



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

*Requested Board Meeting Date: January 13, 2015*

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

The constructed single family residence is required to mitigate an additional 0.28 acres of Important Riparian Area with underlying Xeroriparian Class B (IRAX B) habitat on property located at 1456 East Canyon Spring Court. The property is impacted by a regulatory floodplain associated with the Pima Wash and is also impacted by a FEMA Zone AE Special Flood Hazard Area. This development has impacted over one-third of an acre of regulated riparian habitat. As such, the applicant is subject to compliance with Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance). Due to site constraints, the applicant is proposing to mitigate through contribution of an In-Lieu Fee. When 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 Riparian Habitat Mitigation Plan for approval by the Board. The Riparian Habitat Mitigation Plan must be approved prior to approval of the Floodplain Use Permit.

*CONTRACT NUMBER (If applicable):       N/A*

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

The ILF proposal presented conforms to the Ordinance and as such can be approved.

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

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

PIMA COUNTY COST: 0.0 and/or REVENUE TO PIMA COUNTY:\$ 3197.60

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:**

If the Board approves the In Lieu Fee proposal, an amount of \$ 3,197.60 will be contributed to the Mitigation Bank and the development will be in compliance with the Ordinance.

**IF DENIED:**

The Floodplain Use Permit will be delayed until the applicant provides an alternative onsite and/or offsite riparian habitat mitigation plan that meets all Ordinance requirements.

DEPARTMENT NAME: Regional Flood Control District

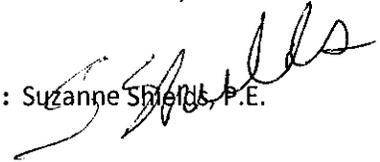
CONTACT PERSON: Eric Shepp/Patricia Gilbert TELEPHONE NO.: 4-4610/4606

DIRECTOR'S SIGNATURE:   
Suzanne Shields, P.E.

**DATE:** December 29, 2014

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

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



**SUBJECT: Approval of a Riparian Habitat Mitigation Banking Plan Located within Important Riparian Area with underlying Xeroriparian Class B Habitat (District 1)**

### **Background**

Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance) requires mitigation for mapped riparian habitat disturbances greater than 1/3 acre. If a project site contains suitable area(s) for riparian restoration, enhancement, or establishment, onsite mitigation occurs in accordance with the adopted *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines*. The Ordinance contains a provision for mitigation banking, when on-site mitigation is not feasible. All offsite mitigation proposals require Flood Control District Board of Directors (Board) review and approval.

### **Report**

Pima County Regional Flood Control District (District) issued floodplain use permit (FPUP) No. 10-486RP authorizing improvements on the subject property; a single family residence was built on the property located at 1456 East Canyon Spring Court (Exhibit A). The property contains 2.7 acres of Important Riparian Area with Underlying Xeroriparian Class B Habitat (Exhibit B). A condition of the FPUP required implementation of the riparian habitat mitigation plan (RHMP) during the first growing season after completion of the project, and submittal of monitoring reports throughout the five year monitoring period. The plants within the mitigation area are required to have 80% survival. A monitoring report shall affirmatively state that 80% of the plants remain viable. After not receiving a monitoring report, the District contacted the owners.

The owners, Rajen and Anju Desai, contacted the District and substantiated that the mitigation areas were unsuccessful. The owners hired Dean Alexander, with Blue Agave Landscape Design, to assess the project site to re-mitigate and decided to propose to contribute \$3,197.60 in lieu of onsite habitat mitigation for the unsuccessful attempt to mitigate for previous disturbance.

**Approval of a Riparian Habitat Mitigation Banking Plan Important Riparian Area with underlying Xeroriparian Class B Habitat (District 1)**

December 23, 2014

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**ILF Calculation Spreadsheet**

**0.28 acres to be mitigated**

Required Mitigation by Vegetation Type in Important Riparian Area with Underlying Xeroriparian Class B Habitat	Total Plants (Mitigation) Required	Total Plants Mitigated Through ILF Contribution
60 trees/acre	20 trees (100% 15 gal)	20 trees (50% 15 gal, 50% 5 gal)
80 shrubs/acre	33 shrubs (100% 5 gal)	33 shrubs (50% 5 gal, 50% 1 gal)
Seeding	Seed disturbed and/or mitigated areas using approved method and seed mix	Standard seeding requirement
Irrigation	To be provided for 5 years	Standard drip irrigation requirement

**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 resources or towards restoration of degraded riparian habitat within Pima County.

