



# Influent Pump Station Resiliency Project

Planning Committee

February 10, 2026

Jennifer Ku, Associate Civil Engineer

# Agenda

**1** Project Drivers & Objectives

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**2** Project Scope

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**3** Grant Funding

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**4** Implementation Approach & Next Steps

# Project Drivers & Objectives

Why the Influent Pump Station is so critical, the issues we have seen, and what the project is intended to achieve.



# The Importance of IPS

- The Influent Pump Station (IPS) is the most important structure at the MWWTP
- All flow coming to the MWWTP from the wastewater service area must be pumped by IPS to be treated
- Within hours of an IPS outage, raw wastewater would overflow into the San Francisco Bay and possibly public streets



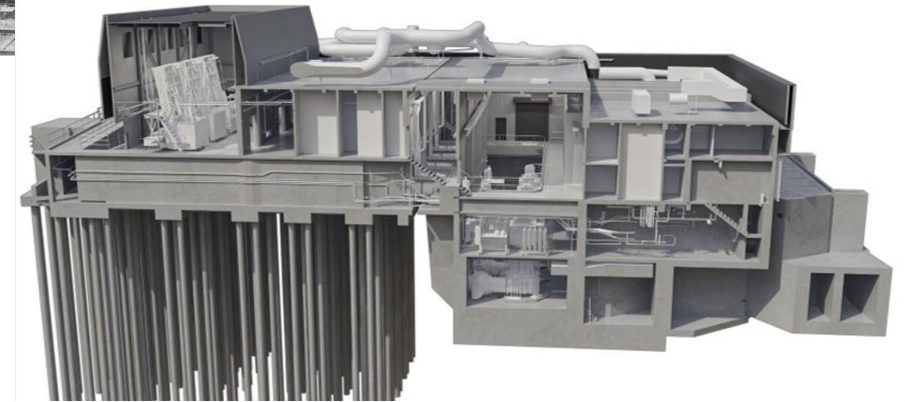
Pump Room Inside IPS

# The Problem – Seismic Deficiencies

- IPS structure is composed of three buildings
  - IPS was constructed in 1951 when the MWWTP was first built
  - Grit Facility constructed in 1951 then converted and connected to IPS in 1990
  - Fine Screenings Handling Building and Skybridge constructed in 1990
- Seismic codes changed substantially since original construction
- Seismic evaluation completed in 2018 for IPS and determined the need for seismic retrofits



3D Model of IPS Structure

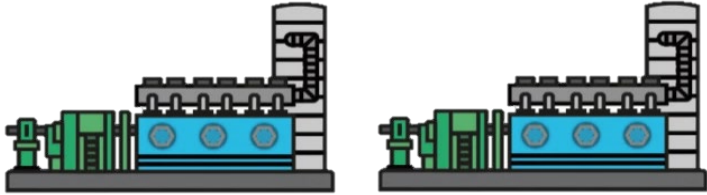


# Existing Power Sources

## ONSITE GENERATION

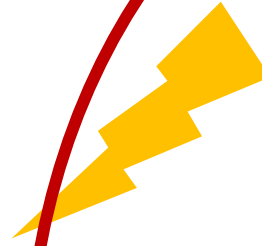
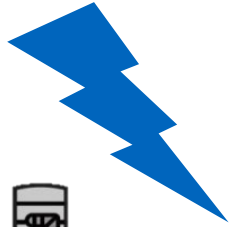
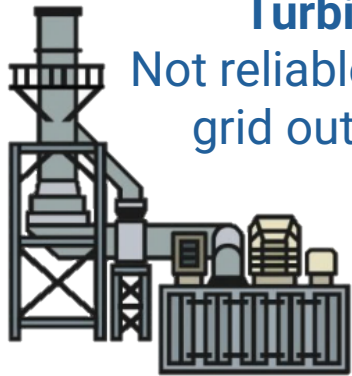
### Engines

Two in service at a time  
(one standby)



### Turbine

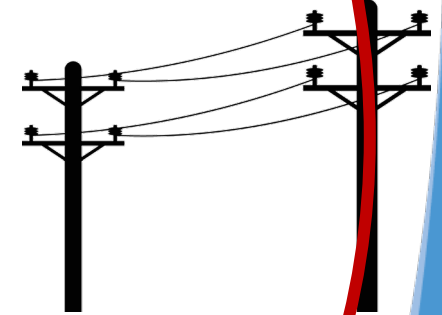
Not reliable during  
grid outages



## UTILITY FEEDS



Line C



Line L

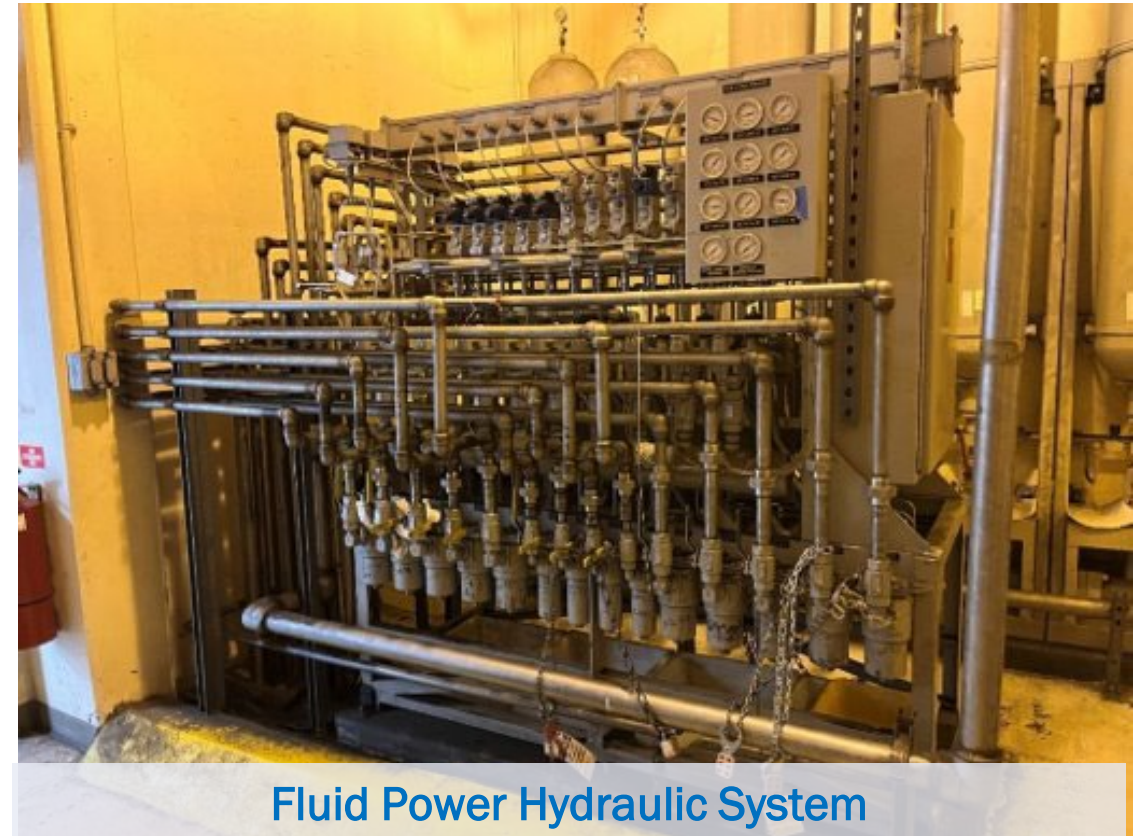


# Power Supply Deficiencies

- The IPS receives a mix of power supply sources
- Power outages over the years highlighted deficiencies with this configuration
- The co-mingling of power sources within each train led to less reliability and more issues that delayed bringing IPS back into service when there was a power outage

# The Problem – Support Equipment

- Support equipment can be just as critical to the reliability of IPS as the pumps, motors, and power supply.
- Support equipment opens/closes gates and valves, helps run pumps, etc.
- Failure of support equipment has led to overflows.
- Equipment is obsolete and needs redundancy.



