EAST BAY MUNICIPAL UTILITY DISTRICT

FONTAINE PUMPING PLANT REPLACEMENT PROJECT AESTHETICS CONCEPTUAL DESIGN REPORT

FINAL | September 2021

EBMUD

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SUMMARY OF KEY FINDINGS

The Fontaine 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) Fontaine PP Replacement 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 developed, EBMUD selected Concept 2 (see Figure A), which will serve as the basis for subsequent phases of design.

Figure A Preferred Concept – View from MacArthur Boulevard Facing South

EBMUD selected Concept 2, the Residential Design concept, as the preferred architectural concept for the Fontaine PP building. The concept features beige stucco cladding with contrasting trim over cast-in-place concrete walls, covered by a steel-framed gable roof with brown asphalt shingles. This concept was determined to best meet EBMUD's design objectives and the community's aesthetic preferences.

Landscape Architecture

EBMUD selected an assortment of plants from various landscape design concepts proposed for the Project site. Concept 2 landscape design elements feature a tree, Marina madrone (*Arbutus 'Marina'*), in the northeast corner of the site and California Mountain lilac (*Ceanothus concha*) as a hedge shrub along the southern perimeter of the site. Other low shrubs and plants selected from Concepts 1 and 3 for the remaining planting areas include Carmel Creeper (*Ceanothus griseus*), sticky monkey flower (*Mimulus aurantiacus*), and Purple Needlegrass (*Nasella pulchra*). This assortment of plantings was selected in coordination with EBMUD maintenance staff, and was determined to best meet EBMUD's landscape design objectives, which considered aesthetic preferences, species growth rates, and long-term maintenance and water requirements.

SECTION 1: INTRODUCTION

1.1 Project Overview

The Project consists of the replacement of the existing 20-million-gallon-per-day (mgd) PP located at 8445 Ney Avenue in the City of Oakland with a new 20-mgd PP located on EBMUD property located at the southwest corner of MacArthur Boulevard and 96th Avenue in the City of Oakland. In addition to the new building and related site improvements, the Project includes new mechanical and electrical equipment and new underground pipelines to connect the new PP to the distribution system. EBMUD identified the preferred Project location and purchased the land in 2016. The general site layout and PP configuration are based on the 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 appropriate architectural and landscape design concept for the new Fontaine 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 meetings and workshops, and through similar project experience.

2.1.1 Architecture

The architectural design utilizes building materials, colors, and features that blend the utilitarian facility into a predominantly residential neighborhood.

Specific architectural design objectives include:

- Familiar forms and features that elevate the design beyond the basic functional requirements.
- Incorporating design elements that reflect neighborhood scale and character.
- Utilizing exposed materials and details that minimize long-term maintenance requirements and opportunities for vandalism.
- Employing cost-efficient materials and details.

2.1.2 Landscape

The landscape design utilizes trees, shrubs, and groundcover to provide an attractive and complementary 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, and that are drought-tolerant.
- Ensuring visibility into the property from the perimeter, for site security.
- Utilizing landscaped areas, 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 for review which established the functional requirements and design constraints.

2.2.1 Architecture

The PP building will be designed to accommodate pumps and associated mechanical and electrical equipment. The PP building will be approximately 45 feet by 50 feet with an interior clear height of approximately 18 feet based. Additional requirements for the PP building architecture 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 also opening to the driveway.
- Ventilation louvers located on opposite sides of the building, in a high-low configuration.
- Minimum louver size requires approximately 25 square feet of ventilation per side.
- No windows or additional doors permitted.
- Paint color selections based on EBMUD standards.
- Minimization of long-term maintenance requirements for all materials and features.

2.2.2 Landscape

The landscape design will utilize trees, shrubs, and groundcover to provide an attractive and complementary setting for the PP. Site and landscape requirements include:

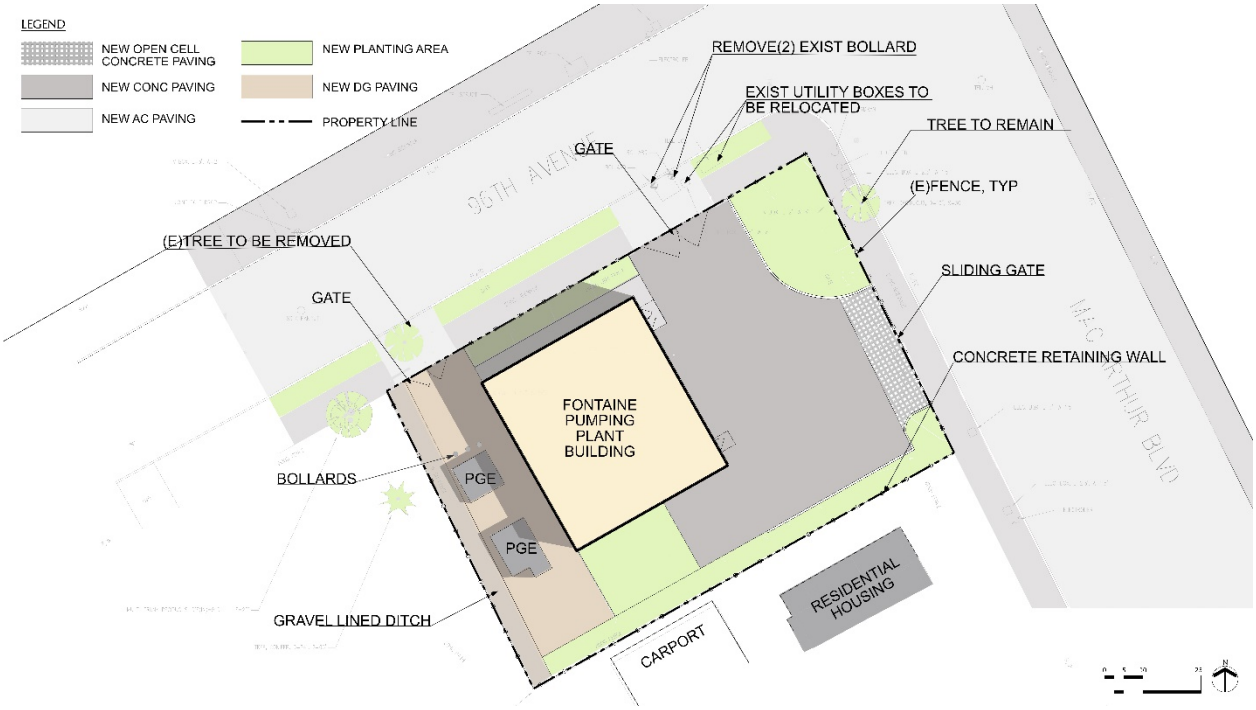
- Small staff parking area and large, paved construction staging / lay-down area between the PP building and MacArthur Boulevard for portable pumps to augment those on site, or to substitute for them.
- Electrical facilities on the west side of the building, with separate access from 96th Avenue for Pacific Gas and Electric Company (PG&E) and EBMUD staff access.
- Low-maintenance, drought-tolerant plants will be specified.
- Anti-climb security fencing with barbed wire will be specified.
- Recycled materials will be implemented where feasible.

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, electrical equipment, paved areas, fencing, and gates (see Figure 3.1.1).

Figure 3.1.1 Preferred Concept Site Plan



3.1.1 Site Description

The Project Team visited the Project site with EBMUD staff to document and assess the existing site features and surroundings (see Figure 3.1.2).

Observations made during the site visit include:

- Single-story homes along 96th Avenue
- Multi-story residential development along MacArthur Boulevard with covered parking located closest to the PP building
- Site slopes west from MacArthur Boulevard to the adjacent property, beyond the western fence-line
- Existing wooden fence along the southeastern and southwestern property lines that belongs to adjacent residential development that helps provide screening to the site (that will remain)

- The site currently features a chain-link fence along the northeastern and northwestern property line (that will be replaced as part of the Project))
- Non-native low ground cover grassland vegetation that will be removed as part of the Project
- One visually significant street tree within the public right-of-way, a 10-inch diameter breast height (DBH) Raywood ash (*Fraxinus angustifolia* 'Raywood'), located adjacent to the MacArthur Boulevard curb, outside the project limits (that will remain)
- One street tree within the public right-of-way, a 10-inch-diameter DBH black acacia (*Acacia melanoxylon*), located on the west end of the site's frontage along 96th Avenue that will be removed as part of the Project in order to construct a new driveway
- Existing utility boxes along the sidewalk (to be relocated as part of the Project)
- Existing sidewalks will remain except where improvements are required for site access

Figure 3.1.2 Existing Site Photos

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. Three primary building typologies were identified:

- Residential buildings
    - Traditional early to mid-century styles with gabled roofs and porches.
    - Predominantly painted stucco with a broad range of colors.
    - Simple, traditional features including porches and window trim.

