



2017 SFMTA Facilities Framework

DRAFT



Muni Metro East, Photograph by IDEO, Cover: Presidio

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Report

Executive Summary

This document describes highlights of the San Francisco Municipal Transportation Agency SFMTA 2015-47: Facilities Assessment, Workplace Planning and Organizational Assessment. It summarizes facility assessment and planning by Owen Adams Consulting with Laura Blake Architect, EMG facility condition assessment team, and TBD cost consultants. Separate documents describe the facility management organizational analysis by IDEO, the facility condition assessment by EMG, and a facility peer review by WSP Parsons Brinckerhoff.

Purpose and Process

To support its strategic goal to “(c)reate a workplace that delivers outstanding service” the San Francisco Municipal Transportation Agency (SFMTA) requested a Facility Condition Assessment (FCA) to identify deficiencies and associated costs as a basis for budgeting and prioritizing improvements as well as assistance in identifying major space planning opportunities and ways to improve processes for facility planning and management.

The assignment included extensive interviews with SFMTA staff, tours of facilities, and review of key background documents, starting with the *2013 Real Estate and Facilities Vision for the 21st Century* and the *2014 Addendum (Vision Report)*. The consultants held two major workshops with SFMTA staff in late 2015 and early 2016, and workshops in mid 2016 regarding the potential New Facility program and in late 2016 regarding the risks of various facility planning scenarios. They coordinated

weekly with the facilities core team, and met with members of the executive team to receive input and direction at key decision points (see “Participants” Section starting on page 168).

This report summarizes highlights of team findings, as follows:

- Facility Condition Assessment
- Planning Objectives and Principles
- Needs and Opportunities
- Facility Framework
- Recommended Next Steps

The Appendices contain supporting materials including:

- Appendix 1: Staff and Fleet Data
- Appendix 2: Framework Standards: A summary of the space standards used for this report
- Appendix 3: Facility Data and Studies: Individual facility spreads with facility data, observations, planned 2040 use, and planning studies
- Appendix 4: Facility Condition Assessment: A summary of the findings, priorities, and budget
- Appendix 5: Framework Cost Analysis: A comparison of the budget level costs of the scenarios in this report
- Appendix 6: Participants & Materials: A list of the project participants, workshops, presentations, and resource materials



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PARKING
7 am - 5 pm

AUTHENTIC
PANTS

Bancroft, Photograph by IDEO

A list of SFMTA facilities covered in this report is included on page 14. For simplicity facilities are typically referred to by their street names throughout the report.

Facility Condition Assessment Findings

EMG assessed 18 SFMTA facilities. SFMTA is continuing to establish weighting and prioritization factors for both deferred maintenance backlog and preventive maintenance, and will use the FCA data in budgeting, grant preparation, and facility improvement planning.

Planning Objectives and Principles

Function/Efficiency: Provide functional workspace that is based on needs and fosters operational efficiency.

Quality of Environment: Provide workspace that supports staff health, safety, and productivity and is sustainable.

Cost Effectiveness/Value for Investment: Optimize use of SFMTA buildings and grounds and maintain a cost effective mix of owned and leased space.

Coordinated Asset Management: Strengthen organizational structure, communication, and processes to support coordinated facility planning and management.

Additional Planning Principles: Improve facility planning, management, and utilization.

Facility Improvement Phasing Principles

Short Term Emphasis: Create deferred and preventive maintenance

programs with accurate cost estimates informed by the FCA, according to clearly established priorities.

Mid-Term Emphasis: Coordinate facility renovation program to accommodate new needs and issues, including fleet growth and rehabilitation of existing facilities for today's operational needs. Make incremental investments that build toward a long-term direction.

Long-Term Direction: Outline a flexible framework for planning and investing in facilities, anticipating possible changes in monetary resources, market conditions, external environment, and operational need.

Needs and Opportunities

SFMTA is increasing its transit fleets to meet growing transportation demands. By 2025 it will have 55 more motor and trolley coaches and 12 more light rail vehicles than can fit in its current facilities; by 2030 the numbers increase to 62 and 46. In addition its oldest transit facilities—Potrero, Presidio and Kirkland—were not built for modern needs and are at the end of their useful lives, and its Enforcement and Paratransit facilities are overcrowded and outdated. SFMTA's facility needs include expanded and modern Transit, Enforcement, and Paratransit facilities.

Since completing the *Vision Report* several new opportunities have emerged including the potential New Facility, jurisdictional transfer of 1200 15th Street to SFMTA and using it for Enforcement, and using MME expansion area for swing space prior to its planned rail use.

Short, Mid, and Long Term Planning Implementation

Short Term Planning	Short Term Improvements
<ul style="list-style-type: none"> • Develop deferred and preventive maintenance program based on established priorities. 	<ul style="list-style-type: none"> • Implement prioritized deferred and preventative maintenance.
Mid Term Planning	Mid Term Improvements
<ul style="list-style-type: none"> • Renovate existing facilities to better support operations and accommodate changing needs. • Coordinate renovations to build towards long-term plan. 	<ul style="list-style-type: none"> • Plan for expiring leases <ul style="list-style-type: none"> • Enforcement and Paratransit 2018, Yosemite 2019, Marin 2021. • Optimize office space for ongoing and surge needs <ul style="list-style-type: none"> • South Van Ness, Market, Bayshore, Pennsylvania & Green Annex. • Consolidate shops; better match with NRV fleet <ul style="list-style-type: none"> • Renovate Burke for warehouse & overhead lines. • Renovate Bancroft and consider shared use. • Consolidate rail machine shops at Green, and buildings grounds shops at Pennsylvania.
Long Term Planning	Long Term Improvements
<ul style="list-style-type: none"> • Use a flexible framework for planning and investing in facilities. • Expand or acquire facilities to accommodate growth and replace leased facilities. • Replace deficient facilities and include transit oriented development. 	<ul style="list-style-type: none"> • Add space for growth and to replace leases. <ul style="list-style-type: none"> • Expand or build new motor coach facility. • Expand MME LRV storage. • Consolidate Enforcement facilities. • Plan for expiring leases space <ul style="list-style-type: none"> • Market 2023, Bayshore 2032. • Replace deficient facilities. <ul style="list-style-type: none"> • Rebuild Potrero, Presidio, and Kirkland and include transit oriented development in rebuilds.

Facility Framework

The Facilities Framework is intended to be a flexible and dynamic tool that provides alternatives to address SFMTA's facilities needs. Based on the agency's current needs and opportunities the team developed the following alternative scenarios all of which include rebuilding Potrero, Presidio, and Kirkland:

Scenario 1 - New Facility: Assumes a New Facility for Motor Coach, NRV Maintenance, Enforcement, Paratransit, and Training.

Scenario 1A - New Facility: Assumes jurisdictional transfer of 1200 15th Street to SFMTA and use of Scott and 15th Street for NRV Maintenance and Enforcement, and a smaller New Facility for Motor Coach and Paratransit.

Scenario 1B -New Facility: Assumes SFMTA provides or vendor continues to provide a Paratransit facility, use of Scott and 15th Street for NRV Maintenance and Enforcement, and a smaller New Facility for Motor Coach.

Scenario 2A and 2B - Maximize Existing Facilities: Assume more dense development of Presidio and Potrero sites; use of Scott and 15th Street for NRV Maintenance and Enforcement, and SFMTA or vendor Paratransit facility. Scenario 2A assumes the MME expansion area is used for swing while rebuilding Presidio and Potrero, whereas Scenario 2B assumes Kirkland and a lease space are used.

A component comparison starting on page 22 shows the alternative scenarios by major SFMTA components: yellow for Coach (both motor and trolley), green for Rail, blue for Streets, pink for Paratransit, and gray for Administration.

Motor and Trolley Coach: All scenarios include redevelopment of Potrero, Presidio, and Kirkland sites; the differences are in the amount of transit and other development. All scenarios require lease space (Marin or alternate), with Scenarios 2A and 2B needing the longest leases.

Rail: All scenarios assume that track is added to MME for LRV fleet growth. Scenario 2A also proposes the addition of a trolley "swing" facility, which would afterwards convert to a "Back Shop".

Enforcement: Scenario 1 proposes Enforcement consolidation at the New Facility. All other scenarios assume Enforcement consolidation at Scott and 15th Street. The leases expire starting in 2018, so lease extensions or replacements are needed in any scenario.

Non-Revenue Vehicle Maintenance: In Scenario 1 NRV Maintenance is proposed to move to the New Facility. In all other scenarios it remains at Scott.

Paratransit: A broker manages Paratransit vendors including one which operates and maintains the SFMTA-owned fleet. In Scenario 1/1A the fleet would move to a New Facility. All other scenarios assume SFMTA provide or the vendor continue to provide a facility. The vendor leases expire in 2018, so an extensions or replacements are needed in any scenario.

Administration and Support: SFMTA administrative offices occupy most of One South Van Ness and lease space at Market. A phased re-stacking is underway to optimize space use and adjacencies. Other opportunities to better utilize space are described in the chart starting on page 67.

Scenario Summary

	Scenario 1	Scenario 1A	Scenario 1B	Scenario 2A	Scenario 2 B
New Facility	<ul style="list-style-type: none"> • coach • paratransit • NRV • enforcement • training 	<ul style="list-style-type: none"> • coach • paratransit 	<ul style="list-style-type: none"> • coach 		
MME	<ul style="list-style-type: none"> • rail 	<ul style="list-style-type: none"> • rail 	<ul style="list-style-type: none"> • rail 	<ul style="list-style-type: none"> • rail & swing 	<ul style="list-style-type: none"> • rail
Potrero Presidio Kirkland	<ul style="list-style-type: none"> • rebuild 	<ul style="list-style-type: none"> • rebuild • training 	<ul style="list-style-type: none"> • rebuild • training 	<ul style="list-style-type: none"> • rebuild • training 	<ul style="list-style-type: none"> • rebuild • training
Scott	<ul style="list-style-type: none"> • vacate 	<ul style="list-style-type: none"> • NRV • enf parking 	<ul style="list-style-type: none"> • NRV • enf parking 	<ul style="list-style-type: none"> • NRV • enf parking 	<ul style="list-style-type: none"> • NRV • enf parking
15th St <small>(Currently occupied by Animal Care & Control; to be transferred to SFMTA)</small>		<ul style="list-style-type: none"> • enforcement 	<ul style="list-style-type: none"> • enforcement 	<ul style="list-style-type: none"> • enforcement 	<ul style="list-style-type: none"> • enforcement
Other			<ul style="list-style-type: none"> • paratransit 	<ul style="list-style-type: none"> • paratransit 	<ul style="list-style-type: none"> • paratransit

Shortlisted Scenarios

The Facilities Framework was presented to the SFMTA Executive Team in December 2016. Subsequent direction was to narrow from five scenarios to three: Scenarios 1A and 1B that have smaller new facilities and Scenario 2A that maximizes SFMTA's existing sites. Scenario 1 with the largest New Facility was eliminated because more cost effective alternatives were found for some components. NRV Maintenance will remain at Scott. Enforcement operations will be located at the adjacent 15th Street property (which will be vacated by Animal Care and Control and renovated) and Enforcement fleet will be located at Scott. Training will be located at a rebuilt Potrero. Scenario 2B which uses Kirkland and lease space for swing was eliminated because Scenario 2A which uses MME for swing is preferred.

Recommended Next Steps

To ensure that SFMTA has the facilities it needs to house, operate, and maintain its growing Transit fleets it must proceed expeditiously.

The chart on the following page outlines recommended steps to implement the Facilities Framework. The left column indicates the actions that already have been taken to reduce from five scenarios to three, and the other columns outline the key steps needed to select one scenario and move forward with implementation of the first projects.

Maintenance: Refine the Facility Condition Assessment priority list to update the Capital Improvement Plan and “bundle” related work into campaigns such as Roof and Fire/Life Safety.

New Facility: Continue to work with the developer team to establish Scenario 1A and 1B programs and facility performance criteria, confirm assumptions about purchase over ten years as the basis for a deal structure, and obtain updated cost information.

Potrero, Presidio and Kirkland: SFMTA is planning to issue an RFP for Transit Oriented Development (TOD) advisory services to evaluate the potential of incorporating TOD in the rebuilding of one or more of its coach facilities. Concurrently work with SF Planning Department regarding environmental review.

Swing (Interim Needs): New Facility in Scenario 1A and 1B, or MME expansion area in Scenario 2A will be the location for an interim trolley coach facility while rebuilding Potrero and Presidio. Develop programmatic needs for both options.





15th Street (Enforcement): Move ahead with 15th Street (ACC) property transfer and refine program and planning.

Paratransit: Because Paratransit is a long-term, federally mandated service, SFMTA is considering purchasing a Paratransit Facility rather than continuing to require that the Paratransit vendor provide a facility. Analyze options including Scenario 1A that includes Paratransit in the New Facility, and Scenarios 1B and 2A that entail purchasing a facility or vendor providing a facility.

Periodic Update: The Facilities Framework should be updated regularly - at least every four or five years when SFMTA updates its *Transit Fleet Management Plan*.

Improve Facility Management and Space Utilization: Moving forward SFMTA should improve both its facilities management and space utilization.

Recommended Next Steps

	Dec 2016 Executive Direction	Jan - Mar 2017 Refine & Analyze	Apr - Jun 2017 Refine & Analyze	Jul - Sep 2017 Refine & Analyze	Oct- Dec 2017 Executive Direction	Jan 2018 Start Project
Framework Scenarios	5 Scenarios 1, 1A, 1B, 2A, 2B	3 Scenarios 1A, 1B, 2A	2 Scenarios 1A or 1B, & 2A	2 Scenarios 1A or 1B, & 2A	1 Scenario	
MAINTENANCE		Update CIP Select and set up procurement				
NEW FACILITY	Eliminated Scenario 1	SFMTA finalize program including swing needs Developer revise plans, costs and confirm purchase terms			Compare Scenarios refined scope, schedule, and budget Select Scenario	
POTRERO PRESIDIO KIRKLAND		EIR Study RFP TOD Study RFP Due Diligence Reports	EIR Initial Study TOD Initial Study			
SWING	Approved MME for swing; eliminated Scenario 2B	Define trolley swing needs for New Facility in Scenario 1A/1B and MME in Scenario 2A	Develop MME swing/rail and back shop program and concept for Scenario 2A			
15TH STREET (ENFORCEMENT)	Approved exchange of 15th St for Bryant St	Start jurisdictional transfer Refine program and concept	Select and set-up renovation procurement			
PARATRANSIT		Analyze and select preferred option and eliminate Scenario 1A or 1B				

Facilities

SFMTA has facilities for its administration, transit fleets, streets, support, and enforcement functions. For clarity the facilities are grouped by function and typically referred to by their street names in the list below and throughout the report.



Administration

South Van Ness - *1/11 South Van Ness Avenue*
Market (Transit Management) - *1455 Market St*



Motor Coach

Flynn - *1940 Harrison St*
Islais Creek - *1301 Cesar Chavez St*
Kirkland - *2301 Stockton St and 151 Beach St*
Woods - *1095 Indiana St*



Trolley Coach

Potrero - *2500 Mariposa St*
Presidio - *949 Presidio Ave*

Rail



Cable Car Barn - *1201 Mason St*
Cameron Beach - *2301 San Jose Ave*
Green & Annex - *San Jose Ave 425 Geneva Ave*
Muni Metro East- *601 25th St*



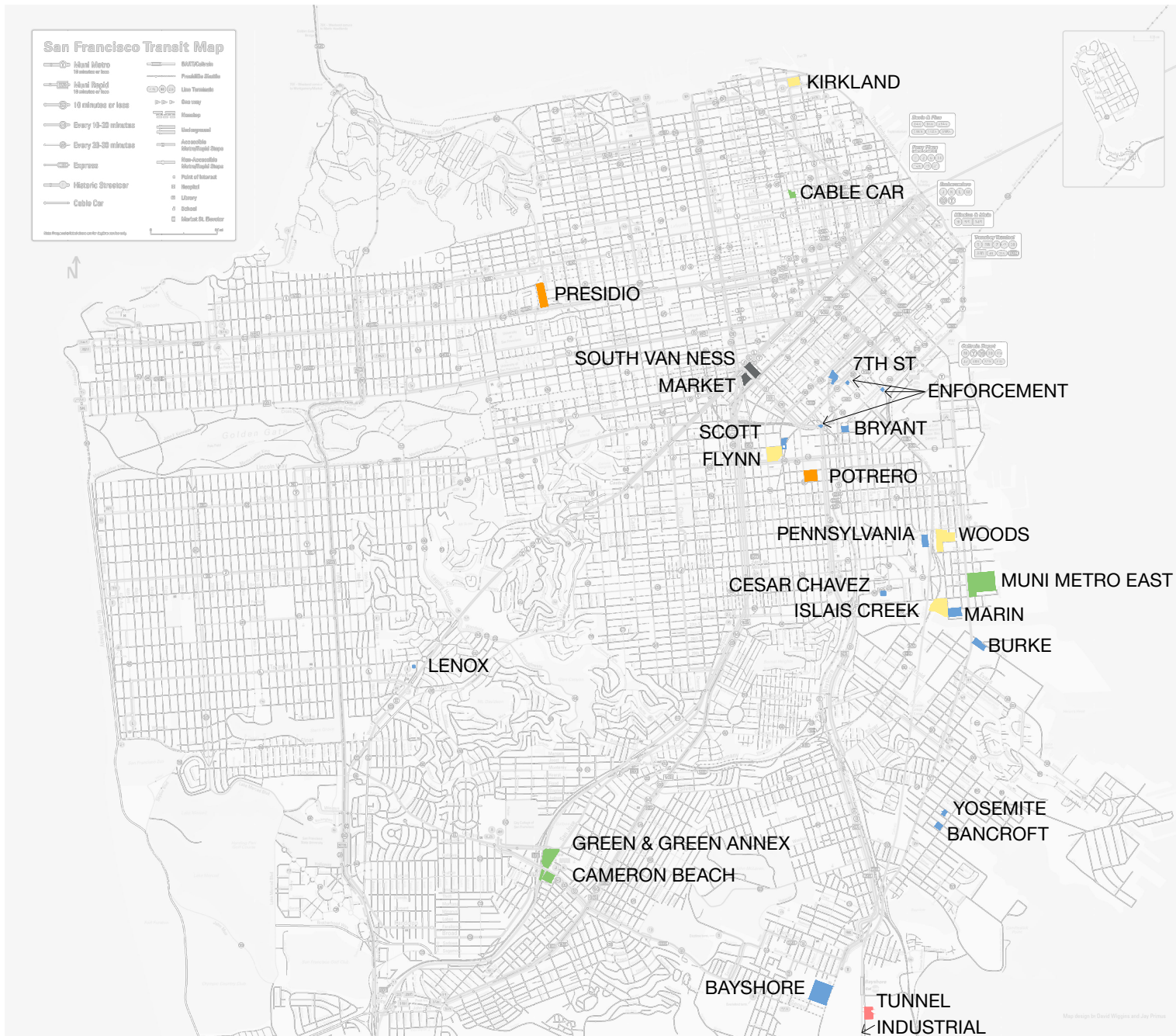
Paratransit (Vendor)

Tunnel - *575 Tunnel Ave, Brisbane*
Industrial - *290 Industrial Way, Brisbane*



Streets, Support and Enforcement

Bancroft (Sign & Meter) - *1508 Bancroft Ave*
Bayshore (Tow & Signal)- *2650 Bayshore, Daly City*
Bryant (Overhead Lines)- *1401 Bryant St*
Burke (Warehouse)- *1570/1580 Burke Ave*
Lenox (Transit Control) - *131 Lenox Way*
Marin (Swing Space) - *1399 Marin St*
Market (Transit Management) - *1455 Market St*
Pennsylvania (Offices & Shops) - *700 Pennsylvania Ave*
Scott (NRV Maintenance) - *1849 Harrison St*
Yosemite (Paint & NRV Parking) - *1528 Yosemite Ave*
Enforcement
 505 7th Street (Office)
 571 10th Street (Parking)
 6th and Townsend (Parking)
 2323 Cesar Chavez Street (Parking)
7th Street (Tow)



Facility Framework

Facility Condition Assessment Findings

EMG Corporation, specialist in facility condition assessment, undertook an assessment of 18 SFMTA facilities. Summary findings of identified deficiencies and estimated cost by building are contained in Appendix 4: Facility Condition Assessment starting on page 141.

More detail can be found in the separately bound EMG Executive Summary, as well as individual building reports, a year by year 20 year replacement reserve recommendation, a detailed spreadsheet listing almost 1200 individual recommended improvements, and other formats.

It should be noted that the initial cost data from EMG went through a review process by SFMTA and cost consultants TBD to add appropriate factors to correspond with San Francisco public procurement and SFMTA specific experience, and to adjust for inflation. EMG's estimates assume continuation of current functions over the twenty year time horizon, so as alternative functions are proposed, new cost estimates must be developed (for example proposed Burke renovation).

SFMTA is continuing to establish weighting and prioritization factors for both deferred maintenance backlog and preventive maintenance, and will continue to use the FCA data in ongoing budgeting, grant preparation, and facility improvement planning.

Objectives and Principles

The following facility planning principles are proposed to guide the Facilities Framework:

Function/Efficiency

- Provide functional space for operational efficiency
- Assign workspace based on functional need (similar functions get same workplace standard)
- Co-locate functions for collaboration
- Share support spaces

Quality of Environment

- Provide workspace that supports staff health, safety, and productivity
- Provide energy efficient and sustainable facilities

Cost Effectiveness/Value for Investment

- Optimize use of SFMTA buildings and grounds
- Consolidate and efficiently plan workspace
- Create flexible and adaptable workspace
- Maintain cost effective mix of owned and leased space

Coordinated Asset Management

- Strengthen organizational structure and communication to support coordinated facility planning and management
- Regularly assess and update facility data
- Prioritize projects to fit resources and needs



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Performance Measures for Planning and Management

Currently the SFMTA planning function does not focus on facility-related performance measures; the closest to a facilities-related goal in the *FY 2013-FY2018 Strategic Plan* is “(c)reate a collaborative environment to support delivery of outstanding service”. Part of coordinated asset management recommendation above should be the establishment and tracking of performance measures for facilities such as:

- Conformance with function-based workplace standards (refer to initial standards used to develop the framework in Appendix 2: Framework Standards)
- Space use efficiency (percent vacant and underutilized space, building net to gross ratio, square feet per employee)
- Occupancy cost (operating cost, occupancy cost per square foot, occupancy cost per employee)
- Churn cost (cost of moving employees for ongoing change and reorganization)

As described in the Facility Conditions Assessments Findings section SFMTA facilities have a large backlog of deferred maintenance, and receive little preventive maintenance. Before the assessment, data on buildings, systems and history of work orders resided mostly in the heads of the stationary engineers for various facilities, making it hard to pro-actively plan or objectively prioritize among competing needs.

Opportunities for Improved Facilities

Our assessment has identified significant opportunities to remedy deficiencies that have accumulated over time throughout SFMTA’s portfolio of buildings, such as:

- Safety issues
- Physical deterioration and poor quality work environment
- Significant areas of vacant or underutilized space
- Space and operational inefficiencies resulting from dispersed locations
- Duplication of functions that might be consolidated or shared
- “Haves and have nots”- significant variation in size and quality of workspace, even comparing similar functions
- Lack of workplace standards

Facility Improvement Phasing Principles

Short Term Emphasis: Create deferred and preventive maintenance programs with accurate cost estimates informed by the Facility Condition Assessment, according to clearly established priorities:

- Safety (e.g. fire/life safety, fall protection)
- Regulatory Compliance (e.g. underground storage tanks)
- Risk Management (grievance, ADA, hazards)
- Service-Critical Improvements to Operational Capacity (e.g. equipment fit-out, lift replacement)
- Employee Morale (restrooms, lighting, HVAC)

Mid-Term Emphasis: Coordinate program to renovate facilities to accommodate new needs, including transit fleet replacement and growth, and the need to rehabilitate existing facilities for today’s transportation operations.

- Make incremental investments that build toward a long-term recommended plan

Long-Term Direction: Outline a flexible framework for planning and investing in facilities anticipating possible changes in operational need, external environment, monetary resources, and market conditions.

- Replace deficient facilities to meet modern needs and accommodate fleet and staff growth
- Consider opportunities for joint development and/or disposition of property to supplement SFMTA revenues

Facility Framework for Long Term Planning

Since completing the *Vision Report*, some needs have not been addressed, and others have been newly identified. To optimize the use of SFMTA facilities and minimize capital expenditures, it is desirable to develop solutions for needs that are incremental steps toward a long term direction. A summary of the current needs, opportunities, and recommended long term use for each facility covered in this report is provided in the chart starting on page 67. The following is a list of current major needs:

- **Motor Coach:** Increased and accelerated fleet growth
- **LRV:** Increased and accelerated fleet growth
- **Paratransit:** Need for permanent solution
- **Enforcement:** Need for modern facility
- **Training:** Need for modern facility
- **Overhead Lines:** Need to vacate Bryant
- **Presidio, Potrero, and Kirkland:** Need to rebuild.

Alternative Scenarios

Because aspects of facility planning change over time, the Facility Framework is intended to be flexible and has five alternative strategies all of which include rebuilding Potrero, Presidio and Kirkland:

Scenario 1 - New Facility: Assumes a New Facility for Motor Coach, NRV Maintenance, Enforcement, Paratransit, and Training.

Scenario 1A - New Facility: Assumes jurisdictional transfer of 1200 15th Street to SFMTA and use of Scott and 15th Street for NRV Maintenance and Enforcement, and a smaller New Facility for Motor Coach and Paratransit.

Scenario 1B -New Facility: Assumes SFMTA provides or vendor continues to provide a Paratransit facility, use of Scott and 15th Street for NRV Maintenance and Enforcement, and a smaller New Facility for Motor Coach.

Scenario 2A and 2B - Maximize Existing Facilities: Assume more dense development of Presidio and Potrero sites; use of Scott and 15th Street for NRV Maintenance and Enforcement, and SFMTA or vendor Paratransit facility. Scenario 2A assumes the MME expansion area is used for swing while rebuilding Presidio and Potrero, whereas Scenario 2B assumes Kirkland and a lease space are used.

A comparison starting on page 22 shows the five alternative scenarios by major components of the SFMTA system: yellow for Coach (both motor and trolley coach), green for Rail, blue for Streets including Enforcement and Non-Revenue Vehicle (NRV), pink for Paratransit, and gray for Administrative.

- Top line is timing, by calendar year
- First row is fleet growth beyond 2017 facility capacity which drives fleet facility needs
- Lease expirations are noted: Enforcement and Paratransit in 2018, Yosemite 2019, Marin in 2021, Market in 2023, Bayshore in 2032

Motor and Trolley Coach: All scenarios include redevelopment of Potrero, Presidio, and Kirkland sites; the differences are in the amount of transit and other development. All scenarios require some extension of the Marin lease, with Scenarios 2A and 2B needing the longest lease extensions.

Rail: All scenarios assume that track is added to MME for LRV fleet growth. Scenario 2A also proposes interim use of a portion of the MME expansion area for trolley “swing” facility, which would afterwards convert to long-term use as a “Back Shop”.

Enforcement: Scenario 1 proposes Enforcement consolidation at the New Facility. All other scenarios assume SFMTA exchanges Bryant St for 15th Street and Enforcement consolidation at Scott and 15th Street. The leases expire starting in 2018, so lease extensions or replacements are needed in any scenario.

Non-Revenue Vehicle Maintenance: In Scenario 1 NRV Maintenance is proposed to move to a New Facility. In all other scenarios, it remains at Scott.

Paratransit: A broker manages Paratransit vendors including one which operates and maintains the SFMTA owned fleet. Currently the vendor provides a facility for the SFMTA fleet as part of its contract. Because Paratransit is a long-term, federally mandated service, SFMTA is considering purchasing a facility rather than continuing to require that the vendor provide a facility. In Scenario 1/1A the fleet would move to the New Facility. All

other scenarios assume SFMTA provides, or vendor continues to provide a facility. The vendor leases expire in 2018, so an extension or replacement are needed in any scenario.

Administration and Support: SFMTA administrative offices occupy most of One South Van Ness as well as leased space at Market. SFPW studies address re-stacking and improved utilization of these offices, and Pennsylvania for Maintenance of Way Engineering, as well as renovation of Burke for Overhead Lines and the Central Warehouse.

The chart starting on page 67 describes other opportunities to better utilize space including using underutilized space for unmet needs and consolidating support functions.

Component Comparison

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Projected fleet growth beyond 2017 facility capacity					14 Motor Coach 1 LRV					55 Motor Coach 12 LRV			
Update Facility Framework based on updated Fleet Plan		Select one Scenario			Update framework					Update framework			
Motor & Trolley Coach	Scenario 1/1A/1B	New Facility planning.....				Marin lease expires Scenario 1/1A/1B confirm need Scenario 2A/2B extend lease or move to alternate	.....New Facility move-in					
		Potrero planning.....					.....Potrero move-in					
							Presidio planning						
							Kirkland planning						
	Scenario 2A	MME Swing planning.....					.....MME Swing move-in					
		Potrero planning					.....Potrero move-in					
					Presidio planning								
	Scenario 2B	Kirkland planning.....					.....Kirkland move-in					
							Potrero planning.....						
					Presidio planning.....								
	Rail	Scenario 1/1A/1B/2B	MME planning.....				.....MME move-in					
		Scenario 2A											
Enforcement	Scenario 1	New Facility planning	Enforcement leases expire Extend leases	.....New Facility move-in								
	Scenario 1A/1B/2A/2B	Exchange Bryant St & 15th St		.....15th St & Scott move-in								
NRV Maintenance	Scenario 1	New Facility planning.....				.....New Facility move-in						
	Scenario 1A/1B/2A/2B												
Shops	All Scenarios	Renovate Bancroft & Burke	Yosemite lease expires, extend										
Paratransit	Scenario 1	New Facility planning	Paratransit leases expire Extend leases.	.....New Facility move in								
	Scenario 1A/1B/2A/2B												
Administration and Support	All Scenarios						Market lease expires						

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
			62 Motor Coach 46 LRV					87 Motor Coach 46 LRV					120 Motor Coach 46 LRV
			Update framework					Update framework					Update framework
.....Presidio Move-in													
.....Kirkland Move-in													
.....Presidio move-in													
.....Potrero move-in.													
.....Presidio move-in													
		Convert swing to LRV storage/back shop											
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.....						Bayshore lease expires						

Shortlisted Scenarios

The Facilities Framework was presented to the SFMTA Executive Team in December 2016. Subsequent direction was to narrow from five scenarios to three: Scenarios 1A and 1B that have smaller new facilities and Scenario 2A that maximizes SFMTA's existing sites. Scenario 1 with the largest New Facility was eliminated because more cost effective alternatives were found for some components. NRV Maintenance will remain at Scott. Enforcement operations will be located at the adjacent 15th Street property (which will be vacated by Animal Care and Control and renovated) and Enforcement fleet will be located at Scott. Training will be located at a rebuilt Potrero. Scenario 2B which uses Kirkland and lease space for swing was eliminated because Scenario 2A which uses MME for swing is preferred.

A comparison of the three SFMTA preferred scenarios starting on page 26 and can be summarized as follows:

- Top line is timing, by calendar year
- First rows are lease expirations and fleet growth beyond 2017 facility capacity which drive facility needs
- Left column and colors indicate the three alternative strategies
- Red numbered dots highlight major decision points (listed on the following page)
- Gray lettered dots highlight possible timing adjustments (listed on the following page)
- Red arrows indicate when 2025 coach fleet needs will be met.

The framework is intended to be a flexible and dynamic tool for ongoing planning based on regularly updated needs, opportunities, and constraints. It envisions the following milestones, decision points, and actions:

2017-2018: Refine Scenarios 1A, 1B and 2A in conjunction with initial EIR and TOD studies, select preferred scenario and begin implementation of first projects.

2019-23: If Scenario 1A/1B design, build and move into New Facility, 15th Street, and MME rail expansion, and start Potrero rebuild. If Scenario 2A design, build and move into 15th Street and MME swing facility and start Potrero design.

2024-29: If Scenario 1A/1B, complete Potrero rebuild as trolley coach facility with larger development component and then rebuild Presidio. If Scenario 2A complete Potrero rebuild as larger motor and trolley coach facility with smaller development component, rebuild Presidio, and then convert MME swing facility to rail expansion and back shop.

2030-2040: All scenarios rebuild Kirkland.

Timing Adjustments

The framework assumes entitlement precedes projects and that projects have six year schedules. For design-bid-build projects this includes one year of pre-design and design procurement, two years of design, one year of permit and bid, and two years of construction. For TOD projects this includes one year of TOD procurement, three years of design and permit, and two years of construction. For smaller design-bid-build projects the duration could be reduced. For the largest TOD projects the duration may need to be increased. As each project scope is refined and procurement method selected, the project schedules should be refined.

Some possible timing adjustments to respond to funding constraints are listed on the following page.

Facility Framework Major Decision Points and Possible Timing Adjustments

Major Decision Points

1 2017

Refine Scenarios 1A, 1B and 2A in conjunction with initial EIR and TOD studies and determine long term approach to Paratransit.

Select a Scenario.

2 2020, 2025, 2030, 2035, 2040

Review and update Facility Framework based on updated agency needs including changes to functions, operational needs, and staff and fleet projections.

Possible Timing Adjustments

A In Scenario 1A/1B rebuilds could be implemented more slowly.

B In Scenario 1A/1B MME track addition could be delayed 4-5 years if turn backs area used to supplement yard storage.

C In all scenarios renovation of 15th St could be delayed if Enforcement leases extended.

D In all scenarios purchase of a Paratransit facility could be delayed if Paratransit leases extended.

Framework Scenario Comparison (See page 25 for red and gray dot notes)

Scenarios	Sites	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Lease /Last Option Expirations			Enforcement Paratransit	Yosemite		Marin						
Fleet in excess of 2016 Facilities					14 Coach 1 LRV					55 Coach 12 LRV		
Fleet & Facility Update		1 Select one Scenario			2 Update					2 Update		
Scenario 1A <ul style="list-style-type: none"> New Coach & Paratransit Facility Scott & 15th St for NRV & Enforcement Use New Facility as swing and rebuild deficient yards A B C D	1. New Facility Coach & Paratransit	Terms/EIR Approval	Design/Permit		Build		Move-In	Potrero Fleet at New Facility			Presidio Fleet at New Facility	
	2. 15th St Enforcement	Swap Bryant & 15th St	Design		Permit/Bid	Build		Move-In				
	3. MME Rail	Pre-Design & Procurement	Design		Permit/Bid	Build		Move-In				
	4. Potrero Trolley & TOD			TOD RFP	Design/Permit			Build		Move-In		
	5. Presidio Trolley & TOD						TOD RFP	Design/Permit			Build	
	6. Kirkland Motor Coach								Pre-Design & Procurement	Design		
		Marin or other lease						Vacate				
Scenario 1B <ul style="list-style-type: none"> New Coach Facility Scott & 15th St for NRV & Enforcement Other for Paratransit Use New Facility as swing and rebuild deficient yards A B C D	1. New Facility Motor Coach	Terms/EIR Approval	Design/Permit		Build		Move-In	Potrero Fleet at New Facility			Presidio Fleet at New Facility	
	2. 15th St Enforcement	Swap Bryant & 15th St	Design		Permit/Bid	Build		Move-In				
	3. MME Rail	Pre-Design & Procurement	Design		Permit/Bid	Build		Move-In				
	4. Potrero Trolley & TOD			TOD RFP	Design/Permit			Build		Move-In		
	5. Presidio Trolley & TOD						TOD RFP	Design/Permit			Build	
	6. Kirkland Motor Coach								Pre-Design & Procurement	Design		
	7. Other Paratransit	Purchase										
	Marin or other lease						Vacate					
Scenario 2A <ul style="list-style-type: none"> Scott & 15th St for NRV & Enforcement Other for Paratransit Use MME as swing and rebuild deficient yards C D	1. 15th St Enforcement	Swap Bryant & 15th St	Design		Permit/Bid	Build		Move-In				
	2. MME Rail & Swing/Shop	Pre-Design & Procurement	Design		Permit/Bid	Build		Move-In	Potrero Fleet at MME			
	3. Potrero Trolley & TOD				TOD RFP	Design/Permit			Build		Move-In	
	4. Presidio Trolley & TOD							TOD RFP	Design/Permit			
	5. Kirkland Motor Coach									Pre-Design & Procurement		
	6. Other Paratransit	Purchase										
		Marin or other lease										

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
					Bayshore								
			62 Coach 46 LRV					87 Coach 46 LRV					120 Coach 46 LRV
			2 Update					2 Update					2 Update
<i>Kirkland Fleet at New Facility</i>													
	Move-In												
	Permit/Bid		Build		Move-In								
<i>Kirkland Fleet at New Facility</i>													
	Move-In												
	Permit/Bid		Build		Move-In								
<i>Presidio Fleet at MME</i>													
		LRV & back shop											
	Build		Move-In										
	Design		Permit/Bid		Build		Move-In						
<i>Kirkland Fleet at Lease</i>													
					Vacate								

Scenarios 1A and 1B

Scenario 1A New Coach & Paratransit Facility	Scenario 1B New Coach Facility
1. New Facility Coach & Paratransit	1. New Facility Coach
2. Scott & 15th St NRV & Enforcement	2. Scott & 15th St NRV & Enforcement
3. MME Rail	3. MME Rail
4. Potrero Trolley, Training & TOD	4. Potrero Trolley, Training & TOD
5. Presidio Trolley & TOD	5. Presidio Trolley & TOD
6. Kirkland Motor Coach	6. Kirkland Motor Coach
<i>Swing: New Facility</i>	7. Other Paratransit
	<i>Swing: New Facility</i>

MME - Add rail in expansion area.
See "Muni Metro East" Section starting on page 106.



Potrero - Rebuild as a trolley coach facility with a couple floors of development above it. See “Potrero” Section starting on page 88.



Presidio - Rebuild as a trolley coach facility with multi-floor development adjacent to it fronting Geary Boulevard. See “Presidio” Section starting on page 94.



Kirkland - Rebuild coach facility. See “Kirkland” Section starting on page 76.



Scenario 2A

Scenario 2A Maximize Existing Sites

1. Scott & 15th St
NRV & Enforcement
2. MME
Rail & Swing/Shop
3. Potrero
Trolley, Training & TOD
4. Presidio
Trolley & TOD
5. Kirkland
Motor Coach
6. Other
Paratransit

Swing: MME & Marin or other lease

MME - Build-out expansion area as a trolley swing facility and convert it to LRV storage and a back shop after rebuilding Potrero and Presidio. See “Muni Metro East” Section starting on page 106.



Potrero - Rebuild as a decked motor and trolley coach facility with a couple partial floors of development above it. See “Potrero” Section starting on page 88.

Presidio - Rebuild as a decked trolley coach facility with multi-floor development adjacent to it fronting Geary Boulevard. See “Presidio” Section starting on page 94.

Kirkland -Rebuild coach facility. See “Kirkland” Section starting on page 76.



Scenario Cost Analysis

Working with SFMTA, the consultant team developed a budget level analysis to compare scenario costs. The estimate for each scenario includes capital, maintenance/tenant improvement, and contingency costs. The estimates are based on the scopes and schedules described in this report. As more information is available, the estimates should be refined and updated.

The estimated cost of the three shortlisted scenarios are:

- Scenario 1A: \$1,170M capital cost / \$1,753M scenario cost
- Scenario 1B: \$1,065M capital cost / \$1,610M scenario cost
- Scenario 2A: \$867M capital cost / \$1,374M scenario cost

The chart on the following page is a comparison of budget level costs of the three shortlisted scenarios. The capital cost/ scenario cost for each scenario are shown in red. The component costs for each scenario are shown in black. The following describes what is included in the costs and their sources.

