

Front of Plant Mandatory Pre-SOQ Meeting

(available on website after meeting)

May 1, 2017



SVCW
Silicon Valley Clean Water

RESCU

Regional Environmental
Sewer Conveyance Upgrade

Agenda – (everything in a little more detail)

- **Introduction**
- **Front of Plant Project – Overview**
- **Project Procurement Process**
- **Key Parts of the RFQ**
- **Early Focus Areas (Stage 1)**
- **Available Information**
- **Questions (Please ask along the way)**

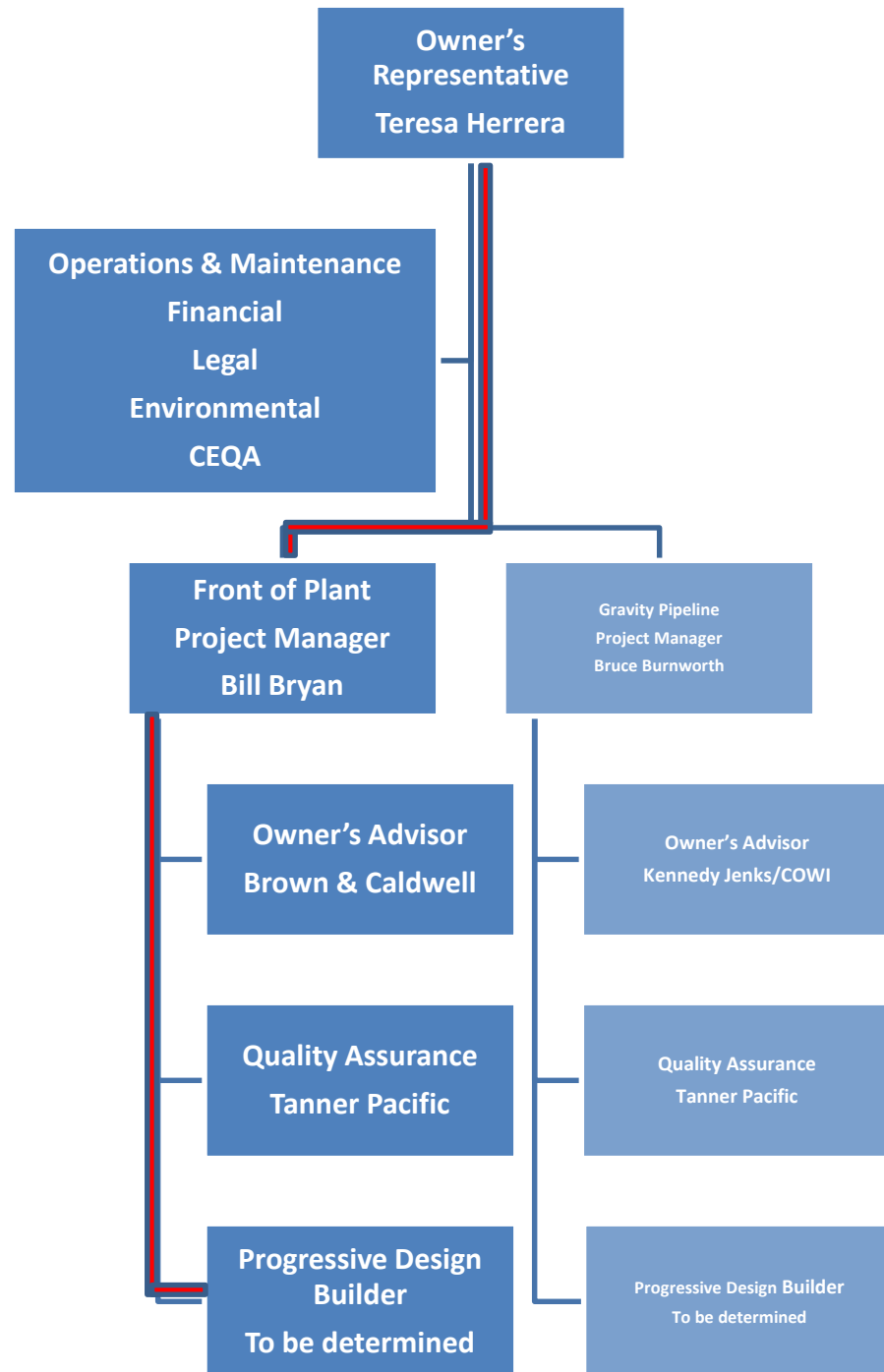
Progressive Design Build Organization Chart

RESCU

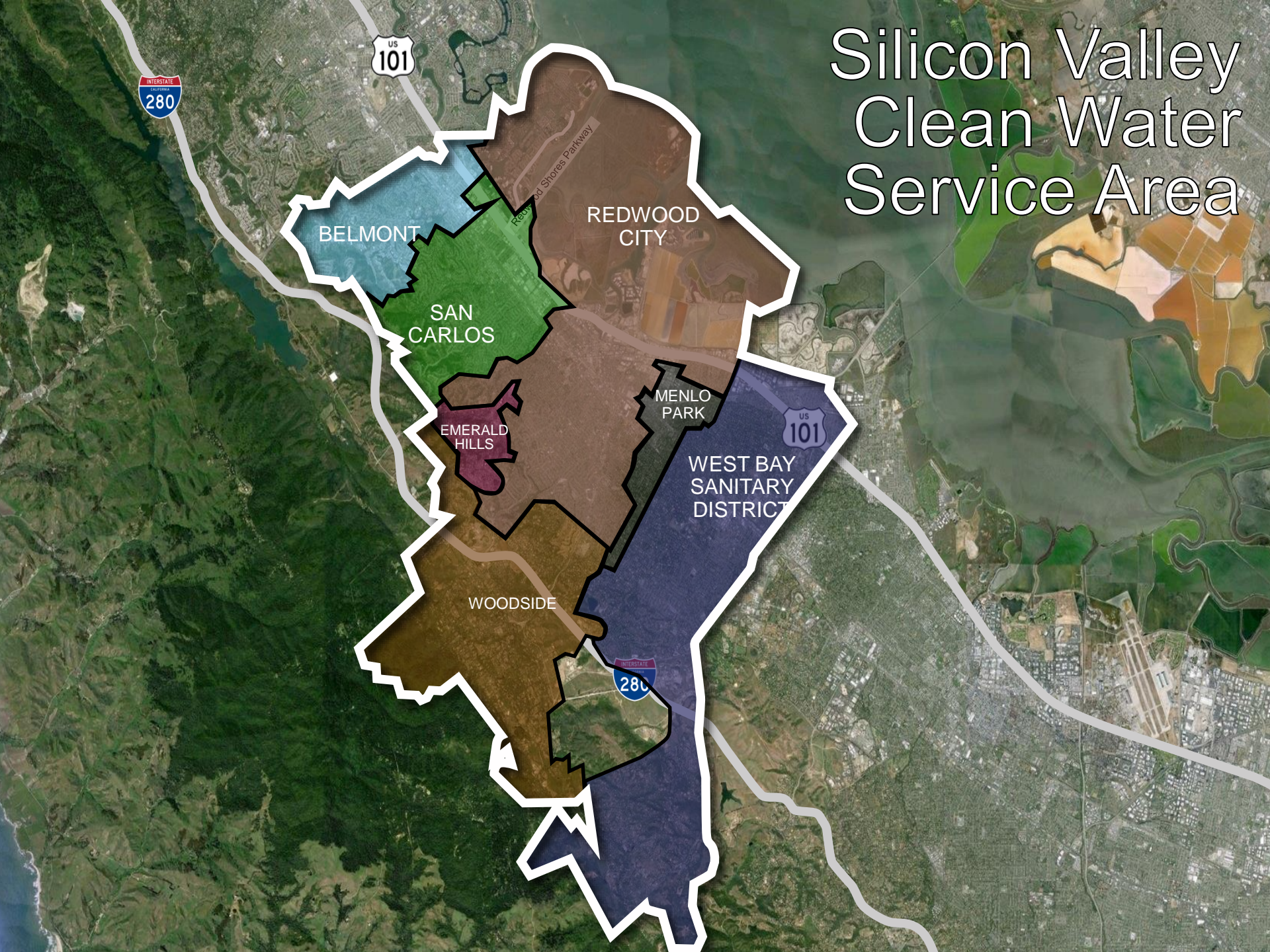
Regional Environmental
Sewer Conveyance Upgrade



