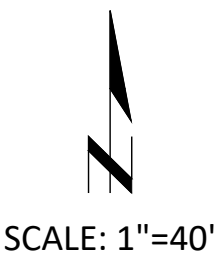
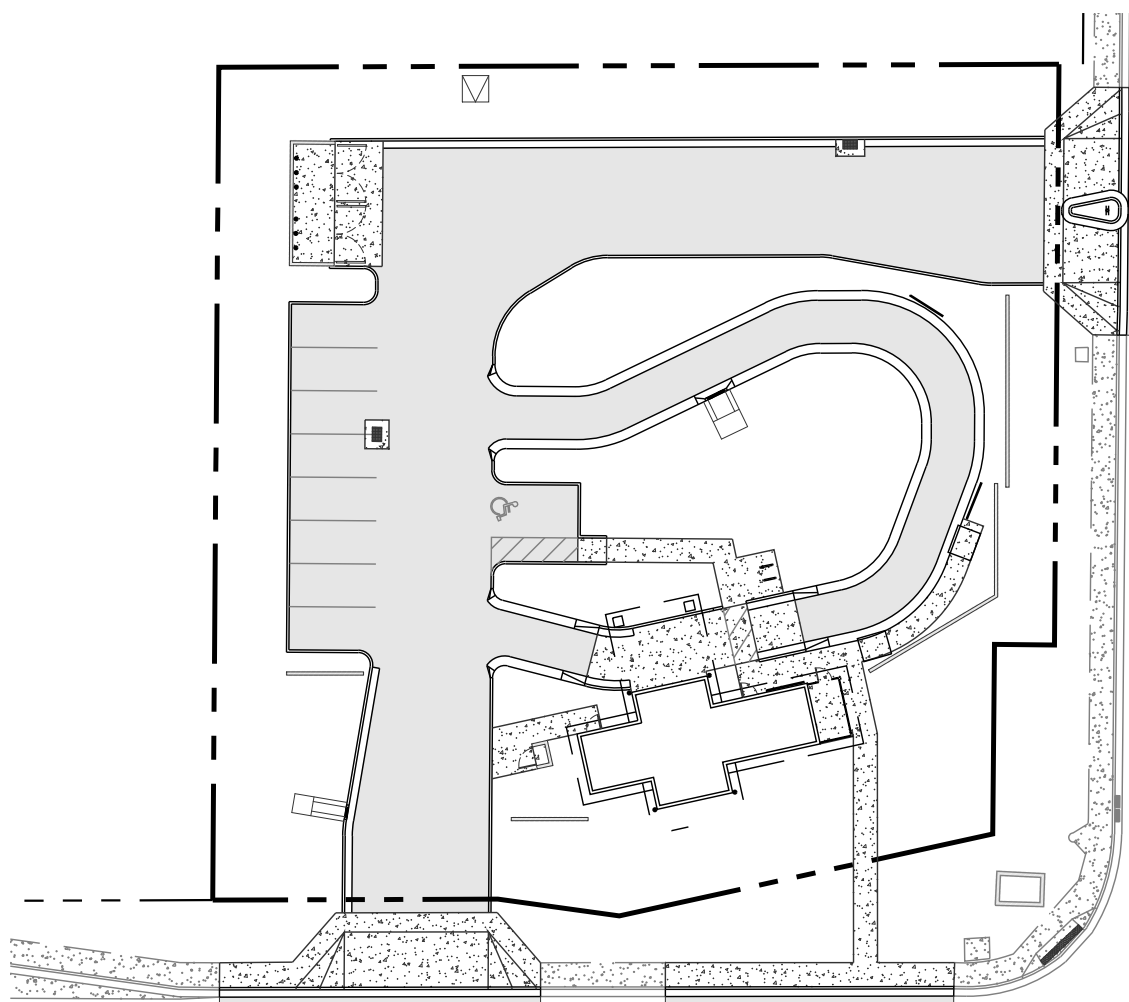