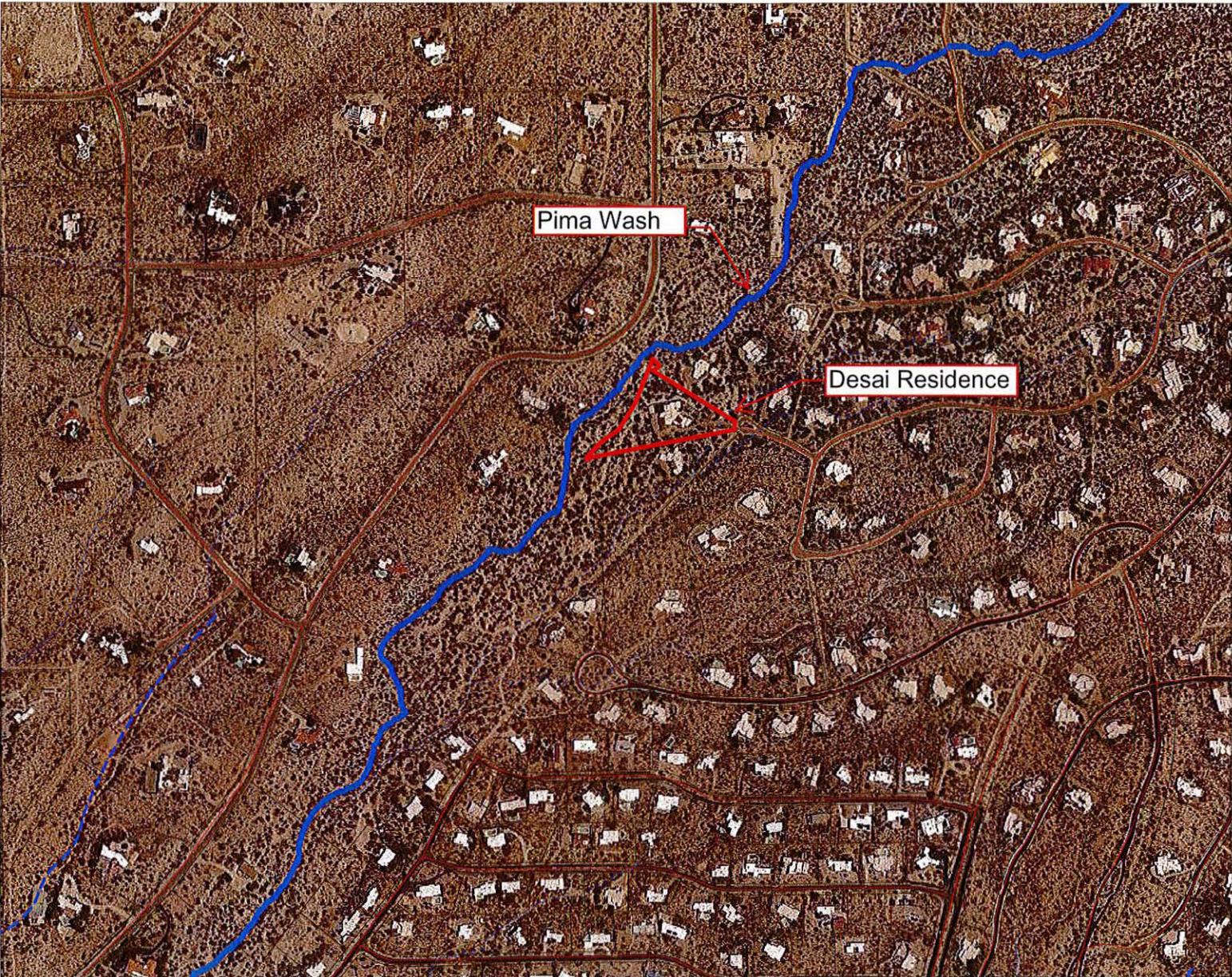
Exhibit A – Project Location

Exhibit B – Project Site – Riparian Classification Map

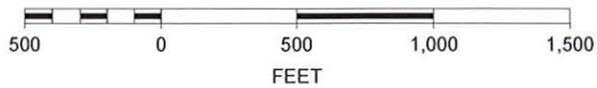
Exhibit C – Mitigation Banking In-lieu Fee Proposal

