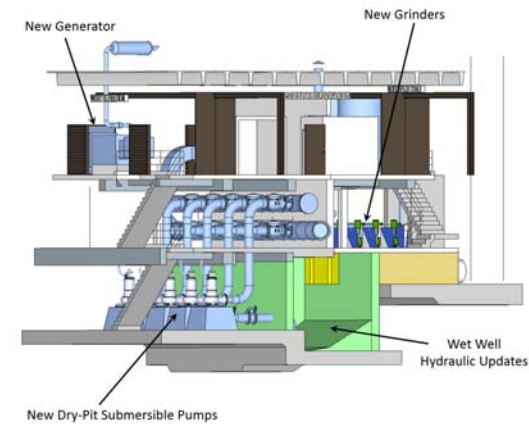


Pump Station Improvements Outreach Meeting

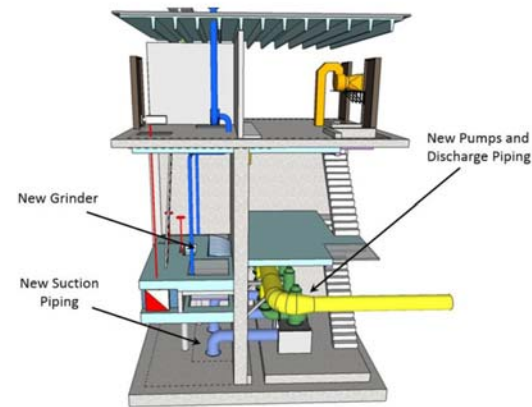
June 27, 2018



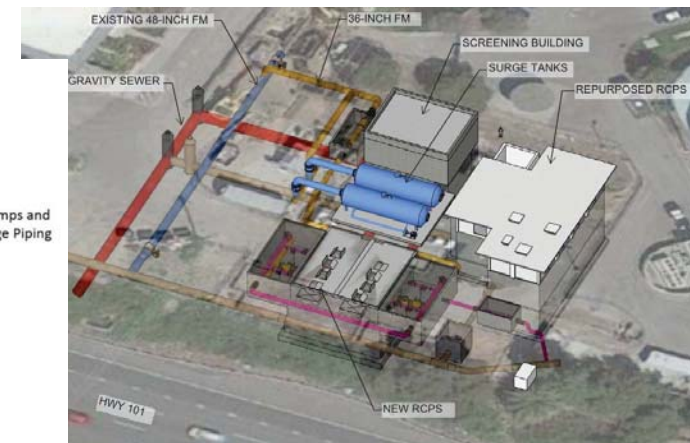
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Menlo Park Pump Station



Belmont Pump Station



Redwood City Pump Station

Agenda

- **Introduction** (Kim)
- **Pump Station Improvement Project – Overview** (Charlie)
- **Procurement Process and Stages** (Bob)
- **Key Parts of the RFQ** (Bob)
- **Estimates, Budgets and Pricing** (Bob)
- **Available Information** (Bob)
- **Questions** (Please ask along the way)

SVCW PSI Project Team

- **SVCW Owner's Representative – Teresa Herrera**
- **Project Manager – Bob Donaldson – Collaborative Strategies Consulting, Inc.**
- **Owner's Advisor – Charlie Joyce – Brown and Caldwell**
- **Connecting Project – Gravity Pipeline**
SVCW Project Manager – Bruce Burnworth
Owner Advisor – Mark Minkowski – Kennedy/Jenks



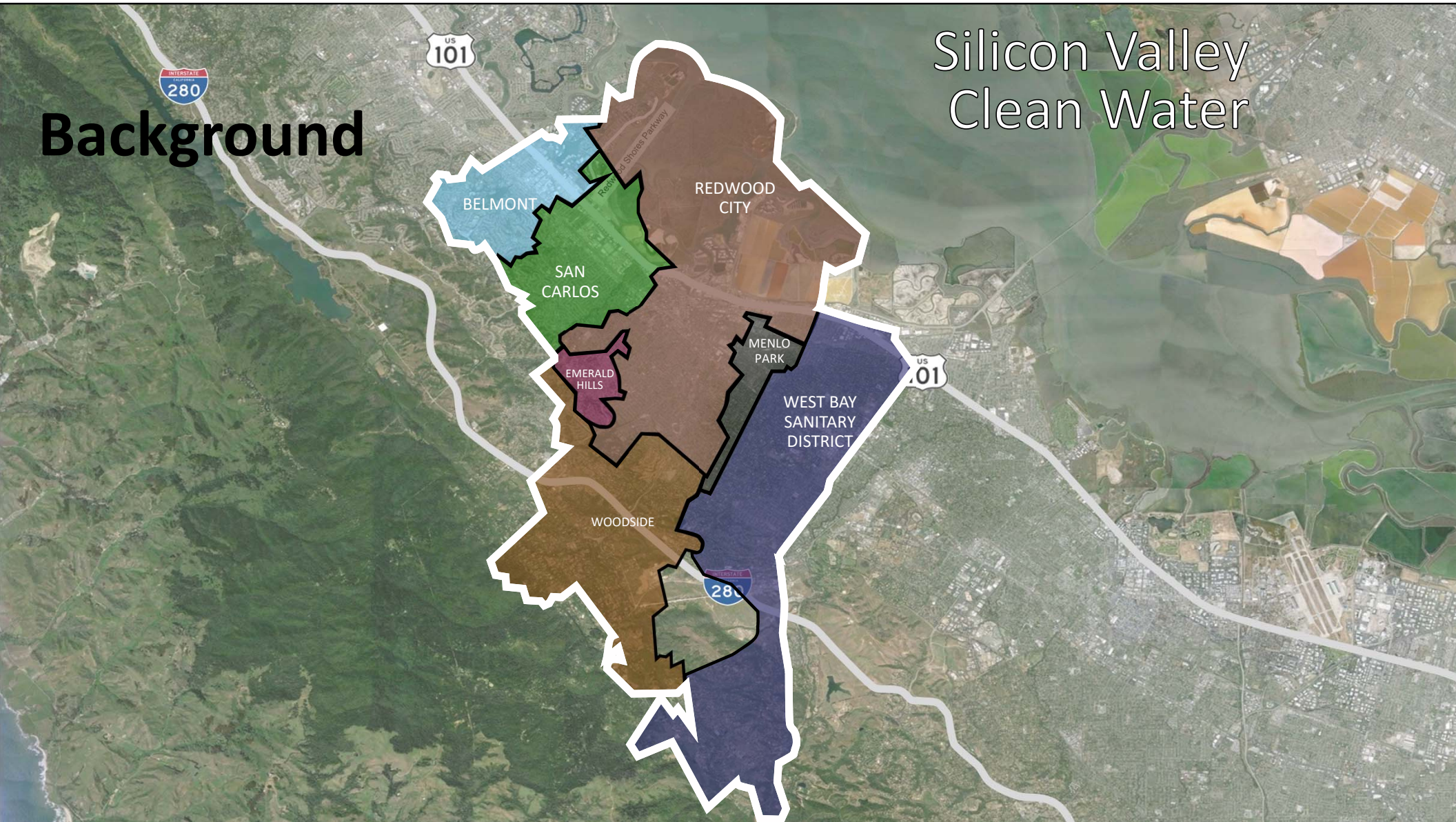
PSI Project – Overview

- **Background**
- **Flows**
- **Project Elements – by location**
 - Existing
 - Project Concept
- **Status of EIR, Permits and Easements**
- **Availability of SVCW Funding**



Background

Silicon Valley Clean Water



An aerial photograph of a city with a river and a large body of water. The city is built on a peninsula, and the river flows through it. The water is a dark green color, and the city is a mix of green and brown. The text "Problem we need to Solve" is overlaid on the image in a large, white, sans-serif font.

