

# 1756 E UNIVERSITY APARTMENT COMPLEX PRELIMINARY GRADING AND DRAINAGE PLAN

1756 E UNIVERSITY DR, MESA, AZ 85203

## REQUIRED RETENTION VOLUME

VOLUME REQUIRED (100-YR, 2-HR STORM)  
 $V_{req} = (P/12) * A * C$   
 $C_{tot} = 0.86$   
 $P = 2.16$  (NOAA ATLAS 14)  
 $V_{req} = (2.16/12) * 63,019 * 0.86 = 9,755$  CF  
 THE CALCULATED VOLUME DOES NOT INCLUDE RUNOFF FROM N HALL AND E UNIVERSITY DR.

VOLUME PROVIDED  
 UGR TANKS: 125 LF, 10 FT DIAMETER => VOL=9,817 CF > 9,755 CF

## RETENTION DISPOSAL

AT THE TIME OF DESIGN AND DEVELOPMENT THERE IS NO EXISTING STREET STORM DRAIN SYSTEM. FUTURE IMPROVEMENTS IN THE GENERAL AREA MIGHT INCLUDE STORM DRAIN SYSTEM IN PROXIMITY TO THE PROJECT AREA. AFTER CITY REVIEWS OF THE PRELIMINARY GRADING AND DRAINAGE PLAN IT WAS PROPOSED BY THE CITY THAT THE CURRENT PROJECT INCLUDES A ON-SITE DRYWELL FOR RETENTION DISPOSAL BUT IN THE FUTURE THE RETENTION SHOULD BE CONNECTED TO A STREET STORM DRAIN SYSTEM, ONCE AVAILABLE.

## OFF-SITE DRAINAGE

THIS SITE IS LOCATED IN A DEVELOPED AREA WITH E UNIVERSITY DR ALONG THE SOUTH, A DEVELOPED LOT WITH A CMU PERIMETER WALLS ALONG THE NORTH, AND N HALL ROAD ALONG THE WEST. THE EXISTING TERRAIN SLOPES FROM NORTHEAST TO SOUTHWEST DIRECTION AND THE EAST NEIGHBORING UNDEVELOPED LOT PRODUCES RUNOFF TOWARDS THIS SITE. IF REQUIRED, THIS ADDITIONAL RUNOFF CAN BE INCLUDED IN THE ON-SITE RETENTION.

## ARCHITECT, MEP ENGINEERING AND STRUCTURAL ENGINEERING

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## FEMA FLOOD INSURANCE RATE MAP