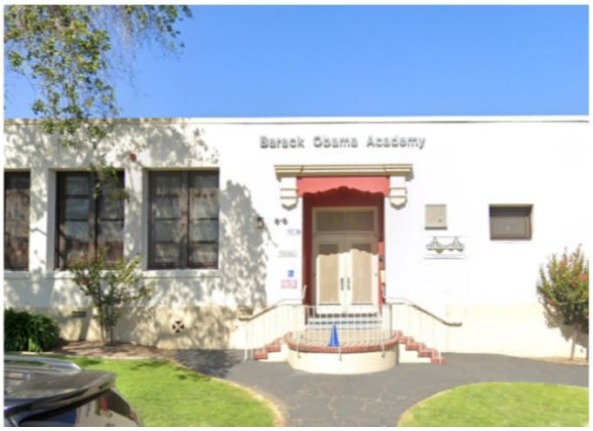
    - Oriented towards 96th Avenue.
- Commercial buildings
    - Simple, boxy form with a flat roof.
    - Predominantly painted stucco with large, storefront glass windows.
    - Large canopy or awning with a sign or medallion trim above.
    - Oriented towards MacArthur Boulevard.
- Civic buildings
    - Contemporary forms with more exaggerated roofs.
    - Range of building materials including stucco, wood, glass, and metal.
    - Larger features with simple trim and detailing.
    - Set back from the property edge.

Figure 3.1.3 Neighborhood Context Photos

RESIDENTIAL CONTEXT

COMMERCIAL CONTEXT

CIVIC CONTEXT



The Project Team identified two primary views for visual simulation of the PP building and landscaping (see Figure 3.1.4). The first view is oriented south along MacArthur Boulevard, representing how people walking, driving, or riding transit will see the Project; this is expected to be the primary view. When moving north along MacArthur Boulevard, the multi-story residential development screens most of the site. The second view is oriented east along 96th Avenue, representing how neighbors will see the Project as they walk and

drive to and from their homes; this is expected to be the secondary view. Existing fences and trees screen the south and east sides of the PP building and are not represented in the visual simulations.

Figure 3.1.4 Visual Simulation Views

MACARTHUR BOULEVARD VIEW FACING SOUTH

96TH AVENUE VIEW FACING EAST

3.1.4 Meetings with EBMUD

The Project Team developed preliminary design concepts based on the site visit, project goals, and functional requirements. Before developing three-dimensional concepts, the Project Team held an informal design charrette to review precedents and confirm suitable materials and colors. Each concept included a material and planting palette, precedent images, visual simulations, PP building elevations, and a landscaping plan. The concepts were refined based on the feedback and ultimately presented to the public to obtain input.

3.2 Preliminary Concepts

Preliminary concepts were presented to and reviewed by EBMUD during three workshops (see Appendix A).

Preliminary PP building concepts include:

- Exposed corrugated concrete construction and a single-slope metal roof.
- Painted stucco with a shingle gable roof and residential design characteristics.
- Exposed smooth concrete clad with metal or wood-look external screen system.
- Exposed board-formed concrete mixed with stucco banding around.
- Painted stucco with single-slope metal roof and commercial building design characteristics.

Preliminary landscaping concepts include very drought-tolerant, native, and slow-growing plants that require minimal maintenance. Most plants will be low height at maturity–under three-feet–but several plants will be higher, such as those the plant area that provides a buffer between the PP building and the multi-family residential project to the south of the site. Planting areas and open-cell concrete pavement will be used to reduce stormwater runoff from the site.

3.3 Concept Refinement

Preliminary concepts were refined based on feedback from EBMUD. Additional input from EBMUD maintenance staff was incorporated into the PP building and landscape design at multiple stages 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:

- Adjusting roof slope and direction to allow for maintenance access through roof access hatches.
- Elimination of cladding materials other than concrete and stucco due to maintenance concerns.
- Door canopy slope, material, trim color, and size to reflect neighborhood context.
- Antenna location and design to reflect EBMUD standards and radio path survey.
- Location and minimum sizing of the louvers for functionality, aesthetics, and noise minimization to adjacent residences.
- Color palette selection to facilitate long term maintenance.

Specific refinements made to the site layout include additional landscaping on the south side of the building and open-cellular concrete paving in front of the secondary entrance to reduce peak stormwater runoff from the site and to improve the visual appearance of the site. The variations between the three proposed landscape concepts were minimal and primarily limited to different designated plant species.

3.4 Public Presentation – Conceptual Alternatives

An on-line public meeting was held on June 23, 2020 where three 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 presented drew design inspiration from neighboring building typologies, reflecting civic, residential, or commercial building features.

The landscape designs among the three alternatives were similar in layout but with varying plant types proposed. Table 1 provides a summary of the proposed plant palettes for the three concepts.