PRELIMINARY IMPROVEMENT PLAN for GRAVITY - CENTER AND MCKELLIPS

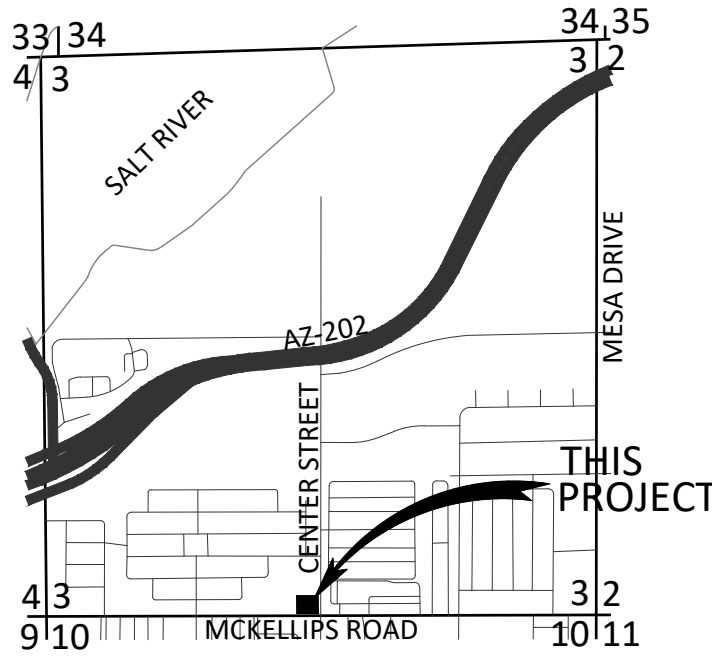
16 WEST MCKELLIPS MESA, ARIZONA
A PORTION SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



CENTER STREET

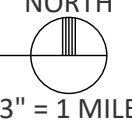
MCKELLIPS ROAD

PROJECT OVERVIEW



IN THE SE 1/4 OF THE SW 1/4 OF SECTION 3,
T. 1 N., R. 5 E., G. & S. R. M.,
CITY OF MESA, MARICOPA COUNTY, ARIZONA

LOCATION MAP



PROJECT INFORMATION

PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE CONSTRUCTION OF A NEW SINGLE-STORY DRIVE-THRU BEVERAGE KIOSK WITH ALL REQUIRED GRADING & DRAINAGE, UTILITY AND PAVING IMPROVEMENTS.

ADDRESS:
16 WEST MCKELLIPS ROAD
MESA, ARIZONA 85201

APN: 136-17-0035

ZONING: LC

SITE AREA: 29,145 SF (0.669 AC)

SURVEY NOTES

- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:
SUPERIOR SURVEYING SERVICES, INC.
2122 WEST LONE CACTUS DRIVE, SUITE 11
PHOENIX, ARIZONA 85027
PH: 623-869-0223
CONTACT: DAVID S. KLEIN, R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE MONUMENT LINE OF MCKELLIPS ROAD, ALSO BEING THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 3 USING A BEARING OF S 89°48'39" W, PER THE RECORD OF SURVEY, BOOK 956 OF MAPS, PAGE 44, RECORDS OF MARICOPA COUNTY, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE CITY OF MESA BENCHMARK, BEING A NAIL IN WASHER, LOCATED AT THE INTERSECTION OF COUNTRY CLUB DRIVE AND MCKELLIPS ROAD, HAVING AN ELEVATION OF 1217.79 FEET, NAVD88.

BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE CITY OF MESA BENCHMARK, BEING A NAIL IN WASHER, LOCATED AT THE INTERSECTION OF COUNTRY CLUB DRIVE AND MCKELLIPS ROAD, HAVING AN ELEVATION OF 1217.79 FEET, NAVD88.

FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C2255L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH 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.

