



## **BOARD OF SUPERVISORS AGENDA ITEM SUMMARY**

Requested Board Meeting Date: July 2, 2013

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### **ITEM SUMMARY, JUSTIFICATION &/or SPECIAL CONSIDERATIONS:**

The property owners, Danny and Margaret McCarther, are proposing to construct a single-family residence on property located at 1703 East Sanctuary Cove Way, within Pima Canyon Estates Subdivision. The development will impact greater than one-third (1/3) acre Regulated Riparian Habitat (RRH). Therefore, the applicants are proposing to mitigate partially onsite while contributing an in-lieu fee (ILF) for the remaining amount. Because this development will impact Xeroriparian Class C habitat, the applicant is subject to compliance with Chapter 16.30 of the Pima County Floodplain and Erosion Hazard Management Ordinance No. 2010-FC5 (Ordinance). Because a portion of the disturbance will be mitigated through contribution of an ILF, the mitigation proposal requires Flood Control District Board of Directors (Board) review and approval.

In order to comply with the Ordinance, the applicant is submitting a partial onsite Riparian Habitat Mitigation Plan (RHMP) and partial ILF for Board approval. The mitigation proposal must be approved prior to issuance of a Floodplain Use Permit which specifies building requirements for the proposed single-family residence.

CONTRACT NUMBER (If applicable): N/A

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### **STAFF RECOMMENDATION(S):**

Conceptually, the combination onsite mitigation plan and ILF presented conforms to the Ordinance and, as such, can be approved.

CLERK OF BOARD USE ONLY: BOS MTG. \_\_\_\_\_

ITEM NO. \_\_\_\_\_

PIMA COUNTY COST: 0.0 and/or REVENUE TO PIMA COUNTY: \$ 936.45

FUNDING SOURCE(S): N/A  
(i.e. General Fund, State Grant Fund, Federal Fund, Stadium D. Fund, etc.)

**Advertised Public Hearing:**

☐

YES

☒

NO

**Board of Supervisors District:**

1 ☒

2 ☐

3 ☐

4 ☐

5 ☐

All ☐

**IMPACT:**

**IF APPROVED:**

Per the plan, habitat mitigation will occur onsite within the specifically designated areas and will be performed in compliance with Board approved mitigation standards with the remaining amount of mitigation contributed to the mitigation bank as an ILF in the amount of \$936.45. By performing a combination of onsite and offsite mitigation, the development will be in compliance with the Ordinance.

**IF DENIED:**

The applicant will not be able to continue with developing the property as currently planned and an alternative mitigation proposal will be required.

DEPARTMENT NAME: Regional Flood Control District

CONTACT PERSON: Eric Shepp/Patricia Gilbert TELEPHONE NO.: 4-4610/4606

DIRECTOR'S SIGNATURE: \_\_\_\_\_

  
Suzanne Shields, P.E.



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# MEMORANDUM

Director's Office  
Regional Flood Control District

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**DATE:** June 14, 2013

**TO:** Flood Control District Board of Directors

**FROM:** Suzanne Shields, P.E.  
Director

**SUBJECT:** Approval of a Riparian Habitat Mitigation Proposal for 1703 East Sanctuary Cove Way,  
Located within Xeroriparian Class C Habitat (District 1)

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## Background

Chapter 16.30 of the Pima County Floodplain and Erosion Hazard Management Ordinance No. 2010-FC5 (Ordinance) requires a Riparian Habitat Mitigation Plan (RHMP) for disturbance of Regulated Riparian Habitat (RRH) exceeding one-third (1/3) of an acre. The adopted *Mitigation Standards and Implementation Guidelines* govern the type, amount, and location of required mitigation.

In addition to onsite mitigation, the Ordinance contains a provision for offsite mitigation, where appropriate. All offsite mitigation options, which are governed by the adopted *Offsite Mitigation Guidelines for Unincorporated Pima County*, require the Flood Control District Board of Directors (Board) review and approval.