SVCW
Silicon Valley Clean Water



Silicon Valley Clean Water Service Area



US
101

INTERSTATE
280

BELMONT

SAN
CARLOS

REDWOOD
CITY

EMERALD
HILLS

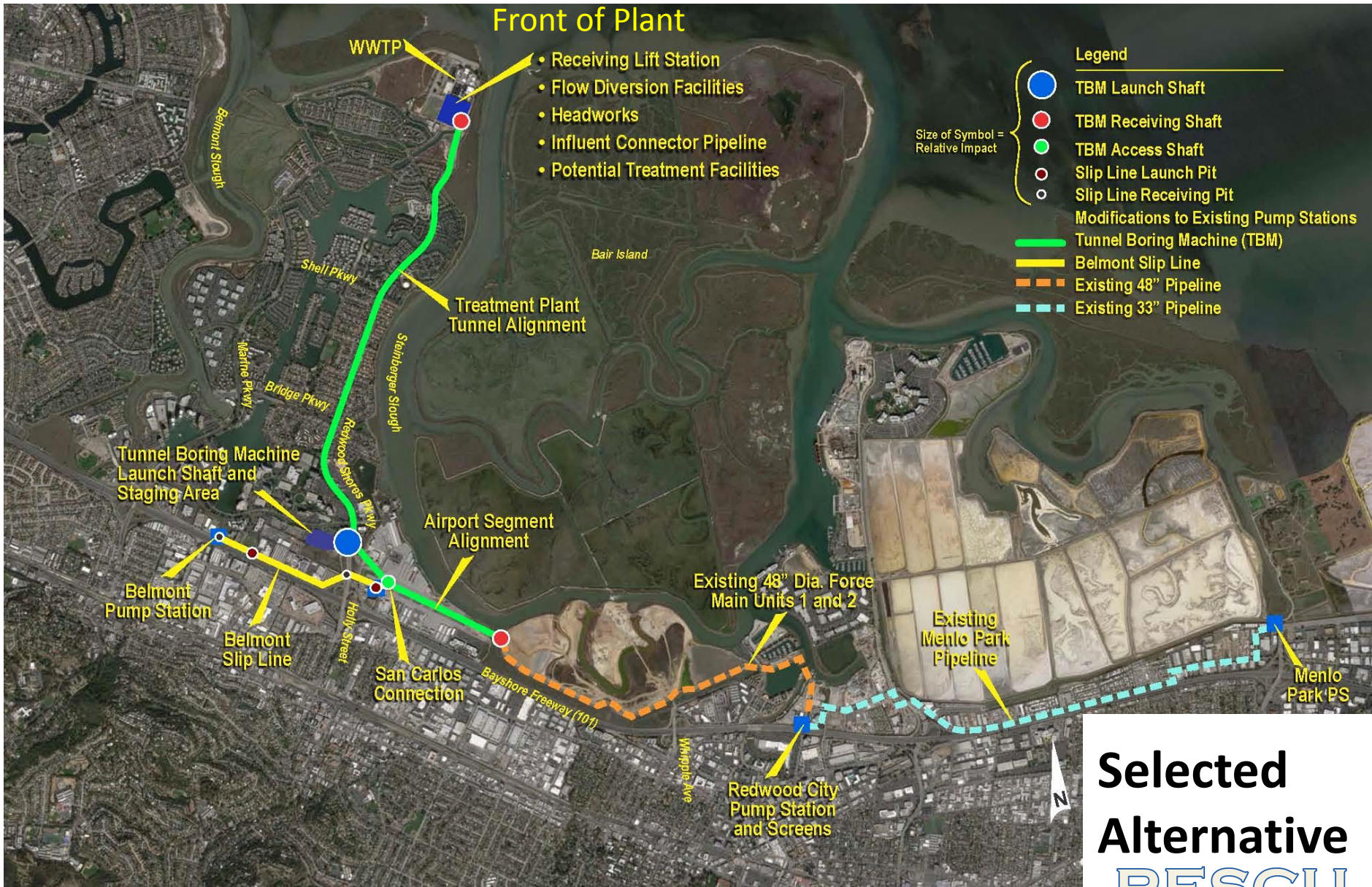
MENLO
PARK

WEST BAY
SANITARY
DISTRICT

WOODSIDE

US
101

INTERSTATE
280



Selected Alternative RESCU

Regional Environmental
Sewer Conveyance Upgrade

Front of Plant Project – Overview

- Background
- Project Elements
- Hydraulics (compressible and non compressible)
 - Diurnal and Seasonal Equalization
- Status of EIR, Permits and Easements
- Availability of SVCW Funding

Problem we need to Solve

- ❖ 4 pump stations with a Booster Pump Station and Influent Lift Pumps
- ❖ Joints every 12' 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.

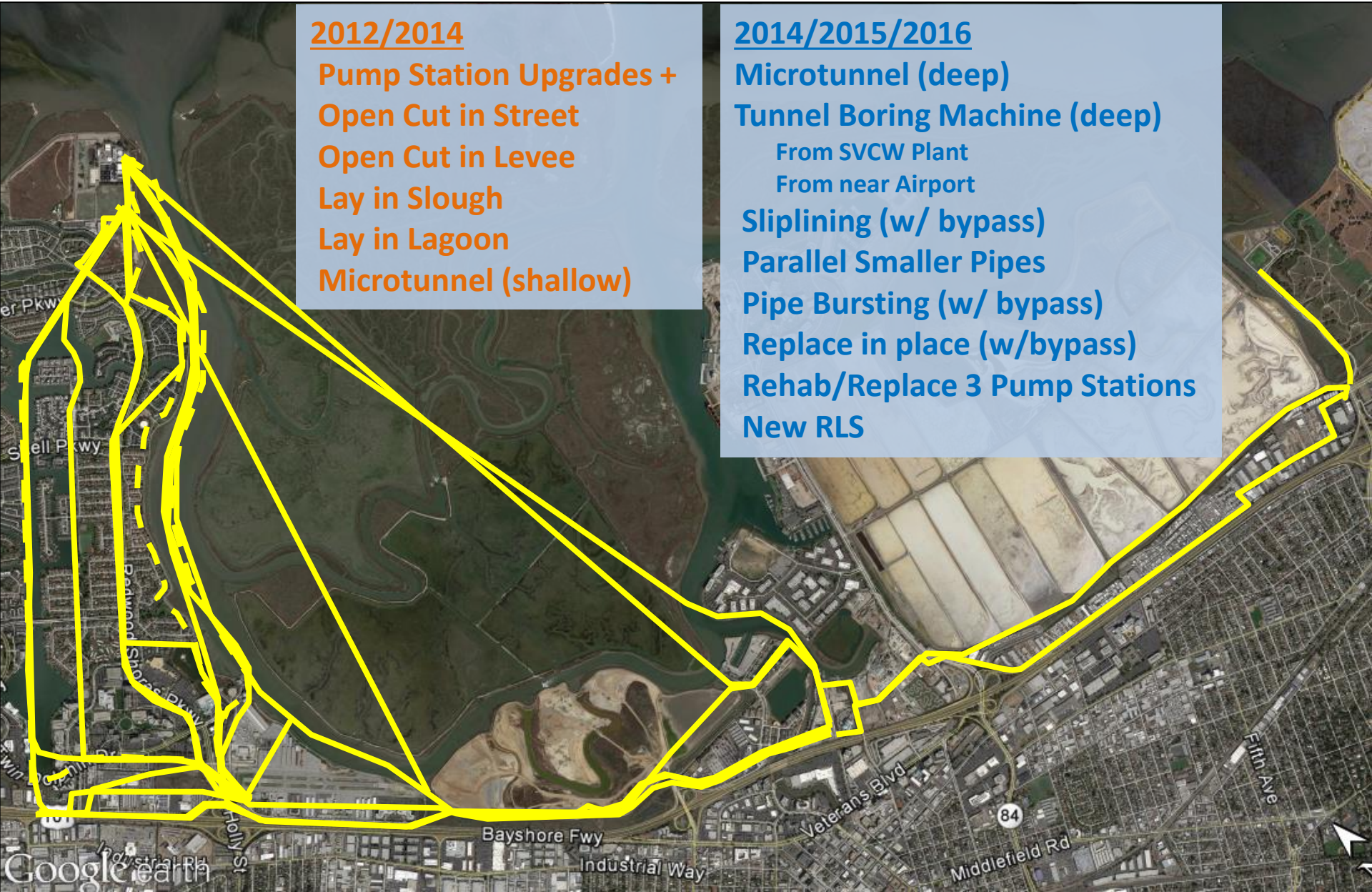
Numerous Alternatives Considered

2012/2014

Pump Station Upgrades +
Open Cut in Street
Open Cut in Levee
Lay in Slough
Lay in Lagoon
Microtunnel (shallow)

2014/2015/2016

Microtunnel (deep)
Tunnel Boring Machine (deep)
From SVCW Plant
From near Airport
Sliplining (w/ bypass)
Parallel Smaller Pipes
Pipe Bursting (w/ bypass)
Replace in place (w/bypass)
Rehab/Replace 3 Pump Stations
New RLS

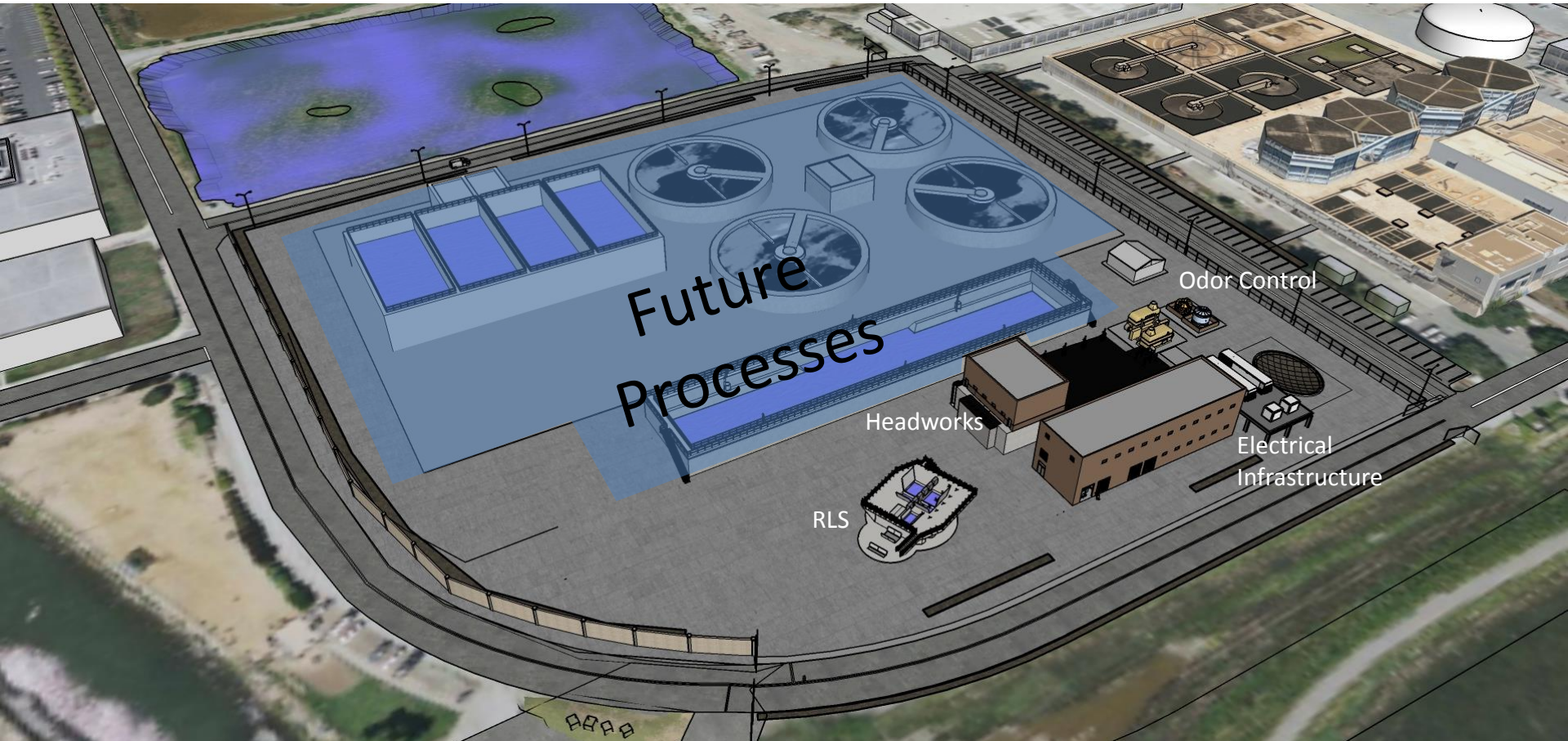




Selected Alternative RESCU

Regional Environmental
Sewer Conveyance Upgrade

Front of Plant Facilities



PDB Team key to delivering

RESCU Success Factors

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

B
A
L
A
N
C
E

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.

