

**STAFF REPORT FOR CALENDAR ITEM NO.: 14
FOR THE MEETING OF: March 10, 2016**

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Presentation of the Operations and Maintenance Study for the Transbay Transit Center Program.

REPORT:

Background

To quantify the operations and maintenance (O&M) needs of the Transbay Transit Center, the Transbay Joint Powers Authority (TJPA) conducted initial O&M studies in 2007, based on the March 2007 Scope Definition Report, and 2010, based on the Schematic to 100% Design Development documents. In 2014, ISES Corporation was contracted to prepare a comprehensive O&M report based on the 100% construction documents.

ISES Corporation, founded in 1987, provides detailed operations, maintenance, and life cycle cost estimates for public and private clients in the Bay Area and throughout the United States. Its detailed estimates capture real costs of operating complex, state-of-the-art facilities, including clean rooms, laboratories, and food service areas that do not fit well into customary O&M estimating practices. Unique architectural and mechanical features are diligently measured, and broad-brush or rule-of-thumb methodologies avoided. ISES carefully estimates necessary future investments in preventive maintenance, corrective maintenance, capital renewal and repair, service contracts, and such auxiliary considerations as tools, training, and learning curves.

Design Overview

The 1.2-million-square-foot Transit Center has been designed for a 100-year operational life. The facility will use materials and technologies with low-maintenance requirements and long-term durability to ensure that it endures as a clean and inviting public destination throughout its life. Durable materials throughout the building include metal panel systems, doors and frames with wear-resistant surfaces such as stainless steel that can be rebuffed to restore scratched surfaces; high-performance steel coatings that are maintenance-free and require only routine cleaning; hard floor surfaces such as terrazzo, and acid-etched glass that resists fingerprints. Low-maintenance technologies include a geothermal system consisting of a condenser water/ground loop heat exchanger in place of a conventional boiler/cooling-tower and natural and low-energy mechanical ventilation systems throughout the facility.

Methodology

The O&M report provides a qualitative and quantitative analysis of the staff and budget needed to support the O&M requirements of the Transit Center.

A task-level methodology was used to develop staffing and annual cost estimates for preventative and corrective maintenance and repair, janitorial grounds, security, and waste management operations. The report also analyzes expected requirements and costs associated with purchased utilities, information technology services, service contracts, insurance, and TJPA administrative overhead costs. The O&M report includes a 50-year projection of anticipated facilities renewal expenditures, which are expected to be funded by tax increment revenue. These expenditures pertain to major recurring component replacement activities, which vary greatly from year to year, unlike the maintenance budget, and should be managed strategically.

Measurements and quantities were taken from relevant Transit Center drawings and applied to the cost and staffing estimating methodology. The costs, in 2015 dollars, are summarized by Phase 1 Program element and include:

- Maintenance and repair, janitorial, groundskeeping, and waste management cost and staffing estimates
- Security-related cost and staffing estimates
- Utilities consumption and cost estimates
- Information technology services cost estimates
- Service contracts
- Insurance costs (property and general liability)
- 50-year facilities renewal cost estimate focused on life cycle-based component replacement
- TJPA administration cost estimate
- Operations contingency (10%)

The maintenance estimate is based on a scheduled maintenance program model that can eventually be implemented for the Transit Center. The model assumes that the Transit Center is diligently maintained and attentively cleaned, similar to other public transportation and retail facilities such as the San Francisco International Airport and San Francisco Westfield Center. Emphasis is placed on systematic preventive maintenance and programmed janitorial and groundskeeping activities, with repair and upkeep conducted at frequencies following typical industry best practices that adhere to original equipment manufacturer recommendations. A level of service is provided in which maintenance activities are organized and strategically managed, equipment and building components are typically observed to be in good working order, building components are upgraded when economically feasible, and the maintenance organization is responsive to customer calls.

The cost model reflects all operations and maintenance activities being contracted under a Master Lease agreement including maintenance, janitorial, grounds, information technology, and tenant management. This arrangement is likely to offer the most agreeable solution to the TJPA for ongoing management needs at all of the various facilities to be included in the future operation and maintenance plan. Staffing for the aforementioned operations and maintenance activities will be the responsibility of the selected Master Lessee.

Key O&M Categories

A few of the key O&M categories are discussed below:

Maintenance services have been estimated to optimize purchased utilities, maintenance labor and materials, component renewal or replacement cycles, and component up-time. Lower costs for all of these facets are desirable; this can be accomplished through a comprehensive preventive maintenance program consisting of largely routine maintenance activities as well as inspection activities that proactively yield corrective maintenance work orders. Such a program envisions that all completed work orders be associated with a building component or asset. Through diligent maintenance and tracking processes, the need for costly emergency maintenance can be mitigated, component renewal or replacement cycles maximized, utility consumption optimized, and component down-time minimized.

