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NEW APPLICATION

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AZ CORP COMMISSION
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Arizona Corporation Commission

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4 Liberty Utilities
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Suite D-101
6 Avondale, AZ 85392
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8 Attorneys for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

9
10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (LITCHFIELD
12 PARK WATER & SEWER) CORP. FOR A
CERTIFICATE OF CONVENIENCE AND
13 NECESSITY TO PROVIDE WASTEWATER
UTILITY SERVICE IN MARICOPA
14 COUNTY, ARIZONA.

DOCKET NO: SW-01428A-15-0259

**APPLICATION FOR EXTENSION
OF CERTIFICATE OF
CONVENIENCE AND NECESSITY**

15 In accordance with A.A.C. R14-2-602, Liberty Utilities (Litchfield Park Water &
16 Sewer) Corp. ("Liberty" or "Applicant"), an Arizona public service corporation, applies to
17 the Arizona Corporation Commission ("Commission") for an order approving the
18 extension of Liberty's existing Certificate of Convenience and Necessity ("CC&N") for
19 wastewater utility service to include the Zanjero Trails development located in certain
20 defined portions of Maricopa County, Arizona.

ZANJERO TRAILS

21
22 1. Zanjero Trails is an approximately 1,740 acre property generally bound by
23 Camelback Road on the south, Peoria Avenue on the north, Perryville Road on the east
24 and the Beardsley Canal on the west. The Zanjero Trails property lies within Sections 4, 9
25 and 16 of Township 2 North, Range 2 West and in Sections 28 and 33 of Township 3
26 North, Range 2 West of the Gila and Salt River Meridian (the "Property").

1 The names, titles and mailing addresses for Liberty's officers and directors are also set
2 forth on the attached **Exhibit 1**. Applicant does not own an interest in any other utility
3 companies. Liberty's parent company owns five other public service corporations
4 providing water and wastewater utility service in Arizona.

5 6. Liberty's Certificate of Good Standing from the Commission is attached
6 hereto as **Exhibit 2**.

7 7. Liberty's management contact is Matthew Garlick, President, 12725 W.
8 Indian School Road, Suite D-101, Avondale, AZ 85392. Mr. Garlick's telephone number
9 is (623) 298-3763 and his email address is Matthew.Garlick@LibertyUtilities.com.

10 8. Liberty's operator certified by the Arizona Department of Environmental
11 Quality (ADEQ) is Clint Arndt, Senior Operations Manager, whose business address is
12 12725 W. Indian School Road, Suite D-101, Avondale, AZ 85392. Mr. Arndt's telephone
13 number is (623) 298-4824. Mr. Arndt also is the on-site manager for Liberty.

14 9. Liberty's attorneys for this application are as follows:

15 Jay L. Shapiro
16 SHAPIRO LAW FIRM
17 1819 E. Morten Avenue, Suite 280
18 Phoenix, Arizona 85020
Telephone: (602) 559-9575
Email: Jay@shaplawaz.com

19 Todd C. Wiley
20 Assistant General Counsel – Liberty Utilities
21 12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Telephone: (623) 240-2087
Email: Todd.Wiley@LibertyUtilities.com

22 All case filings, correspondence, data requests and/or other requests for information
23 should be directed to both Mr. Shapiro and Mr. Wiley, as well as to Whitney Birk at
24 whitney@shaplawaz.com.

25 10. The area covered by this Application is the Zanjero Trails Property, which
26 includes approximately 1,740 acres ("Extension Area") and is owned solely by MWD.

1 All property included within the Extension Area is part of the Zanjero Trails development.
2 As such, there are no landowners within the Extension Area who did not request an
3 extension of wastewater utility service by Liberty. The City of Buckeye and the City of
4 Goodyear are the closest municipalities. The City of Glendale, the City of Litchfield
5 Park, and the City of Surprise are located within five miles of the Extension Area.

6 11. The legal description for the Extension Area is attached as **Exhibit 3**.

7 12. The Master Wastewater Plan for Zanjero Trails (November 2014) prepared
8 by Hilgart Wilson LLC is attached as **Exhibit 4**. That Master Wastewater Plan includes a
9 complete description of the wastewater facilities proposed to be constructed for service to
10 Zanjero Trails in the Extension Area. The name of each county in which the Extension
11 Area is located and location of the Extension Area in relation to the closest municipalities
12 are set forth in **Exhibit 4**, Figure 1 (Vicinity Map). A complete description of the
13 facilities proposed to be constructed, including a preliminary engineering report and the
14 principal components of each sewer system is attached as **Exhibit 4**, Tables B.3 and B.4.

15 13. The estimated total cost for construction of facilities required to provide
16 wastewater service to the Extension Area is attached as **Exhibit 5**. Construction of the
17 offsite and onsite facilities will be financed through a combination of contributions and
18 advances in aid of construction (Hook-Up Feeds) made by MWD and/or subsequent
19 developers, as well as capital improvements (equity) paid by Liberty.

20 14. A general Statement of Financial Condition for Liberty is attached as
21 **Exhibit 6**.

22 15. For service to the Extension Area, Liberty will be charging its existing rates
23 and charges as approved by the Commission. A copy of Liberty's existing tariff schedule
24 is attached as **Exhibit 7**.

25 16. Liberty's estimated annual operating revenue and operating expenses for the
26 first five years of operation in the Extension Area is attached as **Exhibit 8**.

1 17. Phase 1 of Zanjero Trails is located in the southern portion of the Extension
2 Area (Camelback Road on the south, Bethany Home Road on the north, Perryville Road
3 on the east, and Beardsley Canal on the west) and is planned to contain 1,067 single
4 family homes. Construction of the first phase off-site and on-site wastewater facilities to
5 serve the development is estimated to begin within 12 months of receipt of Commission
6 approval of this CC&N Application and is expected to take approximately one year to
7 complete. The phase 1 on-site construction will be done on a parcel by parcel basis with
8 timing being associated with demand. All additional phases of Zanjero Trails will be
9 coordinated with actual market demands. A detailed description of the proposed
10 construction timeline for facilities and construction phases is attached as **Exhibit 4**,
11 pages 8-9.

12 18. The written request for extension of wastewater utility service to the
13 Extension Area by MWD as owner of the Property is attached as **Exhibit 9**.

14 19. Detailed maps of Liberty's existing wastewater CC&N area and the
15 Extension Area are attached as **Exhibit 10**. **Exhibit 10** includes five separate maps,
16 including (i) Zanjero Trails Liberty CC&N Expansion Map, (ii) Zanjero Trails Vicinity
17 Map, (iii) Zanjero Trails Land Use Plan, (iv) Zanjero Trails Wastewater Exhibit,
18 (v) Zanjero Trails Phasing Plan, (vi) CC&N Extension and Nearby Municipalities/Private
19 Sewer Providers within 1 Mile, (vii) CC&N Extension and Nearby Municipalities/Private
20 Sewer Providers within 5 Miles, and (viii) Appendix D to Zanjero Trails Master
21 Wastewater Plan. These maps show the Extension Area and municipal corporate limits
22 that overlap with or are within five miles of the Extension Area; and the Extension Area
23 and its relationship to the service areas of other public service corporations, municipalities
24 and/or districts currently providing water or wastewater service within one mile of the
25 Extension Area, with identification of the entity providing service and each type of service
26 being provided. These maps also include:

- 1 • the boundaries of the Extension Area, with the total acreage noted.
- 2 • the land ownership boundaries within the Extension Area, with the acreage
- 3 of each separately owned parcel within the Extension Area noted.
- 4 • the owner of each parcel within the Extension Area, which as noted above is
- 5 exclusively MWD.
- 6 • that there are not any known wastewater service connections that are already
- 7 being provided service by the Applicant within the Extension Area.
- 8 • the location of all parcels for which a copy of a request for service
- 9 has been submitted.

10 These maps further show the location of Zanjero Trails, the only proposed development
11 within the Extension Area, and the proposed location of the principal components of the
12 wastewater system planned for the Extension Area.

13 20. A copy of the form of notice to be sent to municipal
14 managers/administrators for municipalities within a five (5) mile radius of the Extension
15 Area is attached as **Exhibit 11**.

16 21. The Extension Area is already included within Liberty's Maricopa
17 Association of Governments ("MAG") 208 Water Quality Management Plan.

18 22. The estimated numbers of customers to be served during the first five years
19 of wastewater utility service to the Extension Area are shown in attached **Exhibit 12**.

20 23. Liberty is submitting a franchise application to the Maricopa County Board
21 of Supervisors concurrently with this filing. Liberty anticipates the franchise application
22 to go before the Board at the next formal meeting.

23 24. ADEQ Approvals to Construct issued for facilities to be constructed in the
24 Extension Area will be provided to the Commission as soon as Liberty receives them.

25 25. The Extension Area is currently within EPCOR's water service area.
26 Applicant will treat all wastewater generated within the Extension Area at Liberty's Palm

1 Valley Water Reclamation Facility. Treated effluent either will be delivered for direct use
2 or recharged into the regional aquifer.

3 26. ADEQ no longer issues compliance status reports directly to wastewater
4 providers. Applicant will send a written request to ADEQ asking that the agency send the
5 most current compliance status report for Liberty directly to the Commission.

6 27. Liberty's Aquifer Protection Permit issued by ADEQ is attached as
7 **Exhibit 13.**

8 28. Liberty's Wastewater Use Data Sheet for the period from June 2014 to
9 May 2015 is attached as **Exhibit 14.**

10 29. A notarized signature on behalf of Applicant is attached as **Exhibit 15.**

11 30. For the reasons stated herein, Liberty maintains that this Application is in
12 the public interest and should be granted. There is a need for regulated wastewater utility
13 service to the Extension Area in Maricopa County to ensure the public health, and foster
14 orderly growth.

15 WHEREFORE, Liberty Utilities (Litchfield Park Water & Sewer) Corp.
16 respectfully requests the following:

17 A. That the Commission consider and act upon this Application as timely as
18 possible and to schedule a hearing, if necessary, on this matter;

19 B. That upon completion of said hearing, the Commission enter an Order
20 approving this Application and extending Liberty's CC&N to include the Extension Area
21 as shown on **Exhibit 3**; and,

22 C. That the Commission grant such other and further relief as may be
23 appropriate under the circumstances herein.

24 ...

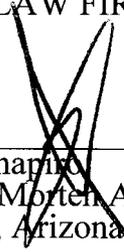
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RESPECTFULLY SUBMITTED this 10th day of July, 2015.

SHAPIRO LAW FIRM, P.C.

By: 
Jay L. Shapiro
1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020

and

LIBERTY UTILITIES

Todd C. Wiley
Assistant General Counsel
12725 W. Indian School Road, Suite D-101
Avondale, Arizona 85392

Attorneys for Liberty Utilities (Litchfield Park
Water & Sewer) Corp.

ORIGINAL and fifteen (15) copies
of the foregoing were filed
this 10th day of July, 2015, with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

By: 

EXHIBITS

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1. **Corporate Information for Liberty Utilities (Litchfield Park Water & Sewer) Corp.**
2. **Applicant's Certificate of Good Standing from the Arizona Corporation Commission.**
3. **Legal Description of Extension Area.**
4. **Master Wastewater Plan for Zanjero Trails dated November 2014.**
5. **Estimated Total Construction Costs and Plant Cost Projections.**
6. **General Statement of Financial Condition.**
7. **Liberty's Schedule of Rates and Charges.**
8. **Annual Revenue and Expenses – First Five Years.**
9. **Written Request for Service.**
10. **Maps of Existing CC&N and Extension Area.**
11. **Form of Notice to be Sent to Municipalities within 5 mile of Extension Area.**
12. **Estimated Number of Customers – First Five Years.**
13. **ADEQ Aquifer Protection Permit.**
14. **Applicant's Wastewater Use Data Sheet.**
15. **Notarized Signature On Behalf of Applicant.**

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EXHIBIT 1

CORPORATE INFORMATION

Applicant Proper Name: Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Applicant Address: 12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Corporate Structure: For-profit Chapter "C" Corporation
500,000 Shares authorized
7,820 shares issued on February 24, 2003

Officers: Matthew Garlick, President
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Todd Wiley, Treasurer and Secretary
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Directors: Ian Robertson, Director
354 Davis Road
Oakville, ON L6J 2X1

Richard Leehr, Director
28 South Shore Road
Salem, NH 03079

Gregory S. Sorensen, Director
701 National Ave
Tahoe Vista, CA 96148

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EXHIBIT 2

ARIZONA CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

FOR

LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.

STATE OF ARIZONA



Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

To all to whom these presents shall come, greeting:

I, Jodi A. Jerich, Executive Director of the Arizona Corporation Commission, do hereby certify that

*****LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.*****

a domestic corporation organized under the laws of the State of Arizona, did incorporate on September 21 1954.

I further certify that according to the records of the Arizona Corporation Commission, as of the date set forth hereunder, the said corporation is not administratively dissolved for failure to comply with the provisions of the Arizona Business Corporation Act; and that its most recent Annual Report, subject to the provisions of A.R.S. sections 10-122, 10-123, 10-125 & 10-1622, has been delivered to the Arizona Corporation Commission for filing; and that the said corporation has not filed Articles of Dissolution as of the date of this certificate.

This certificate relates only to the legal existence of the above named entity as of the date issued. This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the entity's condition or business activities and practices.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capital, this 30th day of June, 2015, A. D.



Jodi A. Jerich
Jodi A. Jerich, Executive Director

By: _____ 1257411

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EXHIBIT 3

LEGAL DESCRIPTION OF EXTENSION AREA

LEGAL DESCRIPTION
Zanjero Trails - Legal Description
(Liberty CC&N Expansion)

Parcel 1:

Portions of land situated within Sections 28 & 33 of Township 3 North, Range 2 West and Sections 4, 9, & 16 of Township 2 North, Range 2 West of the Gila and Salt River Meridian, Maricopa County, Arizona, being more particularly described as follows:

Beginning at a Flush Brass Cap (MCDOT) accepted as the Northeast corner of said Section 28;

Thence, South 00°20'19" West, 2638.46 feet along the east line of said section to a Masonry Nail accepted as the East 1/4 corner of said section 28;

Thence, continuing along said east line, South 00°21'13" West, 2635.60 feet to a Flush Brass Cap accepted as the Southeast corner of said section;

Thence, South 00°22'08" West, 2640.72 feet along the east line of said Section 33 to an Aluminum Cap stamped 2003 accepted as the East 1/4 corner of said Section 33;

Thence, continuing along said east line, South 00°21'40" West, 2639.95 feet to an Aluminum Cap stamped 2009 accepted as the Southeast corner of said Section 33;

Thence, South 00°33'38" East, 2640.27 feet along the east line of said Section 4 to a Brass Cap stamped LS 33307 accepted as the East 1/4 corner of said Section 4;

Thence, continuing along said east line, South 00°33'48" East, 2630.48 feet to a Brass Cap in Handhole stamped MCDOT 2003 accepted as the Southeast Corner of said section 4;

Thence, South 00°23'42" West, 5273.14 feet along the east line of said Section 9 to a 3" Aluminum Cap stamped FCD 2009 accepted as the Southeast corner of said Section 9;

Thence, South 00°24'28" West, 2637.84 feet along the east of Section 16 to a Flush Brass Cap stamped MCDOT accepted as the East 1/4 of said Section 16;

Thence, continuing along said east line, South 00°24'32" West, 2637.33 feet to a found Brass Cap in Handhole stamped SE COR SEC 16 T2N R2W accepted as the Southeast corner of said Section 16;

Thence, leaving said east line, North 89°36'46" West, 2529.49 feet along the south line of said Section 16 to a found Brass Cap stamped S1/4 S16 accepted as the South 1/4 corner of said Section 16;

Thence, North 00°30'54" East, 2464.95 feet along the north-south of said Section 16;

Thence, North 89°51'17" West, 2654.20 feet along a line 162.00 feet south of and parallel with the east-west mid-section line of said Section 16 to a point on the west line of said Section 16;

Thence, along said west line, North 00°23'25" East 162.00 feet to a found Flush Brass Cap stamped MCDOT accepted as the West 1/4 corner of said Section 16;

Thence, continuing along said west line, North 00°30'12" East, 2635.21 feet to a found Flush Brass Cap stamped MCDOT 2003 accepted as the Northwest corner of said Section 16;

Thence, South 89°50'46" East, 2655.09 feet along the north line of said Section 16 to a Flush Brass Cap stamped MCDOT 2003 accepted as the North 1/4 corner of said Section 16;

Thence, North 89°46'46" East, 75.00 feet to a line 75 feet east of and parallel with the west line of the east half of said Section 9;

Thence, North 00°27'02" East, 5268.31 feet along a line 75 feet east of and parallel with the west line of the east half of said Section 9;

Thence, North 00°44'08" West, 5280.79 feet along a line 75 feet east of and parallel with the west line of the east half of said Section 4;

Thence, North 00°21'39" East, 5282.64 feet along a line 75 feet east of and parallel with the west line of the east half of said Section 33;

Thence, North 00°20'37" East, 5276.35 feet along a line 75 feet east of and parallel with the west line of the east half of said Section 28;

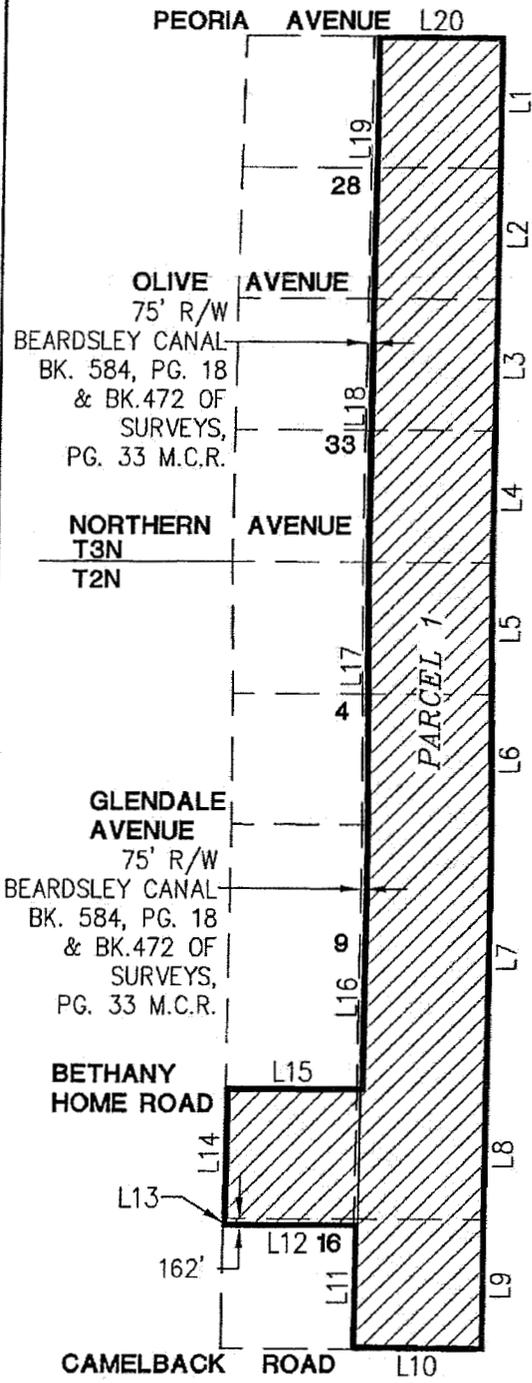
Thence, South 89°42'03" East, 2564.43 feet along the north line of said Section 28 to the **POINT OF BEGINNING**.

Parcel 1 as described hereon contains 75,288,064 sq.ft. or 1728.38 acres, more or less.

This description shown hereon is not to be used to violate subdivision regulations of the state, county and/or municipality of any other land division restrictions.

Prepared by: HilgartWilson
2141 E Highland Ave., Suite 250
Phoenix, AZ 85016
Project No. 1078
Date: January 2015





LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S00°20'19"W	2638.46'
L2	S00°21'13"W	2635.60'
L3	S00°22'08"W	2640.72'
L4	S00°21'40"W	2639.95'
L5	S00°33'38"E	2640.27'
L6	S00°33'48"E	2630.48'
L7	S00°23'42"W	5273.14'
L8	S00°24'28"W	2637.84'
L9	S00°24'32"W	2637.33'
L10	N89°36'46"W	2637.49'
L11	N00°30'54"E	2464.95'
L12	N89°51'17"W	2654.20'
L13	N00°23'25"E	162.00'
L14	N00°30'12"E	2635.21'
L15	S89°50'46"E	2730.09'
L16	N00°27'02"E	5268.31'
L17	N00°44'08"W	5280.79'
L18	N00°21'39"E	5282.64'
L19	N00°20'37"E	5276.35'
L20	S89°42'03"E	2564.43'



PROJ.NO.:	1078
DATE:	JAN 2015
SCALE:	1" = 3500'
DRAWN BY:	DSP
CHECKED BY:	KJP

ZANJERO TRAILS
 LIBERTY CC&N EXPANSION
 PEORIA, ARIZONA
EXHIBIT 'B'

HILGARTWILSON
 2141 E. HIGHLAND AVE., STE. 250
 PHOENIX, AZ 85016
 P: 602.490.0535 / F: 602.368.2436

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EXHIBIT 4

MASTER WASTEWATER PLAN FOR ZANJERO TRAILS

NOVEMBER 2014



HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE

MASTER WASTEWATER PLAN
FOR
ZANJERO TRAILS

MARICOPA COUNTY, ARIZONA

Prepared For:
Maricopa Water District



14825 West Grand Avenue
Surprise, Arizona 85374
Phone: (623) 546-8266
Fax: (623) 584-2536

Wastewater Service Provider:



Liberty Utilities

12725 West Indian School Road, Suite D101
Avondale, Arizona 85392
Phone: (623) 298-3760
Fax: (623) 935-1020

Prepared By:
HILGARTWILSON, LLC
2141 East Highland Avenue, Suite 250
Phoenix, AZ 85016
Phone: (602) 490-0535
Fax: (602) 368-2436



November 2014
HW Project No. 1003.00

MASTER WASTEWATER PLAN

FOR

ZANJERO TRAILS

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1. INTRODUCTION

1.1 PROJECT LOCATION

Zanjero Trails consists of approximately 1,740 acres of land in western Maricopa County, approximately two miles west of Arizona Loop 303 and three miles north of U.S. Interstate 10. The property is currently vacant native desert land and is located in unincorporated Maricopa County. The property is generally bound by Camelback Road on the south, Peoria Avenue on the north, Perryville Road on the east and the Beardsley Canal on the west. The property lies within Sections 4, 9, and 16 of Township 2 North, Range 2 West and in Sections 28 and 33 of Township 3 North, Range 2 West of the Gila and Salt River Meridian. A vicinity map is included as Figure 1 in Appendix A.

1.2 GENERAL DESCRIPTION

Zanjero Trails is master-planned community in the western part of Maricopa County, Arizona. It consists of single-family residential, multi-family residential, commercial, and office zonings. The project also includes three schools and three neighborhood parks. Zoning for Zanjero Trails exists as part of a Unit Plan of Development (UPD) (Case #Z-2005-031) that was approved and adopted by the Maricopa County Board of Supervisors on February 21, 2007. A preliminary plat for Phase 1 (Case #S2005-020) has also been approved by the County. Phase 1 is located between Bethany Home Road and Camelback Road and between Perryville Road and the Beardsley Canal within the east half of Section 16, Township 2 North, Range 2 West. A master wastewater report was prepared as part of the preliminary plat process for Phase 1. Cover sheets of the approved preliminary plat and associated wastewater report are included in Appendix D for reference. Currently, portions of Phase 1 are in the final platting process within Maricopa County. A land use plan is included as Figure 2 in Appendix A. It is anticipated that wastewater service for Zanjero Trails will be provided by Liberty Utilities, and that all wastewater flows generated by Zanjero Trails will be routed to Liberty Utilities treatment facilities.

1.3 SCOPE

The purpose of this study is to discuss the requirements, construction phasing, and anticipated costs for the wastewater facilities within Zanjero Trails, as well as its proposed service by Liberty Utilities. The report has been prepared in support of a proposal by Liberty Utilities to expand their Certificate of Convenience and Necessity (CC&N) area to include Zanjero Trails. Zanjero Trails is currently located in the planned service area shown in the White Tank Mountain Regional Sewer Solution (United Engineering Group, July 14, 2004) for the Litchfield Park Service Company (LPSCO). Zanjero Trails is comprised of approximately 1,740 acres with 4,595 single-family dwelling units, and a projected average day flow of 1.223 MGD.

The proposed wastewater collection system improvements described herein meets Liberty Utilities standards for wastewater system design.

2. LAND USE AND POPULATION PROJECTIONS

A summary of the proposed land uses, areas, and number of dwelling units for each of the parcels within Zanjero Trails is provided in Table B.1 in Appendix B. The land uses are also shown on Figure 2, the Land Use Plan. Table B.2 in Appendix B (Wastewater Flow Calculations) summarizes the projected populations for each parcel based on population densities of 2.0 people per dwelling unit and 3.2 people per dwelling unit for multi-family and single-family residential, respectively. The total estimated population for Zanjero Trails is 14,391 persons.

It is anticipated that Zanjero Trails will have a total of 4,595 residential dwelling units. Based on the projected average daily wastewater flow for the entire project, including residential, commercial, school, and park areas, and assuming a flow of 250 gallons per single family dwelling unit per day, Zanjero Trails will have an equivalent population of 15,660 persons and 4,894 equivalent dwelling units.

3. WASTEWATER DESIGN CRITERIA

The wastewater design criteria used in this report is based upon several criteria and standards. A summary of the criteria is listed below. Table 1 summarizes the design criteria used for this report. The superscript numbers shown in Table 1 correspond to the design criteria references listed below.

1. A Preliminary Wastewater Report was prepared by HILGARTWILSON for Phase 1 of Zanjero Trails (between Camelback Road and Bethany Home Road) and approved by Liberty Utilities on May 19, 2009. The report was designed in accordance with the design criteria established in the White Tank Mountain Regional Sewer Solution Conceptual Plan (Regional Plan) prepared by United Engineering Group (UEG) dated July 14, 2004.
2. Design criteria specified in the October 2009 *Liberty Water Development Guide* (Liberty Water 2009).
3. Peak hour flow rates are based on Arizona Administrative Code (AAC) R18-9-E301.
4. A previous study for Zanjero Trails was prepared for Epcor Water. The flow rates within the study were based on historical flow trends from other municipalities and were consistent with Epcor's Loop 303 Wastewater Master Plan. For consistency with the previously proposed wastewater flow rates and pipe diameters, these flow rates are being used in this study. The flow rates used are also generally consistent with the Unit Design Flows listed in Arizona Administrative Code Title 19, Chapter 9, which indicates a sewage design flow of 80 gallons/day/capita for dwelling units.

TABLE 1: WASTEWATER DESIGN CRITERIA	
DESIGN COMPONENT	CRITERIA
AVERAGE DAY FLOW	
Single Family Residential ⁴	250 gallons/du/day (3.2 persons/du)
Multiple Family Residential ⁴	160 gallons/du/day (2.0 persons/du)
Commercial ⁴	1,250 gallons/acre/day
Office ⁴	1,000 gallons/acre/day
Parks ⁴	200 gallons/acre/day
Schools ⁴	500 gallons/acre/day
PEAK HOUR FLOW^{1,3,4}	Arizona Administrative Code (AAC) R18-9-E301
PIPE DESIGN	
Manning's Roughness Coefficient ²	0.013
Minimum Pipe Diameter ²	8" minimum
	12" minimum along section lines
Velocities ²	Minimum 2.0 fps at peak hour
	Minimum 2.0 fps at average day flow for trunk-lines
	Maximum 10.0 fps
Sewer Capacity Ratio ²	d / D = 0.75 maximum at peak hour
Depth of Cover ²	7.5-feet minimum for trunk lines.
	5.0-feet for all other provided that service lines have 4'-5" minimum cover at the property line.
MANHOLE DESIGN	
Minimum Size ²	5-feet with 30-inch ring and cover
Manhole Drops ²	0.1' drop for < 45 degrees
	0.2' drop for >= 45 degrees
Minimum Spacing ²	Every 500 feet for less than 18-inch diameter Per AAC R18-9-E301 for 18-inch and larger

4. WASTEWATER FLOW PROJECTIONS

Based on the design criteria listed in Table 1, Zanjero Trails will produce a total average daily flow of 1.223 MGD and peak flow of 2.176 MGD (peaking factor of 1.78). A detailed table listing the projected wastewater flows from each parcel is provided as Table B.2 in Appendix B.

5. EXISTING WASTEWATER FACILITIES

5.1 SEWER LINES

There are currently no existing sanitary sewer lines within the boundaries of this project. The neighboring residential units in the area utilize individual septic systems or are within a different service provider's area. A 12-inch sewerline in Camelback Road that provides outfall for Jackrabbit Estates (north of Camelback Road and west of Beardsley Canal) exists and continues west to Perryville Road.



The sewerline increases to a 21-inch line at Camelback Road and a 24-inch line at 181st Avenue. The 24-inch line continues along Camelback Road to Citrus Road, then south along Citrus Road to Indian School Road, then east to Cotton Lane, then south to McDowell Road where it transitions to a 30-inch line east of the intersection of Cotton Lane and McDowell Road. The line continues east to the Sarival lift station and Sarival Road and McDowell Road. The sewerline is owned and maintained by LPSCO. See the wastewater exhibit (Figure 3) in Appendix A for a map of existing facilities.

