	FIRE EXTINGUISHERS	8	EA	350.00	2,800
	FIRE HOSE & HOSE CABINETS	8	EA	500.00	4,000
	MAIL SPECIALTIES				
	EMBEDDED ENTRY MATS	1	LS	4,500.00	4,500
	OTHER GENERAL BUILDING SPECIALTIES	17,239	SF	1.00	17,239
	SUBTOTAL 6.0				58,839

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
7.0	**EQUIPMENT** ANY EQUIPMENT RELATED TO THE BUILDING: RESTAURANT, SCHOOL, CHURCH, BANK, HOSPITAL, GYM, SHOP, MATERIAL HANDLING				
	SUBTOTAL 7.0				**NONE**
8.0	**SPECIAL CONSTRUCTION** UNUSUAL ITEMS NOT A PART OF GENERAL CONST. POOLS INCINERATORS RADIOLOGY SHIELDING PEDESTAL FLOORS ETC.				
	SUBTOTAL 8.0				**NONE**
9.0	**CONVEYING** DUMB-WAITERS ESCALATORS BELTS PNEUMATIC TUBE SYSTEMS CHUTES				
	SUBTOTAL 9.0				**NONE**

PROJECT: **AGRICULTURAL BUILDING**
LOCATION: **SAN FRANCISCO, CA**
CLIENT: **ROMA DESIGN**
DESCRIPTION: **HISTORIC RENOVATION, EAST & SOUTH WINGS**

LSA JOB NO: **07-025A R5**
LSA JOB NO: **LS**
CHECKED BY: **MK**
ESTIMATE DATE: **9/25/2007**
GSF: **15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
10.1	**PLUMBING & FIRE PROTECTION**				
	ROUGH PLUMBING, INCLUDING PIPING, VALVES, AND SPECIALTIES & INSULATION	16	FIX	1,100.00	**17,600**
	EQUIPMENT WATER HEATER	1	EA	1,500.00	**1,500**
	PLUMBING FIXTURES	16	EA	1,500.00	**24,000**
	PLUMBING ACCESSORIES	1	LS	3,000.00	**3,000**
	TESTING & PERMITS & STERILIZATION	1	LS	2,000.00	**2,000**
	FIRE SPRINKLERS & SPECIALTIES				
	ALARM & VALVE TREE	1	EA	6,800.00	**6,800**
	FP SPRINKLERS COMPLETE / OCCUPIED AREA	3,400	SF	4.50	**15,300**
	SPRINKLERS, UNOCCUPIED AREA	15,094	SF	2.80	**42,263**
	PERMITS	1	LS	2,000.00	**2,000**
	SEWER, GAS, FIREWATER MORE THAN 5 FEET FROM BLDG. ARE TO BE INCLUDED WITH SITE UTILITIES				
	SUBTOTAL 10.1				**114,463**
10.2	**HVAC**				
	HVAC UNIT AIR COOLED	60	TONS	1,400.00	**84,000**
	BOILERS	1	EA	3,500.00	**3,500**
	AIR HANDLING TERMINAL DISTRIBUTION ITEMS VAV UNITS	34	EA	750.00	**25,500**
	CONTROLS & POINTS	17,234	SF	4.50	**77,553**
	VALVES	1	LS	3,500.00	**3,500**
	DUCT WORK, SHAFTS	9,800	LB	7.75	**75,950**
	REGISTERS & GRILLS	26	EA	100.00	**2,600**
	INSULATION	9,800	SF	2.00	**19,600**
	PIPING & INSULATION	1	LS	10,000.00	**10,000**
	PERMITS & TESTING	1	LS	9,000.00	**9,000**
	SUBTOTAL 10.2				**311,203**

PROJECT:	**AGRICULTURAL BUILDING**	LSA JOB NO:	**07-025A R5**
LOCATION:	**SAN FRANCISCO, CA**	LSA JOB NO:	**LS**
CLIENT:	**ROMA DESIGN**	CHECKED BY:	**MK**
DESCRIPTION:	**HISTORIC RENOVATION, EAST & SOUTH WINGS**	ESTIMATE DATE:	**9/25/2007**
		GSF:	**15,085**

OPINION OF PROBABLE COST

ITEM #	DESCRIPTION	QUANTITY	UNIT	COST	TOTAL
11.0	**ELECTRICAL**				
	MAIN SWITCH GEAR	1,200	AMPS	14.99	**17,988**
	PANEL BOARDS	4	EA	3,700.00	**14,800**
	TRANSFORMERS				
	EMERGENCY GENERATORS / SPLIT	400	KW	300.00	**120,000**
	FUEL SUPPLY	1	LS	10,000.00	**10,000**
	FIXTURES EXT & INTERIOR	60	EA	275.00	**16,500**
	CONDUIT & RACEWAY / FIXTURES	1,500	LF	5.60	**8,400**
	MISCELLANEOUS DEVICES	40	EA	110.00	**4,400**
	CONDUIT & RACEWAY / DEVICES	1,200	LF	5.60	**6,720**
	FEES	1		2,500.00	**2,500**
	PERMITS	1	LS	5,000.00	**5,000**
	FIRE & LIFE SAFETY SYSTEMS	1	LS	4,000.00	**4,000**
	INTRUSION SYSTEMS				
	CLOSED CIRCUIT T.V.				
	CARDKEY ACCESS SYSTEMS & DATA NETWORKS				
	ELECTRICAL SITE UTILITIES MORE THAN 5 FEET FROM BUILDING ARE TO BE INCLUDED UNDER SITE UTILITIES				
	SUBTOTAL 11.0				**210,308**

HISTORICAL RESOURCE ANALYSIS

Page & Turnbull, Inc.

Historic Resource Analysis

Preliminary Draft - Not for Publication

The Agriculture Building

101 The Embarcadero
San Francisco, California

July 13, 2007

Prepared for
ROMA Design Group
San Francisco, California

Prepared by
PAGE & TURNBULL, INC.
724 Pine Street, San Francisco, California 94108
415.362.5154 / www.page-turnbull.com

TABLE OF CONTENTS

I. INTRODUCTION

This Historic Resource Analysis has been prepared at the request of ROMA Design Group to evaluate the potential effect of alterations to the Agriculture Building at 101 The Embarcadero in San Francisco, California. The Agriculture Building was originally constructed as the Ferry Station Post Office Building in 1915, and took its current name in 1933 when transferred to the San Francisco branch of the Department of Agriculture. The Mediterranean style building was originally two stories in the front and one-story in the back, with a second-story added to the west side of the building in 1918. The exterior of the building has been changed little since 1918.

The Agriculture Building is individually listed in the National Register of Historic Places for local historical and architectural significance (1978). The building is significant for association with the centralization of San Francisco's postal services, and also as a fine example of an early 20th century Mediterranean style government building. Additionally, the building is a contributor to the Port of San Francisco Embarcadero Historic District (2006).

The Port of San Francisco is considering alterations to the Agriculture Building in order to stabilize the building, and also to adapt and expand the building for continued commercial and transportation uses.

This report provides an examination of the property's existing historical status, past historic reports, a statement of significance, character-defining features as established by prior reports, on-site observations, an analysis of the potential impact of alterations and new construction upon the individual building and surrounding historic district, and recommendations for historic preservation taking into account the required structural improvements and a range of possible treatment options.

II. CURRENT HISTORICAL STATUS & PAST HISTORIC REPORTS

National Register of Historic Places

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, resources over fifty years of age are eligible for listing in the National Register if they meet any one of the four criteria of significance and if they sufficiently retain historic integrity. However, resources under fifty years of age can be determined eligible if it can be demonstrated that they are of "exceptional importance," or if they are contributors to a potential historic district. National Register criteria are defined in depth in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*. There are four basic criteria under which a structure, site, building, district, or object can be considered eligible for listing in the National Register. These criteria are:

- *Criterion A (Event):* Properties associated with events that have made a significant contribution to the broad patterns of our history
- *Criterion B (Person):* Properties associated with the lives of persons significant in our past
- *Criterion C (Design/Construction):* Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components lack individual distinction
- *Criterion D (Information Potential):* Properties that have yielded, or may be likely to yield, information important in prehistory or history

In 1978, The Agriculture Building was listed in the National Register under Criterion A (Events) for local significance in association with the development of a centralized post office system in San Francisco. The building was also listed under Criterion C (Architecture) as a fine example of an early 20th century Mediterranean style government building. Additionally, the Agriculture Building was listed as a contributing resource in the Port of San Francisco Embarcadero National Register Historic District in 2006.

California Historical Resource Status Codes

Properties listed or under review by the State of California Office of Historic Preservation are assigned a California Historical Resource Status Code (Status Code) of "1" to "7" to establish their historical significance in relation to the National Register of Historic Places (National Register or NR) or California Register of Historical Resources (California Register or CR). Properties with a Status Code of "1" or "2" are either eligible for listing in the California Register or the National Register, or are already listed in one or both of the registers. Properties assigned Status Codes of "3" or "4" appear to be eligible for listing in either register, but normally require more research to support this rating. Properties assigned a Status Code of "5" have typically been determined to be locally significant or to have contextual importance. Properties with a Status Code of "6" are not eligible for listing in either register. Finally, a Status Code of "7" means that the resource has not been evaluated for the National Register or the California Register, or needs reevaluation.

The Agriculture Building is listed in the California Historic Resources Information System (CHRIS) with status codes of "1S" (1978) and "1D" (2006), which indicates that the property is individually listed in the National Register of Historic Places, and also is a contributor to a National Register Historic District.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is an inventory of significant architectural, archaeological, and historical resources in the State of California. National Register-eligible properties are automatically listed in the California Register.[1] The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places.

In order for a property to be eligible for listing in the California Register, it must be found significant under one or more of the following criteria:

- *Criterion 1 (Events)*: Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- *Criterion 2 (Persons)*: Resources that are associated with the lives of persons important to local, California, or national history.
- *Criterion 3 (Architecture)*: Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
- *Criterion 4 (Information Potential)*: Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.
- Resources eligible for the National Register are automatically listed in the California Register of Historical Resources.

