

preliminary in zoning case

~~FINAL~~ WASTEWATER REPORT
for

Magnolia on Osborn
Scottsdale, Arizona

Prepared For:



PRELIMINARY Basis of Design Report

- ACCEPTED
- ACCEPTED AS NOTED
- REVISE AND RESUBMIT



Disclaimer: If accepted, the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.

For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY Levi Dillon DATE 7/10/2023

Prepared by:



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Scottsdale, AZ 85260
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Project Number: 220205

Submission Date: January 16, 2023

Revised: June 1, 2023

Case No.: 18-ZN-2022

Plan Check No.: TBD

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1. INTRODUCTION

1.1 SUMMARY OF PROPOSED DEVELOPEMENT

Magnolia on Osborn is a proposed 92-unit four-story multifamily development, with 5,800 s.f. of retail space located at the northeast corner of 70th Street and Osborn Road in Scottsdale, Arizona.

The purpose of this report is to provide an updated sewer system analysis supporting the proposed development. Wastewater service will be provided via a new connection to the existing 8" sewer line along 6th Street.

1.2 LEGAL DESCRIPTION

The following parcels of subdivided land are located in the SE ¼ of Section 27, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian in Scottsdale, Arizona. Refer to **EXHIBIT 1** for a vicinity map.

- APN 130-13-064; 31,490 s.f. (0.73 ac) NET
- APN 130-13-062; 31,430 s.f. (0.72 ac) NET

The two APNs are platted as Lots 16 and 18, Orange Acres and recorded in Book 31, Page 14 of Maricopa County Records. The total land area is 1.45 acres, more or less.

2. DESIGN DOCUMENTATION

2.1 DESIGN COMPLIANCE

The proposed sewer system is designed to meet the latest design criteria of the City of Scottsdale ("the city") Design Standards & Policies Manual ("DS+PM"), the city Municipal Code, the Arizona Department of Environmental Quality ("ADEQ"), and Maricopa County Environmental Services Department ("MCESD").

2.2 PROCEDURES, POLICIES AND METHODOLOGIES

Hydraulic design of the service pipe will include the peak flow, including pool backwash, compliant to the calculated demand.

2.3 SOFTWARE ACKNOWLEDGEMENT:

Onsite sewer service line will be hydraulically evaluated using Bentley FlowMaster® V8i (SELECTseries 1).

3. EXISTING CONDITIONS

3.1 EXISTING AND PROPOSED ZONING AND LAND USES

The two existing parcels are presently zoned C-3.

70th Street Lofts northwest of the site is zoned D/DMU-2, a parcel southwest of the site is zoned C-3 and both parcels to the east are zone C-3.

3.2 EXISTING TOPOGRAPHY, VEGETATION AND LANDFORM FEATURES:

The west parcel is a parking lot. The east parcel is an office building with surface parking and an enclosed storage yard. Site topography slopes from the northwest to the southeast with approximately three feet of fall. Refer to **EXHIBIT 2** for an aerial of the overall project existing conditions.

3.3 EXISTING SEWER INFRASTRUCTURE:

See **EXHIBIT 3** - City of Scottsdale (QS 16-44)

- An existing 12" VCP sanitary sewer line is located along the south side of Osborn Road.
- An existing 8" VCP sanitary sewer line is located along the center of East 6th Street and presently provides service to the site.

4. PROPOSED CONDITIONS

4.1 SITE PLAN

All onsite structures and service lines will be removed compliant to City requirements.

4.2 PROPOSED SEWER SERVICE CONNECTIONS

Sewer service will consist of a 6" service line connecting to the 8" sewer in East 6th Street. A utility plan layout is shown in **APPENDIX II**.

4.3 MAINTENANCE RESPONSIBILITIES

The sewer service line will be owned and maintained by the property owner.

5. SEWER SYSTEM COMPUTATIONS

5.1 SEWER DEMANDS

The unit demands are taken from Figure 7.1-2 in the City's DS+PM.

Table 1: PROPOSED SEWER DEMAND CALCULATIONS

	Bldg Area (sq.ft.)	Dwelling Units	ADD (gpd/unit)	Peaking Factor	Avg. Day Demand (gpm)	Peak Flow (gpm)
Residential		92	140	4.5	8.9	40.3
Retail	5,800		0.5	3.0	2.0	6.0
Pool			144,000		100.0	100.0
TOTAL DEMANDS (gpm):					111.0	146.3

5.2 MINIMUM SERVICE REQUIREMENTS

A 6" service line is sufficient to convey the peak flow without the pool backwash at a depth of 1.7" and velocity of 2.2 fps. The peak flow with the pool backwash will have a depth of 3.3" and velocity of 3.5 fps. Refer to **APPENDIX I** for the service pipe hydraulic calculations.

5.3 FLOW MONITORING OF EXISTING SYSTEM:

Flow monitoring is not proposed as the service area to the existing 8" sewer along 6th Street and the 10" sewer in Bishop Lane was evaluated for capacity using criteria from the DS+PM applied to site usage and areas gathered from the County Assessor's Interactive Maps. **APPENDIX I** shows the 8" Sewer in 6th Street, at the shallowest slope, has sufficient capacity to convey the

144 gpm peak flow with 150 gpm for pool backwashes. The 10" Sewer in Bishop Lane has a 1,197 gpm capacity at a d/D of 0.8 and will easily convey peak flows in addition to pool backwashes from the service area.

6. SUMMARY / CONCLUSIONS

6.1 SUMMARY:

The proposed sewer flow, and connections are designed to meet criteria of the City's Design Standards and Policies Manual, the Arizona Department of Environmental Quality ("ADEQ"), and Maricopa County Environmental Services Department ("MCESD").

The hydraulic output shown in **APPENDIX I** indicates that the 6" sewer connection is sufficient to provide service to this project.

6.2 PROJECT SCHEDULE:

As a residential apartment and retail development, the infrastructure and buildings are proposed to be constructed in a single phase.

