SEG

"LEED®ing and Developing Smart Projects"

WATER CAPACITY REPORT

McDowell

PRELIMINARY Basis of Design Report

- ☐ ACCEPTED
- ☑ ACCEPTED AS NOTED
- ☐ REVISE AND RESUBMIT

CITY OF SCOTTSDALE
SCOTTSDALE WATER
9379 E San Salvador Dr.
Scottsdale, AZ 85258

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 ldillon **DATE** 3/24/2022

Address the comments below and herein within the final BOD in the DR case:
1) The two adjacent taps and cut in tee on the ACP main in McDowell Rd require that this whole section of ACP pipe be replaced with new DIP. Fittings installed into asbestos cement pipe (ACP) or PVC pipe within 6-feet of another fitting or joint will require that section of pipe to be removed and replaced with DIP. DS&PM 6-1.408
2) Address comments on utility plan.

Prepared For:

HOH INVESTMENT GROUP

Registered Professional Engineer (Civil)
CERTIFICATE NO.
45621
ALI SAMIH FAKIH
Date Signed 12/01/21
ARIZONA, U. S. A.

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480.588.7226 **www.azSEG.com**

Project Number: 210929

Submittal Date: December 1, 2021

Case No.: TBD **Plan Check No.: TBD**

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1. EXECUTIVE SUMMARY

The proposed development will be a restaurant, with a designated drive through and associated landscaping. The purpose of this water capacity design report is to provide analysis of the impact that this development will have on the city's system.

Water service for the development is to be provided by City of Scottsdale. Existing water infrastructure includes a 12" ACP line in McDowell Road, and a 12" CIP line in Hayden Road.

Refer to **Figure 3** for existing pipes.

On-site fire line improvements will consist of a 6" fire line provided to the building and will be connected to the existing 12" main running along McDowell Road.

No new fire hydrants will be proposed for the site. An existing fire hydrant located approximately 40 ft south of the proposed building will service the site.

Certified fire hydrant flow testing was performed on October 25, 2021 by Arizona Flow Testing, LLC at the location shown on the test results.

Results are as follows:

FLOW TEST: Tested October 25, 2021 at 7:45 a.m.; fire flow test recorded a static pressure of 96 psi and a residual pressure of 80 psi at 1,842 gpm.

Refer to **Appendix I** for fire flow test results.

2. INTRODUCTION

2.1 PLAN OBJECTIVE:

The purpose of this report is to provide discussions and calculations defining the system concepts necessary to comply with the requirements of the City of Scottsdale for a proposed restaurant at E McDowell Road. Preparation of this report has been done in accordance with the City of Scottsdale Design Standards & Policies Manual (DS+PM) 2018.

2.2 SITE LOCATION

The subject property consists of a parcel of land located in a portion of the Southwest Quarter of Section 36, Township 2 North, Range 4 East of the Gila and Salt River Meridian, Maricopa County, Arizona.

- Parcel ID: Parcel 131-04-087H; Zoning is PNC
- Address: 8010 E McDowell Road, Scottsdale 85257

Refer to **FIGURE 1** - **Vicinity Map** for the project's location with respect to major cross streets.

2.3 EXISTING AND PROPOSED DEVELOPMENTS SURROUNDING THE SITE:

Existing site context related to surrounding developments is as follows:

- North: Parcel 131-04-087F; Parking lot; Zoning PNC.

- West: Parcel 131-04-087J; Two story office and retail center; PNC.
- South: Across McDowell Road, Parcel 131-09-002N; Vacant lot; Zoning C-3.
- East: Across Almeria Road, Parcel 131-04-125; Blue Fox Group; Zoning C-2.

2.3.1 EXISTING SITE DESCRIPTION:

The project area includes approximately 16,615 sq. ft. (0.38 acres) of land designated as PNC. The site is currently developed as a parking lot. The site is mostly flat, generally slopes from west to east at approximately 1%.

Refer to **FIGURE 2** for an aerial of the overall project existing conditions.

2.3.2 PROPOSED SITE DEVELOPMENT

The proposed project will require the demolition of the existing parking lot, landscape, pavement and curbing removal, and the construction of a restaurant. The new development will consist of a restaurant building with associated drive-thru and landscape areas.

Proposed domestic, fireline and irrigation lines will tap off the existing 12" water main on McDowell Road.

Refer to **APPENDIX II** for Utility Plan.

3. DESIGN CRITERIA

3.1 UTILITY DEVELOPER GUIDE CRITERIA

This project is designed in accordance with the City of Scottsdale Design Standards & Policies Manual (DS+PM) 2018. The site is located in Scottsdale's pressure zone 1. Refer to **Table 1** below for applicable criteria.

