

**ENGINEER'S GENERAL NOTES**

1. ALL CONSTRUCTION SHALL CONFORM WITH THE LATEST EDITION OF THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD AND SPECIFICATIONS, THE PLUMBING CODE ADOPTED BY THE LOCAL JURISDICTION, AND ALL APPLICABLE CODES & ORDINANCES. WHERE SPECIFICATIONS PROVIDE OVERLAPPING REQUIREMENTS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
2. CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED.
4. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING INCIDENTAL, SURVEYING & INSPECTION.
5. CONTRACTOR SHALL INSTALL SIGNAGE, PAINT, PAVEMENT MARKINGS, REFLECTORS AND OTHER REQUIRED COMPONENTS AS DIRECTED BY THE TRACER WIRE AND WARNING TAPE 6" ABOVE THE PIPE.
6. ALL QUANTITIES SHOWN ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL INDEPENDENTLY VERIFY QUANTITIES.
7. CONTRACTOR SHALL WARRANT ALL WORK FOR A MINIMUM OF 1 YEAR OR AS DEFINED BY CONTRACT DOCUMENTS, WHICHEVER IS GREATER.
8. CONTRACTOR SHALL PROVIDE REPRODUCIBLE "AS-BUILT RECORD DRAWINGS" SEALED BY A REGISTERED LAND SURVEYOR TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE WORK.
9. ALL DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED.

**ENGINEER'S UTILITY NOTES**

1. EXISTING UTILITIES ARE SHOWN WITH BEST AVAILABLE INFORMATION HOWEVER NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ARIZONA 811 PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE THAT MAY BE INCURRED TO THE UTILITIES AND BE LIABLE FOR ANY REPAIR COSTS INCLUDING ACCIDENTAL COSTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING THE OWNER OF EACH VARIOUS UTILITY AND FACILITY WITH WHICH THERE ARE CONFLICTS WITH THE NEW CONSTRUCTION AND MAKING ALL NECESSARY ARRANGEMENTS WITH THE OWNER FOR RELOCATION OR ABANDONING THE UTILITY OR FACILITY AS REQUIRED BY ITS OWNER.
2. ALL PIPE TRENCH CROSS SECTIONS SHALL CONFORM TO MAG STANDARD DETAIL 200-1 TYPE B AND 200-2 UNLESS OTHERWISE NOTED PER PLAN.
3. ALL WATER PIPING SHALL BE INSTALLED WITH RESTRAINED JOINTS.
4. LOCATOR MARKER BALLS SHALL BE LOCATED AT ALL FITTINGS AND SERVICE CONNECTIONS AND AT MINIMUM 200' SPACING ALONG THE PIPE FOR WATER & SEWER LINES.
5. ALL PIPING SHALL BE INSTALLED WITH TRACER WIRE AND WARNING TAPE 6" ABOVE THE PIPE.
6. CONTRACTOR SHALL VERTICALLY REALIGN WATER LINES AS REQUIRED AT UTILITY CROSSINGS PER MAG STD DET 404-1, 2 & 3 WHERE REQUIRED.
7. ALL WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPEC 610.16 AND 611.
8. ALL DIP PIPING SHALL BE INSTALLED WITH POLYWRAP.
9. ALL DAMAGED OR DISTURBED FINISH GRADE MATERIALS (DG, ROCK MULCH, RIPRAP, GRASS, ETC) SHALL BE REPLACED IN-KIND. GRASS SHALL BE REPLACED WITH SOO AND MATCH TO THE EXISTING VARIETY AND A SAMPLE SHALL BE SUBMITTED TO THE OWNER FOR APPROVED PRIOR TO CONSTRUCTION. DG, ROCK MULCH AND RIPRAP SHALL MATCH TO EXISTING ON-SITE COLOR & TYPE AND A SAMPLE SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
10. IN ACCORDANCE WITH THE SAFE DRINKING WATER ACT AND AAC R18-4-213, ALL MATERIALS INSTALLED AFTER JANUARY 4, 2014 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60, 61, & 372. ALL POTABLE WATERLINES AND FITTINGS SHALL HAVE A NSF-PW SEAL. ALL MATERIALS SHALL BE LEAD FREE AS DEFINED IN NSF 372, AAC R18-5-504 & AAC R18-4-101.
11. ALL ABOVE GROUND PIPING AND PIPING EXPOSED TO THE ATMOSPHERE SHALL BE COATED WITH A PRIMER COAT AND A FINISH COAT AS FOLLOWS:  
FERROUS METAL-PRIME COATS SHALL BE AN EPOXY PRIMER COMPATIBLE FOR USE WITH URETHANE FINISH COATS AND APPLIED IN ACCORDANCE WITH WRITTEN INSTRUCTIONS OF THE COATING MANUFACTURER.  
NONFERROUS AND GALVANIZED METAL: NONFERROUS AND GALVANIZED METAL SHALL BE CLEANED PRIOR TO THE APPLICATION OF THE PRIME COAT PRIMER SHALL BE ONE COATING AT MANUFACTURER'S RECOMMENDED DRY FILM THICKNESS FINISH COAT SHALL BE ONE OR MORE COATS AT MANUFACTURER'S RECOMMENDED DRY FILM THICKNESS PER COAT TO A DRY SYSTEM THICKNESS OF 2 MILLS.

**ENGINEER'S GRADING & DRAINAGE NOTES**

1. A GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
2. ALL SLOPES SHALL NOT EXCEED 4:1 INCLUDING RETENTION BASIN SIDE SLOPES UNLESS NOTED OTHERWISE ON THE PLANS.
3. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, DITCHES, PIPES, BERMS, CHANNELS OR OTHER MEASURES DESIGNED TO PROTECT FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO ANY STRUCTURE BEING BUILT.
4. THE CONTRACTOR SHALL SUBMIT AN NOI TO ADEQ AND IMPLEMENT A SWMP WITH EMPS THAT MEETS ALL ADEQ REQUIREMENTS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL RELATED TO THE PROJECT CONSTRUCTION.
6. ALL FINISH LANDSCAPE GRADES ADJACENT TO SIDEWALK OR CURB & GUTTER SHALL BE 2" BELOW TOP OF CONCRETE IN ALL LOCATIONS. ALL FINISH LANDSCAPE GRADES ADJACENT TO BUILDINGS SHALL BE 4" BELOW FINISH FLOOR ELEVATION. ALL GRADES WITHIN 10' OF BUILDINGS SHALL SLOPE AWAY FROM BUILDINGS.
7. ALL PEDESTRIAN ACCESSIBLE ROUTES SHALL MEET ALL ADA REQUIREMENTS AND SHALL HAVE A CONSTRUCTED MAXIMUM OF 2% CROSS SLOPE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND A CONSTRUCTED MAXIMUM OF 5% LONGITUDINAL SLOPE IN THE DIRECTION OF TRAVEL.
8. ALL LANDSCAPE IRRIGATION LINES AND APPURTENANCES SHALL BE PROTECTED IN PLACE OR REPLACED IN-KIND TO SAME OR BETTER CONDITION UNLESS OTHERWISE DIRECTED ON THE LANDSCAPE PLANS.
9. ALL UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO VALVE BOXES, MANHOLES, CLEANOUTS AND METER/UTILITY BOXES SHALL BE ADJUSTED TO FINISH GRADE.
10. ALL ELEVATIONS ARE TO FINISH GRADE OF MATERIALS (ASPHALT, CONCRETE, RIPRAP, DG, ETC.) CONTRACTOR SHALL OVER EXCAVATE AS REQUIRED TO MEET ELEVATIONS PER PLAN.
11. CONTRACTOR SHALL MATCH TO EXISTING GRADE AT ALL LOCATIONS WHERE NEW HARDSCAPE (SIDEWALK, CURB, PAVEMENT, ETC) ADJUTS EXIST HARDSCAPE.
12. ALL AREAS SHALL BE COMPACTED TO 95% EXCEPT THE BOTTOM OF RETENTION BASINS.

**ENGINEER'S PAVING NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE BARRICADING AND TRAFFIC CONTROL, WHERE THE CONSTRUCTION OF THE NEW IMPROVEMENTS IS ADJACENT TO OR CONNECTING TO ANY EXISTING FACILITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY AND FINAL CLEAN-UP OPERATIONS OF ADJACENT, EXISTING PAVED STREETS USED BY CONSTRUCTION TRAFFIC. THIS WORK INCLUDES STREET SWEEPING, POWER BROOM AND WATER AS NEEDED.
3. CONTRACTOR SHALL SUBMIT ASPHALT MIX DESIGN TO ENGINEER.
4. DAMAGED OR CRACKED CONCRETE CURB, GUTTER, VALLEY GUTTER, SIDEWALK, CONCRETE PAVEMENT, OR DRIVEWAY SLABS SHALL BE REPLACED IN-KIND BEFORE FINAL ACCEPTANCE OF THE WORK AT NO ADDITIONAL COST TO THE OWNER.
5. CORRECTION OF CONCRETE AND ASPHALT DEFICIENCIES:  
A. INVERSE FLOWS IN CONCRETE CURB & GUTTER AND VALLEY GUTTER APRONS: TO BE REPLACED. NO GRINDING ALLOWED.  
B. INCORRECT ELEVATIONS WITH CORRECT FLOW DIRECTION: FLAT GRINDING MAY BE ALLOWED, BUT NO SLOT GRINDING.  
C. LOW SPOTS IN ASPHALT: TACK AND SKIN PATCH WITH CEMENT BASED AC, 1/2" MIX. SLURRY SEAL MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.  
D. HIGH SPOTS IN ASPHALT: GRINDING OR MILLING, 3/4" MINIMUM WITH TACK AND A.C. PATCH, CEMENT BASED. SLURRY SEAL MAY BE REQUIRED.  
E. RE-HEATING OR BURNING OF ASPHALT NOT ALLOWED.  
F. ASPHALT REPLACEMENT: SAWCUT AND REMOVE WITH LIKE REPLACEMENT OF AC MIX MATCHING EXST THICKNESS. RECOMPACTION OF ABC SUBGRADE REQUIRED. SLURRY SEAL MAY BE REQUIRED. TACK REQUIRED.  
G. CURB & GUTTER, VALLEY GUTTER, SIDEWALK & PCOP CRACKS: TO BE REMOVED AND REPLACED TO THE NEAREST JOINT.  
H. ASPHALT GAPS AND SEAMS: SLURRY SEAL OR MICRO SEAL. MILLING AND AC PATCH MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE FOR REVIEW A JOINT LAYOUT FOR PORTLAND CEMENT CONCRETE PAVEMENT CONFORMING TO THE RECOMMENDATIONS IN ACI 223 224.3R. CONTRACTION JOINT/CONTROL JOINT SPACING SHALL NOT EXCEED 2.5 FEET X THE SLAB THICKNESS IN INCHES OR 15 FEET, WHICHEVER IS LESS. JOINTS SHALL CONFORM TO MAG STANDARDS AND SPECIFICATIONS. EXPANSION JOINTS SHALL INCLUDE EXPANSION JOINT FILLER PER MAG SPECIFICATION SECTION 729.