Janitorial services are expected to require a high level of staffing due to the Transit Center's function as a passenger terminal situated in a major employment center in downtown San Francisco. In addition to transit services, the facility will host offices, retail space, and a 5.4-acre park with event space. The janitorial approach includes daily services to the common areas as well as bus and program spaces that are accessed by the public. The common areas include public restrooms, stairwells, lobbies, alleys, and retail concourses. In short, the level of appearance sought by the estimate in this report is orderly and tidy.

Security services to patrol the Transit Center will be primarily by contract security forces with some San Francisco Police Department staff. These patrols will be supplemented by video and security device monitoring staff who will maintain constant communications for necessary coverage and prompt response times. Security-related cost and staffing estimates were informed by staffing recommendations contained in the Program's Safety and Security Concept of Operations.

Anticipated Revenues

The operations and maintenance costs will be partially recovered from current confirmed operating revenue streams, including Regional Measure 2/Bridge Toll funds projected to be about \$4,700,000 when the Transit Center opens. It is further anticipated that the Regional Measure 2/Bridge Toll allocation for the Transit Center will be increased to reflect the larger size/scale, improved level of cleanliness, and improved public amenities of the new Transit Center as compared to the old Terminal. Another current confirmed revenue stream is the Greater Rincon Hill Community Business District contribution to the operation and security of the Rooftop Park in the estimated amount of \$1,559,353¹.

Other anticipated revenue sources include some from the Master Lessee:

- a portion of the retail rents
- promotional platform shared revenue
- contribution to operations and maintenance cost
- a portion of rents from Greyhound and Amtrak

Transit agencies operating in the Transit Center, AC Transit, San Francisco Municipal Transportation Agency, including Muni and Paratransit, WestCAT Lynx, SamTrans, and Golden Gate Transit, are also expected to provide revenue to cover their pro rata share of costs. In accordance with the Lease and Use Agreement between the TJPA and AC Transit, adopted September 29, 2008, AC Transit has responsibility to contribute to the operations and maintenance and capital costs of the Transit Center to the extent that they exceed revenues.

RECOMMENDATION:

Information only.

¹ Greater Rincon Hill Community Business District Management Plan, July 2015



Operations & Maintenance Report

March 10, 2016

Transbay Transit Center

TJPA





Transbay Transit Center

ISES Services





Division of Capital Asset Management and Maintenance
D · C · A · M · M



SLAC





Transbay Transit Center

Agenda

1. Design Overview
2. Methodology
3. Basis of Cost Estimates
4. Facilities Renewal
5. Benchmarking
6. Revenue



1. Design Overview

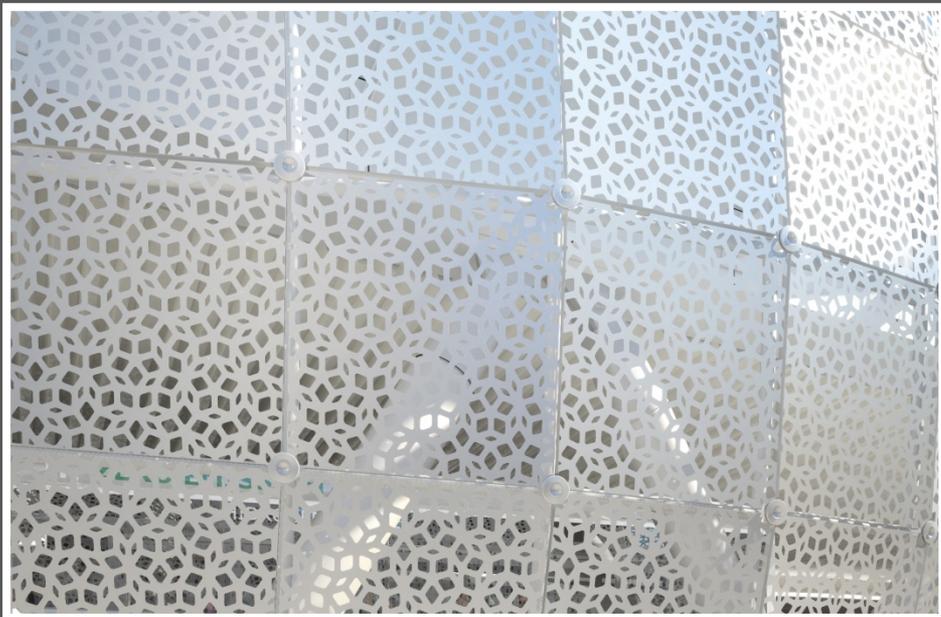


Designed for **100-year** operation



Transbay Transit Center

Design Overview



Durable Materials

- Metal panel systems
- Wear-resistant surfaces such as stainless steel





Design Overview

Durable Materials

- Hard floor surfaces
- High performance coating for steel



Design Overview

Low maintenance HVAC

- Natural and low-energy mechanical ventilation
- Usage of water-source heat pumps