Problem we need to Solve

- ❖ 4 pump stations with a Booster Pump Station and Influent Lift Pumps
- ❖ Joints every 12 ft in RCP Force Main thru YBM
 - Design useful life = 25 to 50 years (ASCE; EPA)
 - Pipe is 45 years old
 - Currently operating at 2.5 times design pressure
 - 64 leaks so far; rate of failure is increasing
 - Leaks are time-consuming, disruptive and expensive to repair . . . potentially catastrophic.



**Pipe cracked
(not a joint separation)**



**Raw sewage flowing from
separated and offset joint**

Pump stations are getting old and worn...

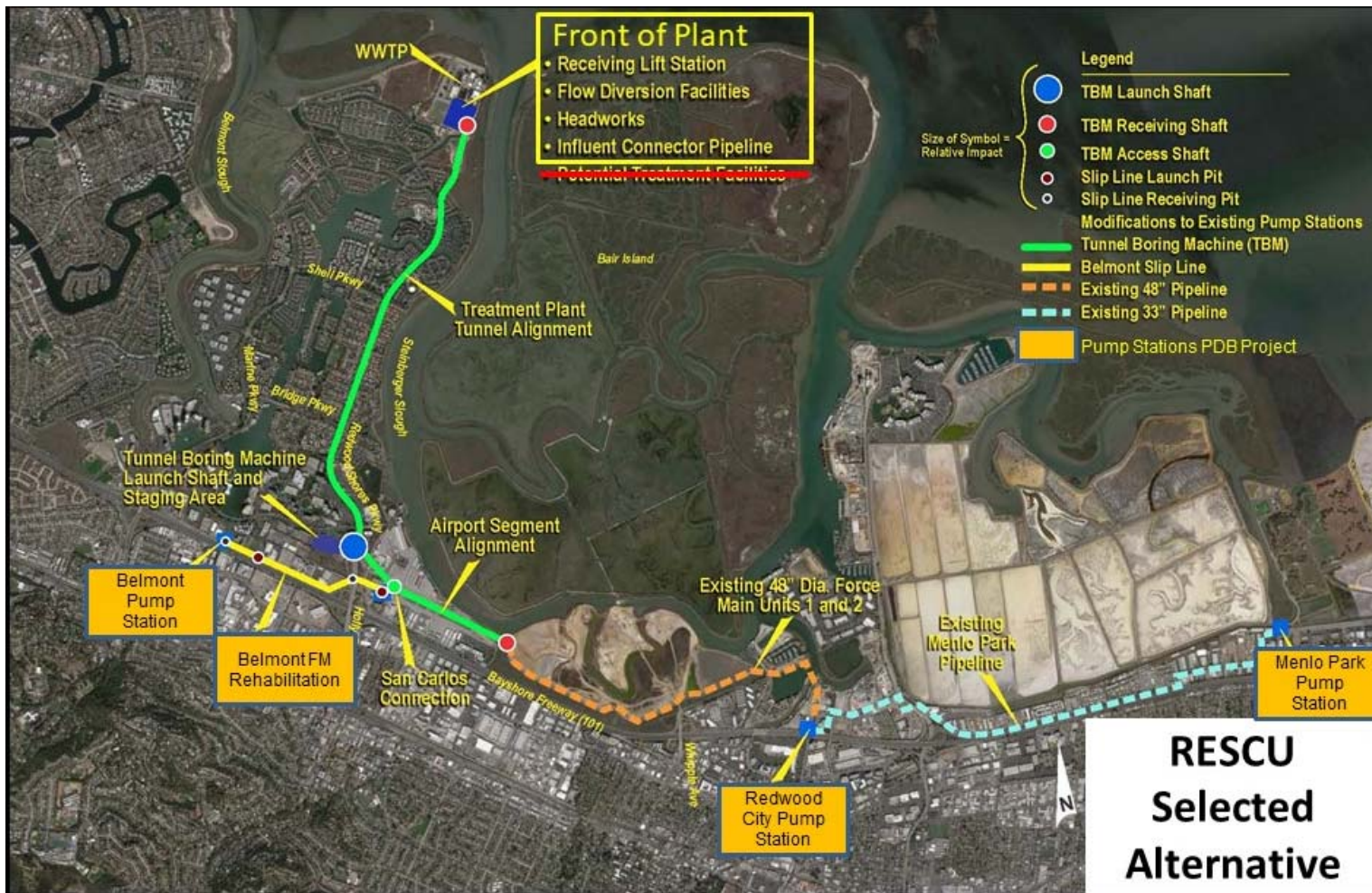


Major Pump Station Issues



Numerous Alternatives Considered



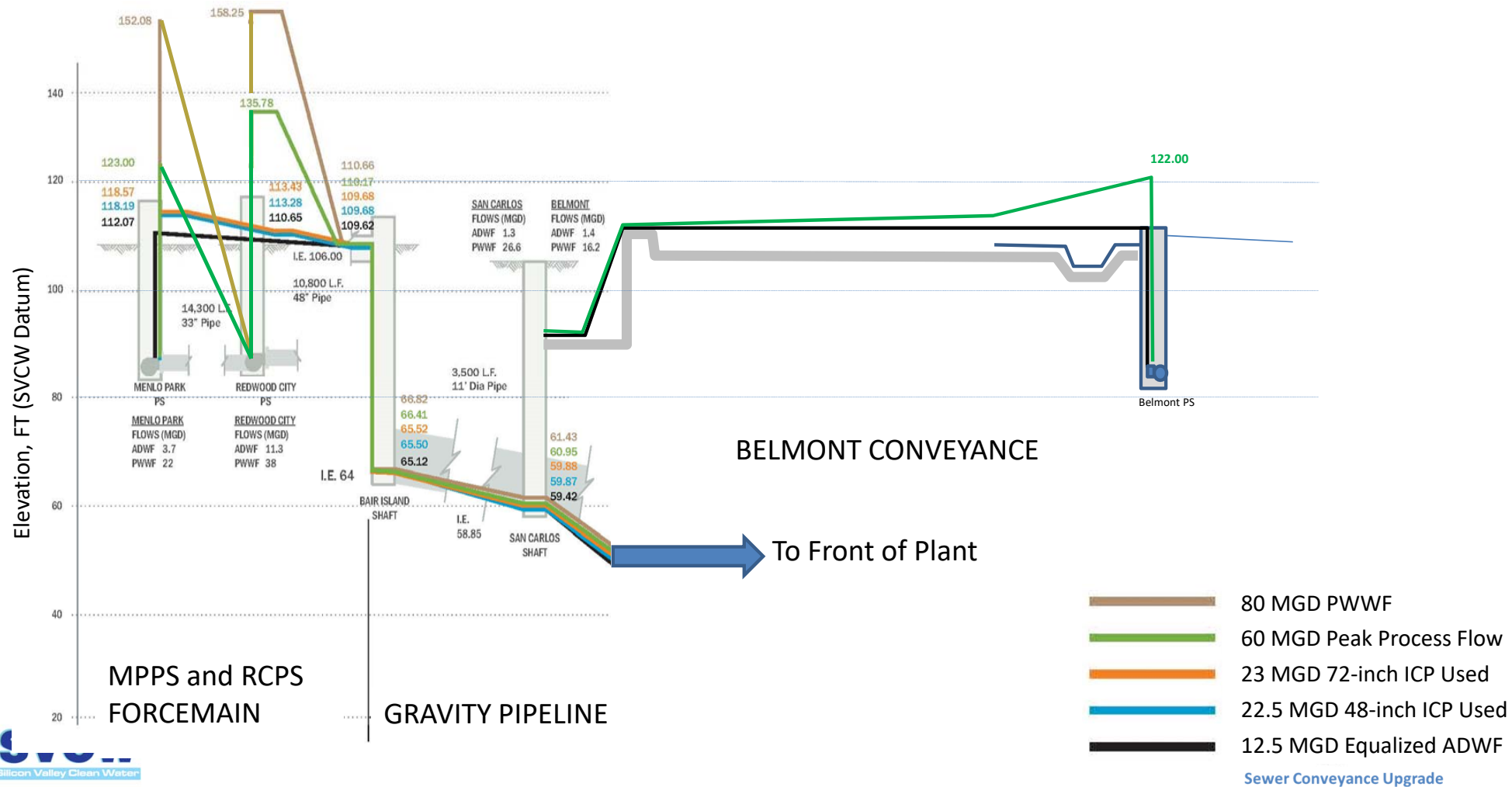