**ENGINEER'S AS-BUILT CERTIFICATION**

I, \_\_\_\_\_, STATE THAT I HAVE REVIEWED THE AS-BUILT DRAWING(S) FOR THE SAN CARLOS WAREHOUSE/SUPPORT BUILDING, AND CERTIFY THAT THE DEVELOPMENT HAS BEEN CONSTRUCTED ACCORDING TO THE APPROVED GRADING & DRAINAGE PLANS, AND IMPROVEMENT PLANS, AND THAT IT SHALL FUNCTION AS DESIGNED.

REGISTERED ENGINEER/LAND SURVEYOR \_\_\_\_\_ DATE \_\_\_\_\_  
REGISTRATION NUMBER \_\_\_\_\_

# CIVIL IMPROVEMENTS

## FOR

### FORT APACHE HERITAGE FOUNDATION

### FORT APACHE - BUILDING 116 REHABILITATION

### 116 GERONIMO ST, FOR APACHE AZ 85926

**Addendum 7**  
supersedes the Civil  
Drawings in the Bid Set:  
C1.0 - C5.1



**ABBREVIATIONS**

ABC	AGGREGATE BASE COURSE	G	GAS	SEC	SECTION
AC	ASPHALT CONCRETE	GB	GRADE BREAK	SHT	SHEET
ADA	AMERICANS WITH DISABILITIES ACT	GW	GRAY WATER	SPEC	SPECIFICATIONS
AVE	AVENUE	HWS	HOT WATER SUPPLY	SRP	SALT RIVER PROJECT
ACHH	ALUMINUM CAP IN HANDHOLE	HWR	HOT WATER RETURN	STA	STATION
BCH	BRASS CAP IN HANDHOLE	CHWS	CHILLED WATER SUPPLY	STD	STANDARD
BLDG	BUILDING	CHWR	CHILLED WATER RETURN	T	TOWNSHIP
BM	BENCHMARK	INV	INVERT	TW	TOP OF WALL
BT	BOTTOM	IRR	IRRIGATION	TC	TOP OF CURB
C	CONCRETE ELEVATION	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	TEL	TELEPHONE
CATV	CABLE TELEVISION	M	MONUMENT LINE	TEMP	TEMPORARY
C	CENTERLINE	MOD	MODIFIED	UNK	UNKNOWN
COMM	COMMUNICATION	NTS	NOT TO SCALE	UTL	UTILITY
CONC	CONCRETE	OHE	OVERHEAD ELECTRIC	VCP	VITRIFIED CLAY PIPE
CONST	CONSTRUCTION	OHT	OVERHEAD TELEPHONE	VE	EXISTING BASIN VOLUME
DET	DETAIL	P	PAVEMENT ELEVATION	VP	VOLUME PROVIDED
DG	DECOMPOSED GRANITE	PKNG	PARKING	VR	VOLUME REQUIRED
DIP	DUCTILE IRON PIPE	R	PROPERTY LINE	W	WATER
E/P	EDGE OF PAVEMENT	PROV	PROVIDED	WM	WATER METER
EB	ELECTRIC PULLBOX	PUE	PUBLIC UTILITY EASEMENT	WSE	WATER SURFACE ELEVATION
EL	ELEVATION	PVC	POLY VINYL CHLORIDE		
ELEC	ELECTRIC	PVMT	PAVEMENT		
ESMT	EASEMENT	R	RADIUS		
EXST	EXISTING	RID	ROOSEVELT IRRIGATION DISTRICT		
F/C	FACE OF CURB	R/W	RIGHT-OF-WAY		
FF	FINISH FLOOR ELEVATION	REQ	REQUIRED		
FG	FINISH GRADE ELEVATION	S	SEWER		
FL	FIRE LINE	S/W	SIDEWALK		
FO	FIBER OPTIC	SCH	SCHEDULE		
FT	FOOT OR FEET	SD	STORM DRAIN		

**PROJECT CONTACT INFORMATION**

OWNER  
FORT APACHE HERITAGE FOUNDATION  
P.O. BOX 507  
FORT APACHE, AZ 85926  
CONTACT: KRISTA BEAZLEY  
P: 928.338.3849

ARCHITECT  
SAWBACK PARTNERS PLLC  
7550 EAST McDONALD DR  
SCOTTSDALE, AZ 85250  
CONTACT: KIT GALLUP, MYLES CAMPBELL, JOHN SATHER  
P: 480.367.2100

CIVIL ENGINEER  
DIBBLE  
3020 EAST CAMELBACK RD, SUITE 201  
PHOENIX, AZ 85016  
CONTACT: ADRIAN CARVAJAL, PE  
P: 602.957.1155

**LEGAL DESCRIPTION**

A PORTION OF THE NORTH HALF OF THE NORTHEAST ¼ OF SECTION 35, TOWNSHIP 5 NORTH, RANGE 22 EAST, G&SRM, NAVAJO COUNTY, ARIZONA.

**PROJECT DESCRIPTION**

THIS PROJECT INCLUDES CIVIL IMPROVEMENTS RELATED TO PARKING, ACCESS, UTILITIES AND DRAINAGE FACILITIES.

**LEGEND**

EXIST	NEW

**SHEET INDEX**

SHEET NUMBER	SHEET TITLE
C1.0	COVER
C1.1	KEY MAP
C2.1	DEMOLITION PLAN
C3.1	CIVIL SITE PLAN
C4.1	GRADING & DRAINAGE PLAN
C5.1	UTILITY PLAN
C6.1	DETAILS
C7.1	CROSS SECTIONS

**EARTHWORK**

CUT: 4 CY  
FILL: 121 CY  
NET: 117 CY (FILL)

NOTE:  
CONTRACTOR SHALL CONDUCT INDEPENDENT EARTHWORK CALCULATIONS. ACTUAL FIELD CONDITIONS MAY VARY.

**PROJECT BENCHMARK**

▲ POINT NUMBER 104  
FOUND NGS PUBLISHED BENCHMARK 'F 406' DESCRIBED AS: 3.7 MILES SOUTHWESTERLY ALONG STATE HIGHWAY 73 FROM THE APACHE TRIBAL HEADQUARTERS IN WHITERIVER AND THENCE 0.5 MILE SOUTHEASTERLY ALONG A PAVED ROAD LEADING TO FORT APACHE, 200.8 FEET SOUTH OF THE CENTERLINE OF THE HIGHWAY, 82.4 FEET NORTHEAST OF AND ACROSS THE HIGHWAY FROM UTILITY POLE 24R7 WITH 2 GUY WIRES, 69.6 FEET SOUTHWEST OF A STONE AND BARBED WIRE FENCE AND 31.8 FEET NORTHEAST OF THE CENTERLINE OF THE PAVED ROAD. THE MARK IS 0.9 FT E FROM A WITNESS POST. THE MARK IS 3 FT ABOVE THE ROAD.