Table 1 Planting Palette

Plant Type	Concept 1	Concept 2	Concept 3
Trees	*Marina Strawberry Tree*	*Catalina Ironbark*	*Western Redbud*
Large Shrubs	*Dr. Hurd Manzanita* *Callistemon*	*Pineapple Guava* *Ceanothus concha*	*Oleander*
Small Shrubs	*Purple Needlegrass* *'Low Fast' Cotoneaster* *Coral Aloe*	*Lomandra (grass)* *Douglas iris* *Sonoma Salvia* *Ceanothus "Emily Brown"*	*Deer Grass* *Currant* *Emerald Carpet Manzanita* *Carmel Creeper*

3.4.1 Concept 1: Civic Design

Concept 1 is a minimalist design utilizing unpainted concrete with a sloping metal roof that emphasizes the utilitarian character of the building. The proportions, application of materials, building features like louvers and doors, and roof slope contribute to a practical aesthetic often applied to public infrastructure facilities. These proportions and features make it stand apart from surrounding residential properties.

Specific building design features include:

- Horizontally corrugated concrete formwork at the base.
- Smooth concrete and contrasting, roof trim evoking an entablature.
- Shed roof in standing seam metal sloping away from MacArthur Boulevard.
- Contrasting dark louvers, doors, and roof trim.
- Tall, narrow louvers to emphasize height.
- Individual canopies over each access doors with contrasting.

3.4.2 Concept 2: Residential Design

Concept 2 is a more traditional design utilizing cladding and roofing materials common to the surrounding residential structures. Functional building features are adapted to resemble more familiar residential building characteristics. False openings and trim mimic a one and a half story home with an attic, masking the atypical building height and massing. Concept 2 design blends in with the existing neighborhood character along 96th Avenue.

Specific building design features include:

- Painted stucco exterior finish.
- Contrasting painted stucco trim around louvers, doors.
- Continuous horizontal trim element to create the appearance of an attic under the gable roof.
- Gable roof opening toward 96th Avenue with asphalt shingles that resemble adjacent homes.
- Exposed concrete foundation.
- Paint colors using warm tones selected from EBMUD standards.
- Large louvers along 96th Avenue that resembles the large picture windows or front porches of adjacent homes.
- Narrow, horizontal louvers at corners to imitate small windows of a half-story.
- Individual canopies over each access doors.

3.4.3 Concept 3: Commercial Design

Concept 3 incorporates commercial building design elements utilizing painted stucco with a sloping metal roof and takes advantage of the PP building proportions that are inherently more similar to the small commercial buildings along MacArthur Boulevard. Building features are distinctly oriented towards MacArthur Boulevard and away from the adjacent homes.

Specific building design features include:

- Painted stucco exterior finish.
- Contrasting painted stucco trim that imitates glass storefronts facing MacArthur Boulevard.
- Single-slope shed roof in standing seam metal sloping away from MacArthur Boulevard to preserve the appearance of a flat commercial roof.
- Large canopy spanning across both access doors that imitates awnings above stores.
- Square medallions located above the canopy.
- Large louver along 96th Avenue with a canopy that imitates a service entry.

3.4.4 Public Feedback

EBMUD mailed over 1,300 postcards and posted the meeting to NextDoor. Microsoft Teams was used to broadcast the presentation live online and a separate teleconference line was used for the question and answer session after the presentation. Approximately 4 people attended the live presentation. The community members' primary questions were related to pipeline installation methods and access to their homes during pipeline installation and the frequency of EBMUD staff visiting the PP when it is operational. EBMUD responded to all questions. The architectural and landscape design plan alternatives were posted on the Project website. The community was provided contact information and asked to submit written comments on the alternatives by July 7, 2020. On July 7, 2020, EBMUD mailed public notice postcards that extended the public comment period to July 31, 2020 to allow the community additional time to review and provide input on the architectural and landscape design alternatives for Project.

A workshop with EBMUD and the Project Team was held following the public comment period to review public comments and identify EBMUD's preferred concept. Limited feedback was received from the community members regarding the PP building and landscape design. The relevant input expressed the need for an exterior design that does not appear abandoned, disused, or that will become an attractive nuisance, which is most consistent with the Residential Concept. Concept 2, the Residential Concept, was selected based on input from community members.

There were no comments that indicated preferences for any of the landscape concepts.

