REVEGETATION/RESTORATION PLANTING PLAN

CT HOMES FELTON RESIDENCE
CITY OF SAN DIEGO, CALIFORNIA
ASSESSOR'S PARCEL NO. 539-132-0200
PTS NO. 557456

Prepared for:

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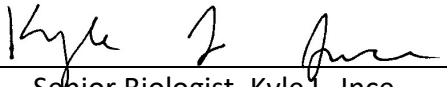

Senior Biologist, Kyle L. Ince

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I. INTRODUCTION

A. Background and Project Purpose

Merkel & Associates, Inc. (M&A) has prepared this revegetation/restoration planting plan for areas of native vegetation temporarily impacted by the proposed Felton Residence development. These temporary impact areas include a 3,083 square foot sewer line construction corridor and a 1,275 square foot slope created for a driveway to the project's proposed residence. This plan is consistent with the LDC-Biology Guidelines/Attachment III/General outline for Revegetation-Restoration Plans (City of San Diego 2018).

B. Location

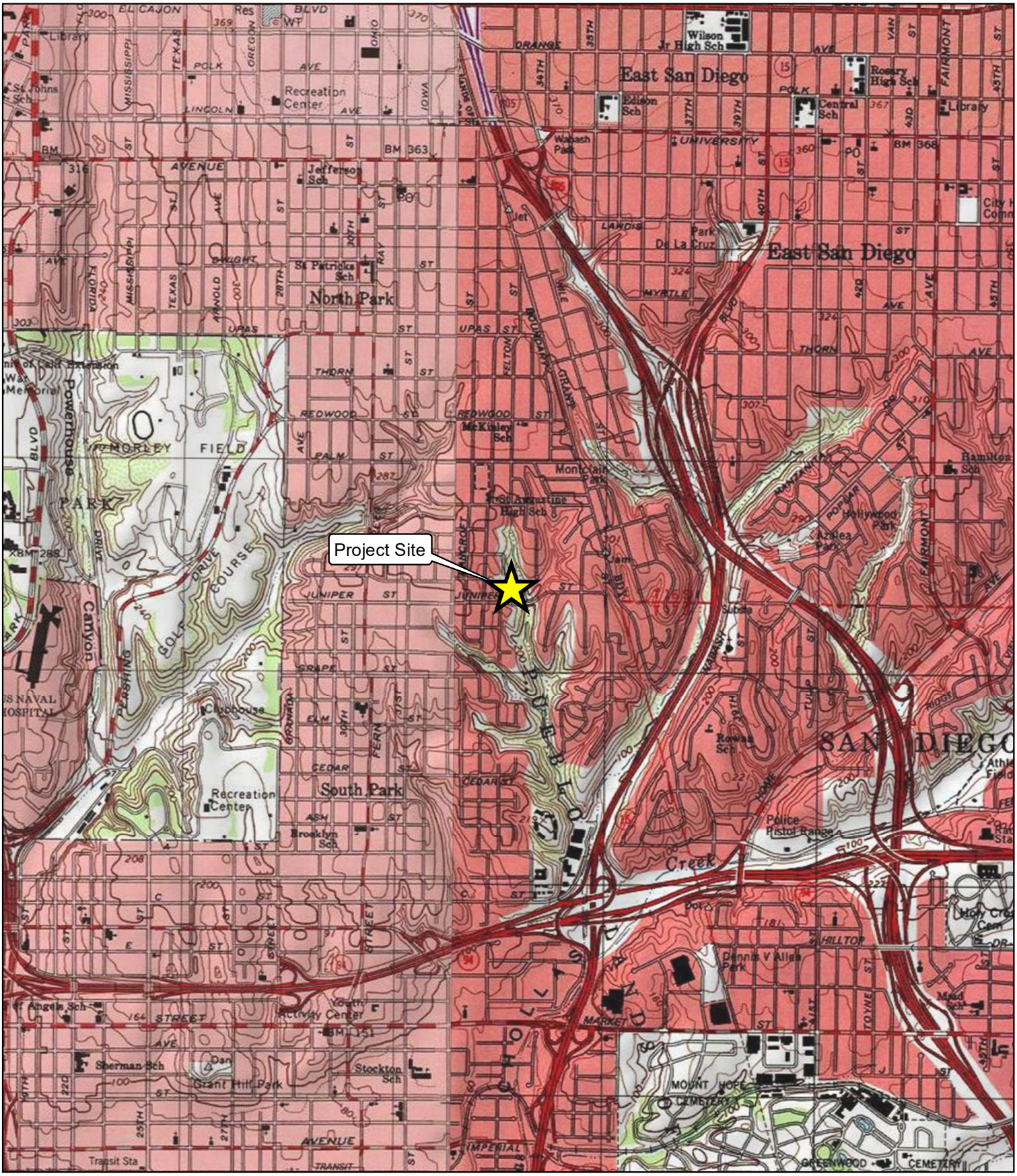
The project site is located at the planned paper street terminus of Felton Street in the City of San Diego on private land (Assessor's Parcel Number [APN]: 539-132-02) (Figure 1). A portion of the parcel is located within a City Multiple Species Conservation Program (MSCP) Multi-Habitat Planning Area (MHPA) (Figure 2).

