

**PRELIMINARY WATER REPORT  
FOR**

# **Marshall Way Mixed Use**

**PREPARED FOR  
SYNECTIC DESIGN  
1111 WEST UNIVERSITY DRIVE  
SUITE 104  
TEMPE, AZ 85281**

**PREPARED BY  
R.B. Williams & Associates, Inc.  
1921 S. Alma School Road, Suite 101  
Mesa, AZ 85210  
(480) 424-2352  
RBW #22048**

June 30, 2022

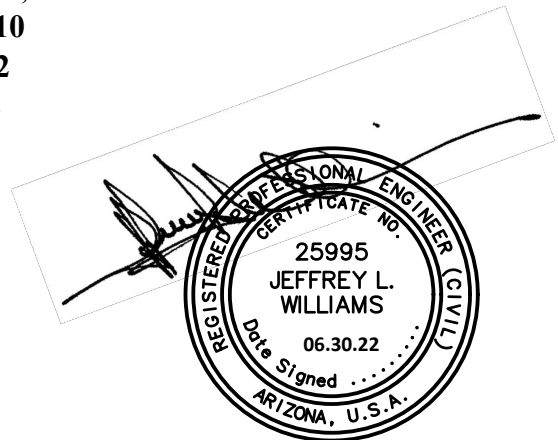


Table of Contents

1.0 INTRODUCTION ..... 1

    1.1 SCOPE ..... 1

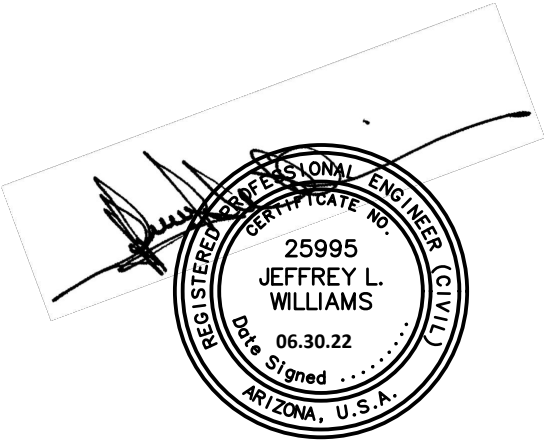
    1.2 LOCATION ..... 1

    1.3 EXISTING CONDITIONS ..... 1

2.0 PROPOSED IMPROVEMENTS..... 1

3.0 DESIGN CRITERIA ..... 2

4.0 DESIGN DEMAND ..... 2



## 1.0 INTRODUCTION

### 1.1 SCOPE

The scope of this Basis of Design is to provide a basis of design analysis for the Marshall Way Mixed Use project. This new development is a mixed-use project which includes one 4-story building with 13,717 sf of commercial use on the first floor, 60 residential units on the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floors and underground parking in the basement. The area of the site is approximately 38,189 square feet.

This report will discuss the concepts for the domestic water distribution system analysis relating to this project. This report will follow the design procedures outlined by the City of Scottsdale's Design Standards & Policies Manual.

### 1.2 LOCATION

The proposed project lies in the City of Scottsdale at the Southeast corner of N. Marshall Way and E. 3<sup>rd</sup> Avenue. This project is in Section 22, Township 2 North, Range 4 East of the Gila and Salt River Base and Meridian, Maricopa County. The approximate gross area of the site is 57,337 square feet. The site is surrounded by E. 3<sup>rd</sup> Avenue on the North, N. Marshall Way on the West, existing commercial development on the South, and an alley on the East.

See Figure 1-Vicinity Map in Appendix A.

### 1.3 EXISTING CONDITIONS

The site currently consists of an existing single-story commercial building, and an asphalt parking lot.

There are existing City of Scottsdale water distribution mains available in N. Marshall Way and E. 3<sup>rd</sup> Avenue. There is a 6" ACP main in N. Marshall Way and another 6" ACP main in E. 3<sup>rd</sup> Avenue. The city's as-builts indicate that there are two existing water meters serving the site, one from the main in N. Marshall Way and one from the main in E. 3<sup>rd</sup> Avenue. There also appear to be three existing fire hydrants surrounding the property.