- **Scenario Cost** includes capital, maintenance/tenant improvement, and contingency costs
- **Capital Costs** include New Facility and other purchase costs, SFMTA project costs and lease savings. TOD Savings are not known at this time and thus not included
- **New Facility Costs** derived by SFMTA based on information from developer; assume purchase over ten years.
- **SFMTA Project Costs** developed by TBD Consultants; include hard and soft costs escalated to mid point of construction

- **Lease Savings** provided by SFMTA; are to 2040
- **Maintenance/Tenant Improvement Costs** include maintenance costs identified in the Facility Condition Assessment and an allowance for tenant improvements.
- **Scenario Contingency** is for EIR, Hazardous Materials Abatement, Unforeseen Conditions, etc

Appendix 5: Framework Cost Analysis starting on page 149 includes cost comparison for all five scenarios included in this report and the supporting back-up materials.

Scenario Cost Comparison Chart

	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M
New Facility	coach \$577M paratransit \$135M	coach \$579M	
MME	rail \$39M	rail \$39M	rail & swing \$136M
Potrero Presidio Kirkland	rebuilds \$419M training \$18M	rebuilds \$419M training \$18M	rebuilds \$687M training \$18M
Scott	NRV \$0 enf parking \$0	NRV \$0 enf parking \$0	NRV \$0 enf parking \$0
15th St <small>(Currently occupied by Animal Care & Control; to be transferred to SFMTA)</small>	enforcement \$23M	enforcement \$23M	enforcement \$23M
Other		paratransit \$30M	paratransit \$30M
Lease Savings	-\$41M	-\$43M	-\$27M

Recommended Next Steps

Facility Framework

Near Term Facility Framework Refinement

To ensure that SFMTA has adequate facilities to house, operate, and maintain its new and growing Transit fleets it must proceed expeditiously. The first steps entail refinement of the shortlisted scenarios in conjunction with the transit oriented development (TOD) study and environmental review (EIR) initial study. By coordinating these efforts SFMTA will be better able to anticipate and mitigate potential negative impacts, and build an understanding of stakeholder issues that could pose obstacles and/or delay progress.

While some framework projects are well suited to individual environmental review, the motor and trolley coach projects may be better suited to a program level EIR. Understanding that Scenarios 1A and 1B entail a developer project, SFMTA could pursue a program level EIR while the New Facility developer pursues its project EIR. In this approach SFMTA's program level EIR would use Scenario 2A as the proposed project, with the developer's New Facility project EIR as a variant.

The following is a list of recommended steps to refine and select the preferred scenario, incorporate TOD, and complete environmental review.

January - March 2017:

- Finalize program and develop building performance criteria for Scenarios 1A and 1B including requirements to use

it as a trolley swing facility while Potrero and Presidio are being rebuilt. Concurrently develop program and planning for a trolley swing facility at MME as needed for Scenario 2A.

- Analyze Paratransit facility options including SFMTA providing a facility or continuing to have vendor provide a facility and select preferred option.
- New Facility developer revise program and concept plans for smaller Scenario 1A with Scenario 1B as an option until SFMTA selects Paratransit approach.
- Issue TOD RFP, select consultant, and finalize contract for at least first TOD site.
- Issue EIR RFP, select consultant, and finalize contract.
- Initiate EIR due diligence studies for Potrero, Presidio, and Kirkland including survey, geotechnical, structural, hazardous materials, historic resource, and transportation and transit.
- Proceed with exchange—through jurisdictional transfer—of 15th Street and Bryant.

April - June 2017

- Complete EIR due diligence studies.
- Establish cash flow and funding parameters (in cooperation with TOD consultant); these can also inform negotiations with New Facility developer.

July-September 2017

- EIR consultant complete initial study and define alternatives for EIR purposes.
- TOD consultant complete opportunities and constraints; incorporate highlights from the technical studies and add findings re: real estate/financial opportunities and constraints as well as guidance on procurement methods, deal structure principles etc.

October - December 2017

- TOD consultant conduct stakeholder outreach, draft recommendations, and report/present findings.
- EIR consultant draft EIR analyze impacts.
- Refine strategy per findings on impacts and mitigations; refine funding/financing analyses; select preferred scenario.

January - June 2018

- Refine implementation strategy for selected scenario.
- EIR consultant draft EIR potential mitigations (where possible, incorporate these into planning assumptions and/or development requirements).

July-September 2018

- EIR consultant complete draft EIR and circulate for mandatory 45 day comment period.
- Select delivery method and deal structure parameters for TOD/Joint Development.
- Issue TOD developer RFQ.

October - December 2018

- Complete final EIR before issuing TOD RFP to pre-qualified TOD developer teams.
- Issue TOD developer RFP, select team, and finalize contract

Long Term Facility Framework Updates

Some of the needs that drive the Facility Framework, such as staff and fleet sizes, will change over time. Thus a periodic “refresh” of the Framework will be needed. When the SFMTA *Transit Fleet Management Plan* is updated (approximately every five years), the Framework document should also be updated, including the Staff and Fleet data in Appendix 1 and the current and future use of each facility in Appendix 3. Given the difficulty in securing large sites suitable for SFMTA’s needs, updates should aim to optimize the use of each site including consideration for building multi-level facilities for SFMTA use or for SFMTA and other uses.

Maintenance

Refine the Facility Condition Assessment priority list to update the Capital Improvement Plan and “bundle” related work into campaigns such as Roof and Fire/Life Safety.

Facility Management

The Organizational Assessment recommended a more proactive approach to managing SFMTA facilities. Recommended measures include:

- Assemble as-built drawings and related information in a convenient, user-friendly inventory/index and scalable

CAD files for both owned and leased space.

- Compile data on age and condition of buildings and major equipment, and history of work orders and renovations, building upon the initial data in Facility Condition Assessments
- Maintain lease inventory highlighting upcoming expirations and describing responsibilities of SFMTA and landlord for facility maintenance and operational budgeting
- Develop an accurate inventory of current staffing- actual and authorized FTE, by division and work location
- Manage NRV inventory in a form usable for space planning and “greening” the fleet over time (e.g. tracking number, types and age of vehicles by division and location)
- Establish processes and roles accountable for creating and maintaining this data

inventory and records management.

- Encourage sharing of support spaces and shops. One notable opportunity is coordinated planning and centralized management of meeting, conference and various types of Training, which are currently “siloes” and managed by different groups. Another opportunity is consolidation of rail shops at Green and street shops at Pennsylvania.

Space Utilization

SFMTA should plan to better utilize owned space and reduce leased space. Recommended measures include:

- Utilize new staff workspace standards, including modular, flexible universal plan layout and alternative officing for field-oriented employees. Consider potential for “virtual teams” and satellite locations for appropriate groups e.g. IT and some financial functions.
- Utilize new fleet facility standards and ratios, consolidate shop functions and reduce storage following best practices for various fleet needs.
- Minimize excess storage; reinforce policies for efficient

Appendix 1: Staff and Fleet Data

Agency

The San Francisco Municipal Transportation Agency (SFMTA) was formed in 1999 when the Municipal Railway (Muni) and the Department of Parking and Traffic (DPT) merged. Today SFMTA is an integrated transportation agency that oversees public transit, paratransit, and taxi service, and the networks for walking, bicycling, driving, and parking. It's vision, mission, core transit values, and strategic goals as described in its *FY 2013-FY2018 Strategic Plan* are:

Vision

- San Francisco: great city, excellent transportation choices.

Mission

- We work together to plan, build, operate, regulate, and maintain the transportation network, with our partners, to connect communities.

Strategic Goals

- Create a safer transportation experience for everyone
- Make transit, walking, bicycling, taxi, ridesharing and car-sharing the preferred means of travel
- Improve the environment and quality of life in San Francisco
- Create a collaborative environment to support delivery of outstanding service

Core Values for Transportation Network

- Transit First: Transit, walking, bicycling, taxi, carsharing, and ridesharing have the highest priority.
- Complete and Green Streets: Streets are designed and managed to be attractive, inviting public spaces for people
- Green, Clean, and Quiet Mobility: Use the greenest, most efficient, and quietest technologies available
- Social Equity and Access: Prioritize the most affordable and accessible modes



Photograph by IDEO



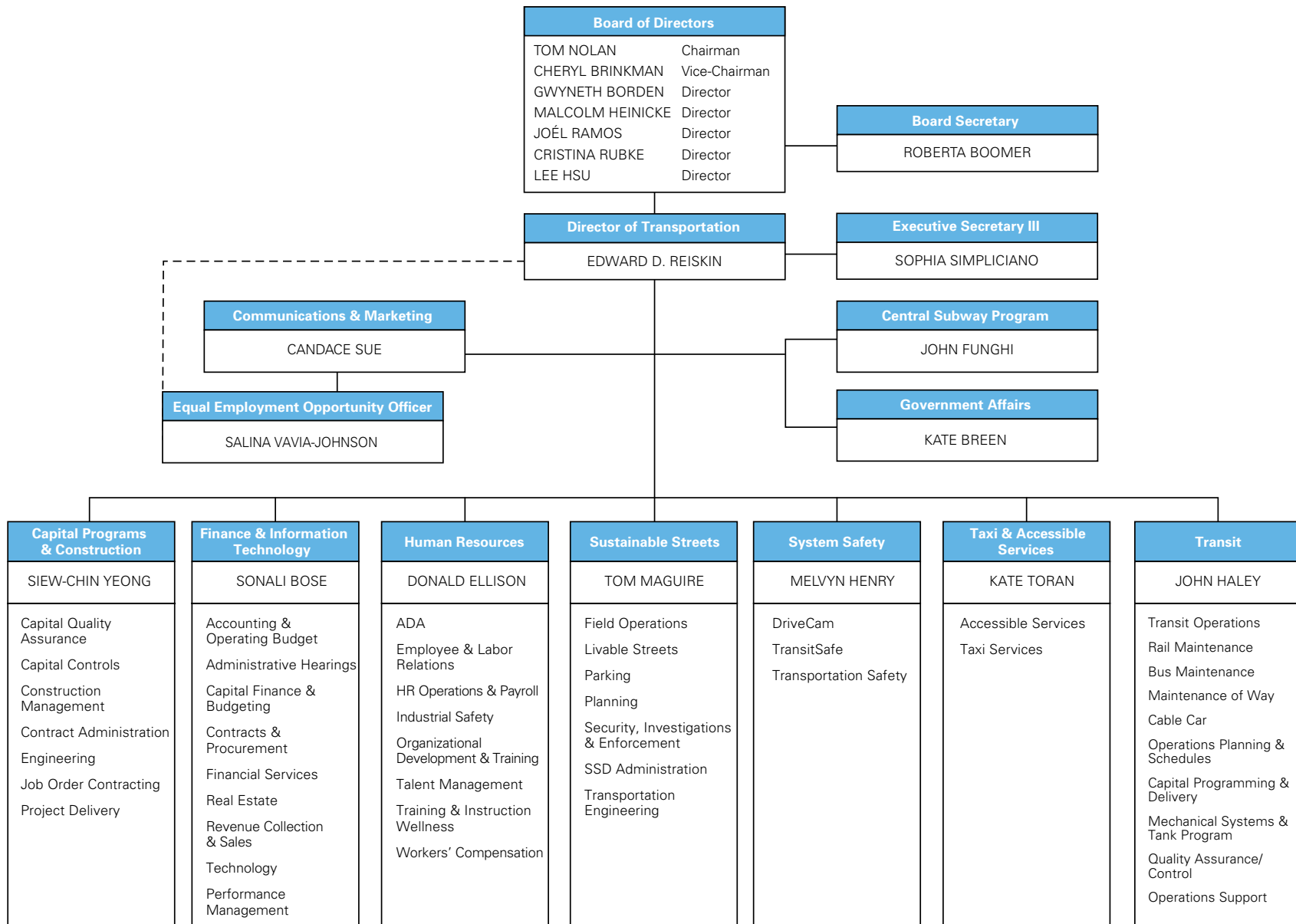
Photograph by SFMTA

Staff

As described in the *SFMTA Short Range Transit Plan Fiscal Year 2015-2030* SFMTA has seven divisions and approximately 5,300 staff.

Division	Description	2015
	Board of Directors, Executive Director, Chief of Staff, Communications, Government Affairs	84
Capital Programs & Construction	Designs and delivers large-scale engineering and construction projects.	159
Finance & Information Technology	Manages finances, collecting fare revenues, leveraging information technology and utilizing resources to maximize SFMTA's financial, technological, and physical ability and capacity	368
Human Resources	Provides recruitment, hiring, employment and labor relations, payroll, organizational development and training, employee wellness, equal employment opportunity, and workers' compensation	76
System Safety	Maintains records for collisions, incidents and hazards; conducts internal safety audits and vehicle safety reviews; develops corrective action plans; and performs inspections and mandated safety certifications	94
Sustainable Streets	Provides transportation planning and engineering. Also manages parking facilities, enforces parking regulations and compliance of transit fare payment	693
Taxis & Accessible Access	Manages taxis and paratransit and SFMTA's American with Disabilities compliance	29
Transit	Provides public transit and maintains the fleet, facilities, and infrastructure.	3802
Total		5,305

SFMTA Organization Chart



Transit Fleets

The San Francisco County Transportation Authority (SFCTA) developed ridership projection based on housing and employment projections. SFCTA projects about a 40% increase in ridership from 700,000 daily transit boardings in 2014 to 1,000,000 in 2040. SFMTA developed its *2014 Transit Fleet Management Plan* based on the ridership projection. The following summarizes the current and projected ridership and planning for the SFMTA public transit fleet and the table on the following page shows the projected fleet every five years through 2040.

Motor Coach Fleet (bio-diesel or hybrid bus)

- Currently carries about 40% of the system's riders on routes throughout the city
- Ridership expected to increase especially on routes serving major developments and the eastern portion of the city
- SFMTA plans to switch from 40' to 60' coaches, increase number of coaches on existing routes and add new routes

Contingency Motor Coach Fleet (reserve fleet)

- Used for special events, trolley and rail renovations, and driver training
- SFMTA plans to increase the contingency fleet

Trolley Coach Fleet (electric trolley bus)

- Currently carries about 30% of the system's riders on routes mostly in the northern portion of the city
- Ridership expected to increase moderately
- SFMTA plans to switch from 40' to 60' trolley coaches and make minor line modifications and extensions

Light Rail Vehicle Fleet (LRV)

- Currently carries about 20% of the system's riders on six lines
- Ridership expected to increase due to Third Street Central Subway extension, M Line extension to Parkmerced, and increased demand
- SFMTA plans to add trains including some with three cars as well as typical two cars

Historic Street Car Fleet

- Currently carries passengers on two lines

Cable Car Fleet

- Currently carries passengers on three lines
- SFMTA plans no changes

Motor Coach, Trolley Coach, Cable Car, Street Car and Light Rail Vehicle Projections

	2015						2020						2025						2030						2035						2040						
MOTOR	30'	40'	60'	Total	S	B	30'	40'	60'	Total	S	B	30'	40'	60'	Total	S	B	30'	40'	60'	Total	S	B	30'	40'	60'	Total	S	B	30'	40'	60'	Total	S	B	
Operating Fleet	30	323	124				26	312	224				26	312	259				26	301	266				26	296	291				26	282	324				
Contingency Fleet		40						50						50						50						50						50					
Historic Fleet	4	18	2	24			4	18	2	24			4	18	2	24			4	18	2	24			4	18	2	24			4	18	2	24			
Fleet Plan	34	381	126	541			30	380	226	636			30	380	261	671			30	369	268	667			30	364	293	687			30	350	326	706			

TROLLEY	40'	60'	S	B	40'	60'	S	B	40'	60'	S	B	40'	60'	S	B	40'	60'	S	B	40'	60'	S	B
Fleet Plan	240	93	333		175	105	280		175	105	280		175	105	280		190	110	300		190	110	300	

RAIL	30'	50'	75'	S	B	30'	50'	75'	S	B	30'	50'	75'	S	B	30'	50'	75'	S	B	30'	50'	75'	S	B	30'	50'	75'	S	B					
Cable Car	40					40					40					40					40					40									
Historic & Milan		17					17					17					17					17					17								
PCC Street Car		32					32					32					32					32					32								
Not in Use		41					41					41					41					41					41								
Light Rail Vehicle			151					215					226					260					260					260							
Fleet Plan	40	90	151	281	0	0	40	90	215	345		40	90	226	356		40	90	260	390		40	90	260	390		40	90	260	390					

LEGEND

- 30' Small Motor Coach or Cable Car
- 40' Standard Motor or Trolley Coach
- 50' Historic Street Car (lengths vary)
- 60' Articulated Motor or Trolley Coach
- 75' Light Rail Vehicle
- S Service (Maintenance or Repair) Bay
- B Body or Paint Bay

Paratransit Fleet Projection

As described in the *SFMTA Short Range Transit Plan Fiscal Year 2015-2030*, SFMTA currently has 88 Paratransit vehicles and is procuring an additional 35 vehicles for a total of 123 vehicles. The *2014 SFMTA Transit Fleet Management Plan* did not include projections for the Paratransit fleet, however SFMTA staff planning for the Paratransit fleet to grow from 123 vehicles in 2015 to 160 vehicles in 2040.

Transit Fleet Growth and Facility Capacity Analysis

SFMTA developed its *2014 Transit Fleet Management Plan* based on the San Francisco County Transportation Authority (SFCTA) projection of a 40% increase in ridership from 2014 to 2040. The fleet plan projects a 30% increase in motor and trolley coaches from 2014 to 2040 with more than half the growth occurring by 2030. The fleet plan also projects a 75% increase in light rail vehicles with all the growth occurring by 2030.

The *Vision Report* identified that SFMTA's three oldest transit facilities—Potrero, Presidio and Kirkland—are functionally and physically deficient and need to be rebuilt. The impacts of the fleet growth and facility rebuilds need to be understood.

The fleet plan and facility capacity tables on the following pages summarize how the transit fleets can be accommodated during the next 25 years for a baseline demand to accommodate fleet growth and several scenarios for accommodating that growth while rebuilding SFMTA's three oldest transit facilities.

Assumptions

- Fleet plan data is based on the *2014 Transit Fleet Management Plan*, the *2015 Short Range Transit Plan* and staff data on the historic motor coach fleet
- The 2014 Fleet Plan is fully implemented
- Old coaches are retired as new ones are added to the fleet
- Potrero, Presidio, and Kirkland are rebuilt by 2040 and may include TOD

- Kirkland capacity assumption should allow for a possible subway stop on site
- One maintenance bay is needed for every 10 coaches/light rail vehicles
- Coaches in acceptance program prior to incorporation into fleet not included
- Facility capacity includes yard parking lanes/tracks and maintenance bays as well as some parking in circulation lanes/tracks

Baseline Analysis

Transit plans to use Muni Metro East as the primary light rail vehicle facility, Green for light rail vehicles and PCC street cars, and Cameron Beach for historic street cars. Muni Metro East has space to add track for the additional light rail vehicle storage needed to accommodate the fleet growth.

If all motor and trolley coach facilities remain in use without closure for rebuilding, the 2040 demand would be (120) 60' motor coaches (Table 1 on page 48).

Scenario 1/1A/1B Analysis

Scenario 1/1A/1B assume that the potential New Facility serves as "swing space" to make up lost capacity while rebuilding the old coach facilities.

The analysis estimates the required size of the potential New Facility (number of motor coaches) based on rebuilding options. The demand is 220 when accounting for the impacts of rebuilding Potrero, Presidio and Kirkland between 2025-2035. (Table 2 on page 49).

Scenario 2A Analysis

Scenario 2A assumes that Muni Metro East expansion area serves as “swing space” to make up lost capacity while rebuilding the old facilities.

The analysis assumes that the rebuilds occur before the Muni Metro East expansion area is needed for rail growth and estimates the required size of the Potrero, Presidio and Kirkland Facilities (number of motor and trolley coaches) to accommodate both the trolley fleet and motor coach growth (Table 3 on page 50).

Scenario 2B Analysis

Scenario 2B assumes that Kirkland and a leased yard such as Marin serves as “swing space” to make up lost capacity while rebuilding the old facilities.

The analysis estimates the required size of the Potrero, Presidio, and Kirkland Facilities (number of motor and trolley coaches) to accommodate both the trolley fleet and motor coach growth (Table 4 on page 51).

Non-Revenue Vehicle Fleet

As described in the *SFMTA Short Range Transit Plan Fiscal Year 2015-2030* SFMTA currently has the following non-revenue vehicles

Administration		29
Capital Programs and Construction		15
Buildings and Grounds, Custodial		16
Sustainable Streets Pool		14
Sustainable Streets Shops		133
Enforcement	Go-4	273
Enforcement, Investigations, Security, Proof of Payment, Taxi Investigations, System Safety, Revenue and Collections		99
Transit Operations Pool & Street Operations		106
Transit Overhead Lines & Track Maintenance	Heavy Duty, Freight	67
Transit Operations Heavy Duty	Sweeper, Tanker, Freight, Cargo, Etc	127
Total		879

Of the total current NRV fleet, approximately 22% are more than 20 years old. Given the City’s interest in “greening” its fleets, SFMTA plans to review its NRV fleet with an eye to fewer newer, more fuel-efficient and/or alternative fuel vehicles.



MARKET



EXCEPT FOR MUNICIPAL VEHICLES

Overhead Lines Repair

Appendix 2: Framework Standards

Staff and Fleet Space Planning Standards

The following Framework Staff and Fleet Planning Standards were derived from WSP Parsons Brinckerhoff's 2016 peer review of the program for the potential New Facility (Scenario 1) and SFMTA's draft Workplace Policy. The standards include standards for:

- Office and Bench Shop Staff
- Office Support
- Meeting and Training
- Operator and Mechanic Staff
- Vehicle Maintenance, Fuel, and Wash
- Vehicle Staging

These standards along with the peer review program for the potential New Facility were used to develop preliminary programs for the alternate scenarios. As specific projects are developed detailed programs will need to be developed.

- Motor and Trolley Coach Facilities
See Potrero Section starting on page 88 for preliminary programs and test fits for rebuilding Potrero in Scenario 1/1A/1B and Scenario 2A/2B.

See Presidio Section starting on page 94 for preliminary programs and test fits for rebuilding Presidio in Scenario 1/1A/1B and Scenario 2A/2B.

See "Kirkland" Section starting on page 76 for preliminary program and test fits for rebuilding Kirkland in Scenario 1/1A/1B/2A and Scenario 2B.

- Paratransit Operations & Maintenance Facility
See Paratransit Section starting on "Paratransit" Section starting on page 110 for preliminary program for a Paratransit Facility.
- Training Facility
See Bayshore Section starting on page 114 or preliminary program and planning study for a Training Facility. Although the preliminary test fit is for Bayshore, the current Facility Framework scenarios include it at Potrero.
- Enforcement Facility
See Scott Section starting on page 130 for preliminary program and test fit for an Enforcement Facility at Scott and the adjoining building at 1200 15th St.



Framework Planning Standards

FUNCTION	DIMENSIONS	AREA (SF)	HEIGHT	RATIO	NOTES
OFFICE AND BENCH STAFF					
Division Director or Superintendent	14' x 16'	224			Enclosed office with small table and 4 chairs
Manager	10' x 12'	120			Enclosed office with 2 guest chairs
Supervisor or staff who spend most of the day at their desk	8' x 8'	64			Open office (Workstation)
Administrative Assistant/ Clerical	6' x 6'	36			Open Office (Workstation)
Hoteling or Intern	5' x 6'	30			Open Office (Workstation)
Bench Staff	10' x 8'	80			Work bench, side table, tool box
SUPPORT					
Lobby	10' x 12'	120			Small lobby with seating for 3-4
Copy/Supply Room	10' x 12'	120			
File Room	10' x 12'	120			
Kitchenette	10' x 12'	120			
MEETING AND TRAINING					
Small Conference	10' x 12'	120			For 4-6 people
Medium Conference	12' x 20'	240			For 10-12 people
Large Conference	15' x 24'	360			For 14-16 people
Training	20' x 30'	600			For 50 people
Specialized Training	20' x 36'	720			Training tables or other equipment
OPERATOR AND MECHANIC STAFF					
Mechanic Locker Room		6.5 sf/locker			12" w x 18" d x full height locker
Operator Locker Room		3.25 sf/locker			12" w x 18" d x half height locker
Office Staff Locker Alcove		2 sf/locker			12" w x 12" d x third height locker
Kitchenette/Vending Room		375-525			Varies with fleet size
Break/Lunch Room		25 sf/person			Varies with fleet size
Single Occupant Restroom	8' x 8'	64			Accessible
Single Occupant Restrm/Shower	10' x 11'	110			Accessible with a couple lockers
BUS MAINTENANCE, FUEL AND WASH, & STAGING					
Maintenance					

Framework Planning Standards

FUNCTION	DIMENSIONS	AREA (SF)	HEIGHT	RATIO	NOTES
Preventive, Running, Brake and Tire Bay	20' x 55' for 40' 20' x 75' for 60'	1,100 for 40' 1,500 for 60'	19'	1 per 10 buses	
Chassis Wash (Steam Clean) Bay	25' x 55' for 40' 25' x 75' for 60'	1,375 for 40' 1,875 for 60'	19'		
Parts Storeroom		20-30 sf/bus			
Fuel and Wash					
Fuel Position	20' x 60' for 40' 20' x 80' for 60'	1,200 for 40' 1,600 for 60'	16'	1 per 75 buses	Motor coach only
Bus Washer	20' x 60' for 40' 20' x 80' for 60'	1,200 for 40' 1,600 for 60'	16'	1 per 75 - 150 buses	1/75 if paired with fuel, 1/150 if not
Detailed Cleaning			16'	1 per 40 buses	Designated parking lane along wall
Staging and Vehicle Circulation					
Staging Lanes	12' x 45' for 40' 12' x 65' for 60'	540 for 40' 780 for 60'	14' motor 19' trolley		Although 14' wide lanes becoming more common, 12' lanes have been industry standard & typical at SFMTA
Aisles for 90 degree turns	65' wide		14' m, 19' t		Planning for 70' allows for bollards, curbs and structural creep
Bypass Lane (no turn)			14' m, 19' t		
Vehicle Access to Bay	20' x 70'	1,400	14' m, 19' t		Back-in access
Vehicle Access to Fuel/Wash	20' x 70' x 2	2,800	14' m, 19' t		Drive thru access
Two Way Bus Ramp	28'-30' wide		14' m, 19' t		10% slope with 60' long 6% transition slope at the top and bottom
NON-REVENUE VEHICLE MAINTENANCE AND STAGING					
Maintenance					
Heavy Vehicle Maintenance Bay	20' x 50'	1,000	19'	1 per 15-30 vehicles	varies with vehicle mix
Light Vehicle Maintenance Bay	20' x 35'	700	19'	1 per 60 vehicles	

Framework Planning Standards

FUNCTION	DIMENSIONS	AREA (SF)	HEIGHT	RATIO	NOTES
Chassis Wash (Steam Clean) Bay	25' x 50'	1,250			
Staging and Vehicle Circulation					
Heavy Vehicle	12' x 30'	360	14'	10 % of fleet	
Light Vehicle	9' x 18'	162	14'	10 % of fleet	
Aisles for 90 degree turns	35' wide		14'		
Vehicle Access to Bay	20' x 35'	700	14'		Back-in access
PARATRANSIT MAINTENANCE AND STAGING					
Maintenance					
Maintenance Bay	20' x 40'	800	19'		7 bays for 160 vehicles
Staging and Vehicle Circulation					
Cutaway Staging Lanes	12' x 27''	324	14'		Although 14' wide lanes becoming more common, 12' lanes have been industry standard & typical at SFMTA
Van Staging	9' x 18'	162			
Aisles for 90 degree turns	35' wide				
Vehicle Access to Bay	20' x 35'	700			Back-in access
ENFORCEMENT STAGING					
Staging and Vehicle Circulation					
PCO Vehicles	varies with type				Go-4, Smart Car, Fire Fly or equivalent
Cars and Trucks	9' x 18'	162			
Aisles for double loaded stall parking	24' wide				



Potrero Bancroft, Presidio, 505 7th Street

Appendix 3: Facility Data and Studies

Map

SFMTA has facilities for its administration, transit fleets, streets, support, and enforcement functions. For clarity the facilities are grouped by function and typically referred to by their street names in the list below and throughout the report.



Administration

South Van Ness - *1/11 South Van Ness Avenue*
Market (Transit Management) - *1455 Market St*



Motor Coach

Flynn - *1940 Harrison St*
Islais Creek - *1301 Cesar Chavez St*
Kirkland - *2301 Stockton St and 151 Beach St*
Woods - *1095 Indiana St*



Trolley Coach

Potrero - *2500 Mariposa St*
Presidio - *949 Presidio Ave*

Rail



Cable Car Barn - *1201 Mason St*
Cameron Beach - *2301 San Jose Ave*
Green & Annex - *San Jose Ave 425 Geneva Ave*
Muni Metro East- *601 25th St*



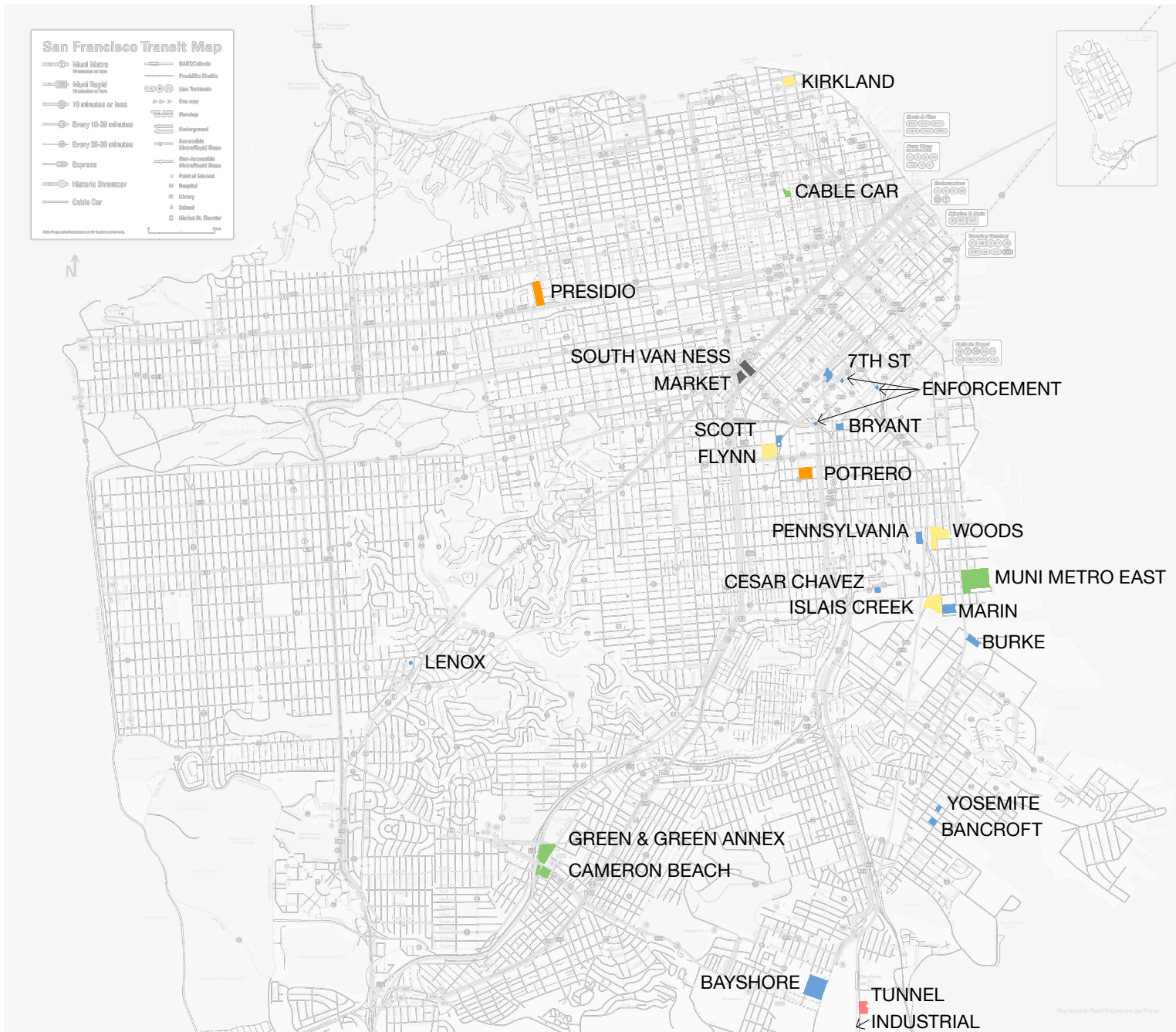
Paratransit (Vendor)

Tunnel - *575 Tunnel Ave, Brisbane*
Industrial - *290 Industrial Way, Brisbane*



Streets, Support and Enforcement

Bancroft (Sign & Meter) - *1508 Bancroft Ave*
Bayshore (Tow & Signal)- *2650 Bayshore, Daly City*
Bryant (Overhead Lines)- *1401 Bryant St*
Burke (Warehouse)- *1570/1580 Burke Ave*
Lenox (Transit Control) - *131 Lenox Way*
Marin (Swing Space) - *1399 Marin St*
Market (Transit Management) - *1455 Market St*
Pennsylvania (Offices & Shops) - *700 Pennsylvania Ave*
Scott (NRV Maintenance) - *1849 Harrison St*
Yosemite (Paint & NRV Parking) - *1528 Yosemite Ave*
Enforcement
 505 7th Street (Office)
 571 10th Street (Parking)
 6th and Townsend (Parking)
 2323 Cesar Chavez Street (Parking)
7th Street (Tow)



Facility Needs, Opportunities and Use

Facility	Current Use	Space Needs and Opportunities	2040 Use
Administration			
South Van Ness <i>1/11 South Van Ness Avenue</i>	Headquarters	SFMTA implementing plan to improve adjacencies, workspace and capacity	Headquarters
Market <i>1455 Market Street</i>	Transit Operations Management	SFMTA implementing plan to optimize use Lease expires September 2023, SFMTA has (2) 10 year extension options	Transit Operations Management
Motor Coach			
Flynn <i>1940 Harrison Street</i>	Motor Coach Facility		Motor Coach Facility
Islais Creek <i>1301 Cesar Chavez Street</i>	Motor Coach Yard	Limited use until maintenance & operations building completed in 2017	Motor Coach Facility
Kirkland <i>2301 Stockton/151 Beach</i>	Motor Coach Facility with limited service	Rebuild possibly with subway station and/or TOD	Rebuilt Motor Coach Facility possibly with subway station and TOD
Woods <i>1095 Indiana Street</i>	Motor Coach Facility, Kirkland Service Motor & Trolley Component Rebuild	Potential to deck yard for fleet needs	Motor Coach Facility Motor & Trolley Component Rebuild
Potential New Facility	NA	Potential new mixed-use facility	Coach, Paratransit, NRV, Enforcement & Training Facility, or Coach & Paratransit Facility, Coach Facility, or no new facility
Trolley Coach			
Potrero <i>2500 Mariposa Street</i>	Trolley Coach Facility	Potential to rebuild with TOD or rebuild decked for Trolley & Motor Coach with TOD	Rebuilt Trolley Coach /TOD Facility if New Facility, or rebuilt decked Trolley & Motor Coach /TOD Facility if no New Facility
Presidio <i>949 Presidio Avenue</i>	Trolley Coach Facility	Potential to rebuild as trolley coach facility with TOD or rebuild decked with TOD	Rebuilt Trolley Coach TOD Facility if new facility, or rebuilt decked Trolley Coach TOD Facility if no New Facility
Rail			
Cable Car Barn <i>1201 Mason Street</i>	Cable Car Facility Museum		Cable Car Facility Museum
Cameron Beach <i>2301 San Jose</i>	Street Car Body & Paint Light rail vehicle yard	Underutilized. Evaluate using for street car restoration and one-offs storage	Historic Street Car Facility Restoration and Storage
Green <i>2200 San Jose Avenue</i>	Light Rail Vehicle Facility Street Car Restoration Rail Component Rebuild	Underutilized. Evaluate consolidating rail shops/component rebuild for efficiency and to increase LRV storage capacity	PCC Street Car and Light Rail Facility Rail Shops and Component Rebuild

Note: This table summarizes the consultant team's assessment of the major space needs and opportunities for each facility.

Facility Needs, Opportunities and Use

Facility	Current Use	Space Needs and Opportunities	2040 Use
Green Annex 425 Geneva Avenue	Maintenance & Operation Offices Electronic and Radio Shops	Underutilized. Evaluate consolidating functions to better use space.	Maintenance & Operation Offices Electronic and other Shop(s)
Muni Metro East 601 25th Street	Light Rail & Street Car Facility	Potential to use expansion area for trolley swing & then expanded rail yard & back shop.	Light Rail Facility Expanded LRV storage or, coach swing then expanded LRV storage & back shop
Paratransit			
Paratransit Vendor Lease	SFMTA Paratransit Fleet Operations and Maintenance	Evaluate SFMTA providing or Vendor continuing to provide facility	SFMTA provide facility or vendor continue to provide facility
Streets & Support			
Bancroft 1508 Bancroft Avenue	Sign, Temporary Sign & Meter Shops	Underutilized; evaluate sharing.	Sign, Temporary Sign & Meter Shops and possibly other use
Bayshore 2650 Bayshore, Daily City	Tow Traffic Signal Shop and Video Shop Central Subway Project Office Vacant Space	Underutilized. SFMTA adding bench shop; potential to add more offices or training <i>Lease expires in 2032, SFMTA has option to negotiate purchase</i>	Tow, Traffic Signal Shop, Bench Shop, Offices or possibly training
Bryant 1401 Bryant Street	Overhead Lines Repair	Underutilized. SFMTA plans to move Overhead Lines Repair to Burke.	Vacate
Burke 1570/1580 Burke Avenue	Warehouse	Inefficient. SFMTA renovating for Warehouse and Overhead Lines Repair	Warehouse and Overhead Lines Repair
Lenox 131 Lenox Way	Transit Control		Back-Up Transit Control
Marin 1399 Marin Street	Motor Coach Acceptance Facility Rail Tack Shop, Street Car Storage	Evaluate moving Street Cars to Cameron Beach. <i>Lease expires 2021</i>	Vacate when move to New Facility or when rebuilds complete if no New Facility
Pennsylvania 700 Pennsylvania Avenue	Buildings & Grounds Offices, and Carpentry, Electric, Machine Shops	Evaluate moving Cable Car machine shop to Green & Yosemite B&G Paint to Penn.	Buildings & Grounds Offices Carpentry, Electric, Machine Shops
Scott 1849 Harrison Street	Non Revenue Vehicle Maintenance Staff Parking	Underutilized. Potential to use for NRV Maintenance and Enforcement Parking	Vacate if New Multi-Modal Facility; use for NRV & Enf Parking if no New Facility
Yosemite 1528 Yosemite Avenue	Paint Shop Non Revenue Vehicle Parking	<i>Lease expires 2019, SFMTA has option to purchase or extend 18 months</i>	Paint Shop Non Revenue Vehicle Parking
Enforcement 505 7th St, 571 10th St 6th & Townsend 2323 Cesar Chavez	Enforcement Office Enforcement Vehicle Parking	Potential to consolidate Enforcement at New Facility or 15th Street and Scott	Vacate
Operator Driving Training Various Short Leases	New Operator Training New Fleet Operator Training	Typically 6-8 one week leases per year, more when fleet growth and/or new fleet	Secure leases as needed

Note: This table summarizes the consultant team's assessment of the major space needs and opportunities for each facility.

