

Final Report of the Harbor Department's Port
Construction & Maintenance Division
Performance Audit

LOS ANGELES, CALIFORNIA

March 25, 2025



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1. Executive Summary

The following analysis is submitted in response to Task Order #24-010, Performance Audit on Construction and Maintenance Division Staffing and Organization and is done in accordance with Personal Services Agreement #23-9949. This audit has been performed based on the Institute of Internal Auditors' International Professional Practices framework, or Red Book.

The City of Los Angeles Harbor Department's (Port of LA, or POLA) Internal Audit Division requested a performance audit for the Port's Construction and Management (C&M) Division. The Port of LA is a Department of the City of Los Angeles (City) that manages the operations of the physical harbor, the Waterfront, and associated City-owned or managed property in or near the harbor. C&M provides for the maintenance and repair of assets managed by the Port of LA.

This audit reviewed C&M's organizational structure, staffing levels, and operational and hiring practices. The following objectives were agreed upon in setting standards for the Audit and its outcomes:

1. **Evaluate Division responsibilities, corresponding positions, and staffing levels within the C&M Division.**
2. **Assess the appropriateness of the current composition and organizational structure of the C&M Division, considering goals, objectives, and responsibilities.**
3. **Consider alternative hiring processes for the C&M Division that meet City Personnel requirements and increase hiring efficiency.**

1.1 Methodology

The Matrix Consulting Group's project team conducted a comprehensive review of the entire Construction and Maintenance Division, including all of its major functions and service areas. The team utilized a wide variety of data collection and analytical techniques, including the following:

- **Current State Assessment:** The project team developed a current state assessment that captured current staffing allocations by number and type of position, the existing organizational structure, roles and responsibilities, workload, and technology used by the Division. This document was utilized as a base point of comparison for future analysis. The current state was developed using data collected from the Division and interviews with Department and Division leadership and staff.
- **Operational and Staffing Analysis:** The project team utilized best management practices and industry trends to evaluate the staffing and operations of the Division. This included:

- Evaluating the existing and projected workloads for major service areas and functions within the Construction and Maintenance Division.
- Review of the level of in-house versus contracted resources currently utilized and whether this mix is appropriate in the future.
- Projecting the required number of staff in each classification to achieve desired service levels for the Construction and Maintenance Division.
- Recommended modifications to existing classifications and staffing levels for the Division to meet the objectives of the audit.

Note that while all major functions and service areas were reviewed, the final audit report only includes the findings and recommendations and not the full analysis for each function/service area.

- **Organizational Structure Review:** A review of the overall organizational structure of the C&M Division including evaluation of:
 - The approach to organizational structure to foster accountability, maintain appropriate supervisor spans of control, and enhance communication, coordination and shared knowledge.
 - Consistency in organizational structure, employee classification, and roles and responsibilities between units / teams within the Division.
 - Recommended modifications to current organizational structure(s) to meet the objectives of the audit.
- **Hiring Practices:** An evaluation of the hiring processes utilized by the Construction and Maintenance Division with a focus on improving the efficiency and timeliness of the process while maintaining compliance with City Personnel requirements.

The next few pages outline these findings, their expected cause, criteria, results, and recommendations for improvement. Several of the subunits/functional areas were deemed satisfactory and therefore have no recommendations. For example, in the Skilled Trades unit, the subunits including Roofing and Electrical are completing nearly 100% of the workorders in a timely manner and the initial findings showed adequate staffing based on the workload. While there were no additional staffing recommendations, there are recommendations to better define service levels and define preventive maintenance to better evaluate staffing needs in these areas.

The findings and information are further explained by analysis in subsequent sections.

Summary of Findings and Recommendations

Finding / Condition	Criteria	Cause	Result	Recommendations	Responsible Party
1. The Division has not fully implemented an asset management system or software to manage the Port's assets.	APWA Best Management Practices (BMPs) and Industry Standards.	A lack of dedicated and trained staff with the capacity and knowledge to implement, maintain, and train on such a system.	The current asset management strategy is inefficient due to the reactive approach to asset maintenance and the use of disparate systems to maintain inventory and maintenance records. This leads to limited and inefficient reporting and communication capabilities.	1.1 Develop an asset management program that includes a defined policy, an asset inventory, setting service levels, developing documented maintenance activities, listing capital improvement needs, and developing program objectives and metrics. The development of the program should begin immediately and be implemented over the next 12-18 months. This is an operational program, not the software. 1.2 Add an Asset Analyst / Program Manager position in the FY 2025/26 budget with a background in GIS to assist in using the asset management software (MaintStar) and develop training on using the system so the Division has two positions dedicated to asset management. There is currently 1 position focused on this workload (Construction Estimator). 1.3 Develop a policy regarding the use of MaintStar within six months and require all programs to plan, schedule, track, on report on work activities in MaintStar. 1.4 Expand the use of mobile technology and the use of tablets or iPads to allow staff to access asset information and work orders from the field, to be implemented immediately. This will increase efficiencies and eliminate duplication of data entry, eliminate paper work orders, allow staff to have access to past maintenance data in the field, and allow staff to create subtasks or workorders as necessary from the field.	1.1. Development Services DED Team. 1.2. C&M Division. 1.3. C&M Division. 1.4. C&M Division, IT Division.
2. The division's administrative support does not align with its size and scope.	Analysis of administrative support workload and comparison of similar staffing ratios in other Divisions of the Port.	Staffing in this capacity should be periodically reconsidered based on the evolving size, scope, and responsibilities of the C&M Division. There has been a gradual increase in responsibilities of the	Additional Administrative support positions are needed to manage the workload of the Division.	2.1 Consolidate administrative support functions into one team/unit. Add an Assistant Director position reporting to the Director to oversee the unit. This should be considered in the next fiscal budget cycle. 2.2 Administrative support units should enhance tracking of work activities. It is recommended that the administrative support units begin a process to track primary work activities MaintStar (or	C&M Division.

Finding / Condition	Criteria	Cause	Result	Recommendations	Responsible Party
		Division in recent years without consideration of staffing needs.		<p>through another technological option) to document time requirements and workload for future staffing evaluation.</p> <p>2.3 Add three (3) staff positions to support Fiscal Operations. Add 1 FTE Sr. Accountant to oversee the Accounting Clerks. Add 1 FTE Accounting Clerk. Second level Supervisors should be assigned a primary Accounting Clerk to work with. Add 1 FTE Management Analyst to focus on contract management and administration. This should be considered in the next fiscal budget cycle.</p> <p>2.4 Retitle Quality Assurance to Personnel or Workforce Management to better align with the work activities of the unit.</p> <p>2.5 Add 1 FTE Safety / Training Coordinator position to the Division.</p>	
<p>3. The long-term maintenance and operational requirements and expenses of major capital projects have not been effectively integrated into the capital improvement planning process and, subsequently, are not considered in the annual budgeting process.</p>	<p>The GFOA Best Practice for Capital Planning Management and APWA BMPs.</p>	<p>Over the past decade, capital improvements and the Public Access Investment Plan have added new infrastructure projects and updates to customer—or community-facing assets. Significant funds have been invested in beautification, neighborhood services, and updated or new amenities.</p>	<p>A focus on funding project construction without considering the operating and maintenance requirements necessary to keep the asset in the same condition over time.</p>	<p>3.1 Modify the CIP process to consider each project’s maintenance and operating cost requirements, to be completed annually.</p> <p>3.2 Integrate the operating cost requirements into the Capital Investment Plan of the Port’s CIP to document annual funding needs and determine revenue sufficiency, to be completed annually as part of the budget process.</p>	<p>Development Bureau Leadership, Engineering and C&M Division Leadership.</p>
<p>4. The Division's staffing is, in some cases, not adequate based on the assets to be maintained. Staffing levels should be evaluated routinely to keep in alignment with changes in assets and maintenance responsibilities.</p>	<p>Analysis of workload data from MaintStar for the previous three full fiscal years (FY 2021-FY 2023), as well as analysis of project or asset count data versus staffing available.</p>	<p>Additional assets to manage and new expectations of maintenance requirements have resulted in higher work orders, lower completion rates, and a backlog of deferred maintenance. Some commonly used</p>	<p>Difficulty completing projects, maintenance tasks, and work orders in expected time periods and increased deferred maintenance with existing staffing levels.</p>	<p>4.1 Fill the current Boat Captain vacancy and reestablish previously reduced Deck Hand position for fill in the next 12 months.</p> <p>4.2 Add Gardener or Sr. Gardener positions as greenspace is developed that meets a ratio of 4 acres per FTE and accounts for a 15% vacancy rate. It is recommended Parks and Grounds Maintenance staffing be increased from 35 to 46 FTEs. Staff should be added over the next two fiscal years.</p>	<p>Port Management, C&M Management, & Human Resources</p>

Finding / Condition	Criteria	Cause	Result	Recommendations	Responsible Party
		classifications, such as gardeners, receive higher pay at the Los Angeles Department of Water and Power, resulting in higher vacancies.		4.3 Develop appropriate custodial service level frequency standards using the model set by GSD and develop a staffing model based on current occupied square footage. If using the basic level of service, increase staffing by 10 FTEs over the next two fiscal budget cycles. 4.4 Add three (3) new Port Electrical Mechanic positions to manage the current workload and have two positions covering the transition from Graveyard to Day Shift in the upcoming budget cycle. 4.5 Add two (2) new FTE Equipment Mechanic positions to manage the current equipment repair workload in the upcoming budget cycle. 4.6 Add one (1) Construction Estimator position and one (1) Construction Project Manager position to C&M Capital Projects to meet project workload demand in the upcoming budget cycle.	
5. There is a disparity in organizational spans of control amongst various levels of supervisors, requiring different levels of supervision and management capacity.	Analysis of the number of employees, number of teams within the Division, and overall size of teams under each level of organization.	Changing organizational structure based upon services provided and ability to fill Assistant Director positions over time.	A disparity in the overall span of control and personnel management responsibilities between the two Assistant Directors and among the five Second-Level Supervisors.	5.1 An additional Parks Maintenance Supervisor is necessary to manage appropriate spans of control within Gardening as staff is added to meet acreage demands in the next fiscal budget cycle. 5.2 Create a Second-Level Supervisor to oversee Divisions 149 and 142 (Welding and Equipment Repair) in the next fiscal budget cycle to report directly to the Assistant Director (Orozco). 5.3 Create a Second-Level Supervisor to oversee Divisions 130 and 133 (Custodial and Street Maintenance) in the next fiscal budget cycle and change these areas to report under the other Assistant Director (Hughes).	Port Management, C&M Management, & Human Resources.
6. C&M has considered and is taking advantage of alternative hiring processes that meet City Personnel requirements and increase hiring efficiency.	Review of available alternative hiring practices within the City.	The City of Los Angeles was seeking to connect all Angelenos to employment opportunities, including those facing barriers to employment.	While C&M has taken advantage of the available alternative hiring processes, it is recommended a more formalized approach be considered, including the development of a matrix listing all positions and whether the position qualified for the TLH or Bridge program.	6.1 C&M and Human Resources should collaborate to develop a formalized plan to enhance the utilization of the alternative hiring programs. This should include a matrix that lists all positions, indicates whether each position qualifies for the TLH or Bridge program, and identifies potential modifications needed for non-qualifying positions to become eligible. The Division/HR should use this matrix as a first step in evaluating all recruitment activities and opportunities.	C&M Quality Assurance

2. Introduction

The Port of LA's property encompasses 7,500 acres of land and 43 miles of waterfront and serves as the busiest container port in the Western Hemisphere. It is overseen by the Board of Harbor Commissioners on policy matters, with an Executive Director overseeing operations. The Port of LA is organized into Bureaus, and further into Divisions.



C&M is a Division of the Port within the Development Bureau. It is the largest division of the Port of LA by staffing, accounting for 309 approved positions (30.9% of the Port's overall workforce, including student workers) and a gross operating budget of \$58,325,076 (10% of the Port's overall budget) in the FY 2024-2025 Adopted Budget.

2.1 Overview of the Construction & Maintenance Division

C&M is responsible for maintaining, repairing, and managing the infrastructure assets owned and operated by the Port of L.A. In some cases, terminals are responsible for maintenance as defined in the lease agreements. The C&M Division is managed by the Director of Port Construction & Maintenance, who reports to the Port's Deputy Executive Director for Development. Assisting the Director are two Assistant Directors, each managing roughly half of the Division's key programs and service areas. There are also three administrative areas within the Division - Fiscal Operations provides budgeting, procurement, and financial support to the management team; Quality Assurance is responsible for personnel, risk, and legal-related items; and a Planning and Coordination team assists in planning work and managing the C&M's work management system.

The Assistant Directors manage multiple "Second Level Supervisors" who are each responsible for coordinating two to eight organizational units (tracked internally as numbered divisions as shown below):

Skilled Trades & Capital Projects:

Capital Projects (Div. 158)
 Roofing (Div. 153)
 Painting (Div. 152)
 Building Maintenance (Div. 154)
 Electrical-Mechanical (Div. 147)

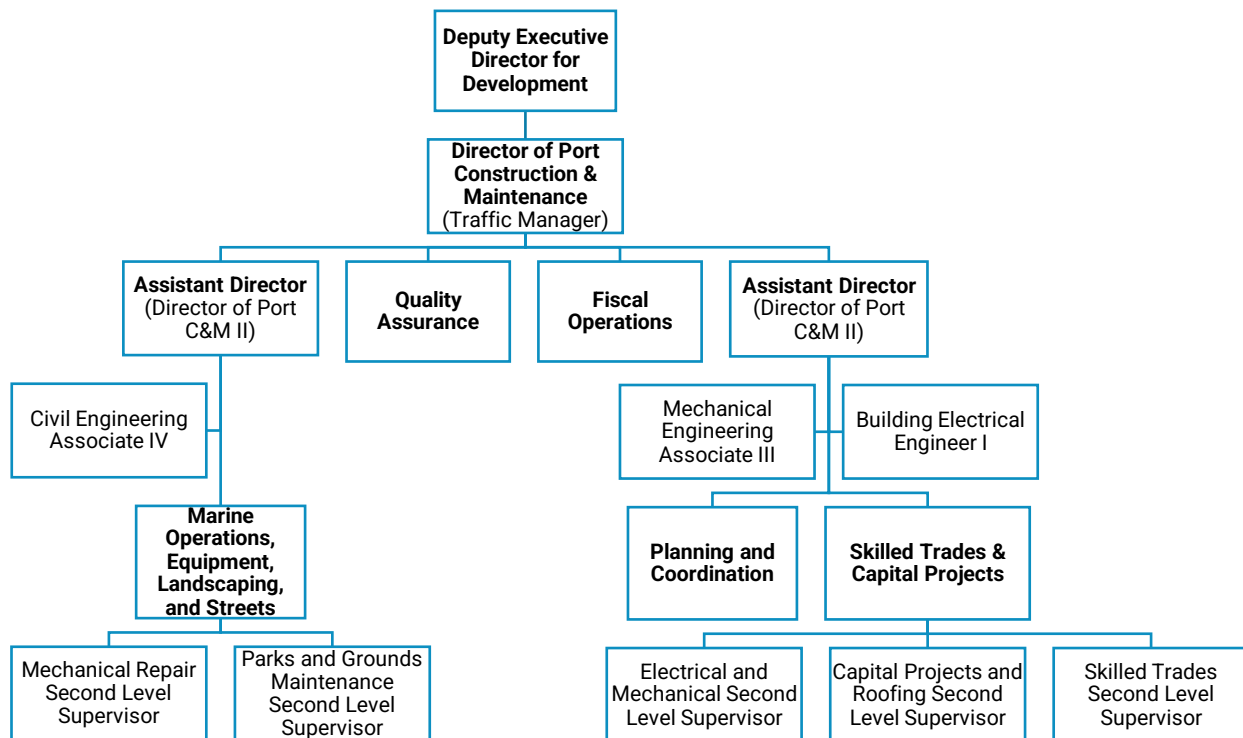
Hiring Hall Operations (Div. 156)
 Carpentry (Div. 155)
 Plumbing (Div. 139)
 HVAC (Div. 136)

Marine Operations, Equipment, Landscaping, and Streets:

- | | |
|--|-------------------------------------|
| Marine Carpentry (Div. 143) | Equipment (Fleet) Repair (Div. 142) |
| Machine / Marine Vessel Repair (Div. 146) | Welding (Div. 149) |
| Vessel Operations (Div. 148) | Laborers (Div. 131,132) |
| Custodial (Div. 130) | Tree Trimming (Div. 138) |
| Gardening / Landscape Maintenance (Div. 137) | Equipment Operations / Streets |
| Pile Driving & Wrapping (Div. 135) | Maintenance (Div. 133) |

The following organizational chart represents the C&M Division at a high level.

Figure 2.1: Port Construction & Maintenance Organizational Structure



Recommended staffing changes are detailed throughout the report. A summary of these recommendations is included in Appendix A.

3. Performance Audit Operational Analysis and Findings

This chapter reviews the operations and work practices of the Construction and Maintenance (C&M) Division. The analysis aims to identify potential operational processes that impact the C&M staffing and organizational structure. Impacts from recommendations within this chapter are taken into consideration during the resource and staffing analysis outlined in the subsequent chapters.

3.1 Asset / Infrastructure Management

■ **FINDING / CONDITION #1:** The C&M Division has not fully implemented an asset management system or software to manage the Port's assets.

3.1.1 Criteria

American Public Works Association Best Management Practices (APWA BMPs) and Industry Standards.

