



## BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: March 7, 2017

**Title:** Approval of a Riparian Habitat Mitigation Plan Located at 11977 West Ditty Lane, within Hydroriparian Habitat

### **Introduction/Background:**

Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance) requires mitigation for disturbance of Regulated Riparian Habitat (RRH) exceeding 1/3 of an acre. A riparian habitat mitigation plan (RHMP) approved by the Flood Control District Board of Directors (Board) is required for disturbance of Hydroriparian habitat exceeding 1/3 of an acre and that exceeds 5 percent of the habitat on the property. The adopted *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines (Guidelines)* govern the type, amount, and location of required mitigation.

### **Discussion:**

The owners, Marcos and Rebecca Cruz, are applying for a floodplain use permit to construct a detached steel building on the property located at 11977 West Ditty Lane. The property is mapped within RRH. Upon review of the floodplain use permit, staff determined that portions of the RRH had been previously disturbed over a period of several years and the disturbance exceeds 1/3 of an acre. While some of the RRH disturbance occurred prior to the Riparian Classification Maps being adopted by the Board in 1999, some of the disturbance was found to be unpermitted. The unpermitted RRH disturbance, 18,295 square feet (0.42 acres), requires a Riparian Habitat Mitigation Plan (RHMP). Karen Cesare, with Novak Environmental, Inc. was hired to prepare a RHMP. On-site mitigation was chosen and the plantings will be located within existing RRH and previously disturbed areas.

### **Conclusion:**

Acceptance of the on-site Riparian Habitat Mitigation Plan allows for the disturbed riparian habitat to re-establish to a healthy valuable resource that supports the natural function of floodplains.

### **Recommendation:**

The RHMP conforms to the Ordinance and the Guidelines and, as such, the District recommends approval.

### **Fiscal Impact:**

n/a

### **Board of Supervisor District:**

☐ 1      ☐ 2      ☒ 3      ☐ 4      ☐ 5      ☐ All

Department: Regional Flood Control District Telephone: 724-4600

Department Director Signature/Date: [Signature] FOR Suzanne Shields

Deputy County Administrator Signature/Date: [Signature] 2/17/17

County Administrator Signature/Date: [Signature] 2/17/17

**DATE:** February 10, 2017

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

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



**SUBJECT:** Approval of a Riparian Habitat Mitigation Plan Located at 11977 West Ditty Lane, within Hydroriparian Habitat (District 3)

### Background

Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance) requires mitigation for disturbance of Regulated Riparian Habitat exceeding 1/3 of an acre. A riparian habitat mitigation plan (RHMP) approved by the Flood Control District Board of Directors (Board) is required for disturbance of Hydroriparian habitat exceeding 1/3 of an acre and that exceeds 5 percent of the habitat on the property. The adopted *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines (Guidelines)* govern the type, amount, and location of required mitigation.

### Report

The owners, Marcos and Rebecca Cruz, are applying for a floodplain use permit to construct a detached steel building on the property located at 11977 West Ditty Lane (Exhibit A). The property is mapped within Regulated Riparian Habitat (RRH) classified as Hydroriparian Habitat (Exhibit B). Upon review of the floodplain use permit, staff determined that portions of the RRH had been previously disturbed over a period of several years and concluded the RRH disturbance exceeded 1/3 of an acre. Some of the RRH disturbance occurred prior to the 1999 mapping, when the Riparian Classification Maps were adopted by the Board, while the remainder of the disturbance was found to be unpermitted. The unpermitted RRH disturbance, 18,295 square feet (0.42 acres), requires a Riparian Habitat Mitigation Plan (RHMP).

Mr. and Mrs. Cruz have chosen to mitigate onsite and hired Karen Cesare, with Novak Environmental, Inc. to prepare a RHMP (Exhibit C). All onsite mitigation planting will occur per the RHMP, which shows the type, number, and planting location of the vegetation that will compensate for riparian disturbance. The mitigation areas are located within existing RRH and within disturbed areas on the property that have the space to support new plantings. Any future development will require submittal of a separate mitigation plan.

