

HUCKLEBERRY ISLAND WATER MAIN REPAIR PROJECT

REVEGETATION PLAN

The Huckleberry Island Water Main Repair Project Revegetation Plan (Plan) identifies activities that the San Lorenzo Valley Water District (SLVWD or District) will implement to provide replacement plantings for previously installed mitigation plantings.

The revegetation is pursuant to permits issued by California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and California Regional Water Quality Control Board and conditions of approval from the County of Santa Cruz for the adjacent Huckleberry Island Bridge Replacement Project, wherein revegetation was required to compensate for bridge construction impacts .

The SLVWD’s water main project will impact up to 11 mitigation plantings. These are:

Table 1. Mitigation Plantings to be Removed and Replaced			
Common Name	Scientific Name	Number to be Removed	Replacement Plantings
Coast Live Oak	<i>Quercus agrifolia</i>	2	2
Big Leaf Maple	<i>Acer macrophyllum</i>	2	2
Sword Fern	<i>Polystichum munitum</i>	1	1
California Rose	<i>Rosa californica</i>	4	4
Coffee Berry	<i>Frangula californica</i>	2	2
TOTAL		11	11

Replacement plantings will be installed on the east and west sides of the Huckleberry Island Bridge. The SLVWD intends to salvage 4 roses and 1 fern from the impact area, then re-install them on-site after project construction. The SLVWD will supply the contractor with the remaining container stock plants.

The SLVWD will be responsible for all maintenance and monitoring of the revegetation area for a minimum period of five (5) years after installation, or longer if necessary, to meet the stated success criteria.

Container Stock Plantings: The contractor shall install container stock plants amid in natural soil areas. Plantings shall include below-ground gopher cages and above-ground browse protection cages.

SEQUENCE OF REVEGETATION

Secure container stock plants from SLVWD.

Container Stock Plantings:

- Cut holes in erosion blanket, if applicable. If needed, power auger plantings holes to minimum 2 feet deep and 2 feet wide to accommodate gopher cages and container stock plantings.
- Install 2-gallon size below-ground gopher basket (Diggers, or equal).
- Install 1-gallon container stock plantings.
- Create watering basin around each plant and apply 3-inch layer of wood chip mulch and above-ground browse protection (see detail).
- Install temporary drip irrigation to each plant.