LEGAL DESCRIPTION

THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTH QUARTER CORNER OF SAID SECTION 3;
THENCE SOUTH 89 DEGREES 26 MINUTES 00 SECONDS WEST ALONG THE SOUTH LINE OF SAID SECTION 3, (SAIDLINE ALSO BEING THE CENTERLINE OF MCKELLIPS ROAD, A DISTANCE OF 220.00 FEET;
THENCE NORTH 00 DEGREES 03 MINUTES 20 SECONDS EAST ALONG A LINE PARALLEL WITH THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 3, A DISTANCE OF 235.00 FEET;
THENCE NORTH 89 DEGREES 26 MINUTES 00 SECONDS EAST ALONG A LINE PARALLEL WITH THE SOUTH LINE OF SAID SECTION 3, A DISTANCE OF 220.00 FEET TO A POINT ON THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 3;
THENCE SOUTH 00 DEGREES 03 MINUTES 20 SECONDS WEST ALONG THE EAST LINE OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 3, (SAID LINE ALSO BEING THE CENTERLINE OF CENTER STREET), A DISTANCE OF 235.00 FEET TO THE TRUE POINT OF BEGINNING.
EXCEPTING THEREFROM THE WEST 5 FEET OF THE EAST 45 FEET AS CONVEYED TO THE CITY OF MESA BY INSTRUMENT NUMBER 84-551312 AND IN INSTRUMENT NO. 85-092583;
ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF MESA BY INSTRUMENT NO. 97-0869696 AND AS DESCRIBED AS FOLLOWS:
THAT PORTION OF THE ABOVE DESCRIBED PROPERTY WHICH LIES SOUTHERLY OF THE FOLLOWING DESCRIBED LINE:
COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 1 NORTH, RANGE 5 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;
THENCE EAST (AN ASSUMED BEARING), ALONG THE SOUTH LINE OF SAID SOUTHWEST QUARTER, SECTION 3, A DISTANCE OF 2252.81 FEET;
THENCE NORTH, PERPENDICULAR TO SAID SOUTH LINE OF THE SOUTHWEST QUARTER, A DISTANCE OF 55.00 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 61 DEGREES 54 MINUTES 34 SECONDS EAST, A DISTANCE OF 25.48 FEET;
THENCE NORTH 89 DEGREES 59 MINUTES 55 SECONDS EAST, A DISTANCE OF 30.52 FEET;
THENCE SOUTH, PERPENDICULAR TO SAID SOUTH LINE OF THE SOUTHWEST QUARTER, A DISTANCE OF 5.50 FEET;
THENCE EAST ALONG A LINE 61.50 FEET NORTH OF AND PARALLEL WITH SAID SOUTH LINE OF THE SOUTHWEST QUARTER, A DISTANCE OF 175.64 FEET;
THENCE SOUTH 81 DEGREES 51 MINUTES 23 SECONDS EAST, A DISTANCE OF 25.55 FEET TO A POINT 57.88 FEET NORTH OF SAID SOUTH LINE OF THE SOUTHWEST QUARTER;
THENCE NORTH 77 DEGREES 48 MINUTES 44 SECONDS EAST, A DISTANCE OF 79.66 FEET;
THENCE NORTH 00 DEGREES 37 MINUTES 24 SECONDS EAST, ALONG A LINE 57.51 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 39.47 FEET;
THENCE SOUTH 89 DEGREES 22 MINUTES 36 SECONDS EAST, PERPENDICULAR TO THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 12.51 FEET;
THENCE SOUTH 00 DEGREES 37 MINUTES 24 SECONDS WEST, ALONG A LINE 45.00 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF SAID SOUTHWEST QUARTER, A DISTANCE OF 59.03 FEET TO A POINT WHICH BEARS NORTH 39 DEGREES 17 MINUTES 22 SECONDS WEST A DISTANCE OF 71.06 FEET FROM THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER AND SAID LINE THERE TERMINATING.