### Recommendation

The RHMP conforms to the Ordinance and the Guidelines, and, as such, the District recommends approval.

**Attachments:** Exhibit A – Project Location  
Exhibit B – Project Site – Riparian Classification Map  
Exhibit C – Riparian Habitat Mitigation Plan



# Exhibit A

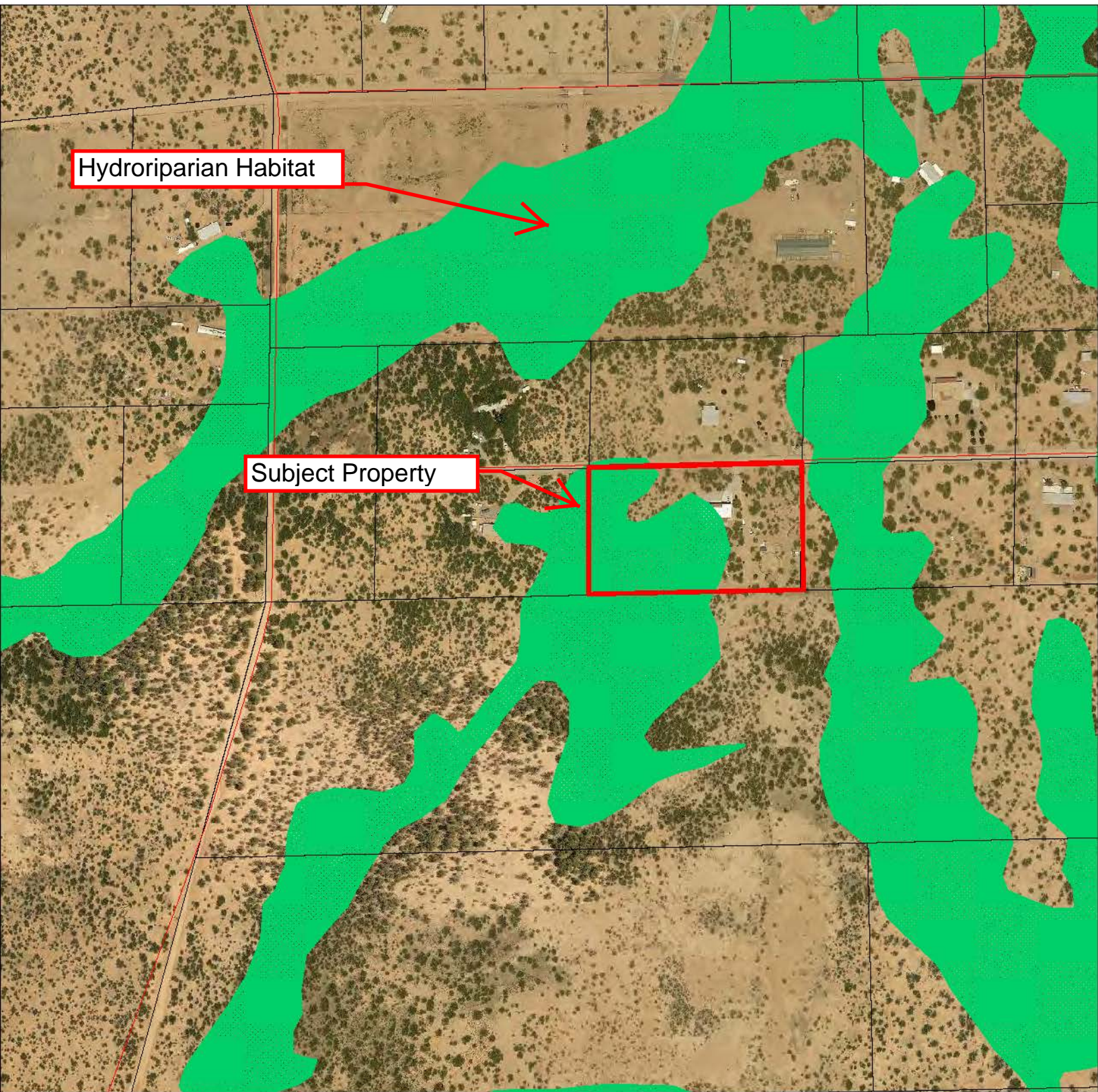