GROUND NORTHING = 1015250.83  
GROUND EASTING = 750549.88  
PUBLISHED ELEVATION = 5009.79

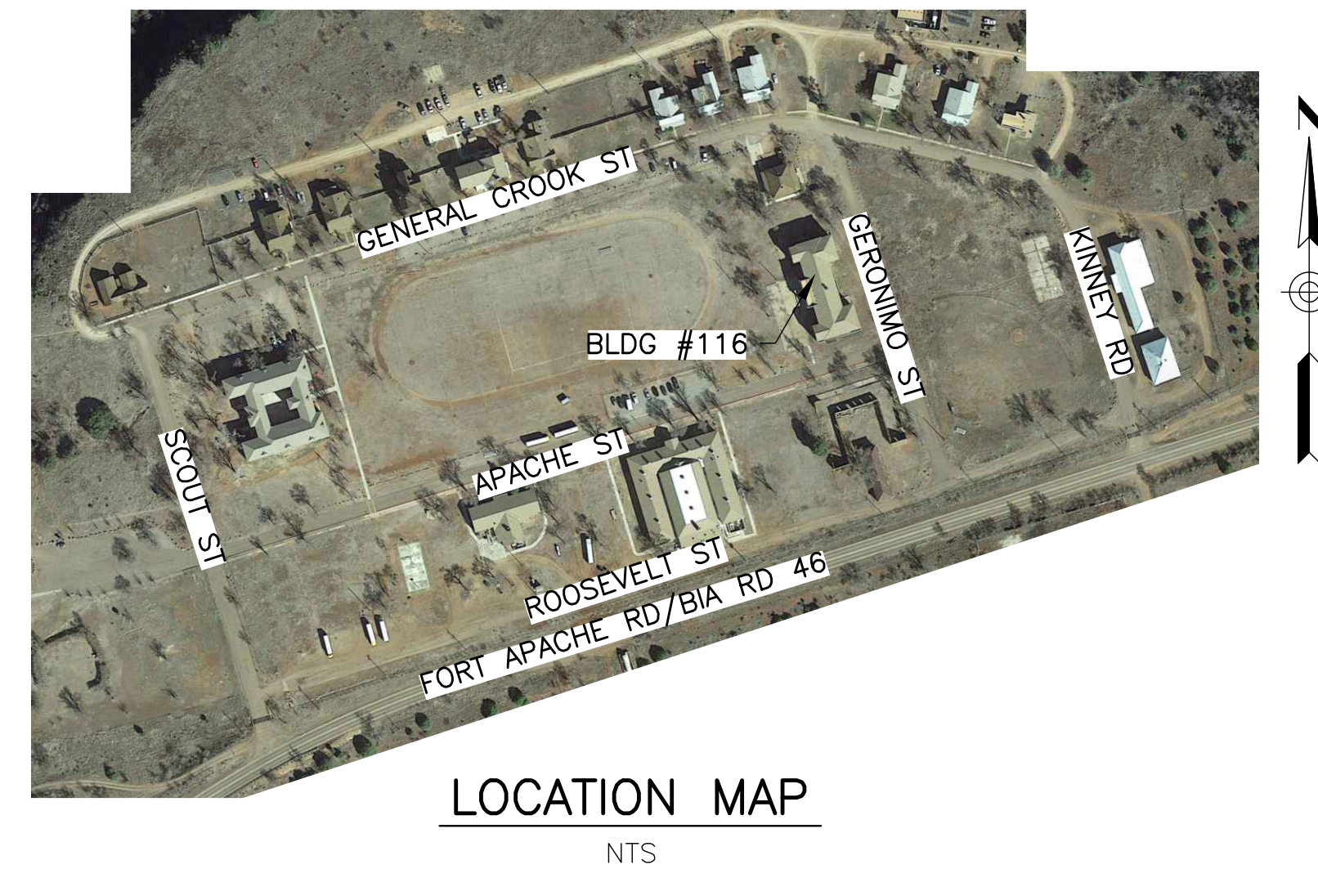
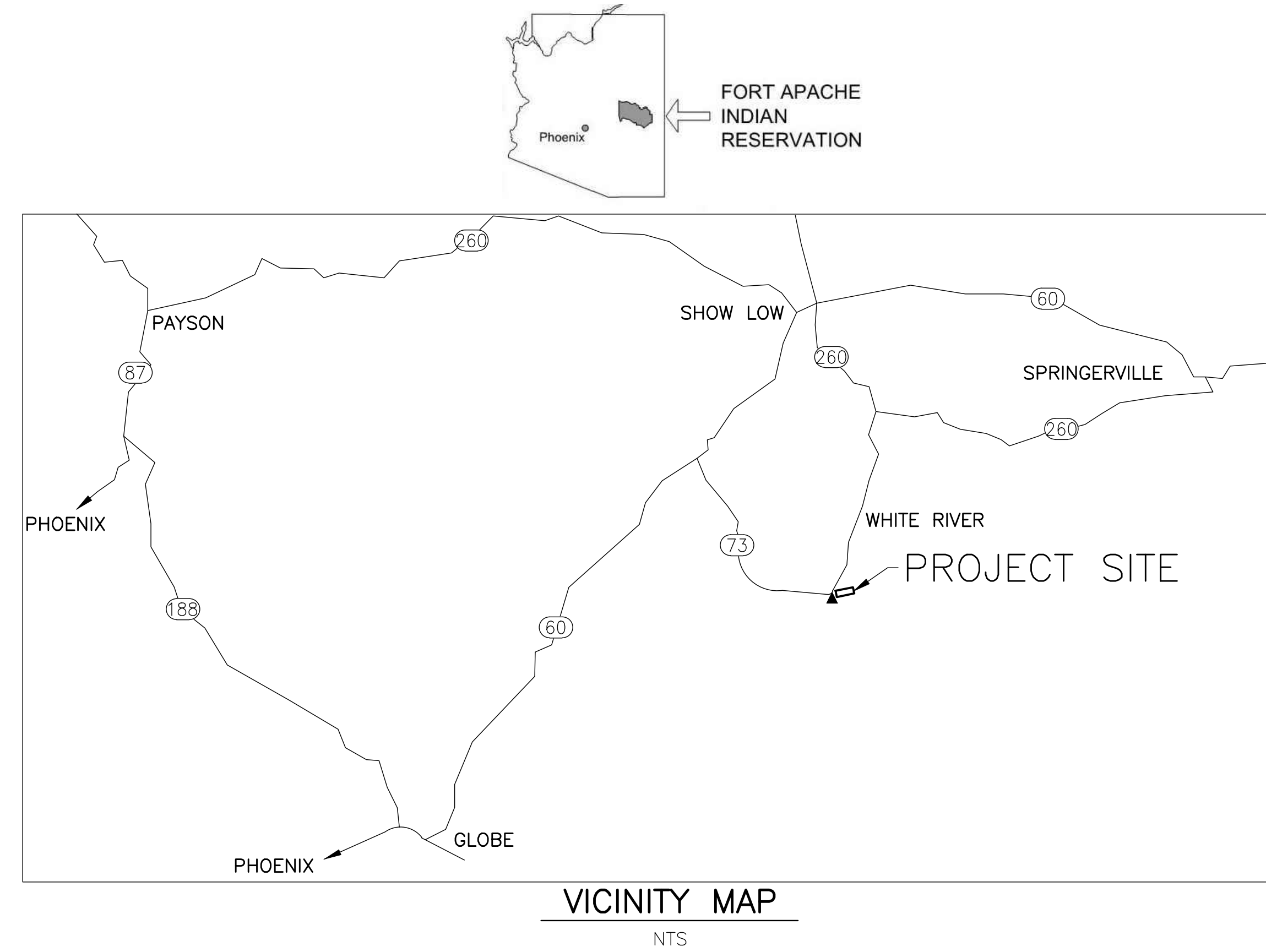
HORIZONTAL DATUM (BASIS OF BEARINGS):  
NAD83 (2011 EPOCH) ARIZONA EASTING ZONE

HORIZONTAL ADJUSTMENT:  
COMBINED SCALE FACTOR (CSF): 1.000334302  
GRID NORTHING (CSF) = GROUND NORTHING  
GRID EASTING (CSF) = GROUND EASTING

VERTICAL DATUM:  
NAVD '88

**SITE ACREAGE**

GROSS: 42.7 AC  
NET: 32.6 AC  
DISTURBED AREA: 0.29 AC



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**PROJECT PHASE**

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<input type="radio"/>	JURISDICTION REVIEW	
<input type="radio"/>	ISSUE FOR BID SET	
<input type="radio"/>	ISSUE FOR CONSTRUCTION	

