

Appendix A: Arizona Game and Fish Department Report, Page 9

Arizona Game and Fish Department
Project ID: HGIS-00626

project_report_linda_vista_93_12465_12544.pdf
Review Date: 2/18/2015 03:35:31 PM

Project Type: Development Outside Municipalities (Rural Development), Residential subdivision and associated infrastructure, New construction

Project Type Recommendations:

Fence recommendations will be dependant upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 48" minimum height on the bottom). Please refer to the Departments Fencing Guidelines located on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, centered, or out to ensure that light reaches only areas needing illumination.

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, <https://agriculture.az.gov/>. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, <http://www.usda.gov/wps/portal/usdahome>. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h_hunting_rules.shtml.

The construction or maintenance of water developments should include: incorporation of aspects of the natural environment and the visual resources, maintaining the water for a variety of species, water surface area (e.g., bats require a greater area due to in-flight drinking), accessibility, year-round availability, minimizing potential for water quality problems, frequency of flushing, shading of natural features, regular clean-up of debris, escape ramps, minimizing obstacles, and minimizing accumulation of silt and mud.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

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Based on the project type entered, coordination with State Historic Preservation Office may be required (<http://azstateparks.com/SHPO/index.html>).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches.

Communities can actively support the sustainability and mobility of wildlife by incorporating wildlife planning into their regional/comprehensive plans, their regional transportation plans, and their open space/conservation land system programs. An effective approach to wildlife planning begins with the identification of the wildlife resources in need of protection, an assessment of important habitat blocks and connective corridors, and the incorporation of these critical wildlife components into the community plans and programs. Community planners should identify open spaces and habitat blocks that can be maintained in their area, and the necessary connections between those blocks to be preserved or protected. Community planners should also work with State and local transportation planning entities, and planners from other communities, to foster coordination and cooperation in developing compatible development plans to ensure wildlife habitat connectivity. The Department's guidelines for incorporating wildlife considerations into community planning and developments can be found on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

Design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Reduce/minimize barriers to allow movement of amphibians or fish (e.g., eliminate falls). Also for terrestrial wildlife, washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise, while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Guidelines for culvert designs to facilitate wildlife passage can be found on the home page of this application at <http://www.azgfd.gov/hgis/guidelines.aspx>.

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (<http://www.azdeq.gov/>).

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<http://www.azwater.gov/azdwr/default.aspx>).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (<http://www.usace.army.mil/>).

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly, PEP@azgfd.gov

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Project Location and/or Species Recommendations:

HDMS records indicate that one or more native plants listed on the Arizona Native Plant Law and Antiquities Act have been documented within the vicinity of your project area. Please contact:

Arizona Department of Agriculture

1688 W Adams St.

Phoenix, AZ 85007

Phone: 602.542.4373

<https://agriculture.az.gov/environmental-services/np1>

HDMS records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the U.S. Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <http://www.fws.gov/southwest/es/arizona/> or:

Phoenix Main Office Tucson Sub-Office Flagstaff Sub-Office

2321 W. Royal Palm Rd, Suite 103 201 N. Bonita Suite 141 SW Forest Science Complex

Phoenix, AZ 85021 Tucson, AZ 85745

2600 S. Pine Knoll Dr.

Phone: 602-242-0210 Phone: 520-670-6144

Flagstaff, AZ 86001

Fax: 602-242-2513 Fax: 520-670-6155 Phone: 928-556-2157

Fax: 928-556-2121

HDMS records indicate that Sonoran Desert Tortoise have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at:

<http://www.azgfd.gov/hgis/pdf/Tortoisehandlingguidelines.pdf>

Appendix B: Archaeological Records Search, page 1



Arizona State Museum
THE UNIVERSITY OF ARIZONA
1013 E. UNIVERSITY BLVD.
TUCSON, AZ 85721

PIMA COUNTY ARCHAEOLOGICAL SUMMARY LETTER

**This report documents the results of an archaeological site-records check. It does not constitute a cultural resources clearance.*