DRAINAGE STATEMENT

-SITE IS NOT IN A SPECIAL FLOOD HAZARD AREA
-OFFSITE FLOWS DO NOT AFFECT THIS SITE
-RETENTION PROVIDED IS 100-YR, 2-HR
-EXTREME STORM OUTFALLS THE SITE AT THE SOUTHWEST CORNER AT THE ELEVATION OF 1221.19

PROJECT RETENTION

RETENTION VOLUME (100-YEAR, 2-HOUR):
VOLUME [CF] = Cw x (P [IN] / 12) x AREA [SF]

ONSITE RETENTION CHAMBERS:
 $C_w = (6,416 \text{ SF} \times 0.50) + (9,481 \text{ SF} \times 0.95) / 15,897 \text{ SF}$
 $C_w = 0.77$

REQUIRED ONSITE VOLUME:
 $V = 0.77 \times (2.17/12) \times 15,897 = 2,214 \text{ CF}$

- PROVIDED VOLUME:
- 2,370 CF IS PROVIDED VIA A NEW UNDERGROUND STORMTECH MC-4500 CHAMBER SYSTEM, WHICH SHALL DRAIN VIA PUMP BLEED-OFF TO MESA STORM DRAIN.
 - STORMTECH MC-3500 STORM WATER CHAMBERS
 - (12) STORMTECH MC-3500 CHAMBERS @ 175.0 CF PER CHAMBER = 2,100CF
 - (6) STORMTECH MC-3500 END CAPS @ 45.1 CF PER END CAP = 270.6 CF
 - INSTALLED WITH 12" COVER STONE AND 9" BASE STONE.
 - STONE SHALL HAVE 40% VOID RATIO

ONSITE SURFACE BASIN #1:
 $CW = (2,421 \text{ SF} \times 0.50) + (1,711 \text{ SF} \times 0.95) / 4,132 \text{ SF}$
 $CW = 0.69$

REQUIRED ONSITE VOLUME:
 $V = 0.69 \times (2.17/12) \times 4,132 = 516 \text{ CF}$

PROVIDED VOLUME:
545 CF VIA A NEW 1' DEEP SURFACE RETENTION BASIN THAT SHALL DRAIN VIA NATURAL PERCOLATION.

ONSITE SURFACE BASIN #2:
 $CW = (5,465 \text{ SF} \times 0.50) + (3,860 \text{ SF} \times 0.95) / 9,325 \text{ SF}$
 $CW = 0.69$

REQUIRED ONSITE VOLUME:
 $V = 0.69 \times (2.17/12) \times 9,325 = 1,164 \text{ CF}$

PROVIDED VOLUME:
1,200 CF VIA A NEW 1' DEEP SURFACE RETENTION BASIN THAT SHALL DRAIN VIA NATURAL PERCOLATION.

