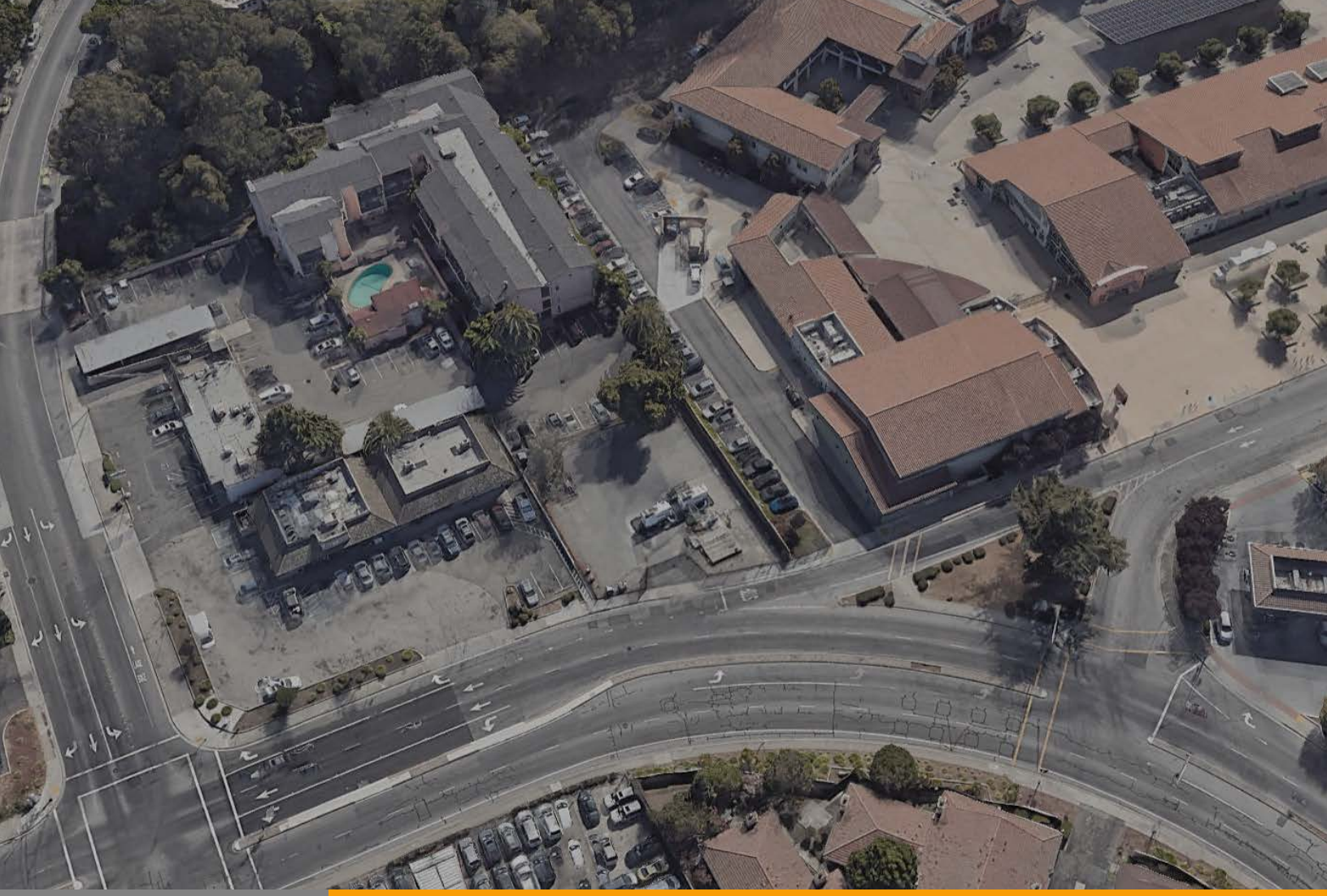

EAST BAY MUNICIPAL UTILITY DISTRICT

WILDCAT PUMPING PLANT PROJECT AESTHETICS CONCEPTUAL DESIGN REPORT

FINAL | May 2021

EBMUD

Prepared by:

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SUMMARY OF KEY FINDINGS

The Wildcat Pumping Plant (PP) Aesthetics Conceptual Design Report (Report) prepared by Panorama Environmental, Inc., MWA Architects, and Dillingham Associates (Project Team) documents the development of architectural and landscape design concepts for the East Bay Municipal Utility District's (EBMUD) Wildcat PP Project (Project). The aesthetic concepts presented in this report are the result of an iterative design development process based on input from both EBMUD and local community stakeholders. Of three preliminary concept designs evaluated, EBMUD selected Concept 1 (see Figure A), which will serve as the design basis for subsequent phases of design development.

Figure A Preferred Concept – View from El Portal Facing South

Architecture

EBMUD selected Concept 1, the California Mission Style concept, as the preferred architectural concept for the Wildcat PP building. The concept features beige stucco cladding with contrasting trim over cast-in-place concrete walls covered by a steel-framed, terra cotta-colored standing seam metal roof. Concept 1 was determined to best meet EBMUD's design objectives and the City of San Pablo's aesthetic preferences.

Landscape Architecture

Due to the physical constraints of the pumping plant structure, outdoor equipment, and maintenance clearance requirements, the site provided limited opportunities for ornamental planting. Landscape design elements include drought-tolerant planting in bioretention basins as well as a narrow strip of native grasses along the northern fence, adjacent to the public sidewalk.