Utilities sub-metering for retail spaces

Geothermal loop system



2. Methodology



Estimate Categories

Maintenance, Janitorial & Grounds

Security Services

Purchased Utilities

Information Technology Services

Service Contracts

Insurance

Facilities Renewal Reserve

Administrative Costs



Transbay Transit Center

Cost Considerations

All estimates in current year dollars (2015)

Contractor overhead included

Retail tenant space operation & maintenance costs excluded

Maintenance, Janitorial & Grounds

Measured and counted building contents

Applied Cleaning and Maintenance standards

- Customized Custodial & Grounds services
- Effective Scheduled Maintenance program

Calculated staffing

Applied localized 75 percentile wage rates



Maintenance, Janitorial & Grounds

Maintenance Service Level

- Activities are organized & strategically managed
- Assets are typically observed to be in good working order
- Organization responsive to customer calls
- Repair/Replace decisions undertaken effectively

Janitorial Service Level

- Floors & base moldings appear bright, clean, & without build-up in corners or along walls
- Surfaces appear clean
- Restroom surfaces gleam & are odor-free
- Restroom supplies replenished

Grounds Service Level

- Lawn typically appears cut, edged, weed-free, & green
- Plants appear vigorous
- Disease & pests controlled upon observation
- Benches, tables, etc. appear clean & are repaired/refinished periodically



Security

Estimate based on
2015 ConOps
Security Staffing
Plan draft report

Mixed deployment
of contract security
and SFPD staff

INCLUDES
monitoring staff
and equipment

EXCLUDES
special security staff
required by tenants



Purchased Utilities

Based on PUC-developed consumption model

Applied PUC-estimated loaded rates

EXCLUDES sub-metered retail tenant space

INCLUDES electricity, water, sewer, fuel oil,
and trash



Transbay Transit Center

Information Technology Services

Two-Way
Radio DAS

Virtual Network
License

Data Network
Service

Basic Data /
Telecom
Service



Service Contracts

**Phase 1 Elevator & Escalator
Maintenance**

**Mission Square Sculpture
Installation Stability Testing**

**Roof Park Landscaping (Years
1-2)**



Insurance

Products / Policies

- Property (All Risk)
- General Liability (Base & Supplement)



Transbay Transit Center

Facilities Renewal Reserve

Measured and counted building contents

Applied lifecycles and costs localized to SF

Annualized 50-year projected variable costs



Administrative Costs

TJPA Management: TJPA-provided estimate that accounts for TJPA administration, communications, supplies, etc.

Operations Contingency: TJPA-provided estimate that accounts for normal fluctuations in annual O&M costs and anticipated to be a part of funding requests



3. Basis of Cost Estimates



Transbay Transit Center

Phase 1 Cost Estimate Categories

TTC Phase 1

Bus Ramp

Rooftop Park

Operations Contingency

TJPA Management



Phase 1 Staffing

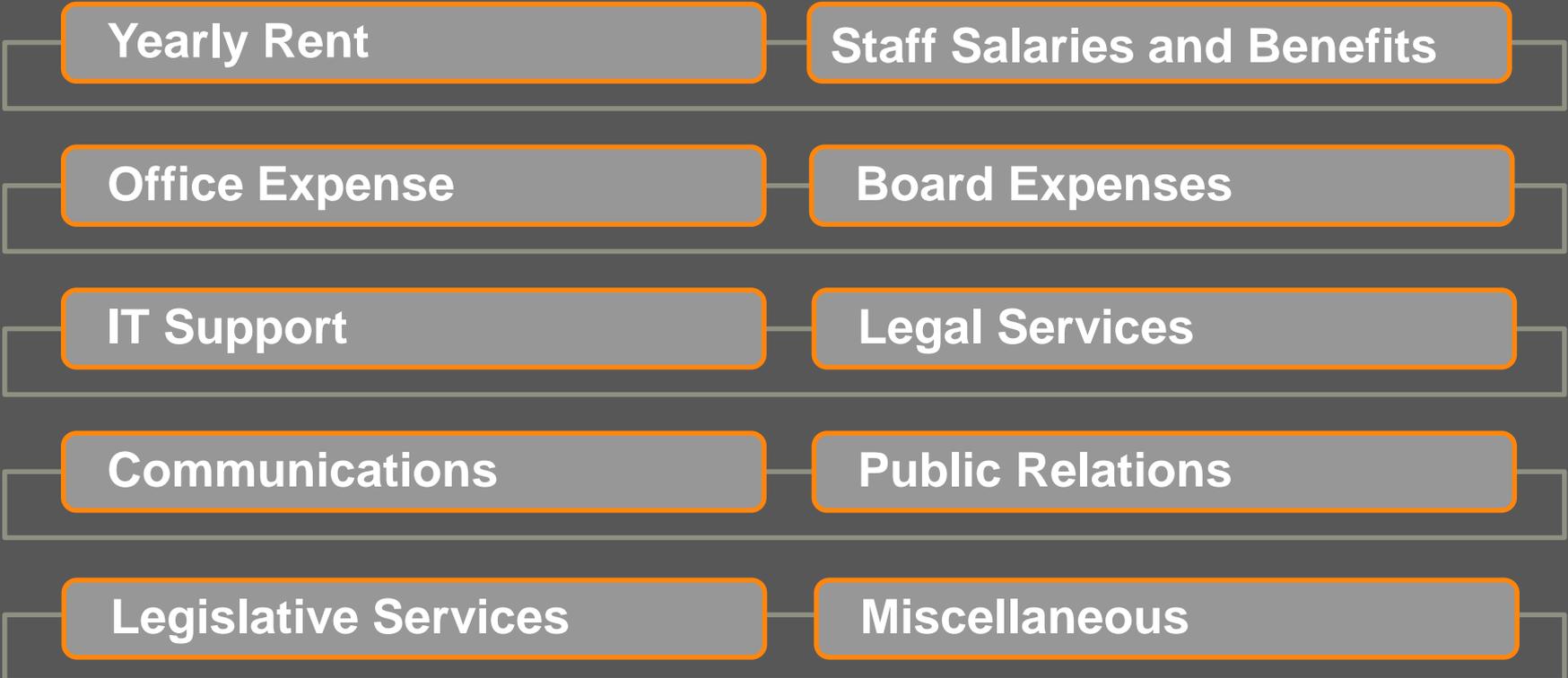
PHASE 1	FTE
Insurance	
Building Maintenance	10.3
Grounds Services	6.7
Janitorial Services	18.1
Security Services	73.0
Purchased Utilities	
Information Technology Services	
Service Contracts	
O&M SUBTOTALS	108.1
TJPA Management	
Operations Contingency	
TOTAL	108.1