## Report

The owners, Mr. and Mrs. Danny McCarther, are proposing to construct a single-family residence (SFR) on property located at 1703 East Sanctuary Cove Way, within Pima Canyon Estates Subdivision (Exhibit A). The property is mapped Xeroriparian Class C habitat (Exhibit B).

The owners hired Blue Agave Landscape Design to prepare the mitigation proposal. The landscape architect assessed the project site for suitable onsite mitigation areas and determined that completing mitigation entirely onsite is not possible due to the size of the parcel, extent of disturbance, and presence of existing vegetation. Therefore, to achieve compliance with the Ordinance, the owner will install a portion of the mitigation requirement onsite and convert the remaining acreage to a dollar amount, which will be contributed to the mitigation bank as a fee in-lieu of onsite mitigation.

All onsite mitigation planting will occur per the RHMP (Exhibit C), which shows the type, number, and planting location of vegetation to partially compensate for land disturbance. The mitigation areas are located within existing or disturbed habitat adjacent to the SFR. The areas are placed either directly downstream of the SFR to capture increased stormwater runoff from the new development or upstream of the SFR, within low-lying areas where stormwater will collect.



**Approval of a Riparian Habitat Mitigation Proposal for 1703 East Sanctuary Cove Way, Located within Xeroriparian Class C Habitat (District 1)**

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The remaining disturbed area will be compensated for through submittal of an in-lieu fee in the amount of \$936.45 (Exhibit D). The fee shall be paid prior to issuance of the Floodplain Use Permit. Any future development will require submittal of a separate mitigation proposal.

All species will be chosen from the approved plant list contained in the *Mitigation Standards and Implementation Guidelines*.

**Disturbance: 17,773 sq.ft. (XC) = 0.41 acres to be mitigated**

Required Mitigation by Vegetation Type in Xeroriparian Class C Habitat (XC)	Total Plants (Mitigation) Required	Total Plants (Mitigation) Actual
45 trees/acre (XC)	14 trees (100% 15 gal)	9 trees (15 gal) mitigated onsite 5 trees (15 gal) in-lieu fee contribution
70 shrubs/acre (XC)	23 shrubs (100% 5 gal)	14 shrubs (5 gal) mitigated onsite 9 shrubs (5 gal) in-lieu fee contribution
Seeding	Seed disturbed and/or mitigated areas using approved method and seed mix	Mitigated and disturbed areas to be hydroseeded with a minimum of 12 species from the approved Xeroriparian plant list
Irrigation	To be provided for 5 years (see Irrigation Notes)	Drip irrigation to be provided for 5 years (see Irrigation Notes)

Flood Control District Board of Directors

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## Recommendation

Acceptance of mitigation banking funds in-lieu of onsite mitigation is allowed under the Ordinance. Contributions to the mitigation bank for disturbance of this habitat will provide funds to be used toward purchase of high value riparian resources or towards restoration of degraded riparian habitat within Pima County. Additionally, the onsite mitigation proposed under the RHMP conforms to the Ordinance and associated mitigation standards and guidelines and, as such, can be approved.