II. EXISTING CONDITIONS

A. Environmental Setting

Southern Maritime Chaparral is the dominant vegetation type found on-site and in the immediate vicinity of the project. Relatively tall woody shrubs including common chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), lemonadeberry (*Rhus integrifolia*), and toyon (*Heteromeles arbutifolia*) characterize this habitat. Two sensitive shrub species, Nuttall's scrub oak (*Quercus dumosa*) and wart-stemmed ceanothus (*Ceanothus verrucosus*) are also relatively common throughout the area. Lower growing shrubs such as black sage (*Salvia mellifera*), flat-top buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), and California encelia (*Encelia californica*) were found interspersed between the taller shrubs. Other native plant species included perennial vines such as manroot (*Marah macrocarpus*), subshrubs such as peak rush rose (*Helianthemum scoparium*), and annual forbs such as intermediate sun cup (*Camissoniopsis intermedia*) and hooked skunkweed (*Navarretia hamata*).

California towhee (*Melozone crissalis*), spotted towhee (*Pipilo maculates*), western scrub-jay (*Aphelocoma californica*), Bewick's wren (*Thryomanes bewickii*) and wrentit (*Chamaea fasciata*), were observed and are common bird species typical of this habitat. Other detected common bird species included bushtit (*Psaltriparus minimus*), mourning dove (*Zenaida macroura*), lesser goldfinch (*Haemorhous mexicanus*), Nuttall's woodpecker (*Picoides nuttallii*), and house finch (*Haemorhous mexicanus*). Only one mammal species, desert cottontail (*Sylvilagus audubonii sanctidiegi*), was detected on-site. Mammals that may potentially occur in this habitat include common and urban tolerant species such as striped skunk (*Mephitis mephitis holzneri*) and coyote (*Canis latrans clepticus*). Potential common reptiles and amphibians present in this habitat include