5.2 TREATMENT FACILITIES

Wastewater flows from Zanjero Trails will outfall to the Sarival lift station located at the intersection of McDowell Road and Sarival Road. Wastewater is ultimately conveyed to the Palm Valley Water Reclamation Facility (PVWRF) located north of Camelback Road, approximately one-half mile east of Bullard Avenue. Rim and invert elevations of the existing sewer lines have been obtained from the LPSCO Regional Sanitary Sewer As-built plans dated April 30, 2007. Relevant portions of these plans are included in Appendix E for reference. See the wastewater exhibit (Figure 3) in Appendix A for a map of the treatment facilities.

6. PROPOSED WASTEWATER FACILITIES

6.1 SEWER LINES

A sewer trunk line is proposed to provide wastewater service to the majority of Zanjero Trails. This trunk line will extend from the intersection of Perryville Road and Camelback Road north along the Perryville Road alignment to one-half mile south of Peoria Avenue. The proposed sewer trunk line will increase in diameter from 8-inches at the upstream end to 18-inches at the downstream end.

An additional 8-inch sewer line will be required on the west side of the Beardsley Canal (east of Jackrabbit Estates) to provide service to Parcels 33 and 34. The 8-inch line will extend from Camelback Road to approximately one-half mile north of Camelback Road. An exhibit showing the proposed trunk main alignment is included as Figure 3 in Appendix A.

A network of 8-inch sewer lines following local and collector street alignments will provide service to the individual lots within each parcel. The sewerlines for Phase 1, which is bound by Camelback Road to the South, Perryville Road to the east, Bethany Home Road to the north, and the Beardsley Canal to the west, have been laid out based on the site plan shown on the approved preliminary plat (Appendix D). Phase 1 is currently in the final design process and construction plans for three of the parcels within Phase 1 have been submitted to the County for review. The wastewater exhibit in Figure 3 depicts the final sewerline alignments based on the preliminary plat for Phase 1. To allow for design flexibility, Figure 3 does not show the locations of sewer lines within the local roadways of future phases within Zanjero Trails. Quantities for future phases have been estimated based on area and dwelling units for each parcel and are included in the cost estimates.



Zanjero Trails will ultimately gravity sewer to the LPSCO PVWRF. The connection will be made at the intersection of Perryville Road and Camelback Road. No additional lift stations will be required.

6.2 WASTEWATER TREATMENT FACILITIES

The Liberty PVWRF, located north of Camelback Road, approximately one-half mile east of Bullard Avenue, will treat wastewater flows from Zanjero Trails. The PVWRF is anticipated to have capacity available to serve Zanjero Trails. Additional treatment facilities or expansions to the existing PVWRF are not anticipated to be required.

7. HYDRAULIC ANALYSIS

A hydraulic model of the sewer trunk line in Perryville Road was completed using Bentley SewerCAD V8i. Model results for the average daily flow and peak flow scenarios are included in Appendix C. Manhole loading calculations used for the model are provided in Table C.1 in Appendix C.

8. PHASING

Zanjero Trails is anticipated to be constructed in several phases, starting from the southern end of the project, and will continue to the north. Each section of land is assumed to be completed as a single phase, with the quarter-section of land located west of the Beardsley Canal and south of Bethany Home Road being completed last. A phasing map is included as Figure 4 in Appendix A. Table 2 below summarizes the parcels and associated average daily and peak flows associated with each phase. A detailed phasing table is included as Table B.3 in Appendix B. It should be noted that actual phasing could vary dependent on market conditions and homebuilder demand. In the event phasing varies from that noted above, an amendment to this master plan reflecting the revised phasing will be submitted to Liberty for review and comment.

TABLE 2: PHASING SUMMARY FOR ZANJERO TRAILS

Phase	Parcel	Land Use	Gross Area (AC)	Average Daily Flow (gpd)	Peak Flow (gpd)	EDUs	Anticipated Construction Year
Phase 1	35A	SF	32.9	29,000	84,100	116	2015
	35B	SF	37.0	28,750	83,375	115	
	36	SF	25.9	28,250	81,925	113	
	37A	SF	28.9	22,750	71,435	91	
	37B	SF	14.2	14,500	52,490	58	
	38	Park	6.8	1,362	4,930	5	
	39	School	17.1	8,530	30,879	34	
	40	SF	37.5	30,000	87,000	120	
	41	MF	13.8	41,760	110,246	167	
	42	Office	4.3	4,280	15,494	17	
	43	SF	28.8	24,500	71,050	98	
44	SF	21.9	23,750	68,875	95		
45	Commercial	15.9	19,913	62,525	80		
Phase 1 Total			285.0	277,345	569,071	1,109	
Phase 2	29	School	14.2	7,100	21,300	28	2019
	30	Park	8.7	1,740	5,220	7	
	31	SF	166.3	124,750	374,250	499	
	32	SF	129.5	32,250	96,750	129	
Phase 2 Total			318.7	165,840	360,316	663	
Phase 3	27	SF	161.0	122,500	367,500	490	2023
	28	SF	152.4	37,750	113,250	151	
Phase 3 Total			313.4	160,250	349,545	641	
Phase 4	22	Office	5.0	5,000	15,000	20	2027
	23	SF	26.2	46,000	138,000	184	
	24	SF	167.6	83,750	251,250	335	
	25	SF	90.8	68,000	204,000	272	
	26	SF	47.8	35,750	107,250	143	
Phase 4 Total			337.4	238,500	497,471	954	
Phase 5	16	SF	162.9	129,250	387,750	517	2031
	17	Park	8.6	1,720	5,160	7	
	18	School	16.3	8,150	24,450	33	
	19	SF	65.3	48,750	146,250	195	
	20	SF	43.3	32,250	96,750	129	
	21	Commercial	17.9	22,375	67,125	90	
Phase 5 Total			314.3	242,495	504,883	971	
Phase 6	33	Commercial	14.4	18,000	54,000	72	2035
	34	SF	155.7	121,000	363,000	484	
Phase 6 Total			170.1	139,000	308,243	556	
Project Total			1,738.9	1,223,430	2,176,134	4,894	



Based on the phasing summary, the population projections and associated wastewater flows by year are listed in the table below. The population projections are based on the persons per dwelling unit listed in Section 3 of this report.

TABLE 3: POPULATION AND WASTEWATER FLOW PROJECTIONS				
Year	Phase	Projected Population	Projected Equivalent Population	Projected Average Day Wastewater Flows (gpd)
2015	Begin Phase 1	0	0	0
2016		775	888	69,336
2017		1,551	1,775	138,672
2018		2,326	2,663	208,008
2019	Begin Phase 2	3,101	3,550	277,345
2020		3,604	4,081	318,805
2021		4,106	4,611	360,265
2022		4,608	5,142	401,725
2023	Begin Phase 3	5,111	5,673	443,185
2024		5,624	6,186	483,247
2025		6,136	6,698	523,310
2026		6,649	7,211	563,372
2027	Begin Phase 4	7,162	7,724	603,435
2028		7,909	8,487	663,060
2029		8,656	9,250	722,685
2030		9,404	10,014	782,310
2031	Begin Phase 5	10,151	10,777	841,935
2032		10,824	11,553	902,558
2033		11,496	12,329	963,182
2034		12,169	13,105	1,023,806
2035	Begin Phase 6	12,842	13,881	1,084,430
2036		13,229	14,325	1,119,180
2037		13,616	14,770	1,153,930
2038		14,004	15,215	1,188,680
2039		14,391	15,660	1,223,430

9. COST ESTIMATE

A cost estimate broken down by project phase is included as Table B.4 in Appendix B. The cost estimate uses current market pricing and accounts for hard construction costs for the sewer lines only. A summary of the anticipated construction costs is shown in Table 3 below.

Phase	Anticipated Construction Year	Total Anticipated Cost	Cost Per EDU	Total Incurred Cost	Incurred Cost Per Total EDU
1	2015	\$4,572,357	\$4,123	\$4,572,357	\$4,123
2	2019	\$3,576,501	\$5,394	\$8,148,858	\$4,599
3	2023	\$3,689,493	\$5,756	\$11,838,351	\$4,906
4	2027	\$4,414,518	\$4,627	\$16,252,869	\$4,827
5	2031	\$3,789,129	\$3,902	\$20,041,997	\$4,620
6	2035	\$2,702,646	\$4,861	\$22,744,643	\$4,647

Using the above table and interpolating between years, the anticipated construction costs in five year increments is listed in Table 4 below:

Year	Total Cost
2015	\$4,572,357
2020	\$8,148,858
2025	\$11,838,351
2030	\$16,252,869
2035	\$22,744,643

10. CONCLUSIONS

As discussed in this study, wastewater service for Zanjero Trails will be provided by Liberty Utilities. Based upon this study, the following can be concluded:

- Zanjero Trails will be served by a gravity sewer trunk line along the Perryville Road alignment from Camelback Road to one-half mile south of Cactus Road.
- Wastewater from Zanjero Trails will be treated at the existing Palm Valley Water Reclamation Facility.
- The sizing and configuration of the sewer trunk main is illustrated in Figure 3. The proposed trunk main adheres to the 2009 Liberty Developer's Guide presented in Section 3 of this report.



- Phasing for Zanjero Trails is anticipated to begin at the southern boundary of the project and continue north. The quarter-section of land located west of the Beardsley Canal and south of Bethany Home Road is anticipated to be completed last.
- A cost estimate was developed based on future projections and phasing and is included in Appendix B. The total anticipated cost of the sewer lines within Zanjero Trails is approximately \$22.7 million.

11. REFERENCES

LPSCO dba Liberty Water (2009). *Liberty Water Development Guide*. October 2009, Avondale, Arizona.

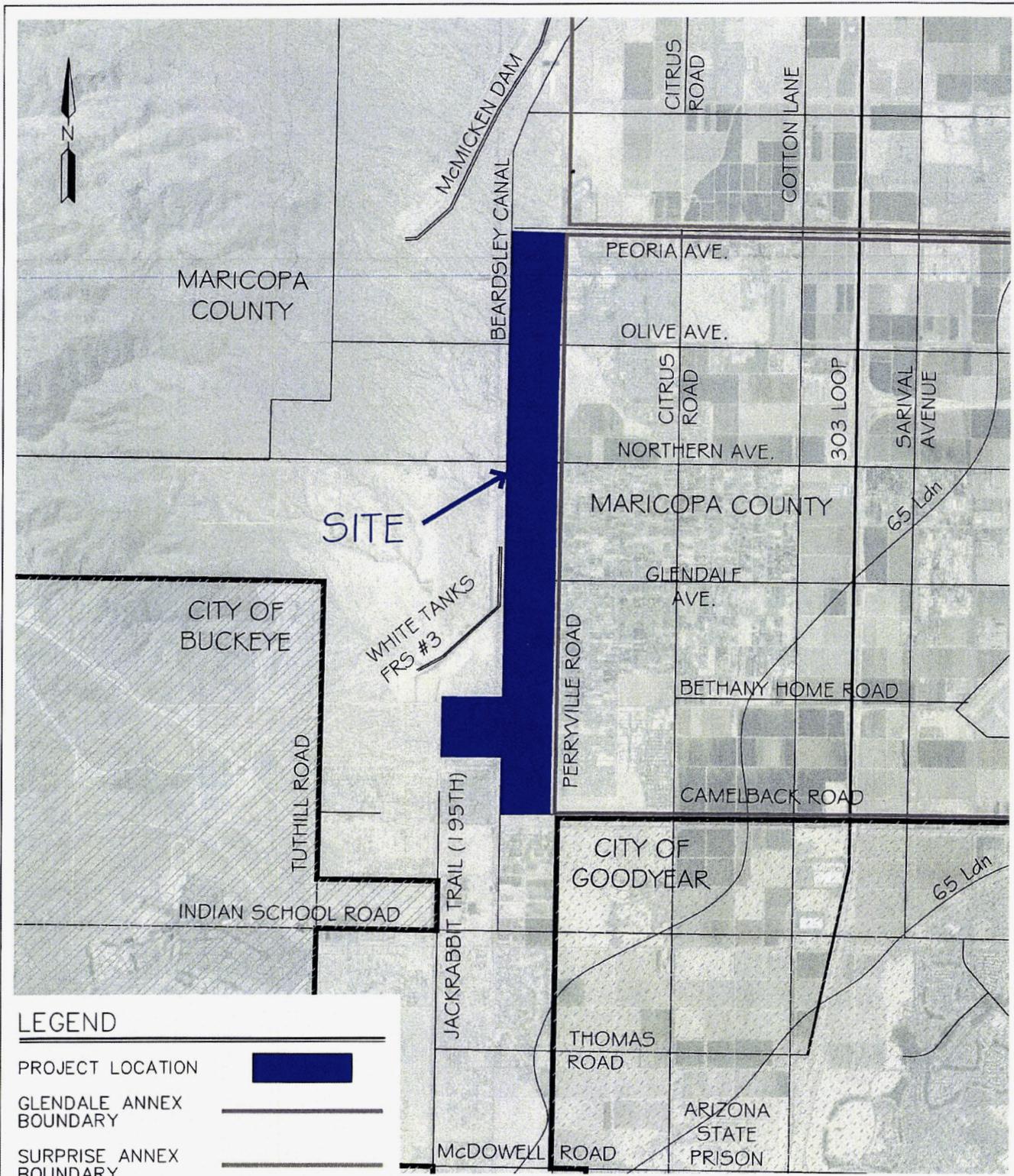
Wood/Patel, LPSCO Regional Sanitary Sewer As-Builts. April 30, 2007, Litchfield Park, Arizona.

United Engineering Group (2004). *White Tank Mountain Regional Sewer Solution*. Litchfield Park Service Company. July 14, 2004. Phoenix, AZ.



APPENDIX A

FIGURES



LEGEND

PROJECT LOCATION



GLENDALE ANNEX BOUNDARY



SURPRISE ANNEX BOUNDARY

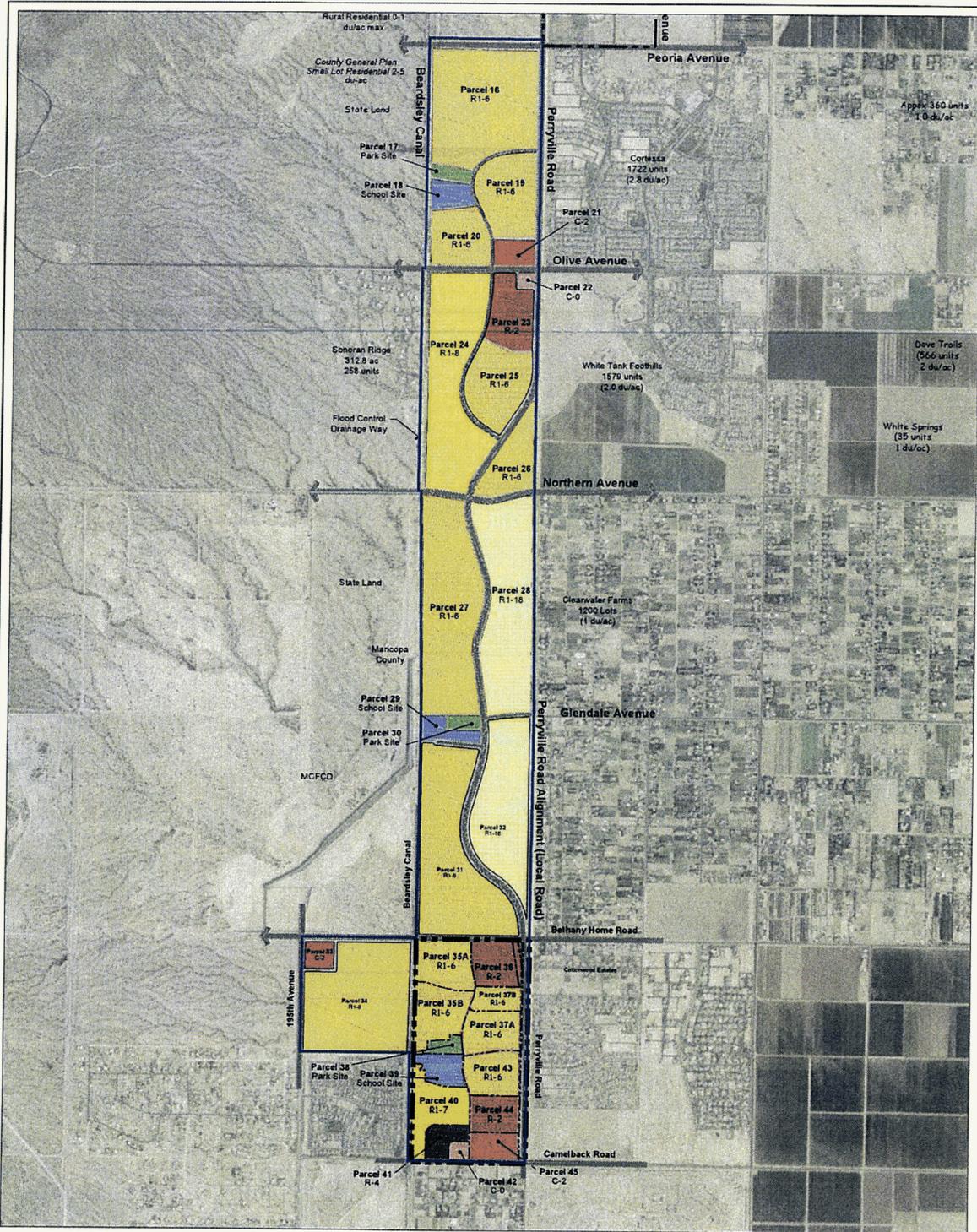


PROJ.NO.:	1003
DATE:	APRIL 2014
SCALE:	NTS
DRAWN BY:	HW
CHECKED BY:	HW

ZANJERO TRAILS
 MARICOPA COUNTY, ARIZONA
FIG 1: VICINITY MAP


HILGARTWILSON
 2141 E. HIGHLAND AVE., STE. 250
 PHOENIX, AZ 85016
 P: 602.490.0535 / F: 602.368.2436

U:\1003\1003\1003\0000_1003_0100 & 1003_0101 - MWD\Reports\Master Wastewater Report for MAG 208\EXHIBITS\1003_FIG 2 - LAND USE PLAN.dwg 4/17/2014 2:35 PM



Zoning Category

 R1-7 (RUPD)	 C-O (CUPD)
 R1-6 (RUPD)	 Dedicated/Non Developable Open Space
 R-2 (RUPD)	 Educational
 R-4 (RUPD)	
 C-2 (CUPD)	

Legend

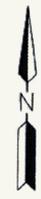
	Phase 1 Boundary
	Zanjero Trails Boundary
	Arterial Street
	Collector Street

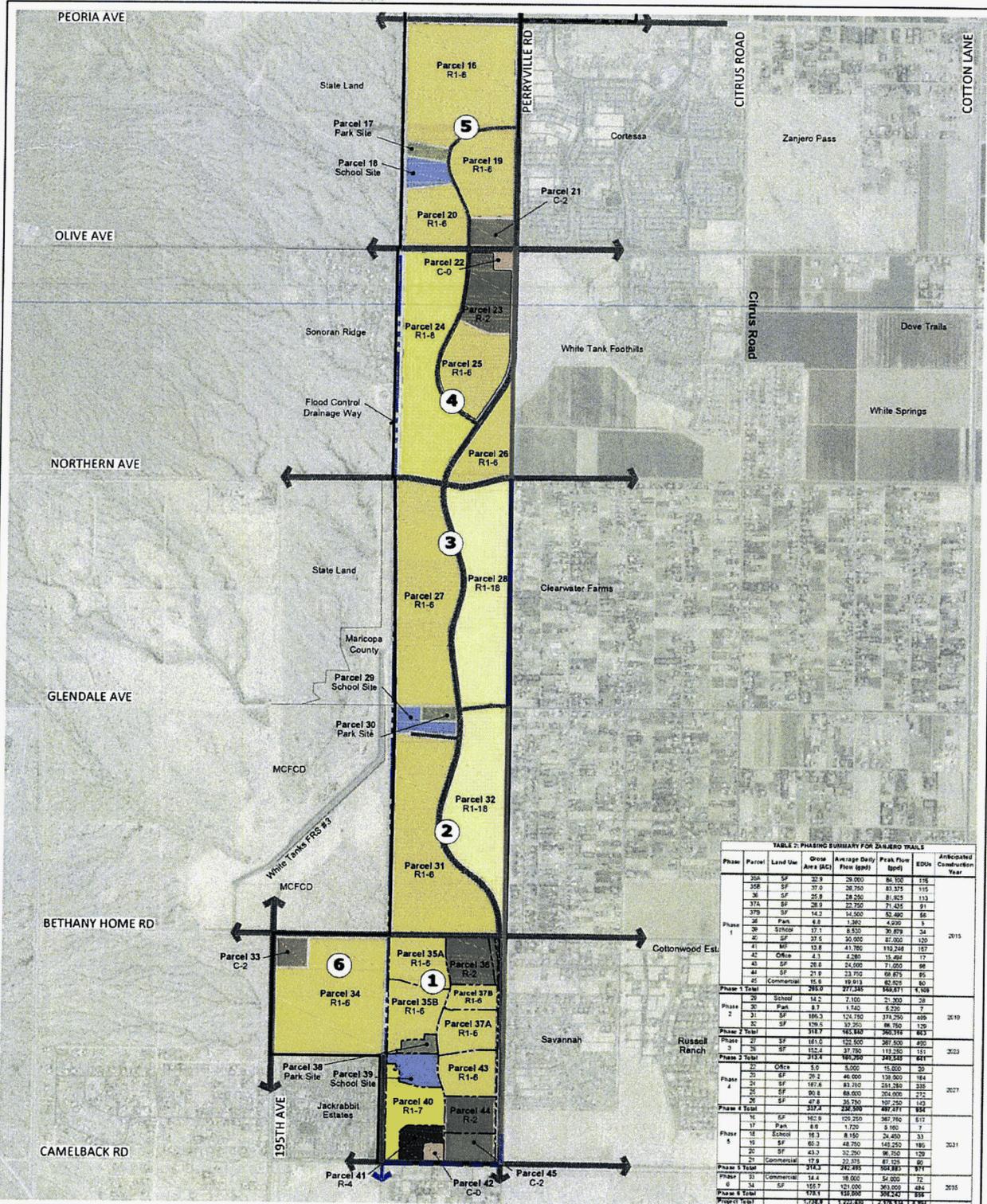
Note:
See Table B.1 in Appendix B for areas and densities of each parcel.

PROJ. NO.:	1003
DATE:	APRIL 2014
SCALE:	NTS
DRAWN BY:	HW
CHECKED BY:	HW

ZANJERO TRAILS
MARICOPA COUNTY, ARIZONA
FIG 2: LAND USE PLAN

HILGARTWILSON
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, AZ 85016
P: 602.490.0535 / F: 602.368.2436





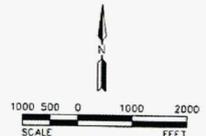
Color Coding Legend
Conduit: Diameter (in)

Thick black line	<= 8.0
Medium-thick black line	<= 10.0
Medium black line	<= 12.0
Thin black line	<= 15.0
Blue line	<= 18.0
Yellow line	<= 21.0
Orange line	<= 24.0

LEGEND
PHASING ①

TABLE 2: PHASING SUMMARY FOR ZANJERO TRAILS

Phase	Parcel	Land Use	Area (AC)	Average Daily Flow (gpd)	Peak Flow (gpd)	EDUs	Anticipated Construction Year		
Phase 1	35A	SF	33.9	25,700	52,300	116	2015		
	35B	SF	37.0	28,750	61,375	115			
	36	SF	25.8	18,250	31,625	113			
	37A	SF	28.9	22,750	41,425	81			
	37B	SF	14.2	14,500	32,400	56			
	38	Park	8.8	7,265	4,920	5			
	39	School	17.1	11,520	29,870	54			
	40	SF	37.5	30,000	67,000	120			
	41	MO	13.8	41,760	112,248	167			
	42	Office	4.3	4,260	13,460	17			
Phase 2	43	SF	28.8	24,000	57,000	99	2019		
	44	SF	21.9	13,770	69,675	89			
	45	Commercial	15.8	19,810	43,100	80			
	Phase 2 Total		285.0	277,330	502,711	1,108			
	28	School	14.2	7,100	21,300	28		2023	
	29	Park	8.7	1,740	6,250	7			
	31	SF	106.3	126,750	278,250	490			
	Phase 3	32	SF	179.0	32,950	68,760		120	2027
		33	SF	118.7	94,840	202,790		400	
		34	SF	161.0	122,500	261,500		490	
Phase 4	35	SF	152.4	37,750	112,250	161	2031		
	36	SF	112.4	180,200	242,800	461			
	37	Office	5.0	5,000	15,000	20			
Phase 5	38	SF	30.2	46,000	138,000	184	2035		
	39	SF	167.8	83,200	241,200	338			
	40	SF	59.8	68,000	258,000	321			
Phase 6	41	SF	67.8	38,750	107,250	142	2035		
	42	SF	237.8	228,200	487,471	894			
	43	SF	162.8	129,250	307,750	512			
Phase 7	44	Park	8.8	1,720	6,160	7	2035		
	45	School	16.3	8,150	24,450	33			
	46	SF	65.2	48,750	142,250	195			
Phase 8	47	SF	43.3	32,250	98,250	129	2035		
	48	Commercial	37.8	22,375	67,125	90			
	49	Commercial	21.2	242,400	502,800	874			
Phase 9	50	Commercial	14.4	18,000	54,000	72	2035		
	51	SF	155.7	121,000	363,000	484			
Phase 9 Total		170.1	139,000	382,471	514				
Project Total		1,728.8	1,222,830	2,176,154	4,161				



<p>HILGARTWILSON ENGINEERS PLANNERS & SURVEYORS</p>	<p>PROJ. NO.: 1003 DATE: NOV 2014 SCALE: 1" = 1000' DRAWN: HW DESIGNED: HW APPROVED: HW</p>	<p>ZANJERO TRAILS PERRYVILLE ROAD MARICOPA COUNTY, ARIZONA</p>	<p>REV:</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>								
<p>FIG 4: PHASING PLAN</p>	<p>HILGARTWILSON ENGINEERS PLANNERS & SURVEYORS 2141 E. HOGLAND AVE., STE. 200 P. 602.490.0535 F. 602.246.2435 PHOENIX, AZ 85016 www.hilgartwilson.com</p>										

APPENDIX B

TABLES

Table B.1: Land Use Table

Project: Zanjero Trails

Prepared By: Zach Hilgart, P.E.



Land Use Per Approved RUPD						Land Use Per Approved Preliminary Plat				Land Use Used for Wastewater		
Parcel	RUPD Zoning	Use	Area (ac)	No. Units	Density (du/ac)	Parcel	Area (ac)	No. Units	Density (du/ac)	Area (ac)	No. Units	Density (du/ac)
16	R1-6	SF	162.9	517	3.2					162.9	517	3.2
17	Rural-43	Park	8.6	-	-					8.6	-	-
18	R1-6	School	16.3	-	-					16.3	-	-
19	R1-6	SF	65.3	195	3.0					65.3	195	3.0
20	R1-6	SF	43.3	129	3.0					43.3	129	3.0
21	C-2	Commercial	17.9	-	-					17.9	-	-
22	C-0	Office	5.0	-	-					5.0	-	-
23	R-2	SF	26.2	184	7.0					26.2	184	7.0
24	R1-8	SF	167.6	335	2.0					167.6	335	2.0
25	R1-6	SF	90.8	272	3.0					90.8	272	3.0
26	R1-6	SF	47.8	143	3.0					47.8	143	3.0
27	R1-6	SF	161.0	490	3.0					161.0	490	3.0
28	R1-18	SF	152.4	151	1.0					152.4	151	1.0
29	R1-6	School	14.2	-	-					14.2	-	-
30	Rural-43	Park	8.7	-	-					8.7	-	-
31	R1-6	SF	166.3	499	3.0					166.3	499	3.0
32	R1-18	SF	129.5	129	1.0					129.5	129	1.0
33	C-2	Commercial	14.4	-	-					14.4	-	-
34	R1-6	SF	155.7	484	3.1					155.7	484	3.1
35	R1-6	SF	80.2	235	2.9	35A	32.9	116	3.5	32.9	116	3.5
	R1-6	SF				35B	37.0	115	3.1	37.0	115	3.1
36	R-2	SF	30.6	114	3.7	36	25.9	113	4.4	25.9	113	4.4
37	R1-6	SF	45.4	157	3.5	37A	28.9	91	3.1	28.9	91	3.1
	R1-6	SF				37B	14.2	58	4.1	14.2	58	4.1
38	Rural-43	Park	6.5	-	-	38	6.8	-	-	6.8	-	-
39	R1-6	School	18.9	-	-	39	17.1	-	-	17.1	-	-
40	R1-7	SF	53.8	121	2.2	40	37.5	120	3.2	37.5	120	3.2
41	R-4	MF	14.6	261	17.9	41	13.8	261	19.0	13.8	261	19.0

Table B.1: Land Use Table

Project: Zanjero Trails

Prepared By: Zach Hilgart, P.E.



Land Use Per Approved RUPD						Land Use Per Approved Preliminary Plat				Land Use Used for Wastewater		
Parcel	RUPD Zoning	Use	Area (ac)	No. Units	Density (du/ac)	Parcel	Area (ac)	No. Units	Density (du/ac)	Area (ac)	No. Units	Density (du/ac)
42	C-0	Office	5.0	-	-	42	4.3	-	-	4.3	-	-
43	R1-6	SF	30.4	98	3.2	43	28.8	98	3.4	28.8	98	3.4
44	R-2	SF	23.1	96	4.2	44	21.9	95	4.3	21.9	95	4.3
45	C-2	Commercial	18.6	-	-	45	15.9	-	-	15.9	-	-
Total			1,781.0	4,610	2.6		285.0	1067	3.7	1,738.9	4,595	2.6

Table B.2: Wastewater Flow Table

Project: Zanjere Trails
 Prepared By: Zach Hilgart, P.E.



