

**MEMORANDUM - CITY OF PASADENA  
DEPARTMENT OF PUBLIC WORKS**

**DATE:** September 1, 2020  
**TO:** Recreation and Parks Commission  
**FROM:** Ara Maloyan, P.E., Director of Public Works  
**RE:** Lower Arroyo Seco Habitat Restoration - Recommend Support of Concept Design

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**RECOMMENDATION**

It is recommended that the Recreation and Parks Commission support the Conceptual Plan for the *Lower Arroyo Seco Habitat Restoration Project (77410)*

**BACKGROUND**

In June 2017, the La Loma Bridge (now known as John K. Van de Kamp Bridge) Rehabilitation project was completed, however, the scope of work did not include restoration of the habitat areas surrounding the bridge including the abutment slopes and construction staging area after construction was completed.

In the Fiscal Year 2020-2024 Adopted Capital Improvement Program, the Lower Arroyo Seco Habitat Restoration project was created and funded utilizing Los Angeles County Proposition A grant funds and residential impact fees. The project's intention is to restore the native plant communities and associated wildlife habitat in the Arroyo Seco from the vicinity surrounding John K. Van de Kamp Bridge extending north to the Pasadena Casting Pond-all within Lower Arroyo Park.

On March 2, 2020, the City entered into an agreement with Psomas for professional planning, design, and plant/seed procurement services for the *Lower Arroyo Seco Habitat Restoration Project*. The scope of services included (a) the development of a CEQA Categorical Exemption; (b) the collection of native seeds in the local subwatersheds; (c) the collection and propagation of native plants of local genetic origin; and (d) project bidding documents (plans and specifications) prepared by Psomas' restoration ecologists, in coordination with landscape architects of Cornerstone Studios, Inc. (Psomas' subcontractor).

On July 20, 2020, the Concept Plan was sent out to community organizations in the area surrounding the project area for comments.

On August 3, 2020, staff conducted a site walk with members of the Pasadena Casting Club and PRCS staff to review the project scope.

On August 20, 2020, staff conducted a site walk with members of the La Casita Foundation.

The Arroyo Seco Foundation and the Pasadena Casting Club have each provided endorsements of the project as presented.

The proposed project plan is consistent with the Lower Arroyo Master Plan adopted by the City in 2003, specifically the recommendations set forth in Section 3.2.2 Restoration of Plant and Wildlife Habitats.

The Concept Plan for this project as presented includes the following:

- Total area of project: Less than five acres.
- Proposed removal of 106 non-native trees/plants and the removal (or pruning) of 11 dead trees ('snags') (Attachment A):
  - 82 of the trees are considered non-mature based on trunk diameter size as established by City's Urban Forestry Advisory Committee (UFAC).
  - 13 of the non-native trees/plants are classified as either snags (requiring full or partial removal due safety concerns) or grasses.
- Manual removal (e.g., via hand tools or string trimmers) of herbaceous non-native plants (weeds).
- Importation and placement of numerous natural boulders/rocks to create natural barriers for habitat protection and to provide habitat values for wildlife.
- Placement of coarse woody debris (i.e., prepared logs and branches from removed trees) to provide natural seating (e.g., within several designated 'rest areas'), natural barriers (e.g., along trails), and assemblages within the planting areas to provide beneficial wildlife cover.
- Decompaction of soils in some areas—esp. staging areas associated with the Bridge Rehabilitation project—to prepare these areas for native plant establishment.
- Installation of environmentally suitable erosion control measures (as needed).
- Installation of a new irrigation system to assist in the establishment of new native trees and plants.

- Installation of native planting materials including 14 southern California black walnut trees, 11 coast live oak trees, 17 western sycamore trees, and approximately 2,000 understory shrubs and herbaceous plants.
- Installation of natural mulch around the newly planted areas.

The removal of the subject non-native trees and other plants is necessary to meet the project criteria for restoration. The intention of restoration is to reestablish the physical and biological characteristics of the Arroyo Seco's native habitats to a natural state void of invasive, non-native plants. The proposed removal of non-native species is a core component of habitat restoration. The removals create open areas to allow the native plant species of the region to reestablish themselves. As these plants establish, mature, and propagate, the habitat is restored for the local native wildlife and improves the ecosystem health in the area.