**REVISIONS**

NO.	DESCRIPTION	DATE

**DESIGN DEVELOPMENT FOR:**  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**COVER**

DRAWN	ZNK
CHECKED	AC
DATE	01/17/2024
SCALE	AS SHOWN
JOB NO.	1124005
SHEET	<b>C1.0</b>



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**PROJECT PHASE**

- CONSTRUCTION DOCUMENTS 01.18.2024
- JURISDICTION REVIEW
- ISSUE FOR BID SET
- ISSUE FOR CONSTRUCTION

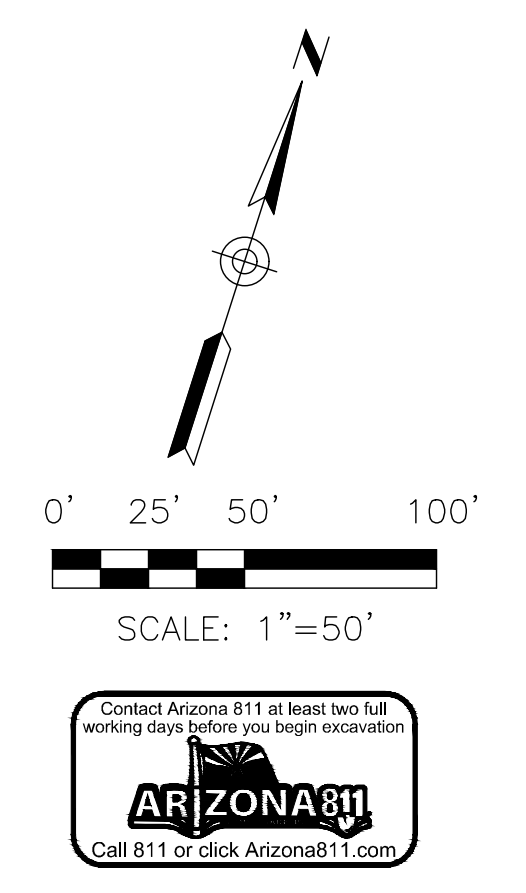
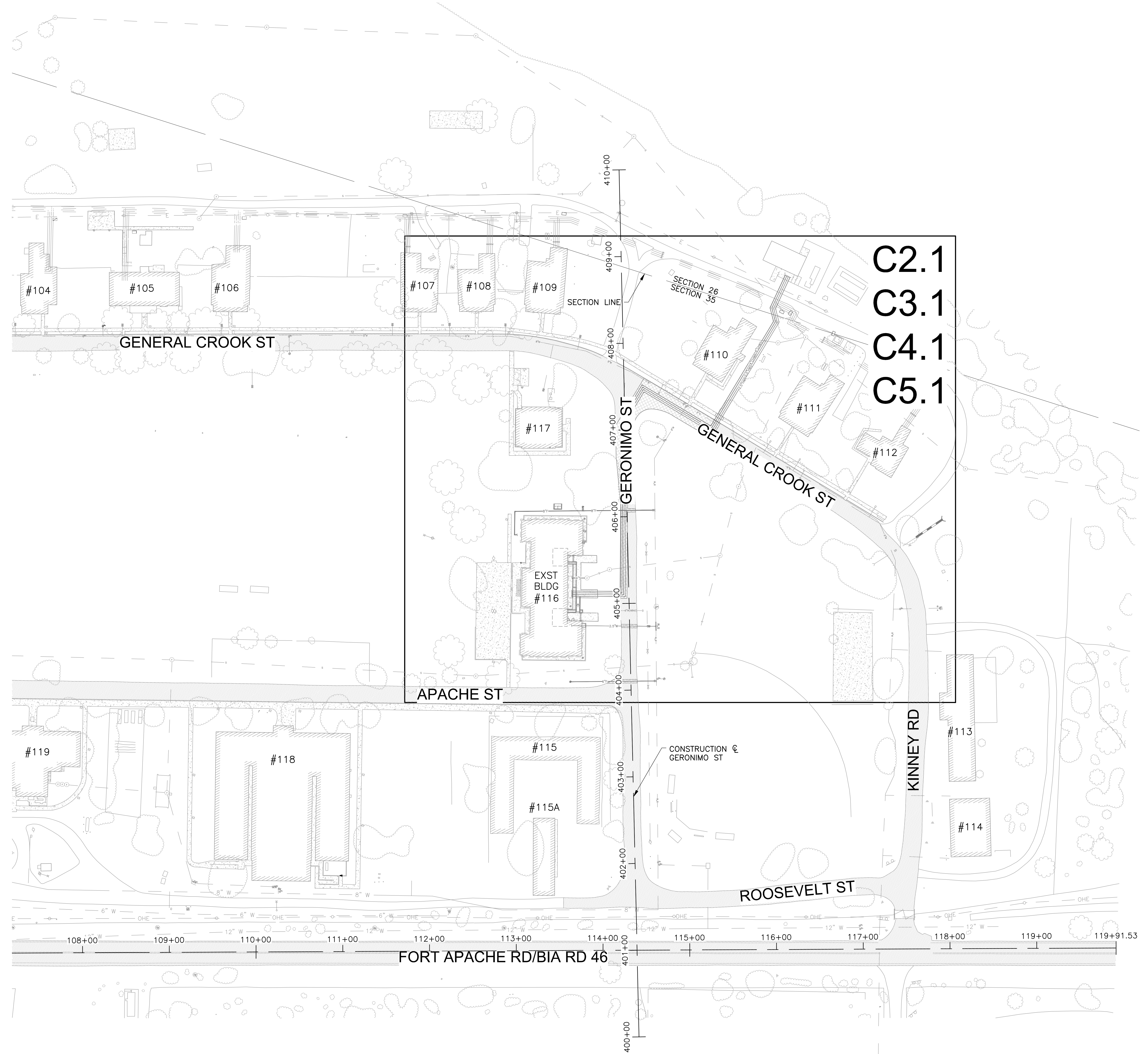
**REVISIONS**

NO.	DESCRIPTION	DATE

DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
NAVAJO COUNTY, ARIZONA

**KEY MAP**

DRAWN	ZNK
CHECKED	AC
DATE	01/17/2024
SCALE	AS SHOWN
JOB NO.	1124005
SHEET	<b>C1.1</b>



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REVISIONS		
NO.	DESCRIPTION	DATE

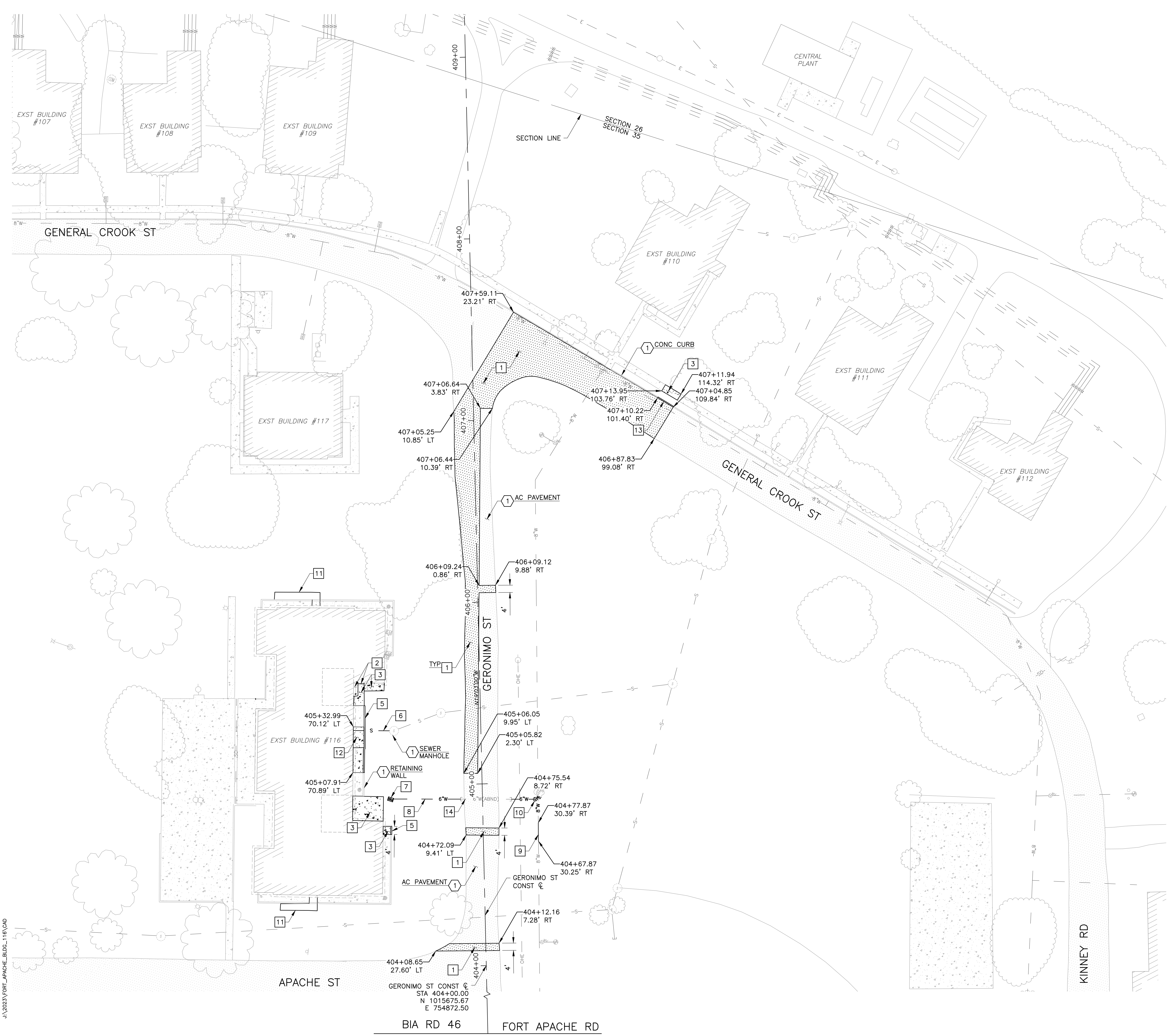
DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**DEMOLITION PLAN**

DRAWN	ZNK
CHECKED	AC
DATE	01/17/2024
SCALE	AS SHOWN
JOB NO.	1124005
SHEET	<b>C2.1</b>

- | REMOVAL NOTES |  |
|---------------|--|
| 1             | SAWCUT & REMOVE AC PAVEMENT FULL DEPTH   |
| 2             | REMOVE CONCRETE STEPS & FOOTING  |
| 3             | REMOVE CONCRETE SIDEWALK TO NEAREST JOINT  |
| 5             | REMOVE CONCRETE RETAINING WALL & FOOTING AS NEEDED FOR UTILITY TRENCHING REPLACE IN KIND |
| 6             | REMOVE EXST SEWER SERVICE LINE   |
| 7             | REMOVE EXST WATER METER BOX COORDINATE W/AHJ FOR METER REMOVAL                           |
| 8             | REMOVE EXST WATER SERVICE LINE   |
| 9             | REMOVE EXST WATER MAIN LENGTH PER PLAN   |
| 10            | REMOVE EXST WATER VALVE  |
| 11            | REMOVE EXTERNAL METAL STAIR CASE SALVAGE TO OWNER  |
| 12            | REMOVE CONCRETE SIDEWALK AS NEEDED FOR SEWER UTILITY TRENCHING                           |
| 13            | REMOVE CONCRETE VERTICAL CURB TO NEAREST JOINT   |
| 14            | ABANDON WATER SERVICE PIPE IN PLACE GROUT FILL W/ NON-SHRINK GROUT & CAP AT EACH END     |

- | REFERENCE NOTES |                  |
|-----------------|------------------|
| 1               | PROTECT IN PLACE |

- | GENERAL NOTES |  |
|---------------|--|
| 1.            | STATIONS & OFFSETS ARE MEASURED FROM GERONIMO ST CONSTRUCTION C (CONST C). |



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REVISIONS		
NO.	DESCRIPTION	DATE