South Van Ness

One South Van Ness
Floors B, 3, 6, 7 & 8
CCSF Owned
SFMTA area: 225,000 sf

Current Use

Headquarters
~ 920 capacity

Vision Observations

NA

Vision Recommendations

NA

SFMTA Subsequent Needs and Planning

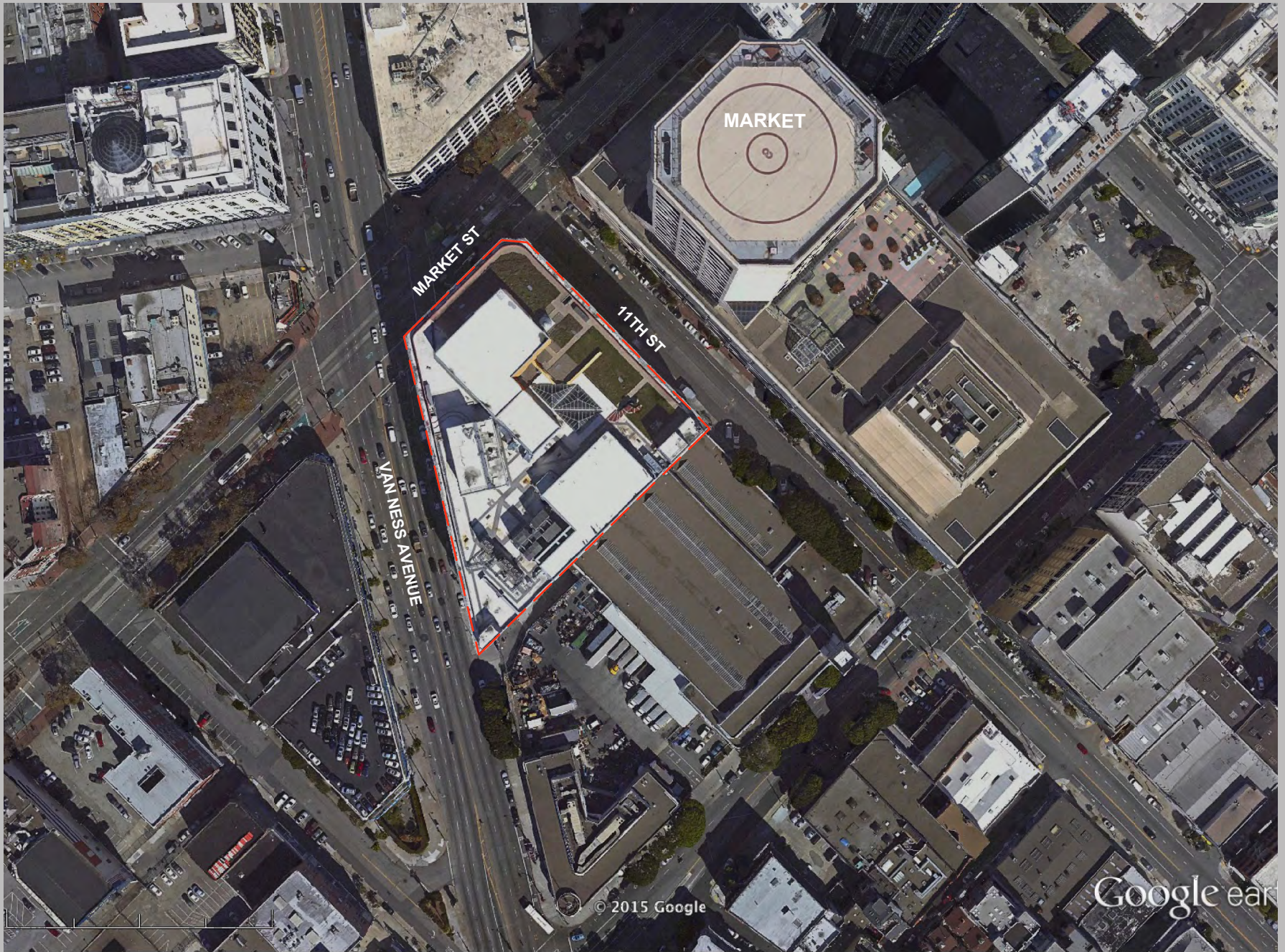
- *SFMTA & SFPW implementing plan to standardize workspace assignments, improve adjacencies and optimize use of space*

2016 Observations

- *Evaluate using vacant and underutilized space at Bayshore and Green Annex for additional office space.*

2040 Use

Headquarters
~1040 seat capacity



Market

1455 Market Street
Leased suite and locker room
Lease expires September
2023, has (2) 10 year options
Suite:38,900 sf Locker 700sf

Current Use

Transit Management Center
~40 capacity

Vision Condition Notes

NA

Vision Recommendations

- *SFMTA plans to consolidate control and communications for transit, parking enforcement and tow and security*

SFMTA Subsequent Needs and Planning

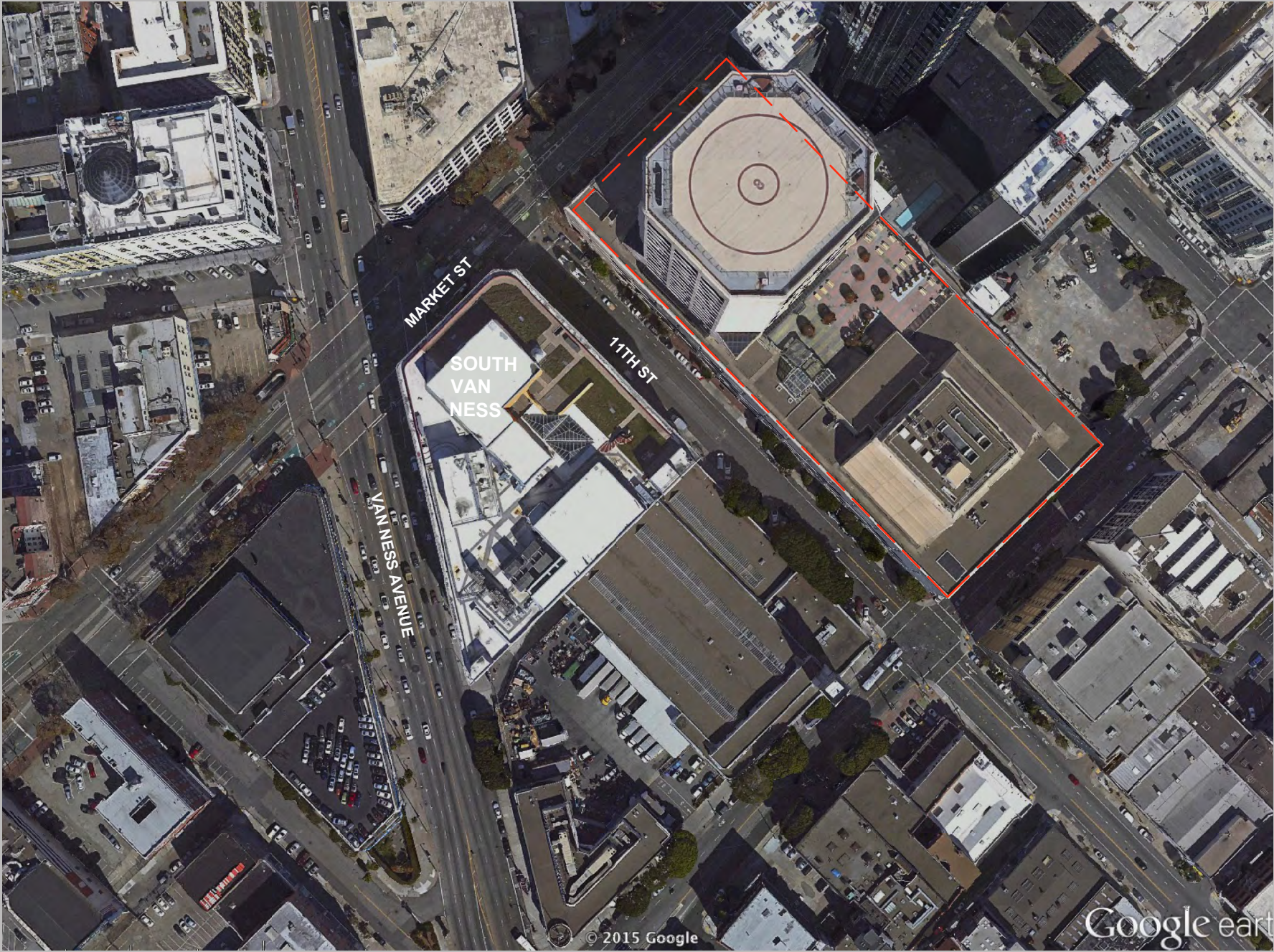
- *SFMTA & SFPW implementing plan to standardize workspace assignments, improve adjacencies and optimize use of space*

2016 Observations

- **Lease expires September 2023, SFMTA has (2) 10 year extension options**

2040 Use

Transit Management Center
~65 capacity



Flynn

1940 Harrison Street

SFMTA owns

Site: 6.2 acres

Building: 266,000 sf

Built: 1941

SFMTA: 1989

Current Use

Motor Coach Facility

(126) 60' motor coaches

(11) maintenance bays

light body repair

tire shop across the street

Vision Observations

- *Only SFMTA 60' motor coach facility*
- *Crowded*

Vision Recommendations

- *Electrify to use as swing facility for Presidio and Potrero renovations*

SFMTA Subsequent Needs and Planning

- *Considered best motor coach facility*
- *Prefer not to electrify Flynn for swing*

2016 Observations

- *Renovating maintenance office and parts could provide better work and storage space*

2040 Use Scenario

1/1A/1B/2B

Motor Coach Facility

(113) 60' motor coaches

(11) maintenance bays

light body repair

tire shop across the street

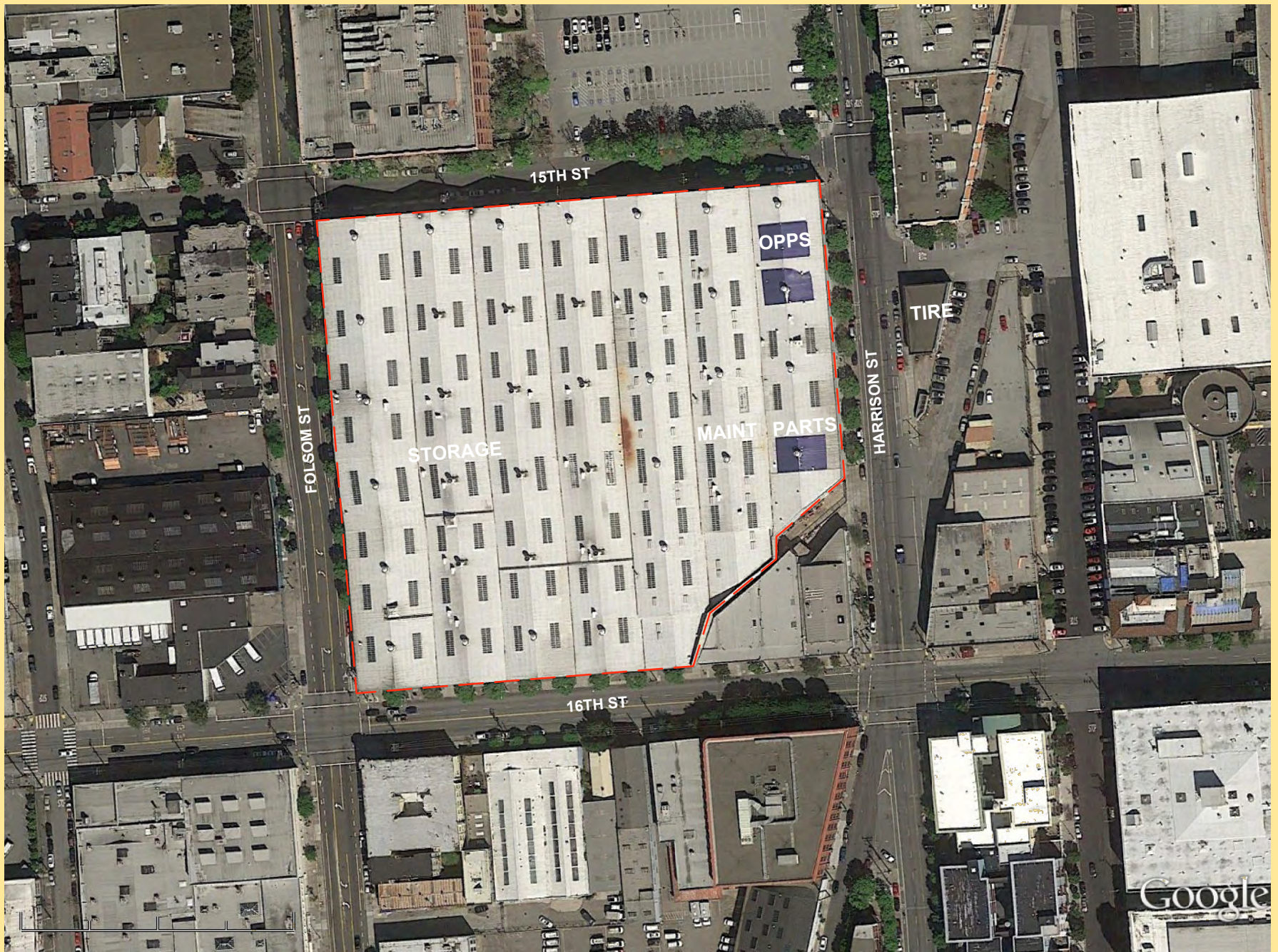
2040 Use Scenario 2A

(119) 60' motor coaches

(11) maintenance bays

light body repair

tire shop across the street



Islais Creek

1301 Cesar Chavez

SFMTA owns portion, is buying portion and leases portion from Caltrans

Site: 8.3 acres plus 0.3 acres open space along water

Phase One: 18,200 sf, 2012

Phase Two: 65,000 sf, 2017

Current Use

Motor Coach Facility
(34) 40' motor coaches

Vision Observations

- *Phase two under construction*

Vision Recommendations

- *Various design recommendations*

SFMTA Subsequent Needs and Planning

- *Maintenance and operations building under construction; currently using temporary operations facilities at Islais Creek, and service at Flynn & Woods.*

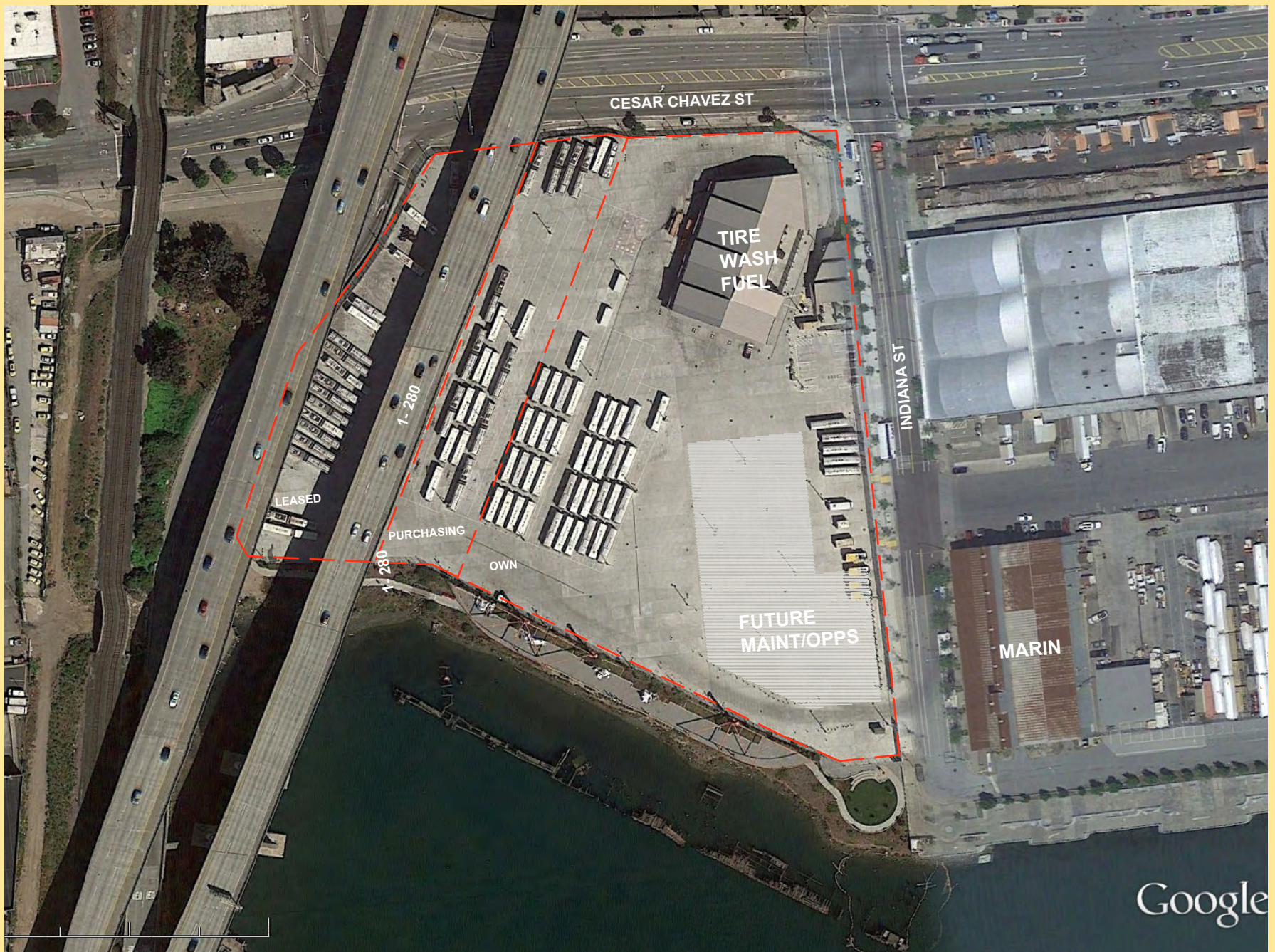
2040 Use Scenario

1/1A/1B/2B

Motor Coach Facility
(82) 40' motor coaches
(82) 60' motor coaches
(16) maintenance bays

2040 Use Scenario 2A

Motor Coach Facility
(51) 40' motor coaches
(96) 60' motor coaches
(16) maintenance bays



Google

Kirkland

2301 Stockton Street
and 151 Beach Street
SFMTA owns
Site: 2.6 acres
Buildings: 13,200 sf
Opened: 1950

Current Use

Motor Coach Facility

(135) 40' motor coaches
(3) maintenance pits

Vision Observations

- *Crowded*
- *Limited service capacity; heavy repair done at Woods*

Vision Recommendations

- *Rebuild with adequate service bays*

SFMTA Subsequent Needs and Planning

- *Possible subway station location if Central Subway is extended to Fisherman's Wharf*

2016 Observations

- *Potential to rebuild motor coach facility with subway station and /or TOD.*

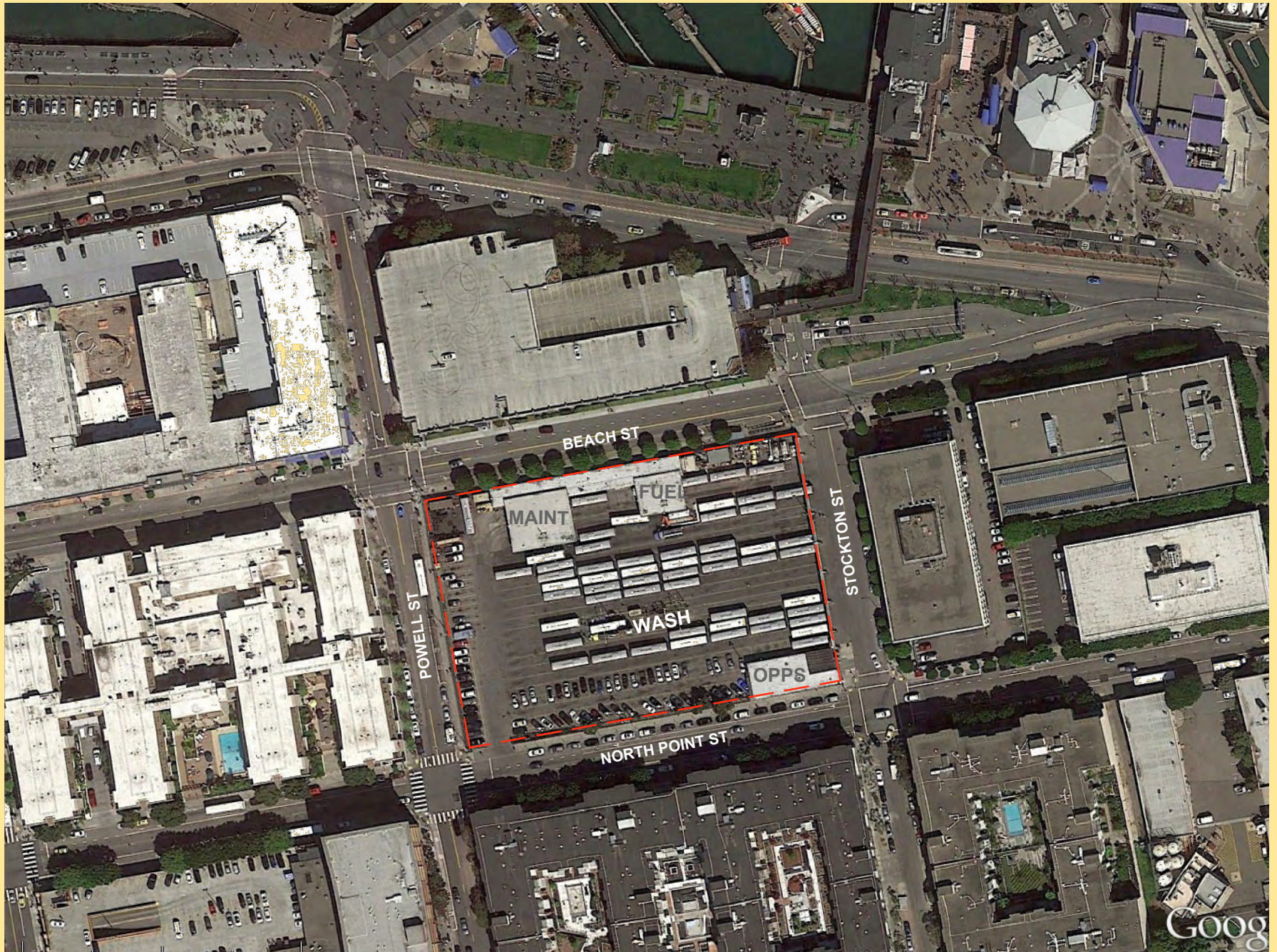
2040 Use Scenario 1/1A/1B/2A

Rebuilt Motor Coach Facility possibly with Subway Station, and/or TOD
(87) 40' motor coaches
(9) maintenance bays

2040 Use Scenario 2B

Rebuilt Motor Coach Facility possibly with Subway Station, and/or TOD
(56) 40' motor coaches
(24) 60' motor coaches
(12) maintenance bays

The studies on following pages include preliminary programs and test fits for rebuilding Kirkland.



KIRKLAND SITE

APPROXIMATELY 2.6 ACRES / 113,400 SF

ZONING: HEIGHT & BULK

REBUILD TEST FIT FOR SCENARIO 1/1A/1B/2A

PROGRAM

OPERATIONS & MAINT STAFF	15,000 SF
MAINT BAYS, SHOPS & PARTS	21,200 SF
WASH & FUEL	2,400 SF
VEHICLE STAGING	42,100 SF
VEHICLE CIRCULATION	47,700 SF
TOTAL	128,400 SF

FLEET	40'T
GRADE 19X4 +2	78
BAYS	9
TOTAL	87

AREA

FIRST FLOOR	21,200 SF
SECOND FLOOR	15,000 SF
TOTAL BUILDING	36,200 SF
YARD	92,200 SF
TOTAL BUILDING AND YARD	128,400 SF

BUILDING HEIGHT

1 @ 25' + 1 @ 13'-6" + 1'6" PARAPET = 40'

NOTES

PRELIMINARY PROGRAM DERIVED FROM NEW FACILITY PEER REVIEW

NEED SURVEY TO CONFIRM SITE DIMENSIONS AND TOPOGRAPHY



KIRKLAND SITE

APPROXIMATELY 2.6 ACRES / 113,400 SF

ZONING: HEIGHT & BULK

REBUILD TEST FIT FOR SCENARIO 2B

PROGRAM

OPERATIONS & MAINT STAFF	15,000 SF
MAINT BAYS, SHOPS & PARTS	21,200 SF
WASH & FUEL	2,400 SF
VEHICLE STAGING	42,100 SF
VEHICLE CIRCULATION	47,700 SF
TOTAL	128,400 SF

FLEET	40' T	60' T
GRADE 14X4, 5X3	56	15
BAYS		12
TOTAL	56	27

AREA

FIRST FLOOR	21,200 SF
SECOND FLOOR	15,000 SF
TOTAL BUILDING	36,200 SF
YARD	92,200 SF
TOTAL BUILDING AND YARD	128,400 SF

BUILDING HEIGHT

1 @ 25' + 1 @ 13'-6" + 1'6" PARAPET = 40'

NOTES

PRELIMINARY PROGRAM DERIVED FROM NEW FACILITY PEER REVIEW

NEED SURVEY TO CONFIRM SITE DIMENSIONS AND TOPOGRAPHY



Woods

1095 Indiana

SFMTA owns

Site: 8.2 Acres

Building: 158,000 sf

Opened 1974-1978

Current Use

Motor Coach Facility

(34) 30' motor coaches
(212) 40' motor coaches
(24) maintenance bays
(6) body/paint bays

- Heavy repair for Woods and Kirkland.
- Body/paint for all motor coaches.
- Component rebuild for all motor and trolley coaches

Vision Observations

- *Crowded; parts storage in maintenance bays and rebuilt components outside.*

Vision Recommendations

- *Move component rebuild to Burke and use space for store room.*
- *Move body/paint to MME and renovate facility for more heavy repair and 60' coaches*

2016 Observations

- *Appears obsolete parts purged and component rebuild area accommodates needs*
- *Decking yard for SFMTA Paratransit appears possible but is costly.*

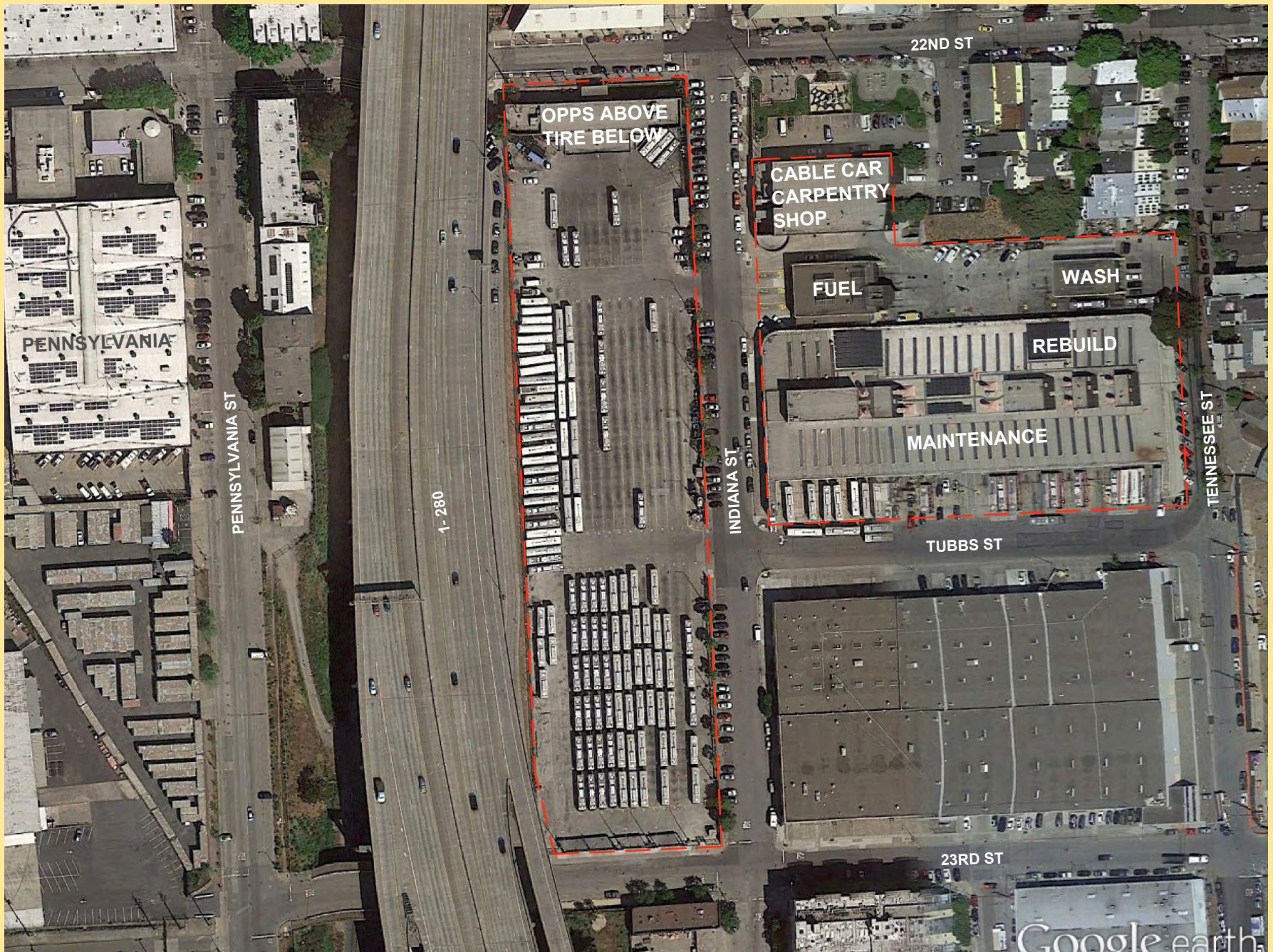
2040 Use

Motor Coach Facility

(30) 30' motor coaches
(212) 40' motor coaches
(24) maintenance bays
(6) body/paint bays

Alternate

The study on the following page includes a preliminary program and test fit to build a Paratransit Facility on a deck over the Woods yard.



WOODS YARD SITE
 APPROXIMATELY 3.9 ACRES
 ZONING: 65X

ALTERNATE TEST FIT FOR ADDING DECK FOR PARATRANSIT

PROGRAM

COACH STAGING & CIRC	161,000 SF
PARA STAFF/ MAINT	20,700 SF
PARA STAGING& CIRC	104,500 SF
TOTAL	286,200 SF

FLEET

	40'	27' PT
GRADE 25x6+12	162	
DECK 12X27+4 in bays		160
TOTAL	162	160

AREAS

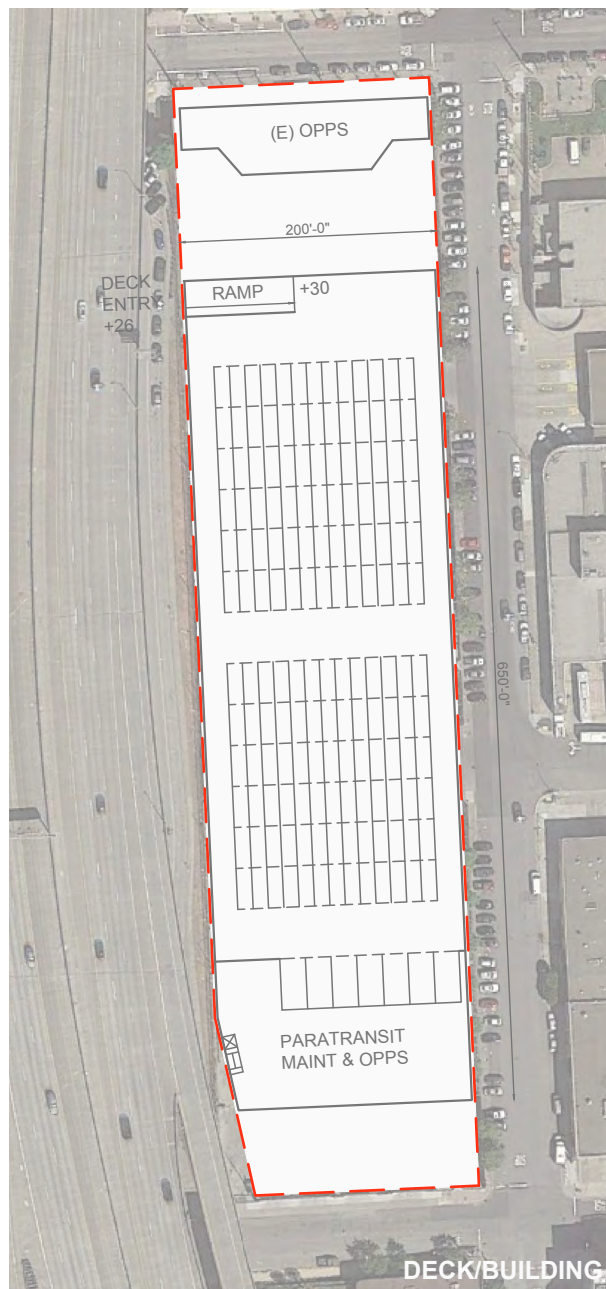
GRADE EXCLUDING (E) BLD	161,000 SF
DECK YARD	104,500 SF
DECK BUILDING	20,700 SF
DECK TOTAL	286,200 SF

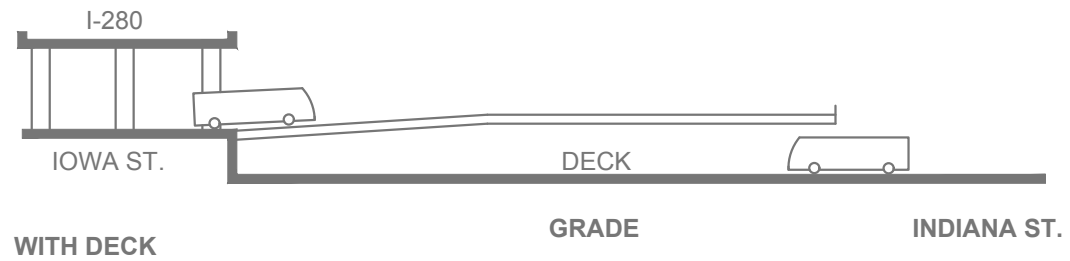
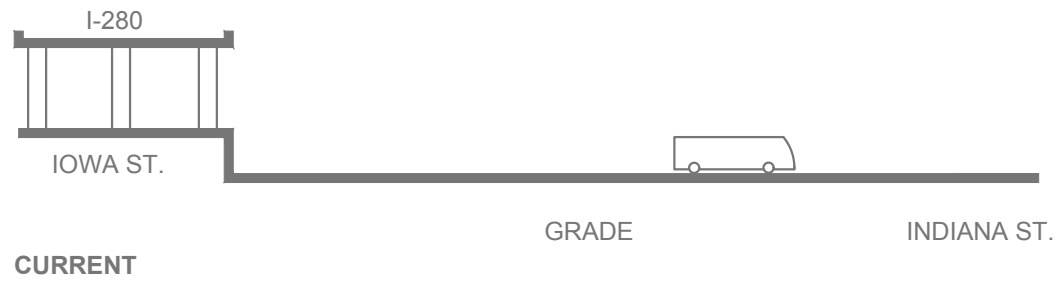
NOTE

ASSUMES USE WOODS MAINTENANCE BAY APRON FOR 30' COACH STAGING

NEED SURVEY TO CONFIRM SITE DIMENSIONS AND TOPOGRAPHY

NEED TO CONFIRM CAN BUILD ADJACENT TO FREEWAY





Potential New Facility

Current Use

- NA

Vision Observations

- *Need larger or expanded motor coach facility for larger fleet.*

Vision Recommendations

- *Expand Woods or procure new site*

SFMTA Subsequent Needs and Planning

- *Motor Coach, Non-Revenue Vehicle Maintenance, Paratransit, Enforcement and Training Classrooms*

2016 Observations

- *Peer review by WSP Evaluate smaller new facility options including locating Enforcement at Scott and Training at Potrero (or Bayshore which is underutilized).*

2040 Use Scenario 1

New Coach, Paratransit, NRV, Enforcement and Training Facility

2040 Use Scenario 1A

New Coach and Paratransit Facility

2040 Use Scenario 1B

New Coach Facility

2040 Use Scenario 2

NA

The chart on the following pages includes preliminary program for Scenarios 1/1A/1B.

NEW FACILITY

COMPONENT	FUNCTION	SCEANRIO 1	SCEANRIO 1A	SCENARIO 1B			
Coach	Staff		25,710	25,710	25,710		
	Fleet Staging	115 40'	185,148	115 40'	185,148	115 40'	185,148
		115 60'		115 60'		115 60'	
		14' lanes		14' lanes		14' lanes	
	Fuel & Wash	4 diesel 4 wash 1 steam	18,843	4 diesel 4 wash 1 steam	18,843	4 diesel 4 wash 1 steam	18,843
Maintenance	24 repair bays 2 tire bays	75,205	24 repair bays 2 tire bays	75,205	24 repair bays 2 tire bays	75,205	
	Body & Paint	2 body 2 prep 2 paint	28,704	2 body 2 prep 2 paint	28,704	2 body 2 prep 2 paint	28,704
	Vehicle Circulation		196,081		196,081		196,081
	Support		14,000		14,000		14,000
	Coach Total		543,691		543,691		543,691
Paratransit							
Paratransit	Staff		9,561		9,561		
	Fleet Staging	150 cutaway	58,320	150 cutaway	58,320		
		10 tall van		10 tall van			
		14' lanes		14' lanes			
	Maintenance	7 repair bays	10,889	7 repair bays	10,889		
	Vehicle Circulation		48,640		48,640		
Support		3,281		3,281			
	Paratransit Total		130,691		130,691		
Enforcement							
Enforcement	Staff		23,243				
	Fleet Staging	300 compact	33,369				
		58 standard					
	Vehicle Circulation		26,717				
	Support		2,188				
	Enforcement Total		85,517				

NEW FACILITY

COMPONENT	FUNCTION	SCENARIO 1	SCENARIO 1A	SCENARIO 1B
NRV	Staff		5,768	
	Fleet Staging	570 NRV 20 large 50 standard	12,860	
	Maintenance	11 heavy repair 10 light repair 1 steam	27,953	
	Vehicle Circulation		23,588	
	Support		1,750	
	NRV Total		71,919	
	Training	Staff		21,895
Support			656	
Training Total			22,551	
Total New Facility			854,369	674,382
				543,691

NOTES

1. Program from WSP Parson Brinkerhoff June 2016 Peer Review of Potential New Facility Program.
2. Assumes 14' lanes for coach and paratransit to allow operation of wheel chair lift in lane.
3. Assumes all 60' coach maintenance bays with half drive through.
4. Component areas include prorated portion of shared support space.

Potrero

2500 Mariposa Street

SFMTA owns

Site: 4.4 acres

Building: 109,000 sf

Opened: 1914

Renovated: 1990

Current Use

Trolley Coach Facility

(75) 40' trolley coaches

(93) 60' trolley coaches

(26) maint bays/pits

light body repair

Vision Observations

- *Only SFMTA 60' trolley coach facility*
- *Physically and functionally deficient*
- *Potential TOD/JD site*

Vision Recommendations

- *Temporarily relocate fleet and replace facility*

SFMTA Subsequent Needs and Planning

- *Preference to rebuild Potrero with TOD/JD before Presidio*

2016 Observations

- *Potential to rebuild with similar sized trolley facility and larger TOD or rebuild with larger decked trolley and motor coach facility and smaller TOD.*

2040 Use Scenario 1/1A/1B

New Trolley Coach Facility could include TOD

(110) 60' trolley coaches

(11) maintenance bays

2040 Use Scenario 2A/2B

New Trolley Coach Facility could include TOD

(111) 60' motor coaches

(72) 60' trolley coaches

(17) maintenance bays

The studies on following pages include preliminary programs and test fits for rebuilding Potrero.