3.1.2 Cause

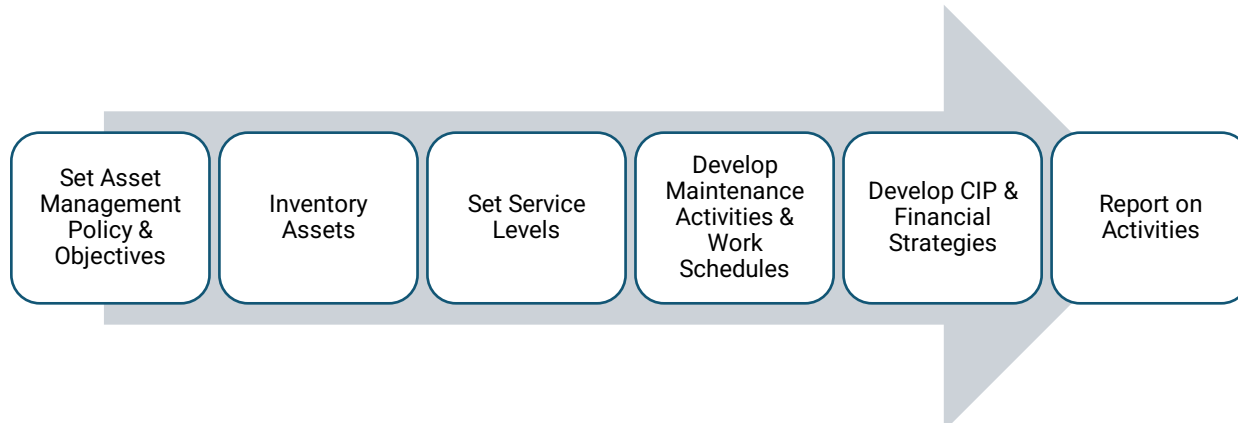
A lack of dedicated and trained staff with the capacity and knowledge to implement, maintain, and train on such a system.

3.1.3 Analysis

C&M has implemented some asset and work management practices but has no formalized asset management program in place. An asset management program is critical to the effective management and maintenance of assets as it serves to optimize resource allocation, prioritize maintenance, schedule and track preventive and extend the lifespan of assets, among other benefits.

APWA has developed an Asset Management Roadmap to assist agencies in outlining the steps to implement a successful asset management program. There are several key steps to an effective program.

Figure 3.1: Asset Management Process Diagram



A modern software system is key to an asset management program. C&M has recently upgraded their workorder software, MaintStar. This new software is a more modern system with a significant increase in functionality over the version the C&M Division has been using. This upgrade appears to have the modern GIS-centric capabilities to maintain records of all infrastructure components, integrate this inventory with the Port's GIS system, create preventive maintenance calendars, assign work orders to assets, update/track their status, and generate effective maintenance reports.

Staff also need to be able to access asset information and work orders from the field to gain the full benefit of the software. While some staff have mobile equipment, further investment in tablets/iPads for select field staff will diminish the time required for data entry and avoid data duplication. Staff should be provided with and required to use these mobile devices to:

- Access asset information remotely;
- Manage work orders electronically and remotely;
- Track the time required to complete assigned work;
- Input completed work order information such as labor, materials, any necessary follow-up in the field at the time the work is being completed; and
- Access preventative maintenance checklists and record results.

It is recommended all Supervisors be assigned tablets. Additionally, select field staff that will be required to complete work orders independently (i.e., some of the electrical and HVAC staff) should also be equipped with tablets.

To establish clear expectations for all employees regarding the use of these devices, C&M should develop a policy regarding the use of the devices and specify which classifications need to be assigned devices. Division leadership would then be responsible for ensuring

staff adhere to the policy. This will likely require additional staff training to ensure those required to use the devices feel comfortable doing so.

In order to fully implement the asset management software, and then to be able to export the information to make more data-driven decisions, an Asset Analyst / Program Manager position is needed. C&M does not currently have staff with the required skills and knowledge to effectively implement and manage a full asset management software system. Currently this effort is being led by the Construction Estimator position, who understands MaintStar and its capabilities significantly, however this position does not have the capacity to focus on routine and preventive maintenance planning, integration with GIS and asset inventory sources, and development of dashboards and reporting for Managers and Supervisors. It is recommended that an Asset Analyst / Program Manager position be added to lead these efforts.

The position's requirements should include solid technical skills, familiarity with modern asset management software, and a familiarity with and ability to use GIS at an intermediate level.

Asset Inventory

The next step in asset management is to complete an inventory and current condition assessment of all assets. C&M has inventoried some of the assets it maintains, though this list does not capture all maintained assets. An inventory process and development of a database listing current condition of assets is recommended so that maintenance programs based upon the asset and its condition can then be integrated and implemented.

Currently, the primary assets C&M is responsible for are tracked in MaintStar and are added as maintenance is requested. The following table includes assets that C&M has documented as well as other asset inventories not currently fully integrated into MaintStar.

Table 3.1: POLA Asset Inventory

Asset	Quantity	Unit	How Documented
Fleet			
Vehicles/Assets	1,044	Vehicle	MaintStar
Facilities			
Buildings	74	Building	MaintStar
HVAC Equipment	74	HVAC Units	MaintStar
Sewer Pump Station	24	Stations	MaintStar
Square Footage	779,449	Square Feet	Memo

Asset	Quantity	Unit	How Documented
Storage Tanks	4	Tank	Memo
Storage Tank Capacity	30,200	Gallons	Memo
Street Lights	3,368	Light	MaintStar
Elevators/Escalators	38	Elevator	MaintStar
POLA Parks			
Total #	62	Park	MaintStar
Parks	149.9	Acres	MaintStar
ROW			
Manholes	193	Manholes	MaintStar
Catch Basins	1,246	Catch Basins	MaintStar
Street Light	21	Each	MaintStar
Vessels/Misc.			
Barge	7	Each	MaintStar
Boat	75	Each	MaintStar
Landing – Dock/Wharf	17	Each	MaintStar
Wharf Piping-Water	4233	LF	MaintStar

An asset inventory and condition assessment process would identify and resolve gaps in the inventory as well as document the status of those assets. This process should consider the use of existing staff, recommended staffing additions, and the use of consultants/contract assistance to expedite inventory and condition assessment collection.

Maintenance Expectations

Best practices in maintenance management suggest that in a quality maintenance operation, 80% of work orders should be preventive, routine, or scheduled, and 20% should be ad hoc or requested. This is an essential part of effective asset management, as routing or preventive maintenance is required to meet full asset life expectations when an asset is put into place. The project team analyzed the overall work order management breakdown for the C&M Division in the following table.

Table 3.2: C&M Workload Analysis Summary

Construction & Maintenance Division	FY 2021	FY 2022	FY 2023
Work Order - Requests	6,976	7,400	8,088
Work Order - Preventive Maintenance (PM)	5,189	5,062	5,347
Total	12,165	12,516	13,435
% of Work Orders - Requested	57%	59%	60%
% of Work Orders - PM	43%	40%	40%

As asset management and maintenance performance principles are implemented, the C&M Division should target a percentage of work orders more in line with best practices. This is accomplished by programming more routine maintenance activities into the MaintStar, and the subsequent maintenance requirements requested will be reduced to align with these ratios.

3.1.4 Results

The current asset management strategy is inefficient due to the reactive asset maintenance approach and disparate systems (i.e., MaintStar, Excel, Word, etc.) to maintain inventory and maintenance records. This leads to limited and inefficient reporting and communication capabilities.

3.1.5 Finding #1 Recommendations

- 1.1 Develop an asset management program that includes a defined policy, an asset inventory, setting service levels, developing documented maintenance activities, listing capital improvement needs, and developing program objectives and metrics. The development of the program should begin immediately and be implemented over the next 12-18 months. This is an operational program, not the software.
- 1.2 Add 1 FTE Asset Analyst / Program Manager position in the FY 2025/26 budget with a background in GIS to assist in using the asset management software (MaintStar) and develop training on using the system so the Division has two positions dedicated to asset management. There is currently 1 position focused on this workload (Construction Estimator).
- 1.3 Develop a policy regarding the use of MaintStar within six months and require all programs to plan, schedule, track, on report on work activities in MaintStar.
- 1.4 Expand the use of mobile technology and the use of tablets or iPads to allow staff to access asset information and work orders from the field, to be implemented immediately. This will increase efficiencies and eliminate duplication of data entry, eliminate paper work orders, allow staff to have access to past maintenance data in the field, and allow staff to create subtasks or workorders as necessary from the field.

3.2 Administrative and Technology Support

FINDING / CONDITION #2: The Division's administrative support does not align with its size and scope.

3.2.1 Criteria

Analysis of administrative support workload and comparison of similar staffing ratios in other Divisions of the Port.

3.2.2 Cause

Staffing in this capacity should be periodically reconsidered based on the evolving size, scope, and responsibilities of the C&M Division. There has been a gradual increase in responsibilities of the Division in recent years without consideration of staffing needs.

3.2.3 Analysis

Administrative support was identified as an area for further analysis based on information gained in interviews and subsequent data collection. Workloads, staffing, and financial resources are increasing while administrative support staffing levels have remained stagnant. Better leveraging of current technology and adding support staff proficient in the use of technology will also enhance the Division's efficiency.

Maintenance-focused work units, such as C&M, require administrative staff to support operational/field staff. Appropriate support for performing these tasks is necessary to effectively track and document work activities, allowing field staff to focus on the maintenance and repair of infrastructure.

To perform further analysis, the project team utilized the current staffing of the Planning and Coordination, Quality Assurance, and Fiscal Operations divisions within C&M. The following table represents the full-time, non-student staffing in these three areas and their allocation by primary responsibility:

Table 3.3: C&M Administrative Staffing in Planning and Coordination, Fiscal Operations and Quality Assurance

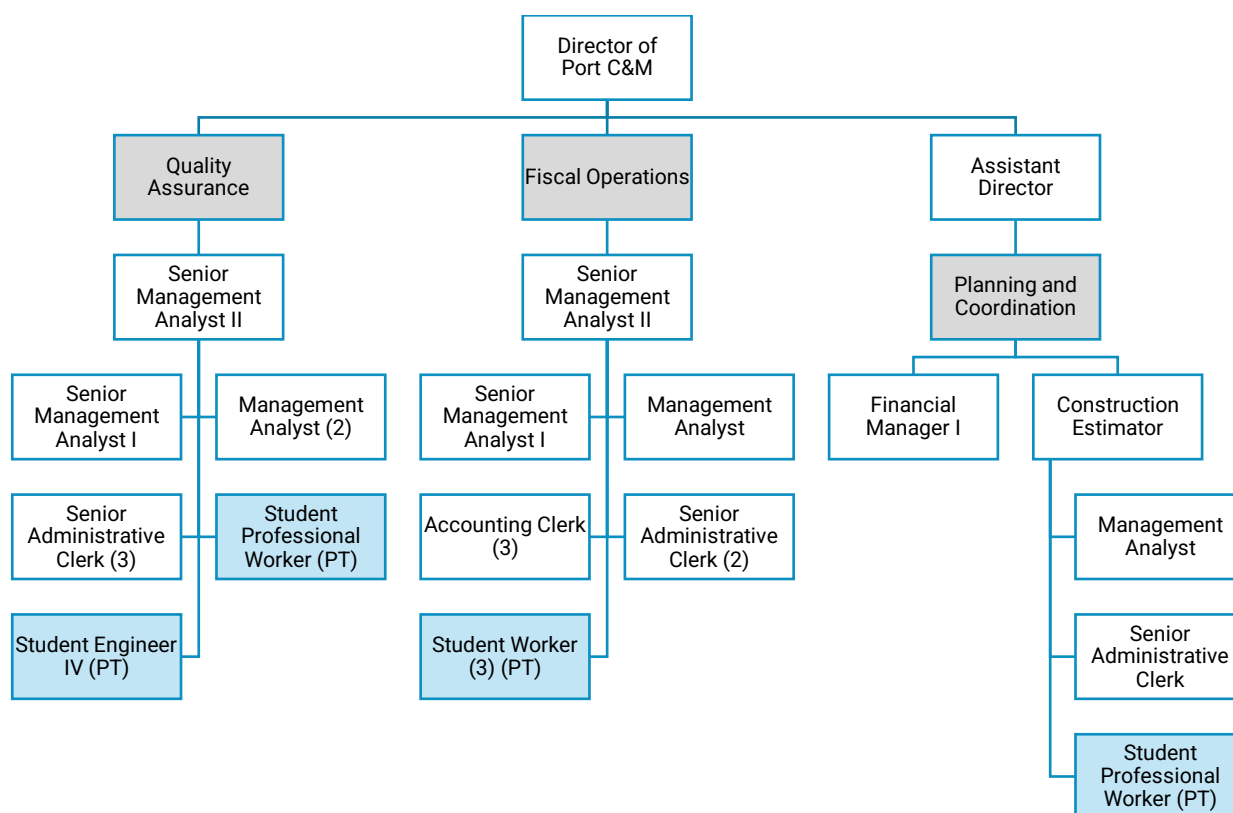
Position	Total No. of Positions	Administrative Support	Work Management or Planning
Sr. Management Analyst II	2	2	-
Sr. Management Analyst I	2	2	-
Management Analyst	4	3	1
Financial Manager	1	-	1

Position	Total No. of Positions	Administrative Support	Work Management or Planning
Construction Estimator	1	-	1
Accounting Clerk	3	3	-
Senior Administrative Clerk	6	5	1
Total	19	15	4

In addition to these positions, five student workers are not included in the table as they are not full-time positions.

The following organizational chart represents the administrative support functions and personnel in the C&M Division.

Figure 3.2: C&M Division Administrative Support Organizational Structure



The Administrative Support functions of the Division are broken up into three sections, two of which report directly to the Director and one to an Assistant Director. They are:

1. **Quality Assurance**—This unit manages the Division's personnel and staffing-related administrative requirements, including hiring, vacancy approvals, evaluations, personnel actions, and payroll.

2. **Fiscal Operations**—This unit manages the Division's financial and budgetary planning and tracking, including budget preparation, expenditure tracking, project financial tracking, purchasing processes, and capital project tracking.
3. **Planning and Coordination**—This unit coordinates the overall planning and management of the Division's work, including coordinating the MaintStar system, weekly task planning, and tracking work performed for performance measurement.

These three sections each report to a separate Senior Management Analyst II, or in the case of Planning and Coordination, to the Division's Construction Estimator or Assistant Director.

Currently, C&M has the smallest percentage of administrative support staff among all of the divisions within Development Services (excluding Internal Audit). C&M is also the lowest in the comparative percentage of administrative staff to total staff in most key operational divisions within the Port.

Table 3.4: Administrative Staffing Percentage Analysis

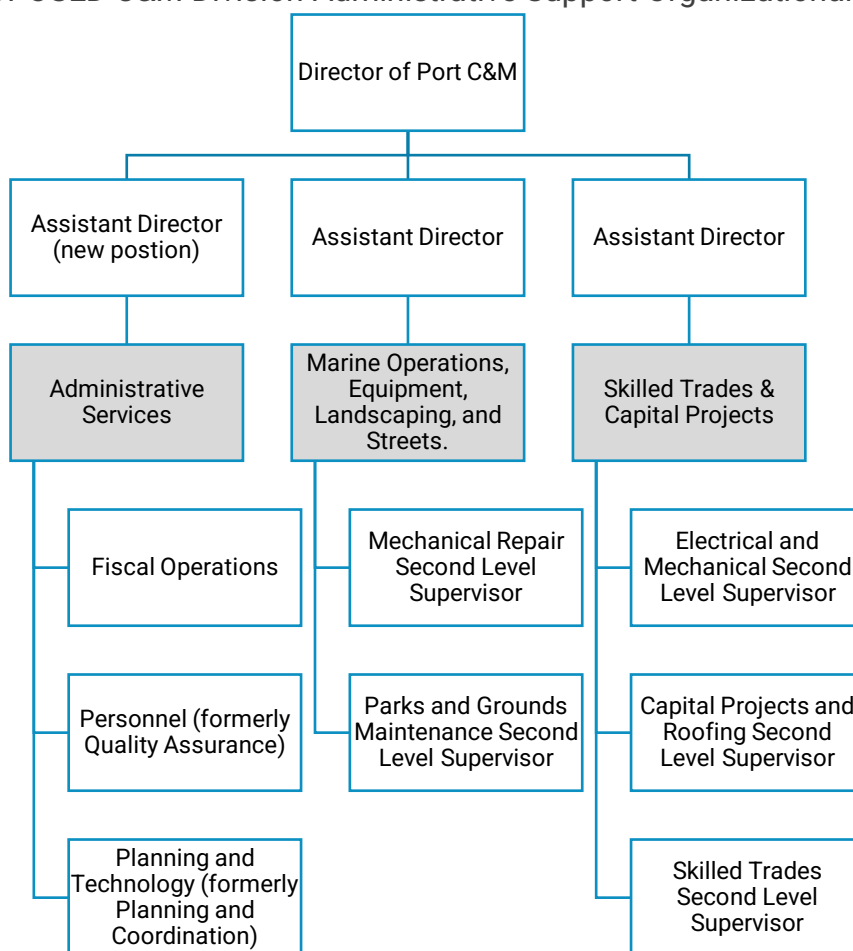
Bureau/Division	Total Staff	Admin Staff	Admin Staff as a %
Development Services			
C&M	298	15	5.0%
Construction	73	8	11.0%
Engineering	90	12	13.3%
Public Safety & Emergency Management			
IT	45	3	6.7%
Port Pilots	33	7	21.2%
Port Police	226	33	14.6%

*Not all divisions were compared; some were too small or exclusively admin staff.

It is also important to note that the C&M Division is the only division in the Harbor Department where administrative support functions are spread across three organizational units and report through three supervisors. In all other Port Divisions, a single Senior Management Analyst II oversees all administrative support functions and reports directly to the Division Director.

It is recommended the administrative functions be combined into a single unit, reporting to a new Assistant Director. The proposed structure is shown below.

Figure 3.3: PROPOSED C&M Division Administrative Support Organizational Structure



Due to the variable nature of their work, Administrative Support teams typically have difficulty gathering and documenting workload measurements. In these three specific administrative units, only a few workload measures were provided for the project team to analyze.

Fiscal Operations Unit

The Port of LA’s Finance and Administration Division includes Accounting, Contracts & Purchasing, Debt & Treasury Management, Financial Planning & Analysis, Human Resources, Internal Audit, and Risk Management. Based on information gained in staff interviews, Finance and Administration provides varying levels of support to the divisions of the Port based on needs and capacity. Since C&M is a large division with many contracts and purchases, these functions in particular have primarily been turned over to the C&M with oversight from Finance and Administration.

The role of C&M Fiscal Operations is to support the fiscal activities specific to C&M. This includes financial and budgetary planning and tracking, budget preparation, expenditure tracking, project financial tracking, purchasing processes, and capital project tracking.

Contracts

At the time of the data collection (July 2024), the C&M Division managed 77 contracts totaling \$21,347,100 annually for various services and projects. Depending on their purpose, contracts range from \$3,000 to \$5,600,000 annually. Industry standards for contract management staffing are generally based on the Contract Management Standard published by the National Contract Management Association (NCMA).