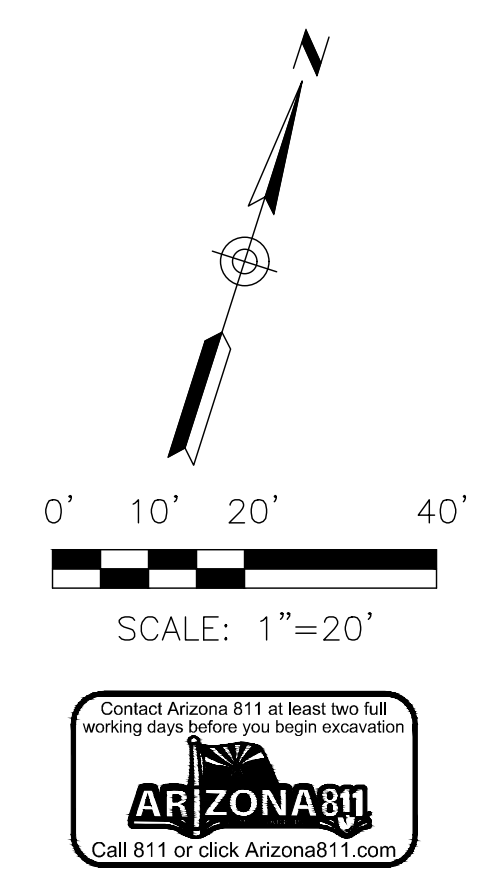
DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**CIVIL SITE PLAN**

DRAWN	ZNK
CHECKED	AC
DATE	01/17/2024
SCALE	AS SHOWN
JOB NO.	1124005
SHEET	<b>C3.1</b>

- CONSTRUCTION NOTES**
- ④ CONCRETE SINGLE CURB  
MAG STD DET 222, TYPE A
  - ⑦ CONCRETE SIDEWALK, WIDTH PER PLAN  
MAG STD DET 230
  - ⑫ AC PAVEMENT REPLACEMENT  
MATCH EXST PAVEMENT SECTION  
THICKNESS & TYPE  
MAG STD DET 200, TYPE B  
SHEET C6.1
  - ⑭ CONCRETE SIDEWALK RAMP  
DET 1, SHEET C6.1

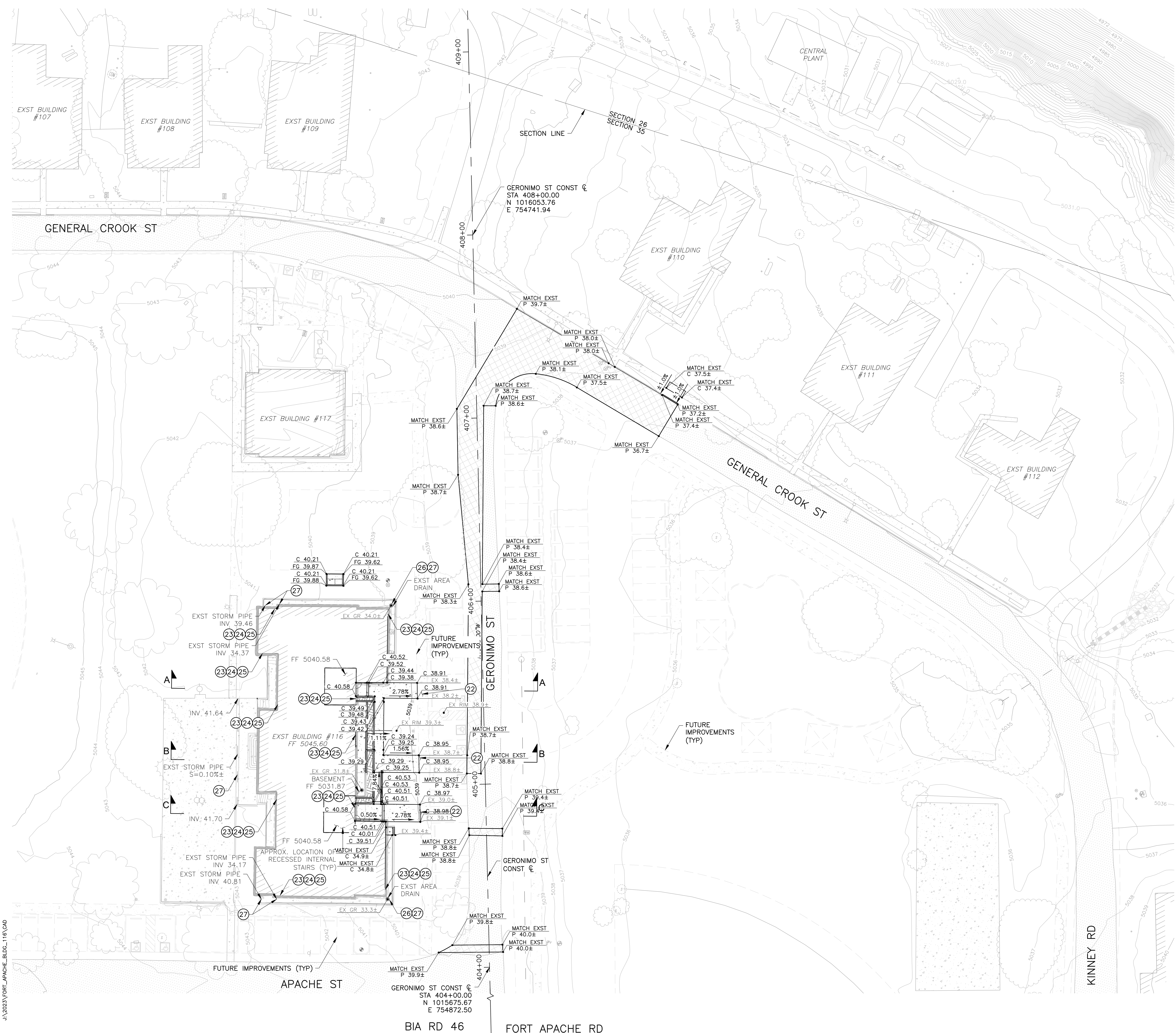
- REFERENCE NOTES**
- ① PROTECT IN PLACE
  - ② UTILITY IMPROVEMENTS  
REFER TO UTILITY PLANS
  - ⑤ RAISED PLANTER WALL  
REFER TO ARCHITECTURAL PLANS
  - ⑭ NEW SES CABINET  
REFER TO ARCHITECTURAL PLANS
  - ⑮ 6 INCH CONCRETE STEPS W/HANDRAILS  
REFER TO ARCHITECTURAL PLANS
  - ⑯ RETAINING WALL  
REFER TO ARCHITECTURAL PLANS

- GENERAL NOTES**
- ALL RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
  - ALL DIMENSIONS ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
  - REFER TO LANDSCAPE PLANS FOR ALL CUSTOM CONCRETE FINISHES, COLORS, JOINT LAYOUTS, GEOMETRIC LAYOUTS AND ADDITIONAL INFORMATION.
  - STATIONS & OFFSETS ARE MEASURED FROM GERONIMO ST CONSTRUCTION CL (CONST CL).
  - TRENCH & BACKFILL INFORMATION PER DETAILS ON C6.1.



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**CONSTRUCTION NOTES**

- 22 CONTRACTOR TO FILL ELEVATION DIFFERENTIAL TO MATCH EXST GRADE W/ ACCESSIBLE COMPLIANT STABILIZED DECOMPOSED GRANITE COMPACTED TO 95% ENSURE DAYLIGHT DOES NOT EXCEED 22:1
- 23 CONTRACTOR TO REPLACE IN-GROUND METAL DOWNSPOUT PIPING & REPAIR SUBGRADE DRAINAGE SYSTEM AS NEEDED TO RESTORE PROPER DRAINAGE SYSTEM FUNCTIONALITY
- 24 CONTRACTOR TO REPAIR EXST GALVANIZED DOWNSPOUTS & ATTACHMENTS, REPLACING ANY NON-GALVANIZED SECTIONS W/ STEEL TO MATCH ORIGINAL GALVANIZED STEEL FINISH
- 25 ADJUST EXST DOWNSPOUT PIPING TO FINISH GRADE
- 26 CONTRACTOR TO CLEAN & REMOVE DEBRIS FROM INLET GRATE & REPLACE IF DAMAGED
- 27 CONTRACTOR TO CAMERA & INSPECT EXST DRAIN PIPING FOR INSPECTION CLEAN & REMOVE DEBRIS & REPLACE IF DAMAGED



**PROJECT PHASE**

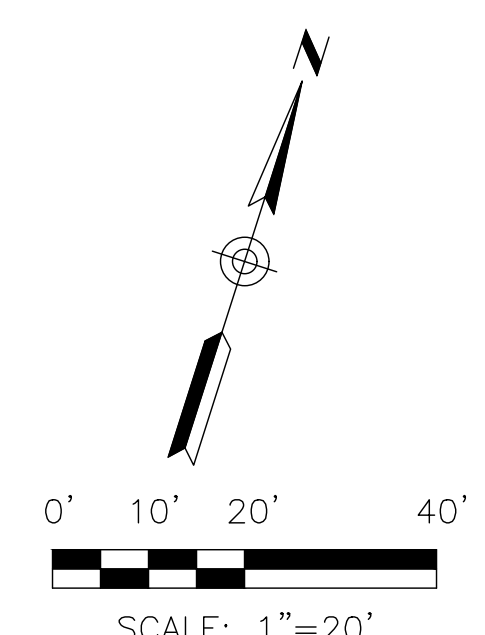
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<input type="checkbox"/>	ISSUE FOR BID SET	
<input type="checkbox"/>	ISSUE FOR CONSTRUCTION	

**REVISIONS**

NO.	DESCRIPTION	DATE

**GENERAL NOTES**

1. ONLY STORM DRAIN UTILITIES SHOWN FOR CLARITY.
2. ADD 5000' TO ALL SPOT GRADES & INVERT ELEVATIONS.
3. ALL TOP OF CURBS ARE 6" ABOVE PAVEMENT ELEVATION UNLESS OTHERWISE NOTED.
4. ALL UTILITY SURFACE FEATURES SHALL BE ADJUSTED TO FINISH GRADE INCLUDING BUT NOT LIMITED TO UTILITY BOXES, VALVES, METER BOXES, VAULTS, MANHOLES, BACKFLOWS, GRATES, ETC.
5. ALL NEW SIDEWALK, PAVING AND OTHER HARDSCAPE FEATURES SHALL MATCH IN WITH EXISTING ADJACENT GRADES.
6. ALL SIDEWALK AND ADA ROUTES SHALL BE CONSTRUCTED WITH 5% MAX SLOPE IN THE DIRECTION OF TRAVEL AND 2% MAX CROSS SLOPE.



