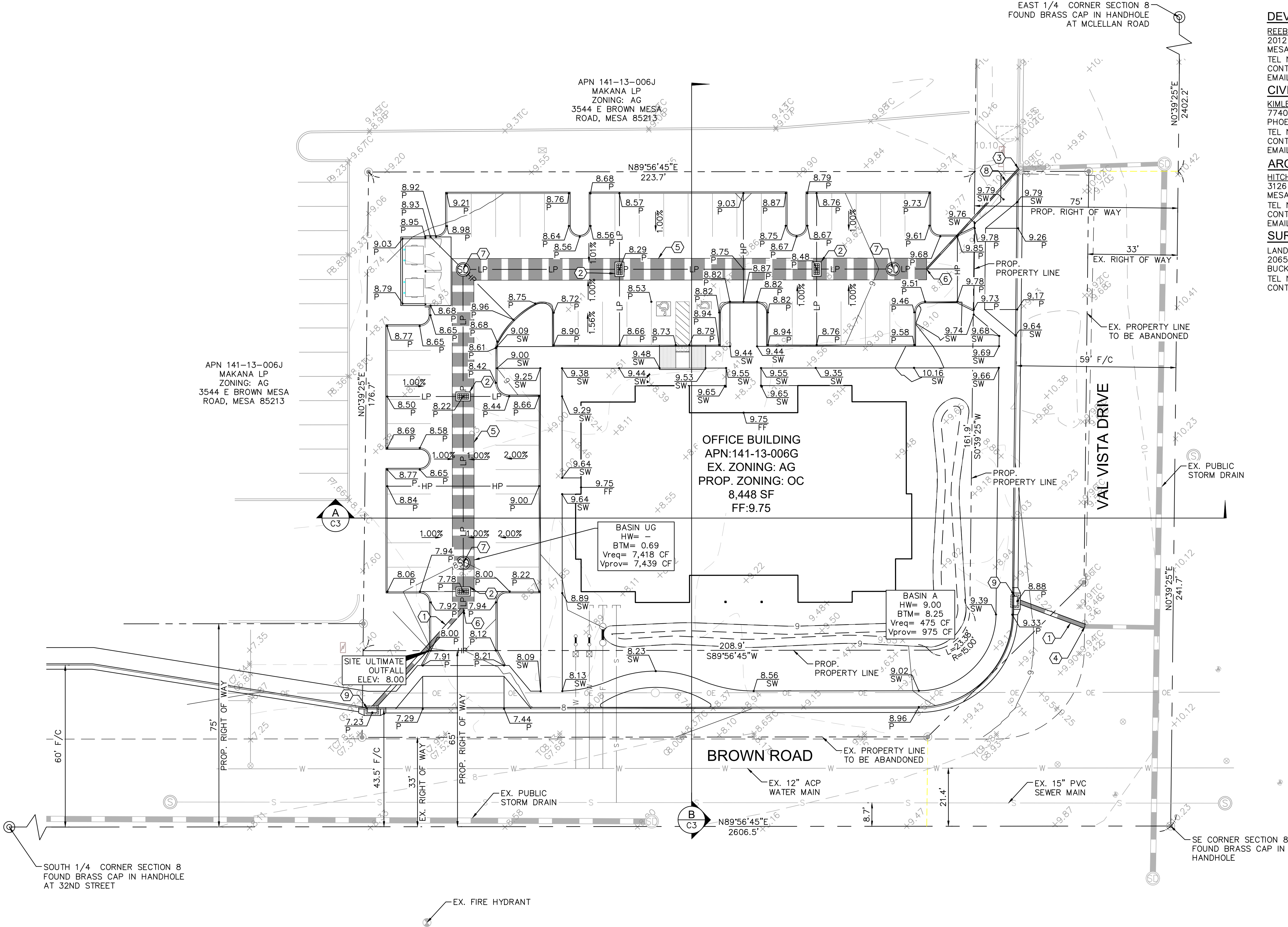


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DRAINAGE STATEMENT

THE PROPOSED NEW OFFICE BUILDING PROJECT WILL RETAIN THE 100-YEAR, 2-HOUR STORM. RUNOFF WILL BE RETAINED PRIMARILY WITHIN ONSITE UNDERGROUND RETENTION, WITH SUPPLEMENTARY SURFACE RETENTION BASINS LOCATED ALONG THE EAST AND SOUTH PERIMETER OF THE DEVELOPMENT. NO RETENTION IS PROPOSED FOR THE HALF-STREET OF VAL VISTA DRIVE DUE TO THE EXISTING STORM DRAIN INFRASTRUCTURE IN THE ROAD. HALF-STREET DRAINAGE WILL BE PROVIDED FOR BROWN ROAD.

PER THE CITY OF MESA REQUIREMENTS, THE RETENTION WILL BLEED OFF THROUGH A 6 INCH STORM DRAIN PIPE TO AN EXISTING CATCH BASIN IN VAL VISTA DRIVE AT THE NORTHEAST CORNER OF THE SITE. THIS BLEED OFF WILL BE DESIGNED WITH THE CONSTRUCTION DOCUMENTS PHASE OF THE PROJECT TO DRAIN IN LESS THAN 36 HOURS.

THIS SITE IS IN FLOOD ZONE 'X' AND HAS LESS THAN A 0.2% CHANCE ANNUALLY TO FLOOD. THE OFFSITE FLOWS FROM BROWN ROAD AFFECT THIS SITE AND ARE RETAINED IN THE ON SITE UNDERGROUND DETENTION VAULT. THE ULTIMATE OUTFALL OF THIS SITE IS AT THE SOUTHWEST CORNER AT AN ELEVATION OF 8.0'.

BASIS OF BEARINGS

PER LAND SURVEY SERVICES PLC, THE BASIS OF BEARINGS IS THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 1 NORTH, RANGE 6 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN. SAID LINE BEARS SOUTH 89 DEGREES 56 MINUTES 45 SECONDS WEST.

BENCHMARK

PER LAND SURVEY SERVICES PLC, THE BENCHMARK IS A BRASS TAG IN HEADWALL AT THE SOUTHWEST CORNER OF BROWN ROAD AND VAL VISTA DRIVE. ELEVATION = 1309.71 FEET (CITY OF MESA NAVD 88 DATUM)