3.5 Conceptual Cost Estimate

The Conceptual Cost Estimate for Architectural & Landscape Work Only (Cost Estimate) is representative of all three concepts presented and there is not expected to be significant cost variation between the designs (see Appendix C). The Cost Estimate includes only the costs associated with exterior architectural finishes and sitework (e.g., landscaping, irrigation, paving, fencing). All process equipment, pump equipment, mechanical and electrical work, structural framing, foundations, and building platform earthwork is excluded because EBMUD's cost estimation group provides estimates for these costs separately. See Table 2 for a summary of the Cost Estimate:

Table 2 Cost Estimate Summary

Total	Pumping Plant Architectural Work Only	Sitework
$781,000	$395,000	$386,000

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 residential aesthetic. Refinements include:

- Adjustments of trim colors for consistency.
- Refinement of the roof structure, trim, and fascia to reflect common wood frame construction techniques.

4.1.2 Landscape

There were minor refinements from the original planting plans, including changes of plant species based on feedback from EBMUD maintenance staff.

Refinements to the site plan include:

- Addition of a representation of the perimeter retaining wall and curb.
- Indication of relocated utility boxes and bollards along 96th Avenue.
- Clarification of western drainage ditch material as gravel, to decrease peak stormwater runoff.

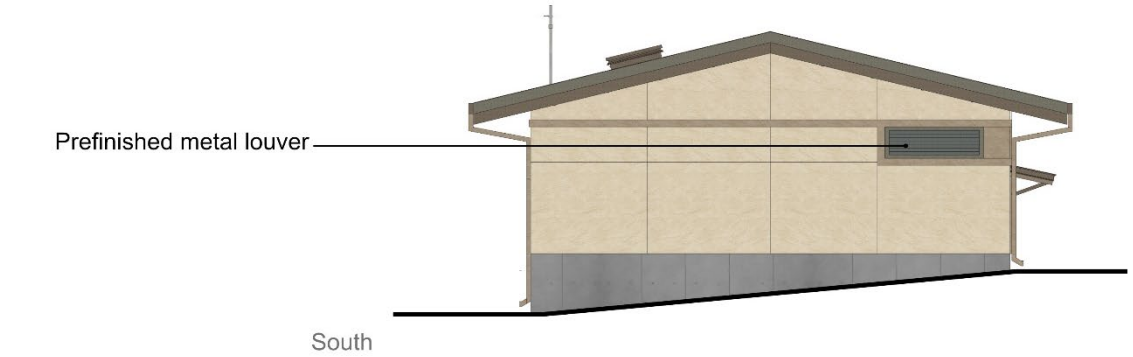
4.2 Architectural Design Guidelines

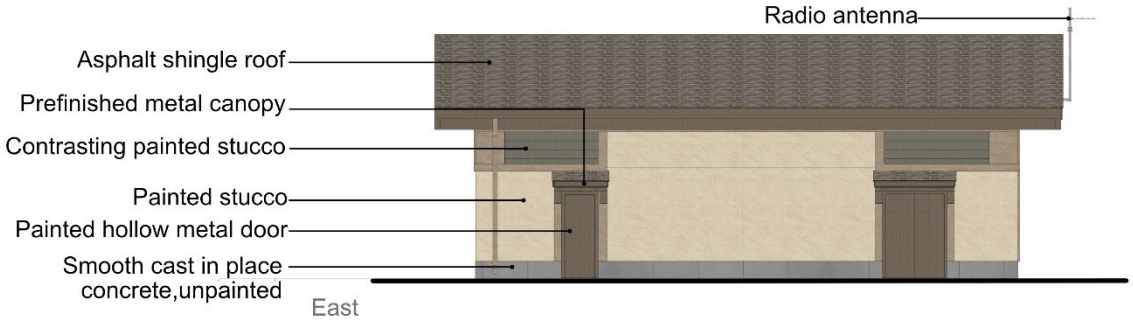
See Figures 4.2.1, 4.2.2, 4.2.3 for the PP building preferred concept architectural design.