Successful PDB Team meets Front of Plant Project Objectives

B
A
L
A
N
C
E

Quality: Provide a FoP that will be sustainable over **50 years** and will reliably receive, convey and **wastewater flows** ranging from 2 mgd to 103 mgd in full compliance with environmental requirements.

Cost: Provide complete functional facilities that meet the goals of the Project at the **lowest practical capital and lifecycle cost**. Provide early and ongoing **cost predictability**.

Schedule: Bring new facilities online as soon as practical so that the **existing failing pipeline and pump stations** can be taken out of operation as early as reasonably possible.

Risk: Generally assign to the Design-Builder the **risks that the Design-Builder can reasonably anticipate and control**. Assign to SVCW the risks that the Design-Builder cannot reasonably anticipate and control.

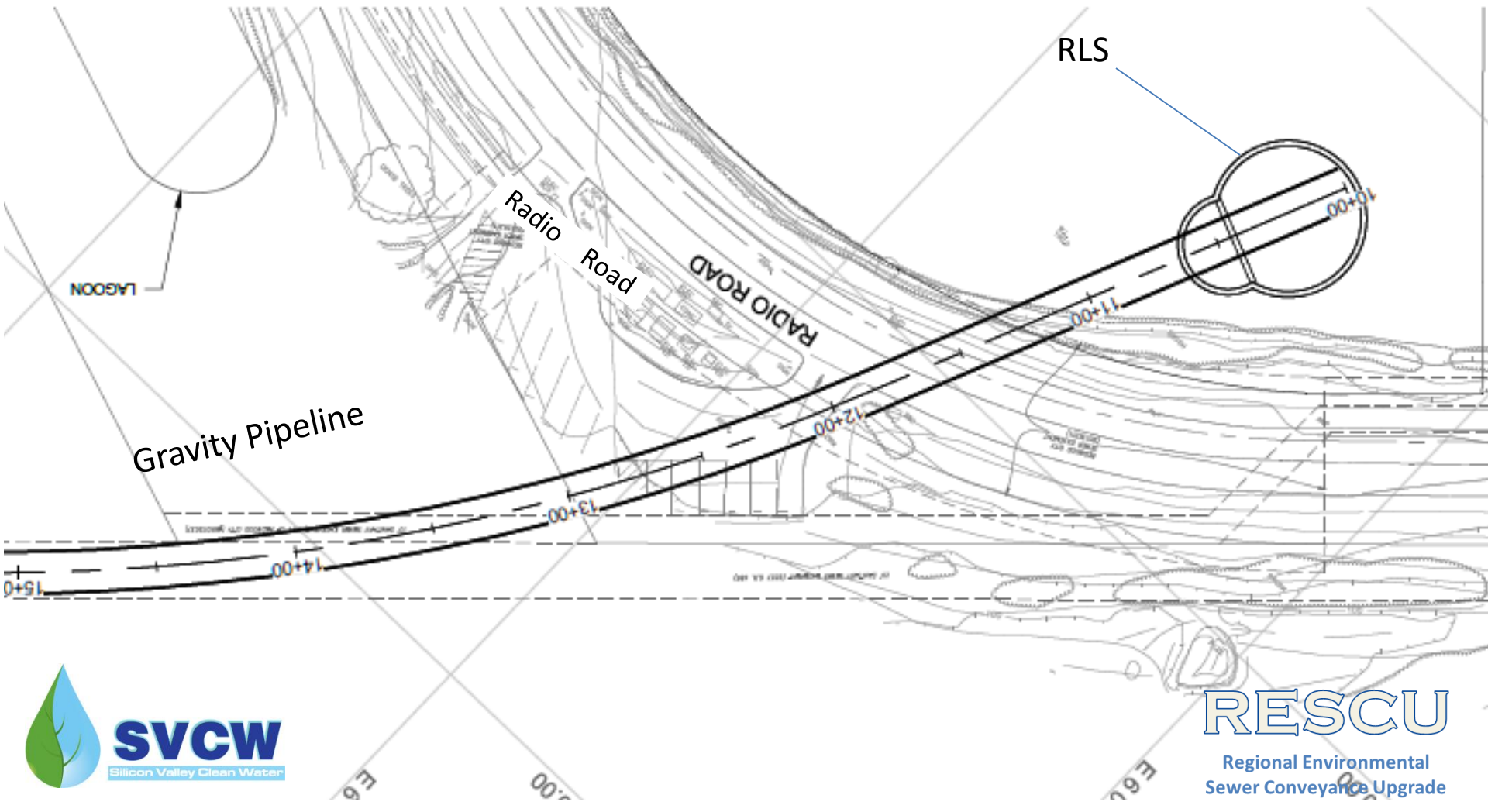
Safety: Implement an effective safety program incorporating **best practice industry practices**.

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 FoP requirements**.

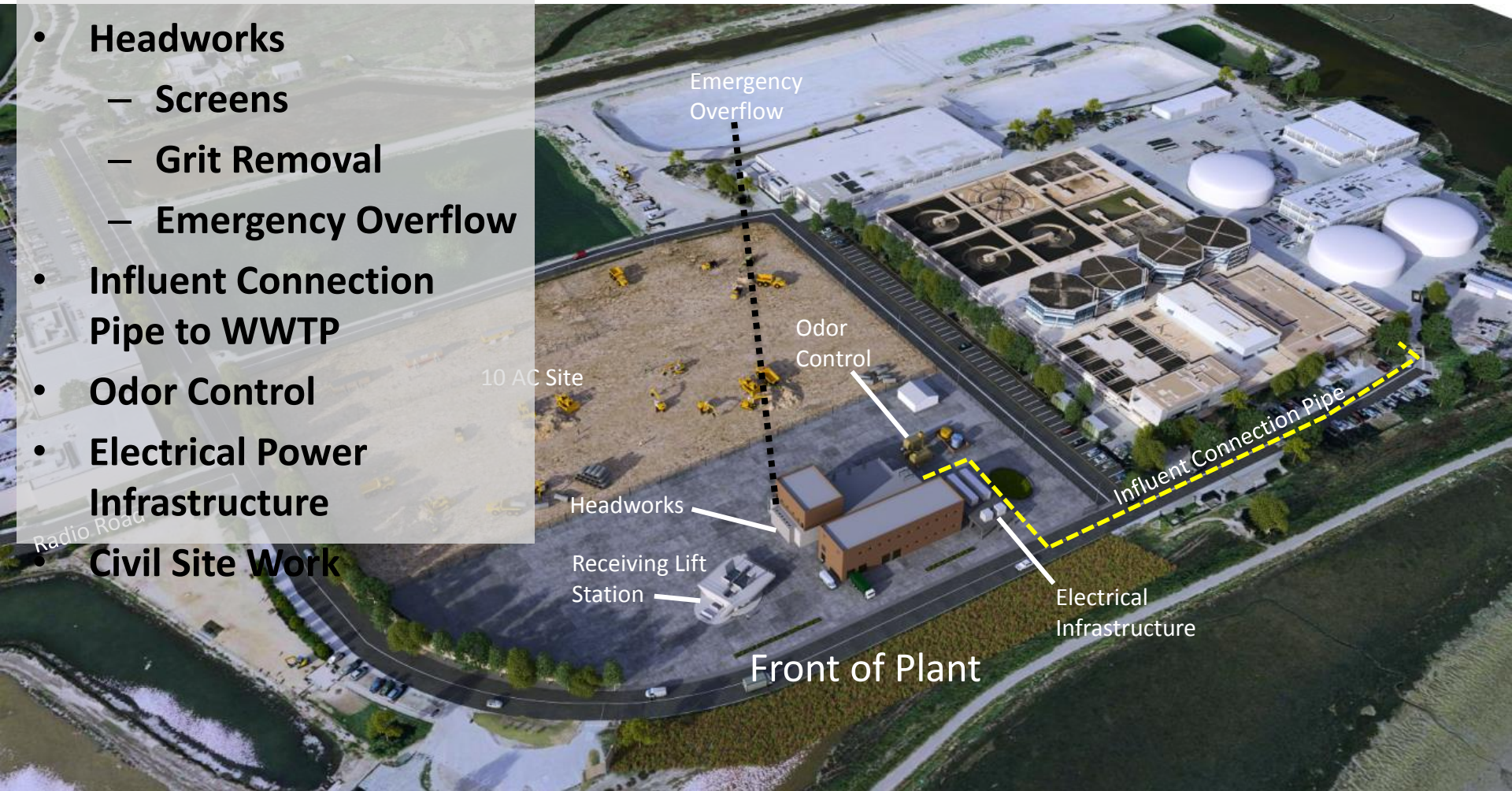
Innovation: **Apply proven technology from other locations to uniquely achieve FoP goals**.

Gravity Pipeline Entering FoP



Front of Plant Facilities

- Receiving Lift Station
- Headworks
 - Screens
 - Grit Removal
 - Emergency Overflow
- Influent Connection Pipe to WWTP
- Odor Control
- Electrical Power Infrastructure
- Civil Site Work



Front of Plant – Prep work 2017



- Lime stabilized area
- Roadway Improvements & Construction Fencing
- Grading & Stormwater Drainage

2017 Site Preparation Effort

- All of the Site Preparation completed under separate DBB in 2017/early 2018
- PDB entity must field verify site conditions
 - psf loading capabilities (crane mats – piles for t cranes?)
- Electrical utilities are to be supplied by PDB entity