The National Institute for Government Procurement¹ states that contract administration requires proper contract documentation, management of performance, and management of contract issues or disputes.

■ **NIGP Global Best Practice Statement: The primary responsibilities of contract administration are to document performance of the contract in a procurement file, monitor performance of the contract, and resolve any issues related to the contract.**

This is a significant volume of workload to manage, and the Division is not currently tracking the time it takes to manage the workload. The industry standards also do not provide specific staffing ratios, as this is dependent on a number of factors including the contract types, complexity, timeframes, and use of technology. The Division should begin tracking the time spent on the contract management to further refine the staffing needs. It is estimated by the project team 2-4 FTEs are needed to manage this workload.

Invoice and Payment Processing

Fiscal Operations also manages invoicing and payment processing within C&M. The following table represents a sample of this workload.

Table 3.5: Administrative Invoice Workload Summary for FY 2023-2024

Month (2023-24)	# Invoices	Total Cost	Invoices Per Staff
July	409	\$1,093,103	51.1
August	293	\$864,919	36.6
September	517	\$2,037,568	64.6
October	260	\$809,376	32.5
November	183	\$575,164	22.9

¹ NIGP Global Best Practice – Contract Administration - <https://www.nigp.org/resource/global-best-practices/global-best-practice-contract-administration.pdf>

Month (2023-24)	# Invoices	Total Cost	Invoices Per Staff
December	335	\$1,836,996	41.9
January	352	\$1,958,500	44.0
February	201	\$1,109,248	37.6
March	598	\$1,090,502	74.8
April	310	\$2,629,267	38.8
May	423	\$2,564,398	52.9
June	612	\$2,960,696	76.5
Total	374.4 (AVG/MO)	\$19,529,743	47.9 (AVG)

On average, fiscal staff process roughly 375 invoices a month. Estimating 22 working days per month, this averages out to be 17 per day. The employees in this division are also responsible for developing purchasing requirements, such as requisitions and contract requirements for maintenance functions, and for appropriately tracking and managing the Division's budget. This includes processing the contract for approval through the Los Angeles Board of Harbor Commissioners (Commission).

Using the NIGP Best Practice's guidance and subject matter expertise, the project team estimates that tracking and managing an invoice for payment takes roughly 1.5 hours of time per invoice, however, no formal standard is available to verify this time period. When extrapolated, this comes out to 6,889.5 hours of time for the invoices in the table above in a 12-month time frame. A baseline of 2,080 hours per FTE would account for 3.3 FTEs worth of work. Using a baseline of 75% of that amount to account for time off, vacation, and other responsibilities would result in 4.4 FTEs required to manage the invoicing workload.

Purchasing

C&M processes roughly 500-600 purchase orders monthly based on information obtained from their 2023-2024 purchase log. The workload ranges from simple purchase order to larger purchases involving obtaining quotes, selecting the vendor, and completing the required paperwork. The time committed to purchasing activities is not currently being tracked. The Division should track this to better estimate the staffing needed to manage the workload. Based on experience with other agencies, it is estimated this is workload for 1-2 FTEs.

Board Approval Memoranda and Presentations

The following table represents the number of board items per year managed by the Fiscal Services team since 2010.

Table 3.6: Administrative Board Presentations Workload Summary for FY 2010-2024

Year	No. of Board Presentations	Year	No. of Board Presentations
2010	2	2018	8
2011	7	2019	2
2012	11	2020	7
2013	3	2021	5
2014	6	2022	2
2015	7	2023	11
2016	6	2024	16
2017	11		
Grand Total			104
Average (Rounded)			7

Since 2010, this has averaged seven (7) presentations per year, with the last two years (2023 & 2024) having more than ten (11 & 16, respectively). These require highly technical and professional skills and typically require a Management Analyst level position or above.

Summary of Fiscal Operations

Additional work activities by the Division include miscellaneous purchase orders, P-card reconciliation, store warehouse orders, and general staff support for items such as travel expenses. Due to a lack of capacity, the workload and time to complete these activities is not being tracked. Additionally, due to lack of capacity of the Fiscal Operations team, fiscal activities are often being performed by the Assistant Directors and Supervisors to help manage the workload. It is assumed 1-2 staff are needed to manage this workload.

Additionally, the Administrative Clerks assigned to this unit work primarily with the C&M Capital Project unit assisting with the hiring of labor (time entering, service reports, etc.)

Fiscal Operations is currently comprised of 8 FTEs. Excluding the Administrative Clerks, this leaves 6 FTEs focus on the financial tasks detailed above. Based on the analysis of the workload and information obtained in staff interviews, it is recommended 8-12 staff be dedicated to Fiscal Operations (in addition to the Administrative Clerks focused on the Capital Project unit). It is recommended that additional staff positions be added in Fiscal Operations to manage the responsibilities and workload of the team as follows:

- An additional Sr. Accountant to oversee the Accounting Clerks and to assist in managing purchasing, budget and finances of the Division.

- An additional Accounting Clerk.
- The Second Level Supervisors should be assigned a primary Accounting Clerk to work with. Based on the evaluation of workload, the two Supervisors over Capital Projects and Roofing and the Skilled Trades would need a dedicated Accounting Clerk. The remaining Supervisors would share a primary clerk (i.e., 1 Accounting Clerk/2 Second Level Supervisors).
- An additional Management Analyst to focus on contract management and administration.

C&M is currently performing fiscal duties that, in many instances, the Port of LA's Finance and Administration team manages for other divisions (i.e., procurement including developing the requests, obtaining and reviewing bids, drafting the purchase order, etc.) As an alternative to adding staff to C&M, many of these functions could be transferred to Finance and Administration with dedicated staff to assist C&M.

An advantage of centralizing purchasing in Finance and Administration is the enhanced efficiency and consistency achieved through the new cloud-based ERP software. This system allows for streamlined procurement processes, real-time data access, and improved coordination among departments, ensuring that purchasing decisions are well-informed and align with the Port's overall financial strategy. Additionally, there are more similarly trained resources to serve as backups during vacancies and/or periods of heavy workload.

Quality Assurance Unit (Recommend title change to Personnel or Workforce Management)

The Quality Assurance unit similarly has significant workload requirements due to its role in providing administrative support, which includes managing vacancies, filling vacancies, managing payroll, handling disciplinary actions, and overseeing employee annual evaluations. As Quality Assurance is a vague title, it is recommended that the unit's name be changed to Personnel or Workforce Management to better align with its work activities.

To evaluate staffing in this area, the project team utilized estimates based on industry experience for work performed, however, there is again no formal standard to base this analysis on. These estimates are broken down into the following core areas:

- Vacancy and Position Fulfillment – Based upon Hiring Process Review – 40 Hours Per Year Per Vacancy
- Managing Payroll – 15 Minutes per Employee Per Month
- Managing Employee Evaluations – 4 Hours Per Employee Per Year

Using the current FTE allotment (as of the time of this report) of 298 employees and the average vacancies managed of 63 equates to the following workload:

Table 3.7: C&M Quality Assurance Workload

Task	Annual Hours
Managing vacancies	2,520
Payroll processing	894
Employee evaluations	1,192
Total	4,606

Using the benchmark of 75% of 2,080 annual available hours per FTE, there is a need for 2.95 FTEs.

In addition to this workload, this unit also oversees training, safety, and general personnel and administrative support to Division management. There is a position primarily dedicated to policies and procedures and updating of manuals and a position dedicated to workers compensation and risk management.

A large operational Division such as C&M requires substantial safety and training needs. It is recommended a Safety/Training Coordinator position be added to oversee the training and safety needs of the Division.

Planning and Coordination

The Planning and Coordination unit consists of:

- 1 Financial Manager I
- 1 Construction Estimator
- 1 Management Analyst
- 1 Senior Administrative Clerk

As discussed in Section 3.1, it is recommended an Asset Analyst / Program Manager position be added to this team focused on the implementation, training, and reporting of the asset management software (MaintStar). Additionally, C&M would benefit from additional IT support. There is currently no position in C&M to serve as a liaison between the Port's Information Technology (IT) Division and the maintenance divisions within C&M. This leads to confusion about the types of technology to be utilized and implemented and difficulty communicating needs to IT to assist in implementing effective technology solutions to provide efficient services. It is recommended that IT assign a liaison to coordinate with the Division and to work with C&M Management in the planning, purchasing, and maintenance of the IT hardware and software within C&M.

The Financial Manager I handles tasks like board reports, workorders, insurance claims, and purchase orders. The use of this position did not align with the work of the Division. Effective January 2025, this position was moved to Internal Audit.

3.2.4 Result

Additional Administrative support positions are needed to manage the workload of the Division such as purchasing, personnel, financial, and customer service requirements.

3.2.5 Finding #2 Recommendations

- 2.1 Consolidate administrative support functions into one team/unit. Add an Assistant Director position reporting to the Director to oversee the unit. This should be considered in the next fiscal budget cycle.
- 2.2 Administrative support units should enhance tracking of work activities. It is recommended that the administrative support units begin a process to track primary work activities MaintStar (or through another technological option) to document time requirements and workload for future staffing evaluation.
- 2.3 Add three (3) staff positions to support Fiscal Operations. Add 1 FTE Sr. Accountant to oversee the Accounting Clerks. Add 1 FTE Accounting Clerk. Second level Supervisors should be assigned a primary Accounting Clerk to work with. Add 1 FTE Management Analyst to focus on contract management and administration. This should be considered in the next fiscal budget cycle.
- 2.4 Retitle Quality Assurance to Personnel or Workforce Management to better align with the work activities of the unit.
- 2.5 Add 1 FTE Safety / Training Coordinator position to the Division. This should be considered in the next fiscal budget cycle

3.3 CIP and Infrastructure Operational Impact Planning

FINDING / CONDITION #3: The long-term maintenance and operational requirements and expenses of major capital projects have not been effectively integrated into the capital improvement planning process and, subsequently, are not considered in the annual budgeting process.

3.3.1 Criteria

The GFOA Best Practice for Capital Planning Management requires sufficient maintenance and operational funds to be allocated to maintain and manage the projects. APWA BMPs require that the capital planning process consider maintenance and operational costs.

3.3.2 Cause

Over the past decade, capital improvements and the Public Access Investment Plan have added new infrastructure projects and updates to customer—or community-facing assets. Significant funds have been invested in beautification, neighborhood services, and updated or new amenities.

3.3.3 Analysis

Capital Improvement Program or Capital Expenditure Plan

The Port adopts an annual Capital Improvement Program outlining major expenditures and projects for the next five years. Projects are incorporated as Capital Improvement Projects (CIPs) or Maintenance Improvement Projects (MIPs). These are incorporated into the Five-Year Capital Expenditure Plan for approval and incorporation into the Port's project planning systems.

The following image is a representation of the first page of the FY 24/25 – FY 28/29 Port Capital Expenditure Plan:

Figure 3.4: POLA Capital Expenditure Plan FY 24/25 – FY 28/29

PORT OF LOS ANGELES FIVE YEAR CAPITAL EXPENDITURE PLAN Fiscal Year 24/25 to 28/29											
Project Title	Design Finish	Construction Finish	Total Project Cost	Previous Years	1st Year FY 24/25	2nd Year FY 25/26	3rd Year FY 26/27	4th Year FY 27/28	5th Year FY 28/29	Five Year Total	Future Needs
I. Terminals											
Cruise Terminals											
Berth 90-93 - World Cruise Center											
B. 93 - Elevator No. 2 Renovation (2565200)	12/28/22	05/01/24	\$ 334,000	\$ 271,040	\$ 62,960	\$ -	\$ -	\$ -	\$ -	\$ 62,960	\$ -
B. 91-93 - Passenger Terminal Mobile Gangways Hydraulic Cylinder Replacement (2565300)	02/08/21	12/31/24	\$ 2,273,000	\$ 1,530,255	\$ 183,441	\$ 23,297	\$ -	\$ -	\$ -	\$ 206,738	\$ 536,007
B. 93 A & B - World Cruise Center Photovoltaic System Inverter Replacement (2565600)	03/31/23	12/31/23	\$ 415,000	\$ 20,482	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 394,518
B. 91-92 - Passenger Terminal - Roof Replacement (2567900)	10/15/21	01/02/25	\$ 2,811,000	\$ 1,394,710	\$ 999,467	\$ 416,823	\$ -	\$ -	\$ -	\$ 1,416,290	\$ -
B. 93 - Escalator No. 3 Modernization (2569100)	07/03/22	05/05/24	\$ 512,837	\$ 364,888	\$ 147,949	\$ -	\$ -	\$ -	\$ -	\$ 147,949	\$ -
B. 93 - Escalator Nos. 1 & 2 Renovation (2571700)	01/31/23	05/01/24	\$ 1,369,985	\$ 1,117,118	\$ 252,867	\$ -	\$ -	\$ -	\$ -	\$ 252,867	\$ -
B. 91-92 - Passenger Terminal Pedestrian Deck Coating (2572000)	08/31/22	04/29/25	\$ 5,037,040	\$ 3,362,240	\$ 1,039,772	\$ 635,028	\$ -	\$ -	\$ -	\$ 1,674,800	\$ -
B. 93 - Escalator Nos. 4 & 5 Modernization (2572100)	10/12/22	05/01/24	\$ 1,410,000	\$ 805,556	\$ 604,444	\$ -	\$ -	\$ -	\$ -	\$ 604,444	\$ -
B. 93 - Vehicular Ramp Corrosion Mitigation (2575800)	12/27/23	06/29/25	\$ 732,000	\$ 129,531	\$ 534,253	\$ 68,217	\$ -	\$ -	\$ -	\$ 602,469	\$ -
B. 93 - World Cruise Center - Exit Sign Replacement (2577700)	01/19/24	08/17/24	\$ 57,351	\$ 55,370	\$ 1,981	\$ -	\$ -	\$ -	\$ -	\$ 1,981	\$ -
Berth 90-93 - World Cruise Center Total			\$ 14,952,213	\$ 9,051,189	\$ 3,827,134	\$ 1,143,365	\$ -	\$ -	\$ -	\$ 4,970,498	\$ 930,526

The following table shows the summary data from this Expenditure Plan.

Table 3.8 Capital Improvement Program Summary

	Total Project Cost	Previous Years	Five Year Total	Future Needs
CIP TOTAL COST	\$2,454,432,742	\$502,060,456	\$1,282,249,072	\$670,123,214

This plan incorporates many primary areas of best practice for capital improvement programming, including previous year investments, schedule of dates, and financial requirements beyond the current five years. One thing not included in the capital improvement planning is the operational impacts of the project itself, which is established as a Government Finance Officers Association (GFOA) best practice²:

GFOA Best Practice Statement: GFOA recommends that state and local governments prepare and adopt comprehensive, fiscally sustainable, and multi-year capital plans to ensure effective management of capital assets. A prudent multi-year capital plan identifies and prioritizes expected needs based on a strategic plan, establishes project scope and cost, details estimated amounts of funding from various sources, and

² <https://www.gfoa.org/materials/multi-year-capital-planning>

- projects future operating and maintenance costs. A capital plan should cover five to 25
- years or more.

The table above does not incorporate the projected operating and maintenance costs associated with projects. This could include decreased operating expenses, such as updating the elevators on the list in Figure 3.2, however, when new or additional assets or expansions of current projects are going to need additional resources for maintenance (for example, a new or additional park) the estimated operational impact should be included in the plan to be incorporated into the annual operating budget. These costs should estimate additional staffing and contract requirements necessary to maintain the new asset or project at acceptable levels going forward.

Public Access Investment Plan (PAIP)

The Port of LA has adopted and continues to update a Public Access Investment Plan (or PAIP) to “provide City of Los Angeles Harbor Department staff with broad guidelines to plan and budget LA Waterfront projects and community benefits.”³ The PAIP planned expenditures are for improving the Waterfront to benefit the residents of the San Pedro and Wilmington neighborhoods that directly border the Port itself as well as Port customers.

The PAIP includes projects like additional electrical service, promenade and town square space, and parking lot improvements, all of which will require future maintenance and repair by C&M. One area of focus that has impacted C&M is the additional greenspace and parks.

The following table displays the increase in park and greenspace acreage that C&M is responsible for since 2000. This is based upon an analysis provided to the project team from C&M. This analysis breaks down the number of acres managed per staff member over time. As acres were added in the late 2000s, staffing was maintained at a 2 acre or less ratio per staff member; however, since 2018, this ratio has gone up above 4 acres per staff member, and total staffing for this function has reduced from 44 in 2008 to 35 FTEs currently. During this same time, the Port of LA has increased acreage from 49.8 acres of parkland and grounds to 152.4 acres. During this time period, the acreage per staff has reduced to a more manageable maintenance level but has increased again over the recent ten-year period.

³ Amended Port of LA Public Access Investment Plan Document – November 2022

Table 3.9: Parks Acreage versus Grounds Maintenance Staff since FY 2000

FY	Staff	Acres	Acres/Staff	FY	Staff	Acres	Acres/Staff
2000	9	46	5.1	2012	47	125.6	2.7
2001	11	46	4.2	2013	53	130.6	2.5
2002	11	46	4.2	2014	54	135.2	2.5
2003	17	46	2.7	2015	53	135.2	2.6
2004	23	46	2.0	2016	53	135.2	2.6
2005	49	47.8	1.0	2017	46	135.2	2.9
2006	33	49.8	1.5	2018	31	135.2	4.4
2007	40	49.8	1.2	2019	31	135.2	4.4
2008	44	49.8	1.1	2020	30	135.7	4.5
2009	44	79.6	1.8	2021	30	135.6	4.5
2010	42	79.6	1.9	2022	30	135.6	4.5
2011	47	125.6	2.7	2023	30	147.6	4.9

As new projects are being considered, the operational impact on the Port should be estimated and incorporated into the annual operating budget process. This will provide for continued maintenance at levels expected based on current services and asset totals.

Increasingly the Port has implemented projects that have a “net-zero” operating impact or reduced operating and maintenance requirements of Port staff (i.e., projects that will be maintained by tenants). Continuing this practice will help to minimize additional workload placed on staff.

3.3.4 Result

A focus on funding project construction without considering the operating and maintenance requirements necessary to keep the asset in the same condition over time.