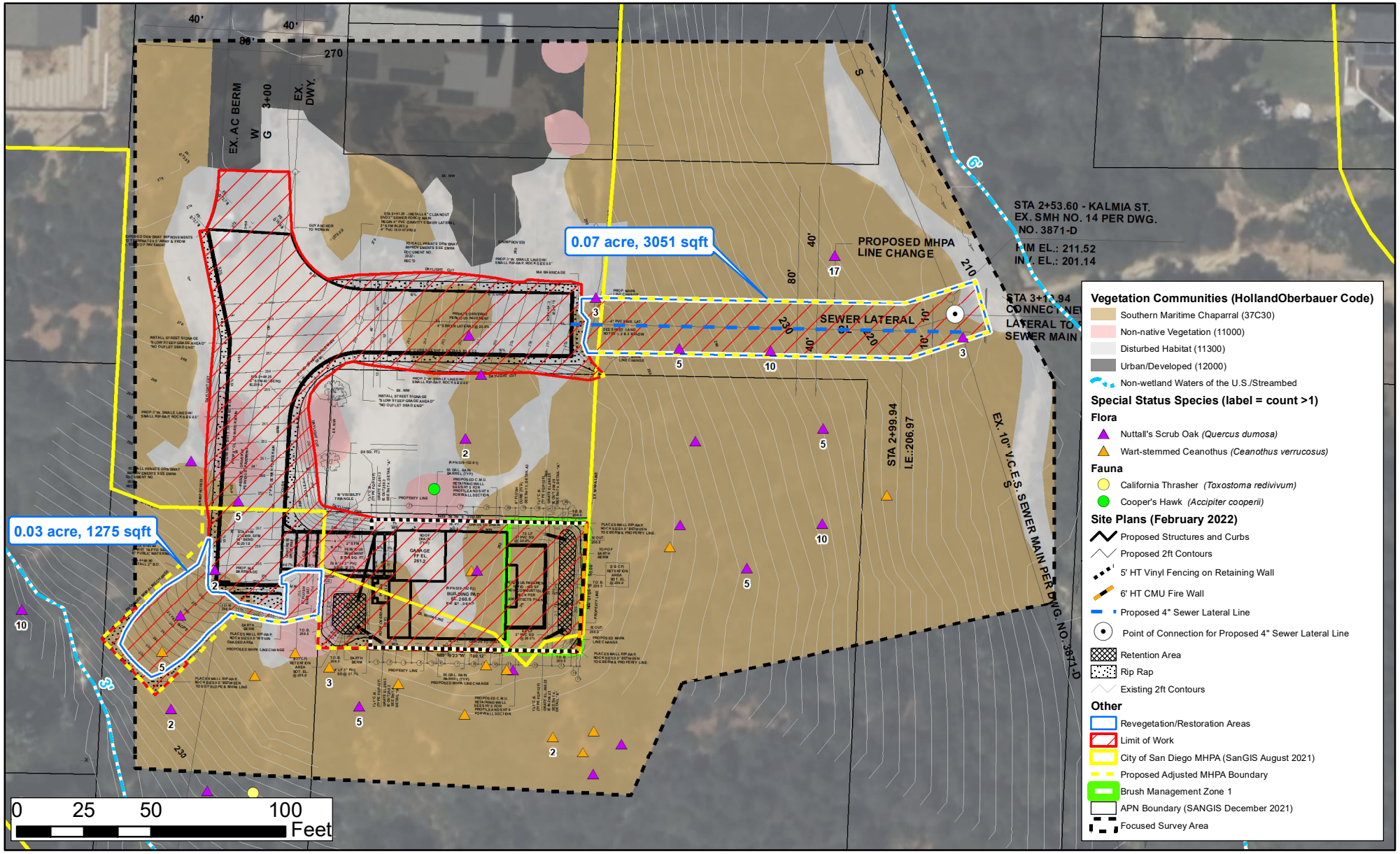


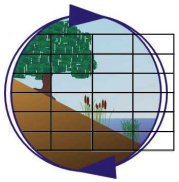
Project Vicinity Map

Felton Residence

Source: USGS 7.5' National City, CA Quadrangle

Figure 1





N W E S

Biological Resources and Revegetation/Restoration Areas Map

Felton Residence

Aerial Source: Bing 2020

Modified on Feb. 27, 2023

Figure 2

the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), San Diego alligator lizard (*Elgaria multicarinata webii*), and garden slender salamander (*Batrachoseps major major*). The sensitive orange-throated whiptail (*Aspidoscelis hyperythra*) has been reported from Juniper Canyon to the south and may occur on-site (CDFW 2019).

B. Land Ownership and Uses

A majority of the site occupies an area immediately adjacent to a City of San Diego Multiple Habitat Planning Area (MHPA) (Figure 2). A total of 0.164 acre of the site occurs within the MHPA. These areas will be removed from the MHPA per a boundary line adjustment (Figure 2).

