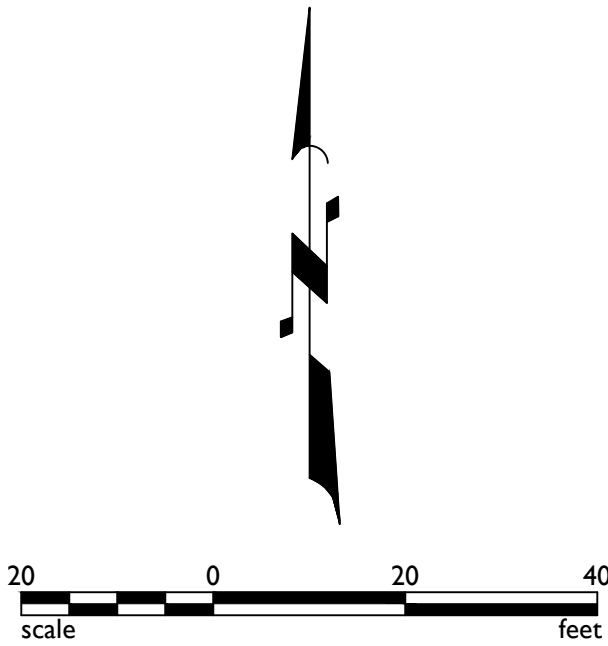
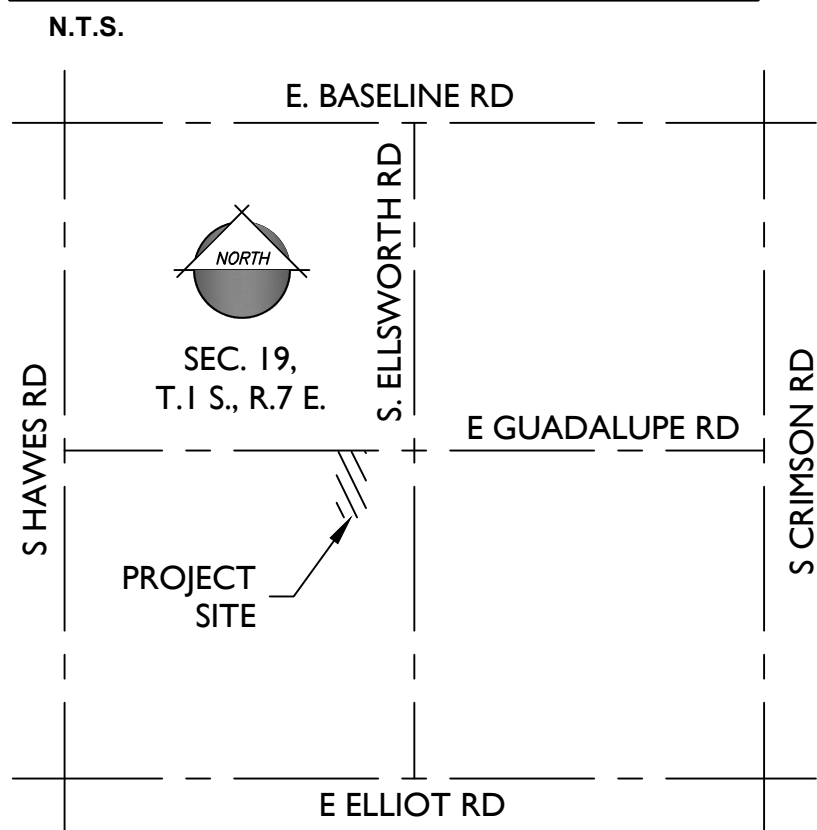


PRELIMINARY UTILITY PLAN FOR JACK IN THE BOX

A PORTION OF LAND LOCATED IN THE NE 1/4 OF NE 1/4 OF
SECTION 9, TOWNSHIP 1 SOUTH, RANGE 7 EAST OF THE
GILA AND SALT RIVER BASE MERIDIAN
MARICOPA COUNTY, ARIZONA



VICINITY MAP



BASIS OF BEARING

SOUTH 88 DEGREES, 46 MINUTES, 56 SECONDS EAST, BEING THE NORTH
LINE OF THE NORTHEAST QUARTER OF SECTION 19, TOWNSHIP 1 SOUTH,
RANGE 7 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN,
MARICOPA COUNTY, ARIZONA.