POTRERO SITE

APPROXIMATELY 4.4 ACRES / 192,000 SF
 ZONING: 65X HEIGHT & BULK

**REBUILD TEST FIT FOR SCENARIO 1A/1B
 (1 SIMILAR, EXCEPT NO TRAINING)**

PROGRAM

OPERATIONS & MAINT STAFF	19,900 SF
TRAINING	20,000 SF
MAINT BAYS, SHOPS & PARTS	34,000 SF
WASH	1,600 SF
VEHICLE STAGING	77,200 SF
VEHICLE CIRC & STRUCTURE	79,200 SF
TOTAL	231,900 SF

FLEET

	60T
GRADE 24X3 +3	99
BAYS	11
TOTAL	110

BUILDING HEIGHT

67' HEIGHT FROM LOWEST POINT ON SITE
 1 @ 25' + 3 @ 13'-6" + 1'-6" PARAPET = 67'

SFMTA AREA

GRADE/FIRST	192,000 SF
SECOND FLOOR	39,900 SF
TOTAL	231,900 SF

DEVELOPMENT AREA

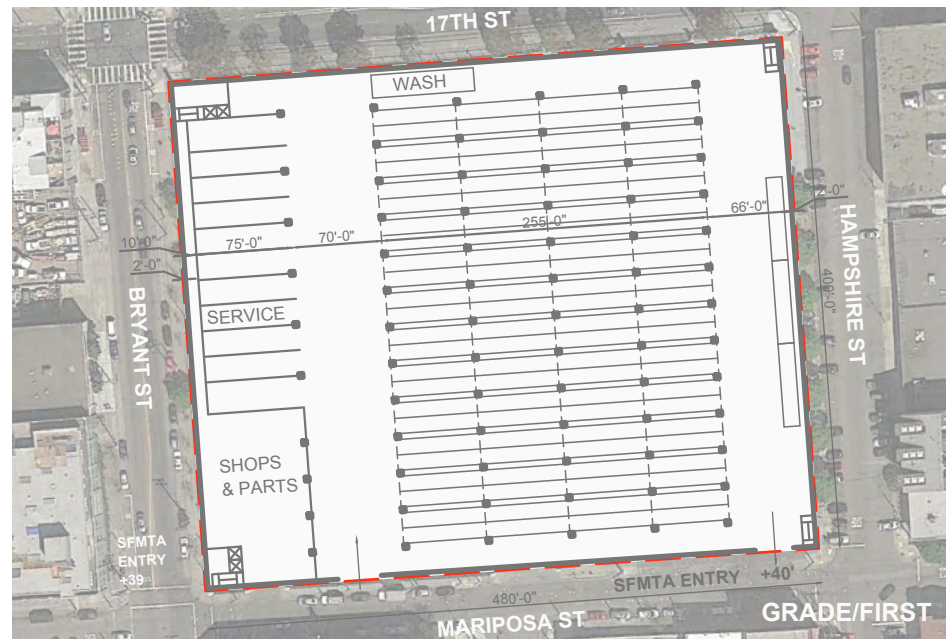
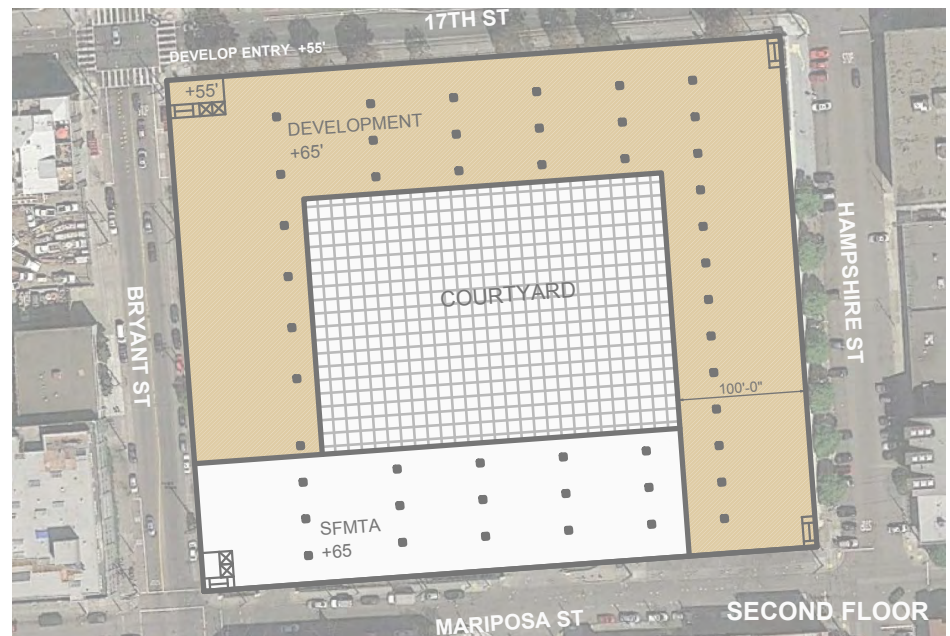
SECOND FLOOR	94,000 SF
THIRD FLOOR	133,900 SF
FOURTH FLOOR	133,900 SF
TOTAL	361,800 SF

NOTES

PRELIMINARY PROGRAM DERIVED FROM NEW FACILITY
 PEER REVIEW. NEED SURVEY TO CONFIRM SITE
 DIMENSIONS AND TOPOGRAPHY

SFMTA

LAURA BLAKE ARCHITECT



POTRERO REBUILD SCENARIO 1A/1B

1" = 150' JANUARY 2017

POTRERO SITE

APPROXIMATELY 4.4 ACRES / 192,000 SF
 ZONING: 65X HEIGHT & BULK

REBUILD TEST FIT FOR SCENARIO 2A/2B

PROGRAM

OPERATIONS & MAINT STAFF	25,600 SF
TRAINING	20,000 SF
MAINT BAYS, SHOPS & PARTS	57,200 SF
FUEL & WASH	6,400 SF
VEHICLE STAGING	131,900 SF
VEHICLE CIRC & STRUCTURE	151,700 SF
TOTAL	392,800 SF

FLEET	NRV	60'T	60' M
GRADE	20		
GRADE 22X3		66	
BAYS		6	11
DECK 20X5			100
TOTAL	20	72	111

BUILDING HEIGHT

67' HEIGHT FROM LOWEST POINT ON SITE
 1 @ 25' + 3 @ 13'-6" + 1'-6" PARAPET = 67'

SFMTA AREA

GRADE/FIRST	192,000 SF
SECOND FLOOR	36,800 SF
THIRD FLOOR	8,800 SF
DECK	155,200 SF
TOTAL	392,800 SF

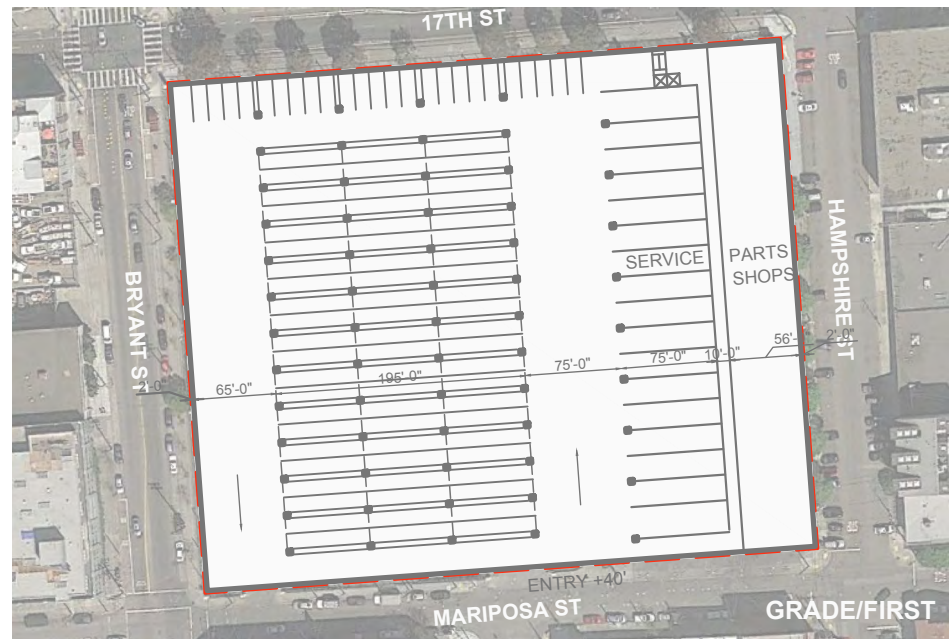
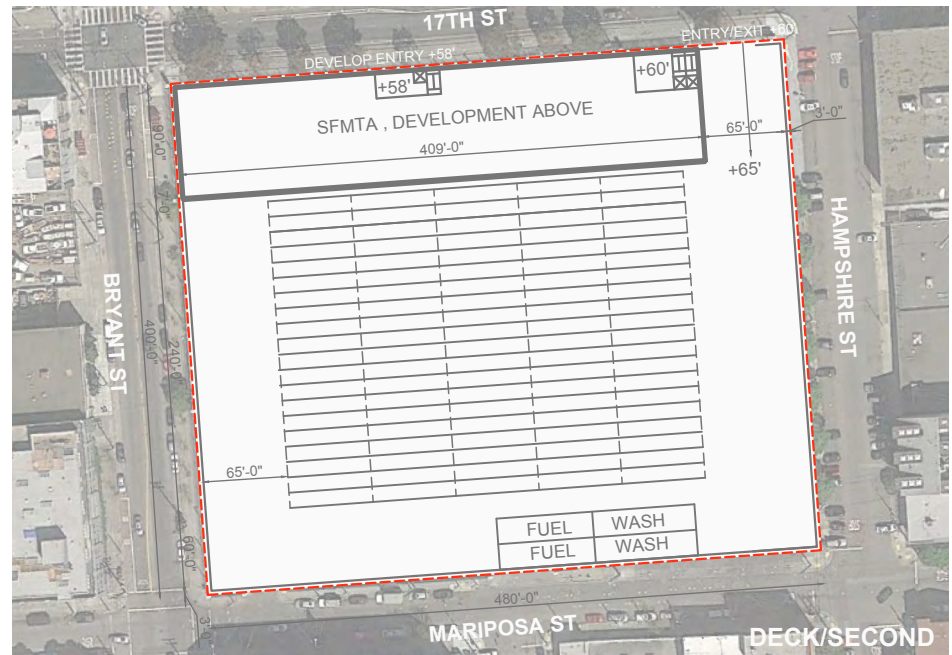
DEVELOPMENT AREA

THIRD FLOOR	28,000 SF
FOURTH FLOOR	36,800 SF
TOTAL	64,800 SF

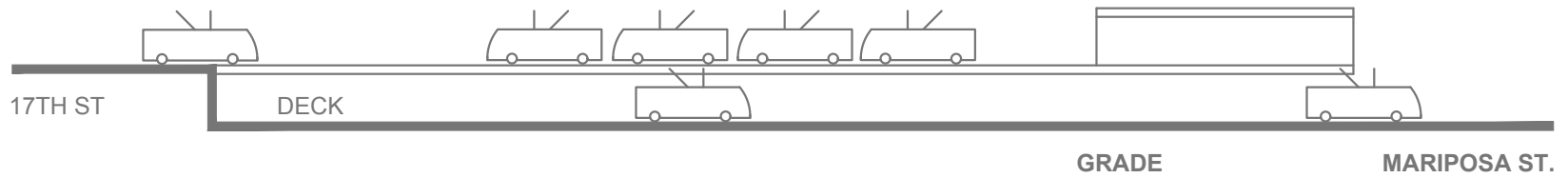
NOTES

PRELIMINARY PROGRAM DERIVED FROM NEW FACILITY PEER REVIEW. NEED SURVEY TO CONFIRM DIMENSIONS AND TOPOGRAPHY.

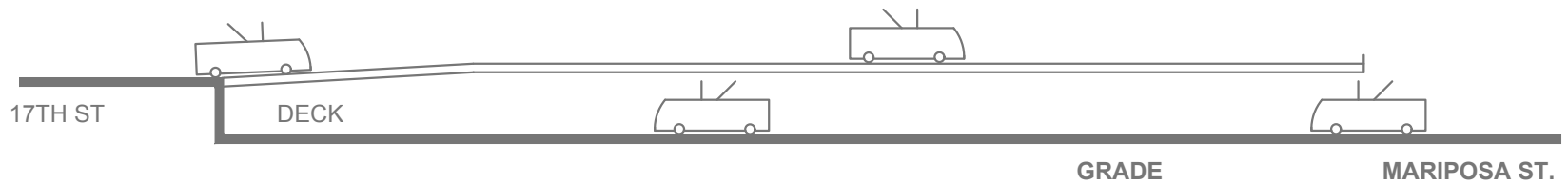
SFMTA
 LAURA BLAKE ARCHITECT



POTRERO REBUILD SCENARIO 2A/ 2B
 1" = 150' JANUARY 2017



CURRENT



REBUILT

Presidio

949 Presidio Avenue

SFMTA owns

Site: 5.4 acres

Building: 158,000 sf

Opened: 1912

Current Use

Trolley Coach and Support

(165) 40' trolley coaches
(16) maint bays/pits

Operator Training
Storage

Reprographics

Employee assistance

Vision Condition Notes

- *Physically and functional deficient*
- *Potential TOD/JD site*

Vision Recommendations

- *Temporarily relocate fleet and replace facility that includes Overhead Lines*
- *Move training to Bayshore and schedules and reprographics to South Van Ness*

SFMTA Subsequent Issues and Planning

- *Schedules moved to Market Street*

2016 Observations

- *Potential to rebuild with similar sized trolley facility and adjoining TOD or rebuild with larger decked trolley facility and adjoining TOD.*

2040 Use Scenario 1/1A/1B

New Trolley Coach Facility with TOD

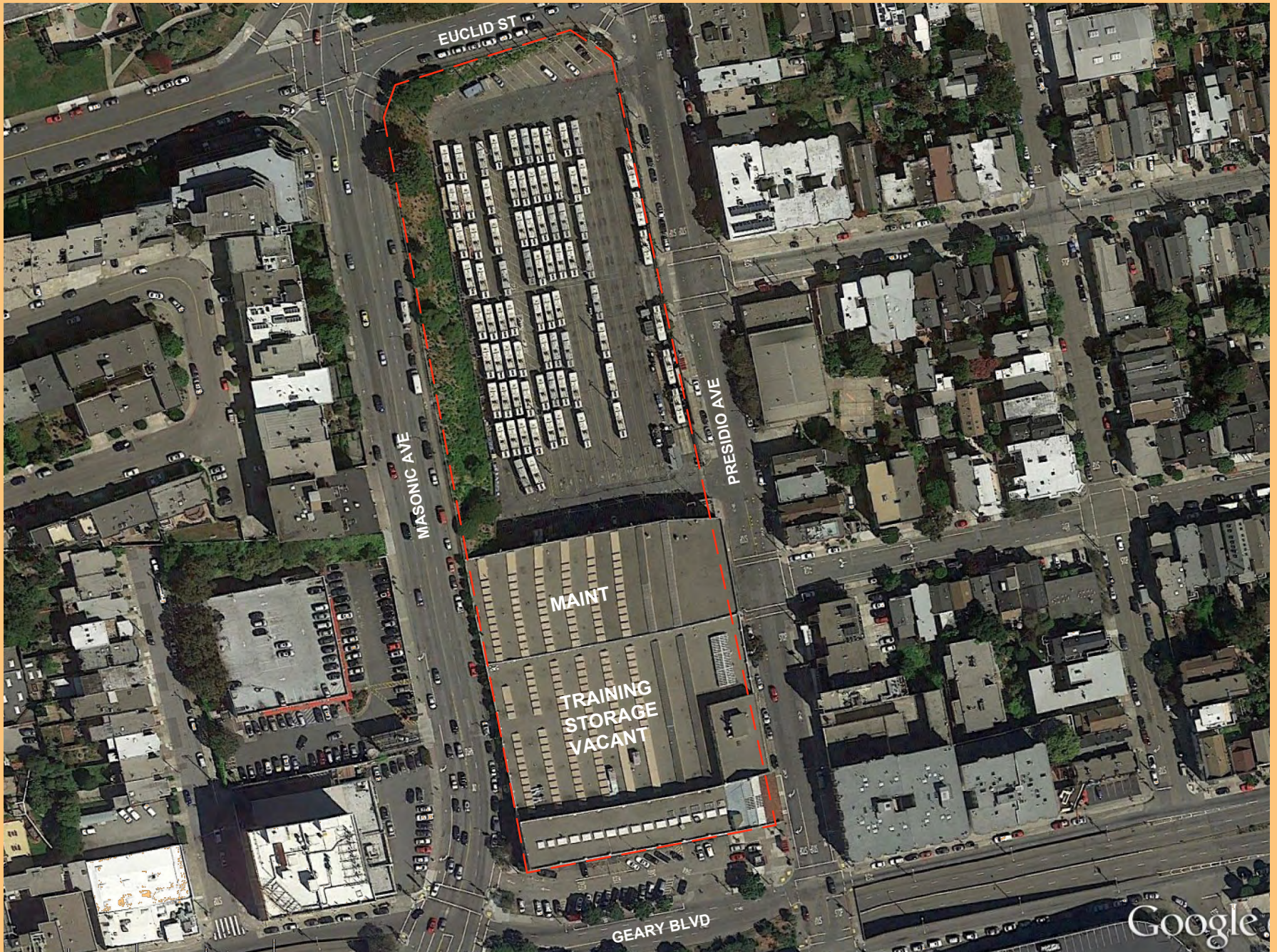
(190) 40' trolley coaches
(19) maintenance bays

2040 Use Scenario 2A/2B

Larger New Trolley Coach Facility with TOD

(191) 40' trolley coaches
(45) 60' trolley coaches
(22) maintenance bays

The studies on following pages include preliminary programs and studies for rebuilding Presidio.



PRESIDIO SITE

APPROXIMATELY 5.4 ACRES
 160E HEIGHT & BULK SOUTH END, 40X REST OF SITE

REBUILD TEST FIT FOR SCENARIO 1/1A/1B

PROGRAM

OPERATIONS & MAINT STAFF	26,000 SF
MAINT BAYS, SHOPS & PARTS	52,900 SF
COVERED DRIVE AISLE	15,100 SF
TOTAL BUILDING	94,000 SF

WASH	2,400 SF
VEHICLE STAGING	92,300 SF
CIRCULATION	53,700 SF
TOTAL YARD	149,400 SF

SFMTA FLEET	40' T
GRADE 19x9	171
BAYS	19
TOTAL	190

SFMTA BUILDING HEIGHT

2 FLOORS: 1 @ 25' + 1 @ 13'-6" + 1'-6" PARAPET = 40'

SFMTA AREA

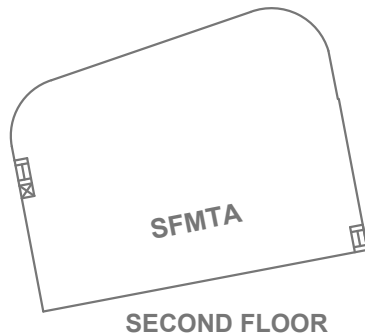
FIRST FLOOR	47,000 SF
SECOND FLOOR	47,000 SF
BUILDING TOTAL	94,000 SF
YARD	149,400 SF
TOTAL BUILDING & YARD	243,000 SF

DEVELOPMENT AREA

UP TO 14 FLOORS; AREA TBD

NOTES

PRELIMINARY PROGRAM
 DERIVED FROM NEW
 FACILITY PEER REVIEW
 NEED SURVEY TO CONFIRM
 SITE DIMENSIONS AND
 TOPOGRAPHY



SFMTA
 LAURA BLAKE ARCHITECT

PRESIDIO REBUILD SCENARIO 1/1A/1B
 1" = 150' JANUARY 2017

PRESIDIO SITE

APPROXIMATELY 5.4 ACRES
 160E HEIGHT & BULK @ SOUTH
 40X REST OF SITE

**REBUILD TEST FIT FOR
 SCENARIO 2A/2B**

PROGRAM

OPPS/ MAINT STAFF	21,200 SF
MAINT, SHOPS, PARTS	67,000 SF
WASH	2,400 SF
VEHICLE STAGING	93,000 SF
VEHICLE CIRC	209,200 SF
GROSS AREA	392,800 SF

FLEET	40' T
GRADE 19x9	171
BAYS	19
TOTAL	190

SFMTA AREA

GRADE/FIRST	196,400 SF
DECK YARD	175,200 SF
SECOND FLOOR	21,200 SF
TOTAL	392,800 SF

DEVELOPMENT AREA

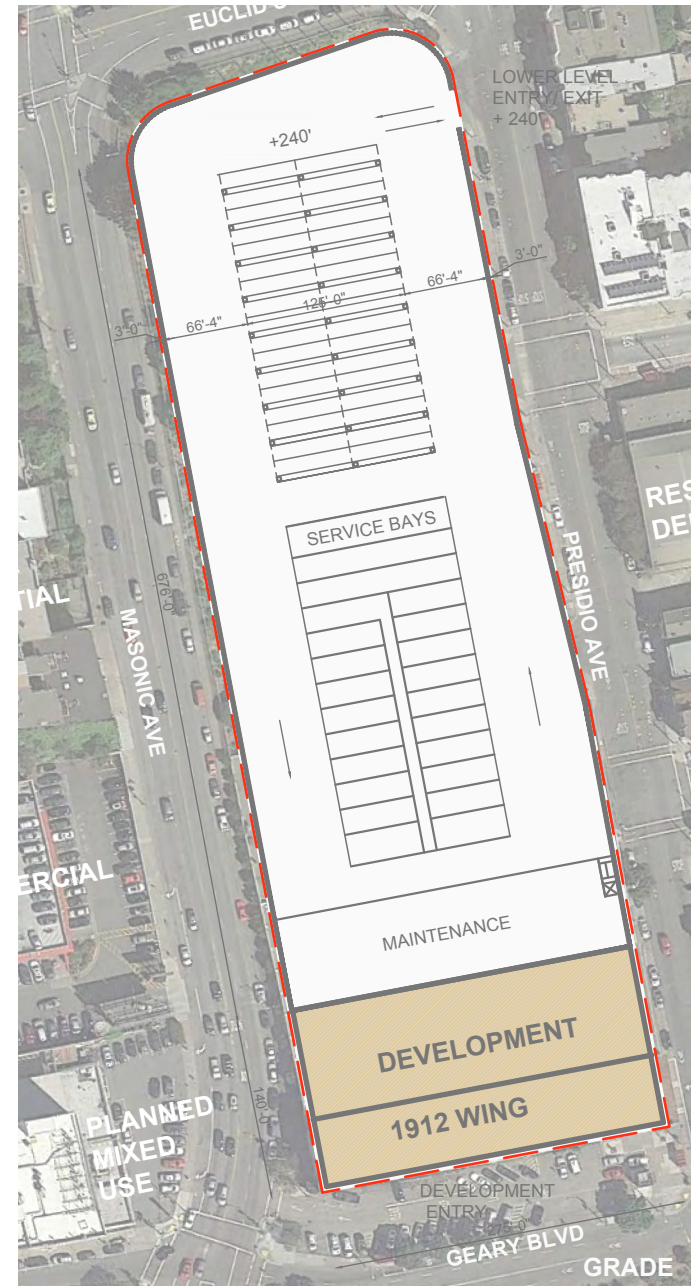
UP TO 14 FLOORS: 1 @ 15'-6" + 13'
 @ 11' + 1'-6" PARAPET

TBD SF
 PLUS 1912 WING

NOTES

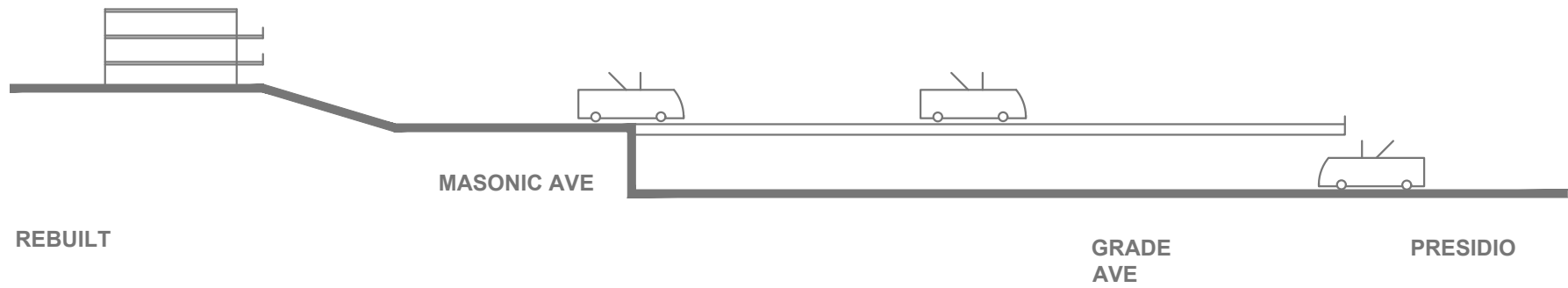
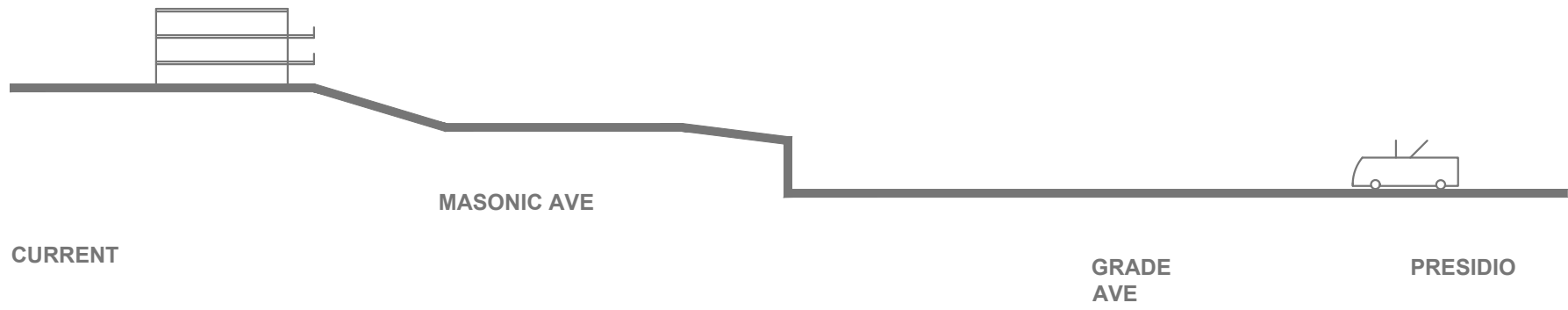
PRELIMINARY PROGRAM
 DERIVED FROM NEW
 FACILITY PEER REVIEW

NEED SURVEY TO CONFIRM
 SITE DIMENSIONS AND
 TOPOGRAPHY



SFMTA
 LAURA BLAKE ARCHITECT

PRESIDIO REBUILD SCENARIO 2A/2B
 1" = 150' FEBRUARY 2016



Cable Car Barn

1201 Mason Street

SFMTA owns

Site: __ acres

Building: 83,700 sf

Opened 1887

Rebuilt & Reopened 1984

Current Use

Cable Car Facility

(40) cable cars

Museum

Vision Condition Notes

- *Renovated in 1984*

Vision Recommendations

- *Continue use*

2040 Use

Cable Car Facility

Same as current



Cameron Beach and Upper Yard

Cameron Beach: 500 Geneva Avenue

Upper Yard: No address

SFMTA owns

Site: 2.8 acres

Cameron Beach Building: 51,000 sf

Cameron Beach 2014

Use

Historic Street Car Facility

(24) street cars

(1) maintenance bays

(3) body/paint

Body/paint for all light rail vehicles and street cars

Vision Condition Notes

- *Deficient and crowded*

Vision Recommendations

- *Move street car facility and body/paint to MME and demolish building and reconfigure track.*

SFMTA Subsequent Needs and Planning

- *Moved Marin Transit Assistance Program to Cameron Beach*

2016 Observations

- *Appears underutilized but not deficient*
- *Evaluate using for one-off street car storage and historic street car restoration*

Cameron 2040 Use

Historic Street Car Facility

(48) street cars

(1) maintenance bays

(3) body/paint

Historic street car restoration

Upper Yard 2040 Use

TOD/JD

Vision Condition Notes

- *Upper Yard identified as TOD/JD site*

SFMTA Subsequent Needs and Planning

- *SFMTA to sell to Mayor's Office of Housing*

Upper Yard 2040 Use

Vacate



Green and Annex

Green: 2200 San Jose Avenue

Annex: 425 Geneva Avenue

SFMTA owns

Site: 6.7 acres

Green: 156,000 sf, opened: 1977

Annex: 35,000 sf, opened: 1987

Green 2014 Use

Light Rail Vehicle Facility

(76) light rail vehicles
(10) maintenance bays
(1) body/paint
component rebuild
street car restoration
parking

Annex 2014 Use

Operations
Electronic repair for all
light rail vehicles and
street cars
Radio repair for all SFMTA
vehicles.

Vision Condition Notes

- *Green has parts storage in service bays*
- *Green body/paint bay is small, not equipped*
- *Annex electric shop has backlog*

Vision Recommendations

- *Move Green body/paint to MME and use space for storage so bays can be used for service*
- *Reconfigure electric shop for more efficient use*

2016 Observations

- *Green underutilized. Evaluate moving street car restoration to Cameron and consolidating rail machine shops/component rebuild to increase LRV storage capacity*
- *Annex underutilized. Evaluate office and shop use.*

Green 2040 Use

Light Rail Vehicle and
PCC Street Car Facility

(101) light rail vehicles
(10) maintenance bays
(1) body/paint
rail machine shops and
component rebuild
parking

Annex 2040 Use

Operations
Electronic Repair
Other Support Shop



Muni Metro East

601 25th Street

SFMTA owns

Site: 16.9 acres

Building: 163,000 sf

Opened: 2008

Current Use

Light Rail Vehicle Facility

(75) light rail storage

(33) street cars

(15) maintenance bays

Vision Condition Notes

- *Needs equipment to be fully functional*
- *Has capacity for 125 LRVs & space to expand*

Vision Recommendations

- *Move Cameron & Marin street cars to MME*
- *Build body repair/paint facility for entire fleet*

SFMTA Subsequent Issues and Planning

- *Moved Marin Muni Signal Shop to MME*
Moving South Van Ness LRV4 team to MME
- *Planning to add rail at SW corner & rail and back shop at expansion area*

2016 Observations

- *Potential to use expansion area for trolley swing prior to rail and back shop use*

2040 Use Scenario

1/1A/1B/2B

Light Rail Facility

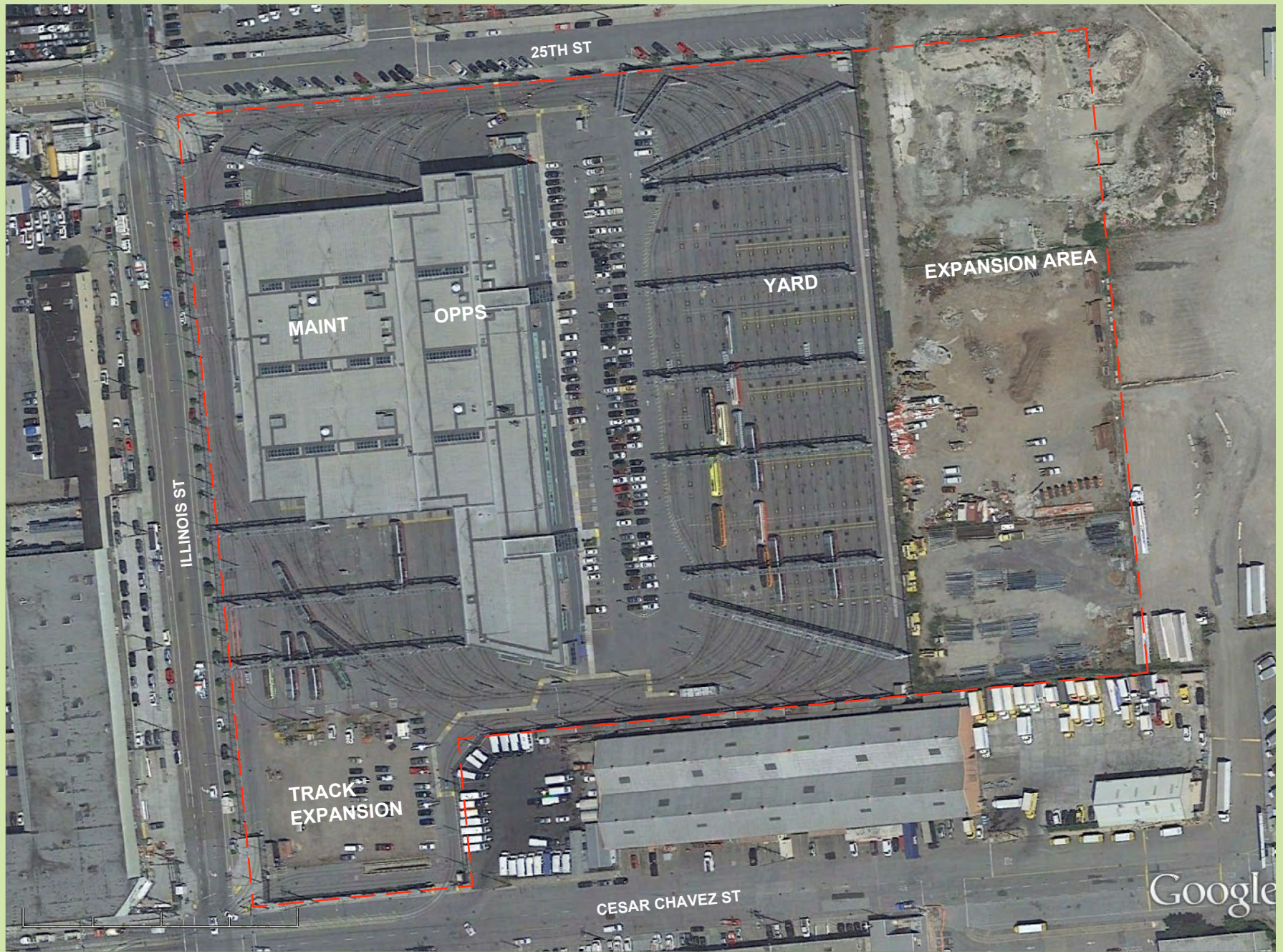
(151) light rail vehicles

(15) maintenance bays

2040 Use Scenario 2A

Light Rail Facility and
Trolley Swing Facility and
then expanded Light Rail
Facility and Back Shop

The studies on following
pages illustrates how
MME expansion area
could be used.



MME EXPANSION SITE
APPROXIMATELY 4 ACRES
ZONING: 40X HEIGHT & BULK

TEST FIT FOR SCENARIO
1/1A/1B/2B

LRV STORAGE

YARD 36 LRV



MME EXPANSION SITE
 APPROXIMATELY 4 ACRES
 ZONING: 40X HEIGHT & BULK

TEST FIT FOR SCENARIO 2A

SWING TROLLEY FLEET

	60'T
YARD	92
SERVICE	<u>12</u>
TOTAL	104

OR

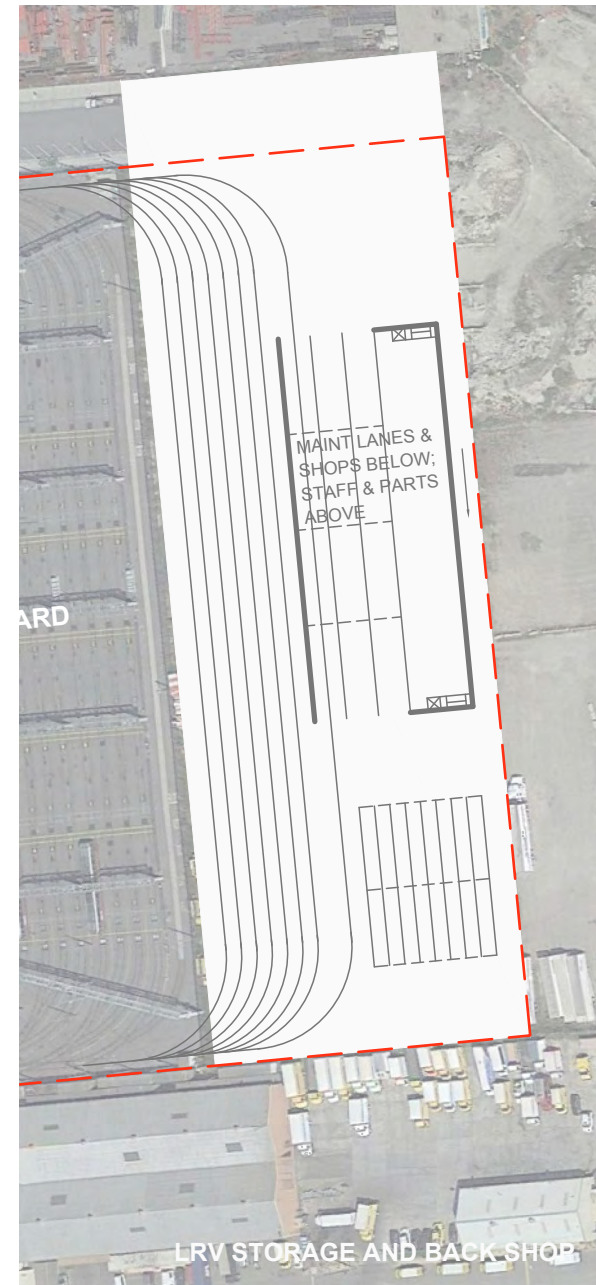
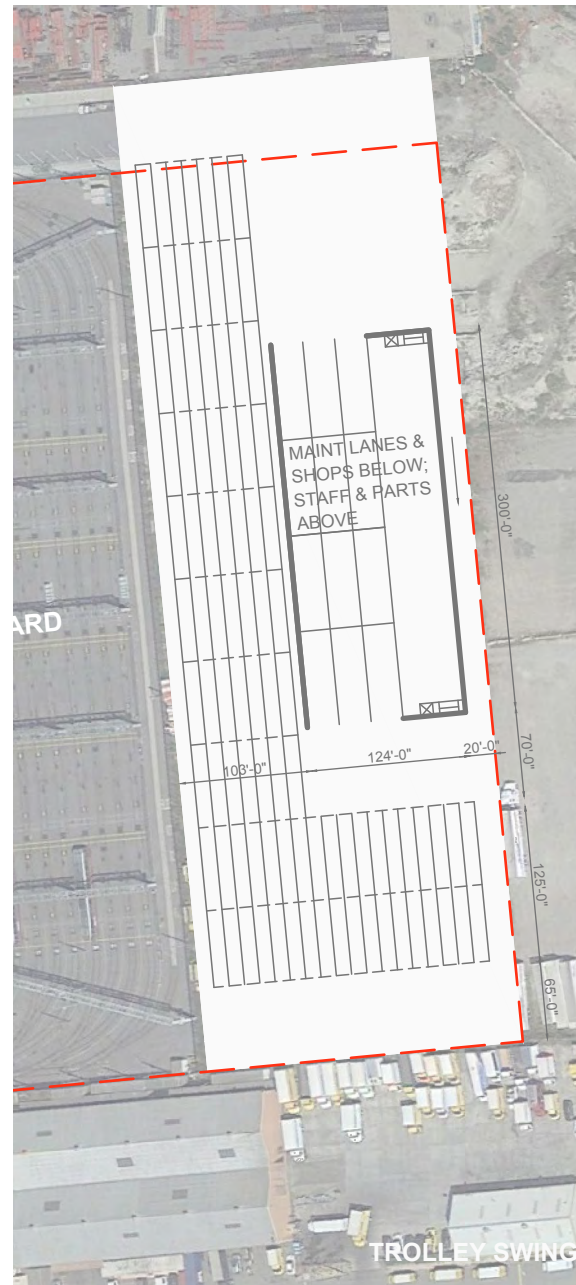
	40'T
YARD	131
SERVICE	<u>12</u>
TOTAL	143

LRV FLEET

YARD 36 LRV

BUILDING

MAINTENANCE	37,200 SF
STAFF/SUPPORT	<u>37,200 SF</u>
TOTAL	74,400 SF



Paratransit

Vendor Leases

Leases expire 2018

575 Tunnel Ave, Brisbane
100,000 SF with 2,100 SF
trailer for operations

290 Industrial Way
10,000 SF Maintenance
Facility

Current Use

(120) Cutaway Buses
(10) Vans

Vision Condition Notes

- NA

Vision Recommendations

NA

SFMTA Subsequent Issues and Planning

- *SFMTA evaluating providing a facility for the SFMTA's Paratransit fleet.*

Observations

- *Evaluate SFMTA purchasing or leasing a Paratransit facility, or continuing to have the Vendor provide a Paratransit facility*

2040 Use Scenario 1/1A

Paratransit at New Facility

(150) Cutaway Buses
(10) Vans
(7) Maintenance Bays

2040 Use Scenario 1B/2A/2B

~2.7 acre site with a
~20,000 sf building

(150) Cutaway Buses
(10) Vans
(7) Maintenance Bays



PARATRANSIT - EXISTING

Bancroft

1508 Bancroft Avenue

SFMTA Owns

Site: 1 acre

Building: 90,000 sf

Opened : 2012

Current Use

Streets Shop Administration

Sign Shop

Temporary Sign Shop

Meter Shop

Non-Revenue Vehicles

Vision Condition Notes

Parking at Yosemite which is two blocks away

Vision Recommendations

SFMTA Subsequent Needs and Planning

- *SFMTA developing shell and infrastructure upgrades.*

2016 Observations

- *Underutilized; evaluate shared use to optimize use of facility*

2040 Use

Streets Shop Administration

Sign Shop

Temporary Sign Shop

Meter Shop

Non-Revenue Vehicles

Other use to optimize use of facility



Bayshore

2650 Bayshore Boulevard, Daly City

Leased through 2033

Site: 12.7 acres

Building: 255,400 sf

Built: 1950's

SFMTA: 2013

Current Use

Tow Facility

Traffic signal shop

Video Shop

Vacant

Vision Condition Notes

- *New Facility*

Vision Recommendations

- *Move Long Term Tow to Bayshore*
- *Move Rankin Traffic Signal to Bayshore*
- *Move Presidio Training to Bayshore*

SFMTA Subsequent Needs and Planning

- *Moved Long Term Tow, Traffic Signal, Video Shop & Central Subway Team to Bayshore*
- *Planning to consolidate Video and Fare Box Shops into one Bench Shop at Bayshore.*

2016 Observations

- *Evaluate use of vacant second floor for offices or training.*
- **Lease expires in 2032, SFMTA has option to negotiate purchase**

2040 Use

Tow Facility

Traffic Signal Shop

Bench Shop

Office

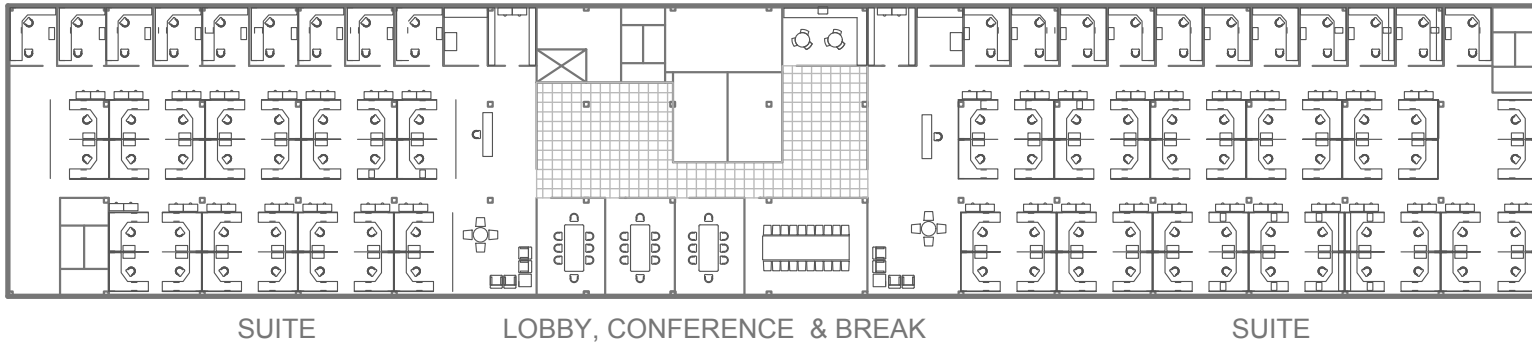
The studies on following page illustrate how a bench shop and fare box vendor could be located on the first floor and offices or training could be located on the second floor.