Exhibit D – Riparian Habitat In-Lieu Fee Proposal

# Exhibit A

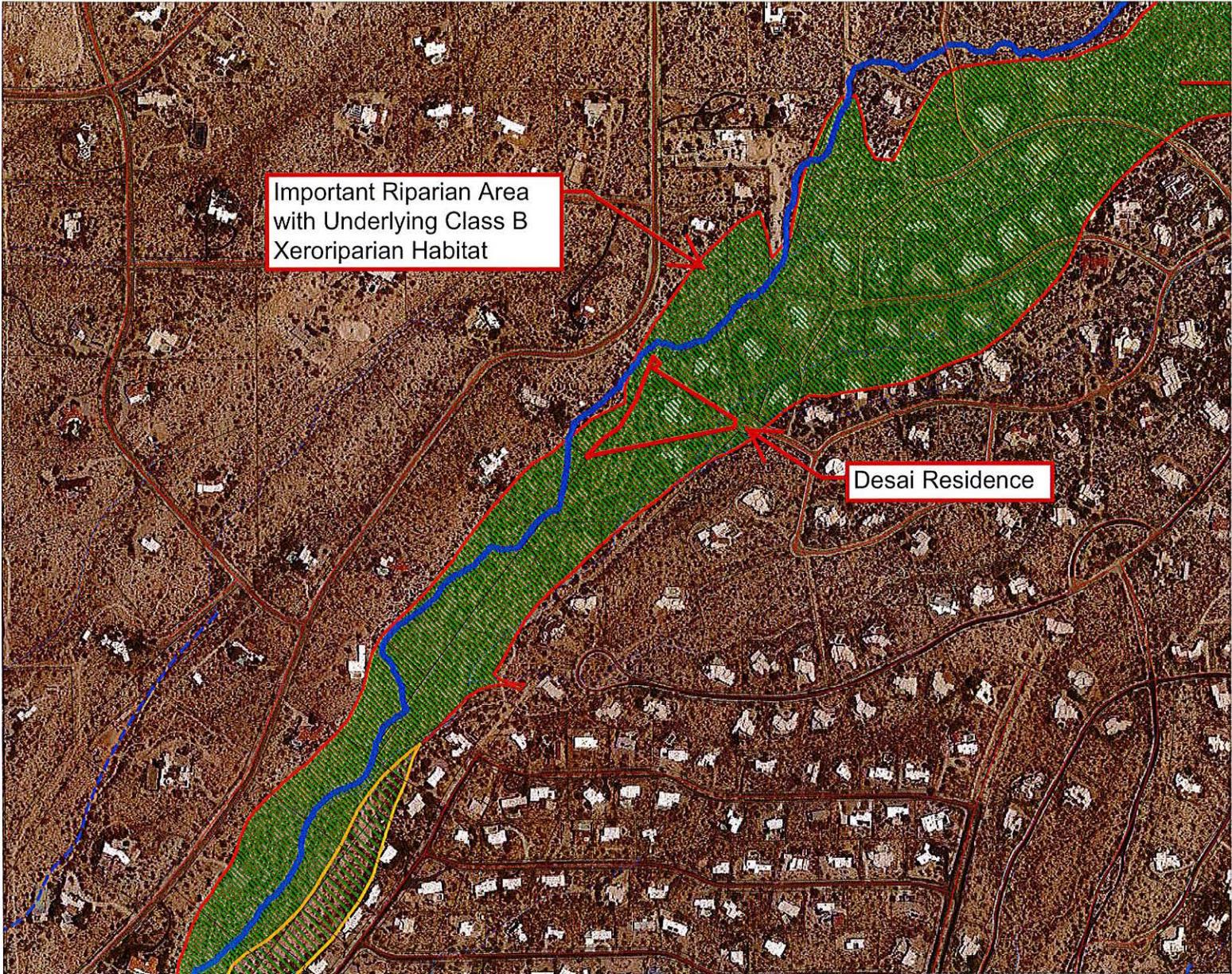


SCALE 1 : 8,000



Desai Residence  
1456 E. Canyon Spring Court  
BOS Meeting Date 1/13/15

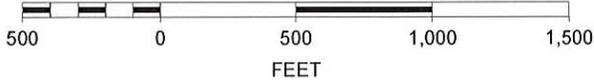




Important Riparian Area  
with Underlying Class B  
Xeroriparian Habitat

Desai Residence

SCALE 1 : 8,000



Desai Residence  
1456 E. Canyon Spring Court  
BOS Meeting Date 1/13/15



## Calculating In-Lieu Fee Costs for Single-lot Development

Shaded fields are editable - Enter value in Acres

Exhibit C

				Option to basic requirement (Xeroriparian)****	Option to basic requirement (Class H)*****		
<b>Class H or IRA w/ Underlying Class H Habitat (H or IRA/H)**</b>							
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)			0 Trees	na	0	Trees	
Total number of shrubs required (100 shrubs/ac)	100		0 Shrubs	na	0	Shrubs	
<b>IRA w/ Underlying Xeroriparian Class A Habitat (IRA/XA)**</b>							
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	
<b>IRA w/ Underlying Xeroriparian Class B Habitat (IRA/XB)**</b>							
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	
<b>IRA w/ Underlying Xeroriparian Class C Habitat (IRA/XC)**</b>							
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	
<b>IRA w/ Underlying Xeroriparian Class D Habitat (IRA/XD)**</b>							
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	