Subject Property

Cruz Residence  
11977 Ditty Lane  
BOS Meeting Date 3/07/17

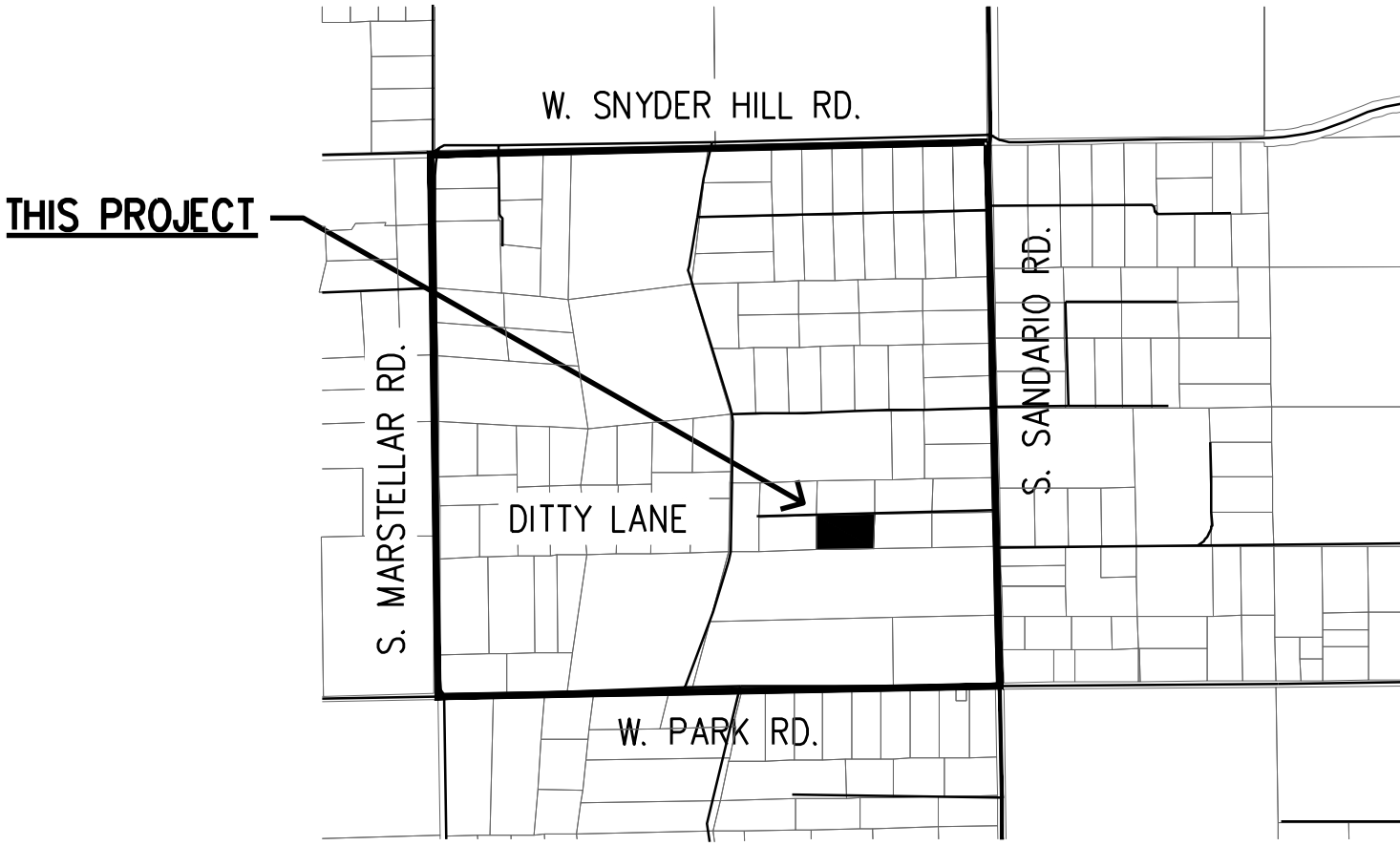
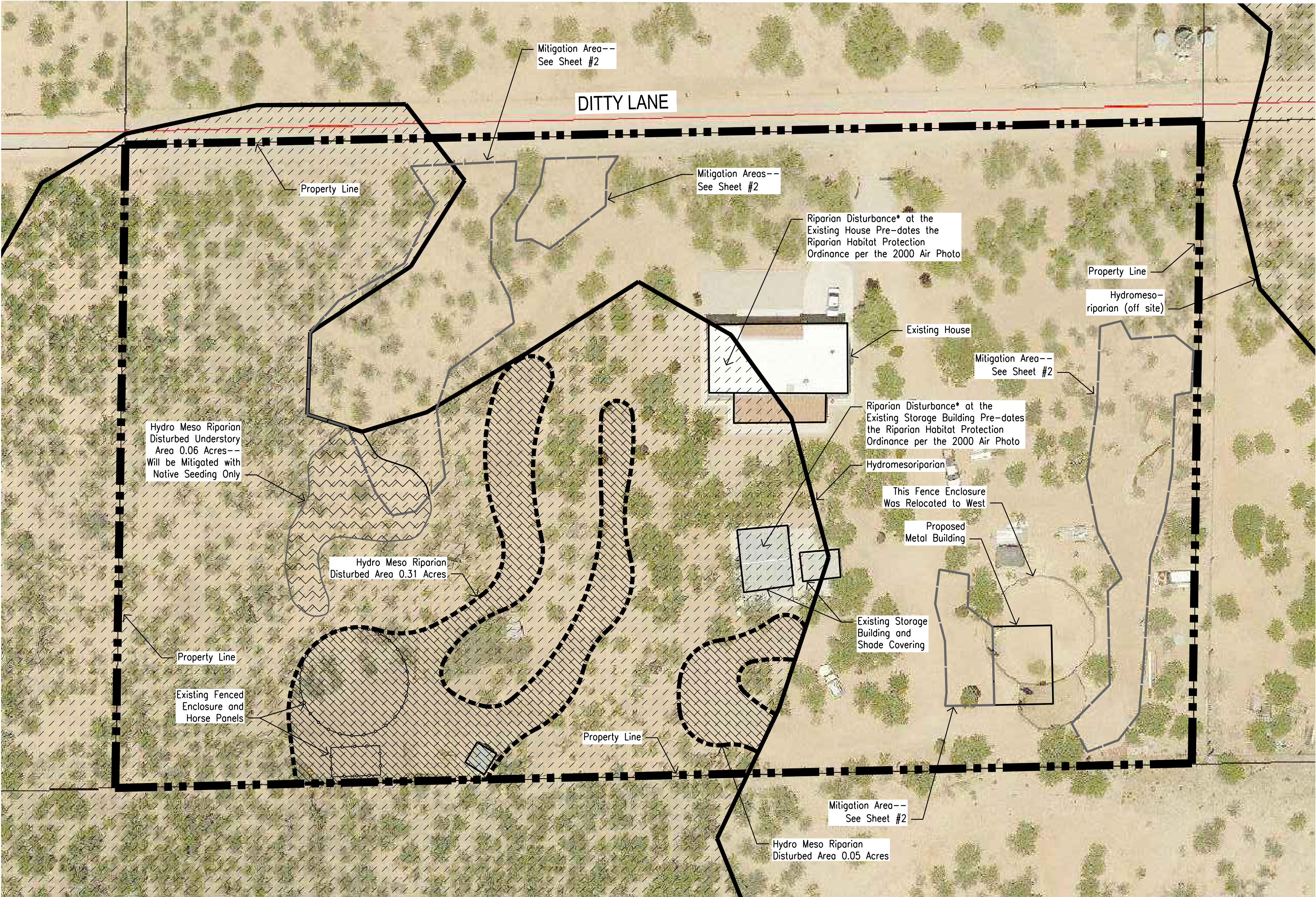