Parcel / Tract	Zoning	Land Use	Gross Acreage	Dwelling Units	Population	Average Daily Flow (gpd)	Average Daily Flow (MGD)	Equivalent Population	Peaking Factor	Peak Flow (gpd)	Peak Flow (MGD)	EDUs
16	R1-6	SF	162.9	517	1,654	129,250	0.129	1,654	2.24	289,082	0.289	517
17	Rural-43	Park	8.6	-	-	1,720	0.002	22	3.62	6,226	0.006	7
18	R1-6	School	16.3	-	-	8,150	0.008	104	3.62	29,503	0.030	33
19	R1-6	SF	65.3	195	624	48,750	0.049	624	2.56	124,800	0.125	195
20	R1-6	SF	43.3	129	413	32,250	0.032	413	2.74	88,365	0.088	129
21	C-2	Commercial	17.9	-	-	22,375	0.022	286	3.14	70,258	0.070	90
22	C-0	Office	5.9	-	-	5,000	0.005	64	3.62	18,100	0.018	20
23	R-2	SF	26.2	184	589	46,000	0.046	589	2.64	121,440	0.121	184
24	R1-8	SF	167.6	335	1,072	83,750	0.084	1,072	2.36	197,405	0.197	335
25	R1-6	SF	90.8	272	870	68,000	0.068	870	2.46	167,280	0.167	272
26	R1-6	SF	47.8	143	458	35,750	0.036	458	2.74	97,955	0.098	143
27	R1-6	SF	161.0	490	1,568	122,500	0.123	1,568	2.25	275,730	0.276	490
28	R1-18	SF	152.4	151	483	37,750	0.038	483	2.74	103,435	0.103	151
29	R1-6	School	14.2	-	-	7,100	0.007	91	3.62	25,702	0.026	28
30	Rural-43	Park	8.7	-	-	1,740	0.002	22	3.62	6,299	0.006	7
31	R1-6	SF	166.3	499	1,597	124,750	0.125	1,597	2.25	280,189	0.280	499
32	R1-18	SF	129.5	129	413	32,250	0.032	413	2.74	88,365	0.088	129
33	C-2	Commercial	14.4	-	-	18,000	0.018	230	3.14	56,520	0.057	72
34	R1-6	SF	155.7	484	1,549	121,000	0.121	1,549	2.25	272,752	0.273	484
35A	R1-6	SF	32.9	116	371	29,000	0.029	371	2.90	84,100	0.084	116
35B	R1-6	SF	37.0	115	388	28,750	0.029	368	2.90	83,375	0.083	115
36	R-2	SF	25.9	113	362	28,250	0.028	362	2.90	81,925	0.082	113
37A	R1-6	SF	28.9	91	291	22,750	0.023	291	3.14	71,435	0.071	91
37B	R1-6	SF	14.2	58	186	14,500	0.015	186	3.62	52,490	0.052	58
38	Rural-43	Park	6.8	-	-	1,362	0.001	17	3.62	4,930	0.005	5
39	R1-6	School	17.1	-	-	8,530	0.009	109	3.62	30,679	0.031	34
40	R1-7	SF	37.5	120	394	30,000	0.030	384	2.90	87,000	0.087	120
41	R-4	MF	13.8	261	522	41,760	0.042	535	2.64	110,246	0.110	167
42	C-0	Office	4.3	-	-	4,280	0.004	55	3.62	15,494	0.015	17
43	R1-6	SF	28.8	98	314	24,500	0.025	314	2.90	71,050	0.071	98
44	R-2	SF	21.9	95	304	23,750	0.024	304	2.90	68,875	0.069	95
45	C-2	Commercial	15.9	-	-	19,913	0.020	255	3.14	62,525	0.063	80
Total			1,739	4,595	14,391	1,223,430	1.223	15,660	1.78	2,176,134	2.176	4,894

Population Factors:
 Single Family (SF) 3.2 people/dwelling unit
 Multi-Family (MF) 2.0 people/dwelling unit

Peaking Factors:
 Use Arizona Administrative Code (AAC) R18-9-E301

Average Daily Flow Factors:
 Single Family Residential: 250 gal/dwelling unit/day
 Multi-Family Residential: 160 gal/dwelling unit/day
 Commercial Flow Factor: 1,250 gal/acre/day
 Office Flow Factor: 1,000 gal/acre/day
 Park Flow Factor: 200 gal/acre/day
 School Flow Factor: 500 gal/acre/day

Table B.3: Phasing

Project: Zanjero Trails
 Prepared By: Zach Hilgart, P.E.



Phase	Parcel	Zoning	Land Use	Gross Area (AC)	Dwelling Units	Population	Average Daily Flow (gpd)	Average Daily Flow (MGD)	Equivalent Population	Peaking Factor	Peak Flow (gpd)	Peak Flow (MGD)	EDUs	Anticipated Construction Year
Phase 1	35A	R1-6	SF	32.9	116	371	29,000	0.029	371	2.90	84,100	0.084	116	2016
	35B	R1-6	SF	37.0	115	368	28,750	0.029	368	2.90	83,375	0.083	115	
	36	R-2	SF	26.9	113	362	28,250	0.028	362	2.90	81,925	0.082	113	
	37A	R1-6	SF	28.9	91	291	22,750	0.023	291	3.14	71,435	0.071	91	
	37B	R1-6	SF	14.2	56	186	14,500	0.015	186	3.62	52,450	0.052	58	
	39	Rural-43	Park	9.8	-	-	1,362	0.001	17	3.62	4,930	0.005	5	
	39	R1-6	School	17.1	-	-	8,530	0.009	109	3.62	30,879	0.031	34	
	40	R1-7	SF	37.6	120	384	30,000	0.030	384	2.90	87,000	0.087	120	
	41	R-4	MF	13.8	261	522	41,760	0.042	535	2.64	110,246	0.110	167	
	42	C-0	Office	4.3	-	-	4,280	0.004	55	3.62	15,484	0.015	17	
	43	R1-6	SF	28.8	98	314	24,500	0.026	314	2.90	71,050	0.071	98	
	44	R-2	SF	21.9	95	304	23,750	0.024	304	2.90	68,875	0.069	95	
	45	C-2	Commercial	15.9	-	-	19,913	0.020	255	3.14	82,525	0.082	80	
	Phase 1 Total				285.0	1,067	3,161	277,345	0.277	3,650	2.05	568,071	0.568	
Phase 2	29	R1-6	School	14.2	-	-	7,100	0.007	81	3.62	21,300	0.021	28	2019
	30	Rural-43	Park	8.7	-	-	1,740	0.002	22	3.62	5,220	0.005	7	
	31	R1-6	SF	166.3	489	1,597	124,750	0.125	1,597	2.25	374,250	0.374	499	
	32	R1-18	SF	129.6	129	413	32,250	0.032	413	2.74	96,750	0.097	129	
Phase 2 Total				318.7	628	2,010	165,840	0.166	2,123	2.17	360,316	0.360	663	
Phase 3	27	R1-6	SF	161.0	490	1,568	122,500	0.123	1,568	2.25	367,500	0.368	490	2023
	28	R1-18	SF	152.4	151	483	37,750	0.038	483	2.74	113,250	0.113	151	
Phase 3 Total				313.4	641	2,051	160,250	0.160	2,051	2.18	349,545	0.350	641	
Phase 4	22	C-0	Office	5.0	-	-	5,000	0.005	64	3.62	15,000	0.015	20	2027
	23	R-2	SF	26.2	184	589	46,000	0.046	589	2.64	138,000	0.138	184	
	24	R1-9	SF	167.6	335	1,072	83,750	0.084	1,072	2.36	251,250	0.251	335	
	25	R1-6	SF	90.8	272	870	68,000	0.068	870	2.46	204,000	0.204	272	
	26	R1-6	SF	47.8	143	458	35,750	0.036	458	2.74	107,250	0.107	143	
Phase 4 Total				337.4	934	2,989	238,500	0.239	3,053	2.09	497,471	0.497	954	
Phase 5	16	R1-6	SF	152.9	517	1,654	129,250	0.129	1,654	2.24	387,750	0.388	517	2031
	17	Rural-43	Park	8.6	-	-	1,720	0.002	22	3.62	5,160	0.005	7	
	18	R1-6	School	16.3	-	-	8,150	0.008	104	3.62	24,450	0.024	33	
	19	R1-6	SF	65.3	195	624	48,750	0.049	624	2.56	146,250	0.146	195	
	20	R1-6	SF	43.3	129	413	32,250	0.032	413	2.74	96,750	0.097	129	
Phase 5 Total				314.9	841	2,691	242,495	0.242	3,104	2.08	504,883	0.505	971	
Phase 6	33	C-2	Commercial	14.4	-	-	15,000	0.015	230	3.14	54,000	0.054	72	2035
	34	R1-6	SF	155.7	484	1,549	121,000	0.121	1,549	2.25	363,000	0.363	484	
Phase 6 Total				170.1	484	1,549	139,000	0.139	1,779	2.22	308,243	0.308	556	
Project Total				1,738.9	4,895	14,391	1,223,430	1.223	15,680	1.78	2,176,134	2.176	4,894	

Table B.4

ZANJERO TRAILS
 Camelback Road and Perryville Road
 Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 15,000.00	\$ 15,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 7,500.00	\$ 7,500.00
Liberty	1	LS	\$ 75,000.00	\$ 75,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 99,000.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 3,412,835.00	\$ 119,449.23
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 123,304.23
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 3,450,127.00	\$ 120,754.45
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,260	LF	\$ 4.75	\$ 24,985.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 3,412,835.00	\$ 85,320.88
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,260	LF	\$ 0.60	\$ 3,156.00
TOTAL SURVEYING				\$ 4,156.00
TOTAL CONSULTANT SERVICES				\$ 235,216.32
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 3,412,835.00	\$ 68,256.70
TOTAL CONSTRUCTION TESTING				\$ 68,256.70

Table B.4

ZANJERO TRAILS
Camelback Road and Perryville Road
Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
15" SDR 35 Sewerline (14' Avg Depth)	4,583	LF	\$ 50.00	\$ 229,150.00
18" F-679 Sewerline (12' Avg Depth)	677	LF	\$ 50.00	\$ 33,850.00
Manholes (5')	13	EA	\$ 4,000.00	\$ 52,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	13	EA	\$ 150.00	\$ 1,950.00
Camera Test Sewer	5,260	LF	\$ 1.00	\$ 5,260.00
TOTAL SEWERLINE EXTENSION				\$ 334,710.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,640	LF	\$ 24.00	\$ 63,360.00
8" SDR 35 PVC (Parcel 35A)	5,541	LF	\$ 24.00	\$ 132,984.00
8" SDR 35 PVC (Parcel 35B)	5,657	LF	\$ 24.00	\$ 135,768.00
8" SDR 35 PVC (Parcel 36)	4,891	LF	\$ 24.00	\$ 117,384.00
8" SDR 35 PVC (Parcel 37A)	5,657	LF	\$ 24.00	\$ 135,768.00
8" SDR 35 PVC (Parcel 37B)	2,589	LF	\$ 24.00	\$ 62,136.00
8" SDR 35 PVC (Parcel 38)	681	LF	\$ 24.00	\$ 16,344.00
8" SDR 35 PVC (Parcel 39)	2,232	LF	\$ 24.00	\$ 53,568.00
8" SDR 35 PVC (Parcel 40)	5,909	LF	\$ 24.00	\$ 141,816.00
8" SDR 35 PVC (Parcel 41)	5,221	LF	\$ 24.00	\$ 125,304.00
8" SDR 35 PVC (Parcel 42)	767	LF	\$ 24.00	\$ 18,408.00
8" SDR 35 PVC (Parcel 43)	4,575	LF	\$ 24.00	\$ 109,800.00
8" SDR 35 PVC (Parcel 44)	3,518	LF	\$ 24.00	\$ 84,432.00
8" SDR 35 PVC (Parcel 45)	3,266	LF	\$ 24.00	\$ 78,384.00
Manholes (5')	296	EA	\$ 4,000.00	\$ 1,184,000.00
Sewer Stubout	7	EA	\$ 300.00	\$ 2,100.00
Connect to Existing	13	EA	\$ 500.00	\$ 6,500.00
4" Services	1,067	EA	\$ 475.00	\$ 506,825.00
Air Test Manholes	296	EA	\$ 150.00	\$ 44,400.00
Camera Test Sewer	53,144	LF	\$ 1.00	\$ 53,144.00
TOTAL ONSITE SEWERLINES				\$ 3,072,425.00
TOTAL SEWER				\$ 3,407,135.00

Table B.4

ZANJERO TRAILS
Camelback Road and Perryville Road
Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	58,404	LF	\$ 0.50	\$ 29,202.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,260	LF	\$ 1.00	\$ 5,260.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,260	LF	\$ 0.50	\$ 2,630.00
TOTAL MISCELLANEOUS CLEANUP				\$ 37,092.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 3,450,127.00	\$ 34,501.27
TOTAL ONE YEAR WARRANTY COSTS				\$ 34,501.27
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 3,450,127.00	\$ 141,282.70
TOTAL SALES TAX				\$ 141,282.70
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 4,156,688.22	\$ 415,668.82
TOTAL CONTINGENCY				\$ 415,668.82
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 4,572,357.04

Table B.4

ZANJERO TRAILS
Bethany Home Road and Perryville Road
Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,691,274.00	\$ 94,194.59
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 98,049.59
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,723,168.00	\$ 95,310.88
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,324	LF	\$ 4.75	\$ 25,289.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,691,274.00	\$ 67,281.85
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,324	LF	\$ 0.60	\$ 3,194.40
TOTAL SURVEYING				\$ 4,194.40
TOTAL CONSULTANT SERVICES				\$ 192,076.13
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,691,274.00	\$ 53,825.48
TOTAL CONSTRUCTION TESTING				\$ 53,825.48
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
Bethany Home Road and Perryville Road
Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
15" SDR 35 Sewerline (14' Avg Depth)	5,324	LF	\$ 50.00	\$ 266,200.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,324	LF	\$ 1.00	\$ 5,324.00
TOTAL SEWERLINE EXTENSION				\$ 342,124.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,850	LF	\$ 24.00	\$ 68,400.00
8" SDR 35 PVC (Parcel 31)	25,862	LF	\$ 24.00	\$ 620,688.00
8" SDR 35 PVC (Parcel 32)	13,780	LF	\$ 24.00	\$ 330,720.00
Manholes (5')	237	EA	\$ 4,000.00	\$ 948,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	628	EA	\$ 475.00	\$ 298,300.00
Air Test Manholes	237	EA	\$ 150.00	\$ 35,550.00
Camera Test Sewer	42,492	LF	\$ 1.00	\$ 42,492.00
TOTAL ONSITE SEWERLINES				\$ 2,349,150.00
TOTAL SEWER				\$ 2,691,274.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	47,816	LF	\$ 0.50	\$ 23,908.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,324	LF	\$ 1.00	\$ 5,324.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,324	LF	\$ 0.50	\$ 2,662.00
TOTAL MISCELLANEOUS CLEANUP				\$ 31,894.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00

Table B.4

ZANJERO TRAILS
 Bethany Home Road and Perryville Road
 Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,723,168.00	\$ 27,231.68
TOTAL ONE YEAR WARRANTY COSTS				\$ 27,231.68
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,723,168.00	\$ 111,513.73
TOTAL SALES TAX				\$ 111,513.73
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,251,364.61	\$ 325,136.46
TOTAL CONTINGENCY				\$ 325,136.46
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,576,501.07

Table B.4

ZANJERO TRAILS
 Glendale Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,778,939.00	\$ 97,262.87
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 101,117.87
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,811,718.50	\$ 98,410.15
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,239	LF	\$ 4.75	\$ 24,885.25
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,778,939.00	\$ 69,473.48
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,239	LF	\$ 0.60	\$ 3,143.40
TOTAL SURVEYING				\$ 4,143.40
TOTAL CONSULTANT SERVICES				\$ 196,912.27
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,778,939.00	\$ 55,578.78
TOTAL CONSTRUCTION TESTING				\$ 55,578.78

Table B.4

ZANJERO TRAILS
Glendale Avenue and Perryville Road
Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
12" SDR 35 Sewerline (20' Avg Depth)	5,239	LF	\$ 50.00	\$ 261,950.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,239	LF	\$ 1.00	\$ 5,239.00
TOTAL SEWERLINE EXTENSION				\$ 337,789.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,800	LF	\$ 24.00	\$ 67,200.00
8" SDR 35 PVC (Parcel 27)	25,207	LF	\$ 24.00	\$ 604,968.00
8" SDR 35 PVC (Parcel 28)	16,196	LF	\$ 24.00	\$ 388,704.00
Manholes (5')	246	EA	\$ 4,000.00	\$ 984,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	641	EA	\$ 475.00	\$ 304,475.00
Air Test Manholes	246	EA	\$ 150.00	\$ 36,900.00
Camera Test Sewer	44,203	LF	\$ 1.00	\$ 44,203.00
TOTAL ONSITE SEWERLINES				\$ 2,435,450.00
TOTAL SEWER				\$ 2,773,239.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	49,442	LF	\$ 0.50	\$ 24,721.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,239	LF	\$ 1.00	\$ 5,239.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,239	LF	\$ 0.50	\$ 2,619.50
TOTAL MISCELLANEOUS CLEANUP				\$ 32,579.50

Table B.4

ZANJERO TRAILS
 Glendale Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,811,718.50	\$ 28,117.19
TOTAL ONE YEAR WARRANTY COSTS				\$ 28,117.19
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,811,718.50	\$ 115,139.87
TOTAL SALES TAX				\$ 115,139.87
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,354,084.48	\$ 335,408.45
TOTAL CONTINGENCY				\$ 335,408.45
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,689,492.92

Table B.4

ZANJERO TRAILS
Northern Avenue and Perryville Road
Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 3,339,298.00	\$ 116,875.43
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 120,730.43
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 3,376,877.00	\$ 118,190.70
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,342	LF	\$ 4.75	\$ 25,374.50
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 3,339,298.00	\$ 83,482.45
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,342	LF	\$ 0.60	\$ 3,205.20
TOTAL SURVEYING				\$ 4,205.20
TOTAL CONSULTANT SERVICES				\$ 231,252.85
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 3,339,298.00	\$ 66,785.96
TOTAL CONSTRUCTION TESTING				\$ 66,785.96

Table B.4

ZANJERO TRAILS
Northern Avenue and Perryville Road
Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
10" SDR 35 Sewerline (18' Avg Depth)	5,342	LF	\$ 43.00	\$ 229,706.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	2	EA	\$ 12,000.00	\$ 24,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,342	LF	\$ 1.00	\$ 5,342.00
TOTAL SEWERLINE EXTENSION				\$ 317,648.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	3,250	LF	\$ 24.00	\$ 78,000.00
8" SDR 35 PVC (Parcel 23)	6,656	LF	\$ 24.00	\$ 159,744.00
8" SDR 35 PVC (Parcel 24)	21,951	LF	\$ 24.00	\$ 526,824.00
8" SDR 35 PVC (Parcel 25)	14,110	LF	\$ 24.00	\$ 338,640.00
8" SDR 35 PVC (Parcel 26)	7,423	LF	\$ 24.00	\$ 178,152.00
Manholes (5')	297	EA	\$ 4,000.00	\$ 1,188,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	934	EA	\$ 475.00	\$ 443,650.00
Air Test Manholes	297	EA	\$ 150.00	\$ 44,550.00
Camera Test Sewer	53,390	LF	\$ 1.00	\$ 53,390.00
TOTAL ONSITE SEWERLINES				\$ 3,015,950.00
TOTAL SEWER				\$ 3,333,598.00

Table B.4

ZANJERO TRAILS
Northern Avenue and Perryville Road
Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	58,732	LF	\$ 0.50	\$ 29,366.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,342	LF	\$ 1.00	\$ 5,342.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,342	LF	\$ 0.50	\$ 2,671.00
TOTAL MISCELLANEOUS CLEANUP				\$ 37,379.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 3,376,877.00	\$ 33,768.77
TOTAL ONE YEAR WARRANTY COSTS				\$ 33,768.77
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 3,376,877.00	\$ 138,283.11
TOTAL SALES TAX				\$ 138,283.11
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 4,013,198.12	\$ 401,319.81
TOTAL CONTINGENCY				\$ 401,319.81
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 4,414,517.93

Table B.4

ZANJERO TRAILS
 Olive Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,872,625.00	\$ 100,541.88
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 104,396.88
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,901,719.50	\$ 101,560.18
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	2,500	LF	\$ 4.75	\$ 11,875.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,872,625.00	\$ 71,815.63
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	2,500	LF	\$ 0.60	\$ 1,500.00
TOTAL SURVEYING				<u>\$ 2,500.00</u>
TOTAL CONSULTANT SERVICES				\$ 187,750.81
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,872,625.00	\$ 57,452.50
TOTAL CONSTRUCTION TESTING				\$ 57,452.50
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
Olive Avenue and Perryville Road
Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
8" SDR 35 Sewerline (12' Avg Depth)	2,500	LF	\$ 30.00	\$ 75,000.00
Manholes (5')	7	EA	\$ 4,000.00	\$ 28,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Air Test Manholes	7	EA	\$ 150.00	\$ 1,050.00
Camera Test Sewer	2,500	LF	\$ 1.00	\$ 2,500.00
TOTAL SEWERLINE EXTENSION				\$ 107,050.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,300	LF	\$ 24.00	\$ 55,200.00
8" SDR 35 PVC (Parcel 16)	26,024	LF	\$ 24.00	\$ 624,576.00
8" SDR 35 PVC (Parcel 17)	877	LF	\$ 24.00	\$ 21,048.00
8" SDR 35 PVC (Parcel 18)	2,145	LF	\$ 24.00	\$ 51,480.00
8" SDR 35 PVC (Parcel 19)	10,132	LF	\$ 24.00	\$ 243,168.00
8" SDR 35 PVC (Parcel 20)	6,711	LF	\$ 24.00	\$ 161,064.00
Manholes (5')	268	EA	\$ 4,000.00	\$ 1,072,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	934	EA	\$ 475.00	\$ 443,650.00
Air Test Manholes	268	EA	\$ 150.00	\$ 40,200.00
Camera Test Sewer	48,189	LF	\$ 1.00	\$ 48,189.00
TOTAL ONSITE SEWERLINES				\$ 2,765,575.00
TOTAL SEWER				\$ 2,872,625.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	50,689	LF	\$ 0.50	\$ 25,344.50
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	2,500	LF	\$ 1.00	\$ 2,500.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	2,500	LF	\$ 0.50	\$ 1,250.00
TOTAL MISCELLANEOUS CLEANUP				\$ 29,094.50
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00

Table B.4

ZANJERO TRAILS
 Olive Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,901,719.50	\$ 29,017.20
TOTAL ONE YEAR WARRANTY COSTS				\$ 29,017.20
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,901,719.50	\$ 118,825.41
TOTAL SALES TAX				\$ 118,825.41
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,444,662.29	\$ 344,466.23
TOTAL CONTINGENCY				\$ 344,466.23
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,789,128.52

Table B.4

ZANJERO TRAILS
Northern Avenue and Beardsley Canal
Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 4,000.00	\$ 4,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 2,000.00	\$ 2,000.00
Liberty	1	LS	\$ 20,000.00	\$ 20,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 27,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,027,912.00	\$ 70,976.92
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 74,831.92
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,052,381.00	\$ 71,833.34
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,342	LF	\$ 4.75	\$ 25,374.50
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,027,912.00	\$ 50,697.80
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,342	LF	\$ 0.60	\$ 3,205.20
TOTAL SURVEYING				\$ 4,205.20
TOTAL CONSULTANT SERVICES				\$ 152,110.84
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,027,912.00	\$ 40,558.24
TOTAL CONSTRUCTION TESTING				\$ 40,558.24
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
Northern Avenue and Beardsley Canal
Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Beardsley Cana)				
8" SDR 35 Sewerline (15' Avg Depth)	5,342	LF	\$ 35.00	\$ 186,970.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,342	LF	\$ 1.00	\$ 5,342.00
TOTAL SEWERLINE EXTENSION				\$ 250,912.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Parcel 33)	2,945	LF	\$ 24.00	\$ 70,680.00
8" SDR 35 PVC (Parcel 34)	24,625	LF	\$ 24.00	\$ 591,000.00
Manholes (5')	154	EA	\$ 4,000.00	\$ 616,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	934	EA	\$ 475.00	\$ 443,650.00
Air Test Manholes	154	EA	\$ 150.00	\$ 23,100.00
Camera Test Sewer	27,570	LF	\$ 1.00	\$ 27,570.00
TOTAL ONSITE SEWERLINES				\$ 1,777,000.00
TOTAL SEWER				\$ 2,027,912.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	32,912	LF	\$ 0.50	\$ 16,456.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,342	LF	\$ 1.00	\$ 5,342.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,342	LF	\$ 0.50	\$ 2,671.00
TOTAL MISCELLANEOUS CLEANUP				\$ 24,469.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,052,381.00	\$ 20,523.81

Table B.4

ZANJERO TRAILS
 Northern Avenue and Beardsley Canal
 Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
TOTAL ONE YEAR WARRANTY COSTS				\$ 20,523.81
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,052,381.00	\$ 84,045.00
TOTAL SALES TAX				\$ 84,045.00
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 2,456,950.81	\$ 245,695.08
TOTAL CONTINGENCY				\$ 245,695.08
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 2,702,645.89



APPENDIX C
HYDRAULIC CALCULATIONS

Table C.1: Manhole Loading

Project: Zanjero Trails

Prepared By: Zach Hilgart, P.E.



Manhole	Parcel	Percentage	Average Daily Flow (gpd)	Equivalent Population	Peaking Factor	Peak Flow (gpd)
MH-20	16	100%	129,250	1,654	2.24	289,082
Total (Cumulative)			129,250	1,654	2.24	289,082
MH-19	17	100%	1,720	22	3.62	6,226
	18	100%	8,150	104	3.62	29,503
	19	100%	48,750	624	2.56	124,800
	20	100%	32,250	413	2.74	88,365
	21	100%	22,375	286	3.14	70,258
Total (Cumulative)			242,495	3,104	2.08	504,883
MH-18	22	100%	5,000	64	3.62	18,100
	23	100%	46,000	589	2.64	121,440
	24	50%	41,875	536	2.64	110,550
	25	50%	34,000	435	2.74	93,160
Total (Cumulative)			369,370	4,728	1.99	735,234
MH-17	24	50%	41,875	536	2.64	110,550
	25	50%	34,000	435	2.74	93,160
	26	100%	35,750	458	2.74	97,955
Total (Cumulative)			480,995	6,157	1.94	931,908
MH-16	27	50%	61,250	784	2.50	153,125
	28	50%	18,875	242	3.14	59,268
Total (Cumulative)			561,120	7,182	1.91	1,070,598
MH-15	27	50%	61,250	784	2.50	153,125
	28	50%	18,875	242	3.14	59,268
Total (Cumulative)			641,245	8,208	1.88	1,207,626
MH-14	29	100%	7,100	91	3.62	25,702
	30	100%	1,740	22	3.62	6,299
	31	50%	62,375	798	2.50	155,938
	32	75%	24,188	310	2.90	70,144
Total (Cumulative)			736,648	9,429	1.86	1,368,960
MH-13	31	50%	62,375	798	2.50	155,938
	32	25%	8,063	103	3.62	29,186
Total (Cumulative)			807,085	10,331	1.84	1,489,027
MH-12	36	100%	28,250	362	2.90	81,925
Total (Cumulative)			835,335	10,692	1.84	1,536,365
MH-10	37B	100%	14,500	186	3.62	52,490
Total (Cumulative)			849,835	10,878	1.84	1,560,615
MH-8	37A	100%	22,750	291	3.14	71,435
Total (Cumulative)			872,585	11,169	1.83	1,598,600
MH-5	43	100%	24,500	314	2.90	71,050
Total (Cumulative)			897,085	11,483	1.83	1,639,422
MH-3	44	100%	23,750	304	2.90	68,875
Total (Cumulative)			920,835	11,787	1.82	1,678,916
MH-1	45	100%	19,913	255	3.14	62,525
Total (Cumulative)			940,748	12,042	1.82	1,711,969
MH-21	35A	100%	29,000	371	2.90	84,100
	35B	100%	28,750	368	2.90	83,375
	38	100%	1,362	17	3.62	4,930
	39	100%	8,530	109	3.62	30,879
	40	77.5%	23,250	298	3.14	73,005
	41	100%	41,760	535	2.64	110,246
Total (Cumulative)			4,280	55	3.62	15,494
Total (Cumulative)			1,077,680	13,794	1.80	1,937,922

Table C.1: Manhole Loading

Project: Zanjero Trails

Prepared By: Zach Hilgart, P.E.