### ILF Calculation

15-gallon trees	20	\$1,600.00
5-gallon trees	0	\$0.00
5-gallon shrubs	33	\$759.00
1-gallon shrubs	0	\$0.00
Hydroseed	0.28 Acres(s)	\$247.80
Irrigation	0.28 Acres(s)	\$420.00
5-year maintenance for Xeroriparian***	0.28 Acres(s)	\$170.80
5-year maintenance for H***	0.00 Acres(s)	\$0.00
<b>Total Cost</b>		<b>\$3,197.60</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.

**Exhibit D**

Owner: Rajin and Anju Desai  
 Parcel # 22020307A  
 FPUP # 14-378RP

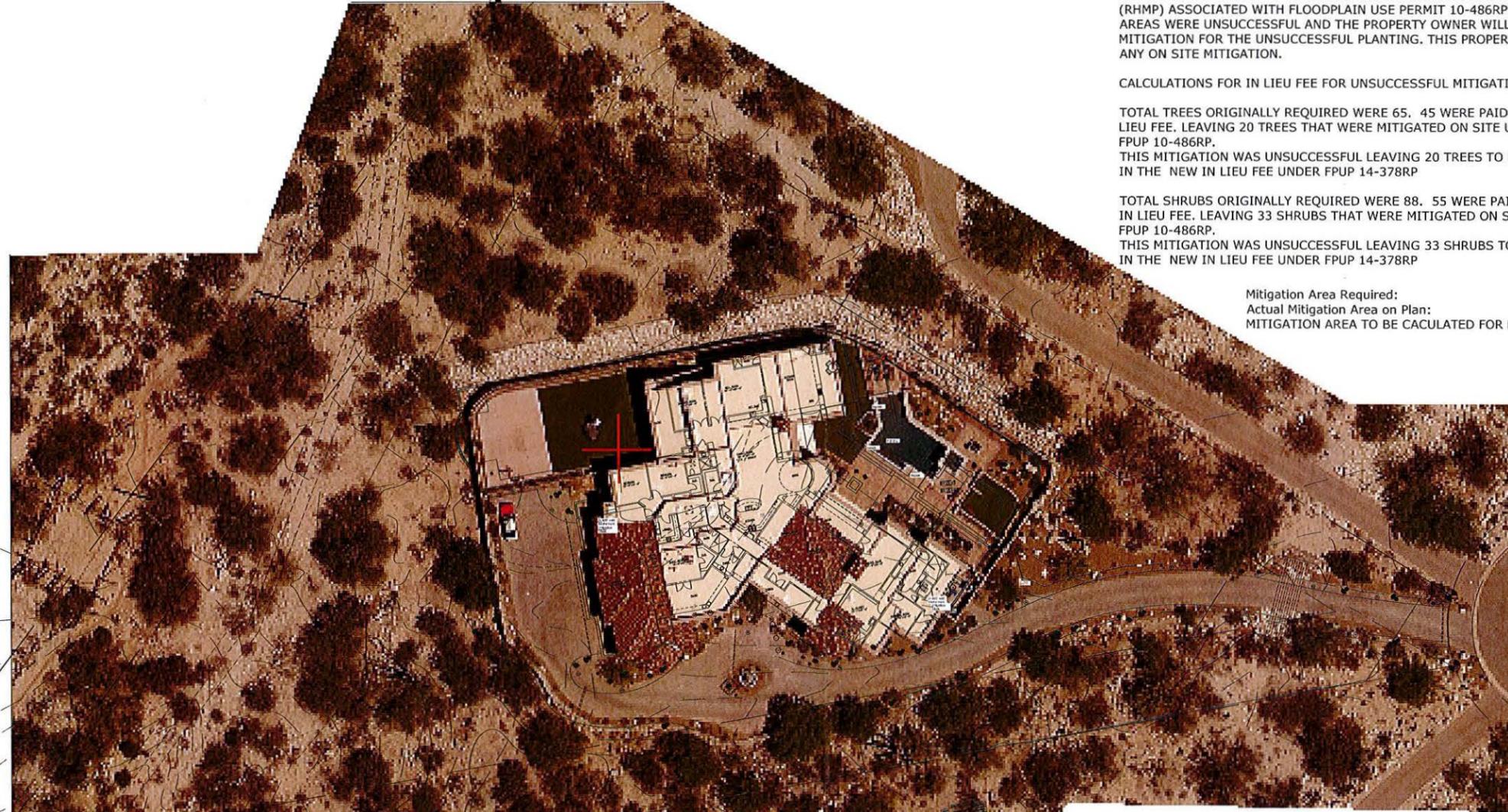
THIS PLAN IS A REVISION TO THE ORIGINAL RIPARIAN HABITAT MITIGATION PLAN (RHMP) ASSOCIATED WITH FLOODPLAIN USE PERMIT 10-486RP. THE MITIGATION AREAS WERE UNSUCCESSFUL AND THE PROPERTY OWNER WILL PAY A FEE IN LIEU OF MITIGATION FOR THE UNSUCCESSFUL PLANTING. THIS PROPERTY DOES NOT HAVE ANY ON SITE MITIGATION.