BENCHMARK

CITY OF MESA BRASS TAG IN TOP OF CURB OF THE SOUTHEAST CORNER
OF GUADALUPE RD AND ELLSWORTH ROAD
ELEVATION = 1424.57 NAVD88

FLOOD ZONE INFORMATION:

THIS PROJECT IS LOCATED WITHIN ZONE X OF THE F.E.M.A. FLOOD
INSURANCE RATE MAP, MAP #04013C2760L, DATED OCT. 16 2013. ZONE
X IS DEFINED AS: AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1%
ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1
FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND
AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

LEGEND

- PROPOSED WATER METER
- SEWER CLEANOUT
- PROPOSED BACKFLOW
- PROPOSED FIRELINE
- PROPOSED SEWER
- PROPOSED WATERLINE

1130 N. ALMA SCHOOL ROAD
Suite 120
Mesa, AZ 85201
T:480.503.2250 F:480.503.2258
www.epsgroupinc.com

Project:
Jack in the Box
9113 E. Guadalupe Rd.
Mesa, Arizona

Revisions:

Call at least two full working days
before site begins excavation.

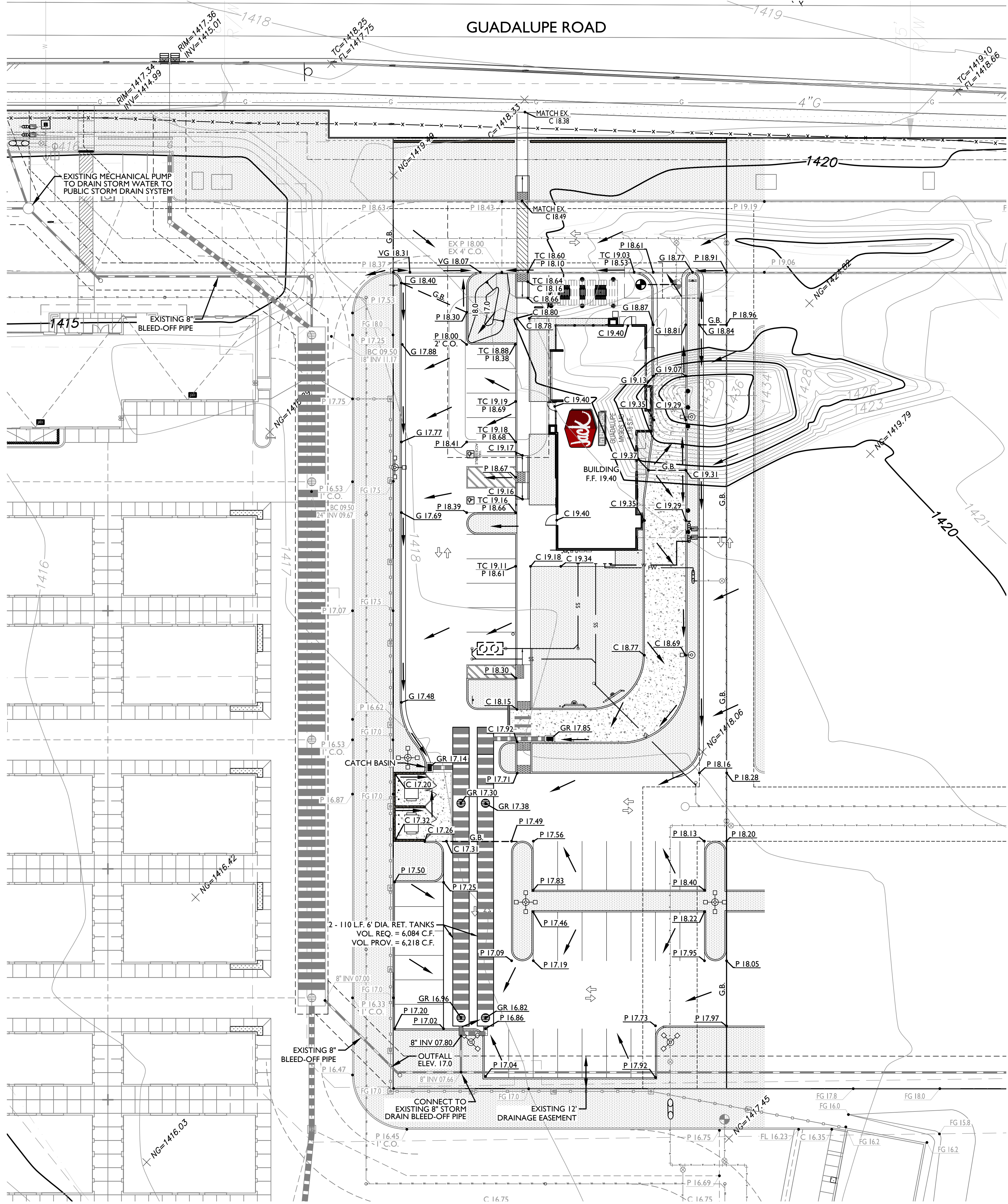
Dial 611 or 1-800-878-6111 (Toll Free)
In Maricopa County: (602)263-1100