**DESIGN DEVELOPMENT FOR:**  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**GRADING & DRAINAGE PLAN**

DRAWN	ZNK
CHECKED	AC
DATE	01/17/2024
SCALE	AS SHOWN
JOB NO.	1124005
SHEET	<b>C4.1</b>

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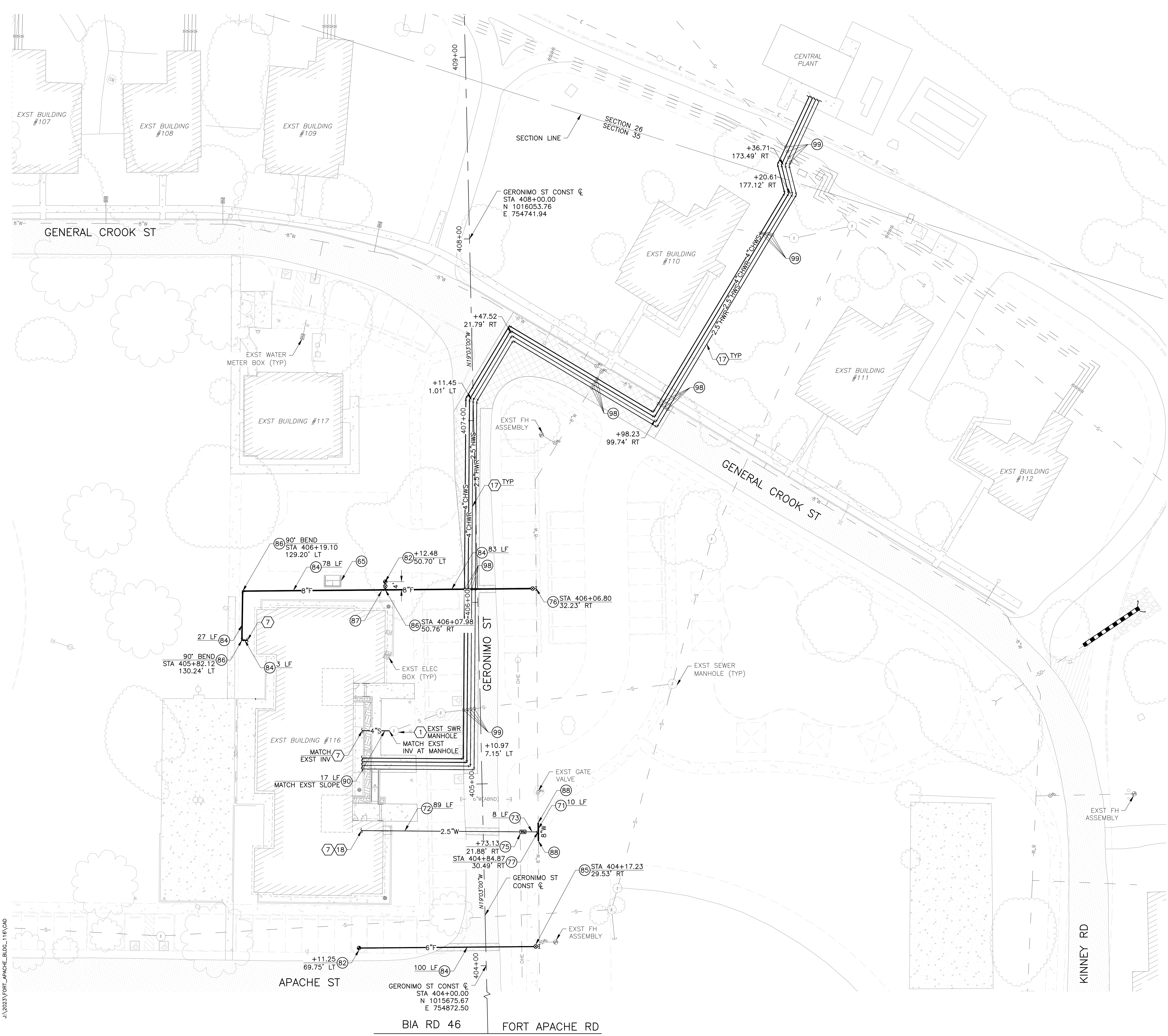
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PROJECT PHASE	
<input checked="" type="checkbox"/>	CONSTRUCTION DOCUMENTS 01.18.2024
<input type="checkbox"/>	JURISDICTION REVIEW
<input type="checkbox"/>	ISSUE FOR BID SET
<input type="checkbox"/>	ISSUE FOR CONSTRUCTION

REVISIONS		
NO.	DESCRIPTION	DATE

DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**UTILITY PLAN**

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SHEET	<b>C5.1</b>



**CONSTRUCTION NOTES**

- 65 GENERAL CONTRACTOR TO COORDINATE W/ NAVAPACHE ELECTRIC COOPERATIVE FOR FINAL ELECTRICAL DESIGN TO SET
- 71 WATER LINE W/FITTINGS, DIP CL 350 W/POLYWRAP, SIZE PER PLAN
- 72 WATER SERVICE LINE W/FITTINGS, PVC SCH 40 SIZE PER PLAN
- 73 WATER SERVICE LINE W/FITTINGS TYPE K COPPER, SIZE PER PLAN
- 75 2" BADGER METER, RECORDALL TURBO SERIES MODEL 200 OR APPROVED EQUAL NON TRAFFIC RATED WATER METER BOX PER MAG STD DET 320
- 76 8"x6" TAPPING SLEEVE & VALVE W/BOX & COVER, MAG STD DET 340
- 77 WATER SERVICE CONNECTION SIZE PER PLAN, COP STD DET P1342
- 82 FIRE HYDRANT ASSEMBLY MAG STD DET 360-1 (DRY BARREL)
- 84 FIRE LINE W/FITTINGS, PVC C-900, DR18 SIZE PER PLAN
- 85 8"x6" DUCTILE IRON TEE W/THRUST BLOCK MAG STD DET 380
- 86 CONCRETE THRUST BLOCK MAG STD DET 380
- 87 6"x4" FLANGED REDUCER PER IPC LATEST EDITION
- 88 CONNECT TO EXST WATER LINE
- 90 SEWER SERVICE LINE, PVC SDR 35 SIZE PER PLAN
- 98 WATER LINE CROSSING WATER LINES SHALL HAVE 36" MINIMUM COVER ENSURE MINIMUM 2" VERTICAL SEPARATION AT ALL UTILITY CROSSINGS
- 99 WATER & SEWER LINE CROSSING WATER LINES SHALL HAVE 36" MINIMUM COVER PIPE SEPARATION & EXTRA PROTECTION PER MAG STD DET 404

**REFERENCE NOTES**

- 1 PROTECT IN PLACE
- 7 FOR CONTINUATION REFER TO PLUMBING PLANS
- 17 HEATING & COOLING SERVICE REFER TO MECHANICAL PLANS
- 18 INTERIOR SUBPANEL FOR SUBMETERING COORDINATE LOCATION WITH ARCHITECT

**GENERAL NOTES**

1. EXISTING UTILITIES ARE SHOWN WITH BEST AVAILABLE INFORMATION. NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. STATIONS & OFFSETS ARE MEASURED FROM GERONIMO ST CONSTRUCTION & (CONST C).
  2. CONTRACTOR SHALL ENSURE MINIMUM 36" COVER FOR ALL WATER LINES.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF UTILITIES PRIOR TO CONSTRUCTION