3.3.5 Finding #3 Recommendations

- 3.1 Modify the CIP process to consider each project’s maintenance and operating cost requirements, to be completed annually.
- 3.2 Integrate the operating cost requirements into the Capital Investment Plan of the Port’s CIP to document annual funding needs and determine revenue sufficiency, to be completed annually as part of the budget process.

4. Evaluation of Staffing, Classifications, and Workload

This chapter will review the position classifications and workload data of the C&M Division to determine if adequate resources are available to meet Harbor Department objectives.

4.1 Workload and Staffing Analysis

FINDING / CONDITION #4: The Division's staffing is, in some cases, not adequate based on the assets to be maintained. Staffing levels should be evaluated routinely to keep in alignment with changes in assets and maintenance responsibilities.

4.1.1 Criteria

Analysis of workload data from MaintStar for the previous three full fiscal years (FY 2021-FY 2023), as well as analysis of project or asset count data versus staffing available.

4.1.2 Cause

Additional assets to manage and new expectations of maintenance requirements have resulted in higher work orders, lower completion rates, and a backlog of deferred maintenance. Some commonly used classifications, such as gardeners, receive higher pay at the Los Angeles Department of Water and Power, resulting in higher vacancies.

4.1.3 Analysis

C&M documents work orders and work completed in their CMMS software, MaintStar. The past three years of work order requests and preventative maintenance provide a snapshot of the total work being completed by the Division. An analysis of this workload is below.

Table 4.1: Work Order Analysis of C&M Division

Construction & Maintenance Division	FY 2021	FY 2022	FY 2023
Work Order - Requests	6,976	7,400	8,088
Work Order - Preventive Maintenance (PM)	5,189	5,062	5,347
Total	12,165	12,516	13,435
Work Orders Completed	12,029	12,295	12,287
% of Work Completed	99%	98%	91%

Work order requests have been increasing year over year since at least 2021. From 2021 to 2023 there was a 15.9% increase in work order requests while the staffing in the same period only increased from 291 to 296, a 1.7% increase. Preventative maintenance work orders have also increased from 2021 to 2023 by 3.0%. A smaller amount than work order requests, but still an increase.

The number of work orders completed has decreased since 2021, moving from 99% in 2021 to 91% of work orders being filled in 2023, signifying a greater workload than what can be accomplished by existing staff. The Division's lack of staffing increases to keep pace with the added workload has created a gap between the number of work orders issued and the number completed.

Below is a further analysis of the workload of specific work units that showed a decrease in completion over the defined period or have had substantial increases in responsibility over the previous three years.

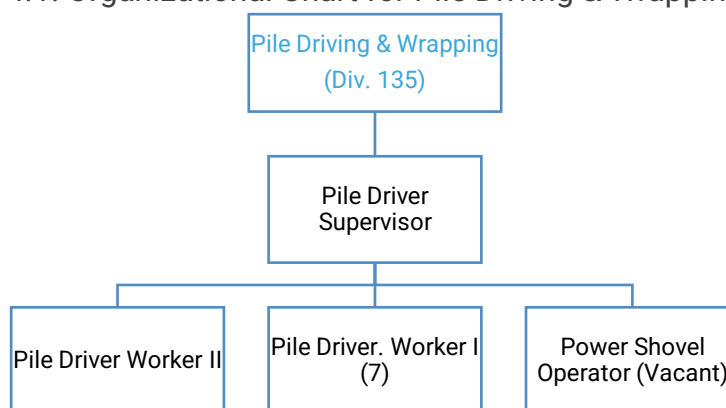
Mechanical Repair (Specialty Port Maintenance Operations)

The Mechanical Repair section of C&M is responsible for berth, vessel, and aquatic fleet repair and includes Pile Driving & Wrapping, Vessel Operations, and Vessel Equipment Repair.

Pile Driving & Wrapping

The Pile Driving & Wrapping team performs pile driving, power digging, and wrapping throughout the Port to maintain berths regularly. This highly specialized work is somewhat unique to the Port as it involves the need for work to be performed on the water and along berths. As such, it is difficult for the Division to find outsourced labor to supplement in-house services. The following chart outlines the organization of this section.

Figure 4.1: Organizational Chart for Pile Driving & Wrapping



The following table represents the work orders from MaintStar for FY 2021-FY2023, their type, and the percentage completed.

Table 4.2: Work Order Analysis of Pile Driving & Wrapping (Div 135)

Pile Driving - Div 135	FY 2021	FY 2022	FY 2023
Work Order - Requests	77	90	82
Work Order - Preventive Maintenance (PM)	28	28	29
Total	105	118	111
Work Orders Completed	104	108	96
% of Work Completed	99%	92%	86%
% of Work Orders - Requested	73%	76%	74%
% of Work Orders - PM	27%	24%	26%

Although work orders have not increased significantly, the percentage of work orders completed is decreasing, from 99% in 2021 to 86% in 2023.

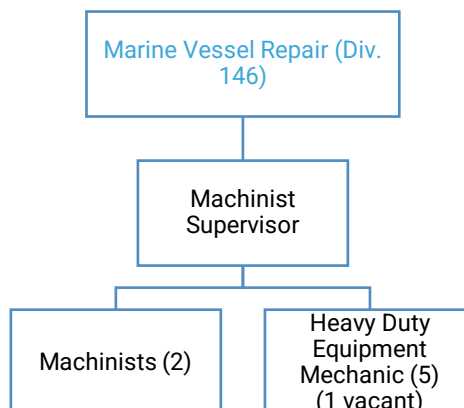
There are 10 FTEs in this section. The only personnel change is that one Pile Driver I was exchanged for a Power Shovel Operator within the last three years. This equates to 11.1 work orders per staff member throughout the year. Over time, there have been extensive vacancies, but according to the vacancy report, all positions except for the Power Shovel Operator are currently filled.

During interviews, it was noted that the pile-driving barge, crane, and associated equipment had been offline for some time and were amid repair and recertification. The barge itself was originally built by the Division and is well beyond its useful life. In this area, an evaluation of replacement equipment is necessary to continue to provide services effectively and increase the work completion rate.

Marine Vessel Repair

This section repairs complex machines, specifically vessels or marine equipment, for continued use and to extend and maintain their useful life. Like the vehicle equipment section, staff are focused on floating or marine equipment and their upkeep and repair. The following represents the organization of the Marine Vessel Repair, the majority of positions being Machinists and Heavy Equipment Mechanics.

Figure 4.2: Organizational Chart for Marine Vessel Repair



The following table represents the work orders from MaintStar for FY 2021-FY2023, their type, and the percentage completed.

Table 4.3: Work Order Analysis of Marine Fleet (Div 146)

Marine Fleet - Div 146	FY 2021	FY 2022	FY 2023
Work Order - Requests	191	136	321
Work Order - Preventive Maintenance (PM)	13	13	36
Total	204	149	357
Work Orders Completed	196	145	141
% of Work Completed	96%	97%	39%
% of Work Orders - Requested	94%	91%	90%
% of Work Orders - PM	6%	9%	10%

Since FY 2021, Marine Fleet's work orders have increased, and the percentage of work orders completed has decreased drastically, from 96% in 2021 to 39% in 2023, presumably due to the large increase in work requests with no additional staffing to complete the requests. This section has 8 staff members, including the supervisor. Currently, all positions are filled.

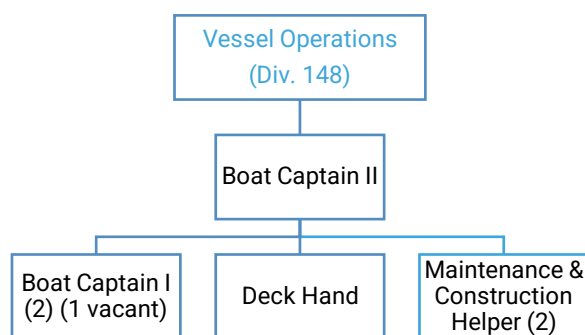
While the completion percentage went down in FY 2023, the total number of work orders completed is in line with the previous years. The 2023 increase in work orders could be

an anomaly, however, if the current years' work orders are similar to FY 2023, showing a consistent pattern, additional staff resources will be needed to manage the workload.

Vessel Operations

Vessel Operations is responsible for operating any marine equipment used in maintaining areas of the Port by water. This is an essential function of Port maintenance operations due to the number of maintenance requirements along the Port waterfront. The following organizational chart represents the staffing of Vessel Operations. Positions are primarily Boat Captains and Deck Hands responsible for operating marine equipment to support maintenance operations.

Figure 4.3: Organizational Chart for Vessel Operations



The following table represents the work orders from MaintStar for FY 2021-FY2023, their type, and the percentage completed.

Table 4.4: Work Order Analysis of Vessel Operations (Div 148)

Vessel Ops - Div 148	FY 2021	FY 2022	FY 2023
Work Order - Requests	112	117	113
Work Order - Preventive Maintenance (PM)	15	17	20
Total	127	134	133
Work Orders Completed	119	116	98
% of Work Completed	94%	87%	74%
% of Work Orders - Requested	88%	87%	85%
% of Work Orders - PM	12%	13%	15%

Although work orders have not increased significantly since 2021, Vessel Operations has seen a decrease in the number of work orders completed.

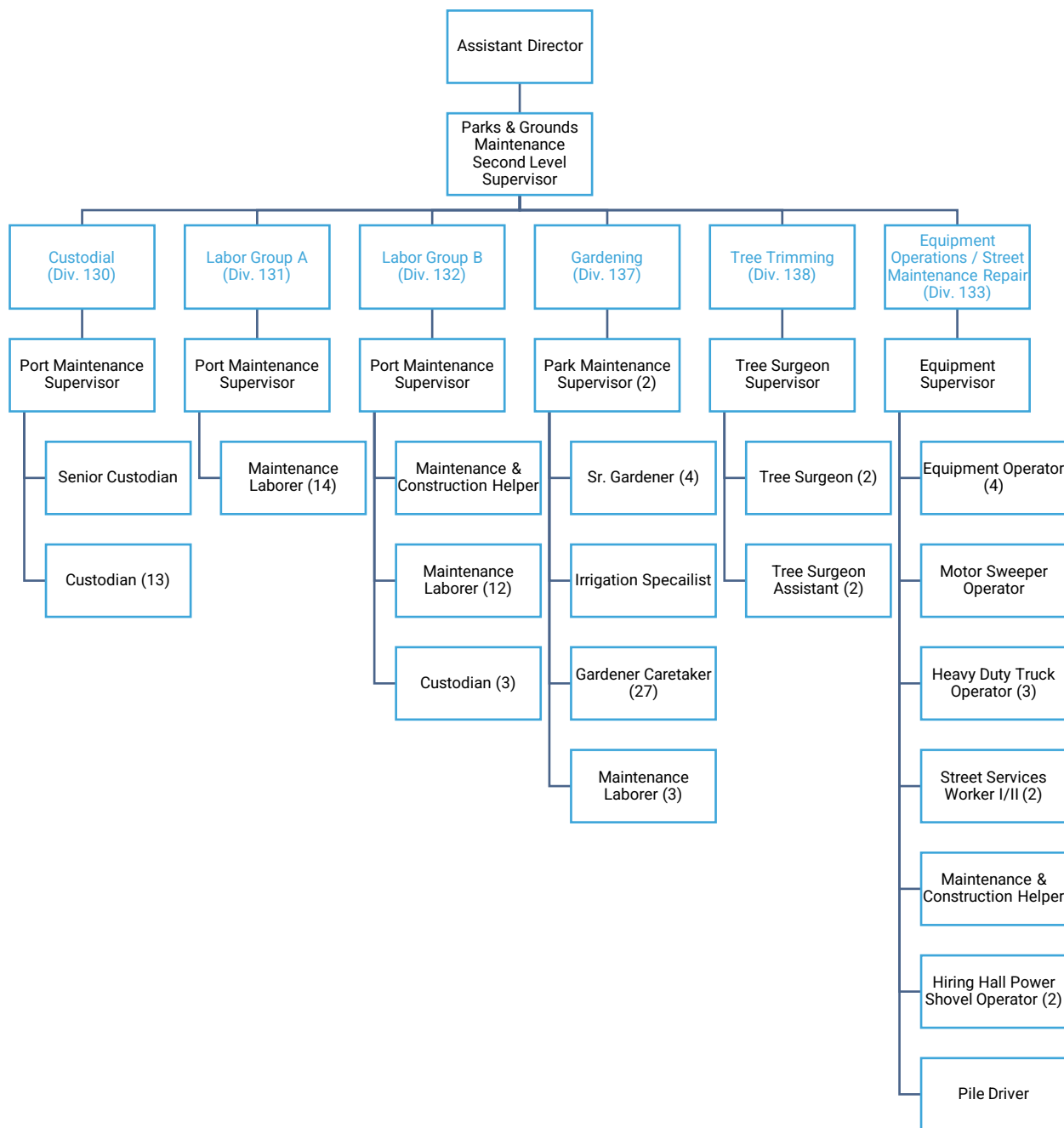
The division has 7 FTEs budgeted and authorized, equating to roughly 18.6 work orders per FTE over the last three years. One Boat Captain position is currently vacant. In 2022,

the division reduced staffing by one position (Deck Hand), moving from 8 to 7 FTE. It is recommended that current staffing vacancies be filled, and the previously reduced position be reestablished.

Parks & Grounds Maintenance

Parks & Grounds Maintenance is responsible for park, tree, and landscape maintenance and custodial duties. These services are divided into subunits: Custodial, Labor, Gardening, Tree Trimming, and Streets Maintenance.

Figure 4.4: Organizational Chart for Parks and Grounds Maintenance



The following table represents an analysis completed by C&M regarding staffing versus the acreage of parks to manage, referenced in Section 3.4 of this report, for the Gardening (Div 137) staffing. Staff included in the analysis were Gardener Caretakers and Senior Gardeners.

Table 4.5: Parks and Grounds Maintenance Staffing since 2000

FY	Senior Gardeners, Gardeners and SPAs	Acres	Acres/Staff	FY	Senior Gardeners, Gardeners and SPAs	Acres	Acres/Staff
2000	9	46.0	5.1	2014	54	135.2	2.5
2001	11	46.0	4.2	2015	53	135.2	2.6
2002	11	46.0	4.2	2016	53	135.2	2.6
2003	17	46.0	2.7	2017	46	135.2	2.9
2004	23	46.0	2.0	2018	31	135.2	4.4
2005	49	47.8	1.0	2019	31	135.2	4.4
2006	33	49.8	1.5	2020	30	135.7	4.5
2007	40	49.8	1.2	2021	30	135.6	4.5
2008	44	49.8	1.1	2022	30	135.6	4.5
2009	44	79.6	1.8	2023	30	147.6	4.9
2010	42	79.6	1.9	2024	35	149.9	4.3
2011	47	125.6	2.7	2025/26	35	150.4	4.3
2012	47	125.6	2.7	2026/27	35	162.4	4.6
2013	53	130.6	2.5				

In 2018 there was a decrease in positions resulting in a significant increase in acres/staff maintenance. Considering the average vacancy rate of this team, the above analysis breaks down to closer to 5.5 to 6 acres per employee. Historical workload data shows an appropriate target ratio of 4 acres per FTE. Additionally, as 6-8 vacancies in this area are typical, a vacancy rate of 15% is recommended as an expectation for staffing capacity at any given time. Using this information, the following table represents expected staffing needs in future years:

Table 4.6: Staffing Levels Needed for Parks Maintenance

Fiscal Year	Acres	Acres/Staff	FTEs	With Expected Vacancies
2024	149.9	4	38	46
2025	150.4	4	38	46
2026	162.4	4	41	47

The following tables represent workload information from MaintStar.

Table 4.7: Work Order Analysis of Gardening, Tree Trimming and Labor Crews

Labor Crew - Div 131 & 132	FY 2021	FY 2022	FY 2023
Work Order - Requests	197	199	255
Work Order - Preventive Maintenance (PM)	48	45	45
Total	245	244	300
Work Orders Completed	245	243	284
% of Work Completed	100%	100%	95%
% of Work Orders - Requested	80%	82%	85%
% of Work Orders - PM	20%	18%	15%
Gardening - Div 137	FY 2021	FY 2022	FY 2023
Work Order - Requests	63	48	56
Work Order - Preventive Maintenance (PM)	210	209	208
Total	273	257	264
Work Orders Completed	272	256	262
% of Work Completed	100%	100%	99%
% of Work Orders - Requested	23%	19%	21%
% of Work Orders - PM	77%	81%	79%
Tree Trimming - Div 138	FY 2021	FY 2022	FY 2023
Work Order - Requests	62	52	68
Work Order - Preventive Maintenance (PM)	18	18	18
Total	80	70	86
Work Orders Completed	80	70	84
% of Work Completed	100%	100%	98%
% of Work Orders - Requested	78%	74%	79%
% of Work Orders - PM	23%	26%	21%

While labor crew work orders have increased by 22.4% since 2021, crews have completed 95% of this workload. A combined 32 FTEs in the two labor crews equates to 9.4 work orders per staff member in 2023.

Based on the analysis above, the Parks and Grounds Maintenance function should be staffed at the previous 4 Acres per FTE metric, with anticipated vacancies. This would necessitate increasing the number of Gardeners from 36 to 47 FTEs.

Custodial Services

The custodial unit of C&M Parks & Grounds Maintenance provides cleaning and janitorial services to the Port's various facilities. This includes daily, weekly, and monthly cleaning

tasks to keep facilities in good working order and provide a safe and healthy environment for Port employees and patrons.

C&M Division Custodial Service Analysis – 2013

It is important to note that in 2013, the Port undertook an initiative to reduce custodial service levels, consequently reducing the staffing resources required for custodial services. The intent of the analysis was to review service levels to prevent an increase in staff. Essentially, it looked at how to adjust service levels to better manage the workload with existing staff. This analysis documented the frequency of services provided in each facility. Before the study, all services were provided daily. After the study, most services were changed to an every-other-day or as-needed basis. The following table represents an example of this service change in the Harbor Administration Building. Services in gray were no longer performed by custodial staff and were left for Port staff to manage on their own.