Designer: MWP
Drawn by: MWP

Professional Engineer
MATTHEW D. KUEHN
45987
State of Arizona
Expires: 3/31/2019

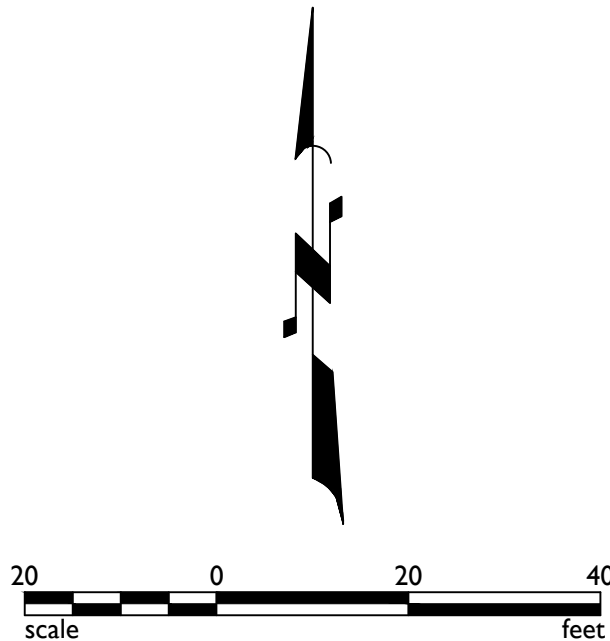
Job No.
18-550

Sheet No.
1 of 1



PRELIMINARY GRADING & DRAINAGE PLAN FOR JACK IN THE BOX

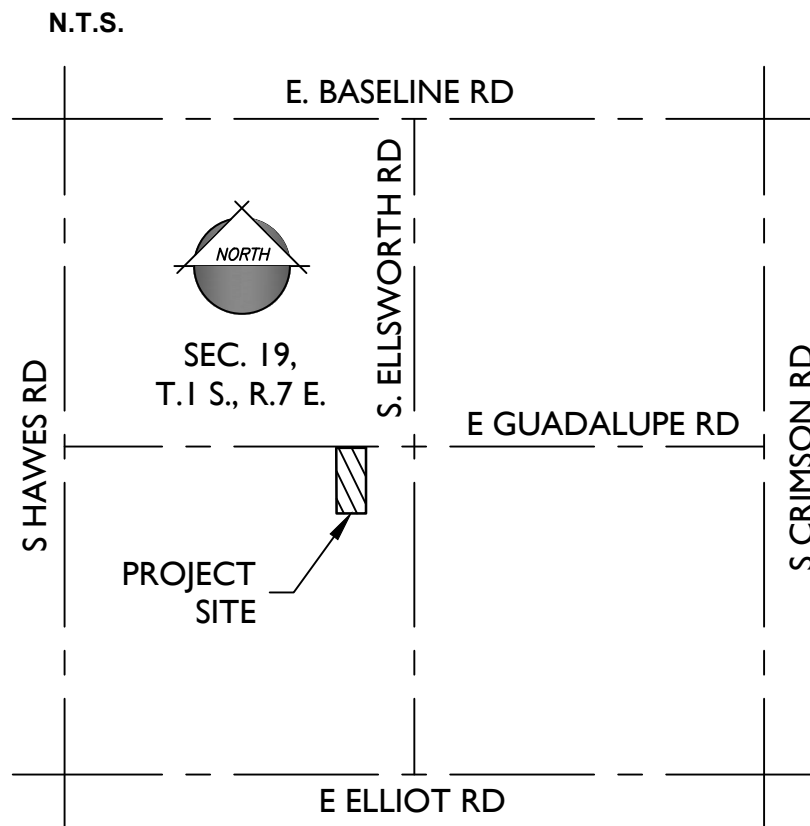
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MARICOPA COUNTY, ARIZONA



LEGEND

- GR GRATE ELEVATION
- FF FINISH FLOOR ELEVATION
- P PAVING ELEVATION
- C CONCRETE ELEVATION
- VG VALLEY GUTTER ELEVATION
- G GUTTER ELEVATION
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- PROPOSED STORM DRAIN
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AREAS PROTECTED BY LEVES FROM 1% ANNUAL CHANCE FLOOD.

RETENTION SUMMARY

TOTAL VOLUME REQUIRED = 6,084 C.F.
TOTAL VOLUME PROVIDED = 6,218 C.F.

TOTAL EXCESS VOLUME = 134 C.F.

SEE PRELIMINARY DRAINAGE REPORT FOR CALCULATIONS

Project:
Jack in the Box
9113 E. Guadalupe Rd.
Mesa, Arizona

Revisions:



Designer: MWP
Drawn by: MWP

Expires: 3/31/2019

Job No.
18-550

Sheet No.

1 of 1



Preliminary Drainage Report

For

Jack in the Box
9113 E. GUADALUPE RD.
Mesa, Arizona

Developer
RUCKER RESTAURANT HOLDINGS, LLC.
1945 W. MAIN ST.
MESA, AZ 85201
Contact: ANGELINA GALAVIZ



Expires: 3/31/2019

Project No. 18-550

Date: January 2019

1130 N. Alma School Road, Suite 120
Mesa, AZ 85201
o: 480.503.2250
f: 480.503.2258

Table of Contents

1.0	Introduction	1
