Attachment No. PC 7

Dudek Memorandum from May 5, 2025

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MEMORANDUM

To:	Tom Sandefur, P.E., Assistant City Engineer, Public Works Department, City of Newport Beach
From:	Tommy Molioo, Senior Biologist and Chis Kallstrand, Senior Urban Forester
Subject:	Tree Evaluation Report for the Balboa Branch Library Replacement Project
Date:	May 5, 2025
Attachment(s):	Landscaping Plans

This memorandum includes the results of an evaluation of the proposed tree replacement activities for the Balboa Branch Library Replacement Project, located on the Balboa Peninsula in the city of Newport Beach, Orange County, California. Dudek's biologist and arborist met with city staff on site to conduct an evaluation of the existing trees that will be removed and trees proposed for replacement that would meet the requirements of both the landscaping design for the project, as well as provided adequate replacement habitat for nesting great blue herons (*Ardea herodias*) on site. This memo includes Dudek's recommendation for the replacement of tree species that are suitable from a biological and arboricultural perspective. This memo has also been prepared to respond to feedback from the California Coastal Commission (CCC) on suitable replacement trees.

Project Location and Description

The project site generally occurs north of the Pacific Ocean, south of Interstate 405, east of State Route 55, and west of Crystal Cove State Park. The project site is specifically located at the Balboa Branch Library at 100 East Balboa Boulevard on the Balboa Peninsula in the city of Newport Beach. The project proposes to demolish the existing Balboa Branch Library and construct a new fire department station with associated landscaping. All vegetation and trees on the project site will be removed for the proposed project. This includes a blue gum (*Eucalyptus globulus*) tree that contains an active heron rookery.

Biological Analysis

In coastal California, suitable trees for heron nesting are typically located in quiet, undisturbed habitats near estuaries, tidal marshes, or coastal wetlands. In other coastal states like Washington, herons sometimes nest on the ground, human-made structures, cliffs, and in shrubs, nesting mostly occurs in trees like alder, cedar, hemlock, pine, Douglas-fir (*Pseudotsuga menziesii*), spruce, hawthorn, bigleaf maple (*Acer macrophyllum*), and cottonwood (*Populus balsamifera*)[1]. However, in Southern California, they often frequent taller trees near coastal zones, regardless of human activity. Specifically, herons favor tall, mature trees with broad, sturdy branches that can support large nests and accommodate colony nesting. Species such as coast live oak (*Quercus agrifolia*), Monterey

[1] Azerrad 2012. Management Recommendations for Washington's Priority Habitats and Species. Great Blue Heron *Ardea Herodias*. Washington Department of Fish and Wildlife

cypress (*Hesperocyparis macrocarpa*), and California sycamore (*Platanus racemosa*) provide the height, structure, and canopy cover herons need for safe nesting. Non-native eucalyptus (*Eucalyptus spp.*) or hoop pine (*Araucaria cunninghamii*) also frequently serve as nesting sites due to their size and limb strength.

Arboricultural Analysis

Following an evaluation of the project site plans, available spacing, and nesting requirements, Dudek recommends the use of Western Sycamore (*Platanus racemosa*) as a replacement species due to its ecological value, structural suitability for nesting birds, and compatibility with Southern California's climate. As a native species, Western Sycamore supports local biodiversity and provides ideal branching structure and canopy coverage for colonial nesting birds such as herons. It has a moderate to fast growth rate, averaging 24 to 36 inches per year under favorable conditions, particularly when given adequate water during the establishment period. Western Sycamores typically reach maturity in approximately 20 to 30 years, at which point they can attain heights of 60 to 80 feet with broad, spreading canopies that offer excellent nesting opportunities. Their adaptability to riparian and urban environments, coupled with their proven value as wildlife habitat, makes them a strong candidate for long-term habitat mitigation and landscape integration.

Based on an assessment of the site plans and a review of the intended future use of the property, Dudek has determined that the site can reasonably support the planting of five Western Sycamore trees without compromising existing infrastructure, future development plans, or the overall functionality of the space. This estimate takes into consideration appropriate spacing for tree health and canopy development, as well as long-term growth characteristics of the species. As shown in Attachment A, the proposed placement of the Western Sycamores has been strategically planned to optimize their potential as long-term nesting habitat while ensuring compatibility with site constraints. The introduction of five Western Sycamore trees will, over time, establish a structurally diverse canopy capable of supporting colonial nesting birds such as herons, thereby offering a sustainable and ecologically valuable replacement for the tree proposed for removal.