Manhole	Parcel	Percentage	Average Daily Flow (gpd)	Equivalent Population	Peaking Factor	Peak Flow (gpd)
MH-22	40	22.5%	6,750	86	3.62	24,435
Total (Cumulative)			1,084,430	13,881	1.80	1,949,003
MH-23	33	100%	18,000	230	3.14	56,520
	34	100%	121,000	1,549	2.25	272,752
Total			1,223,430	15,660	1.78	2,176,134

FlexTable: Conduit Table
 14-0502_ZT Perryville Rd_No Fut No
 Shea_AAC.stsw

Active Scenario: Average Daily Flow

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Slope (ft/ft)	Manning's n	Start Node	Invert (Start) (ft)	Cover (Start) (ft)	Stop Node	Invert (Stop) (ft)	Cover (Stop) (ft)	Flow (gpd)	Depth (Normal) / Rise (%)	Flow / Capacity (Design) (%)	Velocity (Maximum Calculated) (ft/s)	Capacity (Excess Design) (gpd)	Capacity (Full Flow) (gpd)
CO-1	18.0	101	0.0012	0.013	MH-1	1,120.08	12.81	OF-1	1,119.96	13.29	940,747	44.1	44.1	1.94	1,193,069	2,340,025
CO-2	18.0	576	0.0011	0.013	MH-2	1,120.84	15.19	MH-1	1,120.18	12.71	920,835	44.0	43.9	1.90	1,174,666	2,298,006
CO-3	15.0	166	0.0116	0.013	MH-3	1,123.01	13.88	MH-2	1,121.09	15.19	920,835	30.7	22.5	4.45	3,173,409	4,489,904
CO-4	15.0	737	0.0036	0.013	MH-5	1,125.79	14.15	MH-3	1,123.11	13.78	897,085	41.3	39.1	2.91	1,398,592	2,517,527
CO-6	15.0	600	0.0035	0.013	MH-6	1,127.99	14.07	MH-5	1,125.89	14.05	872,585	41.1	38.7	2.84	1,379,637	2,469,873
CO-7	15.0	334	0.0035	0.013	MH-7	1,129.26	13.89	MH-6	1,128.09	13.97	872,585	41.1	38.7	2.85	1,380,600	2,470,929
CO-8	15.0	334	0.0035	0.013	MH-8	1,130.53	13.90	MH-7	1,129.36	13.79	872,585	41.1	38.7	2.85	1,380,600	2,470,929
CO-9	15.0	581	0.0035	0.013	MH-9	1,132.66	14.17	MH-8	1,130.63	13.80	849,835	40.5	37.8	2.82	1,400,448	2,467,746
CO-10	15.0	284	0.0035	0.013	MH-10	1,133.76	14.24	MH-9	1,132.76	14.07	849,835	40.4	37.6	2.83	1,409,174	2,477,316
CO-11	15.0	430	0.0033	0.013	MH-11	1,135.28	13.47	MH-10	1,133.86	14.14	835,335	40.7	38.2	2.75	1,352,361	2,399,112
CO-12	15.0	117	0.0040	0.013	MH-12	1,135.85	12.90	MH-11	1,135.38	13.37	835,335	38.6	34.6	2.96	1,577,531	2,646,041
CO-13	15.0	1,000	0.0033	0.013	MH-13	1,139.28	11.47	MH-12	1,135.95	12.80	807,085	39.9	36.7	2.74	1,389,759	2,409,143
CO-14	15.0	2,500	0.0057	0.013	MH-14	1,153.52	9.23	MH-13	1,139.38	11.37	736,648	33.0	25.7	3.23	2,126,422	3,139,751
CO-15	15.0	2,824	0.0041	0.013	MH-15	1,165.21	15.54	MH-14	1,153.62	9.13	641,245	33.4	26.3	2.77	1,797,613	2,674,545
CO-16	12.0	2,500	0.0054	0.013	MH-16	1,179.08	17.92	MH-15	1,165.46	15.54	561,120	39.6	36.2	3.00	988,656	1,699,544
CO-17	12.0	2,739	0.0058	0.013	MH-17	1,195.09	21.91	MH-16	1,179.18	17.82	480,995	35.8	30.1	2.95	1,119,261	1,754,902
CO-18	10.0	2,500	0.0102	0.013	MH-18	1,220.64	14.53	MH-17	1,195.26	21.91	369,370	34.7	28.4	3.40	931,627	1,426,723
CO-19	10.0	2,842	0.0068	0.013	MH-19	1,240.02	11.15	MH-18	1,220.74	14.43	242,495	30.9	22.8	2.61	821,016	1,166,287
CO-20	8.0	2,500	0.0059	0.013	MH-20	1,255.05	11.28	MH-19	1,240.19	11.14	129,250	31.5	23.5	2.12	419,802	602,111
CO-21	10.0	1,152	0.0059	0.013	MH-21	1,127.50	9.67	OF-1	1,120.68	13.24	282,682	34.8	28.5	2.59	710,815	1,089,506
CO-22	8.0	1,095	0.0036	0.013	MH-22	1,131.59	13.74	MH-21	1,127.67	9.66	145,750	38.3	34.2	1.83	280,348	467,276
CO-23	8.0	465	0.0033	0.013	MH-23	1,133.23	16.10	MH-22	1,131.69	13.64	139,000	38.2	33.9	1.76	270,834	449,439
CO-24	8.0	2,729	0.0045	0.013	MH-24	1,145.71	13.62	MH-23	1,133.43	15.90	139,000	35.2	29.1	1.96	338,717	523,883

Active Scenario: Average Daily
Flow

FlexTable: Manhole Table
14-0502_ZT Perryville Rd_No
Fut No Shea_AAC.stsw

Current Time: 0.000 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Depth (Structure) (ft)	Flow (System Sanitary) (gpd)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH-1	1,134.39	1,120.08	14.31	940,747	1,120.71	1,120.71
MH-2	1,137.53	1,120.84	16.69	920,835	1,121.50	1,121.50
MH-3	1,138.14	1,123.01	15.13	920,835	1,123.48	1,123.48
MH-5	1,141.19	1,125.79	15.40	897,085	1,126.31	1,126.31
MH-6	1,143.31	1,127.99	15.32	872,585	1,128.50	1,128.50
MH-7	1,144.40	1,129.26	15.14	872,585	1,129.77	1,129.77
MH-8	1,145.68	1,130.53	15.15	872,585	1,131.04	1,131.04
MH-9	1,148.08	1,132.66	15.42	849,835	1,133.17	1,133.17
MH-10	1,149.25	1,133.76	15.49	849,835	1,134.26	1,134.26
MH-11	1,150.00	1,135.28	14.72	835,335	1,135.79	1,135.79
MH-12	1,150.00	1,135.85	14.15	835,335	1,136.33	1,136.33
MH-13	1,152.00	1,139.28	12.72	807,085	1,139.78	1,139.78
MH-14	1,164.00	1,153.52	10.48	736,648	1,153.94	1,153.94
MH-15	1,182.00	1,165.21	16.79	641,245	1,165.63	1,165.63
MH-16	1,198.00	1,179.08	18.92	561,120	1,179.48	1,179.48
MH-17	1,218.00	1,195.09	22.91	480,995	1,195.45	1,195.45
MH-18	1,236.00	1,220.64	15.36	369,370	1,220.97	1,220.97
MH-19	1,252.00	1,240.02	11.98	242,495	1,240.29	1,240.29
MH-20	1,267.00	1,255.05	11.95	129,250	1,255.26	1,255.26
MH-21	1,138.00	1,127.50	10.50	282,682	1,127.79	1,127.79
MH-22	1,146.00	1,131.59	14.41	145,750	1,131.85	1,131.85
MH-23	1,150.00	1,133.23	16.77	139,000	1,133.48	1,133.48
MH-24	1,160.00	1,145.71	14.29	139,000	1,145.94	1,145.94

FlexTable: Outfall Table
14-0502_ZT Perryville Rd_No
Fut No Shea_AAC.stsw

Active Scenario: Average Daily
Flow

Current Time: 0.000 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Total Out) (gpd)
OF-1	1,134.75	1,119.76	1,223,430

FlexTable: Conduit Table
 14-0502_ZT Perryville Rd_No Fut No
 Shea_AAC.stsw

Active Scenario: Peak Flow (AAC)

Current Time: 0.000 hours

Label	Diameter (in)	Length (ft)	Slope (ft/ft)	Manning's n	Start Node	Invert (Start) (ft)	Cover (Start) (ft)	Stop Node	Invert (Stop) (ft)	Cover (Stop) (ft)	Flow (gpd)	Depth (Normal) / Rise (%)	Flow / Capacity (Design) (%)	Velocity (Maximum Calculated) (ft/s)	Capacity (Excess Design) (gpd)	Capacity (Full Flow) (gpd)
CO-1	18.0	101	0.0012	0.013	MH-1	1,120.08	12.81	OF-1	1,119.96	13.29	1,716,201	63.6	80.4	2.24	417,615	2,340,025
CO-2	18.0	576	0.0011	0.013	MH-2	1,120.84	15.19	MH-1	1,120.18	12.71	1,682,832	63.5	80.3	2.20	412,669	2,298,006
CO-3	15.0	166	0.0116	0.013	MH-3	1,123.01	13.88	MH-2	1,121.09	15.19	1,682,832	42.4	41.1	5.26	2,411,412	4,489,904
CO-4	15.0	737	0.0036	0.013	MH-5	1,125.79	14.15	MH-3	1,123.11	13.78	1,642,864	58.9	71.6	3.38	652,813	2,517,527
CO-6	15.0	600	0.0035	0.013	MH-6	1,127.99	14.07	MH-5	1,125.89	14.05	1,601,443	58.6	71.1	3.31	650,779	2,469,873
CO-7	15.0	334	0.0035	0.013	MH-7	1,129.26	13.89	MH-6	1,128.09	13.97	1,601,443	58.6	71.1	3.31	651,742	2,470,929
CO-8	15.0	334	0.0035	0.013	MH-8	1,130.53	13.90	MH-7	1,129.36	13.79	1,601,443	58.6	71.1	3.31	651,742	2,470,929
CO-9	15.0	581	0.0035	0.013	MH-9	1,132.66	14.17	MH-8	1,130.63	13.80	1,562,808	57.8	69.4	3.29	687,475	2,467,746
CO-10	15.0	284	0.0035	0.013	MH-10	1,133.76	14.24	MH-9	1,132.76	14.07	1,562,808	57.6	69.2	3.30	696,201	2,477,316
CO-11	15.0	430	0.0033	0.013	MH-11	1,135.28	13.47	MH-10	1,133.86	14.14	1,538,096	58.2	70.3	3.21	649,601	2,399,112
CO-12	15.0	117	0.0040	0.013	MH-12	1,135.85	12.90	MH-11	1,135.38	13.37	1,538,096	54.7	63.7	3.46	874,770	2,646,041
CO-13	15.0	1,000	0.0033	0.013	MH-13	1,139.28	11.47	MH-12	1,135.95	12.80	1,489,756	56.9	67.8	3.20	707,089	2,409,143
CO-14	15.0	2,500	0.0057	0.013	MH-14	1,153.52	9.23	MH-13	1,139.38	11.37	1,371,209	46.2	47.9	3.83	1,491,860	3,139,751
CO-15	15.0	2,824	0.0041	0.013	MH-15	1,165.21	15.54	MH-14	1,153.62	9.13	1,209,286	47.2	49.6	3.29	1,229,572	2,674,545
CO-16	12.0	2,500	0.0054	0.013	MH-16	1,179.08	17.92	MH-15	1,165.46	15.54	1,069,693	57.5	69.0	3.54	480,083	1,699,544
CO-17	12.0	2,739	0.0058	0.013	MH-17	1,195.09	21.91	MH-16	1,179.18	17.82	931,623	51.8	58.2	3.51	668,634	1,754,902
CO-18	10.0	2,500	0.0102	0.013	MH-18	1,220.64	14.53	MH-17	1,195.26	21.91	735,372	50.9	56.5	4.08	565,625	1,426,723
CO-19	10.0	2,842	0.0068	0.013	MH-19	1,240.02	11.15	MH-18	1,220.74	14.43	505,302	46.0	47.5	3.19	558,209	1,166,287
CO-20	8.0	2,500	0.0059	0.013	MH-20	1,255.05	11.28	MH-19	1,240.19	11.14	289,311	48.8	52.7	2.64	259,740	602,111
CO-21	10.0	1,152	0.0059	0.013	MH-21	1,127.50	9.67	OF-1	1,120.68	13.24	580,318	51.9	58.4	3.14	413,179	1,089,506
CO-22	8.0	1,095	0.0036	0.013	MH-22	1,131.59	13.74	MH-21	1,127.67	9.66	321,935	61.0	75.6	2.23	104,163	467,276
CO-23	8.0	465	0.0033	0.013	MH-23	1,133.23	16.10	MH-22	1,131.69	13.64	308,707	60.9	75.3	2.15	101,127	449,439
CO-24	8.0	2,729	0.0045	0.013	MH-24	1,145.71	13.62	MH-23	1,133.43	15.90	308,707	55.2	64.6	2.42	169,011	523,883

Active Scenario: Peak Flow
(AAC)

FlexTable: Manhole Table
14-0502_ZT Perryville Rd_No
Fut No Shea_AAC.stsw

Current Time: 0.000 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Depth (Structure) (ft)	Flow (System Sanitary) (gpd)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
MH-1	1,134.39	1,120.08	14.31	1,716,201	1,120.94	1,120.94
MH-2	1,137.53	1,120.84	16.69	1,682,832	1,121.79	1,121.79
MH-3	1,138.14	1,123.01	15.13	1,682,832	1,123.66	1,123.66
MH-5	1,141.19	1,125.79	15.40	1,642,864	1,126.53	1,126.53
MH-6	1,143.31	1,127.99	15.32	1,601,443	1,128.72	1,128.72
MH-7	1,144.40	1,129.26	15.14	1,601,443	1,129.99	1,129.99
MH-8	1,145.68	1,130.53	15.15	1,601,443	1,131.26	1,131.26
MH-9	1,148.08	1,132.66	15.42	1,562,808	1,133.38	1,133.38
MH-10	1,149.25	1,133.76	15.49	1,562,808	1,134.48	1,134.48
MH-11	1,150.00	1,135.28	14.72	1,538,096	1,136.01	1,136.01
MH-12	1,150.00	1,135.85	14.15	1,538,096	1,136.53	1,136.53
MH-13	1,152.00	1,139.28	12.72	1,489,756	1,139.99	1,139.99
MH-14	1,164.00	1,153.52	10.48	1,371,209	1,154.10	1,154.10
MH-15	1,182.00	1,165.21	16.79	1,209,286	1,165.80	1,165.80
MH-16	1,198.00	1,179.08	18.92	1,069,693	1,179.66	1,179.66
MH-17	1,218.00	1,195.09	22.91	931,623	1,195.61	1,195.61
MH-18	1,236.00	1,220.64	15.36	735,372	1,221.12	1,221.12
MH-19	1,252.00	1,240.02	11.98	505,302	1,240.41	1,240.41
MH-20	1,267.00	1,255.05	11.95	289,311	1,255.38	1,255.38
MH-21	1,138.00	1,127.50	10.50	580,318	1,127.93	1,127.93
MH-22	1,146.00	1,131.59	14.41	321,935	1,132.00	1,132.00
MH-23	1,150.00	1,133.23	16.77	308,707	1,133.64	1,133.64
MH-24	1,160.00	1,145.71	14.29	308,707	1,146.08	1,146.08

FlexTable: Outfall Table
14-0502_ZT Perryville Rd_No
Fut No Shea_AAC.stsw

Active Scenario: Peak Flow
(AAC)

Current Time: 0.000 hours

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Total Out) (gpd)
OF-1	1,134.75	1,119.76	2,176,134



APPENDIX D

**PHASE 1 APPROVED PRELIMINARY PLAT
AND WASTEWATER REPORT**

PRELIMINARY WASTEWATER REPORT
FOR
ZANJERO TRAILS - PHASE 1

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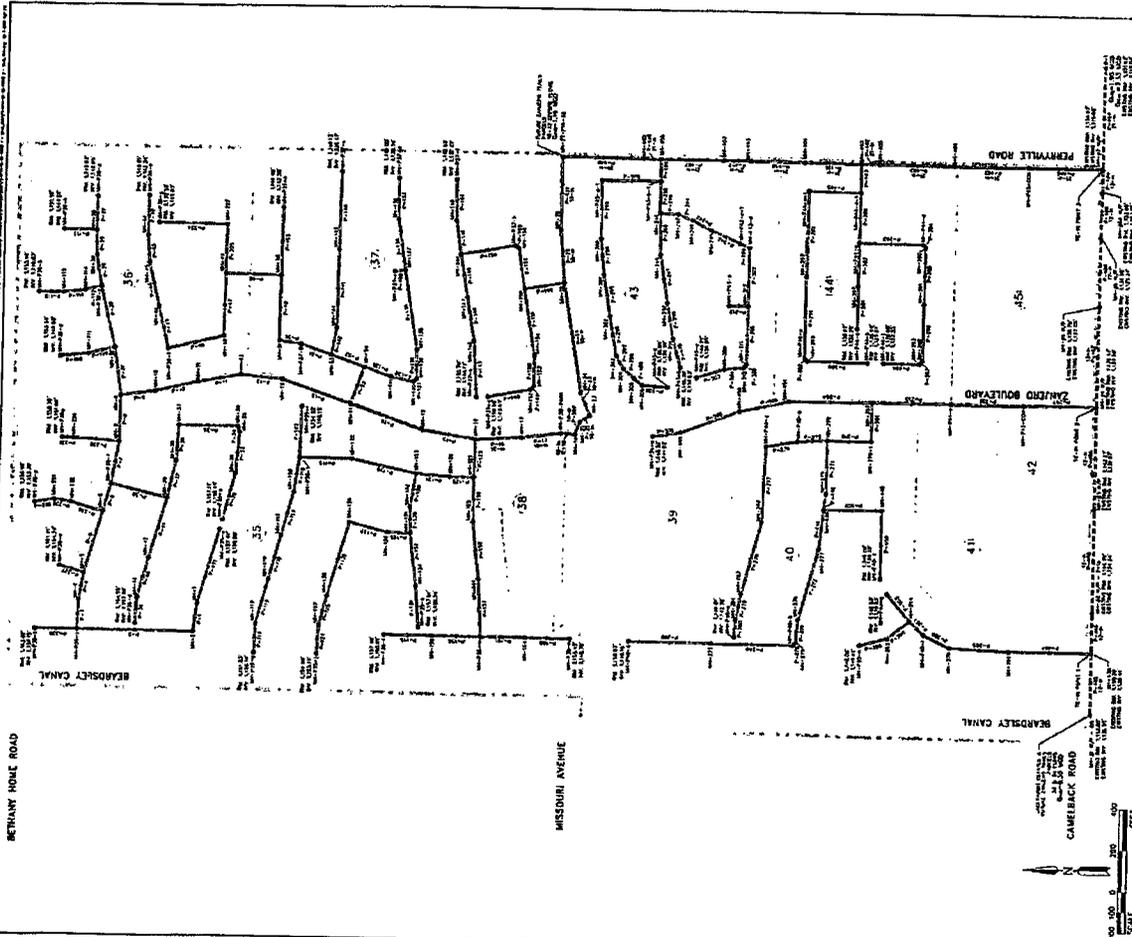
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LEGEND

PROJECT BOUNDARY
 PARKER BOUNDARY
 PROPOSED SEWER LINE
 EXISTING SEWER LINE
 MANHOLE
 EXISTING MANHOLE
 GULCH
 PAVED DRIVE
 2 1/2"

NOTES:

- ALL STREET, LOT LAYOUT, PARCEL, AND UTILITY LINES SHOWN ARE BASED ON RECORD PLANS AND FIELD SURVEY DATA. THE CLIENT HAS BEEN ADVISED OF ANY DISCREPANCIES.
- PROPOSED SEWER LINES AND MANHOLES ARE SHOWN IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS FOR SEWERAGE AND WASTEWATER SYSTEMS, 8TH EDITION, 2006, AS ADOPTED BY THE CITY OF JANSZHO, ARIZONA.
- EXISTING SEWER LINES AND MANHOLES ARE SHOWN IN ACCORDANCE WITH THE RECORD PLANS AND FIELD SURVEY DATA.
- PROPOSED SEWER LINES AND MANHOLES ARE SHOWN IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS FOR SEWERAGE AND WASTEWATER SYSTEMS, 8TH EDITION, 2006, AS ADOPTED BY THE CITY OF JANSZHO, ARIZONA.
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ZANJERO TRAILS PHASE 1
 PRELIMINARY WASTEWATER SYSTEM
 JANSZHO, ARIZONA

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 CONSULTING ENGINEERS, ARCHITECTS, AND PLANNERS
 710 N. PIMA AVENUE, SUITE 200
 TUCSON, ARIZONA 85705
 PHONE: (520) 545-1000
 FAX: (520) 545-1001

DATE: MAY 2008
 SCALE: 1" = 200'
 SHEET NO. 1 OF 1



APPENDIX E

LPSCO Regional Sanitary Sewer As-built plans

DESCRIPTION:
 WGS ELONGATION P. 323
 MARK 10 SOUTH 115000 (1977)

DESIGNED BY: M. HOGAN, LEADING ENGINEER, MARCH 1987
 10' x 10' RW FROM GOODYEAR
 ALMOST 800 FEET WEST ALONG WIGAM ROAD FROM THE POST
 OFFICE AT GOODYEAR. THERE IS NO WEST SIDE
 SIDEWALK FROM WIGAM TO THE WEST SIDE OF WIGAM
 ROAD. FROM WIGAM TO THE WEST SIDE OF WIGAM
 ROAD, THERE IS A SIDEWALK AT THE CORNER OF
 WEST BEAR LANE AND WIGAM ROAD. AT THE CORNER OF
 WEST BEAR LANE AND WIGAM ROAD, THERE IS A SIDEWALK
 10 FEET WEST OF THE CENTER LINE OF A ROAD ON THE EAST
 SIDE OF THE CORNER OF WEST BEAR LANE AND WIGAM
 ROAD. THE CONCRETE FOUNDATION FOR THE
 WIGAM ROAD BRIDGE IS 8 FEET EAST OF THE
 EAST PORTION OF THE CONCRETE FOUNDATION FOR THE
 WIGAM ROAD BRIDGE. THE EAST END OF A
 CONCRETE ROADWAY IS 10 FEET WEST OF A GOODYEAR
 TREE, AND ABOUT 7 FEET BELOW THE LEVEL OF THE ROAD.



LITCHFIELD PARK SERVICES COMPANY

311 W. WIGWAM BLVD., SUITE B LITCHFIELD PARK, AZ 85340 (623) 935 9367

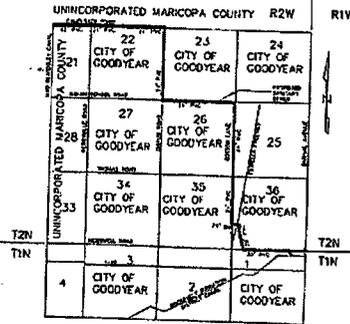
OWNER
 LITCHFIELD PARK SERVICES COMPANY
 311 WEST WIGWAM BLVD
 SUITE B
 LITCHFIELD PARK, AZ
 85340
 TEL: (623) 935 9367

CLIENT
 LARRY SOUTHWICK, INC.
 2051 WEST HORDERN AVENUE
 SUITE 102
 PHOENIX, ARIZONA 85021
 CONTACT: MR. DAVID L. MADRUE
 TEL: (602) 841-1815
 FAX: (602) 841-1800

ENGINEER
 WOOD, PATEL & ASSOCIATES INC
 2501 WEST HORDERN, SUITE 100
 PHOENIX, ARIZONA 85021
 CONTACT: MR. ROBERT D. GOFFINA, P.E.
 TEL: (602) 335-5000
 FAX: (602) 514-9500

SEWER & PAVING QUANTITIES (ESTIMATED)	
1" PIPE	1.00
2" PIPE	1.00
3" PIPE	1.00
4" PIPE	1.00
6" PIPE	1.00
8" PIPE	1.00
10" PIPE	1.00
12" PIPE	1.00
15" PIPE	1.00
18" PIPE	1.00
21" PIPE	1.00
24" PIPE	1.00
27" PIPE	1.00
30" PIPE	1.00
36" PIPE	1.00
42" PIPE	1.00
48" PIPE	1.00
54" PIPE	1.00
60" PIPE	1.00
66" PIPE	1.00
72" PIPE	1.00
78" PIPE	1.00
84" PIPE	1.00
90" PIPE	1.00
96" PIPE	1.00
102" PIPE	1.00
108" PIPE	1.00
114" PIPE	1.00
120" PIPE	1.00
126" PIPE	1.00
132" PIPE	1.00
138" PIPE	1.00
144" PIPE	1.00
150" PIPE	1.00
156" PIPE	1.00
162" PIPE	1.00
168" PIPE	1.00
174" PIPE	1.00
180" PIPE	1.00
186" PIPE	1.00
192" PIPE	1.00
198" PIPE	1.00
204" PIPE	1.00
210" PIPE	1.00
216" PIPE	1.00
222" PIPE	1.00
228" PIPE	1.00
234" PIPE	1.00
240" PIPE	1.00
246" PIPE	1.00
252" PIPE	1.00
258" PIPE	1.00
264" PIPE	1.00
270" PIPE	1.00
276" PIPE	1.00
282" PIPE	1.00
288" PIPE	1.00
294" PIPE	1.00
300" PIPE	1.00
306" PIPE	1.00
312" PIPE	1.00
318" PIPE	1.00
324" PIPE	1.00
330" PIPE	1.00
336" PIPE	1.00
342" PIPE	1.00
348" PIPE	1.00
354" PIPE	1.00
360" PIPE	1.00
366" PIPE	1.00
372" PIPE	1.00
378" PIPE	1.00
384" PIPE	1.00
390" PIPE	1.00
396" PIPE	1.00
402" PIPE	1.00
408" PIPE	1.00
414" PIPE	1.00
420" PIPE	1.00
426" PIPE	1.00
432" PIPE	1.00
438" PIPE	1.00
444" PIPE	1.00
450" PIPE	1.00
456" PIPE	1.00
462" PIPE	1.00
468" PIPE	1.00
474" PIPE	1.00
480" PIPE	1.00
486" PIPE	1.00
492" PIPE	1.00
498" PIPE	1.00
504" PIPE	1.00
510" PIPE	1.00
516" PIPE	1.00
522" PIPE	1.00
528" PIPE	1.00
534" PIPE	1.00
540" PIPE	1.00
546" PIPE	1.00
552" PIPE	1.00
558" PIPE	1.00
564" PIPE	1.00
570" PIPE	1.00
576" PIPE	1.00
582" PIPE	1.00
588" PIPE	1.00
594" PIPE	1.00
600" PIPE	1.00
606" PIPE	1.00
612" PIPE	1.00
618" PIPE	1.00
624" PIPE	1.00
630" PIPE	1.00
636" PIPE	1.00
642" PIPE	1.00
648" PIPE	1.00
654" PIPE	1.00
660" PIPE	1.00
666" PIPE	1.00
672" PIPE	1.00
678" PIPE	1.00
684" PIPE	1.00
690" PIPE	1.00
696" PIPE	1.00
702" PIPE	1.00
708" PIPE	1.00
714" PIPE	1.00
720" PIPE	1.00
726" PIPE	1.00
732" PIPE	1.00
738" PIPE	1.00
744" PIPE	1.00
750" PIPE	1.00
756" PIPE	1.00
762" PIPE	1.00
768" PIPE	1.00
774" PIPE	1.00
780" PIPE	1.00
786" PIPE	1.00
792" PIPE	1.00
798" PIPE	1.00
804" PIPE	1.00
810" PIPE	1.00
816" PIPE	1.00
822" PIPE	1.00
828" PIPE	1.00
834" PIPE	1.00
840" PIPE	1.00
846" PIPE	1.00
852" PIPE	1.00
858" PIPE	1.00
864" PIPE	1.00
870" PIPE	1.00
876" PIPE	1.00
882" PIPE	1.00
888" PIPE	1.00
894" PIPE	1.00
900" PIPE	1.00
906" PIPE	1.00
912" PIPE	1.00
918" PIPE	1.00
924" PIPE	1.00
930" PIPE	1.00
936" PIPE	1.00
942" PIPE	1.00
948" PIPE	1.00
954" PIPE	1.00
960" PIPE	1.00
966" PIPE	1.00
972" PIPE	1.00
978" PIPE	1.00
984" PIPE	1.00
990" PIPE	1.00
996" PIPE	1.00
1002" PIPE	1.00
1008" PIPE	1.00
1014" PIPE	1.00
1020" PIPE	1.00
1026" PIPE	1.00
1032" PIPE	1.00
1038" PIPE	1.00
1044" PIPE	1.00
1050" PIPE	1.00
1056" PIPE	1.00
1062" PIPE	1.00
1068" PIPE	1.00
1074" PIPE	1.00
1080" PIPE	1.00
1086" PIPE	1.00
1092" PIPE	1.00
1098" PIPE	1.00
1104" PIPE	1.00
1110" PIPE	1.00
1116" PIPE	1.00
1122" PIPE	1.00
1128" PIPE	1.00
1134" PIPE	1.00
1140" PIPE	1.00
1146" PIPE	1.00
1152" PIPE	1.00
1158" PIPE	1.00
1164" PIPE	1.00
1170" PIPE	1.00
1176" PIPE	1.00
1182" PIPE	1.00
1188" PIPE	1.00
1194" PIPE	1.00
1200" PIPE	1.00

REGIONAL SANITARY SEWER LINE
 CAMELBACK ROAD TO MCDOWELL ROAD
 MARICOPA COUNTY, ARIZONA



KEY MAP (NTS)

INDEX OF DRAWINGS:

- C1 COVER SHEET
- C2 GENERAL NOTES
- C3 LEGEND, ABBREVIATIONS AND QUANTITIES
- C4 INDEX MAP
- C5-C43 PLAN & PROFILE
- C44-C45 DETAIL SHEETS

APPROVED BY:

LOCAL LETTER OF APPROVAL DATES MAY 24, 2000
 MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
 MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT
 DATE: 8/2/00
 DATE: 9-12-05
 DATE: 9/16/05

FIELD DATA CERTIFICATION

I HEREBY CERTIFY THAT THIS DESIGN IS BASED ON ADEQUATE FIELD DATA MEASUREMENTS WHICH WERE OBTAINED BY THE FIELD PERSONNEL TO SUBMITTER.