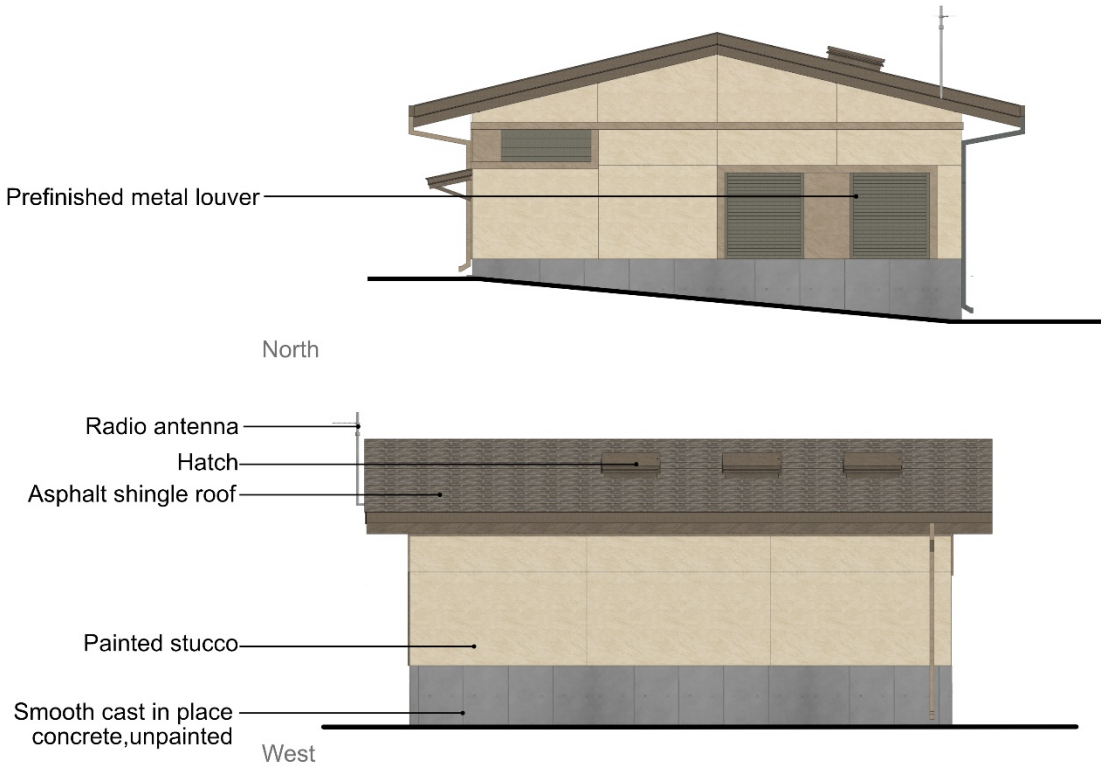
Figure 4.2.1 Preferred Concept – MacArthur Facing South

Figure 4.2.2 Preferred Concept – 96th Facing East

Figure 4.2.3 Preferred Concept Elevations







4.2.1 Roof

The proposed roof is a gable form, sloped at 3:12 with an asphalt shingle finish. The gable is oriented to open towards 96th Avenue. The roof will be configured and detailed to control runoff and direct drainage away from equipment, doorways, and louvers. The roof structure will be composed of exposed steel beams. Fascia, gutters, and eave trim will be metal and finished to match EBMUD's dark brown Federal Standard 16165 color. Roof hatches will be provided above each pump for equipment access and removal.

4.2.2 Canopies

Canopies will be provided above each personnel door to match the design of the roof. 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 concrete construction. The concrete will be covered in a textured stucco finish that extends from the roof down to the base of the doors. Below the doors, the concrete will be exposed as the site slopes down. A graffiti repellant coating will be applied to unpainted concrete. The stucco will be painted in EBMUD's beige Federal Standard 26400 color. The stucco will feature narrow reveals to panelize the wall vertically and horizontally. Stucco trim will be provided around doors and openings painted in EBMUD's light brown Federal Standard 20318 color.

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 in the EBMUD dark brown Federal Standard 16165 color. Non-functional louvers will be backed with an integrated acoustic blank-off panel to reduce noise transmission. Functional louvers include one low-level louver along the north façade and one high-level louver along the south façade. Along 96th Avenue, two large louvers imitate a large picture window or porch. Narrow, horizontally oriented and recessed concrete panels at the west corners are painted in Federal Standard 16165 to imitate half-story windows in residential properties.

Access doors provided for personnel and equipment will be hollow metal doors and frames primed and finished in EBMUD's dark brown Federal Standard 16165 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

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

Figure 4.3.1 Preferred Concept Landscape Plan

BOTANICAL NAME	COMMON NAME	SIZE	QTY	SPACING
ARBUTUS 'MARINA'	MARINA STRAWBERRY TREE	24" BOX	2	AS SHOWN
CEANOTHUS CONCHA	CALIFORNIA MOUNTAIN LILAC	5 GAL	7	@ 8-FT O.C
MIMULUS AURANTICUS	STICKY MONKEY FLOWER	5 GAL	10	@ 5-FT O.C
CEANOTHUS GRISEUS	CARMEL CREEPER	1 GAL	10	@ 5-FT O.C
NASELLA PULCHRA	PURPLE NEEDLEGRASS	1 GAL	224	@ 2-FT O.C