SECTION 1: INTRODUCTION

1.1 Project Overview

The Project consists of a new 25-million gallon per day (mgd) PP located at EBMUD's existing Road 20 Rate Control Station (RCS) site at the intersection of El Portal Drive and Road 20 in the City of San Pablo in Contra Costa County. The new PP will replace the existing Road 20 Portable PP (approximately 10-mgd capacity). As part of the Project, EBMUD will also reclaim use of the southern portion of the project site, which has been leased to an adjacent apartment complex (Kona Apartments) and used for residential parking, as part of the new PP facility. In addition to the new PP building and related site improvements, the Project includes new pad-mounted electrical equipment to support the PP and approximately 725 feet of storm drain pipeline that will connect to the City of San Pablo's existing storm drain system along Road 20. The general site layout and PP configuration are based on functional requirements (e.g., vehicle access, electrical equipment size and clearance requirements) previously established by EBMUD.

The purpose of this Report is to document the development of conceptual aesthetic alternatives and the selection of a preferred conceptual design. Initial design work involved identifying a range of exterior architectural and landscape design elements and features compatible with EBMUD requirements.

This Report is organized into four primary sections that represent the major tasks completed for the scope of work:

- Introduction – provides a project overview describing the purpose and context of the Report in the overall planning, design, and construction process.
- Design Criteria – provides the relevant project objectives and design requirements established by EBMUD.
- Concept Development – documents the tasks conducted by the Project team including site analysis, preliminary concept development, public presentation, and preferred concept selection and refinements.
- Preferred Concept and Design Guidelines – presents the preferred architectural and landscape design guidelines.

SECTION 2: DESIGN CRITERIA

2.1 Project Objectives

The primary objective of this Report is to provide a site-specific, functional, and visually appropriate architectural and landscape design concept for the new Wildcat PP. Architecture and landscape objectives were developed by the Project Team throughout the preliminary concept design process based on design criteria provided by EBMUD, ideas shared during stakeholder meetings and workshops, and similar project experience.

2.1.1 Architecture

The architectural design utilizes building materials, colors, and features to integrate a utilitarian facility into a suburban neighborhood.

Specific architectural design objectives include:

- Familiar building forms and features that elevate the design beyond the basic functional requirements.
- Incorporating design elements that reflect neighborhood scale and visual character.
- Utilizing building structure and finish materials that minimize long-term maintenance requirements and opportunities for vandalism.
- Using cost-effective materials and detailing.

2.1.2 Landscape Architecture

The landscape design utilizes grasses and plants that are appropriate for bioretention basins to provide an attractive and functional setting for the PP.

Specific site and landscape design objectives include:

- Improving the visual appearance of the property.
- Minimizing site maintenance.
- Using drought-tolerant plants that thrive with low-water use.
- Ensuring visibility into the property from the perimeter, where feasible, for site security.
- Utilizing planted bioretention basins, and minimizing impervious areas, to reduce stormwater runoff from the site.
- Using recycled site materials where feasible.

2.2 Functional Requirements

EBMUD provided the Project Team with architectural and landscaping design criteria, a site layout, and precedent project documentation at project kick-off. The document, titled *Wildcat Pumping Plant Project – Design Criteria and Site Plan* (EBMUD, 2020), established a basis of design for the development of concept design alternatives and is summarized in Section 2.2.1 and 2.2.2.

2.2.1 Architecture

The PP building will accommodate pumps and associated mechanical and electrical equipment. The PP building will be approximately 40 feet by 80 feet with an interior clear height of approximately 18 feet. Additional architectural requirements for the PP building include:

- Poured-in-place concrete construction with form-liner texture or stucco finish.
- 3:12 pitched roof or flat roof finished with asphalt shingles or standing seam metal.

- Roof hatches located above each pump unit.
- Primary egress will be double doors with a six-foot wide opening and eight-foot height opening to the driveway.
- Secondary egress will be a single door with a three-foot wide opening and eight-foot height opening to the driveway.
- Ventilation louvers located on opposite sides of the building, in a high-low configuration and located away from residential structures.
- Minimum louver size requires approximately 40 square feet of ventilation per louver.
- No windows or additional doors permitted; although window reveals that mimic real windows are allowed.
- Paint color selections based on EBMUD standards.
- Minimize long-term maintenance requirements for all materials and features.

2.2.2 Landscape Architecture

The site design utilizes paved areas as well as low plants and grasses to provide a functional and attractive setting for the PP as seen from Road 20 and El Portal Drive. Site and landscape elements include:

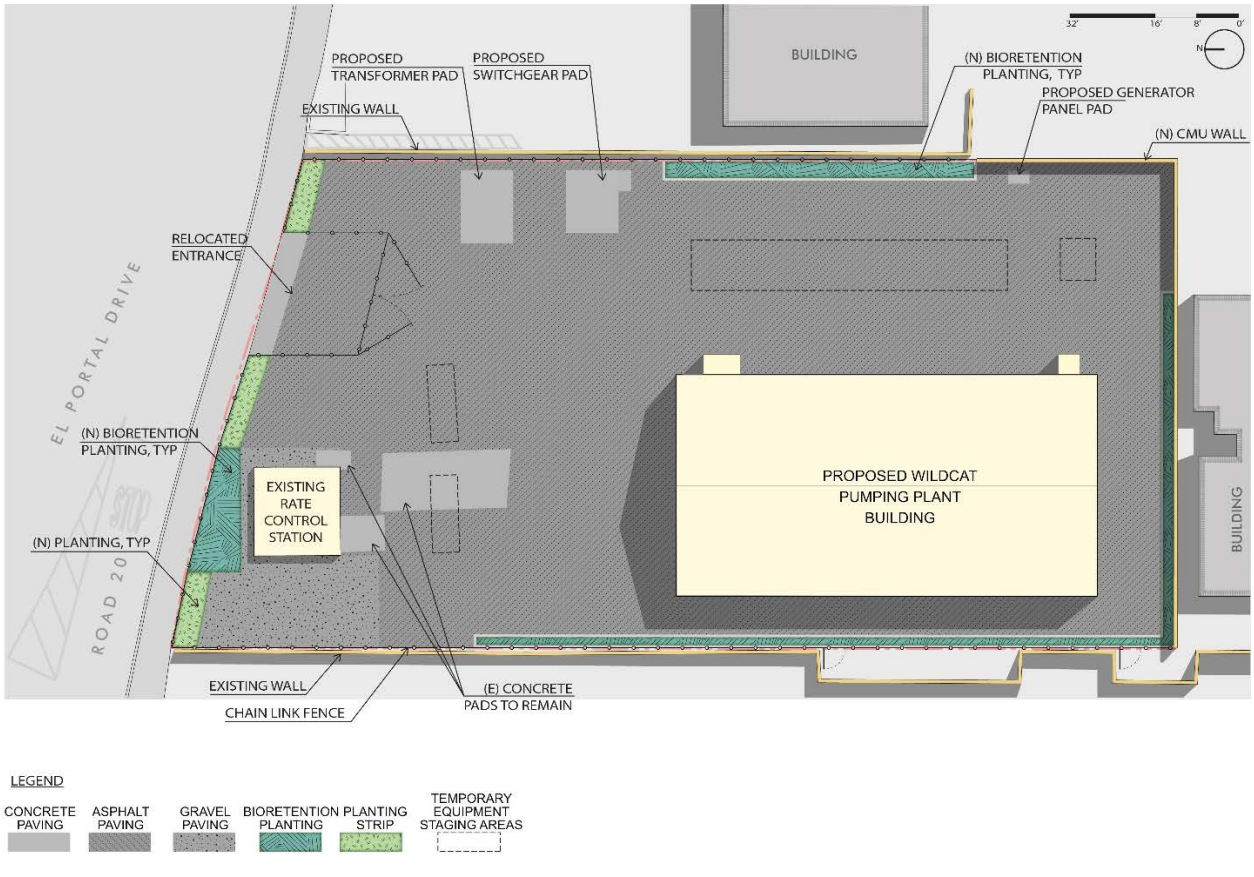
- Paved construction staging and lay-down areas between the PP building and surrounding site boundaries, including a small parking area for staff access to the PP building.
- Electrical facilities on the east side of the site.
- Low-maintenance, drought-tolerant plants specified for bioretention basins and a strip of low grasses along the north edge of the site, adjacent to the sidewalk.
- Anti-climb security fencing and Concrete Masonry Unit (CMU) wall with barbed wire.
- Recycled materials implemented, where feasible.
- Existing RCS and portable PP connections on the north side of the site.

SECTION 3: CONCEPT DEVELOPMENT

3.1 Design Process

Prior to initiating the architectural and landscape design process, EBMUD established the general site layout based on functional requirements of the PP, including building footprint, outdoor electrical equipment, paved areas, temporary equipment staging areas, fencing, and gates. The site layout is illustrated in the Preferred Concept Site Plan (see Figure 3.1.1).

Figure 3.1.1 Preferred Concept Site Plan



The Project Team developed preliminary design concepts based on the site layout, site visit, project goals, and functional requirements. As part of the design process, the Project Team held an informal design charrette and a series of design workshops to present and review each concept iteration. The concepts were refined based on the feedback and presented in a public meeting to obtain input.

3.1.1 Site Description

The Project Team visited the Project site with EBMUD staff to perform a visual assessment of the existing site features and surroundings (see Figure 3.1.2).

Additional design criteria established and observations made during the site visit include:

- The existing site contains approximately 16,662 square feet (0.38 acres), which is almost entirely paved and contains a portable PP, an RCS structure, and various supporting equipment.
- Several existing palms and other trees will be removed prior to construction.

- To the north, the site fronts onto the merging of Road 20 (west of the site) and El Portal Drive (east of the site). An existing six-foot concrete sidewalk separates the site from the merging of these two streets. The sidewalk will remain except where improvements are required for site access.
- One-story commercial structures and related parking are located to the east of the site.
- A multi-story apartment complex (Kona Apartments) is located south of the site at 2645 Church Lane. A 6,720 square foot portion of the Wildcat PP site has been leased to this apartment complex for parking.
- The Walter T. Helms Middle School is located to the west of the site and is separated from the PP site by an existing six-foot-high (as measured from the PP site) CMU wall.

Figure 3.1.2 Existing Site Photos

3.1.2 Neighborhood Character

During the site visit, the Project Team reviewed and documented the architectural characteristics of nearby properties (see Figure 3.1.3). Additional analysis of the larger neighborhood was conducted using online tools. Five primary building styles were identified:

- Residential buildings with California Mission style influence
    - Two-story, single-family homes
    - Stucco cladding in white or beige tones
    - Gable or hipped terra cotta roofs with overhangs
    - Traditional features including porches and contrasting trim around windows and doors

- Multifamily residential buildings in contemporary style
    - Larger, boxy multifamily apartment buildings
    - Smooth surfaces with stucco cladding in light tones
    - Gable asphalt shingle or flat roofs
    - Repeated windows openings and boxed balconies with simple window trim
- Commercial buildings
    - Simple form with a flat or shallow sloped roof
    - Predominantly painted metal or stucco siding
- Civic buildings with California Mission style influence
    - Taller proportions and oversized features without trim
    - Stucco cladding in a variety of light tones
    - Large gable terra cotta roofs with overhangs
- Civic buildings in contemporary style
    - Multiple different cladding materials and colors including concrete, stucco, metal, and glass
    - Shapes and forms reflective of building function
    - Roof with multiple slopes and orientations to emphasize entrances

Figure 3.1.3 Neighborhood Context Photos

Residential buildings with California Mission style influence

Multifamily residential buildings in contemporary style

Civic buildings with California Mission style influence

Civic buildings in contemporary style

3.1.3 Primary View Identification

The Project Team identified three primary viewpoints for visual simulation of the proposed PP building and landscaping (see Figure 3.1.4). These views represent the most publicly visible angles of the site. The first view faces east along El Portal Drive representing the perspective from a passing automobile. From this perspective, the existing CMU wall on the adjacent school property screens the lower half of the PP building. The second view faces south along El Portal Drive representing the perspective of people walking, cycling, or riding transit along El Portal Drive and Road 20. This perspective offers the clearest view of the PP building

and site. The third view faces west along El Portal Drive representing the perspective of people crossing at the intersection at Church Lane or driving along El Portal Drive. From this perspective, the southern end of the PP building is screened by the adjacent commercial building. The existing apartment complex along the southern edge of the site and a CMU wall running the length of the western edge of the site screen the proposed PP building from public view from those directions.