Fluid Power Hydraulic System

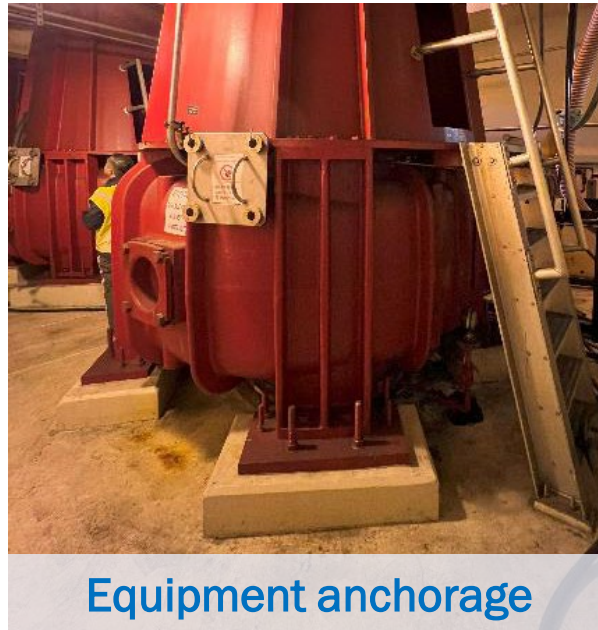
# Project Scope

How we will solve the challenges at IPS, and how the work will be challenging.



# Seismic Retrofit Scope

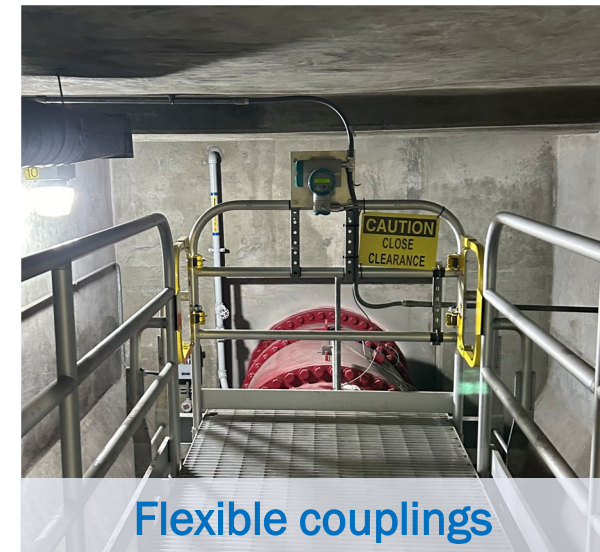
- New piles around building
- Brace frame reinforcing
- Strengthen equipment anchoring
- Structural wrap
- Flexible couplings



Equipment anchorage



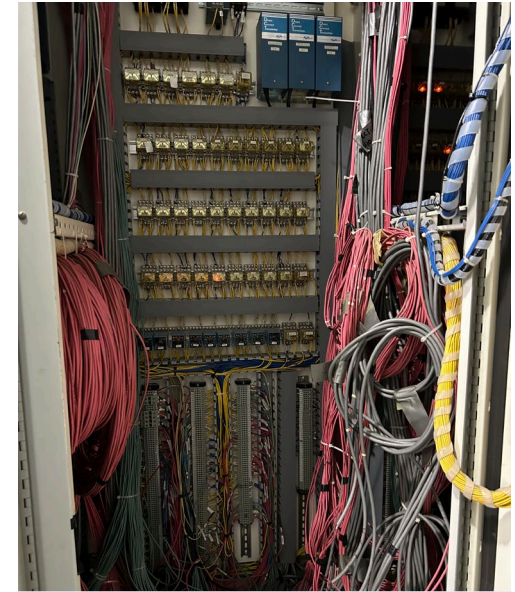
Brace frames



Flexible couplings

# Electrical Improvements Scope

- Rerouting of power supply conduits
- Replacement of obsolete equipment
  - New motors
  - Replace pump controllers with variable frequency drives
- Replacement of support equipment
  - Fluid power hydraulic system
  - Flow meters



Conduits inside cabinets



Conduit runs inside building

# Grant Funding

The project was awarded a significant FEMA grant, which introduces its own challenges to the project.



# FEMA HMGP Grant

- Awarded a Hazard Mitigation Grant Program (HMGP) grant on November 21, 2023
- Grant covers **only** the seismic retrofit portion of the scope
- For the seismic improvements, the **grant reimburses 90%** of District costs
  - Phase 1 Design = up to \$2.8 million
  - Phase 2 Construction = up to \$29 million
  - Costs associated with managing the grant = up to 5% of design & construction cost
- Submitted quarterly reimbursement requests for design (Phase 1) costs
- District has already received **\$829,273** in grant funding to-date



# HMGP Grant Challenges

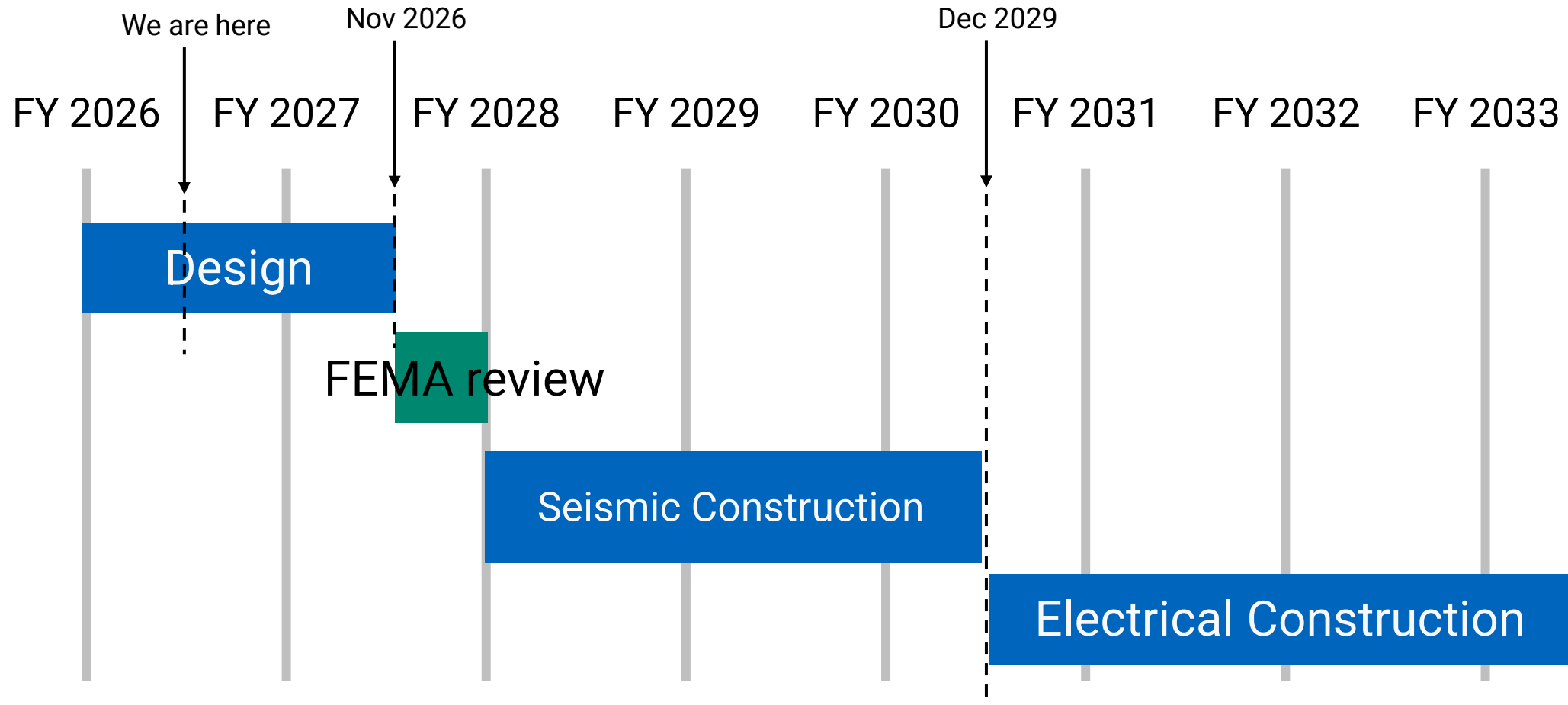
- Phase 2 costs will be reimbursed **only after FEMA approval** of the Phase 1 (planning & design) deliverables
- FEMA Phase 1 review has been taking 18 months or more for other projects, due to lack of FEMA staffing
- Pausing the project for FEMA review will impact project implementation schedule
- Uncertain if an extension will be granted by FEMA for Phase 2 funding

