AEROJET - NEW GUARD POST - 2

East Camden, Arkansas

CROMWELL
1300 East 6th Street Little Rock, AR 72202
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Project

AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

Notes

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

TITLE SHEET

Sheet Number

G-001

ARCHITECTURAL ABBREVIATIONS

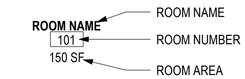
AB	ANCHOR BOLT
ACOUST.	ACOUSTICAL
AD	AUXILIARY DRAIN
ADJ.	ADJUSTABLE
ADMIN.	ADMINISTRATION
A.F.F.	ABOVE FINISH FLOOR
AGGRE.	AGGREGATE
ALUM.	ALUMINUM
BD	BOARD
B.F.F.	BELOW FINISH FLOOR
BLKG	BLOCKING
BM	BEAM
B.O.	BOTTOM OF
BPL	BASE PLATE
BS	BOTH SIDES
BTWN.	BETWEEN
B.U.R.	BUILT-UP ROOF
CAL.	CALIPER
CL	CENTERLINE
CFC	COMBINED FACILITIES COMPLEX
CSF	COMBINED SHARED FACILITIES
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONC. BLK	CONCRETE BLOCK
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CT	CERAMIC TILE
DB	DECK BEARING
DIM.	DIMENSION
DR	DOOR
DTL	DETAIL
DWG	DRAWING
EA	EACH
E.B.	EXPANSION BOLT
EF	EXHAUST FAN
E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQ	EQUAL
EQUIP.	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP	EXPANSION
EXT.	EXTERIOR
F	FEMALE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
F.F.E.	FINISH FLOOR ELEVATION
FIN.	FINISH
FLR	FLOOR
FND	FOUNDATION
F.O.C.	FACE OF CONCRETE
FRP	FIBERGLASS REINFORCED PANEL
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GR	GUARD RAIL
GP	GUARD POST
GYP	GYPSUM
GYP.BD.	GYPSUM BOARD
H	HIGH
HD	HANDICAP
HC	HOLLOW CORE
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
INFO.	INFORMATION
INSUL.	INSULATION
INT	INTERIOR
JAN	JANITOR.
JT	JOINT
JST	JOIST
KCJ	KEYED CONTROL JOINT
LAV.	LAVATORY
KG	KILOGRAM
LCB	LIQUID CHALK BOARD
LM	LINEAL METER
LG	LONG
MAS	MASONRY
MATL.	MATERIAL
MAX	MAXIMUM
MB	MINI-BLINDS
M.D.	METAL DECK
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEZZ.	MEZZANINE
MFR	MANUFACTURER
MISC.	MISCELLANEOUS
MO	MASONRY OPENING
M.S.	METAL STUD
MTL.	METAL
N.I.C.	NOT IN CONTRACT
NS	NON-SHRINK
N.T.S.	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFW	OUTSIDE FACE OF WALL
OPNG	OPENING
OPP.	OPPOSITE
P.LAM	PLASTIC LAMINATE
PL	PLATE
PLYWD.	PLYWOOD
PNL	PANEL
PROD	PRODUCE
KG/SQM	KILOGRAMS PER SQUARE METER
KG/SQCM	KILOGRAMS PER SQUARE CENTIMETER
QTY	QUANTITY
R	RISER
R	RADIUS
RD	ROOF DRAIN
REFRIG	REFRIGERATION
REINF	REINFORCING
REQD	REQUIRED
RM	ROOM
RPP	RACK POST PROTECTOR
SC	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SPECS	SPECIFICATIONS
SMFE	SURFACE MOUNTED FEC
SRFE	SEMI-RECESSED FEC
S	SEWER
SS	SANITARY SEWER
S.S.	STAINLESS STEEL
SSC	STAINLESS STEEL CLOSURE
SST	STAINLESS STEEL THRESHOLD
STB	STAFF TRAINING BUILDING
STL	STEEL
STO.	STORAGE
STRUCT.	STRUCTURAL
SYM.	SYMBOL
T	TREAD
T & B	TOP AND BOTTOM
THK	THICK
THRESH.	THRESHOLD
TJ	TOOLED JOINT
TO	TOP OF
T.O.S.	TOP OF STEEL
T.O.P.	TOP OF PANEL
TS	TUBE STEEL
TW	TRANSACTION WINDOW
TYP	TYPICAL
T.O.M.	TOP OF MASONRY
U.N.O.	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W	WIDE
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WG	WALL GUARD
W/O	WITHOUT
WP	WATERPROOFING
WT	WEIGHT
WWF	WELDED WIRE FABRIC

INDEX OF DRAWINGS

SHEET NUMBER	SHEET NAME	Sheet Issue Date	REVISION DATE
GENERAL INFORMATION			
G-001	TITLE SHEET	07-17-2024	
G-002	INDEX, SYMBOLS & ABBREV.	07-17-2024	
G-003	GENERAL NOTES & DETAILS	07-17-2024	
LIFE SAFETY			
GI001	LIFE SAFETY CODE ANALYSIS	07-17-2024	
GI101	LIFE SAFETY FLOOR PLAN	07-17-2024	
CIVIL			
VF101	SITE SURVEY	06-20-2024	
C-001	CIVIL NOTES	06-20-2024	
CD101	SITE DEMOLITION PLAN	06-20-2024	
CS101	SITE LAYOUT PLAN	06-20-2024	
CG101	SITE GRADING AND DRAINAGE PLAN	06-20-2024	
CU101	SITE UTILITY PLAN	06-20-2024	
C-501	SITE DETAILS	06-20-2024	
C-502	SITE DETAILS	06-20-2024	
C-503	SITE DETAILS	06-20-2024	
STRUCTURAL			
S-001	STRUCTURAL DESIGN CRITERIA AND GENERAL NOTES	07-17-2024	
S-002	STRUCTURAL GENERAL NOTES CONT'D	07-17-2024	
S-003	COMPONENTS AND CLADDING WIND PRESSURE PLANS	07-17-2024	
S-101	FOUNDATION AND SLAB PLAN	07-17-2024	
S-102	ROOF FRAMING PLAN	07-17-2024	
S-301	TYP FOUNDATION AND SLAB DETAILS	07-17-2024	
S-302	FOUNDATION DETAILS	07-17-2024	
S-303	FOUNDATION DETAILS	07-17-2024	
S-501	TYPICAL ROOF FRAMING DETAILS	07-17-2024	
S-502	TYPICAL ROOF FRAMING DETAILS	07-17-2024	
S-503	TYPICAL CANOPY FRAMING DETAILS	07-17-2024	
S-601	TYPICAL HARDENED ROOM DETAILS	07-17-2024	
ARCHITECTURAL			
A-101	FLOOR PLAN	07-17-2024	
A-102	CANOPY	07-17-2024	
A-201	EXTERIOR ELEVATIONS	07-17-2024	
A-301	SECTIONS	07-17-2024	
A-401	LARGE SCALE PLANS & DETAILS	07-17-2024	
A-402	DETAILS	07-17-2024	
A-403	DETAILS	07-17-2024	
A-404	WINDOW DETAILS	07-17-2024	
A-601	SCHEDULES & DEMOLITION PLAN	07-17-2024	
A-602	ROOM FINISH NOTES AND LEGENDS	07-17-2024	
A-701	MILLWORK DETAILS	07-17-2024	
A-801	PARTITION TYPES AND WALL SECTIONS	07-17-2024	
PLUMBING			
P-001	PLUMBING LEGEND AND NOTES	07-17-2024	
P-101	OVERALL PLUMBING PLAN	07-17-2024	
P-501	PLUMBING DETAILS	07-17-2024	
P-502	PLUMBING DETAILS & RISER	07-17-2024	
P-601	PLUMBING SCHEDULES	07-17-2024	
MECHANICAL			
M-001	MECHANICAL LEGEND, SYMBOLS, GENERAL NOTES, AND SCHEDULES	07-17-2024	
M-101	FIRST FLOOR MECHANICAL PLAN	07-17-2024	
M-501	MECHANICAL DETAILS	07-17-2024	
ELECTRICAL			
E-001	ELECTRICAL LEGEND	07-17-2024	
ES101	ELECTRICAL SITE PLAN	07-17-2024	
EG101	LIGHTNING PROTECTION PLAN	07-17-2024	
EL101	LIGHTING PLAN	07-17-2024	
EP101	POWER PLAN & SINGLE LINE DIAGRAM	07-17-2024	
ET101	SYSTEMS PLAN	07-17-2024	
E-601	ELECTRICAL SCHEDULES	07-17-2024	

SYMBOLS LEGEND

ROOM LABEL



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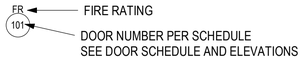

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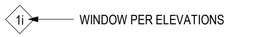

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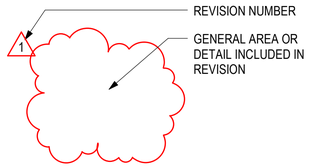

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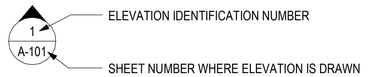

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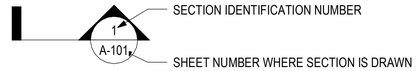

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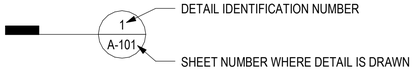
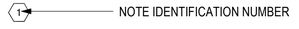


KEY NOTE



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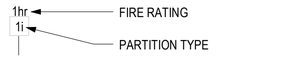
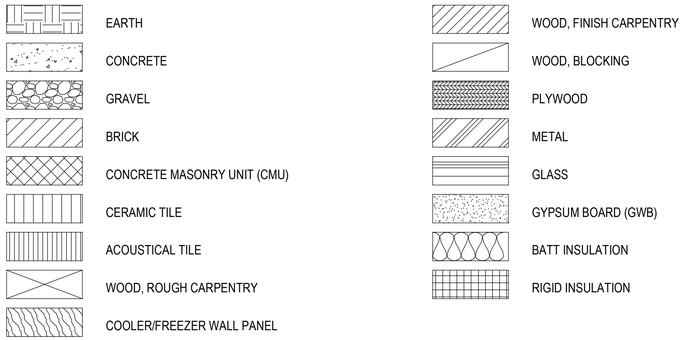


SECTION INDICATIONS



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REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

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Sheet Title

INDEX, SYMBOLS & ABBREV.

Sheet Number

G-002

NOTES

GENERAL CONSTRUCTION REQUIREMENTS:

1. ALL WORK SHALL BE DONE IN A SAFE AND WORKMANLIKE MANNER AND IN STRICT ACCORDANCE WITH THE UFC, GOVERNING BUILDING CODES, NATIONAL ELECTRIC CODE, AND ALL APPLICABLE REGULATIONS AND ORDINANCES HAVING JURISDICTION.

2. THE CONTRACTOR IS TO UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS COMPLETELY. EACH ASPECT OF THE WORK MAY BE INDICATED IN ONE DISCIPLINE OR INDICATED IN MULTIPLE DISCIPLINES. REVIEW ALL INFORMATION FROM ALL DISCIPLINES AND COMPLETELY FIELD VERIFY ALL CONDITIONS BEFORE IMPACTING EXISTING CONDITIONS OR PROVIDING NEW WORK.

3. EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO DO SO DOES NOT RELIEVE ANY RESPONSIBILITY FOR PERFORMING THIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.

4. PRIOR TO COMMENCING WITH THE WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF ALL ITEMS, AND IF ANY DISCREPANCIES ARE FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT EXISTS IN THE FIELD, CONTACT THE ARCHITECT TO DETERMINE THE PROPER COURSE OF ACTION. THE CONTRACTOR'S APPROVAL FOR FABRICATION INDICATES THE ACCEPTANCE OF EXISTING CONDITIONS.

5. THE OWNER SHALL OCCUPY PORTIONS OF THE FACILITY DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL CONSTRUCTION PROCEDURES WHICH WILL INTERFERE WITH THE NORMAL DAILY OPERATIONS OF THE FACILITY. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE OWNER FOR ALL INTERRUPTIONS OF UTILITY SERVICES PRIOR TO THE INTERRUPTION. ACCIDENTAL INTERRUPTIONS SHALL BE REMEDIED IMMEDIATELY WITH APPROPRIATE FORCES.

6. THE FACILITY SHALL BE PROTECTED AT ALL TIMES FROM MOISTURE, DUST AND DEBRIS. INSTALL DUST PARTITIONS AS REQUIRED AND/OR AS SHOWN TO KEEP THE EXISTING PREMISES FREE FROM DUST AND DEBRIS. PROVIDE BARRICADES SEPARATING THE PUBLIC FROM CONSTRUCTION ACTIVITY.

7. ANY DAMAGE TO THE OWNER'S PROPERTY OR OWNER'S EMPLOYEES CAUSED BY THE CONSTRUCTION PROCESS SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER OR OWNER'S EMPLOYEES.

8. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE SECURITY SYSTEM OF THE EXISTING FACILITY AT ALL TIMES. THIS INCLUDES KEEPING THE FACILITY SECURE FROM PERSONS, ENVIRONMENTAL ELEMENTS, OR HAZARDS. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE OWNER PRIOR TO THE MODIFICATION OF ANY SECURITY SYSTEM OR THE DISABLING OF SUCH.

9. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA FREE AND CLEAR OF DEBRIS. REMOVE TRASH AND DEBRIS FROM CONSTRUCTION AREA AND DO NOT ALLOW TO ACCUMULATE. NO FLAMMABLE MATERIALS/LIQUIDS MAY BE STORED IN THE BUILDING DURING CONSTRUCTION. PROVIDE EXTINGUISHERS AS REQUIRED BY LOCAL AND STATE AUTHORITIES, UL LISTED 2A:20BC DRY CHEMICAL FIRE EXTINGUISHERS, ACCESSIBLE AT ALL TIMES WITHIN ALL CONSTRUCTION AREAS.

10. THE CONTRACTOR SHALL MAINTAIN THE REQUIRED NUMBER OF EXITS FROM THE FACILITY. MAINTAIN EXITS, EXIT SIGNS AND EMERGENCY LIGHTING AT ALL TIMES AS REQUIRED BY THE GOVERNING AUTHORITIES.

11. REMOVE ANY EXISTING ITEMS, SERVICES, FINISHES/OR SURFACES AS REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION.

12. REPAIR, RE-ROUTE AND EXTEND ALL SERVICES, PIPING, CONDUIT OF EXISTING ITEMS AND EQUIPMENT AS REQUIRED DURING THE CONSTRUCTION PROCESS FOR THE COMPLETE INSTALLATION AND OPERATIONS OF NEW EQUIPMENT. THIS INCLUDES ALL ITEMS SHOWN OR NOT SHOWN ON THE DRAWINGS. RESET EXISTING EQUIPMENT OR RELATED ITEMS AS REQUIRED FOR PROPER OPERATION.

13. ALL QUESTIONS RELATING TO THE CONSTRUCTION OF THIS PROJECT SHALL BE DONE IN WRITTEN FORM USING THE "REQUEST FOR INFORMATION" FORM, INCLUDED IN THE SPECIFICATIONS, THROUGH THE GENERAL CONTRACTOR ONLY. FOLLOW INSTRUCTIONS WHEN COMPLETING AND SENDING THIS FORM.

GENERAL SITE VERIFICATION REQUIREMENTS:

15. EXISTING CONDITIONS SHOWN IN THESE PLANS ARE BASED ON LIMITED FIELD OBSERVATIONS BY THE ARCHITECT. ALL EXISTING, DIMENSIONS, AND GENERAL CONDITIONS SHALL BE VERIFIED BEFORE PURCHASE OF MATERIAL AND CONSTRUCTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS IMMEDIATELY.

16. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES (WHETHER SHOWN OR NOT) PRIOR TO THE SUBMISSION OF HIS BID OR THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE DISCOVERY OF EXISTING UTILITIES NOT SHOWN OR NOTED ON DRAWINGS. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITY SERVICES PRIOR TO ANY EXCAVATION.

GENERAL DEMOLITION REQUIREMENTS:

REFER TO EXISTING GUARD POST - DEMOLITION NOTES ON A601

17. ALL DEMOLITION SHALL BE CARRIED OUT IN A SAFE MANNER AND IN STRICT ACCORDANCE WITH OSHA REGULATIONS.

18. THE CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF DEMOLITION. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE DEMOLITION AND REMOVAL OF WALLS, CEILINGS, ROOFING, DOORS, FIXTURES, PLUMBING, MECHANICAL AND ELECTRICAL ITEMS INCLUDING CONDUITS AND DUCTWORK AS SHOWN ON DRAWING OR AS REQUIRED FOR THE INSTALLATION OF THE NEW WORK FOR A COMPLETE JOB. CONTRACTOR SHALL REPAIR SITE, REFER TO CIVIL DRAWINGS.

19. WHEN UTILITIES ARE REMOVED, CAP AND SEAL A MINIMUM OF 8" BELOW FINISH FLOOR.

20. THE CONTRACTOR SHALL RETAIN A REGISTERED PROFESSIONAL ENGINEER TO SPECIFY DEMOLITION PROCEDURES. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR MEANS AND METHODS OF DEMOLITION AND NEW CONSTRUCTION.

21. DURING DEMOLITION AND CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY REQUIRED SAFETY BARRIERS OR BARRICADES. PROVIDE BARRICADES SO AS TO PRECLUDE INTRUSION OF PUBLIC INTO CONSTRUCTION AREAS.

22. REFER TO THE OWNER APPROVED CONSTRUCTION PHASING SCHEDULE FOR PHASING OF DEMOLITION AND NEW CONSTRUCTION. COORDINATE DEMOLITION WITH NEW CONSTRUCTION IN ORDER THAT THE FACILITY WILL HAVE UNINTERRUPTED WATER, SEWER, ELECTRICAL, GAS AND FIRE PROTECTION SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL NECESSARY TEMPORARY UTILITY PROVISIONS REQUIRED.

23. ALL DEMOLITION MATERIALS NOT SALVAGED BY THE OWNER SHALL BE REMOVED BY THE CONTRACTOR. COORDINATE WITH THE OWNER REGARDING MATERIALS TO BE SALVAGED BY THE OWNER. REFER ALSO TO DRAWINGS AND SPECIFICATIONS FOR SALVAGED ITEMS.

24. THE CONTRACTOR SHALL USE A WET SAW FOR SLAB SAWING. NO JACK HAMMERS WILL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE OWNER.

25. PROTECT ALL WATER PIPING AT AREAS OF DEMOLITION AND EXPANSION, WHERE EXISTING PIPING IS SUBJECT TO FREEZING. PROTECT PIPING SO AS NOT TO FREEZE.

GENERAL FLOOR PLAN NOTES:

26. ALL DIMENSIONS ARE TO FACE OF CMU OR STUD UNLESS NOTED OTHERWISE.

27. ALL NEW FLOORING SHALL BE PROTECTED FROM SCRATCHING, MARKING, STAINING, ETC. DURING CONSTRUCTION. ANY FLOORING THAT IS DAMAGED BY CONSTRUCTION AND DOES NOT APPEAR IN NEW CONDITION AT THE TIME OF POSSESSION WILL BE REPLACED BY THE GENERAL CONTRACTOR AT HIS EXPENSE. INSTALL TRANSITION STRIP WHERE FLOORING ABUTS EXPOSED CONCRETE FLOOR.

28. CLEAN ALL EXISTING HVAC GRILLES WHICH REMAIN, PRIOR TO CONTRACT COMPLETION.

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REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

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GENERAL NOTES & DETAILS

Sheet Number

G-003

APPLICABLE CODES AND STANDARDS

CODE	EDITION	DESCRIPTION
AFPC	2021	ARKANSAS FIRE PREVENTION BUILDING CODE
NFPA 1	2021	FIRE CODE
NFPA 10	2022	STANDARD FOR PORTABLE FIRE EXTINGUISHERS
NFPA 13	2019	INSTALLATION OF SPRINKLER SYSTEMS
NFPA 24	2019	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
NFPA 25	2020	STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS
NFPA 70	2020	NATIONAL ELECTRIC CODE
NFPA 72	2019	NATIONAL FIRE ALARM CODE
NFPA 90A	2021	STANDARD INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
NFPA 101	2021	LIFE SAFETY CODE

OCCUPANCY CLASSIFICATION

☐ SINGLE
☒ MIXED
☐ SEPARATED ☒ NON SEPARATED

OCCUPANCY CLASSIFICATION(S): B, U
ACCESSORY OCCUPANCIES: N/A

CONSTRUCTION CLASSIFICATION: IIB

HEIGHT AND AREA - ACTUAL

BUILDING HEIGHT	HEIGHT IN FEET 12' - 2"	HEIGHT IN STORIES 1
BUILDING AREA	439.00 SF	

HEIGHT AND AREA- ALLOWABLE

		TABULAR AREA (TABLE 506.2)		TABULAR HEIGHT (TABLE 504.3-4)		
OCCUPANCY CLASSIFICATION	TYPE OF CONSTRUCTION	AREA FACTOR	AREA	AREA FACTOR	FEET	STORIES
B	IIB	NS	23000	NS	55	3
U	IIB	NS	8500	NS	55	2

UNLIMITED AREA ☐ YES ☒ NO
QUALIFY FOR FRONTAGE INCREASE? ☒ YES ☐ NO
FRONTAGE INCREASE FACTOR (TABLE 506.3.3): 0.75

ALLOWABLE AREA $A_A = [A_T + (NS \times I_F)]$ (506.2)

14875	=	[8500	+	(8500	X	0.75	)]
ALLOWABLE AREA		TABULAR ALLOWABLE AREA FACTOR		TABULAR ALLOWABLE AREA FACTOR FOR NS		FACTOR INCREASE DUE TO FRONTAGE	

INTERIOR FINISH REQUIREMENTS

	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES
WALL & CEILING FINISH	A	B	C
FLOOR COVERINGS	II	II	II

(TABLE 803.13)

INCIDENTAL USES

- ☐ FURNACE ROOM
- ☐ ROOMS WITH BOILERS
- ☐ REFRIGERANT MACHINERY ROOM
- ☐ HYDROGEN FUEL GAS ROOMS
- ☐ INCINERATOR ROOMS
- ☐ PAINT SHOPS IN OTHER THAN F
- ☐ GROUP E LABORATORIES AND VOCATIONAL SHOPS
- ☐ GROUP I-2 LABORATORIES
- ☐ AMBULATORY CARE FACILITIES LABORATORIES
- ☐ LAUNDRY ROOMS OVER 100 SQFT
- ☐ GROUP I-2 LAUNDRY ROOMS OVER 100 SQFT
- ☐ GROUP I-3 CELLS AND GROUP I-2 PATIENT ROOMS
- ☐ GROUP I-2 PHYSICAL PLANT MAINTENANCE SHOPS
- ☐ AMBULATORY CARE FACILITIES OR GROUP I-2 WASTE AND LINEN COLLECTION ROOM WITH AGGREGATE VOLUME OF 10CF
- ☐ OTHER THAN AMBULATORY AND GROUP I-2 WASTE AND LINEN COLLECTION ROOMS OVER 100 SQFT
- ☐ AMBULATORY CARE FACILITIES OR GROUP I-2 STORAGE ROOMS OVER 100 SQFT
- ☐ ELECTRICAL INSTALLATIONS AND TRANSFORMERS

IF APPLICABLE, SEPARATION AND/OR PROTECTION: N/A (TABLE 509.1)

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM	REQUIRED	PROVIDED	SECTION
AUTOMATIC SPRINKLER			903
ALTERNATIVE AUTO FIRE EXT			904
STANDPIPE			905
PORTABLE FIRE EXTINGUISHERS	●	●	906
FIRE ALARM AND DETECTION			907
EMERGENCY ALARM			908
SMOKE CONTROL			909
SMOKE & HEAT REMOVAL			910
FIRE COMMAND CENTER			911
FIRE DEPT. CONNECTIONS			912
FIRE PUMPS			913
EMERGENCY RESPONDER FEATURES			914
CARBON MONOXIDE DETECTION			915
GAS DETECTION SYSTEMS			916
MASS NOTIFICATION SYSTEMS			917
EMERGENCY RESP. COMM COVERAGE			918

FIRE RESISTANCE OF BUILDING ELEMENTS

	REQUIRED	SECTION
STRUCTURAL FRAME	0	601
BEARING WALLS (EXTERIOR)	0	601
BEARING WALLS (INTERIOR)	0	601
NON-BEARING WALLS (EXTERIOR)	0	601
NON-BEARING WALLS (INTERIOR)	0	601
FLOOR CONSTRUCTION	0	601
ROOF CONSTRUCTION	0	601
INTERIOR EXIT STAIRWAYS	N/A	1023
SHAFT ENCLOSURE	N/A	713
CORRIDORS	N/A	1020

MEANS OF EGRESS

MEANS OF EGRESS ELEMENT	REQUIRED	PROVIDED	SECTION
NUMBER OF EXITS	1	1	1006.3.4
EXIT ACCESS TRAVEL DISTANCE	75 ft	17 ft	1017.2
DEAD-END LIMIT	20 ft	0 ft	1020.5
COMMON PATH OF TRAVEL LIMIT	75 ft	17 ft	1006.2.1

TOTAL OCCUPANT LOAD: 2
EGRESS WIDTH: 0.2" PER PERSON FOR LEVEL COMPONENTS/ 0.3" STAIRS AND RAMPS
MINIMUM CORRIDOR WIDTH: 44"
CLEAR OPENING DOOR WIDTH: 32"
ILLUMINATION OF EGRESS: 1 FT-CANDLE AT THE FLOOR AND 0.2 FT-CANDLE FOR A SINGLE LIGHT FAILURE.
EMERGENCY EGRESS LIGHTING: EXIT ACCESS AND DISCHARGE ONLY. ACCESS INCLUDES DESIGNATED CORRIDORS, AISLES, AND PASSAGEWAYS. DISCHARGE INCLUDES DESIGNATED DOORS, WALKWAYS, AND RAMPS LEADING TO A PUBLIC WAY. PERFORMANCE PER NFPA 101 7.9.
EXIT MARKING: MARKING OF EXITS AND THE MEANS OF EGRESS SHALL BE PER NFPA 101 7.10

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Project
AEROJET
New Guard
Post - 2

Design Phase
CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19823
JOHN W. OSSIAN
07-17-2024

Notes

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Project Number 2024-052
Issue Date 07-17-2024
Sheet Title
LIFE SAFETY CODE ANALYSIS
Sheet Number
GI001

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GENERAL SYMBOLS

- REVISION NUMBER SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- DEMOLISH TO POINT INDICATED
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- PIPE CONTINUATION

SPACE TAG:
OFFICE — SPACE NAME
101 — SPACE NUMBER
100 SF — SPACE AREA

- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT

EGRESS SYMBOLS

EGRESS SPACE TAG:
OFFICE — SPACE NAME
101 — SPACE NUMBER
100 SF — SPACE AREA
1 Occupant(s) — SPACE OCCUPANCY LOAD

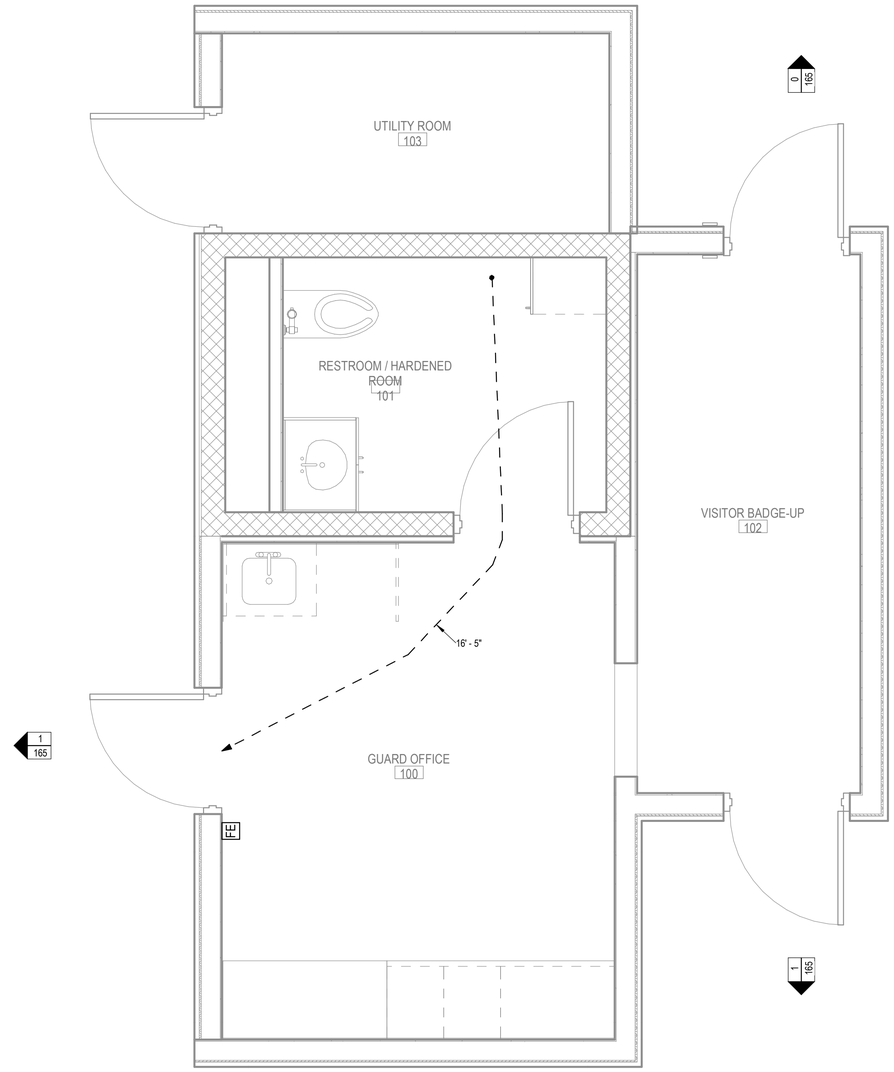
- PATH OF EGRESS
- COMMON PATH OF TRAVEL
- TOTAL TRAVEL DISTANCE
- EGRESS DOOR LOAD TAG: COL / TEC — CALCULATED OCCUPANT LOAD / TOTAL EXITING CAPACITY
- EGRESS STAIR DOOR LOAD TAG: COL / TEC — CALCULATED OCCUPANT LOAD / TOTAL EXITING CAPACITY