7. REFERENCES

1. COS Sewer Q-S MAP 16-44
2. City of Scottsdale Design Standards & Policies Manual, 2018 (Chapter 7 – Sewer)

EXHIBITS

1. Vicinity Map

2. Aerial

*3. Sewer Quarter
Section Map*

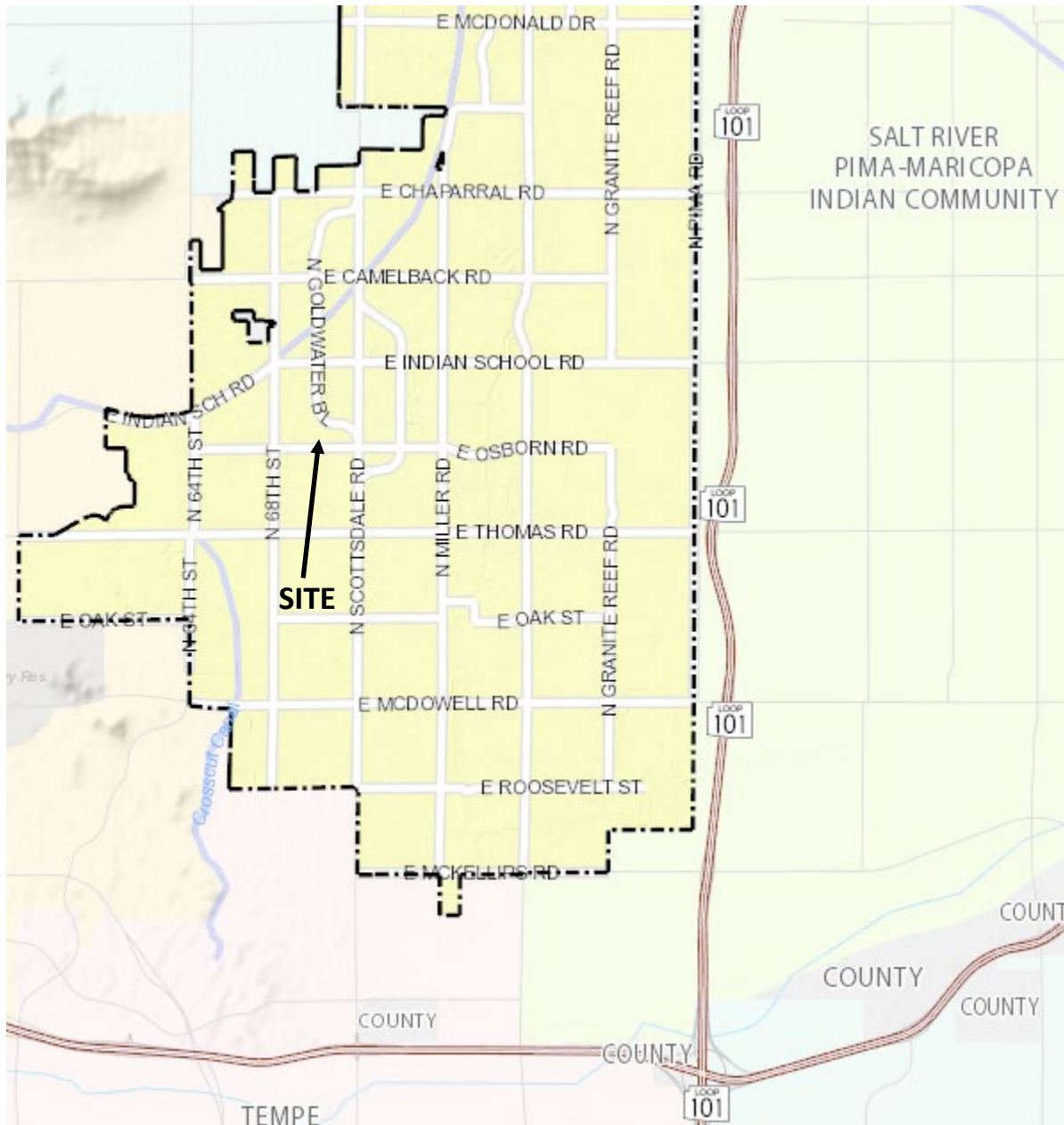













EXHIBIT 1 – Vicinity Map

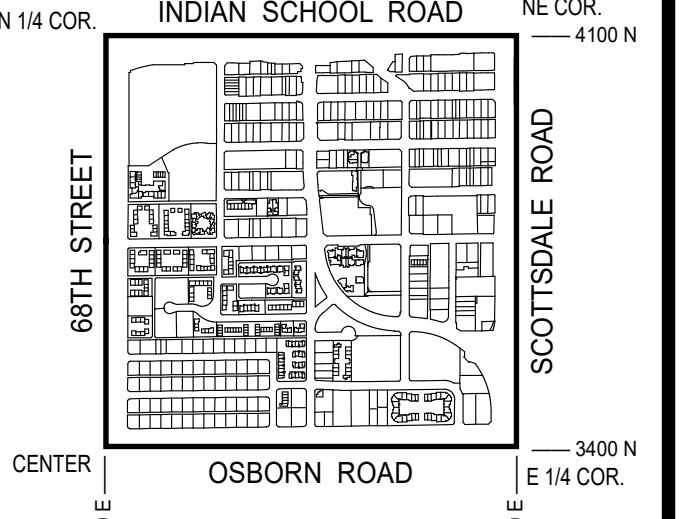
8280 E. Gelding Dr., Suite 101
Scottsdale, AZ 85260

GENERAL NOTES:
 THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
 THE SECTION LINE BEARING AND DISTANCES ARE BASED ON 1991 BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOT "AS CALICATED" ON THE MAP.

LEGEND:

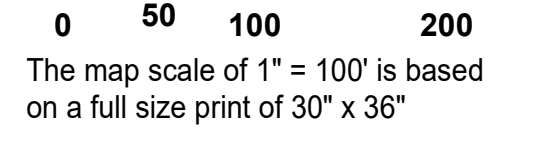
- Cleanout 
- Lift Station 
- Non-GPIS Point 
- Plug 
- Sewer Service Point 
- Sewer Tap Point 
- Sewer Valve 
- Treatment Plant 
- Sewer Main - Gravity 
- Sewer Main - Force 
- Sewer Main - Private 

VICINITY MAP



NORTH

SCALE: 1" = 100'