The project proposed is categorically exempt under the California Environmental Quality Act (CEQA) under Title 14, Chapter 3, Article 19, Section 15304, Class 4 for minor alterations to land and Title 14, Chapter 3, Article 19, Section 15333, Class 33 for small habitat restoration projects.

For Class 4, the proposed project involves minor public alterations in the condition of land and vegetation, including removal of 106 non-native trees/plants as part of the City's urban forestry management. The proposed work is minor because there is minimal disturbance of the ground surface, totaling much less than five acres, and the surface areas would be restored with no permanent adverse effects on the environment.

For Class 33, the project does not exceed five acres in size to assure the maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife.

## **NEXT STEPS**

On September 9, 2020, staff will present the Concept Plan to UFAC to obtain approval for the proposed tree/plant removals described therein.

With the support of the Recreation and Parks Commission and UFAC, it is anticipated that staff will finalize the project plans and specifications in fall 2020 and advertise for bids and go to City Council for award of construction contract by December 2020. The construction completion date is March 2021 due to the Proposition A grant reimbursement deadline.

**FISCAL IMPACT**

The project concept design is estimated to cost \$500,000 to implement, inclusive of all labor for site preparation/installation and post-installation maintenance (90-day warranty period), materials, and biological monitoring/management tasks. Funding is budgeted and available for construction of the project under Lower Arroyo Seco Habitat Restoration (project number 77410).