# Implementation Approach & Next Steps

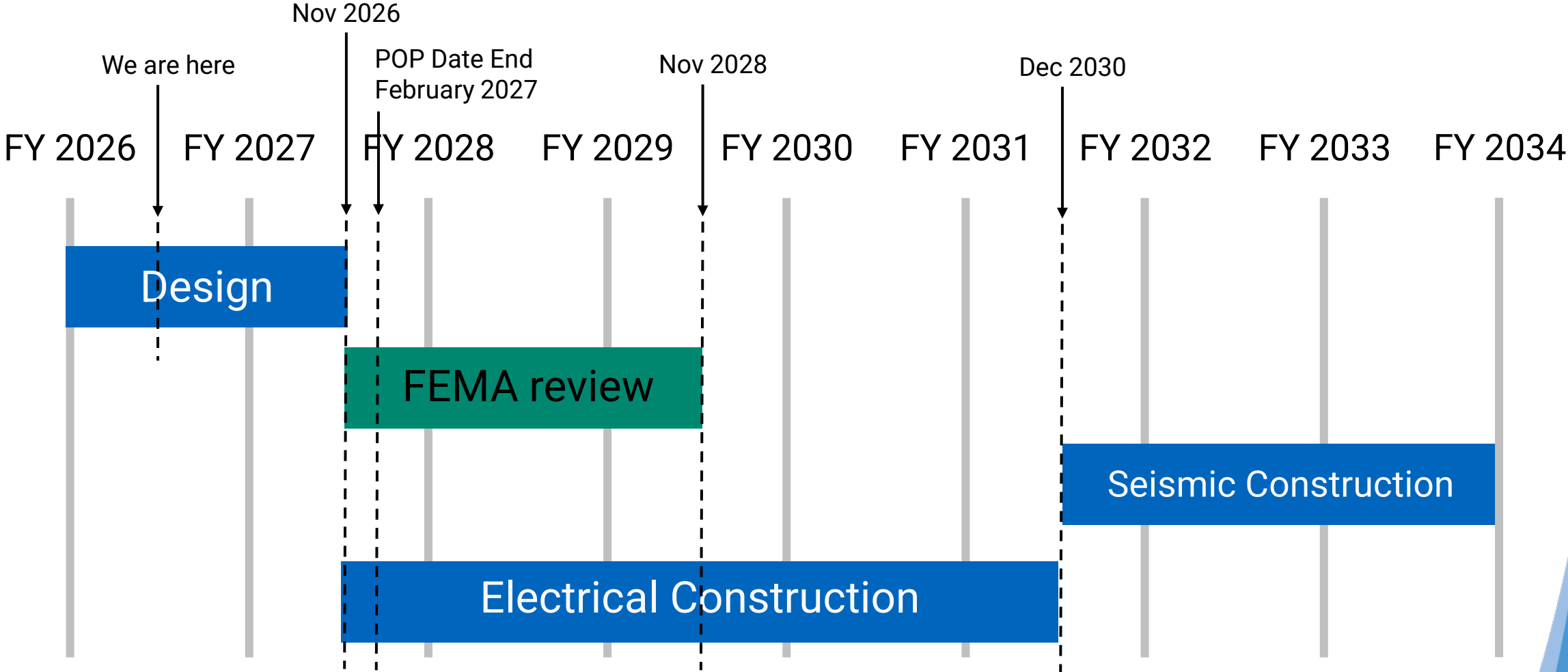
Our approach to completing the project, and next steps for the project.



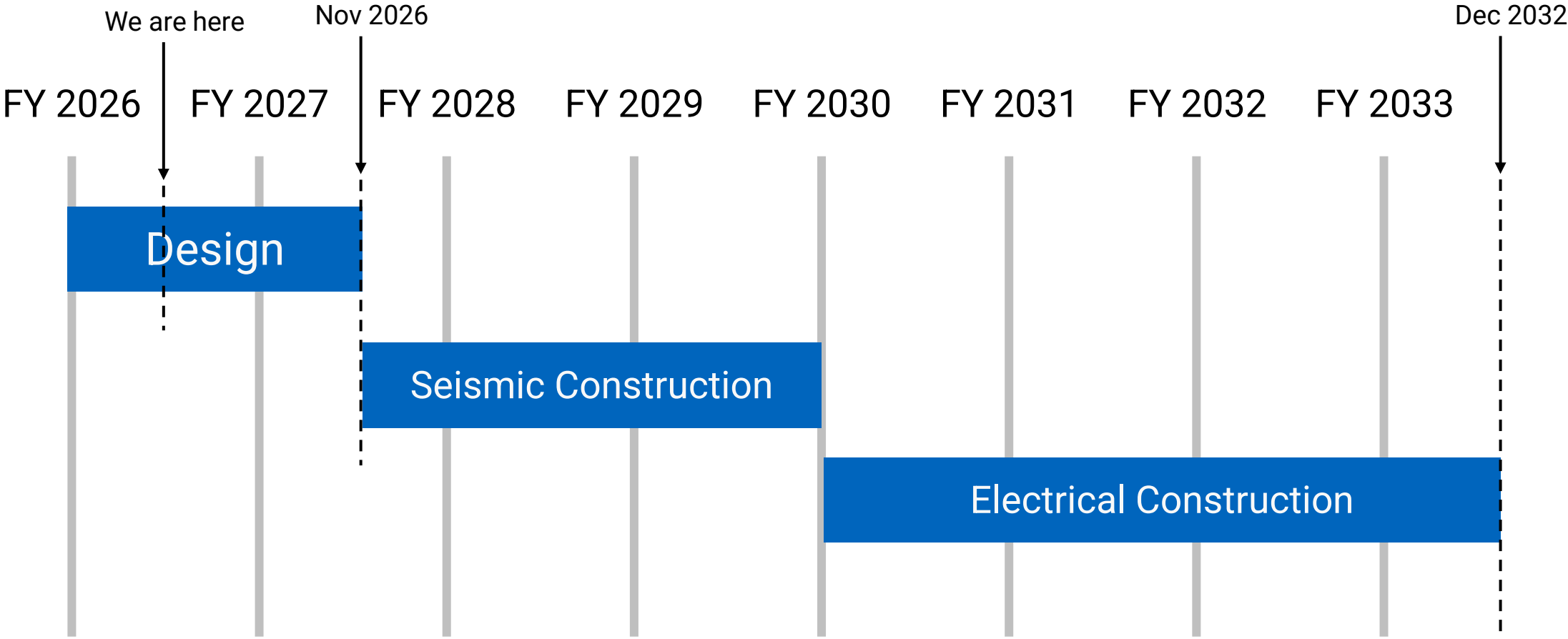
# Original Implementation Timeline



# Implementation Timeline – Extended Review



# Implementation Timeline – No FEMA Review



# Next Steps

- 60% design expected this month
- 90% design expected August 2026
- Final design expected November 2026
- Wait to see if FEMA grants time extension (estimated by November 2026)
- If no time extension, seismic construction will proceed first
  - Estimated time frame of FY 2027 to FY 2029
- If time extension, electrical construction will proceed first
  - Estimated time frame of FY 2030 to FY 2032