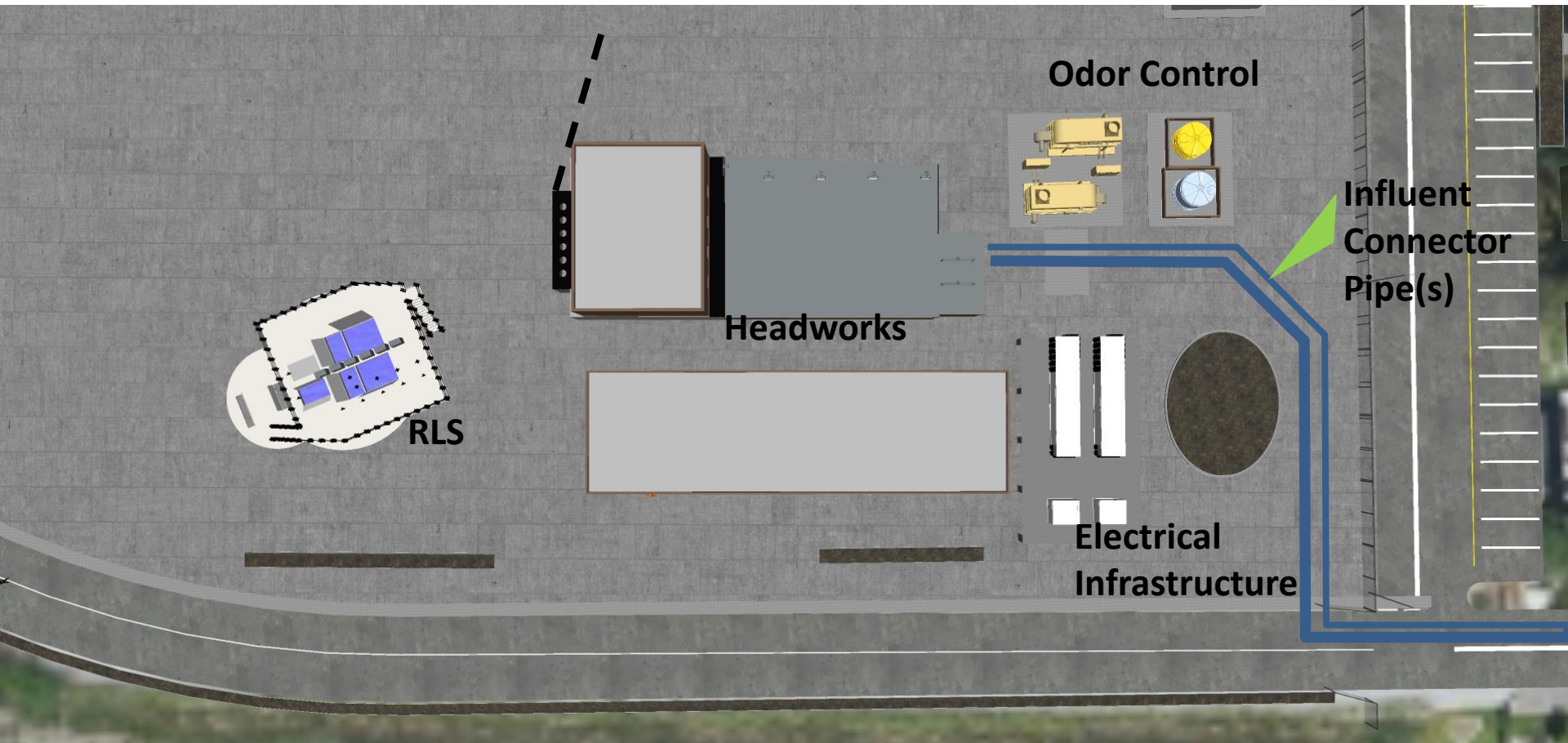
Current Project Concept

- SVCW will share the studies and alternatives developed to-date including project planning reports
- We expect to work collaboratively with the PDB during Stage 1 to refine, revise or change these concepts to best meet SVCW objectives

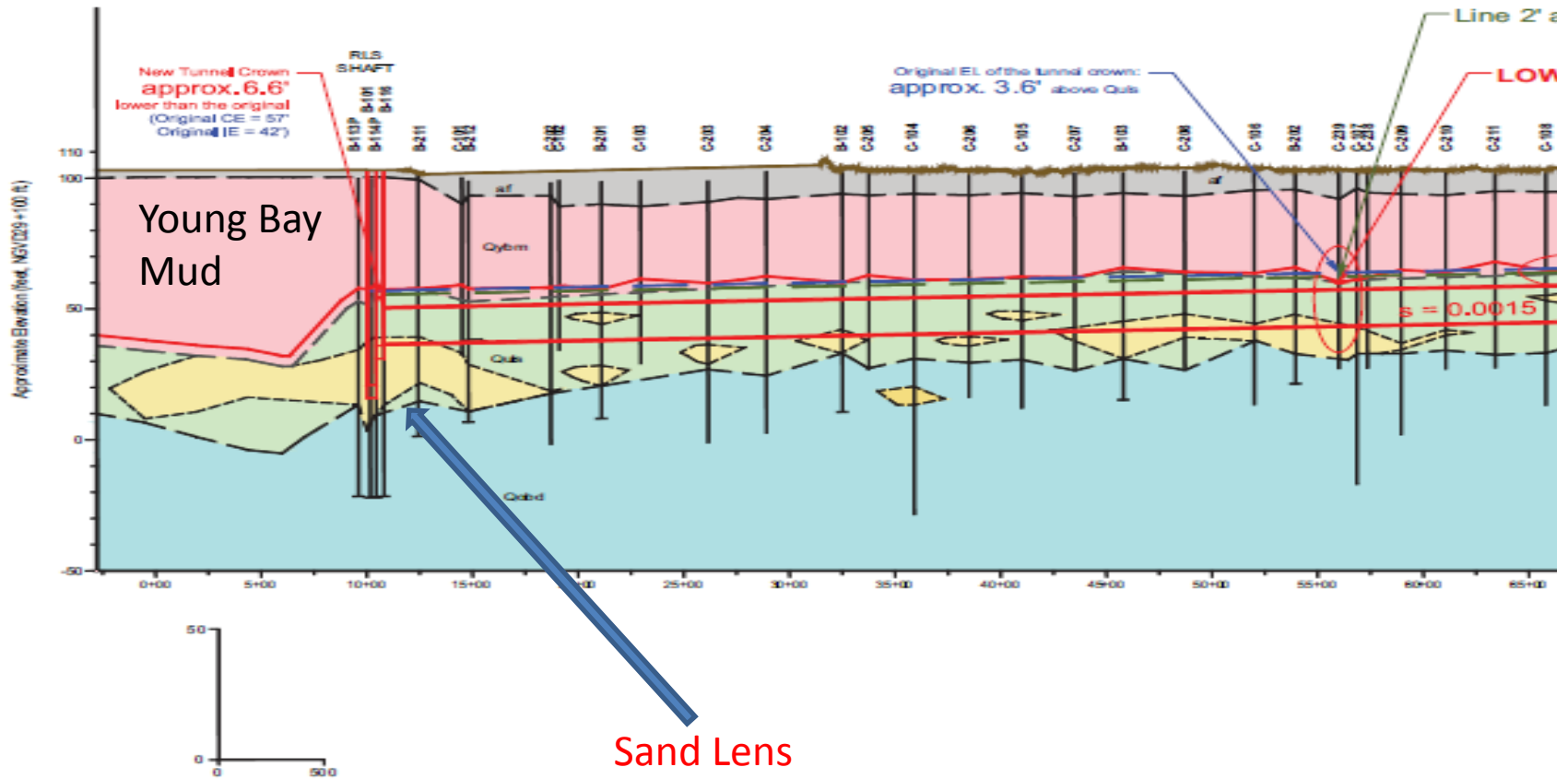
Design Progression during Preconstruction

- Selected PDB Entity is encouraged to propose alternative designs
- Selected PDB Entity is encouraged to propose cost savings and optimization improvements
- Selected PDB Entity must develop collaborative relations with SVCW O&M