As a historic resource listed in the National Register, the Agriculture Building is also listed in the California Register under Criteria 1 (Events) and 3 (Architecture).

[1] National Register-eligible properties include properties that have been listed on the National Register and properties that have formally been found eligible for listing.

Past Historic Reports

Charles Hall Page & Associates, Inc., Survey of Cultural Resources: Piers 14-22 ½, the Agriculture Building & the Fire Boat House (November 1977)

In 1977, the Agriculture Building was included in a survey of cultural resources undertaken by Charles Hall Page & Associates for the City and County of San Francisco, required for Section 106 compliance in conjunction with a project known as "Demolition of Existing Finger Piers 14, 16, 18, 20, and 22, and Construction of a Two Level Waterfront Promenade at the Port of San Francisco." The project area for report was defined as lying east of the seawall and the Embarcadero beginning at the south wall of the Agriculture Building, and proceeding southerly to the north wall of the Fire Boat House located at Pier 22 ½. The 1977 report outlines a general history of the waterfront extending from the Ferry Building south to Harrison Street, and presents the specific history of sites and structures located in and/or adjacent to the project area. This report is crucial to our understanding of the historic architectural context of the present-day Agriculture Building.

The report concludes that the Agriculture Building stands out as having "major historical, architectural, and cultural significance," representing an "excellent example of the Mediterranean style and one of the finest examples of this style in the Bay Area." The report calls out the fine use of materials, including the tiled hip roof, copper cornice, red brick and light ochre terra cotta. The report also remarks on the building's significance as the most important postal facility in the city between 1915 and 1925, noting that the originally ornate public space in the interior northwest corner, important to its postal function, had been remodeled by later tenants.

Carey & Co., Inc., Agriculture Building Historic Resources Evaluation (December 2000)

Carey & Co., Inc. produced an evaluation of the Agriculture Building for the Port of San Francisco in December 2000. The report gives a summary history of the building, and provides a building description, including a list of exterior alterations. The majority of the text is devoted to an itemized listing of the historic components existing in the interior of the building, and a conditions assessment of interior and exterior features including a significance rating for each feature.

Page & Turnbull did not have access to interior spaces beyond the public areas on the first and second story entry hall and main stairway, and could not corroborate the findings of the Carey & Co.

interior survey. Future work should ascertain the extant interior features and update the Carey & Co. catalogue. In general, we agree with this report's descriptions of exterior elements and interior elements that were available for survey; however, we have included a revised discussion of significant, contributing, and non-contributing building features.

III. DESCRIPTION

Site Description

The Agriculture Building is located on a stretch of the bulkhead south of the Ferry Building which was historically built-up with a procession of buildings related to port activities. The Agriculture Building was constructed in a scale and style shared by the other main bulkhead wharf buildings along this section of the waterfront. Pier sheds behind the main buildings and smaller support structures between the main buildings were constructed as secondary structures, of lesser materials, and slighter scale and height than the buildings lining the bulkhead wharf. Many of the historic buildings surrounding the Agriculture Building were demolished in the 1960s and 1970s. Despite the change in setting, the building was listed individually as a landmark in the National Register for historical and architectural significance, and remains a discrete and intact remnant of the historically busy and developed bulkhead wharf.

Architectural Description

Site and Approach

The Agriculture Building is a Mediterranean style building with a rectangular-shaped plan. The Agriculture Building stands along The Embarcadero separated from the Ferry Building by open space, which allows for a view of the building as a whole. The building stands alone on this stretch of The Embarcadero, and unobstructed views from the auto and pedestrian ways on the west and south sides allow for views of the entire building, open site and expansive waterside setting. The building is set back from the street, with a wide promenade along the main facade. (Figures 1-4)

The most common approach to the Agriculture Building is from the north or south along The Embarcadero, which gives the pedestrian and motorist a distinctive view of the building. The building is very often seen in profile. From the north approach, the Agriculture building is set at a distance from the Ferry Building, and has a distinctive silhouette with a prominent red tile hipped roof capping the two-story front of the building, backed by the lower, single-story, flat-roofed, port-side portion of the building. (Figure 2) From the south, the building is sited in relation to the Ferry Building so that it does not fully conceal the main Ferry Building to the north. From the south approach, the Agriculture Building is two-stories in front and in the rear. The red tile hipped roof in the front is met by a perpendicular extension with a matching, slightly lower and smaller-scale, hipped red tile roof that caps the 1918 second story rear addition. (Figures 3, 4) From a direct, front approach, the building registers as a wide, two-story building with a shallow-pitched hipped roof.

The rear of the building does not show from this approach, and the roofline is clean and uninterrupted. (Figure 5)

West Facade

The principal façade faces west, has a granite base and is clad in dark red brick laid in Flemish bond with light mortar. The façade is two stories, divided into a tall first floor and shorter second story by horizontal courses of ochre-colored terra cotta. The façade is capped by a copper cornice and a red clay tile roof, and is framed at the corners by wide, full-height piers composed of matte, ochre-colored, raked-finish terra cotta designed to have the appearance of stone blocks. (Figure 5)

The first story has a main central entrance and two secondary entrances. Each entrance is framed with an oversized surround composed of the ochre, molded terra cotta blocks. The end entrances are set off by wide piers of terra cotta blocks and capped by terra cotta bracketed lintels. A cast iron griffin, shield, and flagpole are set into the door surround above the main entrance. (Figure 6) The doors in the central entrance and the north entrance are double doors clad in copper and topped by decorative iron grilles. The doorway on the south end has matching iron grillwork, and infill below. (Figure 7) Three tall, rectangular windows flank each side of the main entrance on the first floor. Patterned brick architraves and surrounds outline the windows, and bands of patterned bricks run across the façade, level with the window sills. The three windows south of the main entrance have their original frames with replacement glazing, while the three on the north side retain the original glazing pattern and materials. The second story of the main façade has nine square-shaped, sixteen-light casement windows alternating with panels of elaborately patterned brickwork. The two panels above the main entrance feature molded decorative shields.

Alterations to the main façade include the replacement of double doors at the south entrance, and the removal of original glazing in three windows on the ground floor. A double-hung, four-over-four light window has been added to the façade between the southern entrance and the corner pier. The windows on the second floor, except for a few of the individual lights, retain their original glazing.

North Facade

The design and materials of the main façade are continued on the north side of the building. The two-story front has the same monumental massing and embellished design as the main façade. The first story features a tall casement window, and a doorway that matches the secondary entrances on the main facade, both with terra cotta surrounds and bracketed lintels. A narrow casement window is sited between the two grandly proportioned openings. Three square-shaped, sixteen-light casement

windows are located on the second story, alternating with panels of patterned brick. The two-story front portion of the north facade is capped with a copper cornice and red tile roof. (Figures 8, 9)

The original single-story rear of the building is composed of the same materials as the front, but with a simpler design. This portion of the building is clad in red brick, capped by a band of terra cotta, and edged by molded terra cotta quoins. There are six openings on the rear façade. The three openings towards the front feature original paired sets of double-hung, nine-over-nine light windows. The three openings towards the back originally had rolling metal doors, and currently feature a metal door, and two large replacement windows. (Figure 10)

Alterations to the north façade include the replacement of the original doors below the decorative iron transom in the two-story front portion of the building, and the replacement of three rolling doors in the rear of the building. A metal marquee was originally hung on chains along the rear of the north façade. The marquee and chains were removed at an unknown date, but iron plates which fastened the marquee to the facade, remain.

South Facade

Like the north façade, the design and materials of the main façade are continued on the south facade of the building. The two-story front has the same monumental massing and embellished design as the main façade, and is capped with a copper cornice and red tile roof. The ground floor features a row of three tall rectangular window openings with patterned brick architraves and window surrounds. The original casement windows in the openings have been replaced with fixed plate glass windows. A small window opening, with a four-light fixed-sash window and air conditioning unit has been added to the ground floor façade. Three square-shaped, sixteen-light casement windows are located on the second story, alternating with panels of patterned brick. One casement window has been slightly altered to accommodate an air conditioning unit. (Figures 11, 12)

The rear of the north façade is also two stories, and continues the same use of materials with a simpler design. The ground floor features four wide door openings. Originally of uniform width and height, one opening has been expanded beyond its original height. These four openings originally featured rolling metal doors, which have been replaced by fixed windows set in concrete; the tallest opening features a gate set in set in concrete. (Figure 13)

The mezzanine level of the original ground floor features three pairs of window openings that were added to the building in 1918 when the second story was constructed at the rear. Three of the openings have original double-hung windows; three windows have been replaced with louvered vents. The 1918 second story addition is located above the terra cotta beltcourse that caps the original ground floor. The addition has the same materials and style as the original 1915 portion of the building. The second story features six square-shaped, sixteen-light casement windows, topped by a band of terra cotta designed to have the appearance of stone, a galvanized iron cornice and red tile roof to match the earlier building. The addition extends beyond the original ground floor, and is supported by steel columns on its easternmost end.

Alterations to the south façade include the addition of a small, fixed-sash window, the replacement of original glazing in the three ground-floor windows, and the slight alteration of a second-floor casement window at the front of the building. The four rolling doors in the rear of the building have been replaced with windows and a gate; each set in concrete. One of the door openings has been extended beyond its original height, and two window openings above the expanded doorway have been infilled with brick and mortar. Vents have replaced original glazing in three windows on the mezzanine level. A metal marquee was originally hung on chains along the rear of the north façade. The marquee and chains were removed at an unknown date, but iron plates which fastened the marquee to the facade, remain.