PSI Conceptual Flow Conditions

Flow Condition	MPPS (mgd)		RCPS (mgd)		BPS (mgd)	
	Exist	Future	Exist	Future	Exist	Future
Average DWF	3.7	4.6	4.5	8.0	1.4	1.8
Peak DWF – hourly	10.2	10.0	11.1	14.5	3.2	3.6
Min DWF – hourly	0.2		0.9		0.3	
PWWF – hourly		22	38	60		16.3

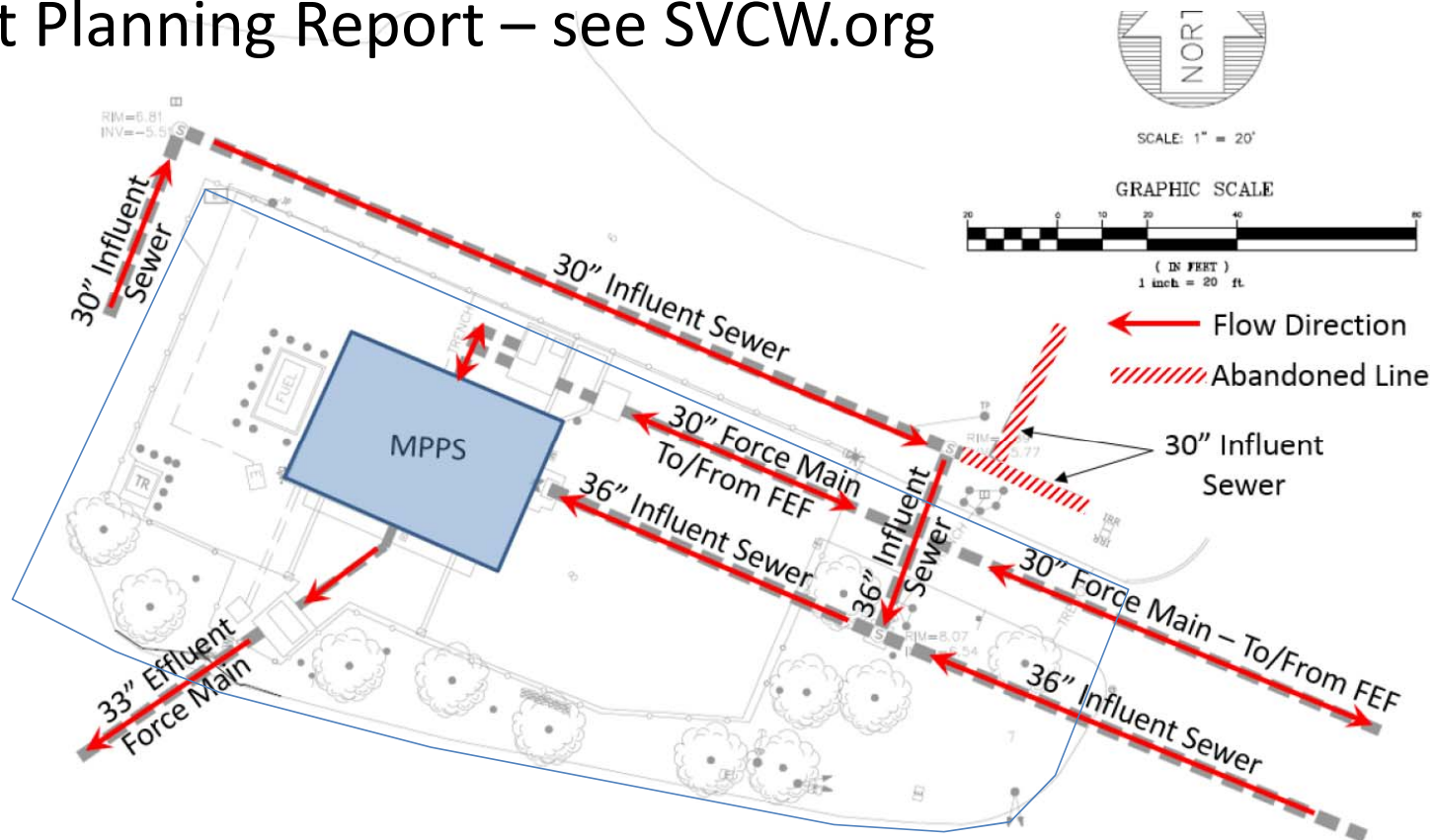
- Existing – October 2015
- Future – 2040
 - RCPS PWWF includes MPPS flows

PSI Conceptual Hydraulic Gradeline



Menlo Park Pump Station - MPPS

- Project Planning Report – see SVCW.org



MPPS Site Aerial



MPPS Site

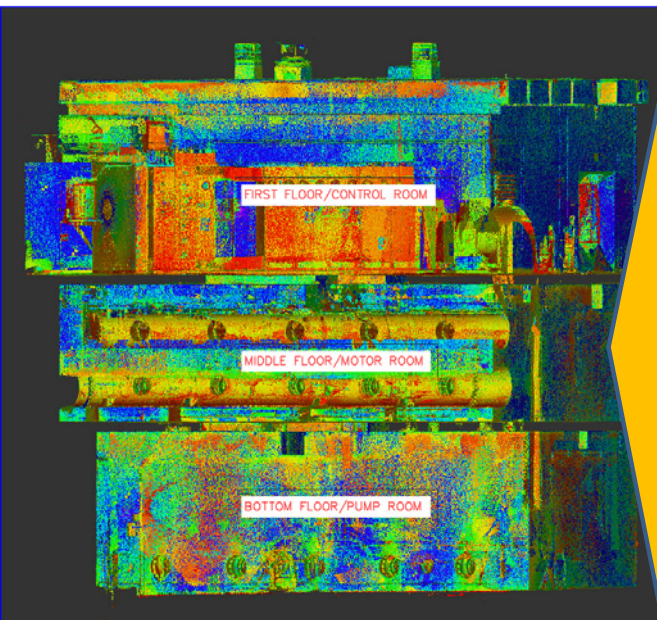


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MPPS Data – Lidar of Pump, Motor, Electrical Rooms