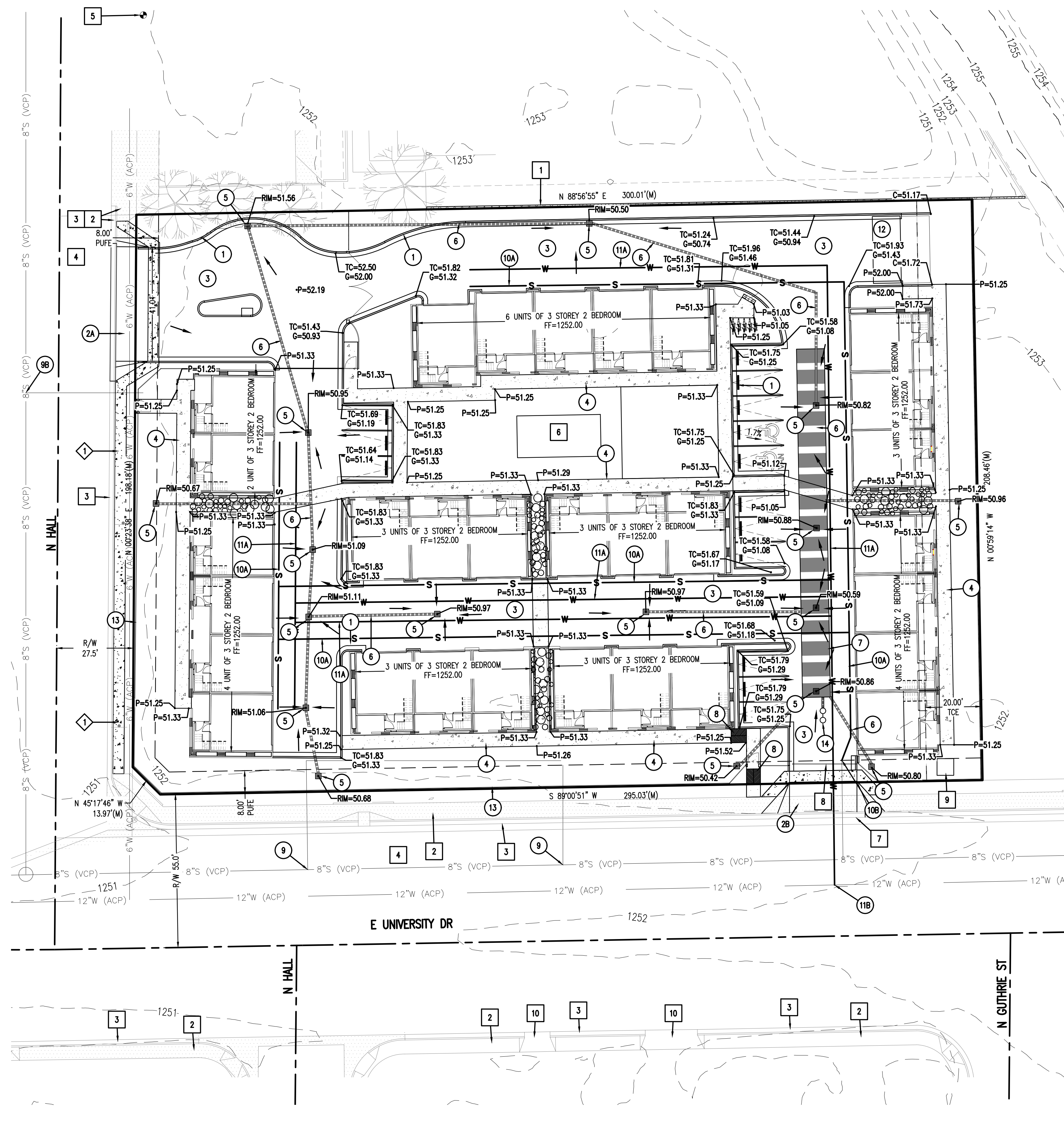
ZONE X (DOT-HATCHED)  
 MAP PANEL# 04013C2270M  
 REVISION DATE: NOVEMBER 4, 2015

## SEWER CONNECTION

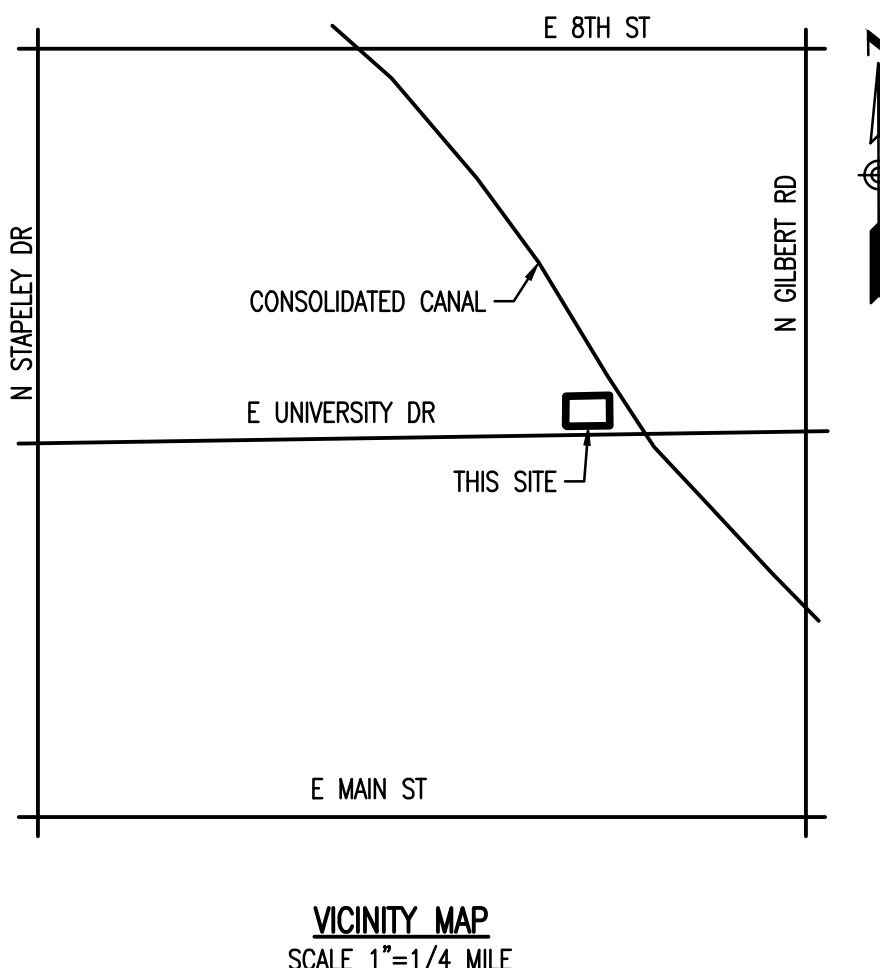
CONNECTION TO PUBLIC SEWER TO BE DETERMINED DURING FINAL CONSTRUCTION PHASE. THERE IS ONE EXISTING SEWER STUB ALONG N HALL AND THREE ALONG E UNIVERSITY DR.