2.0	Flood Insurance Rate Zone	1
3.0	Existing Site and Surrounding Conditions	2
4.0	Offsite Drainage	2
5.0	Onsite Drainage	2
6.0	Summary of Findings.....	3
	References	3

Appendices

Appendix A: Flood Insurance Rate Map

Appendix B: Preliminary Grading & Drainage Plan

Appendix C: Retention Calculations



Expires: 3/31/2019

1.0 Introduction

Jack in the Box (the Project) is a proposed 0.98 acre site with a 2,065 square foot restaurant building located on the south side of Guadalupe Road west of Ellsworth Road. The Project sits on a site that can be further located in the Northeast quarter of Section 9, Township 1 South, Range 7 East of the Gila and Salt River Meridian, Maricopa County, Arizona. See Figure 1, Location Map, below.



Figure 1: Location Map

2.0 Flood Insurance Rate Zone

The site is located within an area the Federal Emergency Management Agency (FEMA) has indicated to be within Flood Zone X in accordance with Flood Map 04013C2760L, effective October 16, 2013. The Flood map is included in **Appendix A**. Flood Zone X is defined as:

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

3.0 Existing Site and Surrounding Conditions

The site is currently vacant land adjacent to a Valero gas station and convenience store at the northeast corner, and a UStor self storage development currently under construction on the west. The site has approximately 123 feet of frontage on Guadalupe Road.