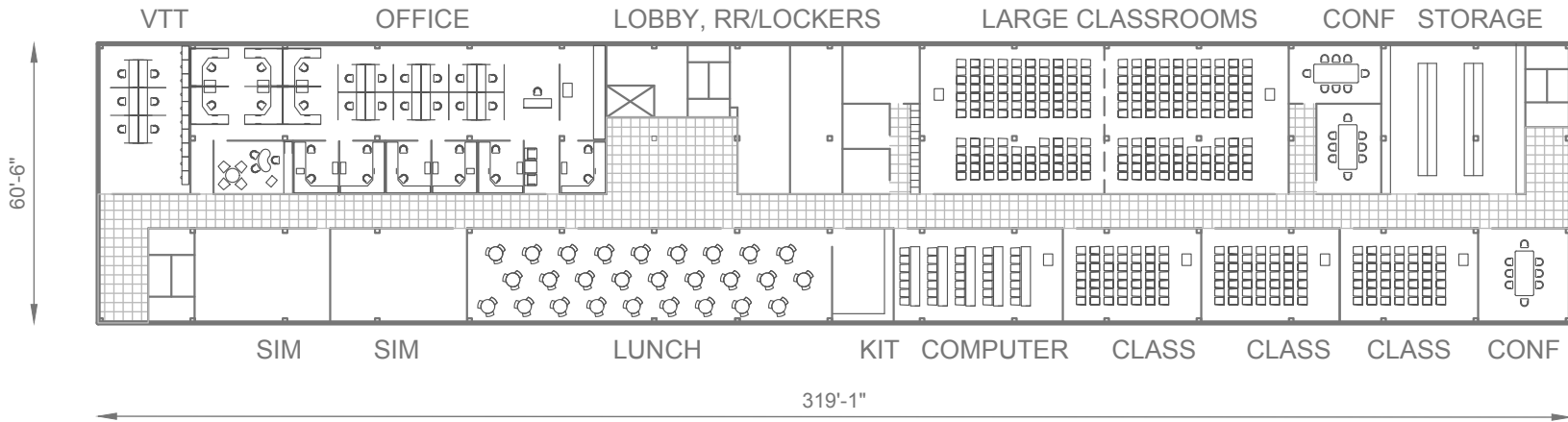


PROGRAM

CONSOLIDATED BENCH	5,460 SF
FARE BOX VENDOR	1,800 SF
(E) CENTRAL SUBWAY	2,270 SF
SURGE SPACE	2,990 SF



TEST FIT FOR OFFICE USE WITH APPROXIMATELY 96 PERSON CAPACITY



TEST FIT FOR TRAINING USE WITH 2 LARGE CLASSROOMS THAT COMBINE INTO ONE MULTIPURPOSE FOR 225

Bryant

1401 Bryant St
SFMTA owns
Building: 43,000 sf
Site: 1.1 acres
Opened 1893
SFMTA: 1944

Current Use

Overhead Line Repair

Vision Condition Notes

- *Unreinforced masonry building is seismic concern*

Vision Recommendations

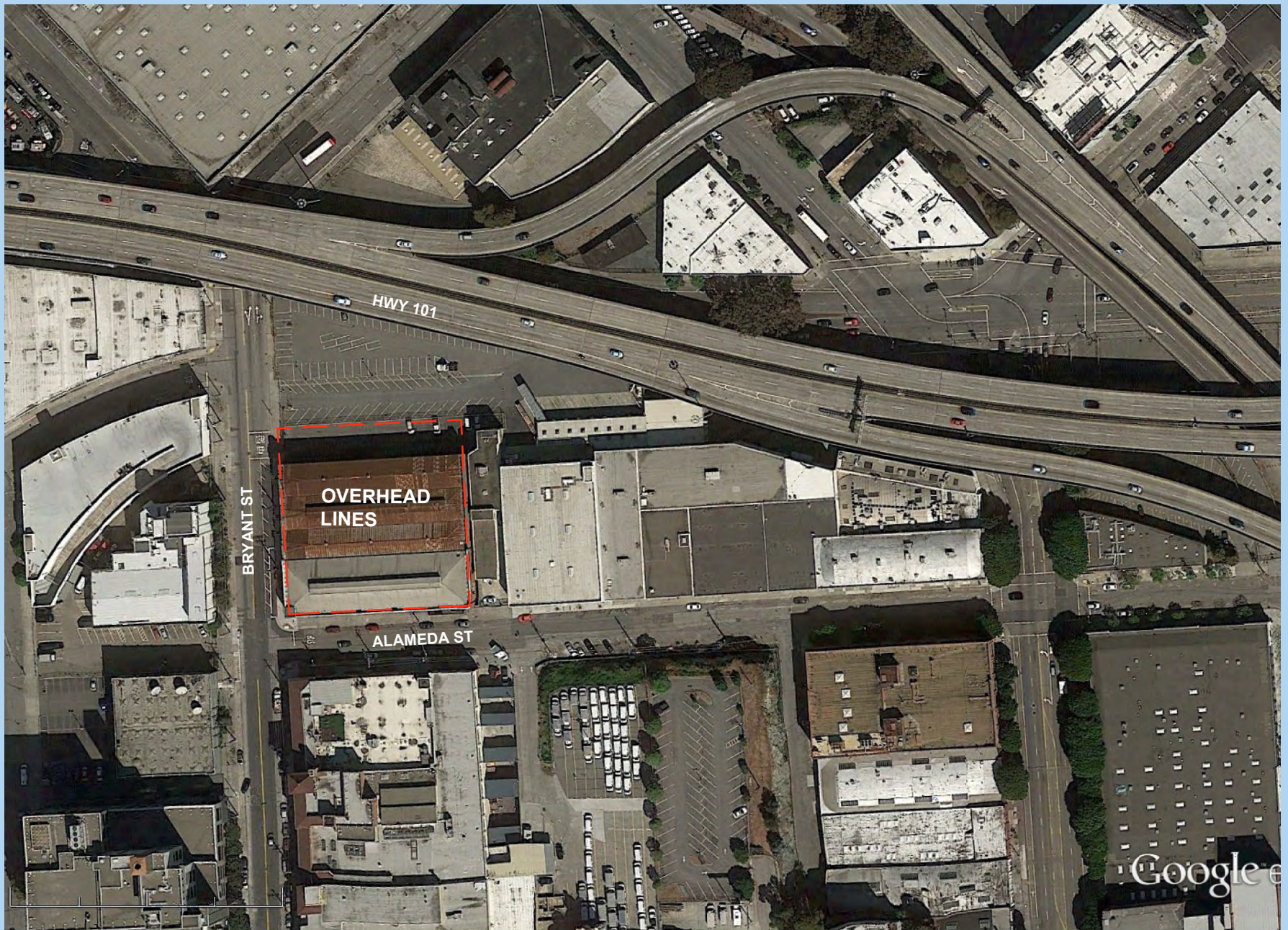
- *Move Overhead Lines to Presidio to reduce response time*

SFMTA Subsequent Needs and Planning

- *City plans to use Bryant for Animal Care and Control, so SFMTA planning to move Overhead Lines to Burke*

2040 Use

Vacate



Burke

1570/1580 Burke Avenue

SFMTA Owns

Site: 2.4 acres

Building: 103,000 sf

Opened 1969

SFMTA: 2005

Current Use

Central Warehouse

- Fleet parts/components
- Fleet contract spares
- Custodial supplies
- Receiving and distribution for campaign parts
- Staging to auction obsolete items
- Emergency command vans

K-9 training

Vision Condition Notes

- *Inefficient layout,uninsulated, poor lighting*
- *Street car/cable car parts take up space*

Vision Recommendations

- *Move street car/cable car parts to MME or Penn*
- *Move Woods component rebuilt to Burke*
- *Renovate facility*

SFMTA Subsequent Needs and Planning

- *SFMTA planning to renovate for Warehouse and Overhead Lines*

2016 Observations

- *Renovating Burke and using for Overhead Lines and the Central Warehouse will optimize use of this facility.*

2040 Use

Central Warehouse

Overhead Lines



Lenox

West Portal Station
131 Lenox Way
SFMTA Owns
Suite: 10,000+/- sf
Opened 1982

Current Use
Transit Control

Vision Condition Notes

Vision Recommendations

- *SFMTA planning consolidated Transit Management center at Market Street*

2040 Use
Backup Transit Control



Marin

1399 Marin Street

Leased to July 2021, however
SFPUC plans to use a portion
of site starting 2018

Site: 3.2 acres

Building: 27,000 sf

SFMTA: 1990

Current Use

Motor Coach Acceptance

Track Shop

Street Car Storage

Vision Condition Notes

Vision Recommendations

- *Move Video Shop to Bayshore*
- *Move Transit Signal Shop to MME*
- *Move Street Cars to MME*

SFMTA Subsequent Needs and Planning

- *Motor Coach Acceptance Facility*
- *SFPUC planning to use a portion site starting in 2018, details are not known at this time*

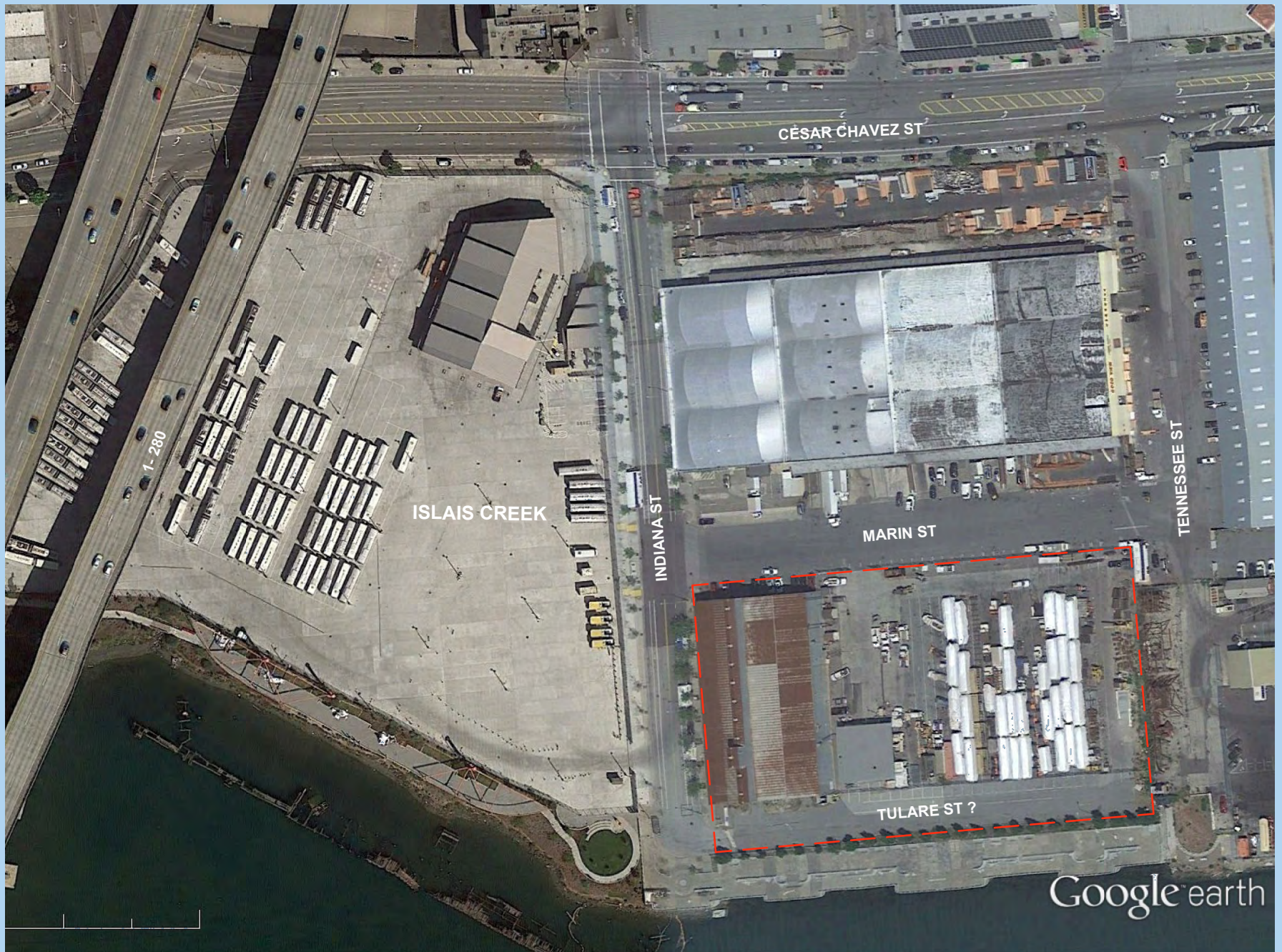
2016 Observations

- *Evaluate PUC plans and extending lease for motor coach swing*
- *Evaluate moving street cars to Cameron Beach & track shop to Green*
- **Lease expires 2021**

2040 Use Scenario

Vacate

The study on following pages illustrates Marin coach capacity for potential swing use.



MARIN SITE

APPROXIMATELY 3.2 ACRES

SWING TEST FIT

	60'
YARD 15X3+7X2	59
SERVICE	4
	63

OR

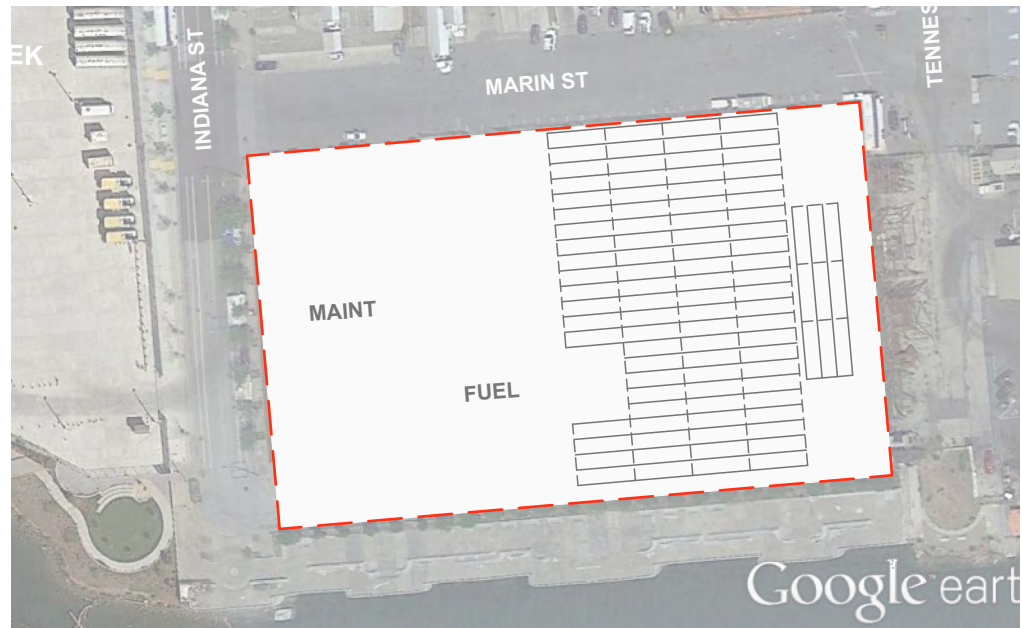
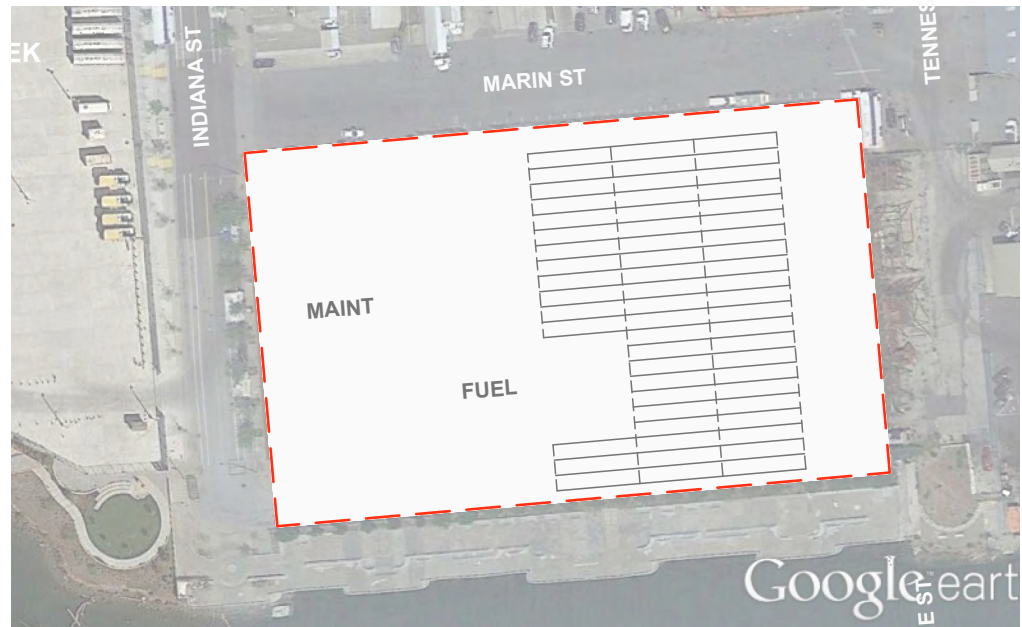
	40'
YARD 18X4 + 5X3	89
SERVICE	4
AISLE	9
	102

NOTES

NEED TO CONFIRM CAN EXTEND LEASE

NEED INFORMATION ON SFPUC SEWER PROJECT TIMING AND SITE USE

NO ASSESSOR'S MAP, NEED SURVEY TO CONFIRM SITE DIMENSIONS



Pennsylvania

700 Pennsylvania Ave

SFMTA owns

Site: 2 acres

Building: 88,000 sf

Opened 1947

Renovated: 2000's

Current Use

Maintenance Facility

Offices

Cable Car Machine Shop

Facilities Carpentry Shop

Electric Shop

Track Maint Storage

Facility Maint Storage

Locksmith Shop

Gardeners

Custodians

Cable Car Machine Shop

Non-Revenue Vehicle Parking

Vision Condition Notes

- *Large cable car machine shop underutilized*

Vision Recommendations

- *Move Woods machine shop to Penn to consolidate light rail & cable car machine shops.*
- *Move Woods cable car carpentry shop to Penn to consolidate maintenance-of-way and cable car carpentry shops.*

SFMTA Subsequent Needs and Planning

- *SFMTA & SFPW implementing plan to standardize workspace assignments, improve adjacencies and optimize use of Building B*

Observations

- *Evaluate consolidating cable car machine shop with other machine shops at Green & Yosemite buildings & grounds paint shop with other buildings & grounds shops at Penn.*

2040 Use

Maintenance Facility



Scott

1849 Harrison St

SFMTA owns

Site: 1.1 Acres

Building: 30,000 sf

Garage: 88,000 sf

Opened: 1989

Current Use

Non-Revenue Vehicle
Maintenance Facility
City Staff Parking

Service facility on first
floor and parking on sec-
ond, third and roof.

Vision Condition Notes

- *Inefficient - crowded service area underuti-
lized parking.*

Vision Recommendations

- *Either make better shared facility or dedicat-
ed enforcement facility*

SFMTA Subsequent Needs and Planning

*SFMTA evaluating exchanging 1401Bryant St for
1200 15th St which is adjacent to Scott.*

Observations

- *Potential to use Scott and 15th St for NRV
and Enforcement if 1200 15th street transfer
to SFMTA.*

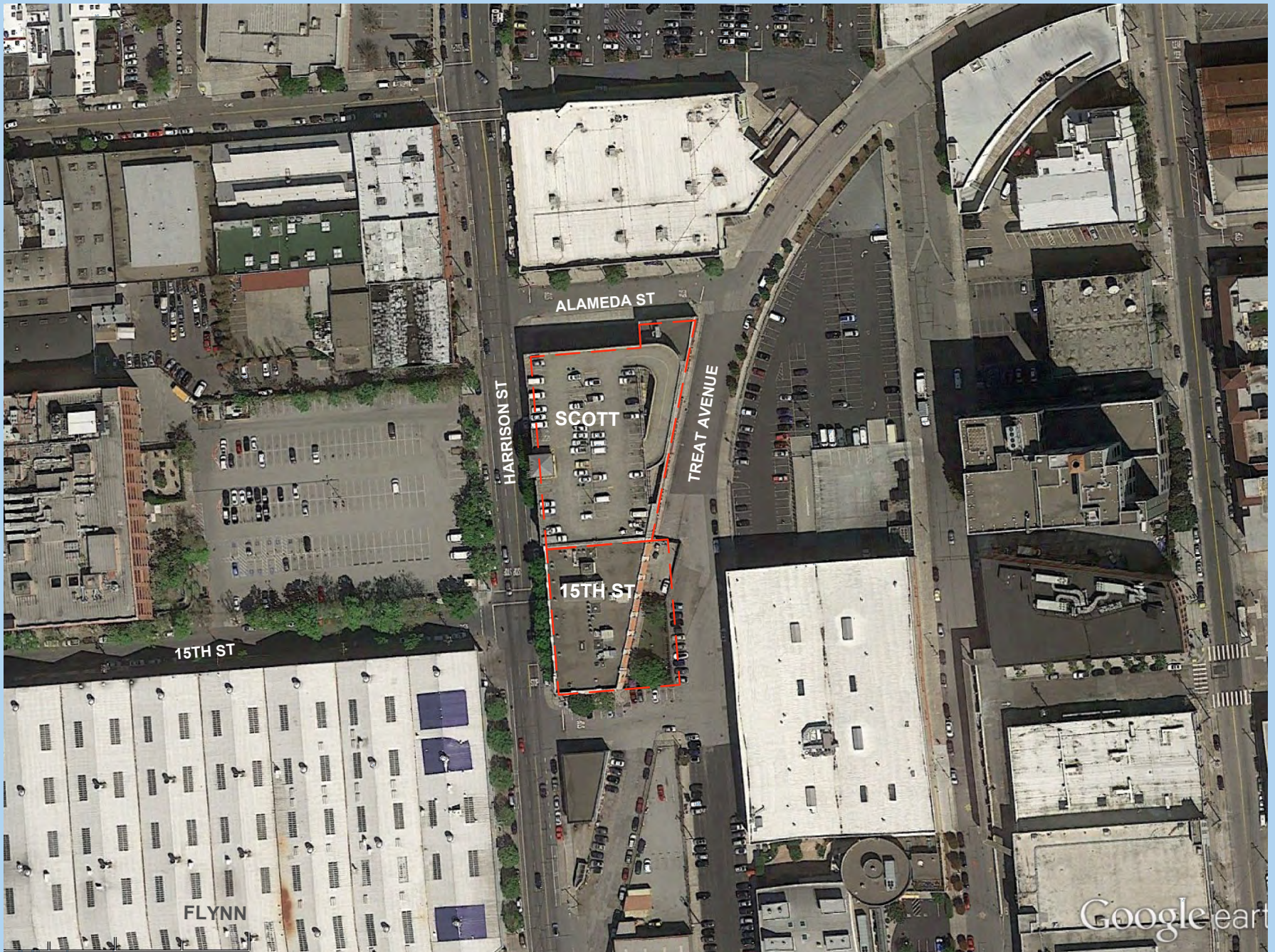
2040 Use Scenario 1

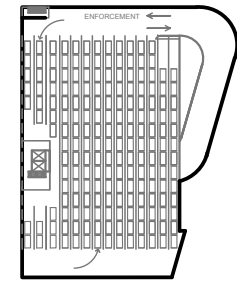
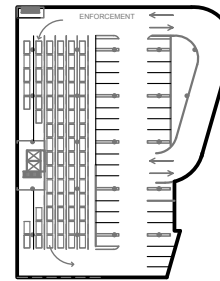
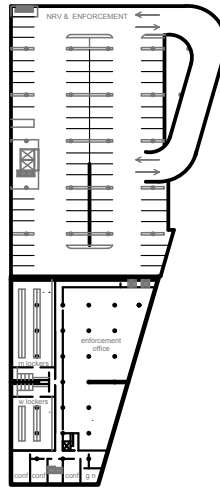
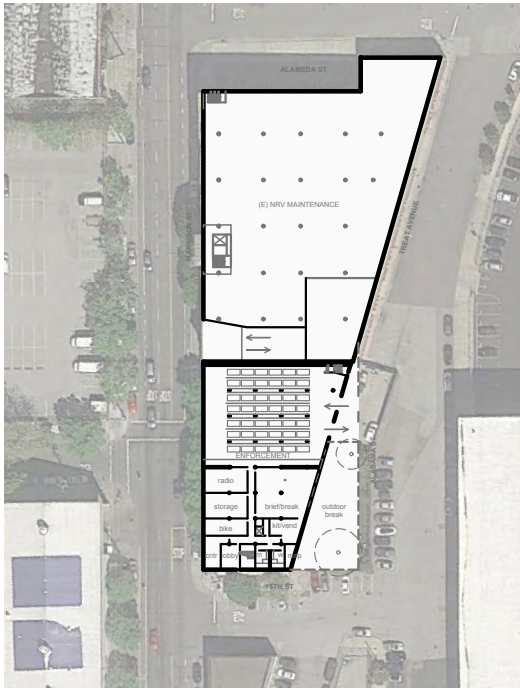
Vacate

2040 Use Scenario 1A, 1B, 2A, 2B

Non-Revenue Vehicle
Maintenance Facility
Enforcement Parking

The studies on following
pages include a test fit
for NRV and Enforcement
at Scott and 15th St and
an alternative for NRV,
Enforcement, MRO and
Surge space at Scott
and 15th St if 15th Street
rebuilt.





SCOTT AND 15TH ST SITE
 APPROXIMATELY 1.2 ACRES
 ZONING: 65-X

TEST FIT

PROGRAM

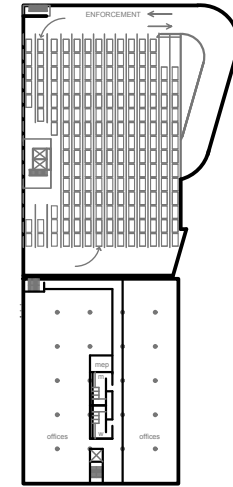
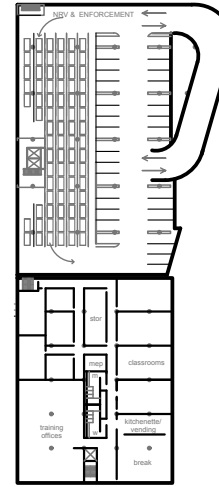
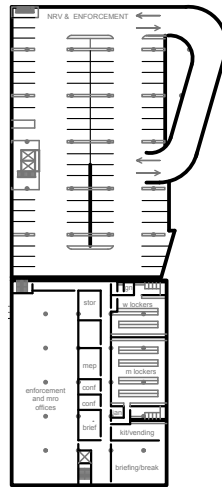
(E) NRV MAINTENANCE	29,000SF
NRV STAGING	7,800 SF
ENFORCEMENT OPERATIONS	58,700 SF
ENFORCEMENT STAGING	21,000 SF
VEHICLE CIRC & STRUCTURE	31,000 SF
TOTAL	147,500 SF

FLEET

	NRV stall	ENF stall	ENF Go-4 lane
SCOTT SECOND	48	23	
SCOTT THIRD	35		76
SCOTT ROOF			186
ACC FIRST			42
TOTAL	48	58	304

AREA

SCOTT	118,000 SF
15TH ST	29,500 SF
TOTAL	147,500 SF



SCOTT AND 15TH ST SITE
 APPROXIMATELY 1.2 ACRES
 ZONING: 65-X

TEST FIT

PROGRAM

(E) NRV MAINTENANCE	29,000 SF
ENFORCEMENT & MRO OPERATIONS	38,600 SF
OTHER OFFICE	19,300 SF
NRV STAGING	7,800 SF
MRO STAGING	5,800 SF
ENFORCEMENT STAGING	57,700 SF
VEHICLE CIRC & STRUCTURE	37,000 SF
TOTAL	195,200 SF

FLEET

	NRV stall	MRO STAFF	ENF stall	ENF Go-4 lane
SCOTT SECOND	48		23	
SCOTT THIRD		36	35	
SCOTT ROOF				186
15TH ST FIRST				112
TOTAL	48	36	58	298

AREA

SCOTT	118,000 SF
15TH ST	77,200 SF
TOTAL	195,200 SF

SFMTA
 LAURA BLAKE ARCHITECT

SCOTT AND 15TH ST ALTERNATE
 1" = 150' JANUARY 2017

Yosemite

1528 & 1538 Yosemite Avenue
35,000 sf and 4,100 sf
Lease expires July 2016,
option to purchase or extend
lease 3 years plus 18 months
SFMTA:2012

Current Use

Streets Paint Shop
Parking for Bancroft
Building & Grounds Paint
Shop

Vision Condition Notes

NA

Vision Recommendations

NA

Observations

- Lease expires July 2019, SFMTA has option for 18 month extension

2040 Use

Streets Paint Shop
Parking for Bancroft



7th Street

450 7th Street
Leased

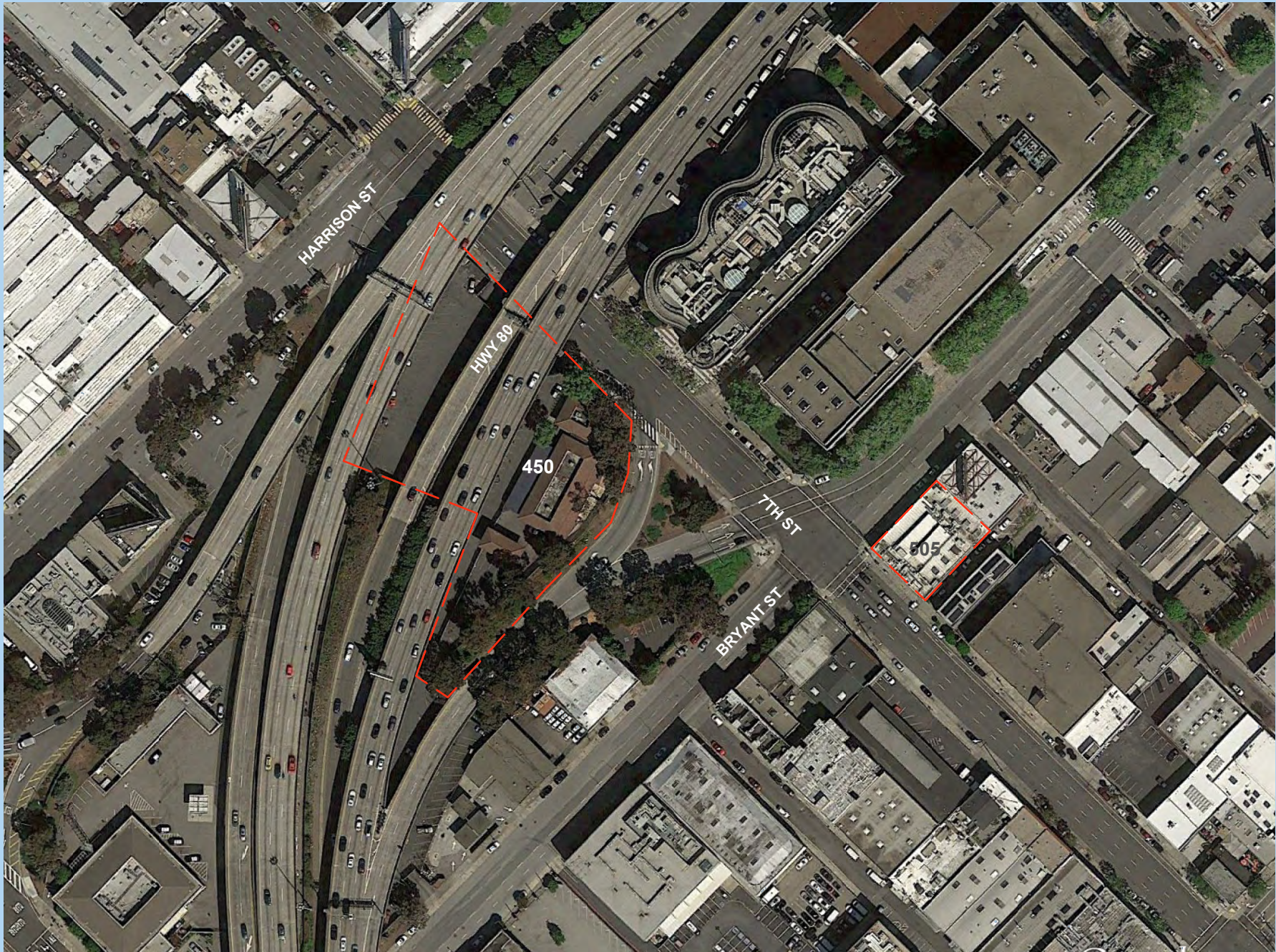
Current Use
Tow Facility

Vision Condition Notes

Vision Recommendations

SFMTA Subsequent Needs and Planning

2040 Use
Tow Facility



Enforcement

505 7th St (899 Bryant)

Lease expires Jan 2018
9,700 sf building
3,200 sf parking

571 10th Street

Caltrans monthly lease
12,100 sf lot

6th and Townsend

Caltrans monthly lease
32,500 sf lot

2323 Cesar Chavez St

City Yard

Current Use

62 Staff + 305 PCO
300 Go-4 + 58 Standard

7th St - office
10th St - 45 tow/boot/scofflaw
6th St - 200 various units
Chavez - 60 street sweeping
Vehicle maintenance by SFPW

Vision Condition Notes

- NA

Vision Recommendations

- *Consider consolidating Enforcement at Scott*

SFMTA Subsequent Issues and Planning

- *SFMTA considering consolidating enforcement operations and fleet at New Facility; vehicle maintenance will remain at SFPW facility.*

2016 Observations

- *Potential to consolidate Enforcement staff at 15th Street and Enforcement vehicles at adjacent Scott Garage.*

2040 Use Scenario 1

Consolidate Enforcement at New Facility

2040 Use Scenario 1A/1B/2A and 2B

Consolidate Enforcement at Scott and 15th Street

The study starting on page 132 includes a preliminary program and test fit for NRV & Enforcement at Scott & 15th St and an alternate for NRV, Enforcement & MRO if 15th Street is rebuilt.



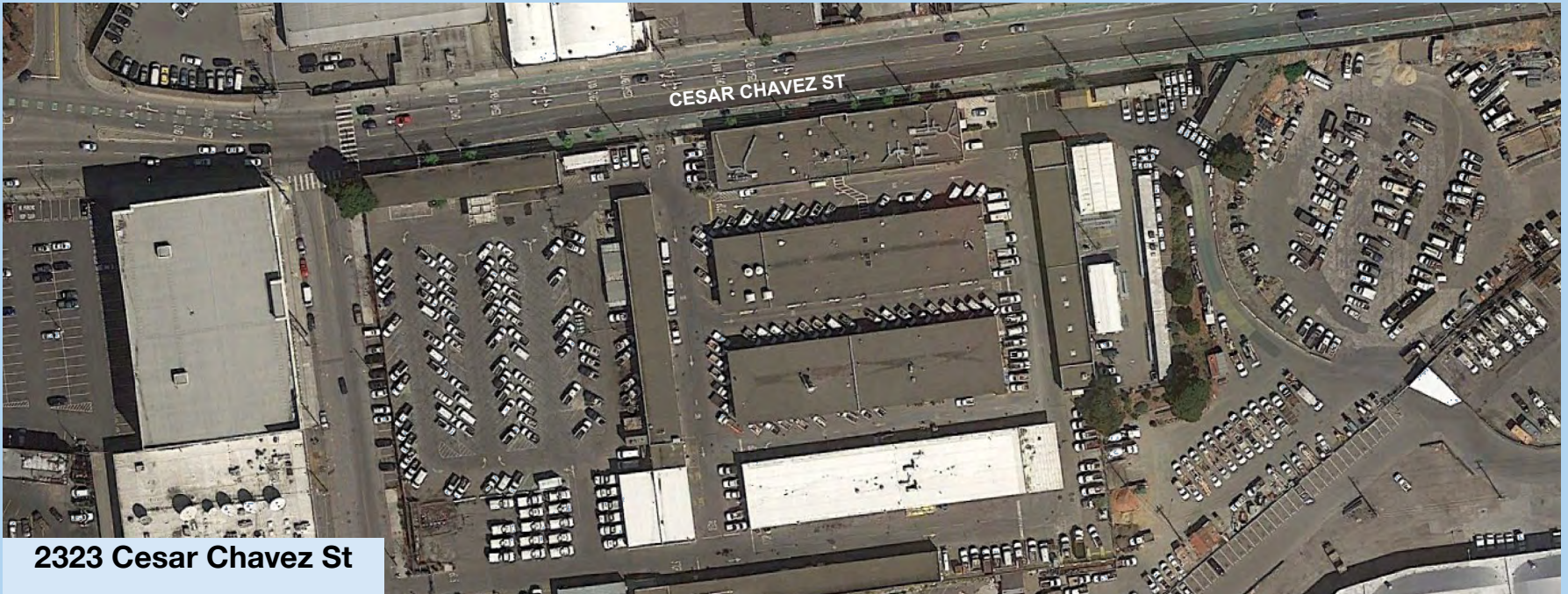
505 7th St



571 10th Street



6th and Townsend



2323 Cesar Chavez St



NOTICE
SPILLS AND
OVERFILLS MUST
BE REPORTED

Appendix 4: Facility Condition Assessment

Condition Assessment Process

EMG Corporation, specialists in facility condition assessment, undertook an assessment of 18 SFMTA facilities including:

◆ **Motor Coach**

Flynn
Kirkland
Woods

◆ **Trolley Coach**

Presidio
Potrero

◆ **Rail**

Cable Car Barn
Green
Muni Metro East

◆ **Streets and Support**

Alameda
Bancroft
Bayshore
Bryant
Burke
Lenox
Pennsylvania
Scott
7th Street
10th Street

EMG conducted walk-through surveys to observe facility systems and materials, identify physical deficiencies, and formulate recommendations to remedy the deficiencies. During the walk-through surveys EMG interviewed staff on historical and pending repairs/replacements. Next EMG prepared draft facility condition reports for each building, reviewed them with SFMTA, and made corrections as needed.