Date: 7/7/2016	Requester Name: Clay Goodwin
Company: The WLB Group, Inc.	Address: 4444 E. Broadway Blvd.
Phone: 520-881-7480	Email: cgoodwin@wlbgroup.com
Legal Description: T12S, R13E, S20 & S21	Project Area Location: 225-02-002E & 001B, 225-04-014G
Project Name: Linda Vista 77	Project Description: Rezoning from SR to CR-1

Search Results:

According to a search of the archaeological site files and records retained at the Arizona State Museum (ASM), approximately 43 previous survey projects were conducted within a one-mile radius of the project area between 1975 and 2014. Previous survey work was conducted in support of residential and commercial development; academic research; park construction; road construction and improvements; wash repair and stabilization; and the installation and maintenance of cable, sewer, water, transmission, and gas lines. All of parcels 225-02-002E and 225-02-001B were surveyed in 1981 as part of the Northern Tucson Basin archaeological research project (Fish et al. 1992, Madsen et al. 1993). No portion of 225-04-014G has been subject to previous archaeological investigation. Six archaeological properties have been recorded within a 1-mile radius of the project area; however, no archaeological properties are crossed by the project area.

Archaeological Properties in Project Area:

No archaeological properties are identified; but the entire project area has not been subject to archaeological survey.

Recommendations and Responsibilities:

1. Although parcels 225-02-002E and 225-02-001B have been previously surveyed, the work was conducted 35 years ago (Fish et al. 1992, Madsen et al. 1993). It is standard archaeological practice for a property to be re-surveyed if the previous survey was conducted 10 or more years ago, as there is a possibility for unidentified archaeological properties to have since been exposed. ASM recommends, but it is not required by ASM, that a qualified archaeological contractor be consulted before any ground-disturbance begins.
2. Because Pima County has jurisdiction in this project area, the county will make recommendations for the project using its own search results and it may use the ASM's search results and / or others. Should the county require additional archaeological work in this parcel, you will need to contact a qualified archaeological contractor. A list of archaeological contractors is available on the ASM website at: <http://www.statemuseum.arizona.edu/crservices/permits/index.shtml>.
3. Pursuant to Arizona Revised Statutes §41-865, if any human remains or funerary objects are discovered during your project work, all work will stop within the area of the remains and Dr. Todd Pitzel, ASM assistant curator of archaeology, will be contacted immediately at (520) 621-4795.

If you have any questions about the results of this records search, please contact me.

Sincerely,


Shannon D. Twilling, M.A.
Research Specialist
Archaeological Permits Office
Arizona State Museum
(520) 621-2096
twilling@email.arizona.edu

☐ This project occurs within or close to the boundary of a known cultural resource. This project requires Pima County Office of Archaeology & Historic Preservation review.

Appendix B: Archaeological Records Search, page 3

References

Fish, Suzanne K., Paul R. Fish, and John H. Madsen (editors)

1992 *The Marana Community in the Hohokam World*. Anthropological Papers of the University of Arizona No. 56. University of Arizona Press, Tucson.

Madsen, John H., Paul R. Fish, and Suzanne K. Fish (editors)

1993 *The Northern Tucson Basin Survey: Research Directions and Background Studies*. Arizona State Museum Archaeological Series No. 182. Arizona State Museum, University of Arizona, Tucson.

Appendix B: Archaeological Records Search, page 2



Location of proposed project area.

August 18, 2017



Brian Sabri
The WLB Group, Inc.
4444 E. Broadway Blvd.
Tucson, AZ 85711

**Re: ±64.15 Acres at the SWC of Linda Vista Blvd and Shannon Road
(PN 225-02-002E & 225-02-001B)
CAP17-05**

Dear Mr. Sabri,

The above properties lie adjacent to the legal boundary of the Metropolitan Domestic Water Improvement District (MDWID), designated as having a 100-year assured water supply. The MDWID has existing water facilities along the south and east boundaries of these parcels as shown on the enclosed map. With the receipt of enclosed direction by the City of Tucson Water to pursue other providers for water service, the MDWID is agreeable to extending service to these areas subject to the conditions noted below.

Any onsite or offsite requirements deemed necessary to provide the domestic and fire flow water supply will be determined at the time of improvement plan submittal or whenever application for water service is received, and will be the financial responsibility of the owner or those developing the property. Pipe sizing and system augmentation, if necessary, will be based on calculated demand for both domestic and fire flows as needed to adequately supply this area. The MDWID will also require the subject properties be annexed within our legal boundaries as a condition of providing water service.

