



## **Engineering Department**

### **Staffing Plan**

October 1, 2025

## **Chapter 1 Purpose and Background**

### **1.0 PURPOSE**

OC San currently relies on contract staff to support execution of the Capital Improvement Program (CIP) and small projects. The small projects consist of Facility Engineering (FE) (CIP funded) and Facility Replacement (FR) (operationally funded) projects. This request seeks approval to shift the staffing philosophy to hire additional full-time-equivalent (FTE) positions to reduce reliance on contract resources. Expanding in-house staffing will strengthen succession planning, support the transfer of institutional knowledge, and improve project oversight by achieving a more manageable staff-to-supervisor ratio. This document outlines the future staffing resources required by the Engineering Department to meet the CIP and small project needs over the next 10 years and describes the benefit of hiring additional OC San staff and enhancing the supervisory structure.

### **1.1 BACKGROUND**

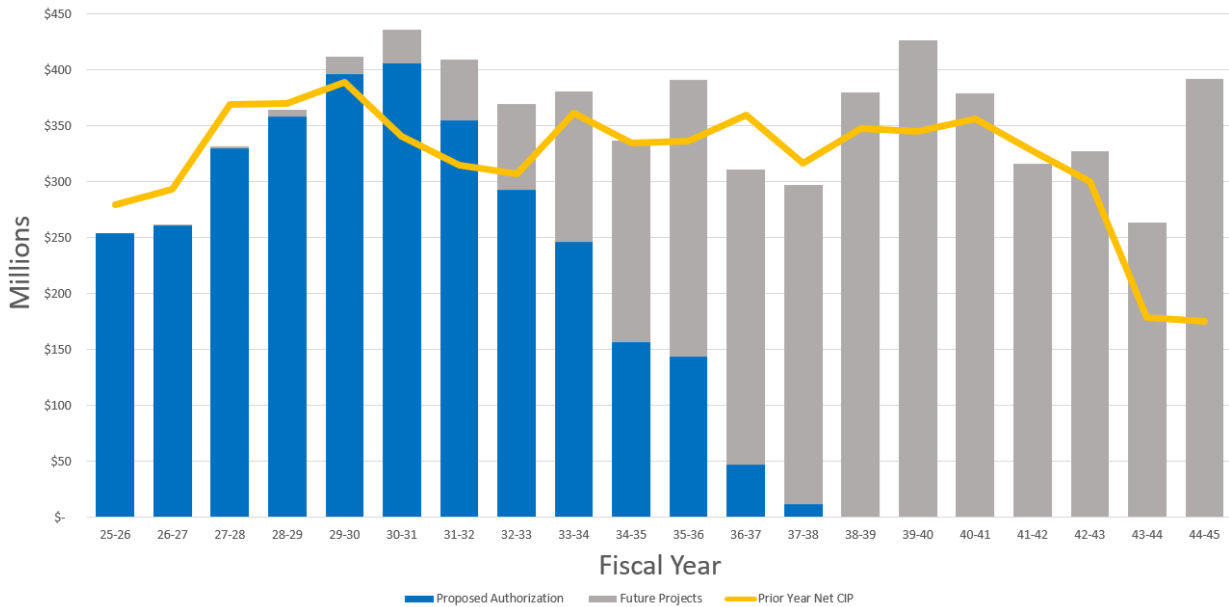
#### **1.1.1 ENGINEERING DEPARTMENT**

A. The Engineering Department includes four divisions that are responsible for the planning and execution of CIP and small projects.

1. Planning: Supports OC San's long-term infrastructure strategy by maintaining the CIP, guiding project prioritization using asset management, and coordinating capacity planning. The division performs system modeling, manages permitting functions, monitors trends affecting infrastructure needs, and provides technical input for CEQA and policy decisions.
2. Project Management Office (PMO): Manages CIP and small projects with a focus on scope, schedule, budget, and risk management.
3. Design: Provides technical leadership on projects during planning, design, and construction. Provides commissioning oversight and support. Provides secure and reliable control systems for the collections and plant facilities.
4. Construction Management: Provides construction management services to ensure CIP and small projects are safely constructed in accordance with all applicable construction and engineering codes and standards and in compliance with the contract documents.

#### **1.1.2 CAPITAL IMPROVEMENT PROGRAM IS INCREASING**

A. The CIP has been steadily increasing in value, complexity, and number of projects since it hit a low of \$80M after the completion of the 2012 full secondary consent decree, requiring a proportional increase in the number of staffing resources. Fiscal year 2024-25 had a net cashflow of \$245M. OC San currently has approximately 110 active CIP projects valued at around \$4 billion. Over the next 4 years, the CIP will continue to ramp up to over \$350M, with a 20-year net CIP of \$6.7 billion.



**Figure 1 – 20-Year Net CIP (FY25-26)**

**1.1.3 ADDITIONAL MAINTENANCE SUPPORT**

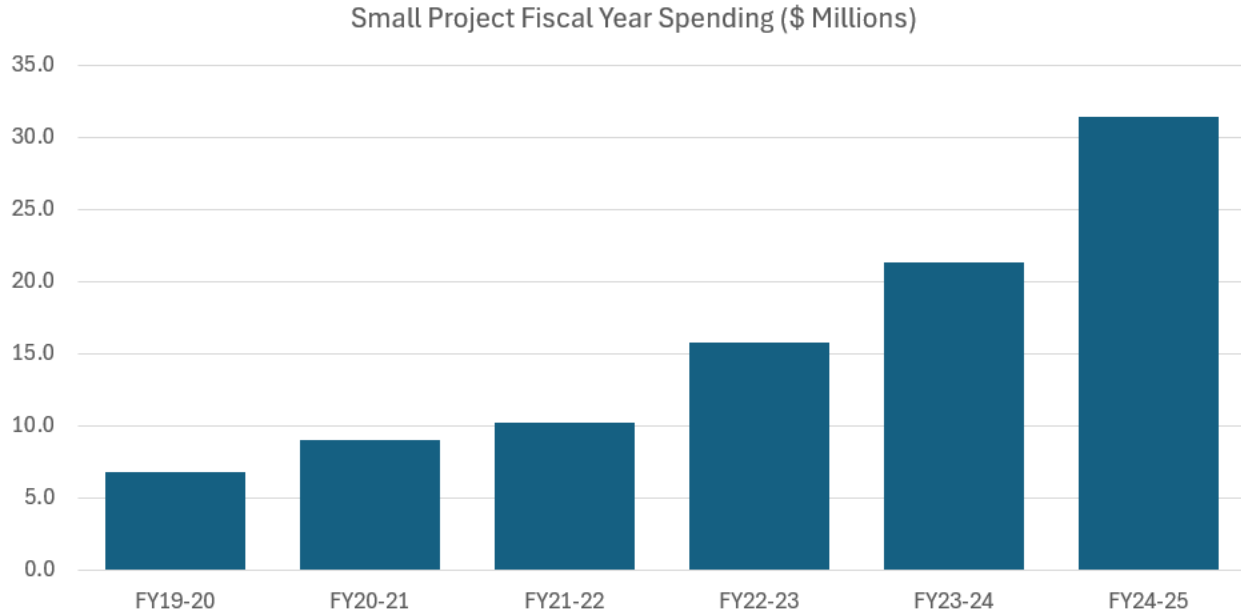
A. In 2019, OC San reorganized the Operations, Maintenance, and Engineering (OME) Departments to provide a more focused asset management approach and create a Small Project Delivery Group within Engineering. This was accomplished by moving engineers and a supervisor from Maintenance to Engineering, leaving O&M with three process engineers dedicated to support daily plant operations.

B. The reorganization expanded the asset management group within the Engineering Department and assigned asset engineers to collections, pump stations, and plant areas. The areas in the plants match the O&M area teams. This reorganization was very successful in creating a close, integral partnership between Engineering and O&M, with the asset engineers serving as the first point of contact for engineering assistance. The asset engineers also support the execution of small operationally funded maintenance projects, which often use a pre-approved list of maintenance contractors to expedite repair work with a construction cost up to \$500,000.

C. The Small Project Delivery Group oversees the execution of FE and FR projects, which utilize consultant design and construction services with fees up to \$500,000. These include both Public Works and non-Public Works repair projects, such as valve replacements at pump stations, pump replacements requiring modifications, piping replacements, HVAC replacements, roof repairs, and motor starter replacements. These projects play a critical role in ensuring reliable collections and plant operations in the periods between larger CIP projects, which are typically executed every 25 years.

D. The OME reorganization has been very beneficial to OC San’s operations. It came at a critical time when Maintenance’s workload was increasing due to the addition of full secondary facilities, thickening and dewatering facilities, and aging of existing assets. Proper maintenance and timely repair of these assets are essential to ensuring reliable facility operations, maintaining permit compliance, phasing and sequencing work for CIP projects, and maintaining consistent flows to the Orange County Water District’s Ground Water Replenishment System. As a result of the reorganization, Engineering has supported and executed a significantly greater number of small projects. The growth in small project spending since 2019 is shown in **Figure 2**. The small project workload requires approximately 25 staff across the Engineering Department’s various

roles to keep up with the demand. Although successful and important, this additional workload does place additional demands and project coordination effort on an already busy project execution process.

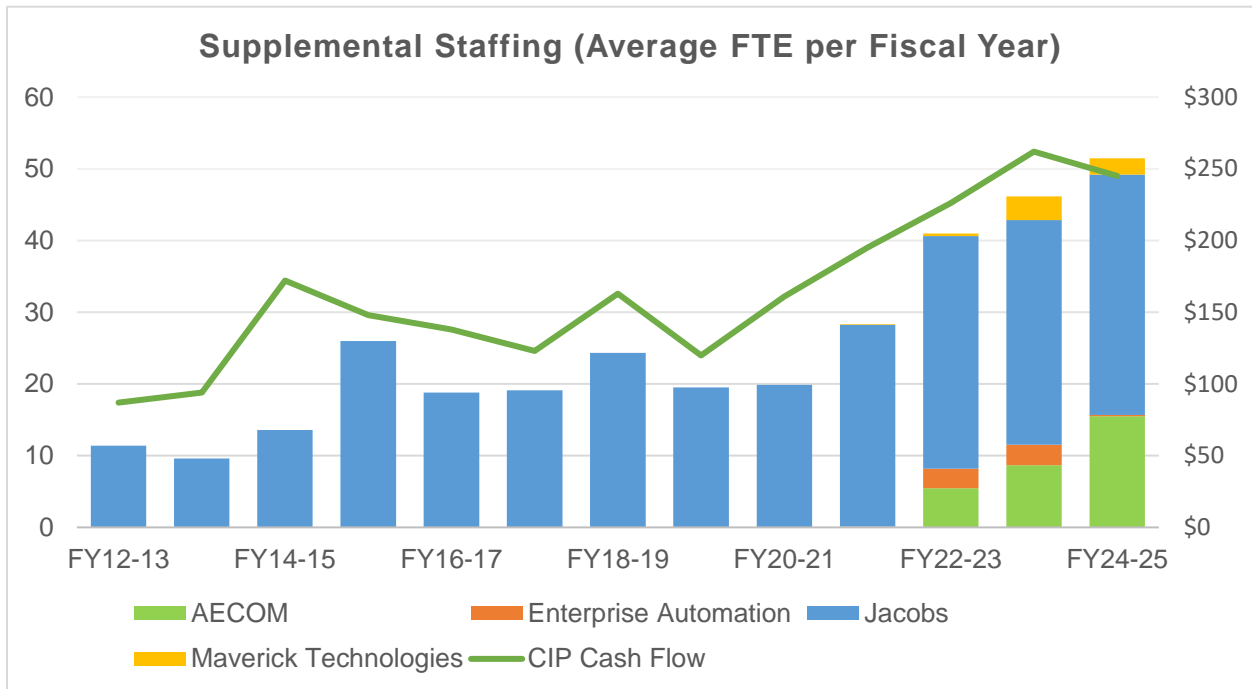


**Figure 2 - Small Project Spending**

**1.1.4 SUPPLEMENTAL STAFFING**

A. For more than 20 years, OC San has utilized professional service agreements for supplemental staffing to meet the CIP and small project workload demands. This initially began with the use of contract staffing firms to bring in select staff. Starting in 2002, multi-year program management contracts were used to provide supplemental resources to meet the full secondary consent decree and CIP workload. See **Figure 3** for supplemental staffing levels.