Table 1: Design Criteria by Demand Type

Land Use	Average Day Demand (gpm)	Unit	*Peaking Factors*	
			Max Day	Peak Hour
Restaurant	1.81E-03	per sq. ft.	2	3.5

Minimum Pressures:

50 psi at Maximum Day and Peak Hour.

30 psi at Fire Flow conditions.

Velocity & Head loss:

10 fps maximum velocity for distribution system.

Hazen-Williams Coefficient 130

Fire Flows:

The City's design standards govern the fire flow rates used for all buildings per Section 6-1.500 of the City of Scottsdale's Design Standards & Policies Manual (DS&PM), dated 2018. The fire flow to be used is 1,500 gpm minimum for commercial, industrial, and multi-family residential properties, per Section 6-1.501 of the DS&PM

4. DEMANDS

4.1 PROJECT USE DESCRIPTION

The proposed development at the site consists of one restaurant. Refer to **Table 2** below for the proposed water demand calculations based on the design criteria established in *Section 3.1* above.

Table 2: Proposed Water Demand Calculations

Land Use	Unit Count	Unit	ADD per Unit (gpm)	Avg. Day Demand (gpm)	Max Day Demand (gpm)	Peak Hour Demand (gpm)
Restaurant	2,440	per sq. ft.	1.81E-03	4.42	8.84	15.47
			Totals	4.42	8.84	15.47

4.2 ZONING

The project is located in the water pressure zone 1.

4.3 TABULAR CALCULATIONS

The water demands were assigned to nodes based on the building demands.

The Bentley WaterCAD model of this system includes the following input parameters:

1. Pipe diameter (inches)
2. Pipe lengths (feet)
3. Pipe invert elevations (feet)
4. A reservoir and a pump to model the fire flow test performed
5. System demands (gpm)
6. Model piping is PVC using Hazen-Williams frictional losses (C= 130 for aging pipe)
7. Fire Flows

Output parameters include:

1. Pressure (psi)
2. Flow rates (gpm)
3. Velocities (fps)
4. Head loss (feet)

Bentley WaterCAD Version 8i was used to analyze the waterline network for the Average Day, Max Day, Peak Hour and Fire Flow scenarios. Detailed WaterCAD outputs for these scenarios are included in **Appendix II**. Each fire hydrant and junction in the distribution network was assigned a node with elevations corresponding to its finished grade. Water demands for each of the above listed scenarios were mapped to the fire hydrant locations based on the area each hydrant would serve during a fire event.

The results of the WaterCAD analysis were used to verify that the distribution network provides adequate water pressure, and that the pipes are sized correctly for the required fire flow. The minimum system pressures in the distribution network were approximately 74 psi for Average Day, Maximum Day, and Peak Hour scenarios. Table 3 shows the minimum and maximum node pressures for the project´s area for each design scenario.

Table 3 – Water Pressure Results		
Scenario	**Minimum Pressure (psi)**	**Maximum Pressure (psi)**
Average Day	74	74
Maximum Day	74	74
Peak Hour	74	74
Fire Flow Demand	30	30

A fire flow/hydrant analysis was completed during the max day scenario to verify the waterline network provides adequate fire prevention demand during max day conditions. Available fire flow within the distribution system to all hydrants in the project's area exceeded 1,500 gpm with velocities not exceeding 10 fps. The minimum system pressure under the fire flow scenario was 30 psi which meets the minimum requirements.

5. EXISTING FACILITIES / CONDITIONS

5.1 PREVIOUS MASTER PLANS

No existing master plan or water report is available from the City of Scottsdale for this site.

6. PROPOSED FACILITIES

6.1 DISTRIBUTION SYSTEM PIPING

6.1.1 Onsite:

The proposed water supply will consist of a 2" water meter and domestic service to the building, and one dedicated 6: fire line to the building. Both will be tapped off the 12" main on McDowell Road. The restaurant will also include a 1" landscape service and meter to be tapped off the 12" main on McDowell Road as well.

6.1.2 Offsite Infrastructure:

No offsite infrastructure is proposed.

Refer to Utility Plan in **Appendix II**.

6.2 REQUIRED FACILITIES AND PHASING

- Proposed facility improvements for this project are limited to a 6" fire line connection, one 2" meter and one 1" landscape meters.
- This project will be constructed in a single phase.