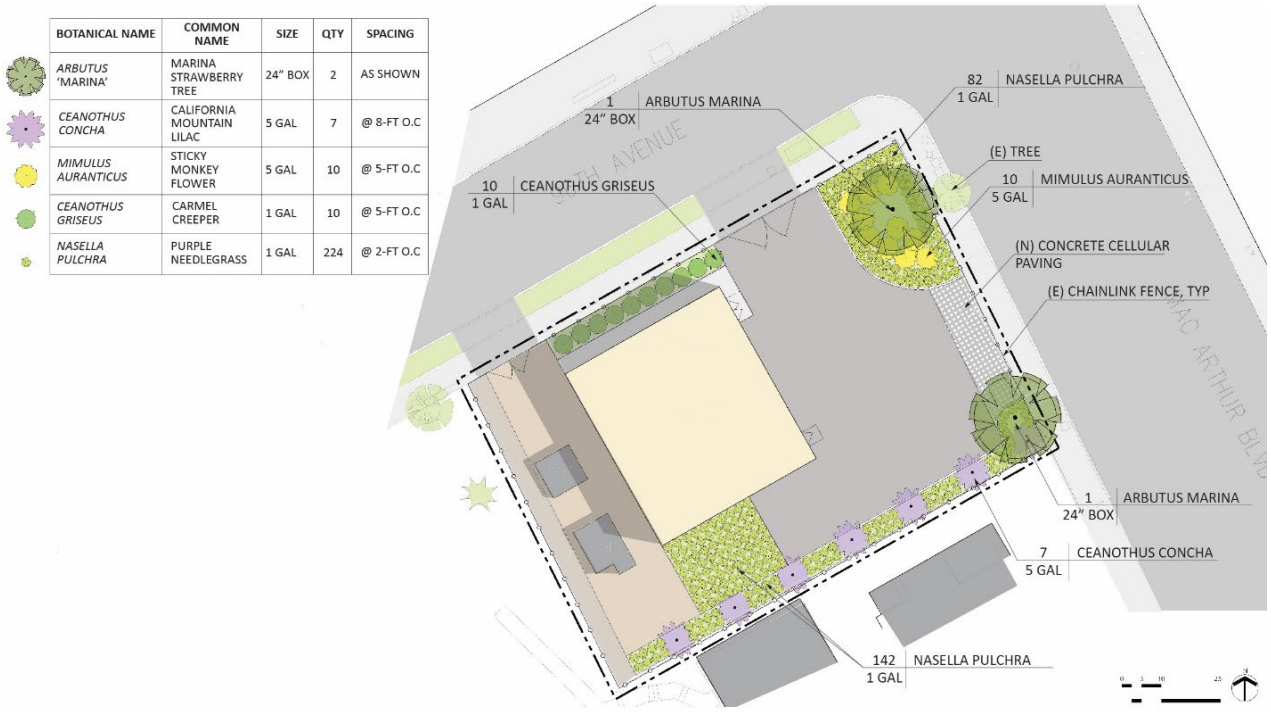


Figure 4.3.2 Preferred Concept Planting Palette

LARGE SHRUBS ON SOUTH PROPERTY LINE

CEANOTHUS CONCHA
CALIFORNIA MOUNTAIN LILAC

LOWER SHRUBS ON 96TH AVE

CEANOTHUS GRISEUS
CARMEL CREEPER

TREES

ARBUTUS MARINA
MARINA STRAWBERRY TREE

SHRUBS IN PLANTER AREA AT CORNER

MIMULUS AURANTIACUS
STICKY MONKEY-FLOWER

NASELLA PULCHRA
PURPLE NEEDLEGRASS

4.3.1 Site Landscape Planting

One of the objectives of the landscape planting plan is to blend the facility's appearance in with the established surrounding land uses. Plantings will soften the appearance of the proposed building, and will give the facility an appearance that is more compatible with a mixed residential and commercial neighborhood.

The proposed planting for the Project site will include a mix of small and large shrubs and one tree. Due to the relatively small size of the site and the limited areas available for planting, the landscape plan is relatively simple with a limited number of plant species. Specific plants were selected to fit the landscape spaces identified on the site plan as well as functional site requirements. Plantings range from low plants adjacent to the public sidewalks, to larger trees in the two plant areas adjacent to the MacArthur Boulevard sidewalk.

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.