1. Integrated Program Management Consultants (IPMC) (2002 - 2012)
2. Supplemental Engineering Services (2012 - 2017)
3. Supplemental Engineering Services (2017 - 2022)
4. Supplemental Engineering Services (2022 - 2027) (Jacobs and AECOM)
5. Programming Professional Services (2022 – 2027) (Enterprise Automation and Rockwell Automation)



**Figure 3 - Supplemental Staffing Levels**

B. The supplemental staffing contracts have served OC San well and helped OC San to execute the CIP and small projects. Contract staff retention has been a challenge at times, creating temporary gaps and loss of project knowledge. Expanding additional OC San staff will reduce staff turnover, preserve expertise, improve continuity in project execution, and maintain institutional knowledge.

C. While the supplemental staffing firms provide supervision, performance reviews, training, and coaching for their teams, OC San’s supervisors remain actively involved in workload distribution, technical problem solving, and commercial dispute resolution. OC San’s management staff need to interact with the supplemental staffing firms to provide knowledge of OC San’s execution process and standards, provide general project oversight, manage project and program risks, understand and approve major decisions, provide knowledge of project interdependencies, and support collaboration with project stakeholders.

D. A new Supplemental Engineering Services (SES) request for proposal will be sent out in October 2025 for Fiscal Years 2026-27 to 2031-32.

**1.1.5 PROGRESSIVE DESIGN-BUILD**

A. OC San is in the process of developing a program to utilize progressive design-build to execute a select number of projects. Currently legislation allows OC San to execute 10 projects, each at least \$5M in value. OC San will be awarding the first progressive design-build project in November 2025 and is currently planning to execute several additional projects using this procurement method. This procurement method is expected to require less engineering design and construction management resources since the design and construction quality assurance/quality control is owned by the design-builder. Progressive design-build provides a faster project execution process and will allow OC San to execute projects with fewer overall resources from the Engineering Department.

#### **1.1.6 INSTITUTIONAL KNOWLEDGE**

A. Institutional knowledge is essential to the long-term success of OC San. The transfer of knowledge from one generation of staff to the next helps to ensure the successful operation of our facilities and the successful delivery of our projects. The retirement of seasoned staff over the past five years has created a gap in this knowledge and understanding of our facilities. Past project knowledge, risks, challenges, and operational work restrictions that were once easily brought up during project review meetings now require more research and investigation. Growing the Engineering Department through the addition of permanent staff improves ownership, accountability and succession management by building and preserving institutional knowledge to support the growth and effectiveness of the organization and providing a larger pool of potential candidates to fill technical, supervision, and managerial positions.

## Chapter 2 Staffing Requirements

### 2.0 OVERVIEW

A. OC San has validated the overall workload of the Engineering Department for the next 10 years to determine the staff requirements for the major resources. Based on Human Resource Department's historical information, the average years of service for an OC San employee has changed from 24 years to 9 years over the past 10 years. This justifies the use of a 10-year staffing window.

B. Even with additional FTEs, there will continue to be a need for supplemental staffing to support additional workload peaks, perform value engineering and constructability reviews, and provide technical expertise in specialized areas not provided by OC San, such as structural, architectural, and HVAC when needed.

C. The information in this document is based on supplemental staffing resources as of September 2025. The number of current supplemental staff will need to ramp up to accommodate the increasing project workload.

#### D. Engineering Department Project Workload

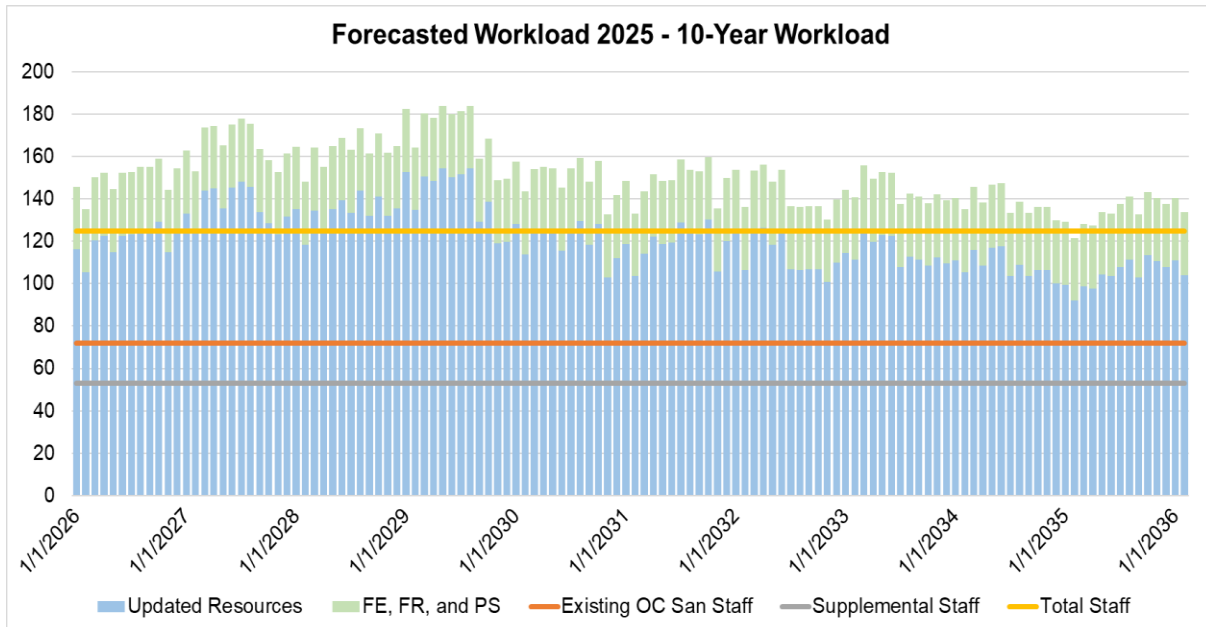
1. There are 124 FTEs in the Engineering Department with an average of 72 staff that charge to CIP funded projects (including FE projects) and operationally funded FR projects.

2. Most of the resources to support asset management and operationally funded projects for Maintenance are from the Planning Division. Staff in this division mostly charge their time to facility areas for asset management and operationally funded maintenance projects, with a small portion of their time charged to planning studies and CIP projects.

3. Most of the resources to support CIP funded projects come from the PMO, Design, and Construction Management Divisions. Staff in these divisions mostly charge to CIP projects.

4. The billing rates for Engineering Department project staff who charge to projects include benefits and a markup to cover the overhead cost of management, supervision, Finance, and Contract Management who support the execution of projects but do not charge to them.

5. **Figure 4** represents the total forecasted staff workload over the next 10 years. This graph includes an average of 30 staff to execute small projects (FE and FR), planning studies (PS), and research projects, based on the staffing levels observed over the last 17 months. Unlike budgeted CIP projects (e.g. J-XXX, P1-XXX, and P2-XXX) and future CIP projects (e.g. X-###), which are budgeted and planned 20 years into the future, small projects, planning studies, and research projects are identified a few years in advance of being launched.



**Figure 4 – 10-year Staff Workload**

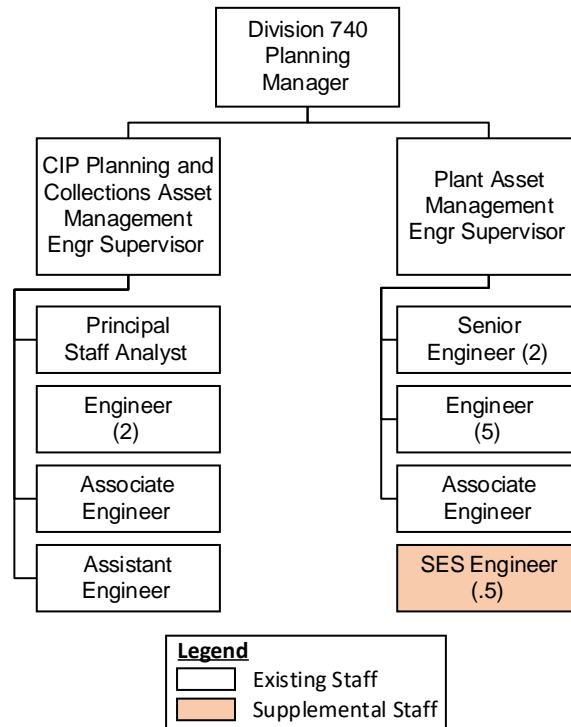
E. Approximately 25% of the staff workload, including supplemental staffing, occurs during the project development and design phases and 75% of the staff workload occurs during the construction phase. This is reflected in the Construction Management Division staffing where the staff workload is increasing over the coming years.

## 2.1 PLANNING

### 2.1.1 CURRENT ORGANIZATION AND STAFFING

- A. The Planning Division consists of two groups: CIP Planning/Collections Asset Management Group and Plant Asset Management Group. There is a total of 16 staff members.
- B. SES provides one half-time electrical engineer to support electrical asset management.
- C. See **Figure 5** for the existing organization chart.