7. SUMMARY/CONCLUSIONS

7.1 CONFORMANCE TO DESIGN GOALS

- Water designs are done in compliance with The City of Scottsdale Design Standards & Policies Manual (DS+PM) 2018.
- 10 fps maximum velocity is not exceeded.
- Minimum 50 psi @ peak hour required; 74 provided.
- Minimum 30 psi @ fire flow scenario required; 30 provided.

8. REFERENCES

1. *City of Scottsdale Design Standards & Policies Manual, 2018*
2. *COS Water Q-S MAP 13-47*

FIGURES

Figure 1. Vicinity Map

11/25/2021 2:11:53 PM

FIGURE 2. AERIAL

13-46

13-48

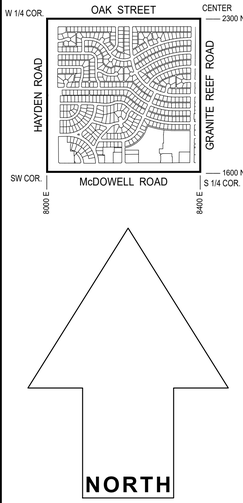
GENERAL NOTES:

- 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 THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 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 NOTED AS 'CALCULATED' ON THE MAP.

LEGEND:

- Air Release Valve (ARV)
- Non-potable Air Release Valve (NPARV)
- Blowoff
- Cap
- Cathodic Protection (CPT)
- Fill Drain (FND)
- Fire Hydrant
- Non-GPS Point
- Pressure Reducing Valve (PRV)
- Pump (WP)
- Reducer
- Sample Station (SS)
- Water Manhole (WMH)
- Non-Potable Manhole (NPMH)
- Well (WELL)
- Valve
- Non-potable Valve (NPV)
- Vault (WVT)
- Water Main
- Non-Potable Main (NP)
- Fire / Private Main
- Non-Scottsdale Main

VICINITY MAP



SCALE: 1" = 100'

0 50 100 200

The map scale of 1" = 100' is based on a full size print of 30" x 36"

FIGURE 3
WATER
QUARTER SECTION MAP

13-47
SW 1/4 SEC. 36 T2N R4E

CITY OF SCOTTSDALE
SCOTTSDALE GEOGRAPHIC INFORMATION SYSTEMS
3629 North Drinkwater Boulevard
Scottsdale, Arizona 85251

10-OCT-21

APPENDIX I

Flow Test Results

Arizona Flow Testing LLC

HYDRANT FLOW TEST REPORT

Project Name:	McDowell & Hayden
Project Address:	McDowell Road & Hayden Road (NEC), Scottsdale, Arizona, 85257
Client Project No.:	Not Provided
Arizona Flow Testing Project No.:	21565
Flow Test Permit No.:	C66590
Date and time flow test conducted:	October 25, 2021 at 7:45 AM
Data is current and reliable until:	April 25, 2022
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Ray Padilla –City of Scottsdale-Inspector (602-541-0586)

Raw Test Data

Static Pressure: **96.0 PSI**
(Measured in pounds per square inch)

Residual Pressure: **80.0 PSI**
(Measured in pounds per square inch)

Pitot Pressure: **24.0 PSI**
(Measured in pounds per square inch)

Diffuser Orifice Diameter: One 4-inch Hose Monster
(Measured in inches)

Coefficient of Diffuser: .7875

Flowing GPM: **1,842 GPM**
(Measured in gallons per minute)

GPM @ 20 PSI: **4,273 GPM**

Data with 24 PSI Safety Factor

Static Pressure: **72.0 PSI**
(Measured in pounds per square inch)

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

Residual Pressure: **56.0 PSI**
(Measured in pounds per square inch)

Distance between hydrants: Approx.: 330 Feet

Main size: Not Provided

Flowing GPM: **1,842 GPM**

GPM @ 20 PSI**:** **3,481 GPM**

Flow Test Location

North

North Hayden Road

Flow Fire Hydrant

Project Site
McDowell Road &
Hayden Road (NEC)