Menlo Park Pump Station Project

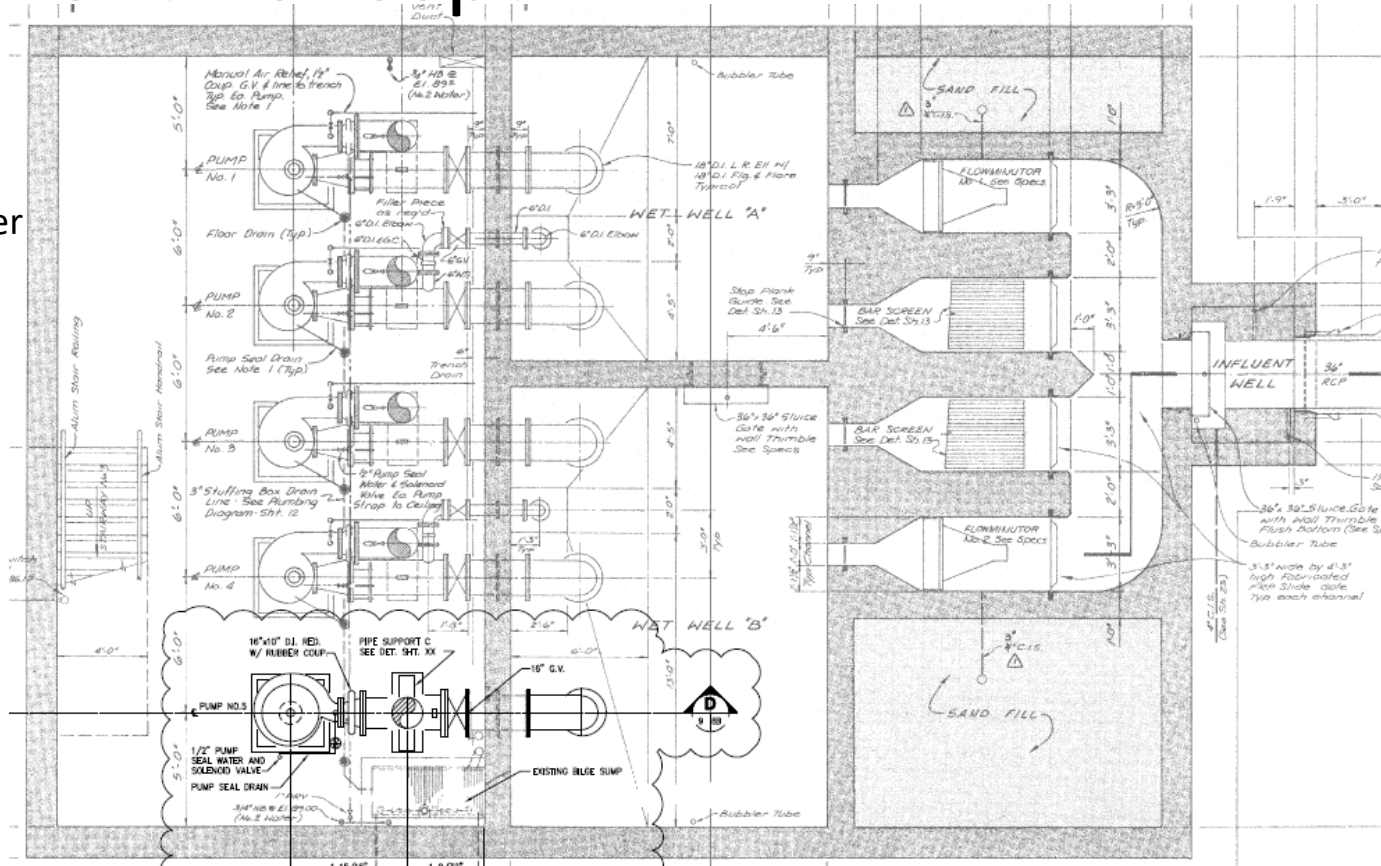
TruView 3D Laser Scanning Web Portal - Select the floor link below to enter the TruView Scenes