**Figure 5 – Existing Planning Division Organization Chart**

**D. CIP Planning/Collections Asset Management Group**

1. Provides technical input on CEQA and oversees the on-call CEQA support services contract.
2. Provides asset management for the collections and pump stations, tracks and resolves asset issues, provides technical support for maintenance projects, and performs collections system modeling.
3. Supports OC San’s long-term infrastructure strategy by maintaining the CIP, guiding project prioritization, and coordinating capacity planning.
4. Manages permitting functions and interagency agreements.
5. Oversee the Planning Study and Research Program.
6. Assists or leads the execution of planning studies.

**E. Plant Asset Management Group**

1. Provides asset management for the plants, tracks and resolves asset issues, and provides technical support for maintenance projects. The maintenance project workload is currently exceeding the capacity of the plant asset engineers group.
2. There is one senior engineer at each plant to provide plant oversight, in addition to their assigned asset area. They also lead the recently created Shutdown Coordination Committee and coordinate future project shutdowns at the plants by reviewing input from project engineers and other asset engineers. The shutdown coordination is essential as the CIP continues to ramp up.
3. Assists or leads the execution of planning studies.

**2.1.2 PROPOSED ORGANIZATION AND STAFFING CHANGES**

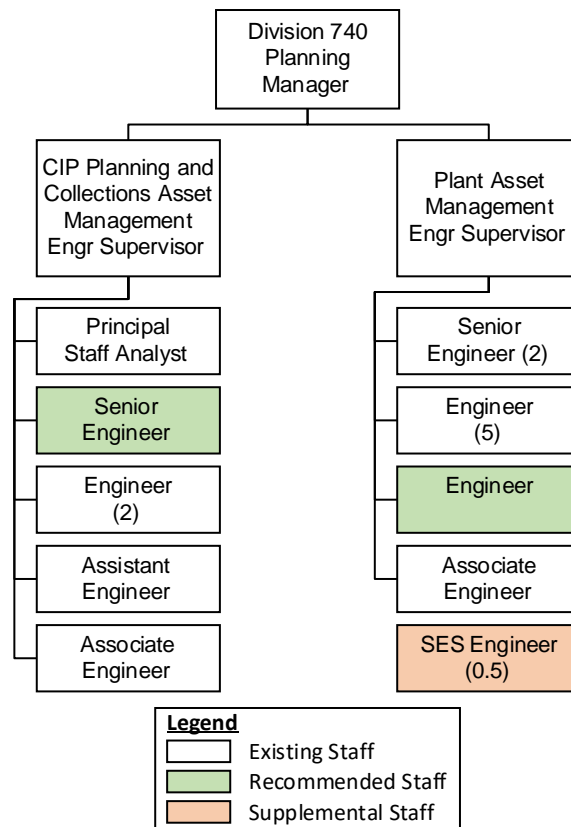
A. The workload for the Collections Asset Management Group has increased for condition assessment, siphon cleaning, and maintenance projects and is starting to exceed the capacity of the staff. To meet the workload needs and provide better technical oversight of the collections and pump stations, it is recommended to add one senior engineer. The other engineers in the group will continue to be assigned to gravity sewer, pump stations, permitting and external agreements, with support from the associate and assistant engineer to help with studies, maintenance projects, CCTV, and miscellaneous items.

B. Plant Asset Management Group: The overall workload for maintenance projects exceeds the capacity of the asset engineers. To meet the workload needs, it is recommended to add one engineer.

C. In summary, it is recommended to add 2 in-house staff:

1. 1 senior engineer
2. 1 engineer

D. See **Figure 6** for the proposed organization chart and **Table 1** for the proposed staffing levels.



**Figure 6 – Proposed Planning Division Organization Chart**

| Table 1 - Division 740 Planning - Proposed Staffing |           |                |           |                |          |                |          |
|---|-----------|----------------|-----------|----------------|----------|----------------|----------|
| Staff Role<br>(Note 1)                              | Current   |                | Proposed  |                | Change   |                | Comments |
|   | OC San    | Suppl Staffing | OC San    | Suppl Staffing | OC San   | Suppl Staffing |          |
| Manager   | 1         | 0              | 1         | 0              | 0        | 0              |          |
| Supervisors   | 2         | 0              | 2         | 0              | 0        | 0              |          |
| Staff   | 13        | 0.5            | 15        | 0.5            | 2        | 0              | Note 2   |
| <b>Div Total</b>                                    | <b>16</b> | <b>0.5</b>     | <b>18</b> | <b>0.5</b>     | <b>2</b> | <b>0</b>       |          |

**Notes:**  
 1. Staffing counts are based on September 2025 data. Supplemental staffing will continue to be adjusted as required to meet the current workload.  
 2. The proposed supplemental staffing count includes retaining a half-time electrical engineer to support the current asset management workload.

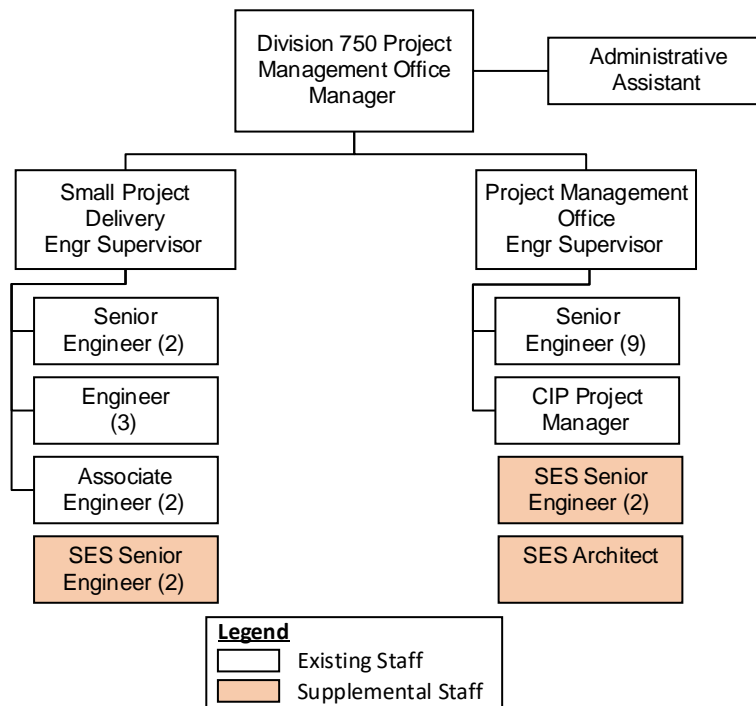
## 2.2 PROJECT MANAGEMENT OFFICE

### 2.2.1 CURRENT ORGANIZATION AND STAFFING

A. The PMO consists of two groups: Project Management Group and Small Project Delivery Group. There is a total of 21 staff members.

B. SES currently provides three project managers for the Project Management Group and two managing project engineers (MPE) for the Small Project Delivery Group.

C. See **Figure 7** for the existing organization chart.

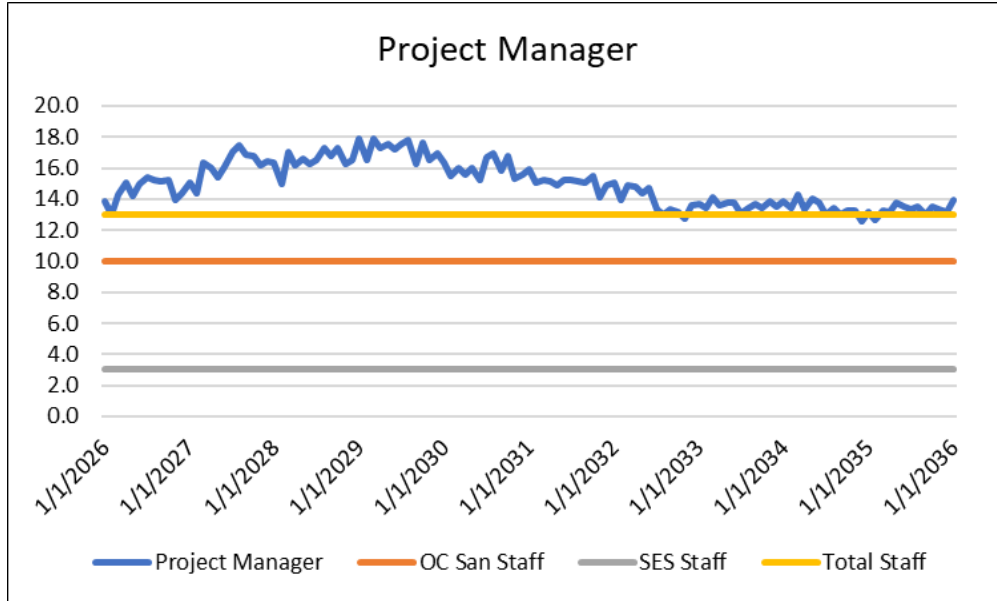


**Figure 7 – Existing PMO Division Organization Chart**

D. Project Management Group

1. Project managers lead the individual projects and oversee the scope, schedule, budget, and risk management. **Figure 8** shows the projected project management workload over the

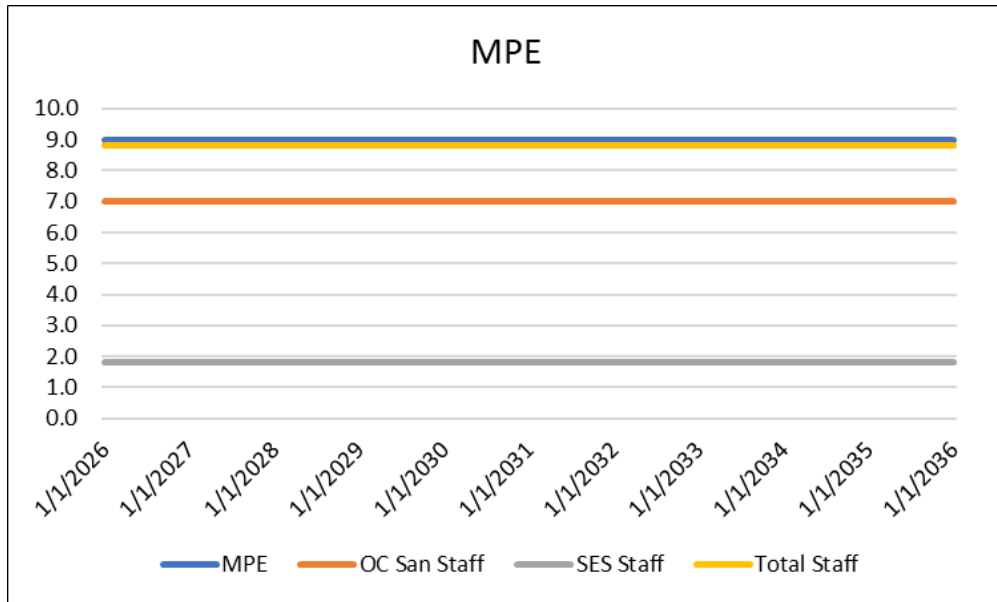
next ten years. In the figure, the blue line represents the number of full-time project managers required, while the yellow line represents the current staffing level, which also serves as the recommended 10-year baseline staffing level. Any short-term staffing needs above this baseline will be supported by SES.