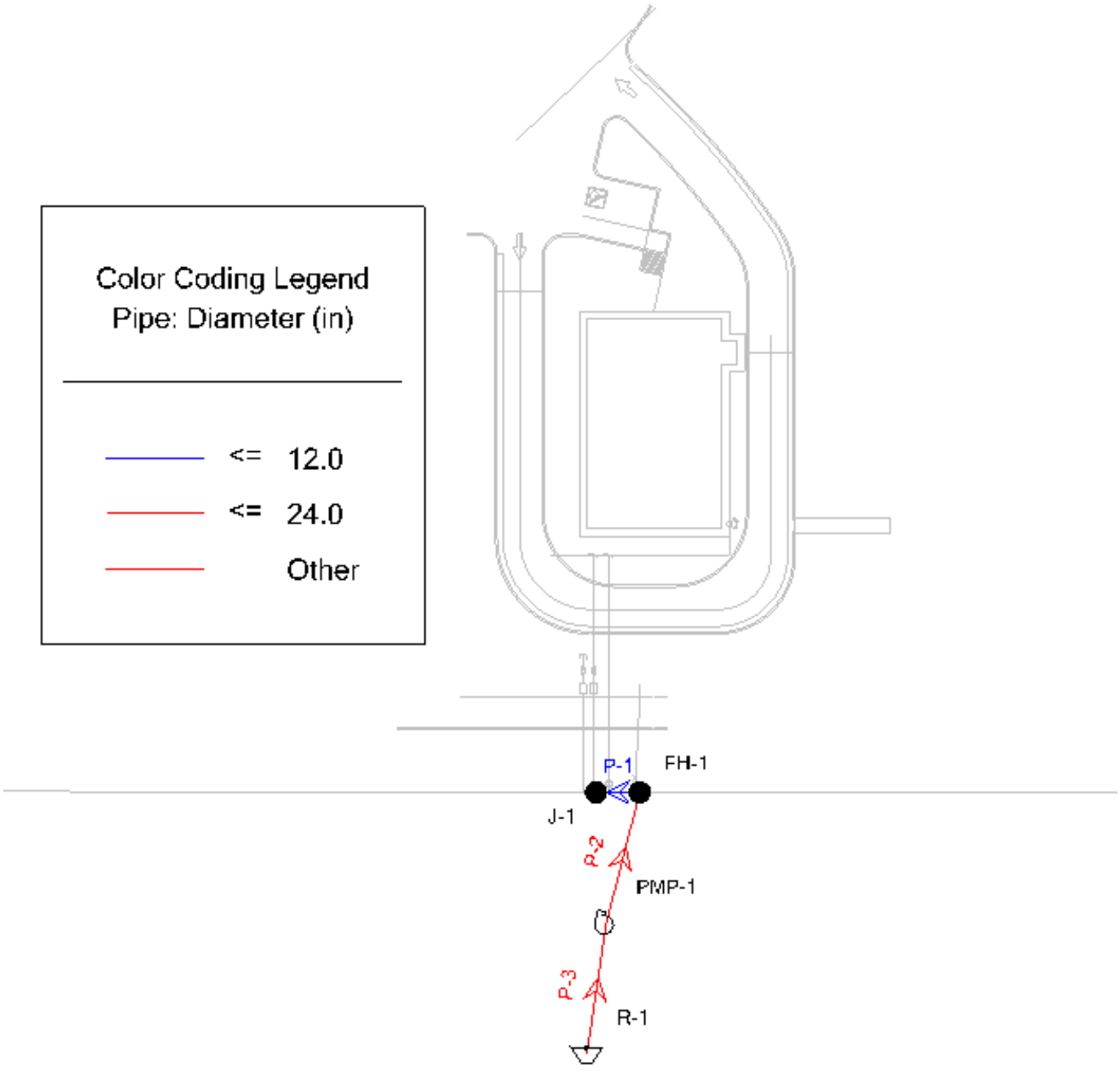
Pressure Fire Hydrant

East McDowell Road

APPENDIX II

Water Model Results

McDowell WaterCAD 11-26-2021.wtg
Scenario: Base



McDowell WaterCAD 11-26-2021.wtg

Average Day Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
FH-1	1,221.28	0	1,391.32	74
J-1	1,221.21	4	1,391.32	74

McDowell WaterCAD 11-26-2021.wtg

Average Day Demand

Pipe Table - Time: 0.00 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Status (Initial)
P-1	12	FH-1	J-1	12.0	Ductile Iron	130.0	4	0.01	Open
P-2	36	FH-1	PMP-1	24.0	Ductile Iron	130.0	-4	0.00	Open
P-3	35	PMP-1	R-1	24.0	Ductile Iron	130.0	-4	0.00	Open

McDowell WaterCAD 11-26-2021.wtg

Average Day Demand

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	1,225.00	On	1,225.00	1,391.32	4	166.32

McDowell WaterCAD 11-26-2021.wtg

Average Day Demand

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,225.00	4	1,225.00

McDowell WaterCAD 11-26-2021.wtg

Maximum Day Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
FH-1	1,221.28	0	1,391.32	74
J-1	1,221.21	9	1,391.32	74