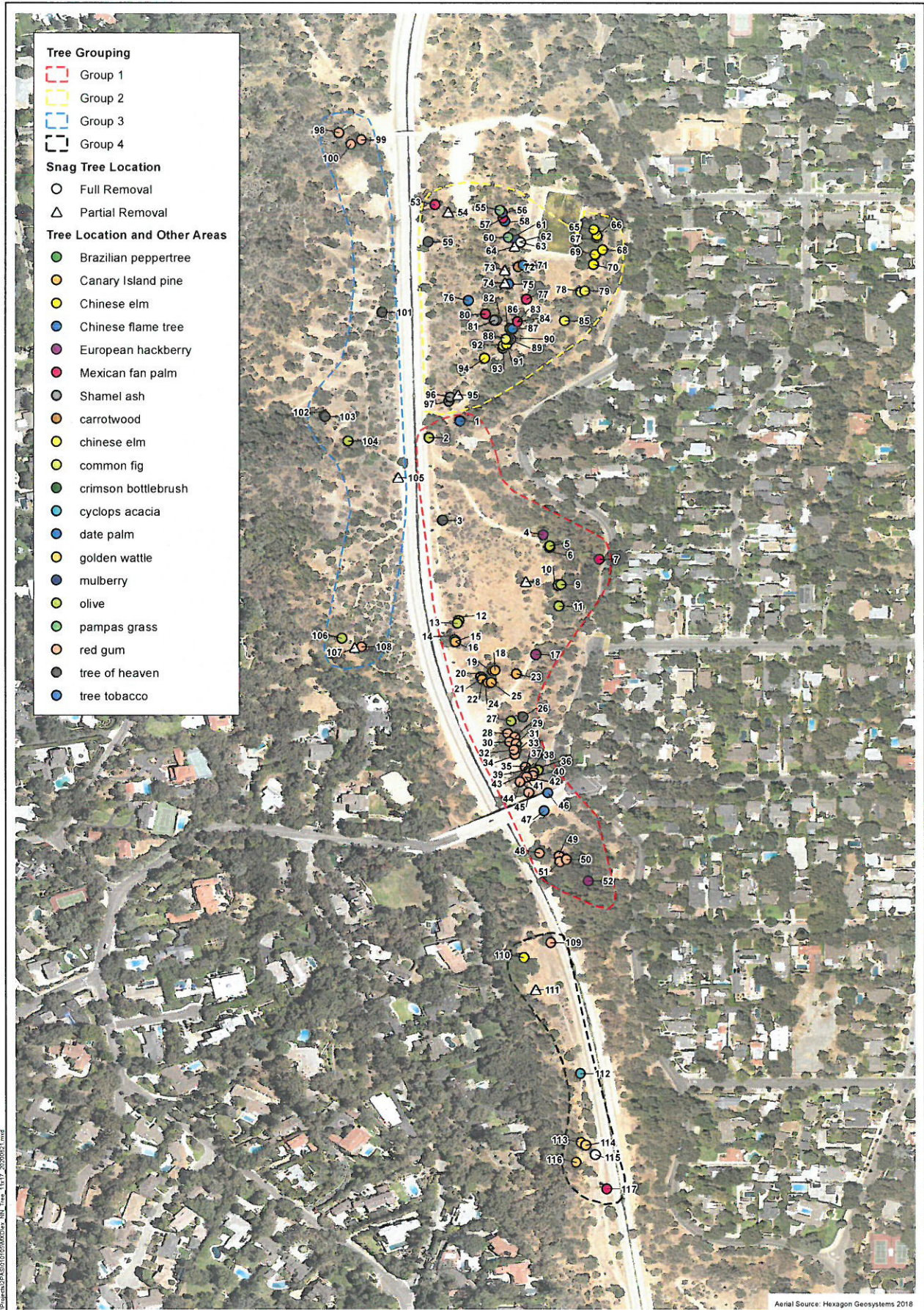
Prepared by,



Hayden Melbourn, P.E.  
Principal Engineer

Attachment A – Non-Native Tree/Plant Removal Plan  
Attachment B – Conceptual Planting Plan

# Attachment A - Non-Native Tree/Plant Removal Plan



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Aerial Source: Hexagon Geosystems 2018

