

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
P	SHEET INDEX VOLUME 1																			
N	SHEET INDEX VOLUME 1																			
M	SHEET INDEX VOLUME 1																			
L	SHEET INDEX VOLUME 1																			
K	SHEET INDEX VOLUME 1																			
J	SHEET INDEX VOLUME 1																			
H	SHEET INDEX VOLUME 1																			
G	SHEET INDEX VOLUME 1																			
F	SHEET INDEX VOLUME 1																			
E	SHEET INDEX VOLUME 1																			
D	SHEET INDEX VOLUME 1																			
C	SHEET INDEX VOLUME 1																			
B	SHEET INDEX VOLUME 1																			
A	SHEET INDEX VOLUME 1																			



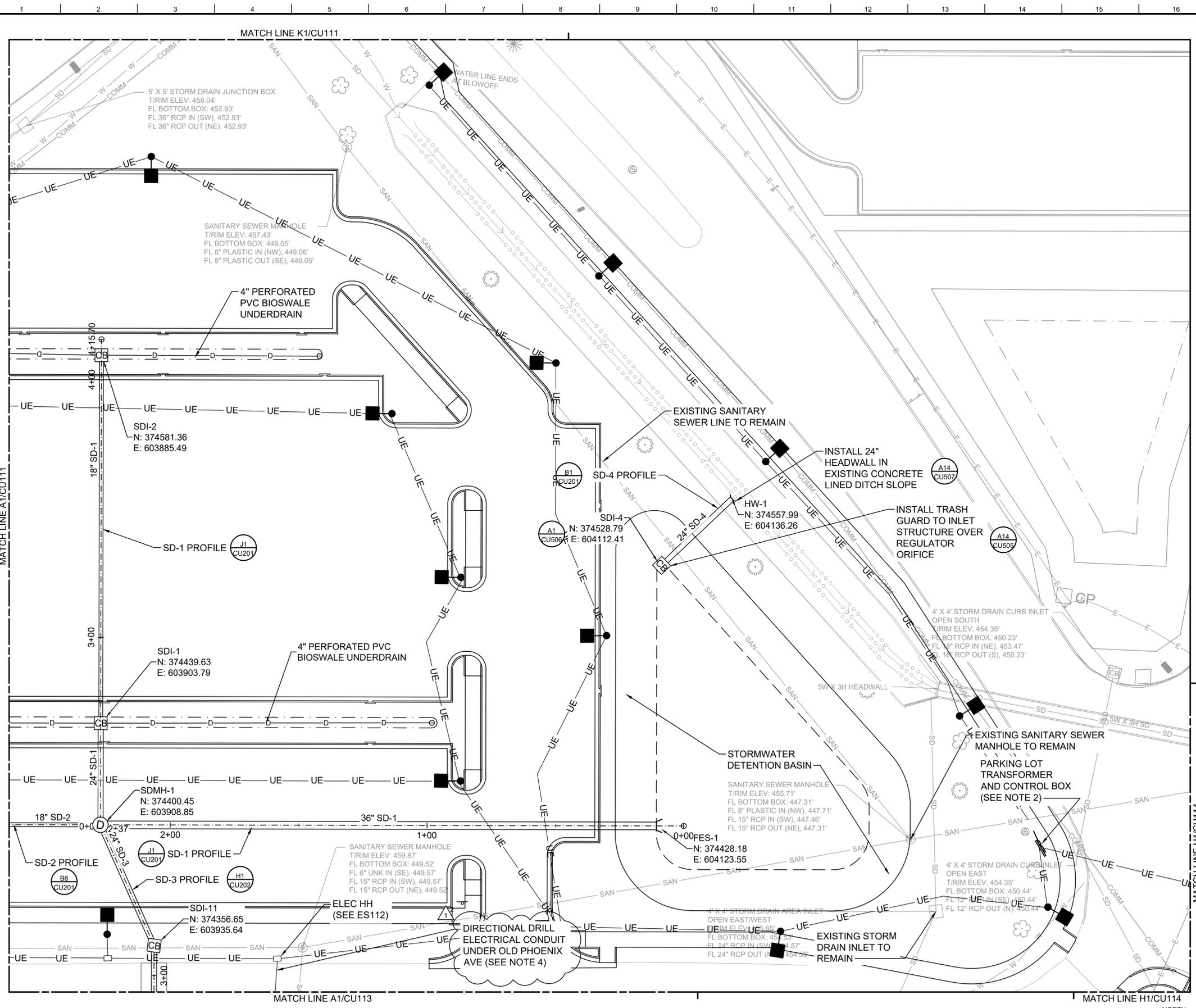
DATE	JAN 2026
DATE	JUL 2026
DESCRIPTION	AM0002 - REMOVED CATHODIC PROTECTION READY TO ADVERTISE (RTA) SUBMITTAL
MARK	1

DESIGNED BY:	J. VOIGHT
DRAWN BY:	J. VOIGHT
CHECKED BY:	B. STREIBIN
SUBMITTED BY:	B. STREIBIN
FILE NAME:	ANSI165438_G_R22.rvt
ISSUE DATE:	JUL 2025
SCALE:	AS SHOWN
CONTRACT NO.:	W9127S24F007
PROJECT NO.:	W9127S25RA001

US ARMY CORPS OF ENGINEERS LITTLE ROCK DISTRICT LITTLE ROCK, ARKANSAS	BURNS AND McDONNELL LITTLE ROCK DISTRICT KANSAS CITY, MO 64114 165438
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F-35: SPECIAL ACCESS PROGRAM FACILITY EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS	SHEET INDEX VOLUME 1
SHEET ID	G-002.1

READY-TO-ADVERTISE (RTA) SUBMITTAL



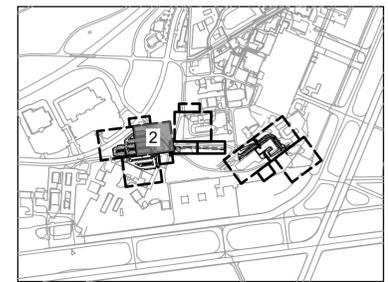
**GENERAL SHEET NOTES**

- SEE UTILITY NOTES ON C-002.
- SEE ELECTRICAL FOR PARKING LOT LIGHTING.
- ALL WORK ASSOCIATED WITH THE PARKING LOT AND STORM DRAINAGE ON THIS SHEET TO BE BID AS PART OF BID OPTION - POV PARKING.
- OLD PHOENIX AVE MUST REMAIN OPEN DURING DRILLING/TRENCHING OPERATIONS. DIRECTIONAL DRILL ELECTRICAL CONDUIT PER SPECIFICATIONS SECTION 33 05 07.13.
- MAINTAIN ACCESS TO THE FLIGHT LINE VIA OLD PHOENIX AVE COORDINATE PHASING AND CLOSURES WITH FSM AIRPORT OPERATIONS AND MERCY LIFE UNIT HELI SERVICES.

**LEGEND**

	WL-1	WATER
	UE-1	UNDERGROUND ELECTRICAL - PRIMARY FEED
	COM-1	COMMUNICATIONS
	SS-1	SANITARY SEWER
	D	UNDERDRAIN (B1 LP502)
	SD-1	STORM DRAIN
		FIRE HYDRANT (A13 CU503)
		VALVE (J7 CU503)
		CLEANOUT (E7 CU503)
		SANITARY SEWER MANHOLE (G12 CU504)
		COMMUNICATIONS MANHOLE
		TRANSFORMER
		CATCH BASIN (A1 CU503)
		FLARED END SECTION (A1 CU505)
		LIGHT POLE
	W	EXISTING WATER
	---	EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
	---	EXISTING COMMUNICATIONS
	G	EXISTING NATURAL GAS
	---	EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
	SAN	EXISTING SANITARY SEWER
	SD	EXISTING STORM DRAIN
		STORM DRAIN MANHOLE (G12 CU504)

**KEY PLAN**



ISSUE DATE:	JAN 2026	DATE
DESIGNED BY:	R. DONNELLY	MARK
CHECKED BY:	D. HENRIAN	0
CONTRACT NO.:	W912S24R4001	
PROJECT NO.:	W912S24F007	
DESCRIPTION:	AM0002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL	

US ARMY CORPS OF ENGINEERS  
 LITTLE ROCK DISTRICT  
 LITTLE ROCK, ARKANSAS

DESIGNED BY: R. DONNELLY  
 CHECKED BY: D. HENRIAN  
 CONTRACT NO.: W912S24R4001  
 PROJECT NO.: W912S24F007

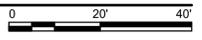
STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 R. DONNELLY  
 No. 22384  
 1/5/2026