McDowell WaterCAD 11-26-2021.wtg

Maximum Day Demand

Pipe Table - Time: 0.00 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Status (Initial)
P-1	12	FH-1	J-1	12.0	Ductile Iron	130.0	9	0.03	Open
P-2	36	FH-1	PMP-1	24.0	Ductile Iron	130.0	-9	0.01	Open
P-3	35	PMP-1	R-1	24.0	Ductile Iron	130.0	-9	0.01	Open

McDowell WaterCAD 11-26-2021.wtg

Maximum Day Demand

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	1,225.00	On	1,225.00	1,391.32	9	166.32

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,225.00	9	1,225.00

McDowell WaterCAD 11-26-2021.wtg

Peak Hour Demand

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
FH-1	1,221.28	0	1,391.31	74
J-1	1,221.21	15	1,391.31	74

McDowell WaterCAD 11-26-2021.wtg

Peak Hour Demand

Pipe Table - Time: 0.00 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Status (Initial)
P-1	12	FH-1	J-1	12.0	Ductile Iron	130.0	15	0.04	Open
P-2	36	FH-1	PMP-1	24.0	Ductile Iron	130.0	-15	0.01	Open
P-3	35	PMP-1	R-1	24.0	Ductile Iron	130.0	-15	0.01	Open

McDowell WaterCAD 11-26-2021.wtg

Peak Hour Demand

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)
PMP-1	1,225.00	On	1,225.00	1,391.31	15	166.31

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	1,225.00	15	1,225.00

McDowell WaterCAD 11-26-2021.wtg

Fire Flow Demand

Fire Flow Results Table - Time: 0.00 hours

Label	Fire Flow (Needed) (gpm)	Pressure (Calculated Residual) (psi)	Fire Flow (Available) (gpm)	Max Day + Fire Flow at Junction (gpm)	Junction w/ Minimum Pressure (Zone)	Pressure (Calculated System Lower Limit) (psi)	Pipe w/ Maximum Velocity	Velocity of Maximum Pipe (ft/s)
FH-1	1,500	30	3,160	3,160	J-1	30	P-3	2.24

McDowell WaterCAD 11-26-2021.wtg

Pump Definition Detailed Report: Pump Definition - 1

Element Details

ID	35	Notes	
Label	Pump Definition - 1		

Pump Definition Type

Pump Definition Type	Standard (3 Point)	Design Head	129.36 ft
Shutoff Flow	0 gpm	Maximum Operating Flow	3,481 gpm
Shutoff Head	166.32 ft	Maximum Operating Head	46.20 ft
Design Flow	1,842 gpm		

Pump Efficiency Type

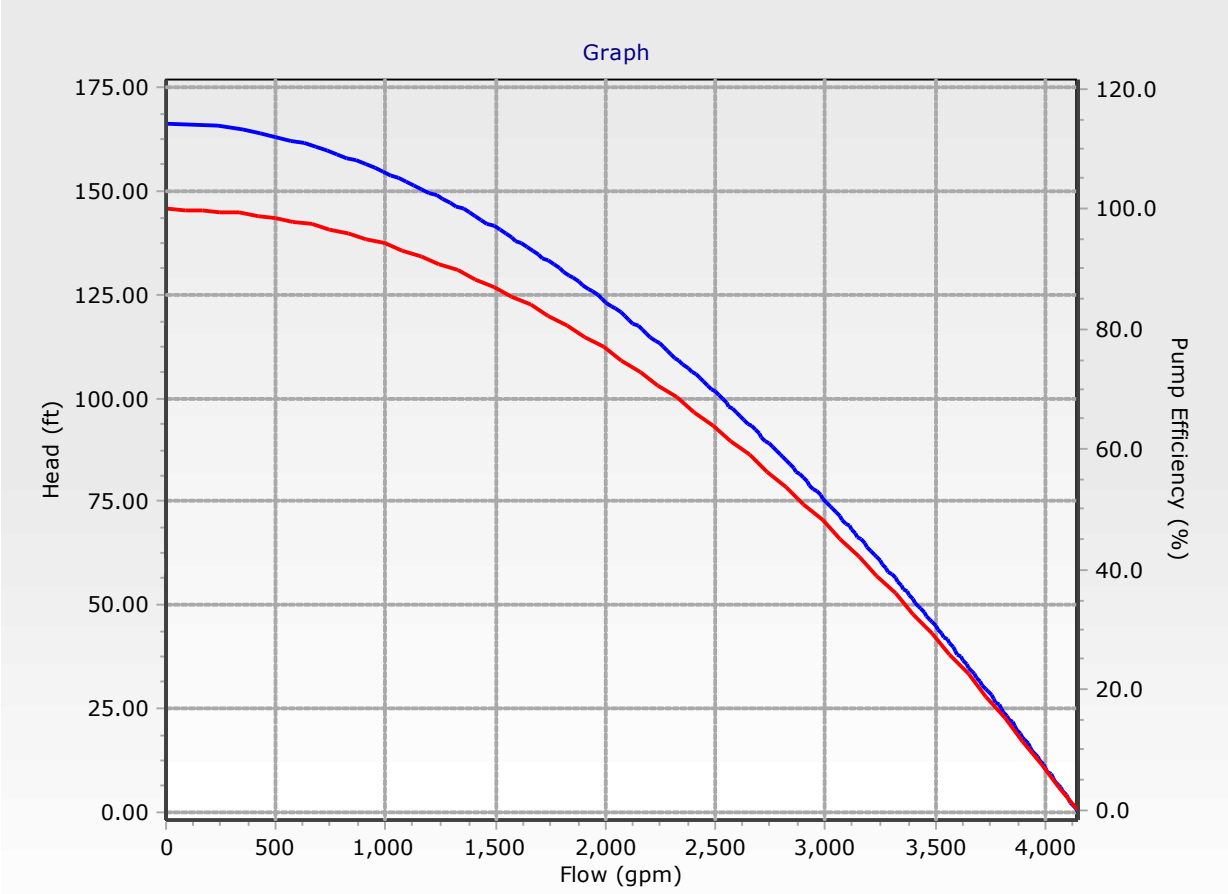
Pump Efficiency Type	Best Efficiency Point	Motor Efficiency	100.0 %
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0 gpm		