Front of Plant Facilities



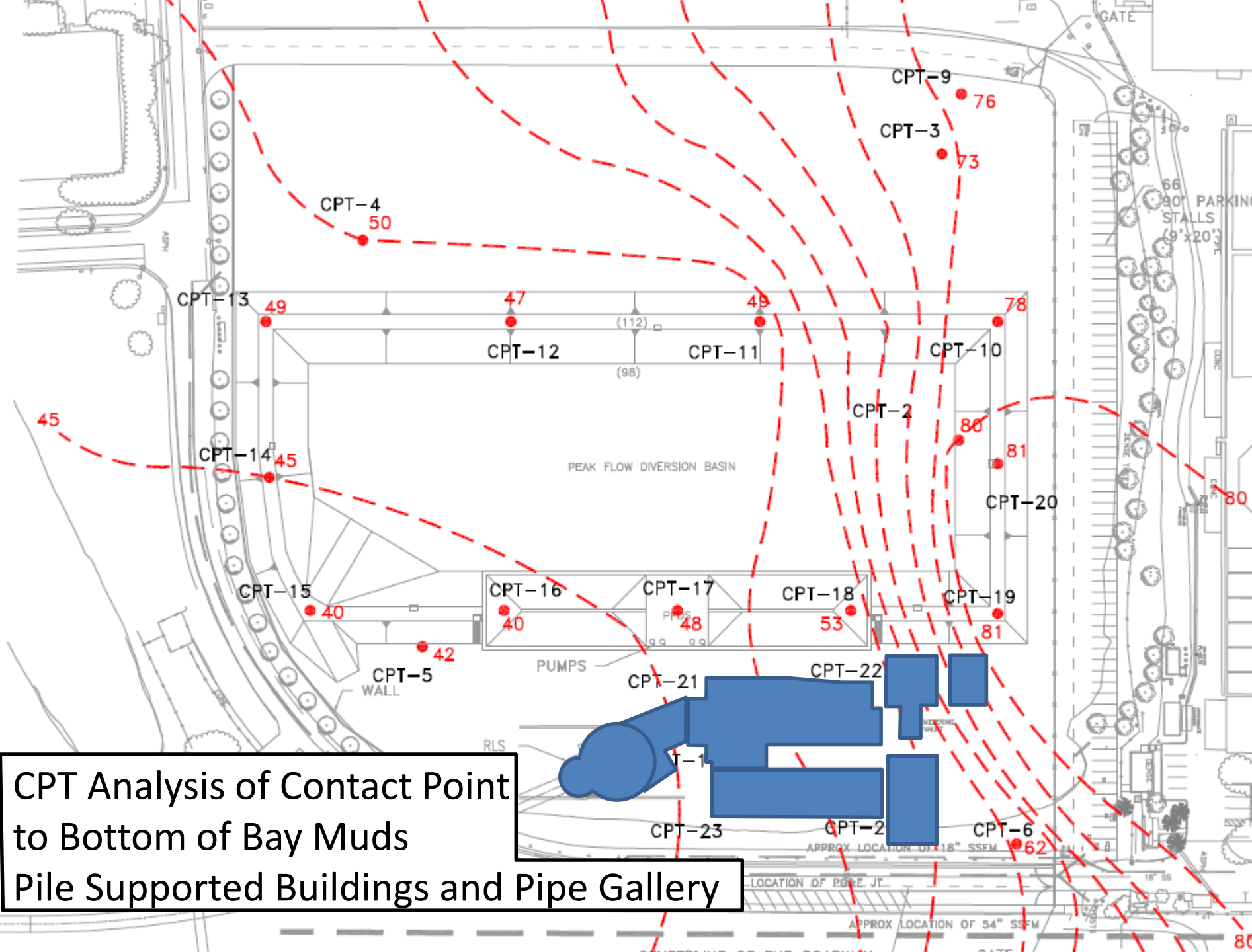
Geologic Profile



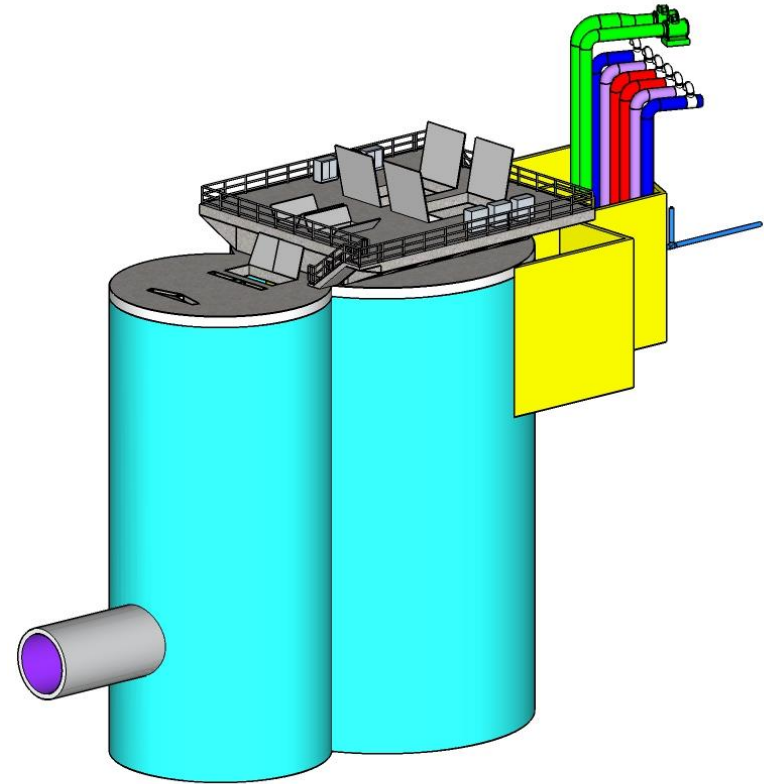
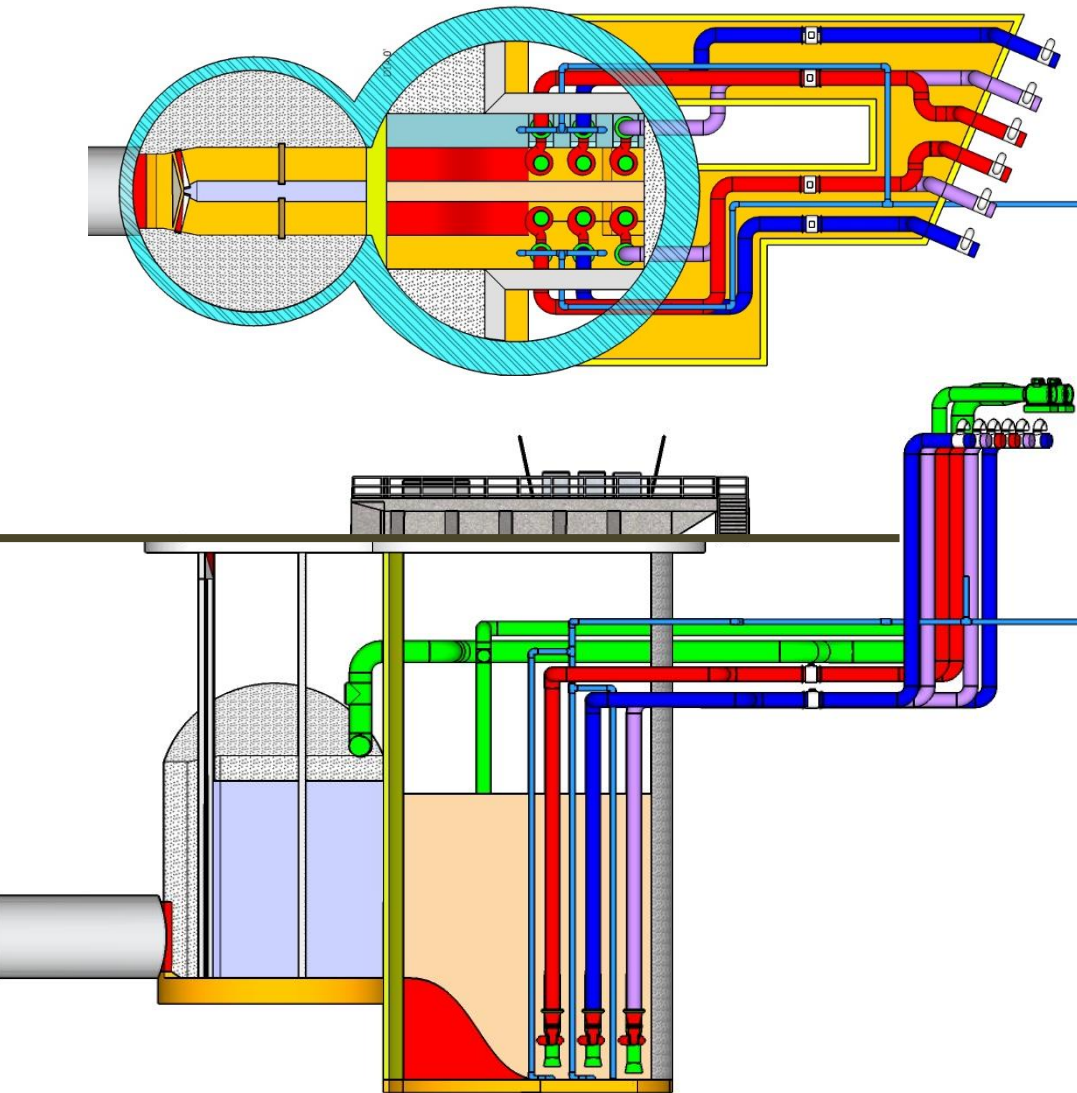
Explanation

- ARTIFICIAL FILL: Clay (CL, CH) and Sand (SP, SM)
- YOUNG BAY MUD: Very soft to medium stiff Fat Clay to Gassy Silt (CHMH)
- Bottom of very soft to soft Young Bay Mud.
- UPPER LAYERED SEDIMENTS: Fine to stiff Clay (CL, CH)
- UPPER LAYERED SEDIMENTS: Medium dense to dense Sand (SPSM), Gravely Sand (SP), and Sandy Gravel (GP).

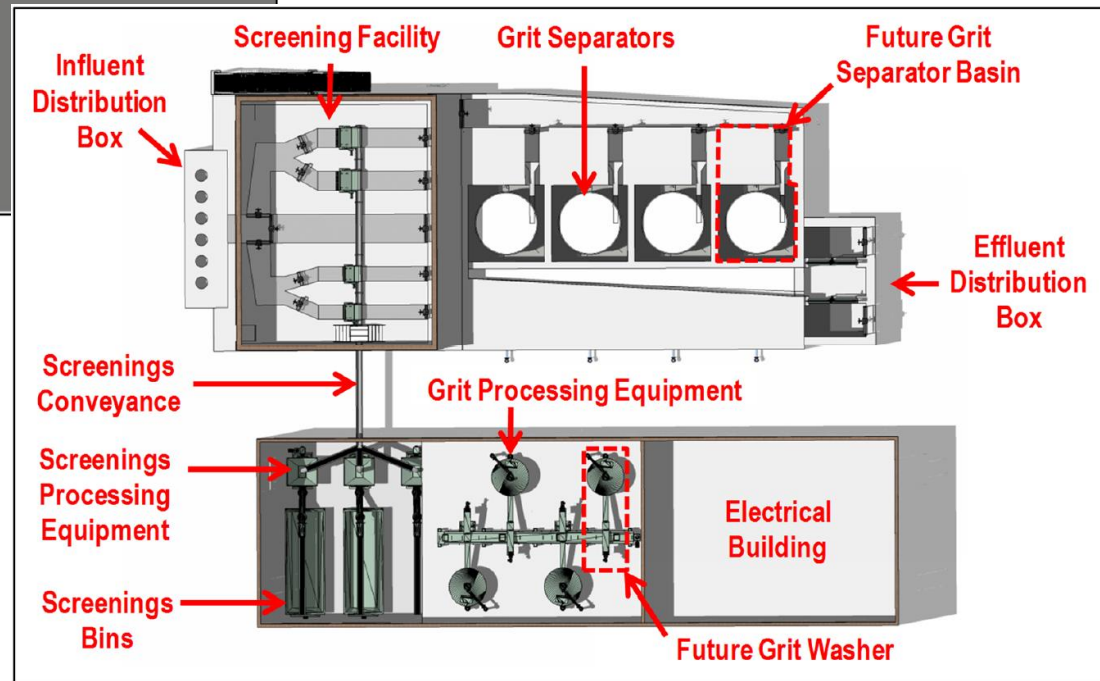
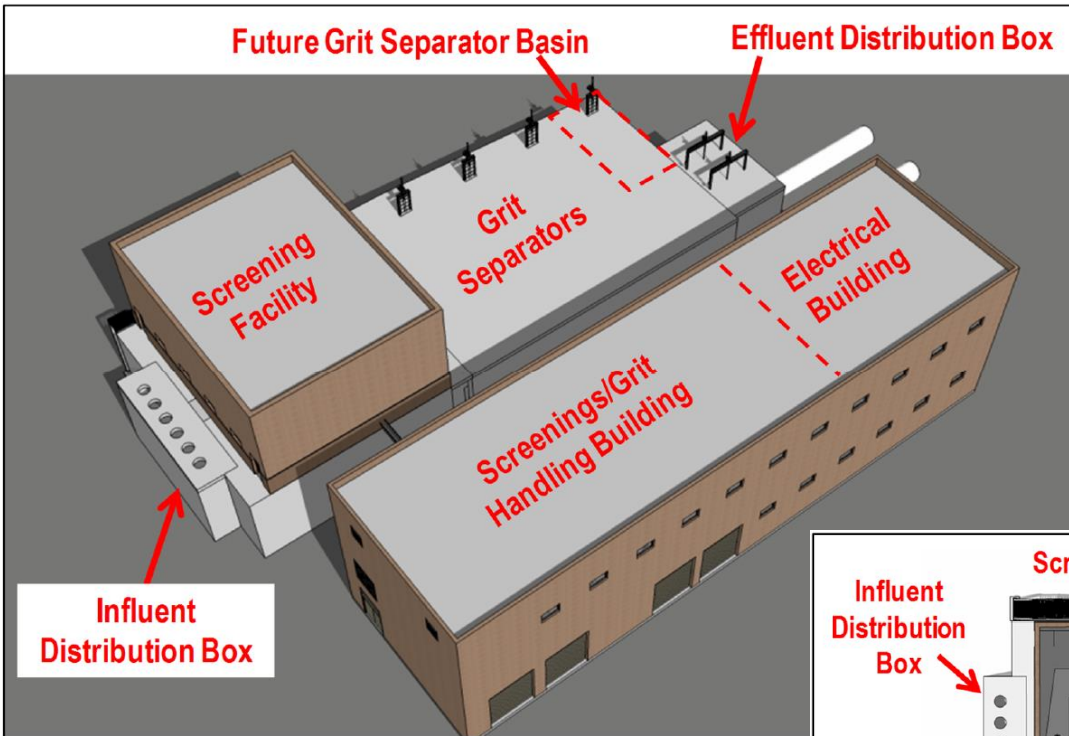
CPT Analysis of Contact Point
to Bottom of Bay Muds
Pile Supported Buildings and Pipe Gallery