# Exhibit B



Cruz Residence  
11977 Ditty Lane  
BOS Meeting Date 3/07/17





LOCATION MAP

Scale: 3" = 1 Mile  
Township 15 S, Range 11 E, Section 4

OWNER

Marcos & Rebecca Cruz  
11977 Ditty Lane  
Tucson, Arizona 85735  
Phone: 520-241-9898

LANDSCAPE ARCHITECT

NOVAK ENVIRONMENTAL, INC.  
4574 North First Avenue  
Suite 100  
Tucson, Arizona 85718  
Attn: Karen M. Cesare, RLA  
Phone: (520) 206-0951  
Email: Karen@novakenvironmental.com

LEGEND

- Regulated Riparian Habitat-- Hydromesoriparian, Undisturbed Area
- Regulated Riparian Habitat-- Hydromesoriparian, Disturbed Area
- Regulated Riparian Habitat-- Hydromesoriparian Understory Disturbance Only
- Property Limits

REGULATED RIPARIAN HABITAT CALCULATIONS

HYDROMESORIPARIAN MITIGATION--	
Total Site Area	4.13 acres
Total Area Hydromesoriparian	2.06 acres
Disturbed Area Hydromesoriparian	0.36 acres
Disturbed Understory Hydromesoriparian	0.06 acres
Total Disturbed Area Hydromesoriparian	0.42 acres
Riparian Mitigation Area Required	0.63 acres x 70% Reduction = 0.44 acres
Riparian Mitigation Area Provided	0.44 acres (4 areas)
Mitigation Multiplier	1.5:1
Trees Required @ 90 per acre**	49 Trees--25 @15 gallon, 24 @5 gallon
Shrubs Required @ 100 per acre**	54 Shrubs--27 @5 gallon, 27 @1 gallon
Plus Native Seeding the newly planted areas to make a riparian vegetation community.	

\*\* Tree and Shrub Mitigation Plantings are based on the completely disturbed area of 0.36 acres. The partially disturbed understory area of 0.06 acres will be native seeded only.

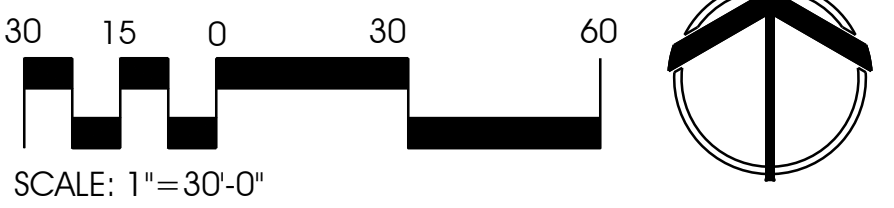
REGULATED RIPARIAN HABITAT NOTES

1. This project site contains Regulated Riparian Habitat (RRH). The site contains habitat mapped as Hydromesoriparian. Some areas of the site have been previously disturbed or will be disturbed. Avoidance of this impact is not possible.
2. The Hydromesoriparian area totals 2.06 acres. One area of disturbance has been identified totalling 0.42 acres. It will be mitigated with riparian plantings per the Riparian Habitat Mitigation Plan (sheet #2).
3. The riparian mitigation plantings will be provided at the levels indicated in the Mitigation Standards and Implementation Standards, dated November 2011. The species selected for the tree, shrub, and native seed mix are a combination of plants found on site and from the approved plant lists. Because this site is located in an area between watersheds, plants were selected from the Black/Browley Wash (which the wash on this site drains into) and the Western Pima County. Many of the selected plants are on both approved plant lists.
5. Riparian Mitigation Plantings will be irrigated and maintained for five years per PCRFC requirements, see notes on page 2.
6. Riparian Mitigation Planting installation will be completed by the first growing season after construction.
7. Total site area is 4.13 acres.
8. Total area of Hydromesoriparian is 2.06 acres.
9. Total Hydromesoriparian mitigation area is 0.44 acres.

PLAN NOTES

1. This project site plan was obtained from Pima County MapGuide. The riparian habitat linework is also straight from MapGuide with no adjustments made.
2. The air photo shown on this plan is the 2016 photo from MapGuide and shows the current condition of the site. Other older photos were consulted and compared to the current conditions.