There is an existing 8" storm water bleed-off line located in a 12 foot drainage easement that is located on the south side of the project site. This bleed-off line utilizes the 42-inch City of Mesa storm drain pipe in Guadalupe Road that flows west to the ADOT drainage channel adjacent to the Loop 202 Santan Freeway. The project will utilize this storm drain to bleed off the on-site retention.

In the northwest portion of the site there is an existing temporary retention basin that receives storm water runoff from the existing paved drive that runs through the north portion of the site. Once developed, the project will provide retention for the runoff in the new underground retention facilities.

4.0 Offsite Drainage

For this project, the offsite drainage flows along Guadalupe Road that require onsite retention volume have been accounted for in the retention calculations for the UStor development to the west of the project site.

5.0 Onsite Drainage

The drainage scheme of this project is for onsite storm water to flow to low points where the runoff will be conveyed into two 6' diameter underground retention pipes. **Appendix B** shows the proposed drainage routing for the site. In **Appendix C**, Retention Basin Capacity Calculations have been prepared. The on-site drainage retention is provided for the 100-year, 2-hour event. Flows higher than the 100-year, 2-hour event outfall to the historical outfall at the southwest corner of the site that continues south to E. Onza Avenue. The Finished Floor will be designed for a freeboard of not less than 12" above outfall water surface elevation. The site has accounted for outfall flows and flows necessary to bleed off the site retention in 36 hours or less.

Bleed-off of the underground storage pipe will be to the existing 8-inch storm drain bleed-off pipe located in a 12 foot wide drainage easement along the south portion of the site. The existing 8" bleed-off pipe bleeds off thru the existing UStor development to the existing UStor structure, where the existing UStor sump pump will pump the water into an existing 12" bleed off stub connected to the 42" Guadalupe storm drain.

6.0 Summary of Findings

This report concluded that:

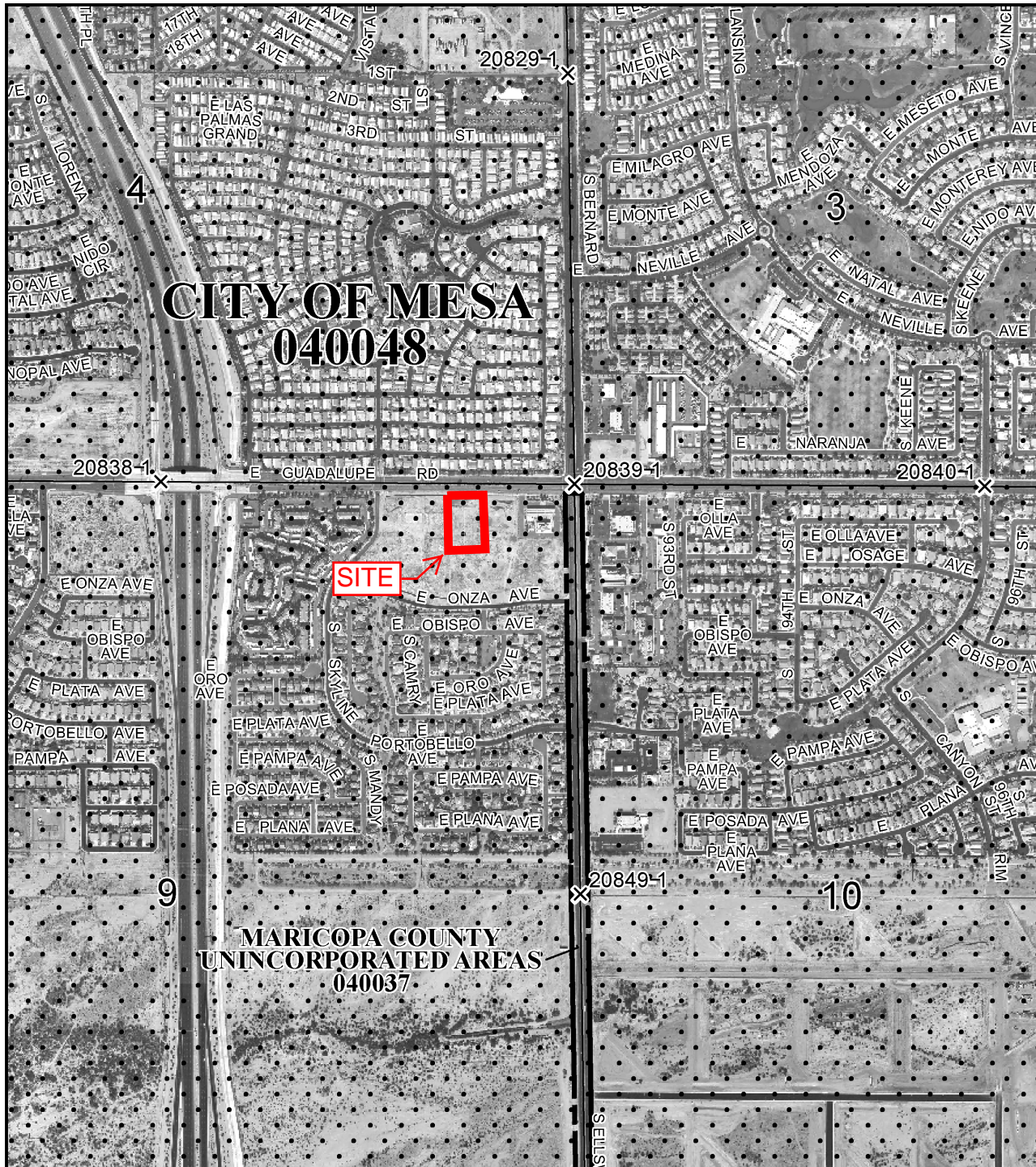
- This site has been designed in accordance with the Maricopa County Drainage Manual and City of Mesa standards.
- The finished floor for the building will be a minimum of 1 foot above the highest adjacent water surface elevation.
- Retention requirements for onsite storm water have been met by onsite an underground retention pipe.
- Storm water flows from Guadalupe Road have been accounted for in the onsite retention for the UStor development.
- Drainage in the developed condition of the site does not negatively impact or increase flows to adjacent properties.