WATER/SEWER "AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE "AS-BUILT" MEASUREMENTS AND DIMENSIONS WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AM NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY OCCUR IN THE FUTURE DUE TO CHANGES IN THE DESIGN OR CONSTRUCTION OF THE PROJECT.

CITY OF GOODYEAR
 ENGINEERING DEPARTMENT
 UTILITY CONFLICT SIGNATURE BLOCK

THESE PLANS HAVE BEEN REVIEWED BY THE FOLLOWING UTILITY COMPANIES WHERE THE WORK IS TO BE CONDUCTED. THEIR ANY OF THESE UTILITIES THE COMPACT SHALL BE RECOVERED AS SHOWN IN THE SPECIAL NOTES AND AS A CONDITION OF THE CONTRACT. THESE COMPANIES ARE NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. ANY CHANGES TO THE DESIGN SHALL BE APPROVED BY THE UTILITY COMPANY AND BY THE DESIGN ENGINEER.

UTILITY COMPANY	REPRESENTATIVE	DATE
SALE WATER PROJECT POWER	STEVE THOMAS	8/2/00
ARIZONA PUBLIC SERVICE	THOMAS WATSON	8/2/00
QUEST	MATTHEW PHILLIPS	11/28/04
COX COMMUNICATIONS	DAVE HANAY	8/7/00
SOUTHWEST GAS	MICHAEL HANAY	8/28/04
POP WATER	ARON BIRD	10/24/04
PHOENIX METRO	SHANE BOHANNON	10/27/04
EL PASO NATURAL GAS	RONALD BROWN	10/24/04
ARIZONA POWER AND LIGHT	STEVE HANAY	8/2/00

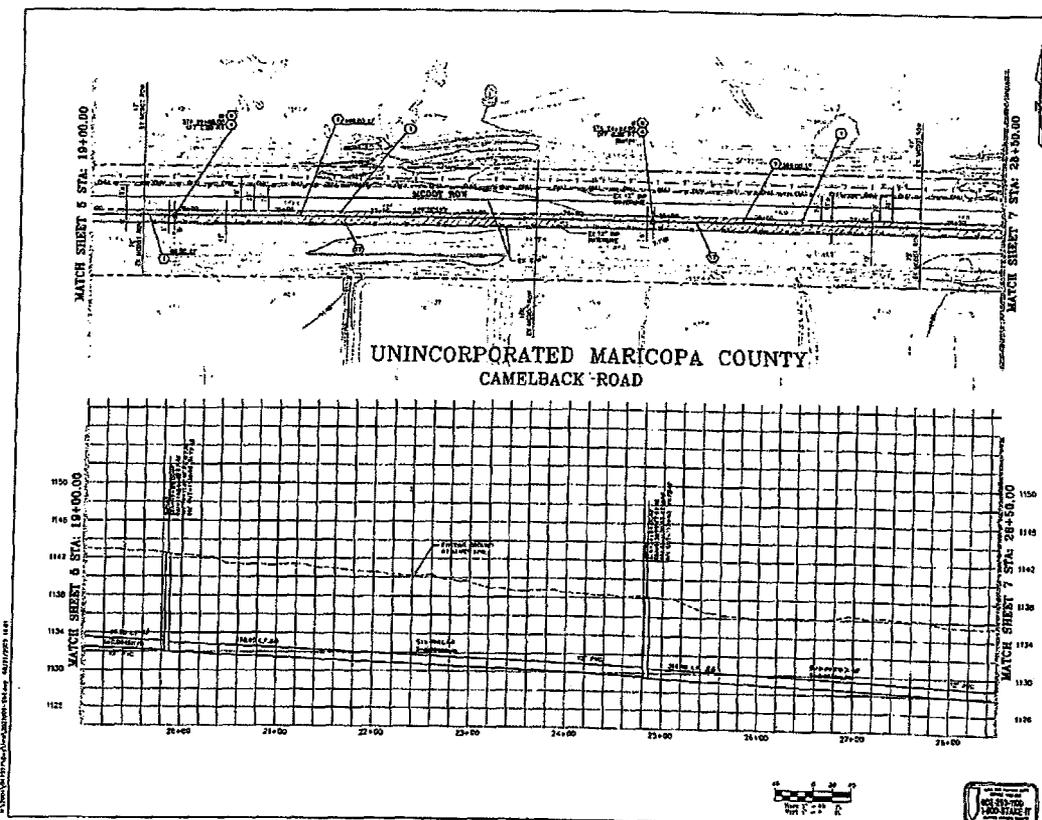
I, THE DESIGNER, HEREBY CERTIFY THAT ALL OF THE UTILITY COMPANIES LISTED ABOVE HAVE REVIEWED THIS PROJECT PROPOSAL AND ALL COMMENTS HAVE BEEN RECORDED AT THE POINT. NO COMMENTS FORMS HAVE BEEN OBTAINED FROM EACH UTILITY COMPANY AND ARE INCLUDED IN THIS DOCUMENT. I ALSO CERTIFY THAT ALL UTILITY TRANSDUCERS, GAGE PIPES AND ANY OTHER APPROPRIATE ARE PLACED SUCH THAT THEY DO NOT INTERFERE WITH THE USE OF INTENDED USE OF ANY DESIGNATED EASEMENTS OR FACILITIES SHOWN ON THESE PLANS INCLUDING BUT NOT LIMITED TO CONDUIT SPACING, BENCH, SEAT DISTANCE EASEMENTS AND COG OR OTHER OPEN SPACE REQUIREMENTS.

AS-BUILT SEAL

WOODPATEL, INC.
 10000 W. WIGWAM BLVD.
 SUITE 100
 LITCHFIELD PARK, AZ 85340
 TEL: (623) 935-9367
 FAX: (623) 935-9368

COVER SHEET
 PROJECT: LPSCO REGIONAL SANITARY SEWER
 SHEET NO. 101
 DATE: 8/2/00

04-123



UNINCORPORATED MARICOPA COUNTY
CAMELBACK ROAD

REMARKS NOTES

NO.	DESCRIPTION	DATE	BY
1	REVISIONS TO BE MADE TO THIS DRAWING AS SHOWN ON THE ATTACHED SHEETS AND TO BE MADE TO THIS DRAWING AS SHOWN ON THE ATTACHED SHEETS AND TO BE MADE TO THIS DRAWING AS SHOWN ON THE ATTACHED SHEETS.	1/25/11	EF

CONSTRUCTION NOTES

NO.	DESCRIPTION	DATE	BY
1	INSTALL 12" DIA. PIPE IN EXISTING TRENCH WITH 18" COVER.	1/25/11	EF
2	CONCRETE CURB AND GUTTER TO MATCH EXISTING CURB AND GUTTER.	1/25/11	EF
3	INSTALL 12" DIA. PIPE IN EXISTING TRENCH WITH 18" COVER.	1/25/11	EF
4	INSTALL 12" DIA. PIPE IN EXISTING TRENCH WITH 18" COVER.	1/25/11	EF

WOODFATEL
WOODFATEL ENGINEERING, INC.
11111 N. 24TH AVENUE, SUITE 100
SCOTTSDALE, AZ 85255
TEL: 480-344-1111
WWW.WOODFATEL.COM

PLAN AND PROFILE
LPCAD REGIONAL
SANITARY SEWER

DATE: 1/25/11
BY: EF
CHECKED: [Signature]
SCALE: AS SHOWN

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EXHIBIT 5

**ESTIMATED TOTAL CONSTRUCTION COSTS AND
PLANT COST PROJECTIONS**

Table B.4

ZANJERO TRAILS
 Camelback Road and Perryville Road
 Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 15,000.00	\$ 15,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 7,500.00	\$ 7,500.00
Liberty	1	LS	\$ 75,000.00	\$ 75,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 99,000.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 3,412,835.00	\$ 119,449.23
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 123,304.23
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 3,450,127.00	\$ 120,754.45
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,260	LF	\$ 4.75	\$ 24,985.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 3,412,835.00	\$ 85,320.88
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,260	LF	\$ 0.60	\$ 3,156.00
TOTAL SURVEYING				\$ 4,156.00
TOTAL CONSULTANT SERVICES				\$ 235,216.32
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 3,412,835.00	\$ 68,256.70
TOTAL CONSTRUCTION TESTING				\$ 68,256.70

Table B.4

ZANJERO TRAILS
Camelback Road and Perryville Road
Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
15" SDR 35 Sewerline (14' Avg Depth)	4,583	LF	\$ 50.00	\$ 229,150.00
18" F-679 Sewerline (12' Avg Depth)	677	LF	\$ 50.00	\$ 33,850.00
Manholes (5')	13	EA	\$ 4,000.00	\$ 52,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	13	EA	\$ 150.00	\$ 1,950.00
Camera Test Sewer	5,260	LF	\$ 1.00	\$ 5,260.00
TOTAL SEWERLINE EXTENSION				\$ 334,710.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,640	LF	\$ 24.00	\$ 63,360.00
8" SDR 35 PVC (Parcel 35A)	5,541	LF	\$ 24.00	\$ 132,984.00
8" SDR 35 PVC (Parcel 35B)	5,657	LF	\$ 24.00	\$ 135,768.00
8" SDR 35 PVC (Parcel 36)	4,891	LF	\$ 24.00	\$ 117,384.00
8" SDR 35 PVC (Parcel 37A)	5,657	LF	\$ 24.00	\$ 135,768.00
8" SDR 35 PVC (Parcel 37B)	2,589	LF	\$ 24.00	\$ 62,136.00
8" SDR 35 PVC (Parcel 38)	681	LF	\$ 24.00	\$ 16,344.00
8" SDR 35 PVC (Parcel 39)	2,232	LF	\$ 24.00	\$ 53,568.00
8" SDR 35 PVC (Parcel 40)	5,909	LF	\$ 24.00	\$ 141,816.00
8" SDR 35 PVC (Parcel 41)	5,221	LF	\$ 24.00	\$ 125,304.00
8" SDR 35 PVC (Parcel 42)	767	LF	\$ 24.00	\$ 18,408.00
8" SDR 35 PVC (Parcel 43)	4,575	LF	\$ 24.00	\$ 109,800.00
8" SDR 35 PVC (Parcel 44)	3,518	LF	\$ 24.00	\$ 84,432.00
8" SDR 35 PVC (Parcel 45)	3,266	LF	\$ 24.00	\$ 78,384.00
Manholes (5')	296	EA	\$ 4,000.00	\$ 1,184,000.00
Sewer Stubout	7	EA	\$ 300.00	\$ 2,100.00
Connect to Existing	13	EA	\$ 500.00	\$ 6,500.00
4" Services	1,067	EA	\$ 475.00	\$ 506,825.00
Air Test Manholes	296	EA	\$ 150.00	\$ 44,400.00
Camera Test Sewer	53,144	LF	\$ 1.00	\$ 53,144.00
TOTAL ONSITE SEWERLINES				\$ 3,072,425.00
TOTAL SEWER				\$ 3,407,135.00

Table B.4

ZANJERO TRAILS
 Camelback Road and Perryville Road
 Maricopa County, Arizona
PHASE 1 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	58,404	LF	\$ 0.50	\$ 29,202.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,260	LF	\$ 1.00	\$ 5,260.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,260	LF	\$ 0.50	\$ 2,630.00
TOTAL MISCELLANEOUS CLEANUP				\$ 37,092.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 3,450,127.00	\$ 34,501.27
TOTAL ONE YEAR WARRANTY COSTS				\$ 34,501.27
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 3,450,127.00	\$ 141,282.70
TOTAL SALES TAX				\$ 141,282.70
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 4,156,688.22	\$ 415,668.82
TOTAL CONTINGENCY				\$ 415,668.82
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 4,572,357.04

Table B.4

ZANJERO TRAILS
 Bethany Home Road and Perryville Road
 Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,691,274.00	\$ 94,194.59
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 98,049.59
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,723,168.00	\$ 95,310.88
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,324	LF	\$ 4.75	\$ 25,289.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,691,274.00	\$ 67,281.85
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,324	LF	\$ 0.60	\$ 3,194.40
TOTAL SURVEYING				\$ 4,194.40
TOTAL CONSULTANT SERVICES				\$ 192,076.13
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,691,274.00	\$ 53,825.48
TOTAL CONSTRUCTION TESTING				\$ 53,825.48
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
Bethany Home Road and Perryville Road
Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
15" SDR 35 Sewerline (14' Avg Depth)	5,324	LF	\$ 50.00	\$ 266,200.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,324	LF	\$ 1.00	\$ 5,324.00
TOTAL SEWERLINE EXTENSION				\$ 342,124.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,850	LF	\$ 24.00	\$ 68,400.00
8" SDR 35 PVC (Parcel 31)	25,862	LF	\$ 24.00	\$ 620,688.00
8" SDR 35 PVC (Parcel 32)	13,780	LF	\$ 24.00	\$ 330,720.00
Manholes (5')	237	EA	\$ 4,000.00	\$ 948,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	628	EA	\$ 475.00	\$ 298,300.00
Air Test Manholes	237	EA	\$ 150.00	\$ 35,550.00
Camera Test Sewer	42,492	LF	\$ 1.00	\$ 42,492.00
TOTAL ONSITE SEWERLINES				\$ 2,349,150.00
TOTAL SEWER				\$ 2,691,274.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	47,816	LF	\$ 0.50	\$ 23,908.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,324	LF	\$ 1.00	\$ 5,324.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,324	LF	\$ 0.50	\$ 2,662.00
TOTAL MISCELLANEOUS CLEANUP				\$ 31,894.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00

Table B.4

ZANJERO TRAILS
 Bethany Home Road and Perryville Road
 Maricopa County, Arizona
PHASE 2 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,723,168.00	\$ 27,231.68
TOTAL ONE YEAR WARRANTY COSTS				\$ 27,231.68
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,723,168.00	\$ 111,513.73
TOTAL SALES TAX				\$ 111,513.73
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,251,364.61	\$ 325,136.46
TOTAL CONTINGENCY				\$ 325,136.46
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,576,501.07

Table B.4

ZANJERO TRAILS
Glendale Avenue and Perryville Road
Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,778,939.00	\$ 97,262.87
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 101,117.87
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,811,718.50	\$ 98,410.15
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,239	LF	\$ 4.75	\$ 24,885.25
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,778,939.00	\$ 69,473.48
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,239	LF	\$ 0.60	\$ 3,143.40
TOTAL SURVEYING				\$ 4,143.40
TOTAL CONSULTANT SERVICES				\$ 196,912.27
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,778,939.00	\$ 55,578.78
TOTAL CONSTRUCTION TESTING				\$ 55,578.78

Table B.4

ZANJERO TRAILS
Glendale Avenue and Perryville Road
Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
12" SDR 35 Sewerline (20' Avg Depth)	5,239	LF	\$ 50.00	\$ 261,950.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	1	EA	\$ 12,000.00	\$ 12,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,239	LF	\$ 1.00	\$ 5,239.00
TOTAL SEWERLINE EXTENSION				\$ 337,789.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,800	LF	\$ 24.00	\$ 67,200.00
8" SDR 35 PVC (Parcel 27)	25,207	LF	\$ 24.00	\$ 604,968.00
8" SDR 35 PVC (Parcel 28)	16,196	LF	\$ 24.00	\$ 388,704.00
Manholes (5')	246	EA	\$ 4,000.00	\$ 984,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	641	EA	\$ 475.00	\$ 304,475.00
Air Test Manholes	246	EA	\$ 150.00	\$ 36,900.00
Camera Test Sewer	44,203	LF	\$ 1.00	\$ 44,203.00
TOTAL ONSITE SEWERLINES				\$ 2,435,450.00
TOTAL SEWER				\$ 2,773,239.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	49,442	LF	\$ 0.50	\$ 24,721.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,239	LF	\$ 1.00	\$ 5,239.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,239	LF	\$ 0.50	\$ 2,619.50
TOTAL MISCELLANEOUS CLEANUP				\$ 32,579.50

Table B.4

ZANJERO TRAILS
 Glendale Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 3 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,811,718.50	\$ 28,117.19
TOTAL ONE YEAR WARRANTY COSTS				\$ 28,117.19
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,811,718.50	\$ 115,139.87
TOTAL SALES TAX				\$ 115,139.87
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,354,084.48	\$ 335,408.45
TOTAL CONTINGENCY				\$ 335,408.45
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,689,492.92

Table B.4

ZANJERO TRAILS
Northern Avenue and Perryville Road
Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 3,339,298.00	\$ 116,875.43
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 120,730.43
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 3,376,877.00	\$ 118,190.70
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,342	LF	\$ 4.75	\$ 25,374.50
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 3,339,298.00	\$ 83,482.45
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,342	LF	\$ 0.60	\$ 3,205.20
TOTAL SURVEYING				\$ 4,205.20
TOTAL CONSULTANT SERVICES				\$ 231,252.85
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 3,339,298.00	\$ 66,785.96
TOTAL CONSTRUCTION TESTING				\$ 66,785.96

Table B.4

ZANJERO TRAILS
Northern Avenue and Perryville Road
Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL ITEM COST
5.00 MISCELLANEOUS REMOVALS				
5.10 SAWCUT AND REMOVE AC	20	SY	\$ 10.00	\$ 200.00
TOTAL MISCELLANEOUS REMOVALS				\$ 200.00
6.00 GRADING AND PAVING				
6.10 PAVING				
5" AC on 7" ABC (ARTERIAL)	20	SY	\$ 35.00	\$ 700.00
Traffic Control Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL GRADING AND PAVING				\$ 5,700.00
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
10" SDR 35 Sewerline (18' Avg Depth)	5,342	LF	\$ 43.00	\$ 229,706.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Jack and Bore Sewerline w/ Steel Casing (40')	2	EA	\$ 12,000.00	\$ 24,000.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,342	LF	\$ 1.00	\$ 5,342.00
TOTAL SEWERLINE EXTENSION				\$ 317,648.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	3,250	LF	\$ 24.00	\$ 78,000.00
8" SDR 35 PVC (Parcel 23)	6,656	LF	\$ 24.00	\$ 159,744.00
8" SDR 35 PVC (Parcel 24)	21,951	LF	\$ 24.00	\$ 526,824.00
8" SDR 35 PVC (Parcel 25)	14,110	LF	\$ 24.00	\$ 338,640.00
8" SDR 35 PVC (Parcel 26)	7,423	LF	\$ 24.00	\$ 178,152.00
Manholes (5')	297	EA	\$ 4,000.00	\$ 1,188,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	934	EA	\$ 475.00	\$ 443,650.00
Air Test Manholes	297	EA	\$ 150.00	\$ 44,550.00
Camera Test Sewer	53,390	LF	\$ 1.00	\$ 53,390.00
TOTAL ONSITE SEWERLINES				\$ 3,015,950.00
TOTAL SEWER				\$ 3,333,598.00

Table B.4

ZANJERO TRAILS
 Northern Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 4 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	58,732	LF	\$ 0.50	\$ 29,366.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,342	LF	\$ 1.00	\$ 5,342.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,342	LF	\$ 0.50	\$ 2,671.00
TOTAL MISCELLANEOUS CLEANUP				\$ 37,379.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 3,376,877.00	\$ 33,768.77
TOTAL ONE YEAR WARRANTY COSTS				\$ 33,768.77
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 3,376,877.00	\$ 138,283.11
TOTAL SALES TAX				\$ 138,283.11
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 4,013,198.12	\$ 401,319.81
TOTAL CONTINGENCY				\$ 401,319.81
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 4,414,517.93

Table B.4

ZANJERO TRAILS
 Olive Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 6,000.00	\$ 6,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 3,000.00	\$ 3,000.00
Liberty	1	LS	\$ 30,000.00	\$ 30,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 40,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,872,625.00	\$ 100,541.88
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 104,396.88
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,901,719.50	\$ 101,560.18
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	2,500	LF	\$ 4.75	\$ 11,875.00
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,872,625.00	\$ 71,815.63
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	2,500	LF	\$ 0.60	\$ 1,500.00
TOTAL SURVEYING				\$ 2,500.00
TOTAL CONSULTANT SERVICES				\$ 187,750.81
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,872,625.00	\$ 57,452.50
TOTAL CONSTRUCTION TESTING				\$ 57,452.50
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
 Olive Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Perryville Road)				
8" SDR 35 Sewerline (12' Avg Depth)	2,500	LF	\$ 30.00	\$ 75,000.00
Manholes (5')	7	EA	4,000.00	28,000.00
Connect to Existing	1	EA	500.00	500.00
Air Test Manholes	7	EA	150.00	1,050.00
Camera Test Sewer	2,500	LF	1.00	2,500.00
TOTAL SEWERLINE EXTENSION				\$ 107,050.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Collector Road)	2,300	LF	\$ 24.00	\$ 55,200.00
8" SDR 35 PVC (Parcel 16)	26,024	LF	\$ 24.00	624,576.00
8" SDR 35 PVC (Parcel 17)	877	LF	\$ 24.00	21,048.00
8" SDR 35 PVC (Parcel 18)	2,145	LF	\$ 24.00	51,480.00
8" SDR 35 PVC (Parcel 19)	10,132	LF	\$ 24.00	243,168.00
8" SDR 35 PVC (Parcel 20)	6,711	LF	\$ 24.00	161,064.00
Manholes (5')	268	EA	\$ 4,000.00	1,072,000.00
Sewer Stubout	5	EA	\$ 300.00	1,500.00
Connect to Existing	7	EA	\$ 500.00	3,500.00
4" Services	934	EA	\$ 475.00	443,650.00
Air Test Manholes	268	EA	\$ 150.00	40,200.00
Camera Test Sewer	48,189	LF	\$ 1.00	48,189.00
TOTAL ONSITE SEWERLINES				\$ 2,765,575.00
TOTAL SEWER				\$ 2,872,625.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	50,689	LF	\$ 0.50	25,344.50
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	2,500	LF	\$ 1.00	2,500.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	2,500	LF	\$ 0.50	1,250.00
TOTAL MISCELLANEOUS CLEANUP				\$ 29,094.50
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00

Table B.4

ZANJERO TRAILS
 Olive Avenue and Perryville Road
 Maricopa County, Arizona
PHASE 5 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,901,719.50	\$ 29,017.20
TOTAL ONE YEAR WARRANTY COSTS				\$ 29,017.20
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,901,719.50	\$ 118,825.41
TOTAL SALES TAX				\$ 118,825.41
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 3,444,662.29	\$ 344,466.23
TOTAL CONTINGENCY				\$ 344,466.23
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 3,789,128.52

Table B.4

ZANJERO TRAILS
Northern Avenue and Beardsley Canal
Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
1.00 PLAN REVIEW AND PROCESSING FEES				
1.10 FINAL ENGINEERING REVIEW FEES				
MCESD	1	LS	\$ 4,000.00	\$ 4,000.00
MCDOT	1	LS	\$ 1,500.00	\$ 1,500.00
MWD	1	LS	\$ 2,000.00	\$ 2,000.00
Liberty	1	LS	\$ 20,000.00	\$ 20,000.00
TOTAL PLAN REVIEW AND PROCESSING FEES				\$ 27,500.00
2.00 PERMIT FEES				
2.10 MUNICIPALITY PERMIT FEES				
Municipality Permits (Items 6-7)	3.5%	OF	\$ 2,027,912.00	\$ 70,976.92
2.20 COUNTY HEALTH DEPT. FEES (Air Qual.)				
Dust Control Permit (Sewerline Extension Only)	1	LS	\$ 3,855.00	\$ 3,855.00
TOTAL PERMIT FEES				\$ 74,831.92
3.00 CONSULTANT SERVICES				
3.10 CONSTRUCTION MANAGEMENT				
Construction Management (Items 5-8)	3.5%	OF	\$ 2,052,381.00	\$ 71,833.34
3.20 ENGINEERING				
Engineering Design (Sewerline Extension Only)	5,342	LF	\$ 4.75	\$ 25,374.50
3.30 CONSTRUCTION STAKING				
Offsite Construction Staking (Items 6-7)	2.5%	OF	\$ 2,027,912.00	\$ 50,697.80
3.40 SURVEYING				
Legal Descriptions	1	LS	\$ 1,000.00	\$ 1,000.00
Topographic Survey (Sewerline Extension Only)	5,342	LF	\$ 0.60	\$ 3,205.20
TOTAL SURVEYING				\$ 4,205.20
TOTAL CONSULTANT SERVICES				\$ 152,110.84
4.00 CONSTRUCTION TESTING				
4.10 SOIL /COMPACTION TESTING				
Offsite Testing (Items 6-7, exclusive of onsite sewerlines)	2.0%	OF	\$ 2,027,912.00	\$ 40,558.24
TOTAL CONSTRUCTION TESTING				\$ 40,558.24
5.00 MISCELLANEOUS REMOVALS				

Table B.4

ZANJERO TRAILS
Northern Avenue and Beardsley Canal
Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
6.00 GRADING AND PAVING				
7.00 SEWER				
7.10 SEWERLINE EXTENSION (Beardsley Cana)				
8" SDR 35 Sewerline (15' Avg Depth)	5,342	LF	\$ 35.00	\$ 186,970.00
Manholes (5')	14	EA	\$ 4,000.00	\$ 56,000.00
Connect to Existing	1	EA	\$ 500.00	\$ 500.00
Air Test Manholes	14	EA	\$ 150.00	\$ 2,100.00
Camera Test Sewer	5,342	LF	\$ 1.00	\$ 5,342.00
TOTAL SEWERLINE EXTENSION				\$ 250,912.00
7.10 ONSITE SEWERLINES (Parcels and Collector Roads)				
8" SDR 35 PVC (Parcel 33)	2,945	LF	\$ 24.00	\$ 70,680.00
8" SDR 35 PVC (Parcel 34)	24,625	LF	\$ 24.00	\$ 591,000.00
Manholes (5')	154	EA	\$ 4,000.00	\$ 616,000.00
Sewer Stubout	5	EA	\$ 300.00	\$ 1,500.00
Connect to Existing	7	EA	\$ 500.00	\$ 3,500.00
4" Services	934	EA	\$ 475.00	\$ 443,650.00
Air Test Manholes	154	EA	\$ 150.00	\$ 23,100.00
Camera Test Sewer	27,570	LF	\$ 1.00	\$ 27,570.00
TOTAL ONSITE SEWERLINES				\$ 1,777,000.00
TOTAL SEWER				\$ 2,027,912.00
8.00 MISCELLANEOUS CLEANUP				
8.10 HYDRO-VAC SEWER	32,912	LF	\$ 0.50	\$ 16,456.00
8.20 SUPPLEMENTAL DUST CONTROL (Sewerline Extension Only)	5,342	LF	\$ 1.00	\$ 5,342.00
8.30 CLEAN UP FOR MUNICIPALITY FINAL WALK (Sewerline Extension Only)	5,342	LF	\$ 0.50	\$ 2,671.00
TOTAL MISCELLANEOUS CLEANUP				\$ 24,469.00
9.00 PRINTING / REIMBURSABLES				
9.10 PRINTING / REIMBURSABLES (Sewerline Extension Only)	1	LS	\$ 5,000.00	\$ 5,000.00
TOTAL PRINTING / REIMBURSABLES				\$ 5,000.00
10.00 ONE YEAR WARRANTY COSTS				
10.10 ONE YEAR WARRANTY COSTS (Items 5-8)	1%	OF	\$ 2,052,381.00	\$ 20,523.81

Table B.4

ZANJERO TRAILS
 Northern Avenue and Beardsley Canal
 Maricopa County, Arizona
PHASE 6 SEWER IMPROVEMENTS



Prepared Date: November 3, 2014

ESTIMATE OF ANTICIPATED DEVELOPMENT COSTS

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL ITEM COST
TOTAL ONE YEAR WARRANTY COSTS				\$ 20,523.81
11.00 SALES TAX				
11.10 SALES TAX (Items 5-8)	4.095%	OF	\$ 2,052,381.00	\$ 84,045.00
TOTAL SALES TAX				\$ 84,045.00
12.00 CONTINGENCY				
12.10 CONTINGENCY (Items 1-11)	10%	OF	\$ 2,456,950.81	\$ 245,695.08
TOTAL CONTINGENCY				\$ 245,695.08
TOTAL ANTICIPATED DEVELOPMENT COSTS				\$ 2,702,645.89

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EXHIBIT 6

GENERAL STATEMENT OF FINANCIAL CONDITION

Litchfield Park Service Company (Sewer)

WASTEWATER UTILITY BALANCE SHEET

Acct No.	ASSETS	BALANCE AT BEGINNING OF TEST YEAR	BALANCE AT END OF YEAR
	CURRENT AND ACCRUED ASSETS		
131	Cash	-\$11,584	\$1,882,694
132	Special Deposits	\$2,083,201	
135	Temporary Cash Investments		
141	Customer Accounts Receivable	\$1,538,629	
146	Notes/Receivables from Associated Companies	\$6,120,635	
151	Plant Material and Supplies		
162	Prepayments	\$30,500	
174	Miscellaneous Current and Accrued Assets	\$284,962	
	TOTAL CURRENT AND ACCRUED ASSETS	\$10,046,344	\$1,882,694
	FIXED ASSETS		
101	Utility Plant in Service	\$76,282,231	\$77,858,634
103	Property Held for Future Use		
105	Construction Work in Progress	\$357,041	\$1,793,339
108	Accumulated Depreciation - Utility Plant	\$16,405,407	-\$17,802,627
121	Non-Utility Property		
122	Accumulated Depreciation - Non Utility		
	TOTAL FIXED ASSETS	\$60,233,865	\$61,849,346
	TOTAL ASSETS	\$70,280,209	\$63,732,040

NOTE: Total Assets on this page should equal Total Liabilities and Capital on the following page. The total value of assets for LPSCO Water plus LPSCO Sewer equals the total value of liabilities and equity for LPSCO Water plus LPSCO Sewer. The values reported here are the result of an accounting system conversion that does not currently allocate percentages of certain accounts to the water division and to the sewer division.