During the removal and replanting phase, it is important to consider the availability of existing trees in the immediate area that can continue to support heron nesting activity. Several nearby trees already exhibit the size, height, and structural characteristics preferred by herons for nesting. Notably, the mature eucalyptus trees located at the intersection of Island Avenue and W. Bay Avenue, directly across the street from the library, offer substantial canopy height and branching structure well-suited to heron rookeries. Additionally, the hoop pine situated in the median southeast of the library provides another viable nesting option. These trees, due to their mature stature and relative proximity to the original nesting site, are likely to serve as suitable interim nesting habitat for the local heron population. Their presence should help minimize disruption to the nesting cycle during the transitional period while newly planted trees, such as the proposed Western Sycamores, mature and develop sufficient canopy coverage to support long-term habitat needs.

Attachment A
Landscaping Plans

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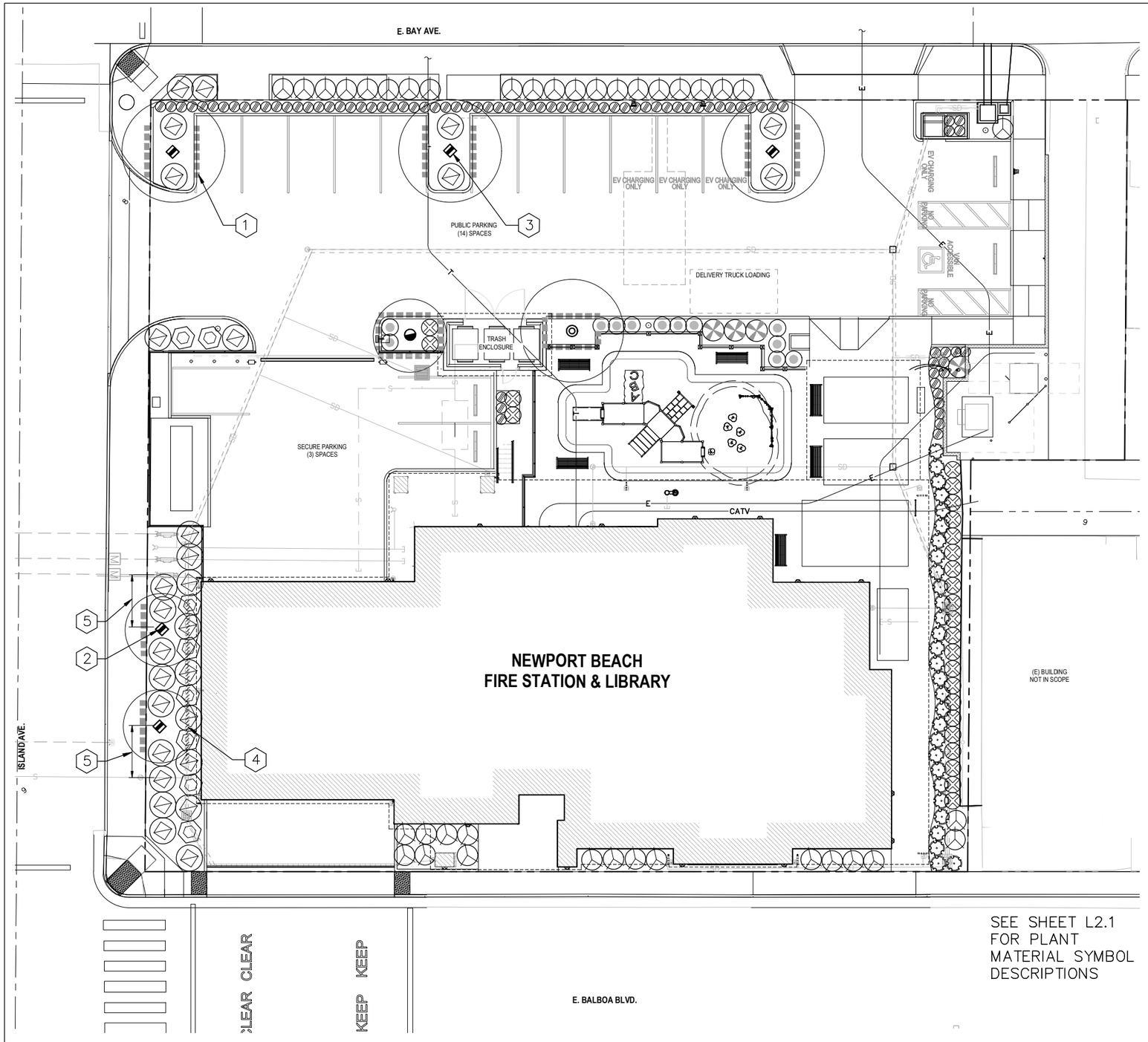