LIFE SAFETY EQUIPMENT

- FE — FIRE EXTINGUISHER - HOOK MOUNTED
- FEC — FIRE EXTINGUISHER IN CABINET
- FHV — FIRE HOSE VALVE CABINET
- 75' TRAVEL DISTANCE FOR FIRE EXTINGUISHERS

WALL SEPERATIONS

- HALF-HOUR FIRE WALL
- 45-MINUTE FIRE WALL
- 1 HOUR FIRE WALL
- 2 HOUR FIRE/SMOKE WALL
- "S" REPRESENTS SMOKE BARRIER WALL
- EACH ◆ REPRESENTS 1-HOUR OF FIRE RATING



1 LIFE SAFETY FLOOR PLAN
1/2" = 1'-0"
0 1 2 4
NORTH

LIFE SAFETY - PATH OF TRAVEL

TRAVEL PATH			
FROM ROOM	TO ROOM	EXIT TRAVEL TYPE	LENGTH
RESTROOM / HARDENED ROOM 101	GUARD OFFICE 100	COMMON PATH	16' - 5"
			16' - 5"

LIFE SAFETY SCHEDULE

NAME	NUMBER	SPACE AREA	AREA PER PERSON	OCCUPANT LOAD
GUARD OFFICE	100	137 SF	150 SF	1
RESTROOM / HARDENED ROOM	101	57 SF	150 SF	0
VISITOR BADGE-UP	102	84 SF	150 SF	1
UTILITY ROOM	103	54 SF	300 SF	0
		333 SF		2

Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 19823 — JOHN W. ROBINSON

07-17-2024

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

LIFE SAFETY FLOOR PLAN

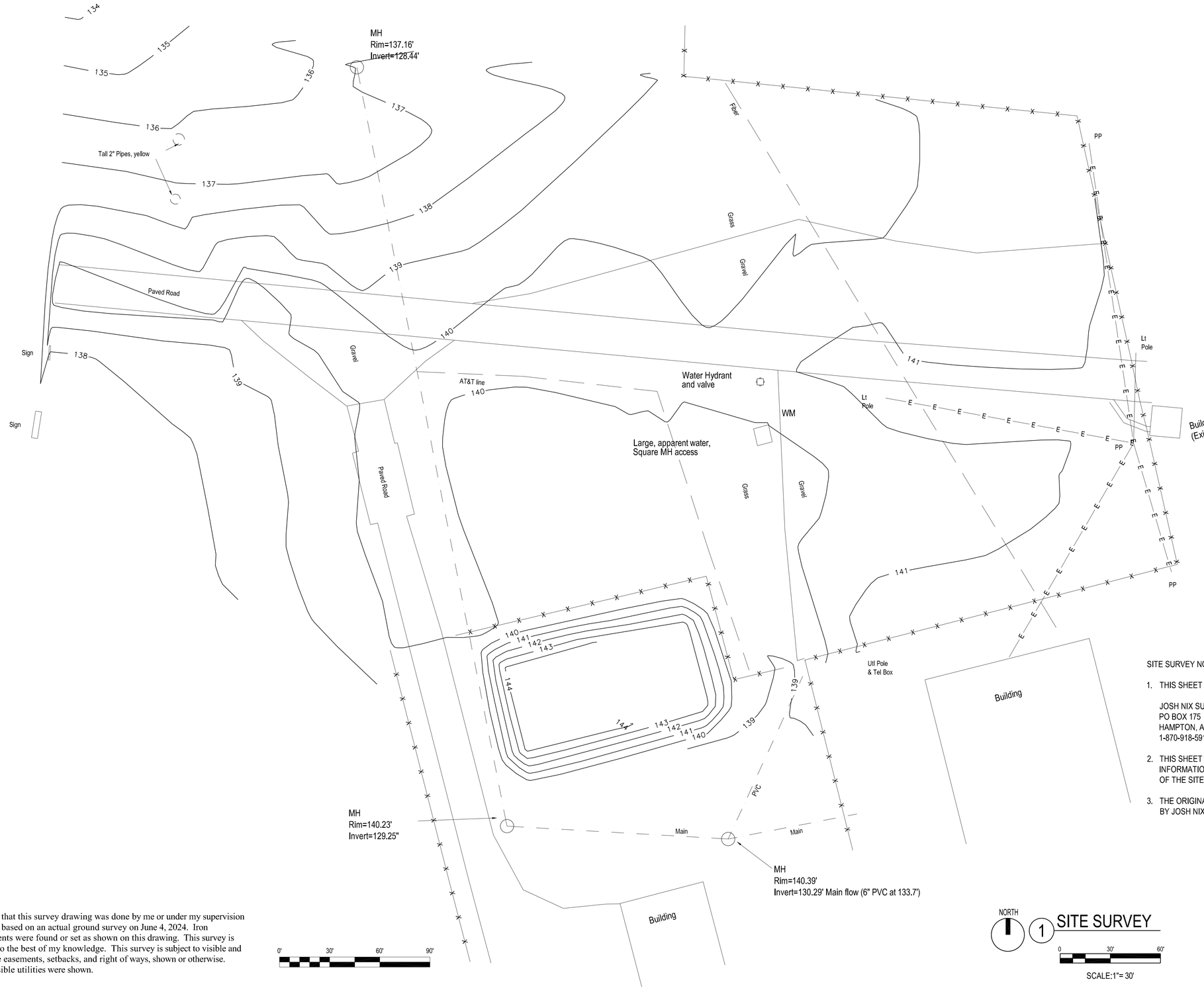
Sheet Number

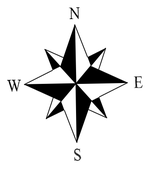
GI101

Joshua Nix Surveying dba Nix Land Surveying, LLC
P.O. Box 175
Hampton, AR 71744
870-918-5918
June 6, 2024

Survey for Cromwell, Aerojet Guard Post Project

Engineering survey of the area of the new guard post project, Aerojet Rocketdyne, East Camden, Arkansas.





Bearings based on NAD 83, AR
South zone state pln, GPS obs.

LEGEND

- △ Found Monument
- ● Calculated Point
- ○ Ground Shots (G)
- E -- E Overhead Electric
- Ep=Edge of pavement
- OHE=Overhead Electric
- Bc=Bottom of culvert
- Wv=Water Valve
- CC = Concrete
- MH=Sewer Manhole
- X X Fence
- Wm=Water Meter
- PP=Power Pole
- LT=Light Pole
- Rk=Overhead pipe rack

SITE SURVEY NOTES:

1. THIS SHEET IS TAKEN FROM A SURVEY PROVIDED BY:

   JOSH NIX SURVEYING
   PO BOX 175
   HAMPTON, AR 71744
   1-870-918-5918

2. THIS SHEET IS A PRESENTATION DRAWING FOR INFORMATION ONLY TO SHOW THE EXISTING CONDITIONS OF THE SITE .

3. THE ORIGINAL FULL SURVEY WAS STAMPED AND SEALED BY JOSH NIX (AR, PLS 1628).

I certify that this survey drawing was done by me or under my supervision and was based on an actual ground survey on June 4, 2024. Iron monuments were found or set as shown on this drawing. This survey is correct to the best of my knowledge. This survey is subject to visible and invisible easements, setbacks, and right of ways, shown or otherwise. Only visible utilities were shown.

NORTH

1 SITE SURVEY

0 30' 60'

SCALE:1"= 30'

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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Stamp

Notes

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title **SITE SURVEY**

Sheet Number **VF101**

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING ALL DEBRIS FROM THE SITE IN A LAWFUL MANNER. CONTRACTOR SHALL PROVIDE MANIFEST OF ALL ITEMS REMOVED FROM THE PREMISES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
3. THE CONTRACTOR MUST PROTECT THE PUBLIC FROM CONSTRUCTION ACTIVITIES AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. TO THE BEST PRACTICES AND APPROVED BY THE OWNER.
4. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
5. PRIOR TO CLEARING, VEGETATION TO REMAIN SHALL BE PROTECTED FROM DAMAGE AND THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES AND TREE PRESERVATION FENCING.
6. CONTRACTOR SHALL NOTIFY GOVERNING AUTHORITY PRIOR TO ANY WORK IN PUBLIC RIGHT-OF-WAY AND OBTAIN ANY NECESSARY PERMITS.
7. ANY DAMAGE TO THE EXISTING PUBLIC STREET OR OTHER PUBLIC INFRASTRUCTURE DUE TO THE CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL SAW CUT IMPROVEMENTS AT REMOVAL LINES. THE CONTRACTOR SHALL PROTECT SAW CUT EDGE OF ASPHALT FROM RAVELING DURING CONSTRUCTION. WHERE RAVELING OCCURS PRIOR TO NEW PAVEMENT BEING PLACED THE CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL SAW CUT, AT THE CONTRACTOR'S EXPENSE, TO PROVIDE A CLEAN EDGE.
9. ALL PAVEMENT OR STRUCTURE DEMOLITION INCLUDES ASSOCIATED FOUNDATIONS AND/OR BASE COURSE LAYERS.
10. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO INDICATE THEIR PRESENCE ON THE PLAN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NEEDED. EXISTING AND ABANDONED UTILITY LOCATIONS ARE UNKNOWN. SURVEY MARKERS ARE APPROXIMATE LOCATIONS ONLY. ALL UTILITIES ARE TO BE RELOCATED PRIOR TO CONSTRUCTION.
11. ALL UTILITIES SHOWN FOR REMOVAL BACK TO MAIN SHALL BE REMOVED AND CAPPED PER UTILITY STANDARD REQUIREMENTS. UTILITY REMOVAL SHALL BE COORDINATED WITH THE UTILITY AND THE OWNER. 72 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND UTILITY PRIOR TO DEMOLISHING ANY UTILITY.
12. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECTED.
13. SEE ELECTRICAL SITE PLAN FOR ADDITIONAL ELECTRIC SERVICE REMOVAL.
14. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITIONS.
15. ANY ITEMS SHOWN TO BE SALVAGED SHALL BE STORED AND REUSED AS SHOWN ON OTHER PLAN DRAWINGS OR RETURNED TO THE OWNER AND STORED AT THE OWNER'S DIRECTION.
16. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, SIDEWALKS, LIGHTING, STORM INLET STRUCTURES, ETC. THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIAL/STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNATED TO BE RELOCATED ON THIS PLAN, ALL CONSTRUCTION MATERIALS SHALL BE NEW.
17. ANY CONSTRUCTION ACTIVITIES THAT WILL REQUIRE ROAD OR LANE CLOSURES SHALL BE COORDINATED WITH THE APPROPRIATE ORGANIZATION PRIOR TO CLOSURE AND APPROPRIATE PERMITS OBTAINED BY THE CONTRACTOR.
18. CONTRACTOR SHALL PAY FOR ALL TRAFFIC CONTROL DEVICES AND PERSONNEL FOR ROAD CLOSURES AND DETOURS.
19. ALL EXISTING SIGNS AND POSTS TO BE REMOVED SHALL BE RELOCATED, STOCKPILED, OR REMOVED AS DIRECTED.
20. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.

SITE LAYOUT NOTES :

1. CONTRACTOR SHALL BE CONFINED TO THE LIMITS OF CONSTRUCTION SHOWN UNLESS OTHER PROVISIONS HAVE BEEN MADE WITH THE OWNER. THIS INCLUDES STAGING AND LAYDOWN AREAS.
2. CONTRACTOR SHALL NOTIFY OWNER PRIOR TO WORK BEGINNING. A PRE-CONSTRUCTION MEETING IS REQUIRED WITH AEROJET (AR) FIELD COORDINATOR, AR SAFETY, AR FACILITIES ENGINEERS AND HIGHLAND INDUSTRIAL PARK REPRESENTATIVES.
3. PARKING LOT STRIPING SHALL BE 4" WIDE, WHITE NON-REFLECTIVE TRAFFIC PAINT. ZONE STRIPING SHALL BE @ 2' CENTERS AND AT 45° TO LINE OF TRAFFIC.
4. DIMENSIONS TO CURBS ARE TO BACK OF CURB. DIMENSIONS TO BUILDINGS ARE TO OUTSIDE FACE OF BUILDING WALL.
5. MINIMUM CURB RADIUS SHALL BE 2'.
6. THE CONTRACTOR SHALL LAYOUT AND VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DIRECTION AND RESOLUTION PRIOR TO PROCEEDING.
7. PROVIDE EXPANSION JOINTS IN ALL CASES WHERE CONCRETE SURFACE MEETS VERTICAL STRUCTURES OR WHERE NEW CONCRETE SURFACE ABUTS EXISTING CONCRETE SURFACE.
8. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITIONS. RESTORATION AND CLEANUP SHALL BE COMPLETE PRIOR TO ACCEPTANCE OF THE JOB.
9. ALL WORK DONE IN PUBLIC RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING AUTHORITY.
10. THE CONTRACTOR IS RESPONSIBLE FOR ANY STREET SIGNS OR SIGNS IN RIGHT-OF-WAY THAT WERE REMOVED DURING CONSTRUCTION SHALL REPLACE/REINSTALL AS SOON AS PRACTICAL. TEMPORARY SIGNS SHALL BE INSTALLED DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING NEWLY PAVED AREAS THAT SHOW DIFFERENTIAL SETTLEMENT OR RANDOM CRACKING AT ENGINEER'S DISCRETION.

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR SHALL MODIFY THE EROSION CONTROL PLAN AS NEEDED TO ELIMINATE SEDIMENTATION FROM LEAVING THE SITE AS SITE CONDITIONS CHANGE.
2. EXISTING UTILITIES TO REMAIN ARE TO BE ADJUSTED TO MATCH PROPOSED GRADE.
3. CONTRACTOR SHALL SPREAD 4" TOPSOIL AND INSTALL SEED AND FERTILIZER ON ALL DISTURBED EARTH SURFACES RESULTING FROM THE CONTRACTOR'S OPERATIONS, UNLESS SHOWN OTHERWISE. RE-SEED AND MAINTAIN UNTIL THE SEED HAS TAKEN ROOT.
4. AREAS THAT ARE TO BE SODDED OR SEEDED SHALL BE RELATIVELY FREE OF WEEDS AT TIME OF FINAL ACCEPTANCE.
5. ALL IMPORTED FILL SHALL BE FREE OF ORGANIC MATERIAL.
6. MAXIMUM LAWN GRADE SLOPE SHALL BE 3:1, UNLESS SHOWN OTHERWISE.
7. MAXIMUM WALK CROSS SLOPE SHALL BE 2%. MAXIMUM LINEAR GRADE SHALL BE 5%.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING SWPPP AND KEEPING STORM WATER SYSTEM CLEAN DURING CONSTRUCTION. COMPLY WITH AEROJET STORMWATER POLLUTION PREVENTION PLAN - AVAILABLE UPON REQUEST.
9. CONTRACTOR IS RESPONSIBLE FOR PURSUING AND OBTAINING ALL NECESSARY STORM WATER PERMITS AND FOLLOWING ALL LOCAL STORM WATER DETENTION/RETENTION AND OUTFALL REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION
10. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.

UTILITY NOTES:

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
2. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING AUTHORITY.
3. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO INDICATE THEIR PRESENCE ON THE PLAN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NEEDED. EXISTING AND ABANDONED UTILITY LOCATIONS ARE UNKNOWN. SURVEY MARKERS ARE APPROXIMATE LOCATIONS ONLY. ALL UTILITIES ARE TO BE RELOCATED PRIOR TO CONSTRUCTION.
4. ALL UTILITIES SHOWN FOR REMOVAL BACK TO MAIN SHALL BE REMOVED AND CAPPED PER UTILITY STANDARD REQUIREMENTS. UTILITY REMOVAL SHALL BE COORDINATED WITH THE UTILITY AND THE OWNER. 72 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND UTILITY PRIOR TO DEMOLISHING ANY UTILITY.
5. CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
6. EXISTING UTILITIES THAT ARE TO REMAIN ARE TO BE PROTECTED AND ADJUSTED TO MATCH NEW GRADE.
7. ANY MAJOR REVISION TO LOCATION OF WATER OR SANITARY SEWER TIE-INS, MANHOLES, METERS, ETC. NEED TO HAVE DRAWINGS RE-SUBMITTED TO ARKANSAS DEPARTMENT OF HEALTH AND HIGHLAND INDUSTRIAL PARK FOR RE-APPROVAL.
8. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.
9. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.

SEDIMENTATION AND EROSION CONTROL NOTES:

1. ALL AREAS OF THE SITE EXPOSED BY CONSTRUCTION ACTIVITY AND LEFT UNDISTURBED FOR 21 DAYS MUST BE MULCHED WITHIN 14 DAYS OF LAST DISTURBANCE.
2. PRIOR TO CLEARING, THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES AND TREE PRESERVATION FENCING.
3. ALL AREAS WITHIN THE PARKING LOT ARE TO RECEIVE A GRAVEL BASE TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 135 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
4. ALL AREAS NOT WITHIN THE PARKING LOT ARE TO RECEIVE LOOSE STRAW TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 2 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BMP'S, POSTING SWPPP ON SITE AND MONITORING/MAINTAINING EROSIONS CONTROL MEASURES.
6. ANY DAMAGE TO PUBLIC STORM WATER SYSTEM DUE TO LACK OF MAINTAINING BMP'S WILL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OR REPAIR TO THE SATISFACTION OF THE ENGINEER OR LOCAL AUTHORITY.
7. CONTRACTOR SHALL MODIFY THE EROSION CONTROL PLAN AS NEEDED TO ELIMINATE SEDIMENTATION FROM LEAVING THE SITE AS SITE CONDITIONS CHANGE.
8. CONTRACTOR SHALL PREVENT OFF-SITE TRACKING OF CONSTRUCTION SEDIMENT AND RUNOFF TO ADJACENT PROPERTY AND PUBLIC ROADS.
9. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR CONTROLLING EROSION AND DISCHARGE OF SEDIMENT FROM THE SITE AT ALL TIMES DURING CONSTRUCTION. THE PERMITTEE OR THEIR REPRESENTATIVE SHALL PROVIDE NECESSARY MEASURES DURING ALL PHASES OF CONSTRUCTION AND SHALL MAINTAIN AND REPLACE CONTROLS AS NECESSARY DURING CONSTRUCTION TO PREVENT THE MOVEMENT OF SEDIMENT DOWNSTREAM.
10. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR INFORMING ALL PARTIES ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE SWPPP.
11. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE, AS SHOWN ON THE PLAN(S), SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL REMAIN TOTALLY UNDISTURBED. PHASING SHALL BE USED TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
12. A COPY OF THE SWPPP AND INSPECTION REPORTS MUST BE DISPLAYED AT THE CONSTRUCTION SITE.
13. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE CLEANED AND SWEPT AT THE END OF EACH WORKING DAY AT A MINIMUM, MORE FREQUENTLY IF SEDIMENT TRACK OUT IS HEAVY. WASHING OF ACCUMULATED SEDIMENT INTO THE STORM DRAIN OR WATERWAYS IS PROHIBITED.
14. DUST SHALL BE CONTROLLED DURING CONSTRUCTION AND CONSTRUCTION AREAS SHALL BE WATERED WHENEVER CONDITIONS WARRANT.
15. SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROLS AND FACILITIES SHALL NOT BE PLACED ON STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND SHALL BE IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
16. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH AN APPROVED SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON DISTURBED AREAS.
17. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS OFF-SITE BORROW AND FILL AREAS.
18. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION, THE CONTRACTOR OR THEIR REPRESENTATIVE SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION.
19. THE CONTRACTOR OR THEIR REPRESENTATIVE SHALL STABILIZE ALL DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION ACTIVITY WITHIN 14 CALENDAR DAYS AFTER ACTIVITY HAS CEASED. HOWEVER WITHIN THE RIPARIAN AREA, BANKS, ETC., SEEDING, MULCHING AND NEEDED FERTILIZATION SHOULD BE WITHIN THREE DAYS OF FINAL CONTOURING.
20. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED MEASURES.
21. ALL DISTURBED AREAS NOT RECEIVING OTHER PERMANENT STABILIZATION SUCH AS PAVEMENT, ROOFS,SOD, ETC., SHALL BE SEEDED AND MULCHED, AS SPECIFIED IN THE SWPPP BEFORE TEMPORARY SEDIMENT CONTROLS CAN BE REMOVED AND PRIOR TO FINAL APPROVAL OF CONSTRUCTION.
22. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
23. AFTER FINAL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS SHALL BE STABILIZED IMMEDIATELY.
24. SILT AND DEBRIS MUST BE REMOVED FROM STORM DRAINS, CONVEYANCE CHANNELS, BASINS OR ANY PART OF THE STORMWATER SYSTEM PRIOR TO FINAL SITE STABILIZATION APPROVAL.
25. THE FOLLOWING WILL BE IMPLEMENTED ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS: LIQUID AND SOLID WASTE MANAGEMENT, CHEMICAL AND MATERIAL DELIVERY AND STORAGE, CONCRETE WASTE, PAINTING AND DRYWALL WORK, VEHICLE FUELING, MAINTENANCE AND CLEANING, ASPHALT, SAWCUTTING, CORING, AND GRINDING ACTIVITIES, BUILDING BLASTING AND CLEANING, CEMENT, GROUT AND MORTAR WORK, SANITARY AND SEPTIC WASTES, WATER LINE DISINFECTION, FLUSHING, DEWATERING, AND OTHER NON-STORMWATER DISCHARGES, HAZARDOUS WASTE MANAGEMENT, AND PROHIBITED DISCHARGES.
26. CONTRACTOR OR THEIR REPRESENTATIVE SHALL MEET ALL OTHER STATE AND FEDERAL CLEAN WATER REQUIREMENTS.

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS-ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15927
CHARLES WISE
07-17-2024

Notes

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Project Number **2024-052**

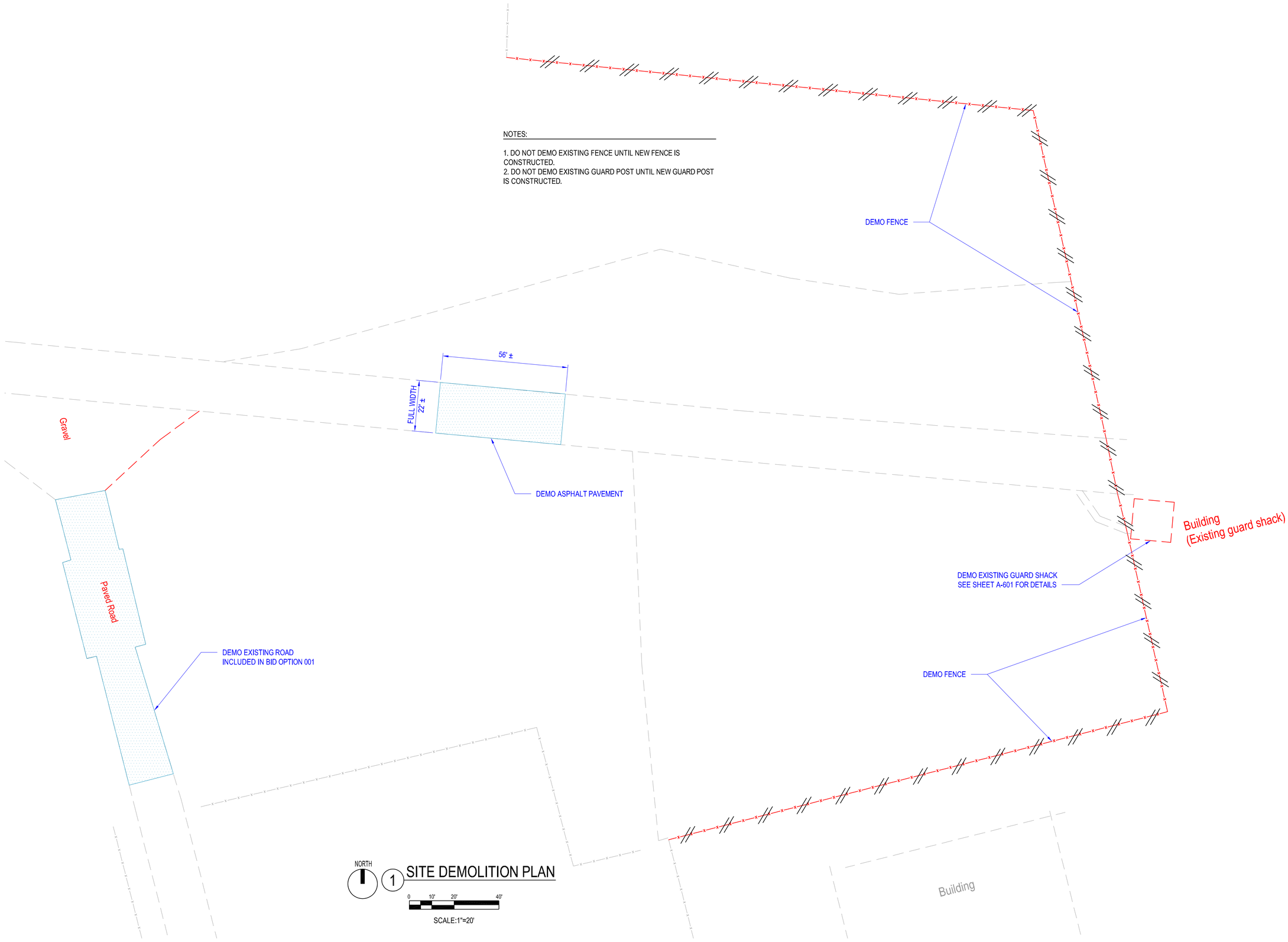
Issue Date **07-17-2024**

Sheet Title **CIVIL NOTES**

Sheet Number **C-001**

NOTES:

1. DO NOT DEMO EXISTING FENCE UNTIL NEW FENCE IS CONSTRUCTED.
2. DO NOT DEMO EXISTING GUARD POST UNTIL NEW GUARD POST IS CONSTRUCTED.