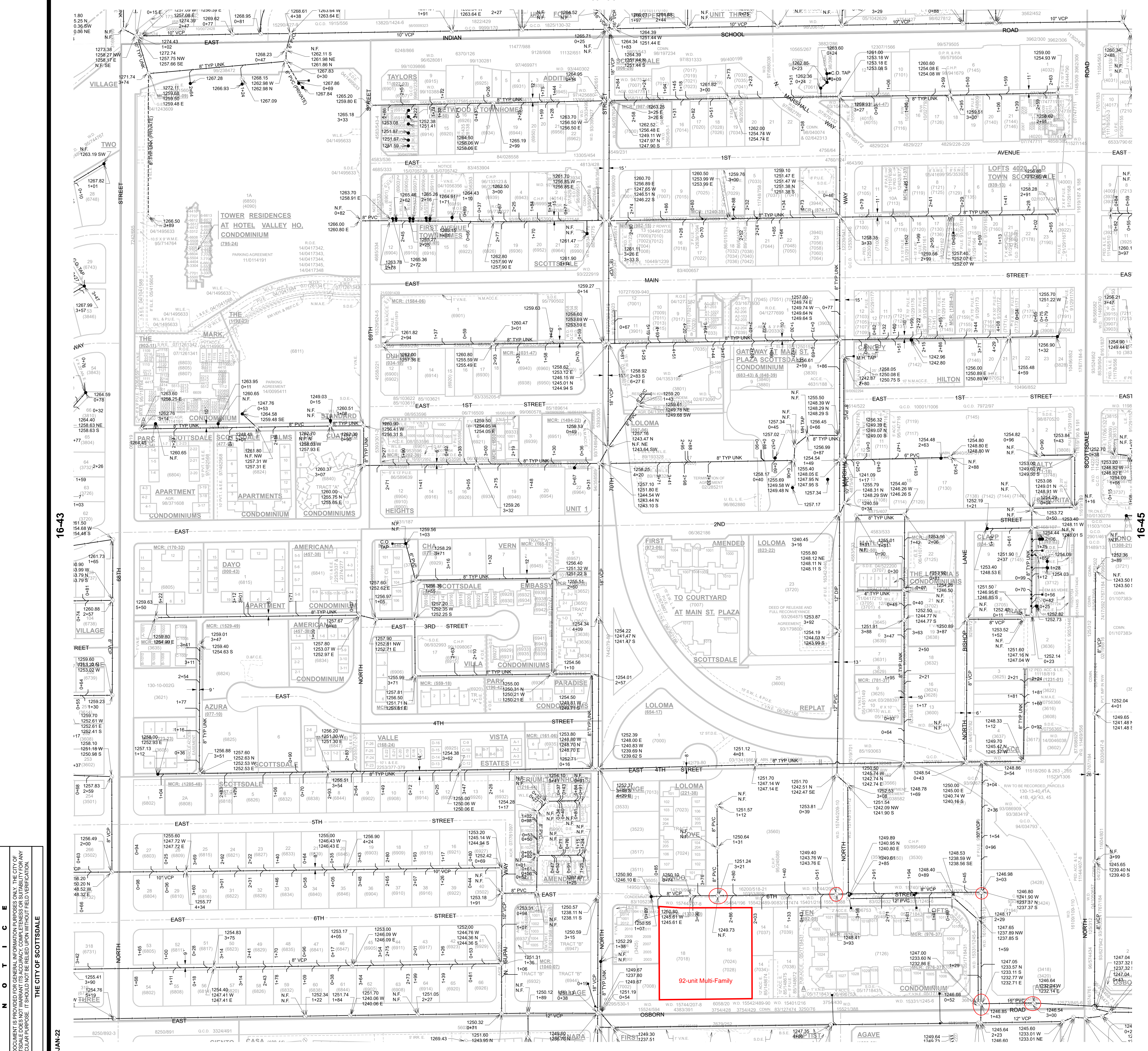


SEWER QUARTER SECTION MAP

16-44

NE 1/4 SEC. 27 T2N R4E

CITY OF SCOTTSDALE
SCOTTSDALE GEOGRAPHIC INFORMATION SYSTEMS
 3625 North Drinkwater Boulevard
 Scottsdale, Arizona 85251



NOTICE
 THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT ITS ACCURACY, COMPLETENESS OR SUITABILITY FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.
 THE CITY OF SCOTTSDALE
 30-JAN-22

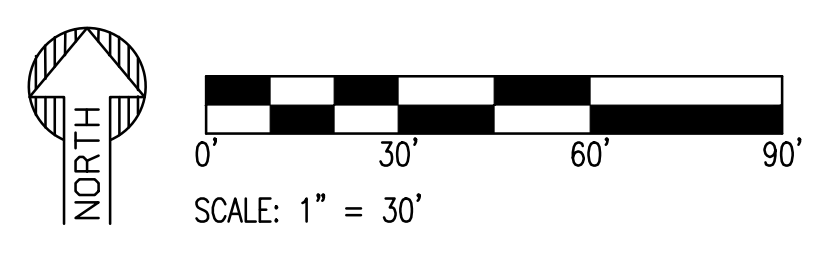
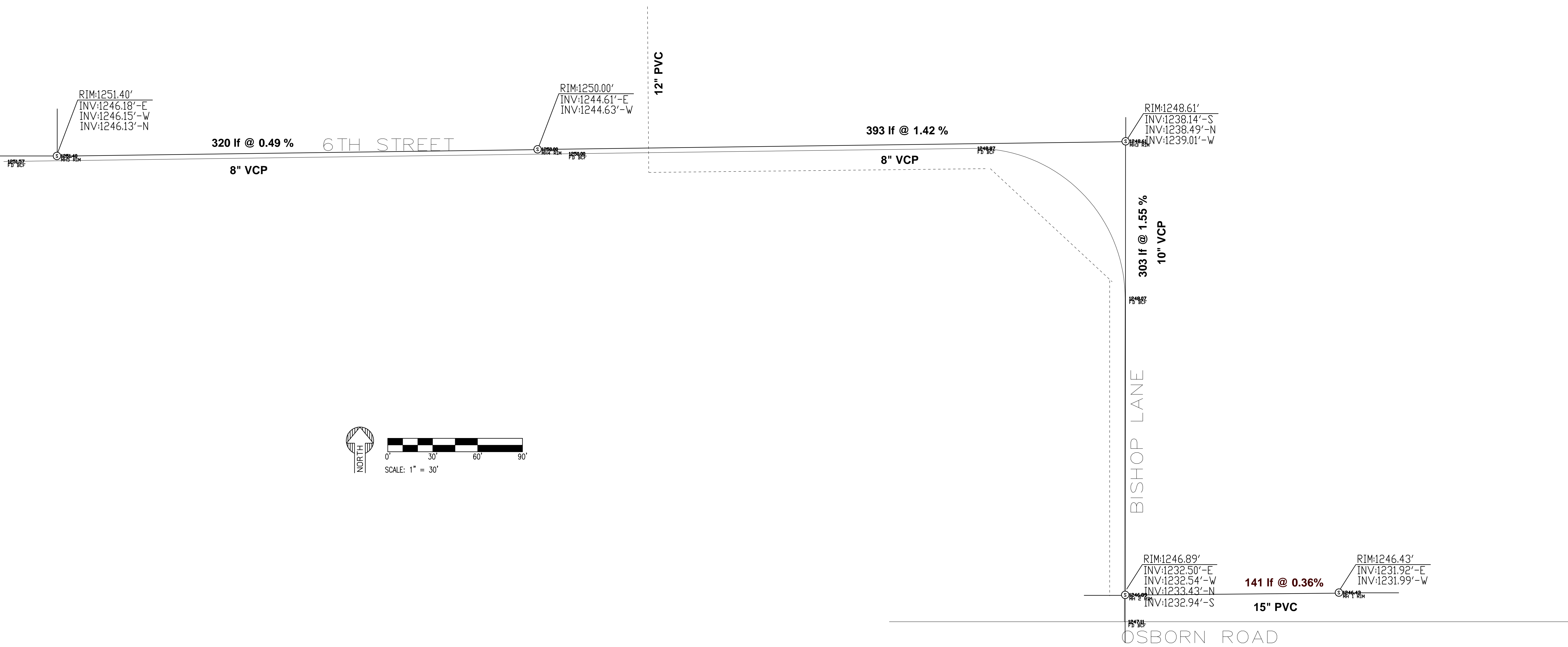