Respectfully submitted,

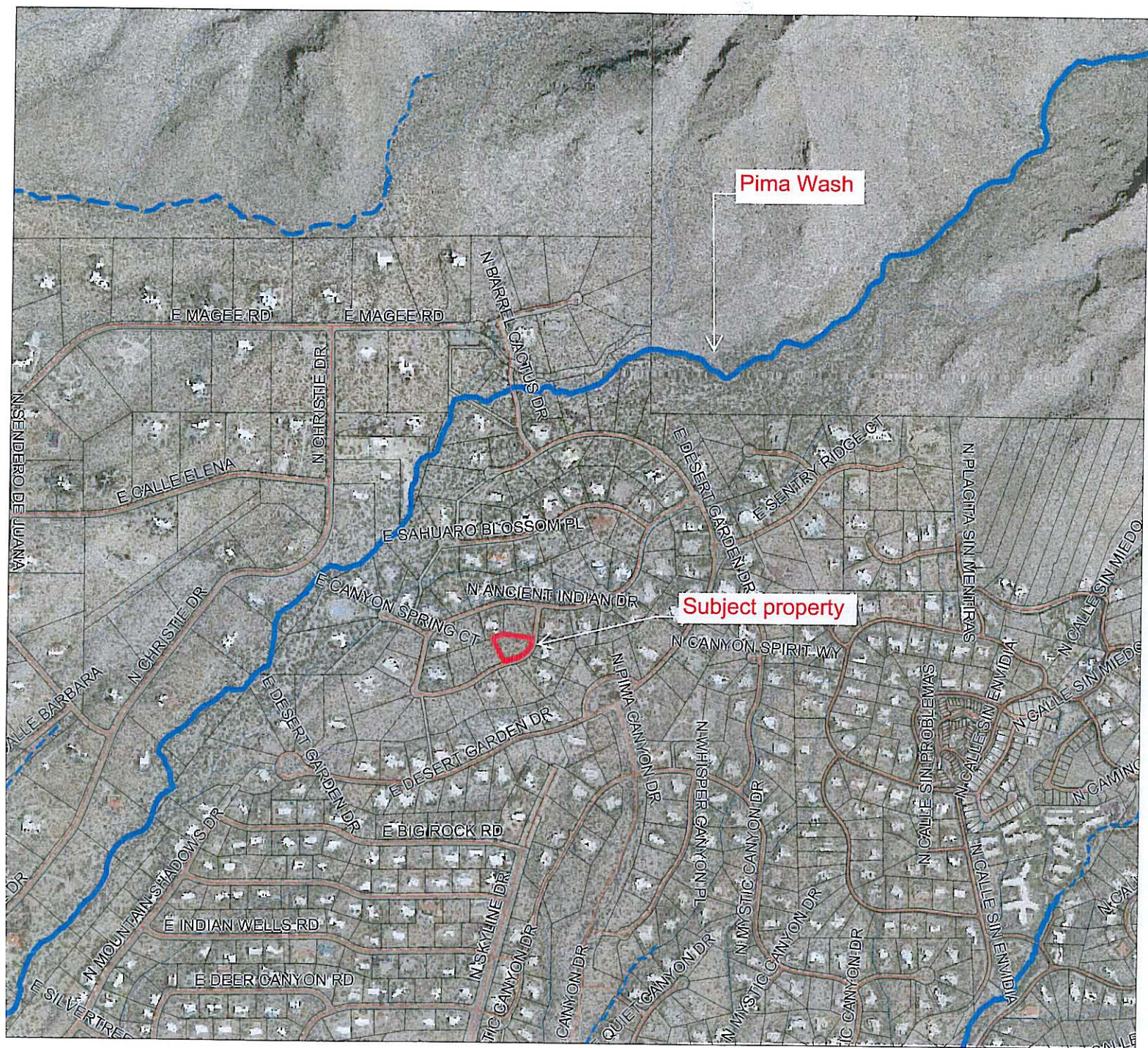
5 Shells

Suzanne Shields, P.E.  
Director and Chief Engineer

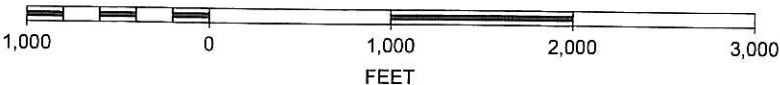
Attachments: Exhibit A – Project Location  
Exhibit B – Project Site - Riparian Classification Map  
Exhibit C – Riparian Habitat Mitigation Plan (RHMP)  
Exhibit D – In-Lieu Fee Proposal



# Exhibit A



SCALE 1 : 12,000



McCarthy Residence  
1703 East Sanctuary Cove Way  
T12SR14E31  
BOS Meeting Date 7/02/13

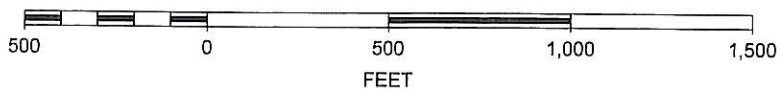




# Exhibit B



SCALE 1 : 6,000



McCarther Residence  
1703 East Sanctuary Cove Way  
T12SR14E31  
BOS Meeting Date 7/02/13