| Stormwater Retention Requirement Summary | | | | | |
|--|-------------|--------------------|---------------------|----------------------------------|------------------------------------|
| Basin | Land Use | Runoff Coefficient | Rainfall Depth (in) | Drainage Area (ft ²) | Required Volume (ft ³) |
| UG | Landscaping | 0.50 | 2.20 | 7,552 | 692 |
| | Building | 0.95 | 2.20 | 8,448 | 1,471 |
| | Pavement | 0.95 | 2.20 | 30,170 | 5,255 |
| TOTAL | | | | 0 | 7,418 |
| A | Landscaping | 0.50 | 2.20 | 5,180 | 475 |
| | Building | 0.95 | 2.20 | 0 | 0 |
| | Pavement | 0.95 | 2.20 | 0 | 0 |
| TOTAL | | | | 0 | 475 |

| Underground Retention Summary | | | | | |
|-------------------------------|-----------------|----------|-----------------|-----------------|------------------|
| Retention Basin | Required Volume | Diameter | Required Length | Provided Length | Provided Storage |
| | cf | ft | If | If CMP | cf |
| UG | 7,418 | 8 | 296 | 296 | 7,439 |

| Surface Basin Summary | | | | |
|-----------------------|----------------|-----------------|-----------------|--------|
| Retention Basin | Tributary Area | Volume Required | Volume Provided | Excess |
| | cf | cf | cf | cf |
| A | 5,180 | 475 | 975 | 500 |

- ALL RETENTION CALCULATIONS ARE BASED ON A 100-YEAR 2-HOUR RAINFALL RUNOFF OF 2.18 INCHES FROM CITY OF MESA ENGINEERING STANDARDS.
- RETENTION CALCULATIONS DO NOT INCLUDE RUNOFF FROM HALF-STREET RIGHT OF WAY ALONG ELLIOT NOR ELLSWORTH DUE TO EXISTING PUBLIC STORM DRAINS IN THE STREET.