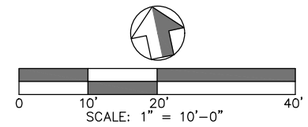

PLANTING NOTES

1. FINE GRADE ALL PLANTING AREAS PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT PLANT MATERIAL TO COVER AREAS SHOWN ON THE PLANS.
3. INSTALL ALL PLANT MATERIALS IN ACCORDANCE WITH DETAILS. ALL FINISH GRADING AND PLANTING OPERATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PLAN NOTES, DETAILS AND SPECIFICATIONS.
4. ALL NURSERY TYING MATERIALS AND TAPES SHALL BE REMOVED AT TIME OF PLANTING.
5. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO DELIVERY OF PLANT MATERIALS TO THE SITE IN ORDER THAT THE LANDSCAPE ARCHITECT CAN DETERMINE THE ACCEPTABILITY OF PLANT MATERIAL AT TIME OF DELIVERY.
6. CONTRACTOR SHALL LOCATE PLANT MATERIAL AS SHOWN ON THE PLANTING PLAN AND OBTAIN APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. SCALE THE LOCATION OF TREES AND SHRUBS FROM CENTER OF INDIVIDUAL SYMBOLS BASED ON OFFSETS FROM BUILDING OR HARDSCAPE FEATURES.
7. CONTRACTOR SHALL INSTALL MINIMUM 3 INCH DEPTH OF WOOD MULCH IN ALL PLANTING AREAS. SEE SPECIFICATIONS FOR CLASS.
8. ALL PLANT MATERIAL IN SIMILAR CONTAINERS SHALL BE EVENLY MATCHED.
9. THE FINISH GRADE OF ALL SHRUB AND GROUNDCOVER AREAS SHALL BE FREE OF ROCKS 2 INCHES AND LARGER.
10. ALL LANDSCAPE AREAS SHALL BE GRADED TO MAINTAIN A MINIMUM SLOPE OF 2 PER CENT FROM THE BUILDING TO DRAINS, CURBS AND WALKS.
11. VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO EXCAVATING FOR PLANT MATERIAL. SEE CIVIL IMPROVEMENT PLANS FOR LOCATIONS.
12. THE SURFACE AND SUBSURFACE SOIL IN ALL PLANTING AREAS SHALL BE RIPPED TO A MINIMUM DEPTH OF 6 INCHES.
13. AFTER ROUGH GRADING, SOIL SAMPLES SHALL BE TAKEN FROM TWO (2) LOCATION ON SITE AS DETERMINED BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL CONDITION THE PLANTING BACKFILL PER THE SOIL LAB'S ANALYSIS RECOMMENDATIONS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
14. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING LANDSCAPE WORK SO THAT THE OWNER'S REPRESENTATIVE CAN REVIEW THE PROJECT UTILITY LOCATIONS AND REVISE PLANS ACCORDINGLY IF NECESSARY.
15. SEE SPECIFICATIONS CONCERNING WEED ERADICATION SCHEDULE PRIOR TO BEGINNING IRRIGATION AND PLANTING OPERATIONS.
16. ALL TREES, SHRUBS AND GROUNDCOVERS SHALL BE HAND WATERED WHILE IRRIGATION SYSTEMS ARE BEING REPAIRED OR REROUTED.

PLAN NOTES

1. ROOT BARRIER, TYPICAL THIS SYMBOL.
2. SET CENTER OF TREE TRUNK 3'-0" FROM EDGE OF PAVING, TYPICAL.
3. CENTER TREE IN LENGTH AND WIDTH OF PARKING ISLAND, ALIGN WITH ADJACENT TREES, TYPICAL.
4. BIOBARRIER ROOT CONTROL FABRIC, TYPICAL THIS SYMBOL. WRAP LENGTH OF STORM DRAIN PIPE WITH 19.5" WIDTH OF FABRIC, NODULES FACING OUT. OVERLAP FABRIC MINIMUM 1" AT FABRIC EDGE. EXTEND FABRIC WRAP 5'-0" FROM CENTER OF TREE TRUNK.
5. MAINTAIN 10'-0" OFFSET FROM WATER AND SEWER UTILITY.