## Large Non-native Vegetation

Van De Kamp Restoration Project

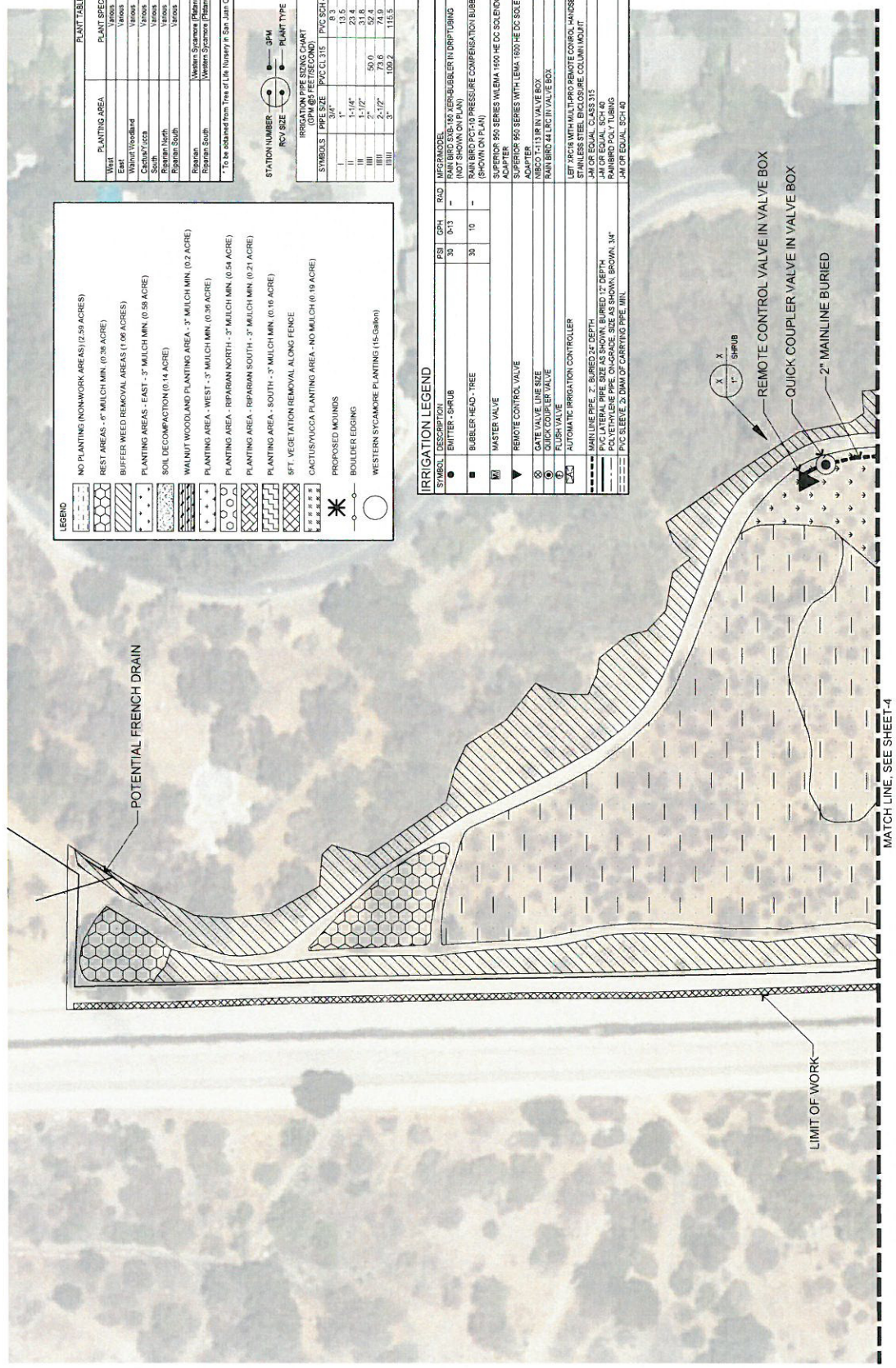


In-House



Attachment B - Conceptual Planting Plan

SUBMITTED



**LEGEND**

- NO PLANTING (NONWORK AREAS) (2.59 ACRES)
- REST AREAS - 6" MULCH MIN. (0.38 ACRE)
- BUFFER WEEED REMOVAL AREAS (1.06 ACRES)
- PLANTING AREAS - EAST - 3" MULCH MIN. (0.58 ACRE)
- SOIL DECOMPACTION (0.14 ACRE)
- WALNUT WOODLAND PLANTING AREA - 3" MULCH MIN. (0.2 ACRE)
- PLANTING AREA - WEST - 3" MULCH MIN. (0.36 ACRE)
- PLANTING AREA - RIPARIAN NORTH - 3" MULCH MIN. (0.54 ACRE)
- PLANTING AREA - RIPARIAN SOUTH - 3" MULCH MIN. (0.21 ACRE)
- PLANTING AREA - SOUTH - 3" MULCH MIN. (0.16 ACRE)
- 8FT. VEGETATION REMOVAL ALONG FENCE
- CACTUS/YUCCA PLANTING AREA - NO MULCH (0.16 ACRE)
- PROPOSED MOUNDS
- BOULDER EDDING
- WESTERN SYCAMORE PLANTING (15-Gallon)

PLANTING AREA	PLANT SPECIES	SIZE	QUANTITY
West	Various	1-Gallon	206
East	Various	1-Gallon	551
Walnut Woodland	Various	1-Gallon	202
Central/East	Various	1-Gallon	202
Riparian North	Various	1-Gallon	397
Riparian South	Various	1-Gallon	61
Riparian	Western Sycamore (Various sizes)	15-Gallon	2,000
Riparian South	Western Sycamore (Various sizes)	15-Gallon	3
			3
			17
			TOTAL

**IRRIGATION PIPE SIZING CHART**

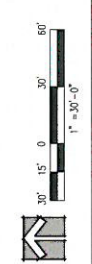
SYMBOLS	PIPE SIZE	PVC SCHEDULE	PIVC SCHEDULE
I	1"	114"	8.3
II	1.5"	114"	13.5
III	2"	114"	31.8
IIII	2.5"	114"	52.4
IIIII	3"	114"	73.6
IIIIII	3.5"	114"	110.7