**Figure 8 – Workload for Project Managers**

E. Small Project Delivery Group

1. Since the 2019 OME reorganization, the workload of the Small Project Delivery Group has steadily increased to accommodate the small project workload needs of O&M. This work is carried out by MPEs, who are responsible for both project management and technical duties. The current average workload for the past 17 months requires nine MPEs. Based on the average volume of projects being approved by the Clearinghouse (OC San’s bi-weekly project approval process), this workload level is anticipated to remain steady for years to come. **Figure 9** reflects this projection, showing the workload at nine MPEs.



**Figure 9 – Workload for Managing Project Engineers**

**2.2.2 PROPOSED ORGANIZATION AND STAFFING CHANGES**

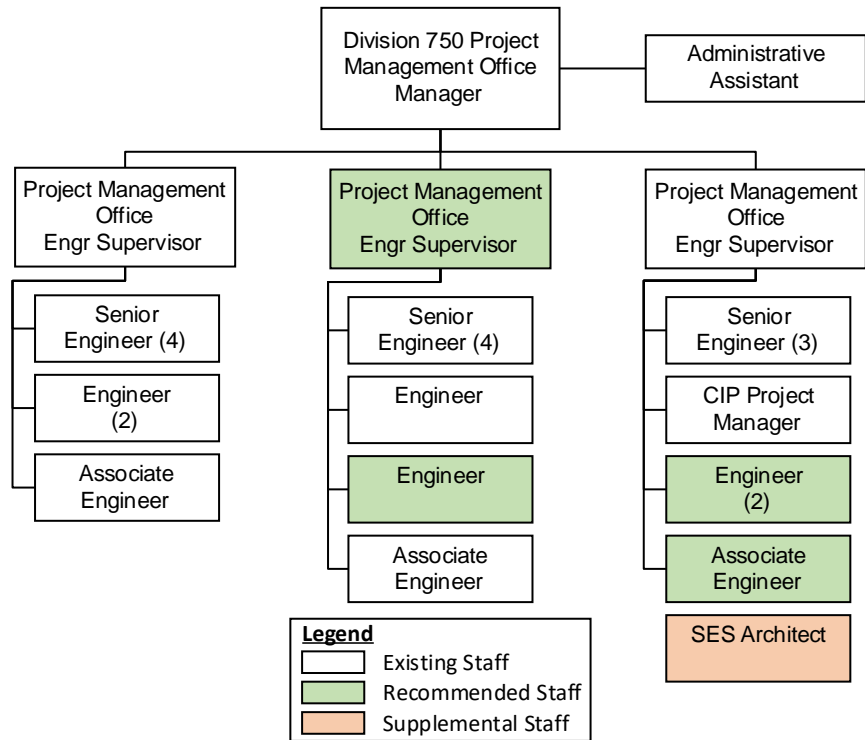
A. The Project Management Group supervisor oversees staff responsible for delivering CIP projects, which currently total over 50 projects worth \$4 billion and 13 small projects. Similarly, the Small Projects Delivery Group supervisor oversees staff executing small projects. The total number of small projects currently totals 60 projects worth around \$128 million. The growing number and value of these projects makes it increasingly difficult for a single supervisor to provide adequate oversight of their group. To provide effective oversight of all projects, it is recommended to add a third engineering supervisor to better balance responsibilities and redistribute staff and projects, so the three supervisors oversee a mix of both CIP and small projects, rather than dividing groups strictly by project type. This will also build internal expertise and capabilities and support succession management efforts for the associated managerial position.

B. Since the establishment of the PMO in 2002, all CIP project managers have been classified at the senior engineer level. To strengthen succession management within the PMO, the recommendation is to leverage the job classification family by assigning projects based on their size and complexity, similar to what is done in the Design and Construction Management Divisions. This structure allows staff to progressively develop as project managers and advance into higher classifications based on the complexity of the work. To address the growing workload and assure proper oversight, it is recommended to add three engineers to manage both CIP and small projects and one associate engineer to manage small projects.

C. In summary, it is recommended to add 5 in-house staff:

1. 1 engineering supervisor
2. 3 engineers
3. 1 associate engineer

D. See **Figure 10** for the proposed organization chart and **Table 2** for the proposed staffing levels.



**Figure 10 – Proposed PMO Division Organization Chart**

| Staff Role<br>(Note 1) | Current   |                | Proposed  |                | Change   |                | Comments |
|------------------------|-----------|----------------|-----------|----------------|----------|----------------|----------|
|                        | OC San    | Suppl Staffing | OC San    | Suppl Staffing | OC San   | Suppl Staffing |          |
| <b>Manager</b>         | 1         | 0              | 1         | 0              | 0        | 0              |          |
| <b>Supervisors</b>     | 2         | 0              | 3         | 0              | 1        | 0              |          |
| <b>Staff</b>           | 18        | 5              | 22        | 1              | 4        | -4             | Note 2   |
| <b>Subtotal</b>        | <b>21</b> | <b>5</b>       | <b>26</b> | <b>1</b>       | <b>5</b> | <b>-4</b>      |          |

**Notes:**  
 1. Staffing counts are based on September 2025 data. Supplemental staffing will continue to be adjusted as required to meet the current workload.  
 2. The proposed supplemental staffing count includes retaining one architect to support the lab and Plant No. 2 O&M Complex.

## 2.3 DESIGN

### 2.3.1 CURRENT ORGANIZATION AND STAFFING

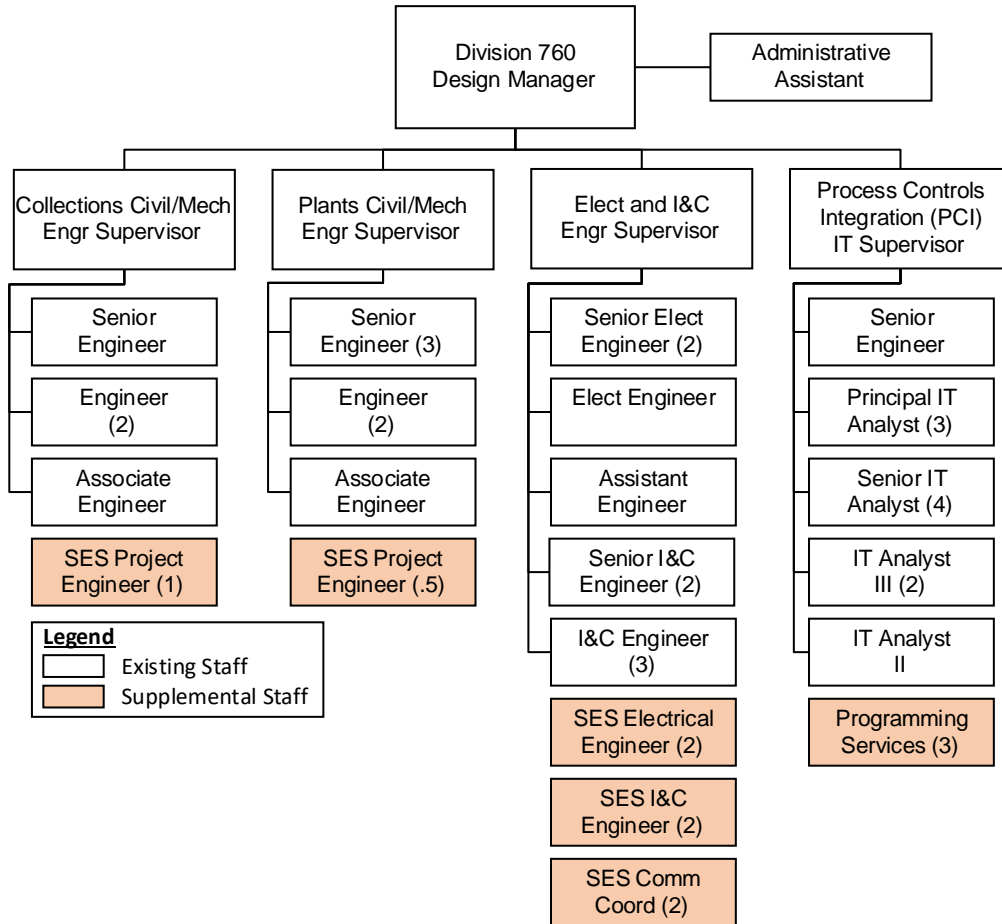
A. The Design Division consists of four groups: collections civil/mechanical design, plants civil/mechanical design, electrical and instrumentation and control (I&C), and PCI. The Electrical and I&C Group includes staff responsible for electrical, I&C, commissioning, and electrical/I&C shutdown coordination. The PCI Group includes staff responsible for the operation, maintenance, and programming of the collections and plant control systems. There is a total of 36 staff members.

B. SES currently provides one project engineer for collections projects, one half-time project engineer for plant projects, two electrical engineers, two and a half I&C engineers, and two

commissioning coordinators. It has been difficult to find additional SES electrical and I&C staff. There is a total of 11 SES.

C. The current agreement for on-call Programming Professional Services currently provides an average of three staff to support bench testing, programming, and commissioning of our plant and collections control systems.

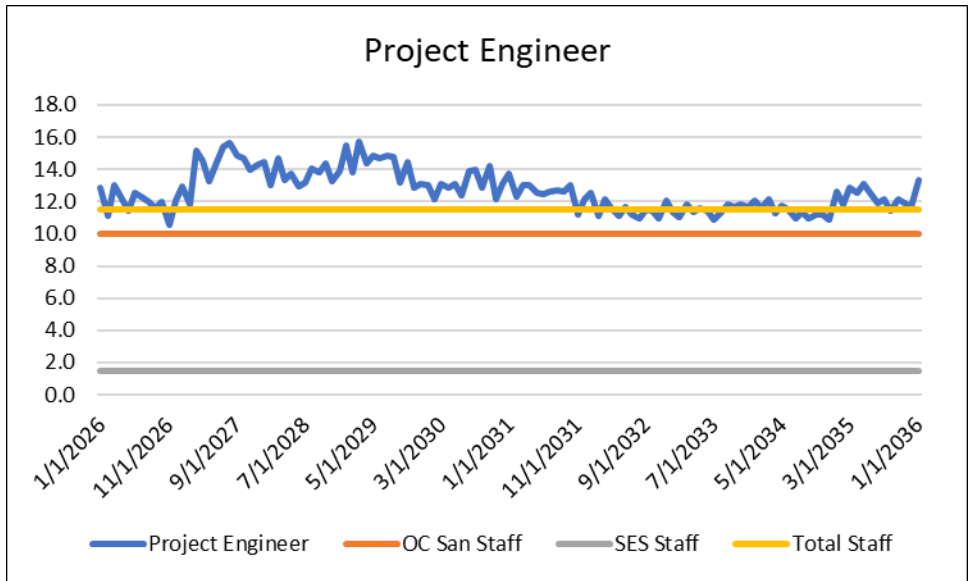
D. See **Figure 11** for the existing organization chart.