Note: Facility Renewal is intended to be funded by Tax Increment



Transbay Transit Center

TJPA Management Transit Center Operations Annual Cost Categories

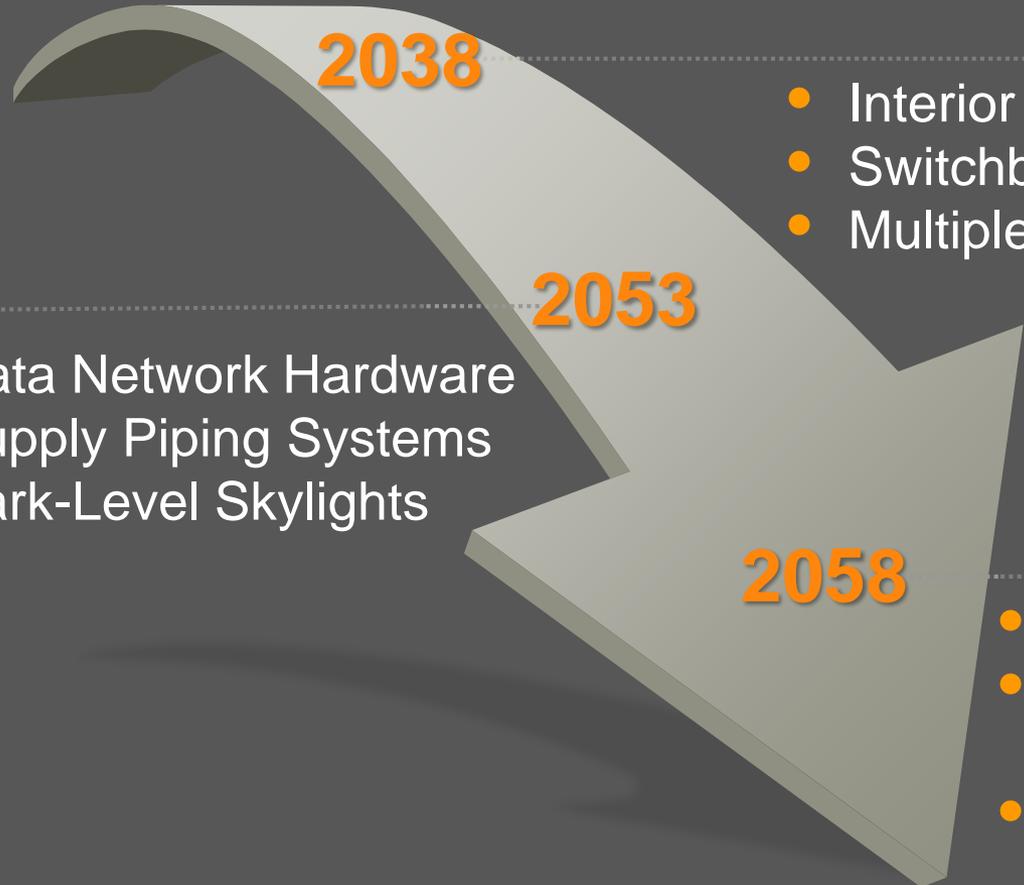




4. Facilities Renewal



Future Capital Costs



2038

- Interior lighting replacements
- Switchboard replacements
- Multiplex Pump Systems