## 2.0 PROPOSED IMPROVEMENTS

The new development consists of one 4-story, mixed use structure. The first floor will contain 13,717 square feet of commercial space. The 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floors will consist of 60 residential units with parking provided in a basement parking garage.

The project is designed to use the existing water services for domestic water with additional taps for the fire sprinkler system.

### 3.0 DESIGN CRITERIA

City of Scottsdale requires the following criteria for this project:

1. Fire Flow Required is 1500 gpm for commercial, industrial, and multi-family residential project.
2. Minimum of 30 psi with a max static pressure of 120 psi and residual pressure of 50 psi

### 4.0 DESIGN DEMAND

The post-construction onsite demands were calculated using the City of Scottsdale Design Standards & Policies Manual and the 2018 IFC.

Per City of Scottsdale, the average daily consumption for this project will be Gallons/Day/Unit. See Tables 1 & 2 below for domestic water calculations.

**Table 1: 13,717 sf Commercial**

<b>Building ID</b>	<b>Area (sf)</b>	<b>Design Flow (gal/day/sf)</b>	<b>Average Day Demand (gpm)</b>	<b>Peak Hour Demand (gpm)</b>
First Floor Commercial	13,717	0.8	7.6	27

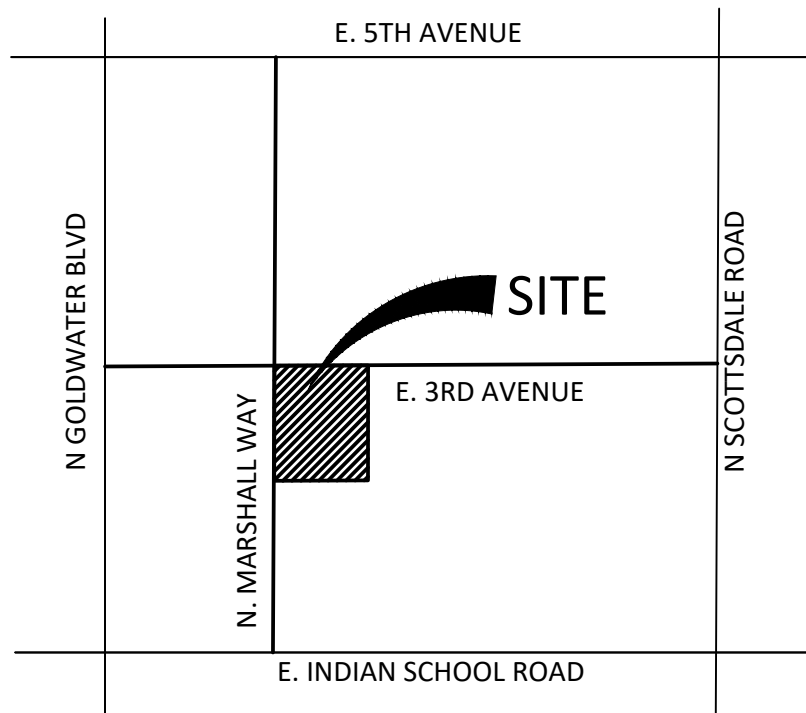
**Table 2: 60 Residential Units**

<b>Building ID</b>	<b>Number of Units</b>	<b>Design Flow (gal/day/unit)</b>	<b>Average Day Demand (gpm)</b>	<b>Peak Hour Demand (gpm)</b>
Residential Units	60	185.3	7.7	27

A hydrant flow test has not been performed as of this date.

# APPENDIX A

VICINITY MAP & PROPOSED LAYOUT



## VICINITY MAP

T2N, R4E, S 22  
(N.T.S.)