East Façade

The east façade is a single-story, and features uniform concrete cladding, and nine openings on the ground level. Originally, seven openings originally featured rolling metal doors, and two openings featured paired casement windows. Alterations to this façade include the removal of the original rolling doors and casement windows, which have been replaced by concrete block, contemporary double doors, and replacement rolling doors. (Figure 14)

The east façade of the original two-story front portion of the building is visible from a raised vantage point, across the flat roof of the rear of the building. The façade is intact, and the original window openings are in place. Alterations to this façade include the replacement of three original windows with two fixed plate glass windows, and a double-hung window. (Figure 15)

IV. CONSTRUCTION CHRONOLOGY

April 1915	Construction of Ferry Station Post Office begins.
August 1915	Original building completed. The original building included a single story structure that matches the footprint of the current Agriculture Building, with a second story on the west side of the building.
1918	Second story added to the south end of the building above the first floor and mezzanine. The 1918 addition closely matches the design vocabulary and materials of the original building. The 1918 construction included adding four sets of paired, double-hung windows into the mezzanine level of the original south façade. The second story addition projected beyond the end of the original structure, supported over a driveway by steel columns.
1925	Interior observation gallery and open balconies removed. Wooden staircases from mezzanine floor up to second floor removed.
1925	Building foundation repaired.
1930s	Interior office spaces altered.
1940	First floor slab repaired.
1957	First floor slab repaired.
Pre-1961	Addition of two double-hung, wood-sash, four-over-four light windows; one window at the south end of the west elevation and at the west end of the south elevation.
1961	Interior office configuration altered, including the adaptation of the northeast interior to a testing laboratory for the Agriculture Department. New installation of windows, rolling doors, and infill in existing openings on the first floors of exterior elevations. -West facade: replacement of three windows and one door -North facade: replacement of three rolling doors -East facade: replacement of all rolling doors; two windows -South facade: Infill of two windows; expansion of one door opening, replacement of three windows with vents; infill in all four ground-floor openings in rear of building; replacement of three windows on ground floor front of the building
1999	East entry stair remodeled.
No date	Removal of marquees along first-story level of south and north elevations.

V. HISTORIC CONTEXT

Site History

The opening of the Panama Canal in 1914 marked the beginning of the modern maritime era in San Francisco. The Embarcadero and seawall were complete between Taylor and Channel Streets, and a belt line railroad linked every pier to national rail lines. A new postal facility called the Ferry Station Post Office Building (now known as the Agriculture Building), was constructed in 1915 immediately south of the main Ferry Building as additional piers, port-related buildings, and secondary support structures were assembled along the section of the bulkhead south of the Ferry Building.

Building History

The Ferry Station Post Office Building was completed in August 1915, with a formally designed and ornamented two-story front portion, housing the main postal offices and public spaces, and a one-story, open-plan work space and warehouse in the rear, punctuated with steel rolling doors for postal deliveries and distribution. As the structure closest to the street and housing the offices and public space in the building, the two-story front portion featured the most ornate decorative detail, with a red tile hipped roof; Flemish bond brick cladding; wide piers of matte, raked-finish terra cotta rising the full height of the building; decoratively framed entryways; and doors with wrought-iron transom grills; and patterned brickwork around the windows on the first floor and between the windows on the second floor.

The rear portion of the building featured open work space for receiving and sorting mail. On the exterior of the building, the north and south facades of the rear work space displays brickwork and terra cotta detail with more simple design than the front portion of the building, outwardly demonstrating the progression to more utilitarian functions within the building. Originally, metal marquees ran along the rear north and south facades, supported by chains from iron plates.

The east façade, facing the San Francisco Bay, was solely used for receiving mail deliveries from ferries. Just as the other facades architecturally demonstrate the variety and hierarchy of functions within, the plain concrete cladding on the east façade marks this elevation as least ornate, and therefore the most utilitarian of the facades.

The eastern end of the building was historically connected to a large timber shed with 16,000 square feet of storage and work space. This building was named the Dolphin Building because it was located

on the dolphin, a small boat-shaped pier, between ferry slips 8 and 9 behind the subject building. A covered promenade ran between the main building and the shed, linking the ferry slips to the Ferry Building to the north. A passage over the covered walkway connected the Ferry Station Post Office Building and the Dolphin Building.

By 1916, the entire bulkhead along the waterfront between Piers 14 and 30 was a continuous progression of large buildings constructed in the Mediterranean and Mission Revival styles. Smaller buildings, housing the offices of port-related businesses, and connecting fences and gates, filled the spaces between the larger bulkhead wharf buildings. Additional structures historically part of the context of the Ferry Station Post Office Building/Agriculture Building included:

- **Ferry Building Extension,** neighboring structure to the north: built 1915, demolished 1960s
- **Dolphin Building**, timber frame utilitarian shed, neighboring structure to the east: built ca. 1915, extant through 1958, demolished before 1975.
- **Wells Fargo Building**, Mediterranean style, neighboring structure to the south: built 1915, destroyed by fire 1969
- **Pier 14 and shed** behind the Wells Fargo Building: built 1915, damaged by fire 1969, demolished 1977
- **Launch Offices Building** between Piers 14 and 16, Mediterranean style: built 1915, demolished 1960
- **Piers 16, 18, and 20 with sheds and a single, contiguous bulkhead façade**, Mission Revival style: built 1915, sheds of Piers 18 and 20 and main façade demolished 1960, piers and Pier 16 shed demolished ca. 1977
- **Pier 22 with shed and large-scale bulkhead building**, combination of Mission Revival and Mediterranean styles: built 1916, shed and bulkhead building demolished 1973, pier demolished ca. 1977

This section of the waterfront included a lively succession of large-scale bulkhead wharf buildings with comparable massing and similarly styled facades. Smaller buildings, fences and gates in corresponding styles ran between the large buildings. Finger piers, capped by frame pier sheds, stretched into the bay behind the main buildings. The span of The Embarcadero south of the Ferry Building was crowded with buildings servicing the port and the city, and yet the mass was harmonized; each building, and the sheds behind, matched the others in height, style, and scale, and none challenged the Ferry Building as a focal point. (Figures 21, 22)

Soon after the 1915 construction of the original Ferry Station Post Office Building, the facility required expansion. A second-story rear addition on the south side of the building was constructed in 1918 to accommodate more offices. The addition was built in the same style and materials as the original building, with a tiled hip roof, copper cornice, and the same brick as the original.
In 1925, the post office moved to a larger facility. In 1933, the building was transferred to the San Francisco Branch of the Department of Agriculture and took its current name. The occupant between the years 1925 and 1933 is unknown, and some later building occupants include the Southern Pacific Commissary, and the offices of the Oakland Alameda Ferry, the Fire Marshall of the Port, a U.S. Customs Office, and several private offices. Since the 1977 removal of Piers 14, 16, 18, 20, and 22, and the shed at Pier 16, the Agriculture Building has remained an isolated remnant of a formerly unified section of waterfront sites and activities between the Ferry Building and the Fire Boat House at Pier 22 ½.

VI. STATEMENT OF SIGNIFICANCE AND CHARACTER-DEFINING FEATURES

Areas of Significance

The Agriculture Building is listed in the National Register for local significance under Criterion A (Events) for its association with the development of a centralized local postal system in San Francisco, and under Criterion C (Architecture) as a fine example of an early 20th century Mediterranean style government building. For Criterion A, the National Register states that the building assumed the task of "centralization" in 1915, and until the Post Office moved into new and larger quarters in 1925, the Ferry Station Post Office Building was the central postal facility for the City of San Francisco. The building was the site where post was received from mail-carrying ships, where the post was processed and sorted, and was the origin of city-wide mail distribution.

For Criterion C, the National Register states, "Between 1913 and 1915 the State Department of Engineering designed a number of waterfront structures for the State Board of Harbor Commissioners, and the Agriculture Building, designed by A. A. Pyle, survives as one of the finest examples of Mediterranean architecture executed by the State for the Harbor Commission."[2]

Period of Significance

The period of significance established by the National Register nomination defines the scope of the architectural and historical significance as the years between 1915 and 1925. The building was originally designed for the purpose of postal receiving and distribution, and was altered in those years to accommodate the growing postal operations of San Francisco. The period of significance is based on the years that the post office occupied the building, and ends the year that postal business moved to another location. The time between 1915 and 1925 is considered the period in which the building is significantly associated with the history of San Francisco.

[2] NR Nomination 1978

Exterior: Character-Defining Features

The following section identifies the aspects that define the visual character of the Agriculture Building. *Character* refers to those visual and physical features that comprise the unique appearance of the building. A historic building's distinguishing character should be taken into account when planning for a new use or rehabilitation. The preservation of the essential character of a historic landmark is required for its continued listing in the National Register of Historic Places. The character-defining features of the Agriculture Building include:

- Setting, site, approach
  - wide promenade between street and main façade
  - open space between Ferry Building and Agriculture Building
- Mass, scale, size, shape, proportion
  - deferential height and scale compared to neighboring Ferry Building
  - larger front mass and smaller-scale rear mass
  - proportional relationship between the base, tall first story, and short second story
- Roof and roof features
  - dominant roof and roofline on two-story front
  - red clay tile roof with copper cornice on west, and galvanized iron cornice on south
  - shallow hipped roof shape
  - unobstructed roofline, without interruptions
- Window and door openings: size, shape, and pattern
  - West façade
    - entrance openings with original doors and transom lights, ground floor (x2)
    - entrance with original transom light, altered door, ground floor (x1)
    - tall rectangular window openings, ground floor (x6)
    - original casement and transom lights in tall rectangular window openings, ground floor (x3)

    - square, sixteen-light casement windows, second floor (x9)

  - North façade
    - entrance opening with transom light, ground floor front (x1)
    - tall rectangular casement windows, ground floor front (x2)
    - square, sixteen-light casement windows, second floor front (x3)
    - double-hung, nine-over-nine light, casement windows, ground floor rear (3 pairs)
    - service door openings, ground floor rear (x3)
  - South façade
    - tall rectangular window openings, ground floor font (x3)
    - square, sixteen-light casement windows, second floor front (x3)
    - service door openings, ground floor rear (x4)
    - window openings, mezzanine rear (3 pairs)
    - double-hung six-over-one light casement windows, mezzanine rear (x3)
    - square, sixteen-light casement windows, second floor rear (x6)
  - East façade
    - rhythm of door and window openings, ground floor (x9)
    - rectangular window openings, second floor (x17)
    - casement windows, second floor (x14)