2053

- Data Network Hardware
- Supply Piping Systems
- Park-Level Skylights

2058

- HVAC Distribution Systems
- Electrical Distribution Systems
- Drain Piping Systems



6. Revenue



Transbay Transit Center

TTC Phase 1 Revenue

Confirmed Operating Revenue

- Transbay Revenue (RM2) \$4,700,000
 - Community Benefits District \$1,559,353**
- Annual Revenue Subtotal \$6,259,353

** Greater Rincon Hill CBD Management Plan

Other Anticipated Operating Revenue to cover remaining need

From Master Lessee

- Retail Rents (portion to TJPA)
- Promotional Platform Revenue Sharing (portion to TJPA)
- Contribution to O&M for areas of responsibility
- Rents from Greyhound & Amtrak

Contributions from Transit Agencies

- AC Transit (Lease and Use Agreement)
- SFMTA
- Golden Gate Transit

Increased RM2 Transbay Revenue



Security Staffing Plan

Transbay Transit Center

TJPA





Agenda

- Benchmarks
- Staffing Model Options
- Recommended Staffing

Benchmarks

- Metropolitan Atlanta Regional Transit Agency (MARTA)
- Port Authority of New York and New Jersey (PANYNJ)
- World Trade Center (WTC) PATH Station
- Los Angeles County Metropolitan Transportation Authority (LACMTA)
- Los Angeles Union Station (LAUS)
- Washington Metropolitan Transit Authority (WMATA) Union Station



Staffing Model Options Cost

Two Staffing Models Considered and reviewed by SFPD

- Model 1 primarily staffed by SFPD with less contract guard staff
- Model 2 primarily staffed by contract guard service with less SFPD



Transbay Transit Center

TTC Operation Hours

Transit Center hours: Primarily 5 am to 1 am, with some areas operating 24 hours

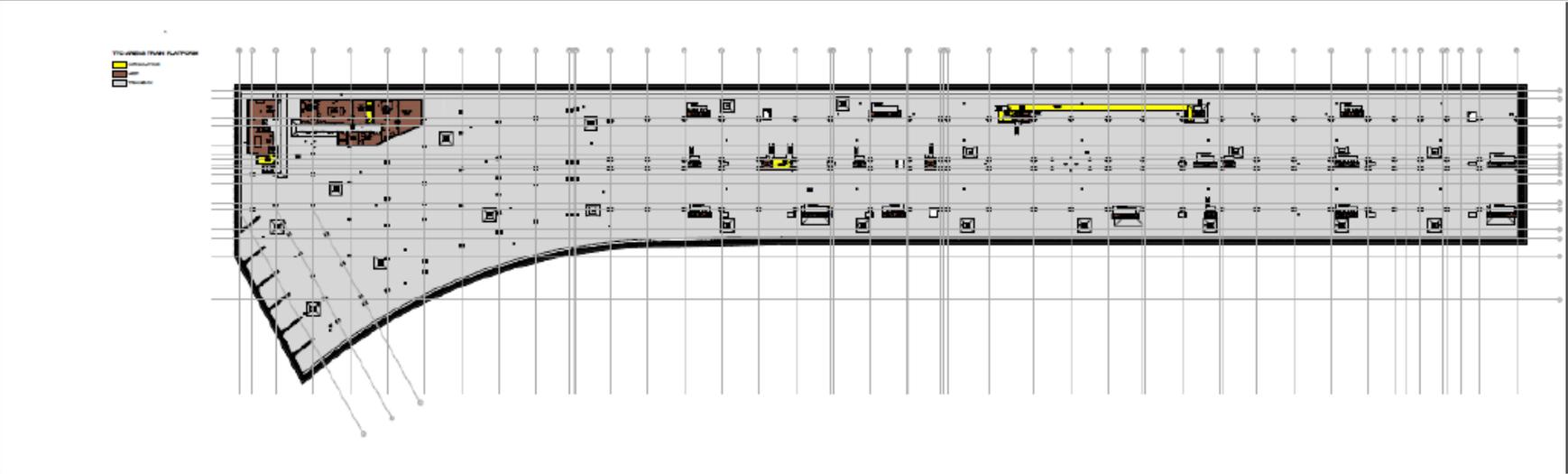
Park hours: Primarily dawn to dusk, longer hours expected for evening events and dining