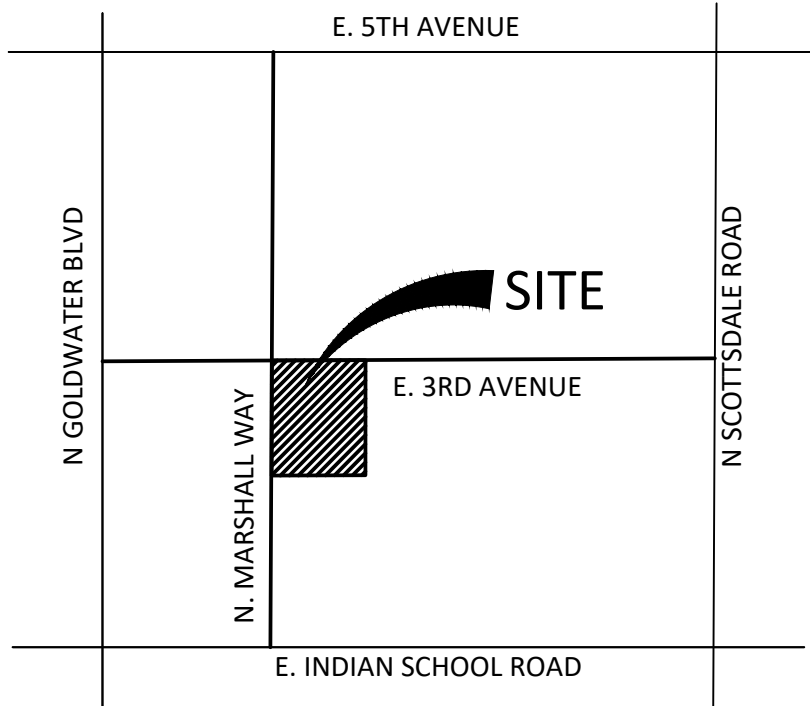
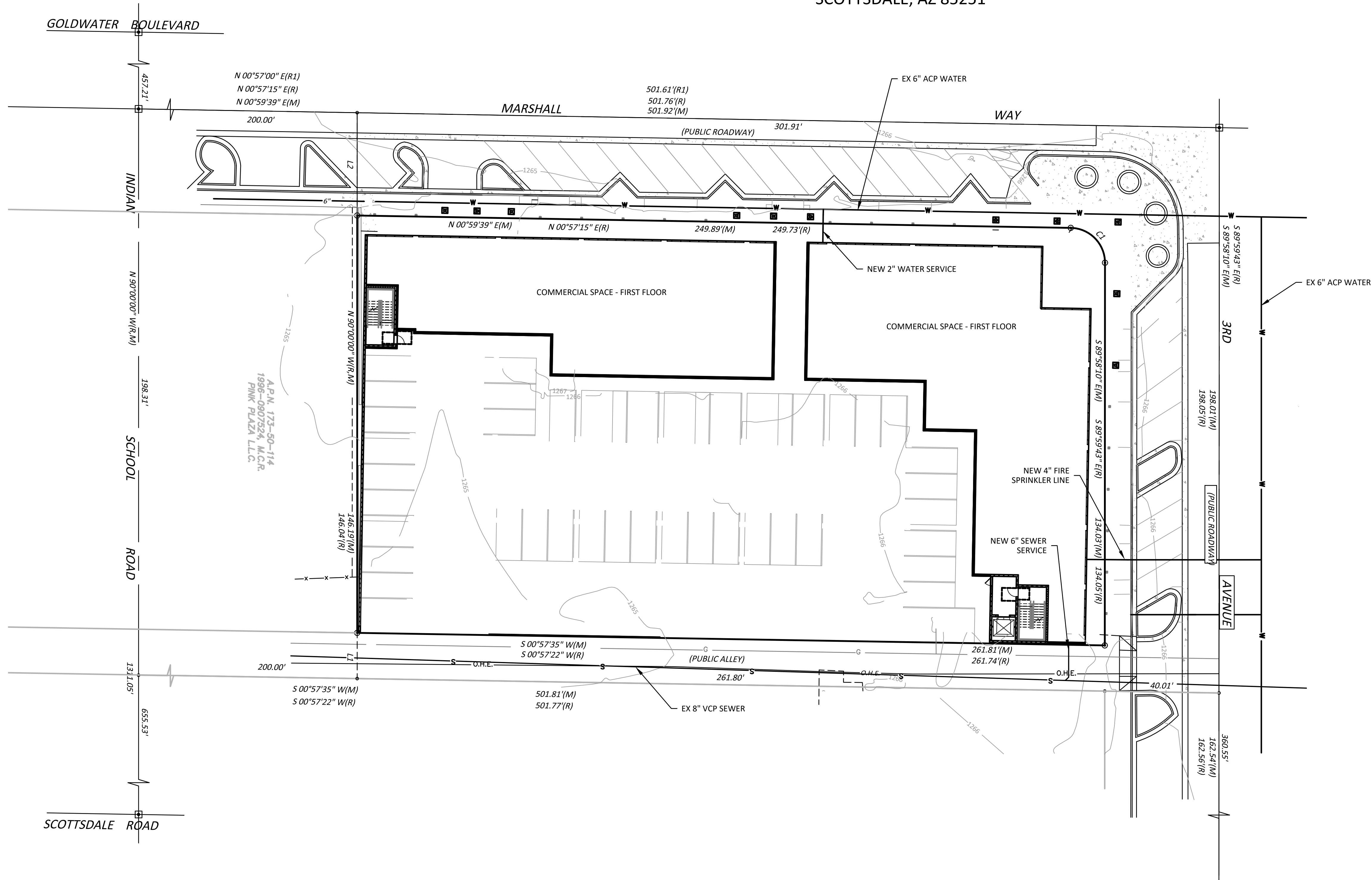
**R.B. WILLIAMS & ASSOCIATES, INC.**