**Questions?**





# Contracted Services for Maintenance and Construction

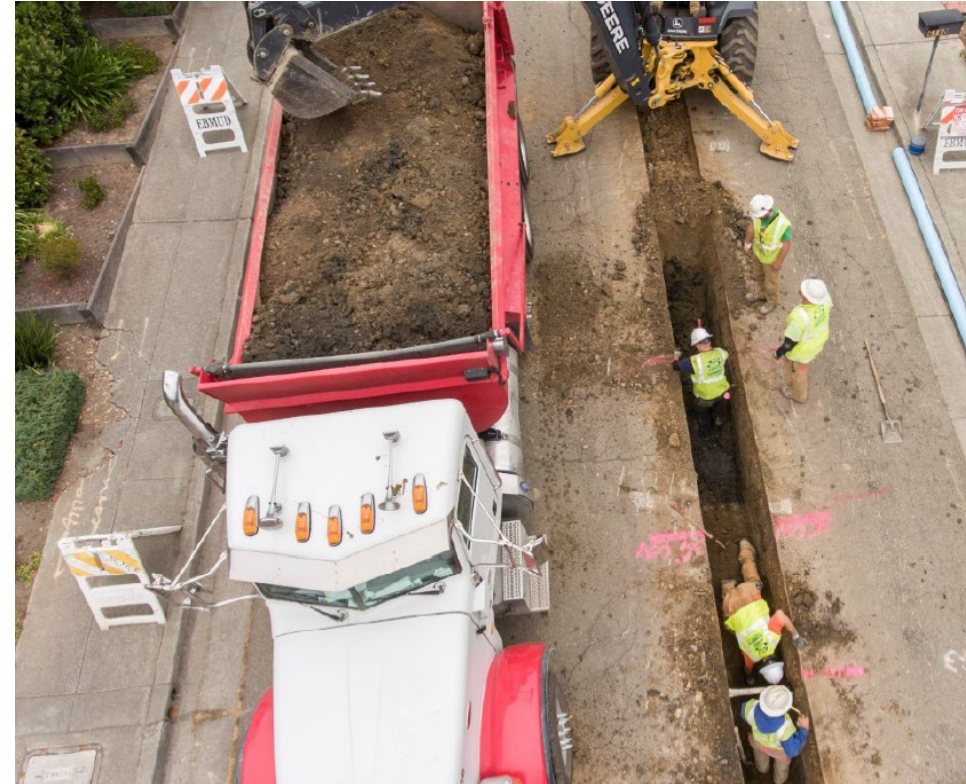
Planning Committee

February 10, 2026

Crystal Yezman, Manager of Maintenance and Construction  
David Katzev, Manager of Pipeline Construction  
Gina Jenkins, Manager of Maintenance Support

# Outline

- Overview of Contracted Services
- Focus On Five Services
  - Paving
  - Dump Truck
  - Saw-Cutting
  - Flagging
  - Concrete Repair
- Cost Comparison and Contract Equity Program
- Key Takeaways



*Contract Dump Truck Service alongside District Forces Replacing Pipe in a Trench*

# What are Fully-Maintained and Operated (FM&O) Services?

- Fully Maintained and Operated (FM&O) describes contracted services where a contractor brings their own equipment. For example, a dump truck driver who drives their own truck.
- FM&O agreements can be for work not performed by the District forces (e.g., slurry seal) or for work which requires joint contractual agreements with local jurisdictions (e.g., joint paving projects).
- This presentation focuses on FM&O contracted services for routine work that can also be performed by District forces (e.g., when peak workload exceeds staffing resources).

# FM&O Contracted Services

- Dump Truck Services
- Paving Services
- Flagging
- Saw-Cutting
- Concrete Repair
- Hydro/Air-Vacuum Excavation
- Pavement Grinding
- Welding
- Sweeping



*Contract Flaggers alongside District Forces Replacing Pipe in a Trench*

# Fiscal Year (FY) 2025

## FM&O vs District Forces Expenditures

Fiscal Year 2025 (FY25)	Operating	Capital	Subtotal	% of Total
District Labor	\$65,078,675	\$57,851,751	\$122,930,426	55%
Materials and Supplies, Rentals, Leases, Special Services, Construction and Other Costs	\$24,458,528	\$59,249,537	\$87,277,229	39%
<b>FM&amp;O Contracted Services</b>	<b>\$954,682</b>	<b>\$12,525,659</b>	<b>\$13,480,342</b>	<b>6.0%</b>
Totals	\$90,491,886	\$133,196,112	\$223,687,997	

- The majority of work performed by the Maintenance and Construction Department is done utilizing District forces with only 6% of total expenditures using FM&O contracted services.

# Contracted Services Actuals for FY2025

FM&O Contracted Services	FY2025 Actuals	Contracted Service	FY2025 Actuals
Dump Truck Services	\$6,408,958	Hydro/Air-Vacuum Excavation	\$608,417
Paving Services*	\$110,386	Pavement Grinding	\$348,805
Flagging	\$2,514,891	Welding	\$213,260
Saw-Cutting	\$1,647,962	Sweeping	\$14,036
Concrete Repair	\$1,613,624		

\* Paving services do not include \$2.6 million in costs for Joint Paving Agreements with local jurisdictions.

# When Contracted Services are Utilized

- Peak workload stemming from complex permit requirements, emergencies, seasonality, project schedules and tight deadlines
- Specialized skills and services such as slurry and chip sealing roadways, traffic loop installations, or Americans with Disabilities Act pedestrian ramps
- Unplanned absences
- Coordination with outside parties (e.g., jointly funded projects)

# Focus on Five

Paving, Dump Truck Services, Saw Cutting, Flagging, and Concrete Repair

# Paving Services Overview

- Eight District paving crews
- Approximately 4,000 orders per year
  - Pipeline Rebuild replacements
  - Main breaks & service repairs
  - District facilities
- Joint paving agreements with cities and counties