NORTH

1 SITE DEMOLITION PLAN

0 10' 20' 40'

SCALE:1"=20'

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

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CERTIFICATE OF AUTHORIZATION ARKANSAS-ENGINEER
CROMWELL ARCHITECTS/ ENGINEERS #5

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 15927 CHARLES WISE
07-17-2024

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Project Number **2024-052**

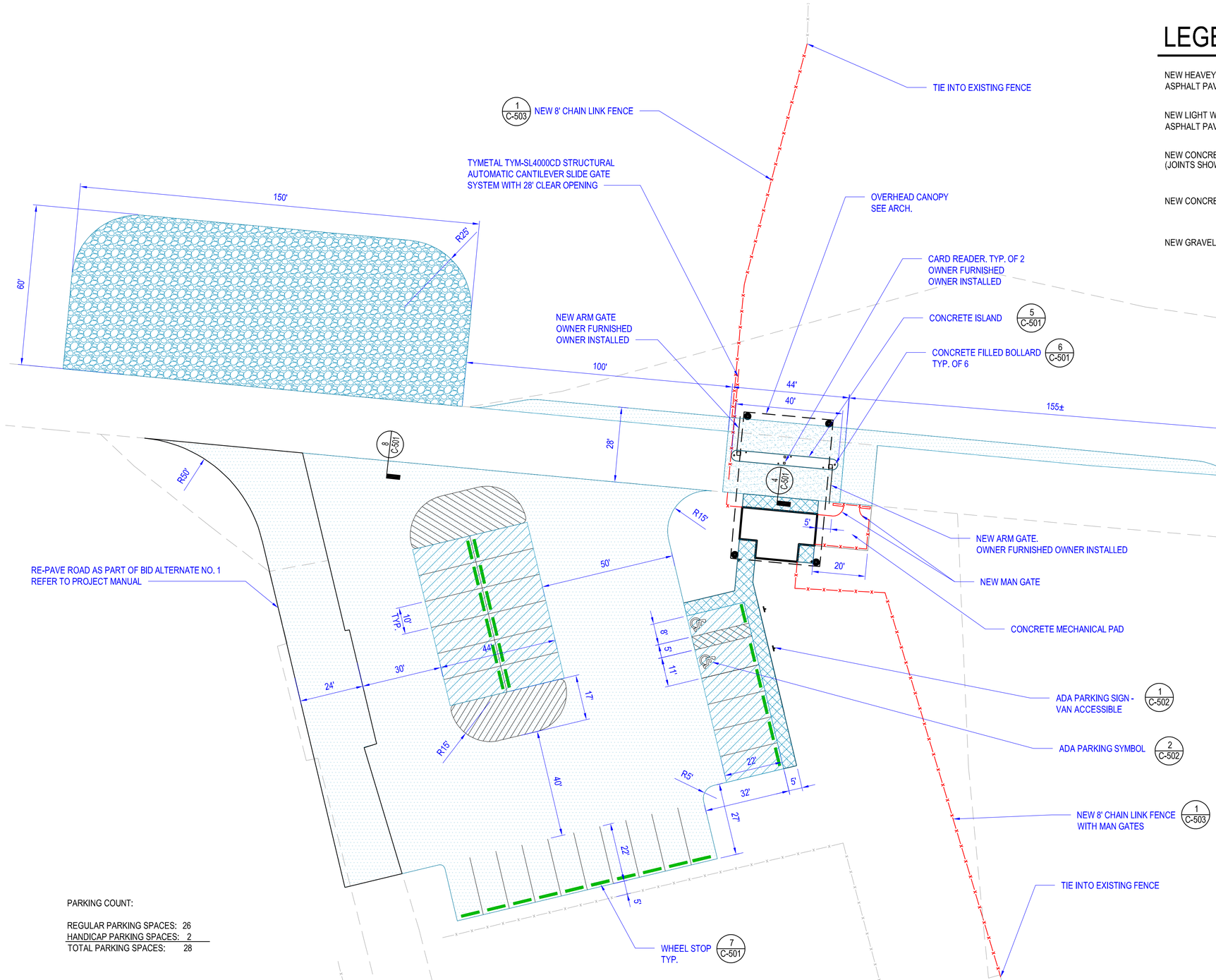
Issue Date **07-17-2024**

Sheet Title

SITE DEMOLITION PLAN

Sheet Number

CD101



PARKING COUNT:

REGULAR PARKING SPACES:	26
HANDICAP PARKING SPACES:	2
TOTAL PARKING SPACES:	28

NORTH

1 SITE LAYOUT PLAN

0 10' 20' 40'

SCALE:1"=20'

LEGEND

	DETAIL REFERENCE
NEW HEAVEY DUTY ASPHALT PAVEMENT	1 C-501
NEW LIGHT WEIGHT ASPHALT PAVEMENT	1 C-501
NEW CONCRETE PAVEMENT (JOINTS SHOWN)	2 C-501
NEW CONCRETE WALK	2 C-501
NEW GRAVEL ROAD SURFACE	3 C-501

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AEROJET New Guard Post - 2

Design Phase

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CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 15927 — CHARLES WISE — 07-17-2024

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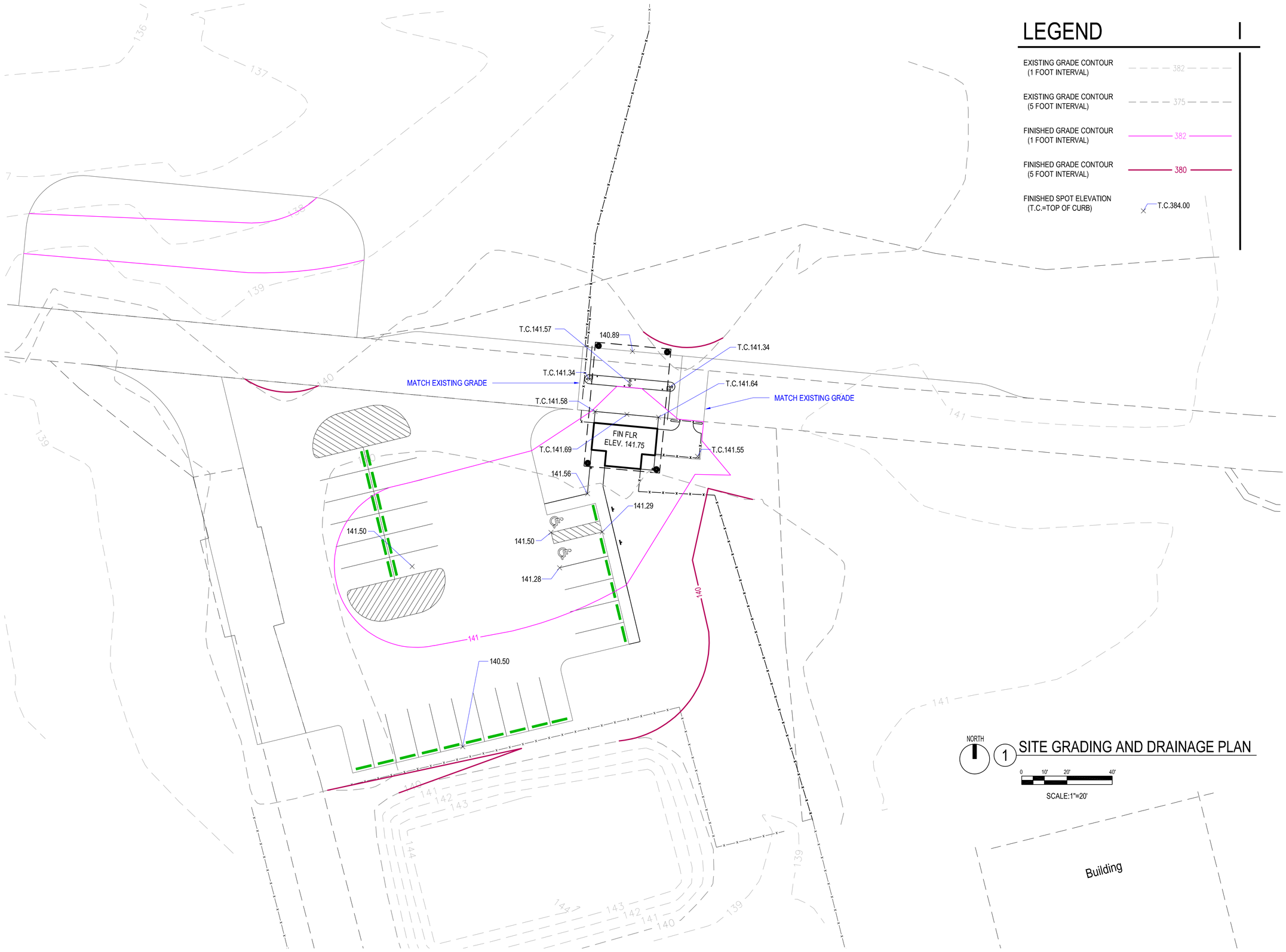
Issue Date **07-17-2024**

Sheet Title **SITE LAYOUT PLAN**

Sheet Number **CS101**



LEGEND

EXISTING GRADE CONTOUR (1 FOOT INTERVAL) — 382

EXISTING GRADE CONTOUR (5 FOOT INTERVAL) — 375

FINISHED GRADE CONTOUR (1 FOOT INTERVAL) — 382

FINISHED GRADE CONTOUR (5 FOOT INTERVAL) — 380

FINISHED SPOT ELEVATION (T.C.=TOP OF CURB) — T.C.384.00

NORTH

1 SITE GRADING AND DRAINAGE PLAN

0 10' 20' 40'

SCALE:1"=20'

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AEROJET New Guard Post - 2

Design Phase

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STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 15927 — CHARLES WISE — 07-17-2024

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Issue Date **07-17-2024**

Sheet Title

SITE GRADING AND DRAINAGE PLAN

Sheet Number

CG101

MH
Rim=137.16'
Invert=128.44'

LEGEND

		DETAIL REFERENCE
EXISTING UTILITY LINE		
W=WATER	W	
SS=SANITARY SEWER	S S	
O.H.E.=OVERHEAD ELECTRIC		
NEW UTILITY LINE		
W=WATER	W	
SS=SANITARY SEWER	S S	
NEW MANHOLE (M.H.)		3 / C-502
EXISTING SANITARY SEWER MANHOLE (M.H.)		
EXISTING WATER VALVE		
EXISTING FIRE HYDRANT		

COLUMN FOOTING

NEW S.S. M.H
OVER EXIST S.S.
TOP ELEV. 140.25
INV ELEV. 128.80±

130 L.F. OF 4" S.S. @ 6.0%

NEW 2" WATER LINE

EXISTING HYDRANT

20'

10' MIN.

AT&T line

Fiber

P.P.

10" MAIN WATER LINE

"1 SERVICE LINE TO EXISTING GUARD HOUSE

TAP EXISTING WATER LINE

20" MAIN WATER LINE

CONTRACTOR SHALL COORDINATE RELOCATION OF EXISTING AT&T COMMUNICATION LINE A MINIMUM 10' AWAY FROM BUILDING. RELOCATION WORK TO BE PERFORMED BY UTILITY. CONTRACTOR TO PAY ALL COST ASSOCIATED WITH THE WORK.

NOTES:

1. ALL UTILITY WORK SHALL BE PER HIGHLAND INDUSTRIAL PARK STANDARDS.

Building

NORTH

1 SITE UTILITY PLAN

0 10' 20' 40'

SCALE:1"=20'

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AEROJET New Guard Post - 2

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07-17-2024

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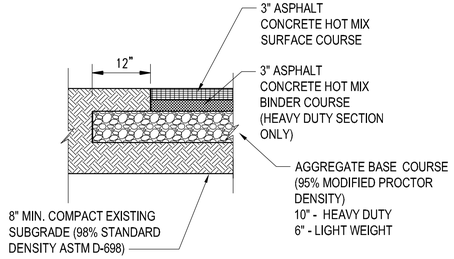
Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title **SITE UTILITY PLAN**

Sheet Number

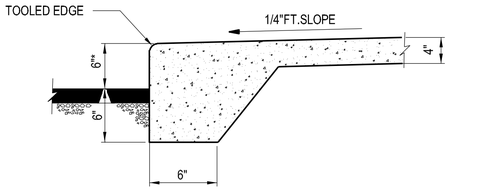
CU101



NOTE: WHERE FILL IS TO BE PLACED ON EXISTING SUBGRADE, FULL DEPTH COMPACTION OF SELECT MATERIAL IS REQUIRED (SEE EARTHWORK SECTION OF SPECS.)

1 ASPHALT PAVING DESIGN SECTION

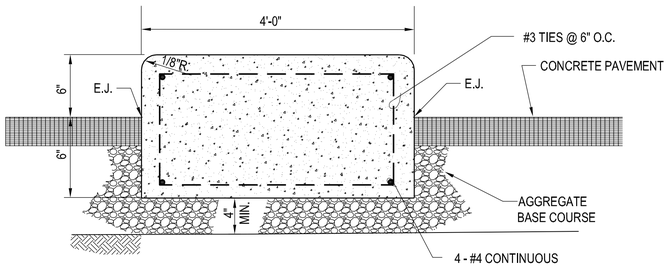
NOT TO SCALE



*-UNLESS SHOWN OTHERWISE ON CG101

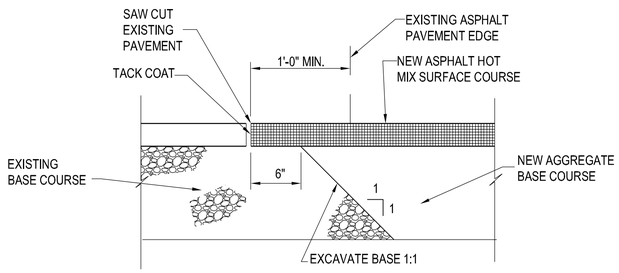
4 TURN DOWN WALK DETAIL

NOT TO SCALE



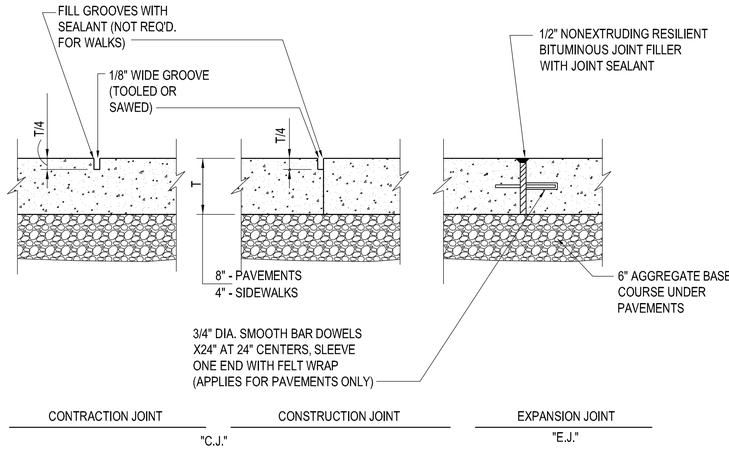
5 ISLAND CURB DETAIL

NOT TO SCALE



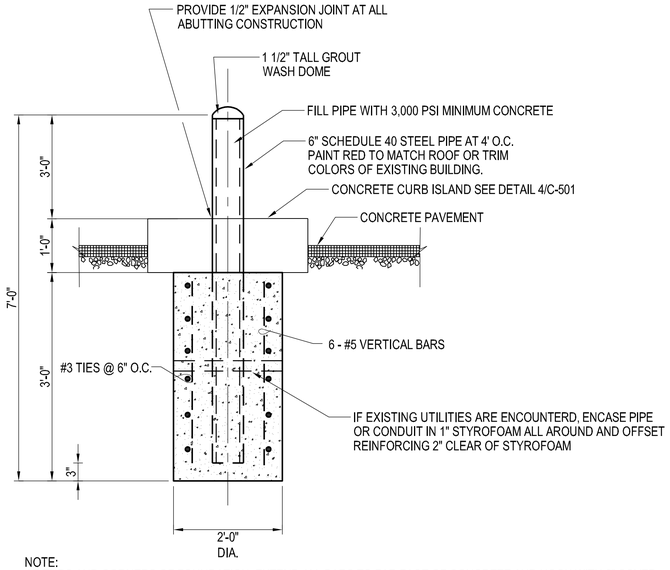
8 ASPHALT PAVEMENT JUNCTURE DETAIL

NOT TO SCALE



2 CONCRETE JOINT DETAILS

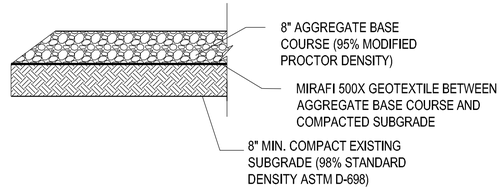
NOT TO SCALE



NOTE:
AT ENDS AND CORNERS OF FOUNDATION, EXTEND ALL BARS TO FAR FACE OF CONCRETE AND HOOK WITH 2" COVER

6 BOLLARD BARRIER DETAIL

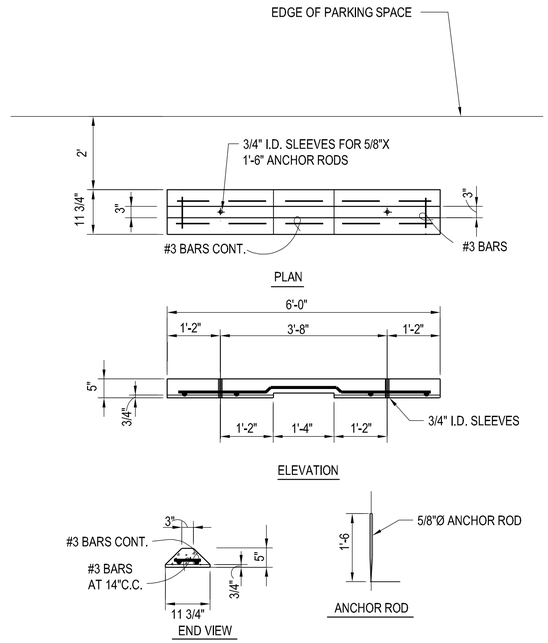
NOT TO SCALE



NOTE: WHERE FILL IS TO BE PLACED ON EXISTING SUBGRADE, FULL DEPTH COMPACTION OF SELECT MATERIAL IS REQUIRED (SEE EARTHWORK SECTION OF SPECS.)

3 ROCK PAVING DESIGN SECTION

NOT TO SCALE



NOTE:
1. APPROVED STANDARD MANUFACTURED WHEEL STOP MAY BE USED IF APPROVED BY OWENR

7 WHEEL STOP DETAILS

NOT TO SCALE

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 15927 — CHARLES WISE — 07-17-2024

Notes

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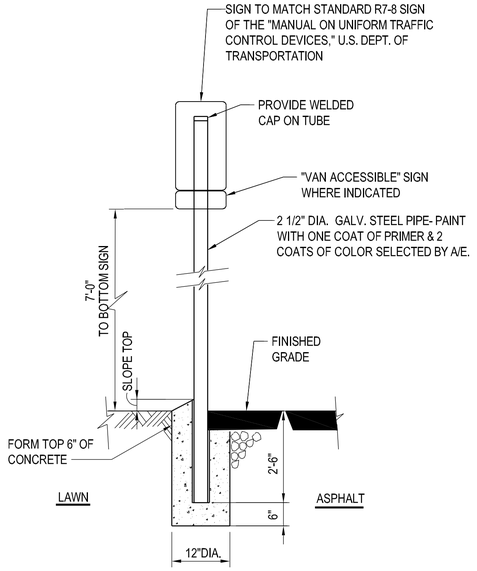
Project Number **2024-052**

Issue Date **07-17-2024**

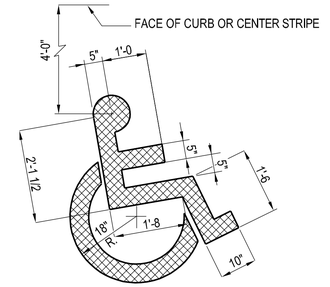
Sheet Title **SITE DETAILS**

Sheet Number **C-501**



1 HANDICAPPED PARKING SIGN DETAIL

NOT TO SCALE

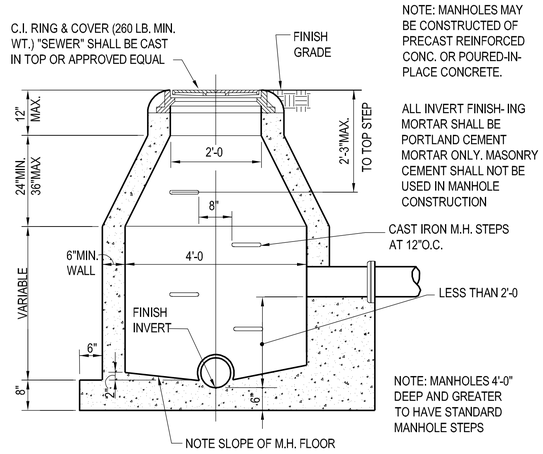


NOTE: SYMBOL TO BE PAINTED WITH WHITE NON- REFLECTIVE TRAFFIC PAINT

2 HANDICAP SYMBOL DETAIL

NOT TO SCALE

ALL MANHOLES IN PUBLIC RIGHT OF WAY SHALL HAVE PROVISIONS TO FACILITATE ANY NECESSARY ADJUSTMENTS IN HEIGHT.



NOTE: MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONC. OR POURED-IN-PLACE CONCRETE.

ALL INVERT FINISH- ING MORTAR SHALL BE PORTLAND CEMENT MORTAR ONLY. MASONRY CEMENT SHALL NOT BE USED IN MANHOLE CONSTRUCTION

CAST IRON M.H. STEPS AT 12"O.C.

NOTE: MANHOLES 4'-0" DEEP AND GREATER TO HAVE STANDARD MANHOLE STEPS

3 SANITARY SEWER MANHOLE DETAIL

NOT TO SCALE

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15927
CHARLES WISE
07-17-2024

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Project Number **2024-052**

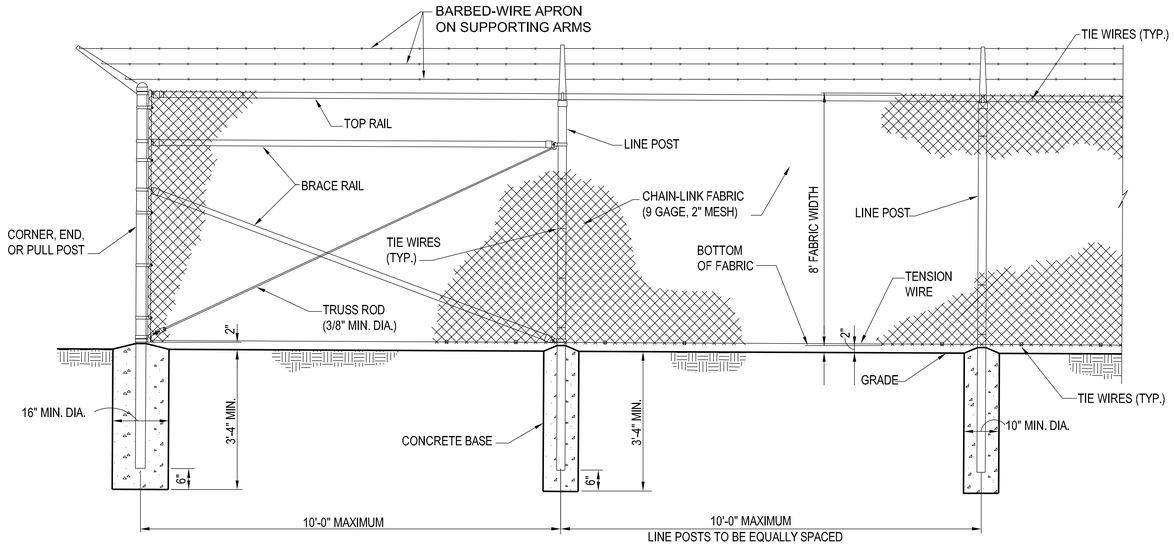
Issue Date **07-17-2024**

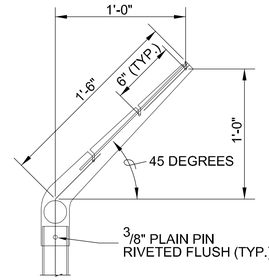
Sheet Title

SITE DETAILS

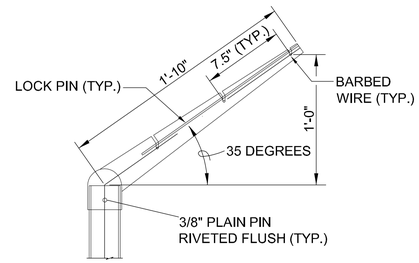
Sheet Number

C-502





LINE POST

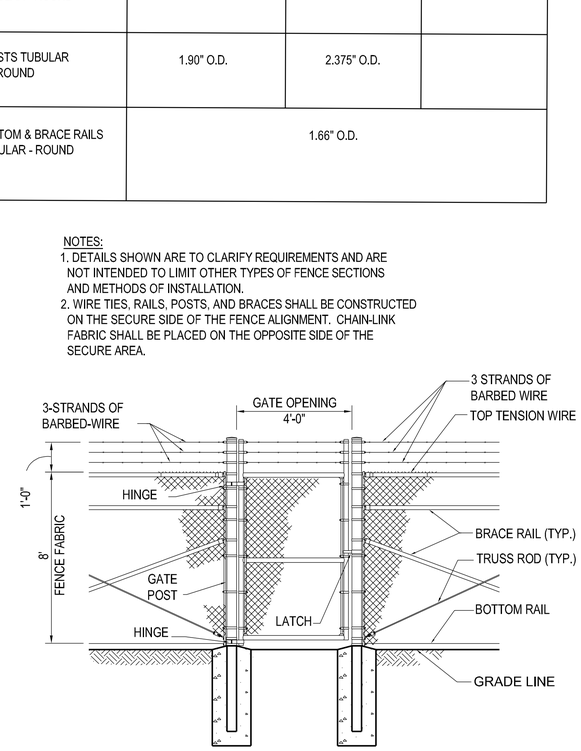


CORNER POST

SUPPORTING ARM DETAILS
NO SCALE

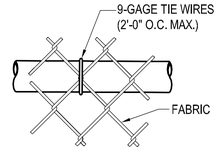
STEEL POST SCHEDULE			
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)		
	FABRIC LESS THAN 72"	FABRIC 72" TO 96"	
CORNER, END & PULL POSTS TUBULAR - ROUND	2.375" O.D.	2.875" O.D.	
LINE POSTS TUBULAR - ROUND	1.90" O.D.	2.375" O.D.	
TOP, BOTTOM & BRACE RAILS TUBULAR - ROUND	1.66" O.D.		

NOTES:
1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE SECURE AREA.

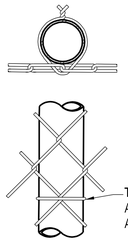


PERSONNEL GATE
NO SCALE

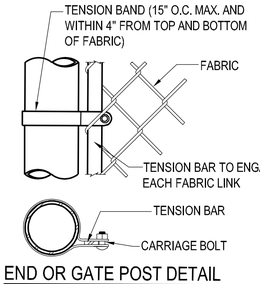
GATE POST SCHEDULE	
GATE LEAF WIDTH (NOMINAL)	OUTSIDE DIMENSION (NOMINAL)
6' OR LESS	2.875" O.D. 2.5" SQ.
MORE THAN 6' TO 13'	4.0" O.D.
MORE THAN 13' TO 18'	6.625" O.D.
MORE THAN 18'	8.625" O.D.



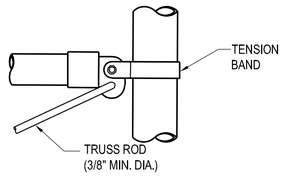
TOP OR BRACE RAIL ATTACHMENT



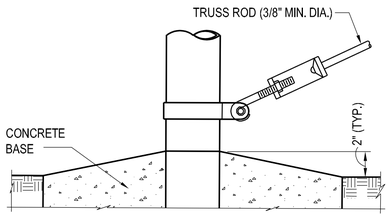
LINE POST ATTACHMENTS



END OR GATE POST DETAIL

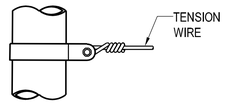


ROUND POST



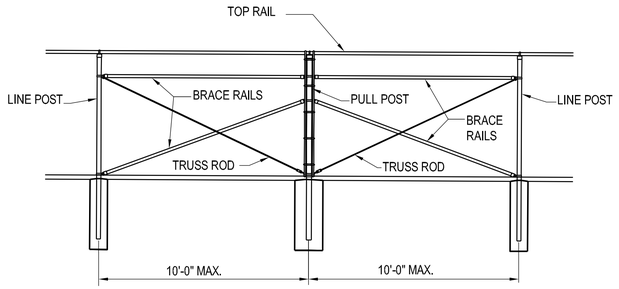
TRUSS ROD AND BAND

BRACE RAIL CLAMP DETAILS



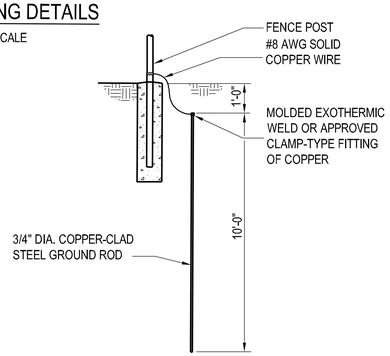
TENSION BAND DETAIL

FASTENING DETAILS
NO SCALE



BRACE PANEL DETAIL
NO SCALE

NOTE:
PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 500 FEET. INSTALL IN CENTER OF STRAIGHT RUNS.



GROUNDING DETAIL
NO SCALE

1 CHAIN LINK FENCE DETAILS
NOT TO SCALE

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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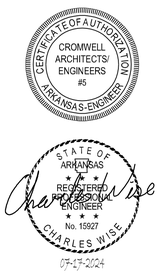
Stamp



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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title **SITE DETAILS**

Sheet Number **C-503**

ABBREVIATIONS

(NOT ALL ABBREVIATIONS USED)

#XX	NUMBER
A.F.F.	ABOVE FINISHED FLOOR
ADD'L	ADDITIONAL
ADJ	ADJACENT
ARCH.	ARCHITECTURAL
B.F.F.	BELOW FINISHED FLOOR
BLDG.	BUILDING
BOT	BOTTOM
BTWN	BETWEEN
CJ	CONTROL/ CONSTRUCTION/ CONTRACTION JOINT
CL	CENTER LINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
DBA	DEFORMED BAR ANCHOR
DIA	DIAMETER
DTL	DETAIL
E.F.	EACH FACE
EA.	EACH
ELEV.	ELEVATION
EW	EACH WAY
FF	FINISHED FLOOR
FLR	FLOOR
FS	FAR SIDE
FTG	FOOTING
G.C.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
HSS	ROUND, SQUARE, OR RECTANGULAR STRUCTURAL TUBING
ID	INSIDE DIAMETER
JT.	JOINT
K or k	KIP (1,000 LBS)
KCJ	KEYED CONTROL JOINT
KSI	KIPS PER SQUARE INCH
L	ANGLE
LBS	POUNDS
LF	LINEAL FOOT
MANUF.	MANUFACTURER
MATL.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MISC	MISCELLANEOUS
N.T.S.	NOT TO SCALE
NS	NEAR SIDE
Ø	DIAMETER
O.C.	ON CENTER
OPP	OPPOSITE
P.J.	PANEL JOINT
PL	PLATE
PLBG	PLUMBING
PSF	POUNDS PER SQ FOOT
PSI	POUNDS PER SQ INCH
REINF.	REINFORCEMENT
REQ'D.	REQUIRED
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SJ	SAWN JOINT
SPA.	SPACE
SQ	SQUARE
STD.	STANDARD
T&B	TOP AND BOTTOM
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL or TOP OF SLAB
THRU	THROUGH
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT. OR V	VERTICAL
VSC	VERTICAL SLIDING CLIP
W.W.R.	WELDED WIRE REINF.
w/	WITH
WP	WORK POINT
X/S-YYY	SECTION/DETAIL "X" ON SHEET "S-YYY"
XX#	POUNDS
ZRC	ZINC BASE PAINT

STRUCTURAL DESIGN CRITERIA

BUILDING CODE: 2021 ARKANSAS FIRE PREVENTION CODE (BASED ON 2021 IBC)

RISK CATEGORY (2021 IBC TABLE 1604.5): II

GRAVITY LOADS (REFERENCE: 2021 IBC & ASCE 7-16):

DEAD LOADS:	UNIFORM
ROOF:	10 PSF
HARDENED ROOM ROOF:	75 PSF
COLLATERAL ROOF:	5 PSF
FLOOR LIVE LOADS:	UNIFORM
TYPICAL	100 PSF
ROOF LIVE LOADS:	20 PSF (NON-REDUCIBLE)
RAIN LOADS:	
15 MINUTE DURATION / 100 YR RETURN PERIOD	i15 = 6.75 IN./H
60 MINUTE DURATION / 100 YR RETURN PERIOD	i60 = 3.60 IN./H
SNOW LOADS:	
GROUND SNOW LOAD	Pg = 10 PSF
FLAT ROOF SNOW LOAD	Pf = 9 PSF
SLOPED ROOF SNOW LOAD	Ps = 9 PSF
SNOW LOAD IMPORTANCE FACTOR	Is = 1.00
SNOW EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.2

LATERAL LOADS (REFERENCE: 2021 IBC & ASCE 7-16):

WIND:	
ULTIMATE WIND SPEED	Vult = 104 MPH
NOMINAL WIND SPEED	Vasd = 81 MPH
TERRAIN EXPOSURE	C
INTERNAL PRESSURE COEFFICIENTS	+/- 0.18
COMPONENTS & CLADDING WIND LOAD	SEE SHEET S-002
SEISMIC:	
SEISMIC IMPORTANCE FACTOR	Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS	Ss = 0.187
	S1 = 0.098
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATIONS	SDS = 0.200
	SD1 = 0.156
SEISMIC DESIGN CATEGORY	C
SEISMIC FORCE RESISTING SYSTEM	
STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE / ORDINARY REINFORCED MASONRY SHEAR WALLS	
DESIGN BASE SHEAR	V = 0.066W / 0.100W
SEISMIC RESPONSE COEFFICIENT	Cs = 0.066 / 0.100
RESPONSE MODIFICATION COEFFICIENT	R = 3 / 2
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTION: SEE SPECIFICATION SECTION 014533

STRUCTURAL DESIGN APPROACH:

THIS PROJECT CONSISTS OF THREE INDEPENDENT STRUCTURES:

THE GUARD POST IS A SINGLE STORY STEEL FRAME BUILDING. THE ROOF CONSISTS OF A METAL DECK SUPPORTED BY STEEL WIDE FLANGE BEAMS THAT BEAR ON WIDE FLANGE STEEL GIRDERS. ROOF FRAMING IS SUPPORTED BY HSS COLUMNS. A SLAB ON GRADE IS USED THROUGHOUT THE BUILDING. STEEL MOMENT FRAMES PROVIDE LATERAL RESISTANCE FOR THE STRUCTURE. THE ENTIRE STRUCTURE IS SUPPORTED BY A SHALLOW FOUNDATION SYSTEM.