**CALCULATIONS FOR IN LIEU FEE FOR UNSUCCESSFUL MITIGATION:**

TOTAL TREES ORIGINALLY REQUIRED WERE 65. 45 WERE PAID FOR IN ORIGINAL IN LIEU FEE. LEAVING 20 TREES THAT WERE MITIGATED ON SITE UNDER FPUP 10-486RP. THIS MITIGATION WAS UNSUCCESSFUL LEAVING 20 TREES TO BE CALCULATED FOR IN THE NEW IN LIEU FEE UNDER FPUP 14-378RP

TOTAL SHRUBS ORIGINALLY REQUIRED WERE 88. 55 WERE PAID FOR IN ORIGINAL IN LIEU FEE. LEAVING 33 SHRUBS THAT WERE MITIGATED ON SITE UNDER FPUP 10-486RP. THIS MITIGATION WAS UNSUCCESSFUL LEAVING 33 SHRUBS TO BE CALCULATED FOR IN THE NEW IN LIEU FEE UNDER FPUP 14-378RP

Mitigation Area Required: = .95 Acres  
 Actual Mitigation Area on Plan: = .28 Acres  
 MITIGATION AREA TO BE CALCULATED FOR NEW IN LIEU FEE: .28 ACRES



2509 N. Campbell Ave #254  
 Tucson, AZ 85719  
 (520) 325-4242  
 www.BlueAgaveDesign.com

**Desai Residence**  
 1456 E. Canyon Spring Ct.  
 Pima Canyon/ Lot 235  
 Riparian Habitat Mitigation In-Lieu Fee Proposal

CANYO SPRING COUR

**Mitigation Calculations for Partial in lieu fee: (PREVIOUSLY APPROVED PER fpup10-486RP)**  
 The mitigation area is smaller than the allowed 70%. based on the following calculations:

Mitigation Area Required: .95 Acres x 43,560 = 41,382 sq ft  
 Actual Mitigation Area on Plan: = 12,196 sq ft  
 difference = 29,185 sq ft or 70%  
 Trees: 45 trees for partial in lieu fee\*  
 Shrubs: 55 shrubs for partial in lieu fee\*

\* See attachment for In lieu fee schedual and calculations.

**Calculations:(PREVIOUSLY APPROVED PER fpup10-486RP)**  
 This site construction effects the Important Riparian area Xeroriparian Class B.

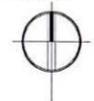
Total Riparian Hbitat of site: 2.74 Acres  
 Area of disturbed Riparian Hab. IRA /XB: .91 Acres  
 Area of mitigation = .91 Acres x 1.5 = 1.36 Acres  
 Total # of trees required = 60 x 1.36 = 81 Trees  
 Total # of shrubs required = 80 x 1.36 = 109 Shrubs

All trees to be planted at 15 gal. size, all shrubs to be planted at 5 gal - qualifies for a 20% reduction in quantities required  
 81 trees - 20%= 65 trees  
 109 trees - 20%=88 shrubs

Mitigation Area (70% allowed) = 1.36 x 0.70 = .95 acres

Mitigation Area Required: = .95 Acres  
 Actual Mitigation Area on Plan: = .28 Acres

SCALE: 1"=20'-0"  
 DRAFTED BY:  
 DESIGNED BY:  
 DEAN ALEXANDER



DATE:11-5-2010  
 REVISIONS:  
 11-22-2010  
 12-9-2010  
 11-20-14  
 12-4-14

10-486-RP

**L-4**