*Extension Paving by District Forces*

# Paving Performed by District Forces

## Patch Paving

- Patches are from main breaks, service repairs, and new installations

## Extension Paving

- District crews perform limited paving following pipeline work



*Patch paving in El Cerrito*



*Extension paving in Oakland*

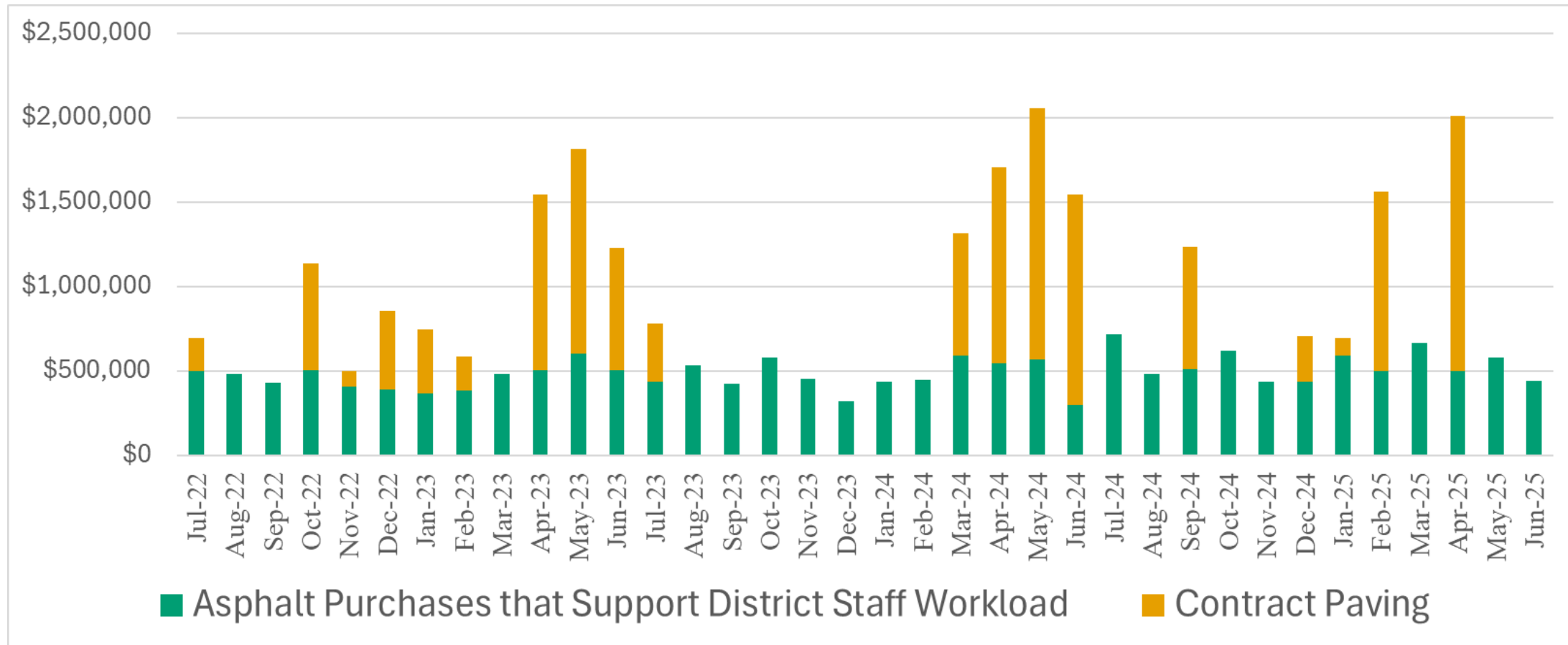
# Paving Performed by Contractors

- Large pipeline replacement clusters
- Joint projects with cities & counties
  - 97% to 98% of contract paving expenditures are for joint paving agreements
- Specialized work not performed by District Forces (e.g., ground stabilization, slurry and chip sealing)

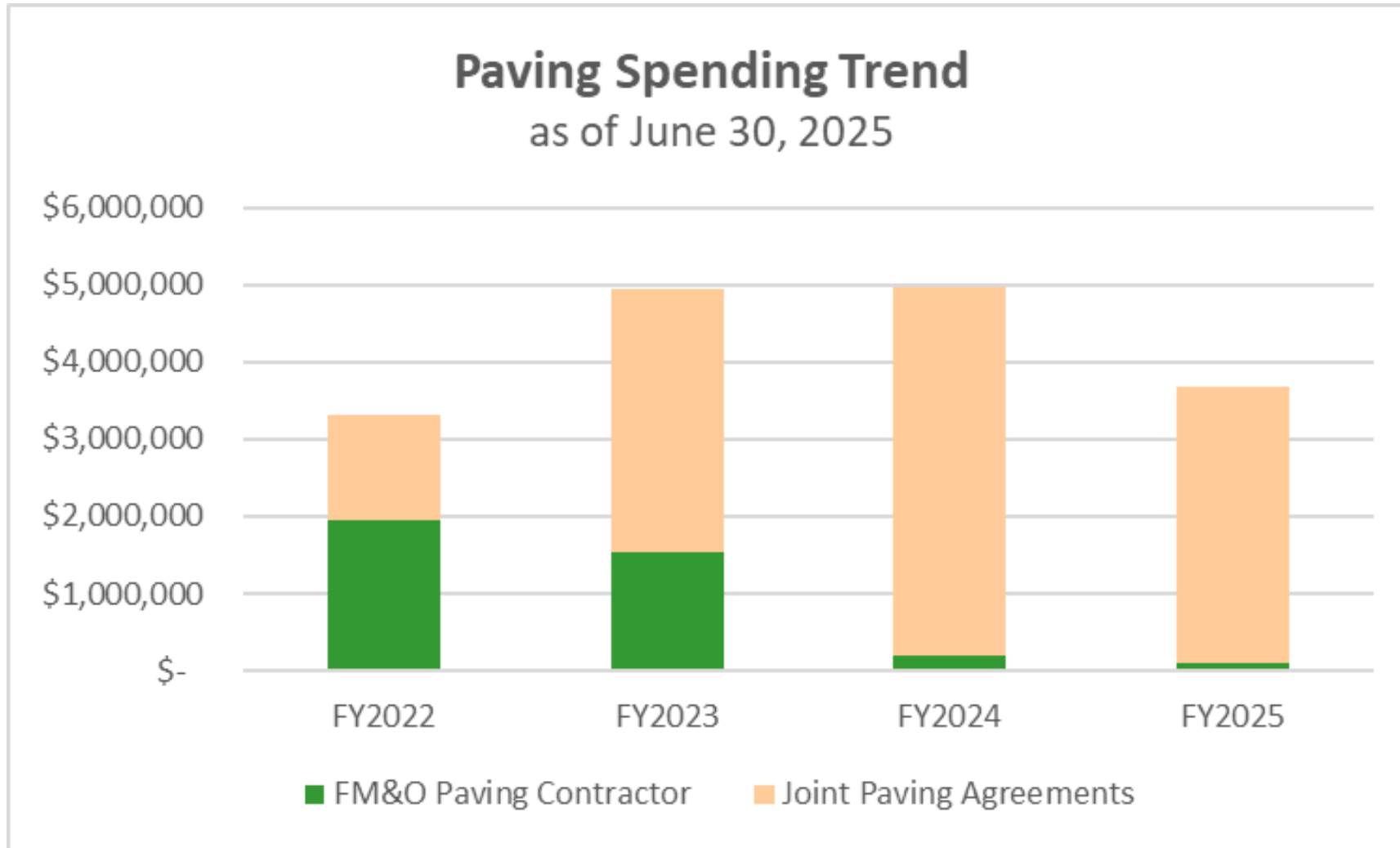


*Extension paving by Contractors*

# Seasonality of Paving



# Paving Services – Spending Trend



FY2026 projections indicate that approximately 96% of total paving expenditures will be through joint paving agreements.