FLOOD ZONE INFORMATION

ALL AREAS OF THE SUBJECT PARCEL LIE IN FEMA FLOOD ZONE 'X' AND HAVE BEEN DETERMINED TO BE AREAS WITH 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 OF FLOOD, ACCORDING TO THE FLOOD INSURANCE RATE MAP #04013C2260M, DATED OCTOBER 16, 2013.

DEVELOPER

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CIVIL ENGINEER

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7740 N 16TH STREET, SUITE 300
PHOENIX, AZ 85020
TEL NO. (602) 944-5500
CONTACT: MICHAEL L DELMARTER, PE
EMAIL: MIKE.DELMARTER@KIMLEY-HORN.COM

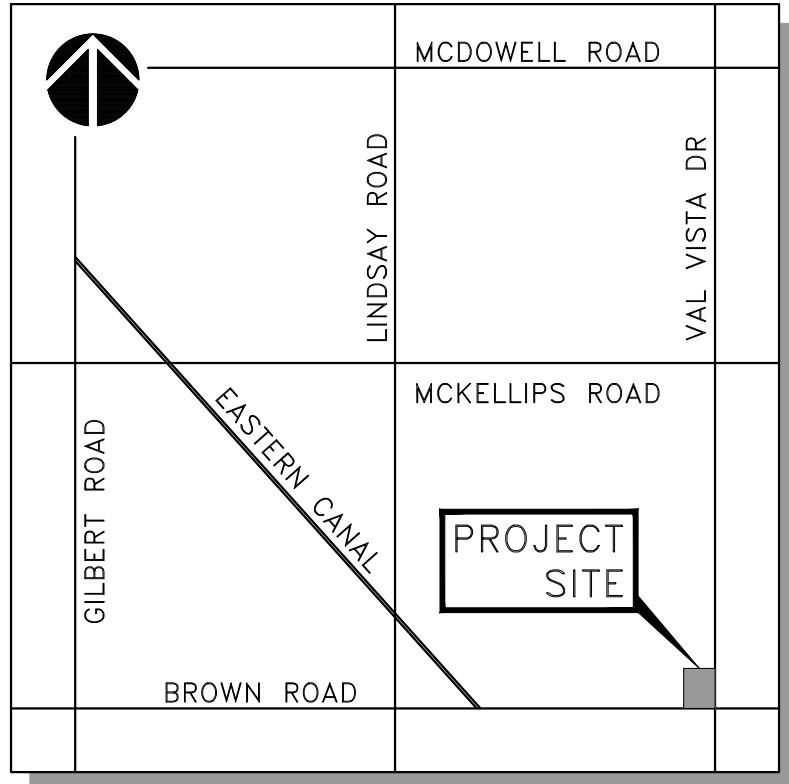
ARCHITECT

HITCHENS ASSOCIATES ARCHITECTS
3126 N LOS ALAMOS
MESA, AZ 85213
TEL NO. (602) 615-0204
CONTACT: GREG HITCHENS
EMAIL: GREG@HITCHARCH.COM

SURVEYOR

LAND SURVEY SERVICES PLC
20651 W PASADENA AVE
BUCKEYE, AZ 85396-1255
TEL NO. (602) 703-7010
CONTACT: THOMAS L ROPE, R.L.S.

Kimley»Horn



VICINITY MAP

CITY OF MESA
N.T.S.