References

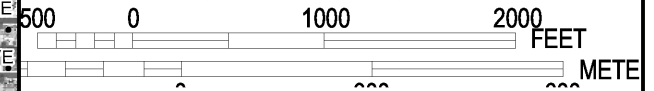
- City of Mesa Engineering and Design Standards Manual, 2017
- Maricopa County Drainage Manual, Volume 1 and Volume 2, hydrology & hydraulics.

Appendix A

Flood Insurance Rate map



MAP SCALE 1" = 1000'



NFIP

PANEL 2760L

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY,
ARIZONA
AND INCORPORATED AREAS

PANEL 2760 OF 4425

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY	040037	2760	L
GILBERT, TOWN OF	040044	2760	L
MESA, CITY OF	040048	2760	L

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
04013C2760L

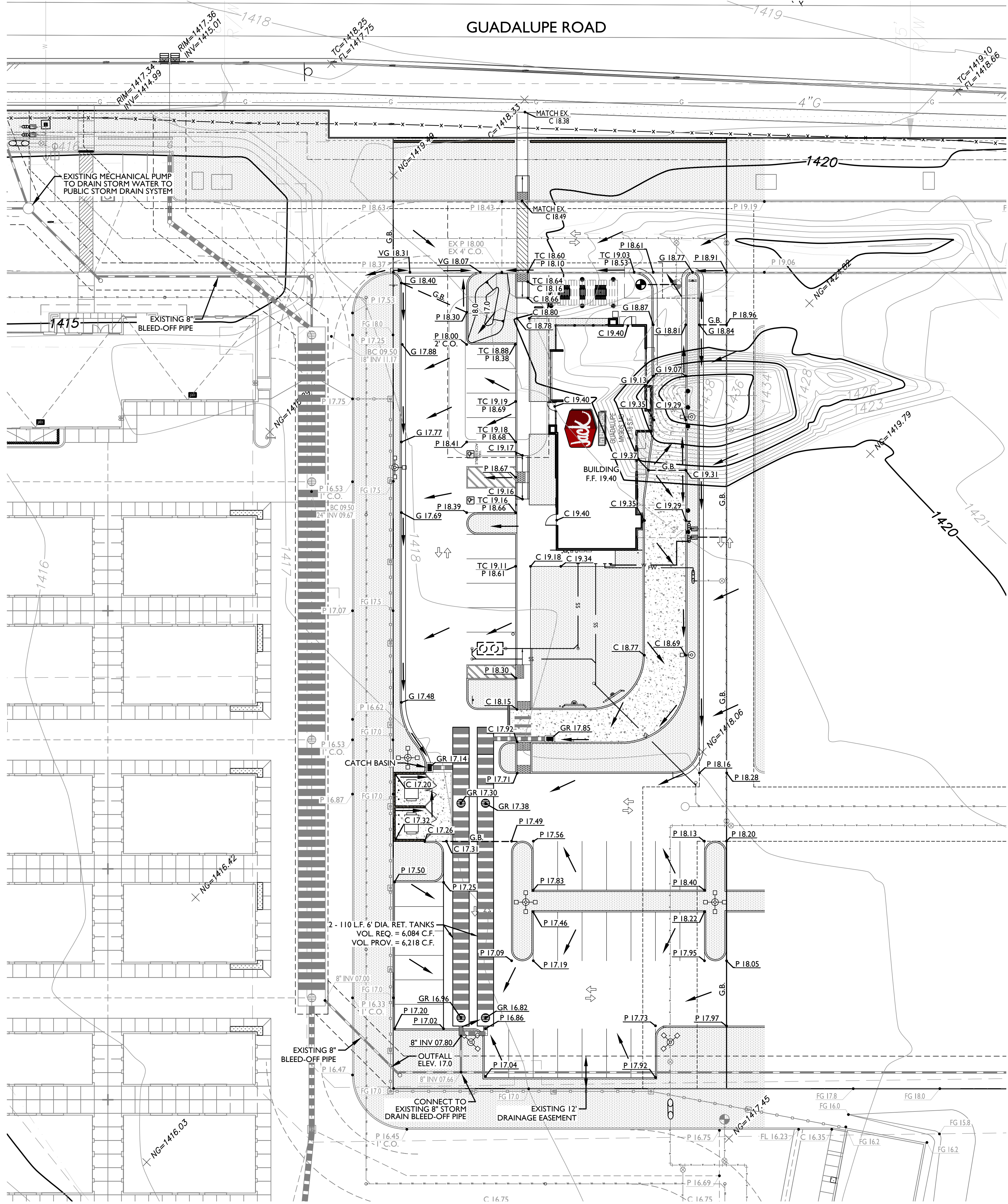
MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