# Dump Truck Services Overview

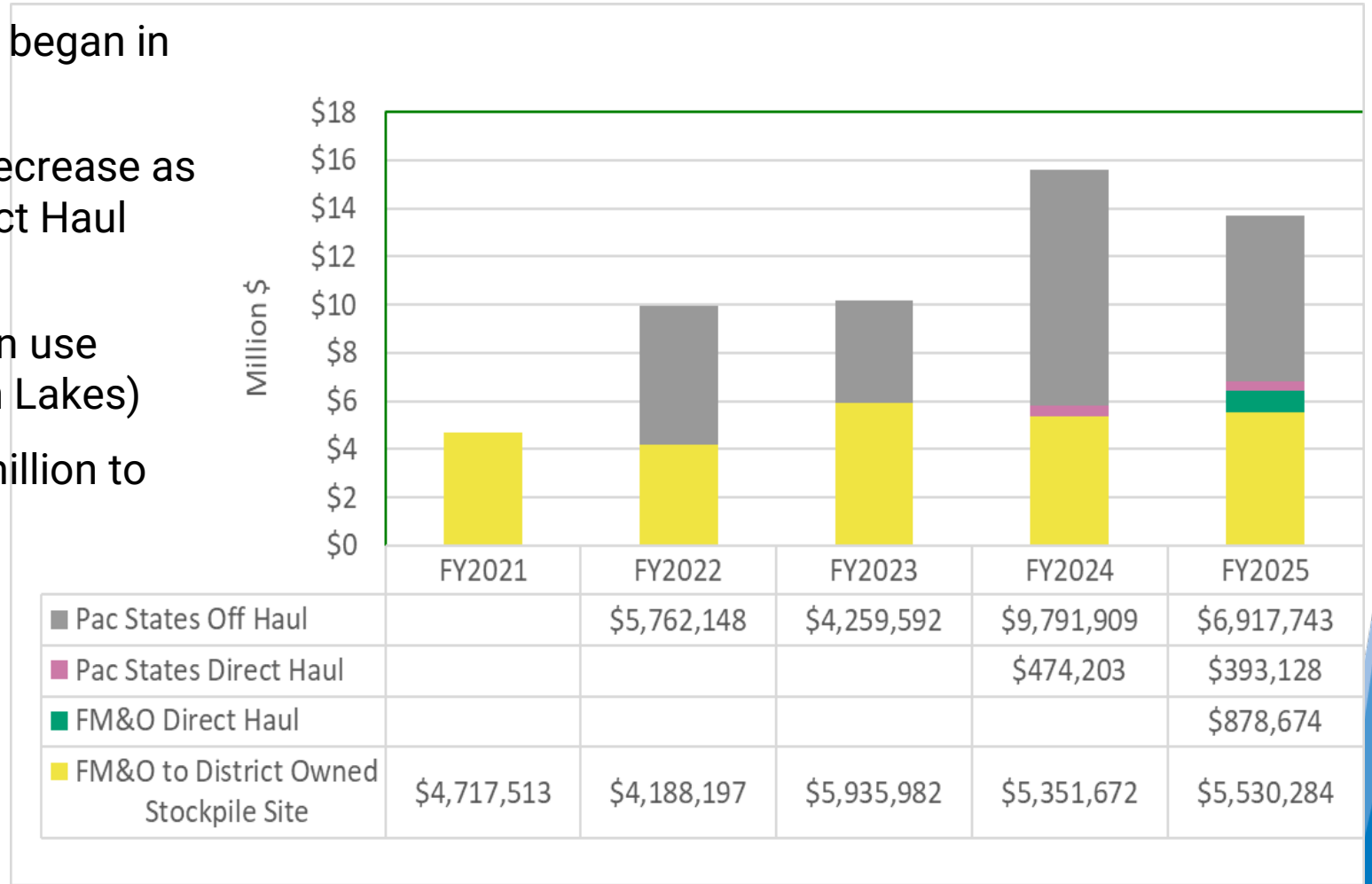
- Haul soil and debris in and out of job sites
- Construction Activities
  - Stripping asphalt
  - Hauling trench spoils
  - Delivering backfill materials and temporary asphalt



*Pipeline Construction Project using Contracted Dump Truck Service*

# Dump Truck Services – Spending Trend

- Direct haul to beneficial reuse sites began in FY2024
- Spending for Off Haul Events will decrease as FM&O Dump Truck Service for Direct Haul increases
- Two direct haul sites are currently in use (Dumbarton Quarry and Pleasanton Lakes)
- Briones off-haul event cost \$16.7 million to remove 212,695 cubic yards
- Transition to direct haul will reduce community impacts and overall cost of soil management
- Staff working to add additional direct haul beneficial reuse sites



# Saw-Cutting Services Overview

- Pipeline has one dedicated District saw that cuts approx. one mile of trench per month (12 miles)
- Pipeline installs 25 miles of pipe per year leaving 13 miles for FM&O
- Service yards need saw cutting for all planned work (service/hydrant installs)
- Paving uses District forces to cut all patch paving (main breaks) so crews are not always available for pipeline projects when needed



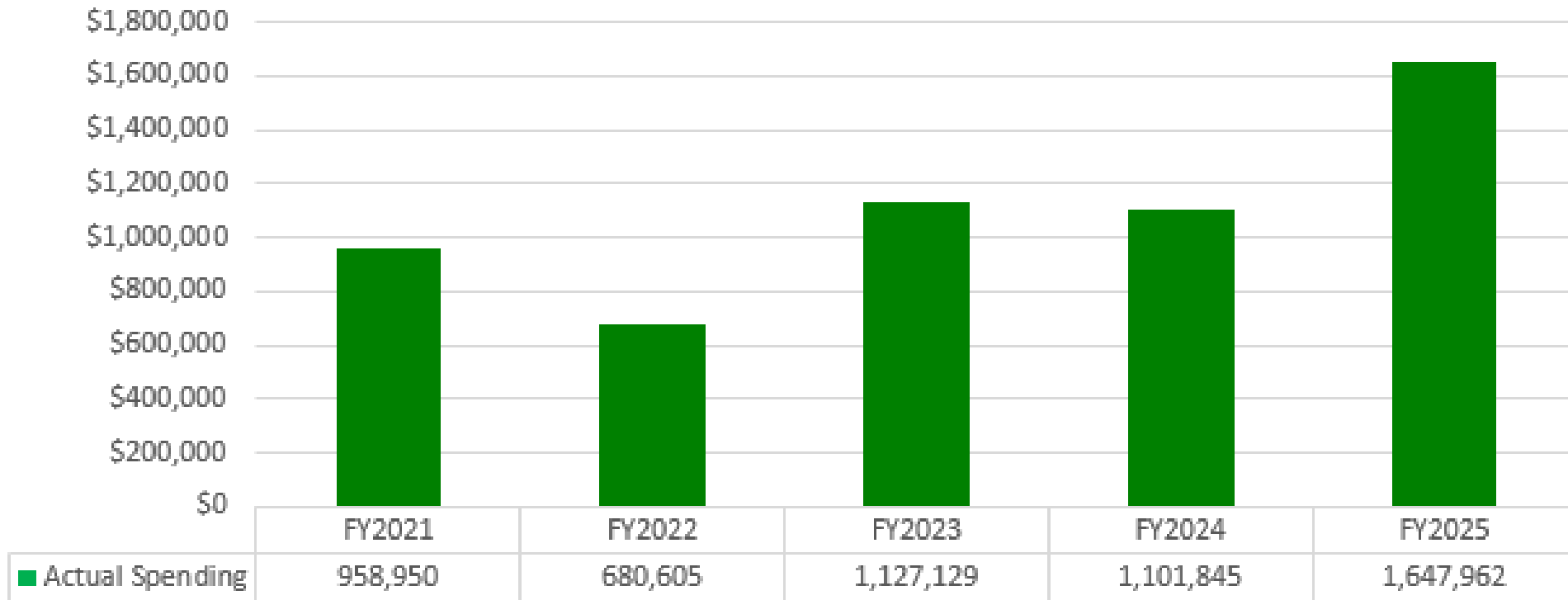
*Contractor Performing Asphalt Saw-Cutting for District Pipeline Project*

# Saw-Cutting – Spending Trend

Staffing and equipment will be added in FY2027 to create one additional saw-cutting crew

## Saw-cutting Spending Trend

As of Jun. 30, 2025



# Flagging Services Overview

- Cities and counties approve Traffic Control Plans, which dictate flagging requirements
- Flagging needs vary by project
- District staff can perform flagging, but it is not their primary responsibility or core work