C. Evaluation of Site Characteristics

General Physiography

A majority of the project site lies on a relatively flat disturbed mesa at the terminus of Felton Street. The elevation ranges within the project study area from approximately 205 feet above mean sea level (MSL) near the eastern terminus of the proposed sewer line to 266 feet above MSL located along the northern boundary of the site near the terminus of Felton Street. The soils within the project study area are mapped as terrace escarpments (SanGIS 2002). Underlying geology is mapped as Miocene to Pleistocene rock type sandstone, mudstone (SanGIS 2003). The regional climate is characterized as temperate, semi-arid Mediterranean, with hot, dry temperatures in the late summer/early autumn and cooler, wet winters. Most of the annual precipitation falls between December and March, with annual rainfall levels totaling approximately 9–13 inches (USDA-NRCS 2006).

Vegetative Resources

The proposed areas of restoration are currently dominated by Southern Maritime Chaparral vegetation as described above. Following implementation of the project, native vegetation will be restored to these areas.

III. ROLES & RESPONSIBILITY

A. Financial

The current Property Owner (CT Homes) will be financially responsible for the success of the restoration area.

B. Revegetation Team

Applicant

The current Property Owner (CT Homes) shall serve as the Applicant and be responsible for hiring a qualified Biological Monitor and Revegetation Contractor to implement the installation, maintenance, and monitoring programs. The Biological Monitor and Revegetation Contractor can be of the same firm if the firm meets the following qualifications for both tasks.

Biological Monitor

The Biological Monitor shall have a minimum of a bachelor's degree of Science in Biology and have at least five years' experience in native habitat restoration including native upland scrub vegetation

types. The Biological Monitor will be responsible for monitoring all aspects of the restoration effort, including irrigation layout, and planting. Once planted, the Biological Monitor shall be responsible for monitoring the establishment of the restoration and for reports documenting the status of the project. The Biological Monitor shall assist the Applicant with any decisions regarding the need for specific remedial actions during the monitoring period, as well as long-term maintenance activities.

Revegetation Contractor

It is recommended (but not required) that the Revegetation Contractor possess a C-27 contractor's license issued by the State of California and have experience with native habitat restoration. The Revegetation Contractor shall be responsible for installation of plant materials and any necessary maintenance activities or remedial actions required during installation and long-term maintenance of the site.

IV. SITE PREPARATION

A. Staking and Flagging

The revegetation/restoration site is defined by the limits of work within the sewer alignment and proposed driveway slope (Figure 2). The Biological Monitor shall flag the boundaries of the restoration area and then walk this boundary with the applicant and Revegetation Contractor to ensure proper installation.

B. Weed Eradication/Site Clean Up

Prior to installation, all non-native species occupying the restoration areas shall be removed and properly disposed of at a certified landfill. The Applicant's Revegetation Contractor shall coordinate with the Biological Monitor regarding identification of exotic weed species to be removed/treated.

C. Grading Plan

Grading of the planting areas (i.e., driveway and sewer alignment) will occur as designed in the project's grading plans. The top 6-8 inches of topsoil will be salvaged from these areas prior to grading and stored and protected on-site. This topsoil will be reapplied to their respective areas following final grading and prior to installation of the irrigation system and plant material. Any excess soils from trenching of the sewer will either be hauled off and properly disposed of offsite or feathered in with the existing topography inside the limits of work at the Project Biologist's discretion. Prior to planting, the surface soil (top 6-12 inches) will be de-compacted to ensure plant root establishment.

D. Soil Preparation

Site soils are anticipated to be suited to support the prescribed upland vegetation. Any introduced fill dirt will be reviewed for planting suitability, prior to its introduction to the site.

E. Site Access and Staging

Access to the site will occur from the terminus of Felton Drive. All staging/storage areas shall be restricted to the limits of work.

V. IRRIGATION

The irrigation system shall follow the layout and specifications shown in the landscape design plans.