Table 4.8: 2013 C&M Division Service Level Change – HAB Facility⁴

Description of Service	Service Prior to Study					New Reduced Service				
	M	T	W	R	F	M	T	W	R	F
Dusting of offices and cubicles (furniture, surfaces, computer, counters, desktops)	•	•	•	•	•					
Emptying trash cans and recycle bins in cubicles and offices	•	•	•	•	•					
Vacuuming all carpeted areas, stairwell, elevator	•	•	•	•	•	•		•		•
Mopping of lobbies and common areas	•	•	•	•	•	•		•		•
Dusting of conference rooms	•	•	•	•	•		•		•	
Cleaning of vault, racquet ball court, loading dock, parking structure	•	•	•	•	•			•		
Dusting of file cabinets, book shelves and displays	•	•	•	•	•		•		•	
Cleaning of Restrooms and Kitchens, emptying of common area trash	•	•	•	•	•	•	•	•	•	•

Provision of Services

Custodial services are typically not managed by work orders alone, as they are predominantly service-level-based. Janitorial tasks are set based on frequency (e.g., vacuuming every week, cleaning surfaces every day, waxing floors monthly, etc.). As such, work orders would not normally follow the same expectation of 80% preventive and 20% requested as the standard for other types of maintenance. The work orders listed over the three years in the table below account for routine or requested maintenance guided

⁴ Data Analysis Provided by Construction & Maintenance Division

by supervisors or customers and do not account for the majority of daily work tasks that are a part of the overall service levels for each facility.

The following table represents the MaintStar work orders for the Custodial section from FY 2021 to FY 2023.

Table 4.9: Custodial MaintStar Work Order Analysis for FY 2021 – FY 2023

Custodial - Div 130	FY 2021	FY 2022	FY 2023
Work Order - Requests	27	35	35
Work Order - Preventive Maintenance (PM)	33	33	33
Total	60	68	68
Work Orders Completed	60	68	68
% of Work Completed	100%	100%	100%
% of Work Orders - Requested	45%	51%	51%
% of Work Orders - PM	55%	49%	49%

The tasks entered were completed 100% each year, and the percentage breakdown was roughly half and half for routine versus requested maintenance.

Staffing Benchmark Analysis – Custodial – IFMA 2022 Benchmarks

The International Facility Management Association (IFMA) developed benchmarks from member-supplied data in 2022 for its *Operations and Maintenance Benchmarks for North America* Report. This report catalogs the average number of Janitorial FTEs and Supervisor FTEs of the responding agencies based on their interior “rentable” square footage, or RSF. This metric is used in Facilities Management based on the usable square footage of a facility plus common areas, public spaces, hallways, restrooms, and other general areas. In terms of the Port, this equates to the interior square footage of the Port’s facilities. Table X.X lists the benchmarks by RSF.

Table 4.10: IFMA 2022 Custodial Staffing Benchmarks⁵

Facility Size (RSF)	No. of Janitorial FTEs	No. of Supervisor FTEs
< 50,000	2.1	1.1
50,000 – 100,000	3.8	1.0
100,001 – 250,000	7.9	1.3
250,001 – 500,000	20.0	2.0
500,001 – 750,000	16.5	2.2
750,001 – 1,000,000	37.4	3.8

⁵ IFMA North America Operations and Maintenance Benchmark Report 2022

Facility Size (RSF)	No. of Janitorial FTEs	No. of Supervisor FTEs
1,000,001 – 1,500,000	27.0	3.3
1,500,001 – 2,000,000	77.2	7.8
2,000,001 – 3,000,000	99.2	9.8
> 3,000,000	140.3	10.5

Per the data provided by the Division, there are 779,449 SF managed and maintained by C&M. The average number of janitorial staff by SF in the IFMA report for facilities between 750,001 and 1,000,000 SF is 37.4 FTEs and 3.8 supervisors. The janitorial section of C&M currently has one supervisor, one senior custodian, and 17 custodians. This is significantly lower than the industry average.

The report also provides an average of roughly 31,500 SF maintained per custodian or janitor, resulting in 25.74 FTEs needed to maintain the 779,449 SF of the Port. There is no equivalent metric for supervisors in the report.

Staffing Benchmark Analysis – Custodial – APPA Metrics

The APPA (formerly the Association of Physical Plant Administrators) is another organization that sets benchmarks and standards for various facilities, predominantly in the education industry, to gauge and determine appropriate resourcing for custodial services.

The APPA has designated a five-level system⁶ to determine resources based on the level of service expected at a particular facility. This system is a ranking with Level 1 being the highest level of cleanliness and Level 5 being the lowest:

- Level 1 – Orderly Spotlessness
- Level 2 – Orderly Tidiness
- Level 3 – Casual Inattention
- Level 4 – Moderate Dinginess
- Level 5 – Unkempt Neglect

Table X.X lists the recommended square footage per FTE by facility type for each level of service. Areas shaded in grey represent those space categories not recommended for those levels. This table was developed as a part of the APPA Body of Knowledge and updated in 2017 by Steven Gilsdorf, CEFP.⁷

⁶ <https://www.appa.org/bok/cleaning-operations/>

⁷ <https://www.appa.org/bok/cleaning-operations/>

Table 4.11: APPA Recommended SF per FTE by Type of Facility

Standard / Space Category	New (SF/Custodian)				
	Level 1	Level 2	Level 3	Level 4	Level 5
Auditorium Seating & Foyer	6,300	15,200	35,200	75,900	443,600
Auditorium Stage & Wings	19,100	28,200	86,700	263,800	
Cafeteria with Carpet	12,200	18,800			
Cafeteria with Hard Floor	12,700	17,700			
Classroom with Carpet Floor – Heavy Use	7,200	17,000	18,100	23,600	24,500
Classroom with Carpet Floor	13,800	29,600	33,100	45,700	48,500
Classroom with Hard Floor	10,200	19,100	32,000	43,400	48,500
Classroom with Hard Floor – Heavy Use	5,500	10,600	11,200	22,800	24,300
Dormitory Lounge	6,300	10,900	22,800	54,800	171,000
Dormitory Sleep/Study	4,600	4,800	9,500	22,200	31,300
Dormitory Washroom	2,000	2,600			
Entranceway	5,100	8,800	13,800	22,400	36,100
Gymnasium (Wood Floor)	20,000	39,600	86,200	262,400	1,130,000
Library with Carpet	23,000	48,600	96,000	140,900	166,600
Library with Hard Floor	11,700	21,800	24,900	49,800	58,200
Locker/Changing Room - No Shower	14,000	14,200			
Nursing Station- Ham Floor	6,400	6,400			
Office with Carpet Floor	12,300	24,500	45,600	74,000	116,800
Office with Hard Floor	9,400	16,800	30,700	41,200	54,000
Patient Conference Room	10,200	10,200			
Patient Treatment Area - Carpeted	3,600	3,600			
Patient Treatment Area - Hard Floor	3,400	3,400			
Public (Circulation) with Carpet Floor	23,300	55,300	74,900	117,500	135,900
Public (Circulation) with Hard Floor	9,100	24,400	36,100	44,500	47,600
Research Lab with Hazardous Waste	6,200	8,500	10,100	14,600	36,900
Research Lab without Hazardous Waste	7,800	11,700	14,900	27,000	88,600
Shower Room	7,800	7,800			
Stairwell	9,300	18,600	21,800	30,600	93,800
Storeroom	81,800	240,200	452,200	1,895,900	3,348,800
Utility	4,600	6,000	10,700	19,100	50,300

Standard / Space Category	New (SF/Custodian)				
	Level 1	Level 2	Level 3	Level 4	Level 5
Vending	5,900	13,300	18,900	20,700	22,600
Washroom	2,600	3,500			
Washroom - Heavy Use	1,300	1,900			

The project team recommends that the Division consider using this matrix and assign appropriate space categories to impacted facilities to determine benchmarked staffing standards. This should be done with an estimated 1,456 hours available per custodial (or 70% productivity) to account for time off and administrative factors reducing their available time to perform services.

Staffing Benchmark Analysis – Custodial – ISSA Benchmarks

The Division's 2013 study to determine staffing levels was based on an analysis of the services provided, the levels of service provided by the City of Los Angeles's General Services Department (GSD), and then International Sanitary Supply Association (ISSA) standards. ISSA is a leading custodial industry organization and serves as the primary professional association for janitorial supply purposes. It provides guidance on meeting appropriate cleaning requirements through its Cleaning Industry Management Standard (CIMS)⁸, most recently updated in 2023.

This standard requires the organization to develop a workload plan using an industry-accepted methodology to determine the labor hours needed to meet the expected service delivery standards (CIMS Standard 2.1.1).

The Division provided the project team with the results of the 2013 analysis, but they did not have the appropriate background data to enable the project team to update and validate the data for this audit. The GSD was able to provide square foot per hour metrics based on their current custodial contract requirements, aligning with the facilities being cleaned to determine staffing targets based on the City's service level expectations. This system meets the CIMS standard for developing an appropriate ISSA staffing benchmark.

The GSD breaks down square footage expectations per hour worked into multiple variables:

- Type of Facility
- Vendor providing the service
- Full Services Requested and Basic Services Requested

⁸ <https://cims.issa.com/cims-standard-overview/>

The Type of Facility is outlined in the following table of types and appropriate codes:

Table 4.12: GSD Custodial Production Facility Types

Facility Type	Code
Animal Shelters	SHE
Art Centers / CAD	ART
Child Care Centers	CHI
Library	LIB
Maintenance Yards	YRD
Medical Facilities	MED
Museums	MUS
Office Buildings	OB
Outside/Exterior Areas	OUT
Parking Lots / Garages	PRK
Police Station w/ Jails	PDJ
Police Stations	PDS
Theatres	THE
LAPD Forensics	SID

These types then drive a full-level square footage per hour and a basic-level square footage per hour for the three primary custodial vendors. This is broken down in the following table:

Table 4.13: GSD Custodial Production Square Footage per Hour by Vendor

Facility Type	Code	Vendor 1		Vendor 2		Vendor 3	
		Full	Basic	Full	Basic	Full	Basic
Animal Shelters	SHE	2,500	4,500	3,500	4,500	3,600	4,500
Art Centers / CAD	ART	4,000	5,000	3,750	4,750	3,000	3,750
Child Care Centers	CHI	3,200	5,000	2,500	2,750	2,600	2,600
Library	LIB	4,500	5,000	3,300	3,600	3,200	3,200
Maintenance Yards	YRD	4,800	5,100	2,250	2,950	4,800	6,000
Medical Facilities	MED	3,500	4,500	1,800	2,000	2,800	3,200
Museums	MUS	3,900	4,500	3,000	4,200	5,000	6,250
Office Buildings	OB	3,750	4,500	3,500	4,000	5,000	5,500
Outside/Exterior Areas	OUT	5,000	8,000	5,000	6,000	10,000	10,000
Parking Lots / Garages	PRK	7,000	8,000	5,000	6,000	10,000	10,000
Police Station w/ Jails	PDJ	4,600	5,000	2,500	3,500	4,200	5,250
Police Stations	PDS	3,200	5,000	3,300	4,000	4,500	5,625
Theatres	THE	5,000	6,000	3,800	4,800	3,000	3,750
LAPD Forensics	SID	3,750	4,500	1,800	2,000	5,000	6,250

For the purposes of this analysis, an average of the full and basic levels of all three vendors was used. This is broken down in the following table:

Table 4.14: Average GSD Custodial Production Square Footage per Hour

Facility Type	Code	Full	Basic
Animal Shelters	SHE	3,200	4,500
Art Centers / CAD	ART	3,600	4,500
Child Care Centers	CHI	2,800	3,500
Library	LIB	3,700	3,900
Maintenance Yards	YRD	4,000	4,700
Medical Facilities	MED	2,700	3,200
Museums	MUS	4,000	5,000
Office Buildings	OB	4,100	4,700
Outside/Exterior Areas	OUT	6,700	8,000
Parking Lots / Garages	PRK	7,300	8,000
Police Station w/ Jails	PDJ	3,800	4,600
Police Stations	PDS	3,700	4,900
Theatres	THE	3,900	4,900
LAPD Forensics	SID	3,500	4,300

The project team then used the C&M Division locations and assigned each a Type Code using the list provided. This assignment is listed in the following table, with the SF per Hour based on the Full and Basic levels of levels assigned.

Table 4.15: POLA Facilities Cleaned with GSD Service Level Expectations

Location	Sq. Ft	Type Code	Full	Basic
HAB	70,000	OB	4,100	4,700
Berth 161	30,000	YRD	4,000	4,700
Berth 93	13,152	YRD	4,000	4,700
Boys & Girls Club	19,879	CHI	2,800	3,500
Liberty Plaza Parking Lot	59,967	ART	3,600	4,500
Berth 84	1,000	YRD	4,000	4,700
Berth 87 (Tower)	1,110	YRD	4,000	4,700
Day Care	4,000	CHI	2,800	3,500
Pilot Station	5,028	YRD	4,000	4,700
Pilot Trailers	1,200	YRD	4,000	4,700
Customs Building	8,000	OB	4,100	4,700
Construction Trailers T.I.	600	YRD	4,000	4,700

Location	Sq. Ft	Type Code	Full	Basic
Test Lab	2,500	SID	3,500	4,300
Archive Building	3,200	OB	4,100	4,700
CTIP Building	20,000	OB	4,100	4,700
Cruise Ship Promenade	200	ART	3,600	4,500
Harbor Blvd Promenade	400	ART	3,600	4,500
300 Water Street (1st Floor)	9,720	OB	4,100	4,700
Bannings Landing	10,000	ART	3,600	4,500
Port Police HQ	500,326	PDJ	3,800	4,600
300 Water Street (2nd Floor)	9,720	OB	4,100	4,700
Berth 87 IOWA	400	YRD	4,000	4,700
Inspection Trailer	400	YRD	4,000	4,700
K9 facility	600	PDS	3,700	4,900
Total	771,402			

Using this information, the project team estimated the maintenance hours needed per day for the listed facilities. It is assumed that an FTE in a maintenance function can produce work at roughly 75% of their overall availability due to travel during work hours, time off, and time for special requests. As such, a daily number of 6 hours per FTE is used to determine FTE needs based on service levels. This is broken down in the following table:

Table 4.16: FTE Needs based on Service Level Frequencies

Location	Hours Needed Per Day		Number of FTEs	
	Full	Basic	Full	Basic
HAB	17.07	14.89	2.85	2.48
Berth 161	7.50	6.38	1.25	1.06
Berth 93	3.29	2.80	0.55	0.47
Boys & Girls Club	7.10	5.68	1.18	0.95
Liberty Plaza Parking Lot	16.66	13.33	2.78	2.22
Berth 84	0.25	0.21	0.04	0.04
Berth 87 (Tower)	0.28	0.24	0.05	0.04
Day Care	1.43	1.14	0.24	0.19
Pilot Station	1.26	1.07	0.21	0.18
Pilot Trailers	0.30	0.26	0.05	0.04
Customs Building	1.95	1.70	0.33	0.28
Construction Trailers T.I.	0.15	0.13	0.03	0.02
Test Lab	0.71	0.58	0.12	0.10
Archive Building	0.78	0.68	0.13	0.11

Location	Hours Needed Per Day		Number of FTEs	
	Full	Basic	Full	Basic
CTIP Building	4.88	4.26	0.81	0.71
Cruise Ship Promenade	0.06	0.04	0.01	0.01
Harbor Blvd Promenade	0.11	0.09	0.02	0.01
300 Water Street (1st Floor)	2.37	2.07	0.40	0.34
Bannings Landing	2.78	2.22	0.46	0.37
Port Police HQ	131.66	108.77	21.94	18.13
300 Water Street (2nd Floor)	2.37	2.07	0.40	0.34
Berth 87 IOWA	0.10	0.09	0.02	0.01
Inspection Trailer	0.10	0.09	0.02	0.01
K9 facility	0.16	0.12	0.03	0.02
Totals			33.89	28.15

This unit is staffed with one supervisor, one senior custodian, and seventeen (17) custodians. Since the supervisor is responsible for managing and coordinating the service, a total of 18 FTEs is the effective workforce. Based on this analysis, and assuming a similar level of service per type of facility, the Custodial unit is deficient in staffing by at least 10.15 FTEs.

To further qualify this analysis, the project team reviewed service levels provided in the 2013 study and requested updates from the C&M Division to determine if current service levels meet the same service specifications set by the GSD for Full or Basic levels of Service.

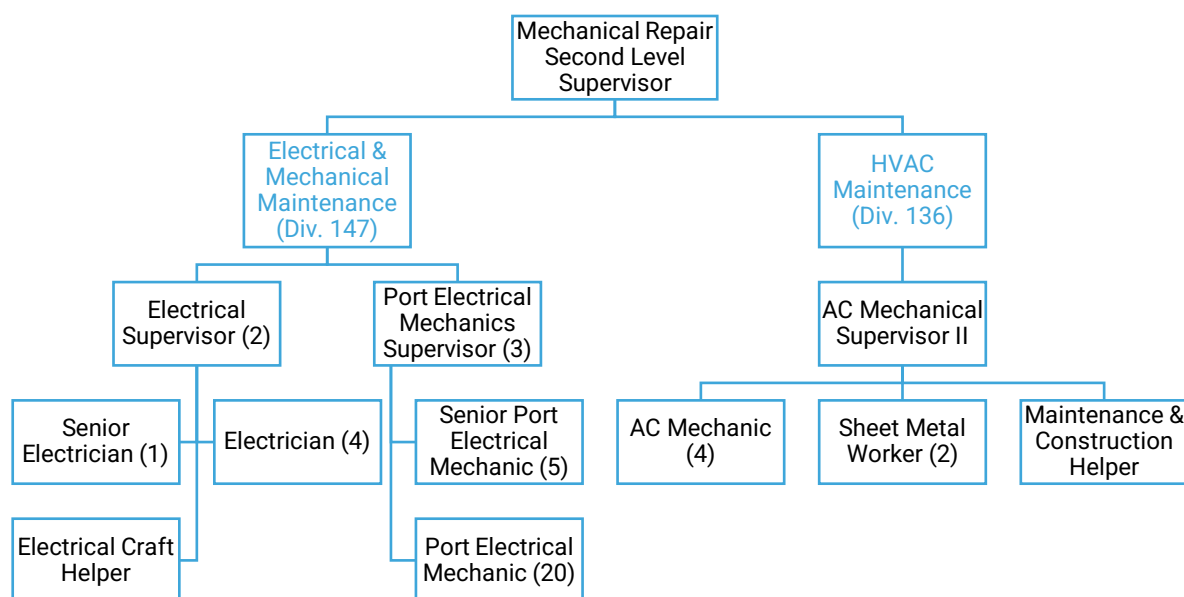
This review included breaking down the table of Service Level tasks in the GSD custodial scope of work and applying frequencies of scheduled work to compare against those in the scope of work. This review found that of the 85 items in the scope of work that apply to the Port of LA, 25 services are being provided at a higher than Basic service level (or more frequently), 22 are provided at the Basic service level, and 38 services are provided at a lower than Basic service level (or less frequently). This suggests that 45% of tasks in the GSD custodial scope are being provided less frequently by the Port of LA, and 55% of tasks are being performed as frequently or more frequently.