Exhibit 4

**APPENDIX III -
Exist Sewer Survey**

APPENDIX I.

Hydraulic Calculations

6" Service Line at 1.0% w/o Pool Backwash

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.01000 ft/ft
Diameter	6.0 in
Discharge	46.3 gpm

Results

Normal Depth	1.74 in
Flow Area	0.05 ft²
Wetted Perimeter	0.57 ft
Hydraulic Radius	1.00 in
Top Width	5.4 in
Critical Depth	1.90 in
Percent Full	29.0 %
Critical Slope	0.00709 ft/ft
Velocity	2.18 ft/s
Velocity Head	0.07 ft
Specific Energy	0.22 ft
Froude Number	1.19
Maximum Discharge	270.9 gpm
Discharge Full	251.8 gal/min
Slope Full	0.00034 ft/ft
Flow Type	SuperCritical

APPENDIX I – Hydraulic Calculations and Service Area

6" Service Line at 1.0% w/ Pool Backwash

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

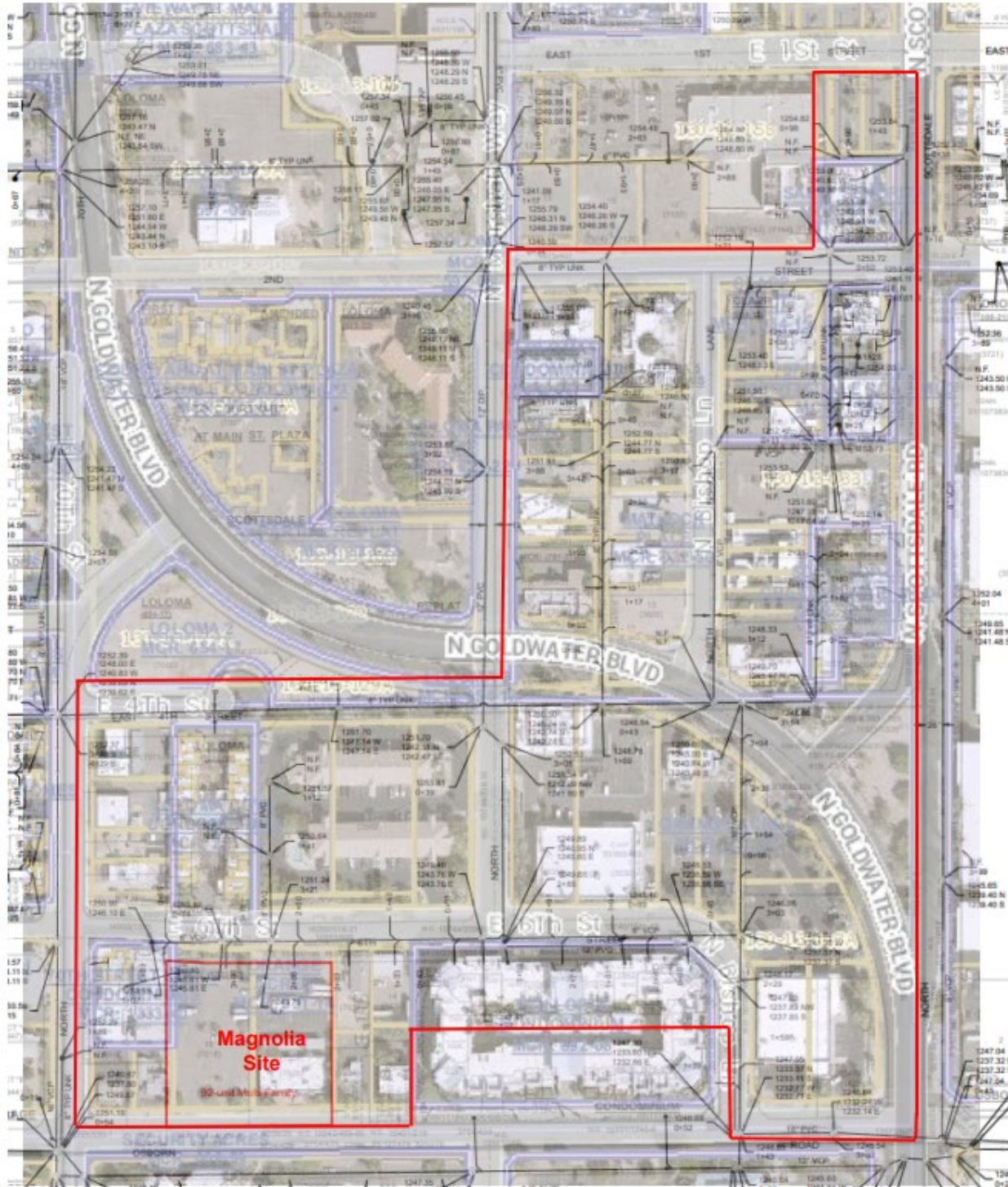
Roughness Coefficient	0.013
Channel Slope	0.01000 ft/ft
Diameter	6.0 in
Discharge	146.3 gpm

Results

Normal Depth	3.28 in
Flow Area	0.11 ft ²
Wetted Perimeter	0.83 ft
Hydraulic Radius	1.58 in
Top Width	6.0 in
Critical Depth	3.47 in
Percent Full	54.7 %
Critical Slope	0.00835 ft/ft
Velocity	2.96 ft/s
Velocity Head	0.14 ft
Specific Energy	0.41 ft
Froude Number	1.11
Maximum Discharge	270.9 gpm
Discharge Full	251.8 gal/min
Slope Full	0.00338 ft/ft
Flow Type	SuperCritical