The system will be temporary and will consist of an automatically operated overhead spray system. The system would consist of low-flow, low-gallonage spray heads. All irrigation lines will be placed at grade and staked in place. The point of connection will be from the water main servicing the site's proposed house. The system will operate from a controller installed for the property's landscaping. Valves will be independent from the landscaping for the property. The system shall provide complete and even coverage where all planting is proposed. There shall be no overspray or irrigation runoff onto the adjacent City fee-owned property. The irrigation system will only be used as needed to naturalize the vegetation and will be terminated one year prior to final signoff of the restoration area by the City. Watering is expected to occur relatively frequently (3-4 times per week) initially and be reduced substantially (2 times per month) as the vegetation takes hold. As the plants become established, irrigation should mimic natural rainfall. The plants will be weaned off supplemental water during the winter months to allow for naturalization to the site. The system shall be removed upon establishment of the plantings to the satisfaction of the City. The above grade system shall be removed at the end of the maintenance period prior to Parks and Recreation acceptance per the City's Landscape Standards, Section 5.3.

VI. PLANTING SPECIFICATIONS

Species to be planted are provided in Table 1 and are additionally provided in the landscape design plans. Species were selected based upon the flora of the local area, and except for the wart-stemmed ceanothus (*Ceanothus verrucosus*), include only species that are appropriate for planting over sewer pipelines and follow the City of San Diego's Public Utilities Department's Sewer Design Guide (2015). The wart-stemmed ceanothus will only be planted on the project's driveway slope. A minimum of 50 percent of the total slope area shall be planted with deep rooting groundcovers per the City's Landscape Standards, Section 4.2. The proposed planting complies with Municipal Code Section 142.0411, Revegetation and Erosion Control and includes 1-gallon minimum size container stock at a rate of not less than one plant/100 square feet. The wart-stemmed ceanothus is being planted to satisfy conditions of coverage requirements specified in the City's MSCP Subarea Plan (1997). A 60-month (five year) maintenance/monitoring period will occur for the wart-stemmed ceanothus to comply with the City's Revegetation/Restoration Standards. A total of 5 wart-stemmed ceanothus will be impacted by the Felton Residence development. A total of 15 plants will be planted on-site with a requirement for 10 surviving individuals (2:1 mitigation) at the end of the maintenance/monitoring period. The Biological Monitor will provide the precise layout of the plant material to ensure a random/natural appearance.

A. PLANT SOURCES/PROCUREMENT

All plant material shall be propagated from plant populations occurring in coastal San Diego County. All plants shall be inspected by the Biological Monitor prior to installation and shall be in a healthy state with a root system that is of a compatible size with its associated container. Plants shall be free of defects and all stems shall be green throughout.

B. Plant Installation and Timing

Container plants will be installed using standard planting techniques. Each planting hole will be excavated to a width that is twice the size of the container. The depth of each hole shall be equal to the depth of the rootball. The hole will be filled with water and allowed to drain twice prior to planting. The plant shall be positioned in the hole so that the surface of the rootball is slightly (1 inch) higher than the ground level. The hole shall be backfilled with the native soil and an earthen watering basin shall be created in a two-foot diameter around each rootball. The plant shall then be watered in by hand immediately after planting. All planting will occur during the winter months to take advantage of seasonal precipitation and the period in which native plants most successfully become established.

C. Container Plants

The following species are to be utilized in the restoration effort.

Table 1. Container Plant Materials

Species	Common Name	Unit Size	Maximum Density	Total Quantity
Acmispon glaber var. *glaber*	Deerweed	1-gallon	3-foot centers	45
Ceanothus verrucosus	Wart-stemmed Ceanothus	1-gallon	5-foot centers	15
Dudleya pulverulenta	Chalk Dudleya	1-gallon	2-foot centers	12
Encelia californica	California Encelia	1- gallon	3-foot centers	50
Eriogonum fasciculatum var. *fasciculatum*	Flat-top Buckwheat	1-gallon	3-foot centers	110
Eriophyllum confertiflorum	Golden Yarrow	1-gallon	2-foot centers	12
Helianthemum scoparium	Peak Rush-rose	1-gallon	2-foot centers	19
Mimulus aurantiacus var. *puniceus*	Coast Monkey Flower	1-gallon	3-foot centers	17
Melica imperfecta	Coast Range Melic	1-gallon	2-foot centers	13
Opuntia littoralis	Coast Prickly Pear	1-gallon	3-foot centers	7
Rhamnus crocea	Redberry	1-gallon	3-foot centers	7
Salvia mellifera	Black Sage	1-gallon	3-foot centers	62
Stipa lepida	Foothill Needlegrass	1-gallon	2-foot centers	28
Yucca schidigera	Mohave Yucca	1-gallon	10-foot centers	8
Total				**400**