**Figure 11 – Existing Design Division Organization Chart**

E. Project Engineers

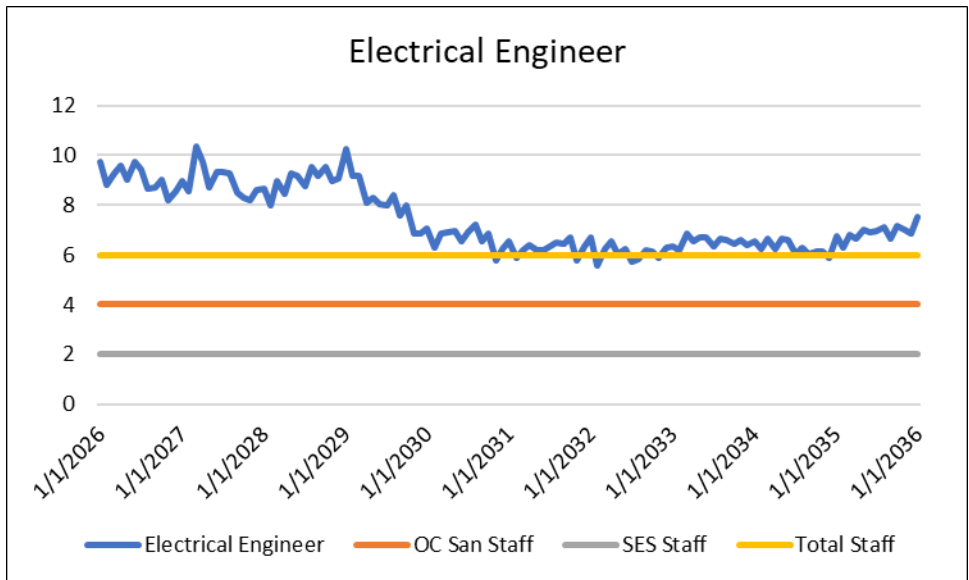
1. Project engineers provide overall technical oversight, civil/mechanical technical leadership on collections and plant projects, and coordination with O&M. The project engineer workload is increasing with the CIP. **Figure 12** shows the projected workload for the project engineers.



**Figure 12 – Workload for Project Engineers**

F. Electrical Engineer

1. Electrical engineers provide discipline technical leadership for pump station and plant projects and technical oversight on electrical projects. A full-time assistant electrical engineer is currently supporting the shutdown coordination process for electrical and I&C shutdowns by defining and coordinating the shutdowns with O&M. The electrical engineer workload is currently at a high level due to several electrical-intensive projects. **Figure 13** shows the projected workload for electrical engineers.



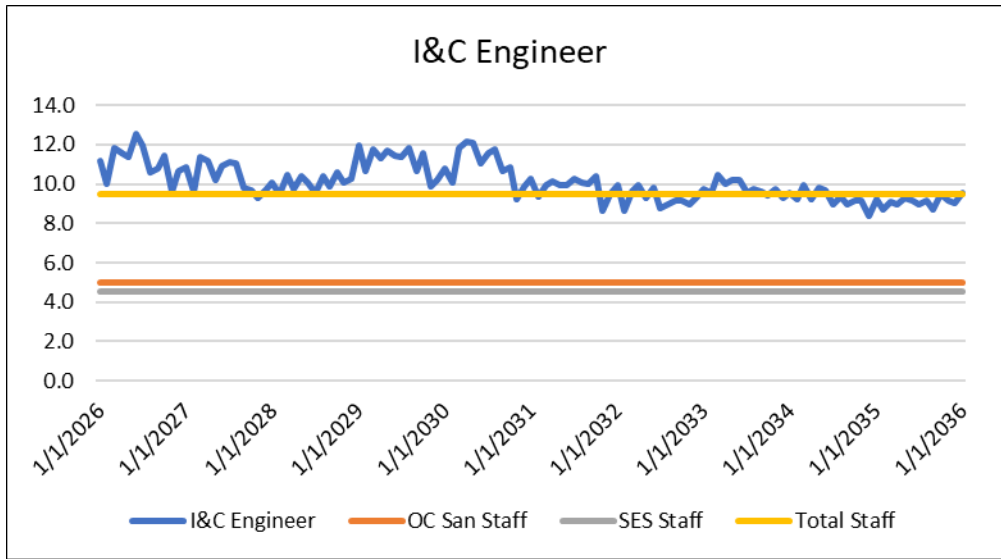
**Figure 13 – Workload for Electrical Engineers**

G. Instrumentation and Control (I&C) Engineer

1. The I&C engineer role includes hours for both I&C engineer and commissioning coordinator functions. I&C engineers provide discipline technical leadership on pump station



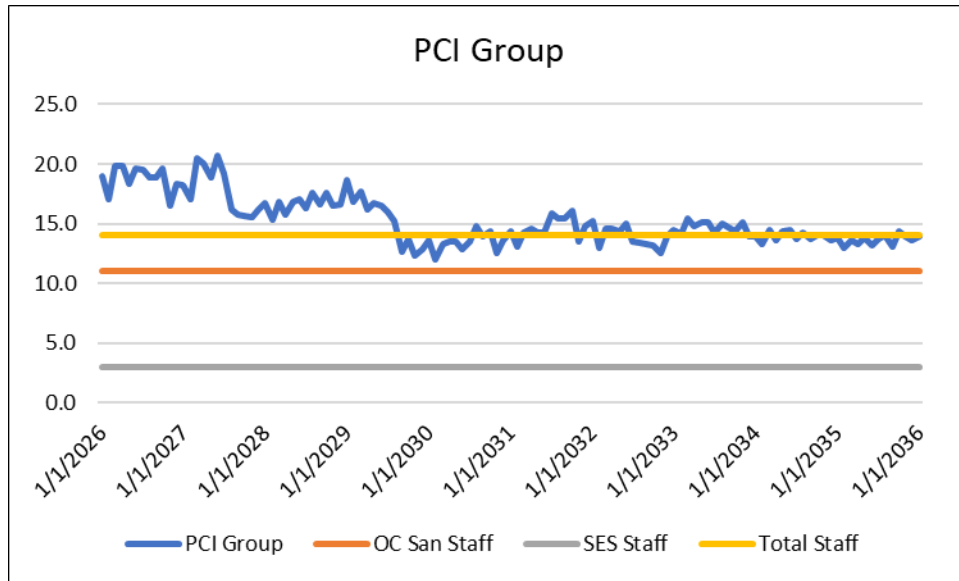
and plant projects. Commissioning coordinators provide technical oversight of the commissioning process during design and construction. This includes overseeing the development of commissioning documents and procedures during design and close coordination with the contractor during construction. This role also includes an engineer for mechanical equipment quality control who coordinates closely with Maintenance and the civil/mechanical inspectors during construction. There are currently five commissioning coordinators supporting commissioning. **Figure 14** shows the projected workload for I&C engineers.



**Figure 14 – Workload for I&C Engineers**

H. Process Controls Integration (PCI)

1. PCI provides technical leadership for the collections and plant control systems. This leadership includes the overall maintenance and security of the control systems; support during design, programming and commissioning during construction; and training of O&M staff. Through 2027, PCI will be supporting the upgrade of the existing graphic human machine interface from CRISP to ABB. The overall maintenance of the control system requires five PCI staff, which is included in the projected PCI workload in **Figure 15**.



**Figure 15 – Workload for PCI Staff**

## 2.3.2 PROPOSED ORGANIZATION AND STAFFING CHANGES

### A. Commissioning and Shutdown Coordination

1. The Electrical and I&C Group oversees the staff responsible for electrical, I&C, commissioning, and electrical/I&C shutdown coordination. The size of this group, number of technical disciplines, and quantity of projects in design and construction make it increasingly difficult for a single supervisor to provide adequate oversight. To support the unique nature of the commissioning and shutdown tasks along with stakeholder coordination across multiple divisions within the organization, it is recommended that a separate Commissioning Group be created with a dedicated supervisor to provide proper oversight of staff and coordination with other groups. This other group coordination includes information technology asset information deliverables, operations shutdown coordination, maintenance reliability testing baseline information and coordination. This supervisor will provide leadership and direction to the Commissioning Group, while also providing unity and focus on quality assurance of CIP and small projects.

2. It is recommended that the proposed Commissioning Group include one new supervisor, one new senior engineer, two existing engineers, one new engineer, and one new associate engineer. The current workload for shutdown coordination is more than one FTE and will be increasing as construction increases. Since this team is currently supported by the Electrical and I&C Group, several of these positions will be moved from this group to the new Commissioning Group as shown in **Figure 16**.

B. Collections Design Group: It is recommended to add one project engineer to support the increasing collections project workload.

### C. Electrical and I&C Group

1. It is recommended to add one electrical engineer and one associate electrical engineer to support the increased project workload.