*Contract Flagger at Work*

# Complex Traffic Control Plans

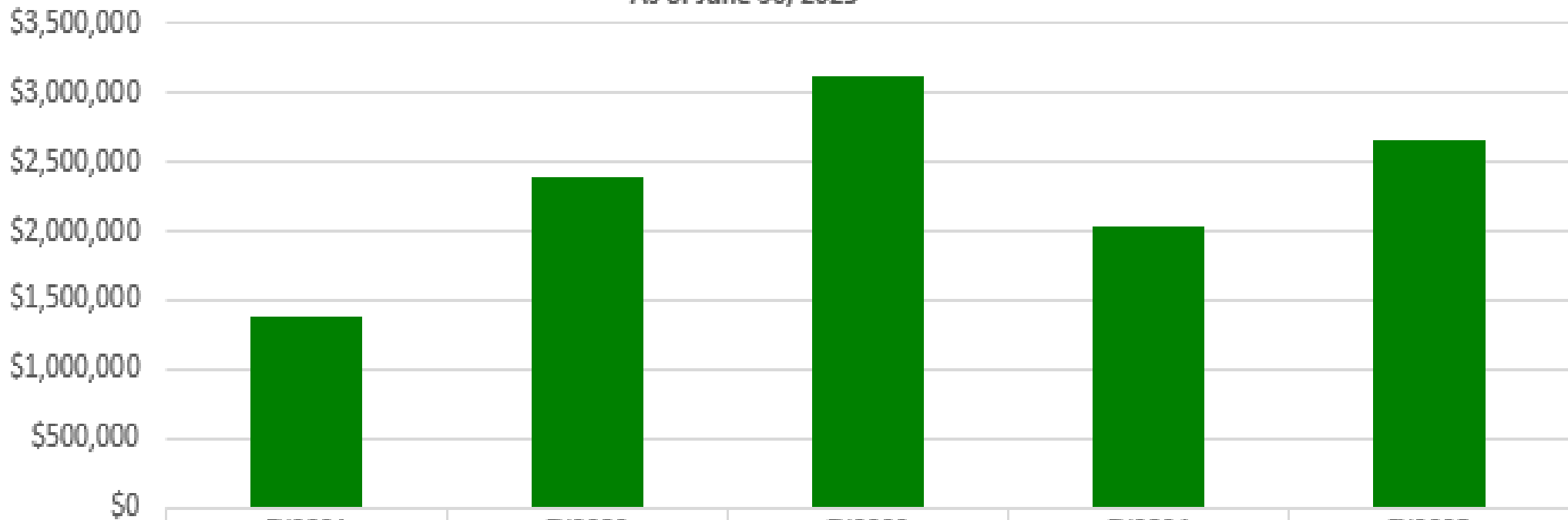


- Example of complex city required traffic control plan for a pipeline project (Pleasant Hill)
- Construction permit required **9 flaggers** for the work zone, with up to five each day as work progressed.
- Flagging needs vary on a daily basis, from zero to 30 flaggers, with an average of 12 flaggers needed on any given day.

# Flagging- Spending Trend

## Flagging Spending Trend

As of June 30, 2025



	FY2021	FY2022	FY2023	FY2024	FY2025
■ Actual Spending	1,372,809	2,385,420	3,115,488	2,037,015	2,654,892

# Concrete Services Overview

- The District uses concrete repair services to supplement District forces for concrete work on streets, sidewalks, and meter boxes
- In FY2025, District had 6 concrete crews, with one paving foreman
- Added one Concrete Finisher II and one Paving Crew Foreman in FY2026
- District crews primarily perform small concrete repair work