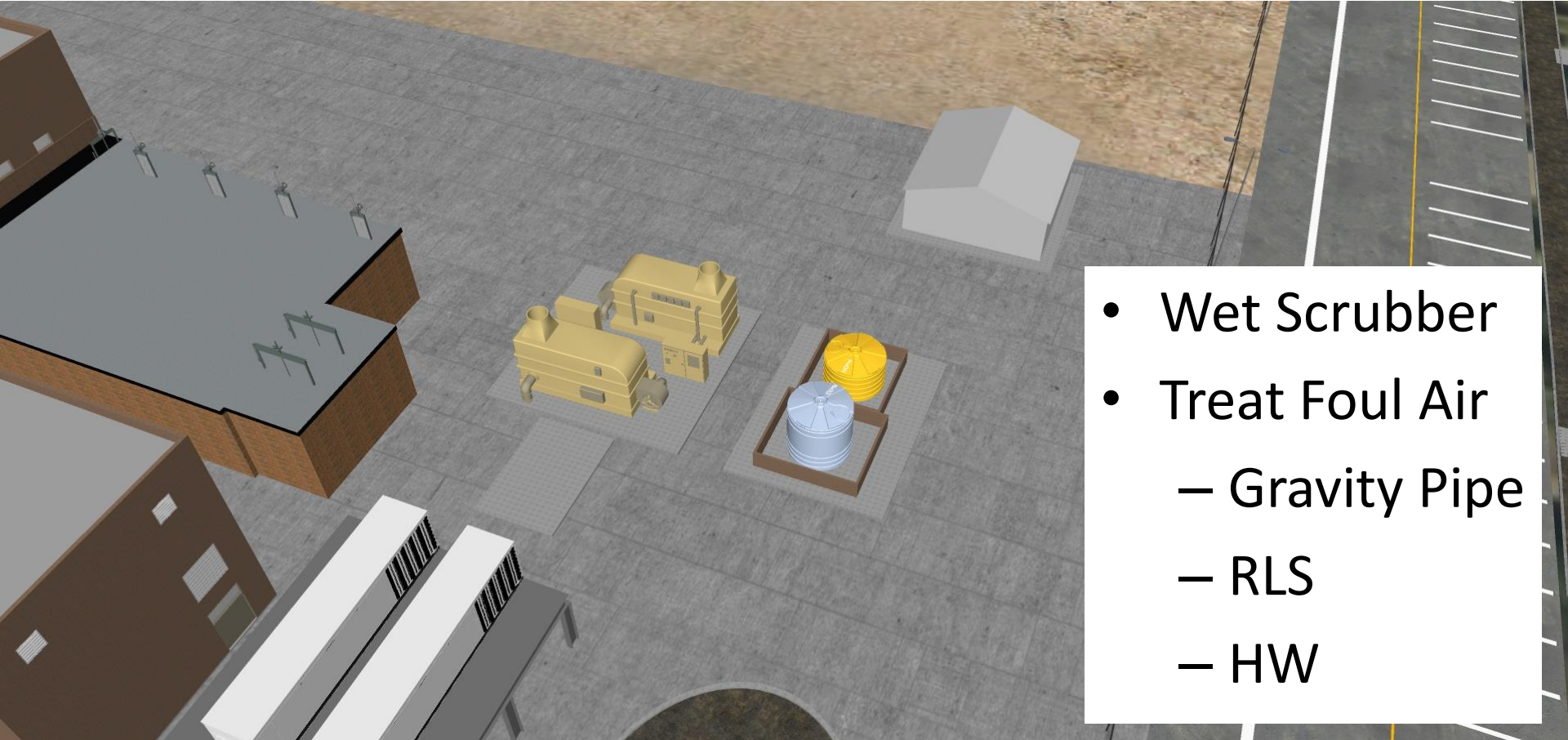
Receiving Lift Station



Headworks

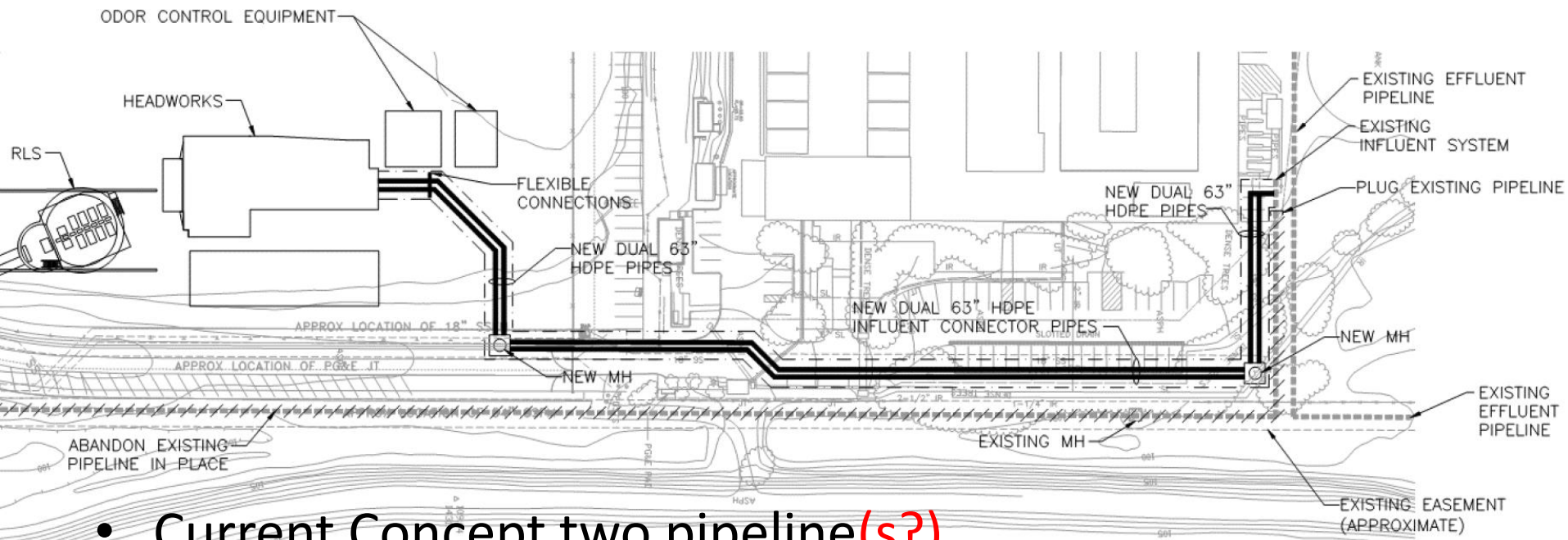


Odor Control



- Wet Scrubber
- Treat Foul Air
 - Gravity Pipe
 - RLS
 - HW

Influent Connection Pipe



- Current Concept two pipeline(s?)
- Dry weather flow – Wet Weather Flow
- Length - ~1,800 ft

Focus Areas during early PDB Preconstruction Services (Stage 1)

- RLS shaft – coordination with Gravity Pipeline
- Equipment configuration and sizing
- Hydraulic conditions-Lead by FoP team
- Final Diameter of Gravity Pipeline
- Shaft configuration, structural needs, construction timing and access
- Connection point to WWTP
- Early online use of Headworks
- Project cost and schedule

RLS shaft configuration– coordination with Gravity Pipeline

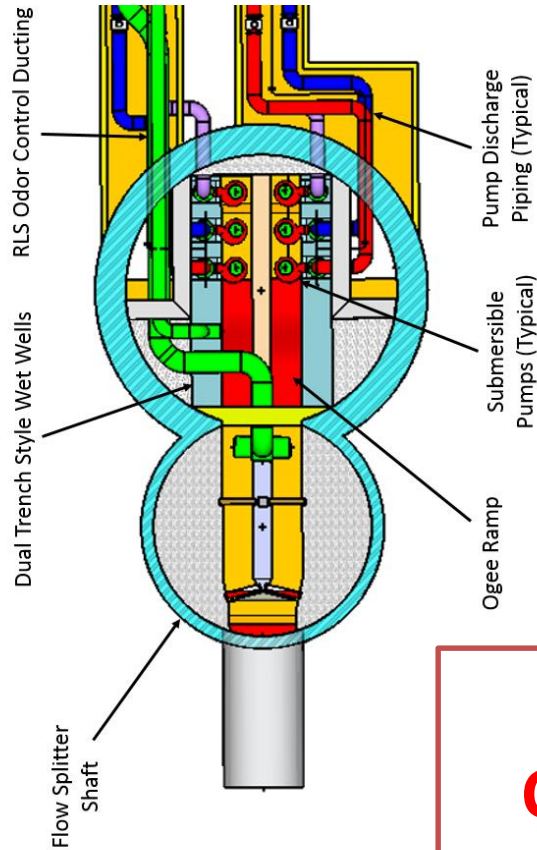
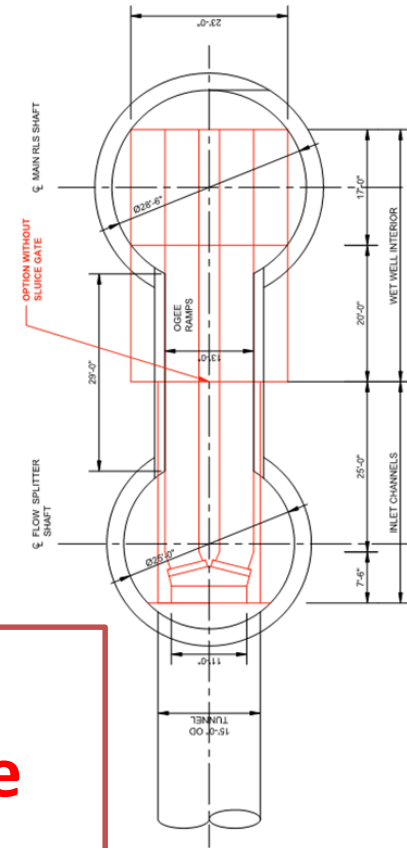