\* Per Phone Conversation With Brian Jones on 12/5/16, the Riparian Disturbance at the House and Storage Building was Determined to Have Occurred Before the Effective Date of the Ordinance Based on the 2000 Air Photo.

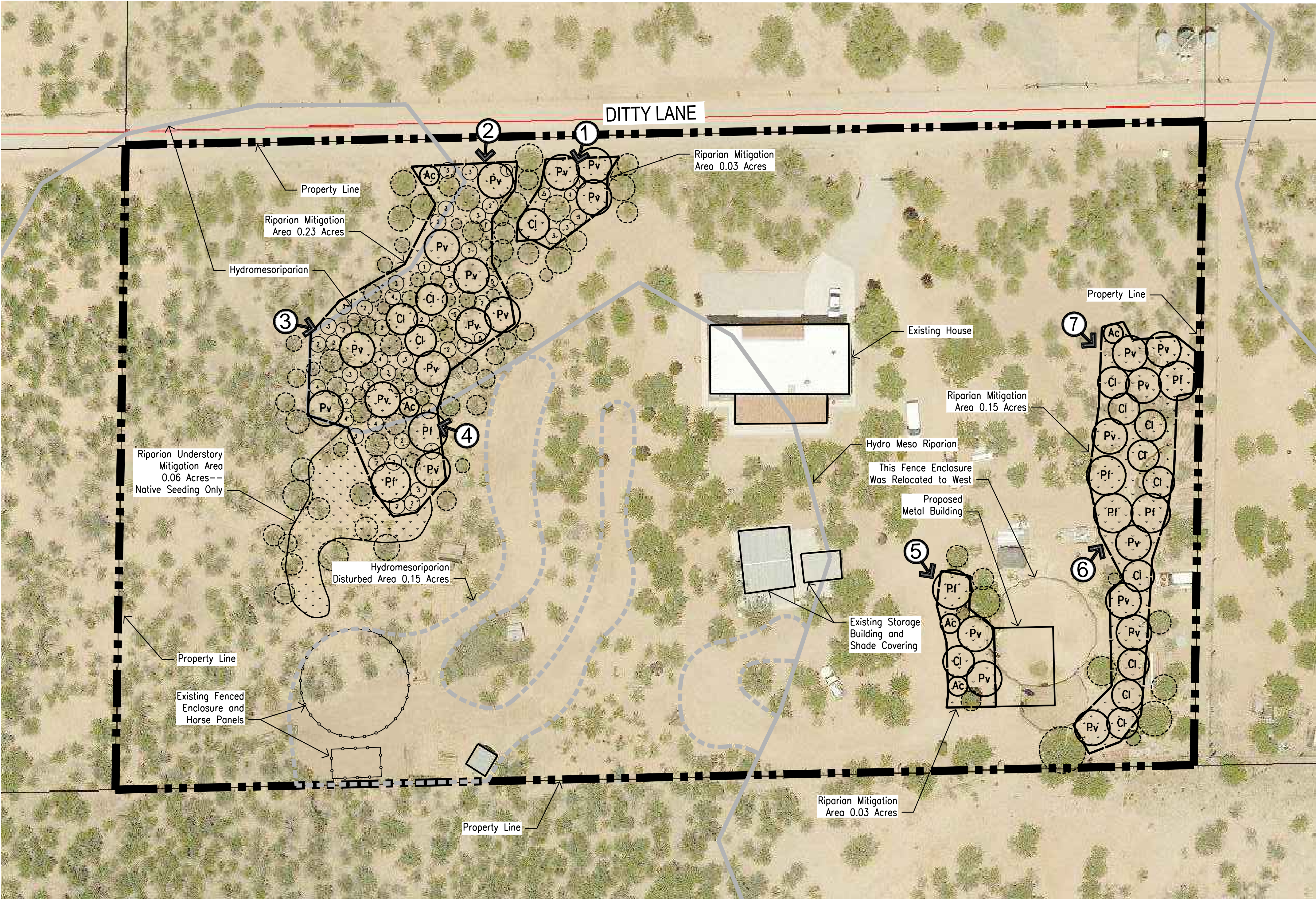


FPUP NO. P16FC00559  
ADDRESS: 11977 DITTY LANE

			Novak Environmental, Inc. 4574 North First Avenue #100 Tucson, AZ 85718 Phone 520.206.0591 Fax 520.882.3006 Landscape Architecture • Natural Resources • Planning • Mitigation		
			RIPARIAN HABITAT MITIGATION PLAN RIPARIAN HABITAT DISTURBANCE PLAN CRUZ RESIDENCE W549.62' E1750.39' M/L S327.74' N2 SE4 AKA E549.62' W1379.24' S327.74' LOT 25 TUCSON WEST RS 2 / 80 4.13 AC SEC. 4, T 15 S, R 11 E, G&SRM, PIMA COUNTY, ARIZONA		
NO.	REVISION	DATE	DESIGNED: TC	DRAWN: TC	CHECKED: KC
			DATE: FEBRUARY 2017	PROJECT NO.: 16034	SCALE: SEE PLAN
			SHEET RHMP-1 1 OF 2		



NOTICE OF DRAWING AUTHORIZATION: THIS DRAWING IS A COPYRIGHT PROTECTED DOCUMENT PRODUCED BY COMPUTER AIDED DESIGN AND DRAFTING TECHNIQUES. MULTIPLE AND/OR UNAUTHORIZED COPIES OF DRAWING DATA FILES MAY EXIST. ANY USE, REUSE OR MODIFICATION OF THE DRAWING OR ITS DATA FILES WITHOUT THE APPROPRIATE, AUTHORIZED, SIGNED, REGISTERED, LANDSCAPE ARCHITECT'S AND WRITTEN VERIFICATION BY ANOVA ENVIRONMENTAL IS PROHIBITED AND WILL BE AT THE USER'S RISK AND FULL LEGAL RESPONSIBILITY.



PLANT KEY

Botanical Name	Common Name	Quantity	Size
Existing Plants	Prosopis (mostly)		Various
Trees:			
Acacia constricta	Whitethorn Acacia	5	5@5 gallon