Litchfield Park Service Company (Sewer)

WASTEWATER UTILITY BALANCE SHEET (CONTINUED)

Acct No.	LIABILITIES	BALANCE AT BEGINNING OF TEST YEAR	BALANCE AT END OF YEAR
	CURRENT LIABILITES		
231	Accounts Payable		
232	Notes Payable (Current Portion)	\$150,400	
234	Notes/Accounts Payable to Associated Companies		
235	Customer Deposits		
236	Accrued Taxes	\$34,644	
237	Accrued Interest	\$77,628	
241	Miscellaneous Current and Accrued Liabilities	\$44,665	\$1,082,059
	TOTAL CURRENT LIABILITIES	\$307,337	\$1,082,059
	LONG-TERM DEBT (Over 12 Months)		
224	Long-Term Notes and Bonds	\$4,453,218	
	DEFERRED CREDITS		
252	Advances in Aid of Construction	\$12,110,401	\$6,160,061
253	Other Deferred Credits		\$1,893,783
255	Accumulated Deferred Investment Tax Credits		
271	Contributions in Aid of Construction	\$35,077,436	\$4,791,275
272	Less: Amortization of Contributions	\$5,957,420	\$10,220
281	Accumulated Deferred Income Tax	\$2,395,960	
	TOTAL DEFERRED CREDITS	\$43,626,377	\$12,834,900
	TOTAL LIABILITIES	\$48,386,932	\$13,916,959
	CAPITAL ACCOUNTS		
201	Common Stock Issued	\$33,626	\$33,626
211	Other Paid in Capital	\$13,728,278	\$13,728,278
215	Retained Earnings	\$8,131,373	\$9,868,101
218	Proprietary Capital (Sole Props and Partnerships)		
	TOTAL CAPITAL	\$21,893,277	\$23,630,005
	TOTAL LIABILITIES AND CAPITAL	\$70,280,209	\$37,546,964

Litchfield Park Service Company (Sewer)

**WASTEWATER UTILITY COMPARATIVE STATEMENT OF INCOME
AND EXPENSE**

Acct. No.	OPERATING REVENUES	PRIOR YEAR	CURRENT YEAR
521	Flat Rate Revenues	\$8,624,304	\$11,008,894
522	Measured Revenues	\$861,147	
536	Other Wastewater Revenues	\$374,767	\$3,365
	TOTAL REVENUES	\$9,860,219	\$11,012,259
	OPERATING EXPENSES		
701	Salaries and Wages	\$1,201,594	\$209,525
710	Purchased Wastewater Treatment	\$39,395	\$26,008
711	Sludge Removal Expense	\$246,971	\$251,738
715	Purchased Power	\$628,493	\$629,688
716	Fuel for Power Production		\$3,114
718	Chemicals	\$295,100	\$359,790
720	Materials and Supplies	\$119,214	\$74,361
731	Contractual Services – Professional	-\$40,983	\$2,291,460
735	Contractual Services – Testing	\$36,144	\$33,337
736	Contractual Services – Other	\$2,439,628	\$1,265,238
740	Rents	\$2,472	\$5,696
750	Transportation Expense	\$18,856	\$16,827
755	Insurance Expense	\$84,335	\$48,329
765	Regulatory Commission Expense		
775	Miscellaneous Expense	\$122,361	\$217,820
403	Depreciation Expense	\$1,648,570	\$1,487,913
408	Taxes Other Than Income		
408.11	Property Taxes	\$752,647	\$856,251
409	Income Taxes		
	TOTAL OPERATING EXPENSES	\$7,594,797	\$7,777,094
	OTHER INCOME/EXPENSE		
419	Interest and Dividend Income	\$24,550	
420	AFUDC Income	\$15,996	\$12,367
421	Non-Utility Income		
426	Miscellaneous Non-Utility Expenses		
427	Interest Expense	\$339,090	(\$12,001)
	TOTAL OTHER INCOME/EXPENSE	-\$298,544	\$366
	NET INCOME/(LOSS)	\$1,966,878	\$3,235,532

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EXHIBIT 7

LIBERTY'S SCHEDULE OF RATES AND CHARGES

Applies to all WASTEWATER service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

I. RATES

In Decision No. 74437, dated April 18, 2014, the Commission authorized the following rates and charges to become effective May 1, 2014:

A. Monthly Usage Charge

<i>Meter Size</i>	Minimum Charge Per Month
Residential Service	\$40.35
Low Income Residential Service	34.30
Multiple Unit Housing – Monthly Per Unit	37.46
Small Commercial Service – Monthly	68.24
Regular Domestic – Monthly Service Charge	38.20
Restaurants, Motels,* Grocery Store, Dry Cleaning Estab. – Monthly Service Charge	38.20
Wigwam Resort Monthly Rate – Per Room	37.46
Wigwam Resort Main Hotel Facilities – Per Month	1,483.47
Elementary Schools	1,008.75
Middle & High Schools	1,186.77
Community College	1,839.50
Effluent Sales Charge Per 1,000 gallons	**

*Motels without restaurants charges Multi-Unit Housing – Monthly Unit rate

**Market Rate – Maximum effluent rate shall not exceed \$430 per acre foot based on a potable water rate of \$1.32 per thousand gallons.

Issued: April 30, 2014

Effective: May 1, 2014

ISSUED BY:

Greg Sorenson, President - Arizona
 Liberty Utilities (Litchfield Park Water & Sewer) Corp.
 12725 W. Indian School Road, Suite D-101
 Avondale, AZ 85392

Applies to all WASTEWATER service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

B. Commodity Charge

(per 1,000 gallons of water)	
Regular Domestic	\$3.33
Restaurants, Motels, Grocery Store, Dry Cleaning Estab.	4.45

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Effective: May 1, 2014

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Applies to all WASTEWATER service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

C. Miscellaneous Service Charges

<u>Service</u>	<u>Charge</u>
Establishment	\$20.00
Re-Establishment (within 12 months)	(a)
Reconnection	\$20.00
NSF Check	25.00
Deferred Payment (per month)	1.50%
After Hours Service Calls*	\$40.00
Deposit	(b)
Deposit Interest	6.00%
Late Charge	(c)
Service Lateral Connection Charge - All Sizes	(d)
Main Extension Tariff	(e)

(a) Number of full months off the system times the minimum charge, per A.A.C. R14-2-603(D).

(b) Per Rule R14-2-603(B). Residential - two times the average monthly bill. Non-residential - two and one half times the average monthly bill.

(c) Greater of \$5.00 or 1.50% of unpaid balance.

(d) At cost. Customer/Developer shall install or cause to be installed all Service Laterals as a non-refundable contributions in aid of construction.

(e) Per A.A.C. R14-2606(b). All Main Extensions shall be completed at cost and shall be treated as non-refundable contribution-in-aid of construction.

*For After Hours Service Calls for work performed on the customer's property after hours, at customer's request. In addition to the charge for an utility service provided.

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ISSUED BY:

Effective: May 1, 2014

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 12725 W. Indian School Road, Suite D-101
 Avondale, AZ 85392

Applies to all WASTEWATER service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

II. TAXES AND ASSESSMENTS

In addition to all other rates and charges authorized herein, the Company shall collect from its customers all applicable sales, transaction, privilege, regulatory or other taxes and assessments as may apply now or in the future, per Rule R14-2-608(D)(5).

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Greg Sorenson, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
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Avondale, AZ 85392

Applies to all WASTEWATER service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

III. PERMITTED COSTS

- A. Costs shall be verified by invoice.
- B. For services that are provided by the Company at cost, costs shall include labor, materials, other charges incurred, and overhead. However, prior to any such service being provided, the estimated cost of such service will be provided by the Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to the Company.
- C. In the event that the actual cost is less than the estimated cost, the Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.
- D. In the event the actual cost is more than the estimated cost, the Company will bill the customer for the amount due within 30 days after completion of the invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date.
- E. At the customer's request, the Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.
- F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by the Company as a result of any tariff or contract for wastewater facilities under which the Customer advances or contributes funds or facilities to the Company.

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Effective: May 1, 2014

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Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WASTEWATER service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

I. CUSTOMER DISCHARGE TO SYSTEM

A. Service Subject to Regulation

The Company provides wastewater service using treatment and collection facilities that are regulated by numerous county, state and federal Statutes and Regulations. Those Regulations include limitations as to domestic strength wastewater and the type of wastewater that may be discharged into the system by any person directly or indirectly connected to the plant.

B. Waste Limitations

The Company has established the permissible limits of concentration as domestic strength wastewater and will limit concentration for various specific substances, materials, waters, or wastes that can be accepted in the sewer system, and to specify those substances, materials, waters, or wastes that are prohibited from entering the sewer system. Each permissible limit so established shall be placed on file in the business office of the Company, with a copy filed with the Commission. No person shall discharge, or cause to be discharged, any new sources of inflow including, but not limited to, storm water, surface water, groundwater, roof runoffs, subsurface drainage, cooling water, or polluted industrial process waters into the sanitary sewer. The Company will require an affidavit from all commercial and industrial customers, and their professional engineer, stating that the wastewater discharged to the system does not exceed domestic strength.

C. Inspection and Right of Entry

Every facility that is involved directly or indirectly with the discharge of wastewater to the Treatment Plant may be inspected by the Company as it deems necessary. These facilities shall include but not be limited to sewer, sewage pumping plants; all processes; devices and connection sewer; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these rules. Inspections may include the collection of samples. Authorized personnel of the Company shall be provided immediate access to all of the above facilities or to other facilities directly or indirectly connected to the Treatment Plant at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the user's facility to be inspected shall promptly be removed by the facility user or owner at

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Effective: May 1, 2014

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WASTEWATER service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

the written or verbal request of the Company and shall not be replaced. No person shall interfere with, delay, resist or refuse entrance to an authorized Company representative attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the Treatment Plant. Adequate identification shall be provided by the Company for all inspectors and other authorized personnel and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

All transient motor homes, travel trailers and other units containing holding tanks must arrive at the Company's service area in an empty condition. Inspection will be required of said units prior to their being allowed to hookup to the wastewater system.

D. Termination of Water Service for Violation of Wastewater Rules and Regulations

The Company is authorized to discontinue water service to any person connected to both its water and sewer systems who violates the Company's wastewater terms and conditions as set forth in this PART FOUR or in any way creates a public health hazard or the likelihood of such a public health hazard. This termination authority does not apply to non-payment for water or wastewater services.

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WASTEWATER service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

II. RULES AND REGULATIONS

The Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-601 through A.A.C. R14-2-609 will be controlling of Company procedures, unless specifically approved tariffs or Commission Order(s) provide otherwise.

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Greg Sorenson, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WATER and WASTEWATER service areas
PART FIVE
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
DOMESTIC SERVICE - SINGLE FAMILY ACCOMMODATION

APPLICABILITY

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the program qualifications and special conditions of this rate schedule.

TERRITORY

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Utilities").

RATES

Thirty percent (30%) discount applied to the regular filed tariff.

PROGRAM QUALIFICATIONS

1. The Liberty Utilities bill must be in your name and the address must be your primary residence or you must be a tenant receiving water service by a sub-metered system.
2. You may not be claimed as a dependent on another person's tax return.
3. You must reapply each time you move residences.
4. You must renew your application once every two (2) years, or sooner, if requested.
5. You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare / food stamp cards.
6. You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
7. Your total gross annual income of all persons living in your household cannot exceed the income levels below:

ISSUED BY:

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WATER and WASTEWATER service areas
PART FIVE
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

Effective January 1, 2014

<u>No. of Person in Household</u>	<u>Total Gross Annual Income</u>
1	\$17,505
2	\$23,595
3	\$29,685
4	\$35,775
5	\$41,865
6	\$47,955

For each additional person residing in the household, add \$6,090

For the purpose of the program the "gross household income" means all money and non cash benefits, available for living expenses, from all sources, both taxable and non taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries	Social Security, SSI, SSP	Rental or royalty income
Interest or dividends from:	Scholarships, grants, or other aid	Profit from self-employment
Savings account, stocks or bonds	used for living expenses	(IRS form Schedule C, Line 29)
Unemployment benefits	Disability payments	Worker's Compensation
TANF (AFDC)	Food Stamps	Child Support
Pensions	Insurance settlements	Spousal Support
Gifts		

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Greg Sorensen, President - Arizona
 Liberty Utilities (Litchfield Park Water & Sewer) Corp.
 12725 W. Indian School Road, Suite D-101
 Avondale, AZ 85392

Applies to all WATER and WASTEWATER service areas
PART FIVE
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

SPECIAL CONDITIONS

1. **Application:** An application on a form authorized by the Commission is required for each request for service under this schedule. A customer must reapply every two (2) years.
2. **Recertification:** A customer enrolled in the ARWW program must, each year, recertify by submitting a declaration attesting to continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare / food stamp cards.
3. **Commencement of Rate:** Eligible customers whose applications have been approved shall be billed on this schedule commencing with the next regularly scheduled billing period that follows receipt of application by Liberty Utilities.
4. **Verification:** Information provided by the applicant is subject to verification by Liberty Utilities. Refusal or failure of a customer to provide documentation of eligibility acceptable to Liberty Utilities, upon request by Liberty Utilities, shall result in removal from this rate schedule.
5. **Notice from Customer:** It is the customer's responsibility to notify Liberty Utilities if there is a change of eligibility status.
6. **Rebilling:** Customers may be re-billed retroactively for periods of ineligibility under the applicable rate schedule.
7. **Master-metered:** A reduction will be calculated in the bill of master-metered customers, who have sub-metered tenants that meet the income eligibility criteria, so an equivalent discount (30%) can be passed through to eligible customer(s).
8. **Participation Cap:** The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers. Applications will be reviewed and approved on a first come, first served basis. Applicants will be placed on a waiting list if the participation cap has been met.

ISSUED BY:

Ortg Sorenson, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
17725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

**Application for
Alternate Rates for Water and Wastewater (ARWW)**

To qualify for Liberty Utilities ARWW please check (✓) all that apply:

- I am a Liberty Utilities residential customer and the Liberty Utilities account is in my name.
- I am a sub-metered tenant within the Liberty Utilities service area.
- My household income is at or below the income level in the listing below.

Household Size	Total Gross Annual Income from All Sources
1	\$17,505
2	\$23,595
3	\$29,685
4	\$35,775
5	\$41,865
6	\$47,955

For each additional person residing in the household, add \$4,020.

The definition of "gross household income" (before taxes) is all money and non cash benefits available for living expenses from all sources, both taxable and non taxable, before deductions, including expenses, for all people who live in your home. This includes, but is not limited to the following (please check (✓) all that apply):

- Wages, salaries or profit from self-employment
- Disability and/or Workers' Compensation payments
- Insurance and/or legal settlements
- Pensions
- Spousal and/or child support
- Scholarships, grants, or other aid used for living
- Interest/dividends from savings, stocks, bonds, or retirement accounts
- Social Security, SSI or SSP
- Food Stamps
- TANF (AFDC)
- Veterans Affairs benefits
- Unemployment benefits
- Rental and/or royalty income
- Cash, gifts and/or other income

Please print the following information. Incomplete information will delay your discount. The name used to apply for the discount must be the same as the name on the Liberty Utilities statement.

PLEASE PRINT LEGIBLY											
Liberty Utilities Account Number (As shown on statement)											
Total No. of persons living in household:				Household's Total Gross Annual Income: \$				Contact Phone Number			
Name as shown on Liberty Utilities statement											
Liberty Utilities Service Address											
City			State			Zip Code					

Please attach one of the items listed as proof of income for eligibility verification: Copy of tax return from prior year, or copy of W2 from prior year, or copy of welfare / food stamp cards.

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

Customer Signature _____

Date _____

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification. Please allow 30-45 days for processing.

Office Use Only: Date Verified _____ Verified By _____ Expires _____

Issued: April 30, 2014

Effective: May 1, 2014

ISSUED BY:

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

**Declaration of Eligibility
Alternate Rates for Water and Wastewater (ARWW)**

To recertify enrollment in the ARWW Program please fill out the following attesting to continuing eligibility:

PLEASE PRINT ELIGIBLY											
Name as shown on Liberty Utilities statement											
Liberty Utilities Account Number (As shown on statement)											
Liberty Utilities Service Address											
City				State				Zip Code			
Contact Phone Number						Work Phone Number					

I,

Your Name (Please Print)

Last submitted an Application for Alternative Rates (ARWW)
on

(dd/mm/yyyy)

and hereby confirm my eligibility for the year ending

(dd/mm/yyyy)

Please attach one of the items listed below as proof of income for eligibility verification:

Copy of tax return from prior year,
or copy of W2 form from prior year,
or copy of welfare / food stamp cards.

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

Customer Signature

Date

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification.

Issued: April 30, 2014

Effective: May 1, 2014

ISSUED BY:

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

**Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Alternate Rates for Water and Wastewater (ARWW)**

Applicability

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the Program Qualifications and Special Conditions of this rate schedule.

Territory

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Discount

Thirty percent (30%) discount applied to the regular filed tariff. The discount will be applied to the customer's total bill before any adjustments and application of any other taxes, credit, penalties or fees.

Program Qualifications

- The Liberty Utilities account must be in your name and the address must be your primary residence in our service area or you must be a tenant receiving water service by a sub-metered system.
- You may not be claimed as a dependent on another person's tax return.
- You must reapply each time you move residences.
- You must renew your application once every two (2) years or sooner if requested.
- You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare/food stamp cards.
- You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
- Your total gross annual income of all persons living in your household cannot exceed the income levels provided on the application.

Special Conditions

- You must fill out and sign the ARWW Application completely. Incomplete information will delay your discount. You must reapply every two (2) years.
- You must recertify your enrollment in the ARWW annually by submitting a Declaration of Eligibility and providing one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare/food stamp cards.
- Customers shall be billed on this schedule commencing with the next regularly scheduled billing period that follows the receipt and approval of the application by Liberty Utilities.
- Documentation of your gross annual income must be provided to Liberty Utilities for verification of eligibility for ARWW. Refusal or failure to provide documentation of acceptable eligibility to Liberty Utilities shall result in removal from this rate schedule.
- It is the customer's responsibility to notify Liberty Utilities if there is a change in eligibility status.
- You may be re-billed for any periods of ineligibility under the applicable rate schedule.
- Master-metered customers who have sub-metered tenants will receive a reduction in the billing. Sub-metered tenants must qualify and meet the income eligibility criteria so an equivalent discount (30%) can be passed through to eligible customer(s).
- The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers.

How to Submit Completed ARWW Application and/or Declaration of Eligibility

Mail, Fax or Email your ARWW Application and Declaration of Eligibility to:
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Rd. Ste. D101
Avondale, AZ 85392
Fax: 623-935-1020
Email: customerserviceavondale@libertywater.com

Issued: April 30, 2014

Effective: May 1, 2014

ISSUED BY:

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

PART SIX
HOOK-UP FEE TARIFF

WASTEWATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site facilities hook-up fees payable to Liberty Utilities (Litchfield Park Water & Sewer) Corp. – Wastewater Division (the “Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals, and may include Developers and/or Builders of new residential subdivisions, and industrial or commercial properties.

“Company” means Liberty Utilities (Litchfield Park Water & Service) Corp. – Wastewater Division.

“Collection Main Extension Agreement” means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to the Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as “Wastewater Facilities Agreement.”

“Off-site Facilities” means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and benefit the entire wastewater system.

“Service Lateral” means and includes all service laterals for single-family residential, commercial, industrial or other uses.

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

III. Wastewater Hook-up Fee

For each new residential service lateral, the Company shall collect a Hook-Up Fee of \$1,800 based on the Equivalent Residential Unit ("ERU") of 320 gallons per day. Commercial and industrial applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 320 gallons per day. For "Active Adult" communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Hook-Up Fee shall be \$1,070, based on an ERU factor of 190 gallons per day.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per parcel, service lateral, or lot within a subdivision (similar to a service lateral installation charge).

(B) Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of Off-site Facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

(C) Time of Payment:

(1) In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder within 15 days of execution of a Main Extension Agreement.

(2) In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

(D) Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

Issued: April 30, 2014

ISSUED BY:

Effective: May 1, 2014

Craig Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

(E) **Failure to Pay Charges; Delinquent Payments:** The Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

(F) **Large Subdivision and/or Development Projects:** In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision and/or development containing more than 150 lots, the Company may, in its reasonable discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision and/or development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) **Off-Site Hook-Up Fees Non-refundable:** The amounts collected by the Company pursuant to the off-site facilities hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) **Use of Off-Site Hook-Up Fees Received:** All funds collected by the Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities.

(I) **Off-Site Facilities Hook-up Fee in Addition to On-site Facilities:** The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

(J) **Disposition of Excess Funds:** After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) **Status Reporting Requirements to the Commission:** The Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2015, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.

ISSUED BY:

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

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EXHIBIT 8

**ESTIMATED ANNUAL OPERATING REVENUE
AND EXPENSES – FIRST FIVE YEARS**

Litchfield Park Service Company - Wastewater Division dba Liberty Utilities
Zanjero Trails CC&N Extension
Projected Incremental Balance Sheets
For the Years Ended

Exhibit 1
Schedule 1

Line No.	Beginning of Year	Label	Year							
			1st year Changes	1	2	3	4	5		
3		Assets								
5	-	Utility Plant (a)	4,707,357	4,707,357	4,977,357	5,292,357	9,259,458	9,806,658		
7	-	Accumulated Depreciation (b)	(49,099)	(49,099)	(154,046)	(273,618)	(446,595)	(678,762)		
8	-	Cash	8,734	8,734	43,548	110,079	213,898	366,751		
11		Total Assets	\$ 4,666,993	\$ 4,666,993	\$ 4,866,859	\$ 5,126,818	\$ 9,026,762	\$ 9,494,627		
13		Equity and Liabilities								
15		Equity								
17	-	Common Stock, Net of (d)	-	-	-	-	-	-		
19	-	Retained Earnings	8,734	8,734	43,548	110,079	213,898	366,751		
20	-	Total Equity (e)	\$ 8,734	\$ 8,734	\$ 43,548	\$ 110,079	\$ 213,898	\$ 366,751		
22		Liabilities & Deferred Credits								
23	-	Advances in Aid of Construction (f)	-	-	-	-	-	-		
24	-	Contributions in Aid of Construction	4,707,357	4,707,357	4,977,357	5,292,357	9,259,458	9,806,658		
26	-	Less: Amortization (h)	(49,099)	(49,099)	(154,046)	(273,618)	(446,595)	(678,762)		
27	-	Customer Deposits (i)	-	-	-	-	-	-		
28	-	Long-Term Debt	-	-	-	-	-	-		
31		Total Liabilities and Deferred Credits	4,658,258	4,658,258	4,823,311	5,016,739	8,812,863	9,127,876		
35		Total Equity & Liab.	\$ 4,666,993	\$ 4,666,993	\$ 4,866,859	\$ 5,126,818	\$ 9,026,762	\$ 9,494,627		

- (a) Plant Additions (See Schedule 1a)
- (b) Depreciation Computations (See Schedule 1a)
- (c) Change in cash (See Schedule 3)
- (d) Common Stock issuance and/or repurchase. (See Schedule 1b)
- (e) Profit or loss from operations (See Schedule 2)
- (f) Advances in Aid of Construction (See Schedule 1c)
- (g) Contributions in Aid of Construction (See Schedule 1e)
- (h) Amortization of Contributions in Aid of Construction, if applicable (See Schedule 1e)
- (i) Security deposits (2 times average bill)

Litchfield Park Service Company - Wastewater Division dba Liberty Utilities
Zanjero Trails CC&N Extension
Projected Incremental Revenues and Expenses
For the 12 Months Ended

Exhibit
Schedule 2

Line No.	Description	Year				
		1	2	3	4	5
1		\$ 20,693	\$ 79,773	\$ 163,444	\$ 282,645	\$ 442,762
2	Total estimated Revenues					
3	Variable Expenses					
4	Pumping Power:					
5	0.52 per 1,000 gals treated	1,404	5,616	11,700	19,938	30,964
6	0.025 per 1,000 gals treated	68	270	583	959	1,489
7	0.21 per 1,000 gals treated	567	2,268	4,725	8,052	12,505
8	0.29 per 1,000 gals treated	783	3,132	6,525	11,119	17,269
9	0.027 per 1,000 gals treated	73	292	608	1,035	1,608
10	0.37 /month/customer	169	698	1,477	2,616	4,151
11	12.00 /month/customer	5,472	22,622	47,907	84,836	134,616
12						
13						
14	Total Variable Expenses	\$ 8,535	\$ 34,898	\$ 73,504	\$ 128,555	\$ 202,601
15						
16	Other Expenses					
17	Depreciation net of Amortization of CIAC					
18	Legal & Accounting					
19	Miscellaneous (d)(b)	\$ 500	\$ 510	\$ 520	\$ 531	\$ 541
20	Income Taxes	300	306	312	318	325
21	Property Taxes (e)	2,071	8,254	20,747	46,272	81,762
22		553	1,080	2,351	4,685	7,920
23	Total Other Expense	\$ 3,424	\$ 10,149	\$ 23,931	\$ 51,806	\$ 90,548
24						
25						
26	Total Operating Expenses	\$ 11,959	\$ 45,047	\$ 97,435	\$ 180,361	\$ 293,149
27						
28	Operating income (loss)	\$ 8,734	\$ 34,726	\$ 66,008	\$ 102,283	\$ 149,613
29	Less:					
30	Interest (Expense)Income on Work. Cap. (c)					
31	Interest Expense Long-term Debt (c)		87	523	1,536	3,240
32	Net Income	\$ 8,734	\$ 34,813	\$ 66,531	\$ 103,820	\$ 152,852
33						
34	(a) Per customer per month					
35	(b) Annual Inflation of:					
36	(c) If Applicable					
37	(d) Miscellaneous Expenses of \$25 per month					
38	(e) ADOR Property Tax Calculation					
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EXHIBIT 9

WRITTEN REQUEST FOR SERVICE



July 1, 2015

Mr. Steve Carlson
Manager of Development Services
Liberty Utilities
12725 W. Indian School Rd., Suite D 101
Avondale, AZ 85392

Re: Request for Sewer Service – Zanjero Trails

Dear Mr. Carlson:

Now that we have successfully negotiated a Master Utility Agreement between MWD and Liberty Utilities, we are formally requesting service to our Zanjero Trails project in accordance with that MUA.

We look forward to working together as you make your submittal for a CC&N to the Arizona Corporation Commission to expand your service area so that Zanjero Trails can be provided sewer service through a publically regulated utility.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Glen Vortherms', with a long horizontal flourish extending to the right.