THE HARDENED ROOM IS A SINGLE STORY REINFORCED MASONRY WALL STRUCTURE WITH A CONCRETE ROOF SUPPORTED BY METAL DECK AND STEEL BEAMS. THE CMU WALLS PROVIDE LATERAL RESISTANCE FOR THE STRUCTURE. THE HARDENED ROOM HAS BEEN DESIGNED FOR 250 MPH ULTIMATE WIND SPEED AND IS NOT AN ICC 500 SHELTER OR FEMA SAFE ROOM AND CANNOT BE IDENTIFIED AS SUCH.

THE CANOPY IS AN EXTERIOR STEEL FRAME STRUCTURE. THE ROOF CONSISTS OF A METAL DECK SUPPORTED BY STEEL WIDE FLANGE BEAMS THAT BEAR ON WIDE FLANGE STEEL GIRDERS. ROOF FRAMING IS SUPPORTED BY HSS COLUMNS. STEEL MOMENT FRAMES PROVIDE LATERAL RESISTANCE FOR THE STRUCTURE. THE ENTIRE STRUCTURE IS SUPPORTED BY A SHALLOW FOUNDATION SYSTEM.

STRUCTURAL GENERAL NOTES

A. CONTRACTOR DELEGATED DESIGN COMPONENTS:

1. THE FOLLOWING ITEMS ARE NOTED AS A DELEGATED DESIGN COMPONENT AND SHALL BE DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL EMPLOY A SPECIALTY STRUCTURAL ENGINEER LICENSED IN THE STATE OF ARKANSAS TO DESIGN THE FOLLOWING ITEMS:
   a. SHORING AND TEMPORARY STRUCTURES
   b. COLD-FORMED STEEL FRAMING
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR EACH DELEGATED DESIGN COMPONENT. ALL STRUCTURAL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE SPECIALTY STRUCTURAL ENGINEER. THE DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR AND THE DESIGN ENGINEER PRIOR TO SUBMITTAL. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR AND THE SPECIALTY STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT/ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL DELEGATED DESIGN COMPONENTS AND THEIR ACCESSORIES WITH OTHER TRADES TO AVOID CONFLICTS, e.g., FIRE SUPPRESSION SYSTEMS.

B. SPECIAL INSPECTIONS:

1. QUALIFIED INSPECTORS SHALL CONDUCT SPECIAL INSPECTIONS AND TESTS AND FURNISH REPORTS AS SPECIFIED IN SECTION 014533 AND IN ACCORDANCE WITH CHAPTER 17, INTERNATIONAL BUILDING CODE.
2. THE CONTRACTOR SHALL COORDINATE THE SPECIAL INSPECTIONS AND TESTING SERVICES WITH THE PROGRESS OF THE WORK, PROVIDE THE APPROPRIATE DOCUMENTATION AND PERFORM OTHER TASKS AS SPECIFIED IN SECTION 014533.
3. CONSTRUCTION THAT REQUIRES CONTINUOUS INSPECTION PER SECTION 014533 CAN NOT PROGRESS WITHOUT INSPECTORS PRESENT.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER INSPECTIONS OR TESTS IN THE SPECIFICATIONS NOT LISTED IN THE SCHEDULE OF SPECIAL INSPECTION SERVICES IN SECTION 014533.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR, REINSPECTION AND RETESTING FOR ITEMS THAT DO NOT PASS THE INSPECTIONS OR TESTS.
6. SPECIAL INSPECTION SERVICES DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH OTHER CONSTRUCTION DOCUMENT REQUIREMENTS OR REGULATORY REQUIREMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF DEMOLITION, RECONSTRUCTION, INSPECTION AND TESTING OF ANY WORK COMPLETED WITHOUT INSPECTION AND TESTING AS SPECIFIED IN SECTION 014533.

C. STABILITY DURING CONSTRUCTION, SHORING, & TEMPORARY STRUCTURES:

1. PERMANENT STABILITY OF THE BUILDING AND COMPONENTS IS NOT PROVIDED UNTIL ALL THE STRUCTURAL ELEMENTS ARE INSTALLED AS SHOWN ON THE CONTRACT DRAWINGS.
2. PROVIDE STABILITY TO ALL NON-SELF-SUPPORTING ELEMENTS UNTIL PERMANENT STRUCTURAL SUPPORTS ARE INSTALLED. PROVIDE BRACING, SHORING, AND/OR TEMPORARY STRUCTURES AS REQUIRED IN ORDER TO SATISFY THE CONTRACT REQUIREMENTS.
3. PROVIDE ALL BRACING NECESSARY TO STABILIZE THE BUILDING DURING THE ERECTION PROCESS. BRACING SHALL BE DESIGNED AND INSTALLED SUCH THAT IT DOES NOT TWIST OR DISTORT MEMBERS. BRACING SHALL BE DESIGNED FOR LOADS AS REQUIRED BY APPLICABLE CODES. THE DESIGN OF THE BRACING SHALL TAKE INTO ACCOUNT FORCES DUE TO THERMAL EXPANSION AND CONTRACTION OF THE BUILDING FRAME AND BRACES.
4. ANCHOR RODS FOR STEEL COLUMNS ARE NOT DESIGNED TO STABILIZE STRUCTURE BY PROVIDING FIXITY OF THE COLUMN BASE. PROVIDE TEMPORARY BRACING FOR STABILITY DURING THE ERECTION PHASE UNTIL ALL LATERAL LOAD RESISTING ELEMENTS ARE IN PLACE AND WELDING AND/OR BOLTING INSPECTIONS ARE COMPLETE.
5. COMPLY WITH ALL APPLICABLE OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.

D. GENERAL REQUIREMENTS:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH DRAWINGS RELATING TO OTHER TRADES. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, OPENINGS, PIPE SLEEVES, CURBS, ETC. WITH THE WORK OF OTHER TRADES.
2. WORK NOT INDICATED ON A PART OF THE DRAWING BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
3. DETAILS DESIGNATED AS "TYPICAL" APPLY TO ALL AREAS WHERE THE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAIL.
4. THE PLANS AND DETAILS IN THE CONTRACT DRAWINGS SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL BY THE ARCHITECT/ENGINEER.
5. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
6. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. EXAMINE THE DRAWINGS FOR REQUIRED OPENINGS AND PROVIDE FOR ALL OPENINGS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ALL SUB-CONTRACTORS. PIPE SLEEVES THROUGH THE DECK WILL NOT REQUIRE ADDITIONAL FRAMING UNLESS THE DIAMETER EXCEEDS 10".
7. SPLICING OF STRUCTURAL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL OF ARCHITECT/ENGINEER. IF APPROVED, ADDITIONAL TESTING AND INSPECTION SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND PAID FOR BY THE CONTRACTOR.
8. NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE: HOLES, SLOTS, CUTS, ETC., ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS.
9. ENSURE THAT ALL CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL DESIGN STRENGTH AND ALL FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE ADEQUACY OF SLABS ON GRADE FOR SUPPORTING ALL CONSTRUCTION EQUIPMENT, INCLUDING AREAL LIFTS.

E. SHOP DRAWINGS:

1. SUBMIT SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT/ENGINEER FOR THE FOLLOWING ITEMS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   a. CONCRETE REINFORCING STEEL
      1. INDICATE ALL REINFORCING STEEL IN FOUNDATIONS AND SLABS ON GRADE
      2. INDICATE ALL HORIZONTAL, VERTICAL, AND TIE REINFORCING
      3. INDICATE TYPE AND LOCATION OF ALL REINFORCING STEEL SPLICES
   b. CONCRETE MASONRY
      1. INDICATE VERTICAL REINFORCING LOCATION AND METHOD OF SPLICE.
      2. INDICATE LOCATION OF CORES FILLED WITH GROUT.
      3. INDICATE BOND BEAM REINFORCING LOCATIONS, LENGTH, AND SPLICES.
   c. STRUCTURAL STEEL
   d. METAL DECKING
   e. COLD-FORMED STEEL FRAMING
2. SUBMIT OTHER SHOP DRAWINGS FOR REVIEW BY ARCHITECT/ENGINEER AS REQUIRED BY PROJECT SPECIFICATIONS.
3. DETAILS FOR SOME SPECIAL CONDITIONS WILL NEED TO BE DEVELOPED BY THE DETAILER DURING THE DETAILING PROCESS. FINAL REVIEW OF THE DETAILS WILL BE AT THE DISCRETION OF THE ENGINEER OF RECORD. NO ADDITIONAL CHARGES FOR MAKING CORRECTIONS, CHANGES, OR ADDITIONS TO THE SHOP DRAWINGS ("RE-DETAILING COST") WILL BE ALLOWED. CONTRACTOR SHALL MAKE PROVISIONS FOR DETAILING CORRECTIONS AND MISCELLANEOUS MATERIAL IN THE BID PRICE. ADJUSTMENTS TO THE CONTRACT WILL ONLY BE MADE FOR CHANGE ORDERS APPROVED PRIOR TO THE COMMENCEMENT OF ANY ACTION ON THE CHANGES.
4. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR / CONSTRUCTION MANAGER PRIOR TO SUBMITTAL. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT/ENGINEER.
5. VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. IN CASE OF CONFLICTS, THE ARCHITECT/ENGINEER IS TO BE NOTIFIED AND WILL PROVIDE THE CORRECT ELEVATIONS AND DIMENSIONS FOR WHICH SHALL BE INCORPORATED INTO THE SHOP DRAWINGS AT NO EXTRA COST.

F. EARTHWORK:

1. FOUNDATION DESIGN IS BASED ON SOIL INVESTIGATION AND REPORT BY GRUBBS, HOSKYN, BARTON & WYATT, LLC, dba UES (PROJECT NO. A24184.00054).
2. FOUNDATION DESIGN IS BASED ON THE FOLLOWING MINIMUM NET ALLOWABLE BEARING PRESSURE:
   a. CONTINUOUS FOOTINGS: 1.5 KSF
   b. INDIVIDUAL PAD FOOTINGS: 2.0 KSF
   ALL FOUNDATION BEARING CONDITIONS SHALL BE VERIFIED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
3. BOTTOM OF FOUNDATION ELEVATIONS ARE GIVEN FOR BIDDING PURPOSES ONLY. ALL FOUNDATIONS SHALL BE FOUNDED A MINIMUM OF 2 FEET BELOW ADJACENT GRADE IN PROPERLY COMPACTED FILL.
4. THE SITE SHALL BE STRIPPED A MINIMUM OF 6", PROOF ROLLED, COMPACTED FILL PLACED, AND EXCAVATED AS REQUIRED FOR FOUNDATION. SEE SPECIFICATION DIVISION 31 FOR EARTHWORK REQUIREMENTS.
5. REMOVE 2 FEET OF EXISTING SUB GRADE MATERIAL UNDER THE BUILDING (EXTENDING 5 FEET BEYOND THE BUILDING PERIMETER) IN AREAS IDENTIFIED TO BE SOFT, THAT EXHIBIT PUMPING OR ARE OTHERWISE UNSUITABLE AFTER PROOF-ROLLING AND BACKFILL AS PER SPECIFICATION DIVISION 31, EARTHWORK, USING SPECIFIED BORROW MATERIAL.
6. THE SILTY FINE SAND AND FINE SANDY SILT ARE HIGHLY MOISTURE SENSITIVE AND WILL EXHIBIT REDUCED STABILITY WHEN SATURATED. THOUGH SITE CONDITIONS WILL VARY SIGNIFICANTLY WITH SEASONAL PRECIPITATION AND SURFACE RUNOFF, SITE GRADING OPERATIONS WILL BE SIGNIFICANTLY EASIER TO PERFORM DURING DRY SEASONS OF THE YEAR. POSITIVE SURFACE AND SUBSURFACE DRAINAGE SHOULD BE ESTABLISHED AT THE START OF CONSTRUCTION, MAINTAINED DURING THE WORK, AND INCORPORATED INTO FINAL DESIGN TO PREVENT SURFACE WATER PONDING AND SUBSEQUENT SATURATION OF SUBGRADE SOILS. DENSITY AND WATER CONTENT OF ALL EARTHWORK SHOULD BE MAINTAINED UNTIL THE FOUNDATION AND PAVEMENTS ARE COMPLETED. SUBGRADE SOILS THAT BECOME SATURATED BY PONDING WATER OR RUNOFF SHOULD BE EXCAVATED TO SUITABLE MATERIAL.
7. TAKE ADEQUATE MEASURES TO ALLOW FOR WORKING SURFACE DURING CONSTRUCTION OF FOUNDATIONS AND SLAB-ON-GRADE, SUCH AS GRAVEL BED OF ADEQUATE DEPTH, ETC.
8. PROVIDE EARTH RETENTION SYSTEMS AND TEMPORARY BRACING OR SHORING (INCLUDING UNDERPINNING) AS REQUIRED TO SUPPORT EXCAVATIONS AND TO PROTECT EXISTING STRUCTURES DURING CONSTRUCTION. TRENCHING AND EXCAVATIONS SHALL MEET ALL OSHA REQUIREMENTS.
9. WATER ACCUMULATION IS ANTICIPATED IN FOOTING EXCAVATIONS; PROVIDE DRAINAGE OF EXCAVATIONS FROM SURFACE WATER AND SEEPAGE. EXCAVATIONS SHALL BE DRAINED OR PUMPED DRY BEFORE POURING CONCRETE.
10. PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
11. NO BACKFILLING SHALL BE DONE AGAINST FOUNDATION WALLS UNTIL CONCRETE HAS ATTAINED ITS FULL DESIGN STRENGTH. BEFORE BACKFILLING, PROVIDE BRACING FOR WALLS SUSTAINING MORE THAN 3'-0" OF EARTH PRESSURE. THIS BRACING SHALL REMAIN IN PLACE UNTIL SLAB ON GRADE HAS BEEN PLACED AND CURED.
12. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION WALL.

G. CONCRETE AND REINFORCING STEEL:

1. THE DESIGN OF THE CONCRETE STRUCTURE IS BASED ON ACI318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. CAST IN PLACE CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS (f'c):

COMPONENT	COMPRESSIVE STRENGTH
FOOTINGS	3500 PSI
INTERIOR SLABS ON GRADE	3500 PSI
SLABS ON STEEL DECK	3500 PSI

   SEE SPECIFICATION SECTION 033000 FOR ADDITIONAL MIX DESIGN REQUIREMENTS.
3. ALL DEFORMED REINFORCING STEEL SHALL BE A615 GRADE 60 STEEL, U.N.O.
4. ALL WELDED WIRE REINFORCING STEEL SHALL BE A1064. ALL WELDED WIRE REINFORCEMENT SHALL BE PROVIDED IN SHEETS.
5. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI CODE AND ACI DETAILING MANUAL.
6. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE:

CONCRETE CAST AGAINST EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#5 BARS AND SMALLER:	1 ½"
#6 BARS AND LARGER:	2"
SLABS, WALLS, AND JOISTS:	1"
BEAMS AND COLUMNS:	1 ½"

7. ALL CONCRETE CONSTRUCTION AND MATERIALS SHALL BE PLACED ACCORDING TO ACI 117 TOLERANCES.
8. ALL CONCRETE REINFORCING STEEL SHALL BE SPLICED USING TENSION SPLICES:
   a. UNLESS NOTED OTHERWISE, LAP SPLICE ALL CONCRETE REINFORCING STEEL:

BARS #6 AND SMALLER:	48 BAR DIAMETERS
BARS #7 AND LARGER:	60 BAR DIAMETERS
WELDED WIRE REINFORCING:	ONE MESH PLUS 2"

   b. ONLY APPROVED MECHANICAL SPLICE SYSTEMS SHALL BE USED TO PROVIDE TENSION SPLICES. MECHANICAL SPLICES SHALL DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR.
9. ALL CONCRETE REINFORCING SHALL BE SPLICED WHERE DETAILED ON THE DRAWINGS. UNLESS NOTED OTHERWISE:
   a. LAP GRADE BEAM TOP REINFORCEMENT AT CENTER OF SPAN.
   b. LAP GRADE BEAM BOTTOM REINFORCEMENT AT SUPPORT.
   c. STAGGER ALL TENSION LAP SPLICE LOCATIONS.
10. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS END WITH STANDARD HOOKS.
11. PROVIDE CORNER BARS IN ALL CONCRETE MEMBERS AT INTERSECTIONS. MATCH SIZE AND SPACING OF HORIZONTAL BARS IN THOSE MEMBERS.
12. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED AS REQUIRED TO FURNISH SUPPORT FOR ALL REINFORCING STEEL.
13. PROVIDE SUPPORT FOR ALL CONCRETE REINFORCING (INCLUDING SLABS ON GRADE AND ELEVATED COMPOSITE SLABS) AS REQUIRED TO MAINTAIN CLEAR COVER DIMENSIONS. SPACING SHALL NOT EXCEED 3'-0".
14. SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT/ENGINEER FOR APPROVAL.
15. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. HORIZONTAL OR NEAR HORIZONTAL JOINTS SHALL BE PREPARED BY ROUGHENING THE SURFACE IN AN APPROVED MANNER SO THAT THE AGGREGATE IS EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSENED PARTICLES, OR DAMAGED CONCRETE.
16. PIPES OR CONDUITS PLACED IN FOUNDATIONS AND SLABS SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTERS. PIPES AND CONDUITS PLACED IN SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUIT SHALL BE PLACED WITHIN 24" OF COLUMN FACE.
17. LOCATION OF SLOTTED INSERTS, WELD PLATES AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
18. REINFORCING BARS SHALL NOT BE WELDED.
19. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVE CURBS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
20. AGGREGATE FOR CONCRETE SHALL NOT CONTAIN LIGNITE, STEEL, OR OTHER MATERIALS THAT MAY BE DETRIMENTAL TO THE CONCRETE. ALKALI-SILICA REACTIVE (ASR) AGGREGATES ARE NOT ALLOWED.
21. MAXIMUM TOLERANCE FOR SLAB EDGES IS 1/2" +/- EXCEPT WHERE TIGHTER TOLERANCE IS REQUIRED FOR ARCHITECTURAL REASONS.
22. CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS. WHEN THE AIR TEMPERATURE IS OVER 85 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 305R. WHEN THE AIR TEMPERATURE IS BELOW 40 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 306R.
23. STUDS AND DEFORMED BAR ANCHORS SHALL BE WELDED USING A WELDING GUN IN ACCORDANCE WITH CHAPTER 7 OF AWS D1.1. STUDS AND DEFORMED BAR ANCHORS SHALL NOT BE FILLET WELDED.

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Project

AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
07-17-2024

Notes

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

STRUCTURAL DESIGN CRITERIA AND GENERAL NOTES

Sheet Number

S-001

STRUCTURAL GENERAL NOTES CONT'D

H. MASONRY WALLS:

1. THE DESIGN OF THE MASONRY WALLS IS BASED ON TMS 402-16 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. SPECIFIED DESIGN COMPRESSIVE STRENGTH: f'm = 2,000 PSI. PER THE UNIT STRENGTH METHOD.
3. CONCRETE BLOCK SHALL CONFORM TO ASTM C-90, NORMALWEIGHT UNITS.
4. MORTAR SHALL CONFORM TO ASTM C-270.
   a. TYPE S: LOAD-BEARING WALL
5. GROUT SHALL CONFORM TO ASTM C476. GROUT SLUMP SHALL BE BETWEEN 9" AND 11". MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 2500 PSI.
6. PROVIDE TEMPORARY BRACING FOR ALL MASONRY WALLS UNTIL PERMANENT LATERAL SUPPORT IS COMPLETE.
7. PIPES, CONDUIT, AND OTHER ITEMS SHALL NOT BE PLACED IN MASONRY CELLS WITH VERTICAL OR HORIZONTAL REINFORCING.
8. FILL ALL BOND BEAMS, CELLS CONTAINING VERTICAL BARS, AND CELLS CONTAINING EXPANSION ANCHORS, STEEL EMBEDS, OR OTHER ANCHORS WITH COARSE GROUT. ALL GROUT SHALL BE CONSOLIDATED AND RECONSOLIDATED BY USE OF A MECHANICAL VIBRATOR.
9. DO NOT PLACE LOADS ON BOND BEAMS OR MASONRY CELLS FILLED WITH GROUT UNTIL THE GROUT HAS CURED FOR A MINIMUM OF 3 DAYS.
10. MASONRY CONSTRUCTION SHALL NOT PROGRESS WITHOUT PERIODIC AND CONTINUOUS INSPECTION AND TESTING AS SPECIFIED IN THE SCHEDULE OF SPECIAL INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COST OF DEMOLITION, RECONSTRUCTION, INSPECTION AND TESTING OF ANY MASONRY CONSTRUCTED WITHOUT THE SPECIFIED INSPECTIONS AND TESTING.

I. STRUCTURAL STEEL:

1. THE DESIGN OF STRUCTURAL STEEL IS BASED ON AISC 360-16, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. ALL STEEL MEMBERS SHALL CONFORM TO:

SECTION	ASTM STANDARD	YIELD STRENGTH
WIDE FLANGE	A992	50 KSI
ANGLES, PLATES, AND BARS	A572	50 KSI
RECTANGULAR AND SQUARE HSS	A500 GRADE C OR A1085	50 KSI

3. ALL BOLTED CONNECTIONS FOR STRUCTURAL STEEL TO STEEL SHALL BE ASTM F3125, GRADE F1852 "TWIST-OFF" STYLE TENSION CONTROL BOLT ASSEMBLIES (SHOP AND FIELD), UNLESS NOTED OTHERWISE. "H.S. BOLTS" DESIGNATES F1852 BOLT ASSEMBLIES.
4. ALL WELDING ELECTRODES FOR STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO AWS A5.1 GRADE E-70 BARE ELECTRODES.
5. COLUMN ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. ANCHOR RODS SHALL HAVE A PLATE WASHER PER AISC TABLE 14-1 AND ONE HEAVY HEX NUT AT THE TOP AND ONE HEAVY HEX NUT AT THE BOTTOM TACK WELDED TO THE ROD, UNLESS NOTED OTHERWISE.
6. PLACE AND SECURE ANCHOR RODS IN FOOTING EXCAVATION PRIOR TO POURING CONCRETE FOR FOOTING. DO NOT PLACE ANCHOR RODS IN WET CONCRETE.
7. PROVIDE LEVELING NUTS OR SHIM PACKS AS REQUIRED TO LEVEL COLUMN BASE PLATES. IF SHIM PACKS ARE USED, ENCASE SHIM PACKS WITH 1" MIN COVER OF NON-SHRINK GROUT WHEN PLACING GROUT UNDER BASE PLATE.
8. CONNECTION DETAILING:
   a. CONNECTIONS SHALL BE DETAILED AS INDICATED IN THE DRAWINGS, UNO.
   b. THE FABRICATOR'S STEEL DETAILER SHALL SELECT AND COMPLETE TYPICAL CONNECTIONS BASED ON THE PLANS AND THE FOLLOWING:
      1. TYPICAL STEEL BEAM AND GIRDER TO COLUMN CONNECTIONS: DETAIL 3/S-501.
      2. TYPICAL STEEL BEAM-TO-BEAM CONNECTIONS: DETAIL 2/S-501.
      3. TYPICAL CONNECTIONS SHALL USE, AS A MINIMUM, THE NUMBER OF BOLTS INDICATED IN THE TYPICAL DETAILS.
      4. IF BEAM END REACTIONS ARE LARGER THAN THE CAPACITY INDICATED IN THE SCHEDULES THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR GUIDANCE.
   c. ANY NON-TYPICAL CONNECTIONS THAT ARE NOT DETAILED IN THE DRAWINGS SHALL BE DESIGNED BY THE FABRICATOR FOR THE LOADS INDICATED IN THE DRAWINGS. THE DESIGN SHALL BE DONE BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF ARKANSAS. THE CONNECTION DETAILS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL.
9. ALL STEEL FABRICATION AND ERECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.
10. THE STRUCTURAL STEEL FRAMING FABRICATOR SHALL BE AN AISC CERTIFIED BUILDING FABRICATOR (BU).
11. ALL STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE REQUIREMENT OF THE LATEST AISC SPECIFICATIONS WITH LATEST REVISIONS.
12. SUPPLY STRUCTURAL STEEL FRAMING CONNECTIONS THAT COMPLY WITH OSHA STANDARDS. IF MEETING THESE STANDARDS CONFLICTS WITH ANYTHING SHOWN IN THESE DRAWINGS THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING ADVISING OF ANY REQUIRED REVISIONS AND ACQUIRE THE ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE WORK.
13. THE MINIMUM PLATE THICKNESS SHALL BE 1/4", THE MINIMUM WELD SHALL HAVE A 1/4" THICK THROAT, THE MINIMUM BOLT DIAMETER SHALL BE 3/4", AND THE MINIMUM CONNECTION SHALL BE TWO BOLTS, U.N.O.
14. ALL COLUMN BEARING PLATES SHALL BE SIZED AS SHOWN ON DETAIL 1/S-303 AND SHALL HAVE ROLLED OR GAS CUT EDGES. MINIMUM EDGE DISTANCE TO CENTER OF BOLT HOLE, SPACING OF HOLES, AND SIZES OF HOLES SHALL BE AS PER AISC MANUAL UNLESS NOTED OTHERWISE.
15. PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF CONCENTRATED LOAD. MINIMUM STIFFENER PLATE THICKNESS TO BE 1/2" OR FLANGE THICKNESS OF COLUMNS ABOVE OR BELOW, WHICHEVER IS GREATER, U.N.O.
16. PROVIDE 1/2" MINIMUM THICKNESS STIFFENERS ON ALL BEAMS RUNNING OVER TOPS OF COLUMNS. MINIMUM SIZE OF WELD TO BE 1/4" FILLET WELD, U.N.O.
17. ALL STEEL NOT REQUIRED TO BE SHOP PAINTED (SEE SPECIFICATIONS) SHALL BE CLEANED OF OIL, GREASE, DIRT, RUST, LOOSE MILL SCALE, ETC. AND ALL OTHER FOREIGN MATERIALS.
18. GALVANIZING OF ALL STEEL MEMBERS SHALL CONFORM TO ASTM A123. ALL GALVANIZED STEEL REQUIRED TO BE PAINTED SHALL BE CLEANED AND PREPPED ACCORDING TO ASTM D6386.
19. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS LATEST EDITIONS. WELDING SHALL BE INSPECTED AND TESTED AS NOTED IN THE SPECIFICATIONS. WELDING INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELDING INSPECTOR.
20. FINAL BOLTING OR WELDING SHALL NOT BE PERFORMED UNTIL THE STRUCTURE HAS BEEN PROPERLY ALIGNED.

J. STEEL ROOF DECKING:

1. THE DESIGN, FABRICATION, AND ERECTION OF STEEL DECKING SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE LATEST SDI STANDARDS AND SPECIFICATIONS:
   a. STEEL ROOF DECK: ANSI/SDI RD-2017, STANDARD FOR STEEL ROOF DECK.
2. STEEL DECKING FOR THE CONSTRUCTION OF ROOF DIAPHRAGMS IS BASED ON THE SDI DIAPHRAGM DESIGN MANUAL (FOURTH EDITION) AND AISI S310, NORTH AMERICAN STANDARD FOR THE DESIGN OF PROFILED STEEL DIAPHRAGM PANELS.
3. STEEL DECK SHALL BE ATTACHED TO SUPPORTING STEEL AS INDICATED ON:
   a. ROOF DECK: DETAIL 1/S-501.
4. ROOF DECK AND FORM DECK ENDS SHALL BE BUTTED OR LAPPED OVER SUPPORTS.
5. DO NOT SUPPORT ROOFTOP EQUIPMENT OR EQUIPMENT CURBS DIRECTLY FROM ROOF DECK. ATTACH CURBS DIRECTLY TO STRUCTURAL STEEL SUPPORTS OR PROVIDE TREATED BLOCKING IN FLUTES OF DECK BETWEEN STRUCTURAL STEEL SUPPORTS AND CURBS.
6. PROVIDE SUPPORT FOR METAL DECK AROUND COLUMNS, SCREED PLATES AROUND OPENINGS, AND EDGES OF SLABS.
7. PROVIDE MINIMUM 3/16" X 8" BENT PLATES AT HIPS, VALLEYS, AND RIDGES AS REQUIRED TO SUPPORT AND CONNECT DECK TO STRUCTURE.
8. SUSPENDED CEILINGS, LIGHT FIXTURES, EQUIPMENT, DUCTS, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL ROOF DECK.

K. COLD-FORMED STEEL FRAMING:

1. THE DESIGN OF THE COLD FORMED STEEL FRAMING SHALL BE BASED ON AISI S100-16 w/S2-20, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
2. COLD-FORMED STEEL STUDS SHALL CONFORM TO THE REQUIREMENTS ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. EXTERIOR COLD-FORMED STEEL WALL STUDS SHALL A MINIMUM OF 18 GAUGE. LIMIT DEFLECTION OF STUDS TO L/240.
3. EXTERIOR NON LOAD-BEARING STEEL STUDS SHALL BE CONNECTED TO THE BUILDING FRAME WITH RIGID CLIPS OR VERTICAL SLIDE CLIPS AS SHOWN ON THE STRUCTURAL DETAILS.
4. ALL MATERIAL SHALL BE COLOR CODED TO INDICATE THE GAUGE OF THE MATERIAL.