2. It is recommended to add one associate I&C engineer to support the increased project workload.

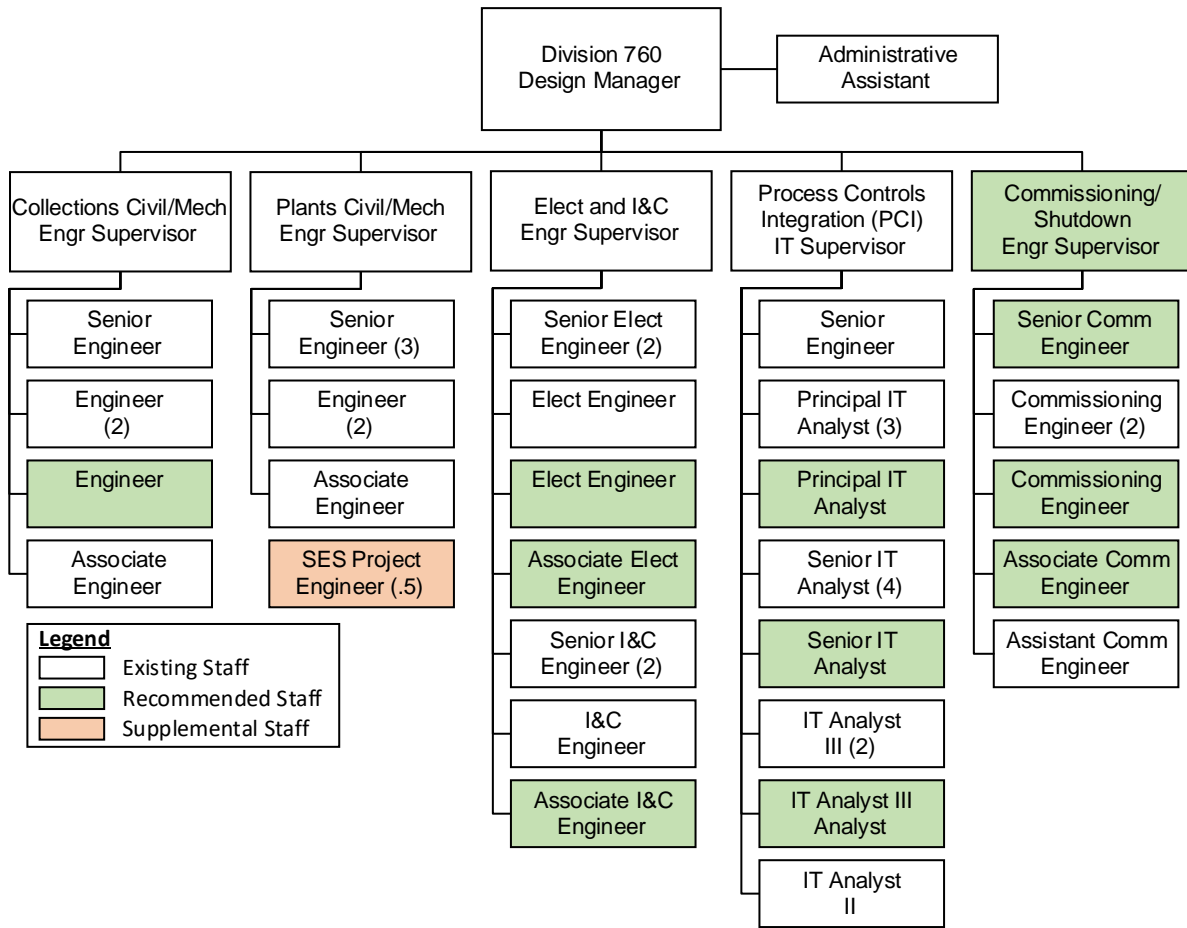
D. PCI: It is recommended to add one principal information technology analyst, one senior information technology analyst, and one information technology analyst II to support the

increased programming and fiber optic design workload in PCI. The additional principal information technology analyst will support the supervisor with technical oversight of this large group by providing project leadership, staff training, and mentoring, allowing the supervisor to focus on the overall group needs, staff development, succession management, project staffing and overall coordination, risk management, and the overall mission of this important group.

E. In summary, it is recommended to add 11 in-house staff:

1. 1 supervisor—Commissioning Group
2. 1 senior engineer—Commissioning Group
3. 1 engineer—Commissioning Group
4. 1 associate engineer—Commissioning Group
5. 1 engineer—Collections Design Group
6. 1 engineer—Electrical and I&C Group
7. 2 associate engineers—Electrical and I&C Group
8. 1 principal information technology analyst—PCI Group
9. 1 senior information technology analyst—PCI Group
10. 1 information technology analyst II—PCI Group

F. See **Figure 16** for the proposed organization chart and **Table 3** for the proposed staffing levels.



**Figure 16 – Proposed Design Division Organization Chart**

| Staff Role (Note 1) | Current   |             | Proposed  |           | Change    |            | Comments |
|---------------------|-----------|-------------|-----------|-----------|-----------|------------|----------|
|                     | OC San    | Contract    | OC San    | Contract  | OC San    | Contract   |          |
| <b>Manager</b>      | 1         | 0           | 1         | 0         | 0         | 0          |          |
| <b>Supervisors</b>  | 4         | 0           | 5         | 0         | 1         | 0          |          |
| <b>Staff</b>        | 31        | 10.5        | 41        | .5        | 10        | -10        | Note 2   |
| <b>Div Total</b>    | <b>36</b> | <b>10.5</b> | <b>47</b> | <b>.5</b> | <b>11</b> | <b>-10</b> |          |

**Notes:**  
 1. Staffing counts are based on September 2025 data. Supplemental staffing will continue to be adjusted as required to meet the current workload.  
 2. The proposed supplemental staffing count includes retaining a half-time project engineer to support the current workload.

## 2.4 CONSTRUCTION MANAGEMENT

### 2.4.1 CURRENT ORGANIZATION AND STAFFING

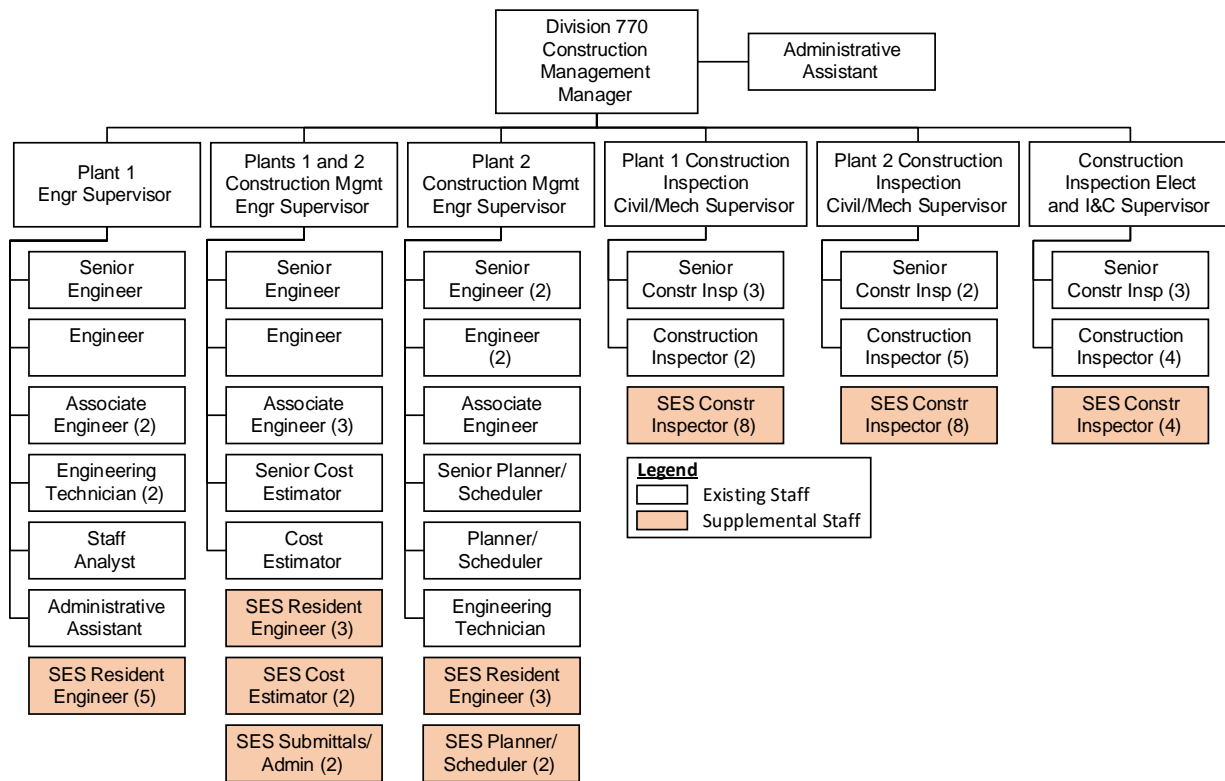
A. The Construction Management (CM) Division consists of six groups: three engineering construction management groups, two civil-mechanical inspection groups, and one electrical-I&C

inspection group. The division includes resident engineers, inspectors, cost estimators, planner/schedulers, engineering technicians for submittal coordination, administrative staff, and a staff analyst to support PMWeb (construction management software). The CM Division has a total of 49 staff members.

B. The majority of the SES staff resources are used by the CM Division to help execute the current workload. The SES project workload requires general oversight from OC San's construction management and inspection supervisors, which includes project change management, quality control issues, risk oversight and mitigation, and claims management/dispute resolution.

C. SES currently provides 11 resident engineers, 16 civil-mechanical inspectors, four electrical-I&C inspectors, two cost estimators, two construction schedulers, and two submittal/administrative staff. There is a total of 37 SES staff members.

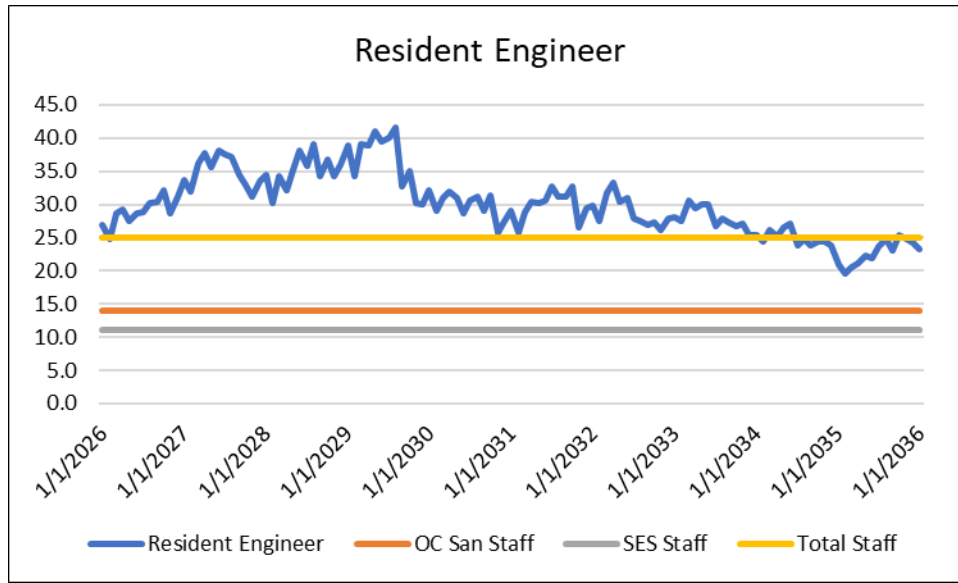
D. See **Figure 17** for the existing organization chart.