Although the site is small, the areas designated for landscaping have been maximized to improve the visual appearance of the property and reduce peak stormwater runoff from the site. Landscape areas will consist of a large planted area (approximately 870 square feet) at the corner of 96th Avenue and MacArthur Boulevard, which will include planting of a Marina **s**trawberry tree (*Arbutus 'Marina'*), sticky monkey flower (*Mimulus*

auranticus) and purple needle grass (*Nasella pulchra*); a small planted area (approximately 150 square feet) at the eastern corner of the site, which will also include plantings of sticky Monkey Flower and purple needle grass (*Nasella pulchra*); a sloping area on the south side of the PP building planted with purple needle grass (*Nasella pulchra*); and a long narrow planted area extending along part of the 96th Avenue frontage and the southern side of the site facing the adjacent multi-family housing, both of which will be planted with rows of California mountain lilac (*Ceanothus concha*).

4.3.2 Planting Spacing and Pruning

In order to minimize site maintenance, plant numbers are limited and plant spacings are 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 project objective is to minimize the use of 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 almost entirely 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), and the "Re-scape / Bay-Friendly Landscape Guidelines," both known and reputable reference sources in the landscape industry in Northern California. In addition, all irrigation for this landscape is to be low-flow, sub-surface drip, and will be compliant with both the State's Model Water Efficient Landscape Ordnance (MWELO) (2015) and with the City of Oakland's irrigation requirements. 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 storm water runoff. 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 State Water Boards.

4.3.4 Access and Fencing

The site will feature three access gates:

- A 24-foot-wide primary double swing access gate connecting to 96th Avenue for regular operations and maintenance.
- A 30-foot-wide sliding access gate connecting to MacArthur Boulevard for delivery of equipment such as portable pumps or generators in the event of a planned or unplanned outage of the PP.
- A 12-foot-wide swing gate connecting to 96th Avenue (west of the primary access gate) to provide PG&E access to electrical equipment on the west edge of the site. An existing Black Acacia tree (*Acacia melanoxylon*) within the public right-of-way and adjacent to the street curb conflicts with the proposed driveway and will be removed.

Security fencing will surround the site on all sides and consist of the District standard security fence: eight-feet high narrow mesh, black chain link fabric with outriggers of barbed wire on top.

All fencing and gates will be located on the property line to minimize illegal dumping in the proposed driveways.

Because one project objective is to ensure visibility into the site, plants have been selected with sparser foliage growth and relatively wide spacing to improve sight line and visibility into the site.

4.3.4 Paving

Site paving on the northeast side of the building, facing MacArthur Boulevard and 96th Avenue, will consist of 3,450 square feet of asphalt paving over aggregate base rock. One aim is to enhance soil percolation from rain, and to enhance compliance with the state Water Board's Municipal Regional Permit (MRP) provision's for New Development and Redevelopment, known as section C.3 treatment measures. To achieve these goals, areas around the electrical equipment on the west side of the PP will consist of 1,563 square feet of stabilized crushed rock in the form of "GraniteCrete", a permeable crushed rock product. For the same reasons, 329 square feet of open-cellular concrete paving will be used adjacent to the large sliding gate facing MacArthur Boulevard. Small amounts of asphalt paving (over aggregate base rock) will be used for a walkway on the north side of the building (241 square feet), as well as for new driveways leading from the site to 96th Avenue (175 square feet and 285 square feet). Cells within open-cellular concrete paving will be filled with un-stabilized crushed rock, to permit soil percolation.

4.3.4 Use of Recycled Materials

To the extent feasible, site construction at the Fontaine PP will use recycled materials. Demolition debris and excavated earth will also be reused on site to the extent feasible. Table 3 provides a list of the landscape materials and the availability of each material from recycled sources.

Table 3 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
Concrete parking bumpers	Not available
Drain rock	Recycled drain rock may be available
Crushed rock paving	Not available
Cellular concrete paving	Not 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)
Irrigation system parts	Not available

Use of recycled materials during site landscape maintenance reduces generation of waste. The following landscape maintenance activities will be implemented to the extent feasible to maximize use of recycled materials:

- Retaining small plant debris for mulch to conserve nutrients on site and protect the soil surface (with the exception of infected plant material)
- Retaining natural leaf drop and seed-free plant trimmings (less than 4-inches) under trees or in shrub beds (with the exception of infected plant material)
- Selecting only tree and shrub beds that will not allow leaf litter or mulch to wash out into storm drains
- On-site chipping and use of all vegetative plant debris (with the exception of infected plant material) and unpainted and untreated wood greater than 4 inches on-site as mulch
- Using rakes for leaf litter removal and avoiding use of power blowers in planting beds