As an additional condition of water service, the MDWID will require a 15 foot public water easement for a future pipeline to be dedicated along the Linda Vista Blvd. alignment, located adjacent to and south of the total 150 foot right-of-way line of the current Pima County Major Streets & Scenic Routes Plan. The MDWID will also require dedication of a 35 foot permanent construction and maintenance easement adjacent to and north of the public water easement, which would either terminate upon dedication of additional Linda Vista public right-of-way, or when dedicated for use by utilities in common area per the plat. Dedication of all easements will need to occur at or before annexation into the MDWID.

If an improvement plan has not been submitted within 2 years after the date of this letter, a reevaluation and reissuance of this will-serve letter will be necessary.

Please let me know if you have any questions or concerns at 575-8100.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy Dinkel", is written over a horizontal line.

Timothy Dinkel, P.E.
Civil Engineer

Enclosures

c: Project File / Sheila Bowen, District Engineer
Metropolitan Domestic Water Improvement District
P.O. Box 36870 Tucson, Arizona 85740 (520) 575-8100 (520) 575-8454 FAX www.metrowater.com

LINDA VISTA BOULEVARD





August 18, 2017

Brian Sabri
The WLB Group, Inc.
4444 E. Broadway Blvd.
Tucson, AZ 85711

**Re: ±18.72 Acres at the SEC of Linda Vista Blvd and Shannon Road (PN 225-04-014G)
CAP17-04**

Dear Mr. Sabri,

The above property lies within the legal boundary of the Metropolitan Domestic Water Improvement District (MDWID) obligated service area. Water service is potable and will be supplied upon demand subject to the conditions noted below.

Any onsite or offsite requirements deemed necessary to provide the domestic and fire flow water supply will be determined at the time of improvement plan submittal or whenever application for water service is received, and will be the financial responsibility of the owner or those developing the property. Pipe sizing and system augmentation, if necessary, will be based on calculated demand for both domestic and fire flows as needed to adequately supply this area.

As an additional condition of water service, the MDWID will require a 15 foot public water easement for a future pipeline to be dedicated along the Linda Vista Blvd. alignment, located adjacent to and south and east of the future 120 foot right-of-way line (45 feet south of section line) to the west, and adjacent to and south of the future 90 foot right-of-way line (15 feet south of the section line) to the east. The MDWID will also require dedication of a 35 foot permanent construction and maintenance easement adjacent to and north of the public water easement on the west side, and a 15 foot permanent construction and maintenance easement adjacent to and north of the public water easement on the east side (to existing right-of-way), which would terminate upon dedication of this additional Linda Vista public right-of-way. Dedication of all easements will need to occur prior to the expiration of this letter or upon recordation of the subdivision plat, whichever occurs first.

If an improvement plan has not been submitted within 2 years after the date of this letter, a reevaluation and reissuance of this will-serve letter will be necessary.

Please let me know if you have any questions or concerns at 575-8100.