EMG provided a typical ranking methodology to prioritize deficiencies (described on page 144) and recommended that the control facilities essential to transit service have a higher priority than the other facilities surveyed. Using this ranking methodology EMG provided a prioritized list of maintenance needs

for all facilities included in the survey, as well as, an electronic database that SFMTA can integrate into its Enterprise Asset Management System. The information will serve as a guide for future replacement, repairs, and improvements for the facilities surveyed.

TBD Consulting, local cost consultants knowledgeable about San Francisco procurement practices, reviewed EMG's costs and made recommendations for contingency and soft cost mark-ups (described on page 146). These mark-ups along with escalation were applied to unit costs to develop maintenance cost estimates (summarized on page 147).



Bancroft Photograph by IDEO

Findings and Prioritizing Maintenance Needs

The Facility Condition Assessment identified both deferred maintenance needs and anticipated maintenance needs over the next twenty years. The objective of the assessment was to identify work needed to maintain the facilities for their intended use and thus includes repairs and replacement of facility systems and finishes as well as known regulatory compliance and risk management items. It does not include code or functional upgrades. The items were prioritized using EMG's standard methodology which aligns with the SFMTA capital planning criteria as summarized below:

Criteria

Safety

Regulatory Compliance

Risk Management
(i.e. grievance, ADA, hazard)

Service Critical Improvements to Operational Capacity
(e.g. equipment fit-out and lift replacement)

Employee Morale Priorities
(e.g. restrooms, lighting, HVAC)

Item Ranking

Highest

Fire Protection
Regulatory Compliance
Risk Mitigation

High

Structural Problem
Weather Protection
HVAC
Site Lighting

Medium and Low

Building Systems
Stairs & Elevators
Finishes



Green Photograph by IDEO

Maintenance Costs and Planning

The maintenance estimate includes the estimated repair or replacement cost of items identified in the facility condition assessment, 25% design contingency, 10% construction contingency, 35% soft costs and 3% per year escalation.

The chart on the right provides a summary of the estimated maintenance costs for 2016 and the total through 2036 for each facility included in the facility condition assessment. The 2016 costs include a number of deferred needs and the total 20 year cost includes both deferred and anticipated future needs. The information has been provided in an electronic database; as maintenance work is completed items can be removed from the database, and as new needs are identified, items can be added to the database.

Facility Condition Assessment was prepared assuming that facilities will be used for their intended function for the next twenty years. However SFMTA should evaluate maintenance expenditures on facilities that will not be retained.

The data from the Facility Condition Assessment is documented in numerous reports including:

- Executive Summary
- Prioritized Spreadsheet (list of deficiencies and costs by year)
- Replacement Reserves Report
- Building Specific Reports (separate for each building)

SFMTA is in the process of applying further filters and prioritization criteria that enable FCA information to be used for ongoing budgeting for maintenance and capital planning.

Maintenance Cost Estimate

Facility	Building Area (sf)	Site Area (acres)	2016 Estimate	20 Year Estimate
Flynn	266,000	6.2	\$6,700,000	\$25,400,000
Kirkland	13,200	2.6	\$1,500,000	\$3,200,000
Woods	158,000	8.2	\$8,300,000	\$31,100,000
Potrero	109,000	4.4	\$7,400,000	\$14,300,000
Presidio	158,000	5.4	\$6,000,000	\$20,100,000
Cable Car	83,700	1	\$6,100,000	\$13,500,000
Green	191,000	6.7	\$1,700,000	\$26,600,000
MME	163,000	16.9	\$6,700,000	\$21,100,000
Alameda	7,000		\$300,000	\$8,500,000
Bancroft	90,000	1	\$700,000	\$2,900,000
Bryant	48,000	1.1	\$3,100,000	\$4,500,000
Burke	103,000	2.4	\$2,600,000	\$4,500,000
Lenox	10,000		\$400,000	\$1,200,000
Pennsylvania	88,000	2	\$200,000	\$15,700,000
Scott	118,000	1.1	\$1,000,000	\$8,600,000
Total Owned	1,605,900	59	\$52,700,000	\$201,200,000
7th	9,700		\$700,000	\$2,600,000
10th	400		\$300,000	\$900,000
Bayshore	255,000		\$7,300,000	\$21,100,000
Total Leased	265,100		\$8,300,000	\$24,600,000
Total Owned & Leased	1,871,000	59	\$61,000,000	\$225,800,000

Appendix 5: Framework Cost Analysis

Framework Cost Analysis

The Framework cost analysis is a budget level analysis developed to compare the five scenarios included in this report. The estimate for each scenario includes capital, maintenance/tenant improvement, and contingency costs. The estimates are based on the scopes and schedules described in this report. As more information is available, the estimates should be refined and updated.

The chart on the following page is a comparison of the budget level costs of the five scenarios included in this report. The capital cost/scenario cost for each scenario are shown in red. The component costs for each scenario are shown in black. The following describes what is included in the costs and their sources.

- **Scenario Cost** includes capital, maintenance/tenant improvement, and contingency costs.
- **Capital Costs** include New Facility and other purchase costs, SFMTA project costs and lease savings. TOD Savings are not known at this time and thus not included.
- **New Facility Costs** derived by SFMTA based on information from the developer; assume purchase over ten years.
- **SFMTA Project Costs** developed by TBD Consultants; include hard and soft costs escalated to mid point of construction.
- **Lease Savings** provided by SFMTA; are to 2040.
- **Maintenance/Tenant Improvement Costs** include maintenance costs identified in the Facility Condition Assess-

ment and an allowance for tenant improvements.

- **Scenario Contingency** is for EIR, Hazardous Materials Abatement, Unforeseen Conditions, etc.

The spreadsheet with the analysis for each scenario is included on the following pages and TBD Consultant's Report with the SFMTA capital project budget estimates is included on the subsequent pages.

Scenario Cost Comparison

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$1,335M / \$1,931M
New Facility	coach \$588M paratransit \$138M NRV \$73M enforcement \$92M training \$27M	coach \$577M paratransit \$135M	coach \$579M		
MME	rail \$39M	rail \$39M	rail \$39M	rail & swing \$136M	rail \$39M
Potrero Presidio Kirkland	rebuilt \$420M	rebuilt \$419M training \$18M	rebuilt \$419M training \$18M	rebuilt \$687M training \$18M	rebuilt \$737M training \$18M
Scott	vacate	NRV \$0 enf parking \$0	NRV \$0 enf parking \$0	NRV \$0 enf parking \$0	NRV \$0 enf parking \$0
15th St (To be transferred to SFMTA)		enforcement \$23M	enforcement \$23M	enforcement \$23M	enforcement \$23M
Other			paratransit \$30M	paratransit \$30M	paratransit \$30M
Lease Savings	-\$42M	-\$41M	-\$43M	-\$27M	-\$28M

		Estimated Maintenance & TI Costs	Estimated Capital Costs	Estimated Scenario Contingency	Estimated Total Cost through 2040
SCENARIO 1	Purchase New Multi-Modal Facility Expand Rail at MME Rebuild Potrero, Presidio and Kirkland	\$288M	\$1,335M	\$308M	\$1,931M
SCENARIO 1A	Purchase New Motor Coach & Paratransit Facility Renovate 15th St for Enforcement Expand Rail at MME Rebuild Potrero, Presidio and Kirkland	\$288M	\$1,170M	\$277M	\$1,735M
SCENARIO 1B	Purchase New Motor Coach Facility Purchase Existing Paratransit Facility Renovate 15th St for Enforcement Expand Rail at MME Rebuild Potrero, Presidio and Kirkland	\$288M	\$1,065M	\$257M	\$1,610M
SCENARIO 2A	Purchase Existing Paratransit Facility Renovate 15th St for Enforcement Build Swing/Rail at MME Rebuild Potrero and Presidio Decked, Rebuild Kirkland	\$288M	\$867M	\$219M	\$1,374M
SCENARIO 2B	Purchase Existing Paratransit Facility Renovate 15th St for Enforcement Expand Rail at MME, Rebuild Kirkland as swing Rebuild Potrero and Presidio Decked	\$288M	\$819M	\$210M	\$1,317M

SOURCES

1. SFMTA - PURCHASE AND LEASE ESTIMATES
2. EMG CORPORATION - MAINTENANCE COST ESTIMATES
3. TBD CONSULTANTS - CONSTRUCTION COST ESTIMATES

ASSUMPTIONS

1. LEASE TO PURCHASE NEW FACILITY 10 YEARS AFTER OCCUPANCY
2. SWAP ACC INCLUDING STREET VACATION FOR BRYANT ST
3. ESTIMATED COSTS ASSUME TIMING SHOWN
4. ESTIMATED PROJECT COSTS EXCLUDE ENTITLEMENT, EIR, HAZARDOUS ABATEMENT COSTS, ETC, ASSUMED PART OF SCENARIO CONTINGENCY

NEED DETERMINE/REFINE

1. NEW FACILITY COSTS
2. T.O.D REVENUES
3. 15% DESIGN, 10% CONSTRUCTION, 35% SOFT COST AND 19% SCENARIO CONTINGENCY PERCENTAGES

SCENARIO 1

MAINTENANCE AND TENANT IMPROVEMENTS		Average Annual Cost	Cost thru 2040	Start Date
		\$12,000,000	\$288,000,000	
PURCHASE		Average Annual Cost	Total Cost	Construction Start
New Facility	New Motor Coach, Paratransit, NRV, Enforcement, Training Facility	\$91,800,000	\$918,400,000	January, 2020
SFMTA OWNED		October 2016 Cost	Escalated Cost	Construction Start
MME Expansion	Rail Expansion	\$31,600,000	\$38,700,000	January, 2021
Potrero	Rebuild for Trolley Coach	\$121,400,000	\$157,900,000	January, 2023
Presidio	Rebuild for Trolley Coach	\$131,200,000	\$186,400,000	January, 2026
Kirkland	Rebuild for Motor Coach	\$48,500,000	\$75,300,000	January, 2029
COSTS		\$332,700,000	\$458,300,000	
SFMTA TOD REVENUE AND LEASE SAVINGS THROUGH 2040		Average Annual Cost	Cost thru 2040	Start Date
Potrero	TOD above SFMTA facility	TBD	TBD	January, 2025
Presidio	Site fronting Geary	TBD	TBD	January, 2028
Swing	Lease Savings	-\$1,300,000	-\$20,700,000	June, 2023
Enforcement	Lease Savings for 4 sites (505 7th, 10th St, 6th S, Cesar Chavez)	-\$900,000	-\$14,500,000	June, 2023
Paratransit	Lease Savings for 2 sites	-\$400,000	-\$6,900,000	June, 2023
REVENUE/SAVINGS		-\$2,600,000	-\$42,100,000	
SCENARIO SUBTOTAL			\$1,622,600,000	
SCENARIO CONTINGENCY (19%)			\$308,300,000	
			SCENARIO 1	\$1,930,900,000

SCENARIO 1A

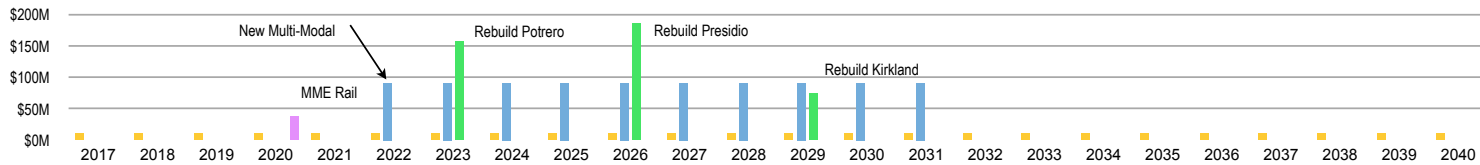
MAINTENANCE AND TENANT IMPROVEMENTS		Average Annual Cost	Cost thru 2040	Start Date
		\$12,000,000	\$288,000,000	
PURCHASE/SWAP		Average Annual Cost	Total/Escalated	Construction Start
New Facility	New Motor Coach and Paratransit Facility	\$71,200,000	\$712,000,000	January, 2020
15th Street	Swap 15th St & Bryant St, renovate 15th St for Enforcement	\$18,600,000	\$22,900,000	January, 2021
COSTS		\$89,800,000	\$734,900,000	
SFMTA OWNED		October 2016 Cost	Escalated Cost	Construction Start
MME Expansion	Rail Expansion	\$31,600,000	\$38,700,000	January, 2021
Potrero	Rebuild for Trolley Coach & Training	\$135,500,000	\$176,200,000	January, 2023
Presidio	Rebuild for Trolley Coach	\$131,200,000	\$186,400,000	January, 2026
Kirkland	Rebuild for Motor Coach	\$48,500,000	\$75,300,000	January, 2029
COSTS		\$346,800,000	\$476,600,000	
SFMTA TOD REVENUE AND LEASE SAVINGS THROUGH 2040		Average Annual Cost	Cost thru 2040	Start Date
Potrero	TOD above SFMTA facility	TBD	TBD	January, 2025
Presidio	Site fronting Geary	TBD	TBD	January, 2028
Marin	Lease Savings	-\$1,300,000	-\$20,700,000	June, 2023
Enforcement	Lease Savings for 3 sites (505 7th, 10th St, 6th St)	-\$800,000	-\$13,800,000	June, 2024
Paratransit	Lease Savings for 2 sites	-\$400,000	-\$6,900,000	June, 2023
REVENUE/SAVINGS		-\$2,500,000	-\$41,400,000	
SCENARIO SUBTOTAL			\$1,458,100,000	
SCENARIO PROJECT CONTINGENCY (19%)			\$277,000,000	
			SCENARIO 1A	\$1,735,100,000

SCENARIO 1B				
MAINTENANCE AND TENANT IMPROVEMENTS				
		Average Annual Cost	Cost thru 2040	Start Date
		\$12,000,000	\$288,000,000	
PURCHASE/SWAP				
		Annual/Oct 16 Cost	Total/Escalated	Construction Start
New Facility	New Motor Coach Facility	\$57,900,000	\$578,600,000	January, 2020
15th Street	Swap 15th St & Bryant St, renovate 15th St for Enforcement	\$18,600,000	\$22,900,000	January, 2021
Paratransit	Purchase Existing Facility and \$5M for minor improvements	\$30,000,000	\$30,000,000	January 2018
COSTS		\$106,500,000	\$631,500,000	
SFMTA OWNED				
		October 2016 Cost	Escalated Cost	Construction Start
MME Expansion	Rail Expansion	\$31,600,000	\$38,700,000	January, 2021
Potrero	Rebuild for Trolley Coach & Training	\$135,500,000	\$176,200,000	January, 2023
Presidio	Rebuild for Trolley Coach	\$131,200,000	\$186,400,000	January, 2026
Kirkland	Rebuild for Motor Coach	\$48,500,000	\$75,300,000	January, 2029
COSTS		\$346,800,000	\$476,600,000	
SFMTA TOD REVENUE AND LEASE SAVINGS THROUGH 2040				
		Average Annual Cost	Total	Start Date
Potrero	TOD above SFMTA facility	TBD	TBD	January, 2025
Presidio	Site fronting Geary	TBD	TBD	January, 2028
Marin	Lease Savings	-\$1,300,000	-\$20,700,000	June, 2023
Enforcement	Lease Savings for 3 sites (505 7th, 10th St, 6th St)	-\$900,000	-\$13,800,000	June, 2024
Paratransit	Lease Savings for 2 sites	-\$400,000	-\$9,100,000	January, 2018
REVENUE/SAVINGS		-\$2,600,000	-\$43,600,000	
SCENARIO SUBTOTAL			\$1,352,500,000	
SCENARIO PROJECT CONTINGENCY (19%)			\$257,000,000	
			SCENARIO 1B	\$1,609,500,000
SCENARIO 2A				
MAINTENANCE AND TENANT IMPROVEMENTS				
		Average Annual Cost	Cost thru 2040	Start Date
		\$12,000,000	\$288,000,000	
PURCHASE/SWAP				
		Annual/Oct 16 Cost	Total/Escalated	Construction Start
15th Street	Swap 15th St & Bryant St, renovate 15th St for Enforcement	\$18,600,000	\$22,900,000	January, 2021
Paratransit	Purchase Existing Facility and \$5M for minor improvements	\$30,000,000	\$30,000,000	January 2018
COSTS		\$48,600,000	\$52,900,000	
LEASE				
		October 2016 Cost	Escalated Cost	Construction Start
Swing	Allowance for minor improvements	\$5,000,000	\$6,100,000	January 2020
SFMTA OWNED				
		October 2016 Cost	Escalated Cost	Construction Start
MME Expansion	Build New Trolley Swing that becomes Rail Expansion and Backshop	\$110,700,000	\$135,700,000	January, 2021
Potrero	Rebuild Decked for Trolley /Motor Coach & Training	\$219,200,000	\$293,600,000	January, 2023
Presidio	Rebuild Decked for Trolley Coach	\$228,400,000	\$334,300,000	January, 2027
Kirkland	Rebuild for Motor Coach	\$48,500,000	\$77,600,000	January, 2030
COSTS		606,800,000	\$841,200,000	
SFMTA TOD REVENUE AND LEASE SAVINGS THROUGH 2040				
		Average Annual Cost		
Presidio	Site fronting Geary	TBD	TBD	January, 2032
Swing	Lease Savings for Swing	-\$1,400,000	-\$10,700,000	June, 2032
Enforcement	Lease Savings for 3 sites (505 7th, 10th St, 6th St)	-\$900,000	-\$13,800,000	June, 2024
Paratransit	Lease Savings for 2 sites	-\$400,000	-\$9,100,000	January, 2018
REVENUE/SAVINGS		-\$2,700,000	-\$33,600,000	
SCENARIO SUBTOTAL			\$1,154,600,000	
SCENARIO PROJECT CONTINGENCY (19%)			\$219,400,000	
			SCENARIO 2A	\$1,374,000,000

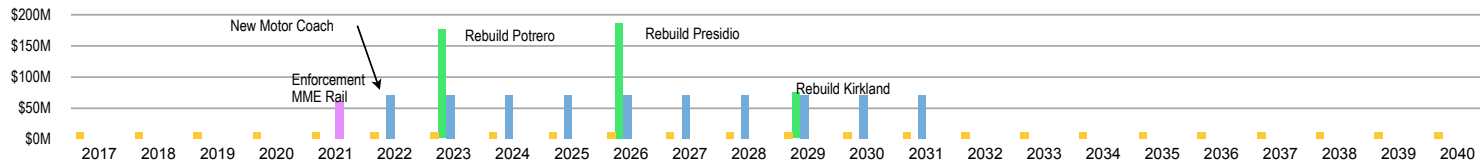
SCENARIO 2B

MAINTENANCE AND TENANT IMPROVEMENTS		Average Annual Cost	Cost thru 2040	Start Date
		\$12,000,000	\$288,000,000	
PURCHASE/SWAP		Annual/Oct 16 Cost	Total/Escalated	
15th Street	Swap 15th St & Bryant St, renovate 15th St for Enforcement	\$18,600,000	\$22,900,000	January, 2021
Paratransit	Purchase Existing Facility and \$5M for minor improvements	\$30,000,000	\$30,000,000	January 2018
COSTS		\$48,600,000	\$52,900,000	
LEASE		October 2016 Cost	Escalated Cost	Construction Start
Swing	Allowance for minor improvements	\$5,000,000	\$6,100,000	January 2020
SFMTA OWNED		October 2016 Cost	Escalated Cost	Construction Start
MME Expansion	Rail Expansion	\$31,600,000	\$38,700,000	January, 2021
Kirkland	Rebuild for Motor/Trolley Coach	\$62,200,000	\$80,900,000	January, 2023
Potrero	Rebuild Decked for Trolley /Motor Coach & Training	\$219,200,000	\$311,500,000	January, 2026
Presidio	Rebuild Decked for Trolley Coach	\$228,400,000	\$363,800,000	January, 2029
COSTS		541,400,000	\$794,900,000	
SFMTA TOD REVENUE AND LEASE SAVINGS THROUGH 2040		Average Annual Cost		
Presidio	Site fronting Geary	TBD	TBD	January, 2029
Swing	Lease Savings for Swing	-\$1,400,000	-\$11,900,000	June, 2031
Enforcement	Lease Savings for 3 sites (505 7th, 10th St, 6th St)	-\$900,000	-\$13,800,000	June, 2024
Paratransit	Lease Savings for 2 sites	-\$400,000	-\$9,100,000	January, 2018
REVENUE/SAVINGS		-\$2,700,000	-\$34,800,000	
SCENARIO SUBTOTAL			\$1,107,100,000	
SCENARIO PROJECT CONTINGENCY (19%)			\$210,300,000	
		SCENARIO 2B	\$1,317,400,000	

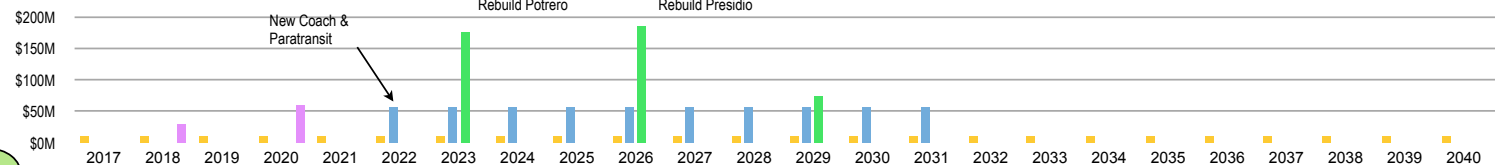
PURCHASE NEW MULTI-MODAL FACILITY AND REBUILD DETERIORATED FACILITIES																									
1	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	TOTAL
MAINTENANCE & TI	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$288M
PURCHASE NEW						\$92M	\$92M	\$92M	\$92M	\$92M	\$92M	\$92M	\$92M	\$92M	\$92M										\$918M
REBUILD							\$158M			\$186M			\$75M												\$420M
PURCHASE /BUILD				\$39M																					\$39M
LEASE SAVINGS																									-\$42M
CONTINGENCY																									\$308M
TOTAL	\$12M	\$12M	\$12M	\$51M	\$12M	\$104M	\$262M	\$104M	\$104M	\$290M	\$104M	\$104M	\$179M	\$104M	\$104M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$1,931M



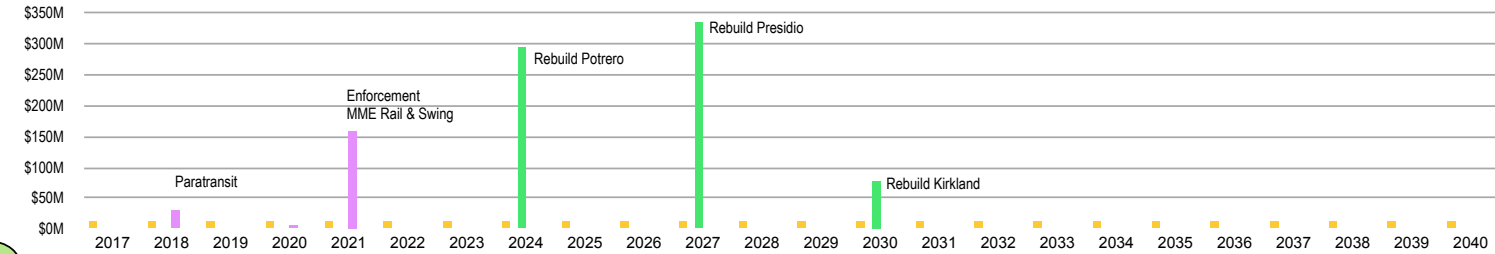
PURCHASE NEW COACH AND PARATRANSIT FACILITY AND REBUILD DETERIORATED FACILITIES																									
1A	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	TOTAL
MAINTENANCE & TI	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$288M
PURCHASE NEW						\$71M	\$71M	\$71M	\$71M	\$71M	\$71M	\$71M	\$71M	\$71M	\$71M										\$712M
REBUILD							\$176M			\$186M			\$75M												\$438M
PURCHASE/BUILD					\$62M																				\$62M
LEASE SAVINGS																									-\$41M
CONTINGENCY																									\$277M
TOTAL	\$12M	\$12M	\$12M	\$12M	\$74M	\$83M	\$259M	\$83M	\$83M	\$270M	\$83M	\$83M	\$159M	\$83M	\$83M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$1,735M



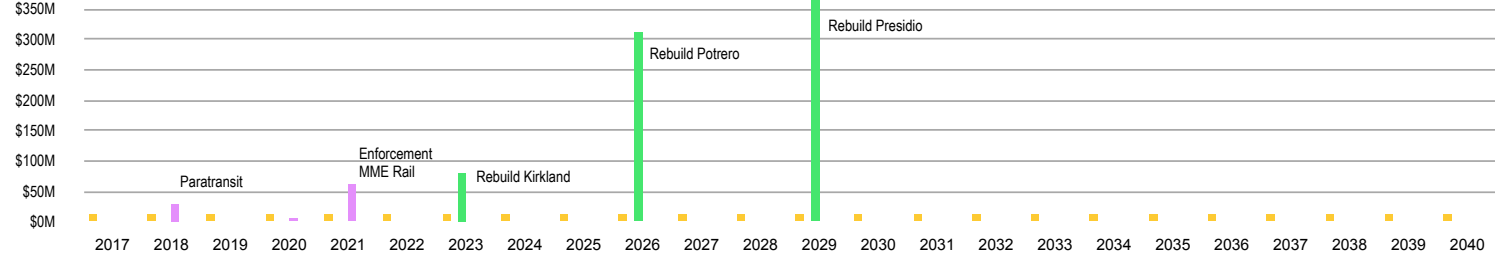
1B	PURCHASE DEVELOPER BUILT COACH FACILITY AND REBUILD DETERIORATED FACILITIES																								TOTAL
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
MAINTENANCE & TI	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$288M
PURCHASE NEW						\$58M	\$58M	\$58M	\$58M	\$58M	\$58M	\$58M	\$58M	\$58M	\$58M										\$579M
REBUILD							\$176M			\$186M			\$75M												\$438M
PURCHASE /BUILD		\$30M		\$62M																					\$92M
LEASE SAVINGS																									-\$44M
CONTINGENCY																									\$257M
TOTAL	\$12M	\$42M	\$12M	\$74M	\$12M	\$70M	\$246M	\$70M	\$70M	\$256M	\$70M	\$70M	\$145M	\$70M	\$70M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$1,610M



2A	REBUILD EXISTING SITES MORE INTENSELY, Use MME as swing																								TOTAL
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
MAINTENANCE & TI	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$288M
PURCHASE NEW																									\$0M
REBUILD								\$294M			\$334M			\$78M											\$706M
PURCHASE /BUILD		\$30M		\$6M	\$159M																				\$195M
LEASE SAVINGS																									-\$34M
CONTINGENCY																									\$219M
TOTAL	\$12M	\$42M	\$12M	\$18M	\$171M	\$12M	\$12M	\$306M	\$12M	\$12M	\$346M	\$12M	\$12M	\$90M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$1,374M



2B	REBUILD EXISTING SITES MORE INTENSELY, Use Kirkland & lease as swing																								TOTAL
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
MAINTENANCE & TI	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$288M
PURCHASE NEW																									\$0M
REBUILD							\$81M			\$312M			\$364M												\$756M
PURCHASE /BUILD		\$30M		\$6M	\$62M																				\$98M
LEASE SAVINGS																									-\$35M
CONTINGENCY																									\$210M
TOTAL	\$12M	\$42M	\$12M	\$18M	\$74M	\$12M	\$93M	\$12M	\$12M	\$324M	\$12M	\$12M	\$376M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$12M	\$1,317M



Project Budget Estimates

SFMTA Facilities Framework

Framework Cost Plan
San Francisco, California

Based on review & analysis of:

Facility Planning and Workplace Planning Draft Report

Report Prepared for:

Owen Adams Consulting

11/11/2016, Revised

more value, less risk

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SFMTA Facilities Framework
Framework Cost Plan
San Francisco, California



Facility Planning and Workplace Planning Draft Report
11/11/2016, Revised

BASIS OF ESTIMATE

REFERENCE DOCUMENTATION

This Construction Cost Plan was produced from the following documentation:

Document	Date
SFMTA Facility Assessment & Workplace Planning Draft Report	6/10/2016
SFMTA Framework Spreadsheet	11/7/2016
SFMTA Facility Planning Framework Draft	11/14/2016
SFMTA Islais Creek Cost Estimate & Bid Results	10/3/2014 & 3/2/2015

PROJECT DESCRIPTION

Scope of work includes master plan cost planning for scenarios of development for SFMTA scope at various sites. Transit-oriented development portions of potential projects are not included in this report.

BASIS FOR PRICING

This framework cost plan reflects benchmark construction cost values for the various projects and should not be construed as a prediction of low bid. Prices are based on local prevailing wage construction costs at the time the plan was prepared. Pricing assumes a procurement process with competitive bidding for all sub-trades of the construction work, which is to mean a minimum of 3 bids for all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher. Conversely in a competitive market should a larger number of sub-bids be received (i.e. 6 or more) pricing can be expected to be lower than the current estimate.

Subcontractor's markups have been included in each line item unit price. Markups cover the cost of field overhead, home office overhead and subcontractor's profit. Subcontractor's markups typically range from 15% to 25% of the unit price depending on market conditions.

General Contractor's/Construction Manager's Site Requirement and Jobsite Management costs are calculated on a percentage basis. General Contractor's/Construction Manager's overhead and fees are based on a percentage of the total direct costs plus general conditions, and cover the contractor's bond, insurance, site office overheads and profit. For planning purposes a cumulative additional rate of 20% over direct costs has been used for the General Contractor markups (excluding contingencies).

Unless identified otherwise, the cost of such items as overtime, shift premiums and construction phasing are not included in the line item unit price.

This framework cost plan is based on standard industry practice, professional experience and knowledge of the local construction market costs. TBD Consultants have no control over the material and labor costs, contractors methods of establishing prices or the market and bidding conditions at the time of bid. Therefore TBD Consultants do not guarantee that the bids received will not vary from this cost estimate.

Additional Conditions of Construction

- The general contract will be competitively bid with qualified general and main subcontractors
- There will likely be local hire, small business set-aside, and equal opportunity employment requirements
- The contractor will be required to pay prevailing wages
- There are no phasing requirements
- The contractor will have full access to the site during normal business hours
- LEED performance standard will be minimum gold



BASIS OF ESTIMATE

CONTINGENCY

The following contingencies have been applied to the planning level construction costs:

Design Contingency 15.0%

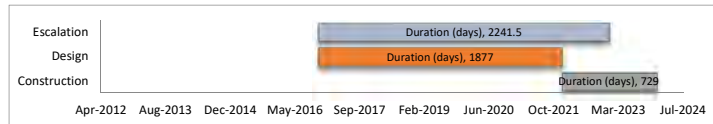
The Design Contingency is carried to cover scope that lacks definition, is unique to a particular project, or may be added to the design. As the design becomes more complete the Design Contingency is typically reduced.

Construction Contingency 10.0%

The Construction Contingency is carried to cover the unforeseen during construction execution and Risks that do not currently have mitigation plans. As Risks are mitigated, Construction Contingency can be reduced, but should not be eliminated.

An owner's project contingency has not been included in this construction cost plan, but it is recommended that the owner carry additional contingency to cover scope change, bidding conditions, claims and delays.

CONSTRUCTION SCHEDULE - FOR START DATE OF JANUARY 2022



MME Expansion, Scenario 1 (Only) Construction Start Date	Jan-2022	Construction End Date	Dec-2023
Mid-date of Construction	Dec-2022	Construction Duration	24 months
Escalation Period	74 months	Escalation End Date	Construction Mid-Point

Escalation is required to the midpoint of construction which is assumed to be 74 months from November 2016

ESCALATION - RATES AND COMPOUNDING

Escalation to Midpoint of Construction for January 2022
 Start Date: 26.27% *Compounded Rate* *Based on cumulative escalation over 6.14 Years*

The compounded escalation rate for the project shown above is based on a start date of January 2022. Construction cost escalation for other projects and scenarios is calculated at a compounded rate from the date of this document to the midpoint of construction. Start dates are taken from the Framework Scenario Time-line Comparison in the Draft Report, and midpoints are assumed to be one year from the start of construction. The rates used for compounding are shown below:

Year 1	5.00%
Year 2	4.50%
Year 3	4.00%
Year 4	3.50%
Year 5	3.37%
Beyond 5 Years	3.00% <i>Approximate long-term historical average</i>

This calculation does not account for adverse bidding conditions and actual escalation rates may vary. Changes in market conditions should be evaluated at least once a year.



BASIS OF ESTIMATE

SOFT COSTS

An allowance for soft costs has been included in this report, based on 35% of hard construction costs including design and construction contingencies. A list of items included in soft costs is provided below. Items listed under Exclusions are not included in the soft cost percentage, nor are they included in construction costs.

Given the high cost of many of the projects and the extent and number of unknown factors that may impact their project costs, a risk analysis and mitigation plan may be warranted. Once a project moves into a detailed planning stage, such a risk analysis would provide guidance in determining a project contingency, and help to focus attention on the most important factors affecting the overall project cost.