Transient (Physical)

Inertia (Pump and Motor)	0.000 lb·ft²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

McDowell WaterCAD 11-26-2021.wtg

Pump Definition Detailed Report: Pump Definition - 1



APPENDIX III

Utility Plans

MCDOWELL

PRELIMINARY GRADING PLAN

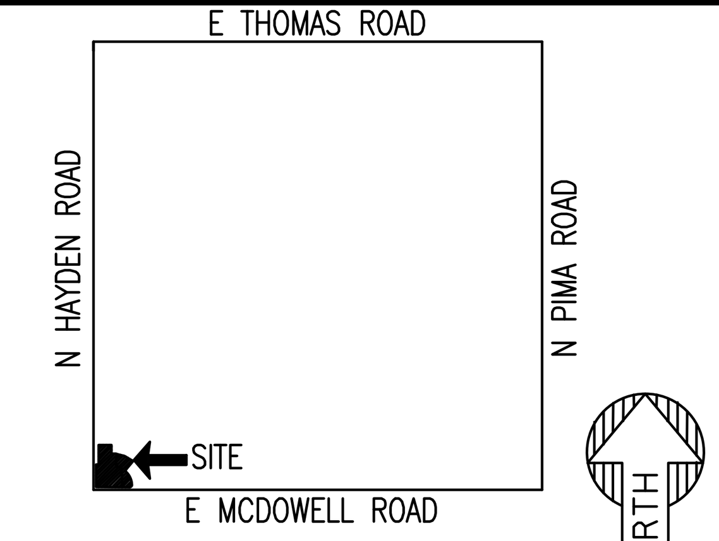
8010 E MCDOWELL ROAD, SCOTTSDALE AZ 85257

A PORTION OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 2 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA.