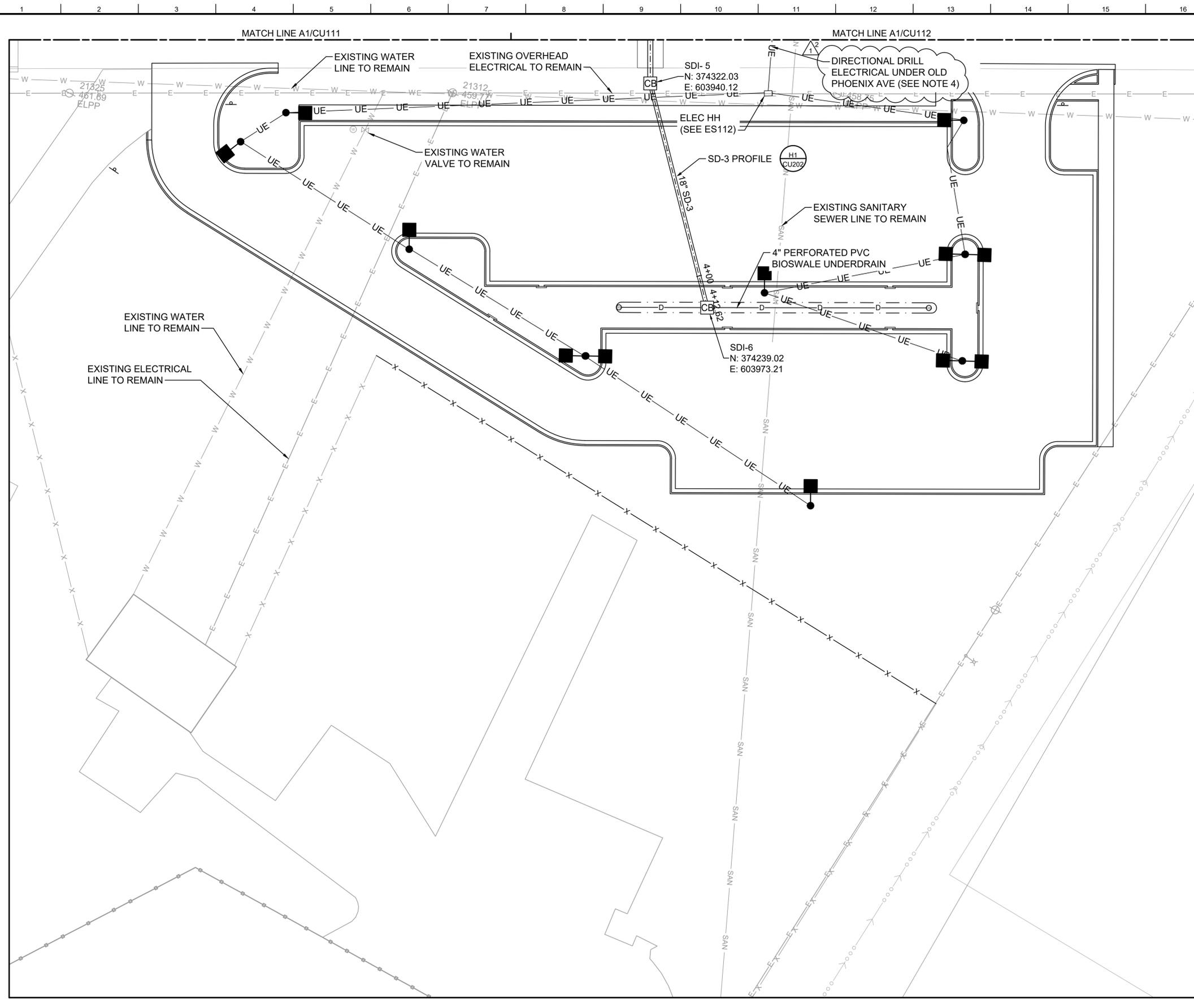
F-35: SPECIAL ACCESS PROGRAM FACILITY  
 EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

UTILITY PLAN - AREA 2

SHEET ID  
**CU112.1**

**A1 UTILITY PLAN - AREA 2**  
 SCALE: 1" = 20'

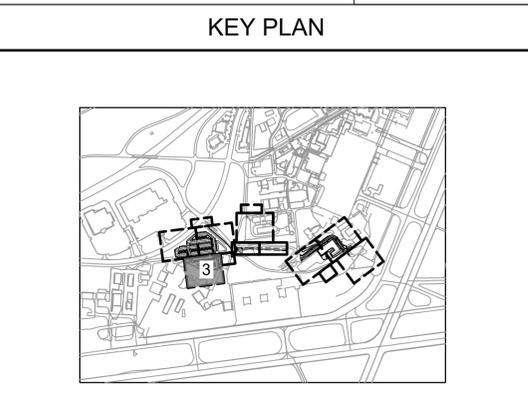




- ### GENERAL SHEET NOTES
- SEE UTILITY NOTES ON C-002.
  - SEE ELECTRICAL FOR PARKING LOT LIGHTING.
  - ALL WORK ASSOCIATED WITH THE PARKING LOT AND STORM DRAINAGE ON THIS SHEET TO BE BID AS PART OF BID OPTION - POV PARKING.
  - OLD PHOENIX AVE MUST REMAIN OPEN DURING DRILLING/TRENCHING OPERATIONS. DIRECTIONAL DRILL ELECTRICAL CONDUIT PER SPECIFICATIONS SECTION 33 05 07.13.
  - MAINTAIN ACCESS TO THE FLIGHT LINE VIA OLD PHOENIX AVE COORDINATE PHASING AND CLOSURES WITH FSM AIRPORT OPERATIONS AND MERCY LIFE UNIT HELI SERVICES.

### LEGEND

	WL-1	WATER
	UE-1	UNDERGROUND ELECTRICAL - PRIMARY FEED
	COM-1	COMMUNICATIONS
	SS-1	SANITARY SEWER
	D	UNDERDRAIN (B1 LP502)
	SD-1	STORM DRAIN
	(A13 CU503)	FIRE HYDRANT
	(J7 CU503)	VALVE
	(E7 CU503)	CLEANOUT
	(G12 CU504)	SANITARY SEWER MANHOLE
	(M1)	COMMUNICATIONS MANHOLE
		TRANSFORMER
	(A1 CU503)	CATCH BASIN
	(A1 CU505)	FLARED END SECTION
		LIGHT POLE
	W	EXISTING WATER
	---E---	EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
	---COM---	EXISTING COMMUNICATIONS
	G	EXISTING NATURAL GAS
	---ES---	EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
	SAN	EXISTING SANITARY SEWER
	SD	EXISTING STORM DRAIN
	(D G12 CU504)	STORM DRAIN MANHOLE



**US Army Corps of Engineers**

<p>ISSUE DATE: 1/5/2026</p> <p>DESIGNED BY: R. DONNELLY</p> <p>CHECKED BY: D. HENRIKSON</p> <p>CONTRACT NO.: W9127S24R4001</p> <p>FILE NAME: 1654362111-16-ang</p>	<p>DATE: JAN 2026</p> <p>MARK: 1</p> <p>DESCRIPTION: AM0002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL</p>
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STATE OF ARKANSAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 22384  
 R. J. DONNELLY

F-35: SPECIAL ACCESS PROGRAM FACILITY  
 EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