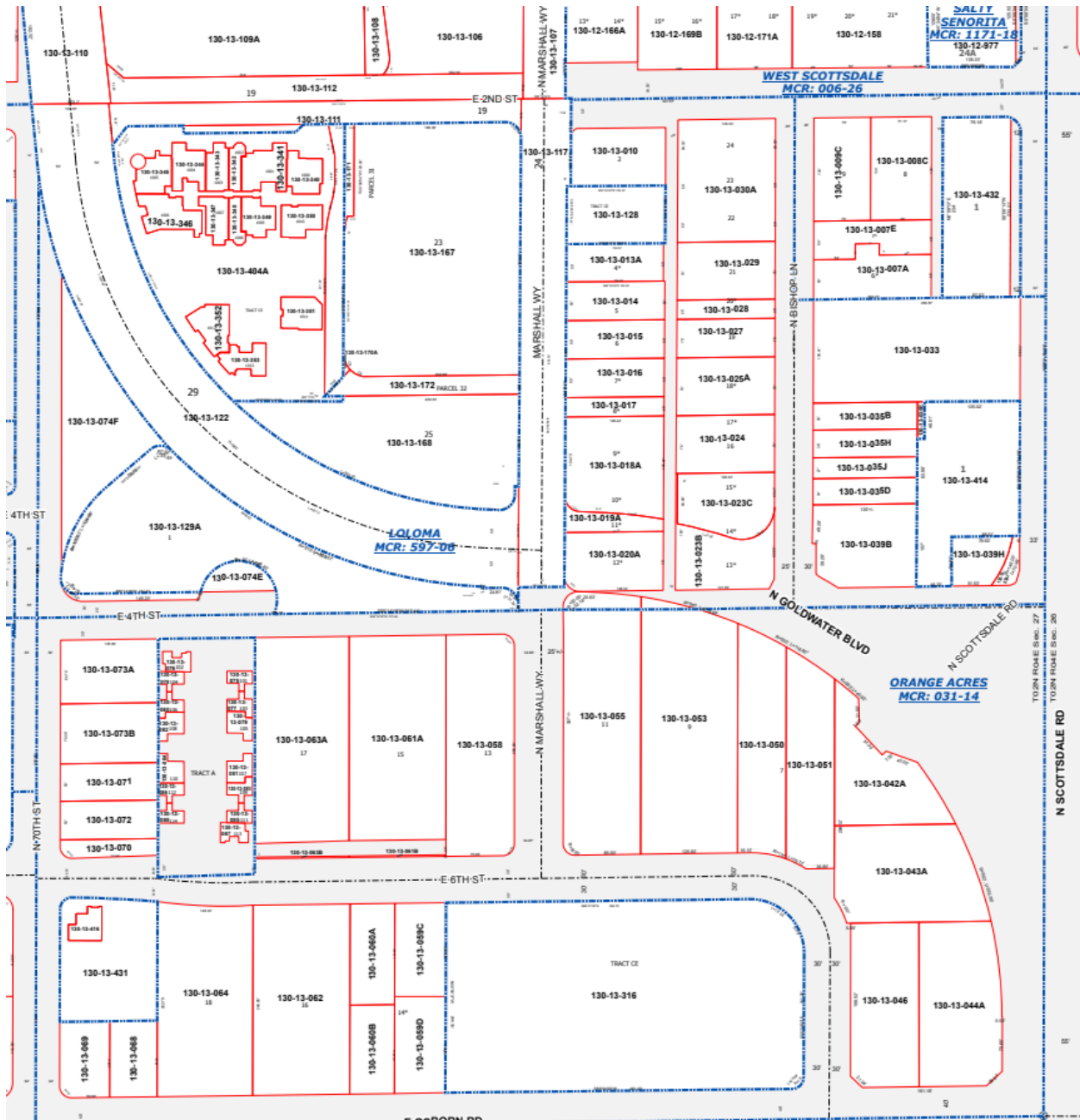
APPENDIX I – Hydraulic Calculations and Service Area

Evaluate Service Area for 6th Street and Bishop Lane Sewer System



APPENDIX I – Hydraulic Calculations and Service Area

5240 N. 16th Street, Suite 105
Phoenix, AZ 85016



APPENDIX I – Hydraulic Calculations and Service Area

5240 N. 16th Street, Suite 105
Phoenix, AZ 85016

Table A - Service Area to 8" Sewer in 6th St

Parcel APN / Development	Site Use	Sq. Ft.	Units	Pool	Demand (gpd or unit)	Avg Day Demand (gpd)	Peaking Factor	Peak Demand (gpd)	Pool Backwash Gpd
130-13-073A	Office	3,648			0.4	1,453	3.0	4,378	
130-13-073B	Office	2,601			0.4	1,040	3.0	3,121	
130-13-071	Residential		1		250	250	4.0	1,000	
130-13-072	Retail	1,427			0.5	714	3.0	2,141	
70th St Lofts	Condominium		28	1	140	3,920	4.5	17,640	72,000
130-13-069	Medical	1,042			0.5	521	4.5	2,345	
130-13-068	Residential		1		250	250	4.0	1,000	
130-13-064 130-13-062	Proposed Site Residential-Retail		92	1	140	12,880	4.5	57,960	72,000
		5,800			2,900	3.0	8,700		
130-13-060A	Warehouse	1,800			0.4	720	3.0	2,160	
130-13-060B	Office	1,341			0.4	536	3.0	1,609	
130-13-059C	Office	1,728			0.4	691	3.0	2,074	
130-13-059D	Office	2,511			0.4	1,004	3.0	3,013	
Stay America	Multi-Family		160	1	140	22,400	4.5	100,800	72,000
Totals (gpd)						49,286		207,940	216,000
Totals (gpm)						34		144	150