- Materials
  - granite base
  - brick cladding and mortar
  - terra cotta
  - original window frames and window glazing
  - iron grill transoms
  - wrought iron entrance ornamentation
  - clay roof tiles

- copper and galvanized iron cornices
- copper-clad doors

- Architectural details
  - hierarchy of facades
    - primary, west façade facing The Embarcadero
    - secondary, north and south facades
    - tertiary, east facade
  - color of brick, color of mortar, bond pattern, patterned panels, distinctive architraves and window-surrounds
  - matte and raked terra cotta piers, door surrounds, quoins
  - matte, smooth-finish terra cotta beltcourses and decorative shields
  - shallow pitch of hipped roofs

Interior: Character-Defining Features

Additional interior features are listed in the Carey & Co. Historic Resources Evaluation, but could not be re-surveyed for this report. Page & Turnbull did not have access to interior spaces beyond the first and second story entry hall and main stairway. This report defers to the Carey & Co. listing of interior architectural resources. Future work should ascertain the extant interior features and update the Carey & Co. catalogue. The highest rehabilitation standards recommend that these items should be salvaged and incorporated into the final design of the building in a historically appropriate manner. From the areas surveyed by Page & Turnbull, the interior character-defining features include:

- Materials and design
  - marble floors, iron balustrade, plaster moldings and brackets, and two historic light fixtures in main lobby, central stairwell, and main hall on second floor

VII. SIGNIFICANCE DIAGRAMS

Utilizing accepted standards for the evaluation of historic resources from the National Park Service and the State of California Office of Historic Preservation, the major historical features have been identified and visually documented within "significance diagrams." The significance diagrams were based upon the National Park Service's definition of integrity. Integrity is defined as the ability of a property to convey its significance. Within the concept of integrity, the National Register recognizes seven aspects of integrity, which include location, design, setting, materials, workmanship, feeling, and association. In general, a historic property must retain historic integrity to qualify for listing in the National or California Register. Based upon these aspects of integrity, each part of the building has been categorized as: "Significant", "Contributing", or "Non-Contributing." The following describes each category in detail:

Significant

Significant features consist of the most prominent exterior areas, as well as the most historically important spaces in the building. Primary and public facades are considered significant features, including those elevations that can be seen from the street or sidewalk. The west, north, and south facades qualify as significant elevations, as does the east façade of the two-story front portion of the building. These facades retain a very high level of integrity of design, materials, workmanship, and feeling. Certain interior elements, such as the main entry hall, central stairway and balustrade, and second floor landing are all significant, owing to their original design and materials and high level of integrity.

Alterations to the significant historic fabric of the building, dated after the period of significance, are marked on the significance diagrams.

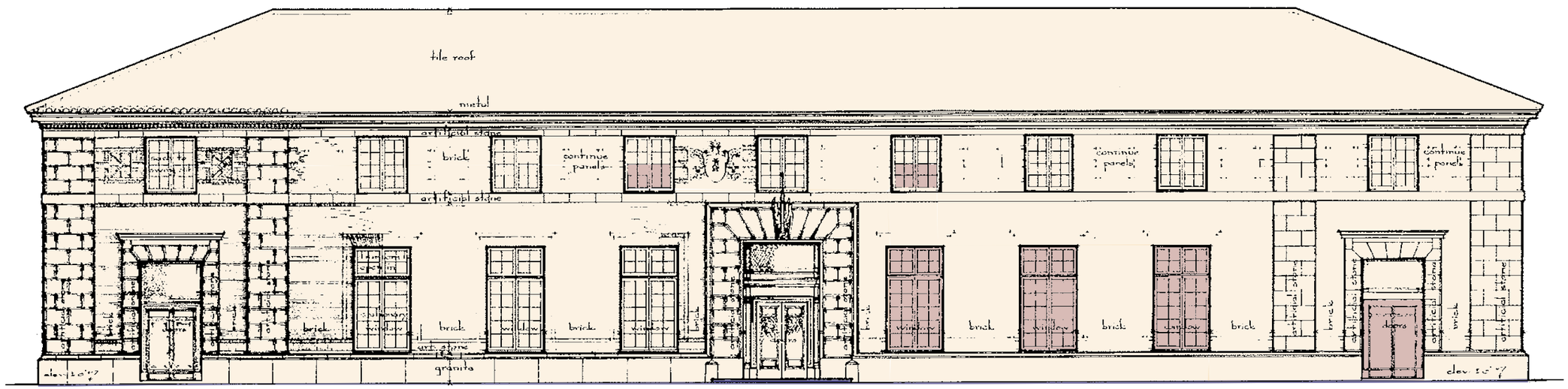
Contributing

Contributing features are those elevations are interior spaces that are characterized by a lesser degree of architectural significance, yet retain a high degree of historic integrity, or that are historically important yet altered spaces. Contributing areas to the Agriculture Building include the utilitarian east facade.

Non-Contributing

Non-Contributing areas are generally non-historic architectural elements, interior spaces, or historic interior spaces that have been altered to the extent that their original character is absent. In the latter case, specific original areas, which have been so altered, include the interior office spaces and corridors in the Agriculture Building, which have been adapted over the years to accommodate various commercial uses. The replacement window and door materials, and new door and window openings are non-contributing. Non-contributing replacement materials and new window and door openings include:

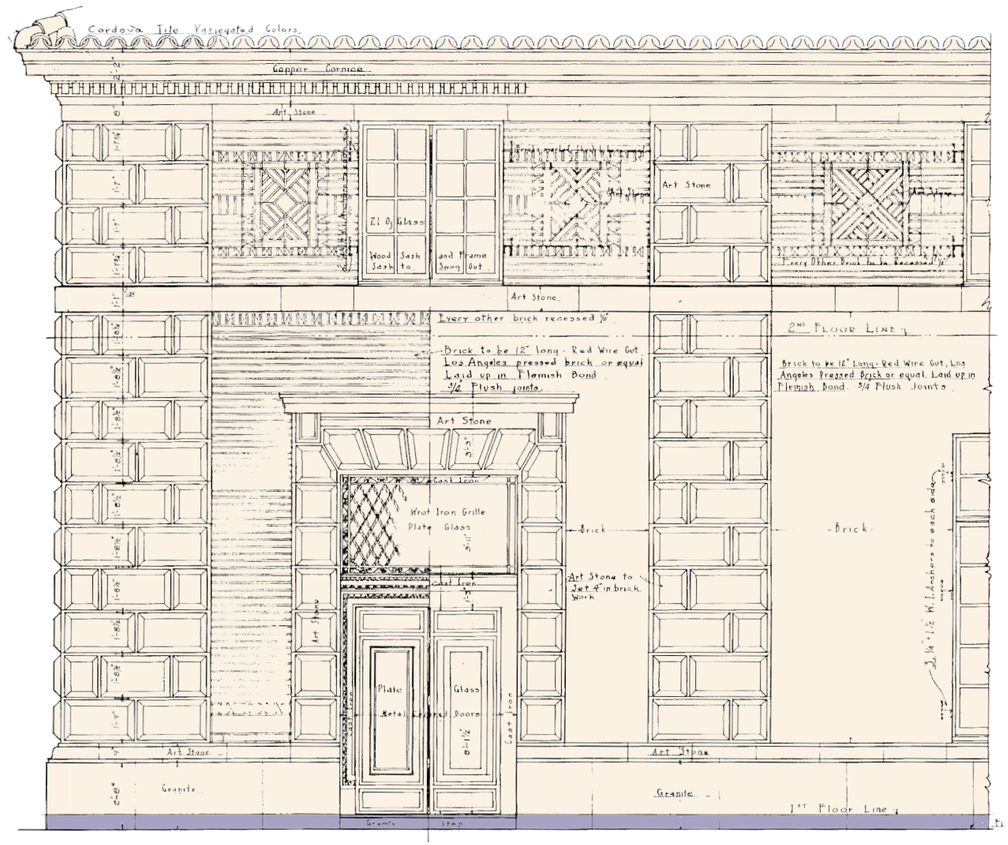
- two new window openings and window materials, southwest corner of building
- replacement lights filling the three tall rectangular window openings, west façade ground floor
- individual replacement lights in the casement windows, west façade second floor
- fixed window in former front entrance, front north façade ground floor
- replacement windows and replacement rolling door in three rear service doorways, rear north façade
- replacement windows, doors, and concrete block infill in nine openings, east façade ground floor
- replacement window material in three window openings, east façade second floor
- replacement lights filling three tall rectangular window openings, front south façade ground floor
- individual replacement lights in casement window, front south façade second floor
- fixed windows, gate, and concrete block infill in four ground-floor service doorways, rear south façade
- vent material in three window openings, rear south facade mezzanine level