**IRRIGATION LEGEND**

SYMBOL	DESCRIPTION	PSI	GPH	ROAD	DETAILS
●	EMITTER, SHRUB	30	0-13	-	SHEET 6, DETAIL K
■	BUBBLER HEAD - TREE	30	10	-	SHEET 7, DETAIL A
□	MASTER VALVE				SHEET 6, DETAIL B
▼	REMOTE CONTROL VALVE				SHEET 6, DETAIL C
○	GATE VALVE LINE SIZE				SHEET 6, DETAIL E
○	FLUSH VALVE				SHEET 6, DETAIL G
○	AUTOMATIC IRRIGATION CONTROLLER				SHEET 6, DETAIL I
—	MAINLINE PIPE - 2" BURIED 32" DEPTH				SHEET 6, DETAIL A
—	PVC LETTERING PIPE (SHOWS DEPTH, 2" DEPTH)				SHEET 6, DETAIL A
—	PVC LETTERING PIPE (SHOWS DEPTH, 30" DEPTH, 14"				SHEET 6, DETAIL A
—	PVC SERVE & DRAIN OF CARRYING PIPE, MIN.				SHEET 6, DETAIL A



CITY OF PASADENA - DEPARTMENT OF PUBLIC WORKS  
 LOWER ARROYO SECTION VAN DE CAMP BRIDGE  
 PROJECT HABITAT RESTORATION PROJECT