**Figure 17 – Existing Construction Management Division Organization Chart**

E. Resident Engineer

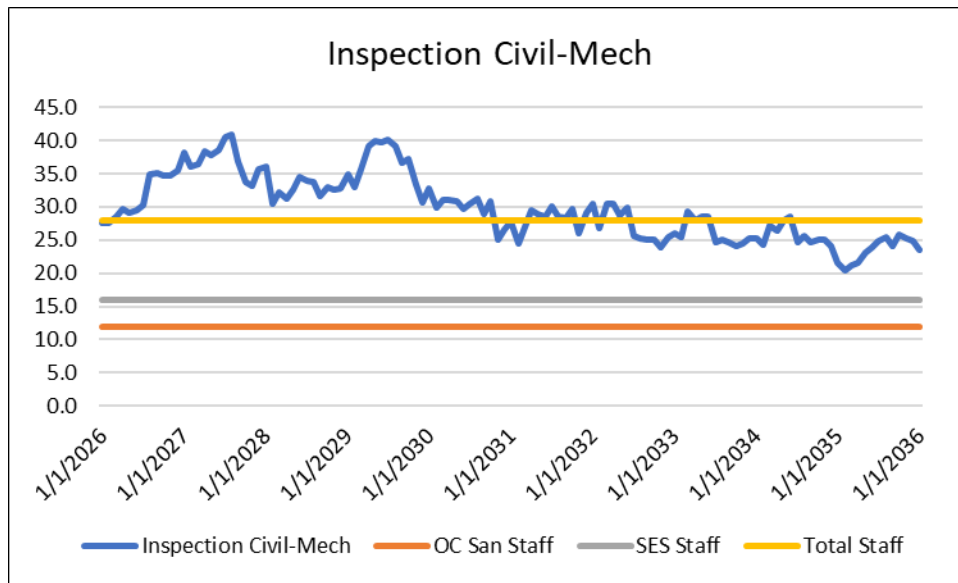
1. Resident engineers are responsible for general day-to-day administration of construction contracts. They provide technical leadership to the project team during construction, commissioning, and closeout activities and are the main point of contact with construction contractors. The resident engineer workload is increasing with the CIP. **Figure 18** shows the projected workload for the resident engineers.



**Figure 18 – Workload for Resident Engineer Staff**

F. Inspection Civil-Mechanical

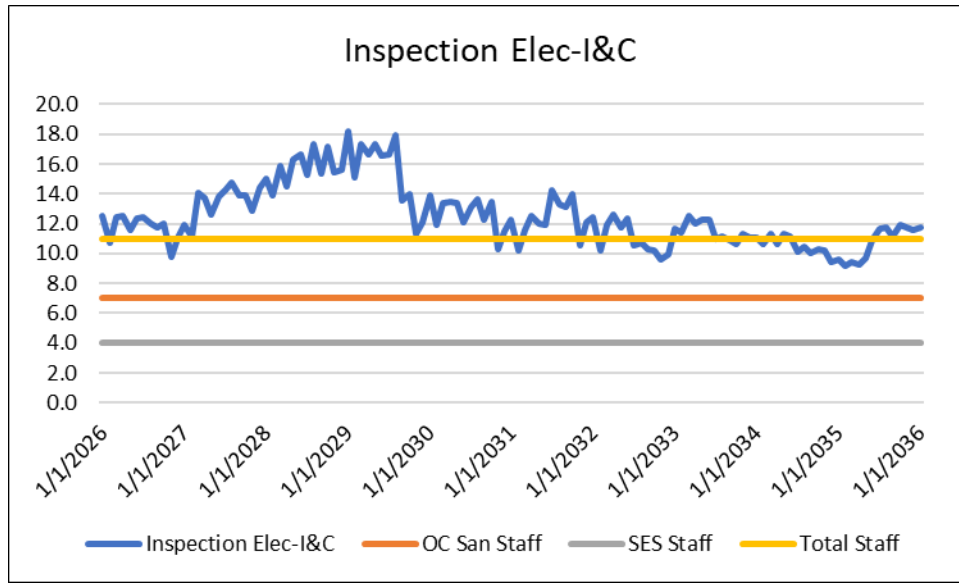
1. Civil/mechanical inspectors observe the contractor's work for compliance with the plans and specifications while monitoring and documenting the quality and quantity of construction. The civil/mechanical inspection workload is increasing with the CIP. **Figure 19** shows the projected workload for inspection civil-mechanical.



**Figure 19 – Workload for Civil-Mechanical Inspection Staff**

G. Inspection Electrical-I&C

1. Electrical/I&C inspectors observe the Contractor's work for compliance with the plans and specifications while monitoring and documenting the quality and quantity of construction. The electrical/I&C inspection workload is increasing with the CIP. **Figure 20** shows the projected workload for inspection electrical and I&C.



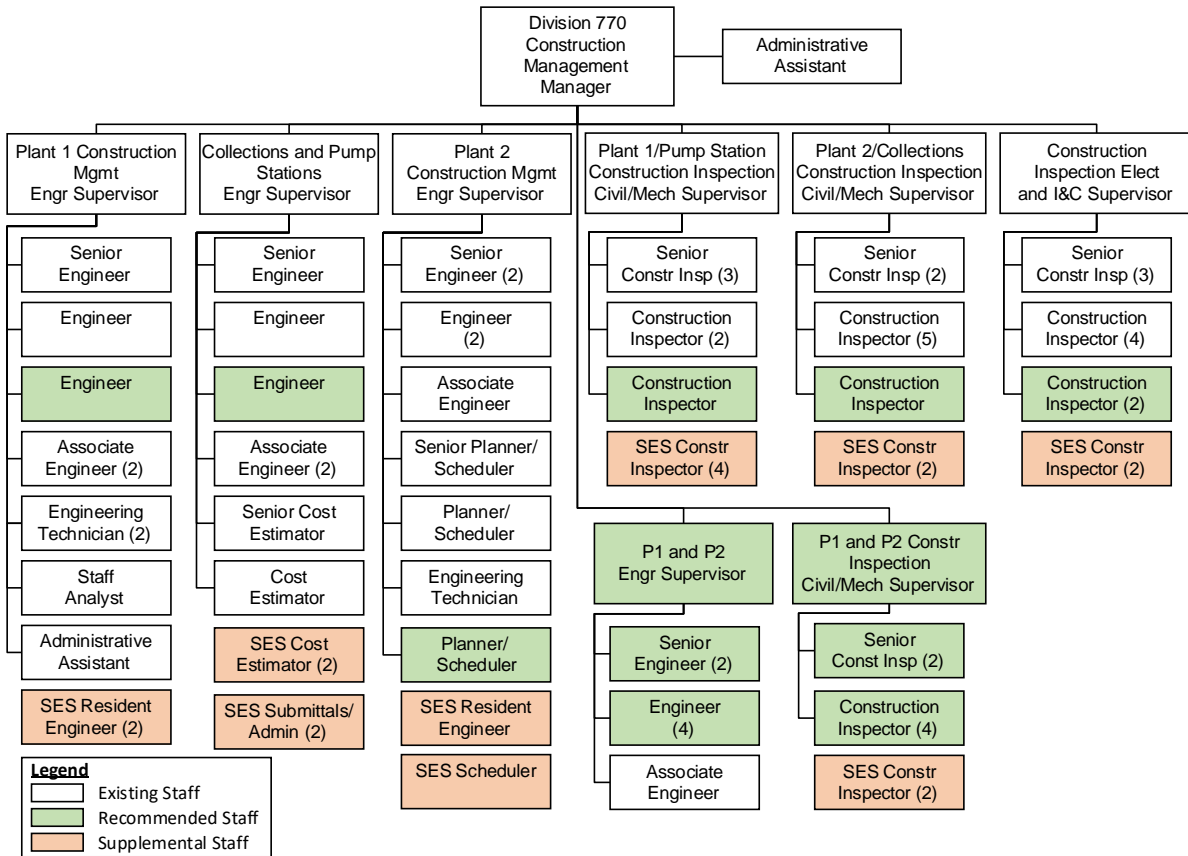
**Figure 20 – Workload for Electrical-I&C Inspection Staff**

**2.4.2 PROPOSED ORGANIZATION AND STAFFING CHANGES**

A. To support the high volume of CIP and small projects in construction, it is recommended to add a total of 21 in-house staff:

1. 1 construction management supervisor
2. 8 resident engineers
  - a. 2 senior engineers
  - b. 6 engineers
3. 1 civil-mechanical inspection supervisor
4. 8 civil-mechanical inspectors
  - a. 2 senior construction inspectors
  - b. 6 construction inspectors
5. 2 electrical-I&C inspectors
6. 1 planner/scheduler

B. See **Figure 21** for the proposed organization chart and **Table 4** for the proposed staffing levels.



**Figure 21 – Proposed Construction Management Organization Chart**

| Staff Role (Note 1)   | Current   |                | Proposed  |                | Change    |                | Comments |
|---|-----------|----------------|-----------|----------------|-----------|----------------|----------|
|   | OC San    | Suppl Staffing | OC San    | Suppl Staffing | OC San    | Suppl Staffing |          |
| <b>Manager</b>  | 1         | 0              | 1         | 0              | 0         | 0              |          |
| <b>Supervisors</b>  | 6         | 0              | 8         | 0              | 2         | 0              |          |
| <b>Staff</b>  | 42        | 37             | 61        | 18             | 19        | -19            | Note 2   |
| <b>Div Total</b>  | <b>49</b> | <b>37</b>      | <b>70</b> | <b>18</b>      | <b>21</b> | <b>-19</b>     |          |
| <b>Notes:</b>   |           |                |           |                |           |                |          |
| 1. Staffing counts are based on September 2025 data. Supplemental staffing will continue to be adjusted as required to meet the current workload.   |           |                |           |                |           |                |          |
| 2. The proposed supplemental staffing count includes retaining three resident engineers, eight civil/mechanical inspectors, two electrical/I&C inspectors, one scheduler, and two submittals/admin staff to support the current workload. |           |                |           |                |           |                |          |



### 2.4.3 OVERALL RECOMMENDATION

A. The staffing recommendation, including new supervisors and two new engineers in Planning, will result in approximately \$950,000 reduction in annual staff costs compared with SES staff, using fully burdened rates, as shown in **Table 5**.

| <b>Table 5 - Staffing Costs (Annual)</b> |                         |                                  |
|--|-------------------------|----------------------------------|
| <b>Description</b>                       | <b>OC San Total Qty</b> | <b>Supplemental Staffing Qty</b> |
| <b>Division 740</b>                      |                         |                                  |
| Project Engineer                         | 2                       | 0                                |
| <b>Division 750</b>                      |                         |                                  |
| Engineering Supervisor                   | 1                       | 0                                |
| Project Manager                          | 4                       | 4                                |
| <b>Division 760</b>                      |                         |                                  |
| Engineering Supervisor                   | 1                       | 0                                |
| Project Engineer                         | 1                       | 1                                |
| Electrical Engineer                      | 2                       | 2                                |
| I&C Engineer                             | 4                       | 4                                |
| PCI                                      | 3                       | 3                                |
| <b>Division 770</b>                      |                         |                                  |
| Engineering Supervisor                   | 1                       | 0                                |
| Inspection Supervisor                    | 1                       | 0                                |
| Resident Engineer                        | 8                       | 8                                |
| Construction Support                     | 1                       | 1                                |
| Inspection Civil-Mech                    | 8                       | 8                                |
| Inspection Elec-I&C                      | 2                       | 2                                |
| <b>Total</b>                             | <b>39</b>               | <b>33</b>                        |
| <b>Annual Costs</b>                      | <b>\$12.90M</b>         | <b>\$13.85M</b>                  |
| <b>Savings</b>                           | <b>~ \$950,000</b>      |                                  |