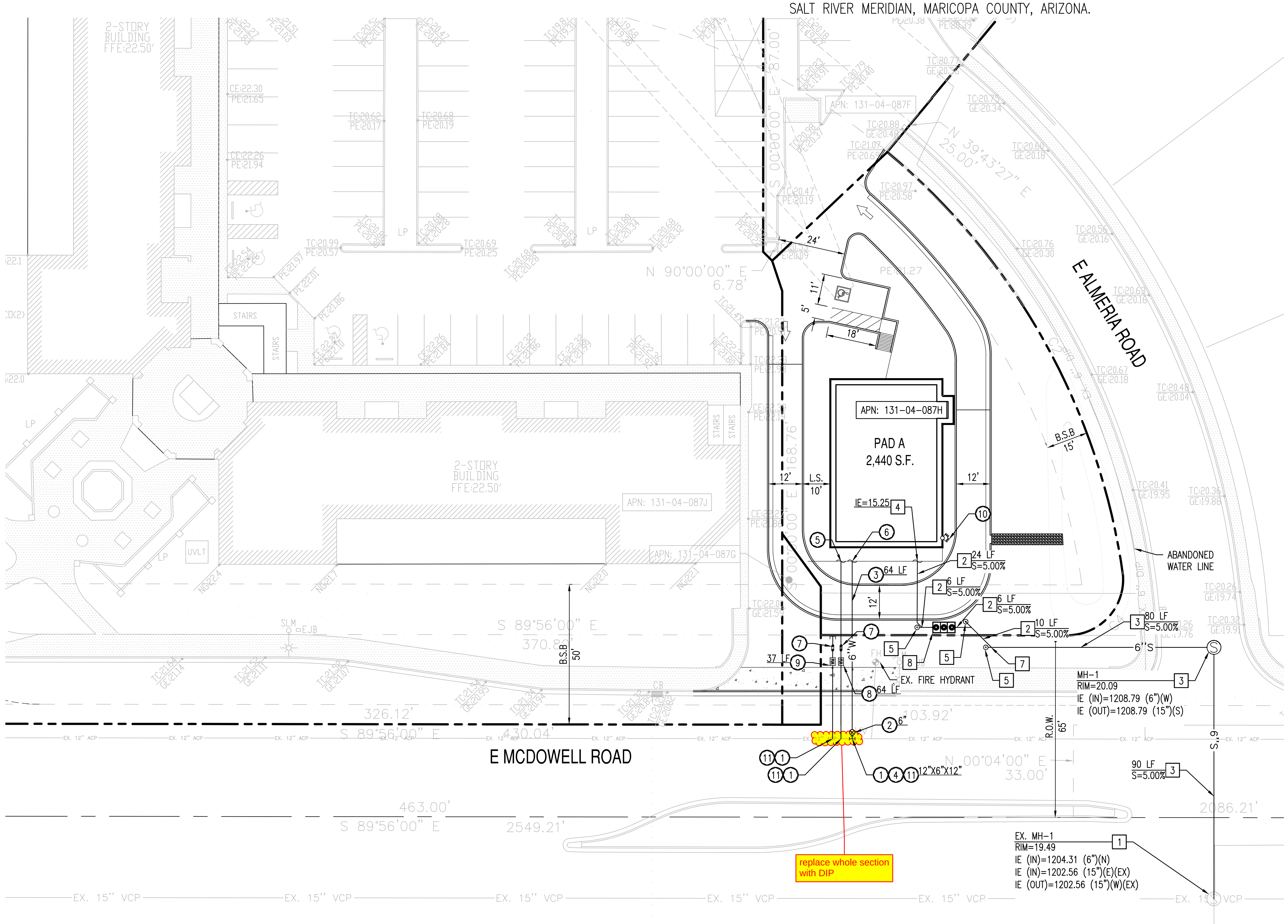
CIVIL ENGINEER
SUSTAINABILITY ENGINEERING GROUP
8280 E. GELDING DR., SUITE 101
SCOTTSDALE, ARIZONA 85260
PHONE: 480-588-7226
ATTN: ALI FAKIH
EMAIL: ALI@AZSEG.COM

OWNER:
HOH MCDOWELL LLC
11811 N. TATUM BLVD #1051
PHOENIX, ARIZONA 85028

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



VICINITY MAP
S36 T2N R4E
NTS



PRELIMINARY WATER KEY NOTES

1. CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING WATER LINE PRIOR TO CONSTRUCTION.
2. GATE VALVE WITH VALVE BOX AND COVER, SIZE PER PLAN.
3. 6" DUCTILE IRON PIPE. LENGTH PER PLAN.
4. CUT-IN TEE, SIZE PER PLAN.
5. DOMESTIC CONNECTION TO BUILDING.
6. FIRE CONNECTION TO BUILDING.
7. BACKFLOW PREVENTION, SIZE TO MATCH WATER METER SIZE.
8. 2" TYPE "K" COPPER DOMESTIC SERVICE CONNECTION. LENGTH PER PLAN.
9. 1" TYPE "K" COPPER IRRIGATION SERVICE CONNECTION. LENGTH PER PLAN.
10. FIRE DEPARTMENT CONNECTION.
11. CONNECTION TO EXISTING WATER LINE. REPLACE AT LEAST 3' OF ACP PIPE PER C.O.S. REQUIREMENTS.