Transbay Transit Center

Recommended Staffing

Train Platform



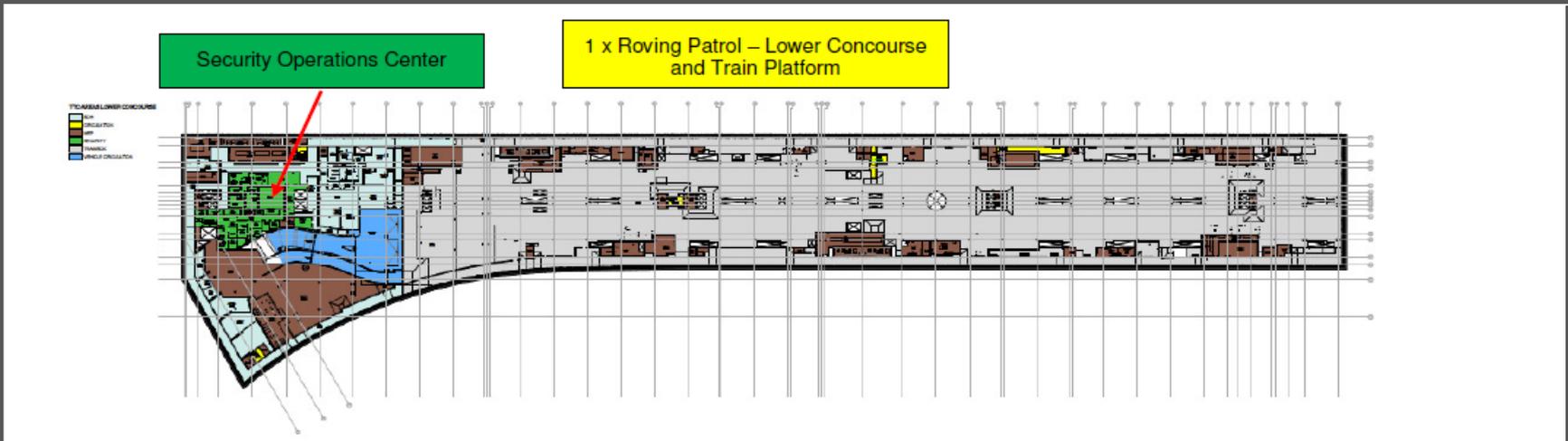
Train Platform	Phase 1
Stationary Posts (Fixed)	0
Roving Patrols	0
SFPD Officers	0



Transbay Transit Center

Recommended Staffing

Lower Concourse



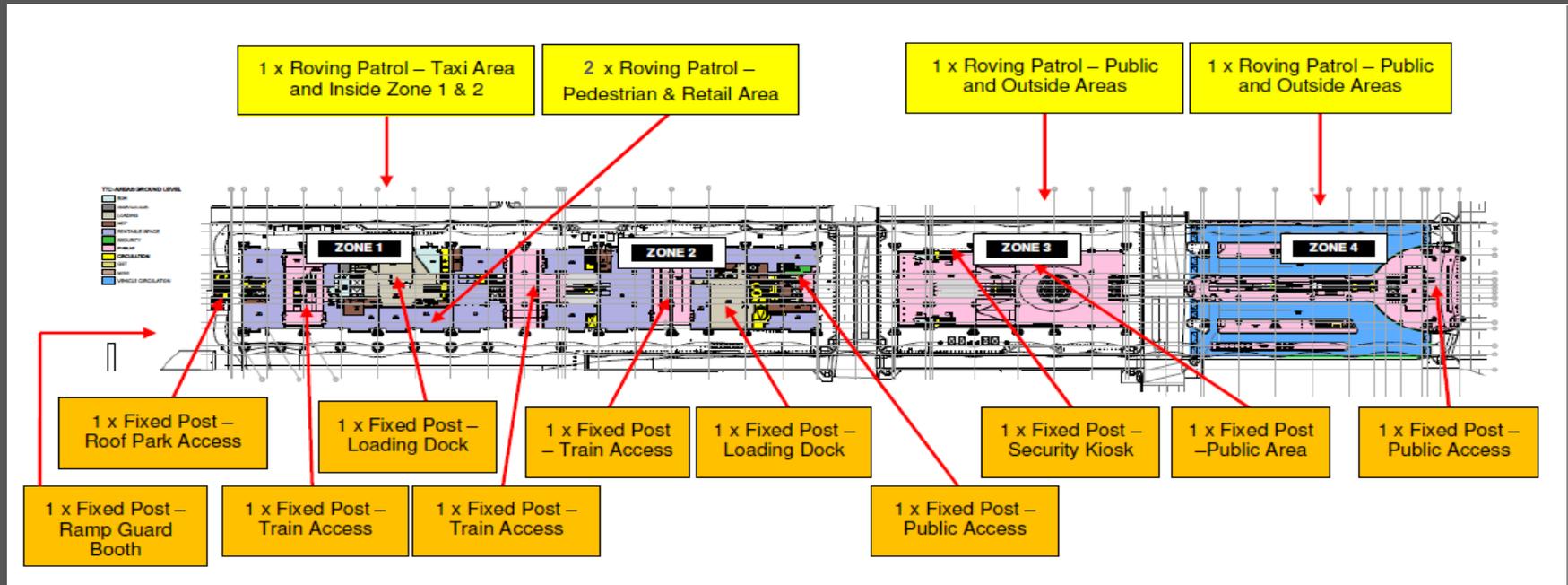
Lower Concourse	Phase 1		
	Shift 1	Shift 2	Shift 3
SOC Supervisor	1	1	1
SOC Operators	2	2	1
Shift Supervisors	1	1	0
Roving Patrols	1	1	0.5
Total	5	5	2.5