Chilopsis linearis	Desert Willow	14	7@15 gallon, 7@5 gallon
Parkinsonia florida	Blue Palo Verde	7	7@15 gallon
Prosopis velutina	Velvet Mesquite	23	11@15 gallon, 12@5 gallon
Total Riparian Mitigation Trees		49	
Shrubs:			
Anisacanthus thurberi	Desert Honeysuckle	6	1 gallon
Atriplex canescens	Fourwing Saltbush	18	5 gallon
Celtis pallida	Desert Hackberry	18	5 gallon
Larrea tridentata	Creosote Bush	6	5 gallon
Lycium andersonii var andersonii	Wolfberry	6	5 gallon
Total Riparian Mitigation Shrubs		54	

NATIVE SEED MIX

Botanical Name	Common Name	PLS per Acre
Shrubs:		
Celtis pallida	Desert Hackberry	1.0
Lycium andersonii var. andersonii	Anderson Wolfberry	1.0
Lycium fremontii	Fremont Wolfberry	1.0
Mahonia haematocarpa	Red Mahonia	1.0
Annuals/Perennials/Forbs:		
Ambrosia ambrosioides	Canyon Ragweed	1.0
Glandularia gooddingii	Goodding's Verbena	1.0
Lupinus sparsiflorus ssp. Mohavensis	Coulter's Lupine	1.0
Kallstroemia grandiflora	Arizona Poppy	1.0
Grasses:		
Aristida ternipes	Spidergrass	1.5
Bouteloua aristidioides	Needle Grama	1.0
Muhlenbergia rigens	Deer Grass	1.0
Sporobolus cryptandrus	Sand Dropseed	1.5
PLS = Pure Live Seed		

PLAN NOTES

1. This project site plan was obtained from Pima County MapGuide. The riparian habitat linework is also straight from MapGuide with no adjustments made.
2. The air photo shown on this plan is the 2016 photo from MapGuide and shows the current condition of the site. Other older photos were consulted and compared to the current conditions.