**REVISIONS**

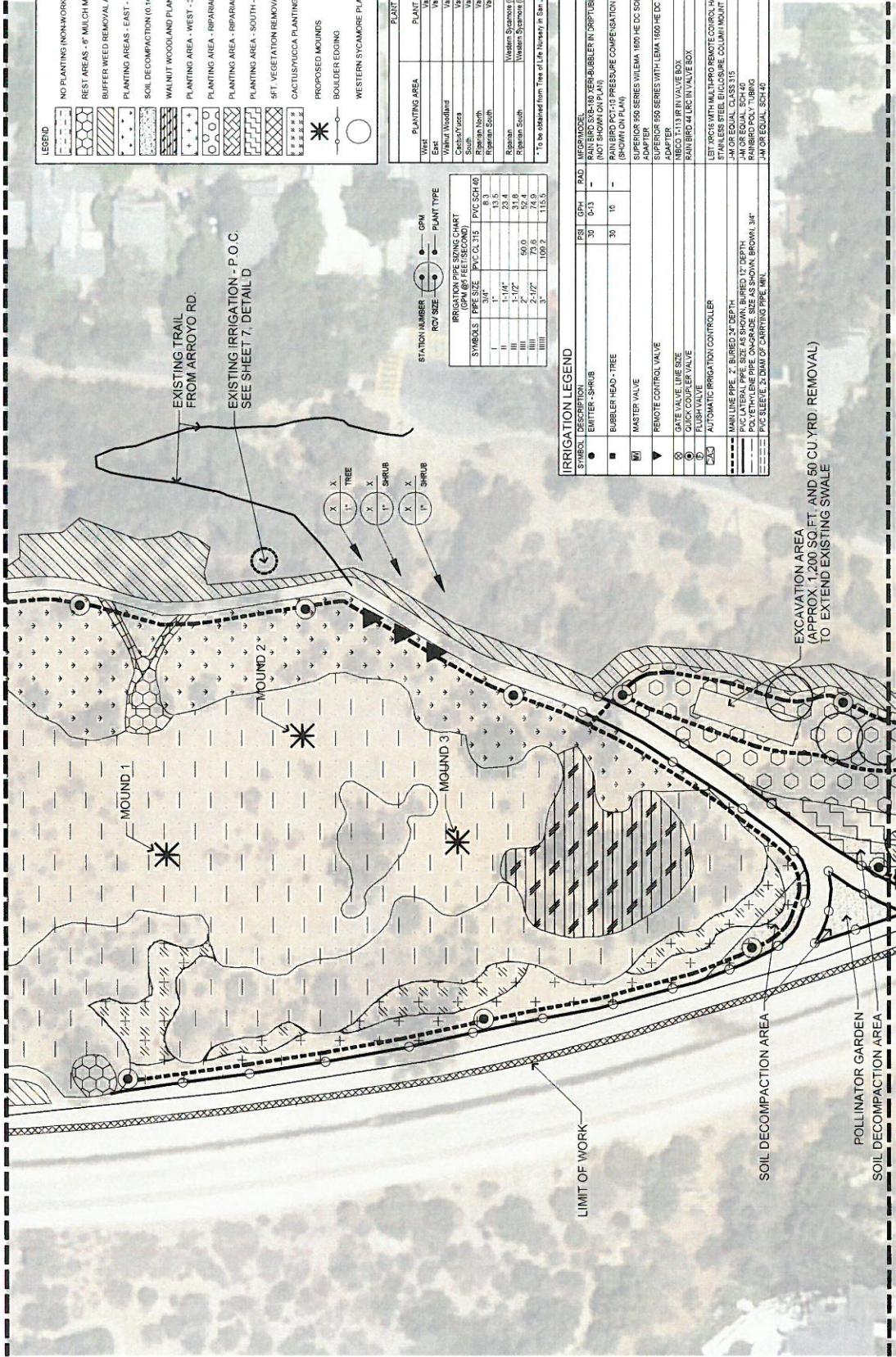
DATE	BY	CHKD.	APPROVED	DESCRIPTION

IRRIGATION PLANTING PLAN  
 SHEET 3 OF 8  
 DWG. NO. #

SCALE 1"=30'  
 LIMITS -  
 AC COUNT -

11/14/2014

MATCH LINE, SEE SHEET-3



**LEGEND**

- NO PLANTING (NON-WORK AREAS) (2.59 ACRES)
- REST AREAS - 4" MULCH MIN. (0.36 ACRE)
- BUFFER WEED REMOVAL AREAS (1.06 ACRES)
- PLANTING AREAS - EAST - 3" MULCH MIN. (0.56 ACRE)
- SOIL DECOMPACTION (0.14 ACRE)
- WALNUT WOODLAND PLANTING AREA - 3" MULCH MIN. (0.2 ACRE)
- PLANTING AREA - WEST - 3" MULCH MIN. (0.39 ACRE)
- PLANTING AREA - RIPARIAN NORTH - 3" MULCH MIN. (0.64 ACRE)
- PLANTING AREA - RIPARIAN SOUTH - 3" MULCH MIN. (0.31 ACRE)
- PLANTING AREA - SOUTH - 4" MULCH MIN. (0.16 ACRE)
- SFT. VEGETATION REMOVAL ALONG FENCE
- CACTUS/YUCCA PLANTING AREA - NO MULCH (0.19 ACRE)

**PROPOSED MOUNDS**

- BOULDER EDGING
- WESTERN SYCAMORE PLANTING (15-Gallon)

**PLANT TABLE**

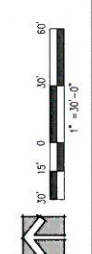
PLANTING AREA	PLANT SPECIES	SIZE	QUANTITY
Wet	Various	1-Gallon	205
Wet	Various	1-Gallon	550
Wet	Various	1-Gallon	200
Wet	Various	1-Gallon	200
Wet	Various	1-Gallon	587
Wet	Various	1-Gallon	81
Wet	Various	1-Gallon	2000
Wet	Various	1-Gallon	150
Wet	Various	1-Gallon	17
<b>TOTAL</b>			<b>3307</b>