MPPS Motor Room

MPPS Improvement Concept

- New CARVs located along Force Main



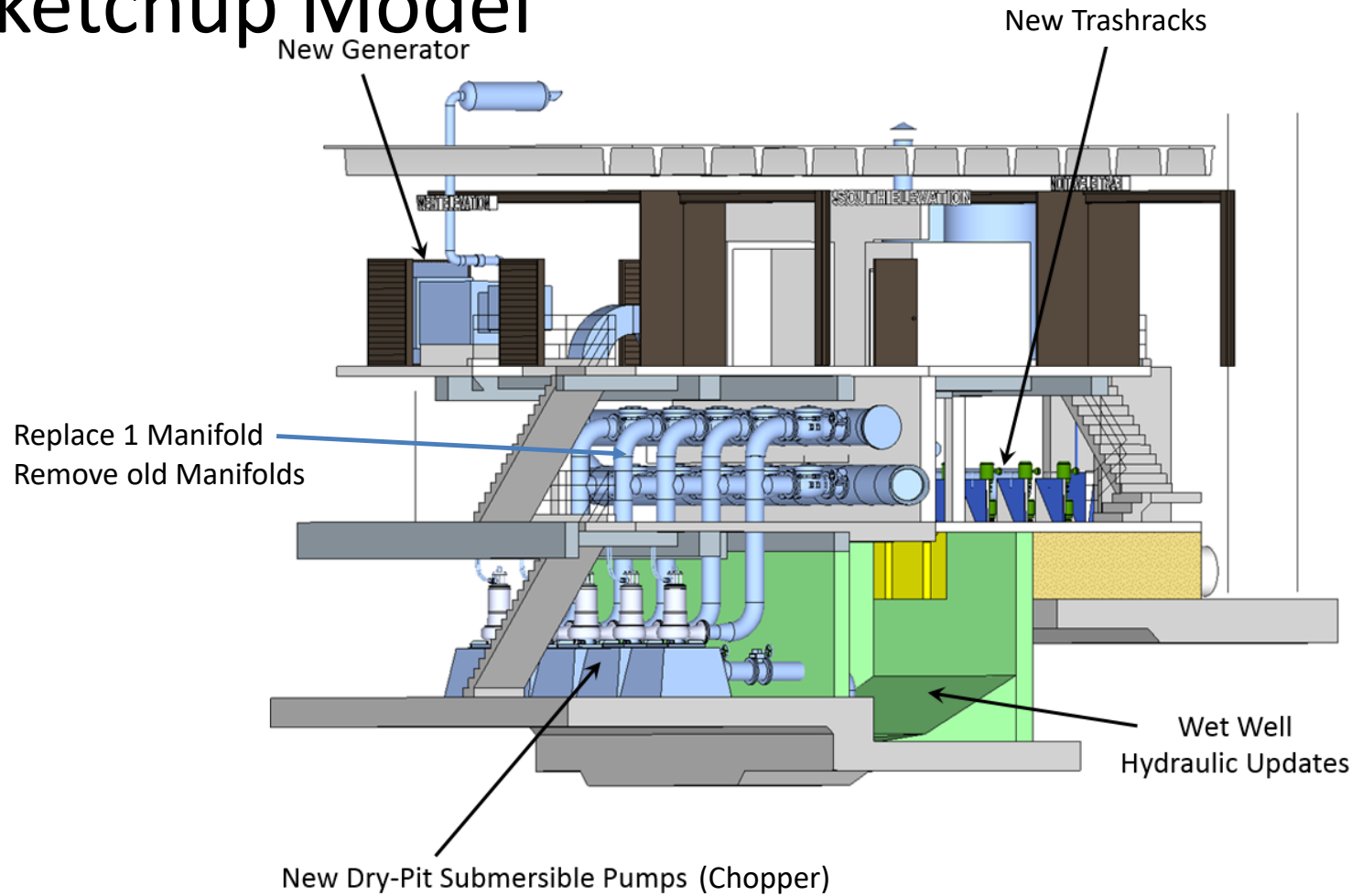
MPPS Record Drawings

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MPPS Sketchup Model



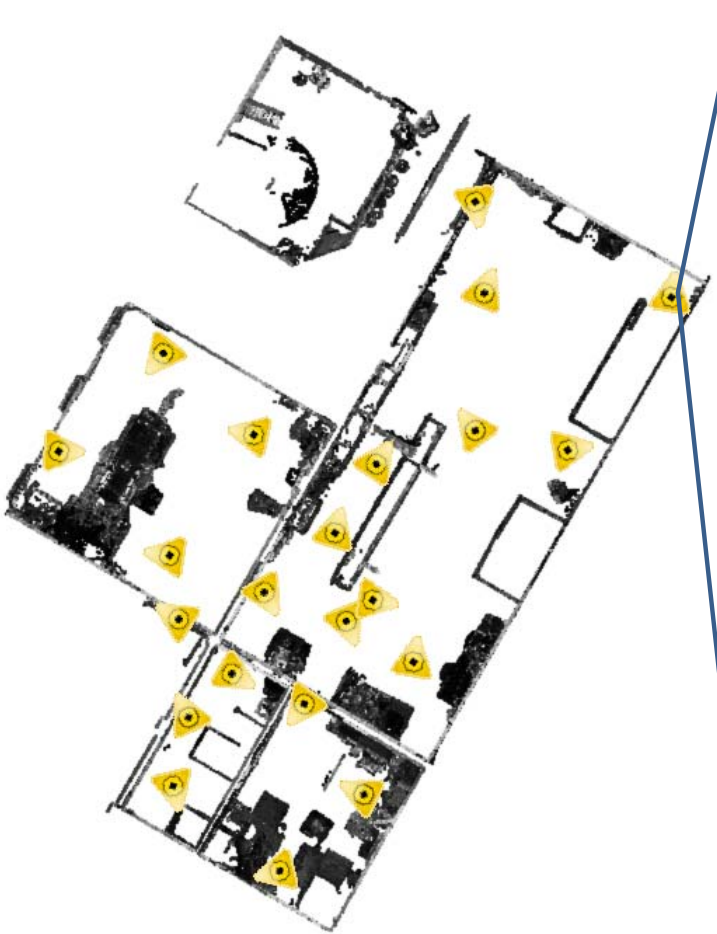
- PPR– SVCW.org



RCPS - Site

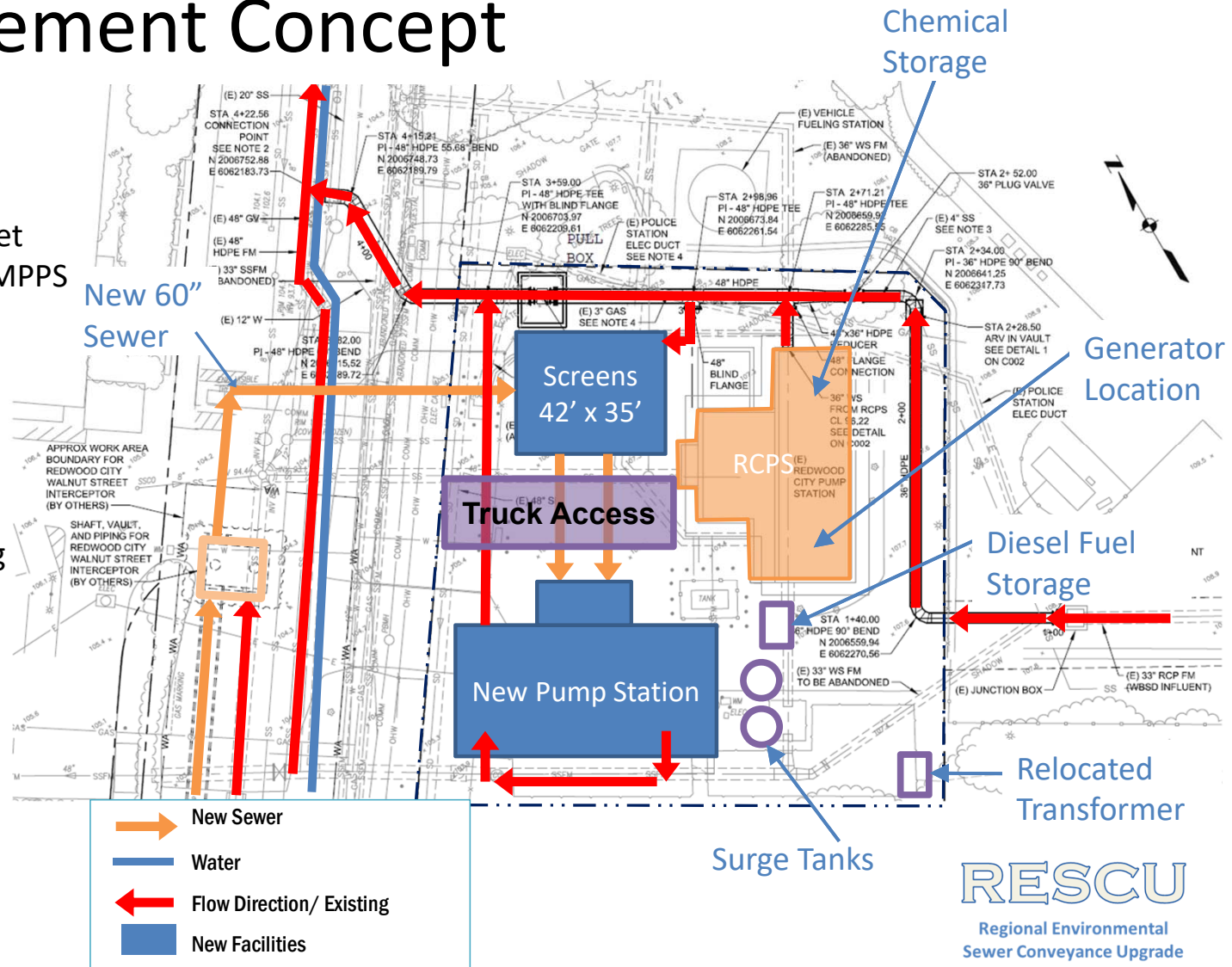


RCPS Data – Lidar of Pump, Motor, Electrical Rooms



RCPS Improvement Concept

- Connect to 60-inch Sewer
- *New Screens
- New Odor Control