Figure 3.1.4 Visual Simulation Views

3.1.4 Meetings with EBMUD

The Project Team held an informal design charrette to review design precedents and confirm suitable materials and colors. Concepts and subsequent design iterations were presented to EBMUD in a series of review workshops. Each concept included a material palette, precedent images, visual simulations, and building elevations. The landscaping plan and planting palette were consistent between all three concepts. The concepts were refined based on the feedback and ultimately presented in a public meeting to obtain input.

3.2 Preliminary Concepts

The Project Team developed preliminary design concepts based on the preliminary site layout, site visit observations, project goals, and all functional and aesthetic design criteria. Preliminary concepts were presented to and reviewed by EBMUD during three workshops (see Appendix A).

Preliminary PP building architectural concepts include:

- Painted stucco cladding with horizontal oriented façade features and terra cotta tile or standing seam metal gable roof.
- Painted stucco cladding with repeating strips of vertical contrasting stucco trim and asphalt shingle gable roof.
- Mixed painted stucco and concrete walls with gable metal roof or flat roof with parapets.

3.3 Concept Refinement

Preliminary design concepts were refined based on feedback from EBMUD. Additional input from EBMUD maintenance staff was incorporated into the PP building to ensure that all alternatives could be easily maintained with common supplies and techniques.

Specific refinements made to the PP building exterior features and materials include:

- Minimizing roof overhangs to allow for maintenance access around the south and west sides of the building.
- Substituting asphalt shingle and terra cotta tile materials with metal standing seam material due to maintenance concerns.
- Simplifying paint palette and quantity of stucco joints due to maintenance concerns.
- Adjusting trim color and size to reflect architectural styles and precedents.

- Relocating antenna to reflect EBMUD standards and radio path survey.
- Refining the location and size of the louvers for functionality, aesthetics, and to minimize noise transmittance to adjacent residences.

Specific refinements made to the landscape and site design include:

- Addition of a CMU wall along the south and southeast property boundary for privacy, aesthetics, and noise control.
- Addition of permeable and landscaped areas around the perimeter of the site to control runoff.
- Addition of 2 single person access gates to access the 2 bump-out areas between perimeter fencing and existing CMU wall on adjacent school property.
- Removal of part of the existing covered parking canopy adjacent to the southeastern corner of the property due to security concerns.

3.3.1 Stormwater Runoff

Based on discussions with the City of San Pablo, EBMUD is incorporating onsite stormwater treatment facilities to meet the intent of Provision C.3 of the Municipal Regional Stormwater Permit (MRP) of the California Regional Water Quality Control Board. Bioretention areas are typically sized using a simple flow-based hydraulic sizing method, known as the "4 percent method," in which the surface area of the bioretention area is 4 percent of the effective impervious surface area that is treated.

A stormwater treatment facility opportunities and constraints analysis (see Appendix C) of the site determined that it is feasible for the site to comply with Provision C.3 by incorporating approximately 680 square feet of bioretention area and approximately 210 square feet of landscaping area into the site plan, as shown in Figure 4.3.1 and Figure 3.1.1. The final sizes and design of the stormwater treatment facilities will be refined as part of the final grading plan and detailed site design.

3.4 Public Presentation – Conceptual Alternatives

An online community meeting was held on January 26, 2021 where the three preliminary design concepts were presented to the public (see Appendix B). The goal of the public presentation was to solicit feedback and input from the community. Each concept described below presented drew design inspiration from neighboring building typologies, reflecting California Mission, multifamily residential, or modern institutional building styles.

The landscape design among the three alternatives were identical in site layout and included several plants to be used in the bioretention basins as well as grasses in a narrow planter along the northern edge of the project adjacent to the public sidewalk. Plants in the bioretention basins include Berkeley sedge (*Carex divulsa*) and Douglas iris (*Iris douglasii*). The landscape areas adjacent to the sidewalk consist of Lomandra (*Lomandra longifolia* 'Breeze') grass species.

3.4.1 Concept 1: California Mission

Concept 1 utilizes cladding materials and characteristics common to historic California Mission style architecture. The tall single-story proportions, stucco cladding, restrained detailing, terra cotta roof color, and roof slope relate closely to the adjacent Walter T. Helms Middle School and blends the PP building and site into the school campus.

Specific building design features include:

- Painted stucco exterior finish in light, warm tones selected from EBMUD paint color standards
- Gable roof in red standing seam metal to match the color of the adjacent school roof
- No roof overhangs to facilitate maintenance access

- Gabled canopy over contrasting painted stucco facing El Portal Drive
- Arched trim and columns in contrasting painted stucco under the gabled canopy
- Large louver facing El Portal Drive set into arch to imitate a primary building entrance
- Small, vertically oriented recesses to imitate small windows along the building sides
- Small, individual canopy over each access door matching roof slope

3.4.2 Concept 2: Multifamily

Concept 2 emphasizes the boxy proportions and unornamented features common to nearby multifamily apartment buildings. False openings, contrasting paint, and reveals in the stucco cladding are used to imitate windows and balconies. These characteristics visually relate the PP building to the adjacent apartment complex to the south.