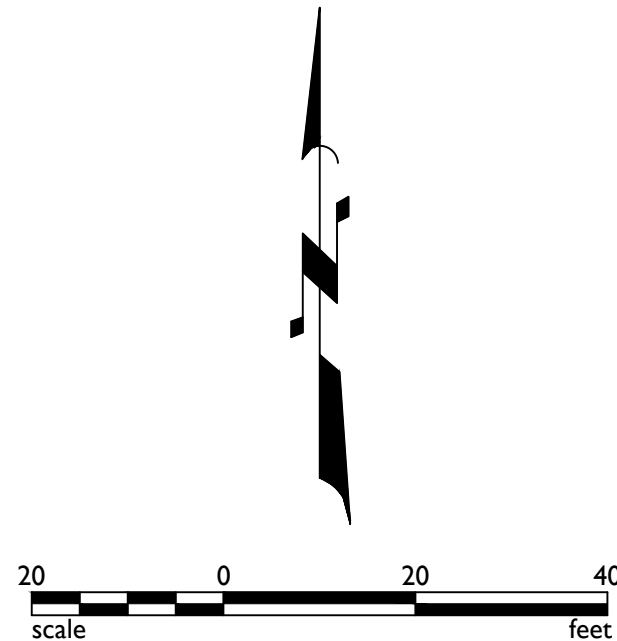
Appendix B

Preliminary Grading & Drainage Plan

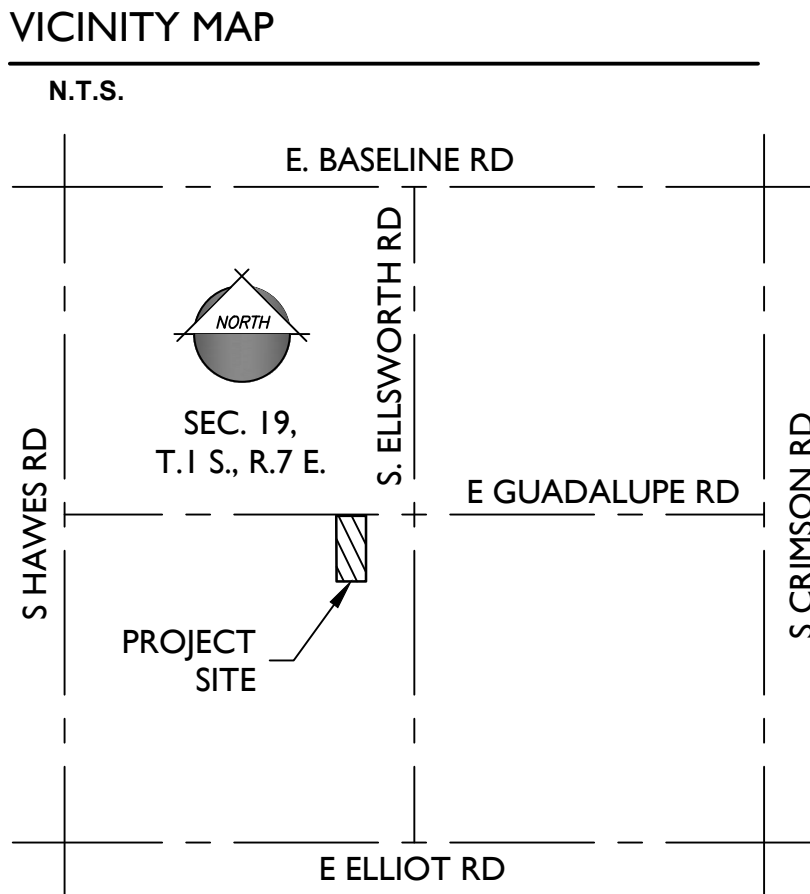


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T: 480.503.2250 F: 480.503.2258
www.epsgroupinc.com

Project:
Jack in the Box
9113 E. Guadalupe Rd.
Mesa, Arizona

Revisions:

Call at least two full working days
before site begin excavation.

Dated to 6/1/2019 10:00:07 AM by: 1025-0348
In Maricopa County: 0002063-1100

Designer: MWP
Drawn by: MWP

Expires: 3/31/2019
Job No.
18-550

Sheet No.
1 of 1

Appendix C

Retention Calculations

Retention Calculations

Project: Jack in the Box - Mesa

Storm Event: 100-yr 2-hr

Prepared by: Michael Peck

Date: 1/9/2019

$$V = C * A * P / 12^{(1)}$$

Where:

V = Runoff Volume

C = Runoff Coefficient

A = Drainage Area

P = 2.22 in

Underground Retention Pipe Volume Calculations

Basin ID	Diameter (ft)	Area (ft ²)	Length (ft)	Volume Provided, V _p (ft ³)
U1	6	28.26	110	3,109
U2	6	28.26	110	3,109
TOTAL				6,218

Volume Required and Summary

Basin ID	Sub-Basin ID	Sub Basin Area Description	Contributing Area (ft ²)	C =	Volume Required, V _R (ft ³)	Volume Provided, V _p (ft ³)
U1&U2	A1	Asphalt PVMT	21,972	0.85	3,455	6,218
		Concrete	8,303	0.95	1,459	
		Landscape	12,647	0.50	1,170	
		Total	42,922	0.77	6,084	