UTILITY PLAN - AREA 3

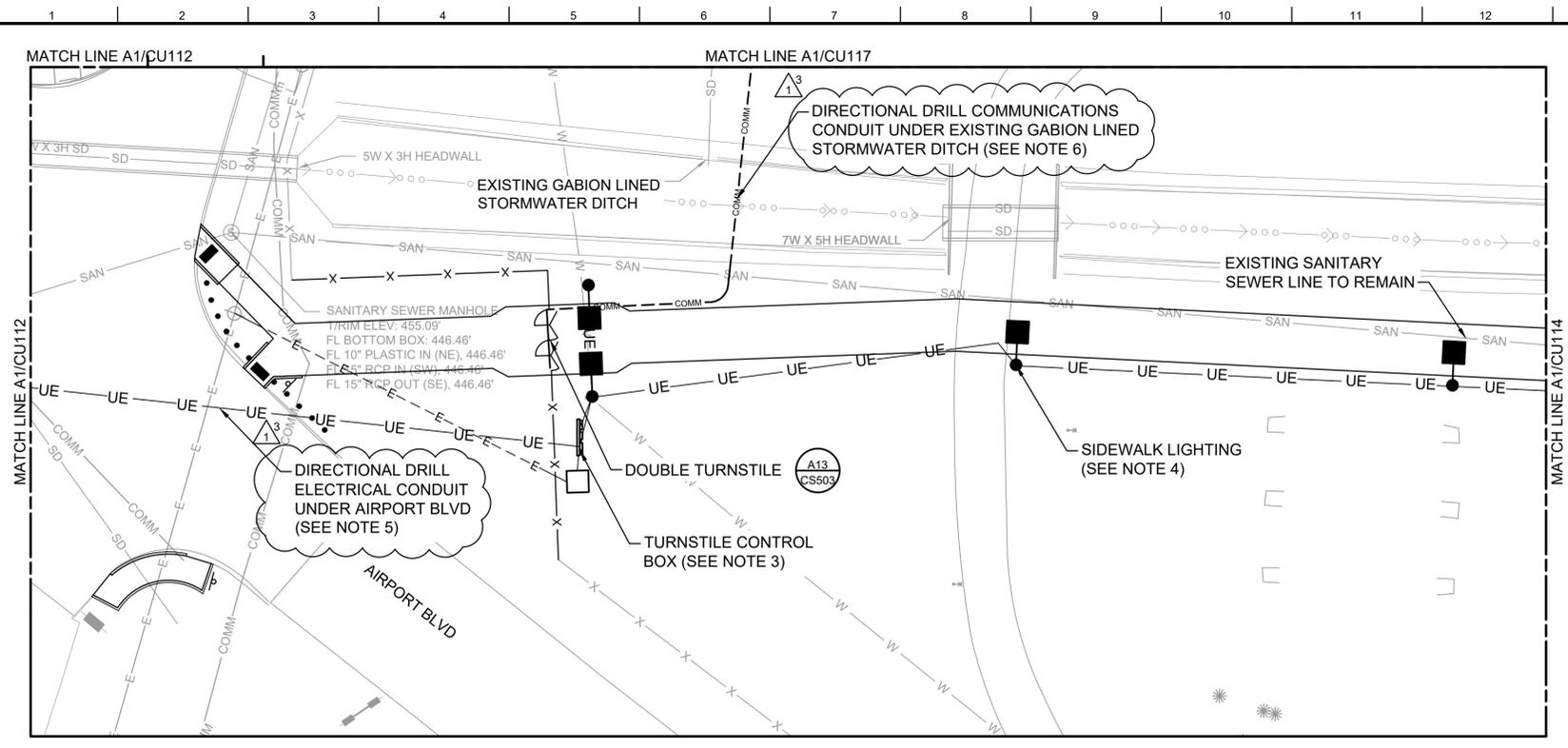
SHEET ID

**CU113.1**

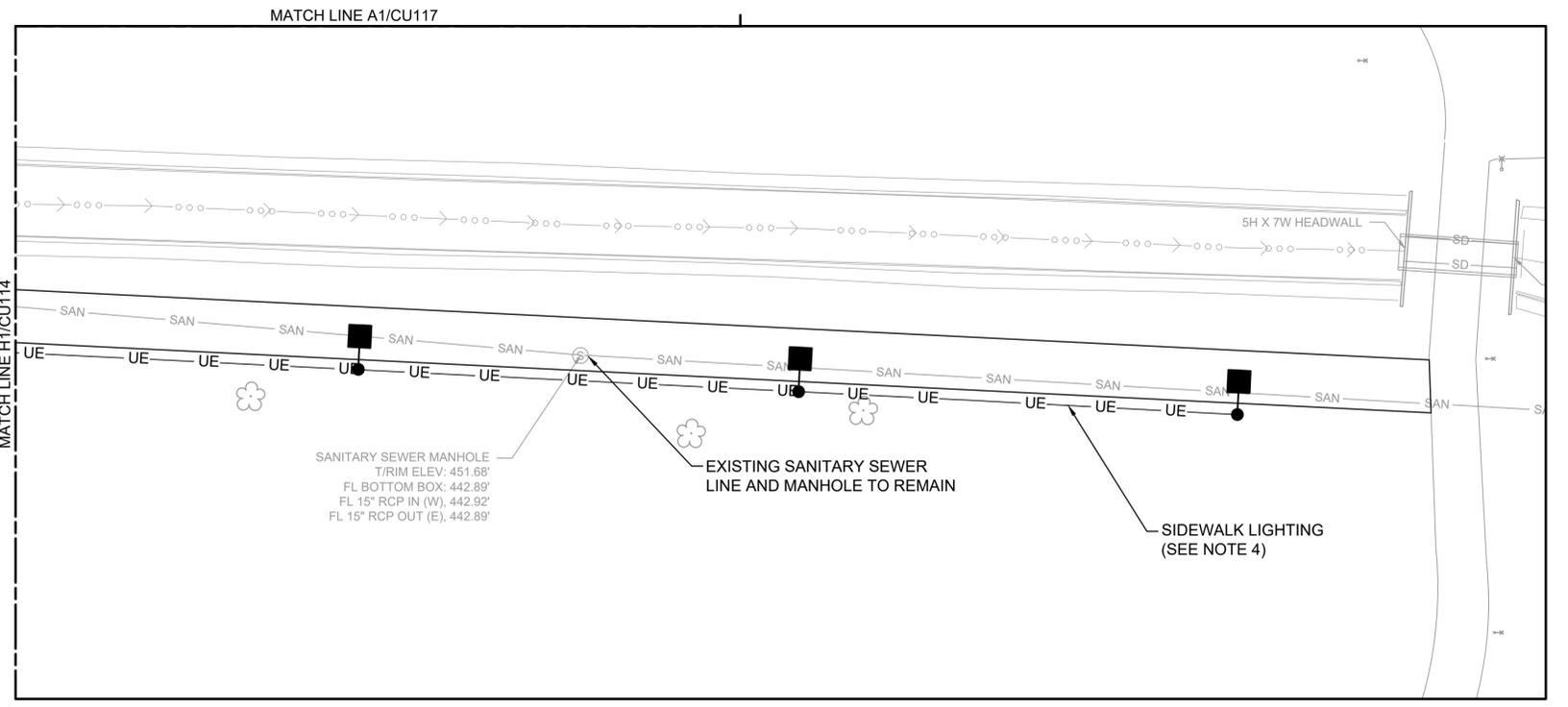
**A1** UTILITY PLAN - AREA 3  
 SCALE: 1" = 20'



READY-TO-ADVERTISE (RTA) SUBMITTAL



**H1** UTILITY PLAN - AREA 4  
SCALE: 1" = 20'

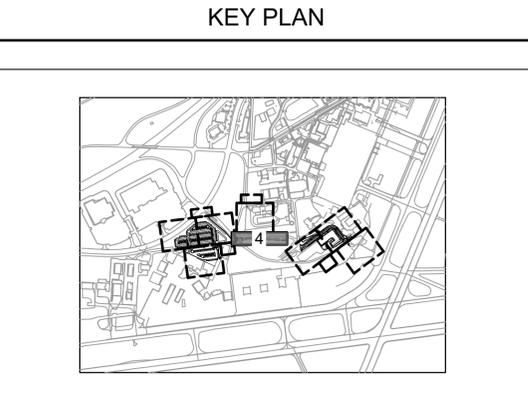


**A1** UTILITY PLAN - AREA 4  
SCALE: 1" = 20'

- ### GENERAL SHEET NOTES
- SEE UTILITY NOTES ON C-002.
  - ALL WORK ASSOCIATED WITH THE PEDESTRIAN TURNSTILE, SIDEWALK, AND FENCE ON THIS SHEET TO BE BID AS PART OF BID OPTION - BASE ACCESS TURNSTILE.
  - SEE ELECTRICAL AND SECURITY DRAWINGS FOR POWER AND COMMUNICATIONS CONNECTIONS AND SECURITY SYSTEMS.
  - SEE ELECTRICAL FOR SIDEWALK LIGHTING.
  - AIRPORT BLVD MUST REMAIN OPEN DURING DIRECTIONAL DRILLING OPERATIONS. DIRECTIONAL DRILL ELECTRICAL CONDUIT IN ACCORDANCE WITH SPECIFICATIONS SECTION 33 05 07.13.
  - DIRECTIONAL DRILL COMMUNICATIONS CONDUIT UNDER EXISTING GABION LINED STORMWATER DITCH IN ACCORDANCE WITH SPECIFICATIONS SECTION 33 05 07.13.

### LEGEND

WL-1	WATER
UE-1	UNDERGROUND ELECTRICAL - PRIMARY FEED
COM-1	COMMUNICATIONS
SS-1	SANITARY SEWER
D	UNDERDRAIN (B1 LP502)
SD-1	STORM DRAIN
(A13 CS503)	FIRE HYDRANT
(J7 CU503)	VALVE
(E7 CU503)	CLEANOUT
(G12 CU504)	SANITARY SEWER MANHOLE
(G12 CU504)	COMMUNICATIONS MANHOLE
(T)	TRANSFORMER
(A1 CU503)	CATCH BASIN
(A1 CU505)	FLARED END SECTION
(L)	LIGHT POLE
W	EXISTING WATER
E	EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
COMM	EXISTING COMMUNICATIONS
ES	EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
G	EXISTING NATURAL GAS
SAN	EXISTING SANITARY SEWER
SD	EXISTING STORM DRAIN
(D)	STORM DRAIN MANHOLE (G12 CU504)



**US Army Corps of Engineers**

MARK	DESCRIPTION	DATE
1	AM0002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL	JAN 2026
0		JUL 2025

DESIGNED BY: R. DONNELLY DRAWN BY: D. HANSEN CHECKED BY: R. BARUTH SUBMITTED BY: B. STREEBIN	ISSUE DATE: JUL 2025 REVISION NO.: W9127S24F000 CONTRACT NO.: W9127S24F0007	FILE NAME: 1654362111-18.rwg ANSID:
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US ARMY CORPS OF ENGINEERS  
LITTLE ROCK DISTRICT  
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL  
9400 WARD PARKWAY,  
KANSAS CITY, MO, 64114  
165436

F-35: SPECIAL ACCESS PROGRAM FACILITY  
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