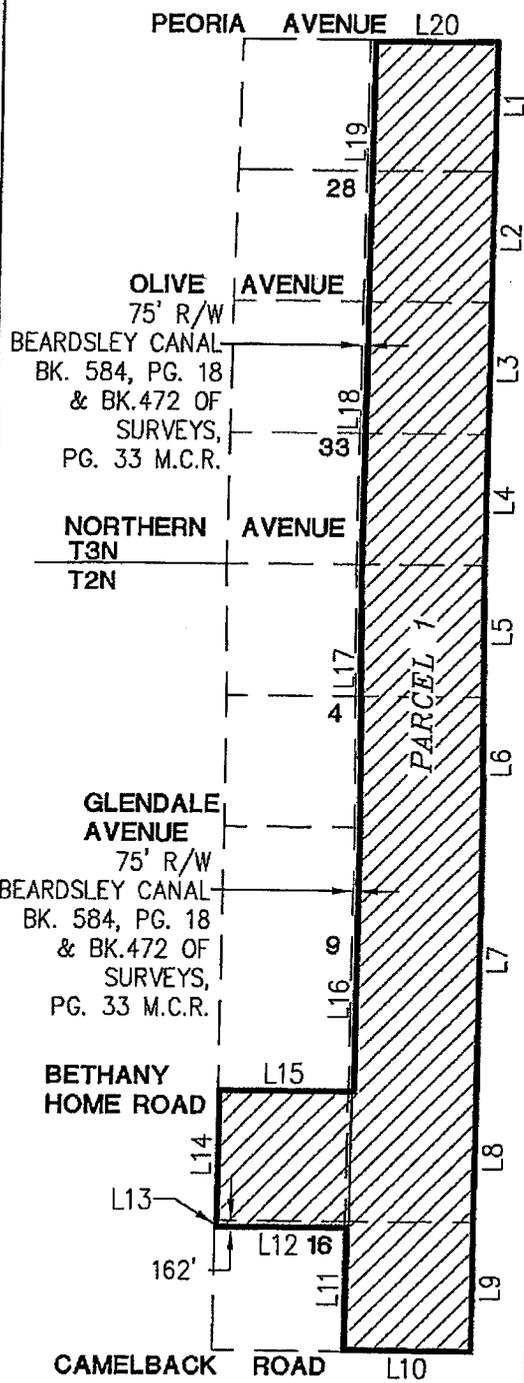
Glen Vortherms
General Manager

c: Sheryl Sweeney

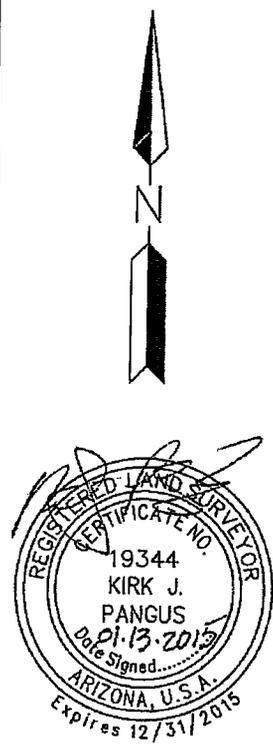
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EXHIBIT 10

MAPS OF EXISTING SERVICE AREA AND EXTENSION AREA



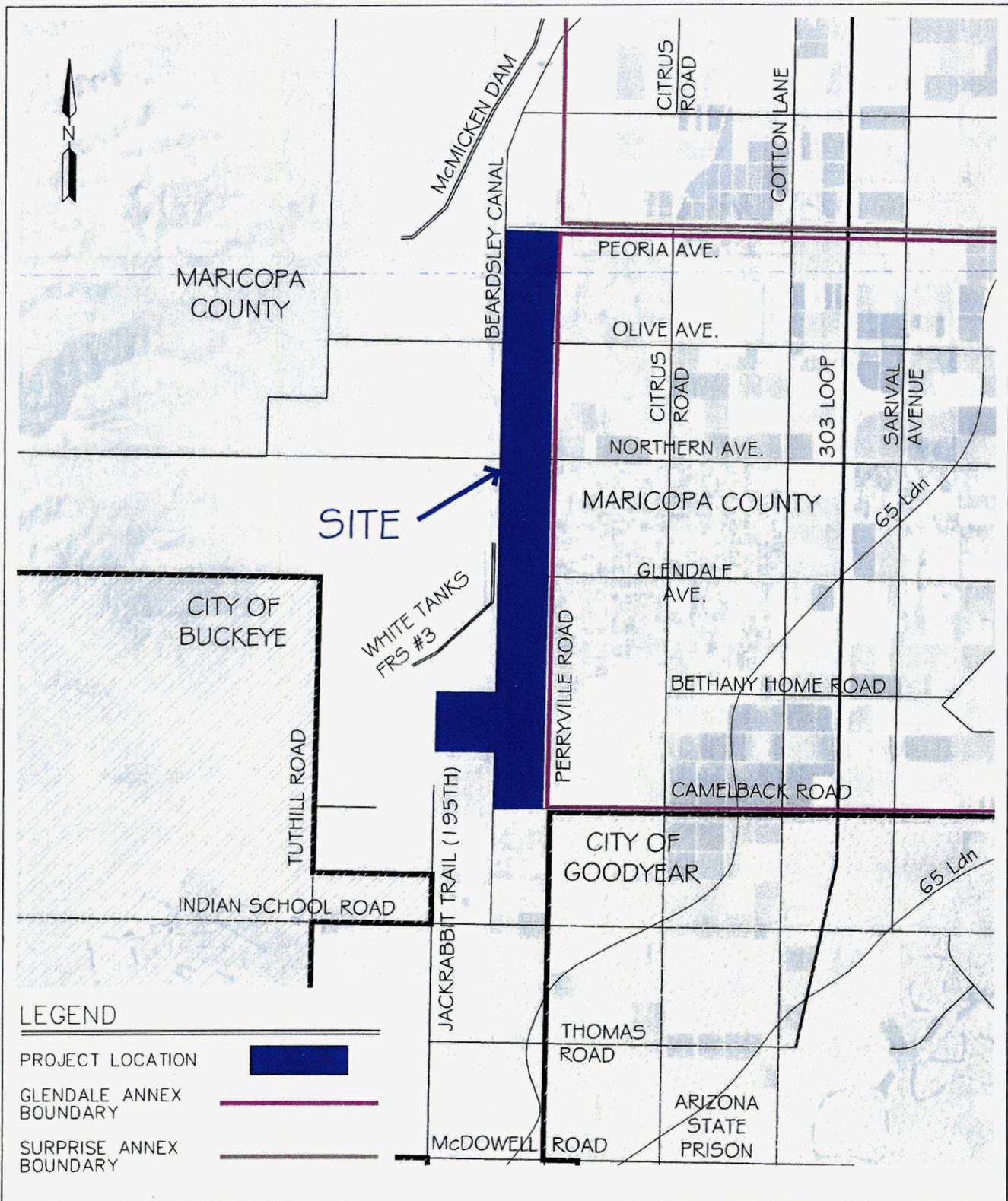
LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S00°20'19"W	2638.46'
L2	S00°21'13"W	2635.60'
L3	S00°22'08"W	2640.72'
L4	S00°21'40"W	2639.95'
L5	S00°33'38"E	2640.27'
L6	S00°33'48"E	2630.48'
L7	S00°23'42"W	5273.14'
L8	S00°24'28"W	2637.84'
L9	S00°24'32"W	2637.33'
L10	N89°36'46"W	2637.49'
L11	N00°30'54"E	2464.95'
L12	N89°51'17"W	2654.20'
L13	N00°23'25"E	162.00'
L14	N00°30'12"E	2635.21'
L15	S89°50'46"E	2730.09'
L16	N00°27'02"E	5268.31'
L17	N00°44'08"W	5280.79'
L18	N00°21'39"E	5282.64'
L19	N00°20'37"E	5276.35'
L20	S89°42'03"E	2564.43'



PROJ.NO.: 1078
 DATE: JAN 2015
 SCALE: 1" = 3500'
 DRAWN BY: DSP
 CHECKED BY: KJP

ZANJERO TRAILS
 LIBERTY CC&N EXPANSION
 PEORIA, ARIZONA
EXHIBIT 'B'

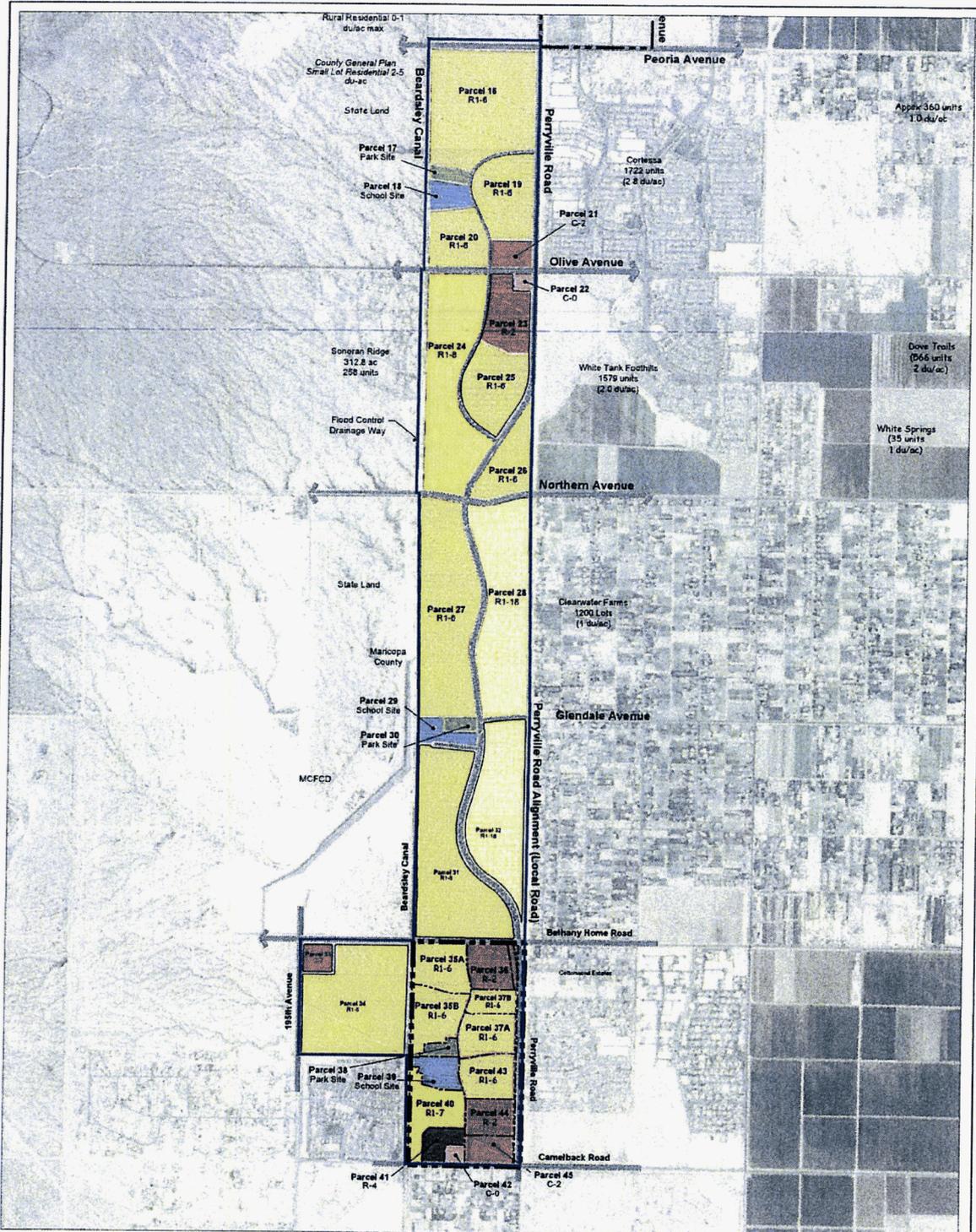

HILGARTWILSON
 2141 E. HIGHLAND AVE., STE. 250
 PHOENIX, AZ 85016
 P: 602.490.0535 / F: 602.368.2436



PROJ.NO.:	1003
DATE:	APRIL 2014
SCALE:	NTS
DRAWN BY:	HW
CHECKED BY:	HW

ZANJERO TRAILS
 MARICOPA COUNTY, ARIZONA
FIG 1: VICINITY MAP


HILGARTWILSON
 2141 E. HIGHLAND AVE., STE. 250
 PHOENIX, AZ 85016
 P: 602.490.0535 / F: 602.368.2436



Zoning Category

- R1-7 (RUPD)
- R1-6 (RUPD)
- R-2 (RUPD)
- R-4 (RUPD)
- C-2 (CUPD)
- C-0 (CUPD)
- Dedicated/Non-Developable Open Space
- Educational

Legend

- Phase I Boundary
- Zanjero Trails Boundary
- Arterial Street
- Collector Street

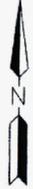
Note:
See Table B.1 in Appendix B for areas and densities of each parcel.

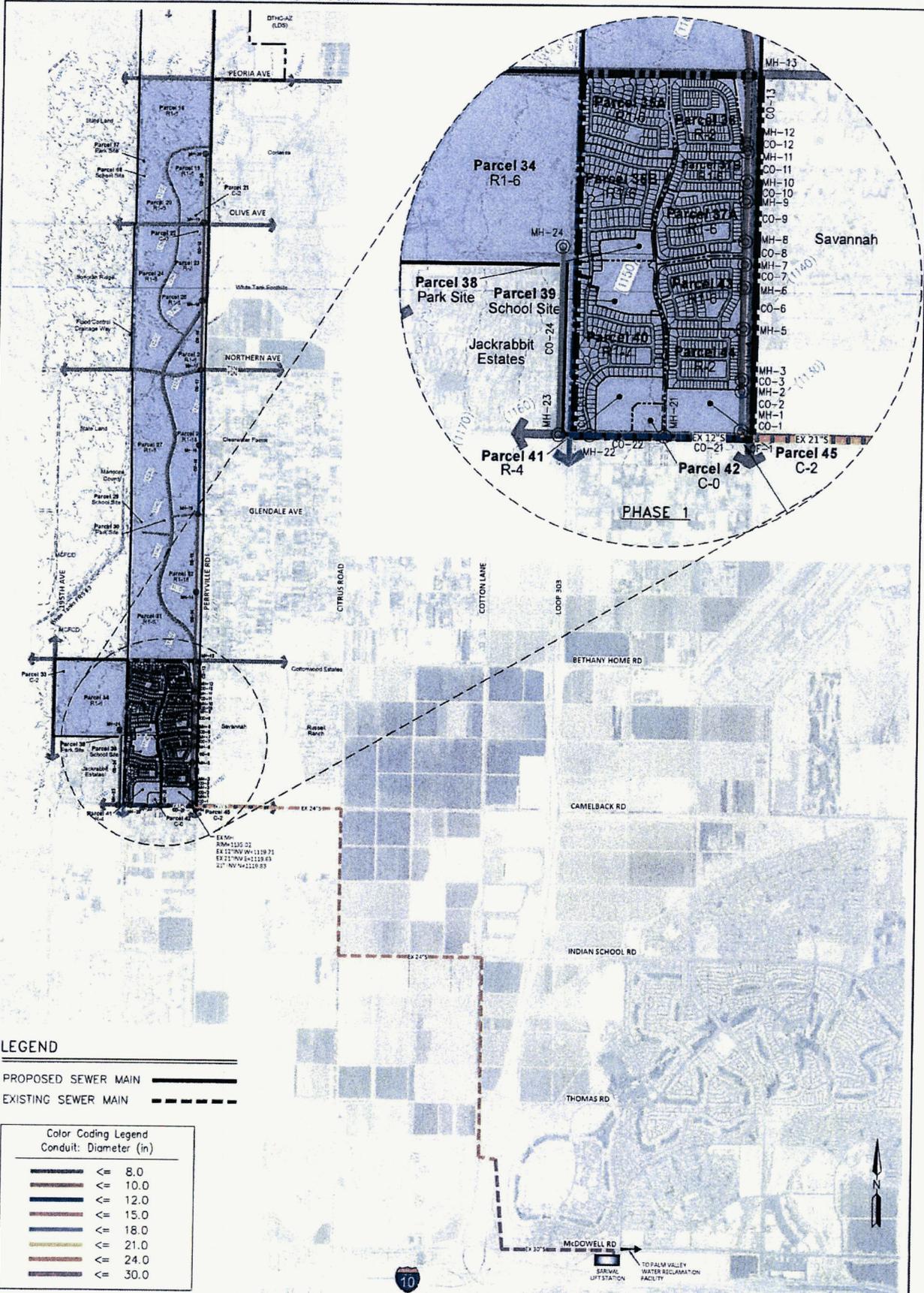
U:\1000\1003\1003 0000_ 1003 0100 & 1003 0101 - MWD\Reports\Master\Masterwater\Report for MAG 2008\EXHIBITS\1003 FIG 2 - LAND USE PLAN.dwg 4/17/2014 2:35 PM

PROJ. NO.:	1003
DATE:	APRIL 2014
SCALE:	NTS
DRAWN BY:	HW
CHECKED BY:	HW

ZANJERO TRAILS
MARICOPA COUNTY, ARIZONA
FIG 2: LAND USE PLAN

HILGARTWILSON
2141 E. HIGHLAND AVE., STE. 250
PHOENIX, AZ 85016
P: 602.490.0535 / F: 602.368.2436





LEGEND

PROPOSED SEWER MAIN

EXISTING SEWER MAIN

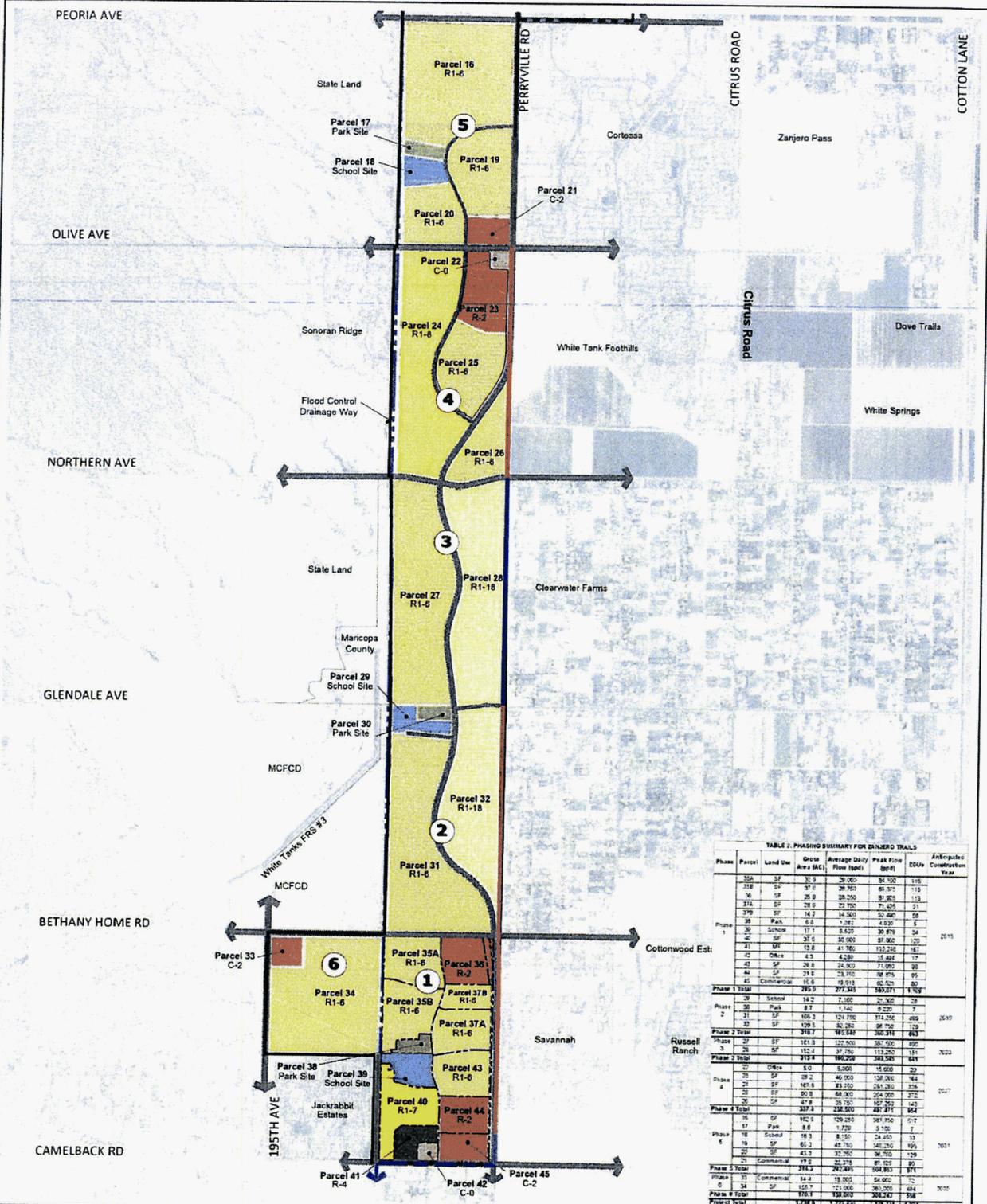
Color Coding Legend	
Conduit: Diameter (in)	
	<= 8.0
	<= 10.0
	<= 12.0
	<= 15.0
	<= 18.0
	<= 21.0
	<= 24.0
	<= 30.0

CON. 2014 11/20/14	HILGART WILSON PROJ. NO.: 1003 DATE: NOV. 2014 SCALE: NTS DRAWN: HW DESIGNED: HW APPROVED: HW
-----------------------	--

ZANJERO TRAILS PERRYVILLE ROAD MARICOPA COUNTY, ARIZONA
FIG 3: WASTEWATER EXHIBIT

HILGART WILSON
 2141 E. HIGHLAND AVE., STE. 250 JR. PHOENIX, AZ 85016
 TEL: 602.486.0535 / F: 602.368.2436
 www.hilgartwilson.com

REV:	



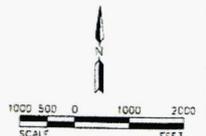
Color Coding Legend
Conduit Diameter (in)

Black	<= 8.0
Red	<= 10.0
Blue	<= 12.0
Green	<= 15.0
Yellow	<= 18.0
Orange	<= 21.0
Light Blue	<= 24.0

LEGEND
PHASING ①

TABLE 1. PHASING SUMMARY FOR ZANJERO TRAILS

Phase	Parcel	Land Use	Gross Area (AC)	Average Daily Flow (gpd)	Peak Flow (gpd)	Anticipated Construction Year
Phase 1	35A	SF	36.3	37,500	94,100	2016
	35B	SF	37.0	38,500	95,300	2016
	36	SF	29.9	30,700	75,800	2016
	31A	SF	28.0	27,000	67,200	2016
	37B	SF	14.7	14,500	35,600	2016
	38	Park	6.6	1,282	4,330	2016
	39	School	17.1	8,537	27,970	2016
	40	SF	37.6	39,000	97,300	2016
	41	SF	15.8	16,100	40,200	2016
	42	Other	4.3	4,200	13,400	2016
Phase 2	43	SF	28.8	29,800	71,000	2016
	44	SF	21.6	21,700	54,200	2016
	45	Commercial	15.6	18,910	47,200	2016
	32	Commercial	255.9	277,325	693,000	2016
	39	School	14.0	7,100	21,300	2016
	31	Park	8.7	1,142	3,220	2016
	33	SF	195.3	124,100	314,200	2016
	30	SF	129.5	131,320	327,700	2016
	37A	SF	216.7	221,540	556,300	2016
	37C	SF	121.3	127,500	320,200	2016
Phase 3	27	SF	112.4	117,700	297,200	2016
	28	SF	219.4	224,000	564,000	2016
	29	Other	5.0	5,000	15,000	2016
	25	SF	39.0	40,000	100,000	2016
	24	SF	187.6	193,000	487,000	2016
	23	SF	20.0	20,000	50,000	2016
	26	SF	47.8	49,700	124,200	2016
	25	SF	112.4	117,700	297,200	2016
	22	SF	307.4	314,000	785,000	2016
	21	SF	162.0	167,200	418,000	2016
Phase 4	16	SF	162.0	167,200	418,000	2016
	17	Park	8.6	1,720	5,160	2016
	18	School	16.3	8,150	24,450	2016
	19	SF	62.3	64,700	161,700	2016
	20	SF	43.0	44,700	111,700	2016
	21	Commercial	17.6	22,375	55,900	2016
	22	Commercial	14.4	18,000	44,600	2016
	19	SF	157.7	161,000	402,500	2016
	18	SF	176.1	182,000	455,000	2016
	Project Total		1,728.9	1,722,800	4,376,100	2016



PROJ. NO.	1003
DATE	NOV 2014
SCALE	1" = 1000'
DRAWN	HW
DESIGNED	HW
APPROVED	HW

ZANJERO TRAILS
PERRYVILLE ROAD
MARICOPA COUNTY, ARIZONA

FIG 4: PHASING PLAN

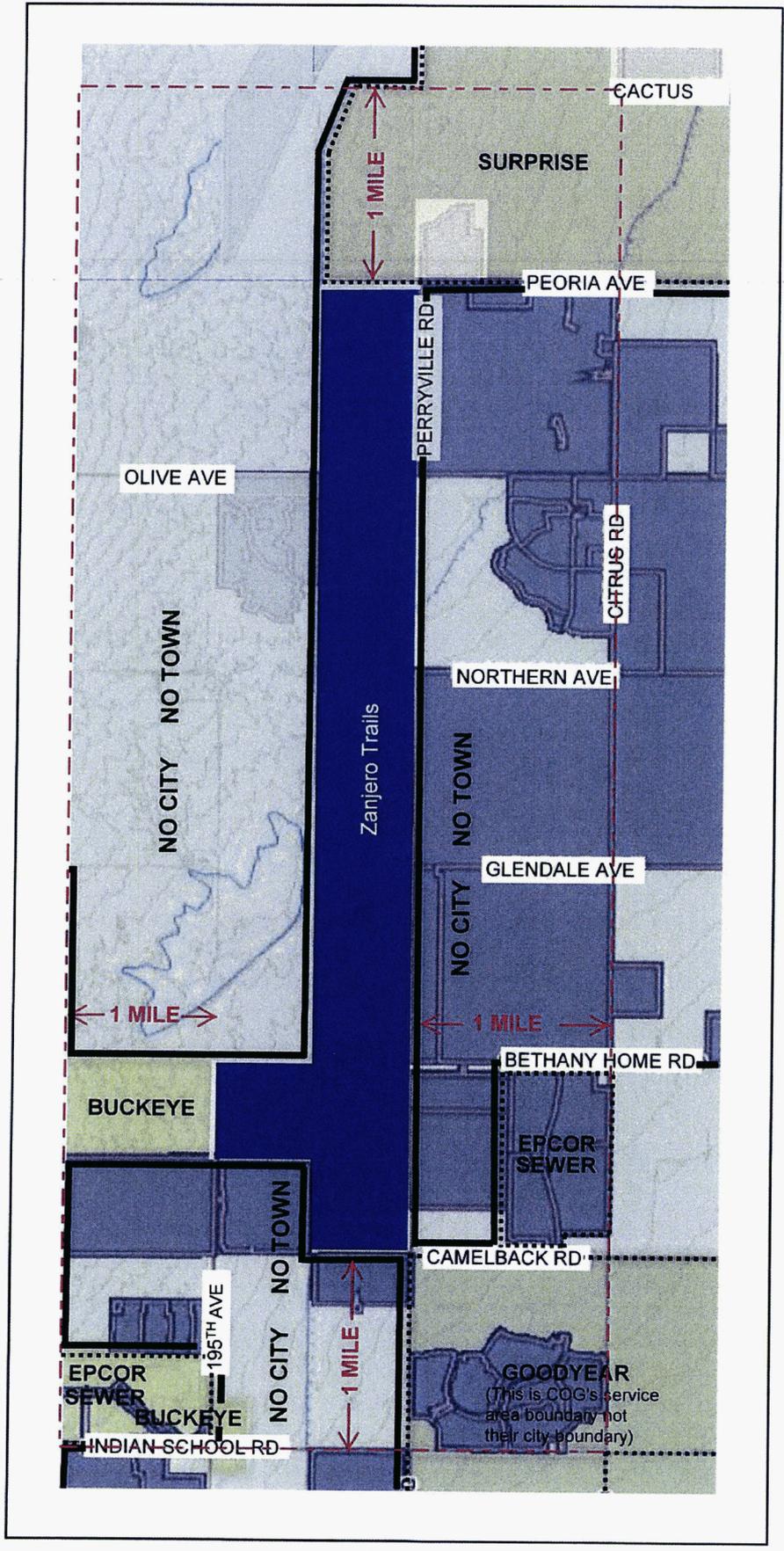
HILGARTWILSON
ENGINEERS | PLANNERS | SURVEYORS | MANAGERS

2141 E. HIGHLAND AVE., SUITE 750 | P. 602.490.0525 | F. 602.268.2436
PHOENIX, AZ 85016 | www.hilgartwilson.com

REV	DESCRIPTION

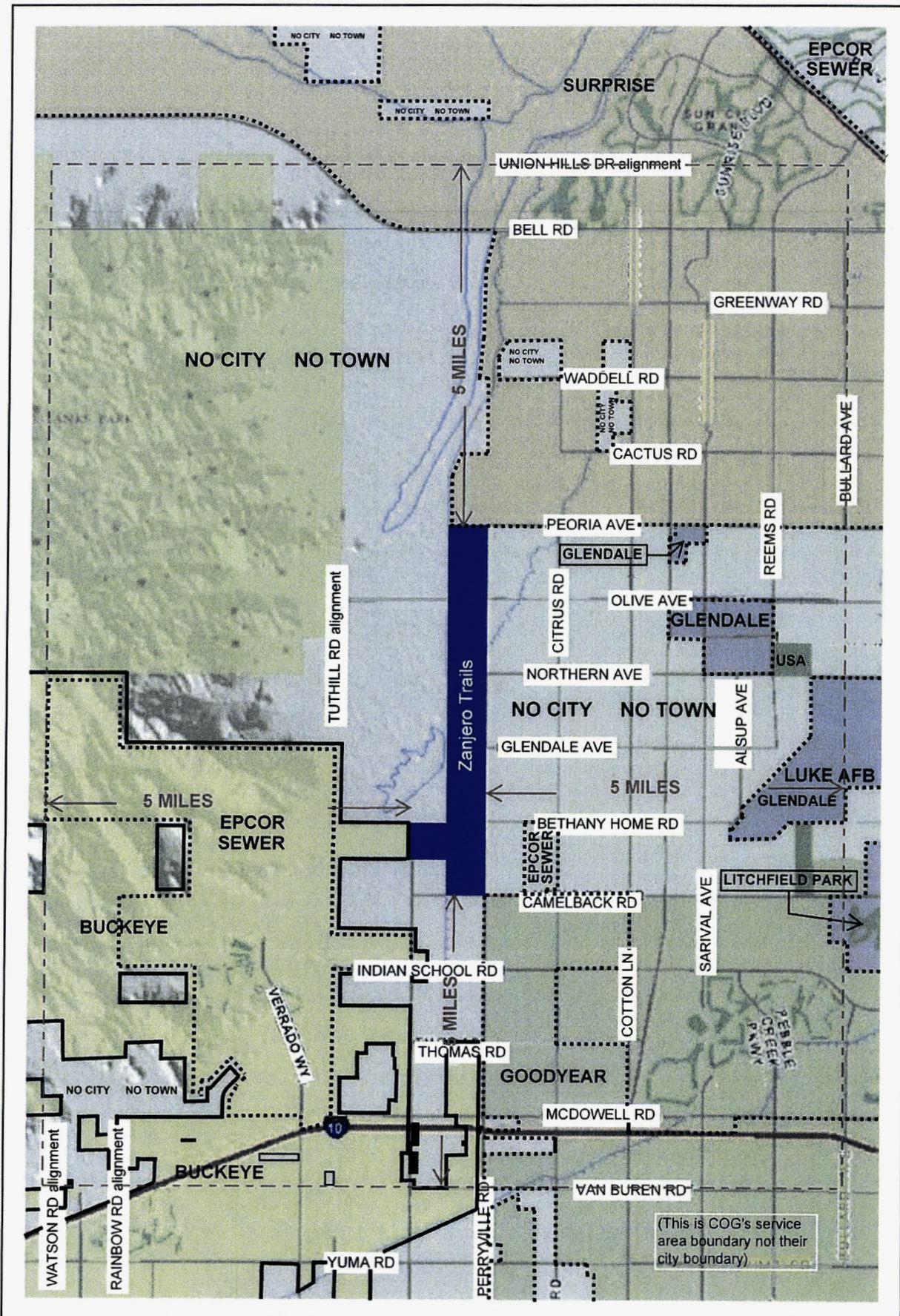
Liberty Utilities (Litchfield Park Water & Sewer) Corp.