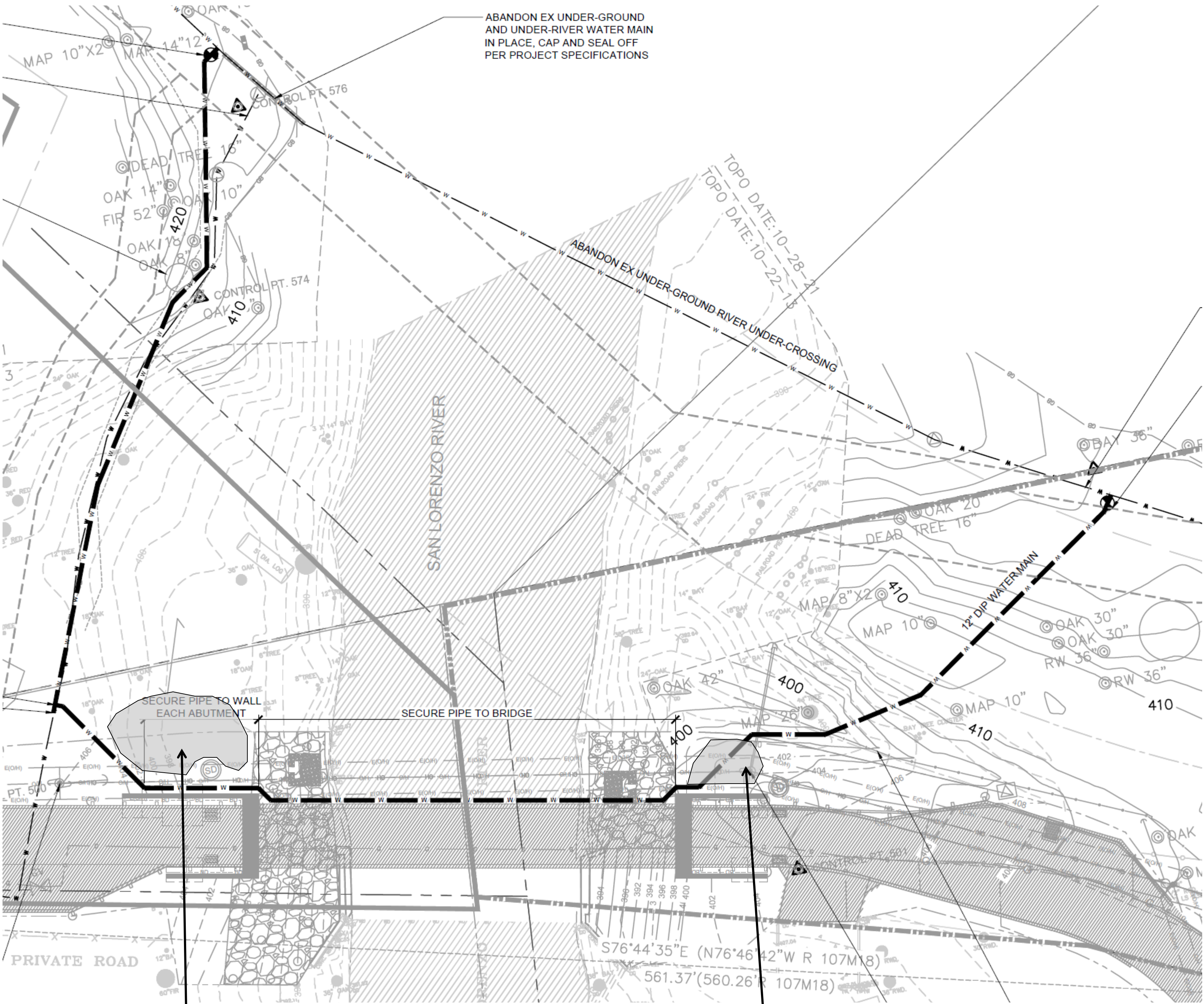
REVEGETATION AREA MAINTENANCE

During Years 1-5, the SLVWD will be responsible for the following tasks:

1. Weeding the replacement planting once a month between March and October to remove non-native invasive plant species from the revegetation areas and all weeds from container stock planting basins.
2. Replenish wood chip mulch within each planting basin to retain 3-inch cover.
3. Removal of invasive, non-native plant species that occur within 10-feet of the replacement plantings, such as locust (*Robinia sp.*), English ivy (*Hedera helix*), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*), Portuguese broom (*Cytisus striatus*), and pampas/jubata grass (*Cortaderia jubata*). Hand removal shall be utilized to remove and control the occurrence of these species from the designated planting areas. Individuals of invasive plant species shall be removed through hand pulling and shovel cutting, with all plants bagged and removed from the site. Hand pulling of ivy, broom, and pampas grass shall remove the plant’s root to prevent re-sprouting.
4. Providing supplemental irrigation to the container stock plants in Years 1-3, providing 1-gallon per week between May and October. In Years 1 and 2, then tapering down to 0.5-gallon per week in Year 3.