VII. MAINTENANCE PROGRAM

Maintenance activities shall occur throughout a 5-year period under the direction of the Biological Monitor.

A. SITE PROTECTION

This restoration site occurs within and adjacent to a privately-owned parcel that has limited access to the public. Therefore, the likelihood of vandalism is very low and as such no signage or fencing to restrict access is recommended. Portions of the site occur within City fee-owned parkland. Prior to entering City fee-owned parkland, the contractor must obtain a Right of Entry Permit from Open Space Division/Asset Management Division, Senior Planner Paul Kilburg. The contractor should allow approximately 6 weeks to secure a permit for entry.

B. WEED CONTROL

Weed abatement shall occur throughout the restoration site. Weed abatement will be performed to control particularly noxious or competitive species that may inhibit the growth of desirable native vegetation. Hand weeding will be performed as needed throughout the maintenance period. Exotic species to be removed include, but are not limited to, short-pod mustard (*Hirschfeldia incana*), castor bean (*Ricinus communis*), tamarisk (*Tamarix* spp.), tree tobacco (*Nicotiana glauca*), giant reed (*Arundo donax*), sweet fennel (*Foeniculum vulgare*), Russian thistle (*Salsola tragus*), acacia (*Acacia* spp.), fleabane (*Conyza bonariensis*), and pampas grass (*Cortaderia selloana*). Other weedy plants that invade the mitigation site in prohibitive numbers shall be removed if they pose a significant threat to the growth or survival of target vegetation. All seed heads shall be cut, removed and bagged prior to complete removal of the species.

All weeds shall be removed by hand or treated with the use of herbicide. Herbicide shall be supervised or applied by a person possessing a Pesticide Applicators License issued by the California Department of Pesticide Regulation. Herbicide shall be used only for hard to control weeds such as Brazilian pepper tree (*Schinus terebinthifolius*), giant reed, tamarisk, Bermuda grass (*Cynodon dactylon*), and pampas grass. No known Crotch bumble bee (*Bombus crotchii*) nests are known within 1 kilometer of the revegetation effort and based on the habitat assessment there is low potential for nesting habitat in the project area. If the species or a nest is found during revegetation activities, the monitoring biologist will notify and coordinate with the California Department of Fish and Wildlife Service for appropriate avoidance measures.

C. HORTICULTURAL TREATMENTS

The purpose of the revegetation effort is to establish native habitat that provides long-term soil stabilization. Horticultural treatments (*e.g.,* pruning, fertilizing, staking) are not conducive to establishment of native habitats and are not recommended.

D. EROSION CONTROL

An erosion control plan that includes silt fencing, fiber rolls, and straw matting has been developed for the site. The plan will be installed prior to restoration implementation and all features will remain in place until vegetation has been established. No additional erosion control measures are anticipated at this time.

E. REPLACEMENT PLANTINGS

Planting

All plants will be guaranteed throughout a 120-day maintenance period. Following this period, plants will be replaced per the specifications identified in the project's success milestones. Dead plants will be replaced with container grown plants of similar type and size. Where micro-habitat conditions are more favorable for growth of a different native species of similar character, plant substitutions, as directed by the Biological Monitor, may be made.