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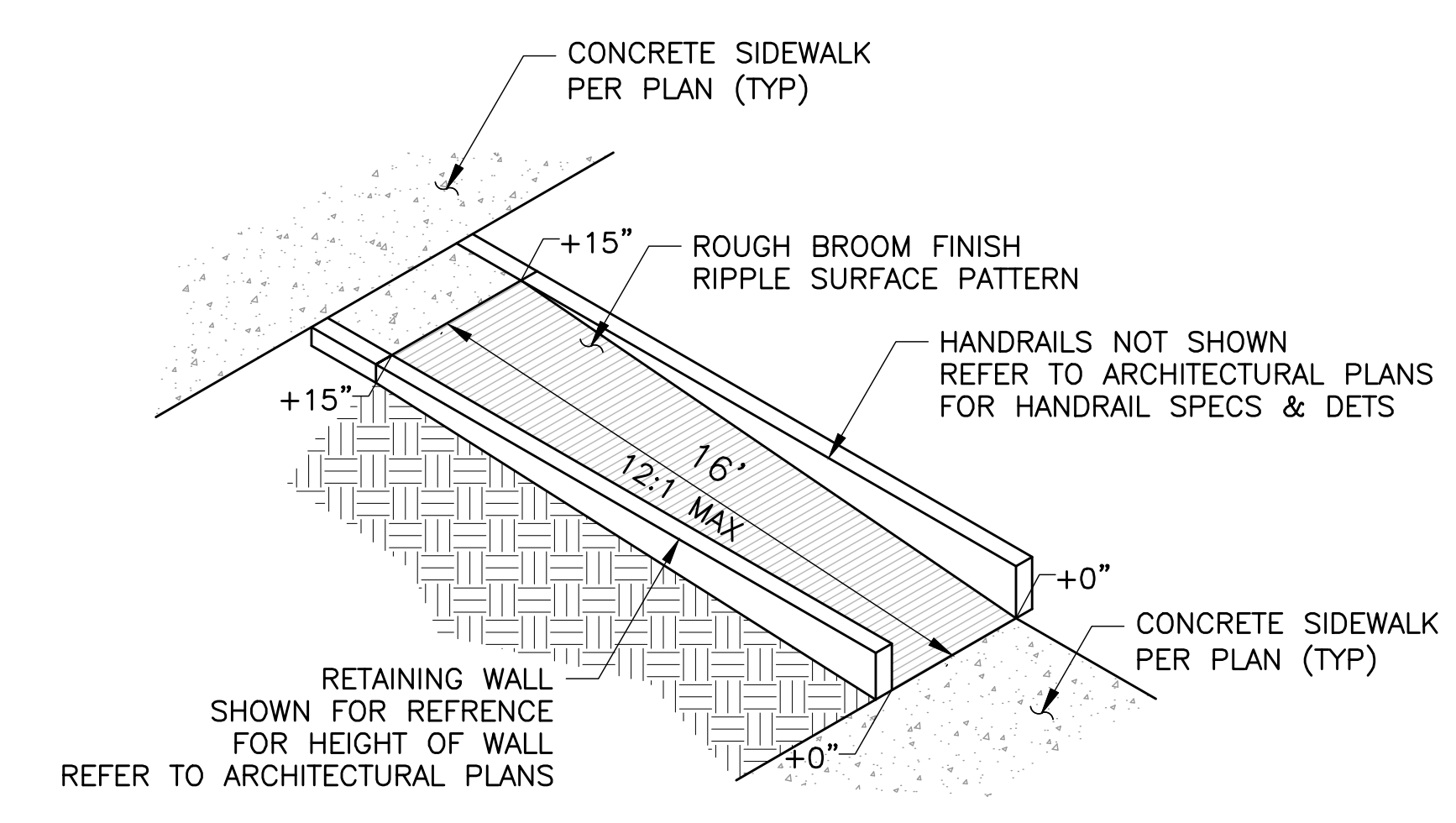
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DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**DETAILS**



1 CONCRETE SIDEWALK RAMP  
NO SCALE

**NOTES:**

- PAVEMENT MATCHING, BASE COURSES AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
- TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 601. NATIVE BACKFILL SHALL ONLY BE USED WITH AGENCY APPROVAL.
- CLSM SHALL BE 1/2-SACK OR 1-SACK PER SECTIONS 604 AND 728.
- MATERIAL FOR FINAL BACKFILL AND BASE (IF APPLICABLE) SHALL BE AS NOTED HEREIN UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
- FINAL BACKFILL SHALL BE CLSM FOR TRENCH DEPTHS GREATER THAN 4 FEET UNLESS A SAFE (OHS COMPLIANT) WORKING SPACE AT LEAST 30" WIDE IS PROVIDED TO CONDUCT COMPACTION TESTING.
- PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN IN "T-TOP" TRENCH REPAIR AT ENDS OF TYPE "A" TRENCH REPAIR EXCEPT WHERE EDGE ABUTS EXISTING CONCRETE.
- USE "T-TOP" PAVEMENT REPLACEMENT WHERE A TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
- THE JOINT LOCATION OR JOINT CONFIGURATION MAY VARY FROM THAT SHOWN TO ELIMINATE REMNANTS, TO ELIMINATE FULL DEPTH SAWCUT JOINTS FROM BEING LOCATED WITHIN A WHEEL PATH AS REQUIRED BY SECTION 336, OR WHEN AN OFFSET JOINT IS CONSTRUCTED. SEE DETAIL 200-2 FOR REMNANT PAVEMENT REMOVAL REQUIREMENTS.
- SAWCUT OR MILL EDGE AND APPLY TACK COAT. FOR PERMANENT PAVEMENT, APPLY 2-1/2" WIDE SECTION 337.2.1 COMPLIANT JOINT SEALANT AS REQUIRED BY AGENCY - SEE DETAIL ON 200-2.
- EXPOSED COPPER OR POLYETHYLENE WATER PIPE UP TO 2" IN DIAMETER IN TRENCHES TO BE BACKFILLED WITH CLSM SHALL BE WRAPPED WITH MINIMUM 3/4" THICK PREFORMED PIPE-COVERING FOAM INSULATION BEFORE PLACING CLSM.

DETAIL NO. 200-1 MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH TRENCH BACKFILL AND SURFACE REPLACEMENT REVISED 01-01-2023 DETAIL NO. 200-1

**NOTES:**

- SEE SECTION 601 FOR TRENCH EXCAVATION, BACKFILLING AND COMPACTION REQUIREMENTS.
- SEE DETAIL 200-1 FOR DETAILED TRENCH REPAIR REQUIREMENTS FOR TRENCH TYPES NOTED HEREIN.
- SEE DETAIL 211 FOR REQUIREMENTS REGARDING THE USE OF PLATING TRANSVERSE TRENCHES. USE OF STEEL PLATES SHALL NOT EXCEED 72 HOURS AFTER COMPLETION OF BACKFILL AND PRIOR TO FINAL PATCHING.

DETAIL NO. 200-2 MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH TRENCH BACKFILL AND SURFACE REPLACEMENT REVISED 01-01-2023 DETAIL NO. 200-2

**NOTES:**

- BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE ABC PER SECTION 702. SEE SECTION 601 FOR ALTERNATIVE MATERIALS TO BE USED WITH AGENCY APPROVAL INCLUDING MAXIMUM 1-1/2" NATIVE MATERIAL FOR CONCRETE PIPE INITIAL BACKFILL.
- SEE SECTION 601 FOR ADDITIONAL TRENCH WIDTH, EXCAVATION, BACKFILLING AND COMPACTION REQUIREMENTS.
- SEE SECTION 601 FOR PIPE MATERIALS CONSIDERED AS RIGID OR FLEXIBLE.

DETAIL NO. 200-3 MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH TRENCH BACKFILL AND SURFACE REPLACEMENT REVISED 01-01-2023 DETAIL NO. 200-3