MONITORING

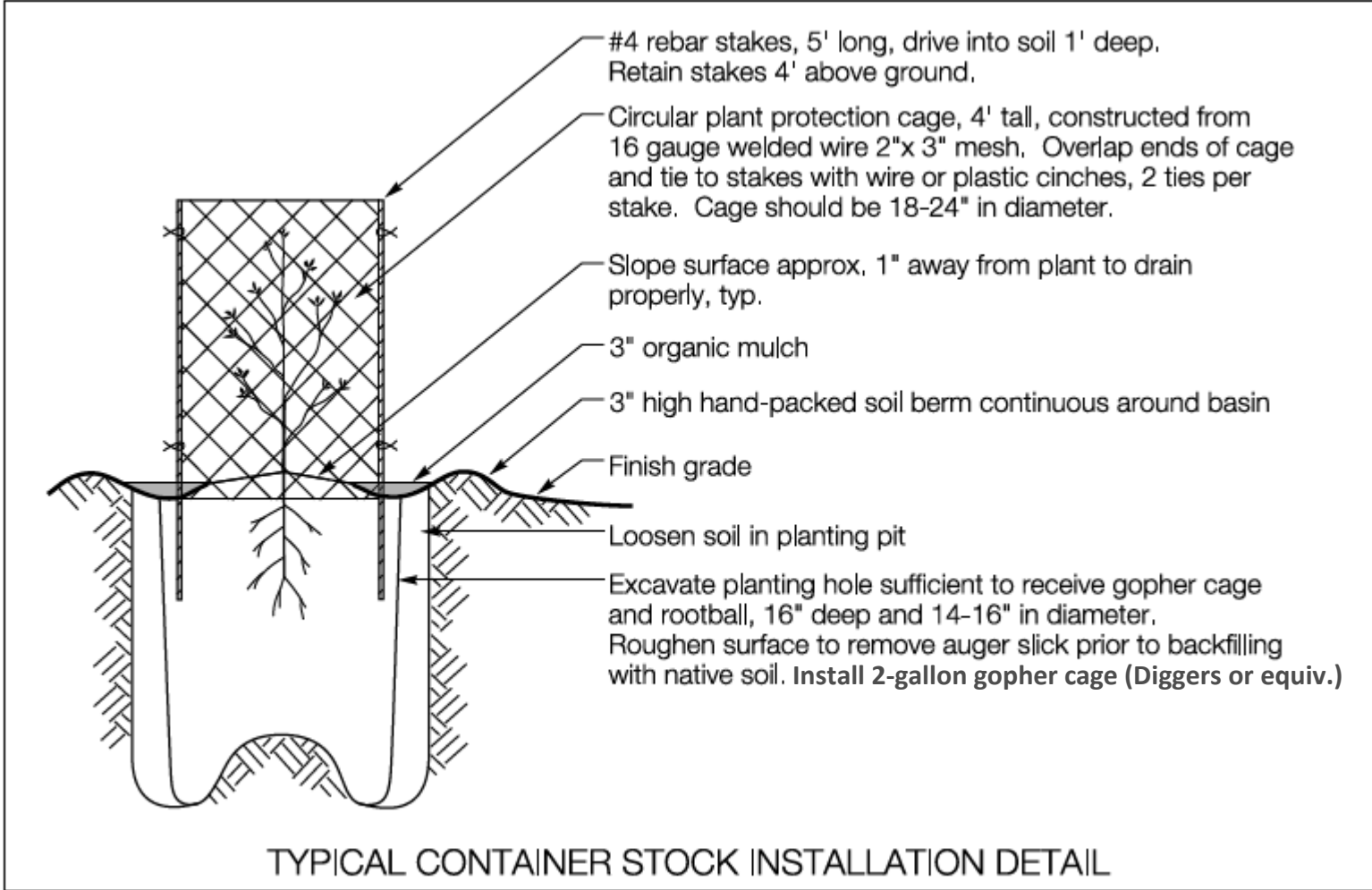
1. The SLVWD shall monitor the progress of the revegetation for a period of five years after planting. In the summer of Years 1-5, the plantings shall be evaluated for plant survival, plant health and vigor, and plant height.
2. Photographs shall be taken to document progress of the revegetation. A minimum of two photo-points will be established within the project area, with photos taken from each point each year for a period of five years.
3. The SLVWD shall maintain the plantings to the following success criteria:
 - a. 80 percent survival of container stock in Years 1-5.
 - b. Invasive, non-native plant cover is less than 5 percent in each year.
 - c. If plant survival rates are not achieved, the SLVWD shall implement remedial measures, such as supplemental/replacement planting.



West Side Planting Area

East Side Planting Area

Common Name	Scientific Name	Approx. Spacing (feet)	Quantity	Size
East Bank Plantings				
Sword Fern	<i>Polystichum munitum</i>	3'	1	On-site salvage
California Rose	<i>Rosa californica</i>	3'	4	On-site salvage
West Bank Plantings				
Coast Live Oak	<i>Quercus agrifolia</i>	8'	2	1-gallon tree pot
Big Leaf Maple	<i>Acer macrophyllum</i>	8'	2	1-gallon tree pot
Coffee Berry	<i>Frangula californica</i>	4'	2	1- gallon



TYPICAL CONTAINER STOCK INSTALLATION DETAIL