PRELIMINARY SEWER KEY NOTES

1. CONNECT TO EXISTING SEWER MANHOLE.
2. 4" PVC SEWER LINE. LENGTH AND SLOPE PER PLAN.
3. 6" PVC SEWER LINE. LENGTH AND SLOPE PER PLAN.
4. SEWER CONNECTION TO BUILDING.
5. INSTALL SEWER CLEANOUT
6. INSTALL SEWER MANHOLE
7. WYE CONNECTION
8. GREASE INTERCEPTOR

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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

ANY WATER LINE PROJECT THAT INVOLVES CONNECTING TO AN EXISTING ACP OR PVC PIPE REQUIRES SPECIAL ATTENTION. PER DSPM SECTION 6-1.408:

FITTINGS INSTALLED INTO ASBESTOS CEMENT PIPE (ACP) OR PVC PIPE WITHIN 6-FEET OF ANOTHER
FITTING OR JOINT WILL REQUIRE THAT SECTION OF PIPE TO BE REMOVED AND REPLACED WITH DUCTILE IRON PIPE (DIP).
EXISTING TEES, TAPPING SLEEVES AND RELATED APPURTENANCES THAT ARE NOT UTILIZED BY A DEVELOPMENT SHALL BE REMOVED BY THE CONTRACTOR. A MINIMUM 3-FOOT SECTION OF PIPE SHALL BE REMOVED, WITH NO LESS THAN 6 FEET REMAINING TO THE NEAREST JOINT. THE REMOVED
PIPE SHALL BE REPLACED WITH DIP.
WHEN MORE THAN 3-FEET OF EXISTING ACP OR PVC WATER LINES ARE EXPOSED DURING CONSTRUCTION AND THE BEDDING IS DISTURBED, THE WATER LINE MUST BE REPLACED WITH DIP (MINIMUM CLASS 350) WITH MECHANICAL JOINTS OR FLANGED JOINTS TO 3-FEET PAST THE SIDES OF THE EXPOSED CROSSING TRENCH. REFER TO MAG STANDARD DETAIL NO. 403-3.
NO TAPPING SLEEVE AND VALVE SHALL BE USED ON ACP PIPE. VALVES WILL NEED TO BE CUT INTO ACP PIPE.
DISPOSAL OF MATERIALS CONTAINING ASBESTOS AND/OR LEAD SHALL BE IN CONFORMANCE WITH ALL REGULATIONS, LAWS AND ORDINANCES.

EXISTING LEGEND:

- PROPERTY LINE
- CENTER LINE
- EASEMENT LINE AS NOTED
- SEWER LINE
- SEWER MANHOLE
- WATER LINE
- WATER VALVE
- FIRE HYDRANT
- STORM DRAIN LINE
- STORM CATCH BASIN
- STORM STORM MANHOLE
- SIGN
- STREET LIGHT

PROPOSED UTILITY LEGEND:

- WATER LINE
- SEWER LINE
- FDC
- WATER METER
- GATE VALVE
- BACKFLOW PREVENTER
- CAP
- BUILDING CONNECTION
- SEWER MANHOLE
- SEWER CLEANOUT

NORTH

SCALE: 1" = 20'

NOTE:

1. EXISTING MANHOLES RIMS AND INVERTS HAVE BEEN SET BASED ON QUARTER SECTION MAP QS# 13-47. DATED 10/10/2021. ELEVATIONS TO BE VERIFIED IN FIELD.

PRELIMINARY NOT FOR CONSTRUCTION

SUSTAINABILITY ENGINEERING GROUP
SEG
8280 E. GELDING DRIVE SUITE 101, SCOTTSDALE, ARIZONA 85260
WWW. AZSEG.COM TEL. 480.588.7226 FAX 480.259.3534

HOH INVESTMENT GROUP

PROJECT: MCDOWELL
LOCATION: 8010 E MCDOWELL ROAD, SCOTTSDALE, AZ

DRAWN	JC	12/01/2021
DESIGNED	JC	12/01/2021
QC	SC	12/01/2021
FINAL QC		
PROJ. MGR.	AF	12/01/2021

DATE: 12/01/2021
ISSUED FOR: ZONING
REVISION NO.: DATE:
JOB NO.: 210929
SHEET TITLE: PRELIMINARY UTILITY PLAN
PAGE NO.: 3 OF 3
SHEET NO.: C4.10

LOCATION: Z:\SHARED\PROJECTS\HOH\SCOTTSDALE - NEC MCDOWELL RD & HAYDEN RD - 210929\11 CAD (SEG)\11.4 ENTITLEMENT-PLANNING\210929-C4.00.DWG SAVED BY: JUANCARLOSCHACON DATE: 12/1/2021