Figure 8

**Early
Collaborative
Decisions**



Dog Bone

RLS Submersible Wet Wells

**Early
Collaborative
Decisions**

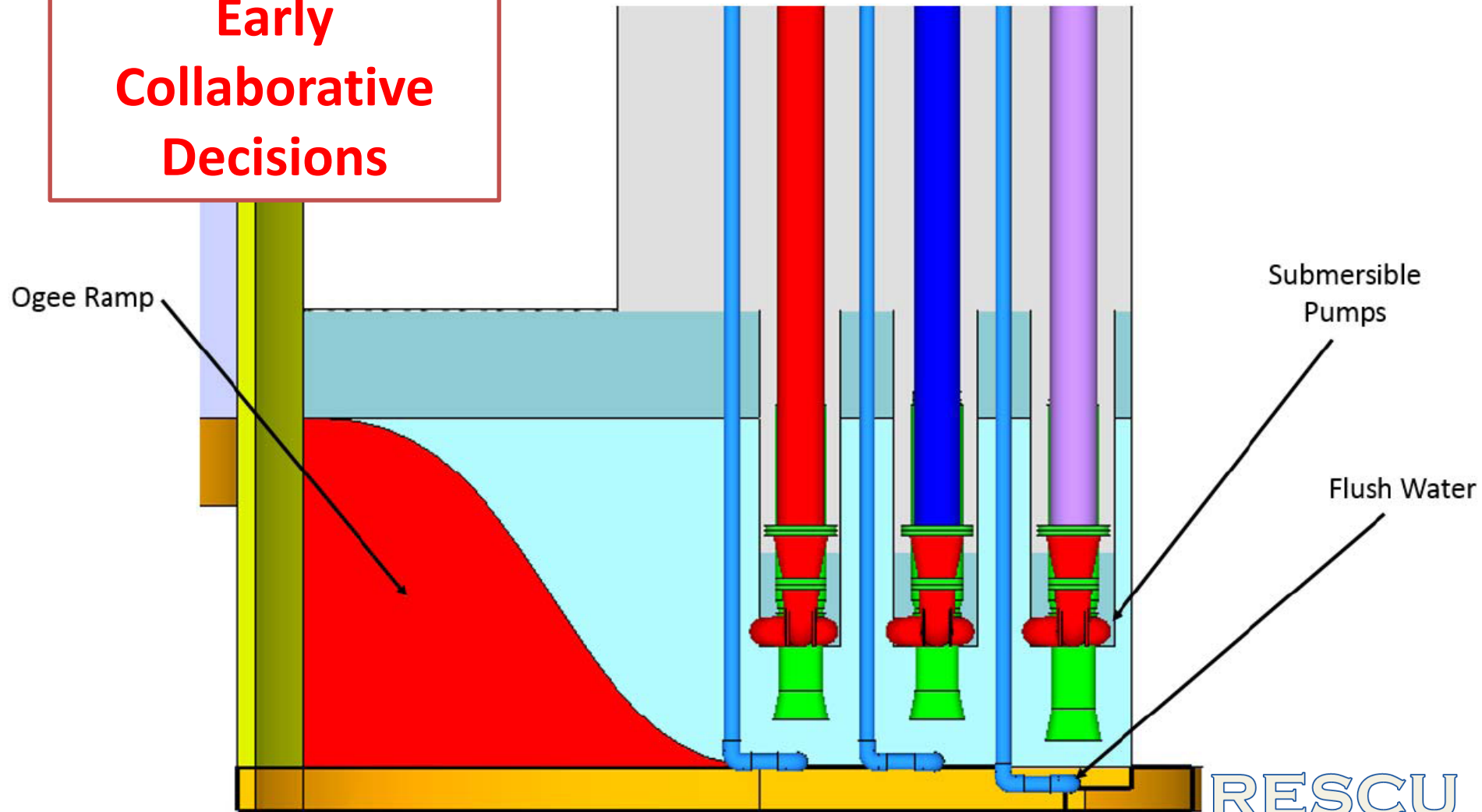


Figure 5-6. RLS wet well concept – section view

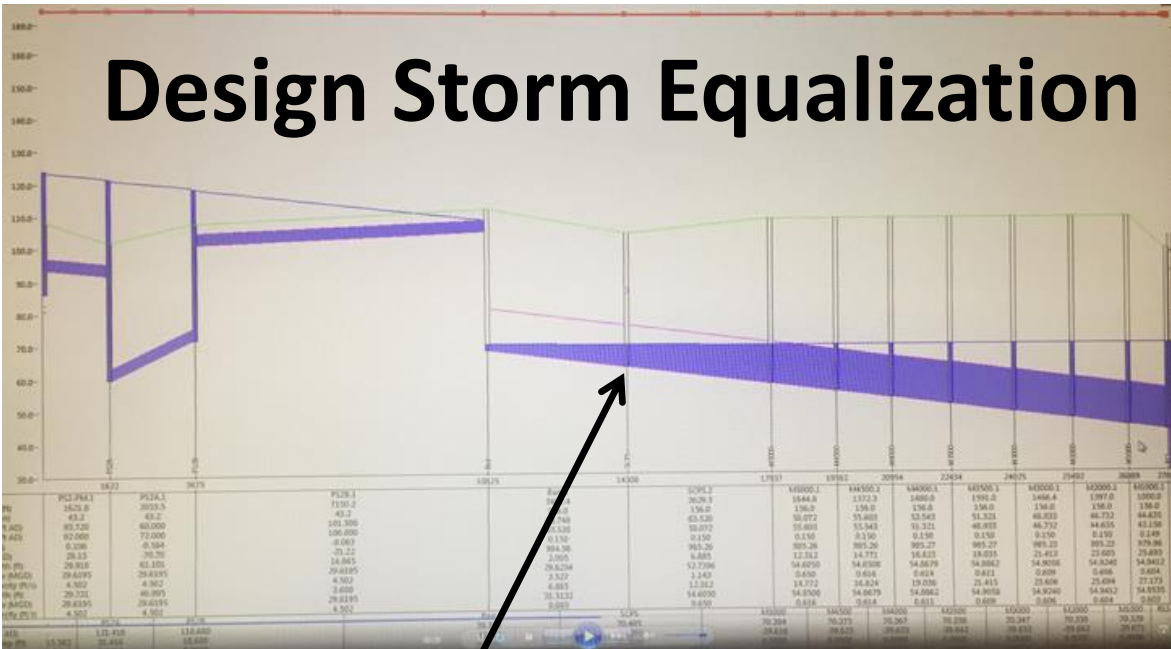
FoP Conceptual Flow Conditions

Flow Condition	Influent (mgd) Exist Future		Existing (mgd)	Future (mgd)
Average DWF	11.8	17.9	12-14	13-15
Peak DWF – hourly	22.5	33.9	22(1)	22(1)
Min DWF – hourly	2.7 (0?)	3+	10-12	10-13
PWWF (1) Wet well cleaning cycle	90+	103	80	80

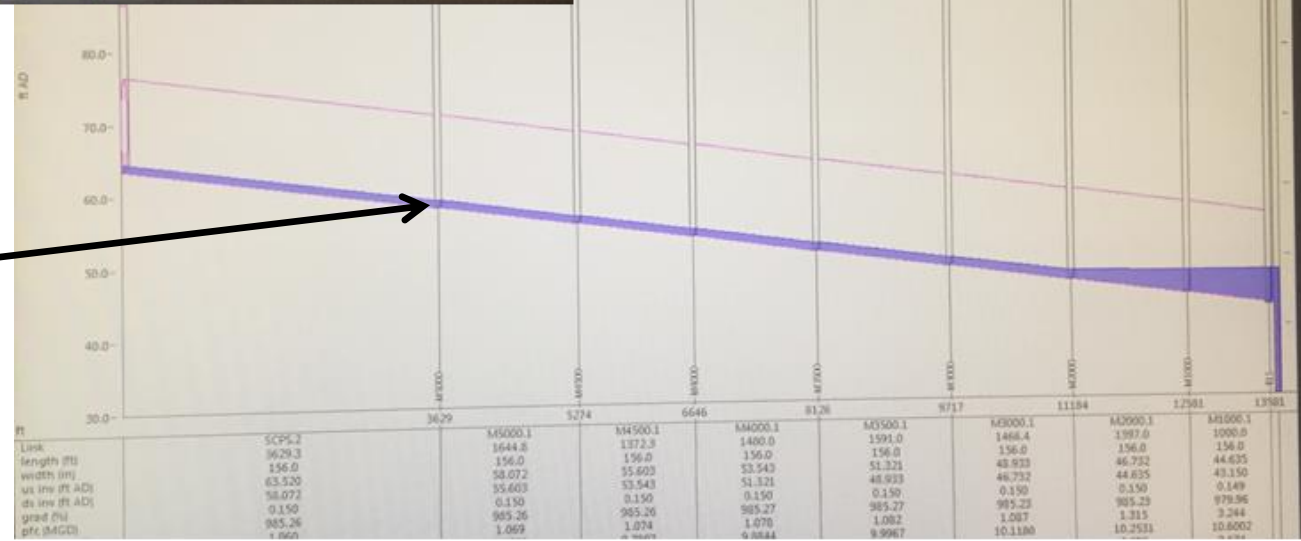
- Gravity Pipeline flow storage
 - Dry weather diurnal flows
 - Wet weather storage above RLS Capacity