- *4 - 50 HP Dry and 4 - 400 HP Wet Weather pumps - Double pump MPPS wet weather flow
- *Dual trench style wetwell with dry pit submersibles
- New flow meter
- New sampling ports and sampler
- New seismic upgrades to building
- Civil site improvements / flood protection
- New electrical, including standby generator, relocate transformer
- New I&C
- New Surge Control



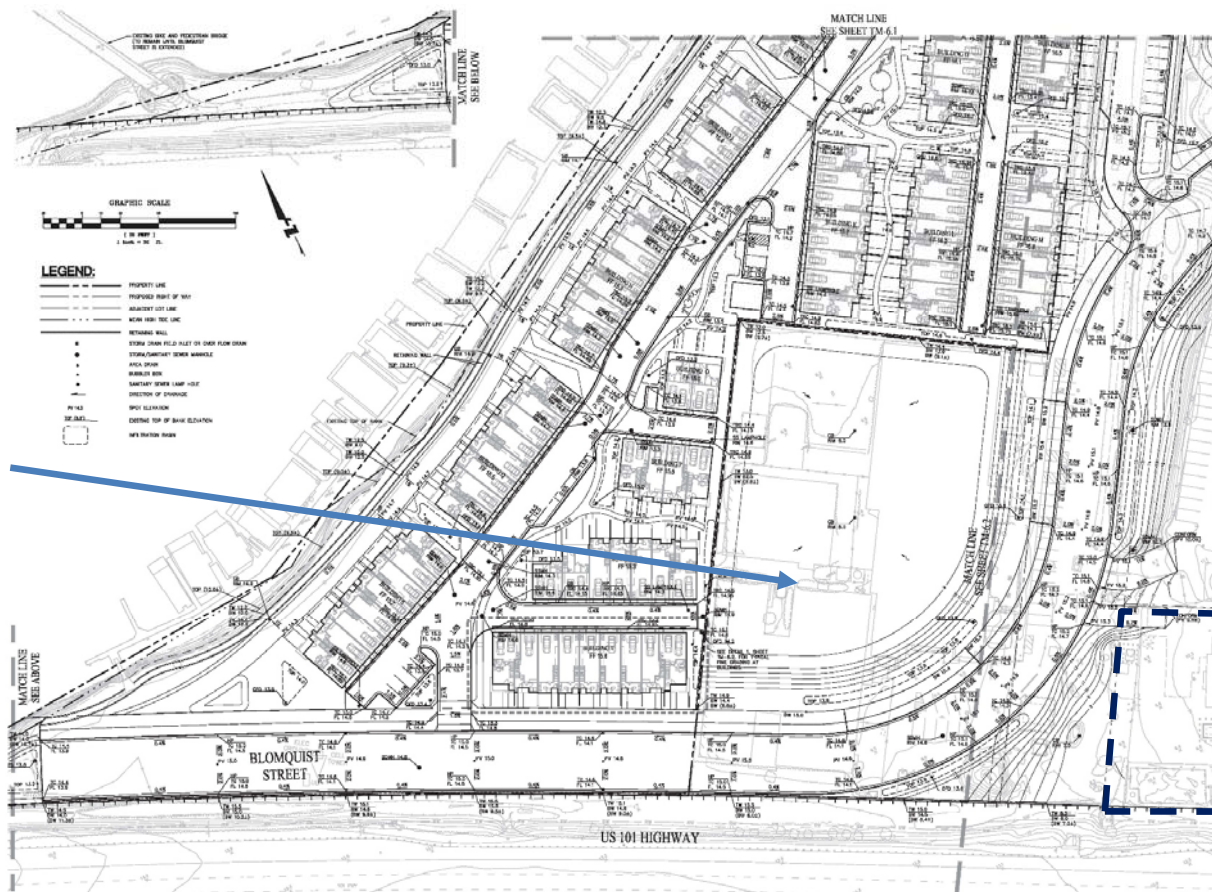
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RCPS – Local Project(s) Coordination