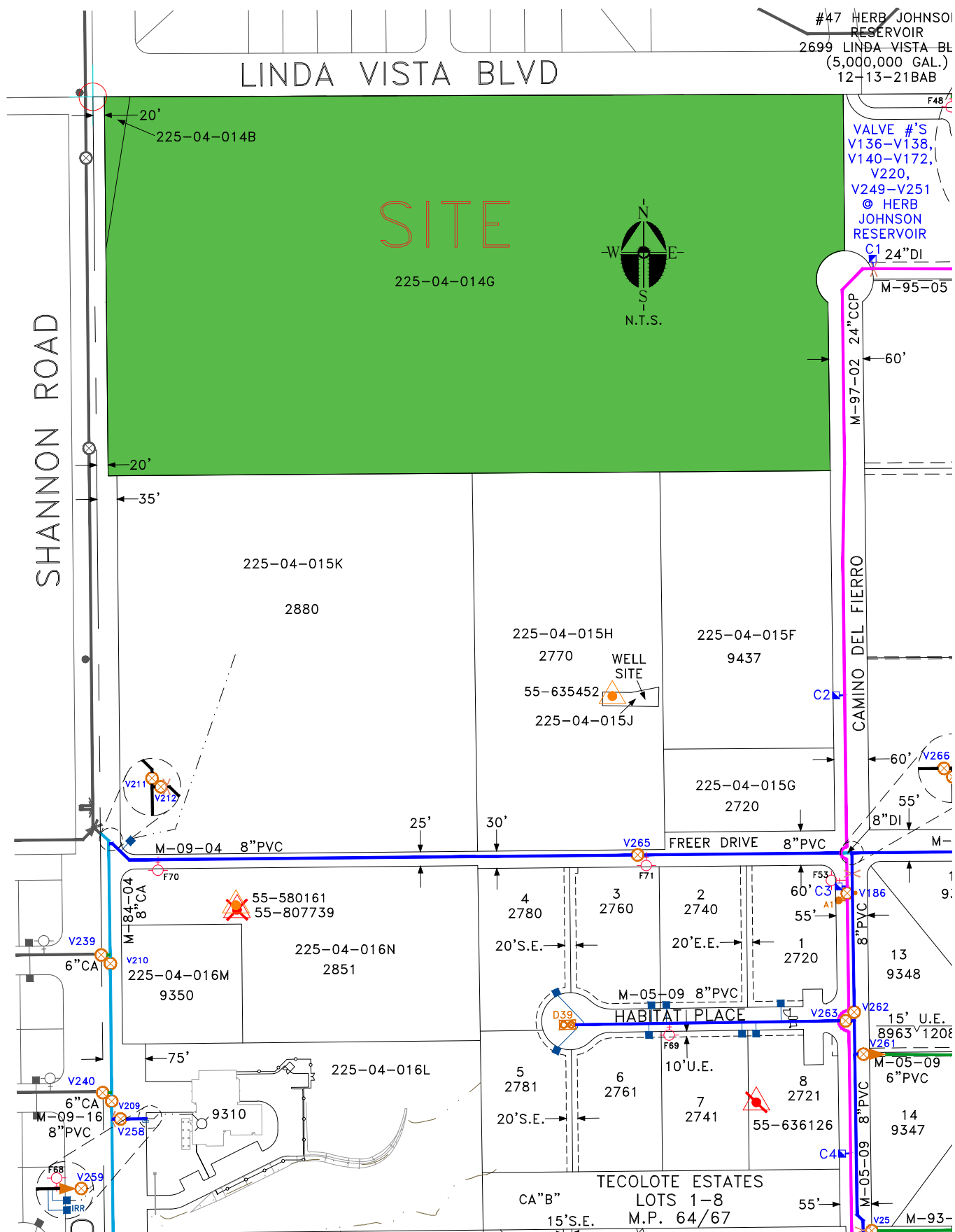
Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy Dinkel", is written over a light blue circular stamp. The signature is fluid and cursive.

Timothy Dinkel, P.E.
Civil Engineer

Enclosures

c: Project File / Sheila Bowen, District Engineer





Appendix C: City of Tucson Water Department Letter

March 10, 2015



CITY OF
TUCSON
TUCSON WATER
DEPARTMENT

WLB Group
4444 E Broadway Blvd
Tucson, AZ 85711

Attn: Robert Kirschmann

**SUBJECT: Water Availability for project: Shannon Rd. & Linda Vista Blvd, APN:
22504014G, 22502002E, 22502001B, Case #: WA1717, T-12, R-13, SEC-21, Lots: 9999,
Location Code: UNI, Total Area: 78.2ac**

Our records indicate the subject project lies within the service area of another water provider.
Therefore Tucson Water cannot commit water service to this project.

Please contact the Arizona Corporation Commission at 628-6550 to determine the appropriate
water provider to contact with your request for water service.

If you have any questions, please call me at New Development at 791-4718.

Sincerely,

A handwritten signature in cursive script that reads "Richard A. Sarti".