VIII. BIOLOGICAL MONITORING AND SUCCESS ASSESSMENT

The applicant shall comply with the following maintenance/monitoring schedule and prescribed success criteria:

Table 2. Summary and Schedule for Maintenance, Monitoring, and Reporting

Period	Activity for Project Biologist/Contractor	*Biologist Site Visit Frequency	Submittals/Checklist	**Reporting Frequency
Revegetation Installation	Project Biologist will be responsible for monitoring, Revegetation Contractor will be responsible for Installation.	As needed or at least once every two weeks.	Site observation report (S.O.R.) prepared by the Project Biologist commencing the completion of the installation and start of the PEP.	At successful installation as determined by the Project Biologist.
120-day PEP	Project Biologist will be responsible for monitoring, Revegetation Contractor will be responsible for maintenance.	Months 1 & 2 biweekly, months 3 & 4 at least once per month.	S.O.R. prepared by the Project Biologist documenting the completion of the PEP.	At the end of the PEP.
60-month Long- term Maintenance & Monitoring	Project Biologist will be responsible for monitoring, Revegetation Contractor will be responsible for maintenance.	Quarterly (every 3 months) for 25-months and biannually (every 6 months) for remaining 35 months.	S.O.R.s prepared by the Project Biologist following each site visit.	Quarterly Year 1 25 Months 31 Months 37 Months 43 Months 49 Months 55 Months 60 Months

*Quarterly and biannual inspections and sign off of the long-term maintenance and monitoring period will be coordinated with the City, Parks and Recreation Department.

**Reports to be submitted to Owner and City including Mark Jennings, Senior Planner, Parks and Recreation Open Space Division.

Table 3. Restoration Success Criteria

Milestone	Success Criteria	Remedial Measures
Installation	All bare areas planted. No evidence of erosion on-site and BMPs in place and intact, as required.	Replant, repair erosion, install BMPs as required.
120-day PEP	100% survival of container plants. No invasive exotic weed growth. No more than 10% non-native weed growth. No erosion.	Replace dead plants, intensify weed control, repair erosion.
Year 1 (12 Months)	A minimum of 50% vegetative cover from planted species and/or native volunteer species. 90% survival of container plants. No invasive exotic weed growth. No more than 5% non-native weed growth. No erosion.	Plant as needed to meet 90% survival and 50% vegetative cover. Intensify weed control, repair erosion.
Year 2 (25 Months)	A minimum of 70% vegetative cover (or equivalent to adjacent native habitat, whichever is greater) from planted species and/or native volunteer species. 80% survival of container plants including no less than 12 wart-stemmed ceanothus. No invasive exotic weed growth. No more than 5% non-native weed growth. No erosion.	Plant as needed to meet 80% survival criterion and 70% vegetative cover (or equivalent coverage from adjacent habitat, whichever is greater). Intensify weed control, repair erosion. Plant as needed to meet wart-stemmed ceanothus survival criterion.
Year 3 (36 Months)	Survival of no less than 12 wart-stemmed ceanothus. Slowly reduce watering to ensure naturalization.	Plant as needed to meet survival criterion.
Year 4 (48 Months)	Survival of no less than 12 wart-stemmed ceanothus. Water turned off for established species.	Plant as needed to meet survival criterion.
Year 5 (60 Months)	Survival of no less than 10 wart-stemmed ceanothus.	Plant as needed to meet survival criterion. Extend maintenance and monitoring for a 6-month period. If survival is not met, consult with City regarding possible alternative actions.

IX. REMEDIATION AND CONTINGENCY MEASURES

A. Initiating Procedures

If a monitoring event identifies failure to attain the prescribed milestone, the Biological Monitor shall analyze the cause(s) of failure and propose remedial action for approval.

B. Responsible Parties

The Applicant is responsible for the implementation and long-term success of this project.

X. COMPLETION OF MITIGATION NOTIFICATIONS

A. Notification of Completion

Upon achievement of the success milestones and completion of the maintenance and monitoring period, the Biological Monitor shall submit a final monitoring and Notice of Completion report to the City. A final inspection is required with attendance and approval of the Parks and Recreation Department and/or the Development Services Department (i.e., MMC) prior to acceptance of the site.

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