Specific building design features include:

- Painted stucco exterior finish in light, warm tones selected from EBMUD paint color standards
- Gable roof in brown standing seam metal to match the color of the adjacent apartment complex
- No roof overhangs and slim roof profile to facilitate maintenance access
- Continuous horizontal wall reveal creating the appearance of second story
- Repeated contrasting painted stucco panels evoking windows and balconies on the upper half
- Large louvers matching the size and color of contrasting stucco panels
- Small metal canopies over each access door

3.4.3 Concept 3: Modern Institutional

Concept 3 utilizes both stucco cladding and exposed concrete inspired by newer civic and institutional buildings located near San Pablo's new City Hall. Materials and colors are uninterrupted, spanning the full width or height of each façade and frame functional elements like the building entry and louvers. These characteristics embrace the utilitarian nature of the PP building and site.

Specific building design features include:

- Painted stucco exterior finish in light, warm tone selected from EBMUD paint color standards on east and west façades
- Textured board-formed concrete on north and south façades
- Gable roof in grey standing seam metal to match doors and louvers
- No roof overhangs and slim roof profile to facilitate maintenance access
- Equally spaced horizontal joints cast into concrete
- Stacked louvers over access doors painted to match the roof
- Small metal canopies over each access door

3.4.4 Public Feedback

EBMUD mailed over 60 postcards and posted the meeting to Nextdoor. In addition, EBMUD specifically contacted representatives from Walter T. Helms Middle School and the adjacent apartment complex for participation and feedback. Zoom video conferencing was used to broadcast the presentation live online and for the question and answer session after the presentation. Although no one attended the web meeting, EBMUD recorded the presentation and placed a copy of the recording, which includes the architectural and landscape design plan alternatives, on the Project website for viewing by the community. The postcard and recording provided contact information and requested the community to submit written comments on the alternatives by February 25, 2021. Project information was also linked on the City of San Pablo website and posted on EBMUD's YouTube channel during the public comment period. No comments by community

stakeholders were received during the live online question and answer period, through the online written comment website, or by representatives of the adjacent property owners.

Additionally, EBMUD conducted a virtual meeting with the City of San Pablo Planning and Engineering staff on February 3, 2021 to solicit feedback and to discuss potential issues and concerns prior to preparation of the Project Mitigated Negative Declaration (MND). City of San Pablo staff expressed a preference for Concept 1, California Mission, due to the prevalence of other Spanish style architecture in the area. City staff also expressed the need for a design that does not appear too utilitarian.

A meeting with EBMUD and the Project Team was held following the public comment period to review public comments and identify EBMUD's preferred concept. Due to the limited feedback received from the community members regarding the PP building and landscape design, Concept 1 was selected to best align with the City's preferences.

There were no comments regarding the landscape design.

3.5 Conceptual Cost Estimate

The Concept Cost Estimate for Architectural & Landscape Work Only (Cost Estimate) is representative of all three concepts presented, and there is not expected to be notable cost variation between the designs (see Appendix D). The Cost Estimate includes only the costs associated with exterior architectural finishes and sitework, which includes paving, fencing, plantings proposed for the bioretention basins and planting strip, and irrigation. All process equipment, pump equipment, mechanical and electrical work, structural wall and roof framing, foundations, and building platform earthwork is excluded because EBMUD's cost estimation group is anticipated to provide estimates for these costs separately during the design phase of the Project. See Table 1 for a summary of the Cost Estimate:

Table 1 Cost Estimate Summary

Total	Pumping Plant Building Architectural Work Only	Sitework
$877,000	$523,000	$354,000[1]

Table Note:

(1) The sitework cost is not inclusive of costs associated with stormwater treatment facilities to comply with Provision C.3 of the California Regional Water Quality Control Board's MRP. Planning-level sitework costs associated with these stormwater treatment facilities is estimated to be $25,000. This cost includes curbs and subsurface substrate.

SECTION 4: PREFERRED CONCEPT AND DESIGN GUIDELINES

4.1 Design Refinements

4.1.1 Architecture

The preferred design concept presented in this Report has been refined to further reflect the intended design aesthetic. Refinements include:

- Adjustments of trim colors for consistency.
- Refinement of the roof structure, trim, and fascia to reflect common wood frame construction techniques including decorative brackets.
- Addition of 1-foot eave overhang to better reflect California Mission style gable roofs, as approved by EBMUD's maintenance staff.

4.1.2 Landscape Architecture

Minor modifications to the site plan were made to better accommodate stormwater runoff requirements. These modifications include:

- Minor revisions to site grading to capture more surface flows into the bioretention basins.
- Use of concrete curbs to control and contain water within the bioretention basins.
- Minor modifications to layout of bioretention basins to better accommodate scaffolding for cleaning the PP building's walls and roof.