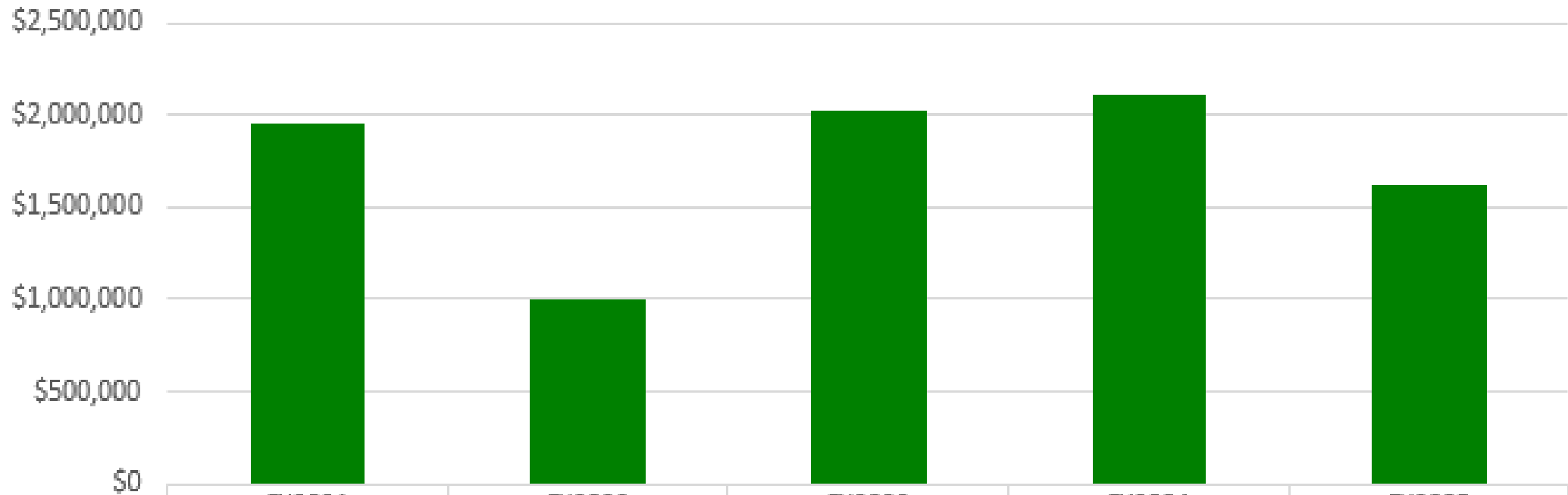


*Meter Box Concrete Repair*

# Concrete Expenditures Over Time

## Concrete Repair Services Spending Trend

As of June 30, 2025



■ Actual Spending

FY2021

FY2022

FY2023

FY2024

FY2025

1,945,673

990,282

2,013,016

2,098,930

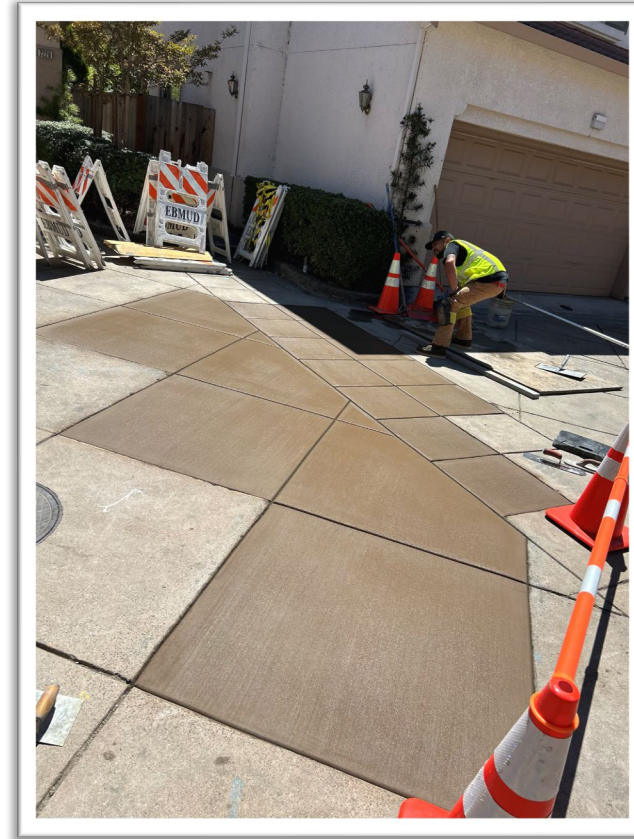
1,613,625

# Concrete Work Performed by District Forces



*Berkeley Park Sidewalk Repair Per City Ordinance*

- Utilized 4 Finishers



*Private Driveway, Walnut Creek Main Break*

- Utilized 3 Finishers

# Concrete Work Performed by District Forces



*South Yard Rest Area Restoration*

- Utilized 5 Finishers



*Ygnacio Valley Rd. Main Break*

- Utilized 4 Finishers

# Concrete Work Performed by Contractors

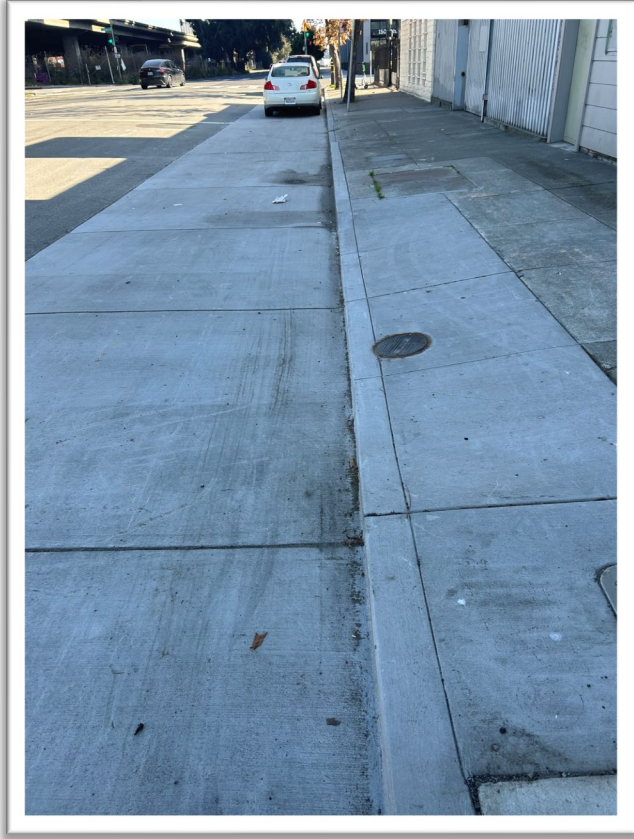


*S. 47th Street, Richmond  
ADA Sidewalk Restoration  
Specialized Service*

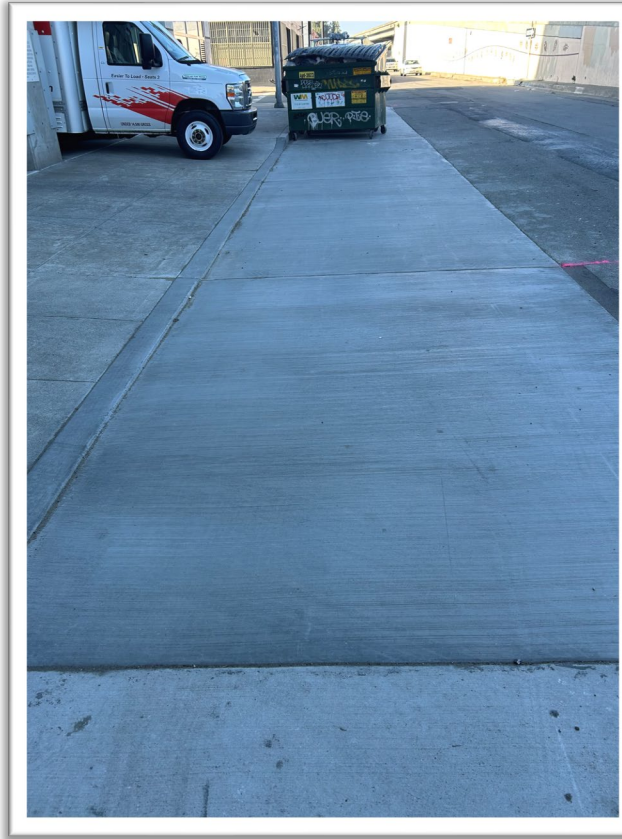


*Private Driveway, Shasta Rd., Berkeley  
Claims Management*

# Concrete Work Performed by Contractors



*3rd & Chestnut, Oakland – Large Curb  
& Gutter*



*5th & Jackson, Oakland – Large  
Curb & Gutter*

# Cost Comparison and Contract Equity Program (CEP)

# Cost of District Forces vs. Contractors

Contracted Service	District Force Production Rates	Contractor Production Rates	% Savings
Paving Extensions	\$2.56 per ISF	\$1.09 per ISF	57%
Concrete Services	1.47 CF per hour	2.17 CF per hour	48%
Dump Truck Services – includes labor, overhead and equipment	\$230.54 per hour	\$161.00 per hour	30.2%
Two Flaggers - includes labor, overhead and equipment	\$349.50 per hour for two utility laborers	\$239.00 per hour	31.6%

ISF – Inch per square foot of asphalt installed

CF – Cubic feet of concrete installed

# CEP Utilization

- The District's CEP Program enhances equal opportunities for business owners of all races, ethnicities, and both genders who are interested in doing business with the District, along with the goal of awarding 50% of all contracts to small business enterprises
- Contracted services support the local economy, minority and women-owned businesses

Category	FY2025 Spending	% Vendors in CEP Category		
		Minority	WO	LBE
Saw-Cutting	\$1,647,962	20%	-	51%
Paving	\$110,389	-	-	100%
Concrete	\$1,613,625	63%	-	32%
Flagging	\$2,514,891	49%	37%	12%
Dump Truck Services	\$6,408,958	56%	19%	52%
Hydro Excavation	\$608,417	40%	20%	80%
Grinding	\$348,805			
Welding	\$213,260	84%	18%	91%
Sweeping	\$14,046			
<b>Total/Average</b>	<b>\$13,480,342</b>	<b>35%</b>	<b>12%</b>	<b>46%</b>

WO – Women Owned  
LBE – Local Business Enterprise

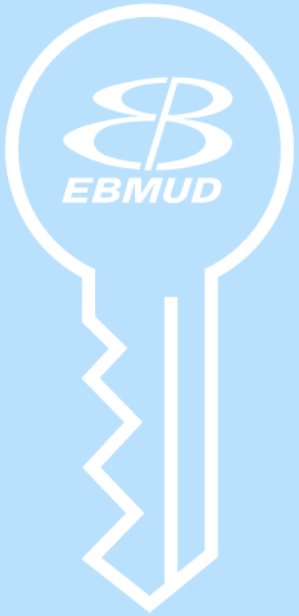
# Staffing Increases by Fiscal Year

- Staffing needs are continuously monitored and increased when baseline workload can support the work
- Staffing for positions performing work also performed by contract services increased by 28 positions since FY2021, which helps minimize contract spending



*District Staff Working on a Pipeline Replacement Project*

# Key Takeaways



- FM&O contracted services needed due to peak workload, seasonality, unplanned absences, joint agreements, and specialized services.
- FM&O contracted services accounts for a small percentage (6%) of the total budget for routine maintenance and construction work.
- FM&O contracted services are a cost-effective way to supplement District forces.
- FM&O contracted services support the District's CEP goals.
- Staff will continue to analyze staffing and adjust staffing levels, when appropriate, and will meet with the Unions to discuss FM&O utilization.

**Questions?**