CC&N extension and nearby municipalities/private sewer providers within 1 mile



Liberty Utilities (Litchfield Park Water & Sewer) Corp.

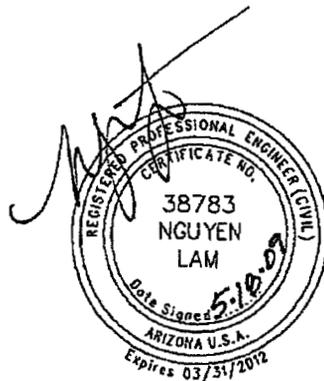
CC&N extension and nearby municipalities/private sewer providers within 5 miles



PRELIMINARY WASTEWATER REPORT
FOR
ZANJERO TRAILS – PHASE 1
MARICOPA COUNTY, ARIZONA

Prepared For:
MARICOPA WATER DISTRICT
PO Box 900
Waddell, AZ 85355
Phone: 623.546.8266
Fax: 623.584.2536

Prepared By:
CMX
7740 North 16th Street, Suite 100
Phoenix, AZ 85020
Phone: 602.567.1900
Fax: 602.567.1901



5th Submittal: May 2009
4th Submittal: April 2009
3rd Submittal: January 2009
2nd Submittal: March 2008
1st Submittal: March 2005
CMX Project No. 6714.02

Litchfield Park Service Co
Approved By: JWH
Date: 5-19-09

PRELIMINARY WASTEWATER REPORT
FOR
ZANJERO TRAILS - PHASE 1

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1.1	General Description.....	1
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EXHIBIT 11

**FORM OF NOTICE TO BE SENT TO MUNICIPALITIES
WITHIN 5 MILES OF EXTENSION AREA**



Liberty Utilities™

Notice Required Pursuant to R14-2-602.B.4
Request for Extension of Certificate of Convenience and Necessity
Filed by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Pursuant to A.A.C. R14-2-602.B.4, Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty") hereby provides notice that Liberty has filed an application with the Arizona Corporation Commission to extend Liberty's Certificate of Convenience and Necessity (CC&N) to provide wastewater utility service to the CC&N Extension Area set forth below. The requested Extension Area is located within five miles of your municipality's corporate limits. The specific notice requirements are as follows:

Applicant Name, Mailing Address and Telephone Number

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
623-935-9367

Date Application was Filed

The CC&N Extension Application was filed on _____, 2015.

Type of Service to be Provided

Wastewater Service

A Description of Requested Service Extension Area

Zanjero Trails is an approximately 1,740 acre property generally bound by Camelback Road on the south, Peoria Avenue on the north, Perryville Road on the east and the Beardsley Canal on the west. The Zanjero Trails property lies within Sections 4, 9 and 16 of Township 2 North, Range 2 West and in Sections 28 and 33 of Township 3 North, Range 2 West of the Gila and Salt River Meridian (the "Property").

Commission Docket Number

ACC Docket No. SW-01428A-15-_____

Instructions on How to Obtain a Copy of Application

The application is available for inspection during regular business hours at the offices of the Commission in Phoenix at 1200 West Washington Street, and at Liberty Utilities, 12725 W. Indian School Road, Suite D-101, Avondale, AZ 85392. In addition, Liberty will provide a printed copy or electronic copy of the application upon request.

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EXHIBIT 12

ESTIMATED NUMBER OF CUSTOMERS – FIRST FIVE YEARS

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Zanjero Trails Project
Customer Projections (5 year)

Year	2015	2016	2017	2018	2019	2020
Annual New Customers						
Residential (EDU's)	-	75	150	175	200	225
Apartments (EDU'S)	-	-	-	-	83	84
Commercial (EDU's)	-	-	-	-	-	40
Office (EDU's)	-	-	-	-	17	-
School Site (EDU's)	-	-	-	-	-	39
Annual Total (EDU'S)	-	75	150	175	300	388
Cumulative Customers per year						
Residential (EDU's)	-	75	225	400	600	825
Apartments (EDU'S)	-	-	-	-	83	167
Commercial (EDU's)	-	-	-	-	-	40
Office (EDU's)	-	-	-	-	17	-
School Site (EDU's)	-	-	-	-	-	39
Cumulative Total (EDU's)	-	75	225	400	700	1,071

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EXHIBIT 13

ADEQ AQUIFER PROTECTION PERMIT

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-100310
PLACE ID 815, LTF 53068

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, Litchfield Park Service Company is hereby authorized to operate Palm Valley Water Reclamation Facility, located in Goodyear, Arizona, in Maricopa County, over groundwater of the Phoenix Active Management Area, in Township 2 N, Range 1 W, Section 33, SE¼, SW¼, SW¼, of the Gila and Salt River Baseline and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name: Palm Valley Water Reclamation Facility
Facility Address: 14222 West McDowell Road
Goodyear, Arizona 85338
County: Maricopa

Permittee: Litchfield Park Service Company
Permittee Address: 12725 W Indian School Rd, Suite D101
Avondale, AZ 85392

Facility Contact: Matthew Garlick
Emergency Phone No.: (623) 935-9367

Latitude/Longitude: 33° 27' 55" N / 112° 21' 55" W
Legal Description: Township 2 N, Range 1 W, Section 33, SE¼, SW¼, SW¼ of the Gila and Salt River Baseline and Meridian

1.2 AUTHORIZING SIGNATURE



Michael A. Fulton, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 13th day of April, 2012

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]**2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]**

Litchfield Park Service Company (LPSCO) is authorized to operate Palm Valley Water Reclamation Facility (WRF), 5.1 million-gallons per day (mgd) facility. The treatment process consists of two (2) bar screens, a vortex grit removal unit, an influent pump station, an influent equalization basin, three (3) sequential batch reactor (SBR) basins, a surge tank, four (4) cloth media disk filters, three (3) ultraviolet (UV) disinfection units, three (3) sludge holding tanks, two (2) centrifuges and two (2) rotary drum thickeners. The WRF is designed and constructed according to plans approved by ADEQ.

Effluent shall be reused for any allowable use under a valid reclaimed water permit (A.A.C. R18-9, Article 7), discharged to the Roosevelt Irrigation District (RID) canal under a valid AZPDES permit, or used for on-site process water applications (such as equipment cleaning). Discharges to the RID canal are exempt from APP requirements pursuant to A.R.S. § 49-250(B)(6) and (16). The Palm Valley WRF reclaimed water distribution system may also be connected to the reclaimed water distribution system for the City of Goodyear 157th Avenue WRF (APP No. P-101324), after the APP for the City of Goodyear 157th Avenue WRF has been amended to allow the connection (as per Section 3.0, Compliance Schedule). Once the reclaimed water distribution systems for the two facilities have been connected, reclaimed water from each of the facilities may be delivered to either facility's reclaimed water customers. Sludge shall be dewatered onsite by centrifuges and/or rotary drum thickeners. The dewatered sludge, including screenings, grit, and scum, shall be hauled off-site for management and disposal in accordance with state and federal regulations.

4.1 mgd Facility

The existing 4.1 mgd WRF includes two (2) bar screens, three (3) SBR basins, three (3) cloth media disc filters, and two (2) UV disinfection units. Discharge monitoring for this stage of operation shall be conducted as per Section 4.2, Table IA-1. Upon completion of construction of the 5.1 mgd expansion, monitoring under Table IA-1 shall be discontinued as per Section 3.0, Compliance Schedule.

5.1 mgd Expansion

The 5.1 mgd WRF shall include two (2) bar screens, three (3) SBR basins, four (4) cloth media disc filters, and three (3) UV disinfection units. In addition, two (2) of the three (3) existing SBR basins shall be retrofitted with new floating decanters and jet aeration systems, in order to expand the capacity of the facility without constructing additional SBR basins. Discharge monitoring for this stage of operation shall be conducted as per Section 4.2, Table IA-2.

Amendment Description

The purpose of this amendment is to increase the capacity of the WRF from 4.1 mgd to 5.1 mgd by adding a disc filter unit and a UV disinfection unit to the existing plant, to retrofit two (2) of the three (3) existing SBRs with new equipment to expand the capacity of the plant, and to allow connection between the Palm Valley WRF reclaimed water distribution system and the City of Goodyear 157th Avenue WRF reclaimed water distribution system.

The depth to groundwater is approximately 120 feet below land surface, and the direction of groundwater flow is toward the west-northwest.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

The site includes the following permitted discharging facility:

Facility Name	Latitude	Longitude
Palm Valley Water Reclamation Facility	33° 27' 55" N	112° 21' 55" W

Annual Registration Fee [A.R.S. § 49-242 and A.A.C. R18-14-104]

The Annual Registration Fee for this permit is established by A.R.S. § 49-242 and is payable to ADEQ each year. The design flow is 5.1 mgd.

Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203(C)(5). The permittee shall maintain financial capability throughout the life of the facility. Litchfield Park Service Company submitted a Letter of Credit in the amount of \$500,000.00 to ADEQ as a financial assurance mechanism.

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The WRF shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

2.2.1 Engineering Design

This expansion of the WRF was designed and shall be constructed as per the design report stamped, dated, and signed (sealed) on August 17, 2010, by Brian P. McBride, P.E. (Professional Engineer) with McBride Engineering Solutions, Inc., and subsequent sealed submittals that served as additions to the design report.

2.2.2 Site-specific Characteristics

Not applicable.

2.2.3 Pre-operational Requirements

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per Compliance Schedule in Section 3.0. The Certificate shall be submitted to the Groundwater Section, and a copy shall be sent to the Water Quality Compliance Section.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the WRF site at all times; the manual shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table III - Facility Inspection (Operational Monitoring).
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s) used shall be documented on the Self-Monitoring Report Form submitted quarterly to the ADEQ Water Quality Compliance Section.

2.2.5 Reclaimed Water Classification

[A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class A, B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.6 Certified Areawide Water Quality Management Plan Conformance
[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Areawide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the WRF with a maximum average monthly flow of 5.1 mgd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BACT pollutant control technologies including liner failure¹, uncontrollable leakage, overtopping (e.g., exceeding the maximum storage capacity, defined as a fluid level exceeding the crest elevation of a permitted impoundment), of basins, lagoons, impoundments or sludge drying beds, berm breaches, accidental spills, or other unauthorized discharges.
4. Specific discharge limitations are listed in Section 4.2, Tables IA-1, IA-2 and IB.

2.4 Points of Compliance (POCs) [A.R.S. § 49-244]

The POCs are established at the following designated locations:

Point	POC Location	Latitude	Longitude
1	Theoretical POC located at the northwest corner of the WRF	33° 27' 56" N	112° 21' 54" W

Groundwater monitoring is not required at the point of compliance, except as a contingency action.

The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring at the POC; or to designate additional points of compliance, if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall develop a site-specific Quality Management Plan (QMP) which describes the sample collection and analysis procedures to ensure that the result of work

¹Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre.

performed under this permit will satisfy the data quality objectives of the permit. The permittee shall be responsible for the quality and accuracy of all data required by this permit. If a third party collects or analyzes samples on behalf of the permittee, the permittee shall obtain a copy of the third party site-specific QMP. The permittee shall consult with the most recent version of the ADEQ QMP and Title 40, PART 136, of the Environmental Protection Agency's Code of Federal Regulations (CFR) for guidance in this regard. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Pre-operational Monitoring

Not applicable at the time of permit issuance.

2.5.2 Routine Discharge Monitoring

The permittee shall monitor the effluent on a routine basis according to Section 4.2, Table IA-1 or IA-2, as applicable. Representative samples of the effluent shall be collected downstream of the UV disinfection channel.

2.5.3 Reclaimed Water Monitoring

On a routine basis, the permittee shall monitor the reclaimed water parameters listed under Section 4.2, Table IB in addition to the routine discharge monitoring parameters listed in Section 4.2, Tables IA-1 and IA-2. Representative samples of the reclaimed water shall be collected downstream of the UV disinfection channel.

2.5.4 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table III.

1. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented on the SMRF submitted quarterly to the ADEQ Water Quality Compliance Section, Data Unit. If none of the conditions occur, the report shall say "no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate this on the SMRF.
2. The permittee shall submit data required in Section 4.2, Table III, regardless of the operating status of the facility unless otherwise approved by the Department or allowed in this permit.

2.5.5 Groundwater Monitoring and Sampling Protocols

Not applicable.

2.5.6 Surface Water Monitoring and Sampling Protocols

Not applicable.

2.5.7 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, Arizona 85007
Phone: (602) 364-0720

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Groundwater Section for approval prior to installation, and the permit shall be amended to include any new monitoring points.

2.6 Contingency Plan Requirements

[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL exceedance, violation of a DL, AQL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL, or any other permit condition.

2.6.2 Exceeding of Alert Levels/Performance Levels

2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions

1. If an operational performance level (PL) set in Section 4.2, Table III has been exceeded the permittee shall:
 - a. Notify the ADEQ Water Quality Compliance Section within five days of becoming aware of the exceedance.
 - b. Submit a written report within 30 days after becoming aware of the exceedance. The report shall document all of the following:
 - (1) A description of the exceedance and its cause;
 - (2) the period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;
 - (3) any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;

- (4) any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an A WQS; and
 - (5) any malfunction or failure of pollution control devices or other equipment or process.
2. The facility is no longer on alert status once the operational indicator no longer indicates that a PL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2 Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Tables IA-1 and IA-2 has been exceeded, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
 - c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameters in question, if necessary to identify the cause of the exceedance.
2. The permittee shall initiate actions identified in the approved contingency plan and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.
3. Within 30 days of an AL exceedance, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, Data Unit, along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.
4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1 Exceeding Permit Flow Limit

1. If the AL for average monthly flow in Section 4.2, Tables IA-1 or IA-2 has been exceeded, the permittee shall submit an application for an APP amendment to expand the WRF or submit a report detailing the reasons that expansion is not necessary.
2. Acceptance of the report instead of an application for expansion requires ADEQ approval.

2.6.3 Discharge Limit Violation

1. If a DL set in Section 4.2, Tables IA-1, IA-2, or IB has been violated, the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:
 - a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
 - b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and

- c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, if necessary to identify the cause of the violation.

The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

2. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4 Aquifer Quality Limit Violation

Not applicable - Groundwater monitoring is not required under this permit.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. § 49-201(12) and pursuant to A.R.S. § 49-241

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Water Quality Compliance Section within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Compliance Section within 24 hours of discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the ADEQ Water Quality Compliance Section within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame

specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements [A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self-monitoring Report Form

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Section 4.0 list the parameters to be monitored and the frequency for reporting results for compliance monitoring. Analytical methods shall be recorded on the SMRFs.
4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

2.7.2 Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms, or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction; and the date and time any repairs were performed;
5. Documentation of sampling date and time; and
6. Any other information required by this permit to be entered in the log book.

Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).

2.7.3. Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Water Quality Compliance Section in writing (by mail or by fax - see Section 2.7.5) within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation, or of an AL exceedance.
2. The permittee shall submit a written report to the Water Quality Compliance Section within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
 - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
 - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
 - e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
 - f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4. Operational, Other or Miscellaneous Reporting

The permittee shall complete the SMRF provided by the Department to reflect facility inspection requirements designated in Section 4.2, Table III and submit to the ADEQ Water Quality Compliance Section, Data Unit quarterly along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results as required in Section 4.2, Table IB and flow volumes to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee; and
2. Any end user who has not waived interest in receiving this information.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Data Unit
Mail Code 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to the following address:

Arizona Department of Environmental Quality
Water Quality Compliance Section
Mail Code 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4497
Fax (602) 771-4505

All documents required by this permit to be submitted to the Groundwater Section shall be directed to:

Arizona Department of Environmental Quality
Groundwater Section
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates²:

Reporting Period	Due Date
January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the semi-annual and annual report due dates:

Reporting Period	Due Date
Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Section and the Water Quality Compliance Section shall be notified within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

²A post-mark date no later than the due date is considered meeting the due date requirements under this Section.

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the ADEQ Water Quality Compliance Section with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Water Quality Compliance Section of the intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Section a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean-closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Section indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

1. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with AWQS at the applicable POC;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remediation or mitigation measures are necessary to achieve compliance with Title 49, Ch. 2; and
5. Further action is necessary to meet property use restrictions.

2.10 Post-closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Section.

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Section a post-closure plan that addresses post-closure maintenance and monitoring actions at the facility. The post-closure plan shall meet all requirements of A.R.S. §§ 49-201(30)

and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

2.10.1 Post-closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2 Post-closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Section. A copy of the cover letter must also be submitted to the ADEQ Water Quality Compliance Section.

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion for the 5.1 mgd expansion in a format approved by the Department that confirms that the facility is constructed according to the Department-approved design report or plans and specifications, as applicable.	Within 90 days after completion of construction of the 5.1 mgd expansion.
The permittee may cease monitoring as per Section 4.2, Table IA-1, begin monitoring as per Section 4.2, Table IA-2, and notify the Water Quality Compliance Section, Data Unit, of the change in monitoring.	Within 30 days after submitting the Engineer's Certificate of Completion for the 5.1 mgd expansion.
The permittee shall notify ADEQ of commencement of discharge from the 5.1 mgd WRF.	Within 15 days after commencement of monitoring under Section 4.2, Table IA-2.
The permittee may apply for a permit amendment to remove Section 4.2, Table IA-1.	After commencement of monitoring under Section 4.2, Table IA-2.
The permittee may connect the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157 th Avenue WRF reclaimed water distribution system.	After a permit amendment is issued to the City of Goodyear allowing the City of Goodyear 157 th Avenue WRF (APP No. P-101324) to connect its reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system.

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA-1
ROUTINE DISCHARGE MONITORING - 4.1 MGD³

Parameter	Location		Coordinates	Frequency	Frequency
	Immediately downstream of the UY Channel		33° 27' 55" N 112° 21' 56" W		
Total Flow ⁴ : Daily	NE ⁵	NE	mgd	Everyday	Quarterly
Total Flow: Monthly Average ¹⁰	3.9	4.1	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	NE	4.1	mgd	Everyday	Quarterly
Reuse Flow: Monthly Average	NE	4.1	mgd	Monthly Calculation	Quarterly
<i>E. coli</i> : Single sample maximum	NE	15.0	CFU or MPN ¹¹	Daily	Quarterly
<i>E. coli</i> : four (4) of seven (7) samples in a week ¹²	NE	Non-detect ¹³	CFU or MPN	Daily	Quarterly
Total Nitrogen ¹⁴ : Five-sample rolling geometric mean	8.0	10.0	mg/l ¹⁵	Monthly ¹⁶	Quarterly

³Monitoring under Table IA-1 is no longer required after the commencement of monitoring under Table IA-2.

⁴AL = Alert Level

⁵DL = Discharge Limit

⁶Total flow is the total of flows to on-site process use, reclaimed water, discharge to the RID canal, and the City of Goodyear 157th Avenue WRF, and flow from the City of Goodyear 157th Avenue WRF.

⁷Flow shall be measured using a continuous recording flow meter which totals the flow daily.

⁸NE = Not Established = Monitoring is required but no limits are specified.

⁹mgd = million gallons per day

¹⁰Monthly average of daily flow values.

¹¹CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

¹²Week means a seven-day period starting on Sunday and ending on the following Saturday.

¹³If at least four (4) of seven (7) samples in a week are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of *E. coli*, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).

¹⁴Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

¹⁵mg/l = milligrams per liter

¹⁶A five-month geometric mean of the results of the five (5) most recent samples

TABLE IA-1
ROUTINE DISCHARGE MONITORING – 4.1 MGD (continued)

Sampling Point Number	Sampling Point Identification			Latitude	Longitude
2	Flow meter at the connection to the City of Goodyear 157 th Avenue WRF reclaimed water distribution system, located 3,000 feet west of Palm Valley WRF at the intersection of McDowell Road and Bullard Avenue			33° 27' 51.48" N	112° 22' 31.08" W
Parameter	AI	DI	Units	Sampling Frequency	Reporting Frequency
Flow from the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157 th Avenue WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly
Flow from the City of Goodyear 157 th Avenue WRF reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly

TABLE IA-1
 ROUTINE DISCHARGE MONITORING - 4.1 MGD (continued)

Parameter	Upper Limit	Lower Limit	Units	Frequency	Frequency
	Immediately downstream of the UV Channel			33° 27' 55" N	112° 21' 56" W
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

TABLE IA-1
ROUTINE DISCHARGE MONITORING - 4.1 MGD (continued)

Compound	Criterion	Monitoring	Frequency	Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):				
Benzene	0.004	0.005	mg/l	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually
1,2,4-Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually
1,1,2-Trichloroethane	0.004	0.005	mg/l	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually

TABLE IA-2
ROUTINE DISCHARGE MONITORING - 5.1 MGD¹⁷

1	Immediately downstream of the UV Channel		33° 27' 55" N	112° 21' 56" W	
Total Flow ²⁰ : Daily ²¹	NE ²²	5.1	mgd ²³	Everyday	Quarterly
Total Flow: Monthly Average ²⁴	4.9	5.1	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	NE	5.1	mgd	Everyday	Quarterly
Reuse Flow: Monthly Average	NE	5.1	mgd	Monthly Calculation	Quarterly
<i>E. coli</i> : Single sample maximum	NE	15.0	CFU or MPN ²⁵	Daily	Quarterly
<i>E. coli</i> : four (4) of seven (7) samples in a week ²⁶	NE	Non-detect ²⁷	CFU or MPN	Daily	Quarterly
Total Nitrogen ²⁸ : Five-sample rolling geometric mean	8.0	10.0	mg/l ²⁹	Monthly ³⁰	Quarterly

¹⁷Monitoring under Table IA-1 is no longer required upon commencement of monitoring under Table IA-2. The permittee shall notify the Water Quality Compliance Section, Data Unit, of the change in monitoring as per Section 3.0, Compliance Schedule.

¹⁸AL = Alert Level

¹⁹DL = Discharge Limit

²⁰Total flow is the total of flows to on-site process use, reclaimed water, discharge to the RID canal, and the City of Goodyear 157th Avenue WRF, and flow from the City of Goodyear 157th Avenue WRF.

²¹Flow shall be measured using a continuous recording flow meter which totals the flow daily.

²²NE = Not Established = Monitoring is required but no limits are specified.

²³mgd = million gallons per day

²⁴Monthly average of daily flow values.

²⁵CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

²⁶Week means a seven-day period starting on Sunday and ending on the following Saturday.

²⁷If at least four (4) of seven (7) samples in a week are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of *E. coli*, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).

²⁸Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen

²⁹mg/l = milligrams per liter

³⁰A five-month geometric mean of the results of the five (5) most recent samples

TABLE IA-2
ROUTINE DISCHARGE MONITORING - 5.1 MGD (continued)

Well ID	Location	Flow Direction	Flow Rate	Frequency	Monitoring Method
2	Flow meter at the connection to the City of Goodyear 157 th Avenue WRF reclaimed water distribution system, located 3,000 feet west of Palm Valley WRF, at the intersection of McDowell Road and Bullard Avenue				
Flow from the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157 th Avenue WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly
Flow from the City of Goodyear 157 th Avenue WRF reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly

TABLE IA-2
 ROUTINE DISCHARGE MONITORING - 5.1 MGD (continued)

Monitoring Point Number	Monitoring Point Description		Latitude	Longitude	
1	Immediately downstream of the UV Channel		33° 27' 55" N	112° 21' 56" W	
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

TABLE IA-2
 ROUTINE DISCHARGE MONITORING - 5.1 MGD (continued)

Compound	AP	DL	Unit	Sampling Frequency	Analysis Frequency
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs)					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene ^(1,4-Dichlorobenzene)	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene ⁵¹	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4-Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2-Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

TABLE IB
RECLAIMED WATER MONITORING - CLASS A³¹

Sample Point Number	Location	Latitude	Longitude	
1	Immediately downstream of the UV Channel	33° 27' 55" N	112° 21' 56" W	
Parameter	Limit	Units	Frequency	
Total Nitrogen ³² : Five-sample rolling geometric mean	10.0	mg/l	Monthly	Quarterly
<i>E. coli</i> : Single-sample maximum	15.0	CFU or MPN ³³	Daily ³⁴	Quarterly
<i>E. coli</i> : Four (4) of last seven (7) samples	Non-detect ³⁵	CFU or MPN	Daily	Quarterly
Turbidity ³⁶ : Single reading	5.0	NTU ³⁷	Everyday ³⁸	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly
Enteric Virus: Four (4) of last seven (7) samples	Non-detect	PFU ³⁹	Suspended/ Monthly ⁴⁰	Quarterly

³¹ Reclaimed water monitoring under Table IB shall be performed in addition to routine discharge monitoring required under Section 4.2, Tables IA-1 and IA-2.

³² Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)

³³ CFU = Colony Forming Units per 100 ml; MPN = Most Probable Number per 100 ml. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.

³⁴ For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each seven-day period are obtained and analyzed.

³⁵ If at least four (4) of the last seven (7) samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the last seven (7) samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).

³⁶ Turbidimeter shall have a signal averaging time not exceeding 120 seconds. Occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.

³⁷ NTU = Nephelometric Turbidity Units

³⁸ For the single turbidity reading, "everyday" means the maximum reading during the 24-hour period.

³⁹ Plaque Forming Units per 40 Liters. A value of <1:1 PFU/40 L shall be considered to be non-detect.

⁴⁰ Enteric virus sampling shall resume only when the discharge limit for the 24-hour average for turbidity is exceeded for two (2) consecutive 24-hour monitoring periods. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter "suspended" in the appropriate space on the SMRF.

TABLE II
GROUNDWATER MONITORING

Not applicable

TABLE III
FACILITY INSPECTION (Operational Monitoring)

Pump Integrity	Good working condition	Weekly	Quarterly
Treatment Plant Components	Good working condition	Weekly	Quarterly

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. APP Application, dated: August 24, 2010
2. Final Engineering Report, dated: March 24, 2011
3. Public Notice, dated: January 26, 2012
4. Public Hearing, dated: Not applicable.
5. Responsiveness Summary, dated: Not applicable.

6.0 NOTIFICATION PROVISIONS**6.1 Annual Registration Fees**

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons-per-day (gpd) as established by A.R.S. § 49-242.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes; Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an AWQS at the applicable POC for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability

[A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee; or
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 Inspection and Entry [A.R.S. §§ 41-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension, and Revocation [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2 Severability [A.R.S. §§ 49-201, 49-241 through 251, A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

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EXHIBIT 14

APPLICANT'S WASTEWATER USE DATA SHEET

COMPANY NAME Liberty Utilities
Litchfield Park Service Company

WASTEWATER FLOWS

MONTH/YEAR (Most Recent 12 Months)	NUMBER OF SERVICES	TOTAL MONTHLY SEWAGE FLOW	SEWAGE FLOW ON PEAK DAY
June 2014	20,697	100,052,000	3,802,000
July 2014	20,803	100,551,000	3,678,000
August 2014	20,821	101,418,000	3,568,000
September 2014	20,921	102,587,000	4,396,000
October 2014	20,933	104,662,000	3,751,000
November 2014	20,944	107,529,000	4,115,000
December 2014	21,132	109,009,000	4,025,000
January 2015	21,132	109,904,000	4,252,000
February 2015	21,132	102,172,000	4,208,000
March 2015	21,132	120,750,000	4,378,000
April 2015	21,132*	119,297,000	4,356,000
May 2015	21,132*	114,928,000	4,196,000

* Note: The number of sewer services was not available as of June 25, 2015 for April and May 2015. The number of sewer services shown for both months is for March 2015.

**PROVIDE THE FOLLOWING INFORMATION AS APPLICABLE
PER WASTEWATER SYSTEM**

Method of Effluent Disposal (leach field, surface water discharge, reuse, injection wells, groundwater recharge, evaporation ponds, etc.)	Reuse, surface discharge
Groundwater Permit Number	N/A
ADEQ Aquifer Protection Permit Number	P100310
ADEQ Reuse Permit Number	R105272, R105472, R105221, R23573, R23618, R23577, R105644, R105706, R105669, R103615
EPA NPDES Permit Number	AZ0025712

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EXHIBIT 15

NOTARIZED SIGNATURE ON BEHALF OF APPLICANT

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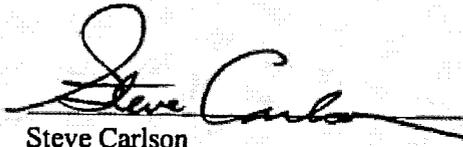
AFFIDAVIT OF STEVE CARLSON

Steve Carlson, being duly sworn, deposes and says:

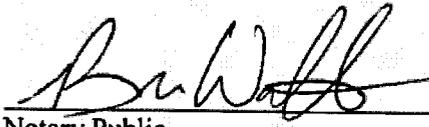
1. I am a resident of Maricopa County, over 18 years of age, and make this affidavit based on my own personal knowledge.

2. I am the Development Services Manager for Liberty Utilities (Litchfield Park Water and Sewer) Corp. ("Liberty").

3. The Application for an Extension of Liberty's existing wastewater CC&N, to which this affidavit is attached, was prepared under my supervision.


Steve Carlson

SUBSCRIBED and sworn to before me this 7 day of July, 2015.


Notary Public

My Commission Expires:

5/26/2018