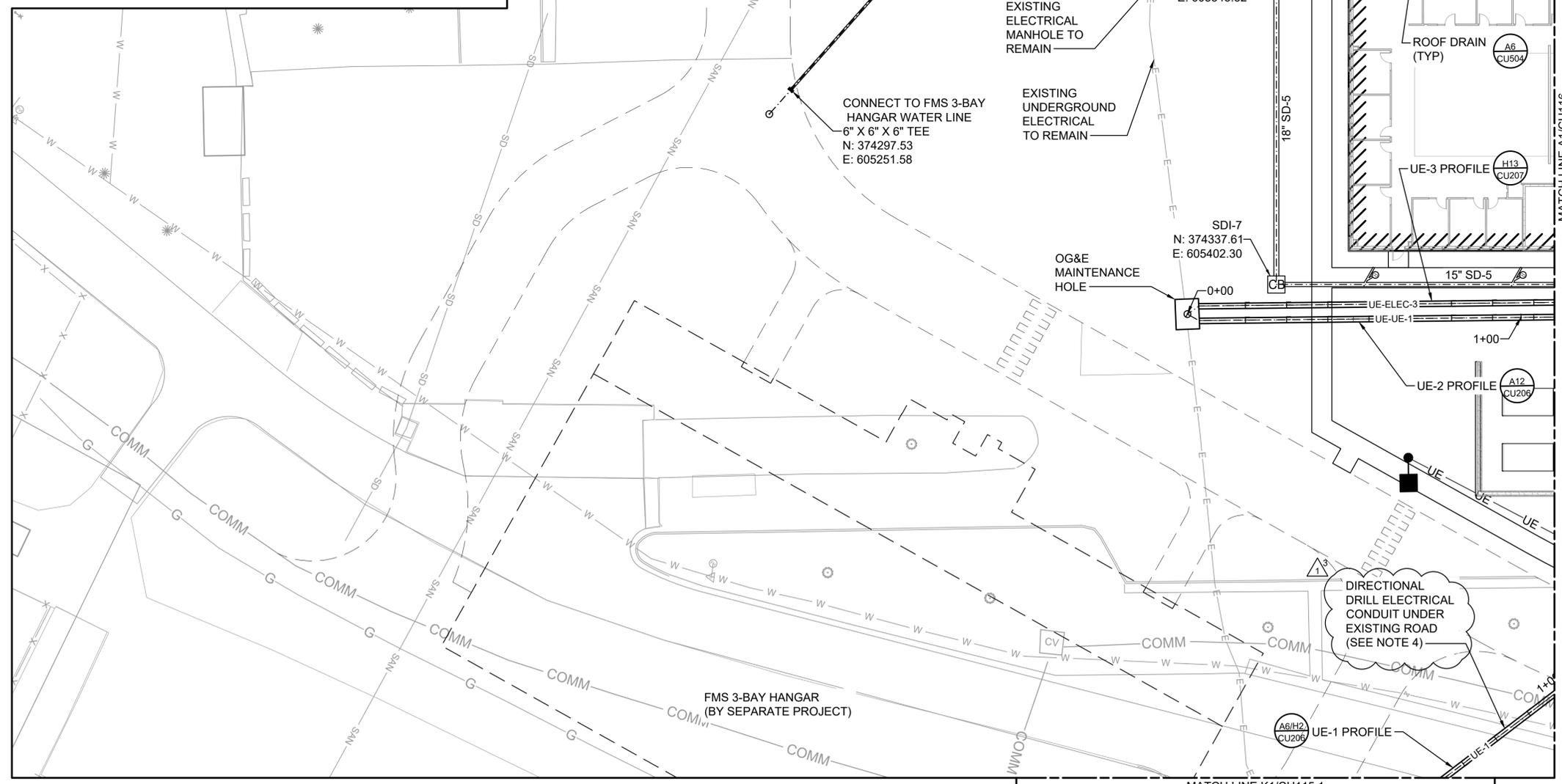
UTILITY PLAN - AREA 4

SHEET ID

# CU114.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

**K1 UTILITY PLAN - AREA 5**  
SCALE: 1" = 20'

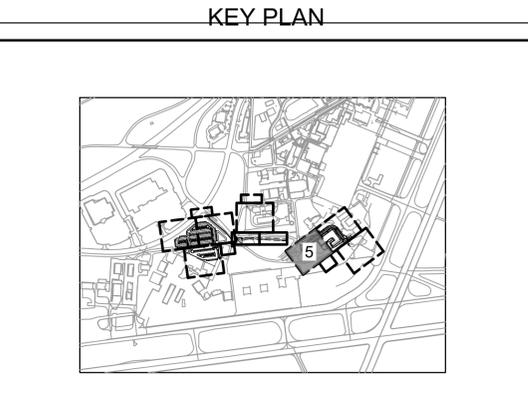


**A1 UTILITY PLAN - AREA 5**  
SCALE: 1" = 20'

- ### GENERAL SHEET NOTES
- SEE UTILITY NOTES ON C-002, SEE NORTHING AND EASTING POINT TABLE ON CU601.
  - SEE MECHANICAL DRAWINGS FOR CONTINUATION OF UTILITY LINES AT THE BUILDING CONNECTIONS.
  - SEE ELECTRICAL DRAWINGS FOR ELECTRICAL AND COMMUNICATIONS WORK.
  - DIRECTIONAL DRILL ELECTRICAL CONDUIT UNDER EXISTING ROAD IN ACCORDANCE WITH SPECIFICATIONS SECTION 33 05 07.13.

### LEGEND

WL-1	WATER
UE-1	UNDERGROUND ELECTRICAL - PRIMARY FEED
COM-1	COMMUNICATIONS
SS-1	SANITARY SEWER
D	UNDERDRAIN
SD-1	STORM DRAIN
⊙	FIRE HYDRANT
⊗	VALVE
⊙	CLEANOUT
⊙	SANITARY SEWER MANHOLE
⊙	COMMUNICATIONS MANHOLE
⊙	TRANSFORMER
⊙	CATCH BASIN
⊙	FLARED END SECTION
⊙	LIGHT POLE
W	EXISTING WATER
---	EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
---	EXISTING COMMUNICATIONS
---	EXISTING NATURAL GAS
---	EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
---	EXISTING SANITARY SEWER
---	EXISTING STORM DRAIN
⊙	STORM DRAIN MANHOLE



**US Army Corps of Engineers**

DATE	DESCRIPTION
JAN 2026	AM002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL
JUL 2025	

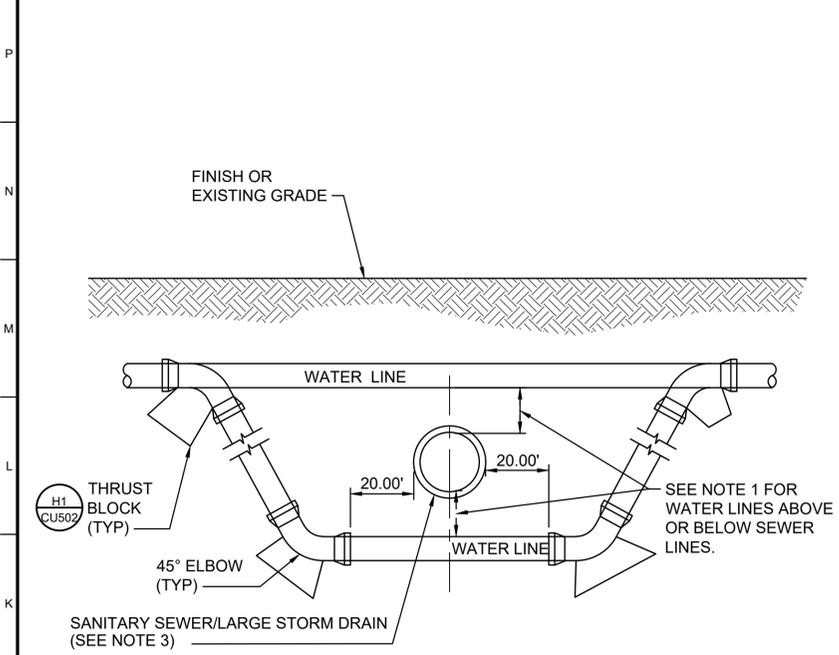
DESIGNED BY: R. DONNELLY	ISSUE DATE: 01/2026
DRAWN BY: D. HENRY	REVISION NO.: W9127524F000
CHECKED BY: R. BARUTH	CONTRACT NO.: W9127524F000
SUBMITTED BY: B. STREIBIN	FILE NAME: 1654362111-16.rvt
ANSI D	SIZE:

**BRIAN J. DONNELLY**  
LICENSED PROFESSIONAL ENGINEER  
No. 22384  
1/5/2026

UTILITY PLAN - AREA 5

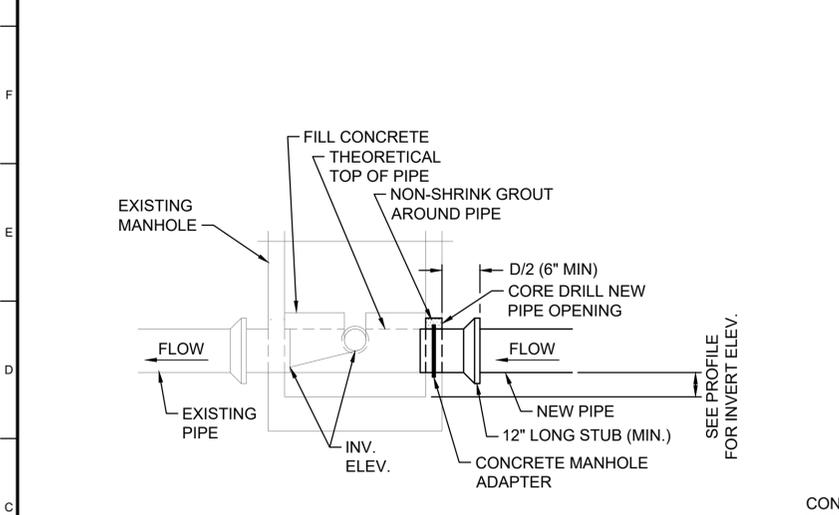
SHEET ID  
**CU115.1**

READY-TO-ADVERTISE (RTA) SUBMITTAL



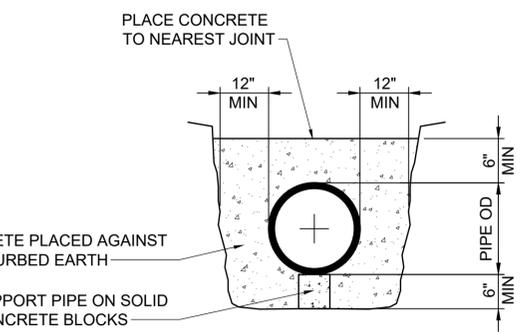
- NOTES:**
1. ALL SANITARY SEWER LINES THAT CROSS LESS THAN 18 INCHES ABOVE OR BELOW WATER MAINS OR SERVICE LINES MUST BE DUCTILE IRON PIPE FOR 10 FEET EACH SIDE OF THE CENTERLINE OF THE CROSSING. CENTER THE SECTION OF PIPE ON THE WATER LINE CROSSING. SEE SPECIFICATIONS SECTION 33 11 00 FOR ADDITIONAL REQUIREMENTS ON PIPE TESTING.
  2. LENGTH OF EXTENSION OF PIPE AND RESTRAINED JOINTS MUST BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.
  3. PER SECTION 4.4 OF THE CITY OF FORT SMITH WATER MINIMUM DESIGN STANDARDS, ALL STORM DRAINS WITH A DIAMETER OF 24 INCHES OR LARGER THE SAME AS SANITARY SEWER LINES WITH RESPECT TO THEIR INTERACTION WITH WATER LINES.

**G1 WATER/SEWER LINE CROSSING**  
SCALE: NTS



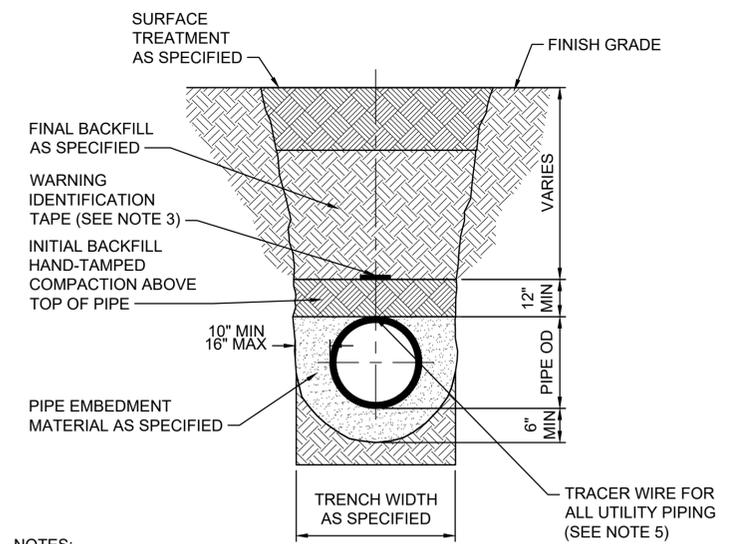
- NOTES:**
1. MAKE CORE CUT WITHOUT SPALLING OR DAMAGE TO THE EXISTING STRUCTURE.
  2. MAKE PIPE CONNECTION THROUGH MANHOLE WALL WITH GROUTING RING GASKET AND NON-SHRINK GROUT.
  3. RE-SHAPE EXISTING INVERT CHANNEL TO ACCOMMODATE NEW INVERT.