Table B - Service Area to 10" Sewer in Bishop Lane

Parcel APN / Development	Site Use	Sq. Ft.	Units	Pool	Demand (gpd or unit)	Avg Day Demand (gpd)	Peaking Factor	Peak Demand (gpd)	Pool Backwash
130-13-316	Motel		50	1.5	380	19,000	4.5	85,500	108,000
130-13-046	Retail	14,820			0.5	7,410	3.0	22,230	
130-13-050	Retail	3,080			0.5	1,540	3.0	4,620	
130-13-053	Retail	16,995			0.5	8,498	3.0	25,493	
130-13-055	Retail	9,142			0.5	4,571	3.0	13,713	
130-13-018A	Church	7,238			0.1	724	3.0	2,171	
130-13-015	Retail	5,062			0.5	2,531	3.0	7,593	
130-13-014	Commercial	3,456			0.5	1,728	3.0	5,184	
130-13-013A	Motel	6,417	12	1.5	380	4,560	4.5	20,520	108,000
130-13-128	Condominiums		5		140	700	4.5	3,150	
130-13-010	Retail	4,325			0.5	2,163	3.0	6,488	
130-13-024	Office	1,644			0.4	658	3.0	1,973	
130-13-025A	Retail	1,666			0.5	833	3.0	2,499	
130-13-030A	Restaurant	5,120			1.2	6,144	6.0	36,864	
130-13-039B	Retail	3,327			0.5	1,664	3.0	4,991	
130-13-035H	Retail	7,087			0.5	3,544	3.0	10,631	
130-13-035H	Residential		1		250	250	4.0	1,000	
130-13-414	Restaurant	5,452			1.2	6,542	6.0	39,254	
130-13-414	Retail	5,040			0.5	2,520	3.0	7,560	
130-13-033	Restaurant	4,910			1.2	5,892	6.0	35,352	
130-13-007A	Retail	5,018			0.5	2,509	3.0	7,527	
130-13-432	Retail	10,599			0.5	5,300	3.0	15,899	
130-13-008C	Commercial	7,500			0.5	3,750	3.0	11,250	
130-12-977	Restaurant	4,264			1.2	5,117	6.0	30,701	
130-12-977	Retail	1,001			0.5	501	3.0	1,502	
Totals (gpd)						98,646		403,662	216,000
Totals (gpm)						69		280	150



Peak domestic demand in 10" sewer at Bishop Lane and Osborn Road: 144 gpm (Table A) + 280 gpm (Table B) + 300 gpm (pools) = 724 gpm

Reference APPENDIX I for the 10" pipe hydraulic calculations
Reference FIGURE 4 for the existing manhole survey

ok

10" pipe capacity at 1.55% with d/D=0.80 is 1,197 gpm so calculated 724 gpm peak demand including pool backwash is okay



exhibit 4

APPENDIX I – Hydraulic Calculations and Service Area

5240 N. 16th Street, Suite 105
Phoenix, AZ 85016

8" 6th St Sewer at shallowest slope; d/D=0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013
Channel Slope	0.00490 ft/ft
Normal Depth	6.40 in
Diameter	8.0 in

Results

Discharge	371.1 gpm
Flow Area	0.30 ft ²
Wetted Perimeter	1.48 ft
Hydraulic Radius	2.43 in
Top Width	6.4 in
Critical Depth	5.17 in
Percent Full	80.0 %
Critical Slope	0.00834 ft/ft
Velocity	2.76 ft/s
Velocity Head	0.12 ft
Specific Energy	0.65 ft
Froude Number	0.65
Maximum Discharge	408.4 gpm
Discharge Full	379.6 gal/min
Slope Full	0.00468 ft/ft
Flow Type	SubCritical

GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %
Normal Depth Over Rise	80.00 %
Downstream Velocity	Infinity ft/s

APPENDIX I – Hydraulic Calculations and Service Area

10" Bishop Lane Sewer at 1.55%; d/D=0.8

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.013
Channel Slope	0.01550 ft/ft
Normal Depth	8.00 in
Diameter	10.0 in

Results

Discharge	1196.7 gpm
Flow Area	0.47 ft ²
Wetted Perimeter	1.85 ft
Hydraulic Radius	3.04 in
Top Width	8.0 in
Critical Depth	8.65 in
Percent Full	80.0 %
Critical Slope	0.01361 ft/ft
Velocity	5.70 ft/s
Velocity Head	0.50 ft
Specific Energy	1.17 ft
Froude Number	1.20
Maximum Discharge	1316.9 gpm
Discharge Full	1224.2 gal/min
Slope Full	0.01481 ft/ft
Flow Type	SuperCritical

GVF Input Data

Downstream Depth	0.00 in
Length	0.00 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 in
Profile Description	
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.00 %
Normal Depth Over Rise	80.00 %
Downstream Velocity	Infinity ft/s

APPENDIX I – Hydraulic Calculations and Service Area



“LEED®ing and Developing Smart Projects”

APPENDIX II.

Utility Plan

MAGNOLIA AT OSBORN

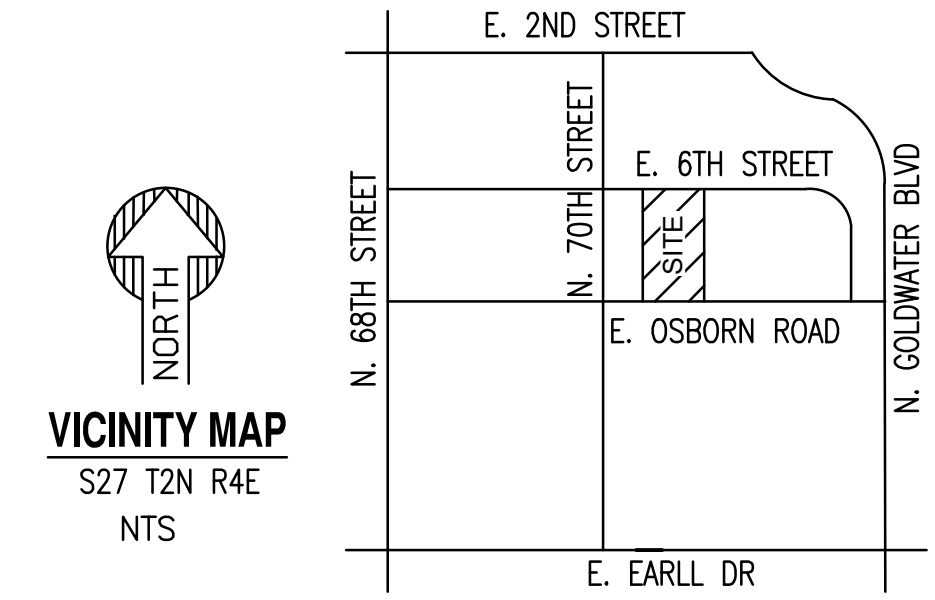
PRELIMINARY UTILITY PLAN

NEC OF 70TH STREET & OSBORN ROAD
 A PORTION OF THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.