## SYMBOLS LEGEND

- PROPOSED ITEM/STRUCTURE
- - - EXISTING ITEM/STRUCTURE
- ⊕ EXISTING FIRE HYDRANT
- PROPERTY LINE
- ROAD CENTERLINE
- PROP WATER LINE
- PROP SEWER LINE
- DRAINAGE DIRECTION
- ▨ CONCRETE WALK



- CONSTRUCTION NOTES
- 1 CURB AND GUTTER MAG 220A 5" CURB, TYPICAL ALL CURBS
  - 2A DRIVEWAY PER CITY OF MESA DETAIL M-42
  - 2B DRIVEWAY PER CITY OF MESA DETAIL M-42, MODIFIED TO 24 FEET WIDTH FOR EXIT ONLY.
  - 3 PROPOSED PAVEMENT
  - 4 PROPOSED PRIVATE SIDEWALK
  - 5 STORM DRAIN INLET MAG 534 OR 535
  - 6 STORM DRAIN PIPE
  - 7 10 FT DIAMETER UNDERGROUND CONCRETE CAST-IN-PLACE RETENTION TANK, TOTAL LENGTH=125 FEET, VOLUME PROVIDED=9,817 CF
  - 8 ADA RAMP
  - 9 EXISTING SEWER STUB TO BE REMOVED TO THE MAIN AND CAPPED. FINAL PROPOSED SEWER STUB TO BE DETERMINED DURING FINAL CONSTRUCTION PHASE.
  - 10A PROPOSED SEWER LINE
  - 10B CONNECT PROPOSED SEWER LINE TO EXISTING SEWER STUB
  - 11A PROPOSED WATER LINE
  - 11B CONNECT PROPOSED WATER LINE TO STREET WATER, SIZE UNKNOWN
  - 12 TRASH ENCLOSURE PER ARCHITECTURAL SPECIFICATIONS
  - 13 WROUGHT IRON FENCE
  - 14 PROPOSED DRYWELL
  - OFF-SITE CONSTRUCTION NOTES
  - CONSTRUCT NEW 4' WIDE PUBLIC SIDE WALK
- INFORMATION NOTES
- 1 EXISTING 6' CMU FENCE
  - 2 EXISTING PUBLIC SIDEWALK
  - 3 EXISTING CURB AND GUTTER
  - 4 EXISTING PAVEMENT
  - 5 EXISTING FIRE HYDRANT
  - 6 POOL AREA
  - 7 FIRE ACCESS
  - 8 EXIT ONLY GATE
  - 9 PROPOSED TRANSFORMER LOCATION
  - 10 EXISTING DRIVEWAY



## RETENTION NOTE

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**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

no.	date	description

**TANGERINE**

421 N HALL  
MESA, AZ 85208

PROJECT NO: 22039  
DATE: 01/07/2024



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**PRELIMINARY  
GRADING AND  
DRAINAGE PLAN  
C1**

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