**A1 PIPE CONNECTION TO EXISTING MANHOLE**  
SCALE: NTS



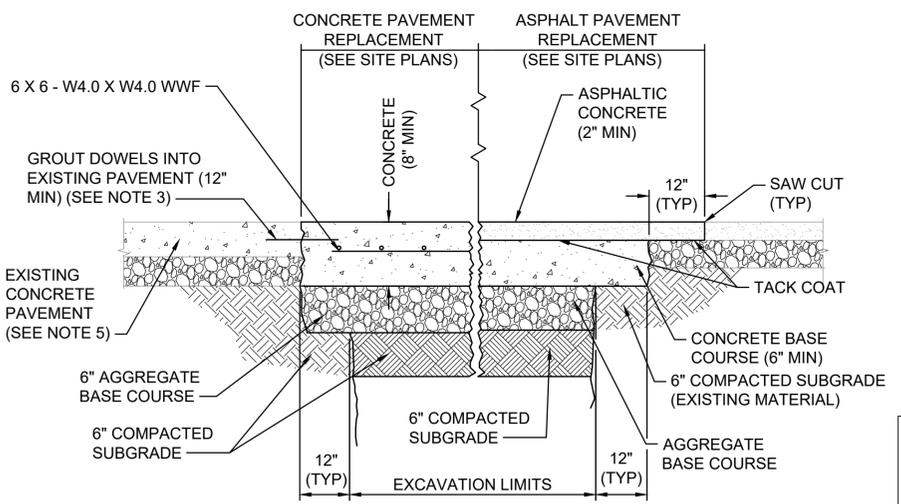
- NOTE:**
1. SECURELY BRACE PIPE VERTICALLY AND HORIZONTALLY TO PREVENT FLOATATION DURING CONCRETE PLACEMENT.

**A7 CONCRETE ENCASEMENT**  
SCALE N.T.S.



- NOTES:**
1. BOTTOM OF TRENCH AND BEDDING MATERIAL MUST PROVIDE UNIFORM LONGITUDINAL SUPPORT FOR BOTTOM SECTION OF PIPE.
  2. FINAL BACKFILL UNDER PAVEMENTS MAY BE SUBJECT TO ADDITIONAL COMPACTION REQUIREMENTS AND TESTING. SEE PAVEMENT SECTIONS ON CS501.
  3. PROVIDE BURIED WARNING AND IDENTIFICATION TAPE IN ACCORDANCE WITH SECTION 31 00 00.
  4. DETAIL APPLIES TO UTILITIES EXCEPT ELECTRICAL AND COMMUNICATIONS.
  5. SEE SPECIFICATION SECTIONS FOR TRACER WIRE REQUIREMENTS FOR UTILITY PIPING SYSTEMS INCLUDING WATER, SANITARY SEWER, INDUSTRIAL WASTE, GAS, AND FIREWATER. SLEEVE TRACER WIRE WITH POLYPIPE AT ALL PIPE JOINTS/FITTINGS.

**H13 UTILITY TRENCH**  
SCALE: NTS



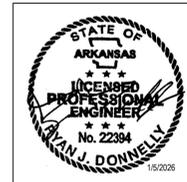
- NOTES:**
1. WIDTH OF PAVEMENT REMOVAL MUST BE MINIMUM 3-Feet EITHER SIDE OF UTILITY CENTERLINE AND TO THE NEXT PAVEMENT PANEL OR JOINT LIMIT WHENEVER FEASIBLE.
  2. THICKNESS OF ALL REPLACEMENT COURSES MUST BE EQUAL TO EXISTING BUT MUST NOT BE LESS THAN INDICATED.
  3. INSTALL DOWELS IN ACCORDANCE WITH DETAILS ON CP502.
  4. MAKE FULL DEPTH SAWCUTS AROUND THE PERIMETER OF THE AREA TO BE PATCHED AND MAKE AT EXISTING JOINTS AND PERPENDICULAR TO THE PAVEMENT EDGE AND CENTERLINE WHENEVER FEASIBLE. FILL SAWCUTS THAT EXTEND OUTSIDE THE AREA OF REMOVAL AND REPLACEMENT WITH AN EPOXY-BASED GROUT MEETING THE REQUIREMENTS OF ASTM C881 TYPE III.
  5. SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT TO PREVENT PARTIAL PANEL REMOVAL.
  6. SIZED CONCRETE REPLACEMENT PANELS TO MATCH THE EXISTING CONCRETE PANEL SIZES WHENEVER FEASIBLE AND MUST HAVE A MAXIMUM LENGTH/WIDTH RATIO OF 1.25.

**A13 PAVEMENT REMOVAL AND REPLACEMENT UTILITY TRENCH**  
SCALE: NTS



ISSUE DATE:	JAN 2026	DATE
REVISION NO.:	0	MARK
DESCRIPTION:	AM002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL	

DESIGNED BY:	R. DONNELLY	ISSUE DATE:	JUL 2025
CHECKED BY:	D. HENKMAN	CONTRACT NO.:	W9127S24R4001
SUBMITTED BY:	R. BARUTH	CONTRACT NO.:	W9127S24F0007
FILE NAME:	B. STREIBIN	FILE NAME:	1634363001.dwg
US ARMY CORPS OF ENGINEERS	LITTLE ROCK DISTRICT	LITTLE ROCK, ARKANSAS	
BURNS AND McDONNELL	9400 WARD PARKWAY,	KANSAS CITY, MO, 64114	1634363

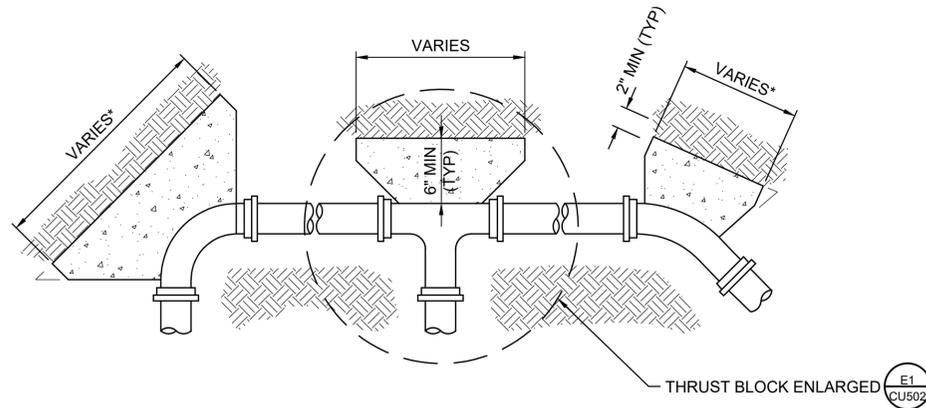


F-35: SPECIAL ACCESS PROGRAM FACILITY  
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

UTILITY DETAILS

SHEET ID  
**CU501.1**

READY-TO-ADVERTISE (RTA) SUBMITTAL

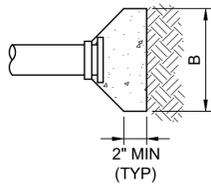


THRUST BLOCK BEARING AREA (SQ FT)					
FITTING SIZE	TEE & END	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
6	4.52	6.40	3.46	1.77	0.89
3	2.01	2.84	1.54	0.78	0.39

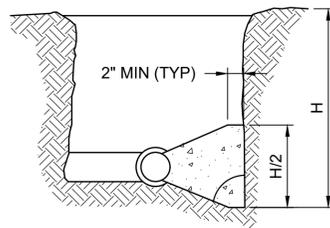
\*AREAS BASED ON PIPE WORKING PRESSURE OF 92 PSI, AND 200 PSI TEST PRESSURE WITH A SOIL BEARING PRESSURE OF 2,500 PSF AND FACTOR OF SAFETY OF 2.0.

\*\*PER NFPA 24, PARAGRAPH 10.10.2.2.1 : ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE MUST BE HYDROSTATICALLY TESTED AT GAUGE PRESSURE OF 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE WHICHEVER IS GREATER AND MUST MAINTAIN THE PRESURE WORKING AT GAUGE PRESSURE OF -- 5 PSI FOR 2 HOURS.

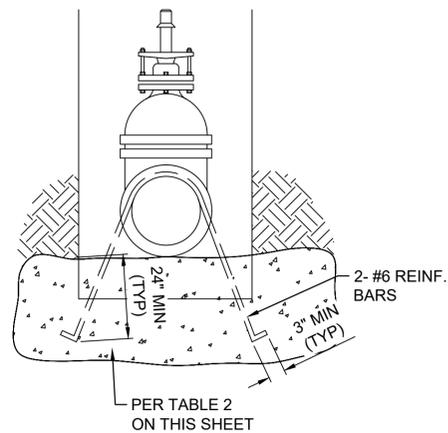
**H1 HORIZONTAL THRUST BLOCK - PLAN**  
SCALE: NTS



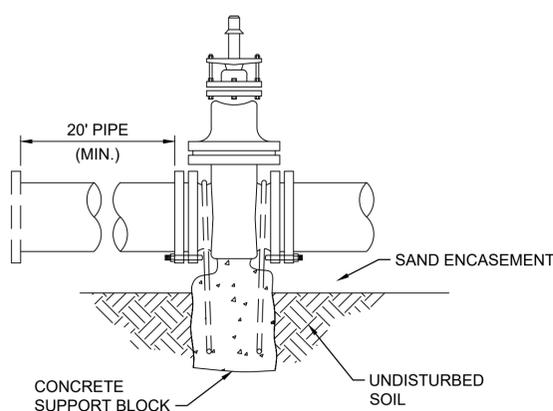
**E1 THRUST BLOCK - ENLARGED PLAN**  
SCALE: NTS



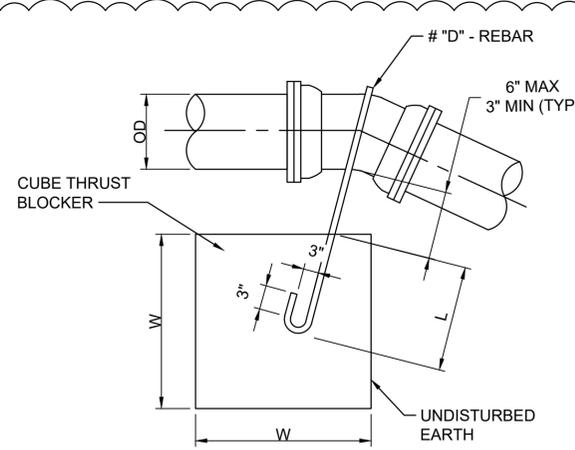
**E6 THRUST BLOCK - SECTION**  
SCALE: NTS