CIVIL ENGINEER
 SUSTAINABILITY ENGINEERING GROUP
 8280 E. GELDING DR., SUITE 101
 SCOTTSDALE, ARIZONA 85260
 PHONE: 480-588-7226
 ATTN: ALI FAKIH
 EMAIL: ALI@AZSEG.COM

CLIENT:
 MAGNOLIA PROPERTY COMPANY
 2435 E. SOUTHLAKE BLVD., SUITE 150
 SOUTHLAKE, TEXAS 76092

SURVEYOR
 A.W. LAND SURVEYING, LLC
 P.O. BOX 2170
 CHANDLER, ARIZONA 85244
 PHONE: 480-244-7630
 ATTN: DANIEL ARMIJO



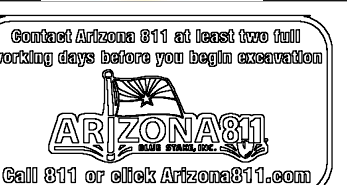
PRELIMINARY
 NOT FOR
 CONSTRUCTION

SUSTAINABILITY
 ENGINEERING
 GROUP

SEG



Magnolia
 PROPERTY COMPANY



PROJECT: MAGNOLIA ON OSBORN
 LOCATION: NEC OF 70TH STREET AND OSBORN ROAD

DRAWN: JC 06/01/2023
 DESIGNED: JC 06/01/2023
 QC: SC 03/02/2022
 PROJ. MGR: AF 06/01/2023

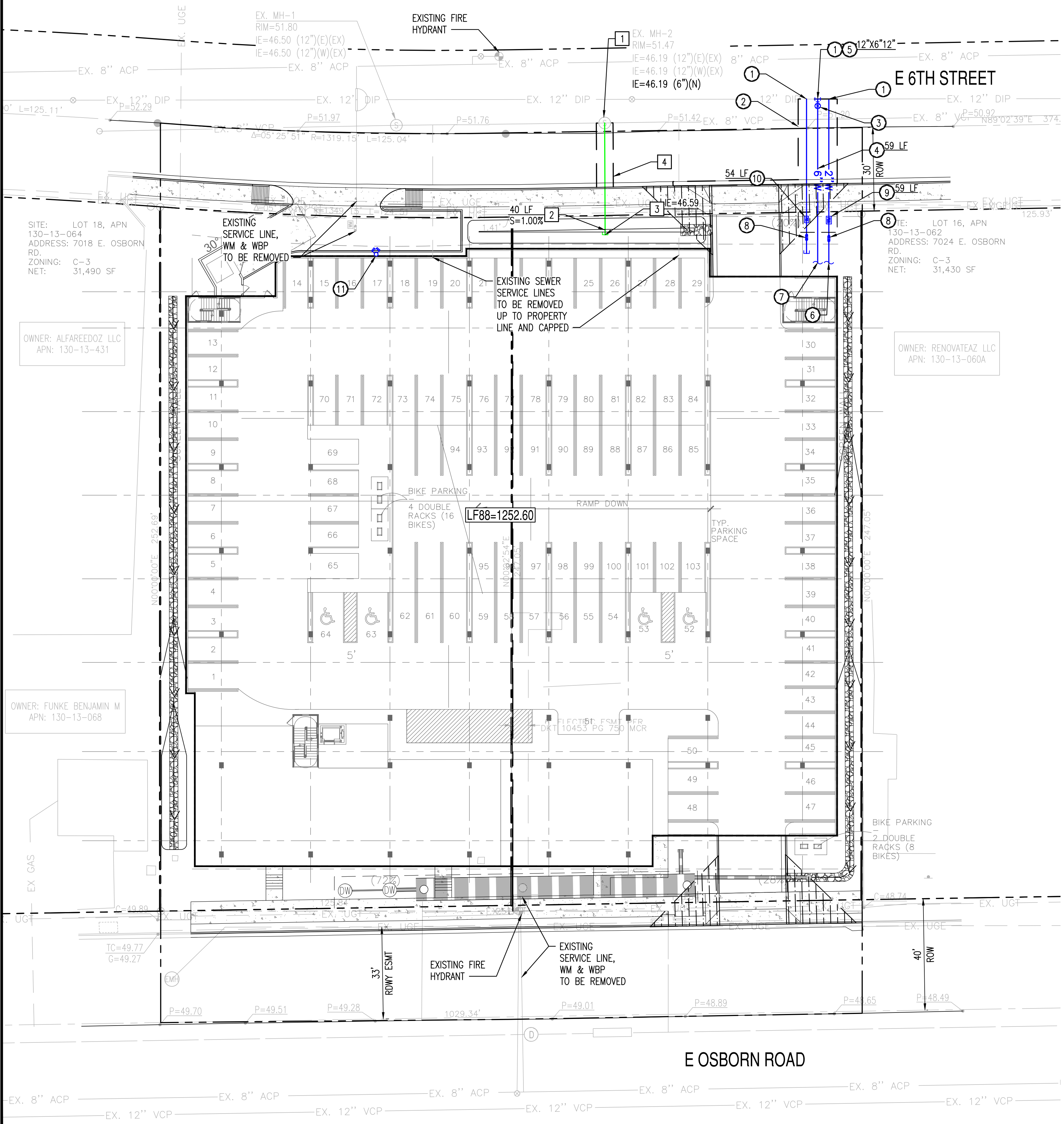
DATE: 06/01/2023
 ISSUED FOR: REZONING

REVISION NO.	DATE

JOB NO.: 220205

SHEET TITLE: **PRELIMINARY UTILITY PLAN**

PAGE NO.: 3 OF 3
 SHEET NO.: C4.10



PRELIMINARY WATER KEY NOTES

- CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION.
- SAWCUT, REMOVE AND REPLACE EXISTING PAVEMENT.
- 6" GATE VALVE WITH VALVE BOX AND COVER.
- 6" DUCTILE IRON PIPE. LENGTH PER PLAN.
- INSTALL CUT-IN TEE, SIZE PER PLAN.
- DOMESTIC CONNECTION TO BUILDING.
- FIRE CONNECTION TO BUILDING.
- BACKFLOW PREVENTION, SIZE TO MATCH WATER METER SIZE.
- INSTALL 2" TYPE "K" COPPER DOMESTIC SERVICE CONNECTION. LENGTH PER PLAN.
- INSTALL 1" TYPE "K" COPPER IRRIGATION SERVICE CONNECTION. LENGTH PER PLAN.
- INSTALL FIRE DEPARTMENT CONNECTION.

PRELIMINARY SEWER KEY NOTES

- CONNECTION TO EXISTING SEWER MANHOLE.
- 6" PVC SEWER LINE PER MAG 440-3. LENGTH AND SLOPE PER PLAN.
- SEWER CONNECTION TO BUILDING.
- SAWCUT, REMOVE AND REPLACE EXISTING PAVEMENT.