LEGEND

| | | | |
|-----|---------------------------------------|----|-------------------------------|
| --- | PROJECT RIGHT-OF-WAY | ● | NEW SEWER MANHOLE |
| --- | EXISTING RIGHT-OF-WAY | ⊙ | NEW SEWER CLEANOUT |
| --- | PROJECT/NEW PROPERTY LINE | ⊗ | NEW WATER VALVE |
| --- | ROADWAY CENTERLINE | W | NEW WATER METER |
| --- | EXISTING EASEMENT | BF | NEW BACKFLOW PREVENTER |
| --- | EXISTING CONTOUR | ⊙ | NEW FIRE HYDRANT |
| --- | NEW CONTOUR | ⊙ | NEW FIRE BACKFLOW PREVENTER |
| --- | EXISTING CONCRETE | ⊙ | NEW REDUCER |
| --- | EXISTING WALL | SD | NEW STORM DRAIN PUMP/WET WELL |
| --- | NEW ASPHALT | ⊙ | NEW TRANSFORMER |
| --- | NEW CONCRETE | ⊙ | NEW SIGN |
| --- | NEW WALL | ⊙ | NEW SITE LIGHT |
| --- | EXISTING CURB | ⊙ | SURVEY MONUMENT AS NOTED |
| --- | EXISTING PAINT STRIPE | ⊙ | SPOT ELEV. (EXIST. GRADE) |
| --- | EXISTING FENCE | ⊙ | SPOT ELEV. (NEW GRADE) |
| --- | NEW CURB | ⊙ | RIGHT-OF-WAY |
| --- | NEW PAINT STRIPE | ⊙ | BACK OF CURB |
| --- | EXISTING STORM DRAIN PIPE | ⊙ | BACK OF SIDEWALK |
| --- | EXISTING IRRIGATION PIPE | ⊙ | RECORDED VALUE |
| --- | EXISTING COMMUNICATION LINE | ⊙ | MEASURED VALUE |
| --- | EXISTING SEWER LINE | ⊙ | RADIUS |
| --- | NEW STORM DRAIN PIPE | ⊙ | PAVEMENT (ASPHALT) |
| --- | NEW SEWER LINE | ⊙ | CONCRETE |
| --- | NEW WATER LINE | ⊙ | GUTTER |
| --- | NEW FIRE SERVICE | ⊙ | TOP OF CURB |
| --- | EXISTING WATER METER | ⊙ | FINISHED GRADE |
| --- | EXISTING BACKFLOW PREVENTER | ⊙ | TOP OF FOOTING |
| --- | EXISTING SITE LIGHT | ⊙ | TOP OF WALL |
| --- | EXISTING TRAFFIC SIGNAL STRUCTURE | ⊙ | LOW POINT |
| --- | EXISTING ELECTRIC PULL BOX | ⊙ | HIGH POINT |
| --- | EXISTING ELECTRICAL EQUIPMENT | ⊙ | GRADE BREAK |
| --- | EXISTING COMMUNICATION PEDESTAL | ⊙ | FINISHED FLOOR ELEVATION |
| --- | EXISTING COMMUNICATION PULL BOX/VAULT | ⊙ | PUBLIC UTILITY EASEMENT |
| --- | EXISTING TRAFFIC LIGHT PULL BOX | ⊙ | MATCH EXISTING |
| --- | EXISTING TRAFFIC CONTROL BOX | ⊙ | |
| --- | EXISTING UTILITY POLE | ⊙ | |
| --- | EXISTING SEWER MANHOLE | ⊙ | |

OWNER/DEVELOPER

BH RE INVESTMENTS
106 SOUTH KYRENE ROAD, #2
CHANDLER, ARIZONA 85226
PH: 480-590-8403
ATTN: BERT HAYENGA

CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT
4450 NORTH 12TH STREET, #228
PHOENIX, ARIZONA 85014
PH: 623-282-2498
ATTN: JEFF HUNT, PE

ARCHITECT

ARCHICON ARCHITECTURE AND INTERIORS
5055 EAST WASHINGTON STREET, SUITE 200
PHOENIX, ARIZONA 85034
PH: (602)-222-4266
ATTN: JEFFREY A. KOSKI

UTILITIES

WATER: CITY OF MESA
SEWER: CITY OF MESA
ELECTRIC: SALT RIVER PROJECT
GAS: SOUTHWEST GAS
TELEPHONE: CENTURYLINK
CABLE: COX COMMUNICATIONS