**IRRIGATION PIPE SIZING CHART (GPM @ 100 PSI)**

PIPE SIZE	PVC CL. 315	PVC SCH 40
1/2"	6.3	20.4
3/4"	11.6	31.8
1"	15.7	50.0
1 1/2"	24.6	74.4
2"	33.5	100.2
3"	50.0	151.5

**IRRIGATION LEGEND**

SYMBOL	DESCRIPTION	PSI	GPM	ROAD	DETAILS
○	EMITTER - SHRUB	30	0-13	-	SHEET 8, DETAIL K
●	BUBBLER HEAD - TREE	30	10	-	SHEET 7, DETAIL A
□	MASTER VALVE	-	-	-	SHEET 4, DETAIL B
▽	REMOTE CONTROL VALVE	-	-	-	SHEET 4, DETAIL J
○	GATE VALVE	-	-	-	SHEET 4, DETAIL E
○	QUICK COUPLER VALVE	-	-	-	SHEET 4, DETAIL S
○	FLUSH VALVE	-	-	-	SHEET 4, DETAIL D
○	AUTOMATIC IRRIGATION CONTROLLER	-	-	-	SHEET 4, DETAIL I
○	MANUAL VALVE	-	-	-	SHEET 4, DETAIL A
○	POLYETHYLENE PIPE (ON-GRADE SIZE AS SHOWN, BROWN, 3/4")	-	-	-	SHEET 4, DETAIL A
○	PVC SLEEVE 2" DIA. OF CARRYING PIPE MIN.	-	-	-	SHEET 4, DETAIL A