- Soft costs inclusions:
- Design and consulting fees
 - License, permits, plan check fees
 - Construction management fees
 - Testing and inspections
 - Public art
 - Moving costs
 - Mechanical utility connection charges & fees (excluding electrical)
 - Site surveys, existing condition reports and soils investigation costs
 - Furniture, fixtures and equipment (FF&E)

EXCLUSIONS

- Transit-oriented development portions of projects
- Project contingency
- Entitlement costs and development fees
- Environmental impact mitigation
- Financing charges
- Administrative expenses
- Legal fees and disbursements
- Operating costs
- Power substations and electrical utility connections
- Power generation systems
- Electrical utility connection charges and fees
- Hazardous materials abatement
- Land and easement acquisition
- Scope change and post-contract contingencies
- Owner-provided insurance programs
- Overtime, 2nd shift and lost productivity premiums



SCENARIO ONE	NOVEMBER 2016 COST	ESCALATED TO MIDPOINT CONSTRUCTION	START DATE
MME EXPANSION	31,602,000	38,744,000	Start Date Jan 2021
POTRERO	121,413,000	157,910,000	Start Date Jan 2023
PRESIDIO	131,156,000	186,399,000	Start Date Jan 2026
KIRKLAND	48,505,000	75,323,000	Start Date Jan 2029
TOTAL, SCENARIO ONE	332,676,000		

SCENARIO ONE - A	NOVEMBER 2016 COST	ESCALATED TO MIDPOINT CONSTRUCTION	START DATE
15TH STREET	18,649,000	22,864,000	Start Date Jan 2021
MME EXPANSION	31,602,000	38,744,000	Start Date Jan 2021
POTRERO	135,485,000	176,212,000	Start Date Jan 2023
PRESIDIO	131,156,000	186,399,000	Start Date Jan 2026
KIRKLAND	48,505,000	75,323,000	Start Date Jan 2029
TOTAL, SCENARIO ONE - A	365,397,000		

SCENARIO ONE - B	NOVEMBER 2016 COST	ESCALATED TO MIDPOINT CONSTRUCTION	START DATE
15TH STREET	18,649,000	22,864,000	Start Date Jan 2021
MME EXPANSION	31,602,000	38,744,000	Start Date Jan 2021
POTRERO	135,485,000	176,212,000	Start Date Jan 2023
PRESIDIO	131,156,000	186,399,000	Start Date Jan 2026
KIRKLAND	48,505,000	75,323,000	Start Date Jan 2029
TOTAL, SCENARIO ONE - B	365,397,000		



SCENARIO TWO - A	NOVEMBER 2016 COST	ESCALATED TO MIDPOINT CONSTRUCTION	START DATE
15TH STREET	18,649,000	22,864,000	Start Date Jan 2021
MME EXPANSION	110,714,000	135,735,000	Start Date Jan 2021
POTRERO	219,175,000	293,607,000	Start Date Jan 2024
PRESIDIO	228,401,000	334,333,000	Start Date Jan 2027
KIRKLAND	48,505,000	77,584,000	Start Date Jan 2030
TOTAL, SCENARIO TWO - A	625,444,000		

SCENARIO TWO - B	NOVEMBER 2016 COST	ESCALATED TO MIDPOINT CONSTRUCTION	START DATE
15TH STREET	18,649,000	22,864,000	Start Date Jan 2021
MME EXPANSION	31,602,000	38,744,000	Start Date Jan 2021
POTRERO	219,175,000	311,492,000	Start Date Jan 2026
PRESIDIO	228,401,000	363,820,000	Start Date Jan 2029
KIRKLAND	62,235,000	80,943,000	Start Date Jan 2023
TOTAL, SCENARIO TWO - B	560,062,000		

ALTERNATES	NOVEMBER 2016 COST
BAYSHORE - TRAINING	9,228,000
WOODS - PARATRANSIT	99,115,000

			NEW SCENARIO 1A									
Component	Unit	Unit Cost	15th Street		Potrero ²		Presidio ³		Kirkland ⁴		Muni Metro East Expansion	
			Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total
Demolition												
Site	SF	\$5-\$15	19,700	98,500	192,000	1,245,000	196,400	2,946,000	113,000	1,695,000	174,135	
Building	SF	\$20.00	-		109,000	2,180,000	158,000	3,160,000	13,200	264,000	-	
Excavation, Class I Only	CY	\$60.00	-		-		90,000	5,400,000			-	
Demolition for Interior Renovation	SF	\$20.00			-						-	
Sitework												
Site Utilities	SF	\$1.20	19,700	23,640	192,000	230,400	196,400	235,680	113,000	135,600	86,715	104,058
Yard Paving	SF	\$24.00	19,700	472,800	-		149,400	6,159,600	95,500	2,292,000	86,715	2,081,160
Rail Track & Overhead Installation	LF	\$2,400.00			-						6,800	16,320,000
Trolley Overhead Installation	LF	\$400.00	-		10,500	4,200,000	10,500	4,200,000	-			
Underground Fuel Tank (30,000 gal)	EA	\$360,000	-		-				-		-	
Building												
Operations & Maintenance Office / Support	SF	\$560.00		-	19,900	11,144,000	26,000	14,560,000	15,000	8,400,000		-
Training	SF	\$400.00			20,000	8,000,000						
Parts Storage	SF	\$350.00	-		8,500	2,975,000	36,080	12,628,000	3,000	1,050,000		
Fuel Station with Canopy (Tanks Above)	EA	\$250,000	-		-				1	250,000	-	
Wash Station with Canopy	EA	\$300,000			1	300,000	1	300,000	1	300,000		
Maintenance	SF	\$660.00	-		25,500	16,830,000	31,920	21,067,200	17,000	11,220,000		-
Structured Yard (Grade & Deck)	SF	\$180.00	-		158,000	28,440,000			-			
Renovation or Tenant Improvement	SF	\$250-\$350	29,500	10,325,000								
Equipment												
Maintenance Bay Fit Out	EA	\$264,000	-		11	2,904,000	19	5,016,000	9	2,376,000		-
Misc. Equipment	SF	\$12.00			73,900	887,000	94,000	1,128,000	35,000	420,000		
Subtotal					10,919,940	79,335,400	76,800,480	28,402,600		18,505,218		
Design Contingency				15%	1,637,991	11,900,310	11,520,072	4,260,390		2,775,783		
Subtotal					12,557,931	91,235,710	88,320,552	32,662,990		21,281,001		
Construction Contingency				10%	1,255,793	9,123,571	8,832,055	3,266,299		2,128,100		
Total Construction Cost					13,813,724	100,359,281	97,152,607	35,929,289		23,409,101		
Soft Cost				35%	4,834,803	35,125,748	34,003,413	12,575,251		8,193,185		
Total Project Cost in 2016 dollars					18,648,528	135,485,029	131,156,020	48,504,540		31,602,286		

Notes

- 1 Not used
- 2 Potrero: Development above SFMTA facility not included
- 3 Presidio: Development at south end of site not included; yard paving includes retaini
- 4 Kirkland: Existing Fuel tanks to remain
- 5 Woods Yard: Site area includes existing yard but not building
- 6 MME Scenario 2 overhead incl. cost of phasing
- 7 Power generation systems excluded (PV's)
- 8 Traction power systems excluded

			NEW SCENARIO 1B									
Component	Unit	Unit Cost	15th Street		Potrero ²		Presidio ³		Kirkland ⁴		Muni Metro East Expansion	
			Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total
Demolition												
Site	SF	\$5-\$15	19,700	98,500	192,000	1,245,000	196,400	2,946,000	113,000	1,695,000	174,135	
Building	SF	\$20.00	-		109,000	2,180,000	158,000	3,160,000	13,200	264,000	-	
Excavation, Class I Only	CY	\$60.00	-		-		90,000	5,400,000			-	
Demolition for Interior Renovation	SF	\$20.00			-						-	
Sitework												
Site Utilities	SF	\$1.20	19,700	23,640	192,000	230,400	196,400	235,680	113,000	135,600	86,715	104,058
Yard Paving	SF	\$24.00	19,700	472,800	-		149,400	6,159,600	95,500	2,292,000	86,715	2,081,160
Rail Track & Overhead Installation	LF	\$2,400.00			-						6,800	16,320,000
Trolley Overhead Installation	LF	\$400.00	-		10,500	4,200,000	10,500	4,200,000	-			
Underground Fuel Tank (30,000 gal)	EA	\$360,000	-		-				-		-	
Building												
Operations & Maintenance Office / Support	SF	\$560.00		-	19,900	11,144,000	26,000	14,560,000	15,000	8,400,000		-
Training	SF	\$400.00			20,000	8,000,000						
Parts Storage	SF	\$350.00	-		8,500	2,975,000	36,080	12,628,000	3,000	1,050,000		
Fuel Station with Canopy (Tanks Above)	EA	\$250,000	-		-	-			1	250,000	-	
Wash Station with Canopy	EA	\$300,000			1	300,000	1	300,000	1	300,000		
Maintenance	SF	\$660.00	-		25,500	16,830,000	31,920	21,067,200	17,000	11,220,000		-
Structured Yard (Grade & Deck)	SF	\$180.00	-		158,000	28,440,000			-			
Renovation or Tenant Improvement	SF	\$250-\$350	29,500	10,325,000								
Equipment												
Maintenance Bay Fit Out	EA	\$264,000	-		11	2,904,000	19	5,016,000	9	2,376,000		-
Misc. Equipment	SF	\$12.00			73,900	887,000	94,000	1,128,000	35,000	420,000		
Subtotal				10,919,940		79,335,400		76,800,480		28,402,600		18,505,218
Design Contingency	15%			1,637,991		11,900,310		11,520,072		4,260,390		2,775,783
Subtotal				12,557,931		91,235,710		88,320,552		32,662,990		21,281,001
Construction Contingency	10%			1,255,793		9,123,571		8,832,055		3,266,299		2,128,100
Total Construction Cost				13,813,724		100,359,281		97,152,607		35,929,289		23,409,101
Soft Cost	35%			4,834,803		35,125,748		34,003,413		12,575,251		8,193,185
Total Project Cost in 2016 dollars				18,648,528		135,485,029		131,156,020		48,504,540		31,602,286

Notes

- 1 Not used
- 2 Potrero: Development above SFMTA facility not included
- 3 Presidio: Development at south end of site not included; yard paving includes retaini
- 4 Kirkland: Existing Fuel tanks to remain
- 5 Woods Yard: Site area includes existing yard but not building
- 6 MME Scenario 2 overhead incl. cost of phasing
- 7 Power generation systems excluded (PV's)
- 8 Traction power systems excluded

			SCENARIO 2A									
Component	Unit	Unit Cost	15th Street		Muni Metro East Expansion		Potrero ²		Presidio ³		Kirkland ⁴	
			Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total
Demolition												
Site	SF	\$5-\$15	19,700	98,500	174,135		192,000	1,245,000	196,400	2,946,000	113,000	1,695,000
Building	SF	\$20.00	-		-		109,000	2,180,000	158,000	3,160,000	13,200	264,000
Excavation, Class I Only	CY	\$60.00	-		-		-		90,000	5,400,000		
Demolition for Interior Renovation	SF	\$20.00			-		-					
Sitework												
Site Utilities	SF	\$1.20	19,700	23,640	174,135	208,962	192,000	230,400	196,400	235,680	113,000	135,600
Yard Paving	SF	\$24.00	19,700	472,800	136,935	3,286,440	-	-	-	-	95,500	2,292,000
Rail Track & Overhead Installation	LF	\$2,400.00			6,800	17,340,000	-	-				
Trolley Overhead Installation	LF	\$400.00					7,500	3,000,000	18,400	7,360,000	-	
Underground Fuel Tank (30,000 gal)	EA	\$360,000			-		1	360,000			-	
Building												
Operations & Maintenance Office / Support	SF	\$560.00		-	37,200	20,832,000	35,600	19,936,000	21,200	11,872,000	15,000	8,400,000
Training	SF	\$400.00					20,000	8,000,000				
Parts Storage	SF	\$350.00	-		14,700	5,145,000	12,000	4,200,000	12,000	4,200,000	3,000	1,050,000
Fuel Station with Canopy (Tanks Above)	EA	\$250,000	-		-		2	500,000			1	250,000
Wash Station with Canopy	EA	\$300,000					2	600,000	2	600,000	1	300,000
Maintenance	SF	\$660.00	-		22,500	14,850,000	45,200	29,832,000	54,950	36,267,000	17,000	11,220,000
Structured Yard (Grade & Deck)	SF	\$180.00	-				291,200	52,416,000	304,650	54,837,000	-	
Renovation or Tenant Improvement	SF	\$250-\$350	29,500	10,325,000								
Equipment												
Maintenance Bay Fit Out	EA	\$264,000	-		12	3,168,000	17	4,488,000	22	5,808,000	9	2,376,000
Misc. Equipment	SF	\$12.00					112,800	1,354,000	88,150	1,058,000	35,000	420,000
				10,919,940		64,830,402		128,341,400		133,743,680		28,402,600
				1,637,991		9,724,560		19,251,210		20,061,552		4,260,390
				12,557,931		74,554,962		147,592,610		153,805,232		32,662,990
				1,255,793		7,455,496		14,759,261		15,380,523		3,266,299
				13,813,724		82,010,459		162,351,871		169,185,755		35,929,289
				4,834,803		28,703,660		56,823,155		59,215,014		12,575,251
				18,648,528		110,714,119		219,175,026		228,400,770		48,504,540

Notes

- 1 Not used
- 2 Potrero: Development above SFMTA facility not included
- 3 Presidio: Development at south end of site not included; yard paving includes retaini
- 4 Kirkland: Existing Fuel tanks to remain
- 5 Woods Yard: Site area includes existing yard but not building
- 6 MME Scenario 2 overhead incl. cost of phasing
- 7 Power generation systems excluded (PV's)
- 8 Traction power systems excluded

			SCENARIO 2B									
Component	Unit	Unit Cost	15th Street		Muni Metro East Expansion		Potrero ²		Presidio ³		Kirkland ⁴	
			Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total	Qty.	Total
Demolition												
Site	SF	\$5-\$15	19,700	98,500	174,135		192,000	1,245,000	196,400	2,946,000	113,000	1,695,000
Building	SF	\$20.00	-		-		109,000	2,180,000	158,000	3,160,000	13,200	264,000
Excavation, Class I Only	CY	\$60.00	-		-		-		90,000	5,400,000		
Demolition for Interior Renovation	SF	\$20.00			-		-					
Sitework												
Site Utilities	SF	\$1.20	19,700	23,640	86,715	104,058	192,000	230,400	196,400	235,680	113,000	135,600
Yard Paving	SF	\$24.00	19,700	472,800	86,715	2,081,160	-	-		-	89,600	2,150,400
Rail Track & Overhead Installation	LF	\$2,400.00			6,800	16,320,000	-					
Trolley Overhead Installation	LF	\$400.00					7,500	3,000,000	18,400	7,360,000	-	
Underground Fuel Tank (30,000 gal)	EA	\$360,000			-		1	360,000			-	
Building												
Operations & Maintenance Office / Support	SF	\$560.00		-		-	35,600	19,936,000	21,200	11,872,000	20,400	11,424,000
Training	SF	\$400.00					20,000	8,000,000				
Parts Storage	SF	\$350.00	-		-		12,000	4,200,000	12,000	4,200,000	3,000	1,050,000
Fuel Station with Canopy (Tanks Above)	EA	\$250,000	-		-		2	500,000			1	250,000
Wash Station with Canopy	EA	\$300,000					2	600,000	2	600,000	1	300,000
Maintenance	SF	\$660.00	-		-		45,200	29,832,000	54,950	36,267,000	23,400	15,444,000
Structured Yard (Grade & Deck)	SF	\$180.00	-				291,200	52,416,000	304,650	54,837,000	-	
Renovation or Tenant Improvement	SF	\$250-\$350	29,500	10,325,000								
Equipment												
Maintenance Bay Fit Out	EA	\$264,000	-			-	17	4,488,000	22	5,808,000	12	3,168,000
Misc. Equipment	SF	\$12.00					112,800	1,354,000	88,150	1,058,000	46,800	562,000
				10,919,940		18,505,218		128,341,400		133,743,680		36,443,000
				1,637,991		2,775,783		19,251,210		20,061,552		5,466,450
				12,557,931		21,281,001		147,592,610		153,805,232		41,909,450
				1,255,793		2,128,100		14,759,261		15,380,523		4,190,945
				13,813,724		23,409,101		162,351,871		169,185,755		46,100,395
				4,834,803		8,193,185		56,823,155		59,215,014		16,135,138
				18,648,528		31,602,286		219,175,026		228,400,770		62,235,533

Notes

- 1 Not used
- 2 Potrero: Development above SFMTA facility not included
- 3 Presidio: Development at south end of site not included; yard paving includes retaini
- 4 Kirkland: Existing Fuel tanks to remain
- 5 Woods Yard: Site area includes existing yard but not building
- 6 MME Scenario 2 overhead incl. cost of phasing
- 7 Power generation systems excluded (PV's)
- 8 Traction power systems excluded

Appendix 6: Participants & Materials

Participants

Interview and Workshop Participants

Finance and Information Technology

Sonali Bose
Adrienne Anderson
Rashid Herd
Eileen Housteau
Kirsten Magary
Daniel Pulon
Rafe Rabelais
Jonathan Rewers
Lisa Walton
Monique Webster

Capital Projects and Construction

Matt Lee
Tess Cavanaugh
Lisa Chow
Dave Greenaway

Sustainable Streets

Paul Bignardi
Dartan Ito
Lee Ann Nhan
George Reynolds
Camron Samii

Transit

John Haley
Terry Fahey
Leo Martinez

Neil Popp
Leda Rozier
Steve Shih
Lee Summerlott

Taxi and Accessible Services

Kate Toran
Annette Williams

Enterprise Asset Management/MOW Buildings & Grounds Workshop

Maria Gartner
Jamie Ballasteros
Terry Fahey
Pat Lloyd
Steve Shih
Ernie Williams

San Francisco Public Works (SFPW)

Edgar Lopez
Julia Laue
Jane Chan
Doug Ullman
Jim Buker
Andy Maloney

New Facility Programming Meetings April 2016

Kerstin Magary
Jason Gallegos
David Greenaway
Licina Iberri
Neal Popp

Emily Williams
Paul Petersen
Kenneth Anderson
Camron Samii,
Annette Williams
Marc Soto, TransDev
Daniel Pulon
Mary Travis-Allen
Louis Guzzo
Pamela Adams, Owen Adams Consulting
Laura Blake, Laura Blake Architect
Mark Probst, WSP Parsons Brinckerhoff

Risk Assessment Workshops November 2016

David Greenaway, SFMTA CP&C
Sarah Jones, SFMTA Planning
Emily Williams, SFMTA Transit
Paul Bignardi, SFMTA Sustainable Streets
Ariel Espiritu Santo, SFMTA FIT
Monique Webster, SFMTA FIT
Kerstin Magary, SFMTA Strategic Real Estate
Jason Gallegos, SFMTA Strategic Real Estate
Licina Iberri, SFMTA Strategic Real Estate
Claudia Gorham, SFRED
Julia Laue, SFPW
Susan Gygi, City and County of SF

Executive Team/Leadership Input

11/30/2015: Executive Team Presentation- Facilities Task Force Implementation Plan Update #2
12/10/2015: Ed Reiskin, Jonathan Rewers, IDEO Organizational team (Zach Krane, Jim Legeman, Peter Jackson)
12/18/2015 Stakeholder Workshop 1 with OAC, LBA, IDEO

1/14/2015: Ed Reiskin, Sonali Bose, Jonathan Rewers and IDEO Organizational Assessment team

1/19 Stakeholder Workshop 2 with OAK, LBA, IDEO

2/16/2016 Ed Reiskin, Sonali Bose, John Haley, Jonathan Rewers, IDEO Organizational Assessment team

3/14/2016 Executive Team- Facilities Task Force Implementation Plan Update #3

3/28/2016 Meeting with John Haley and Transit leadership

3/21/2016 Senior Management Team- Facilities Task Force Program Update Q1 2016

4/5/2016 John Haley and Parsons Brinckerhoff (Mark Probst): Policy Issues regarding New Facility Peer Review and Program

4/26-27 Workshops on New Facility Program Peer Review, Standards and Criteria- Parsons Brinckerhoff (Mark Probst), OAC, LBA, SFMTA

5/10/2016 Update on New Facility Peer Review: Ed Reiskin, Sonali Bose, John Haley, Tom McGuire, Jonathan Rewers, Kerstin Magary, Jason Gallegos, Licinia Iberri

6/19/2016 Executive Team Presentation- Facilities Task Force Implementation Plan Facilities Framework

Consultant Team Site Tours

Coach - Flynn, Kirkland, Woods, Presidio, Potrero
Rail - Cameron Beach, Green, Green Annex, Muni Metro East
Streets, Support, and Enforcement - Bancroft, Bayshore, Bryant, Burke, Pennsylvania, Scott, 7th Street

Workshops and Briefing

Two large, interactive group workshops were held by the consultant team with a broadly representative group of stakeholders representing both SFMTA Facilities Management “service providers” and “client” occupant groups (see Participants Section for a list of SFMTA representatives):

Workshop #1 was held on December 18, 2015. It included a progress report on Facility Condition Assessment and Workplace Planning (see presentation starting on page 171), as well as preliminary findings and participatory exercises regarding Organizational Assessment. Discussion topics included what works well, what is not working, and priorities for improvement.

Workshop #2 on January 19, 2016 included an update on Facility Assessment and Workplace Planning (see presentation starting on page 174), with most of the session highlighting organizational findings. There were participatory breakout sessions regarding clarifying roles involved in Facilities Management, and suggestions for process improvement for Facilities Maintenance and Planning.

An Executive Briefing on February 16, 2016 reported key findings of Phase 1 of the Organizational Assessment (see IDEO presentation starting on page 179). The following direction was given regarding Phase 2:

- Schedule a follow-up session to include more represen-

tation from Transit Division (follow up meetings held with Terry Fahey, Transit Maintenance of Way and with John Haley and Transit leadership on March 28, 2016).

- To undertake Phase 2, develop a team of SFMTA and City subject matter experts representing the key groups contributing to Facilities Management: Maintenance, Planning, Real Estate, Financial Administration, and Capital Project Planning. (Note: these delegates may or may not continue in lead roles after the organizational assessment is completed)
- Give adequate attention to hiring and budget implications of organizational improvement proposals; work within SFMTA funding constraints.

Two Risk Assessment Workshops were held in November 2016 with representatives from SFMTA and its city partners. After the workshops, the consultants discussed the outcome and next steps with SFMTA Project Manager Jonathan Rewers and SFMTA CFO Sonali Bose, and initiated follow-up meetings regarding planning and environmental review approaches.

An Executive Briefing on December 19, 2016 reported on the Facilities Framework (see presentation starting on page 185). Subsequent direction was to narrow from five scenarios to three: Scenarios 1A and 1B and Scenario 2A.

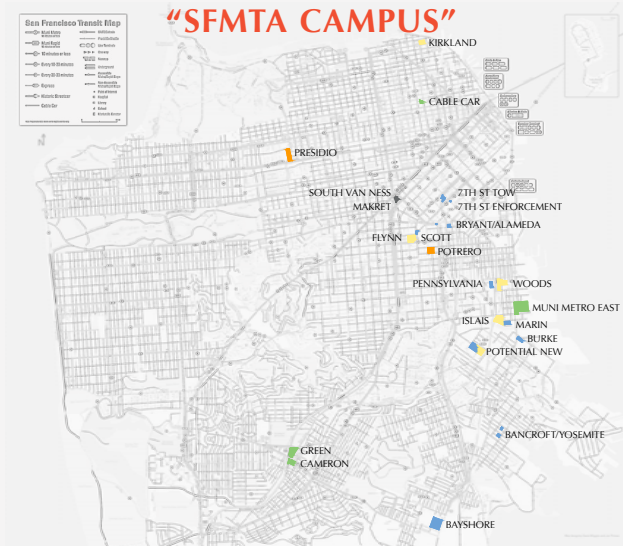
Workshop #1



FACILITIES

Administration South Van Ness - (Headquarters) 1/11 South Van Ness Avenue	Streets and Support Bancroft (Sign & Meter) - 1508 Bancroft Ave Bayshore (Tow & Signal)- 2650 Bayshore, Daly City Bryant (Overhead Lines)- 1401 Bryant St Burke (Warehouse)- 1570/1580 Burke Ave Lenox (Transit Control) - 131 Lenox Way Marin (Swing Space) - 1399 Marin St Market (Transit Management) - 1455 Market St Howard (Central Subway) - 821 Howard St Pennsylvania (Offices & Shops) - 700 Pennsylvania Ave Scott (NRV Service) - 1849 Harrison St Yosemite (Paint & NRV Parking) - 1528 Yosemite Ave 450 7th Street (Tow)
Motor Coach Flynn - 1940 Harrison St Islais Creek - 1301 Cesar Chavez St Kirkland - 2301 Stockton St and 151 Beach St Woods - 1095 Indiana St Potential New Facility - 2000 Toland St	
Trolley Coach Potrero - 2500 Mariposa St Presidio - 949 Presidio Ave	
Rail Cable Car Barn - 1201 Mason St Cameron Beach - 2301 San Jose Ave Green - _____ San Jose Ave Green Annex - 425 Geneva Ave Muni Metro East- 601 25th St	Enforcement 505 7th Street (Office) 571 10th Street (Parking) 6th and Townsend (Parking) 2323 Cesar Chavez Street (Parking)

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015



Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

CONDITION ASSESSMENT

- Flynn
- Kirkland
- Woods
- Presidio
- Potrero
- Cable Car Barn
- Green
- Muni Metro East
- Alameda
- Bancroft
- Bayshore
- Bryant Overhead Line
- Burke
- Lenox (Transit Control)
- Pennsylvania
- Scott
- 7th Street
- 10th Street

Facility Condition Assessment is in progress. The outcome will be an assessment of each facility and a prioritized list with costs of maintenance needs of all facilities surveyed.

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

WORKPLACE PLANNING

Since completing the Vision, new needs, problems and opportunities have emerged. To optimize use of SFMTA facilities develop near term solutions that have long term benefit.

Incremental and coherent steps toward long term facilities.

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

NEEDS, PROBLEMS AND OPPORTUNITIES

Staff Growth

Need: May need more space to accommodate office staff growth

Opportunity: Use underutilized Bayshore & Green Annex

Potrero and Presidio Replacement

Problem: Extending overhead lines to make Flynn a temporary Trolley Facility is disruptive and adds cost

Opportunity: Evaluate phased replacement of Potrero and Presidio

Street Shops

Issue: Pennsylvania, Bancroft and Yosemite have redundant and underutilized office, shop and storage space but limited parking

Opportunity: Consolidate functions to optimize use of these facilities

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

NEEDS, PROBLEMS AND OPPORTUNITIES

Fleet Growth, Component Rebuild and Complex Maintenance

Need: Fleet projections increased and procurement accelerated

Need: Consolidated component rebuild & complex maintenance

Opportunity: Cameron and Green are underutilized, and MME has expansion space. Evaluate how best to use these for fleet growth, component rebuild and complex maintenance. Alternative might be to use Woods for motor and trolley coach component rebuild and complex maintenance, Green for rail component rebuild and complex maintenance, and MME for additional fleet.

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

Facility	Current Use	2040 Planned Use	Needs, Planning and Opportunities
Administration			
South Van Ness 1/11 South Van Ness Avenue	Headquarters	Headquarters	SFMTA developing plan to optimize. May need more space to accommodate growth
Motor Coach			
Flynn 1940 Harrison Street	60' Motor Coach Facility Islais Creek Service	60' Motor Coach Facility	SFMTA preference not to electrify for temporary trolley use
Islais Creek 1301 Cesar Chavez Street	40' & 60' Motor Coach Yard	40' & 60' Motor Coach Facility	Limited use until maintenance & operations facility completed in 2017
Kirkland 2301 Stockton/151 Beach	40' Motor Coach Facility	Rebuilt 40' & 60' Motor Coach Facility	Limited service, most done at Woods Possible Central Subway extension station
Woods 1095 Indiana Street	40' Motor Coach Facility Kirkland Service Motor & Trolley Component Rebuild	40' & 60' Motor Coach Facility	Evaluate deferring renovating Woods for 60' buses until New Facility and possibly Kirkland rebuild complete.
Potential New Facility 2000 Toland Street	NA	40' & 60' Motor Coach Facility Training, NRV Service, Paratransit, Enforcement & Overhead Lines	Evaluate locating overhead lines at Burke and Enforcement at Scott which are SFMTA owned, more central and underutilized.
Trolley Coach			
Potrero 2500 Mariposa Street	40' & 60' Trolley Coach Facility	Rebuilt 40' & 60' Trolley Coach with Transit Oriented Development	SFMTA preference to develop Potrero first, then Presidio.
Presidio 949 Presidio Avenue	40' Trolley Coach Facility	Rebuilt 40' Trolley Coach with Transit Oriented Development	If Potrero & Presidio developments phased/coordinated, may not need to electrify Flynn
Rail			
Cable Car Barn 1201 Mason Street	Cable Car Facility Museum	Cable Car Facility Museum	
Cameron Beach 2301 San Jose	Street Car Body & Paint Light rail vehicle yard	Light Rail Vehicle & Street Car Storage	Underutilized. Evaluate using for street car restoration and one-offs storage.
Green 2200 San Jose Avenue	Light Rail Facility Street Car Restoration Rail Component Rebuild	Light Rail Facility Rail Component Rebuild	Underutilized. Evaluate moving street car restoration to Cameron and consolidating component rebuild to increase light rail capacity
Green Annex 425 Geneva Avenue	Operations, Offices, Storage Electronic and Radio Shops	Operations, Offices, Storage Electronic and Radio Shops	Evaluate needs to better use space.
Muni Metro East 601 25th Street	Light Rail & Street Car Facility	Light Rail & Street Car Facility New multi-modal body/paint	Transit preference for consolidated component rebuild & complex maintenance. Evaluate use of MME, Green & Cameron

NEEDS, PROBLEMS AND OPPORTUNITIES

Potential New Facility

Issue: SFMTA planning new facility for motor coaches, paratransit, non-revenue vehicle service, training, enforcement and overhead lines.

Opportunity: Evaluate benefits and savings of using Scott for enforcement, and Burke for overhead lines which are SFMTA owned, underutilized and more central.

Opportunity: Evaluate deferring Woods renovation for 60' motor coaches until New Facility complete.

Owen Adams Consulting with Laura Blake Architect and IDEO, SFMTA Facilities Workshop 18 December 2015

Facility	Current Use	2040 Planned Use	Needs, Planning and Opportunities
Streets & Support			
Bancroft 1508 Bancroft Avenue	Sign, Temporary Sign & Meter Shops	Sign, Temporary Sign & Meter Shops	SFMTA developing shell and infrastructure upgrades. Underutilized, evaluate sharing.
Bayshore 2650 Bayshore, Daily City	Tow, Traffic Signal Shop, Video and Vacant Space	Lease with option to negotiate purchase expires in 2032. Purchase or relocate functions.	SFMTA moving Central Subway to Bayshore. Evaluate moving Video to Penn to maximize office surge space at Bayshore
Bryant 1401 Bryant Street	Overhead Lines	Vacate	City plans to use Bryant for ACC, so SFMTA considering moving overhead lines to Burke or Potential New Facility.
Burke 1570/1580 Burke Avenue	Warehouse	Warehouse and possibly Overhead Lines	SFMTA developing shell and storage upgrades. Consider moving Overhead Lines to Burke rather than new facility
Lenox 131 Lenox Way	Transit Control	Back-Up Transit Control	
Marin 1399 Marin Street	Motor Coach Acceptance Facility Rail Tack No Operating Street Cars	Vacate when lease expires in 2021	
Market 1455 Market Street	Transit Operations Management	Transit Operations Management	Lease expires September 2023, has (2) 10 year extension options
Howard 821 Howard Street	Central Subway Project Office	Vacate	Lease expires May 2016. Central Subway Project Office moving to Bayshore
Pennsylvania 700 Pennsylvania Avenue	Buildings & Grounds Offices, and Carpentry, Electric, Machine Shops	Buildings & Grounds Offices, Carpentry, Electric, Machine Shops	Evaluate relocating Video to Penn to share shops. Evaluate cable car and street car sharing machine shop.
Scott 1849 Harrison Street	Non Revenue Vehicle Service Staff Parking	Non Revenue Vehicle and Enforcement Vehicle Service or consolidated Enforcement Office & Vehicle Parking	SFMTA considering moving non revenue vehicle service to New Facility. Evaluate consolidating Enforcement at Scott
Yosemite 1528 Yosemite Avenue	Paint Shop Non Revenue Vehicle Parking	Paint Shop Non Revenue Vehicle Parking	Lease expires July 2016, has option to purchase or extend 3 years and then 18 months
505 7th Street 571 10th Street 6th & Townsend 2323 Cesar Chavez	Enforcement Office Enforcement Vehicle Parking		SFMTA considering consolidating enforcement at new facility. Evaluate consolidating enforcement office and parking at Scott which is SFMTA owned & more central

Workshop #2



SFMTA FACILITY CONDITION ASSESSMENT & WORKSPACE PLANNING SECOND WORKSHOP 19 JANUARY 2016

Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Workshop 19 January 2016

◆ Administration

South Van Ness 1/11 South Van Ness

◆ Motor Coach

Flynn 1940 Harrison St
Isais Creek 1301 Cesar Chavez St
Kirkland 2301 Stockton/151 Beach
Woods 1095 Indiana St
Potential New Facility 2000 Toland St

◆ Trolley Coach

Potrero 2500 Mariposa St
Presidio 949 Presidio Ave

◆ Rail

Cable Car Barn 1201 Mason St
Cameron Beach 2301 San Jose Ave
Green San Jose Ave/425 Geneva Ave
Muni Metro East 601 25th St

◆ Streets, Support, Enforcement

Bancroft 1508 Bancroft Ave
Bayshore 2650 Bayshore, Daly City
Bryant 1401 Bryant St
Burke 1570/1580 Burke Ave
Lenox 131 Lenox Way
Marin 1399 Marin St
Market 1455 Market St
Howard 821 Howard St
Pennsylvania 700 Pennsylvania Ave
Scott 1849 Harrison St
Yosemite 1528 Yosemite Ave

450 7th Street
505 7th Street
571 10th Street
6th and Townsend
2323 Cesar Chavez Street



FACILITIES

The SFMTA Campus



CONDITION ASSESSMENT

Assessment of the physical condition of each facility, and a prioritized list of maintenance items for all facilities.

Facility Condition Assessment Process and Findings

- EMG conducted visual surveys to determine the condition and maintenance needs of SFMTA facilities and reviewed draft reports with staff.
- Found significant deferred maintenance needs.
- Roofing, HVAC, and Yard Pavement are recurring issues that could be handled as “campaigns” to address efficiently.
- Maintenance includes known regulatory compliance and risk management items but not code or function upgrades.

Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Preliminary Maintenance Costs for SFMTA Owned Facilities

Facility	Building(s)	Site	2016	20 Year
Flynn	266,000 sf	6.2 acres	\$5,000,000	\$20,900,000
Kirkland	13,200 sf	2.6 acres	\$1,800,000	\$2,900,000
Woods	158,000 sf	8.2 acres	\$15,000,000	\$28,000,000
Presidio	158,000 sf	5.4 acres	\$11,700,000	\$22,600,000
Potrero	155,000 sf	4.4 acres	\$4,700,000	\$10,200,000
Cable Car	83,700 sf	1 acre	\$6,800,000	\$18,400,000
Green	191,000 sf	6.7 acres	\$4,200,000	\$27,100,000
MME	163,000 sf	16.9 acres	\$6,000,000	\$18,700,000
Alameda	7,000 sf		\$200,000	\$9,400,000
Bancroft	90,000 sf	1 acre	\$300,000	\$2,700,000
Bryant	48,000 sf	1.1 acres	\$1,200,000	\$2,500,000
Burke	103,000 sf	2.4 acres	\$900,000	\$8,100,000
Lenox	10,000 sf	NA	\$200,000	\$900,000
Pennsylvania	88,000 sf	2 acres	\$20,000	\$13,700,000
Scott	118,000 sf	1.1 acres	\$800,000	\$7,700,000
Total	1,650,000 sf	59 acres	\$60,000,000	\$195,000,000

Some items and mark ups being reviewed. Currently include 50% markup for design contingency, construction contingency & soft costs + 3%/year escalation

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Maintenance Prioritizing

Criteria

- Safety
- Regulatory Compliance
- Risk Management (ie grievance, ADA, hazard)
- Physical Deterioration

Item Ranking

Highest

- Fire Protection
- Regulatory Compliance
- Risk Mitigation

High

- Structural Problem
- Weather Protection
- HVAC
- Site Lighting

Medium

- Finishes
- Stairs & Elevators
- Building Systems

Prioritizing provides even maintenance of facilities

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WORKPLACE PLANNING

Since completing the Vision, new needs have emerged. Address these as incremental and cohesive steps towards the Vision.

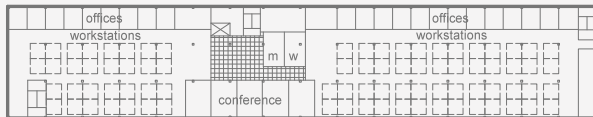
Bayshore Second Floor Test Fit

Test Fit Capacity

- 20 offices
- 80 workstations
- 6 conference rooms

Potential Uses

- Special Project Teams
 - Overflow from 1SVN
- (IT groups are typically candidates)



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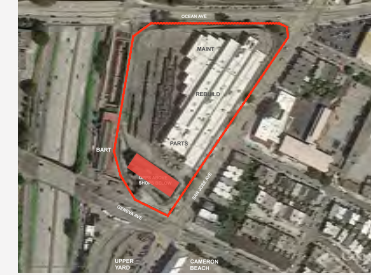
Staff Growth

Need: More office space to supplement South Van Ness

Opportunity: Use underutilized Bayshore & Green Annex

Bayshore - 20,000 sf office space for 80-100

Green - 5,000 -10,000 sf office space for 20-40



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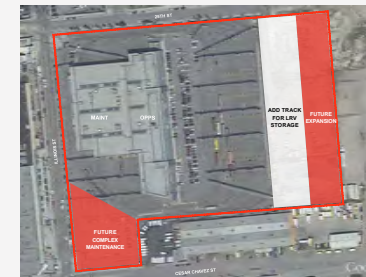
Light Rail Vehicle Fleet Growth

Need : Fleet growth increased and procurement accelerated

Opportunity: MME, Cameron Beach, & Green are underutilized

- Muni Metro East**
LRV Facility
Future Maintenance Facility
- Green**
PCC & LRV Facility
- Cameron Beach**
Historic Street Car Facility

Muni Metro East



Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Motor Coach Fleet Growth and Aging Facilities

Issues

- Potrero, Presidio and Kirkland need to be rebuilt
- Electrifying Flynn as a temporary trolley facility adds cost
- Impact of approach and timing of rebuilding aging facilities on planned New Facility not known
- Potrero and Presidio identified as transit oriented development sites but not tested

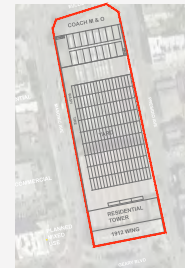
Opportunity

- Develop alternative approaches for rebuilding Potrero and Presidio that test electrifying Flynn as a trolley facility, and phasing rebuilding so do not need to electrify Flynn

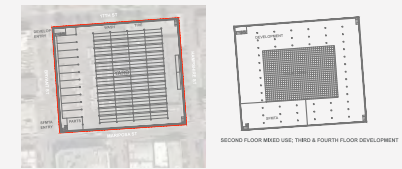
Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Rebuild while electrified Flynn is “full service” trolley facility

Presidio



Potrero



- *New Facility capacity would need to (180- 220) 60' coaches*
- *Could deck Potrero yard for a larger development, but decking could limit changes for new trolley technology*

Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Rebuild in phases while sharing Flynn yard

Presidio



Potrero



- *New Facility capacity would need to (130-180) 60' coaches*
- *Smaller Potrero development but more long term flexibility*

Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Potential New Facility

Issue: SFMTA planning lease facility for motor coaches, para-transit, vehicle service, training, enforcement & overhead lines.

Opportunity: Evaluate using Burke for overhead lines, Scott for enforcement, and Bayshore for training which are SFMTA owned and underutilized.

Bayshore



Burke



Scott



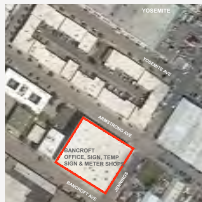
Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Streets Shops

Issue: Pennsylvania, Bancroft and Yosemite have redundant and underutilized office, shop and storage space but limited parking

Opportunity: Share functions to optimize use of facilities

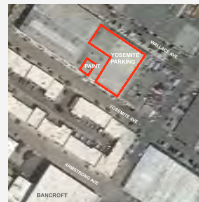
Bancroft



Pennsylvania



Yosemite



Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Facility	Current Use	Needs, Issues and Opportunities	2040 Use
Administration			
South Van Ness 1/11 South Van Ness Avenue	Headquarters 900 +/- capacity	Plan to increase capacity, and improve adjacencies and workspace	Headquarters 1000 +/-capacity
Motor Coach			
Flynn 1940 Harrison Street	60' Motor Coach Facility Islais Creek Service	Could use as shared or dedicated trolley coach when rebuilding Potrero & Presidio	60' Motor Coach Facility
Islais Creek 1301 Cesar Chavez Street	40' & 60' Motor Coach Yard	Limited use until maintenance & operations building completed in 2017	40' & 60' Motor Coach Facility
Kirkland 2301 Stockton/151 Beach	40' Motor Coach Facility with limited service	Rebuild with subway station or consolidate at Woods & lease/sell except for subway	Rebuilt Motor Coach and Subway Station or Development and Subway Station
Woods 1095 Indiana Street	40' Motor Coach Facility Kirkland Service Motor & Trolley Component Rebuild	Evaluate decking yard to include Kirkland fleet or future growth. Rebuild after New Facility and needs beyond 2040 better known.	40' Motor Coach Facility
Potential New Facility 2000 Toland Street	NA	Evaluate locating Overhead Lines at Burke, Enforcement at Scott, Training at Bayshore which are SFMTA owned and underutilized	40' & 60' Motor Coach Facility NRV Service, Para transit, Overhead Lines, Enforcement and Training
Trolley Coach			
Potrero 2500 Mariposa Street	40' & 60' Trolley Coach Facility	Could rebuild as trolley coach facility with development space above M&O building or if deck yard above entire site	Rebuilt 60' Trolley Coach Facility Transit Oriented Development
Presidio 949 Presidio Avenue	40' Trolley Coach Facility	Could rebuild as separate trolley coach facility and housing development	Rebuilt 40' Trolley Coach Facility Transit Oriented Development
Rail			
Cable Car Barn 1201 Mason Street	Cable Car Facility Museum		Cable Car Facility Museum
Cameron Beach 2301 San Jose	Street Car Body & Paint Light rail vehicle yard	Underutilized. Evaluate using for street car restoration and one-offs storage	Historic Street Car Facility Restoration and Storage
Green 2200 San Jose Avenue	Light Rail Facility Street Car Restoration Rail Component Rebuild	Underutilized. Evaluate consolidating component rebuild to increase light rail capacity	PCC Street Car and Light Rail Facility Rail Component Rebuild
Green Annex 425 Geneva Avenue	Operations, Offices, Storage Electronic and Radio Shops	Underutilized. Evaluate consolidating functions to better use space.	Operations, Offices, Storage Electronic and Radio Shops
Muni Metro East 601 25th Street	Light Rail & Street Car Facility	Transit preference for consolidated component rebuild & complex maintenance.	Light Rail Facility Future multi-modal complex maintenance

Facility	Current Use	Needs, Planning and Opportunities	2040 Planned Use
Streets & Support			
Bancroft 1508 Bancroft Avenue	Sign, Temporary Sign & Meter Shops	Underutilized; evaluate sharing.	Sign, Temporary Sign & Meter Shops
Bayshore 2650 Bayshore, Daily City	Tow Traffic Signal Shop and Video Shop Vacant Space	Underutilized. Evaluate moving Video to Penn or Bancroft and using first floor for Training and second floor for Central Subway and other office needs. Lease expires in 2032, has option to negotiate purchase	Tow Traffic Signal Shop, Video Shop or Training Office Space
Bryant 1401 Bryant Street	Overhead Lines	Underutilized. City to use for ACC. Evaluate moving Overhead Lines to Burke or New Facility.	Vacate
Burke 1570/1580 Burke Avenue	Warehouse	Evaluate moving Overhead Lines to Burke.	Warehouse and possibly Overhead Lines
Lenox 131 Lenox Way	Transit Control		Back-Up Transit Control
Marin 1399 Marin Street	Motor Coach Acceptance Facility Rail Tack Shop, Street Car Storage	Evaluate moving Rail Track Shop to Penn, and Street Cars to Bayshore.	Vacate when lease expires in 2021.
Market 1455 Market Street	Transit Operations Management	Lease expires September 2023, has (2) 10 year extension options	Transit Operations Management
Howard 821 Howard Street	Central Subway Project Office	Central Subway Project Office moving to Bayshore	Vacate when lease expires May 2016.
Pennsylvania 700 Pennsylvania Avenue	Buildings & Grounds Offices, and Carpentry, Electric, Machine Shops	Evaluate relocating Marin Track Shop and Yosemite Paint Shop to Penn. Evaluate cable car & street car sharing machine shop.	Buildings & Grounds Offices Carpentry, Electric, Machine Shops
Scott 1849 Harrison Street	Non Revenue Vehicle Service Staff Parking	If move non revenue vehicle service to New Facility, evaluate consolidating Enforcement at Scott	Enforcement or Vacate
Yosemite 1528 Yosemite Avenue	Paint Shop Non Revenue Vehicle Parking	Lease expires July 2016, has option to purchase or extend 3 years and then 18 months	Paint Shop Non Revenue Vehicle Parking
505 7th Street 571 10th Street 6th & Townsend 2323 Cesar Chavez	Enforcement Office Enforcement Vehicle Parking	Evaluate consolidating enforcement office and parking at Scott which is SFMTA owned & more central.	Vacate all except one parking lot



SFMTA
Municipal
Transportation
Agency

Owen Adams Consulting with Laura Blake Architect, SFMTA Facilities Second Workshop 19 January 2016

Executive Briefing on Organizational Management



OVERVIEW

THE ASK

IDEO was brought in to investigate how the SFMTA currently manages its facility campus (meaning the buildings and grounds that the SFMTA is responsible for), how those services are functioning, identify where opportunities for improvement were and create recommendations for how to address them from an organizational design perspective.