4.2 Architectural Design Guidelines

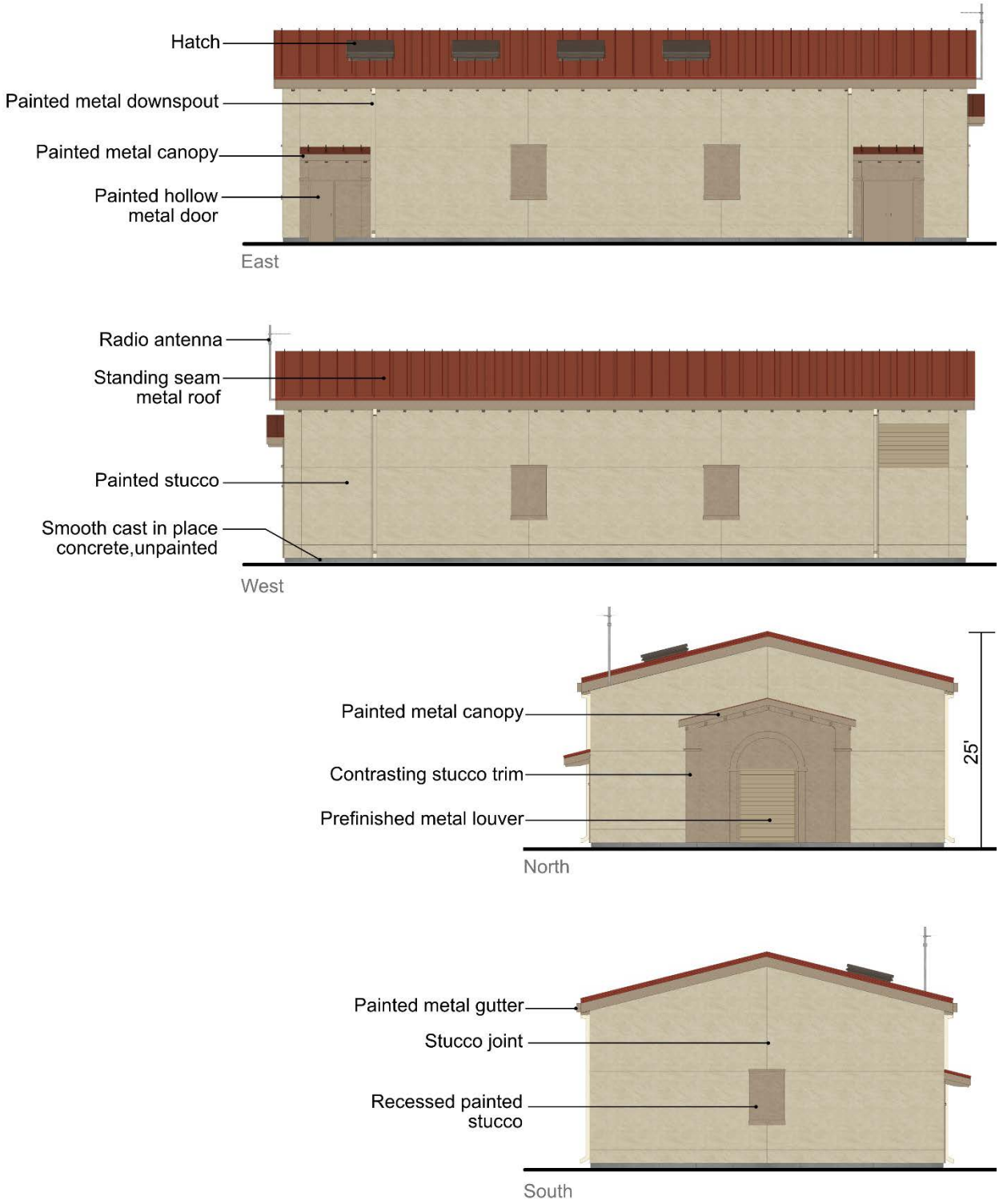
See Figures 4.2.1, 4.2.2, 4.2.3, 4.2.4 for the PP building preferred concept architectural design.

Figure 4.2.1 Preferred Concept – El Portal Facing East

Figure 4.2.2 Preferred Concept – El Portal Facing South

Figure 4.2.3 Preferred Concept – El Portal Facing West

Figure 4.2.4 Preferred Concept Elevations



4.2.1 Roof

The proposed roof is a steel-framed gable form, sloped at 3:12, with a factory finished standing seam metal roofing system. The gable end is oriented towards El Portal Drive. The roof will be configured with gutters and downspouts to control runoff and direct drainage away from equipment, doorways, and louvers. The roof structure will be composed of exposed steel beams. The roof overhangs will be limited to 1 foot to facilitate maintenance and avoid interference with scaffolding. The underside of the roof eaves will feature decorative support brackets painted to match the trim. The standing seam metal roofing will match the terra cotta roof color of the adjacent Walter T. Helms Middle School. Fascia, gutters, and eave trim will be metal and finished to match EBMUD's light brown Federal Standard 20318 color. Painted aluminum roof hatches in a manufacturer standard grey-brown color will be provided above each pump.

4.2.2 Canopies

Steel canopies with standing seam metal roofing will be provided above each personnel door to match the design of the roof. Each personnel door canopy will extend 3 feet from the face of the building to provide protection during inclement weather. An additional gabled canopy will be provided on the north façade that will match the slope of the roof. The gabled canopy will extend at most 3 feet from the face of the building. The underside of the canopies will feature decorative support brackets matching the roof brackets. Trim will be painted in EBMUD's light brown Federal Standard 20318 color.

4.2.3 Exterior Walls

Exterior walls will be designed to be practical and functional, focusing on durability, minimizing maintenance requirements, and enhancing the concept design goals. The walls will be poured-in-place, reinforced concrete construction. The concrete will be covered in a textured stucco finish that extends from the roof down to the base of the doors. The stucco will be painted in EBMUD's beige Federal Standard 26400 color. The stucco will feature narrow control joints aligned or centered on façade elements.

Stucco covered styrofoam trim will be provided around doors and louvers painted in EBMUD's light brown Federal Standard 20318 color. The contrasting stucco area under the gabled canopy on the north façade as well as the smaller recesses in the concrete on the east, west, and south façades will be painted to match the trim. Trim around the single personnel door at the southeast corner of the building will be sized and positioned to match the trim around the double personnel door.

4.2.4 Openings

All doors and louvers will match the materials and appearance of other exterior finishes. Openings will be coordinated with the overall exterior façade design to enhance the overall concept.

Louvers are required for ventilation of the PP building and will be factory finished aluminum in the EBMUD light brown Federal Standard 20318 color. Louvers include one low-level louver along the north façade and one high-level louver along the west façade. The high-level louver should be located as far from the south façade as functionally feasible. Each louver will be a minimum of 40 square feet to provide the required ventilation capacity.