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PROJECT:

CITY OF NEWPORT BEACH

NEWPORT BEACH FIRE STATION NO.1 & LIBRARY

110 E BALBOA BLVD
NEWPORT BEACH, CA 92661

CITY CONTRACT NO. C-8865-1

DESCRIPTION:	DATE:
50% DESIGN DEVELOPMENT	8/12/24
100% DD INTERNAL REVIEW	9/12/24
100% DESIGN DEVELOPMENT	9/30/24
60% CONSTRUCTION DOCUMENTS	1/15/25
PERMIT SUBMITTAL	3/11/25

NOT FOR CONSTRUCTION

PROJECT NUMBER:
202401

SHEET TITLE:
PLANTING PLAN AND NOTES

SHEET NUMBER:
L2.0

WATER EFFICIENCY LANDSCAPE WORKSHEET/CALCULATIONS

Referenced Evapotranspiration (ETo): 44.7

Landscape Area Sector Type: Non–Residential

Hydrozone And Planting Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (Sq. Ft,)	ETAF x Area	Estimated Total Water Use (ETWU)
LOW 1 (ALL PLANTING AREAS IN LOW 1 CATEGORY)	0.2	SUBSURFACE DRIP	.81	.24	3,366 SF	808	22,381
				AVERAGE .24	TOTAL 3,366 SF	TOTAL 808	

Average ETAF for Regular Landscape Areas | IN COMPLIANCE | NOT IN COMPLIANCE

TOTAL LANDSCAPE AREA – 3,366
SITE WIDE ETAF – .24
ETWU TOTAL / GALLONS PER YEAR – 22,381
MAWA TOTAL / GALLONS PER YEAR – 41,972

PLANT MATERIAL LEGEND - TREE / SHRUBS

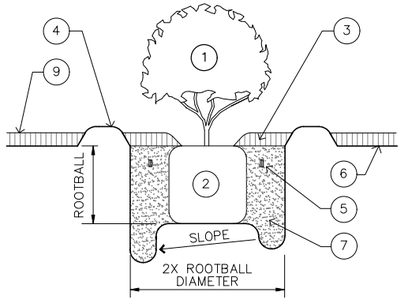
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	MINIMUM CALIPER	DETAIL	WUCOL CLASS ZONE 3	QUANTITY
TREES								
	HYMENOSPORUM FLAVUM	SWEETSHADE	36" BOX	11'–13' HT. / 4'–5' SP. STANDARD	2.5"	A	MODERATE	1
	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	36" BOX	12'–14' HT. / 5'–6' SP. STANDARD	2.5"	A	LOW	1
	PLATANUS RACEMOSA	WESTERN SYCAMORE	36" BOX	13'–15' HT. / 6'–8' SP. STANDARD	2.5"	A	LOW	5
SHRUBS								
	ALOE DAWAI	ORANGE FLAME ALOE	5 GAL.	SUCCULENT LEAVES, GREEN COLOR		B	LOW	8
	CAREX DIVULSA	BERKLEY SEDGE	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	87
	CARPENDERIA CALIFORNICA "ELIZABETH"	BUSH ANEMONE	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	4
	LEYMUS CONDENSATUS "CANYON PRINCE" "CANYON PRINCE"	CANYON PRINCE WILD RYE	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	12
	LOMANDRA "PLATINUM BEAUTY"	VARIEGATED DWARF MATT RUSH	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	29
	ROSMARINUS OFFICINALIS "TUSCAN BLUE"	UPRIGHT ROSMARY	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	25
	WESTRINGIA FRUTICOSA "MORNING LIGHT"	MORNING LIGHT COAST ROSEMARY	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	38
	WESTRINGIA FRUTICOSA "MUNDI"	LOW COAST ROSEMARY	5 GAL.	FULL, BUSHY, GOOD GREEN COLOR		B	LOW	27

ROOT BARRIER

ROOT BARRIER, SEE PLAN FOR LOCATIONS. ANY TREE WITHIN 10' OF PAVING, FOOTING, BUILDING OR ANY OTHER HARDSCAPE SHALL HAVE ROOT BARRIER INSTALLED A MINIMUM OF 18" IN DEPTH, AND 0' IN LENGTH, CENTERED ON THE CENTERLINE OF THE TREE TRUNK (5' EACH SIDE). SEE SPECIFICATION FOR TYPE OF ROOT BARRIER.