As each service has varying impacts on hours required, it is not possible to accurately qualify the staffing differential to determine how this impacts the total FTEs required to meet the Port of LA's service level expectations. However, if the Port of LA wished to adopt, at minimum, the basic levels of service associated with the GSD's scope of work and specifications, an additional 10 FTEs are required. A breakdown of applicable services provided in the GSD scope of work and their associated Port of LA service level frequency is included in Appendix B.

Mechanical Repairs (Electrical, Port Electrical Mechanics, and HVAC)

Electrical & Mechanical is responsible for all HVAC and electrical maintenance and repair activities. The following organizational chart represents the structure of Electrical & Mechanical Maintenance and HVAC Maintenance.

Figure 4.5: Organizational Chart for Electrical and Mechanical Maintenance



The following subsections summarize the workload from the MaintStar system.

Electrical Maintenance

Electrical Maintenance manages all low-voltage electrical maintenance work throughout the Port, primarily in Port facilities, but also supports Port Electrical Mechanic duties when requested.

Table 4.17: Work Order Analysis of Electricians (Div 147E)

Electricians - Div 147E	FY 2021	FY 2022	FY 2023
Work Order - Requests	344	367	452
Work Order - Preventive Maintenance (PM)	68	69	70
Total	412	436	522
Work Orders Completed	409	434	473
% of Work Completed	99%	100%	91%
% of Work Orders - Requested	83%	84%	87%
% of Work Orders - PM	17%	16%	13%

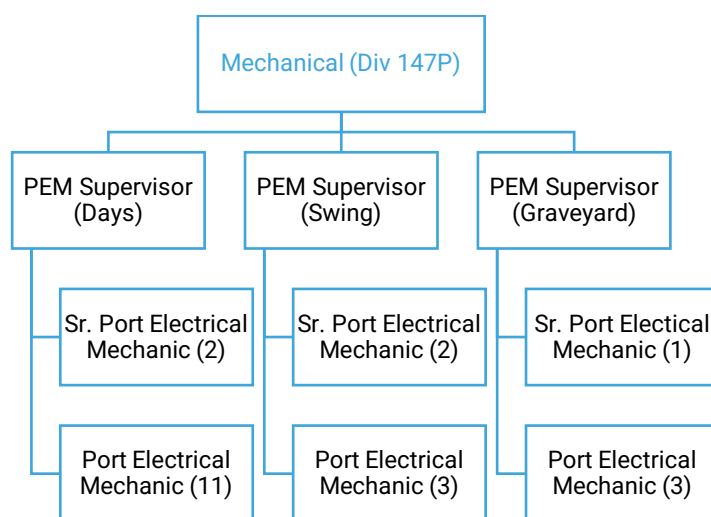
Since 2021, electricians have seen a 26.7% increase in work orders, while the number of work orders completed has decreased by 8%.

With 9 FTEs, the work orders per staff member come out to 58 in 2023, an increase from 45.8 per FTE in 2021. Electrical Maintenance should plan to transition to an 80% preventive maintenance (PM) and 20% requested maintenance program. This would be done by programming more PM activities into MaintStar following the asset management program development, the goal being reduced requested maintenance. In the FY 2024/2025 budget, a Senior Electrician and Electrician position were converted into an additional Electrical Supervisor position. It is concluded the staffing of Electrical Maintenance is adequate to manage the workload.

Port Electrical Mechanics (PEMs)

PEMs support Port clients and tenants in connecting electrical systems to vessels utilizing and renting space. This is a 24-hour operation and staff are scheduled on three shifts. The following organizational chart represents the current organization of PEM.

Figure 4.6: Organizational Chart for Port Electrical Mechanics



The following table represents the workorders from MaintStar for FY 2021 – FY 2023, their type, and the percentage completed.

Table 4.18: Work Order Analysis of Port Electrical Mechanics (Div 147P)

Port Electrical Mechanics - Div 147P	FY 2021	FY 2022	FY 2023
Work Order - Requests	1,612	1,704	1,821
Work Order - Preventive Maintenance (PM)	278	310	398
Total	1,890	2,014	2,219

Port Electrical Mechanics - Div 147P	FY 2021	FY 2022	FY 2023
Work Orders Completed	1,869	1,990	1,829
% of Work Completed	99%	99%	82%
% of Work Orders - Requested	85%	85%	82%
% of Work Orders - PM	15%	15%	18%

PEMS have experienced an increase of 17.4% in work orders and a drop of 17% in work orders completed. This suggests the staff do not have the capacity to manage the additional workload. Most open work orders in 2023 are for preventive or scheduled maintenance activities such as annual inspections, maintenance checklists, or monthly inspections. These account for 59% of open work orders in 2023, while the section's primary function, AMP operations and connections, accounts for roughly 25% of open work orders. Of those for AMP operations and connections, all open work orders are for early morning connections between 4:30 AM and 6:30 AM. These are typically during shift changes between the Daytime and Graveyard (night shifts) and could be missed with current staffing levels and scheduling. Two (2) positions are recommended to be rescheduled to provide overlap between these two shifts and adequate coverage for these requests.

Based upon the data, 25 FTEs in the unit equate to 88.8 work orders per staff member in 2023, a jump from 75.6 per FTE in 2021. Currently, two PEM positions are vacant but budgeted and authorized to be filled. It is recommended that the staffing for this area be maintained at the 2022 work-to-staffing ratio, which is 80.6 work orders per staff member. Using this metric with the total work orders received in 2023, the Division requires three additional PEMs for a total FTE count of 28.

Heating, Ventilation, and Air Conditioning (HVAC) Maintenance

HVAC Maintenance maintains all environmental systems in Port assets, primarily within Port-owned facilities. The following table represents the work orders from MaintStar for FY 2021-FY2023, their type, and the percentage completed.

Table 4.19: Work Order Analysis of HVAC Maintenance (Div 136)

HVAC - Div 136	FY 2021	FY 2022	FY 2023
Work Order - Requests	278	327	344
Work Order - Preventive Maintenance (PM)	69	66	50
Total	347	393	394
Work Orders Completed	343	382	335
% of Work Completed	99%	97%	85%
% of Work Orders - Requested	80%	83%	87%

HVAC - Div 136	FY 2021	FY 2022	FY 2023
% of Work Orders - PM	20%	17%	13%

HVAC has also seen an increase in work by 13.5% since 2021 and a reduction of 14% in work orders completed. Preventive maintenance work orders have decreased over the three years. HVAC maintenance must have an effective preventive maintenance program to properly maintain building environmental systems, especially those that have customer use, such as Port facilities. As noted earlier, maintenance functions like this should target an 80% routine or preventive maintenance percentage and 20% requested.

Vehicle Repair & Maintenance

The number of technicians and related positions required for a maintenance operation to operate effectively is primarily driven by the size and composition of the fleet it serves. Because the Port's fleet consists of a wide variety of vehicles and equipment, it is necessary to establish a relative measure that allows for the evaluation and comparison of staffing needs and costs.

A process known as **Vehicle Equivalent Unit (VEU)** calculation is used to equate the level of effort required to maintain dissimilar types of vehicles to a passenger car, which is given a baseline VEU of 1.0. Work with other fleet organizations has shown that a VEU of 1.0 is equal to between 10 and 15 annual maintenance labor hours, depending upon a number of factors unique to each organization. All other types of vehicles are allocated a VEU value based on their relationship to a passenger car.

For this project, a VEU was assigned for each classification of vehicle or equipment. The 1,044 vehicles and equipment pieces in the fleet total 1,688.5 VEUs. Therefore, the fleet maintenance responsibilities are equivalent to those of maintaining a fleet of over 1,600 sedans.

In determining the number of hours per VEU for an organization, a number of factors that are unique to each fleet are considered. These factors include fleet age and condition, usage levels, operating environment, the facility and tools, parts support, sustainability enhancements, and systems integration. The labor factor required to properly maintain the fleet is calculated at 15.0 hours per VEU. Our calculation is shown in the following table:

Table 4.20: Vehicle Equivalency Unit (VEU) Breakdown

10.0	Baseline hours per VEU	
0	Fleet Age	11.1 years, average age.
1.0	Utilization Levels	Noticeable increase in utilization (new parks, new police positions).
1.0	Operating environment	Near the ocean (saltwater).
0	Facility and tools	
1.0	Parts support	No dedicated parts position/support.
1.0	Sustainability	Upgrading to CNG, more training.
1.0	Systems Integration	MaintStar is not an FMIS.
15	Total Hours per VEU	

With 15 labor hours per VEU expected, the annual maintenance and repair workload is calculated to be 25,327.5 hours (1,688.5 VEU's x 15 hours/VEU).

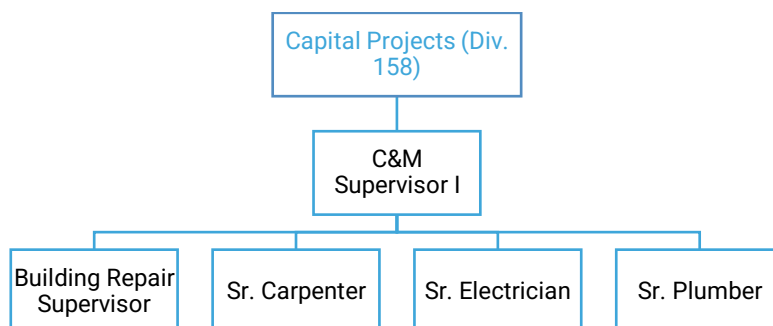
While a fleet mechanic's salary is based on 2,080 hours per year (52 weeks x 40 hours per week) only 70%, or 1,456 labor hours per year, are available to perform actual maintenance work. The remaining payroll hours are lost to vacation, sick time, holidays, and indirect time (i.e., training, etc.). When the 25,327.50 mechanic hours required to maintain the fleet are divided by the 1,456 annual labor hours available per mechanic, the result is a need for 17.4 mechanic full-time equivalents (FTEs).

Not all of this workload will necessarily be handled in-house. Due to factors such as fleet composition and the availability of warranties and vendor contracts, a portion of these hours may be outsourced. A best practice is to outsource 10-15% of maintenance, focusing on warranty work, time-consuming repairs, or work that requires special training or tools to deal with a high degree of complexity. Outsourcing 15% of the work would result in a need for **14.8 FTEs internally**. With 13 FTE mechanics (2 Sr. Heavy Duty Equipment Mechanics, 6 Heavy Duty Equipment Mechanics, 5 Equipment Mechanics) currently, it is recommended that two (2) additional Equipment Mechanic positions are necessary to manage the vehicle assets in the Port effectively.

Capital Projects / Project Management

C&M Capital Projects manages all maintenance improvement projects and most large-scale maintenance issues that require project management and significant resource needs. Capital Projects is comprised of two Supervisors and three senior trades workers. Most work performed uses Hiring Hall (temporary) employees in focused trades areas.

Figure 4.7: Capital Projects (Div. 158) Org Chart



Projects come to Capital Projects staff as Capital Improvement Projects (CIP) and Maintenance Improvement Projects (MIP). Occasionally, work orders from the Maintenance work groups are assigned to Capital Projects if the in-house teams do not have capacity and/or the necessary skills to complete the work.

Capital Projects currently uses Hiring Hall trade staff as Estimators and Schedulers and Senior Trade staff as Junior or Assistant Project Managers, field General Foreman, and Superintendents. The two C&M Supervisors have considerable construction and project management experience and can train, mentor, and oversee current staff in these skill sets. Full-time in-house professional estimating and project management staff to handle projects overall are lacking.

The following spreadsheet analyzes Capital Projects MaintStar work activities to determine overall workload and whether requests and projects entered into the system are being completed.

Table 4.21: Work Order Analysis of Capital Projects (Div 158)

Capital Projects - Div 158	FY 2021	FY 2022	FY 2023
Work Order - Requests	57	46	122
Work Order - Preventive Maintenance (PM)	26	26	26
Total	83	72	148
Work Orders Completed	72	69	130
% of Work Completed	87%	96%	88%
% of Work Orders - Requested	69%	64%	82%
% of Work Orders - PM	31%	36%	18%

Capital Projects has seen an increase in work by 78.3% in the three years analyzed, almost doubling the total workload. The following table represents total workload by project information:

Table 4.22: Capital Projects Project Workload and Value

Year	Total # of Projects	Overall Project Value	Average Cost Per Project
2012	23.00	\$3,584,792.36	\$155,860.54
2013	41.00	\$5,874,802.68	\$143,287.87
2014	40.00	\$9,726,251.93	\$243,156.30
2015	24.00	\$3,721,700.49	\$155,070.85
2016	10.00	\$5,207,479.86	\$520,747.99
2017	15.00	\$14,979,905.49	\$998,660.37
2018	24.00	\$11,539,715.32	\$480,821.47
2019	48.00	\$10,598,552.43	\$220,803.18
2020	27.00	\$7,665,831.24	\$283,919.68
2021	24.00	\$24,733,676.06	\$1,030,569.84
2022	23.00	\$20,217,521.12	\$879,022.66
2023	34.00	\$16,320,717.45	\$480,021.10
Totals	333.00	\$134,170,946.43	\$402,915.76
Average Overall	27.75	\$11,180,912.20	\$465,995.15
Average 2021-2023	27.00	\$20,423,971.54	\$796,537.86

While the average number of jobs per year has stayed consistent, the cost and value of jobs have increased substantially. As costs and project complexity continue to rise, additional overarching estimating, and project management resources are needed to manage and keep up with the workload appropriately. As such, a Construction Estimator position and a Construction Project Manager position are necessary to keep up with the workload and effectively manage current and potential additional projects. This will reduce the time used with Hiring Hall employees for this purpose, while providing additional skilled and professional resources to the Division to meet the project demand.

4.1.4 Result

Difficulty completing projects, maintenance tasks, and work orders in expected time periods and increased deferred maintenance with existing staffing levels.

4.1.5 Finding #4 Recommendations

- 4.1 Fill the current Boat Captain vacancy and reestablish previously reduced Deck Hand position for fill in the next 12 months.
- 4.2 Add Gardener or Sr. Gardener positions as greenspace is developed that meets a ratio of 4 acres per FTE and accounts for a 15% vacancy rate. It is recommended Parks and Grounds Maintenance staffing be increased from 35 to 46 FTEs. Staff should be added over the next two fiscal years.

- 4.3 Develop appropriate custodial service level frequency standards using the model set by GSD and develop a staffing model based on current occupied square footage. If using the basic level of service, increase staffing by 10 FTEs over the next two fiscal budget cycles.
- 4.4 Add three (3) new Port Electrical Mechanic positions to manage the current workload and have two positions covering the transition from Graveyard to Day Shift in the upcoming budget cycle.
- 4.5 Add two (2) new FTE Equipment Mechanic positions to manage the current equipment repair workload in the upcoming budget cycle.
- 4.6 Add one (1) Construction Estimator position and one (1) Construction Project Manager position to C&M Capital Projects to meet project workload demand in the upcoming budget cycle.

5. Organizational Structure Review

Evaluation of the organizational structure includes analysis of the efficiency of the organization's plan and the responsibility and accountability of managers and supervisors. The intent is to ensure the following:

- **The organizational structure fosters accountability** among management and supervisory staff.
- **The organization's plan enhances communication and coordination**, providing ample opportunity to share knowledge and resources.
- **Management and supervisory resources are utilized efficiently**. The plan of the organization minimizes administrative overhead.
- **Adequate span of control** so the number of staff reporting to any manager or supervisor is not more or less than the number that can be feasibly and effectively supervised.

5.1 Assistant Directors, Second-Level Supervision and Direct Supervision

FINDING / CONDITION #5: There is a disparity in organizational spans of control amongst various levels of supervisors, requiring different levels of supervision and management capacity.

5.1.1 Criteria

Analysis of the number of employees, number of teams within the Division, and overall size of teams under each level of organization.

5.1.2 Cause

Changing organizational structure based upon services provided and ability to fill Assistant Director positions over time.

5.1.3 Analysis

The project team reviewed the overarching organization of the C&M Division. For purposes of this analysis the numbered sub-divisions under C&M will be referred to as

C&M Units. Tables 5.1 and 5.2 represent a summary of the organizational breakdown of the teams reporting to the two Assistant Directors:

Table 5.1: Organizational Breakdown by Assistant Director

Assistant Director	Second Level Supervisors	C&M Units	Staff FTEs	Work Orders	# Staff per Unit	# Work Orders per Unit
Unit 1 (Orozco)	2	12	182	5,530	11.375	346
Unit 2 (Hughes)	3	10	120	7,910	12	791

Table 5.2: C&M Units Assigned by Assistant Director

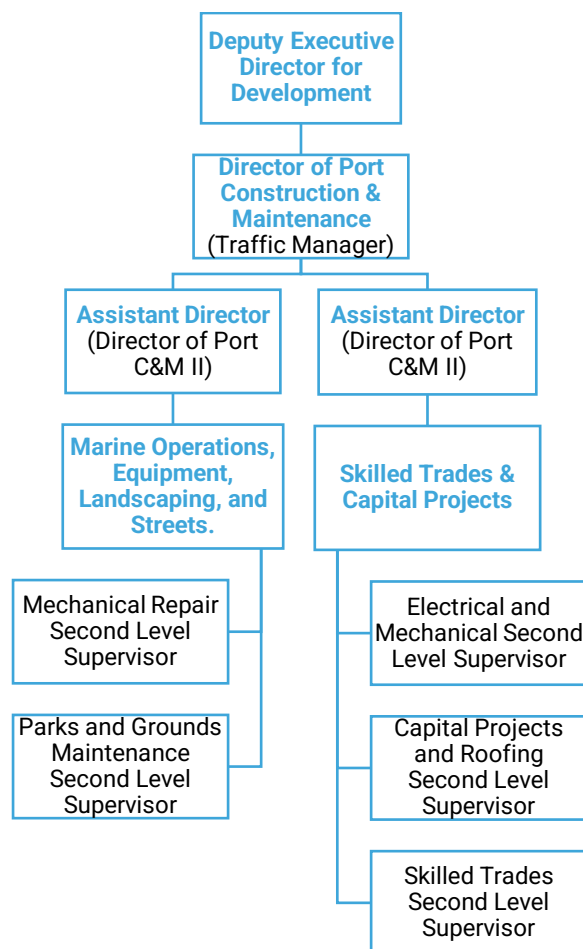
Unit 1 (Orozco)	Unit 2 (Hughes)
Marine Carpentry	Electrical / Mechanical
Pile Driving	HVAC
Marine Vessel Repair	Planning & Coordination
Welding	Capital Projects
Vessel Operations	Roofing
Equipment Repair	Carpentry
Custodial	Painting
Labor Groups	Plumbing
Gardening	Building Maintenance
Tree Trimming	
Street Maintenance Repair	

Based on this data, there is a disparity in the number of C&M Units each Assistant Director and Second Level Supervisors and between the two sections overall.