**A1 ANCHOR VALVE ASSEMBLY**  
SCALE: NTS



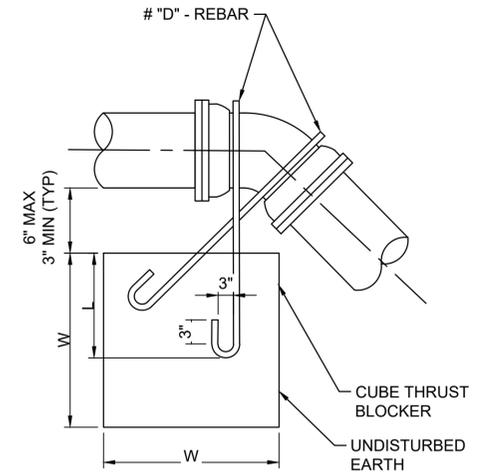
**A6 ANCHOR VALVE ASSEMBLY - ELEVATION**  
SCALE: NTS



**NOTES:**

- EPOXY COAT ALL REBAR ON VERTICAL JOINTS TYPE A RESTRAINT AND TYPE B RESTRAINT IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00 FOR FIELD BENT BARS IN ACCORDANCE WITH ASTM A775.
- FIELD REPAIR ANY DAMAGE TO THE FACTORY COATING DURING TRANSPORT, STORAGE, OR INSTALLATION, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

**J12 TYPE A RESTRAINT FOR 11.25° & 22.50° VERT BENDS**  
SCALE: NTS



**J16 TYPE B RESTRAINT FOR 45° VERT BENDS**  
SCALE: NTS

TABLE 2: VERTICAL JOINT RESTRAINTS								
DEG BEND	PIPE DIA	THRUST (lbs)*	CONCRETE (CF)	CONCRETE (CY)	BLOCK SIZE (ft) (W)	BLOCK SIZE TO NEAREST 0.25 (ft) (W)	BAR DIA (D)	EMBEDMENT (ft) (L)
45	6"	5724	38.16	1.41	3.37	3.50	#5	2.0
	3"	2771	18.47	0.68	2.64	2.75	#5	2.0
22.5	6"	2918	19.45	0.72	2.69	2.75	#5	2.0
	3"	1413	9.42	0.35	2.11	2.25	#5	2.0
11.25	6"	1466	9.77	0.36	2.14	2.25	#5	2.0
	3"	710	4.73	0.18	1.68	1.75	#5	2.0

\*AREAS BASED ON PIPE WORKING PRESSURE OF 92 PSI, AND 200 PSI TEST PRESSURE WITH A SOIL BEARING PRESSURE OF 2,500 PSF AND FACTOR OF SAFETY OF 2.0.

\*\*PER NFPA 24, PARAGRAPH 10.10.2.2.1: ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE MUST BE HYDROSTATICALLY TESTED AT GAUGE PRESSURE OF 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE WHICHEVER IS GREATER AND MUST MAINTAIN THE PRESSURE WORKING AT GAUGE PRESSURE OF -- 5 PSI FOR 2 HOURS.

**E12 VERTICAL JOINT RESTRAINTS TABLE**  
SCALE: NTS

**GENERAL HORIZONTAL AND VERTICAL THRUST BLOCK NOTES:**

- CONCRETE BLOCK AT VALVE TO HAVE SUFFICIENT BEARING IN UNDISTURBED SOIL TO PREVENT THRUST MOVEMENT.
- CONSTRUCT THE THRUST BLOCK SUCH THAT BOLTS, NUTS, AND OTHER MECHANICAL JOINT ACCESSORIES ARE KEPT CLEAR OF CONCRETE.
- BLOCK ALL VALVES AT DEAD ENDS AND AT OTHER LOCATIONS AS CALLED OUT ON THE PLANS AS SHOWN HERE.
- PLACE A NONPOROUS MATERIAL 8 MILS MIN VISQUEEN OR 15 LB MIN FELT BETWEEN THE FITTING AND CONCRETE THRUST BLOCK.
- DO NOT COVER JOINTS WITH CONCRETE. PROVIDE SUFFICIENT CLEARANCE BETWEEN CONCRETE AND FITTINGS FOR FUTURE MAINTENANCE.
- DOUBLE LAYER OF TAR PAPER BETWEEN CONCRETE BLOCK AND PLUG TO PERMIT EASY REMOVAL FOR FUTURE EXTENSION OF WATER MAIN WHERE REQUIRED.
- EPOXY COAT ALL REBAR USED ON THRUST BLOCKS IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00.

**A12 GENERAL HORIZONTAL AND VERTICAL THRUST BLOCK NOTES**  
SCALE: NTS



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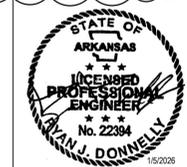
MARK	DESCRIPTION	DATE
1	AM002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL	JAN 2026
0		JUL 2025

DESIGNED BY:	ISSUE DATE:
R. DONNELLY	JUL 2025
D. HENKMAN	SOIL CONDITION NO.:
CHECKED BY:	W9127S24F000
R. BARUTH	CONTRACT NO.:
W9127S24F007	
FILE NAME:	
B. STREEBIN	168-9463001.rvt
ANSI D	

US ARMY CORPS OF ENGINEERS  
LITTLE ROCK DISTRICT  
LITTLE ROCK, ARKANSAS

F-35: SPECIAL ACCESS PROGRAM FACILITY  
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

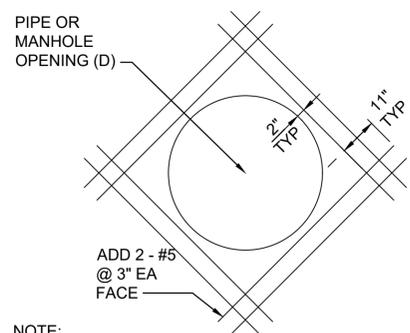
UTILITY DETAILS



SHEET ID

CU502.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

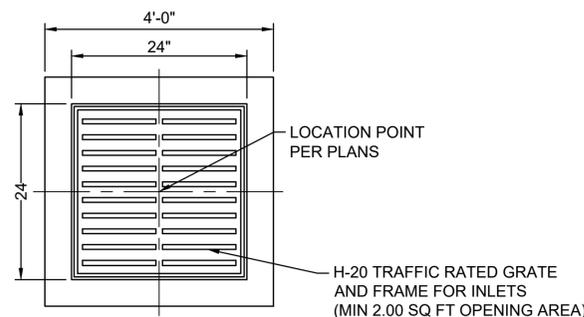


**NOTE:**  
1. ALL BAR MINIMUM LENGTHS TO BE (D + 20") WITH BARS CENTERED ON OPENINGS.

**REINFORCING AT PIPE OR MANHOLE LID OPENING**

**L1**

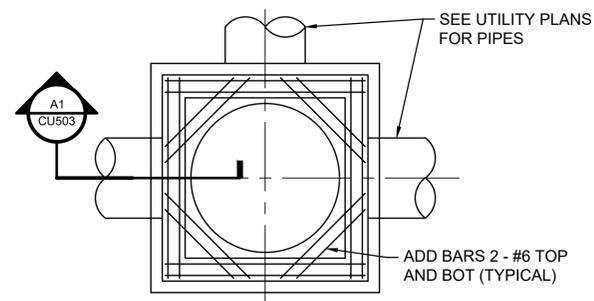
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**CATCH BASIN - GRATE VIEW**

**H1**

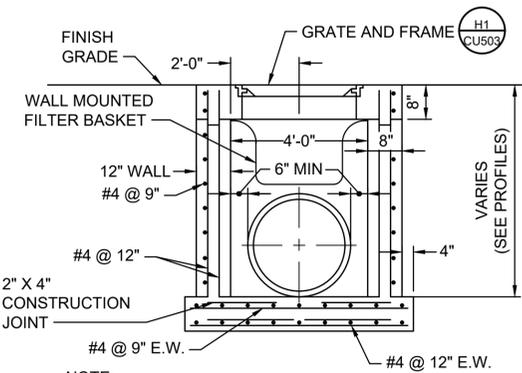
SCALE: NTS



**CATCH BASIN - PLAN VIEW**

**E1**

SCALE: NTS

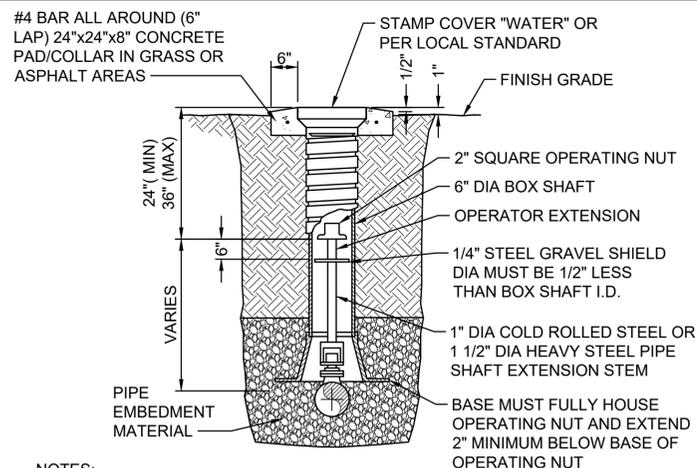


**NOTE:**  
1. STRUCTURE MAY BE PRECAST AND MUST BE RATED FOR H-20, SEE PRECAST MANHOLE DETAIL ON CU504.

**CATCH BASIN - SECTION VIEW**

**A1**

SCALE: NTS

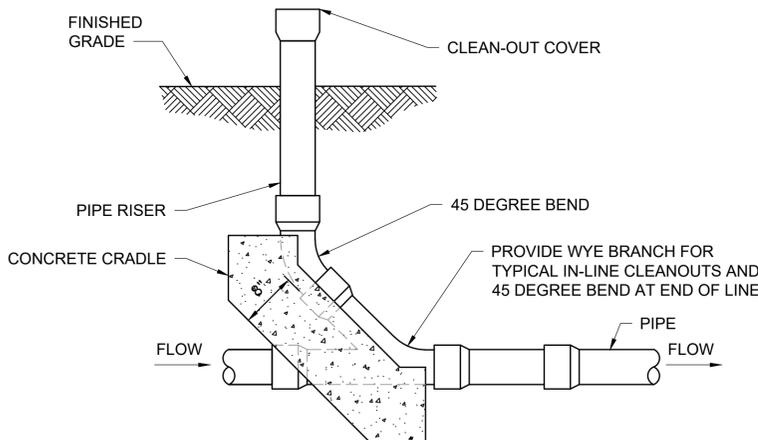


**NOTES:**  
1. DO NOT REST VALVE BOX ON OPERATING ASSEMBLY.  
2. TRAFFIC RATE VALVE BOXES LOCATED IN VEHICULAR AREAS.  
3. INSTALL VALVE BOXES LOCATED IN PAVED AREAS FLUSH WITH FINAL GRADING.  
4. CONCRETE COLLAR MAY BE LOWERED ON RISER ASSEMBLY TO ACCOMMODATE SPECIAL FINISH GRADING.  
5. PAINT VALVE BOX WITH HEAVY COAT OF BITUMINOUS PAINT.