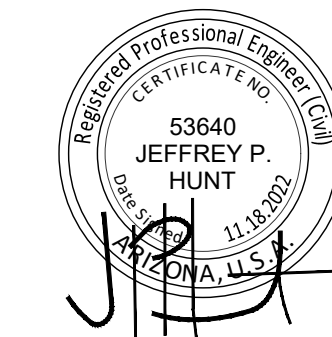
SHEET INDEX

- COVER SHEET
- GRADING AND DRAINAGE PLAN
- ONSITE UTILITY PLAN

PRELIMINARY IMPROVEMENT PLAN for GRAVITY - CENTER AND MCKELLIPS

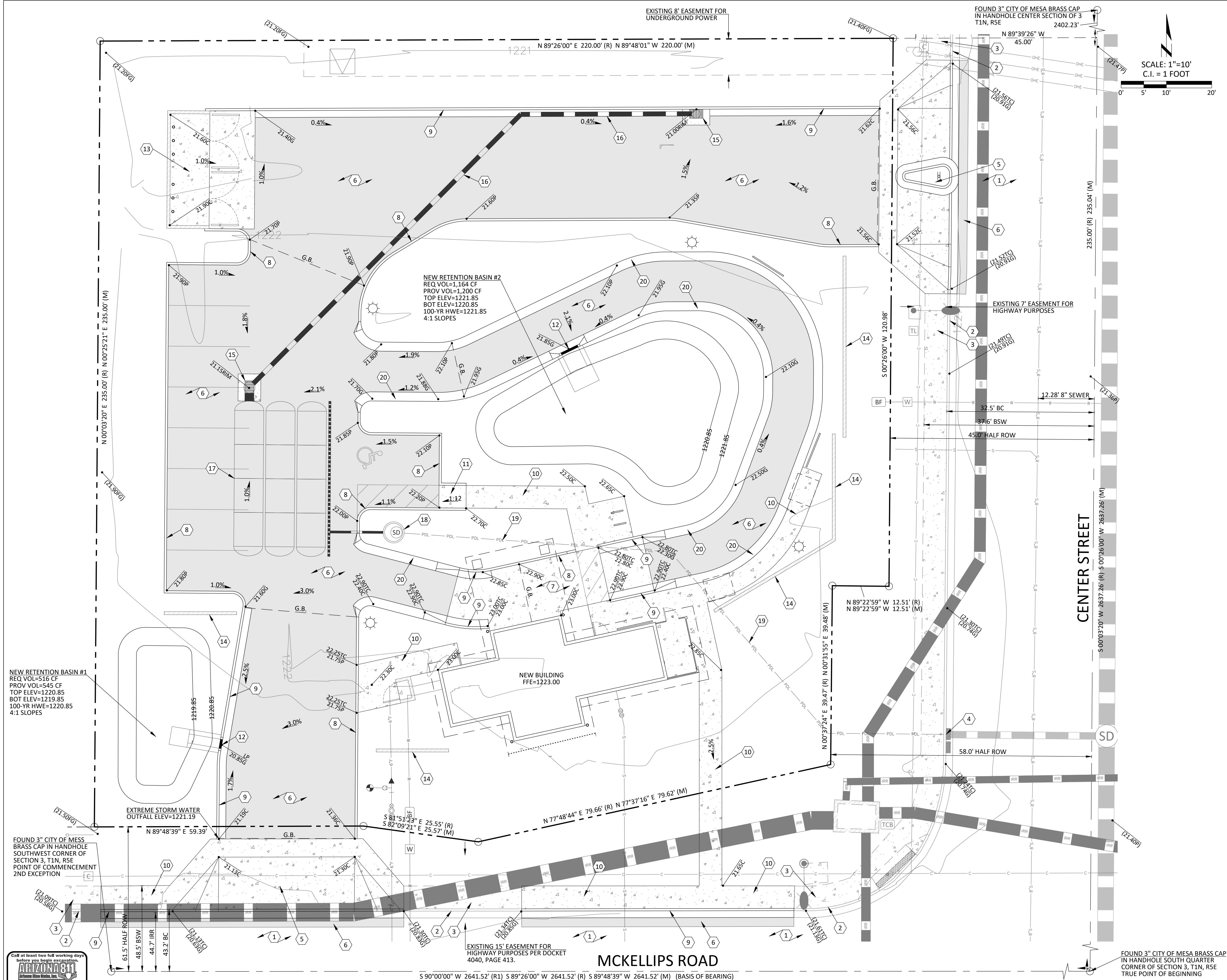
16 WEST MCKELLIPS MESA, ARIZONA

cover



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| DRAWN: | PT |
| DESIGNED: | JH |
| CHECKED: | JH |
| DATE: | 11-18-2022 |
| JOB NO: | 22.126 |
| SHEET NUMBER | |