Second-Level Supervisors

The five second-level supervisors oversee very different types of units and sizes. The appropriate span of control can be assessed by direct reports, the complexity of services, and workload levels. This section analyzes the second-level supervisors and their span of control.

Figure 5.1: C&M Management Organizational Chart



The following table displays the number of C&M Units, staff, and work orders for which each second-level supervisor is responsible.

Table 5.3: Organizational Analysis by Second-Level Supervisor

Second-Level Supervisor	C&M Units	Staff FTEs	Work Orders	# of Staff per Units	# of Work Orders per Unit
Mechanical Repair	6	53	4,539	8.83	756.50
Parks & Grounds Maintenance	6	104	991	17.33	165.17
Electrical & Mechanical Maint.	2	45	3,135	22.50	1567.50
Capital Projects & Roofing	3	66	625	22.00	208.33
Skilled Trades	4	49	4,150	12.25	1037.50

Currently, the Mechanical Repair and Parks and Grounds Maintenance Supervisors oversee the largest number of C&M Units and over half of Marine Operations, Equipment, Landscaping, and Streets staffing. The Parks and Grounds Maintenance supervisor has

substantially more staff than the other Supervisors. In terms of workload, the Mechanical Repair and Skilled Trades supervisors are responsible for most MaintStar work orders.

Span of Control Review for all Supervisor

The following table represents the direct reports for each Director, Manager, and Supervisor and shows the span of control for each leadership position within C&M.

Table 5.4: Span of Control (Direct Reports) by Supervisor

Supervisor	Span of Control
Director	4
Assistant Director (Orozco)	3
Assistant Director (Hughes)	7
Mechanical Repair Supervisor	5
Parks & Grounds Maintenance Supervisor	7
Electrical & Mechanical Maintenance Supervisor	5
Capital Projects & Roofing Supervisor	3
Building Repairer Supervisor	4
Planning & Coordination	
Construction Estimator	3
Fiscal Operations	
Senior Management Analyst II	10
Quality Assurance	
Senior Management Analyst II	8
Mechanical Repair	
Ship Carpenter Lead	2
Pile Driver Supervisor	9
Machinist Supervisor	7
Boat Captain II	6
Sr. Automotive Supervisor	1
Equipment Repair Supervisor	17
Parks & Grounds Maintenance	
Port Maintenance Supervisor	14
Port Maintenance Supervisor	14
Port Maintenance Supervisor	16
Principal Grounds Maintenance Supervisor II	17
Park Maintenance Supervisor	18
Tree Surgeon Supervisor	4
Equipment Supervisor	14

Supervisor	Span of Control
Electrical & Mechanical Maintenance	
Electrical Supervisor	8
Port Electrical Mechanic Supervisor (Days)	13
Port Electrical Mechanic Supervisor (Swing)	5
Port Electrical Mechanic Supervisor (Graveyard)	4
AC Mechanical Supervisor II	7
Capital Projects and Roofing	
Construction & Maintenance Supervisor I	4
Roofer Supervisor	10
Skilled Trades	
Carpenter Supervisor	14
Painter Supervisor II	10
Plumber Supervisor	13
Chief Building Operating Engineer	8

Typically, optimal spans of control for professional supervisors are 3-8 direct reports, with an optimal number of 5. Trades and maintenance supervisors typically have a direct report span of control closer to 10-15. Due to this, the project team focused primarily on those supervisors in these areas that fell outside of these ranges:

- Senior Management Analyst II – Fiscal Operations
- Equipment Repair Supervisor
- Labor Group B Port Maintenance Supervisor
- Principal Grounds Maintenance Supervisor II
- Parks Maintenance Supervisor

Senior Management Analyst II – Fiscal Operations

Section 3.3 of this report considers the Fiscal Operations Senior Management Analyst II position span of control when sharing supervision of staff with the current Senior Management Analyst I and an additional Senior Management Analyst I.

Equipment Repair Supervisor

The Equipment Repair Supervisor currently has one Senior Automotive Supervisor who reports to them and is primarily focused on equipment specifications and purchasing. However, in reviewing the organizational structure, it is recommended that this position share more of the personnel management responsibilities to assist the Equipment Repair Supervisor in having a wider management span of control. The most appropriate methodology for this would be to reassign non-mechanic positions to report to the Senior

Automotive Supervisor, while all still following overall direction from the Equipment Repair Supervisor.

Labor Group B Port Maintenance Supervisor

While this position shows a span of control of 16 direct reports, there are frequently many vacancies due to the transitory nature of Maintenance Laborer positions. As such, this supervisor typically has closer to 12-15 direct reports at any given time, and would fall within the acceptable range for this type of position.

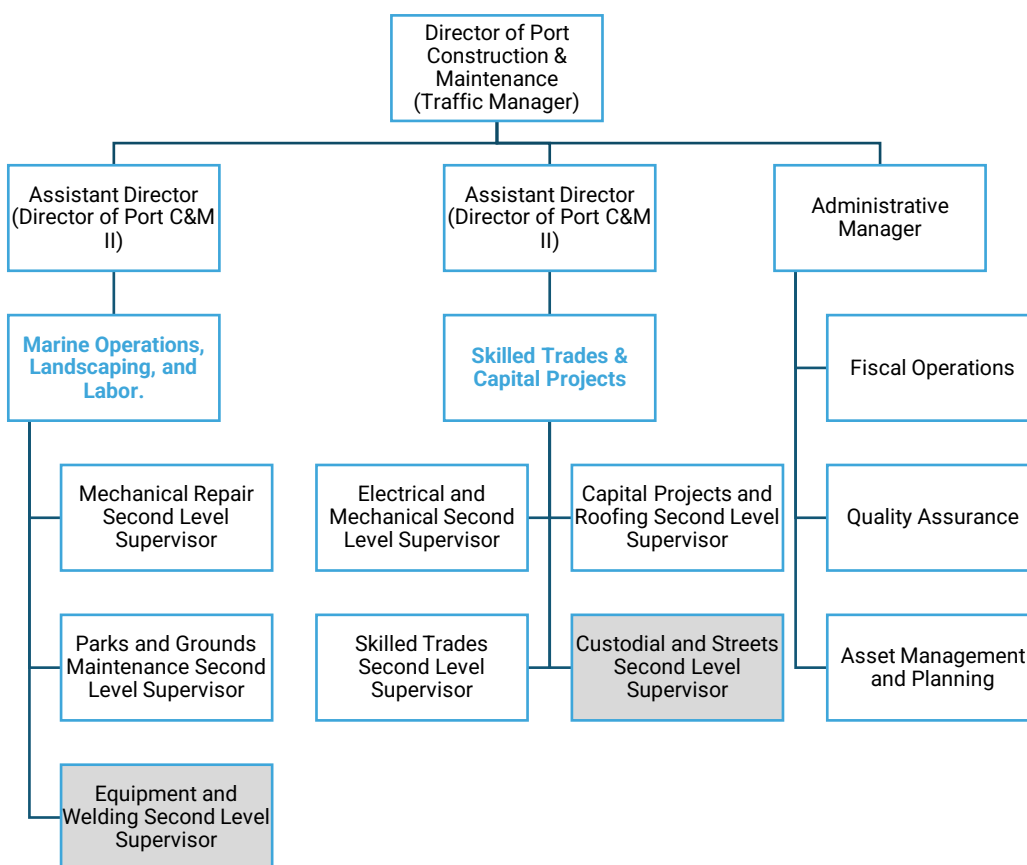
Parks Maintenance Supervisors

In FY 2024-2025, the Port revised one Parks Maintenance Supervisor as Principal Grounds Maintenance Supervisor II. However, this did not reduce the number of direct reports to this Supervisor and the other Parks Maintenance Supervisor. The C&M Division does have Senior Gardener positions to help direct and coordinate crews for work. As additional positions are added to this area to meet acreage maintenance standards, it is recommended that an additional Parks Maintenance Supervisor be added to split the staffing and provide for a better and clearer span of control over FTEs.

C&M Division Leadership

Based on the overall workload and to balance and align work types within appropriate organizational groups, it is recommended that an additional Second-Level Supervisor be added to oversee Div. 149 and 142 (Welding and Equipment Repair) and report directly to the Assistant Director (Orozco). In addition, it is recommended that a Second-Level Supervisor be added to oversee Div. 130 and 133 (Custodial and Street Maintenance) and that this position and the associated staff be reorganized to report to the other Assistant Director (Hughes). This reassignment is due to the services provided more closely aligning with others under that Assistant Director's leadership. Assistant Director Hughes currently provides management direction to building and skilled trades, in which custodial and street maintenance services fall more directly into.

Figure 5.3: Recommended C&M Management Organizational Chart



5.1.4 Result

A disparity in the overall span of control and personnel management responsibilities between the two Assistant Directors and among the five Second-Level Supervisors.

5.1.5 Finding #5 Recommendations

- 5.1 An additional Parks Maintenance Supervisor position is necessary to manage appropriate spans of control within Gardening as staff is added to meet acreage demands in the next fiscal budget cycle.
- 5.2 Add a Second-Level Supervisor position to oversee Div. 149 and 142 (Welding and Equipment Repair) in the next fiscal budget cycle to report directly to the Assistant Director (Orozco).
- 5.3 Add a Second-Level Supervisor position to oversee Div. 130 and 133 (Custodial and Street Maintenance) in the next fiscal budget cycle and change these areas to report under the other Assistant Director (Hughes).

6. Evaluation of Alternative Hiring Practices

FINDING / CONDITION #6: C&M has considered and is taking advantage of alternative hiring processes that meet City Personnel requirements and increase hiring efficiency.

6.1 Criteria

Review of available alternative hiring practices within the City.

6.2 Cause

The City of Los Angeles was seeking to connect all Angelenos to employment opportunities, including those facing barriers to employment.

6.3 Analysis

In recent years the Port has faced increasing challenges in recruiting and retaining staff. The City of Los Angeles has developed several programs to create opportunities for individuals to enter into Civil Service outside of the City's traditional pathway:

- The **Targeted Local Hire Program (TLH)** is focused on candidates seeking entry-level positions. The TLH program is geared towards individuals from the vulnerable and underserved populations. If hired through TLH, employees have an initial 6 month on-the-job training period followed by a 6 month probationary period. Once the probationary period is successfully completed, they are transitioned to full-time regular civil service employment.
- The **Bridge to Jobs Program (BRIDGE)** is similar to TLH but seeks to hire individuals to semi-skilled classifications, rather than entry-level positions.

The following statistics relate C&M's use of the TLH and Bridge to Jobs hiring program for the last three years:

Year	# Positions Filled	Types of Position Filled
2022	8	Gardener Caretaker (4), Custodian (Harbor) (3), Garage Attendant (1)
2023	16	Custodian (Harbor) (12), Administrative Clerk (2), Garage Attendant (1), Gardener Caretaker (1)
2024	16	Gardener Caretaker (9), Custodian (Harbor) (6), Administrative Clerk (1)

6.4 Result

C&M has taken advantage of the available alternative hiring processes. It is recommended C&M engage with Human Resources to develop a more formalized approach, including the development of a matrix that lists all positions, indicates whether each position qualifies for the TLH or Bridge program, and identifies potential modifications needed for non-qualifying positions to become eligible.

Human Resources oversees these programs and should be responsible for developing the matrix and formalized plan to enhance their utilization.

6.5 Finding #6 Recommendations

- 6.1 C&M and Human Resources should collaborate to develop a formalized plan to enhance the utilization of the alternative hiring programs. This should include a matrix that lists all positions, indicates whether each position qualifies for the TLH or Bridge program, and identifies potential modifications needed for non-qualifying positions to become eligible. The Division/HR should use this matrix as a first step in evaluating all recruitment activities and opportunities.

APPENDIX A: Summary of Staffing Recommendations

Recommended Position	Additional Count	Classification	Unit / Job focus	Timeframe	Rec#	Notes
Administrative and Technology		3 - 6				
Asset Analyst	1	Management Analyst		Next fiscal budget	1.2	
Assistant Director over Admin Services	1	Assistant Director	Oversee Administrative Service (combines 3 units)	Next fiscal budget	2.1	If all procurement activities are transferred to Finance the Sr. Accountant and Accounting Clerk positions would not be necessary. Additionally, this could eliminate the need for the Assistant Director as a Sr. MA II could be appointed to oversee the C&M Admin Services unit.
Sr. Accountant	1	Sr. Accountant	Fiscal Operations	Next fiscal budget	2.3	
Accounting Clerk	1	Accounting Clerk	Fiscal Operations	Next fiscal budget	2.3	
Management Analyst	1	Management Analyst	Fiscal Operations - focus on contract management	Next fiscal budget	2.3	
Safety / Training Coordinator	1			Next fiscal budget	2.5	
Maintenance		10 - 31				
Gardener	0 - 11	Gardener or Sr. Gardener	Parks and Grounds Maintenance	Spread out over the next 2 fiscal budget cycles	4.2	Outsource work or reduce service levels to decrease staffing needs.
Custodian	0 - 10	Custodian or Sr. Custodian	Parks and Grounds Maintenance	Spread out over the next 2 fiscal budget cycles	4.3	Determine acceptable service levels and either outsource work or reduce service levels to decrease staffing needs.
Port Electrical Mechanic	3	Port Electrical Mechanic		Next fiscal budget	4.4	
Equipment Mechanic	2	Equipment Mechanic		Next fiscal budget	4.5	
Construction Estimator	1	Construction Estimator	C&M Capital Projects	Next fiscal budget	4.6	

Recommended Position	Additional Count	Classification	Unit / Job focus	Timeframe	Rec#	Notes
Construction Project Manager	1	Construction Project Manager	C&M Capital Projects	Next fiscal budget	4.6	
Parks Maintenance Supervisor	1	Parks Maintenance Supervisor	Parks and Grounds Maintenance	Next fiscal budget	5.1	
Second-level Supervisor	1	Second-level Supervisor	Oversee 149/142, Welding & Equipment Repair	Next fiscal budget	5.2	
Second-level Supervisor	1	Second-level Supervisor	Oversee 130/133, Custodial and Street Maintenance	Next fiscal budget	5.3	
Total	13 - 37					

APPENDIX B: Custodial Scope of Work Data

Area	Specific Task	Full Frequency	Basic Frequency	Pola Frequency
Office Areas	Common Area: Empty all trash in plastic bags for disposal, replacing liners as needed.	Daily	Daily	Daily
	Desk-side trash pick-up (Full-service level only)	Daily	None	Daily
	Trash pick-up from centralized trashbins (Basic-service level)	None	Daily	Daily
	Properly reposition furniture in offices after the cleaning operation.	Daily	None	As Needed
	Gather all trash and refuse, tag where required, and dispose of at the compactor, dumpster and pick-up areas.	Daily	Daily	Daily
	Sweep, spot-mop and/or dust mop all surfaces.	Daily	Weekly	Semi-Weekly
	Vacuum-clean all carpeted areas. Spot clean as required. Report spots that cannot be removed to the supervisor.	Daily	Weekly	Daily
	Dust desk, chairs, file cabinets, counters and office furniture. Spot clean where necessary. Do not touch or remove items on the desks or furniture.	Daily	Weekly	Semi-Weekly
	Wipe/clean telephone and other accessories.	Daily	Weekly	None
	Dust all ledges and other flat surfaces within reach.	Daily	Weekly	Semi-Weekly
	Spot clean all glass surfaces and glass doors.	Daily	Weekly	Semi-Weekly
	Spot clean walls, doors, door jambs and kick plates where needed.	Daily	Weekly	As Needed
	Remove graffiti from walls, doors and partitions, if there are any.	Daily	Weekly	None
	Notify Contract Administrator of burned out lights, ballasts and/or electrical problems with lights.	As they Occur	As they Occur	As Needed
	Wash and disinfect drinking fountains, inside and outside buildings.	Daily	Daily	Daily
	Keep custodial closet clean and orderly by: sweep & mop floor; clean utility sink; keep all equip & supplies in orderly manner; spot clean walls & doors.	Daily	Daily	Daily
	Dust windowsills, ledges, all baseboards, picture frames, partitions, bookshelves, lamps, etc.	Weekly	Monthly	Semi-Weekly
	Thoroughly dust all chair legs, chair rugs/mats, furniture legs, & other furniture / accessories not dusted daily.	Weekly	Monthly	Semi-Weekly
	Dust and vacuum Venetian/vertical blinds.	2 times month	Monthly	Monthly
	Dust high partition ledges, moldings and other surfaces.	Monthly	3 times year	Semi-Weekly
Vacuum under mats and clean chair mats.	Monthly	3 times year	Weekly	