Access doors provided for personnel and equipment will be shop primed hollow metal construction and field painted in EBMUD's light brown Federal Standard 20318 color. Double-door size will be approximately 6 feet wide by 8 feet tall. Single-door size will be approximately 3 feet wide by 8 feet tall. Door hardware will match the door and frame finishes.

4.3 Landscape Design Guidelines

Approximately 680 square feet of planting (see Figure 4.3.1 and 4.3.2) will be located in the bioretention basins. Plants in these basins will include Berkeley Sedge and Douglas Iris. In addition to bioretention basins,

a narrow strip of the grassy plant Lomandra longifolia (Matt Rush) will be located in an approximately 210-square-foot area adjacent to and parallel with the northern fence line.

See Figures 4.3.1 and 4.3.2 for the preferred concept landscape design.

Figure 4.3.1 Preferred Concept Landscape Plan

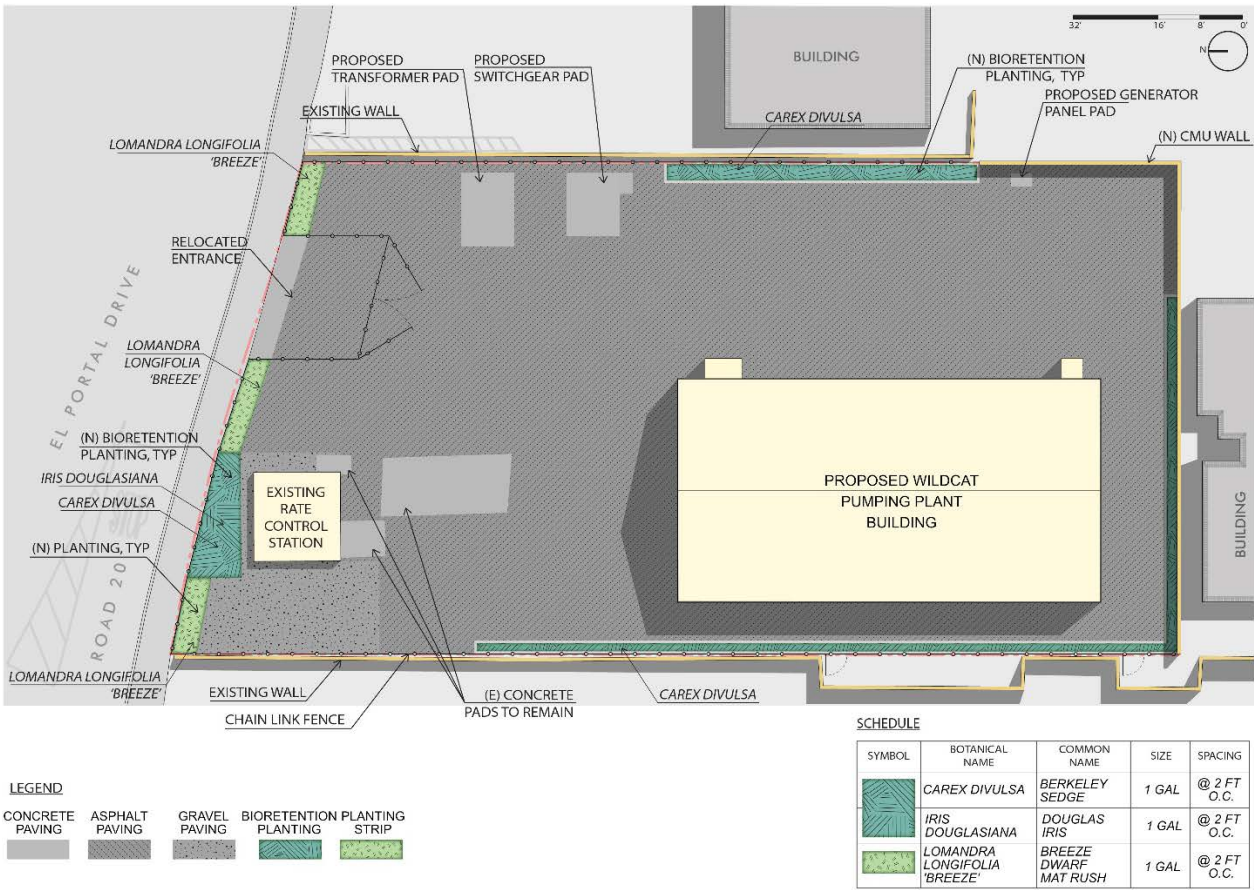
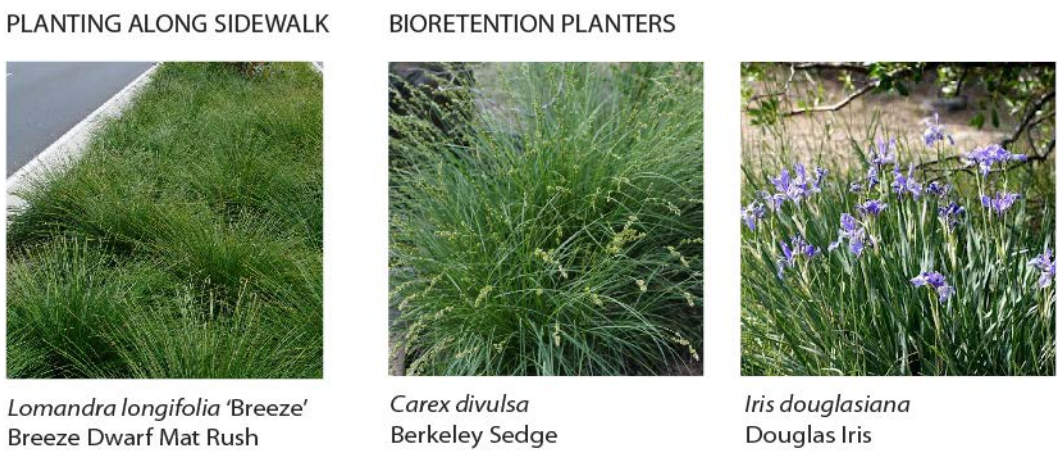


Figure 4.3.2 Preferred Concept Planting Palette



4.3.1 Site Landscape Planting

Although the Wildcat PP site is very limited in area, one of the objectives of the landscape planting plan is to blend the facility's appearance in with established adjacent land uses. Plantings will soften the industrial appearance of the proposed facility, giving it an appearance that is more compatible with a mixed residential and commercial neighborhood. The areas designated for planting have been placed adjacent to the public sidewalk where they are most visible in order to improve the visual appearance of the property and reduce peak stormwater runoff from the site (see Section 4.3.3 for additional discussion regarding planting objectives related to stormwater runoff).