Transbay Transit Center

Recommended Staffing

Ground Level

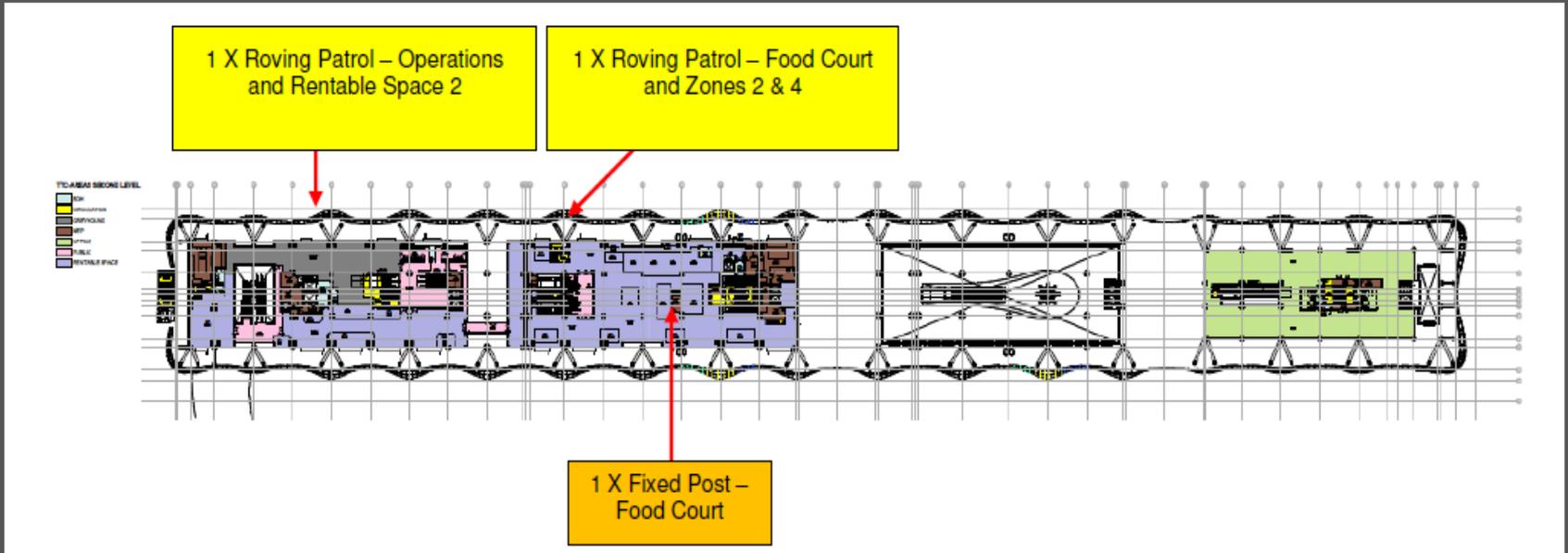


Ground Level	Phase 1		
	Shift 1	Shift 2	Shift 3
Roving Patrols	5	5	2
Stationary Posts	11	11	2
SFPD Officers	1	1	0
Total	17	17	4