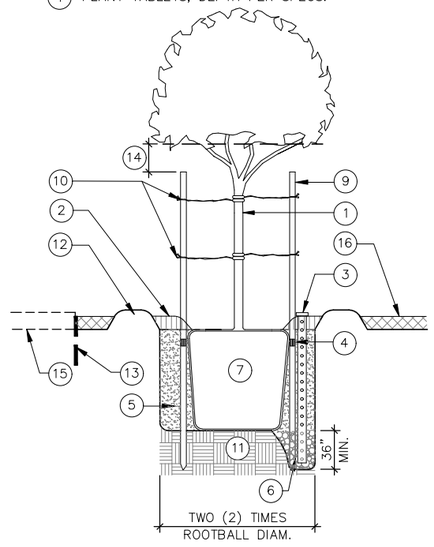
NOTE:
PLANT MATERIAL QUANTITIES LISTED IN THE LEGEND ARE FOR THE CONTRACTOR'S REFERENCE ONLY. THE CONTRACTOR IS REQUIRED TO COMPLETE A THOROUGH TAKEOFF OF REQUIRED PLANT MATERIAL SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO SUBMITTING A BID OF ANY DISCREPANCIES IN QUANTITIES LISTED. THE CONTRACTOR IS REQUIRED TO INSTALL ALL PLANT MATERIAL SHOWN ON THE PLANS AS PART OF THE CONTRACT.

1. SHRUB.
2. ROOTBALL. TOP OF ROOTBALL MIN. 1" ABOVE FINISH GRADE.
3. 3" DEPTH OF WOOD MULCH WITHIN BASIN.
4. 4" HIGH SOIL BERM, FIRMLY COMPACTED.
5. PLANT TABLETS.
6. FINISH GRADE, SLOPES 6:1 OR LESS.
7. PLANTING BACKFILL. PUDDLE AND SETTLE.
8. MAXIMUM 2:1 SLOPE.
9. WOOD MULCH PER PLANTING NOTE 7.



C SHRUB PLANTING
N.T.S.

1. SET TRUNK PLUMB /CENTER IN PIT
2. 3" DEPTH OF WOOD MULCH WITHIN BASIN, TYPICAL.
3. 4" ABS FILTER FABRIC WRAPPED PERFORATED STAND PIPE WITH REMOVABLE SOLID PVC CAP. MINIMUM LENGTH 5'–0".
4. PLANT TABLETS, DEPTH PER SPECS.
5. AMENDED BACKFILL SOIL. REMOVE ROCKS 4" AND LARGER.
6. 3 CU. FT. OF 3/4" GRAVEL AT BASE OF PIPE.
7. ROOT BALL. TOP OF ROOTBALL MIN. 1" ABOVE FINISH GRADE.
8. FINISH GRADE.
9. 2" DIA. LODGE POLE PINE STAKE, 2 EACH 10' MIN., 12' LONG FOR 24" AND 36" BOX TREE SIZE, SET ONE STAKE PERPENDICULAR TO PREVAILING WIND. FOR MULTI–TRUNK TREES INSTALL A MINIMUM OF 1 STAKE WITH TIES PER TRUNK.
10. "CINCH TIE" BY U.I.T. OR EQUAL, 2 LOCATIONS, 4 EACH.
11. SET ROOT BALL ON UNDISTURBED NATIVE SOIL.
12. 4" HIGH SOIL BERM, FIRMLY COMPACTED.
13. "CENTURY" ROOT BARRIER CP OR APPROVED EQUAL, SEE NOTE.
14. CUT STAKES 6" BELOW CANOPY.
15. CONC. WALK, STEP, WALL, CURB, FOUNDATION OR WATER QUALITY TREATMENT BMP LINER.
16. WOOD MULCH PER PLANTING NOTE 7.



NOTE:
INSTALL STAND PIPE AND GRAVEL AT BASE WITH SPECIMEN (24" BOX & LARGER) TREE ONLY.

INSTALL 10 FOOT LENGTH OF ROOT CONTROL SYSTEM CENTERED ON THE TRUNK FOR ALL TREE ROOTBALLS LOCATED WITHIN 5'–0" OF CONC. WALKS, STEPS, CURBS, WALLS, OR FOUNDATIONS. MINIMUM 18" DEPTH.

A SPECIMEN TREE PLANTING / DOUBLE STAKE
N.T.S.

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PLANTING LEGEND, DETAILS, WATER EFFICIENCY WORKSHEET

SHEET NUMBER:
L2.1