Richard A. Sarti, P.E.
Engineering Manager
Tucson Water Department

RS:ka
CC: File



P.O. BOX 27320 • TUCSON, AZ 85726-7320
(520) 791-3242 • FAX: (520) 791-5466 • TTY (520) 791-2639 • www.cityoftucson.org



Appendix D: Pima County Wastewater Reclamation Department Letter

JACKSON JENKINS
DIRECTOR



PH: (520) 724-6500
FAX: (520) 724-9635

June 28, 2016

Linda Thompson
The WLB Group, Inc
4444 E Broadway
Tucson, Arizona 85711

Sewerage Capacity Investigation No. 2016-165 Type I

**RE: Linda Vista 77, Parcels 22502002E, 22502001B, 22504014G
Estimated Flow 23,760 gpd (ADWF).**

Greetings:

The above referenced project is tributary to the Tres Rios Wastewater Reclamation Facility via the Cañada Del Oro Interceptor.

Capacity is currently available for this project in the public sewer G-84-024, downstream from manhole 4201-20-8, and in I-86-206, downstream from manhole 4514-03.

This letter is not a reservation or commitment of treatment or conveyance capacity for this project. It is not an approval of point and method of connection. It is an analysis of the system as of this date and valid for one year. Allocation of capacity is made by the Type III Capacity Response.

If further information is needed, please feel free to contact us at (520) 724-6642.

Reviewed by: Kurt Stemm, CEA Sr.

Appendix E: Amphitheatre Unified School District



OFFICE OF LEGAL COUNSEL

(520) 696-5155
FAX (520) 696-5074

701 W. Wetmore Road • Tucson, AZ 85705 • (520) 696-5000 • TDD (520) 696-5055

GOVERNING BOARD MEMBERS

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December 23, 2016

Brian Sabri
Staff Planner
The WLB Group, Inc.
4444 E Broadway Blvd
Tucson AZ 85711-3508

**RE: Proposed Development of 35 single family homes on
approximately 18 acres within the Amphitheater District
South of Linda Vista Blvd/East of Shannon Rd**

Dear Mr. Sabri:

I am responding to your request for information regarding the capacity of Amphitheater schools impacted by your proposed development.

Using 2000 demographic multipliers developed by the U.S. Department of Census, Bureau of Census, and adjusted for Amphitheater District's school organizational patterns, we project the following student populations to result from this project when built:

<u>Academic Level</u>	<u>35 Single Family Homes</u>
Elementary	7
Middle	8
High School	5

The census multipliers we use to obtain these projections are 0.2075 elementary students per household, 0.2197 middle school students per household and 0.1282 high school students per household.

The capacity noted below is based on today's school enrollment. The schools which would be impacted by your project's proposed enrollment are listed below, along with the physical capacity available at each school *presently*. Please note that these schools will also be impacted by other developments in this area which may have already been approved by the Council but which are not yet built.

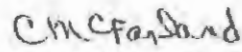
Amphitheater High • Canyon del Oro High • Ironwood Ridge High
Amphitheater Middle School • Coronado K-8 School • Cross Middle School • La Cima Middle School • Wilson K-8 School
Copper Creek Elementary • Donaldson Elementary • Harelson Elementary • Holaway Elementary • Keeling Elementary • Mesa Verde Elementary
Nash Elementary • Painted Sky Elementary • Prince Elementary • Rio Vista Elementary • Walker Elementary • Rillito Center • El Hogar

Appendix E: Amphitheatre Unified School District

<u>School Name</u>	<u>School Capacity</u>	<u>Spaces Currently Available</u>
Mesa Verde Elementary	700	301
Cross Middle	900	249
Canyon del Oro High	2500	858

If I can provide any additional information, please feel free to contact me.

Sincerely,



Connie R. McFarland
Legal Assistant

Appendix E: Marana Unified School District Letter

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Carolyn Dumeier, Ed.D., Assistant Superintendent
Kristin Reidy, Assistant Superintendent
Dan Contorno, Chief Financial Officer



12-7-16

Drian Sabri
The WLB Group, Inc
4444 E Broadway Blvd
Tucson, AZ 85711

Re: 94 homes on 78.6 acres south of Linda Vista, east and west of Shannon

In reference to your request for school district comments and capacity evaluation of the proposed property development in Pima County for a residential subdivision on approximately 78.6 acres east and west of Shannon Road south of Linda Vista in Pima County Arizona, Marana Unified does have capacity to support the projected families. The Marana Unified School District currently uses a factor of .25 per home for elementary and .1 per home secondary. Your anticipated 94 homes could have a positive impact of 24 elementary students and 10 secondary students.