GRADING LEGEND

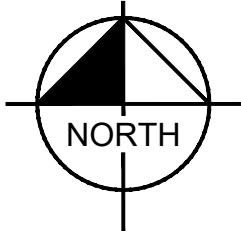
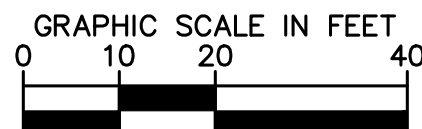
| | |
|-----|---------------------------|
| --- | PROPERTY LINE |
| --- | EXISTING EASEMENT LINE |
| HP | PROPOSED HIGH POINT |
| LP | PROPOSED LOW POINT |
| GB | PROPOSED GRADE BREAK |
| --- | PROPOSED STORM DRAIN PIPE |
| --- | EXISTING CONTOUR |
| --- | PROPOSED CATCH BASIN |
| --- | PROPOSED FLOW ARROW |
| --- | PROPOSED PAVEMENT |
| --- | PROPOSED CATCH BASIN |
| --- | EXISTING ELEVATION |

GRADING AND DRAINAGE NOTES

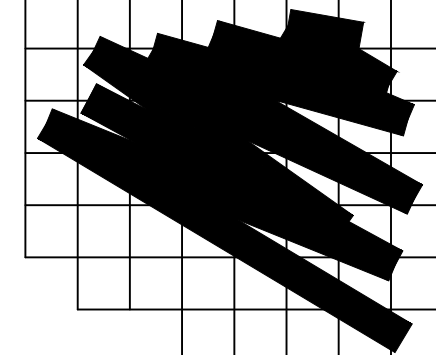
- INSTALL HDPE STORM DRAIN PIPE, SIZE PER PLAN. BEDDING AND BACKFILL PER MAG 601.
- INSTALL TYPE 'E' CATCH BASIN PER MAG STD DET 534. GRATE TO BE SECURED WITH CHAIN.
- CONNECT TO EXISTING CATCH BASIN.
- INSTALL HDPE STORM DRAIN 45" BEND, SIZE TO MATCH ADJOINING PIPES.
- INSTALL 8' DIAMETER ARCH UNDERGROUND DETENTION VAULT. BEDDING AND BACKFILL PER MAG 601.
- STORM DRAIN CONNECTION TO UNDERGROUND RETENTION TANKS.
- INSTALL UNDERGROUND RETENTION ACCESS RISER.
- INSTALL 6" BLEED OFF PIPE.
- INSTALL CATCH BASIN PER COM STD DET M-64.

NOTES

- ADD 1300' TO ALL ELEVATIONS.
- ADD 0.5' TO PAVEMENT (P) ELEVATIONS FOR TOP OF CURB ELEVATIONS FOR VERTICAL CURBS.
- ALL SPOT ELEVATIONS ARE FINISHED GRADE PAVEMENT (P), GUTTER/GRATE (G), TOP OF CURB (TC), OR SIDEWALK (SW) ELEVATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL USE SPOT ELEVATIONS, PROPOSED CONTOURS, AND SLOPES TO ESTABLISH GRADES.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% AND LONGITUDINAL SLOPE SHALL NOT EXCEED 5%.
- REFER TO LANDSCAPE PLANS FOR SLOPE TREATMENT.
- ALL FILL SLOPES SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
- REFER TO BUILDING ARCHITECTURE AND STRUCTURAL PLANS FOR EXACT BUILDING FOUNDATION THICKNESS CHANGES.
- SEE SHEET GD2 FOR CROSS SECTIONS.