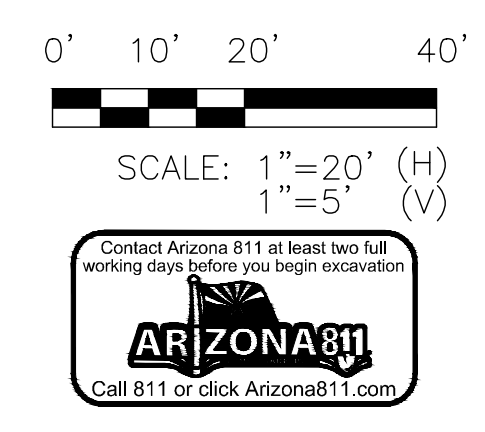
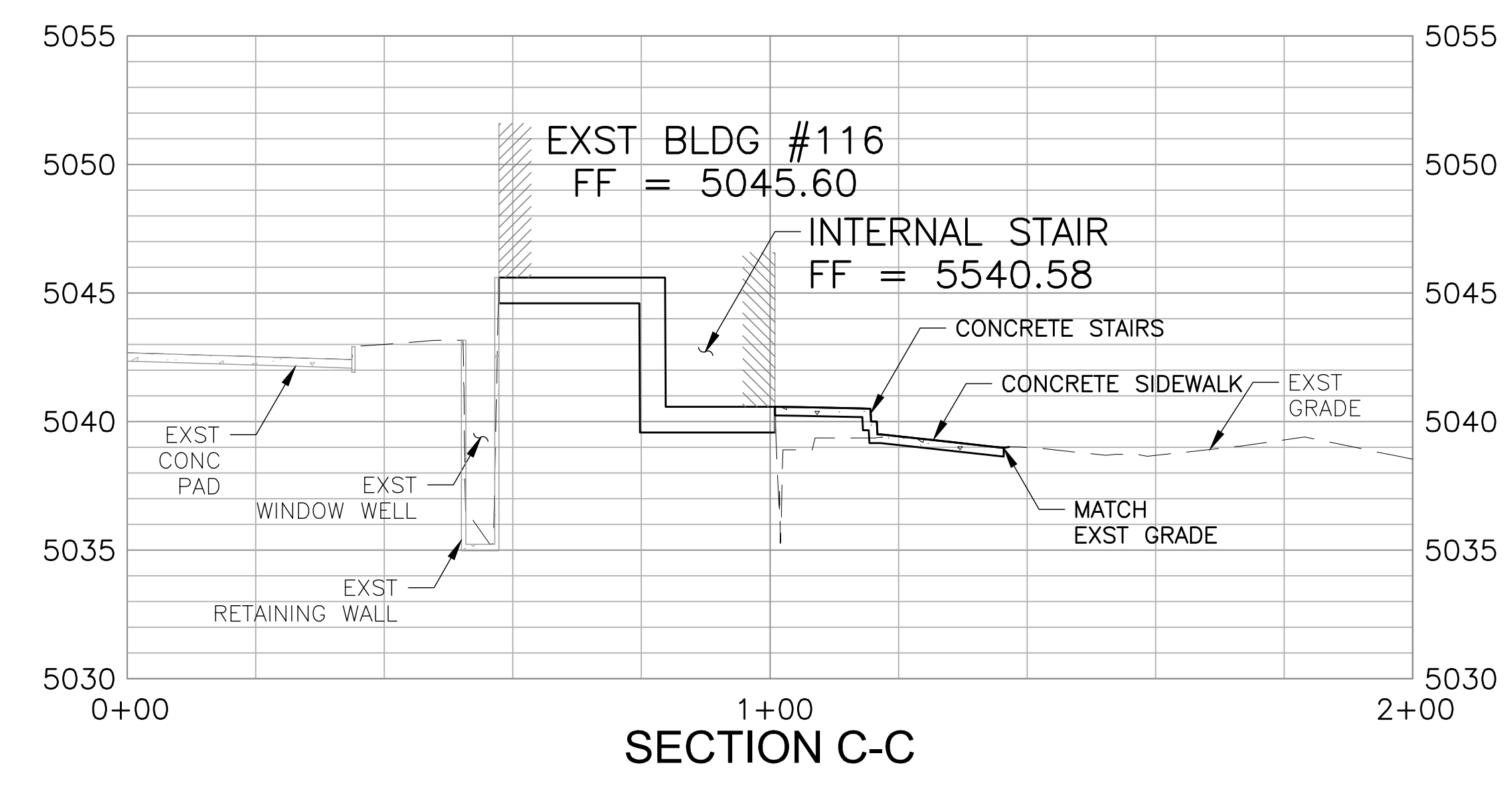
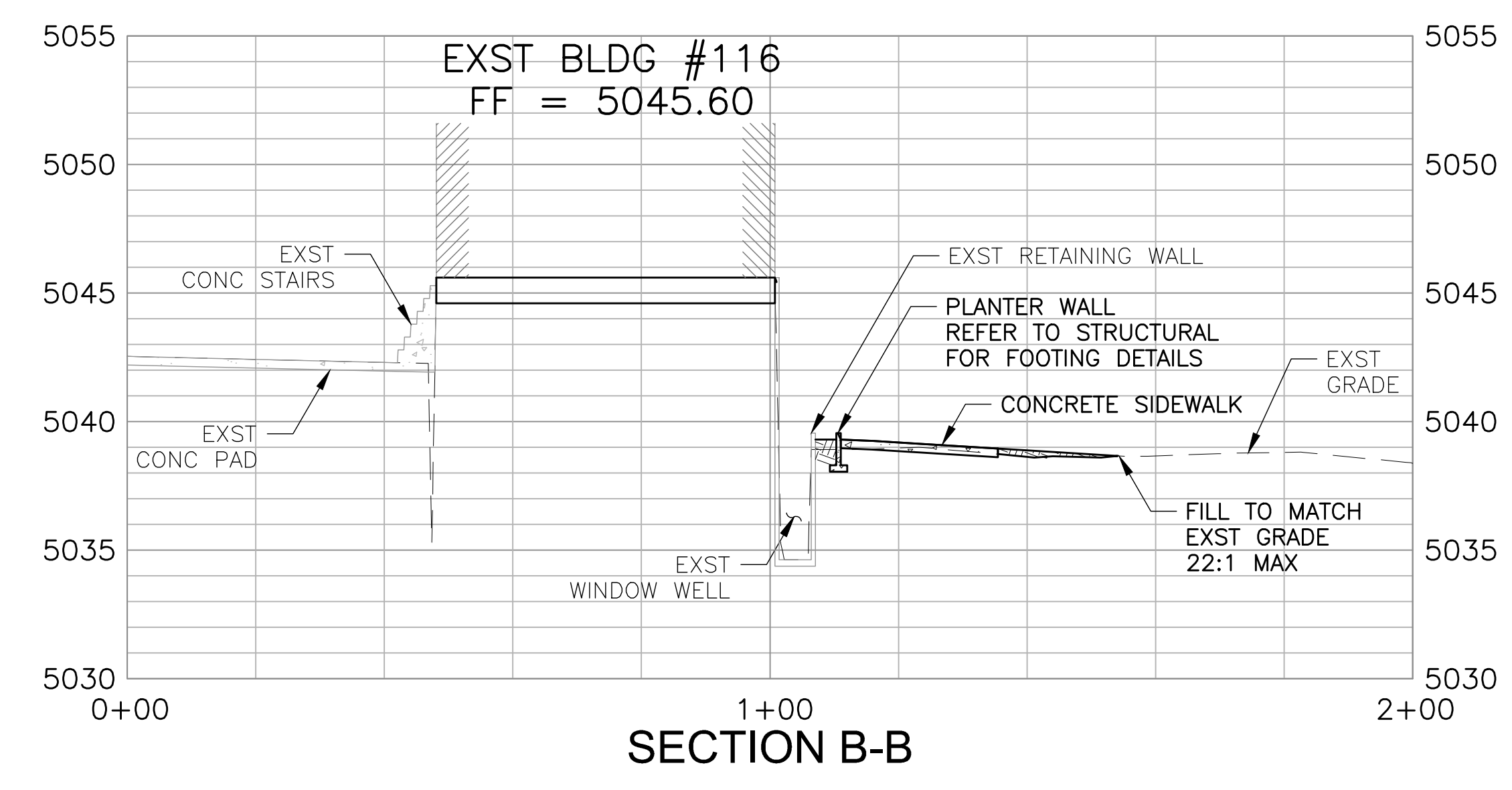
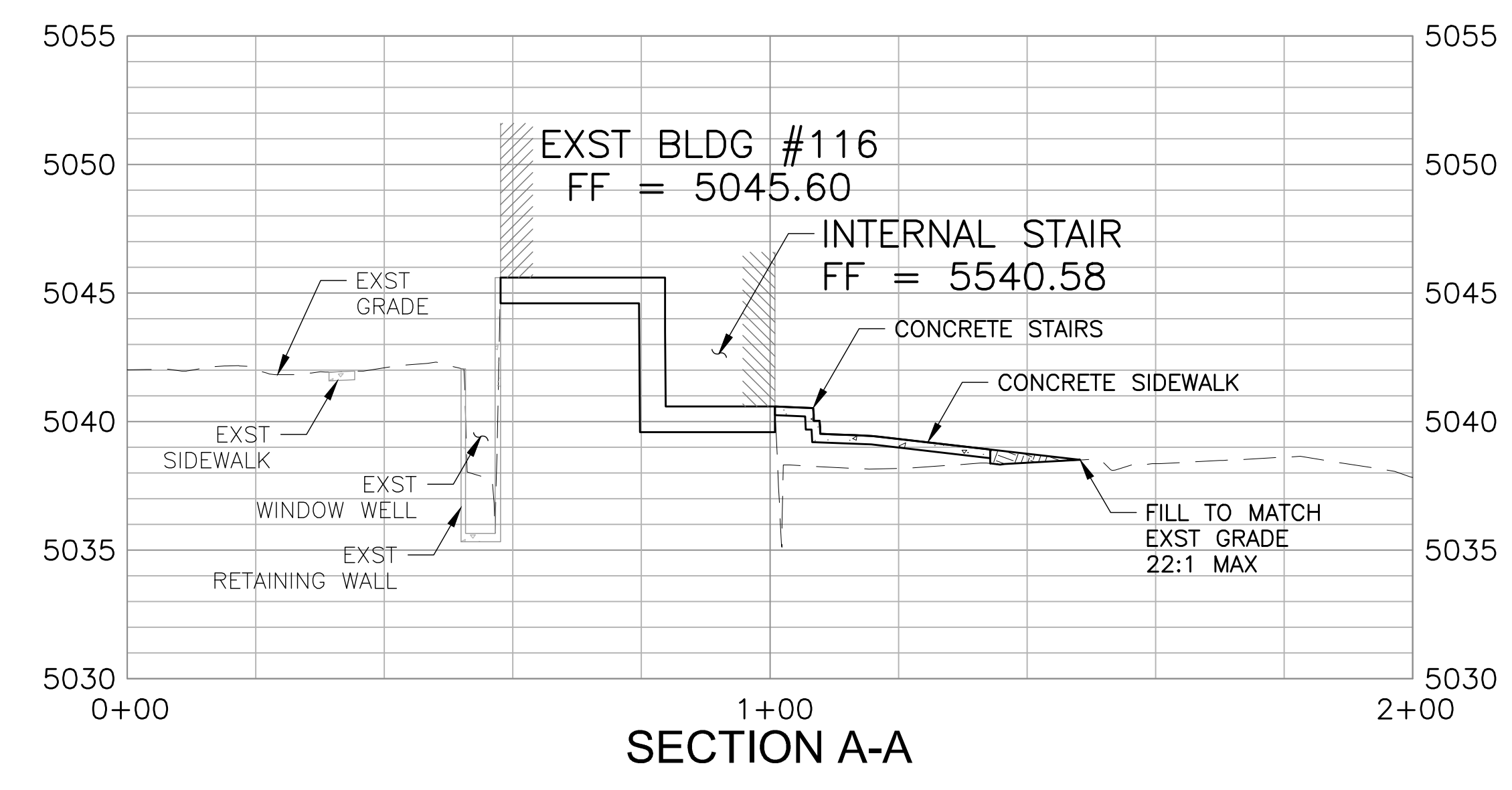


**PROJECT PHASE**

- CONSTRUCTION DOCUMENTS 01.18.2024
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- ISSUE FOR BID SET
- ISSUE FOR CONSTRUCTION

**REVISIONS**

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DESIGN DEVELOPMENT FOR:  
**FORT APACHE HERITAGE FOUNDATION**  
 NAVAJO COUNTY, ARIZONA  
**CROSS SECTIONS**

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