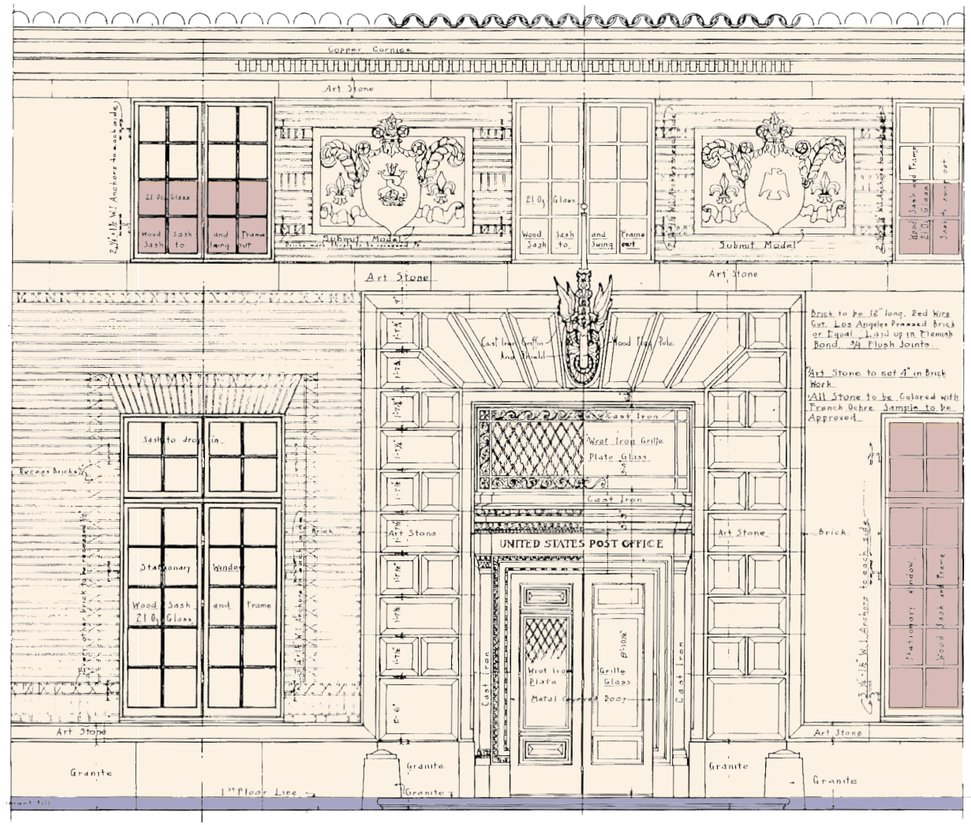


AGRICULTURE BUILDING

West Elevation

PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com





- Significant
- Contributing
- Non-contributing
- Alterations to significant fabric

AGRICULTURE BUILDING

West Elevation Details

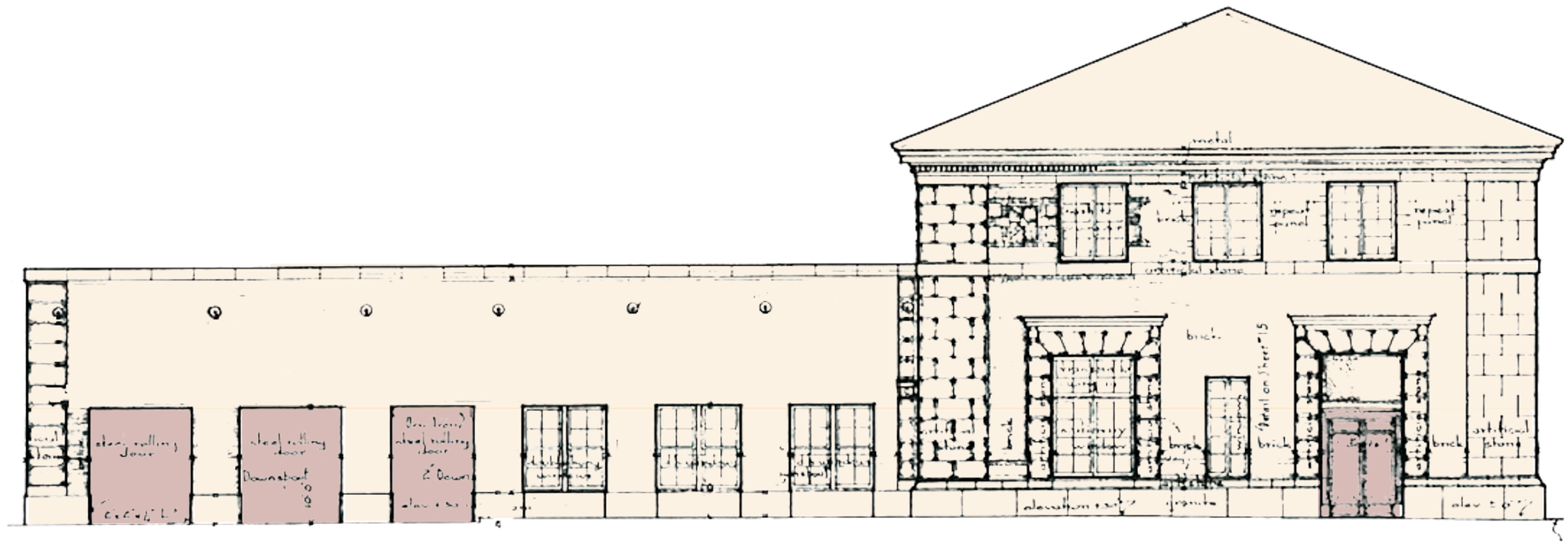
PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com

Significant

Contributing

Non-contributing

Alterations to significant fabric

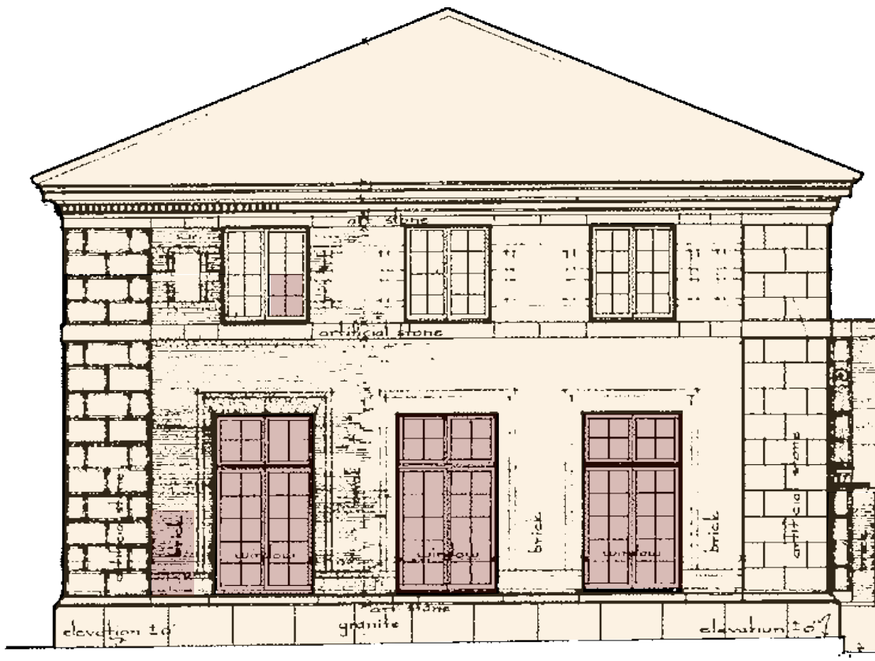


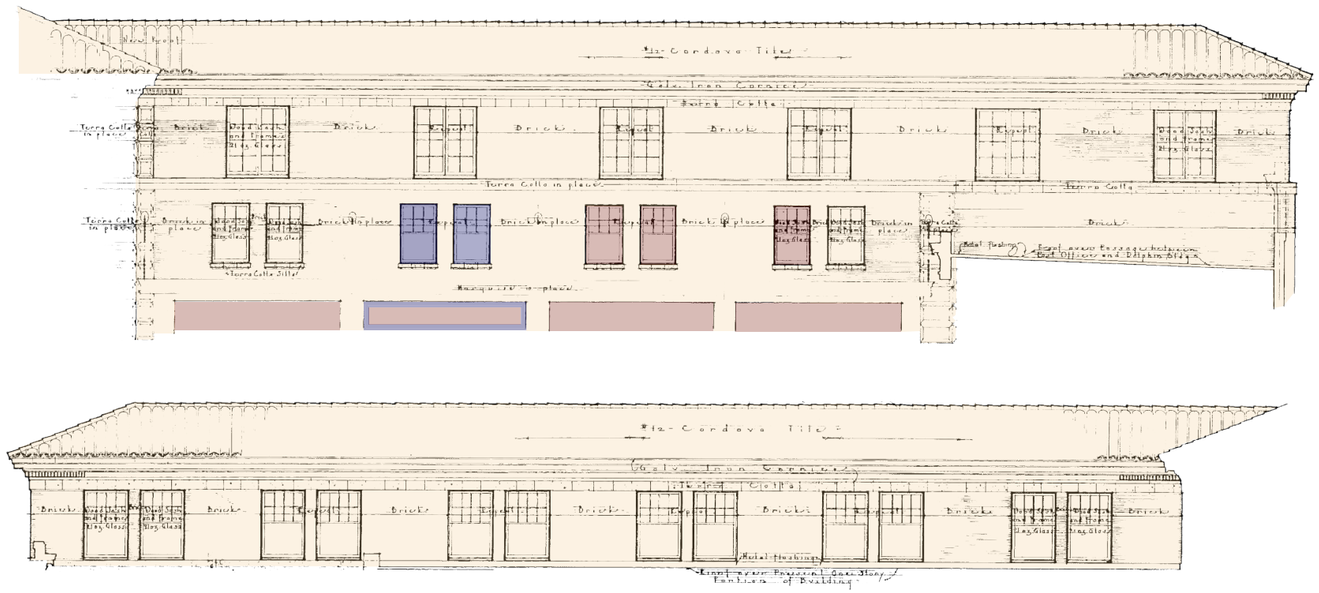
AGRICULTURE BUILDING

North Elevation

PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com

- Significant
- Contributing
- Non-contributing
- Alterations to significant fabric