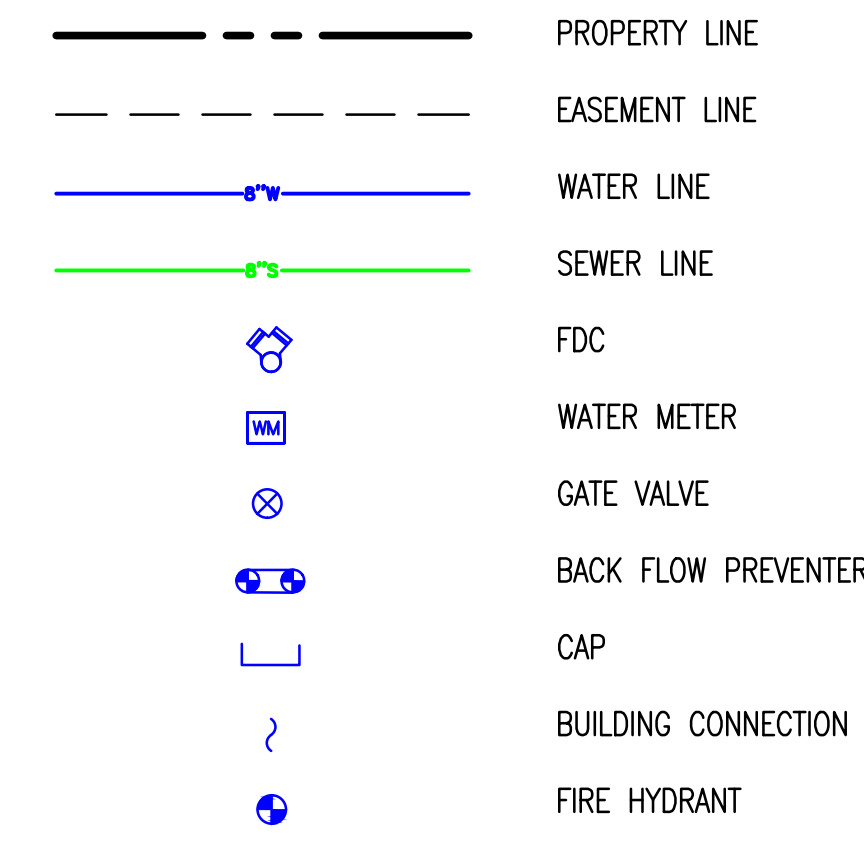
C.O.S. GENERAL NOTES FOR PUBLIC WORKS CONSTRUCTION

- ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MAG UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF SCOTTSDALE SUPPLEMENTAL STANDARD SPECIFICATIONS AND SUPPLEMENTAL STANDARD DETAILS. IF THERE IS A CONFLICT, THE CITY'S SUPPLEMENTAL STANDARD DETAILS WILL GOVERN.
- THE CITY ONLY APPROVES THE SCOPE, NOT THE DETAIL, OF ENGINEERING DESIGNS; THEREFORE, IF CONSTRUCTION QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE NOT VERIFIED BY THE CITY.
- THE APPROVAL OF PLANS IS VALID FOR SIX (6) MONTHS. IF A RIGHT-OF-WAY PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN SIX MONTHS, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
- A PUBLIC WORKS INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFY INSPECTION SERVICES 24 HOURS PRIOR TO BEGINNING CONSTRUCTION BY CALLING 480-312-5750.
- WHENEVER EXCAVATION IS NECESSARY, CALL THE BLUE STAKE CENTER, 811, TWO WORKING DAYS BEFORE EXCAVATION BEGINS. THE CENTER WILL SEE THAT THE LOCATION OF THE UNDERGROUND UTILITY LINES IS IDENTIFIED FOR THE PROJECT.
- RIGHT-OF-WAY PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. A RIGHT-OF-WAY PERMIT WILL BE ISSUED BY THE CITY ONLY AFTER THE REGISTRANT HAS PAID A BASE FEE PLUS A FEE FOR INSPECTION SERVICES. COPIES OF ALL PERMITS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL THE PROPER PERMIT DOCUMENTATION IS OBTAINED.
- ALL EXCAVATION AND GRADING THAT IS NOT IN THE PUBLIC RIGHTS-OF-WAY OR NOT IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO APPENDIX J, GRADING, OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE. A PERMIT FOR THIS GRADING MUST BE SECURED FROM THE CITY FOR A FEE ESTABLISHED BY THE CITY.

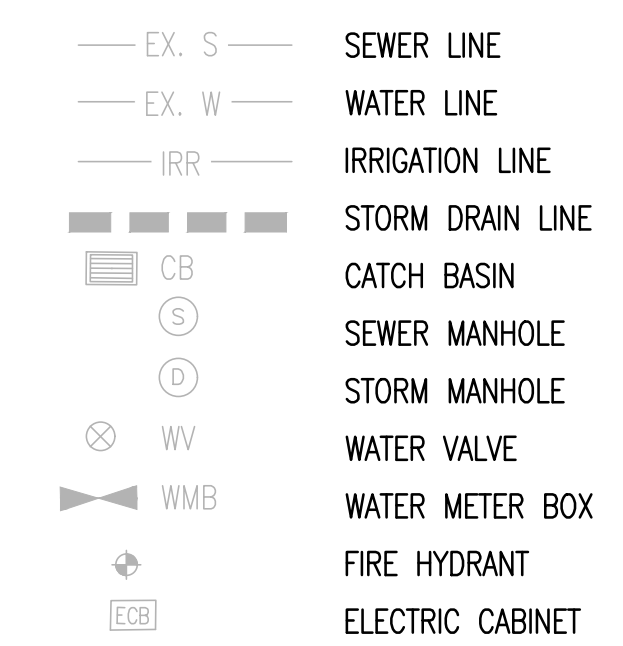
NOTE:
 1. EXISTING MANHOLES RIMS AND INVERTS HAVE BEEN SET BASED ON ALTA NO. 21-10003 BY MLC SERVICES DATED 11/02/2021. ELEVATIONS TO BE VERIFIED IN FIELD.



PROPOSED UTILITY LEGEND:



EXISTING LEGEND



THIS DRAWING IS AN INSTRUMENT OF SERVICE AND THE PROPERTY OF SUSTAINABILITY ENGINEERING GROUP, AND SHALL REMAIN THEIR PROPERTY. THE USE OF THIS DRAWING SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH IT IS PREPARED AND PUBLICATION THEREOF IS EXPRESSLY LIMITED TO SUCH USE.