B. **Table 6** summarizes the recommended staff increases across the Engineering Department.

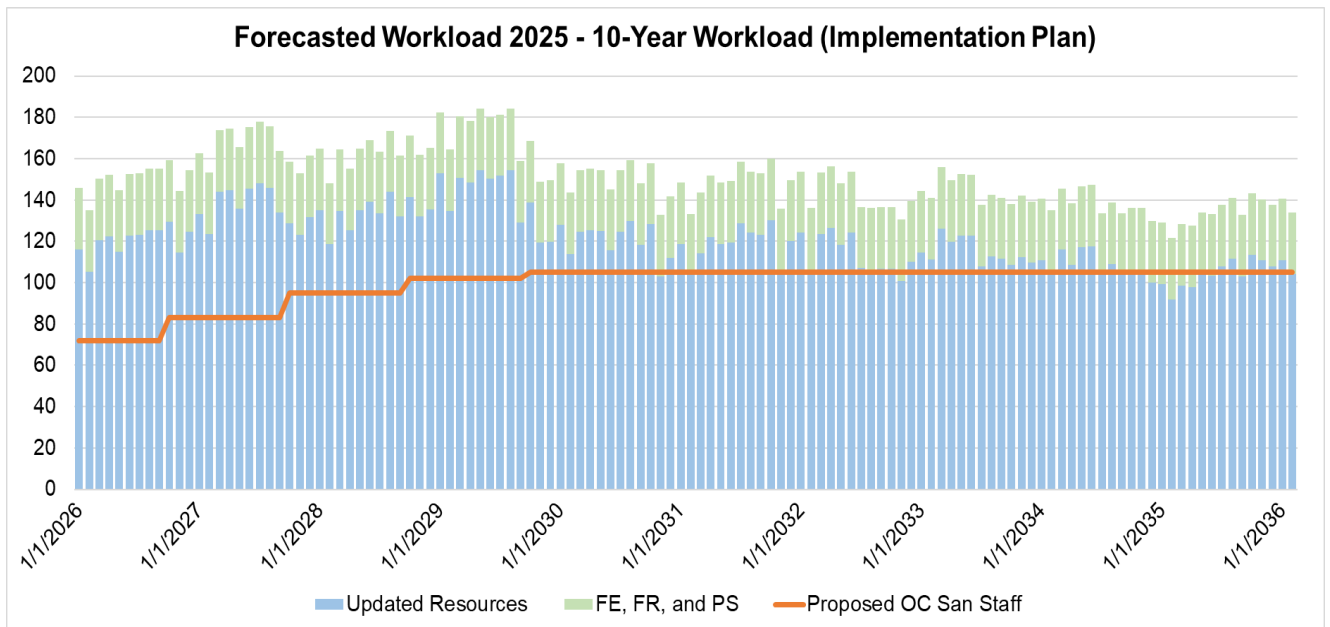
| <b>Table 6 - Engineering Department - Proposed Staffing</b>   |            |             |              |             |             |              |           |             |            |          |
|---|------------|-------------|--------------|-------------|-------------|--------------|-----------|-------------|------------|----------|
| Staff Role<br>(Note 1)  | Current    |             |              | Recommended |             |              | Change    |             |            | Comments |
|   | OC San     | Suppl Staff | Total        | OC San      | Suppl Staff | Total        | OC San    | Suppl Staff | Total Diff |          |
| <b>Division 710 - Engineering Admin</b>   |            |             |              |             |             |              |           |             |            |          |
| DOE   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| Support   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| <b>Div Total</b>  | <b>2</b>   | <b>0</b>    | <b>2</b>     | <b>2</b>    | <b>0</b>    | <b>2</b>     | <b>0</b>  | <b>0</b>    | <b>0</b>   |          |
| <b>Division 740 - CIP Planning and Asset Management Group</b>   |            |             |              |             |             |              |           |             |            |          |
| Manager   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| Supervisors   | 2          | 0           | 2            | 2           | 0           | 2            | 0         | 0           | 0          |          |
| Staff   | 13         | 0.5         | 13.5         | 15          | 0.5         | 15.5         | 2         | 0           | 2          | Note 2   |
| <b>Div Total</b>  | <b>16</b>  | <b>0.5</b>  | <b>16.5</b>  | <b>18</b>   | <b>0.5</b>  | <b>18.5</b>  | <b>2</b>  | <b>0</b>    | <b>2</b>   |          |
| <b>Division 750 - Project Management Office</b>   |            |             |              |             |             |              |           |             |            |          |
| Manager   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| Supervisors   | 2          | 0           | 2            | 3           | 0           | 3            | 1         | 0           | 1          |          |
| Staff   | 18         | 5           | 23           | 22          | 1           | 23           | 4         | -4          | 0          | Note 3   |
| <b>Subtotal</b>   | <b>21</b>  | <b>5</b>    | <b>26</b>    | <b>26</b>   | <b>1</b>    | <b>27</b>    | <b>5</b>  | <b>-4</b>   | <b>1</b>   |          |
| <b>Division 760 - Design</b>  |            |             |              |             |             |              |           |             |            |          |
| Manager   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| Supervisors   | 4          | 0           | 4            | 5           | 0           | 5            | 1         | 0           | 1          |          |
| Staff   | 31         | 10.5        | 42           | 41          | .5          | 42           | 10        | -10         | 0          | Note 4   |
| <b>Div Total</b>  | <b>36</b>  | <b>10.5</b> | <b>47</b>    | <b>47</b>   | <b>.5</b>   | <b>48</b>    | <b>11</b> | <b>-10</b>  | <b>1</b>   |          |
| <b>Division 770 - Construction Management</b>   |            |             |              |             |             |              |           |             |            |          |
| Manager   | 1          | 0           | 1            | 1           | 0           | 1            | 0         | 0           | 0          |          |
| Supervisors   | 6          | 0           | 6            | 8           | 0           | 8            | 2         | 0           | 2          |          |
| Staff   | 42         | 37          | 79           | 61          | 18          | 79           | 19        | -19         | 0          | Note 5   |
| <b>Div Total</b>  | <b>49</b>  | <b>37</b>   | <b>86</b>    | <b>70</b>   | <b>18</b>   | <b>88</b>    | <b>21</b> | <b>-19</b>  | <b>2</b>   |          |
| <b>Engr Total</b>   | <b>124</b> | <b>53.5</b> | <b>177.5</b> | <b>163</b>  | <b>20.5</b> | <b>183.5</b> | <b>39</b> | <b>-33</b>  | <b>6</b>   |          |
| <b>Notes:</b>   |            |             |              |             |             |              |           |             |            |          |
| 1. Staffing counts are based on September 2025 data. Supplemental staffing will continue to be adjusted as required to meet the current workload.   |            |             |              |             |             |              |           |             |            |          |
| 2. The proposed supplemental staffing count includes retaining a half-time electrical engineer to support the current asset management workload.  |            |             |              |             |             |              |           |             |            |          |
| 3. The proposed supplemental staffing count includes retaining one architect to support the lab and Plant No. 2 O&M Complex.  |            |             |              |             |             |              |           |             |            |          |
| 4. The proposed supplemental staffing count includes retaining a half-time project engineer to support the current workload.  |            |             |              |             |             |              |           |             |            |          |
| 5. The proposed supplemental staffing count includes retaining three resident engineers, eight civil-mechanical inspectors, two electrical-I&C inspectors, one scheduler, and two submittals/admin staff to support the current workload. |            |             |              |             |             |              |           |             |            |          |

C. Proposed Implementation Plan

1. The recommendation is to increase OC San's staff using a phased hiring plan through the normal budget process as shown in **Table 7**.

| <b>Table 7 - Proposed Staffing Implementation Plan</b> |                  |                 |                 |                 |                 |                 |
|--|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>Description</b>                                     | <b>Total Qty</b> | <b>FY 25-26</b> | <b>FY 26-27</b> | <b>FY 27-28</b> | <b>FY 28-29</b> | <b>FY 29-30</b> |
| <b>Division 740</b>                                    |                  |                 |                 |                 |                 |                 |
| Senior Engineer  | 1                |                 | 1               |                 |                 |                 |
| Engineer   | 1                |                 |                 | 1               |                 |                 |
| <b>Division 750</b>                                    |                  |                 |                 |                 |                 |                 |
| Engineering Supervisor                                 | 1                | 1               |                 |                 |                 |                 |
| Engineer   | 3                |                 | 1               | 1               | 1               |                 |
| Associate Engineer                                     | 1                |                 |                 |                 |                 | 1               |
| <b>Division 760</b>                                    |                  |                 |                 |                 |                 |                 |
| Engineering Supervisor                                 | 1                | 1               |                 |                 |                 |                 |
| Engineer (Project Engineer)                            | 1                |                 |                 | 1               |                 |                 |
| Senior Engineer (Commissioning)                        | 1                |                 | 1               |                 |                 |                 |
| Engineer (Commissioning)                               | 1                |                 | 1               |                 |                 |                 |
| Engineer (Electrical)                                  | 1                |                 | 1               |                 |                 |                 |
| Associate Engineer (Commissioning)                     | 1                |                 |                 | 1               |                 |                 |
| Associate Engineer (Electrical)                        | 1                |                 | 1               |                 |                 |                 |
| Associate Engineer (I&C)                               | 1                |                 | 1               |                 |                 |                 |
| Principal IT Analyst                                   | 1                |                 | 1               |                 |                 |                 |
| Senior IT Analyst                                      | 1                |                 |                 | 1               |                 |                 |
| IT Analyst III   | 1                |                 |                 | 1               |                 |                 |
| <b>Division 770</b>                                    |                  |                 |                 |                 |                 |                 |
| Engineering Supervisor                                 | 1                |                 | 1               |                 |                 |                 |
| Senior Engineer  | 2                |                 | 1               | 1               |                 |                 |
| Engineer   | 3                |                 | 1               | 1               | 1               |                 |
| Associate Engineer                                     | 3                |                 | 1               | 1               | 1               |                 |
| Planner/Scheduler                                      | 1                |                 |                 | 1               |                 |                 |
| Inspection Supervisor                                  | 1                |                 | 1               |                 |                 |                 |
| Senior Construction Inspector (Civil/Mech)             | 2                |                 |                 | 1               | 1               |                 |
| Construction Inspector (Civil/Mech)                    | 6                |                 | 1               | 1               | 2               | 2               |
| Construction Inspector (Elect/I&C)                     | 2                |                 |                 | 1               | 1               |                 |
| <b>Total</b>   | <b>39</b>        | <b>2</b>        | <b>14</b>       | <b>13</b>       | <b>7</b>        | <b>3</b>        |

D. As OC San's staff levels increase, the need for supplemental staffing will decrease as shown in **Figure 22**.



**Figure 22 – 10-Year Implementation Plan with Recommended Implementation Plan**