Hydraulics

Design Storm Equalization

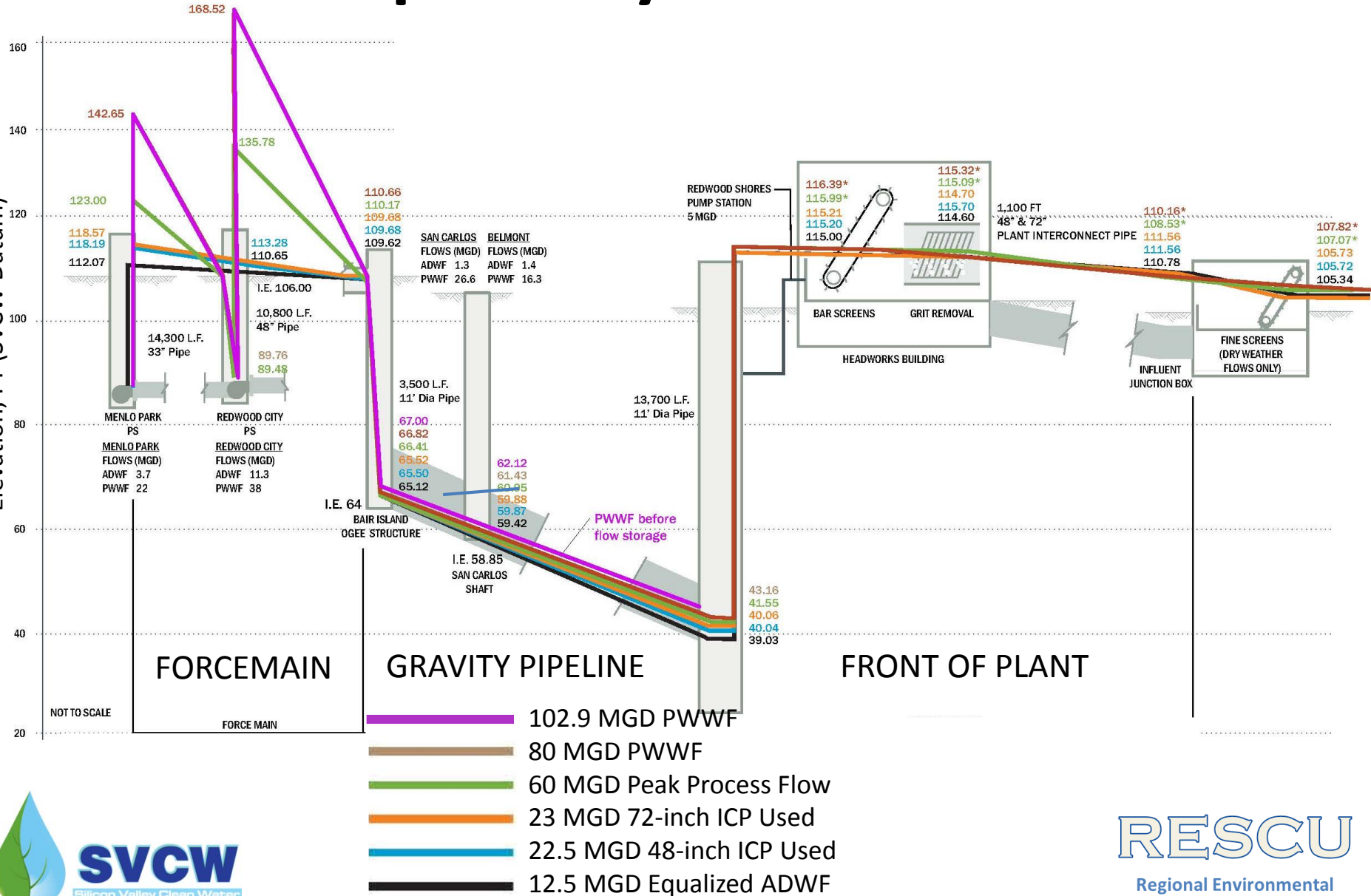


Diurnal Equalization



San
Carlos
Drop
Structure

Elevation, FT (SVCW Datum)



Fine screens bypassed in this scenario

EIR Status

- Adopted April 2017
- Project Accepted April 2017
- Available on SVCW website

Environmental Permits

- Environmental Permit Applications submitted December 2016
 - BCDC
 - California F&WS
- Expected October 2017
- SVCW anticipates obtaining the project Air Permit to construct

Funding

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

PDB Roles and Responsibilities-1 of 2

Collaborate, complete, and timely delivery

Section 4.4 in RFQ

- Design and Construction Documents
- Hydraulic (A+W) modeling GP and FoP Project
- Augment geotech data and prepare GBR
- Supervise Project Team
- Obtain required governmental approvals and permits, unless acquired by SVCW
- Implement practices and activities to address environmental and permitting requirements

PDB Roles and Responsibilities-2 of 2

Collaborate, complete, and timely delivery

Section 4.4 in RFQ

- Maintain security of site
- Coordinate with utility providers
- Provide and implement Safety Plan, SWPPP and other plans as required
- Construct the FoP Project
- Perform system integration, programming, SCADA development using CID
- Conduct **startup** and commissioning, **operational training, and Acceptance Testing (80mgd is hard)**
- Implement and maintain all quality management and control requirements, including special inspections
- Allow continued existing WWTP operation at all times

Why Progressive Design Build

- Coordinate and **faster 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

Procurement Process and Stages of Design-Build

- RFQ/RFP
- Stage 1/Stage 2 with Phases
- Schedule

Two Step Selection Process

- Step 1 – Qualifications
 - RFQ issuance,
 - **Pre-submittal meeting**
 - SOQ Submittal
 - Reference checking
 - **Interviews with selected Respondents**
 - **Shortlisting of three (or up to four) Respondents**

Two Step Selection Process

- Step 2 – Proposals
 - RFP issuance to short-listed Respondents,
 - Pre-Proposal Meeting
 - **Confidential Meetings** with each short-listed Respondent
 - Proposal Submittal
 - Reference checking
 - **Interviews**
 - **Selection of winning Respondent**
 - Negotiation of Progressive Design Build Contract

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 co-operation of facilities.
- Construction Phases
 - As needed to move project forward

FoP Procurement Schedule

- ✓ Issue RFQ April 18
- **Last Day - Questions on RFQ** May 12 – Midnight PDT
- **SOQ Submission** May 23 before 2:00 P.M. PDT
- Interview list June 6
- Interviews June 13-14 (check addendum)
- RFP Shortlist June 20
- RFP Issued June 26
- Proposals Due August 22
- Stage 1 Approval October
- Stage 1 NTP October or November
- Stage 2 Approval Late 2018

Construction: Two to three years

Key Parts of the RFQ

- Project or RESCU Success Factors
 - A successful project is a balance of these
- Front of Plant Project Objectives
 - Collaboration and O and M 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
- Required elements of SOQ

Required Elements in SOQ

Section 8 - Format required in SOQ

- Transmittal letter
- Team Structure and Leadership, Experience Working Together and Design-Build
- Collaboration with Owners
- Design Experience and Qualifications
- Construction and Post-Construction Experience and Qualifications
- Appendices
 - A. Minimum Qualifying Criteria – Pass/Fail
 - B. Minimum Qualifications and support documentation
 - C. Project Profiles
 - D. Resumes
 - E. Comments on Terms Sheet and Risk Allocation Matrix (opt)
 - F. Safety support documents- to be added by Addenda

SOQ Evaluation Criteria

- Responsiveness to RFQ - Pass/Fail
- Minimum Qualifications – Pass/Fail
- SOQ Scored Evaluation Criteria 100 points
 - Team Structure and Leadership, Experience Working Together, and D-B Experience 20 points
 - Collaboration with Owners and Owners' O&M 20 points
 - Relevant Design Qualification and Experience 25 points
 - Relevant Construction and Post-Construction Experience 25 points
 - Safety Experience on Similar Projects 10 points
- Reference Checks 25 points
- SOQ Interviews 100 Points

Attachment B: Design Builder Minimum Qualification Requirements Questionnaire

- 24 Questions
- DB Entity will be disqualified if the answer to any of the following questions is a “No”, except as otherwise stated in the RFQ.

Team Structure and Leadership

- Team Leadership
- Interfacing with other projects
- Team organization and alignment of responsibilities
- Team continuity
- Experience working together
- DB experience
- Design office location and coordination of design team

Collaboration with Owners and Owners' O&M Staff

- Collaboration with Owners
- Collaborative decision making
- Coordination of design development and Operations planning
- O&M Staff training

Relevant Design Qualifications and Experience

- Design experience of firms
- Design experience of key personnel
- Geotechnical design experience
- Power supply, distribution, and electrical design experience
- Hydraulic analysis and (A+W) modeling experience
- Coordination of designs with inter-facing projects
- Design experience on DB projects
- Design using BIM
- Permitting and environmental compliance experience

Relevant Construction and Post Construction Experience

- Construction experience on similar projects
- Installation of electrical systems in highly corrosive environments
- Experience with deep lift stations
- Experience with pile supported foundations
- Coordination of construction with other inter-facing projects
- Integration of designers in construction
- Bypass planning and installation
- BIM during construction
- Environmental monitoring
- Startup, testing, and commissioning
- Acceptance testing

Safety Experience on Similar Projects

- Most recent 3 years of Workers' Compensation EMR and/or Experience Modification Factor and/or Severity DART rates
- 3 years history of items requested in the RFQ regarding safety, illnesses, citations, and worker's compensation experience
- Safety record on similar projects
- Overview of safety program
- Provide support documentation as an Appendix of the SOQ

Reference Checking

- Reference projects – **CONFIRM the contact information**
- At least 5 and no more than 10 projects
- Follow the guidelines for types of projects to represent in your references

SOQ - Interviews

- Purpose: Meet teams and further assess qualifications
- Highest ranking SOQs will be invited to an SOQ interview (based on scoring)
- RFQ Interview will include:
 - Presentation
 - Q&A on SOQ and follow up
 - Live Scenario Exercise
- Uses same scoring system as SOQs

Comments on Draft Term Sheet

- Draft Term Sheet and Responsibility Matrix comments considered in preparing contract in **RFP**
- Comments welcome now and up to SOQ Submittal

Insurance

SVCW intends to obtain an Owner Controlled Insurance Program (**OCIP**) for the Project at SVCW's expense, including the following coverages:

- General Liability
- Excess Liability
- Builder's Risk
- Pollution Liability

Design-Builder will be required to enroll in the OCIP, if SVCW obtains an OCIP. In addition, Design-Builder will be required to carry the following insurance during all stages of the Project:

- Professional Liability
- **Worker's Compensation**
(to be determined as part of pricing negotiation)

SOQ Confidentiality

- All SOQs will be kept confidential until recommendation for award of a contract is announced
- Financial statements will remain confidential

Available at SVCW.ORG

- Draft and Final EIR
- April 5th Outreach Presentation
- Today's Mandatory Pre-SOQ Presentation
- Sign in lists from Outreach and Pre-SOQ presentations
- Notice to Prospective Designers and Contractors
- List of Ineligible Firms and Required Firm
- Project Planning Reports-RLS, HW, ICP, Site Civil, FDS
 - Conceptual Designs
 - Geotechnical Data
 - Includes detailed cost estimates; capital and life cycle
 - Details currently known outstanding issues

Available at eBidboard

- RFQ – Free registration using link from <http://www.svcw.org/projects/SitePages/frontofplant.aspx>
- Registration on eBidboard required to obtain addenda
- Addenda notifications sent to those registered on eBidboard

FoP RFQ is the formal procurement document for the project

- This presentation is not part of the RFQ
- The RFQ (and any Addenda) take precedence over any differences between any presentations and the RFQ.

Front of Plant Site Tour (if desired - escort required)

PPE Required



Questions on the RFQ

- Submit in writing via email:
FrontofPlant@svcw.org
- Deadline May 12, 2017 – Midnight PST
- Questions from today's meeting need to be submitted in writing via email for an official response.

***Thank you for your
attendance***



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Silicon Valley Clean Water

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