AGRICULTURE BUILDING

PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com

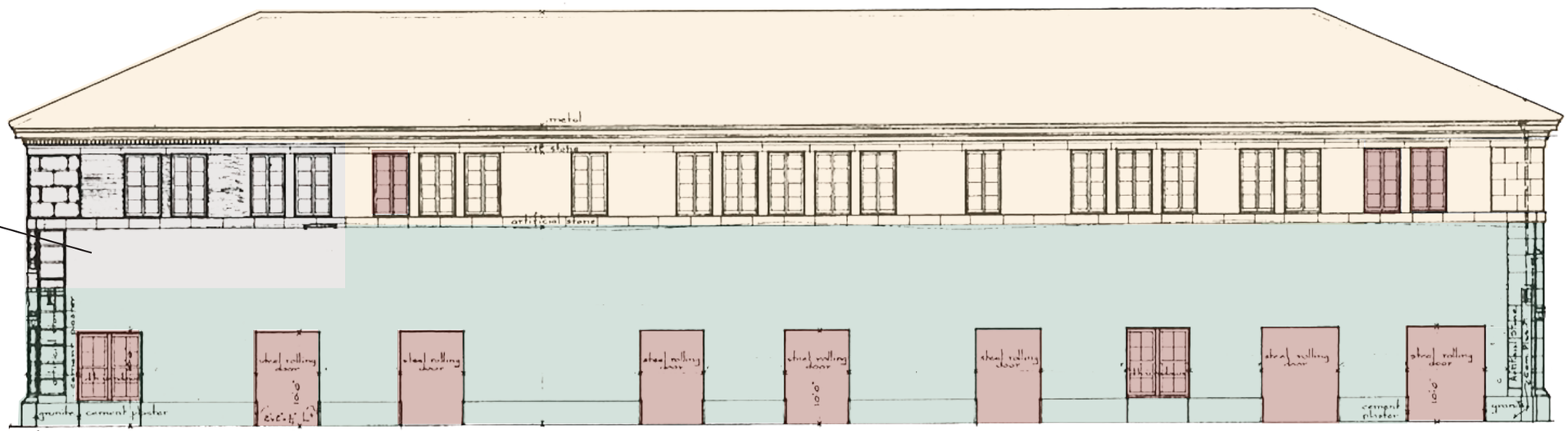
Significant

Contributing

Non-contributing

Alterations to significant fabric

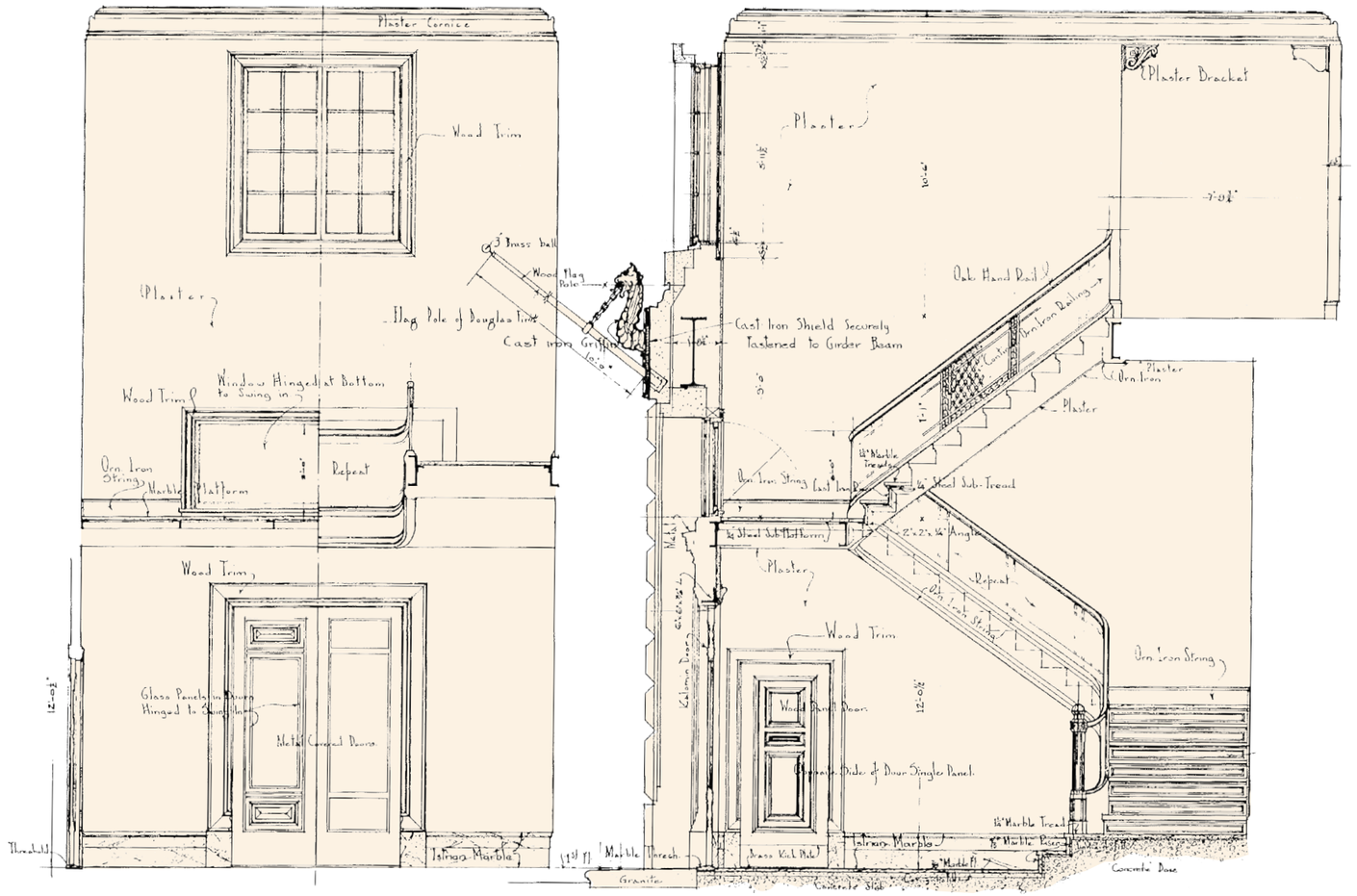
Second Story
Addition Built 1918

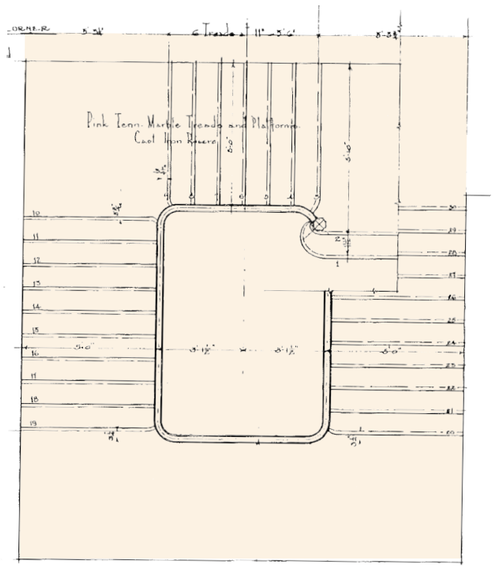


AGRICULTURE BUILDING

East Elevation

PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com





- Significant
- Contributing
- Non-contributing
- Alterations to significant fabric

AGRICULTURE BUILDING

Interior

PAGE & TURNBULL
Architecture ▪ Historic Preservation ▪ Urban Planning
724 Pine Street, San Francisco, CA 94108 www.page-turnbull.com

VIII. PROJECT-SPECIFIC IMPACTS

The following section provides an examination of the project-specific impacts of the feasibility scenario upon the Agriculture Building and its character-defining features.

Proposed Options for Alteration

The proposed project involves intensive maneuvering of the building in order to physically stabilize the deteriorating structure. A multipart engineering plan is required to keep the building in continued use, and also to adapt and expand the building for continued commercial and transportation uses. As we understand, the current feasibility scenario proposed by ROMA Design Group for the rehabilitation and expansion of the Agriculture Building includes the following components:

- Reconstruct the deck north of the Agriculture Building by rebuilding the sub-structure and covering the lagoon located between the Agriculture Building and Ferry Building
- Move the rear, single-story portion of the north elevation, intact, onto the newly reconstructed north deck
- Demolish rear of Agriculture Building, including south façade and 1918 second story addition
- Repair east deck where rear section stood
- Retain the entire two-story front structure intact, and move onto repaired east deck while reconstructing the deck where the two-story front structure was sited
- Re-site two-story front of building to a location 10' east of the original footprint, keeping the same orientation of the building to the Embarcadero, and keeping the original lateral positioning
- Raise original front portion of building on pedestal above promenade, and add steps leading to building at main entrance. Slope the ground along the north and south facades to gradually meet the overall surrounding ground level
- Construct a new 2 - 3-story rear addition to building

Status of Existing Building as a Historic Resource

Rehabilitation of a historic building, or the addition of new construction to a historic building, has the potential to damage or destroy significant historic materials or features, and to change the historic character of a building. Rehabilitation or adaptation may also change the way that a historic building is perceived, and therefore affect the qualities that make the building eligible for listing in the National Register of Historic Places.

The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings (Standards) provide guidance for reviewing proposed work on historic properties.[3] The Standards are a useful tool for understanding and describing the potential impacts of substantial changes to historic resources. In the case where a project does not comply with the Standards, the actions may or may not cause a substantial adverse change in the significance of an historic resource, and thus, the Standards frame the discussion of whether the action would significantly impact the resource to the extent that it would become ineligible for National Register status.

The Standards are used by federal agencies in evaluating work on historic properties, and have also been adopted by local government bodies nationwide for reviewing proposed rehabilitation work on historic properties under local preservation ordinances. The Port of San Francisco has adopted these Standards for reviewing maintenance, repair, alteration and construction proposals involving the Port's eligible and listed historic resources.