Recommended Staffing

Second Level

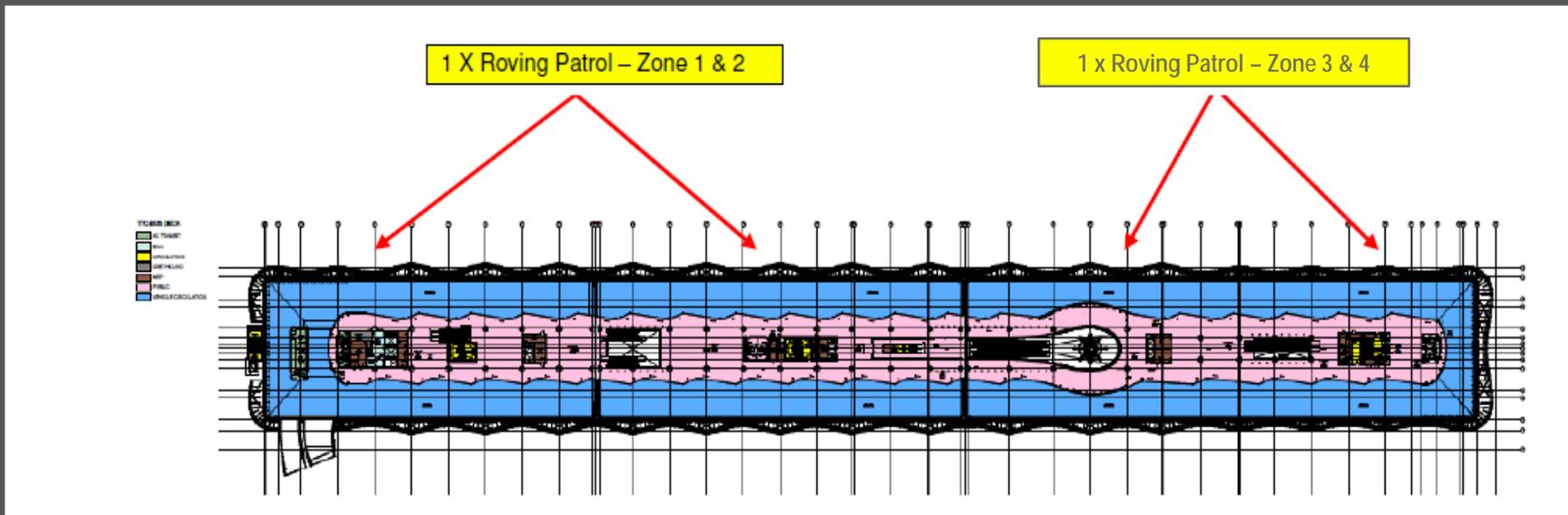


Second Level	Phase 1		
	Shift 1	Shift 2	Shift 3
Roving Patrols	2	2	0
Chief Security Officer	1	0	0
Deputy Chief Security Officer	0	1	0
Total	3	3	0



Recommended Staffing

Bus Deck



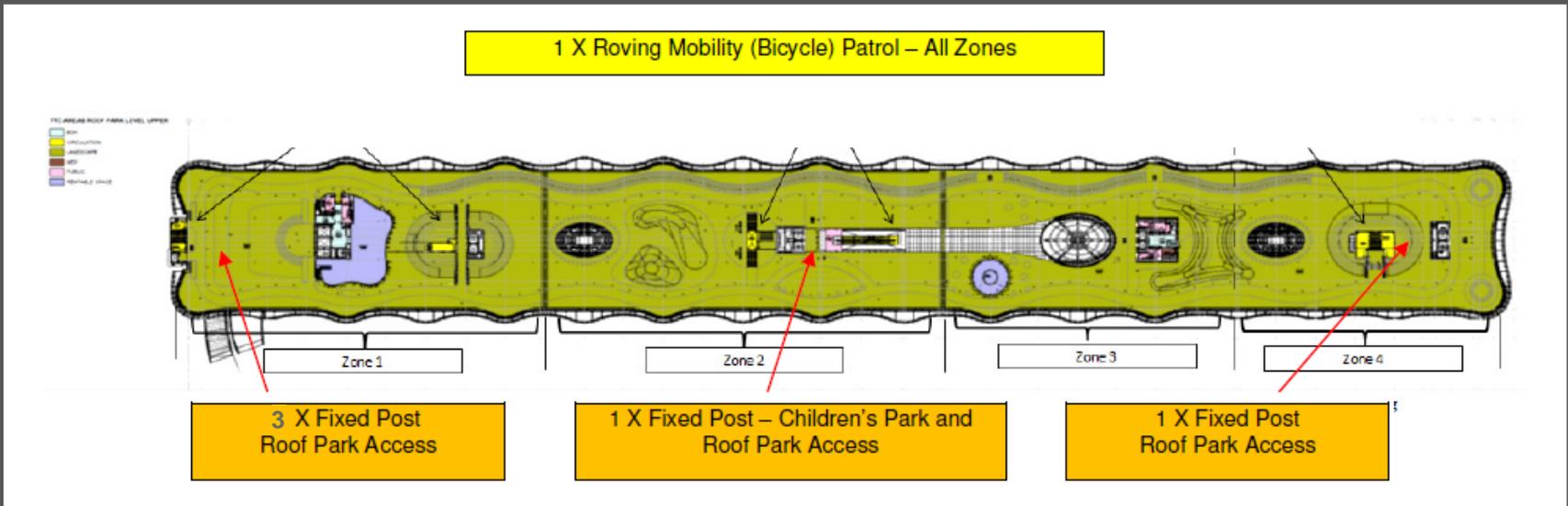
Bus Deck/Bus Ramp	Phase 1		
	Shift 1	Shift 2	Shift 3
Roving Patrols	2	2	1
Stationary Posts (Bus Ramp)	1	1	0.5
Total	3	3	1.5



Transbay Transit Center

Recommended Staffing

Roof Park



Roof Park	Phase 1		
	Shift 1	Shift 2	Shift 3
Roving Patrols	1	1	0.5
Stationary Posts	3	3	0.5
Total	4	4	1

Staffing Summary - Phase 1 Model 2

Position				Total
	Shift 1	Shift 2	Shift 3	
Chief Security Officer	1	0	0	1
Deputy Chief Security Officer	0	1	0	1
Roving Patrols	11	11	4	26
Stationary Posts	15	15	3	33
SFPD Officers	1	1	0	2
SOC Supervisor	1	1	1	3
SOC Operators	2	2	1	5
Shift Supervisors	1	1	0	2
Total	32	32	9	73



Discussion