San Mateo
Correctional
Facility and
Homeless
Shelter



March 2018.



1548 MAPLE STREET
IN REDWOOD CITY, CALIFORNIA
BY STRADA INVESTMENT GROUP

STRADA
INVESTMENT GROUP

DAHLIN

BKF
ENGINEERS, SURVEYORS, PLANNERS

ENVIROPLAN

PRELIMINARY
GRADING &
DRAINAGE PLAN

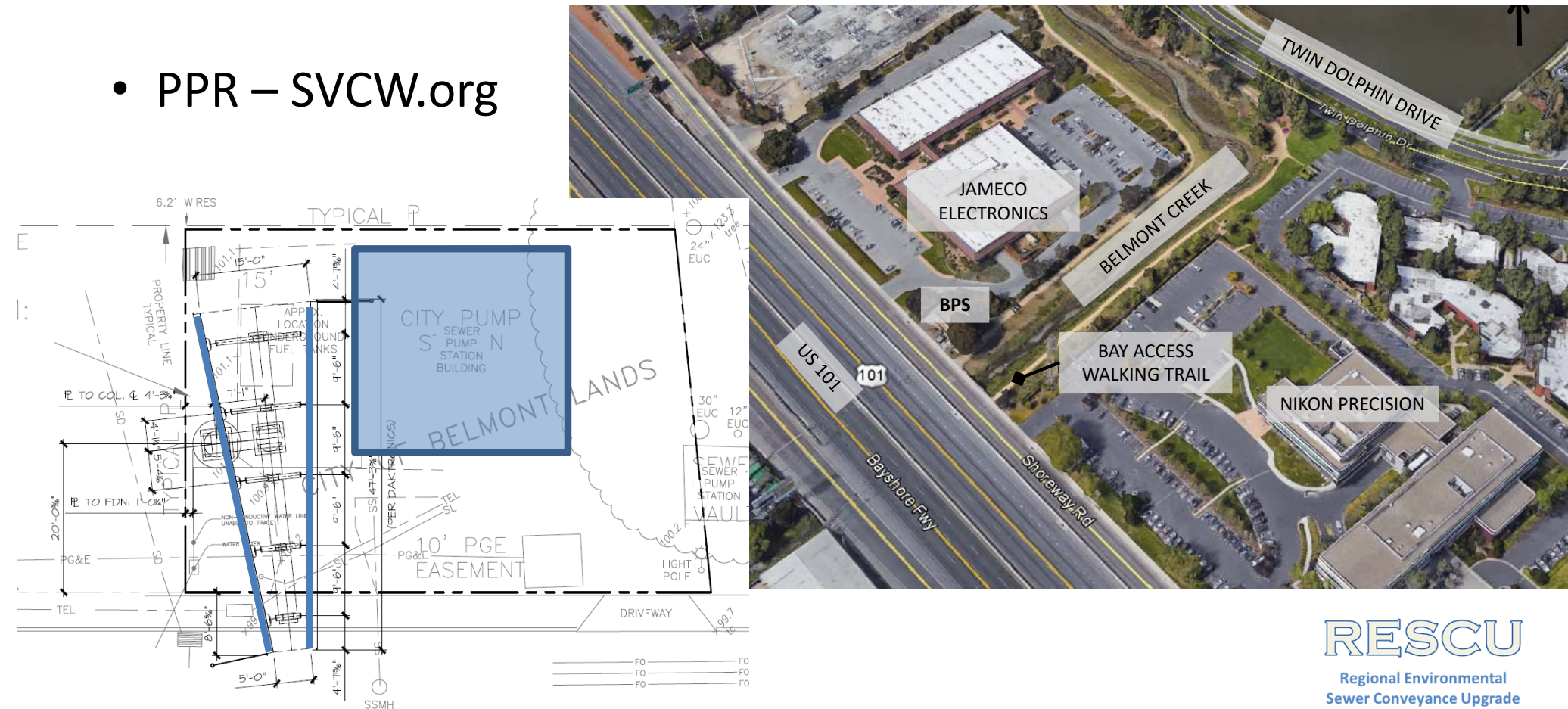
20160806.11 03/22/18
TM-6.0

RCPS

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Belmont Pump Station - Site

- PPR – SVCW.org

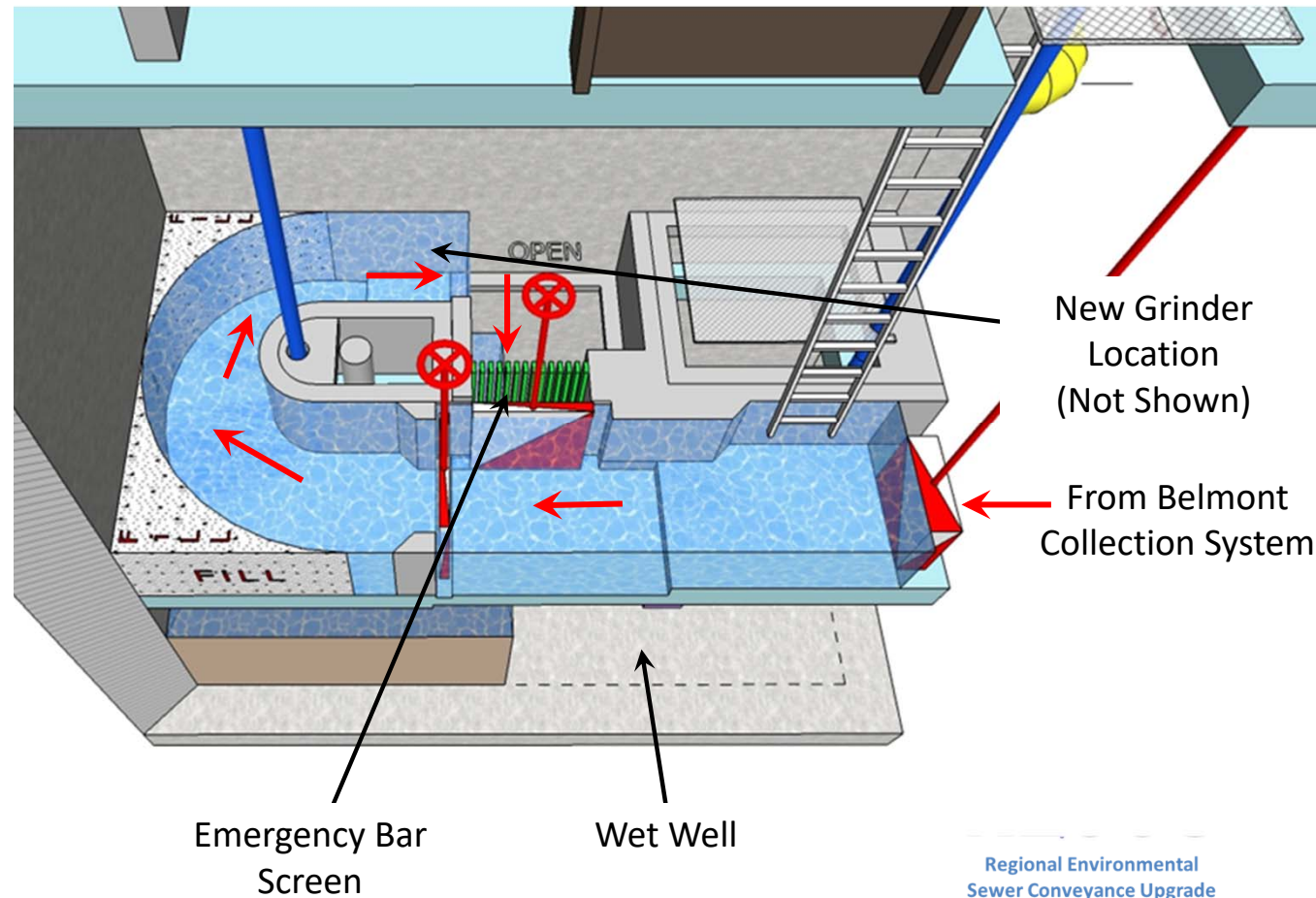




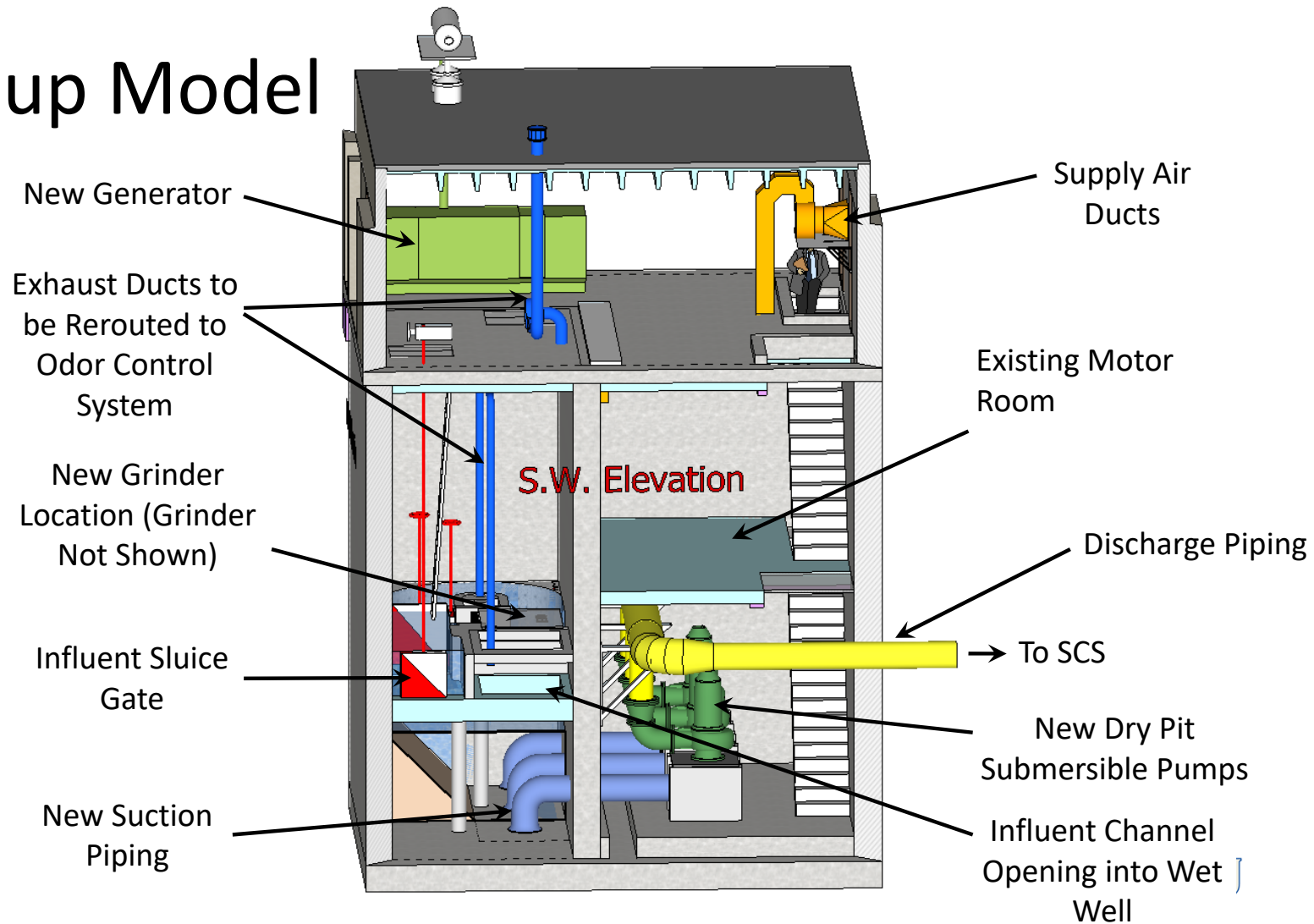
BPS Street View

BPS – Improvement Concept

- 3 new dry pit submersibles -75 HP
- New grinder
- New odor control
- Relocate flow meter and sampler to San Carlos PS site-Part of GP Project
- New generator



BPS Sketchup Model



Belmont Force Main



- 1,150 ft of 24-inch FM – CIPP Rehabilitation
- 3,550 ft of 54-inch FM – HDPE Slipline Rehabilitation

LEGEND	
	EXISTING SAN CARLOS 36-INCH SEWER
	SLIPLINE 54-INCH FM
	CIPP 24-INCH FM
	EXISTING 54-INCH FM- TO BE ABANDONED



- Belmont PPR-SVCW.org

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CIPP Access at BPS



Belmont Tee Connection



Holly and US-101 Access Pit



PSI Facilities

	<i>Pumps / Hydraulics</i>	<i>Odor Control</i>	<i>Electrical</i>	<i>Instrumentation</i>	<i>Seismic</i>	<i>Site Civil</i>
• Menlo Park Pump Station (MPPS) – Dry Pit - Chopper pumps	✓	✓	✓	✓	✓	✓
• Redwood City Pump Station (RCPS) – Screens – Wet well/dry pit submersible	✓	✓	✓	✓	✓	✓
• Belmont Pump Station (BPS) – Dry pit submersible	✓	✓	✓	✓	✓	✓
• Belmont Force Main (BFM)	✓					

Current Project Concept

- SVCW will share the studies and alternatives developed to-date including summary planning reports and current project concepts
- We expect to work collaboratively with the PDB during Stage 1 to refine these concepts to best meet SVCW objectives and D-B to budget