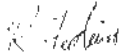
These students can be supported by Ironwood Elementary, Tortolita Middle School, and Mountain View High School. Even the students on the east side of Shannon can be supported by our schools should those families make the good choice to send their students to Marana Unified. All schools have capacity for the impact this proposed development may have on our student population.

In regards to the site location, Marana Unified would like to meet with the site planners soon and discuss site development. We are making plans to improve traffic at Ironwood Elementary and want to ensure our efforts work with the proposed development. Please contact Russ Federico at 520-616-4521 to set this up.

Thank you for your interest in developing homes and businesses in our community. The Town of Marana and Marana Unified School District mutually agree that one of the keys to the continued success of our wonderful community is the quality of our children's education. This belief is held so strongly that we have multiple developers providing the school district with rooftop development funds as they increase the number of properties being built in our community. The district uses these funds to ensure as we grow they are able to provide the necessary infrastructure to support the presentation of an inspiring education. Your participation in this process is an invaluable investment in our community. Please contact the Marana Schools finance office at (520-682-4756) to learn more about your participation.

Please contact Dan Contorno at 520-682-4756, or myself at 520-616-4521 if you have any further questions.

Thank You,



Russell Federico, M.Ed.
Executive Director of Operational Support
Marana Unified School District
11249 W. Grier Rd. Suite 101
Marana, AZ 85653
520-682-4707
Fax 520-682-2514
r.a.federico@maranahausd.org

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Appendix F: Preliminary Integrated Water Management Plan (PIWMP)

Preliminary Integrated Water Management Plan (PIWMP)

This document has been prepared in association with a zone change request that is being submitted to Pima County for the Desert Senna project. A Preliminary Integrated Water Management Plan (PIWMP) is required pursuant to the Pima County Comprehensive Plan Water Resources Element as amended by the Board of Supervisors on April 1, 2008 (Co7-07-04; Resolution 2008-72) for all properties submitted for consideration of rezoning that require the submittal of a Site Analysis.

As such, please find the following responses to the questions posed by the PIWMP.

1. WATER CONTEXT MAP

The water context map must be at a scale appropriate to show the property in adequate detail relative to the existing roadways and other developments. Depicting the location of the proposed project on an aerial photo is preferred. This map must include the sectional breakout and Pima County parcel number. Provide exhibits showing the property in both a regional and local context. The latter should show the site at a scale which accurately details the surrounding properties and existing land uses if any.

The subject property is currently vacant.

The property consists of the following tax parcel numbers:

- 225-02-001B
- 225-02-002E
- 225-04-0146

The current Pima County Comprehensive Plan land use categories or the site consist of the following:

- 78.6 acres of Low Intensity Urban 0.3 (LIU-0.3)

Existing Land Use within ¼ mile

North: Low density single-family residential and vacant land.

Northeast: Medium density single-family residential.

East: Low density single-family residential.

Southeast: Low density single-family residential and vacant land.

South: Medium density single-family residential.

Southwest: Medium density single-family residential and vacant land.

West: Medium density single-family residential.

Northwest: Vacant land.

Refer to Exhibit 1 Water Context Map.

2. BRIEF DESCRIPTION OF PROPERTY'S EXISTING AND HISTORIC WATER USE

A brief description of historic and existing water use is required.

The site is vacant and has had no previous water use.

3. DESCRIPTION OF PROPERTY'S PROPOSED WATER USE

A general description of the proposed land uses as they relate to water use is to be provided in this section. Elements of the land use plan that contribute to projected water demand, including but not limited to irrigated recreation area or landscape, water features, etc. must be described in this section. Phasing considerations should be discussed to the extent that phasing is relevant to the proposed water usage.

The Linda Vista & Shannon project is a proposed 78.6-acre subdivision consisting of medium density residential lots and natural open areas. Currently, the subject properties remain undeveloped. The Linda Vista & Shannon project will increase the density of the current designated residential land use but remain out of the protected natural open areas.

Beyond normal medium residential household water use the Linda Vista & Shannon project will also have irrigated landscaping throughout the project which will have a minimal effect on overall water usage.