**SCREW SHAFT - TYPE VALVE BOX**

**J7**

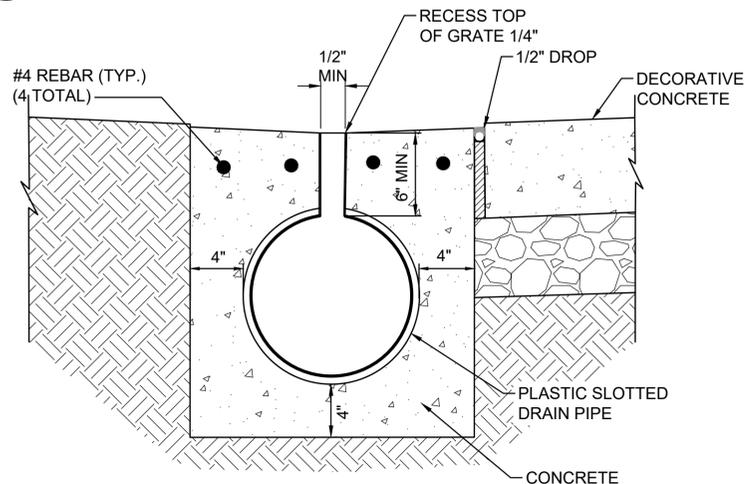
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**CLEANOUT**

**E7**

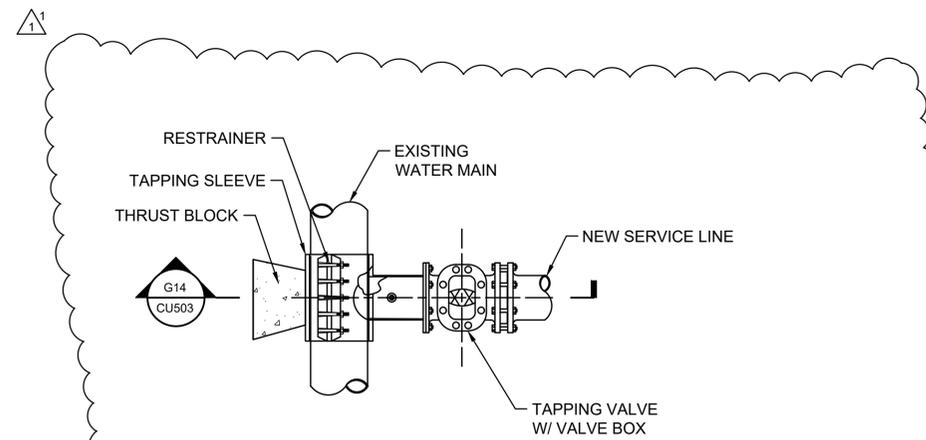
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**SLOT DRAIN**

**A7**

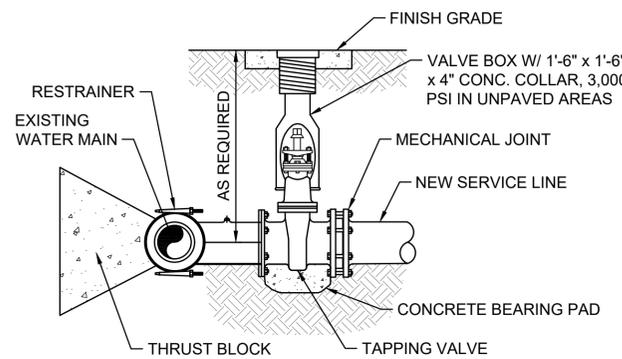
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**WATER TAPPING SLEEVE - PLAN**

**K13**

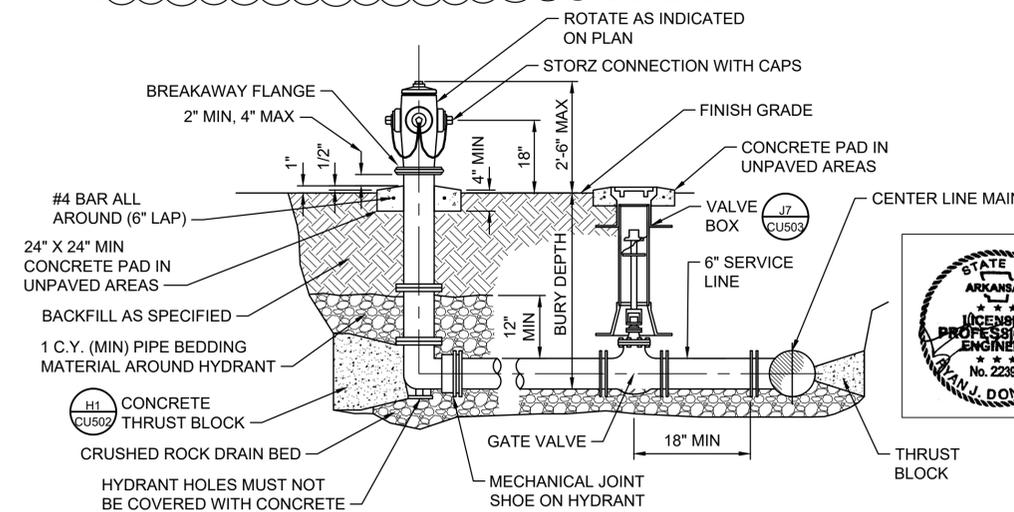
SCALE: NTS



**WATER TAPPING SLEEVE - SECTION**

**G14**

SCALE: NTS



**NOTES:**  
1. PAINT HYDRANT BODY YELLOW WITH LIGHT GREEN BONNETS TO ALIGN WITH EBBING ANGB STANDARDS.  
2. INSTALL TRACER WIRE AND TEST STATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.

**FIRE HYDRANT AND ISOLATION VALVE**

**A13**

SCALE: NTS



US Army Corps of Engineers

DATE	JAN 2026
MARK	0
DESCRIPTION	AM002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL

ISSUE DATE:	JUL 2025
DESIGNATION NO.:	W9127S24F001
CONTRACT NO.:	W9127S24F007
DESIGNED BY:	R. DONNELLY
CHECKED BY:	D. HENRIAN
SUBMITTED BY:	R. BARUTH
FILE NAME:	108-0430101.rvt
ANSI D	

US ARMY CORPS OF ENGINEERS  
LITTLE ROCK DISTRICT  
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL  
9400 WARD PARKWAY,  
KANSAS CITY, MO, 64114  
108-0430

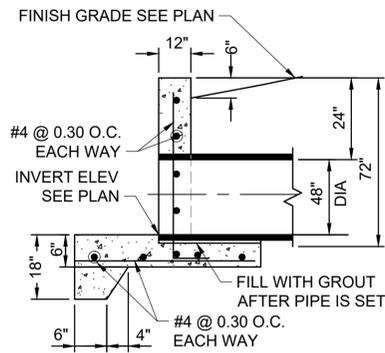
F-35: SPECIAL ACCESS PROGRAM FACILITY  
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

UTILITY DETAILS

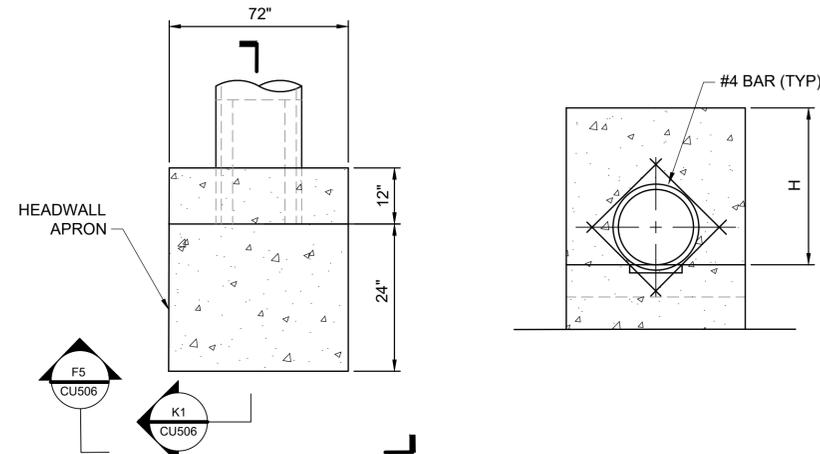
STATE OF ARKANSAS  
LICENSED PROFESSIONAL ENGINEER  
No. 22384  
R. J. DONNELLY  
1/15/2026