L. POST-INSTALLED ANCHORS IN CONCRETE OR MASONRY:

1. POST-INSTALLED ANCHORS (MECHANICAL OR ADHESIVE) SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER–OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS OR DOWELS. POST-INSTALLED ANCHORS SHALL BE BUILDING CODE COMPLIANT, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSPECTED PER THE APPLICABLE ICC-ES OR IAPMO UES EVALUATION REPORT. SEE SPECIFICATIONS SECTIONS 033000 AND 042900 FOR ADDITIONAL INFORMATION.

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AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
07-17-2024

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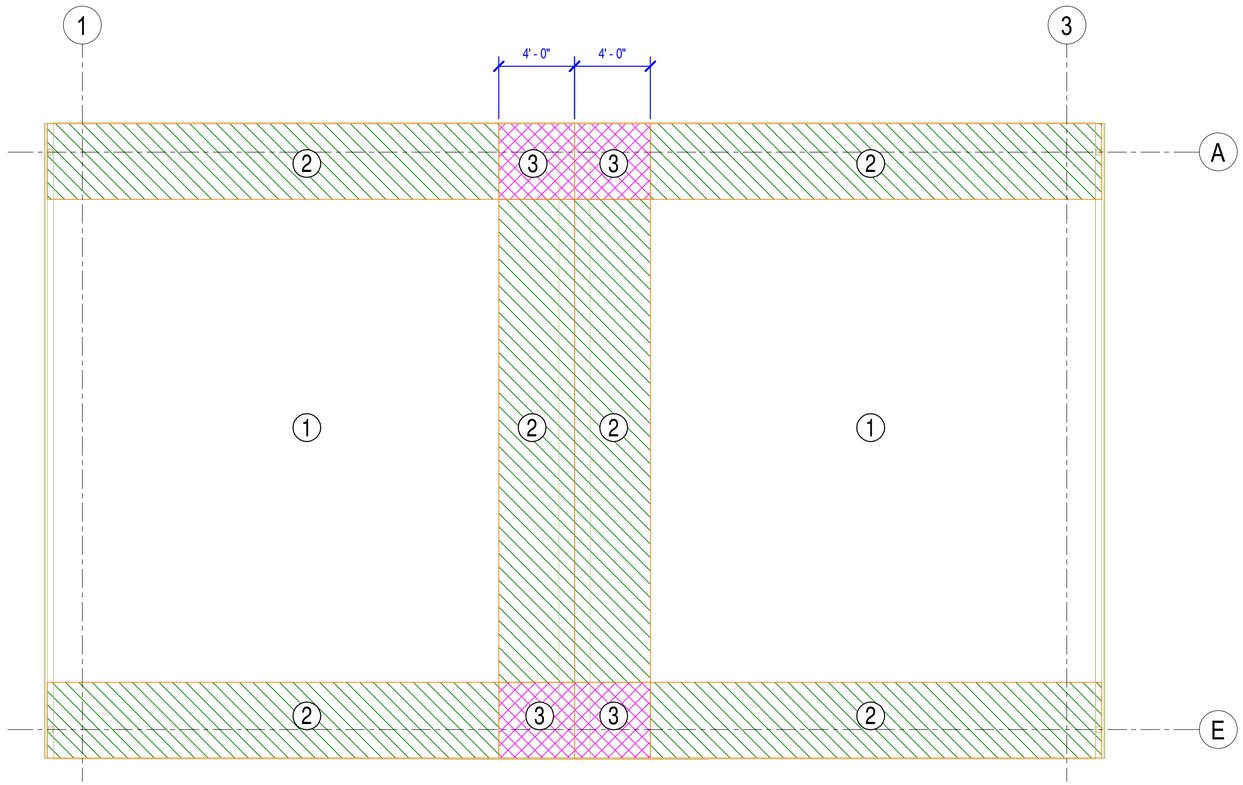
Sheet Title

STRUCTURAL GENERAL NOTES CONT'D

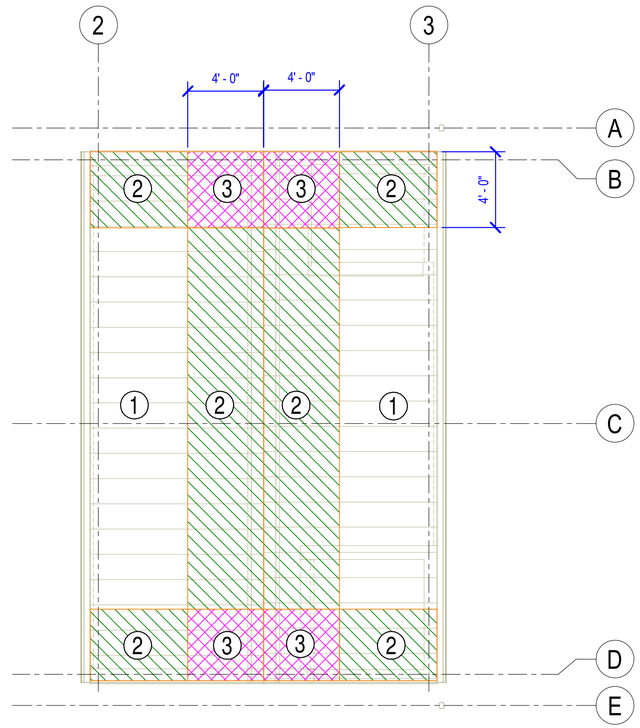
Sheet Number

S-002



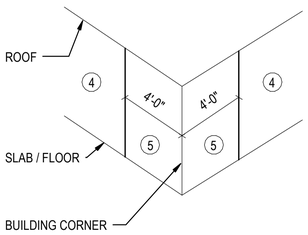
1 CANOPY COMPONENTS AND CLADDING WIND PRESSURE PLAN

1/4" = 1'-0"



2 GUARD POST COMPONENTS AND CLADDING WIND PRESSURE PLAN

1/4" = 1'-0"



GROSS WIND UPLIFT
(STRENGTH DESIGN)

ZONE	TRIBUTARY AREA (SQ. FT.)		
	10	50	100
4	-26/+24 PSF	-23/+21 PSF	-22/+20 PSF
5	-31/+24 PSF	-27/+21 PSF	-25/+20 PSF

ZONE	TRIBUTARY AREA (SQ. FT.)		
	10	50	100
1	-47/+16 PSF	-29/+16 PSF	-16/+16 PSF
2	-69/+16 PSF	-47/+16 PSF	-38/+16 PSF
3	-82/+16 PSF	-55/+16 PSF	-43/+16 PSF

NOTES:
1. ULTIMATE WIND SPEED: 104 MPH
2. NOMINAL WIND SPEED: 81 MPH
3. WIND PRESSURES ARE BASED ON ASCE 7-16 STRENGTH DESIGN (ULTIMATE).
4. POSITIVE / NEGATIVE VALUES INDICATE FORCES ARE ACTING TOWARDS / AWAY FROM ELEMENT, RESPECTIVELY.
5. COMPONENTS SUBJECTED TO PARAPETWIND FORCE ON BOTH SIDES (e.g. WALL PANELS) SHALL BE DESIGNED FOR CUMULATIVE FORCES.
6. SERVICE LEVEL LOADS MAY BE CALCULATED BY MULTIPLYING THE NUMBERS ABOVE BY 0.6.

COMPONENTS AND CLADDING WALL WIND PRESSURES

COMPONENTS AND CLADDING ROOF WIND PRESSURES

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STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
07-17-2024

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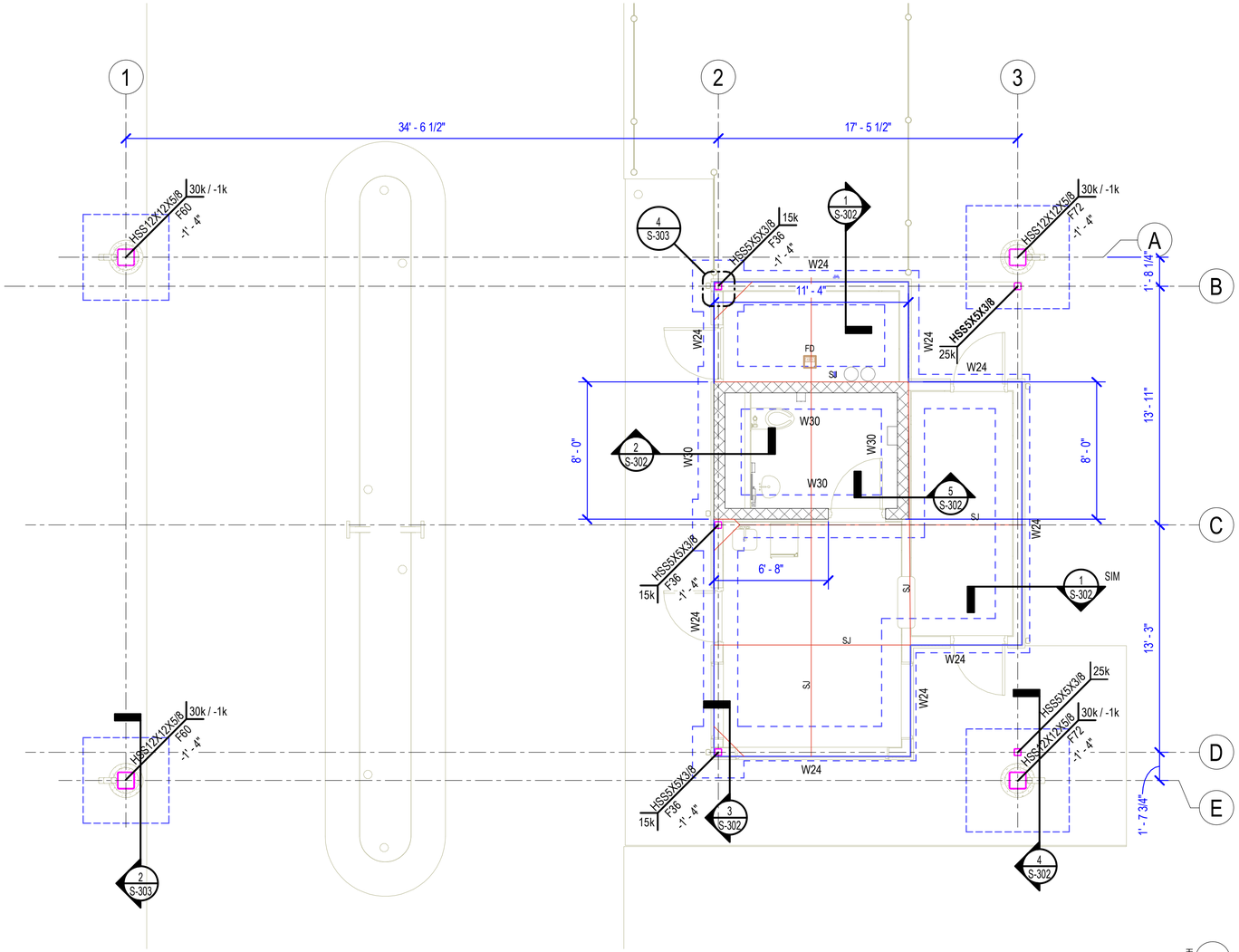
Sheet Title

COMPONENTS AND CLADDING WIND PRESSURE PLANS

Sheet Number

S-003



1 FOUNDATION AND SLAB PLAN

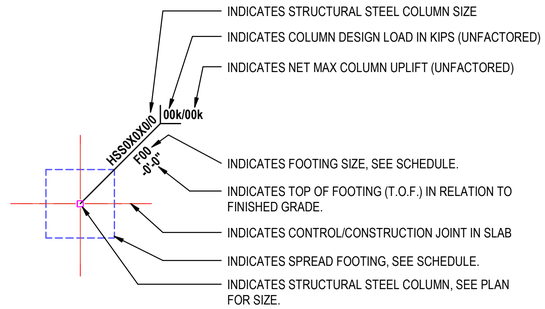
1/4" = 1'-0"

FINISHED FLOOR ELEVATION 0' - 0" = SITE ELEVATION SEE CIVIL

0 2 4 8

SCALE : 1/4" = 1'-0"

FOUNDATION AND SLAB LEGEND



NOTE:
GALVANIZE EXTERIOR COLUMNS

COL FOOTING SCHEDULE

MARK #	W	L	T	REINFORCING
F36	3' - 0"	3' - 0"	1' - 4"	#5 AT 9" O.C. BOT
F60	5' - 0"	5' - 0"	1' - 4"	#5 AT 9" O.C. TOP AND BOT
F72	6' - 0"	6' - 0"	1' - 4"	#5 AT 9" O.C. TOP AND BOT

CONT FOOTING SCHEDULE

MARK #	W	T	REINFORCING
W24	2' - 0"	1' - 4"	SEE 1/S-302
W30	2' - 6"	1' - 4"	SEE 2/S-302

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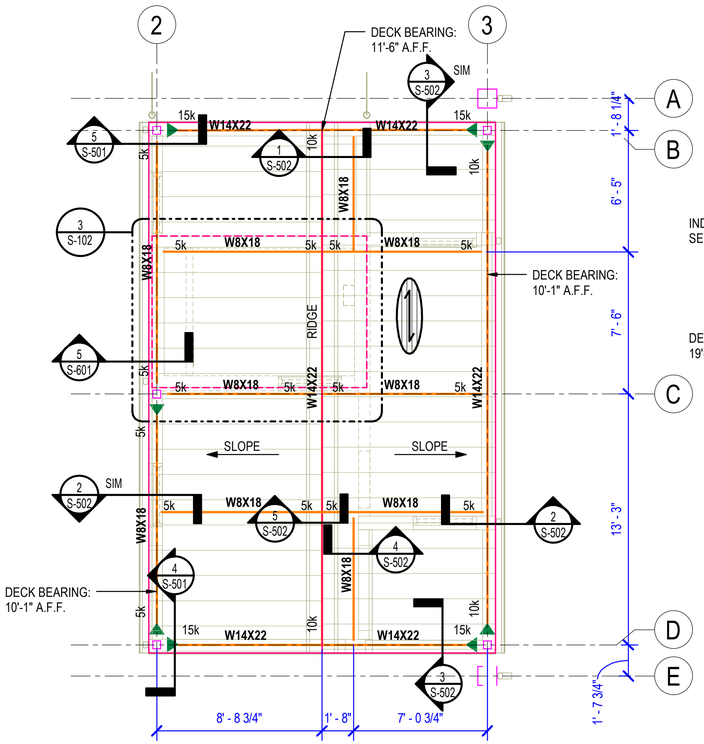
Sheet Title

FOUNDATION AND SLAB PLAN

Sheet Number

S-101



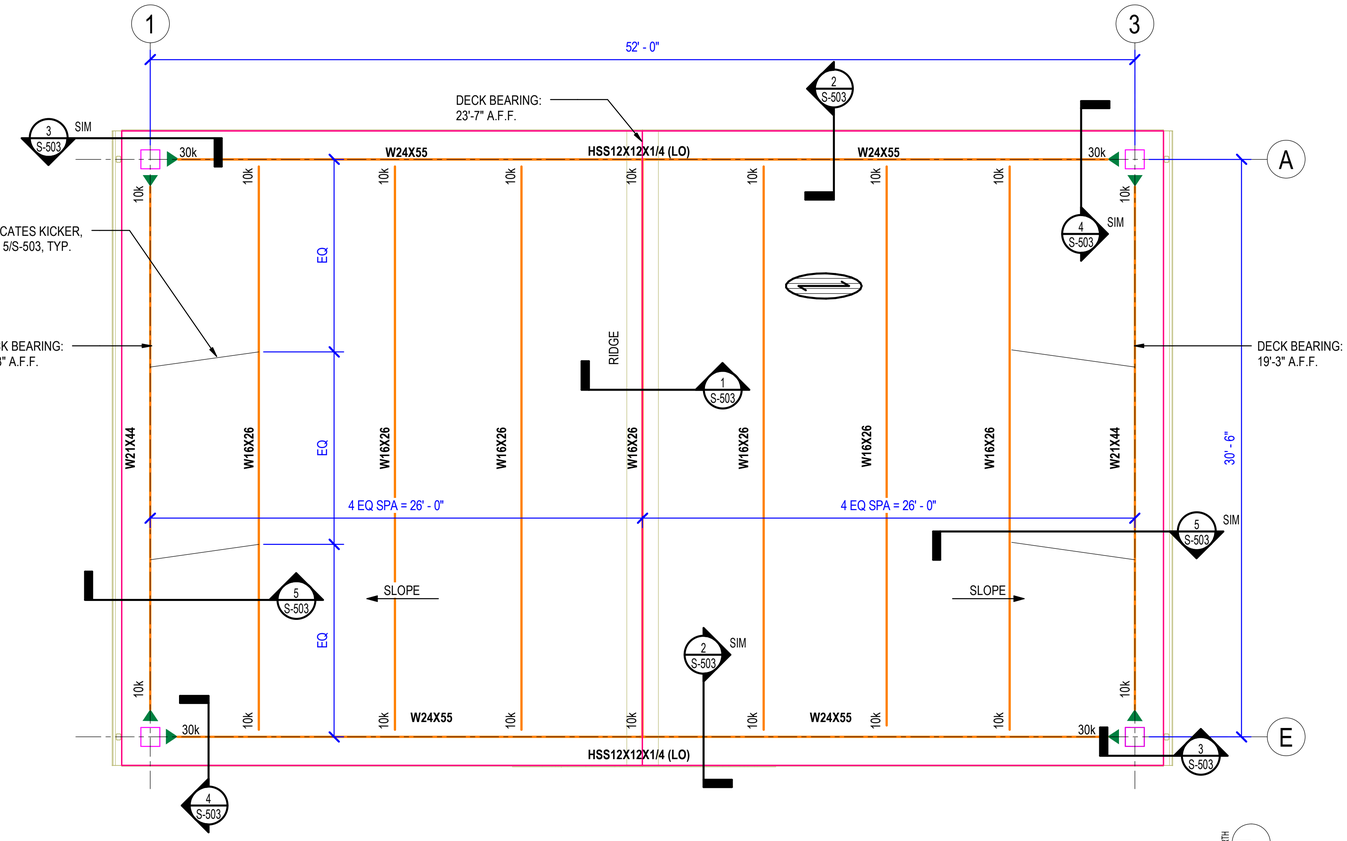
1 GUARD POST ROOF FRAMING

1/4" = 1'-0"

NORTH

0 2 4 8

SCALE : 1/4" = 1'-0"



2 CANOPY ROOF FRAMING

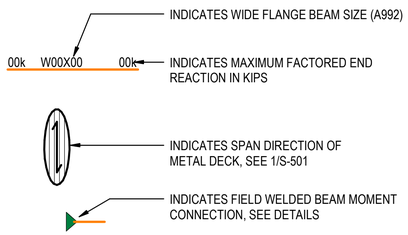
1/4" = 1'-0"

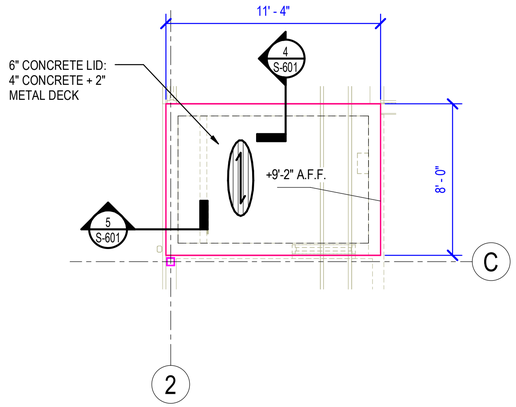
NORTH

0 2 4 8

SCALE : 1/4" = 1'-0"

FRAMING LEGEND





3 HARDENED ROOM FRAMING

1/4" = 1'-0"

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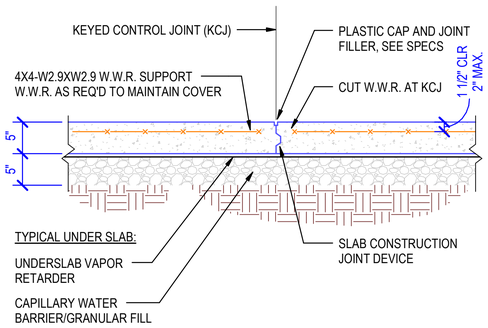
Sheet Title

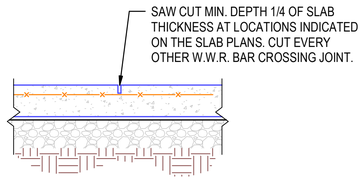
ROOF FRAMING PLAN

Sheet Number

S-102



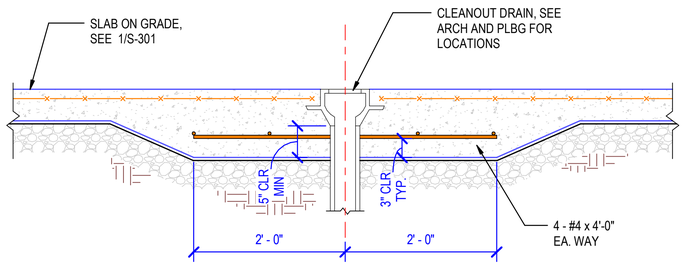
A KCJ (KEYED CONSTRUCTION JOINT)



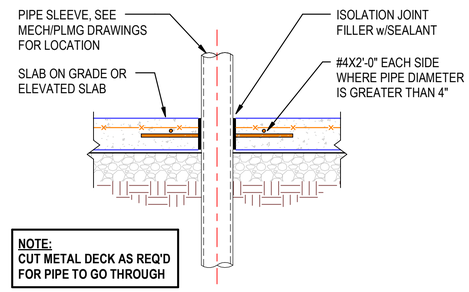
B SAWN JOINT (SJ)

1 TYPICAL SLAB ON GRADE REINFORCING AND JOINT DETAILS

NOT TO SCALE



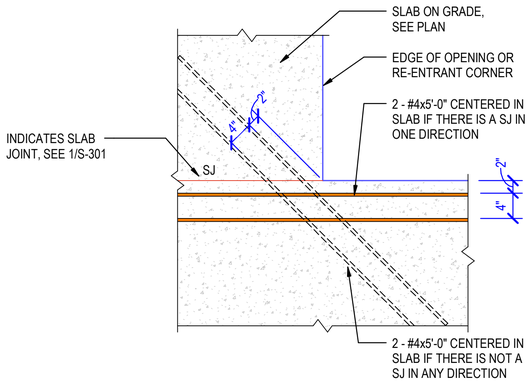
A FLOOR DRAIN AT SLAB



B MECH/PLMG PIPE THROUGH SLAB

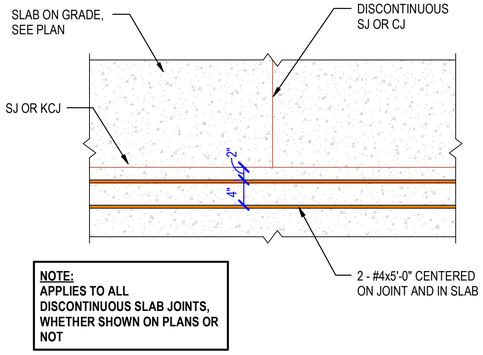
2 TYPICAL SLAB ON GRADE PENETRATION DETAILS

NOT TO SCALE



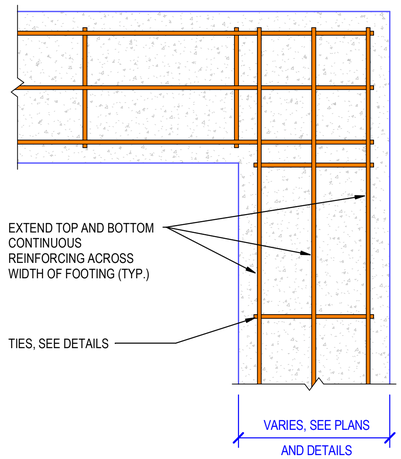
3 TYPICAL REENTRANT CORNER DETAIL

NOT TO SCALE



4 TYPICAL DISCONTINUOUS SLAB JOINT DETAIL

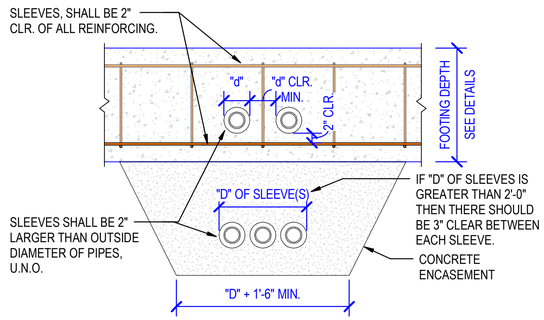
NOT TO SCALE



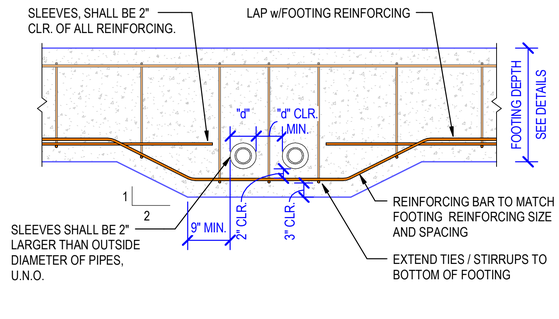
5 TYPICAL CONT. FOOTING REINF. AT CORNERS

NOT TO SCALE

NOTES:
1. PIPE SLEEVES SHALL BE PVC, CAST IRON, OR GALV. STEEL.
2. COORD. PIPE SLEEVE LOCATIONS w/MECH. ELEC. AND PLMG.
3. THE NOMINAL SLEEVE DIAMETER SHALL NOT BE GREATER THAN 1/4 OF THE FOOTING DEPTH. THICKEN FOOTING AS REQUIRED.
4. SLEEVES SHALL BE 2" CLEAR FROM TOP REINF.
5. SEAL EACH SIDE OF SLEEVES AROUND PIPE.