[3] Morton, W. Brown III, Gary L. Hume, Kay D. Weeks, and H. Ward Jandl, *Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings* (Washington, D.C.: U.S. Department of the Interior, National Park Service, Cultural Resources, Preservation Assistance Division, 1992). The *Standards*, revised in 1992, were codified as 36 CFR Part 68.3 in the July 12, 1995 Federal Register (Vol. 60, No. 133). The revision replaces the 1978 and 1983 versions of 36 CFR 68 entitled *The Secretary of the Interior's Standards for Historic Preservation Projects*. The 36 CFR 68.3 *Standards* are applied to all grant-in-aid development projects assisted through the National Historic Preservation Fund. Another set of *Standards*, 36 CFR 67.7, focuses on "certified historic structures" as defined by the IRS Code of 1986. *The Standards* in 36 CFR 67.7 are used primarily when property owners are seeking certification for Federal tax benefits. The two sets of *Standards* vary slightly, but the differences are primarily technical and are not substantive in nature. The *Guidelines*, however, are not codified in the Federal Register.

The following analysis applies each of the Standards to the feasibility scenario for the Agriculture Building:

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

Discussion: The feasibility scenario outlines the new uses for the Agriculture Building as either commercial or transportation. To accommodate these new uses, the current feasibility scenario calls for the demolition of the rear one- and two-story portions of the Agriculture Building except for the one-story north façade, which will be temporarily relocated adjacent to the building, and later added back onto the building in the same location. These new uses would require substantial change to the building's distinctive materials, features, spaces, and spatial relationships. As identified earlier, the building's character-defining features on the south side include: two-story rear mass deferential to front two-story portion; red tile hipped roof with galvanized iron cornice; historic windows and door openings; historic brickwork and terra cotta detail. The removal of these features would affect the building's status in the National Register, and therefore the current feasibility scenario does not comply with Rehabilitation Standard 1.

Currently, the proposed project will not retain the distinctive materials and features of the property. However, if the project required minimal change to the character-defining materials and features described in this report, the plan for the new use of the building for commerce and transportation services is in compliance with Rehabilitation Standard 1. Historically a part of the commercial activities related to the port, the property would continue in use as a place of business.

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

Discussion: As defined earlier, the historic character of the Agriculture Building is defined by the hierarchical arrangement of ornamentation on the exterior. The removal of the original 1915 ground-story in the rear and the 1918 second-story addition on the south side will significantly alter the building's character-defining features. Both of these exterior elements were completed within the building's period of significance, which was defined as 1915 to 1925. The removal of these features

will adversely affect the building's distinctive materials, spaces, and spatial relationships; therefore the current feasibility scenario does not comply with Rehabilitation Standard 2.

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

Discussion: No such creation of false history or addition of conjectural features will be undertaken. The proposed addition will be designed in a contemporary style in order to remain distinguishable from the historic building. Accordingly, the project will be in compliance with Standard 3.

Rehabilitation Standard 4: *Changes to a property that have acquired significance in their own right will be retained and preserved.*

Discussion: The Agriculture Building was completed in 1915, and originally featured a one-story rear portion. In 1918, a second-story was added to the south-side of the rear portion. This two-story addition is considered to have significance in its own right in relation to Agriculture Building and its National Register status. Since 1918 addition, none of the alterations to the Agriculture Building are considered to be significant. The removal of the 1918 Addition would constitute a change to a property that has acquired significance in its own right, and therefore the current feasibility scenario does not comply with Rehabilitation Standard 4.

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

Discussion: As designed, the proposed project is not in compliance with Rehabilitation Standard 5. While the proposed project will rehabilitate and seismically retrofit the front of the building and the north wall, the project proposes to remove a large portion of the rear of the building, including the brick cladding, terra cotta architectural detail, historic windows, original doorways, and the historic cornice and roof.

The proposed treatment of the interior features is in compliance with Rehabilitation Standard 5, including the preservation of marble floors, iron balustrade, plaster moldings and brackets, and two historic light fixtures in the main lobby, central stairwell, and main hall on second floor.

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

Discussion: The current feasibility scenario does not outline specific architectural treatments to historic building fabric, and therefore the current feasibility scenario cannot be evaluated under this Standard. However, we do encourage the project sponsor to adhere to the Rehabilitation Standard, and to follow the Secretary of the Interior's Guidelines for the Rehabilitation of Historic Buildings.[4]

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

Discussion: The current feasibility scenario does not outline specific architectural treatments to historic building fabric, and therefore the current feasibility scenario cannot be evaluated under this Standard. However, we do encourage the project sponsor to adhere to the Rehabilitation Standard, and to follow the Secretary of the Interior's Guidelines for the Rehabilitation of Historic Buildings.[5]

Rehabilitation Standard 8: *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measure will be undertaken.*

Discussion: The feasibility scenario does not involve extensive excavation of the site below the foundation deck, and therefore, the current feasibility scenario cannot be evaluated under this Standard. If archaeological evidence is uncovered, we recommend that the project sponsors halt construction and institute an archaeological mitigation program.

[4] For further information, see Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings <http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_approach.htm>
[5] For further information, see Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings <http://www.nps.gov/history/hps/tps/standguide/rehab/rehab_approach.htm>

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

Discussion: According to established guidelines for rehabilitation, construction of an exterior addition on a historic building may seem to be essential for the new use, but it is emphasized that such new additions should be avoided if possible and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non-character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to retain the original structure, and also to be clearly differentiated from the original.

As designed, the proposed project is not in compliance with Rehabilitation Standard 9. Structural reinforcement is necessary for the continued use of the Agriculture Building. In an extreme case such as this, feats of engineering are required to save the building from further deterioration and to allow the building to continue in use safely. Historic building components must be removed for foundation deck repairs, and the building must be removed from and re-sited on a newly repaired and leveled deck. The project proposes to demolish the south rear wall and second-story addition in the process of repairing the foundation, and therefore is not in compliance with Standard 9. Priority must be given, in all such cases, to retaining significant historic structural components, even if they must be temporarily removed in order to repair the building foundations.

The proposed addition will be designed in a contemporary style in order to remain distinguishable from the historic building, and promises to be compatible with the historic materials and features. These features are in accordance with the Standards. However, the potential massing of the new addition will not be compatible with the historic scale, proportion, and massing of the building. Any new construction that overshadows the two-story front of the building would adversely affect the integrity of the historic structure by changing the relationship of scale and massing between the front and rear of the building. The building is representative of a historic bulkhead building with larger-scale construction on the west side along The Embarcadero, and equal or smaller-scaled structures extending to the water and into the Bay. The buildings along the bulkhead south of the Ferry Building also deferred in size and scale and massing to the Ferry Building itself. Any new construction should be aware of, and attempt to maintain, these two relationships in size, scale, and massing.

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

Discussion: As discussed in the analysis of Rehabilitation Standard 9, the current feasibility scenario is not in compliance with Rehabilitation Standard 10. The project proposes to demolish the majority of the rear of the building. As designed, the addition of the new construction does not retain the essential form and integrity of the historic building and will permanently remove distinctive materials, features, spaces, and spatial relationships, including the mass, scale, shape, and proportion of the rear portion of the building; the red tile hipped roof and galvanized iron cornice; the historic windows and door openings; the historic brickwork and terra cotta detail. The removal of the rear of the building is an irreversible change, and therefore is not in compliance with Rehabilitation Standard 10.

IX. CONCLUSIONS AND RECOMMENDATIONS

As currently envisioned, the proposed project does not comply with Rehabilitation Standards 1, 2, 5, 9, and 10 because of the demolition of a significant portion of historic materials and design on the south side, and the construction of a potentially oversized new addition in the rear of the building. It is likely that these changes would have a significant adverse effect on the integrity of the historic resource, thus making the building ineligible for listing on the National Register. As a result, the building would also lose its status as a contributor to the Port of San Francisco Embarcadero Historic District.

According to Section 15126.4 (b) (1) of the Public Resources Code (CEQA): "Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, the project's impact on the historical resource will generally be considered mitigated below a level of significance and thus is not significant."

In order to reduce the impact of the current feasibility scenario on the resource, we recommend the following:

Preserve Significant Historic Materials and Features

According to the Preservation Brief 14, "preservation of historic buildings is enhanced by avoiding all but minor changes to primary or public elevations."

- In the case of the proposed Agriculture Building alterations, this would include the preservation of historic cladding, roof shapes and materials, cornices, window patterns, door openings, and decorative moldings on the south side of the building.
- In addition to retaining the single-story rear portion of the north side of the Agriculture Building, retain the two-story rear portion of the building on the south side

Preserve Historic Character

- One way to minimize the impact on historic character is to reduce the size of the addition in relationship to the historic building, and to site the new addition so that the north, west, and south structures continue to convey the historic functions of the building.

- Alterations to the historic proportions and profile should be avoided by keeping the new construction well integrated into the current shape, height, and massing of the historic building.
- Agriculture Building was historically connected to a large timber structure to the east, which was built over a short pier that extended into the Bay. This Dolphin Building was roughly the height of the tall first story of the Agriculture Building, and of equal length and depth. It is possible that a new addition to the Agriculture Building could maintain these same dimensions, and extend the building towards the east, instead of compromising the integrity of the building with the impact of new height.

Rehabilitation as Treatment

- The Secretary of the Interior's Standards recommend as little intervention as possible in the restoration and repair of historic fabric, and allow for a new use and programme for the building with the retention of character-defining features
- In the event that the south side of the building must be taken apart in order to stabilize the building and its foundations, the Secretary of the Interior's Standards for Rehabilitation apply, and the character-defining features of the first story and second story addition may be accurately rebuilt using historical, pictorial, and physical documentation. Prior to undertaking work, a documentation and rehabilitation plan should be developed.
- Several previous repairs to the building are not sympathetic to the original materials and design, and all previous and future repairs should be completed in a manner that is compatible, consistent with, and closely matched to historic materials.

Interior Features

- Preservation and rehabilitation guidelines recommend that interior features, including baseboards, paneling, light fixtures, hardware, and flooring should be identified, retained, protected and maintained in place.
- The guidelines also recommend the identification, retention, protection and maintenance of interior mechanical systems, including radiators, vents, grilles, and plumbing features.
- In the case that historic features must be removed in order to secure the structure of the building, the highest standards for rehabilitation recommend that interior features that have had to be removed during the rehabilitation of the building should be reused in areas appropriate to their historic placement.