**Exhibit D**  
**Calculating In-Lieu Fee Costs for Single-lot Development**  
 Shaded fields are editable - Enter value in Acres

<i>Class H or IRA w/ Underlying Class H Habitat (H or IRA/H)**</i>				Option to basic requirement (Xeroriparian)****	Option to basic requirement (Class H)****	
Total mapped habitat onsite		Acre(s)				
Area of disturbed RRH		Acre(s)				
% of mapped habitat disturbed	#DIV/0!	Acre(s)				
Area of mitigation	0.00	Acre(s)				
Total number of trees required (90 trees/ac)	90	0 Trees	na	0	Trees	
Total number of shrubs required (100 shrubs/ac)	100	0 Shrubs	na	0	Shrubs	
<i>IRA w/ Underlying Xeroriparian Class A Habitat (IRA/XA)**</i>						
Total mapped habitat onsite		Acre(s)				
Area of disturbed RRH		Acre(s)				
% of mapped habitat disturbed	#DIV/0!	Acre(s)				
Area of mitigation	0.00	Acre(s)				
Total number of trees required (75 trees/ac)	75	0 Trees	0	na	Trees	
Total number of shrubs required (90 shrubs/ac)	90	0 Shrubs	0	na	Shrubs	
<i>IRA w/ Underlying Xeroriparian Class B Habitat (IRA/XB)**</i>						
Total mapped habitat onsite		Acre(s)				
Area of disturbed RRH		Acre(s)				
% of mapped habitat disturbed	#DIV/0!	Acre(s)				
Area of mitigation	0.00	Acre(s)				
Total number of trees required (60 trees/ac)	60	0 Trees	0	na	Trees	
Total number of shrubs required (80 shrubs/ac)	80	0 Shrubs	0	na	Shrubs	
<i>IRA w/ Underlying Xeroriparian Class C Habitat (IRA/XC)**</i>						
Total mapped habitat onsite		Acre(s)				
Area of disturbed RRH		Acre(s)				
% of mapped habitat disturbed	#DIV/0!	Acre(s)				
Area of mitigation	0.00	Acre(s)				
Total number of trees required (45 trees/ac)	45	0 Trees	0	na	Trees	
Total number of shrubs required (70 shrubs/ac)	70	0 Shrubs	0	na	Shrubs	
<i>IRA w/ Underlying Xeroriparian Class D Habitat (IRA/XD)**</i>						
Total mapped habitat onsite		Acre(s)				
Area of disturbed RRH		Acre(s)				
% of mapped habitat disturbed	#DIV/0!	Acre(s)				
Area of mitigation	0.00	Acre(s)				
Total number of trees required (30 trees/ac)	30	0 Trees	0	na	Trees	
Total number of shrubs required (x shrubs/ac)*	50	0 Shrubs	0	na	Shrubs	

<i>ILF Calculation</i>		
15-gallon trees	5	\$400.00
5-gallon trees	0	\$0.00
5-gallon shrubs	9	\$207.00
1-gallon shrubs	0	\$0.00
Hydroseed	0.11 Acres(s)	\$97.35
Irrigation	0.11 Acres(s)	\$165.00
5-year maintenance for Xeroriparian***	0.11 Acres(s)	\$67.10
5-year maintenance for H***	0.00 Acres(s)	\$0.00
<b>Total Cost</b>		<b>\$936.45</b>

Average Costs (Costs shown for plants do not include installation costs)	15-gallon tree	5-gallon tree	5-gallon shrub	1-gallon shrub	Seeding (per acre)	Irrigation (per acre)	Class H 5-year maintenance (per acre)	Xeroriparian 5-year maintenance (per acre)
	\$80	\$25	\$23	\$6	\$885	\$1,500	\$1,050	\$610

\*Density determined by onsite plant survey.