A PIPES THROUGH OR BELOW FOOTING



B PIPES THROUGH FOOTING (INTERUPTED REINFORCING)

6 TYPICAL HORIZONTAL PENETRATIONS THRU CONT. FOOTINGS

NOT TO SCALE

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

STATE OF ARKANSAS — MICHAEL CALLAHAN — PROFESSIONAL ENGINEER — No. 9668

07-17-2024

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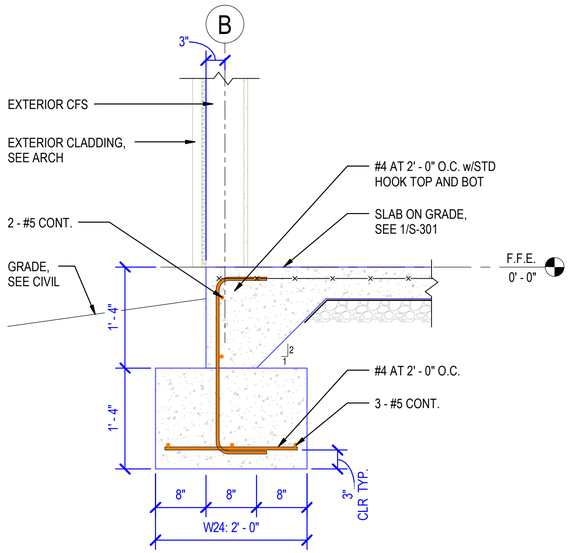
Sheet Title

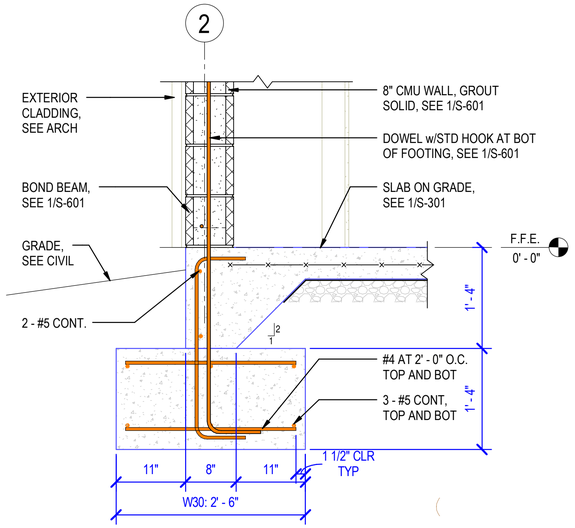
TYP FOUNDATION AND SLAB DETAILS

Sheet Number

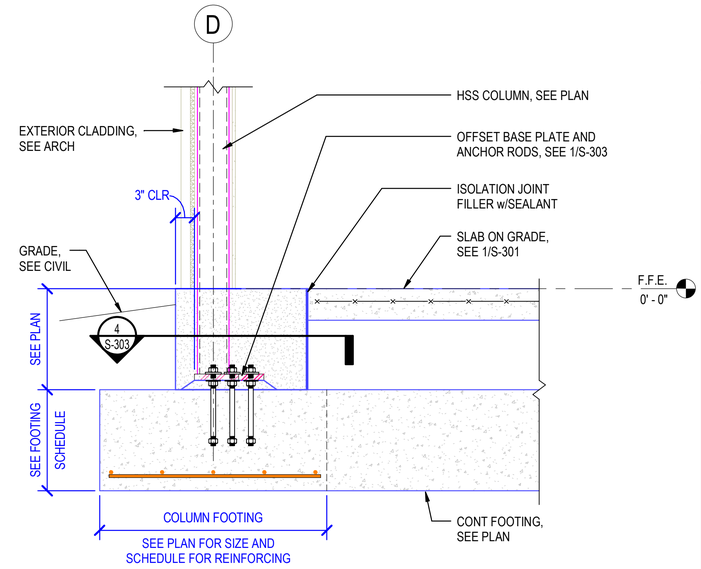
S-301



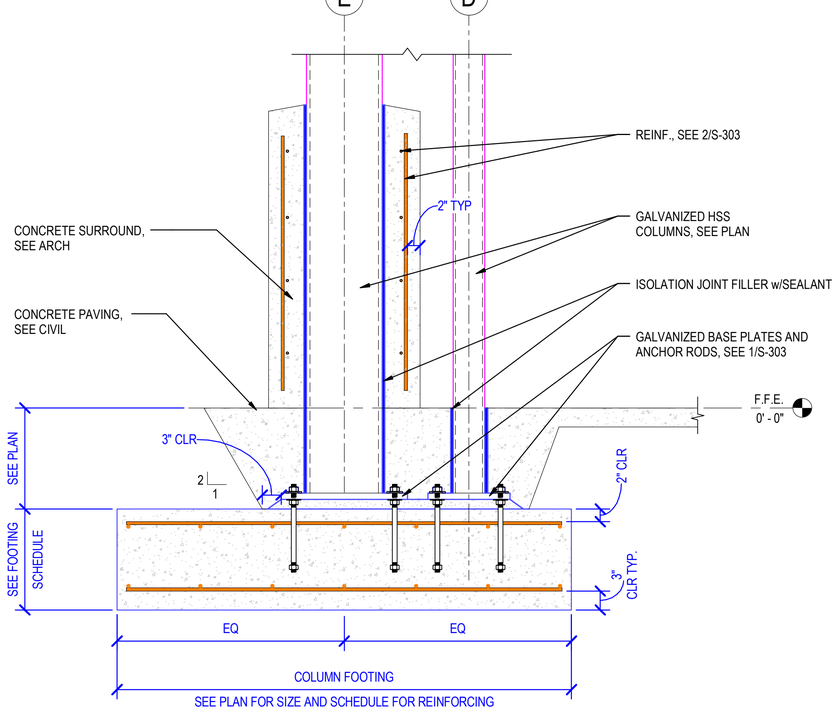
1 TYPICAL SLAB EDGE
1" = 1'-0"



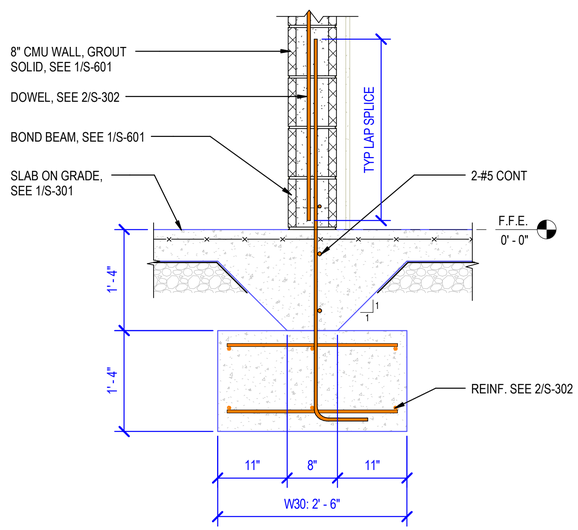
2 SECTION AT EXTERIOR CMU WALL
1" = 1'-0"



3 TYPICAL COLUMN DETAIL AT GUARD POST
1" = 1'-0"



4 TYPICAL COMBINED FOOTING
1" = 1'-0"



5 SECTION AT INTERIOR CMU WALL
1" = 1'-0"

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Sheet Title

FOUNDATION DETAILS

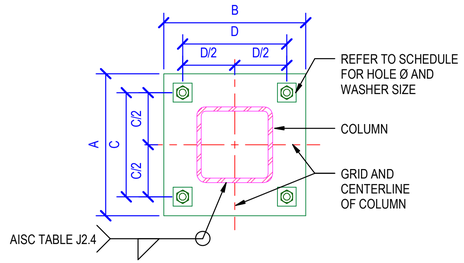
Sheet Number

S-302

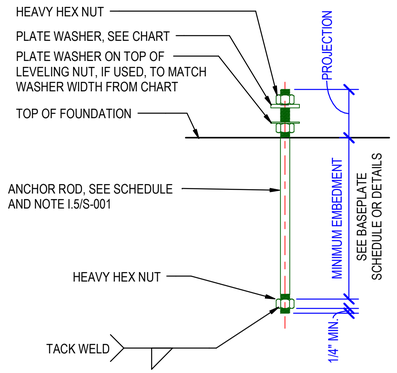
TYPICAL BASE PLATE SCHEDULE							
COL SIZE	PLATE THICKNESS	A	B	C	D	ANCHOR ROD Ø	MIN. EMBEDMENT
HSS5X5 (GRID LINE 3)	3/4"	1'-1"	1'-1"	9"	9"	3/4"	1'-0"
HSS12X12	1 1/2"	1'-8"	1'-8"	1'-4"	1'-4"	3/4"	1'-0"
HSS5X5 (GRID LINES 2 & 2.1)	3/4"	OFFSET, SEE 4/S-303				3/4"	1'-0"

ANCHOR ROD WASHERS AND HOLES SIZE			
ANCHOR ROD Ø	MAX HOLE Ø	MIN. WASHER SIZE	MIN. WASHER THICKNESS
3/4	1 5/16"	2"	1/4"

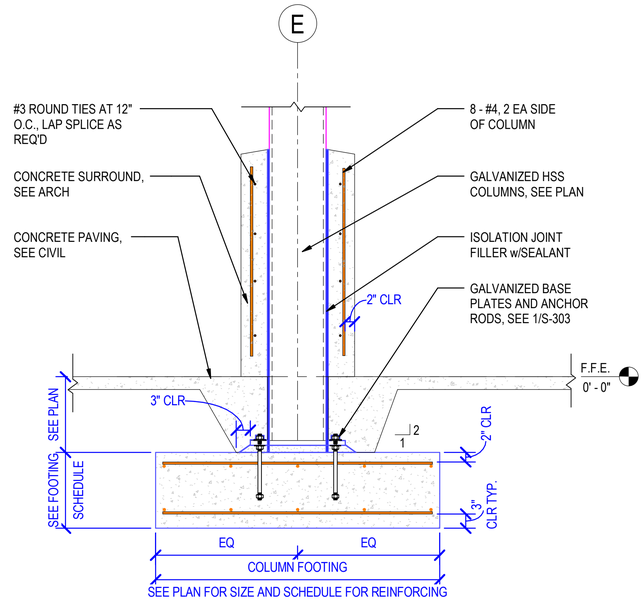
NOTES:
1. THIS CHART IS TAKEN FROM AISC TABLE 14-1. LATEST VERSION OF AISC TABLE 14-1 TAKES PRECEDENCE.
2. CIRCULAR OR SQUARE WASHERS ARE ACCEPTABLE.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR THE WASHER SIZE SELECTED



TYPICAL COLUMN BASEPLATE

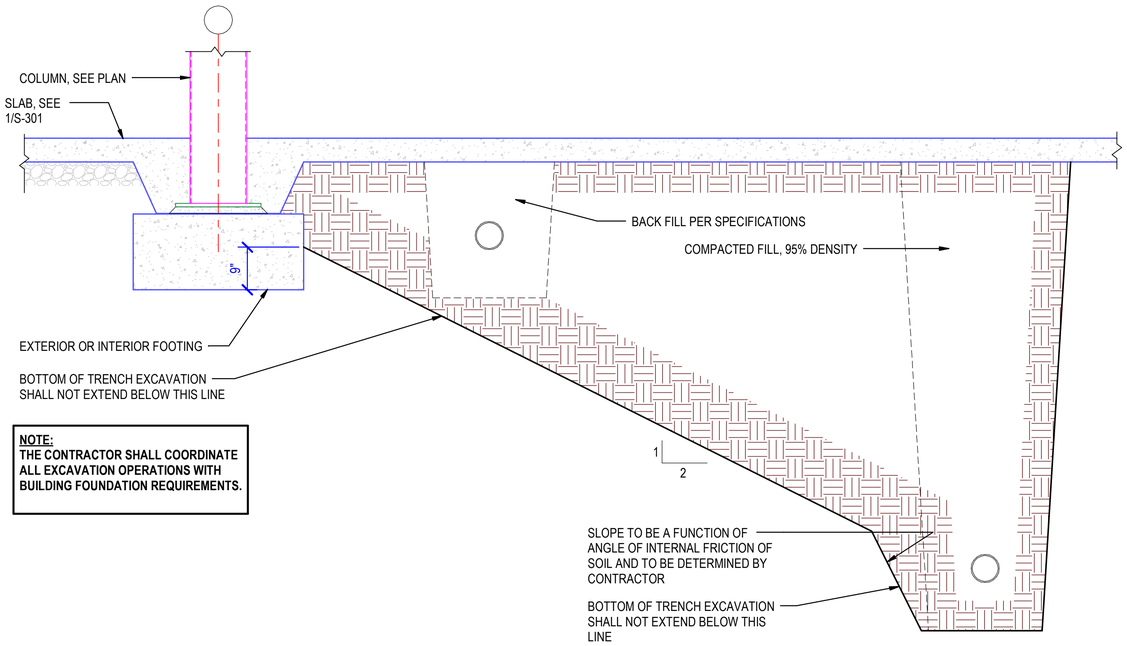


TYPICAL ANCHOR ROD DETAIL



1 BASEPLATE SCHEDULE AND DETAILS (HSS)

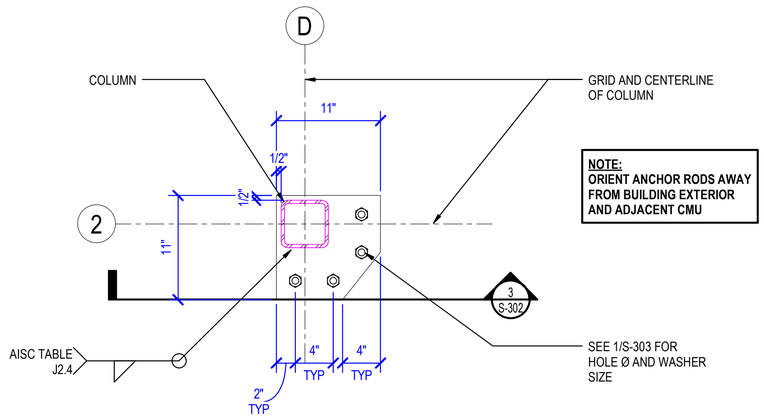
NOT TO SCALE



NOTE:
THE CONTRACTOR SHALL COORDINATE ALL EXCAVATION OPERATIONS WITH BUILDING FOUNDATION REQUIREMENTS.

2 TYPICAL CANOPY FOOTING

3/4" = 1'-0"



NOTE:
ORIENT ANCHOR RODS AWAY FROM BUILDING EXTERIOR AND ADJACENT CMU

3 TRENCH EXCAVATION AT VICINITY OF INTERIOR AND EXTERIOR FOOTINGS

NOT TO SCALE

4 TYPICAL OFFSET COLUMN BASEPLATE

1 1/2" = 1'-0"

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION CROMWELL ARCHITECTS/ ENGINEERS #5 ARKANSAS ENGINEER

STATE OF ARKANSAS PROFESSIONAL ENGINEER No. 9668 MICHAEL CALLAHAN

07-17-2024

Notes

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Project Number **2024-052**

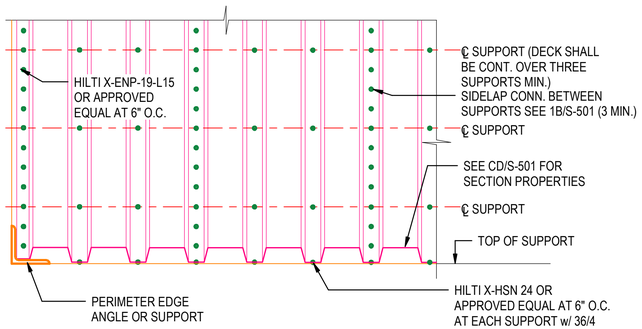
Issue Date **07-17-2024**

Sheet Title

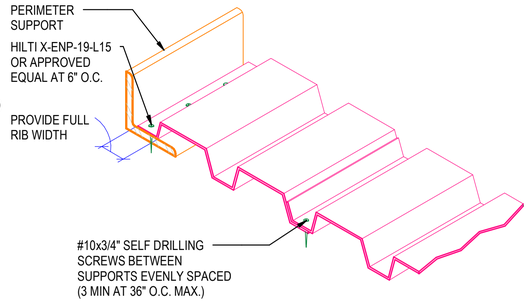
FOUNDATION DETAILS

Sheet Number

S-303



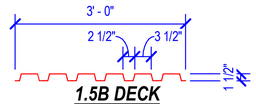
A TYP DECK CONNECTION PATTERN PLAN



B ISOMETRIC AT TYPICAL SIDE LAP

1. **EDGES OF SHEET SHALL BE COMPLETELY ENGAGED.**
2. **DECK GALVANIZING SHALL CONFORM TO ASTM a653 G60**

C DECK NOTES



LOCATION	DEPTH	GAGE	DIAPHRAGM SHEAR VALUE	WEIGHT LBS./SQ. FT. GALVANIZED	I (IN^4)/FT.	Sp (IN^3)/FT.	Sn (IN^2)/FT.
ROOF DECK	1.5" B	20	300 PLF AT 8'-0" SPAN	2.14	0.211	0.234	0.247
HARDENED ROOM ROOF	2" VLI	20	400 PLF AT 6'-8" SPAN	1.89	0.907	0.512	0.538

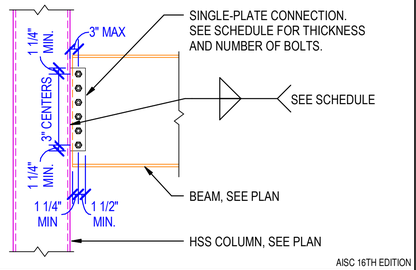
NOTES:
1.SECTION PROPERTIES SHOWN MAY VARY 10%.
2. DECK Fy = 33 ksi MIN.

D SECTION PROPERTIES

1 TYPICAL 1.5B ROOF DECK ANCHORAGE

NOT TO SCALE

SINGLE-PLATE CONNECTION DETAIL



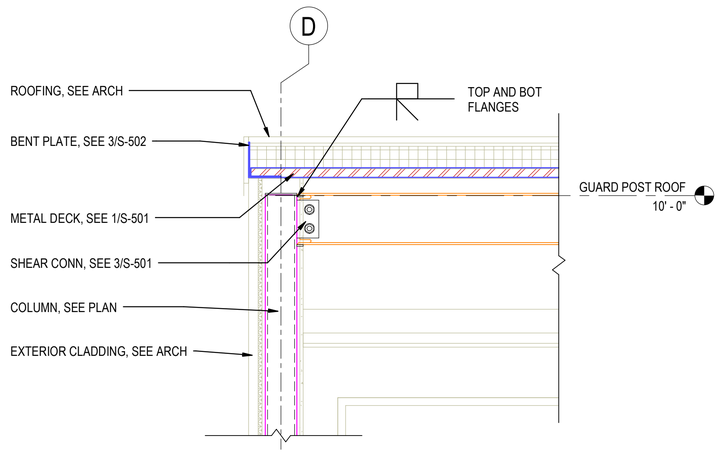
BOLT SCHEDULE

BEAM SIZE	ROWS OF 3/4" Ø H.S. BOLTS	MIN. PLATE THICKNESS	MIN. FILLET WELD SIZE	CAPACITY
W24	7	5/16"	5/16"	131k
W21	6	5/16"	1/4"	112k
W18	5	5/16"	1/4"	93k
W16	4	1/4"	3/16"	59k
W14 & W12	3	1/4"	3/16"	43k
W10 & W8	2	1/4"	3/16"	28k

NOTES:
1. CAPACITY IS BASED ON LRFD DESIGN WITH STANDARD OR SHORT HORIZONTAL SLOTTED HOLES AND A MAXIMUM HSS WIDTH TO THICKNESS RATIO OF 33.7. OVERSIZE OR VERTICAL SLOTTED HOLES ARE NOT ALLOWED. FOR STANDARD HOLES MINIMUM PLATE THICKNESS SHALL BE USED.
2. NUMBER OF BOLTS SHOWN IS THE MINIMUM REQUIRED FOR CONNECTIONS
3. PREHEAT WELDS AS REQUIRED BY AISC.
4. USE STANDARD HOLES ALONG BRACED FRAME OR MOMENT FRAME GRID LINES.

3 TYPICAL BEAM TO HSS COLUMN CONN. SCHEDULE

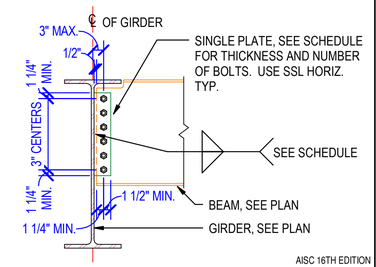
NOT TO SCALE



4 TYPICAL MOMENT CONNECTION

1" = 1'-0"

SINGLE-PLATE CONNECTION DETAIL



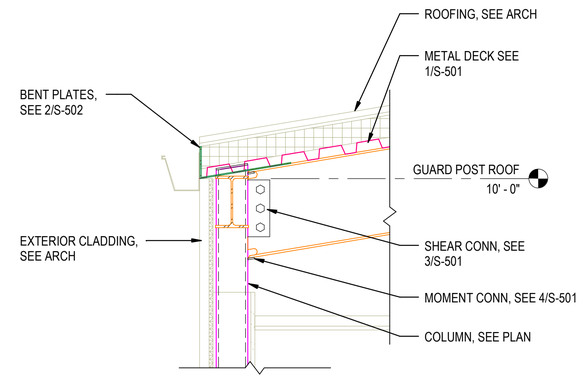
BOLT SCHEDULE

BEAM SIZE	ROWS OF 3/4" Ø H.S. BOLTS	MIN. PLATE THICKNESS	MIN. FILLET WELD SIZE	CAPACITY
W18	5	5/16"	1/4"	93k
W16	4	1/4"	3/16"	59k
W14 & W12	3	1/4"	3/16"	43k
W10 & W8	2	1/4"	3/16"	28k

NOTES:
1. CAPACITY IS BASED ON LRFD DESIGN WITH STANDARD OR SHORT HORIZONTAL SLOTTED HOLES. OVERSIZE OR VERTICAL SLOTTED HOLES ARE NOT ALLOWED. FOR STANDARD HOLES MINIMUM PLATE THICKNESS SHALL BE USED.
2. NUMBER OF BOLTS SHOWN IS THE MINIMUM REQUIRED FOR CONNECTIONS
3. PREHEAT WELDS AS REQUIRED BY AISC.
4. BEAMS WITH LARGE COPES MAY REQUIRE WEB STIFFENER.

2 TYPICAL SINGLE PLATE BEAM TO GIRDER CONNECTION

NOT TO SCALE



5 TYPICAL MOMENT CONN AT GABLE FRAME

1" = 1'-0"

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AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — MICHAEL CALLAHAN — PROFESSIONAL ENGINEER — No. 9668

07-17-2024

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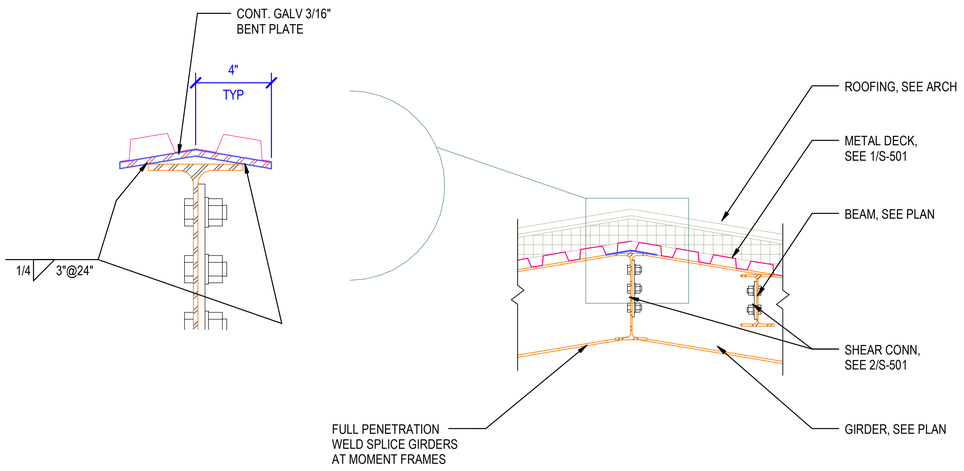
Issue Date **07-17-2024**

Sheet Title

TYPICAL ROOF FRAMING DETAILS

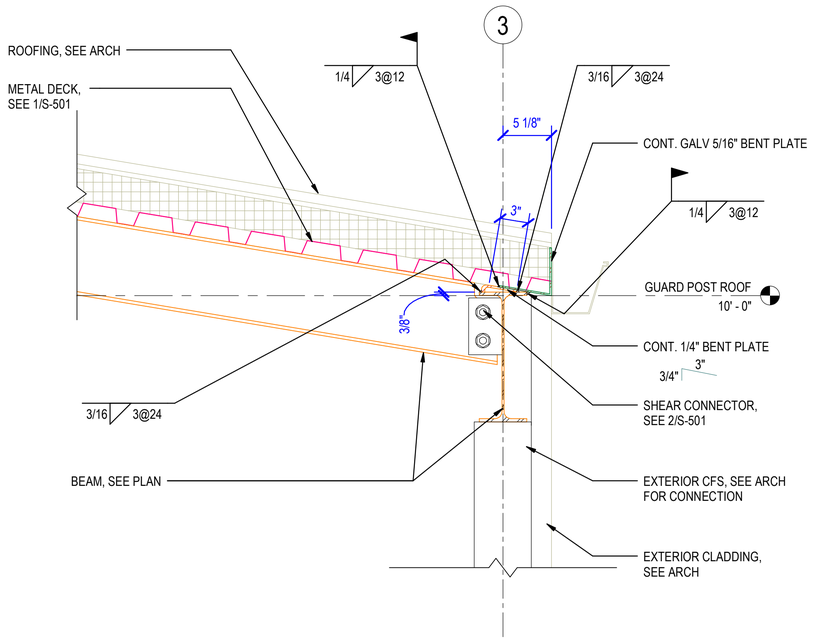
Sheet Number

S-501



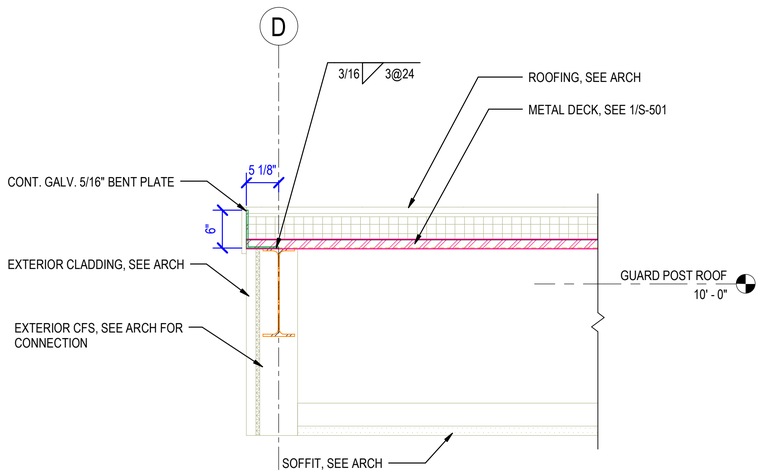
1 TYPICAL SECTION AT RIDGE

1" = 1'-0"



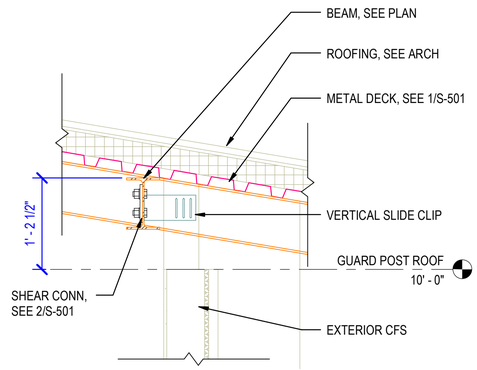
2 TYPICAL SECTION AT DECK EDGE

1 1/2" = 1'-0"



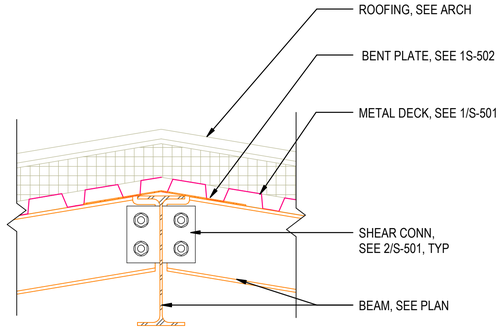
3 TYPICAL SECTION AT DECK EDGE

1" = 1'-0"



4 TYPICAL SECTION AT EXTERIOR WALL BEAM

1" = 1'-0"



5 TYPICAL BEAM TO GIRDER CONNECTION AT RIDGE

1 1/2" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

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Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
07-17-2024

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Project Number **2024-052**

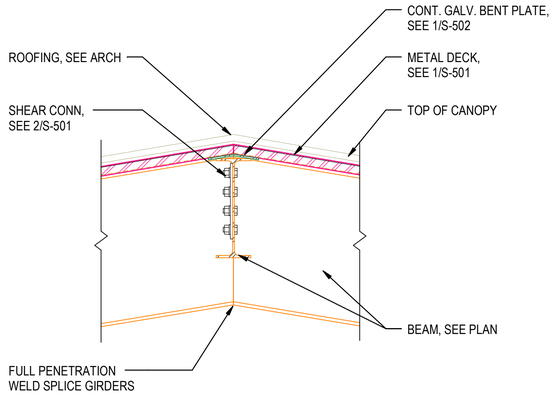
Issue Date **07-17-2024**

Sheet Title

TYPICAL ROOF FRAMING DETAILS

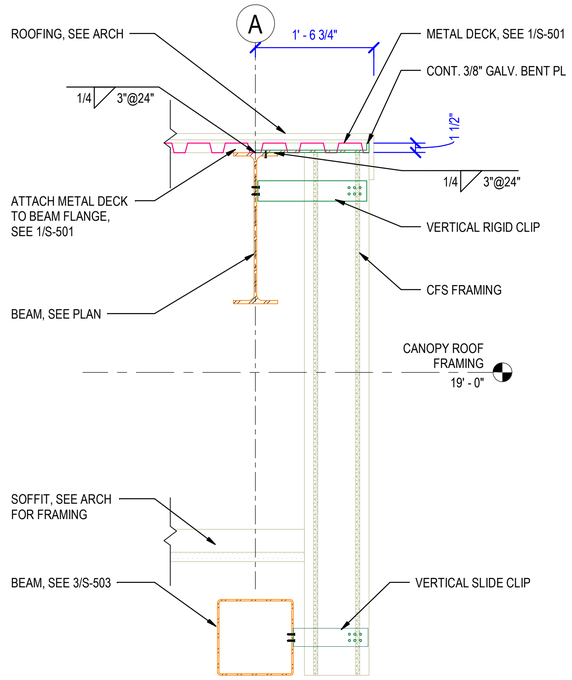
Sheet Number

S-502



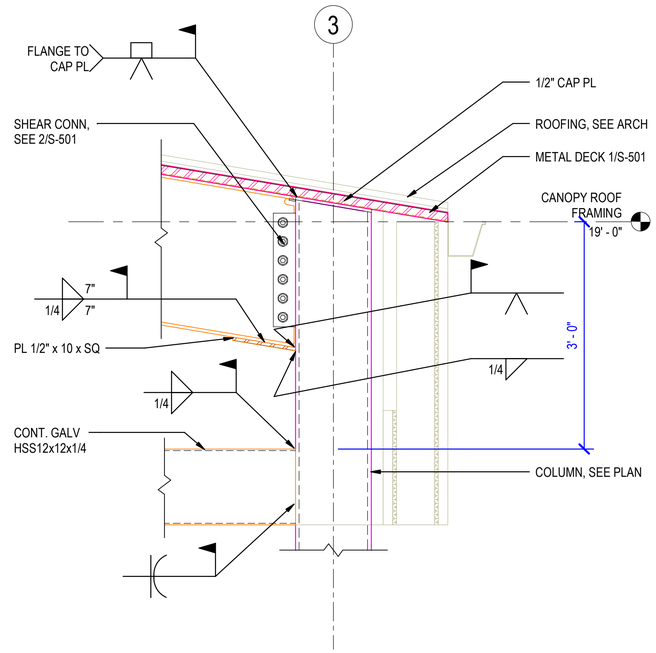
1 TYPICAL SECTION AT CANOPY RIDGE

1" = 1'-0"



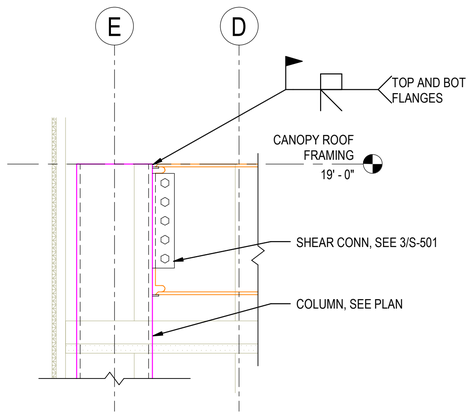
2 TYPICAL CANOPY FRAMING DETAIL

1" = 1'-0"



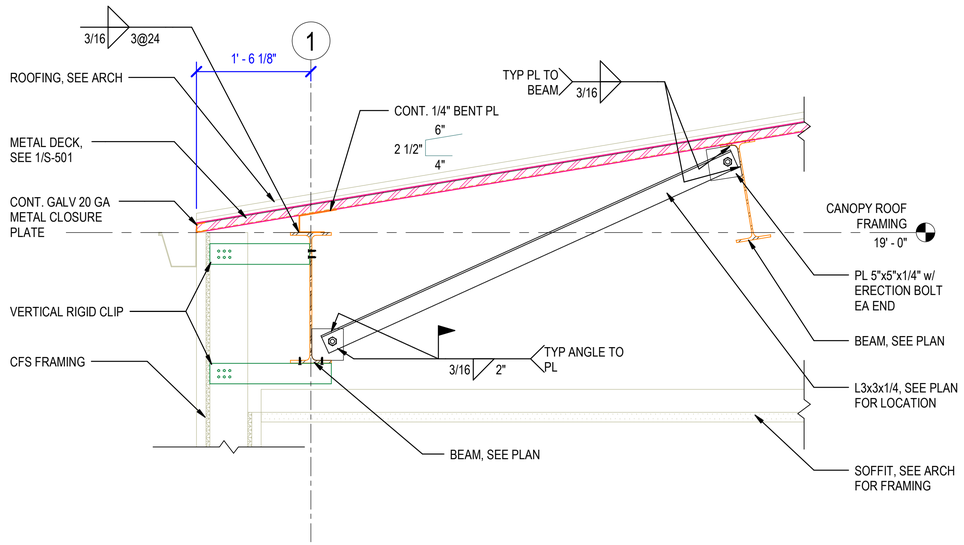
3 TYPICAL GABLE MOMENT CONNECTION AT CANOPY

1" = 1'-0"



4 TYPICAL CANOPY MOMENT CONNECTION

1" = 1'-0"



5 TYPICAL KICKER DETAIL

1" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN

07-17-2024

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Project Number **2024-052**

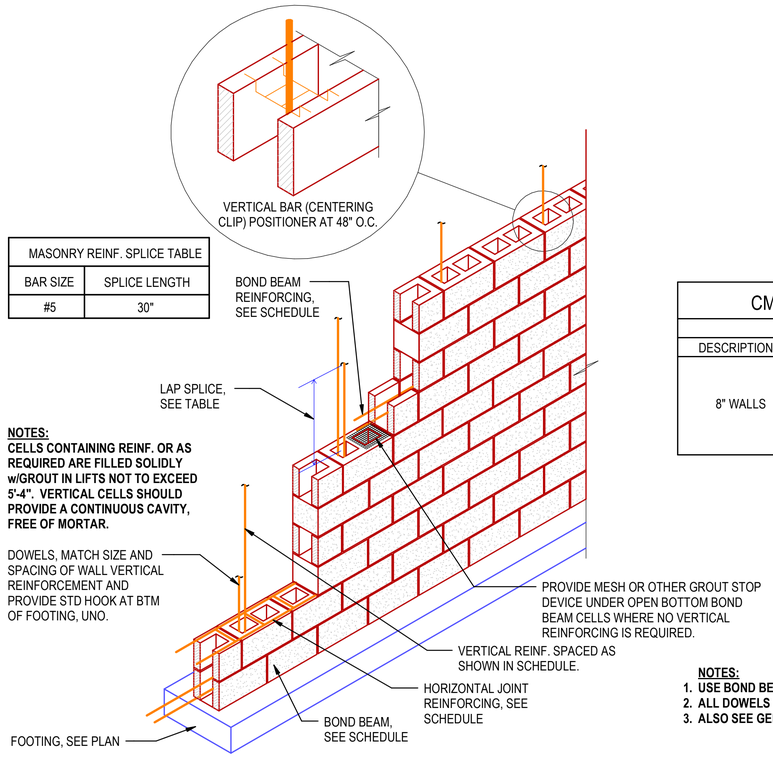
Issue Date **07-17-2024**

Sheet Title

TYPICAL CANOPY FRAMING DETAILS

Sheet Number

S-503



MASONRY REINF. SPLICE TABLE	
BAR SIZE	SPLICE LENGTH
#5	30"

NOTES:
CELLS CONTAINING REINF. OR AS REQUIRED ARE FILLED SOLIDLY w/GROUT IN LIFTS NOT TO EXCEED 5'-4". VERTICAL CELLS SHOULD PROVIDE A CONTINUOUS CAVITY, FREE OF MORTAR.