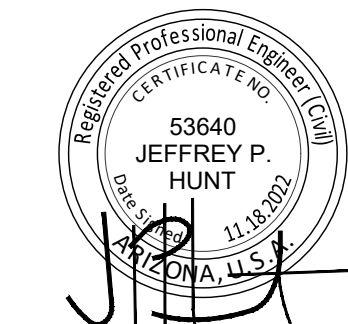


- KEYNOTES**
- 1 EXISTING ASPHALT TO REMAIN.
 - 2 EXISTING CURB TO REMAIN.
 - 3 EXISTING CONCRETE SIDEWALK TO REMAIN.
 - 4 EXISTING STORM DRAIN CATCH BASIN TO REMAIN. CONNECT NEW BLEED-OFF PIPE TO CATCH BASIN.
 - 5 NEW CONCRETE DRIVEWAY.
 - 6 NEW ASPHALT PAVEMENT.
 - 7 NEW CONCRETE PAVEMENT.
 - 8 NEW CONCRETE VERTICAL CURB.
 - 9 NEW CONCRETE VERTICAL CURB AND GUTTER.
 - 10 NEW CONCRETE SIDEWALK.
 - 11 NEW ACCESSIBLE ACCESS RAMP.
 - 12 NEW CURB OPENING AND RIP RAP SPILLWAY.
 - 13 NEW TRASH ENCLOSURE.
 - 14 NEW MASONRY SCREEN WALL.
 - 15 NEW STORM DRAIN INLET.
 - 16 NEW STORM DRAIN PIPE.
 - 17 NEW STORMTECH MC-3500 STORM WATER CHAMBERS. TOTAL REQUIRED VOLUME = 2,214 CF. TOTAL INSTALLED VOLUME = 2,370 CF.
 - 18 NEW WET WELL PUMP.
 - 19 NEW PVC BLEED-OFF PIPE.
 - 20 NEW CONCRETE ROLL CURB.