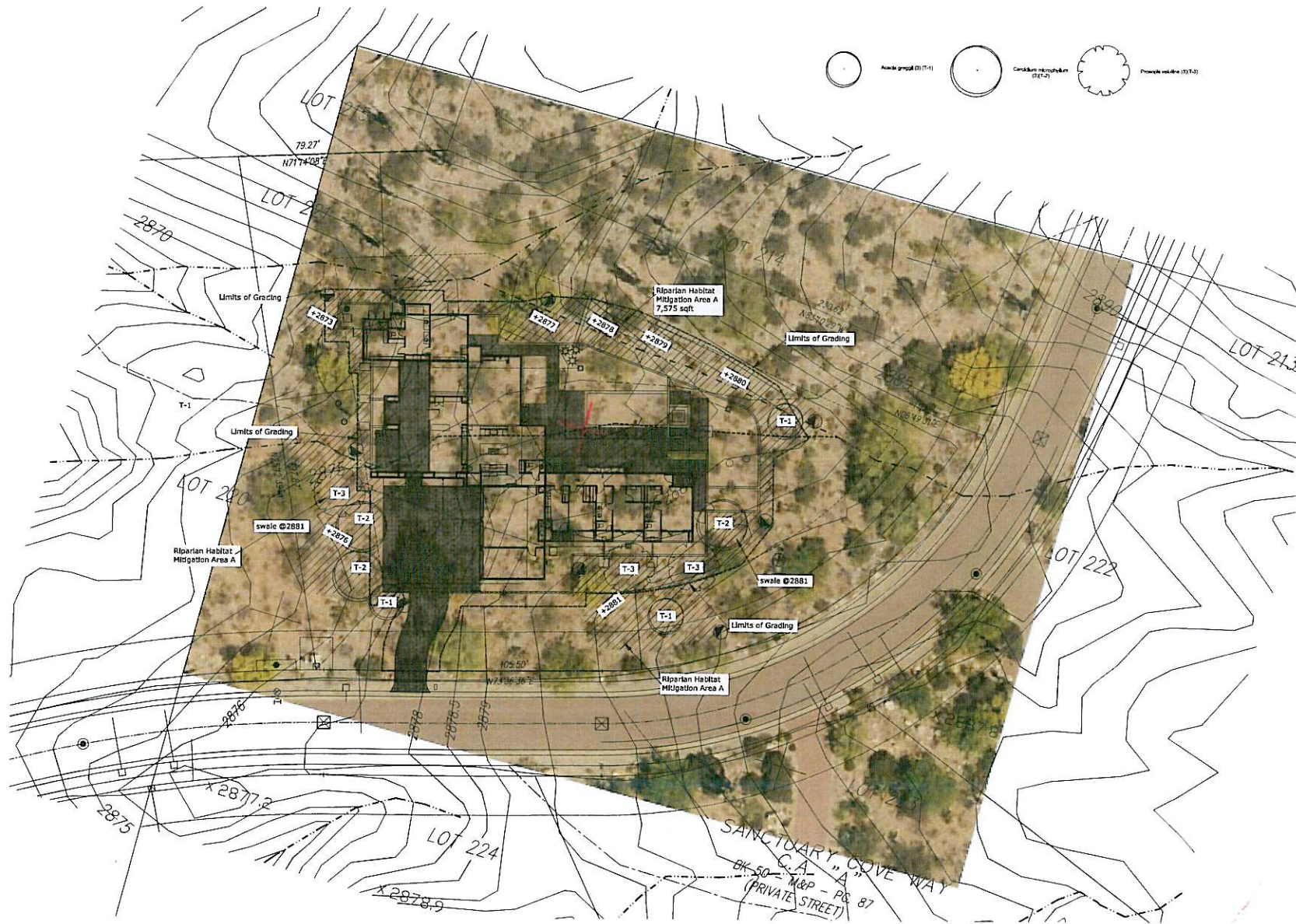
\*\*Guideline plant density requirements have been provided. The applicant may choose to perform an onsite plant survey in accordance with TECH-116 to determine plant density.

\*\*\*Average cost based on annual plant water requirements, plant replacement @ 5% over five years, and invasive species control (cost for herbicide only).