LEGEND

1. Photo point location arrow. Indicates position and direction of all future photos for monitoring report.

GENERAL NOTES:

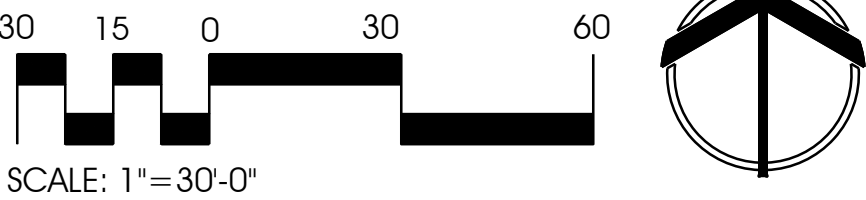
1. All on-site mitigation plantings shall be placed in mitigation areas as shown.
2. Irrigation will be provided to mitigation plantings for five years as part of the planting plans in order to facilitate tree and shrub establishment. Irrigation system shall be an underground water-conserving, automatically controlled drip irrigation system.
3. Planted mitigation areas shall be native seeded with a PCFCD approved seed mix as shown on this sheet. The seed mix shall contain a minimum of 12 species with 4 being shrubs, 4 being annuals and perennials, and 4 being native grasses.
4. The property owner, and/or the owner's successors, agree to preserve and protect the mitigation area for the duration of the project. Further, the project owner and/or successors agree to actively maintain the mitigated area for a period of not less than five years. Maintenance activities shall include, but not be limited to, the regular inspection and repair of the irrigation system, the replacement of dead trees and shrubs, and the removal of noxious plant species.
5. Riparian Mitigation Planting installation will be completed by the first growing season after construction, 12/31/17.

6. Mitigation area(s) to be left in a natural state. No disturbance shall occur within the mitigation area(s) without RFCDD review and approval. Such disturbance includes, but is not limited to secondary impacts such as the presence of livestock, fencing, intensive landscaping, etc.
7. Once plants have established (approximately 1 to 3 years after installation), supplemental irrigation will be decreased in accordance with Appendix C of the Guidelines (page C-12).
8. 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 implementation of the riparian habitat mitigation plan (RHMP). Any changes from the approved RHMP shall be noted on the monitoring plan submittal. Submittals shall be labeled "Annual Monitoring Report for P12XX-XXX" and sent to the following address:

Pima County Regional Flood Control District  
ATTN: Floodplain Management Division Staff  
201 North Stone Avenue, 9th Floor  
Tucson, AZ 85701

MITIGATION AREA GRADING NOTES:

1. Riparian habitat mitigation areas shall be depressed 6" to provide supplemental irrigation via water harvest.
2. The area to be depressed shall be approximately the same size and configuration as the native seed areas.
3. The depressed areas shall be worked around any existing native plants within the mitigation areas. The depressed areas shall be set back 2' from the edges of shrubs, and 8' from the trunks of trees.
4. Depressed areas shall have rounded transitions to provide a smooth, natural appearance.



FPUP NO. P16FC00559  
ADDRESS: 11977 DITTY LANE

	NOVAK ENVIRONMENTAL, INC. 4574 North First Avenue #100 Tucson, AZ 85718 Phone 520.206.0591 Fax 520.882.3006 Landscape Architecture • Natural Resources • Planning • Mitigation				
	RIPARIAN HABITAT MITIGATION PLAN RIPARIAN HABITAT MITIGATION PLAN CRUZ RESIDENCE				
	W549.62' E1750.39' M/L S327.74' N2 SE4 AKA E549.62' W1379.24' S327.74' LOT 25 TUCSON WEST RS 2 / 80 4.13 AC SEC. 4, T 15 S., R 11 E, G&SRM, PIMA COUNTY, ARIZONA				
	DESIGNED: TC	CHECKED: TC	SCALE: SEE PLAN	SHEET RHMP-2 2 OF 2	
NO.	REVISION	DATE	PROJECT NO.: 16034	DATE: FEBRUARY 2017	