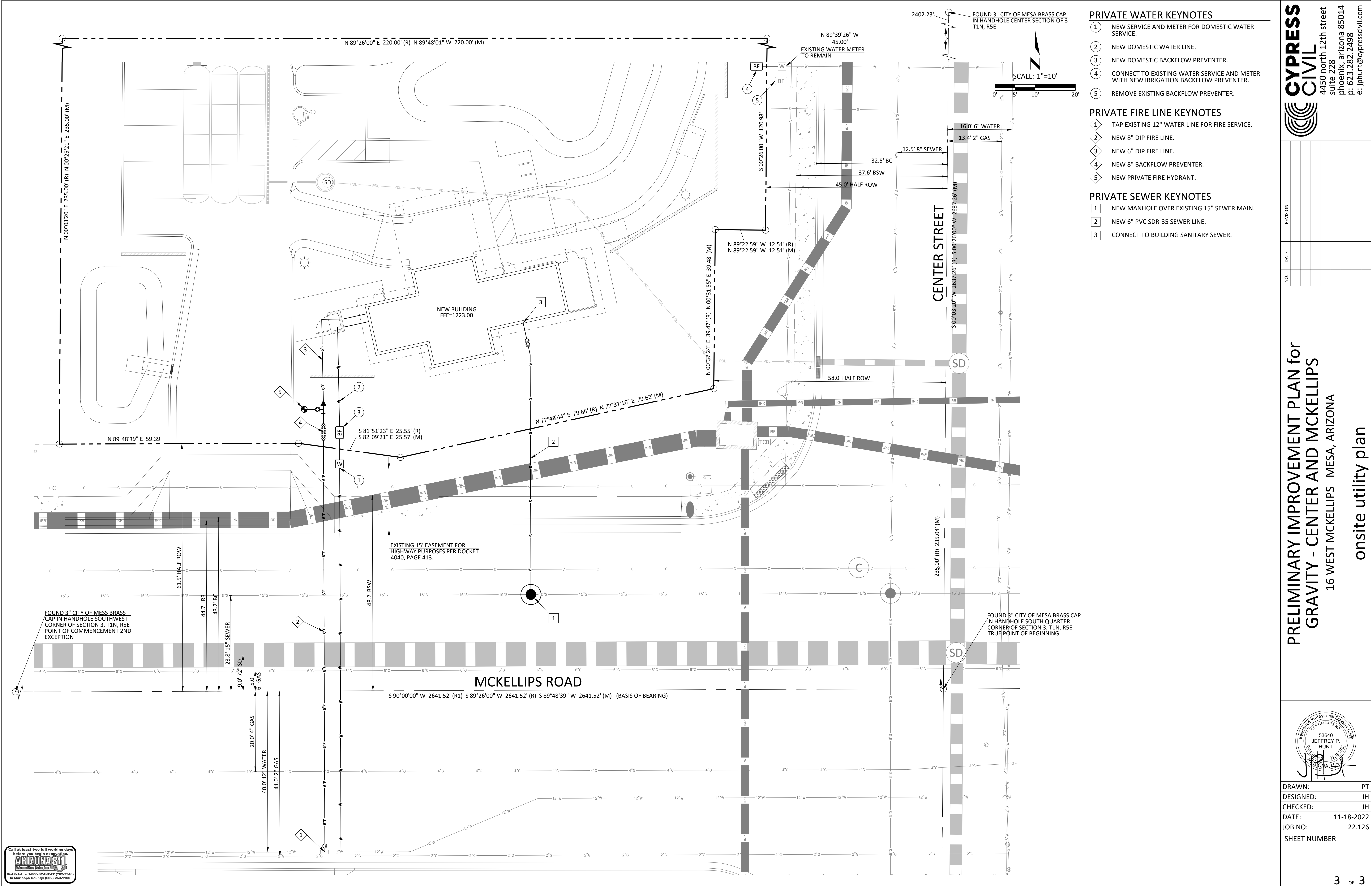
**PRELIMINARY IMPROVEMENT PLAN for
GRAVITY - CENTER AND MCKELLIPS**
16 WEST MCKELLIPS MESA, ARIZONA
grading and drainage plan

CYPRESS CIVIL
4450 north 12th street
suite 228
phoenix, arizona 85014
p: 623.282.2498
e: jphunt@cypresscivil.com

Drawn: PT
Designed: JH
Checked: JH
Date: 11-18-2022
Job No: 22.126
Sheet Number



THESE PLANS ARE PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING



THESE PLANS ARE PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING

PRIVATE WATER KEYNOTES

- 1 NEW SERVICE AND METER FOR DOMESTIC WATER SERVICE.
- 2 NEW DOMESTIC WATER LINE.
- 3 NEW DOMESTIC BACKFLOW PREVENTER.
- 4 CONNECT TO EXISTING WATER SERVICE AND METER WITH NEW IRRIGATION BACKFLOW PREVENTER.
- 5 REMOVE EXISTING BACKFLOW PREVENTER.

PRIVATE FIRE LINE KEYNOTES

- 1 TAP EXISTING 12" WATER LINE FOR FIRE SERVICE.
- 2 NEW 8" DIP FIRE LINE.
- 3 NEW 6" DIP FIRE LINE.
- 4 NEW 8" BACKFLOW PREVENTER.
- 5 NEW PRIVATE FIRE HYDRANT.

PRIVATE SEWER KEYNOTES

- 1 NEW MANHOLE OVER EXISTING 15" SEWER MAIN.
- 2 NEW 6" PVC SDR-35 SEWER LINE.
- 3 CONNECT TO BUILDING SANITARY SEWER.

CYPRESS
CIVIL

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e: jphunt@cypresscivil.com

PRELIMINARY IMPROVEMENT PLAN for
GRAVITY - CENTER AND MCKELLIPS
16 WEST MCKELLIPS MESA, ARIZONA
onsite utility plan



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|--------------|------------|
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