Another objective of the landscape planting plan is to minimize landscape maintenance. While some landscape maintenance is inevitable, the selected plants will require minimal pruning, litter pick-up, or replacement.

4.3.2 Planting Spacing and Pruning

In order to further minimize site maintenance, proposed plant quantities will be limited and plant spacing will be set to reduce the need for frequent plant thinning or pruning. This approach not only reduces the extent of ongoing landscape maintenance required, but also allows for better visual surveillance from the street, thereby enhancing site security.

4.3.3 Water

As one landscaping objective is to minimize the need for irrigation water, proper selection of drought-tolerant plants will help achieve this objective in the short term. In the long term, site irrigation needs will be eliminated. The majority of the plants selected are considered low-water-use plants. All plants are listed as suitable dry-landscape plants based on guidelines set forth in "Plants and Landscapes for Summer-Dry Climates of the San Francisco Bay Region" (EBMUD, 2004), "Water Use Classification of Landscape Species" (Costello and Jones, 2014), and "Landscape Plants for California Gardens" (Perry, 2010). In addition, all irrigation for this landscape is to be low-flow, sub-surface drip, and will be compliant with the State's Model Water Efficient Landscape Ordnance (MWELO) (2015). In a year or two after planting, irrigation water can be eliminated, as all proposed plants will no longer require supplemental water.

A second objective is the reduction of stormwater runoff. Through site grading, stormwater runoff will be directed to the planting areas on site to the fullest extent possible to maximize stormwater recharge of soils. Plant areas that can catch runoff will minimize the flow of water into storm drain structures, and will also enhance compliance with C.3 treatment measures regulated by the MRP for the California Regional Water Quality Control Board.

4.3.4 Access and Fencing

Due to the site configuration, fencing will include one approximately 24-foot-wide vehicle gate to provide vehicle access from Road 20 and El Portal Drive. The gate will be set back from the sidewalk by approximately 20 feet, with fencing set in around the gate, to accommodate a vehicle on site and out of the roadway while the gate is being unlocked and opened.

The site plan also includes two single-person 42-inch gates from the PP site to the western CMU wall bump-out areas, to provide ongoing access to maintain these areas.

An optional 4-foot wide secondary access walk through gate can also be installed on the northwestern end of the site fencing similar to existing condition.

Security fencing will surround the site on all sides and consist of EBMUD's standard security fence: eight-feet high narrow mesh, black chain link fabric with outriggers of barbed wire on top. Based on discussion with the owner of the adjacent apartment complex, a portion of a carport roof that is adjacent to the southeastern corner of the PP site will be removed to further limit unauthorized access to the site.

All fencing and gates will be located on the property line to minimize illegal dumping with the exception of the setback area outside the entry gate noted above.

The planting area behind the sidewalk has been designed with low plants to ensure continuing visibility into the site.

4.3.5 CMU Wall

Based on coordination with the owner of the adjacent apartment complex, EBMUD will construct an eight-foot-tall, 92-foot-long CMU wall along the southern boundary of the site as well as an additional approximately 38-feet of CMU wall at the south end of the eastern boundary.

4.3.6 Paving

The majority of the project site, approximately 10,551 square feet, will consist of asphalt paving over aggregate base rock. An additional impervious area of approximately 1,249 square feet will consist of the existing RCS, existing concrete pads to support the RCS and associated equipment, existing concrete pad to support a portable PP, and new concrete pads to support proposed electrical equipment. Approximately 640 square feet will remain paved with aggregate base rock/gravel to enhance percolation of water into the subsoil.

4.3.7 Use of Recycled Materials

To the extent feasible, site construction at the Wildcat PP will use recycled materials. Table 2 provides a list of the landscape materials and the general availability of each material from recycled sources.

Table 2 Availability of Recycled Site Materials

Project Element	Availability of Recycled Materials
Aggregate base rock	Recycled aggregate base material is available
Asphalt paving	Sand and aggregates in asphalt paving may be available
Concrete curbs	Not available
Drain rock	Recycled drain rock may be available
Vinyl-coated chain-link fencing	Not available
Soil amendment	Some materials (e.g., yard compost) are available (and preferred)
Mulch in planting areas	Bark mulch is available (and preferred)

Additional opportunities for recycling materials may also be employed during site landscape maintenance. The goal will be to maintain the landscape in a manner that prevents waste and uses as much of the plant debris generated on site as possible with the exception of infected plant material. The following landscape maintenance activities will be implemented to the extent feasible to maximize use of recycled materials:

- Retain small plant debris for mulch in order to conserve nutrients on site and protect the soil surface.
- Chip (shred) vegetation trimmings on-site; and use all vegetative plant debris, and unpainted and untreated wood, greater than 4 inches on-site as mulch.
- Use rakes for leaf litter removal. Do not use power blowers in planting beds.

APPENDICES

Appendix A: Preliminary Concept Presentations

Appendix B: Community Meeting Presentation

Appendix C: Feasibility of Integrating Stormwater Treatment Facilities for C.3 Compliance

Appendix D: Concept Estimate for Architectural & Landscape Work Only