4. DESCRIPTION OF WATER SUPPLY OPTIONS AND PROPOSED METHOD OF DELIVERY

This section should address the proposed water supply for the project.

A. If the proposed water supply is from an existing Municipal water provider:

A1. Does the Municipal Provider or applicant have legal or physical access to a renewable and potable water supply? If the provider or applicant does not currently have legal or physical access to a renewable and potable water supply, identify all other renewable and potable supplies available to the applicant/project.

This project will be served by Metro Water. A 24" CCP line is located along Camino Del Fierro, the eastern boundary of the site, and an 8" PVC line is located along Freer Drive.

Is the property within current defined area of the Municipal Provider? Is the property within the planned expansion service area or Certificate of Convenience and Necessity of the Municipal Provider?

The property is located in the Metro Water obligated service area.

Refer to Exhibit 1 Water Context Map.

A2. Provide written documentation of the provider's existing or planned service capacity to the property or area. (It is understood that this documentation is not likely to be a "will-serve" letter).

The property is located in the Metro Water obligated service area and a letter from Metro water is attached.

Please see Appendix C

A3. An exhibit must be included that shows the location of the property and the potential point(s) of connection.

The site will likely connect to the existing water lines located in Shannon Road. Exhibit 4-Proposed Water Supply shows the surrounding waterlines.

B. If water supply for the development is not proposed to be from an existing Municipal Provider, include a brief discussion of the supply system proposed to provide for the anticipated water demand (e.g., annexation, creation of a non-adjacent provider, exempt well or well-share program with conceptual location of well(s), storage, etc.).

Not applicable.

5. WATER DEMAND PROJECTIONS

A. Provide a discussion of the project's Estimated Water Demand consistent with the requested zoning and proposed land use. The Estimated Baseline Water Demand is to be discussed and quantified without consideration of water conservation measures. Estimates are to be expressed in acre-feet/year and derived according to Table A: estimated Baseline water demand for residential Land Uses.

Based upon the project demand table we have determined that the total demand will be 40± acre feet of water per year for all 94 SFR lots.

B. Water Conservation Measures are required to be included as part of the proposed project. The application of water conservation measures should achieve a significant reduction in the project's total water consumption and must employ both indoor and outdoor conservation measures.

The following water conservation measures will be utilized for this project:

- Install lavatory faucets that contain the label "WaterSense," a program sponsored by the EPA, or have a maximum flow rate of 1.5 gpm.
- Install showerheads that contain the "WaterSense," a program sponsored by the EPA, or have a maximum flow rate of 1.5 gpm.
- Install toilets that contain the "WaterSense," a program sponsored by the EPA, or have a maximum flow rate of 1.6 gallons per flush.
- Install drought tolerant landscape materials.
- Provide for water recharge/retention in common areas.
- Install a high efficiency irrigation system with automatic timers and drip irrigation, wherever possible.

6. PROXIMITY TO RENEWABLE AND POTABLE WATER SUPPLIES

If the project's Estimated Baseline Water Demand equals or exceeds 50 acre-feet/year and the proposed project does not have legal, physical, or planned access to renewable and potable supplies, map the location of the property relative to the boundaries of nearby water service provider(s) with legal, physical or planned access to potable and renewable water supplies. Generally identify the closest available point of connection. You will have to contact the individual water provider to find the point of connection.

This section does not apply for the following reasons: (1) The project will be served by Metro Water; (2) the project has legal access to renewable and potable supplies; (3) and the project's water demand is less than 50 acre-feet per year.

ITEMS 7-11

Per the Preliminary Integrated Water Management Plan requirements, sections 7-11 of the PIWMP are not applicable due to an existing Municipal Provider providing legal access to renewable and potable water to this development, no new wells will be drilled to serve this development, and there will be no increase in pumping of any existing wells within one quarter mile of the boundary of the property to serve this development.