SHEET ID  
CU503.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

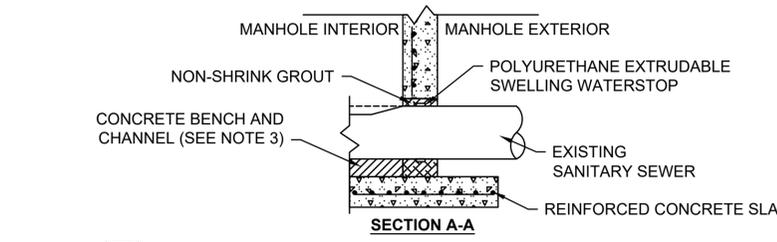
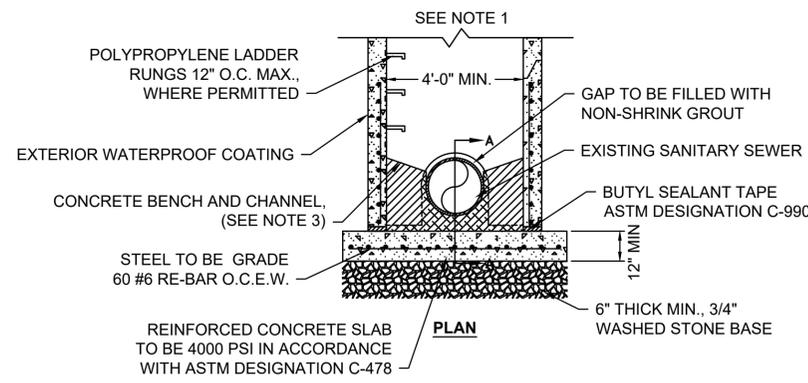


**K1 HEADWALL - SECTION**  
SCALE: NTS



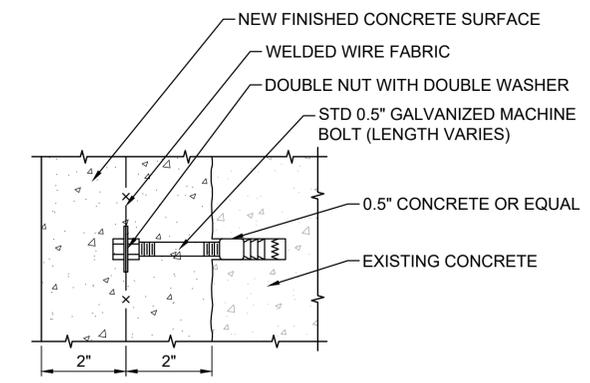
**F1 HEADWALL - PLAN**  
SCALE: NTS

**F5 HEADWALL - ELEVATION**  
SCALE: NTS

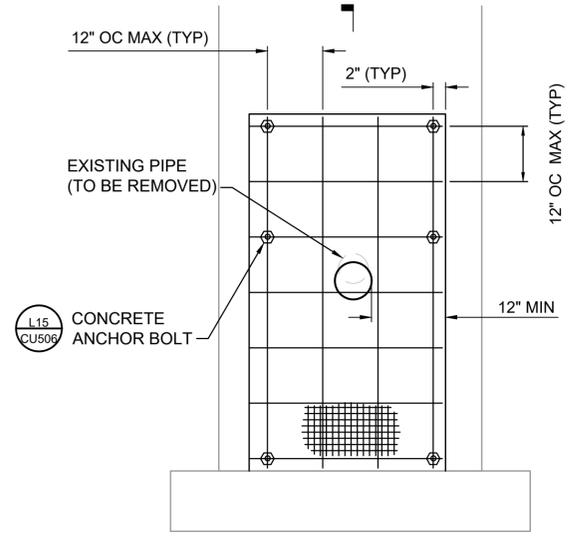


- NOTES:**
1. SEE PRECAST STANDARD MANHOLE DETAIL FOR TYPICAL INSTALLATION.
  2. PRECAST MANHOLE SECTIONS TO BE IN ACCORDANCE WITH ASTM DESIGNATION C478.
  3. SOLID CONCRETE BENCH AND CHANNEL TO BE CONSTRUCTED BY CONTRACTOR.
  4. EXTERIOR COATING NOT REQUIRED IN TEXAS.

**H8 DOGHOUSE MANHOLE**  
SCALE: NTS

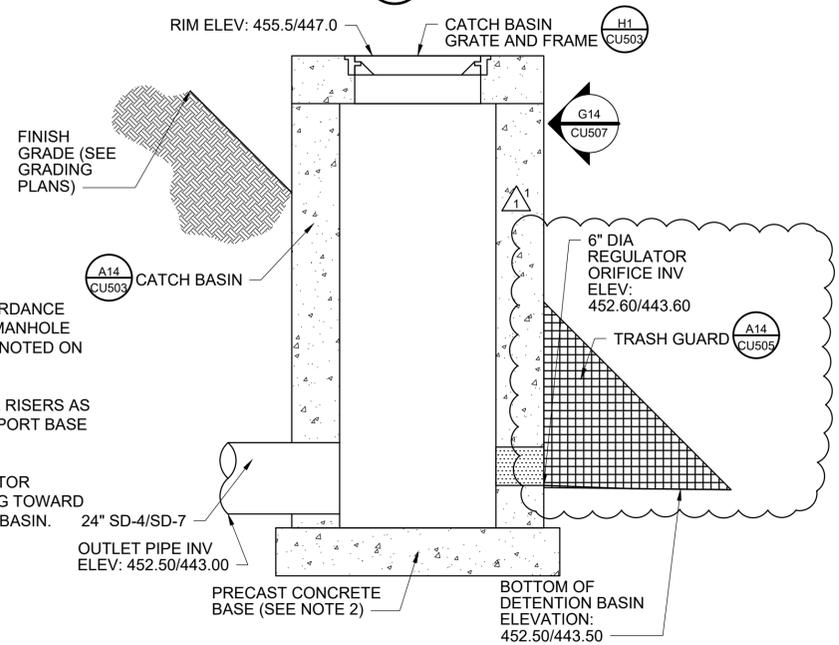


**L15 CONCRETE ANCHOR BOLT**  
SCALE: NTS

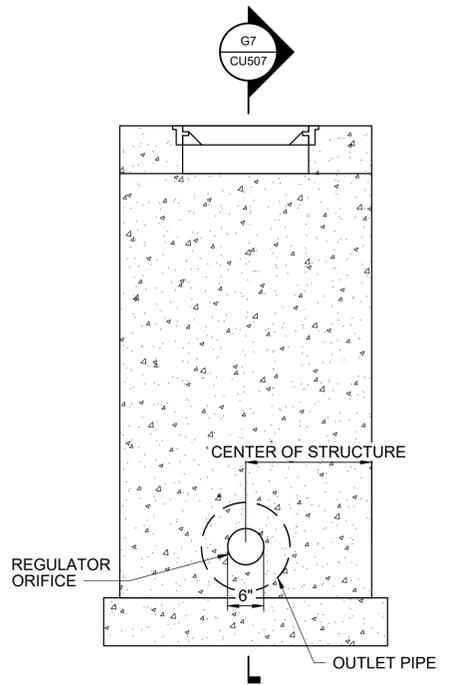


**F15 MANHOLE REPAIR - ELEVATION**  
SCALE: NTS

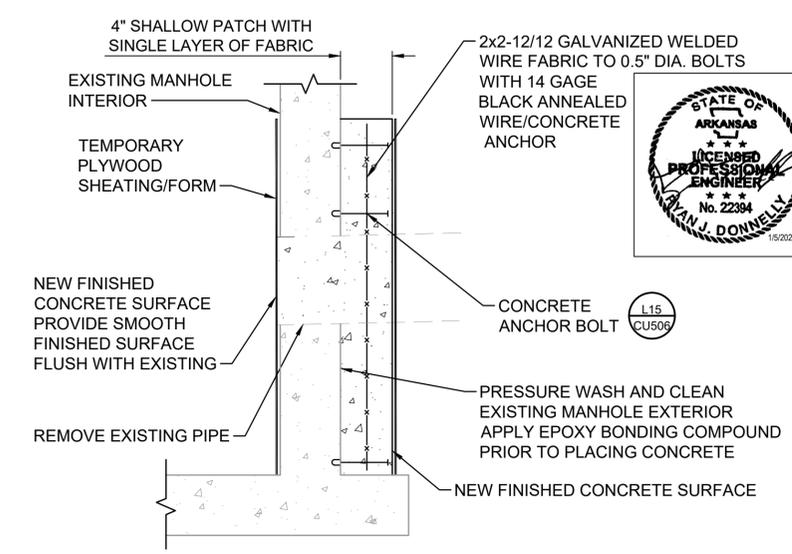
- NOTES:**
1. DESIGN IN ACCORDANCE WITH PRECAST MANHOLE REQUIREMENTS NOTED ON CU504.
  2. ADD ADDITIONAL RISERS AS NEEDED TO SUPPORT BASE OF INLET.
  3. ORIENT REGULATOR ORIFICE OPENING TOWARD THE DETENTION BASIN.



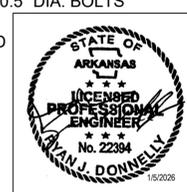
**A1 SDI-4/SDI-9 DETENTION BASIN OUTLET STRUCTURE - SECTION**  
SCALE: NTS



**A8 SDI-4/SDI-9 DETENTION BASIN OUTLET STRUCTURE - ELEVATION**  
SCALE: NTS



**A15 MANHOLE REPAIR - SECTION**  
SCALE: NTS



**US Army Corps of Engineers**

ISSUE DATE: JUL 2025  
 SUBMITTAL DATE: JUL 2025  
 DESIGNATION NO.: W9127S24F0001  
 CONTRACT NO.: W9127S24F0007  
 CHECKED BY: R. BARUTH  
 SUBMITTED BY: B. STREEBIN  
 FILE NAME: 1684-06.rvt  
 ANSID: 1684-06.rvt

AM0002 - REMOVED CATHODIC PROTECTION READY-TO-ADVERTISE (RTA) SUBMITTAL

DESCRIPTION: 1 0 MARK

DESIGNED BY: R. DONNELLY  
 DRAWN BY: D. HENRY  
 CHECKED BY: R. BARUTH  
 SUBMITTED BY: B. STREEBIN  
 FILE NAME: 1684-06.rvt

US ARMY CORPS OF ENGINEERS  
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BURNS AND McDONNELL  
 9400 WARD PARKWAY,  
 KANSAS CITY, MO, 64114  
 1684-06

F-35: SPECIAL ACCESS PROGRAM FACILITY  
 EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

UTILITY DETAILS

SHEET ID  
**CU506.1**

READY-TO-ADVERTISE (RTA) SUBMITTAL