- Any installation of new mechanical systems like heating, air conditioning, or plumbing, should be added in a manner that causes the least alteration possible to exterior elevations, historic building features, and historic materials.

In closing, it should be particularly noted that these analyses and recommendations are open to specific negotiation related to the final proposal for rehabilitation and addition to the Agriculture Building.

X. IMAGES

Figure 1. Agriculture Building, view from northwest across The Embarcadero

Figure 2. View from northwest along The Embarcadero

Figure 3. View from southwest, across The Embarcadero

Figure 4. View from south, along The Embarcadero

Figure 5. West facade, view from west

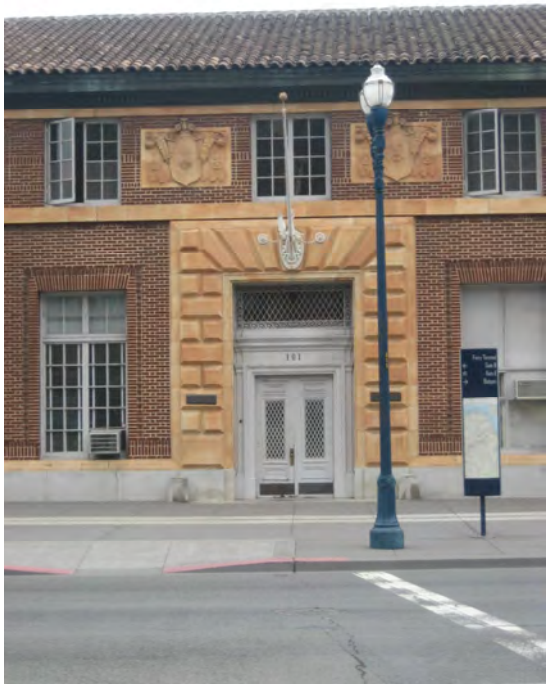


Figure 6. West facade, Main entrance (detail)

Figure 7. West facade, altered south entrance (detail)

Figure 8. North facade, view from northeast

Figure 9. North facade, front

Figure 10. North facade, rear

Figure 11. South facade, view from southwest

Figure 12. South facade, front

Figure 13. South facade, rear

Figure 14. East facade, view from northeast

Figure 15. East facade, second story of building

Figure 6. Terra cotta beltcourse and copper cornice (detail)

Figure 7. Interior, Main hall stairs, balustrade, and marble floor, first floor (detail)

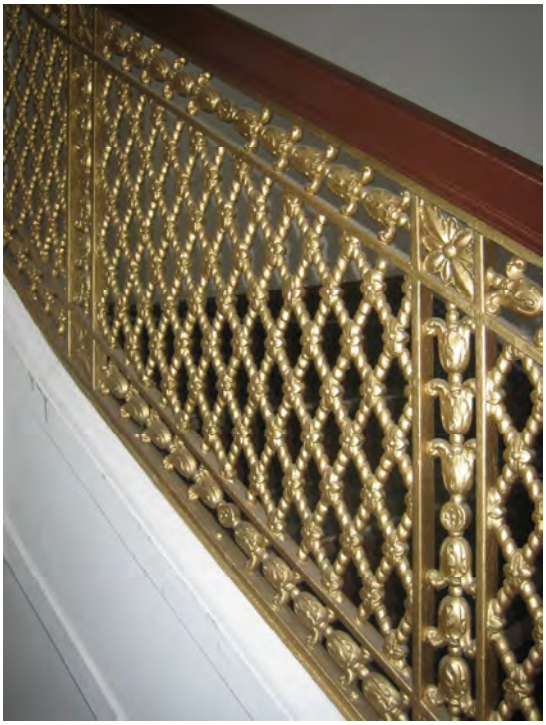


Figure 8. Interior, balustrade (detail)

Figure 9. Interior, Main stairs, landing at mezzanine level (detail)

Figure 10. Interior, Main hall, second floor (detail)

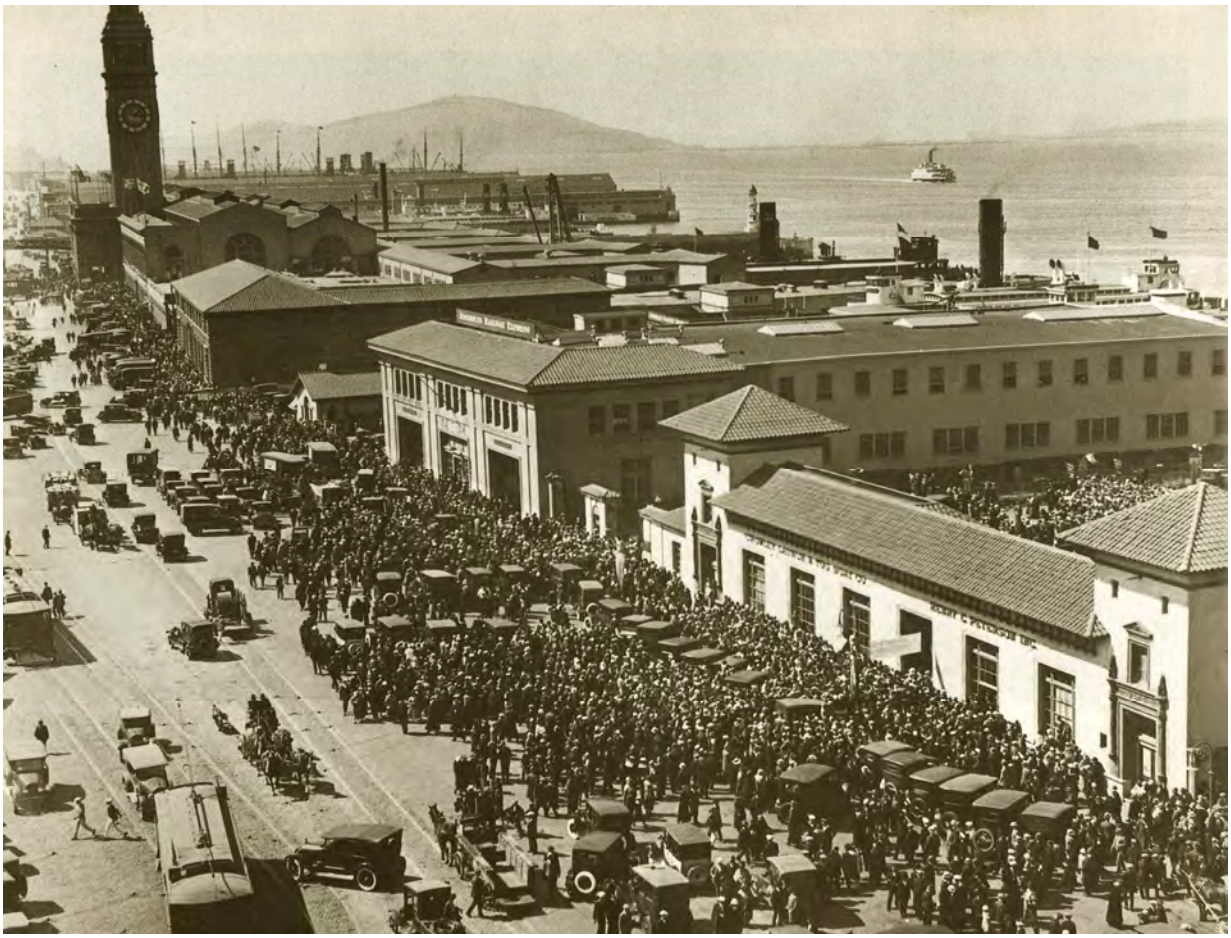


Figure 11. Aerial view from southwest, 1924.
Source, Nancy Olmsted, *The Ferry Building*.

Figure 12. Aerial view from northeast, 1958.
Source, Nancy Olmsted, *The Ferry Building*.

XI. SOURCES

Reports

Carey & Company, Inc. "Historic Resources Evaluation: Agriculture Building, Port of San Francisco." December 26, 2000.

Charles Hall Page & Associates, Inc. "Survey of Cultural Resources: Piers 14-22 ½, The Agriculture Building, and the Fire Boat House, The Port of San Francisco." November 14, 1977.

Olmsted, Nancy. *The Ferry Building: Witness to a Century of Change, 1898-1998*. San Francisco and Berkeley: The Port of San Francisco with Heyday Books, 1998.

Pamela McGuire, Office of Historic Preservation. "National Register of Historic Places Nomination: Agriculture Building." February 8, 1978.

URS Corporation. "National Register of Historic Places Nomination Form: Port of San Francisco Embarcadero Historic District." January 2006.

U.S. Department of Interior National Park Service Cultural Resources, Preservation Assistance Division. *Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings*. Washington, DC: National Park Service, 1992. The *Standards*, revised in 1992, were codified as 36 CFR Part 68.3 in the July 12, 1995 Federal Register (Vol. 60, No. 133).

Weeks, Kay D. "Preservation Brief 14: New Exterior Alterations to Historic Buildings." Washington, DC: U.S. Department of Interior National Park Service Cultural Resources, Preservation Assistance Division, n.d.

Plans

San Francisco Port Authority , Port of San Francisco, Department of Engineering. *S.F. Port Authority Testing Lab, Agricultural Building*. 18 June 1963.

San Francisco Port Authority , Port of San Francisco, Department of Engineering. *Alterations to Agricultural Building, Elevations and Window Details*. 10 May 1961.

State Harbor Commissioners, Department of Engineering. *Extension of Post Office*. 18 June 1918.

State Harbor Commissioners, Department of Engineering. *Plans for Post Office.* 5 November 1914.

State Harbor Commissioners, Department of Engineering. *Floor Plans of Ferry Building Annex "C", No. 278"*. 9 November 1931.

A NEW **PERSPECTIVE** IN PRESERVATION

PAGE & TURNBULL
Architecture · Historic Preservation · Urban Planning
San Francisco · Sacramento · Los Angeles · www.page-turnbull.com