HITCHENS ASSOCIATES
ARCHITECTS



REVISIONS

PRELIMINARY GRADING AND DRAINAGE PLAN

NEW OFFICE BUILDING
3544 E. BROWN ROAD
Mesa, Arizona

PROJECT NO: 191924007

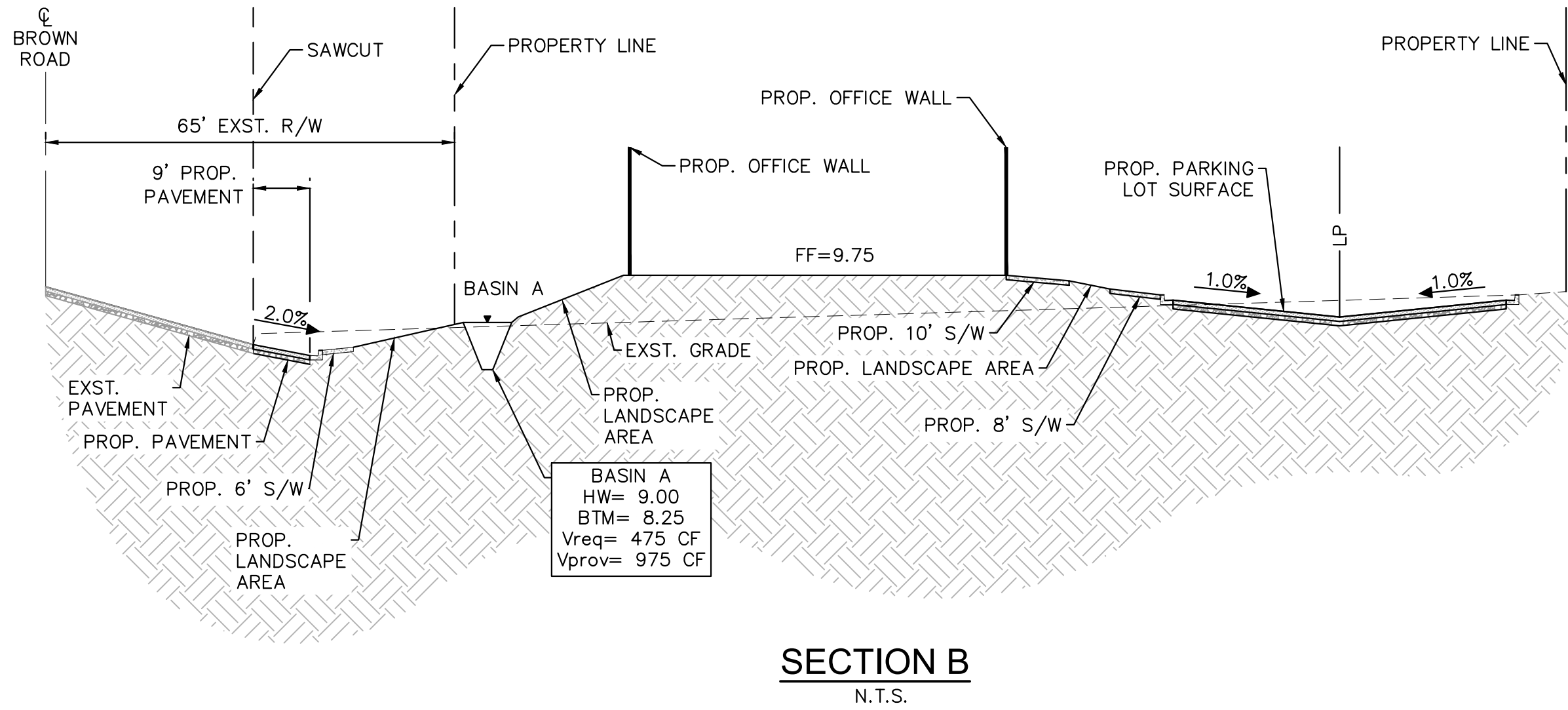
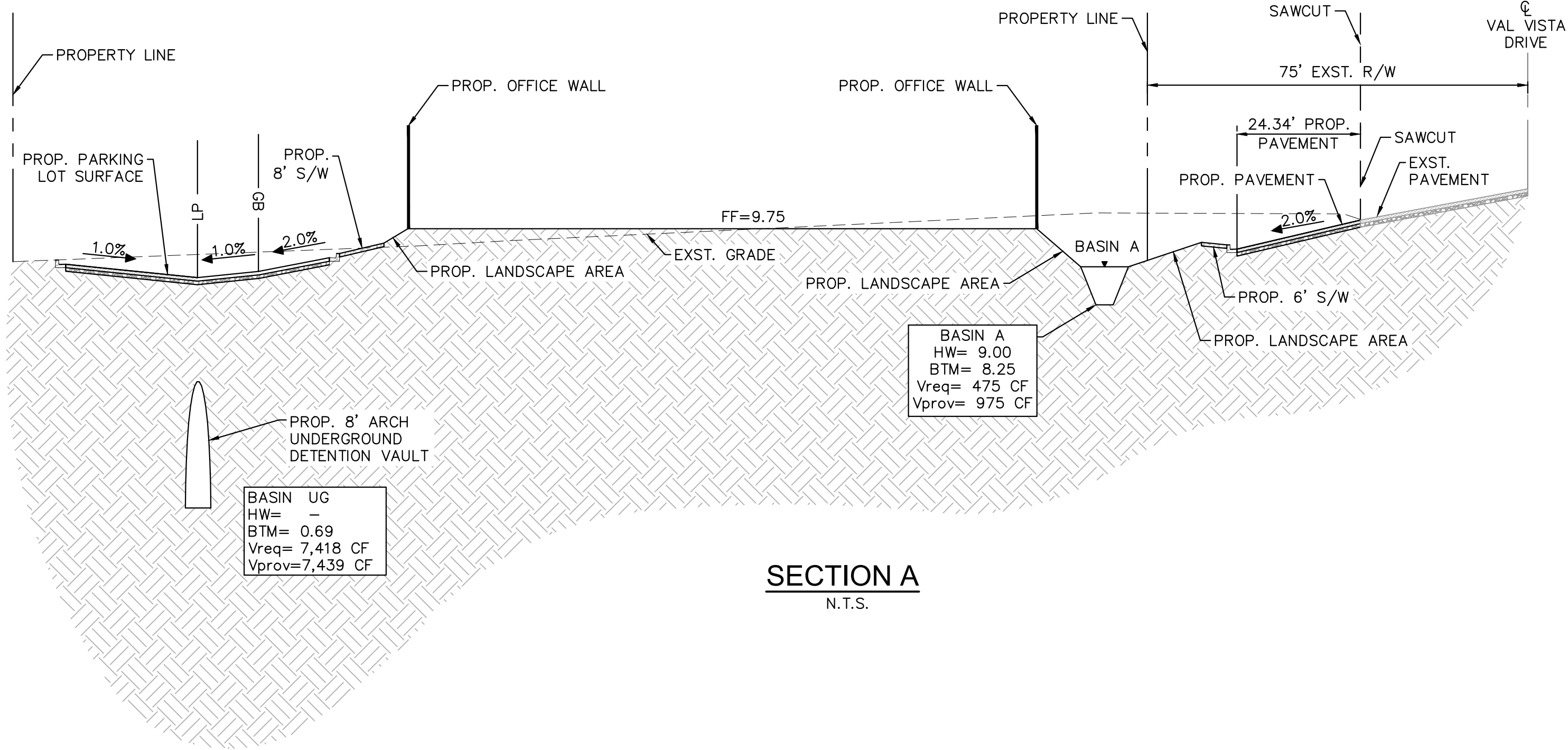
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DATE: 6-15-20