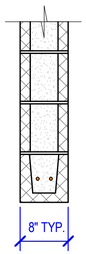
CMU WALL REINFORCEMENT SCHEDULE			
	REINFORCEMENT		
DESCRIPTION	VERTICAL	HORIZONTAL	REMARKS
8" WALLS	#5 AT 16" O.C. AND AT EACH SIDE OF OPENINGS	CONT. BOND BEAM w/1-#5 AT FLOOR SLAB AND AT TOP OF WALL. LADDER JOINT REINFORCEMENT AT 16" O.C.	GROUT SOLID

NOTES:
1. **USE BOND BEAM UNITS WITH OPEN BOTTOM AT CELLS WITH VERTICAL REINFORCMENT.**
2. **ALL DOWELS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT, U.N.O.**
3. **ALSO SEE GENERAL NOTES ON SHEET S-001 FOR ADDITIONAL INFORMATION.**

A MASONRY WALL ELEVATION AND SPLICE TABLE

B REINFORCEMENT SCHEDULE

1 TYPICAL CONCRETE MASONRY WALLS
NOT TO SCALE



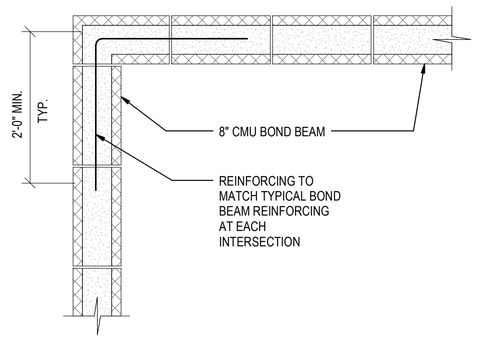
SINGLE WYTHE

OPENINGS < 6'-0"

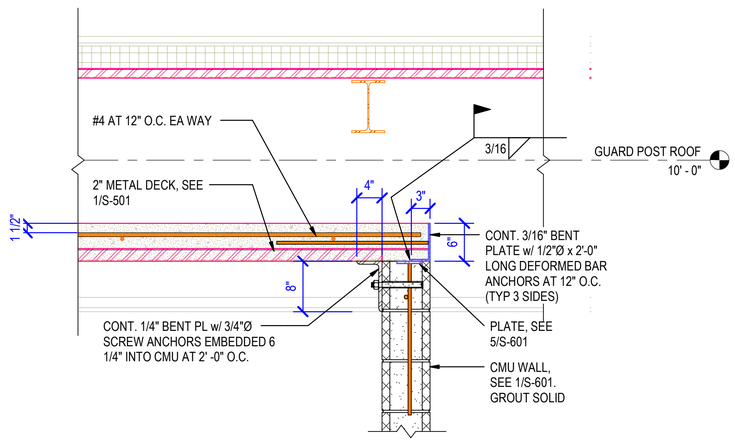
NOMINAL WALL THICKNESS (t)	WIDTH OF OPENING
	0'-10" TO 6'-0"
8"	8" CMU BOND BEAM w/2-#5 BOTTOM

NOTES:
1. **LINTEL SCHEDULE APPLIES UNLESS NOTED OR DETAILED OTHERWISE.**
2. **EXTEND LINTEL REINF. AT LEAST 24 INCHES PAST EDGE OF OPENINGS. WHERE ONLY 16 INCHES IS AVAILABLE USE STD HOOK AT ENDS.**

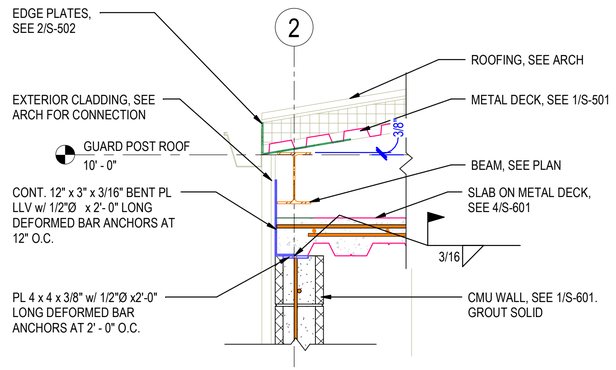
2 LINTEL SCHEDULE
1" = 1'-0"



3 TYPICAL BOND BEAM CORNER REINF.
1" = 1'-0"



4 TYPICAL DECK BEARING AT CMU WALL
1" = 1'-0"



5 TYPICAL DECK EDGE AT EXTERIOR CMU WALL
1" = 1'-0"

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Project

AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — MICHAEL CALLAHAN — PROFESSIONAL ENGINEER — No. 9668

07-17-2024

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

TYPICAL HARDENED ROOM DETAILS

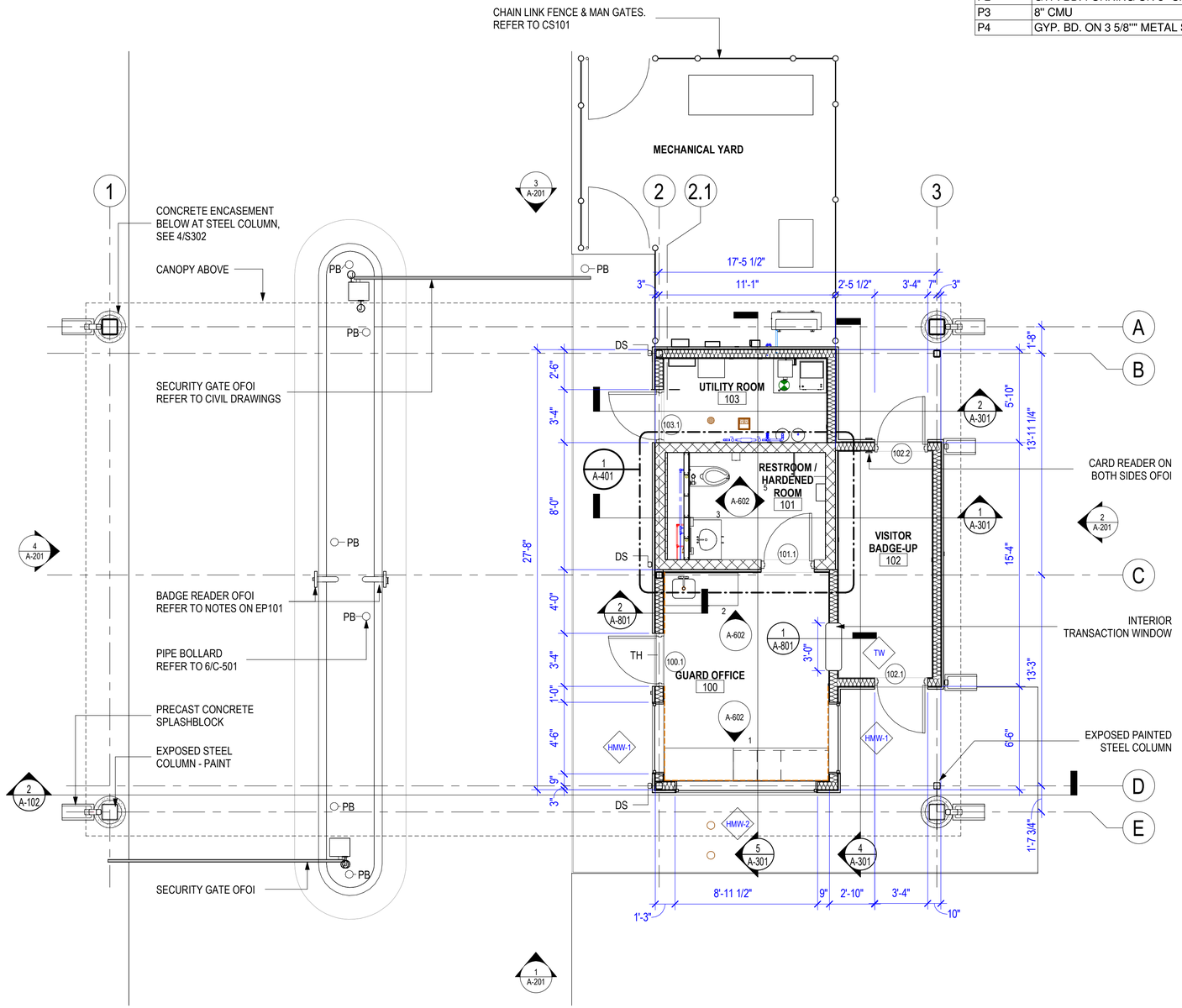
Sheet Number

S-601

NOTE:

PROVIDE 1/4" GWB ON 1/4" THK BALLISTIC RESISTANT FIBERGLASS LEVEL 1, UP TO 4' SEE 2/A-801

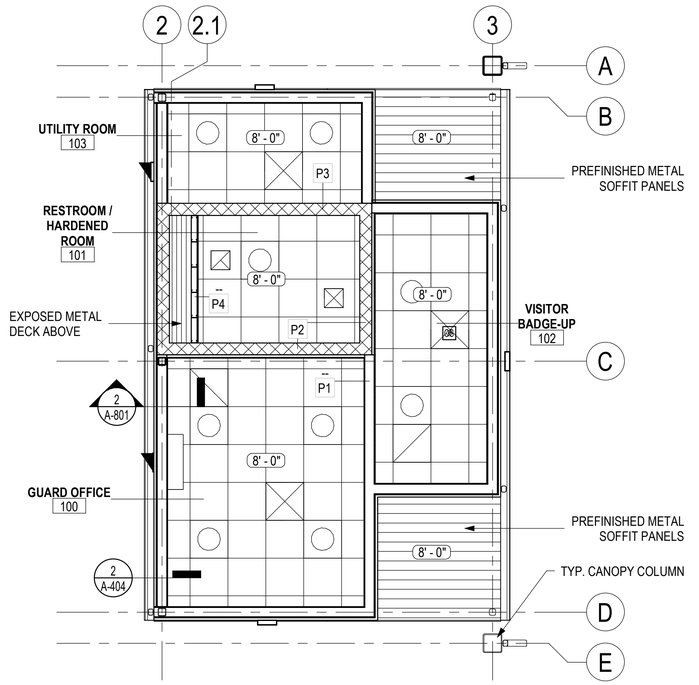
INTERIOR PARTITION TYPES	
Type Mark	Description
P1	GYP. BD. ON 6" METAL STUD
P2	GYP. BD. FURRING ON 8" CMU
P3	8" CMU
P4	GYP. BD. ON 3 5/8"" METAL STUD



1 FIRST FLOOR PLAN

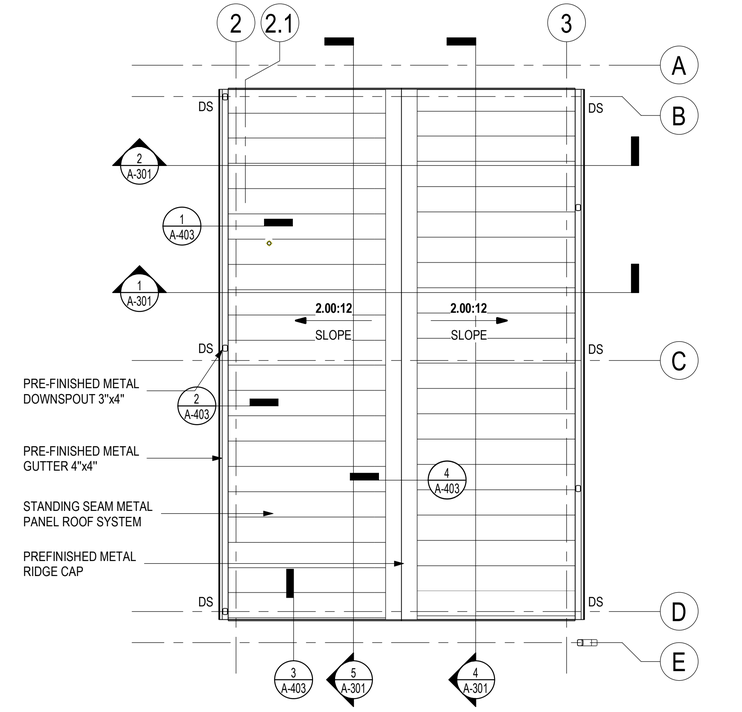
1/4" = 1'-0"

SCALE : 1/4" = 1'-0"



2 REFLECTED CEILING PLAN

1/4" = 1'-0"



3 ROOF PLAN

1/4" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

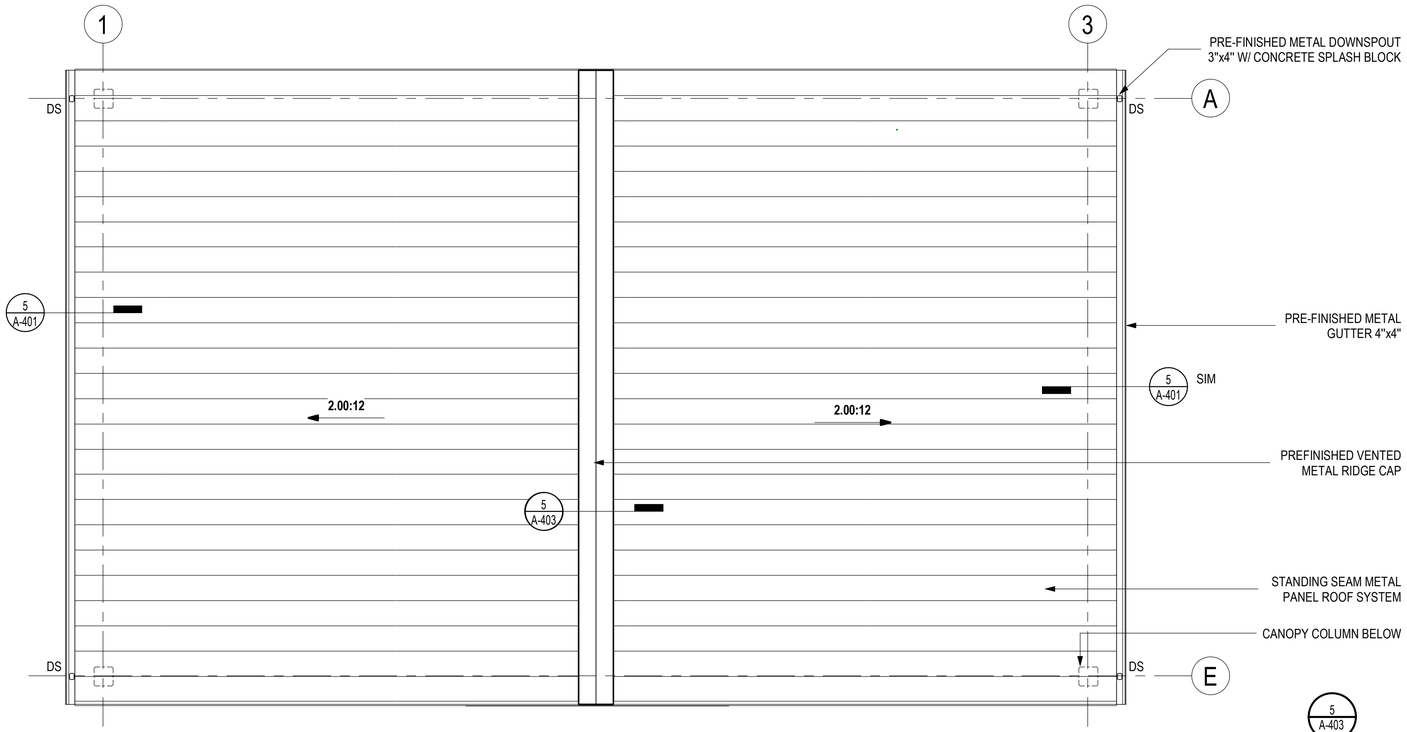
Issue Date **07-17-2024**

Sheet Title

FLOOR PLAN

Sheet Number

A-101



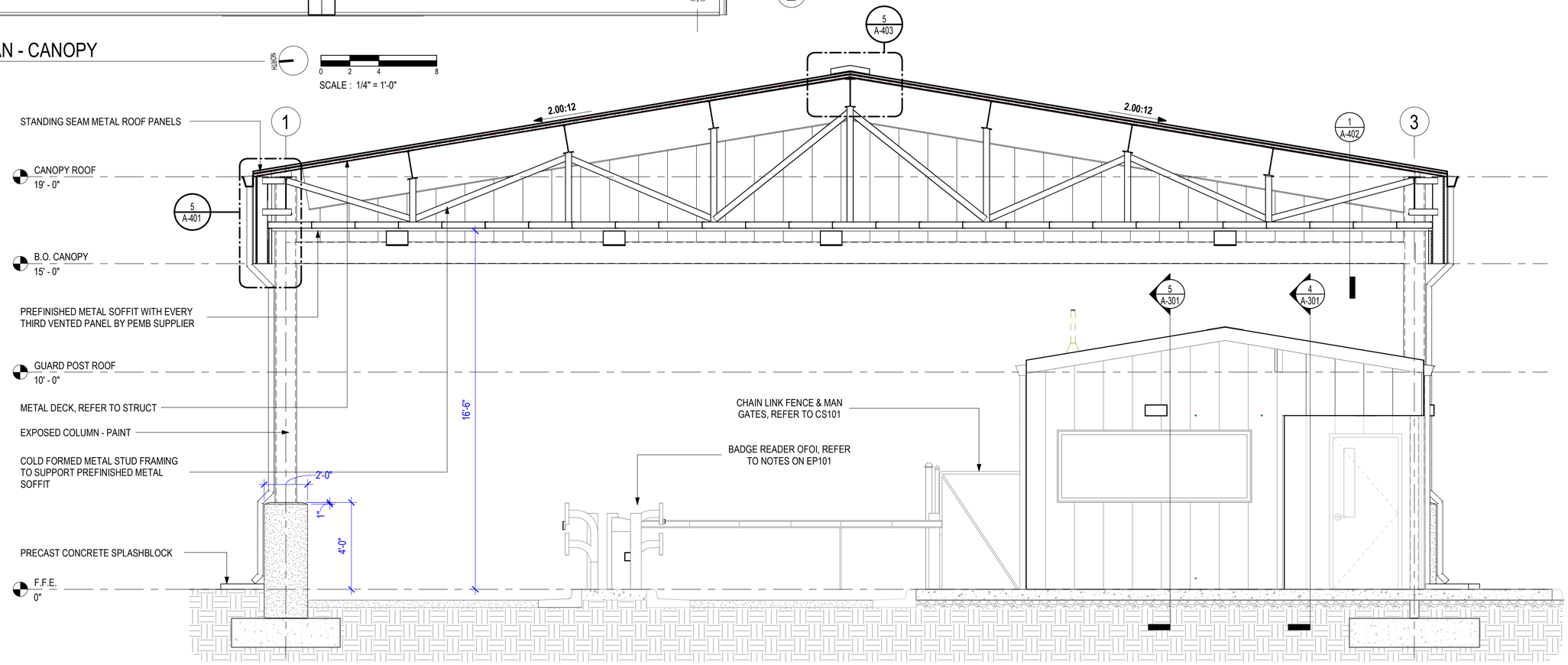
1 ROOF PLAN - CANOPY

1/4" = 1'-0"

NORTH

0 2 4 8

SCALE : 1/4" = 1'-0"



2 BUILDING SECTION - CANOPY

3/8" = 1'-0"

0 2 4 8

SCALE : 3/8" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

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Revisions

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CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

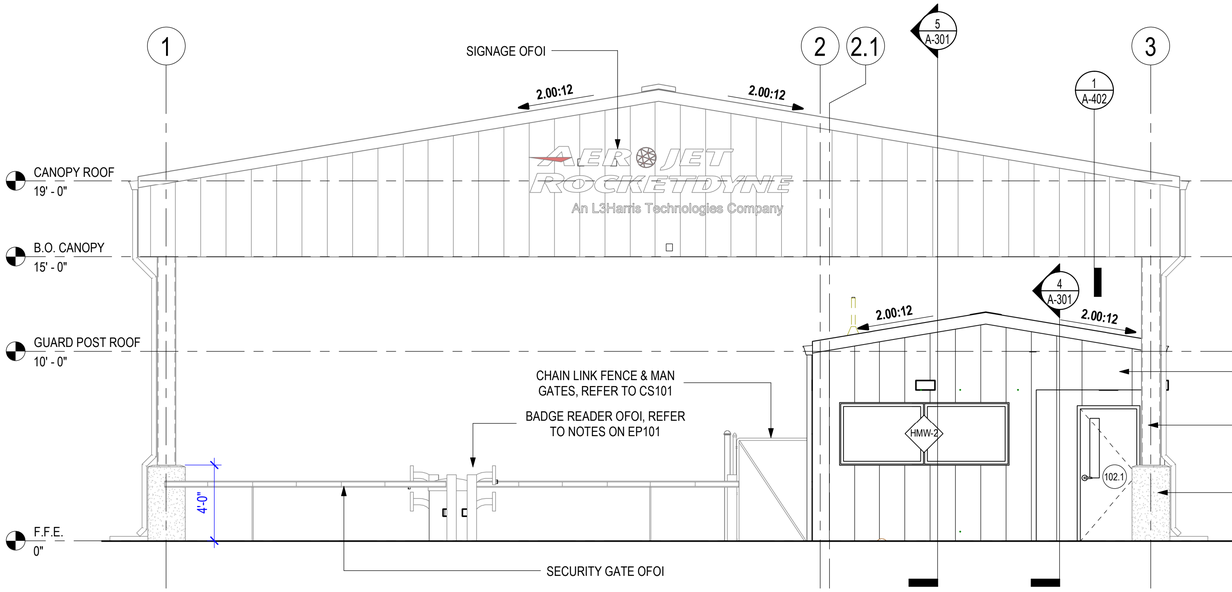
Issue Date **07-17-2024**

Sheet Title

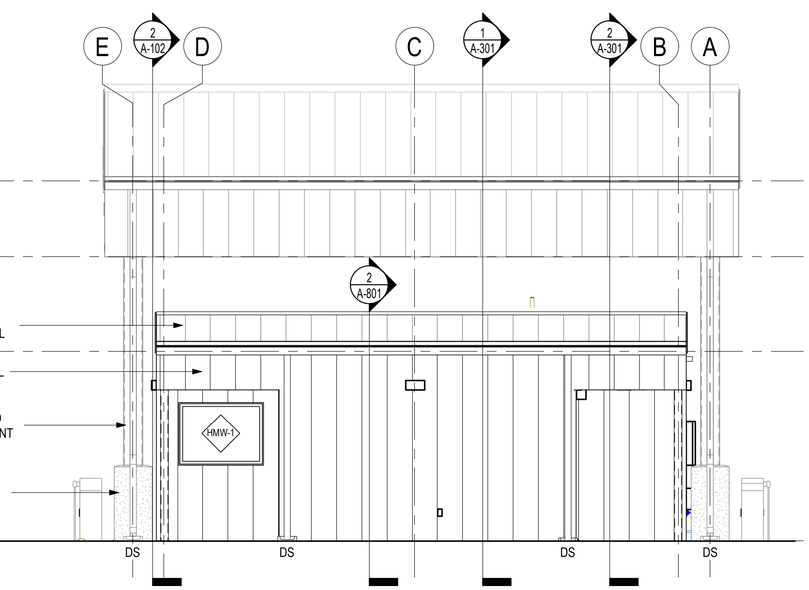
CANOPY

Sheet Number

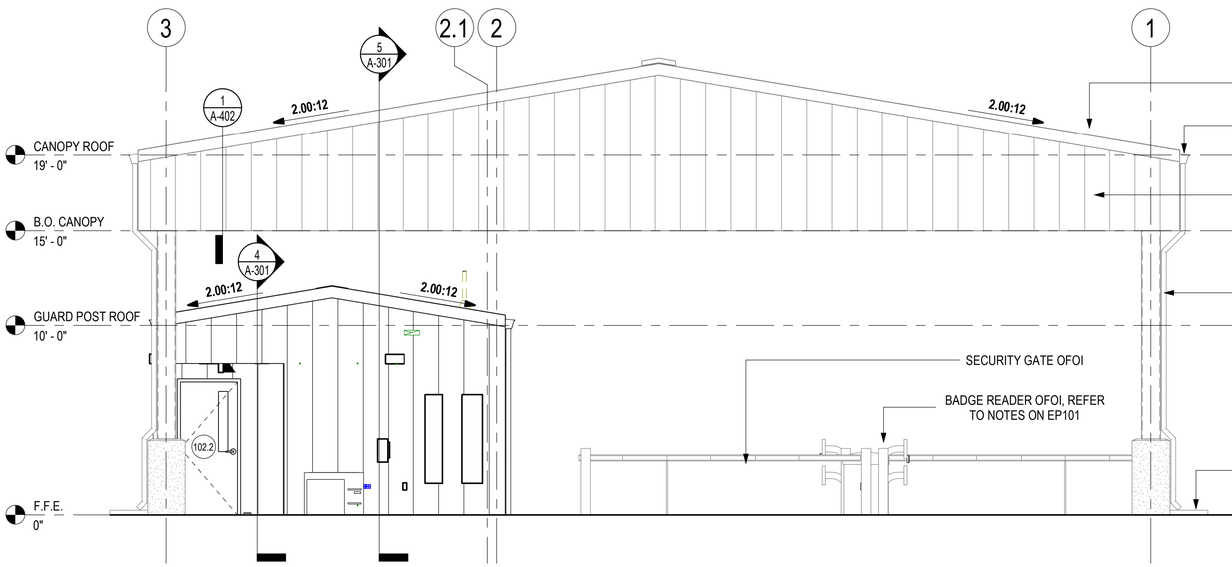
A-102



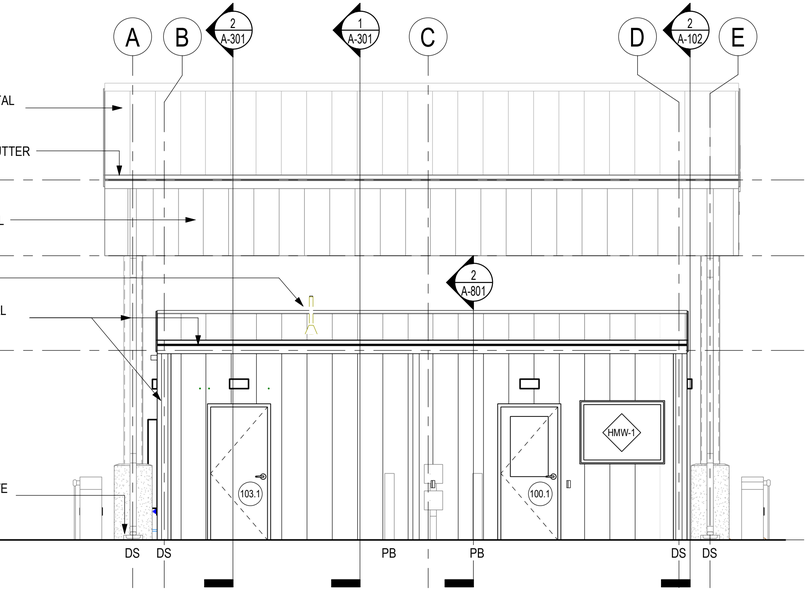
1 WEST
1/4" = 1'-0"