Table B - Water Conservation Measures

Indoor and Outdoor Options

(15-point Minimum; Must include at least one Outdoor Conservation Measure)

Indoor Options		Possible Points	Points Achieved
I-1	Install grey water plumbing lines, labeled and stubbed out to exterior of residence	1	
I-2	Install a "central-core" plumbing system with all water-using fixture fittings ≤5 ft. from HW heater	1	
I-3	Install a manifold "home run" structured plumbing system; with fixtures ≤ 10 ft. of circulation loop & branch lines ≤ 1/2" in diameter	2	
I-4	Install a manual or motion activated on-demand hot water circulation pumping system	2	
I-5	Install a point-of-use tankless hot water heater that uses only cold water supply or solar-assisted preheating for any fixture > 20 pipe run feet from water heater		
I-6	Install lavatory faucets that meet the proposed EPA's WaterSense™ criteria or have a maximum flow rate of 1.5 gpm @ 80 psi of pressure	3	3
I-7	Install showerheads that meet the proposed EPA's WaterSense™ criteria or have a maximum flow rate of 1.5 gpm @ 80 psi of pressure	3	3
I-8	Install toilets that meet the EPA's WaterSense™ rating (1.28 gpf) OR	3	3
I-9	Install dual flush toilets with 1.6 gpf/.8 gpf or less water use	3	
I-10	Install a washing machine with a water factor of 6.0 or less	2	
I-11	Install composting toilet(s), 2 pts/fixture; no maximum	2	
I-12	Install a refrigerator with an in-door filtered water system	0.5	
I-13	Install excess flow check valves or excess water shutoff connectors at fixtures	3	
I-14	No garbage disposal	1	
Outdoor Options			
O-1	Install a rainwater harvesting system capable of retaining and storing 50% or more of the average annual available rainfall on the catchment surface. (min. Catchment Area = 500 ft.)	6	
O-2	Install a rainwater harvesting system capable of retaining and storing 25% or more of the average annual available rainfall on the catchment surface. (min. Catchment Area = 500 ft.)	4	
O-3	Install a rainwater harvesting system capable of retaining and storing 10% or more of the average annual available rainfall on the catchment surface. (min. Catchment Area = 500 ft.)	2	2
O-4	Install a gutter and downspout system or canals that tie to storm water infiltration trenches, bioswales, or rain gardens	2	
O-5	Install grey water plumbing lines, labeled and stubbed out to exterior of residence, but with connection to an onsite landscaping drip irrigation system	2	
O-6	No swimming pool	2	
O-7	No decorative water features or mister systems that use potable water.	1	
O-8	Impervious driveway & walkway surfaces shall be <5% of total site area (≤ 5 acres); OR 1% of the site area (over 5 acres)	2	
O-9	Construct no impervious surfaces outside the building footprint	2	
O-10	Install a vegetative roof system (min 50% of roof area) to reduce impervious surfaces	3	
O-11	Install drought-tolerant, non-irrigated landscaping design by a licensed landscape professional	3	3
O-12	Install drought-tolerant, non-irrigated landscaping design by a licensed landscape professional. Plant species limited to native plants only.	4	
O-13	Irrigation system designed and installed by an EPA Watersense™ certified professional	1	
O-14	Provide recharge/retention plan for rainwater	1	
O-15	Install a high efficiency irrigation system that uses:		
	a. "Smart Controllers" (w/ moisture sensor and rain delay controllers) & high efficiency nozzles;	0.5	
	b. Check valves in heads and heads matched to the beds distinct watering needs;	0.5	
	c. Separate sprinkler zones for beds, with plants grouped based on watering needs (hydrozoning);	0.5	
	d. A timer/controller that irrigates during the hours of 1- pm-8am to minimize evaporation;	0.5	.5
	e. Drip irrigation for all planting beds;	0.5	.5

ISSUED: 4/05	STANDARD DETAIL LOCAL STREET URBAN RESIDENTIAL SUBDIVISION ALTERNATIVE 1	DETAIL NO. 8A
REVISED: 12/15	○ OR AS DETERMINED BY UTILITY COMPANIES □ WHERE APPLICABLE □ MUST EXTEND 5' BEYOND CATCH POINT * THE CROWN SHALL BE AT C* OF PAVEMENT	

ISSUED:		STANDARD DETAIL	LOCAL STREET URBAN RESIDENTIAL SUBDIVISION ALTERNATIVE 1	8A	DETAIL NO.
4/05					
REVISED:					
12/15					

Appendix G: Typical Cross Section for On-Site Rights-Of-Way