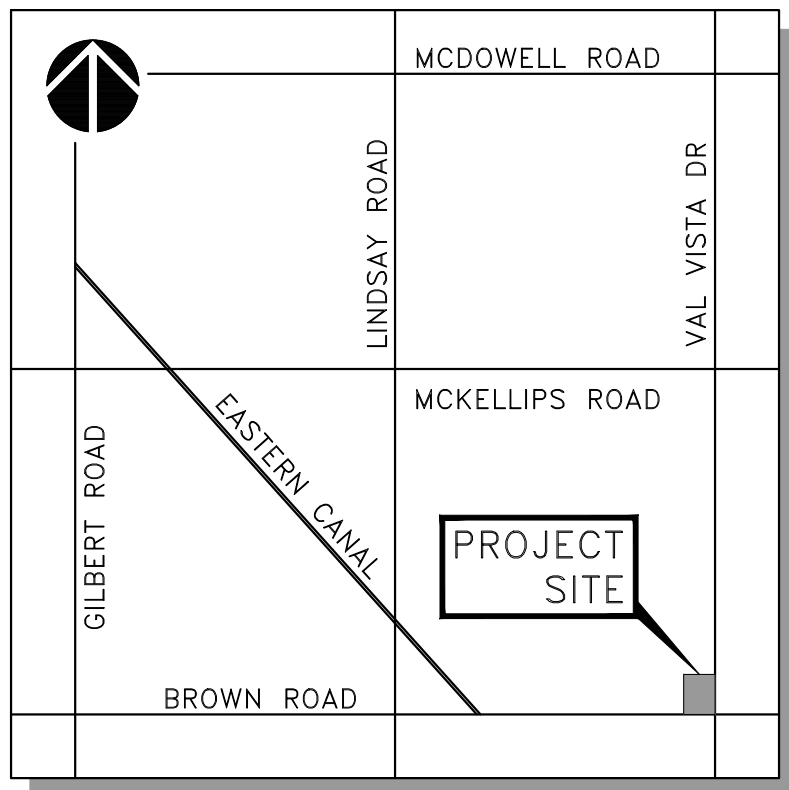


GD1
1 OF 2 SHEETS

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Kimley»Horn



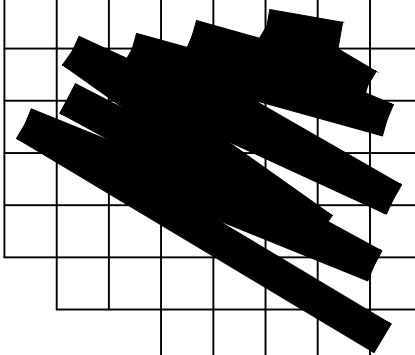
VICINITY MAP

CITY OF MESA
N.T.S.

GRADING LEGEND

| | |
|---------------------|--------------------------------------|
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| --- | EXISTING EASEMENT LINE |
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| LP | PROPOSED LOW POINT |
| GB | PROPOSED GRADE BREAK |
| --- | PROPOSED STORM DRAIN PIPE |
| --- | EXISTING CONTOUR |
| 61 | PROPOSED CATCH BASIN |
| 07.10 P | PROPOSED FLOW ARROW |
| 05.72 G | PROPOSED PAVEMENT SPOT ELEVATION |
| TC=07.09 P=06.62 | PROPOSED CATCH BASIN GRATE ELEVATION |
| --- | EXISTING ELEVATION |

HITCHENS ASSOCIATES
ARCHITECTS



TELEPHONE:
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MESA, ARIZONA 85215

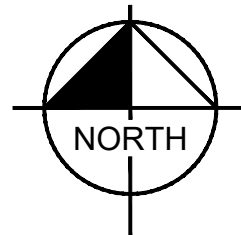
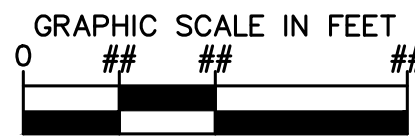
REVISIONS

PRELIMINARY
GRADING AND
DRAINAGE PLAN

NEW OFFICE BUILDING
3544 E. BROWN ROAD
Mesa, Arizona

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PROJECT NO: 191924007

DRAWN BY: TGK

DATE: 6-15-20