CONSULTING ENGINEERS

1921 S. ALMA SCHOOL ROAD, SUITE 101    PHONE: (480) 424-2352  
MESA, ARIZONA 85210    FAX: (480) 424-2353



PRELIMINARY UTILITY PLAN  
FOR  
MARSHALL AVENUE MIXED USE DEVELOPMENT  
4151 N. MARSHALL AVENUE  
SCOTTSDALE, AZ 85251



VICINITY MAP  
T2N, R4E, S 22  
(N.T.S.)

ENGINEER

R.B. WILLIAMS & ASSOCIATES, INC.  
1921 SOUTH ALMA SCHOOL RD. STE 101  
MESA, AZ 85295  
PHONE: (480) 220-8243  
CONTACT: JEFFREY L. WILLIAMS, P.E.

ARCHITECT/DESIGNER

SYNETIC DESIGN  
1111 W. UNIVERSITY DRIVE  
SUITE 104  
TEMPE, AZ 85281  
PHONE: 480.948.9766  
CONTACT: DAVE HAMBLEN

PROPERTY AREA

NET AREA: 38,189 SF  
GROSS AREA: 57,337 SF

BENCHMARK

FOUND NGS MONUMEN "AJ3679", BEING PID # 1DH1  
ELEVATION: 1344.495  
DATUM: CITY OF SCOTTSDALE NAVD 88

PROJECT DESCRIPTION

NEW 4-STORY MIXED USE PROJECT WITH 13,717 SF OF COMMERCIAL SPACE ON THE FIRST FLOOR AND 65 RESIDENTIAL UNITS ON FLOORS 2-4. PARKING WILL BE PROVIDED IN A BASEMENT PARKING GARAGE. THE SITE IS CURRENTLY A 1-STORY COMMERCIAL CENTER. THE EXISTING COMMERCIAL CENTER WILL BE DEMOLISHED PRIOR TO CONSTRUCTION OF THE NEW 4-STORY MIXED USE PROJECT.

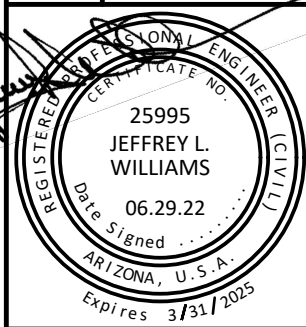
LEGAL DESCRIPTION

LOT 19, OF MARSHALL WAY PLAZA, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA RECORDED IN BOOK 718 OF MAPS, PAGE 35.

A.P.N.: 173-50-129



R.B. WILLIAMS & ASSOCIATES, INC.  
CONSULTING ENGINEERS  
1921 S. ALMA SCHOOL RD., STE 101  
MESA, ARIZONA 85295  
JEFFREY L. WILLIAMS, P.E.  
PHILIP C. WILLIAMS, P.E., R.L.S.  
PHONE: (480) 424-2352



PROJECT NAME

MARSHALL WAY  
MIXED USE DEVELOPMENT

SHEET TITLE

PRELIMINARY  
UTILITY PLAN

REVISIONS:	

DATE	06.29.22
DESIGN	JLW
DRAWN	JLW
CHK'D	HRW
SUB.	

22048UP01.DWG

UP01

SHEET NO.

1/1