\*\*\*\*Option to basic requirement for Xeroriparian Classes A-D: Reduce total plant quantity by 20% if 100% 15 gallon trees and 100% 5 gallon shrubs are used.

\*\*\*\*Option to basic requirement for Class H: Increase total plant quantity by 20% if 50% 15 gallon/50% 5 gallon trees are used and 100% 1 gallon shrubs are used.





Planting Key:

Botanical Name

SHRUBS

Calliandra eriophylla  
Simmondsia chinensis  
Celtis pallida  
Vauquelinia Californica  
Opuntia engelmannii var. engelmannii  
Ambrosia deltoidea

TREES

Acacia greggii  
Cercidium microphyllum  
Prosopis velutina

Common Name

Fairy Duster  
Jojoba  
Hackberry  
Arizona rosewood  
Engelmans Prickly Pear  
Triangle leaf bursage

Catsclaw Acacia  
Foothill Palo verde  
Velvet Mesquite

Size

5g  
5g  
5g  
5g  
5g  
5g

15g  
15g  
15g

Qty.

1  
5  
3  
1  
2  
2

3  
3  
3

sym.

T1  
T2  
T3

Tree and shrub locations shall be field verified by Owner

Shrubs shall be evenly placed throughout the Mitigation Areas

Photo Monitoring Points (typ)

Hydroseed Mix

Rate(lb/acre)	Seed
1.5	ENCCELIA FARINOSA
2.0	ATRIPLEX CANESCENS
4.0	MUHLENBERGIA RIGENS
2.0	MACHAERANTHERA TANACETIFOLIA
1.5	ERICAERIA LACRIFOLIA
1.0	BAILEYA MULTIRADIATA
3.0	MUHLENBERGIA PORTERI
2.0	PENSTEMON PARRYI
3.0	SPHAERALCEA AMBIGUA
2.0	ARISTIDA PURPUREA
4.0	HYPTIS EMORI
4.0	LEPTOCHLOA DUBIA

Calculations:

This entire site lies within a Xeroriparian Class C Habitat.  
This site construction effects the Xeroriparian Class C Habitat as follows:  
Total Riparian Habitat of site: 40,677 sqft / .933 Acres  
Area of disturbed Riparian Habitat: 17,773 sqft / .41 Acres  
Mitigation Ratio for Riparian Habitat -Xeroriparian C is 1:1.0 and is calculated as follows:  
Mitigation Area = .41 acres x 1 = .41 acres  
Mitigation on site qualifies for a 30% reduction in required mitigation area  
(.41 acres x 30% = .28 acres / 12,502 sqft. of mitigation area required.

Total Number of Trees required: 45 x .41 = 18  
Total number of shrubs required: 70 x .41 = 29

All trees to be planted at 15 gal. size and all shrubs to be planted at 5 gal. size.  
This qualifies for a 20% reduction in quantities:  
18 trees - 20% = 14 trees  
29 shrubs -20% = 23 shrubs

Mitigation Calculations

Mitigation Area A: 7,575 sqft  
Mitigation Area Required: = 12,502 sqft  
Actual Mitigation Area on Plan: = 7,575 sqft  
difference = 4,927 sqft under requirement (39%)  
Trees/shrubs to be mitigated off site  
14 trees \* 0.39 = 5 trees  
23 shrubs \*0.39 = 9 shrubs

GENERAL NOTES:

- MITIGATION AREA WILL BE HYDROSEED WITH A MINIMUM OF 12 SPECIES FROM THE APPROVED XERORIPARIAN PLANT LIST FOUND IN APPENDIX B OF THE "REGULATED RIPARIAN HABITAT MITIGATION STANDARDS AND IMPLEMENTATION GUIDELINES." IF PLANTS LISTED ON THE MITIGATION PLAN ARE UNAVAILABLE, REPLACE SPECIES FROM APPROVED PLANT LIST MAY BE SELECTED BASED UPON AVAILABILITY. OF THE 12 SPECIES, 4 SHALL BE SHRUBS, 4 SHALL BE ANNUALS/PERENNIALS/VINES, AND 4 SHALL BE GRASSES.
- MITIGATION PLANTINGS TO BE IRRIGATED USING AN AUTOMATIC IRRIGATION SYSTEM INCLUDING 4-3/4" ELECT. VALVES, 1/2" POLY TUBING, EMITTERS AND DRIP EMITTERS PER IRRIGATION KEY ON LANDSCAPE PLAN.
- MITIGATION PLAN IMPLEMENTATION SHALL BE COMPLETED BY THE FIRST GROWING SEASON FOLLOWING THE COMPLETION OF CONSTRUCTION WHICH IS PROJECTED TO BE SPRING OF 2014
- A MONITORING PLAN, IN ACCORDANCE WITH THE MONITORING SCHEDULE OUTLINED IN SECTION 3 OF THE GUIDELINES, WILL BE SUBMITTED OVER A FIVE YEAR PERIOD FOLLOWING IMPLEMENTAION OF THE RIPARIAN HBITAT MITIGATION PLAN. ANY CHANGES FROM THE APPROVED RHMP SHALL BE NOTED ON THE MONITORING PLAN SUBMITTAL
- MONITORING PLAN SHALL BE LABELED "ANNUAL MONITORING REPORT FOR FPUP NO. AND BE SUBMITTED TO : PIMA COUNTY REGIONAL FLOOD CONTROL DISTRICT ATTN.: WRD RIPARIAN REVIEW STAFF 97 E. CONGRESS STREET, 2ND FLOOR TUCSON, AZ 85701
- THE PROJECT OWNER/OR OWNERS SUCCESSORS, AGREE TO PRESERVE AND PROTECT THE MITIGATION AREA FOR THE DURATION OF THE PROJECT. FURTHER, THE PROJECT OWNER OR OWNERS SUCCESSORS AGREE TO ACTIVELY MAINTAIN THE MITIGATION AREA FOR A PERIOD OF NOT LESS THAN FIVE YEARS. MAINTENANC ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, THE REGULAR OPERATION OF THE IRRIGATION SYSTEM, THE REPLACEMENT OF DEAD TREES AND SHRUBS, AND THE REMOVAL OF NOXIOUS AND/OR INVASIVE PLANT SPECIES.
- MITIAGTION AREAS TO BE LEFT IN A NATURAL STATE. NO DISTURBANCE SHALL OCCUR WITHIN THE MITIGATION AREAS WITHOUT RFCD REVIEW AND APPROVAL. SUCH DISTURBANCE INCLUDES BUT IS NOT LIMITED TO SECONDADRY IMPACTS SUCH AS THE PRESENCE OF LIVE STOCK, FENCING,INTENSIVE LANDSCAPING, OUTDOOR PLAY AREAS,ETC.
- ONCE PLANTS HAVE ESTABLISHED (APPROXIMATELY 1 TO 3 YEARS AFTER INSTALLATION), SUPPLEMENTAL IRRIGATION SYSTEM WILL BE DECREASED IN ACCORDANCE WITH APPENDIX C
- THE RIPARIAN HABITAT OUTSIDE OF THE GRADING LIMITS SHALL BE STAKED WITH WOOD STAKES AND FLAGGED WITH CAUTION TAPE TO INSURE THIS AREA REMAINS UNALTERED
- ALL MITIGATION AREAS WILL BE MAINTAINED ON A REGULAR BASIS UNDER THE SUPERVISION OF THE PROPERTY OWNER. MAINTENANCE SHALL INCLUDE ACTIVITIES LISTED IN THE "MITIGATION PLANTING MAINTENANCE" SCHEDULE FOUND IN APPENDIX C OF THE RIPARIAN HABITAT MITIGATIONSTANDARDS AND IMPLEMENTATION GUIDELINES

Site Information:

Owner: Danny and Margaret McCarther  
Parcel# 220202930  
FPUP# 13-200  
Activity # P13CP03368

SCALE: 1"=20'-0"

DESIGNED BY:  
DEAN ALEXANDER

Date:  
5-25-13  
5-30-13