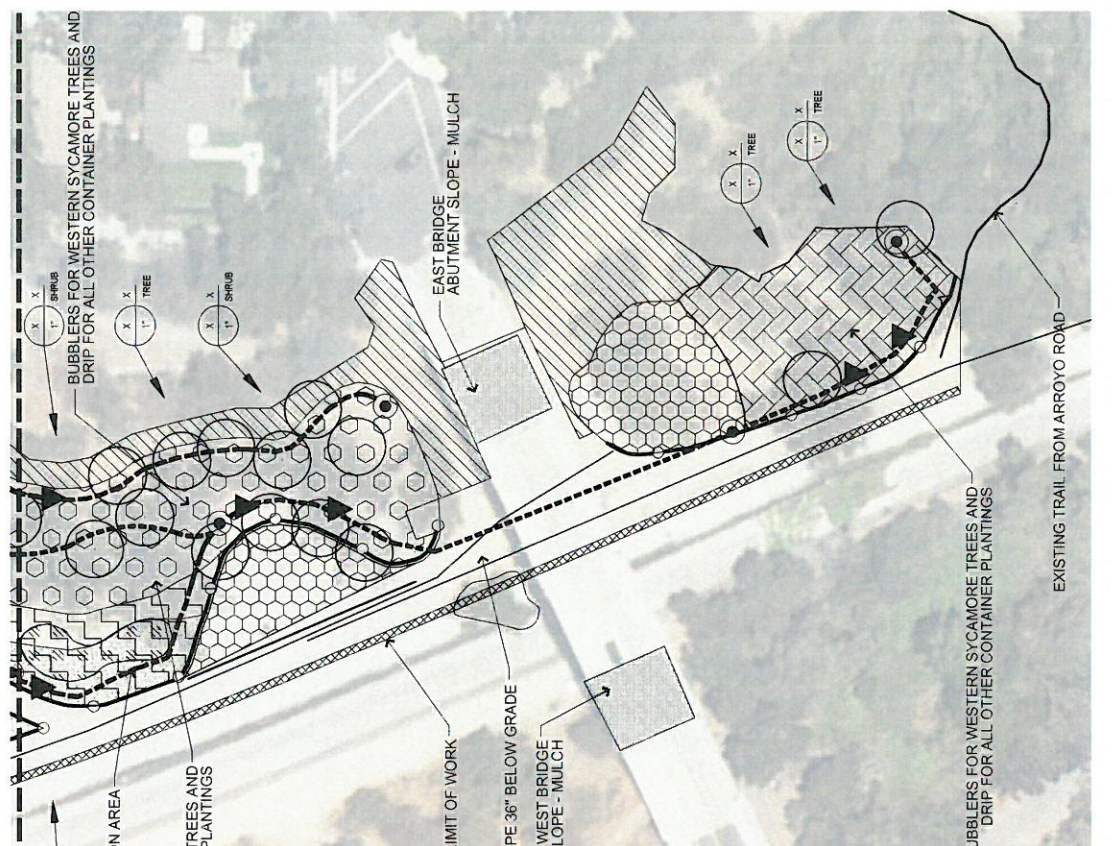
**IRRIATION PLANTING PLAN**

CITY OF PASADENA - DEPARTMENT OF PUBLIC WORKS  
 LOWER ARROYO SECTION VAN DE KAMP BRIDGE  
 HABITAT RESTORATION PROJECT

REVISIONS	DATE	BY	CHKD.	APPVED.	DESCRIPTION

LIMITS: -  
 SCALE: 1"=30'  
 ACCOUNT: -  
 SHEET 4 OF 8  
 DWG. NO. ##

MATCH LINE, SEE SHEET-4



**LEGEND**

- NO PLANTING (WORK AREA) (2.55 ACRES)
- REST AREAS - 4" MULCH MIN. (0.39 ACRE)
- BUFFER WEED REMOVAL AREAS (1.05 ACRES)
- PLANTING AREAS - EAST - 3" MULCH MIN. (0.58 ACRE)
- SOIL DECOMPACTION (0.14 ACRE)
- WALNUT WOODLAND PLANTING AREA - 3" MULCH MIN. (0.2 ACRE)
- PLANTING AREA - WEST - 3" MULCH MIN. (0.39 ACRE)
- PLANTING AREA - RIPARIAN NORTH - 3" MULCH MIN. (0.54 ACRE)
- PLANTING AREA - RIPARIAN SOUTH - 3" MULCH MIN. (0.21 ACRE)
- PLANTING AREA - SOUTH - 3" MULCH MIN. (0.16 ACRE)
- 5 FT. VEGETATION REMOVAL ALONGS FENCE
- CACTUS/YUCCA PLANTING AREA - NO MULCH (0.19 ACRE)

**PLANT TABLE**

PLANTING AREA	PLANT SPECIES	SIZE	QUANTITY
West	Various	1'-5.00m	250
West	Various	1'-5.00m	220
West/Woodland	Various	1'-5.00m	200
Central/Yucca	Various	1'-5.00m	131
South	Various	1'-5.00m	100
Riparian North	Various	1'-5.00m	57
Riparian South	Various	1'-5.00m	97
	TOTAL		2,000

**IRRIGATION PIPE SIZING CHART**

STATION NUMBER	RCP SIZE	GPM	PLANT TYPE
I	1"	13.5	SRUB
II	1-1/4"	23.4	TREE
III	2"	52.4	SRUB
IIII	2-1/2"	73.6	TREE
IIIIII	3"	109.2	TREE

**IRRIGATION LEGEND**

SYMBOL	DESCRIPTION	RE	QTY	UNITS
○	RAINFORCED 2" BUBBLER	30	10	-
○	RAINFORCED 2" BUBBLER IN DRIP/UBUB	30	10	-
○	RAINFORCED 2" PRESS/ARE COMPENSATION BUBBLER ON RISER (SHOWN ON PLAN)	30	10	-
○	SUPERIOR 900 SERIES WITH LEHA 1500 HE DC SOLENOID ACTUATOR & ADAPTER	30	10	-
○	SUPERIOR 900 SERIES WITH LEHA 1500 HE DC SOLENOID ACTUATOR & ADAPTER	30	10	-
○	NECO 1/13 IR IN VALVE BOX	30	10	-
○	RAINFORCED 2" IN VALVE BOX	30	10	-
○	LEFT 1/2 IN UNID. TUBING TRANS. COUPLER, HAUBSET STAINLESS STEEL EXPOSURE COLUMN/MOUNT	30	10	-
○	1/4 IN OR EQUAL SCH 40 JAN OR EQUAL SCH 40	30	10	-
○	PVC LATERAL PIPE SIZE AS SHOWN, BURIED 12" DEPTH	30	10	-
○	POLYETHYLENE PIPE, CHORDAGE, SIZE AS SHOWN, BROWN, 3/4"	30	10	-
○	PVC SLEEVE 21 DRN 2" CARTRIDGE PIPE MIN.	30	10	-

**REVISONS**

NO.	DATE	BY	DESCRIPTION

**CITY OF PASADENA - DEPARTMENT OF PUBLIC WORKS**

PROJECT: LOWER ARROYO SECTION VAN DE KEMP BRIDGE HABITAT RESTORATION PROJECT

SHEET 5 of 8

SCALE: 1"=30'

DATE: 10/22/2020

DESIGNED BY: *[Signature]*

CHECKED BY: *[Signature]*



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