OVERVIEW

CLARIFYING DEFINITIONS

Facilities Management

For the purposes of this project, Facilities Management was defined as how the SFMTA manages the acquisition, maintenance, and sale of buildings and grounds that support the maintenance and operational functions of the SFMTA. For the purpose of this project, the maintenance of tracks, overhead lines, and other operational components was not considered. While subway stations and other stops could be considered "facilities" in the traditional sense, they were not specifically included or excluded in this research.

OVERVIEW

CLARIFYING DEFINITIONS

Building Maintenance

For the purposes of this project, Building Maintenance was defined as the process for conducting maintenance on SFMTA facilities. This definition is not intended to include the maintenance of tracks, overhead lines, trolley car, buses, streets, or any other operational component of the SFMTA. Again, while physical subway stations and other stops could be considered "buildings", they were not specifically included or excluded in this research.

Though previously referred to as "Facilities Maintenance" we are making the change to "Buildings" for clarification based on feedback that was received during this project.




OVERVIEW

WORKSHOPS

Research Workshop:
shared our findings with stakeholders and had them prioritize and build on


Mid-Phase Workshop:
Created high level vision and process flows and invited stakeholders back to critique and build on our ideas



OVERVIEW

Mid-Phase Workshop Groups

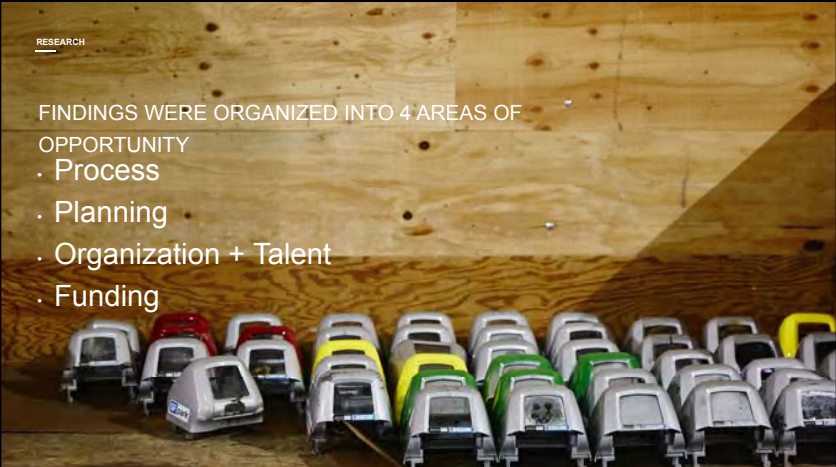
<p>Group 1: Corrective Maintenance</p> <ul style="list-style-type: none"> • Lisa Walton • Steve Shih • George Reynolds • Rashid Herd • Cameron Samii • Neal Popp 	<p>Group 2: Deferred/Preventative Maintenance</p> <ul style="list-style-type: none"> • Matt Lee • Paul Bignardi • Adrienne Anderson • Eileen Housteau • Lee Summerlott • Leanne Nhan 	<p>Group 3: Facility & Space Planning</p> <ul style="list-style-type: none"> • Darton Ito • David Greenaway • Monique Webster • Kerstin Magary • Jonathan Rewers • Terry Fahey • Pamela Adams • Laura Blake
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RESEARCH

FINDINGS WERE ORGANIZED INTO 4 AREAS OF OPPORTUNITY

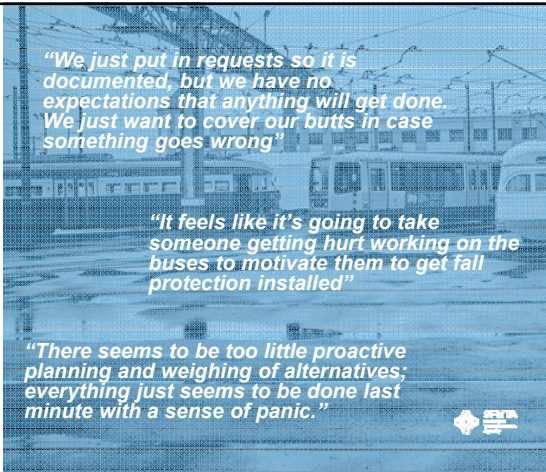
- Process
- Planning
- Organization + Talent
- Funding



PROCESS

Throughout our research we collect quotes in order to represent stories we heard.


Quotes are a single representation meant to illustrate the "voice" of the SFMTA's employees.



"We just put in requests so it is documented, but we have no expectations that anything will get done. We just want to cover our butts in case something goes wrong"

"It feels like it's going to take someone getting hurt working on the buses to motivate them to get fall protection installed"


"There seems to be too little proactive planning and weighing of alternatives; everything just seems to be done last minute with a sense of panic."



RESEARCH

Observations are IDEO's synthesis of a variety of stories and observations from our research activities:


<p>Process</p> <ul style="list-style-type: none"> The execution of facilities management today is relationship driven, inconsistently executed, and focused on transit related agencies. The current process is confusing, with no feedback loops, and poor prioritization of work. A mismatch between process (operational vs capital) and type of work has led the organization to a place where capital funding is required to do urgent improvements. 	<p>Planning</p> <ul style="list-style-type: none"> Too little done too late on preventative or proactive maintenance There is a lack of facility use planning at SFMTA which results in poor space utilization, duplicate functions across facilities, and facility implications not being incorporated into service planning and/or funding. The process for prioritizing different facilities management work lacks formality, transparency, and does not have a clear structure with roles, responsibilities, and authority to support it. Strategic decisions are made today in a reactive environment, with ad hoc team members working with imperfect information and no clear authority to make decisions. 	<p>Org + Talent</p> <ul style="list-style-type: none"> There is no single person accountable for the execution of facilities management within the organization. The organization lacks a strategic facilities expert who manages the overall health and use of a facility. There exists a misalignment of roles, capabilities and process within the facilities management organization today. 	<p>Funding</p> <ul style="list-style-type: none"> The process for creating an operational budget for Facilities Management is not optimized or understood. The organization is unable to articulate a meaningful "funding story" for capital projects.
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RESEARCH

"How Might We" questions are how IDEO represents opportunities for Design within the organization


<p>Process</p> <p>HMW define and articulate a clear process for executing all functions of facilities management for all members of the SFMTA.</p>	<p>Planning</p> <p>HMW incorporate a strategic planning process for Facilities Management that reduces cost and increases the efficiency and productivity of our facilities.</p>	<p>Org + Talent</p> <p>HMW design an organization with clearly defined roles, responsibilities, and reporting structure that delivers strategic facilities management for SFMTA.</p>	<p>Funding</p> <p>HMW attract greater funding for capital and operational facilities management for an organization that spends it efficiently.</p>
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AGENDA

Areas of qualification/focus based on our research workshop:

<p>EASIEST TO ADDRESS</p> <ul style="list-style-type: none"> Needs prioritization process Misalignment of roles Tenants/users are losing morale 	<p>MOST IMPORTANT</p> <ul style="list-style-type: none"> No clear funding story Needs OPs budget for FM 	<p>BOTH AGREE/IMPORTANT</p> <ul style="list-style-type: none"> Unclear/confusing process 	<p>DISAGREE WITH ISSUE</p> <ul style="list-style-type: none"> No one looking at strategic FM planning Transit First culture - needs to include all of SFMTA No designated FM for sites
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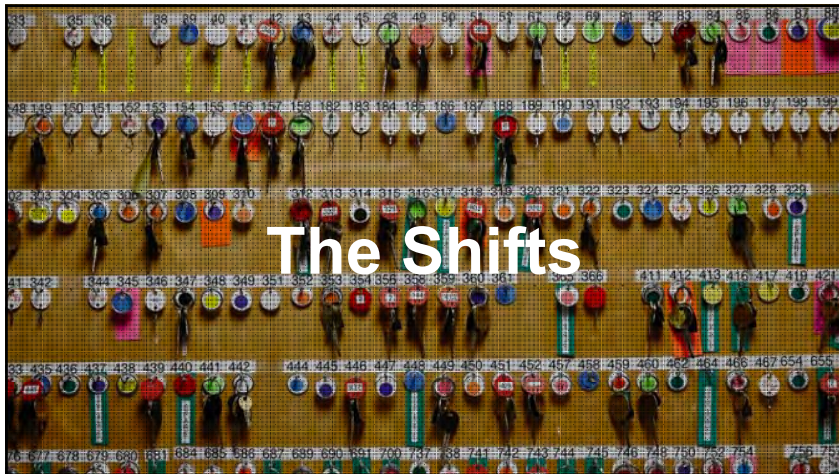




New Structure & Roles

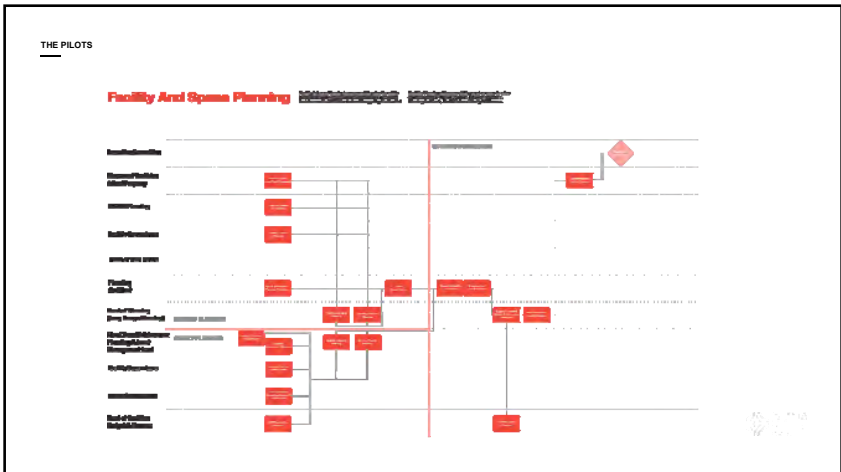
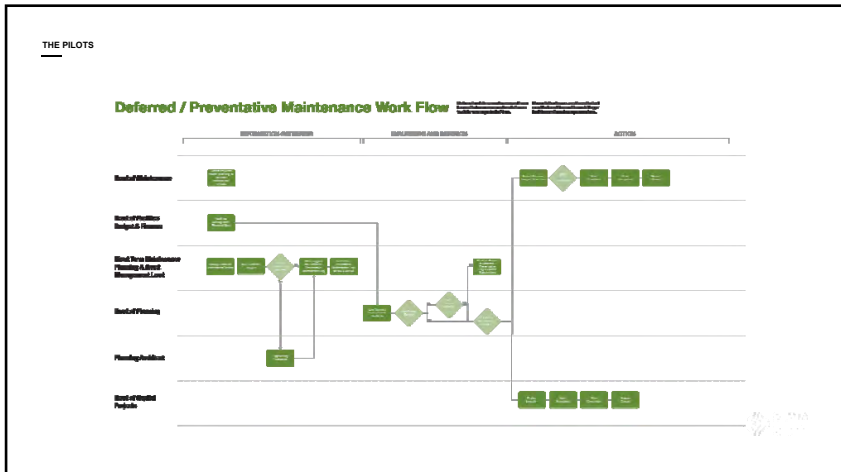
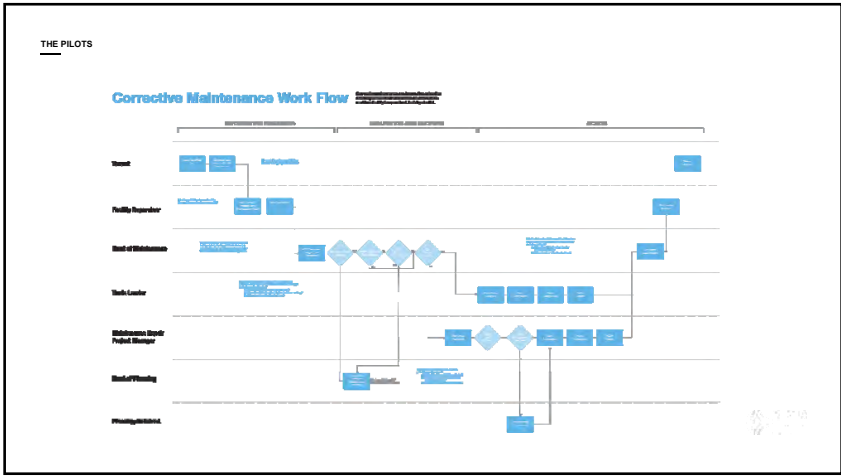
The following **component functions** that are responsible for managing SFMTA facilities are split among multiple parts of the org chart:

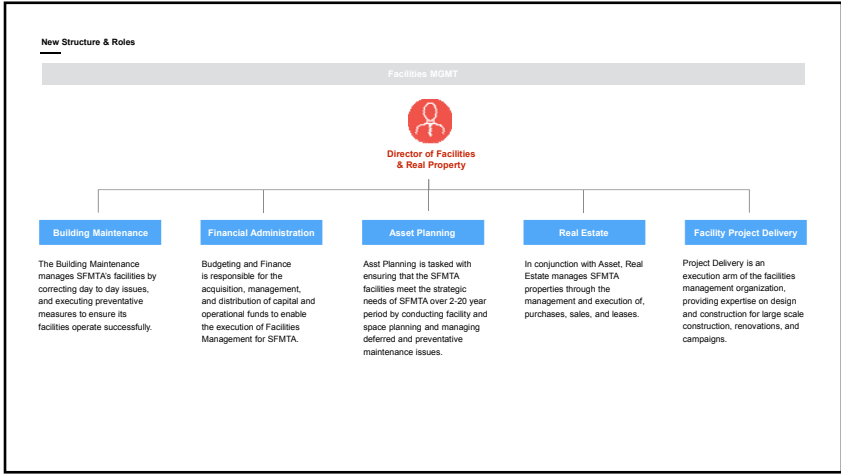
<p>Buildings and Grounds Maintenance</p> <p>The Buildings and Grounds Maintenance maintains SFMTA's facilities by correcting day to day issues, and executing preventative measures to ensure its buildings and grounds operate successfully.</p>	<p>Financial Administration</p> <p>Budgeting and Finance acquires, administers, and distributes of capital and operational funds supporting management of SFMTA facilities.</p>	<p>Asset Planning</p> <p>Asset Planning ensures that the SFMTA facilities meet the strategic needs of SFMTA over 2-20 year period by conducting facility and space planning and developing workplaces to manage deferred and preventative maintenance issues.</p>	<p>Real Estate</p> <p>In conjunction with Asset Planning, Real Estate manages SFMTA properties through the management and execution of, purchases, sales, and leases.</p>	<p>Facility Project Delivery</p> <p>Facility Project Delivery is an execution arm, providing expertise on design and construction for large scale construction, renovations, and campaigns.</p>
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SHIFTS

- The right people with the right skills making the right decisions/providing input at the right time.
- Single points of accountability, with shared understanding of the "one" for each decision.
- Defined process for Facilities Management with roles and responsibilities clearly defined.
- A Facilities Management organization that promotes a unified SFMTA culture and is recognized for its strategic importance to the organization.
- Defined operating budget





Executive Briefing on Facilities Framework



Background

On May 26, 2015 the Executive Team reviewed and approved the Facilities Task Force Implementation Plan.

- 17 recommendations (16 approved)
- Project Scopes Approved
- Program Budget Approved
- Schedules Approved
- Recommendation 3.4 was to develop an update of the original 2013 Facilities Vision Report
- That update is the **2016 Facilities Framework**

Background

What is the Facilities Framework?

- The SFMTA needs a **dynamic plan** for the upgrade, management, acquisition and development of its buildings and grounds (the SFMTA Campus).
- The 2013 Facilities Vision Report largely dealt with the needs of the Muni Transit Fleet, but did not fully consider the operational needs of other SFMTA Divisions or units.
- A **flexible improvement program** is needed to deal with facility conditions, safety, workforce satisfaction and a changing and growing fleet.
- Updated costs and **realistic constrained financial scenarios** needed to be developed.

Background

What is the Facilities Framework?

SHORT TERM

- Develop Facilities Condition Assessment
- Implement an annualized prioritized Program of Improvements

MID TERM

- Renovate existing facilities
- Plan for upcoming expiring leases
- Work toward maintenance and office space consolidation/optimization

LONG TERM

- Use a flexible program (planned options for changing conditions)
- Add additional space for growth, work toward own verses lease
- Replace deficient facilities and work to include TOD

Background

Facilities Framework Development Process

Gather Data	2/18/2016	Fleet and Facilities Analysis presented to DOT/Executive Team
	2/18/2016	Discussions of preliminary scopes for Muni Metro East
Refine	4/5/2016	PB/Transit Peer Review with Director of Transit
	4/18/2016	Burke Coordination with CAO + Cost and Impact to the SFMTA
	5/24/2016	Met with Director of Transit & Transit staff RE: Future of Kirkland
	5/11/2016	Met with DOT/Executive Team – Peer Review Results & New Facility Program
	7/18/2016	Presented updated New Facility Program to DOT/Executive Team
Test/Risks	11/14/2016	Presented to RED, MTA Planning, Capital Finance, Transit and SFPW
	11/28/2016	Met with CFO RE: Financial Feasibility
	12/7/2016	Met with Edgar Lopez & SFPW RE: Implementation Feasibility
	12/15/2016	Met with SSD Environmental Staff RE: Environmental Process

Facilities Framework – July 2016

Long Term Facility Planning Scenarios

Scenario 1: New Facility	Scenario 1A: Smaller New Facility	Scenario 2: Existing Sites
New Facility • Motor Coach • Paratransit • NRV Maintenance • Training • Enforcement	New Facility • Motor Coach • Paratransit • NRV (or Enforcement)	Marin • motor coach swing MME Expansion • add building for trolley swing/future back-shop
		Woods Yard • add deck for Paratransit
	Bayshore • Training	Bayshore • fit out second floor for training
Scott • Vacate	Scott • Enforcement (or NRV)	Scott & Office Lease • NRV & Enforcement
Potrero • rebuild with TOD	Potrero • rebuild with TOD	Potrero • rebuild decked with TOD
Presidio • rebuild with TOD	Presidio • rebuild with TOD	Presidio • rebuild decked with TOD
Kirkland • rebuild	Kirkland • rebuild	Kirkland • rebuild

Facilities Framework – December 2016

Long Term Facility Planning Scenarios

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

	Scenario 1 \$1,135M / \$1,931M	Scenario 1A \$1,170M / \$1,725M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,154M	Scenario 2 B \$819M / \$1,317M
New Facility	motor coach paratransit NRV enforcement training	motor coach paratransit	motor coach		
MME	rail	rail	rail	swing then rail & backshop	rail
Potrero	rebuild	rebuild training	rebuild training	rebuild decked training	rebuild decked training
Presidio	rebuild	rebuild	rebuild	rebuild decked	rebuild decked
Kirkland	rebuild	rebuild	rebuild	rebuild	rebuild
Scott	vacate	NRV enf parking enforcement	NRV enf parking enforcement	NRV enf parking enforcement	NRV enf parking enforcement
15th St (ACC)					
Other			paratransit	paratransit	paratransit
Swing	New Facility	New Facility	New Facility	MME	Kirkland & Lease

Facilities Framework – December 2016



Background

Refinements

To minimize cost and optimize the Framework

- Included the opportunity for ACC/15th St property swap for Bryant (OHL moving to Burke)
- Developed scenarios for a smaller New Facility (Scenarios 1A/1B)
- Developed new more cost effective Scenario 2
- Updated implementation strategy, methods
- Analyzed Risks – schedule, budget/financial, delivery

Facilities Framework – December 2016

Facility Needs

Maintenance and Incremental Improvements
<ul style="list-style-type: none"> • Facility Condition Assessment identified \$53M backlog and \$201M 20 year need to maintain state of good repair of SFMTA owned facilities. • Improvements for emerging needs such as the fare box replacement project
More capacity for growing fleets
<ul style="list-style-type: none"> • Expanded facilities to accommodate planned fleet growth through 2040, including 132 more motor/trolley coaches and 109 more LRVs.
Rebuild Deficient Facilities
<ul style="list-style-type: none"> • Rebuild Potrero, Presidio which house 100% of trolley coach fleet and Kirkland which houses 25% of motor coach fleet
Permanent Solutions for Enforcement and Paratransit
<ul style="list-style-type: none"> • Permanent facilities for SSD Enforcement (358 vehicles) and and growing SFMTA Paratransit Fleet (160 vehicles)

Facility Scenarios

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$819M / \$1,317M
New Facility	<ul style="list-style-type: none"> motor coach paratransit NRV enforcement training 	<ul style="list-style-type: none"> motor coach paratransit 	<ul style="list-style-type: none"> motor coach 		
MME	<ul style="list-style-type: none"> rail 	<ul style="list-style-type: none"> rail 	<ul style="list-style-type: none"> rail 	<ul style="list-style-type: none"> swing then rail & backshop 	<ul style="list-style-type: none"> rail
Potrero	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild training 	<ul style="list-style-type: none"> rebuild training 	<ul style="list-style-type: none"> rebuild decked training 	<ul style="list-style-type: none"> rebuild decked training
Presidio	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild decked 	<ul style="list-style-type: none"> rebuild decked
Kirkland	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild 	<ul style="list-style-type: none"> rebuild
Scott	<ul style="list-style-type: none"> vacate 	<ul style="list-style-type: none"> NRV enf parking 	<ul style="list-style-type: none"> NRV enf parking 	<ul style="list-style-type: none"> NRV enf parking 	<ul style="list-style-type: none"> NRV enf parking
15th St (ACC)		<ul style="list-style-type: none"> enforcement 	<ul style="list-style-type: none"> enforcement 	<ul style="list-style-type: none"> enforcement 	<ul style="list-style-type: none"> enforcement
Other			<ul style="list-style-type: none"> paratransit 	<ul style="list-style-type: none"> paratransit 	<ul style="list-style-type: none"> paratransit
Swing	<ul style="list-style-type: none"> New Facility 	<ul style="list-style-type: none"> New Facility 	<ul style="list-style-type: none"> New Facility 	<ul style="list-style-type: none"> MME 	<ul style="list-style-type: none"> Kirkland & Lease

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Scenario 1/1A/1B

1. MME - build expanded rail



2. Potrero - rebuild coach facility with TOD above



3. Presidio - rebuild coach facility with TOD adjacent



4. Kirkland - rebuild coach facility



Assumes use New Facility for swing while rebuilding Potrero, Presidio, and Kirkland

Scenario 2A

1. MME - build coach swing / rail & backshop



2. Potrero - rebuild as decked coach facility with TOD above



3. Presidio - rebuild decked coach facility with TOD adjacent



4. Kirkland - rebuild coach facility



Assumes use MME Expansion for swing while rebuilding Potrero, Presidio, and Kirkland and then for rail and back shop

Facility Framework



Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Facilities Framework – December 2016

Scenario Estimates

Capital Cost/Scenario Cost

Capital cost includes project, new facility and lease savings

Scenario cost includes capital, maintenance/TT and program contingency costs

Projects Costs developed by cost consultant; include hard and soft costs escalated to mid point of construction

New Facility Costs derived by SFMTA based on information from developer; assume purchase over ten years

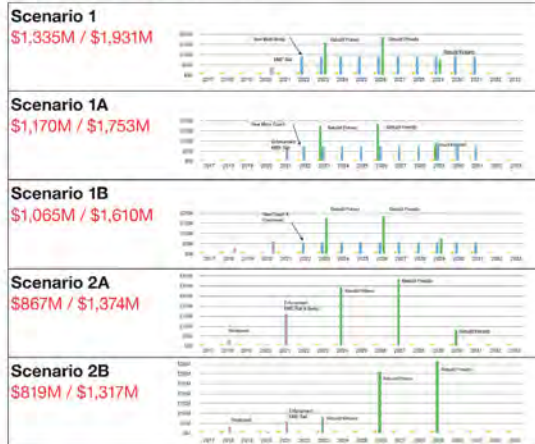
Lease Savings provided by SFMTA

Maintenance & TT Costs based on Facility Condition Assessment

Program Contingency is for EIR, Hazardous Materials Abatement, Unforeseen Conditions, etc

TOD Savings not known and thus not included

Scenario Cost Estimates



Facilities Framework – December 2016

Facility Framework Costs

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$819M / \$1,317M
New Facility	• coach \$588M • paratransit \$138M • NRV \$73M • enforcement \$92M • training \$27M	• coach \$577M • paratransit \$135M	• coach \$579M		
MME	• rail \$39M	• rail \$39M	• rail \$39M	• rail & swing \$136M	• rail \$39M
Potrero Presidio Kirkland	• rebuilds \$420M	• rebuilds \$419M • training \$18M	• rebuilds \$419M • training \$18M	• rebuilds \$687M • training \$18M	• rebuilds \$737M • training \$18M
Scott	• vacate	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0
15th St (ACC)		• enforcement \$23M	• enforcement \$23M	• enforcement \$23M	• enforcement \$23M
Other			• paratransit \$30M	• paratransit \$30M	• paratransit \$30M
Lease	-\$42M	-\$41M	-\$43M	-\$27M	-\$28M

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Facilities Framework – December 2016

Facility Framework Costs

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$819M / \$1,317M
New Facility	• coach \$588M • paratransit \$138M • NRV \$73M • enforcement \$92M • training \$27M	• coach \$577M • paratransit \$135M \$165M lower cost	• coach \$579M		
MME	• rail \$39M	• rail \$39M	• rail \$39M	• rail & swing \$136M	• rail \$39M
Potrero Presidio Kirkland	• rebuilds \$420M	• rebuilds \$419M • training \$18M	• rebuilds \$419M • training \$18M	• rebuilds \$687M • training \$18M	• rebuilds \$737M • training \$18M
Scott	• vacate	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0
15th St (ACC)		• enforcement \$23M	• enforcement \$23M	• enforcement \$23M	• enforcement \$23M
Other			• paratransit \$30M	• paratransit \$30M	• paratransit \$30M
Lease	-\$42M	-\$41M	-\$43M	-\$27M	-\$28M

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Facilities Framework – December 2016

Facility Framework Costs

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$819M / \$1,317M
New Facility	• coach \$588M • paratransit \$138M • NRV \$73M • enforcement \$92M • training \$27M	• coach \$577M • paratransit \$135M \$105M lower cost	• coach \$579M		
MME	• rail \$39M	• rail \$39M	• rail \$39M	• rail & swing \$136M	• rail \$39M
Potrero Presidio Kirkland	• rebuilds \$420M	• rebuilds \$419M • training \$18M	• rebuilds \$419M • training \$18M	• rebuilds \$687M • training \$18M	• rebuilds \$737M • training \$18M
Scott	• vacate	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0	• NRV \$0 • enf parking \$0
15th St (ACC)		• enforcement \$23M	• enforcement \$23M	• enforcement \$23M	• enforcement \$23M
Other			• paratransit \$30M	• paratransit \$30M	• paratransit \$30M
Lease	-\$42M	-\$41M	-\$43M	-\$27M	-\$28M

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Facility Framework Costs

	Scenario 1 \$1,335M / \$1,931M	Scenario 1A \$1,170M / \$1,735M	Scenario 1B \$1,065M / \$1,610M	Scenario 2A \$867M / \$1,374M	Scenario 2 B \$819M / \$1,317M
New Facility	<ul style="list-style-type: none"> coach \$588M paratransit \$138M NRV \$73M enforcement \$92M training \$27M 	<ul style="list-style-type: none"> coach \$577M paratransit \$135M 	<ul style="list-style-type: none"> coach \$579M 	<ul style="list-style-type: none"> rail & swing \$136M 	<ul style="list-style-type: none"> rail \$39M
MME	<ul style="list-style-type: none"> rail \$39M 	<ul style="list-style-type: none"> rail \$39M 	<ul style="list-style-type: none"> rail \$39M 	<ul style="list-style-type: none"> rail & swing \$136M 	<ul style="list-style-type: none"> rail \$39M
Potrero	<ul style="list-style-type: none"> rebuilt \$420M 	<ul style="list-style-type: none"> rebuilt \$419M training \$18M 	<ul style="list-style-type: none"> rebuilt \$419M training \$18M 	<ul style="list-style-type: none"> rebuilt \$687M training \$18M 	<ul style="list-style-type: none"> rebuilt \$737M training \$18M
Presidio					
Kirkland					
Scott	<ul style="list-style-type: none"> vacate 	<ul style="list-style-type: none"> NRV \$0 enf parking \$0 	<ul style="list-style-type: none"> NRV \$0 enf parking \$0 	<ul style="list-style-type: none"> NRV \$0 enf parking \$0 	<ul style="list-style-type: none"> NRV \$0 enf parking \$0
15th St (ACC)		<ul style="list-style-type: none"> enforcement \$23M 	<ul style="list-style-type: none"> enforcement \$23M 	<ul style="list-style-type: none"> enforcement \$23M 	<ul style="list-style-type: none"> enforcement \$23M
Other			<ul style="list-style-type: none"> paratransit \$30M 	<ul style="list-style-type: none"> paratransit \$30M 	<ul style="list-style-type: none"> paratransit \$30M
Lease	-\$42M	-\$41M	-\$43M	-\$27M	-\$28M

Capital Cost / Scenario Cost (capital, maintenance, and contingency)

Facility Framework First Steps

	November - December 2016 Executive Direction	January - March 2017 Refine & Analyze	April - June 2017 Refine & Analyze	June - September 2017 Refine & Analyze	October- December 2017 Executive Direction	January 2018 Start Major Project
Scenarios	5 options Scenario 1, 1A, 1B, 2A, 2B	4 options Scenario 1A, 1B, 2A, 2B	2 options Scenario 1A or 1B, 2A or 2B	2 options Scenario 1A or 1B, 2A or 2B	1 option	
MAINTENANCE	Identify next maintenance projects	Establish MOU with SFPW Select construction procurement for projects	SFPW prepare construction documents as needed SFPW or SFMTA prepare As Needed or Construction RFP			PRELIM
NEW FACILITY	Eliminate Scenario 1 Confirm ability to purchase New Facility	Developer revise concept and start project EIR Confirm cost and define deal structure SFMTA refine program & establish building criteria for New Facility and Potrero	Compare refined scope, schedule, budget, procurement and funding of two Scenarios		Selected Scenarios	DESK
POTRERO	Issue RFP for TOD analysis for Potrero, Presidio and Kirkland Issue RFP for Program EIR for two scenarios for SFMTA expansion and rebuilding	Phase 1 of TOD Study for Potrero, Presidio, and Kirkland Phase 1 of Program EIR				
MME KIRKLAND MARIN		Select Scenario 2A with MME swing or Scenario 2B with Kirkland & lease swing	Refine swing program - concept and cost Refine MME rail concept and cost Determine where to store non-operating Historic Street Cars		Move Historic Street Cars and clean out Main	DESK
15th ST (ENFORCEMENT)	Approve swap of 15th St for Bryant St, use of 15th & Scott for Enforcement & NRV	Refine program and concept, establish cost and identify funding	Establish MOU with SFPW	IMPLEMENT		
PARATRANSIT	Confirm Options: 1. Include in New Facility 2. Purchase existing facility 3. Purchase existing yard, outsource maintenance	Analyze & Select Option	Search for purchase of existing facility(ies) or yard Explore extending Vendor lease and short term lease as fall backs if cannot purchase existing facility(ies) prior to lease expiration			IMPLEMENT

Next Steps

Actions/Decisions

- Recommend Eliminate Scenario 1**
Reduce scenarios; New facility should be smaller, Scenario 1A (Bus and Paratransit) and 1B (Bus Only) are more cost effective.
- Recommend Advance ACC Jurisdictional Transfer**
More cost effective; Enforcement is at a permanent location and superior geographic location.
- Recommend MME for Swing not Kirkland**
Reduce scenarios; Kirkland as swing is feasible, however results in greater community/political risk early in the program
- Confirm Preferred Paratransit Facility Strategy**
Extend current leases as bridge to permanent

Reference Materials

The SFMTA's Real Estate and Facilities Vision for the 21st Century, dated February 5 2013 and *Addendum to SFMTA's Real Estate and Facilities Vision for the 21st Century, Vision Refinement for Coach Facilities*, dated June 24, 2014, prepared by Parsons Brinckerhoff

The Vision Report provided a basis for the consultant team to develop an updated long-term facilities planning framework. See a brief summary of the report on page 192.

SFMTA Rebuild 2040, Draft 1 dated April 14, 2015

This document prepared by SFMTA staff (but never adopted) contains additional background for long-range facilities planning. For instance, it provided guidance on adjustment of the Vision cost estimates to correspond to City of San Francisco and SFMTA-specific factors and considerations.

SFMTA Strategic Plan Fiscal Year 2013-Fiscal Year 2018.

This document describes the Agency's direction for six years and is the basis for the next two year budget cycle.

2014 SFMTA Transit Fleet Management Plan, dated March 2014

This document outlines SFMTA's transit fleet plan

SFMTA Short Range Transit Plan Fiscal Year 2015 – Fiscal Year 2030, approved by the SFMTA Board of Directors June 16, 2015

This document, which SFMTA is required to submit to the Metropolitan Transportation Commission is the source for much background information for this study. It contains an organizational overview of SFMTA, Performance Measures

and Key performance Indicators, Operations Plan and Budget, Capital Improvement Program, etc. The report, combined with the *Transit Fleet Management Plan* is the source of much of the revenue and non-revenue fleet information.

State of Good Repair Report, published February 2015

This document provided background and context to the consultant team's work on Facility Condition Assessment and planning for deferred and preventive maintenance.

SFMTA 20 Year Capital Plan, adopted September 15, 2015

The consultant team's Facility Assessment and proposed Framework Plan for future improvements will contribute to ongoing update of the Capital Improvement Plan.

SFMTA Facilities Task Force Recommendations + Next Steps, dated May 26 2015 presentation to DOT/Executive Team

SFMTA 20 Year Capital Plan, adopted September 15, 2015

This document provided specific priorities from the DOT/Executive Team which has guided consultant work, including:

- Create a Deferred Maintenance Program for the SFMTA Real Estate Portfolio
- Create a Space Plan and Program for the SFMTA Real Estate Portfolio
- Provide an Organizational assessment and design for SFMTA Facility Management
- The team has coordinated with SFPW on some aspects of the work, such as planning for 1 South Van Ness and renovation of the Burke warehouse.

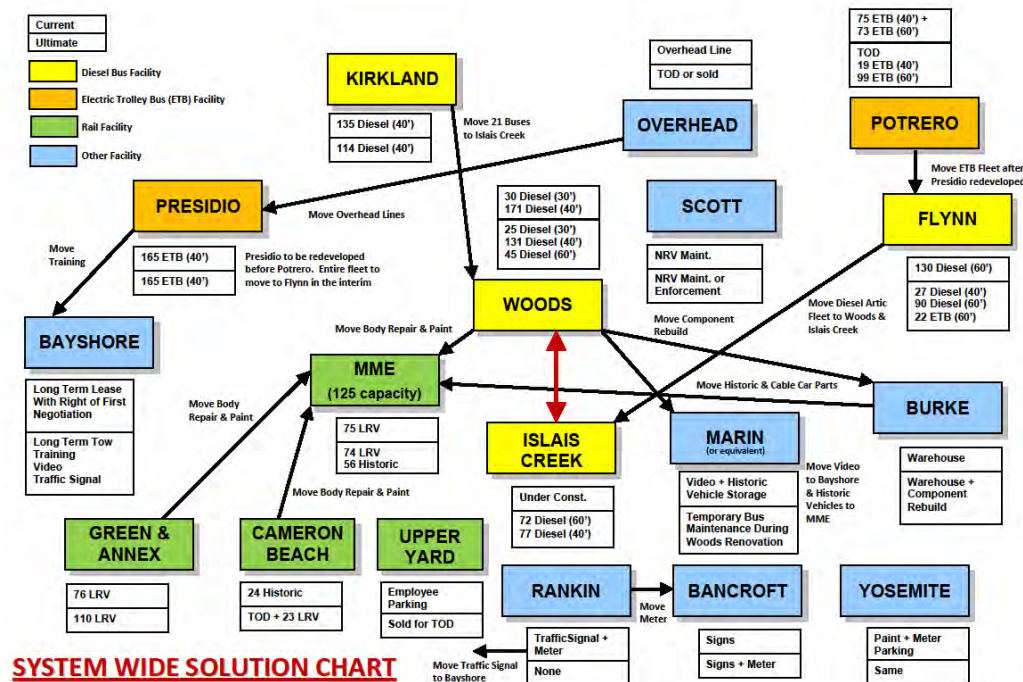
Vision Report

The *SFMTA Real Estate and Facilities Vision for the 21st Century* (Vision Report) is a guide to optimize the use of the SFMTA real estate portfolio by consolidating functions, and reconfiguring, expanding and replacing existing facilities to best meet SFMTA's operational needs while identifying cost savings and revenue-generating opportunities. The Vision Report outlines recommendations to meet SFMTA's operational needs, with an emphasis on fleet operations. It includes projects that could be undertaken at any time as well as series of projects that need to be undertaken in sequence to accommodate fleet growth,

improve function, and replace leased and physically deficient facilities.

The *Vision Refinement for Coach Facilities* (Vision Addendum) updates the recommendations for the larger motor and trolley fleets but not the larger rail fleet described in the *2014 SFMTA Transit Fleet Management Plan*.

The Vision Report and Addendum recommendations for each facility are summarized on the right.



◆ **Motor Coach**

- Flynn - electrify to use as swing facility for Potrero and Presidio trolley coach facility replacements
- Islais Creek - implement design modifications and build to increase yard capacity and provide service for standard and articulated coaches
- Kirkland - Replace aging, limited and inefficient facility with new facility that can accommodate standard and articulated coaches
- Woods - Relocate component rebuild and body/paint, and renovate facility to accommodate standard and articulated coaches.
- New - Add new facility to accommodate 2040 fleet.

◆ **Trolley Coach**

- Potrero - Replace physically and functionally deficient facility with Transit Oriented Development that includes new trolley coach facility
- Presidio - Replace physically and functionally deficient facility with Transit Oriented Development that includes new trolley coach and overhead lines facility

◆ **Rail**

- Cable Car Barn- Continue current use
- Cameron Beach - Replace physically and functionally deficient rail facility with yard
- Cameron Beach Upper Yard - Transit Oriented Development

- Green - Consider outsourcing some functions, relocate body/paint to MME & consolidate components to increase service bays
- Green Annex - Rearrange electronic shop for more efficient use
- Muni Metro East - Procure equipment to complete facility fit-out; build multi-modal body paint facility

◆ **Streets and Support**

- Alameda - Power Control - Continue current use
- Bancroft - Sign and Meter Shop - Upgrade facility
- Bayshore - Tow, Traffic Signal Shop, Video and Training - New lease facility
- Bryant - Overhead Lines - Move from current unreinforced masonry building.
- Burke - Warehouse - Upgrade facility
- Lenox - Transit Control - Move to South Van Ness (SFMTA subsequently revised to move to Market)
- Marin - Swing space
- Pennsylvania - Maintenance and Shops - Consolidate shop functions
- Scott - NRV Maintenance and Enforcement - increase service capacity or make consolidated Enforcement Facility
- Yosemite - Street Paint Shop - Continue current use