Area	Specific Task	Full Frequency	Basic Frequency	Pola Frequency
	Dust air diffusers.	Monthly	3 times year	Monthly
	Edge-clean all carpeted floors and wipe all baseboards.	Monthly	3 times year	As Needed
	Clean vents, including removal of vent plate and brushing and vacuuming around and into duct(s).	Monthly	3 times year	As Needed
Lunchrooms, Eating Areas, Snack Rooms or Cafeteria	Clean tabletops.	Daily	2 times a week	Daily
	Clean chair seats and arrange chairs.	Daily	2 times a week	As Needed
	Sweep and damp-mop entire floor.	Daily	Daily	Semi-Weekly
	Polish floors as necessary.	Daily	Weekly	As Needed
	Vacuum and spot-clean all carpeted floors.	Daily	Weekly	Daily
	Clean kitchen counters, sinks and spot-clean cabinets.	Daily	2 times a week	Daily
	Refill dispensers.	As Needed	As Needed	As Needed
	Empty all trash receptacles.	Daily	Daily	Daily
	Dust top of refrigerators and microwaves and spot-clean the exteriors.	Daily	Weekly	As Needed
	Perform high cleaning/dusting	2 times a month	Monthly	Semi-Weekly
Maintenance Shops	Sweep and spot-clean walls, fixtures and pick up all rags and dispose of trash.	Daily	2 times a week	As Needed
	Keep all trash disposal/recycling areas clean.	Daily	Weekly	Daily
	Dust Venetian/vertical blinds if applicable	2 times a month	2 times a month	As Needed
Restrooms/ Lounges/ Gyms/ Showers/ Lockers	Empty and wipe out all wastepaper receptacles and sanitary napkin receptacles and dispose of properly.	Daily	Daily	Daily
	Refill all dispensers (towels, tissue, hand soap, etc.). Dispensers shall be maintained in clean condition, free of excess soap, gum, etc. Broken dispensers shall be replaced as needed.	Daily & As Needed	Daily & As Needed	As Needed
	Clean and sanitize showers and lockers including dispensers, sanitary napkin disposal bins/boxes and chrome fittings.	Daily	Weekly	Daily
	Clean and polish mirrors, frames and metalwork.	Daily	Daily	Daily
	Wet-mop floors with disinfecting cleaner in each of these areas including shower floors.	Daily	Daily	Daily
	Sanitize toilets, toilet seats, urinals and napkin receptacles. Note: Wire-formed bowl brushes are prohibited due to marks left on porcelain. Pumice stones are acceptable.	Daily	Daily	Daily
	Disinfect underside and tops of toilet seats.	Daily	Daily	Daily

Area	Specific Task	Full Frequency	Basic Frequency	Pol Frequency
	Report malfunctioning dispensers and/or fixtures to the supervisor.	As Needed	As Needed	As Needed
	Spot-clean wall around washbasins.	Daily	Weekly	As Needed
	Damp-clean as required: partitions, ledges, sills, counters, lockers, doors and jambs. Walls, stall partitions, kick plates and doors should be free of hand marks, pencil marks, water streaks and mold.	Daily	Weekly	Daily
	Dust the tops of toilet partitions.	Daily	Weekly	Daily
	High pressure disinfecting (KaiVac) once per week entire areas of all restrooms & showers.	Weekly	Weekly	Unknown
	Wash down with disinfectant cleaner, ceramic tile walls and toilet compartment partitions.	Weekly	Monthly	Daily
	Perform high dusting of vents.	Weekly	Monthly	Semi-Weekly
	Spot-wax high traffic areas.	Weekly	Monthly	As Needed
	Pour clean water down floor drains to prevent sewer gases from escaping.	Weekly	Weekly	As Needed
Docks & Receiving Areas	Sweep and pick-up all loose trash in area. Include area where trucks stop for deliveries and pick-ups.	Daily	Daily	As Needed
	Sweep and clean areas around trash compactors or dumpsters, including recycling dumpsters.	Daily	2 times a week	As Needed
Lobbies, Corridors, Stairways & Elevators	Damp-mop/dust-mop all lobby, hall, stairwell, elevator and corridor floors. Wads of gum and other sticky substances should be removed from area.	Daily	Daily	Semi-Weekly
	Vacuum and edge-clean all carpeted floors. Spot-clean where necessary.	Daily	Weekly	Semi-Weekly
	Spot-clean walls and doors.	Daily	Weekly	As Needed
	Clean and wash ashtrays and sand urns.	Daily	2 times a week	None
	Clean and polish walls, panels, doors and frames, as needed.	Daily	Weekly	As Needed
	Clean all surfaces in the interior of elevators. Ceiling and walls shall be free of finger marks, graffiti and other smudges. Elevator walls shall be free of splash marks.	Daily	Weekly	Semi-Weekly
	Clean handrails of escalators. Spot-clean all glass surfaces. Clean all risers and treads. Polish metalwork and base plates.	Daily	Weekly	Semi-Weekly
	Check exit doors and lights. Report to supervisor if they need fixtures or replacements.	Daily	Weekly	As Needed
	Clean door tracks and thresholds.	Daily	Weekly	As Needed
	Clean all interior and entrance doors; clean all glass doors.	Daily	Daily	As Needed

Area	Specific Task	Full Frequency	Basic Frequency	Pola Frequency
	Wipe clean and polish to an acceptable luster all metalwork, such hardware, doorknobs, kick plates, mail chutes, water coolers and metal door frames.	Daily	Weekly	Semi-Weekly
	Wipe and polish all elevator doors, frames and saddles.	Daily	Weekly	Semi-Weekly
	Dust all furniture, accessories, ledges and other items.	Daily	Weekly	Semi-Weekly
	Remove all trash and refuse. Carry trash to disposal area. Replace liners as needed.	Daily	Daily	Daily
	High-speed burnishing floors nightly at all Police Stations.	Daily	Daily	Monthly
	Wet-mop all hard-surfaced floors in lobbies, halls, stairwells and corridors.	Weekly	Monthly	Semi-Weekly
	Clean baseboards.	Weekly	Monthly	As Needed
	Perform high dusting in all areas.	Monthly	3 times a year	Semi-Weekly
	Dust air diffusers, light fixtures and elevator ceiling grills.	Monthly	3 times a year	Semi-Weekly
	Clean vents, including removal of vent plate and brushing and vacuuming around and into duct(s).	Monthly	3 times a year	As Needed
	Wet-mop or scrub all uncarpeted steps, risers and landings. Remove caked-in dirt particles.	Monthly	3 times a year	Semi-Weekly
	Clean and remove all marks and stains from counters and partitions.	Monthly	3 times a year	As Needed
	Shampoo elevator carpets.	Monthly	3 times a year	Yearly
Sidewalks & Exterior Areas	Remove trash and debris from entrances, including large trash items in bushes or planters.	Daily	Daily	Daily
	Remove trash from trash cans and at all entrances and replace liners.	Daily	Daily	Daily
	Wash all partition glass and clean entrance way floors.	Weekly	Monthly	Monthly
Miscellaneous	Carpet cleaning will be performed in each contracted facility two (2) times per year, except for libraries and Child Care Centers; all libraries will have their carpets cleaned three (3) times per year; all Child Care Centers will have their carpets cleaned monthly. Price for carpet extraction services must be included on Attachment E.	As specified	0 times per year for all locations other than as specified for libraries and Child Care Centers.	N/A
	Strip and reseal all resilient floors in corridors, entrances, lobbies, restroom floors and other heavy traffic areas.	2 times per yr (Quarterly for LAPD Stations)	0 times per year - (1 time for LAPD Stations)	As Needed
	Empty all trash cans, clean stairwells, landings and just outside the doors to the parking lot/garage.	3 times per week	2 time per week	Daily
	Clean debris out of all adjoining escalator, elevators and/or stairwells wells.	3 times per week	1 time per week	As Needed

Harbor Department’s Port Construction & Maintenance Division

Performance Audit Response

Finding / Condition	Recommendations	Response
<p>1. The Division has not fully implemented an asset management system or software to manage the Port's assets.</p>	<p>1.1 Develop an asset management program that includes a defined policy, an asset inventory, setting service levels, developing documented maintenance activities, listing capital improvement needs, and developing program objectives and metrics. The development of the program should begin immediately and be implemented over the next 12-18 months. This is an operational program, not the software.</p>	<p>1.1 Construction and Maintenance (C&M) agrees that a properly developed asset management program would be a huge benefit to the Port. Asset management refers to the process of identifying, managing, and optimizing an organization's assets to maximize their value and achieve specific financial goals. Asset management is driven by clearly defined objectives to maximize returns, mitigate risks, and ensure the long-term sustainability of an asset. It encompasses the entire lifecycle of an asset, from acquisition to operation, maintenance, and eventual disposal. A CMMS system (Maintstar) should not be equated to an asset management system or program as it is only one of the tools or components of a larger asset management system. C&M will coordinate with Information Technology (IT) to evaluate potential software and operational solutions for a department-wide asset management program.</p>
	<p>1.2 Add an Asset Analyst / Program Manager position in the FY 2025/26 budget with a background in GIS to assist in using the asset management software (MaintStar) and develop training on using the system so the Division has two positions dedicated to asset management. There is currently 1 position focused on this workload (Construction Estimator).</p>	
	<p>1.3 Develop a policy regarding the use of MaintStar within six months and require all programs to plan, schedule, track, on report on work activities in MaintStar.</p>	
	<p>1.4 Expand the use of mobile technology and the use of tablets or iPads to allow staff to access asset information and work orders from the field, to be implemented immediately. This will increase efficiencies and eliminate duplication of data entry, eliminate paper work orders, allow staff to have access to past maintenance data in the field, and allow staff to create subtasks or workorders as necessary from the field.</p>	
		<p>1.2 The hiring of an Asset Analyst/Program Manager with a background in GIS to assist in developing a department-wide</p>

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		<p>asset management program will be coordinated and evaluated with IT. This position would be critical in order for the department to support and implement the asset management program proposed in recommendation 1.1.</p>
		<p>1.3 The Maintstar system at C&M was implemented in 2009 and currently contains detailed data on over 126,000 individual service requests. All essential users have been trained in the use of the system and actively input data on a daily basis. All C&M workorders are planned, scheduled, tracked, and reported on as needed. C&M will create an operators manual and a flow chart on the use of Maintstar within six months as recommended. C&M will also reach out to IT to review existing software use policies and model the requested Maintstar use policy accordingly.</p>
		<p>1.4 The use of hand-held technology has expanded significantly over the past several years as the technology has become more readily available and the Maintstar system has been upgraded. Approximately half of the C&M workforce is currently assigned a hand-held device. C&M will continue to evaluate the need for additional technology on an annual basis and submit budget requests as necessary.</p>

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<p>2. The division’s administrative support does not align with its size and scope.</p>	<p>2.1 Consolidate administrative support functions into one team/unit. Add an Assistant Director position reporting to the Director to oversee the unit. This should be considered in the next fiscal budget cycle.</p>	<p>2.1 All administrative support functions are currently handled under C&M Admin Division 126. The addition of an Assistant Director or Chief Management Analyst position will be evaluated.</p>
	<p>2.2 Administrative support units should enhance tracking of work activities. It is recommended that the administrative support units begin a process to track primary work activities MaintStar (or through another technological option) to document time requirements and workload for future staffing evaluation.</p>	<p>2.2 C&M will contact the various administrative support groups at the Port to understand how they are tracking these types of administrative work activities and how workload is evaluated for future staffing needs. C&M will then apply these evaluation techniques accordingly to C&M specific tasks.</p>
	<p>2.3 Add three (3) staff positions to support Fiscal Operations. Add 1 FTE Sr. Accountant to oversee the Accounting Clerks. Add 1 FTE Accounting Clerk. Second level Supervisors should be assigned a primary Accounting Clerk to work with. Add 1 FTE Management Analyst to focus on contract management and administration. This should be considered in the next fiscal budget cycle.</p>	<p>2.3 The Harbor Department is currently working with the City of Los Angeles Personnel Department to identify positions available to fill via transfer in order to avoid layoffs in the City. The positions identified will be evaluated for potential transfer.</p>
	<p>2.4 Retitle Quality Assurance to Personnel or Workforce Management to better align with the work activities of the unit.</p>	<p>2.4 Quality Assurance has been retitled as Administrative Services.</p>
	<p>2.5 Add 1 FTE Safety / Training Coordinator position to the Division.</p>	<p>2.5 Safety continues to be the number one priority at C&M. Risk Management is currently supporting C&M with two part-time Safety/Training coordinators.</p>
<p>3. The long-term maintenance and operational requirements and expenses of major capital projects have not been</p>	<p>3.1 Modify the CIP process to consider each project’s maintenance and operating cost requirements, to be completed annually.</p>	<p>3.1 Engineering and C&M work closely in determining the maintenance and operating costs for every new CIP</p>

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effectively integrated into the capital improvement planning process and, subsequently, are not considered in the annual budgeting process.	3.2 Integrate the operating cost requirements into the Capital Investment Plan of the Port’s CIP to document annual funding needs and determine revenue sufficiency, to be completed annually as part of the budget process.	3.2 project. These costs are incorporated into the Port’s financial model. C&M operating costs are evaluated annually as part of the annual budgeting process. C&M will work with the Finance team to provide operating cost estimates when available and as appropriate for CIP projects.
4. The Division's staffing is, in some cases, not adequate based on the assets to be maintained. Staffing levels should be evaluated routinely to keep in alignment with changes in assets and maintenance responsibilities.	<p>4.1 Fill the current Boat Captain vacancy and reestablish previously reduced Deck Hand position for fill in the next 12 months.</p> <p>4.2 Add Gardener or Sr. Gardener positions as greenspace is developed that meets a ratio of 4 acres per FTE and accounts for a 15% vacancy rate. It is recommended Parks and Grounds Maintenance staffing be increased from 35 to 46 FTEs. Staff should be added over the next two fiscal years.</p> <p>4.3 Develop appropriate custodial service level frequency standards using the model set by GSD and develop a staffing model based on current occupied square footage. If using the basic level of service, increase staffing by 10 FTEs over the next two fiscal budget cycles.</p> <p>4.4 Add three (3) new Port Electrical Mechanic positions to manage the current workload and have two positions covering the transition from Graveyard to Day Shift in the upcoming budget cycle.</p> <p>4.5 Add two (2) new FTE Equipment Mechanic positions to manage the current equipment repair workload in the upcoming budget cycle.</p> <p>4.6 Add one (1)Construction Estimator position and one (1) Construction Project Manager position to C&M Capital Projects to meet project workload demand in the upcoming budget cycle.</p>	<p>4.1 C&M always attempts to fill every vacant position in the most expeditious manner possible. The vacant Boat Captain position has been filled and the vacant Deck Hand position is in the process of being filled.</p> <p>4.2 C&M is currently attempting to fill every vacant Gardener position that is allocated. When completely staffed, a ratio of 4.3 acres per FTE will be achieved. As maintenance obligations are increased in future years, increased staffing levels will be evaluated and proposed either through additional staffing or augmentation of staffing through contracts.</p> <p>4.3 Custodial service level frequency can vary widely depending on the unique characteristics of the facilities being serviced. Benchmarks from organizations such as ISSA, APPA, and GSD are helpful in establishing baselines for staffing. C&M has been operating at current staffing levels for many years with minimal complaints or</p>

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		<p>service failures. Current service levels are being met and C&M staff frequently receive commendations and accolades for the quality of their work. While ten additional FTEs is not needed, a few additional FTES would be welcomed. C&M will evaluate the need for additional custodial staff.</p>
		<p>4.4 C&M is currently attempting to fill every vacant Port Electrical Mechanic (PEM) position that is allocated. Ideal staffing levels would be two PEMs at every container terminal during the day shift, and then one PEM at every container terminal for both the evening shift and the early morning shift. Currently, there is a one hour overlap on each of the three shift changes. C&M will continue to work with HR to evaluate options for filling PEM vacancies through in-lieu hiring at a lower level or development of a PEM apprenticeship.</p>
		<p>4.5 The use of Vehicle Equivalent Units (VEU) is an effective way to analyze staffing needs and costs. The current allocation of staffing in Division 142 is adequate to cover the department's needs. The audit recommends 14.8 FTEs. The division is currently staffed with 14 FTEs.</p>
		<p>4.6 Project levels within the Capital Projects Division do not remain constant. Therefore, the staff within this division is augmented as needed with estimators and project managers</p>

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<p>5. There is a disparity in organizational spans of control amongst various levels of supervisors, requiring different levels of supervision and management capacity.</p>	<p>5.1 An additional Parks Maintenance Supervisor is necessary to manage appropriate spans of control within Gardening as staff is added to meet acreage demands in the next fiscal budget cycle.</p> <p>5.2 Create a Second-Level Supervisor to oversee Divisions 149 and 142 (Welding and Equipment Repair) in the next fiscal budget cycle to report directly to the Assistant Director (Orozco).</p> <p>5.3 Create a Second-Level Supervisor to oversee Divisions 130 and 133 (Custodial and Street Maintenance) in the next fiscal budget cycle and change these areas to report under the other Assistant Director (Hughes).</p>	<p>from the hiring hall to cover staffing and project needs.</p> <hr/> <p>5.1 The need for an additional Park Maintenance Supervisor will be evaluated if staffing levels are increased. When all vacant positions are filled, current staffing allocations would be sufficient to cover current acreage.</p> <p>5.2 There are a significant number of considerations to make when structuring an organization. C&M feels that the current management structure meets the needs of the organization and workloads. The current staffing structure aligns with City of LA Personnel Department career ladders. Career ladders are opportunity pathways that demonstrate potential promotional and lateral movement between classifications. C&M will continue to evaluate staffing needs and structure on an ongoing basis.</p>
<p>6. C&M has considered and is taking advantage of alternative hiring processes that meet City Personnel requirements and increase hiring efficiency.</p>	<p>6.1 C&M and Human Resources should collaborate to develop a formalized plan to enhance the utilization of the alternative hiring programs. This should include a matrix that lists all positions, indicates whether each position qualifies for the TLH or Bridge program, and identifies potential modifications needed for non-qualifying positions to become eligible. The Division/HR should use this matrix as a first step in evaluating all recruitment activities and opportunities.</p>	<p>6.1 C&M in collaboration with HR has been actively hiring staff through the "Targeted Local Hire" program and the "Bridge to Jobs" program. Both of these programs provide alternate pathways into City civil service positions. Since 2017, C&M has hired over 50 employees through these</p>

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		programs. In addition, C&M has been actively involved with attending local job fairs and providing tours of the C&M yard to local trade schools such as Harbor Occupational Center and LA Trade Tech, in addition to the Boys and Girls Club of LA.