EIR Status

- Draft EIR November 2016
- Adopted April 2017
- Available on SVCW.org website

CEQA ACTIVITIES

Title	Description	Attachments
SVCW's Integrated Final Environmental Impact Report	SVCW has completed the EIR for the Wastewater Conveyance System and Treatment Plant Reliability Improvement Project. The EIR was certified and approved at SVCW's Commission Meeting on April 13, 2017. The complete Integrated Final EIR is available to the right.	Final Integrated Environmental Impact Report

To request one or more of the appendices to the EIR, please contact SVCW at info@svcw.org

QUICK LINKS

[RESCU Homepage](#)

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Redwood City, CA 94065-1220
Phone: (650) 591-7121
Fax: (650) 591-7122

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Environmental Permits

- Environmental Permit Applications submitted December 2016
 - BCDC for PSI still needed to be acquired by SVCW
 - California F&WS
- Acquired October 2017
- SVCW anticipates obtaining its own Air Permit to construct



Funding

- SVCW has bonding capacity to obtain bonds for entire program
- SVCW is pursuing less expensive funding
 - SRF
 - WIFIA



Procurement Process and Stages of Design-Build

- Why Progressive Design Build
- RFQ/RFP
- Stage 1/Stage 2 with Phases
- Schedule

Why Progressive Design Build

- Coordinate and accelerate completion of overall Project relative to DBB delivery
- Promote a cooperative and collaborative relationship between SVCW and the PDB team
- Incorporate ongoing cost modeling and take a “design-to-budget” approach
- Flexibility for phased design and construction
- Early and ongoing staff involvement and training



RFQ/RFP Process

- Step 1:
 - RFQ issuance,
 - Pre-submittal meeting
 - Reference checking
 - Interviews with selected Respondents,
 - Shortlisting of **up to three** Respondents.
- Step 2:
 - RFP issuance to short-listed Respondents,
 - Confidential Meetings with each short-listed Respondent
 - Reference checking
 - Interviews
 - Selection of winning Respondent
 - Negotiation of Progressive Design Build Contract
(Stage 2 pricing via amendment)

Stage 1/Stage 2 with Phases

- Stage 1
 - Collaboratively bring the design from a 5% to 10% level to a 60% to 70% level
 - Negotiate Stage 2 Contract Pricing and Schedule
- Stage 2
 - Final design (100%)
 - Construction
 - Testing and Start-up including 3-6 month cooperation of facilities.
- Construction Phases
 - As needed to move project forward

Design Progression during Preconstruction

- Selected PDB Entity is encouraged to propose alternative designs within defined direction
- Selected PDB Entity is encouraged to propose cost savings and optimization improvements
- Selected PDB Entity must develop collaborative relations with SVCW Operations and Maintenance

Current PSI Delivery Schedule

	2018	2019	2020	2021	2022	2023	2024
Progressive Design Build Teams							
Procure Progressive Design-Builder	■						
Coordination with GP Team		■	■	■	■		
Gravity Pipeline Accepts Flows					■		
Stage 1 - Design/GMP Negotiation		■					
Stage 2							
Design Finalization			■				
Construction-MPPS and RCPS			■	■	■		
Construction-BPS and FM					■	■	
Extended Testing and Training					■	■	■

Anticipated Procurement Schedule

- | | |
|--------------------------------------|-----------------------|
| • Issue RFQ | Shortly after July 12 |
| • Pre SOQ Presentation
Site Visit | Week of July 30 |
| • SOQ Submission | August 24 |
| • SOQ Interview and Shortlist | Week of September 24 |
| • RFP Issued | Week of October 1 |
| • Proposals Due | December 10 |
| • PDB Interviews | Early January 2019 |
| • PDB Team Selected | Early January 2019 |
| • Stage 1 NTP | Late February 2019 |
| • Stage 2 Approval | January 2020 |

Construction: ~Three years



Key Parts of the RFQ

- Project or RESCU Success Factors
 - A successful project is a balance of these
- Pump Station Improvement Project Objectives
 - Collaboration and Operations and Maintenance involvement are key
- Availability and use of background information
 - SVCW Website Based
 - Planning reports and the EIR
 - Proposers should not be limited by the concepts shown, unless directed approach identified
- Required elements of SOQ



RESCU Success Factors



“Success” - **collaboratively** implementing an **appropriate balance** of the following:

- **Cost:** Provide a complete functional conveyance system that meets the goals of the Program at the **lowest practical capital and lifecycle cost**.
- **Operations:** Produce projects that are **easy, efficient, and effective to operate**.
- **Maintenance:** Produce projects that **minimize required maintenance**.
- **Safety:** Implement projects that are **safe** to construct, operate, and maintain.
- **Schedule:** Place new wastewater conveyance system projects into operation with **best practical safe speed**, while maintaining the present level of service with existing facilities.
- **Stakeholder Impacts:** Solicit, evaluate, and respond to stakeholder’s concerns, and implement a Program that **best meets the combined needs of stakeholders while reaching the Program’s goals**.

Pump Station Improvement Project Objectives



- **Quality:** The PSI Project to reliably receive, pump, and convey wastewater over a **50-year service life**, and that fully complies with environmental requirements.
- **Cost:** Design to Budget.
- **Schedule:** Bring new facilities **online in coordination** with the GP Project so **existing failing pipeline and pump stations** can be taken out of operation as early as reasonably possible.
- **Risk:** Assign to the party best able to **manage the risk**.
- **Safety:** Implement an effective safety program incorporating **best practice industry practices**.
- **Accountability:** Design-Builder to provide for **a single point of accountability** for performance of all services under Stage 1 and Stage 2. SVCW to provide a single point of accountability for all direction to the Design-Builder.
- **Collaboration:** Implement an **integrated design process** that collaboratively includes SVCW management, engineering, **operations and maintenance** as well as the Design-Build contractor and engineer to develop a design that **optimally achieves SVCW success factors and PSI requirements**.
- **Innovation:** **design innovation and construction / sequencing options** to be considered that may lead to capital or life cycle **cost savings**, and/or to **improved functionality**



Required Elements in RFQ

- Team structure
 - (responsible designers and construction principals for the PSI)
- Key personnel and resumes for above
- Experience collaborating with owners
- Experience collaborating with interdependent projects
- Experience collaborating with Operations and Maintenance
- Demonstrated methods of delivered project safety

Pass - fail items, financial, insurance, bonding, etc.



Questions on RFQ Stage?



Estimates, Budgets and Pricing-RFP

- Budget vs Current Cost Estimate
 - Design to budget
- Firm Lump Sum for Stage 1-Preconstruction
- Markups for Stage 2
- Indicative Pricing for Stage 2-Construction
 - Based on project as currently defined in EIR
 - Indicative pricing to be used in scoring

Focus Areas during early PDB Preconstruction Services (Stage 1)

- Equipment configuration and sizing
- Controls and SCADA approach
- Hydraulic conditions
- Final Diameter of Belmont FM Rehabilitation
- Construction sequencing
- Bypass system(s)
- Seismic upgrades to building
- Site civil improvements – flood protection
- Project cost and schedule

Project Cost and Schedule

- Reduce PSI cost
- Accelerate PSI schedule
 - Connect MPPS and RCPS when GP takes flow
 - Connect BPS and BFM within a year after existing FM available for rehabilitation
- Achieve 50 year service life
- Achieve diurnal and wet weather flows
 - Existing
 - 2040

Available at SVCW.ORG

- Now
 - Final Adopted EIR
 - Today's Presentation – Sign-in list
 - Notice to Prospective Designers and Contractors
 - List of Ineligible Firms and Required Firm – July 3, 2018
 - Project Planning Reports
 - Geotechnical Data
 - Includes detailed cost estimates; capital and life cycle
 - Details outstanding issues at time of PPR
- During SOQ preparation
 - Current concept updates to PPRs – late July
 - Pre SOQ presentation and site visits



More questions?

Pumpstations@svcw.org

Thank you for your interest!



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