2 SOUTH
1/4" = 1'-0"



3 EAST
1/4" = 1'-0"



4 NORTH
1/4" = 1'-0"

0 2 4 8
SCALE : 1/4" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS INC. C-98 REGISTERED ARCHITECTS ARKANSAS

DANIEL K. FOWLER REGISTERED ARCHITECT No. 3339 ARKANSAS

07-17-2024

Notes

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Project Number **2024-052**

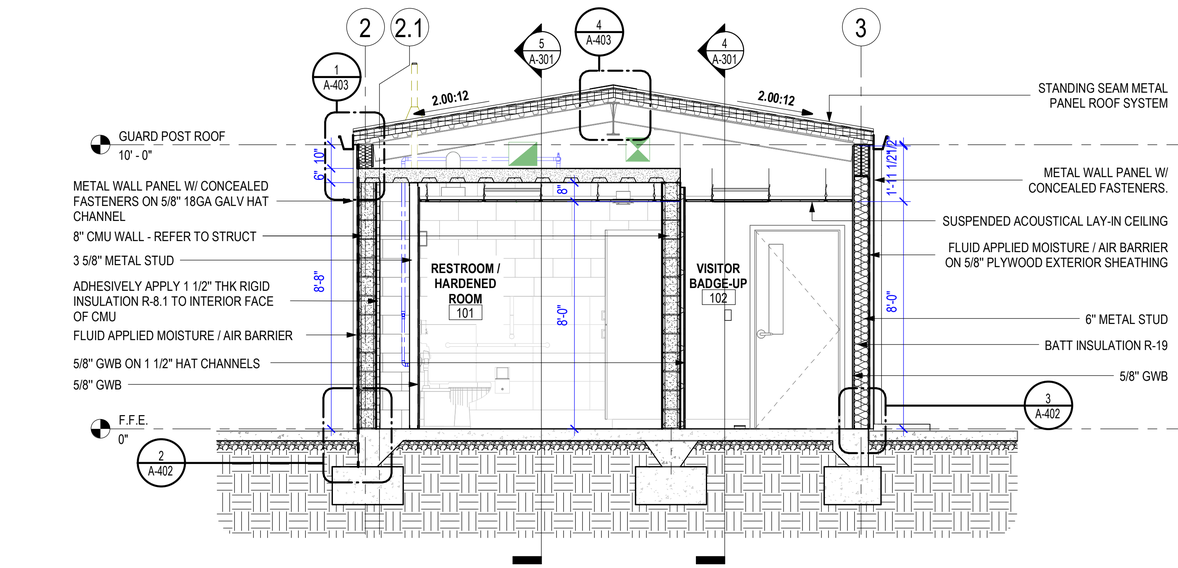
Issue Date **07-17-2024**

Sheet Title

EXTERIOR ELEVATIONS

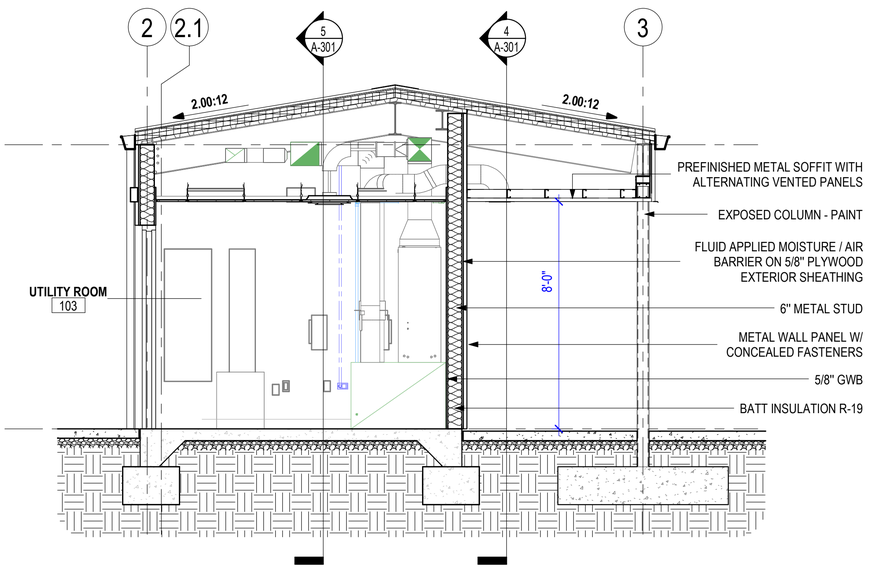
Sheet Number

A-201



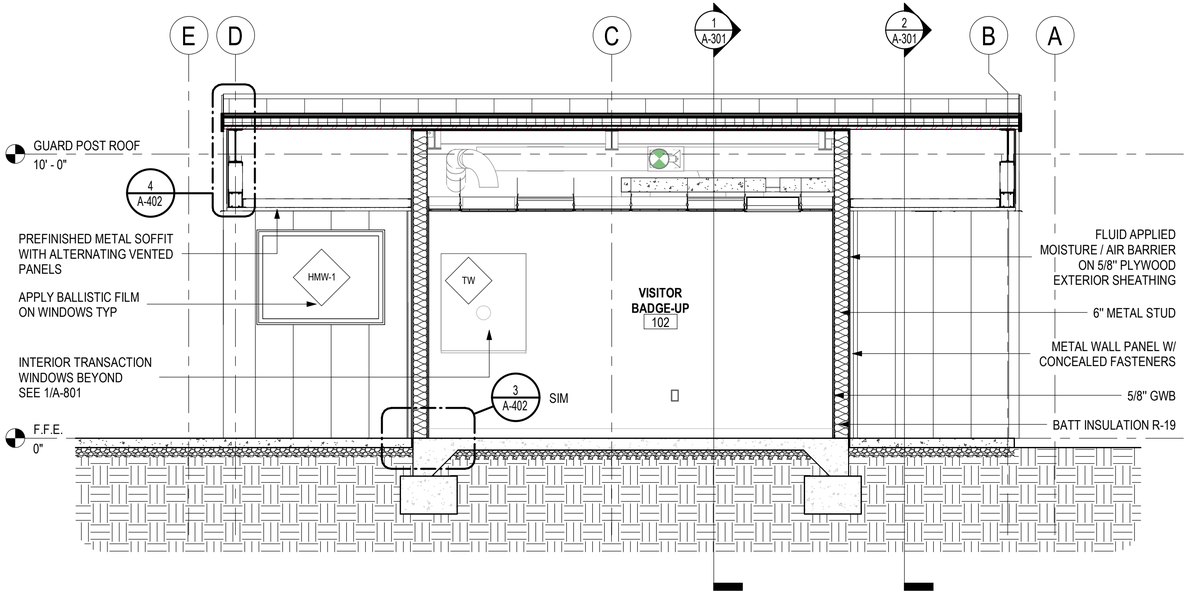
1 BUILDING SECTION

3/8" = 1'-0"



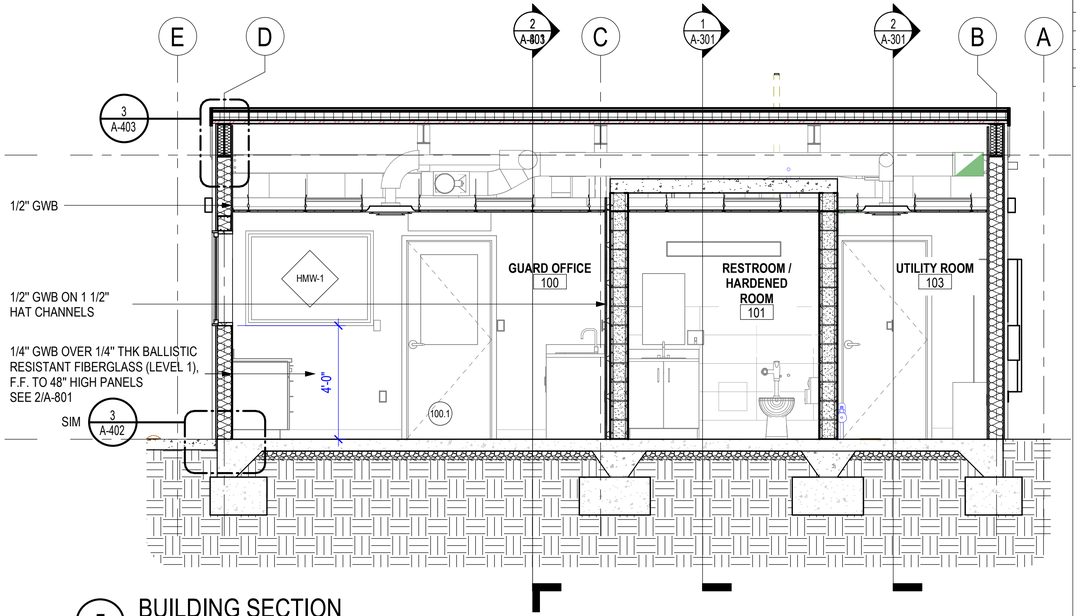
2 BUILDING SECTION

3/8" = 1'-0"



4 BUILDING SECTION

3/8" = 1'-0"



5 BUILDING SECTION

3/8" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

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Project Number 2024-052

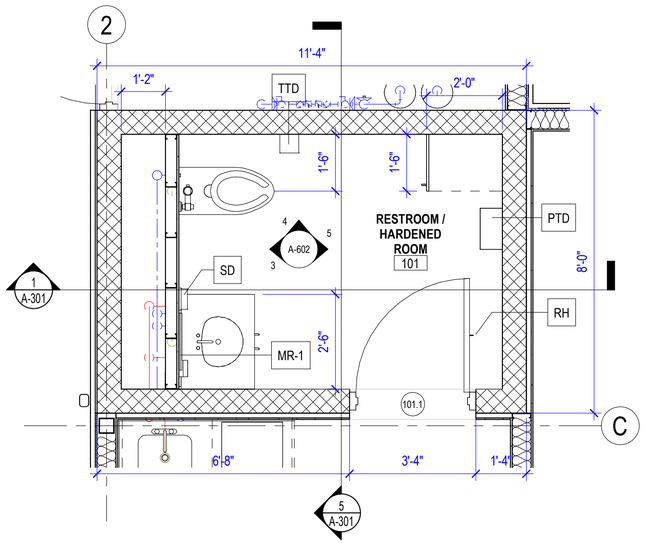
Issue Date 07-17-2024

Sheet Title

SECTIONS

Sheet Number

A-301



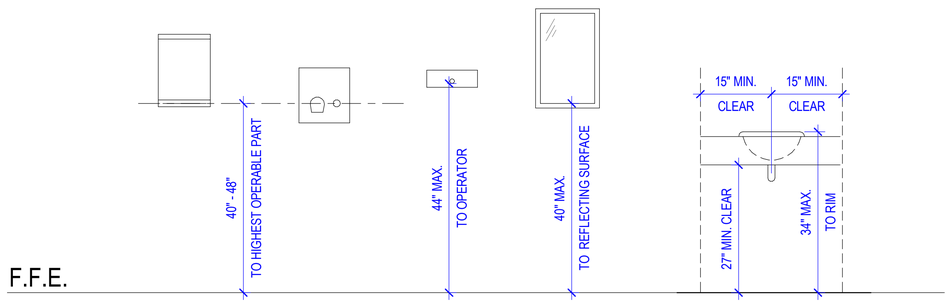
1 RESTROOM - ENLARGED FLOORPLAN

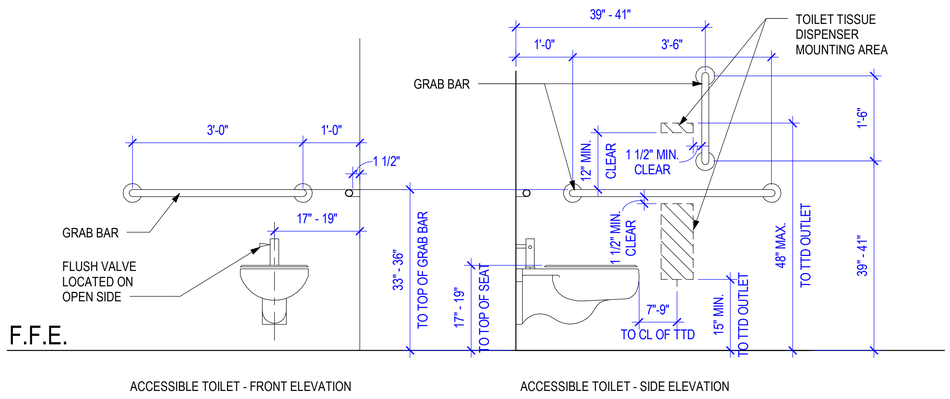
1/2" = 1'-0"

SCALE : 1/2" = 1'-0"

TOILET ACCESSORY SCHEDULE

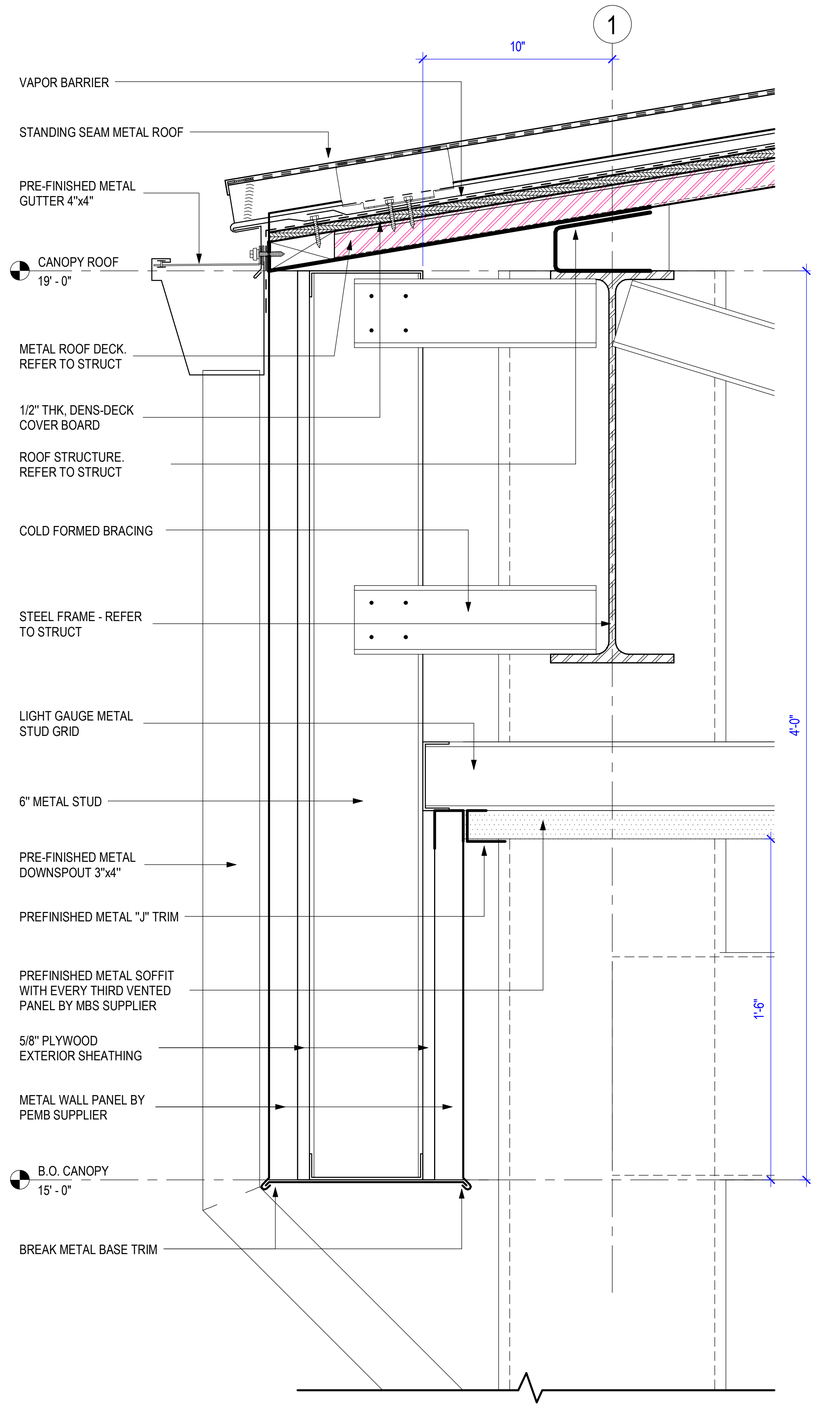
ITEM	RESP.	DESCRIPTION	PRODUCT
MR-1	CF/CI	FRAMED MIRROR - 24" X 18"	BOBRICK B-165 1836
PTD	CF/CI	SURFACE MTD. PAPER TOWEL DISPENSER	BOBRICK B-72860
RH	CF/CI	ROBE HOOK	BOBRICK B-211
SD	CF/CI	WALL MTD. SOAP DISPENSER	BOBRICK B-680 CLASSIC SERIES
TTD	CF/CI	TOILET TISSUE DISPENSER	BOBRICK B-288





4 MISC. MOUNTING HEIGHTS

3/4" = 1'-0"



5 CANOPY GUTTER DETAIL

3" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

Notes

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Project Number **2024-052**

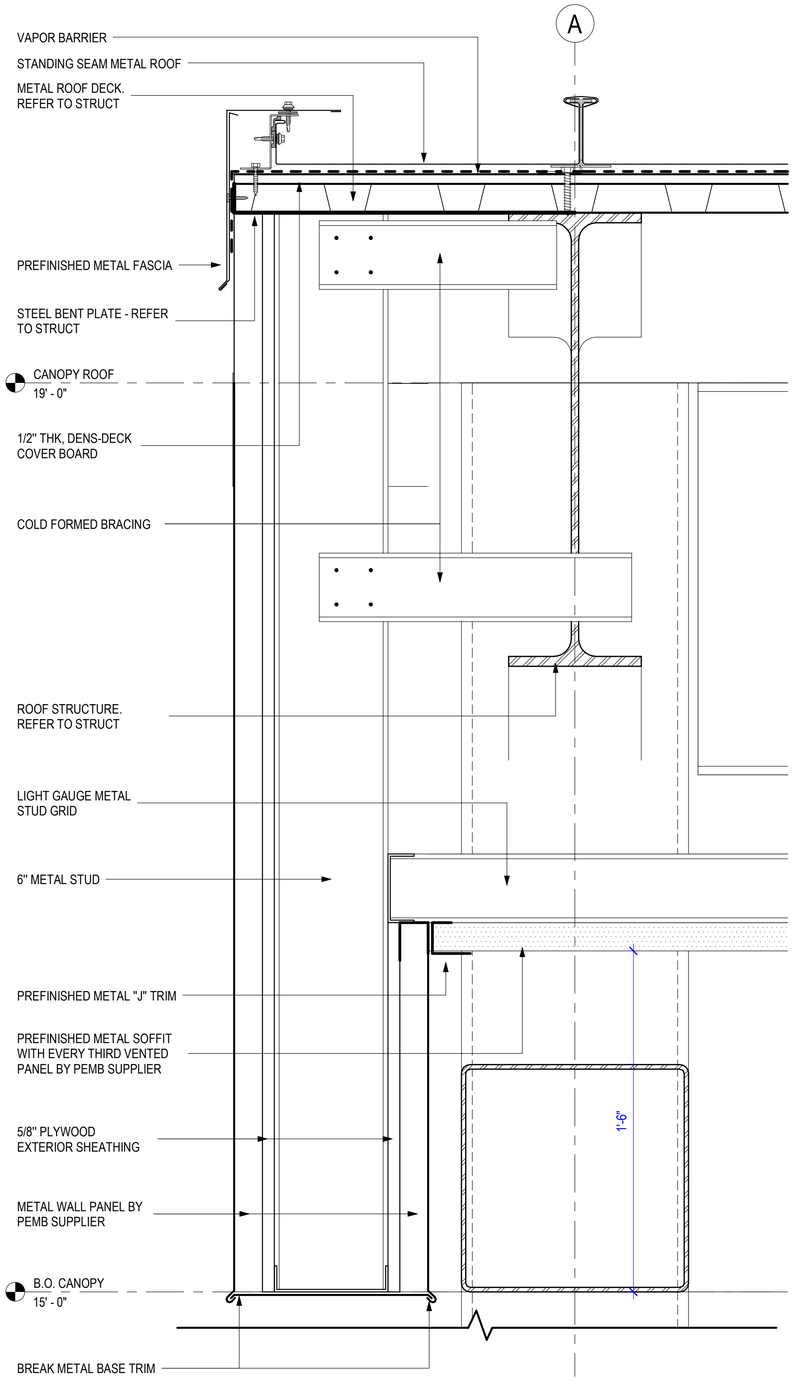
Issue Date **07-17-2024**

Sheet Title

LARGE SCALE PLANS & DETAILS

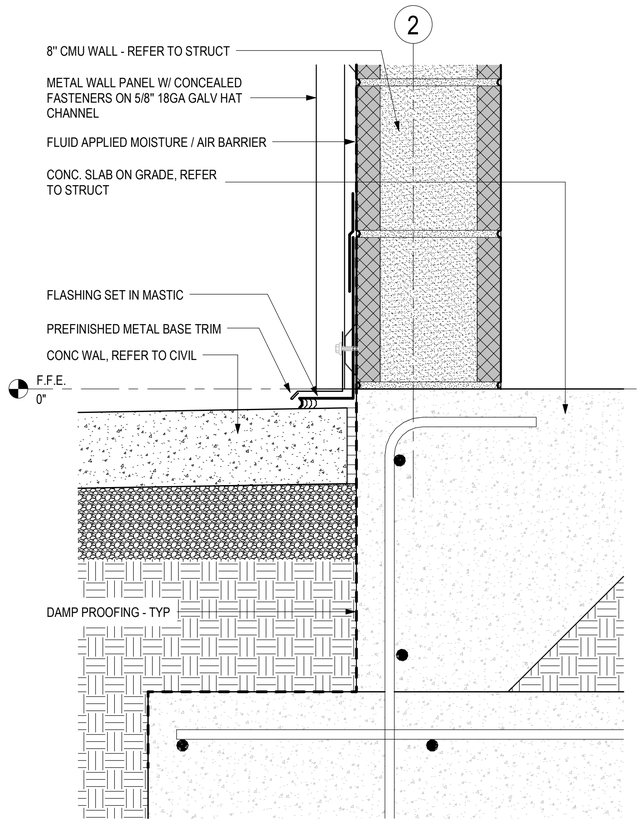
Sheet Number

A-401



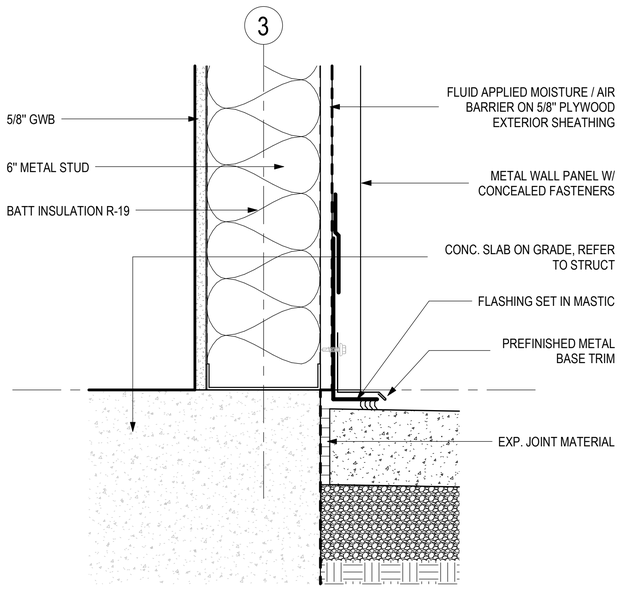
1 CANOPY - RAKE DETAIL

3" = 1'-0"



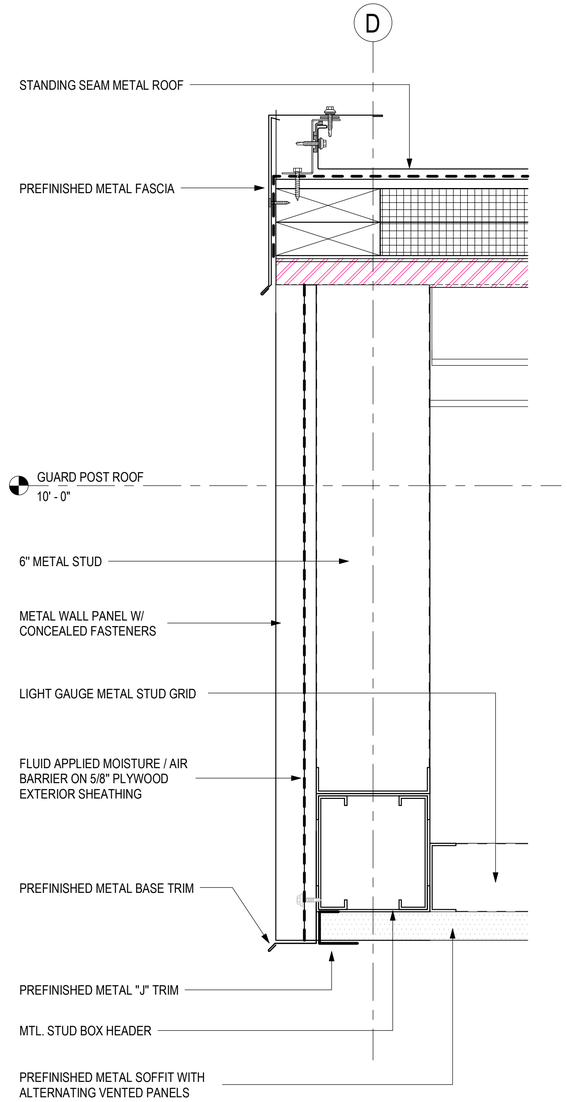
2 ENLARGE DETAIL

3" = 1'-0"



3 ENLARGE DETAIL

3" = 1'-0"



4 ENLARGE DETAIL

3" = 1'-0"

0 3" 6" 1'

SCALE : 3" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

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CROMWELL ARCHITECTS ENGINEERS C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DONALD K. FOWLER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

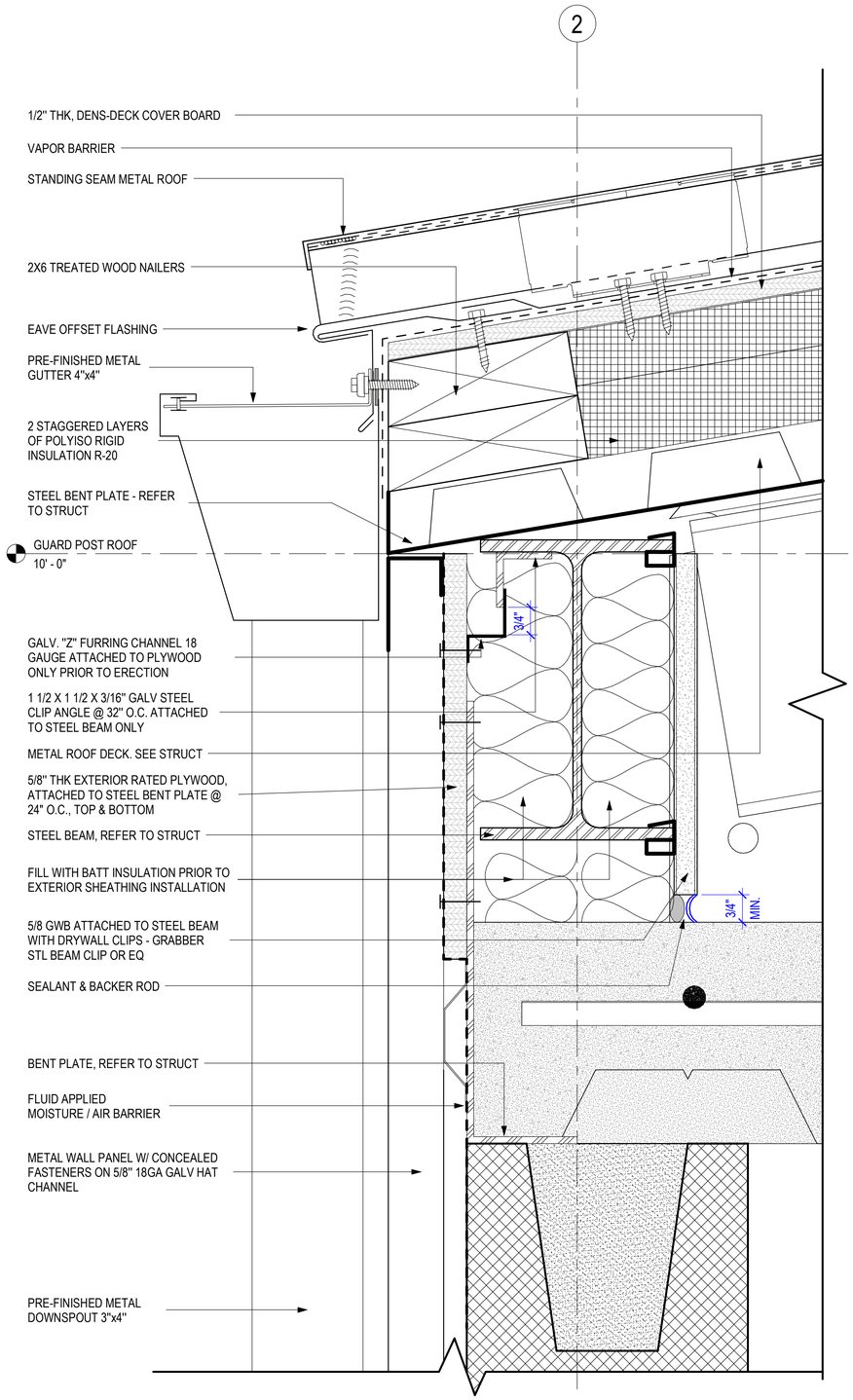
Issue Date **07-17-2024**

Sheet Title

DETAILS

Sheet Number

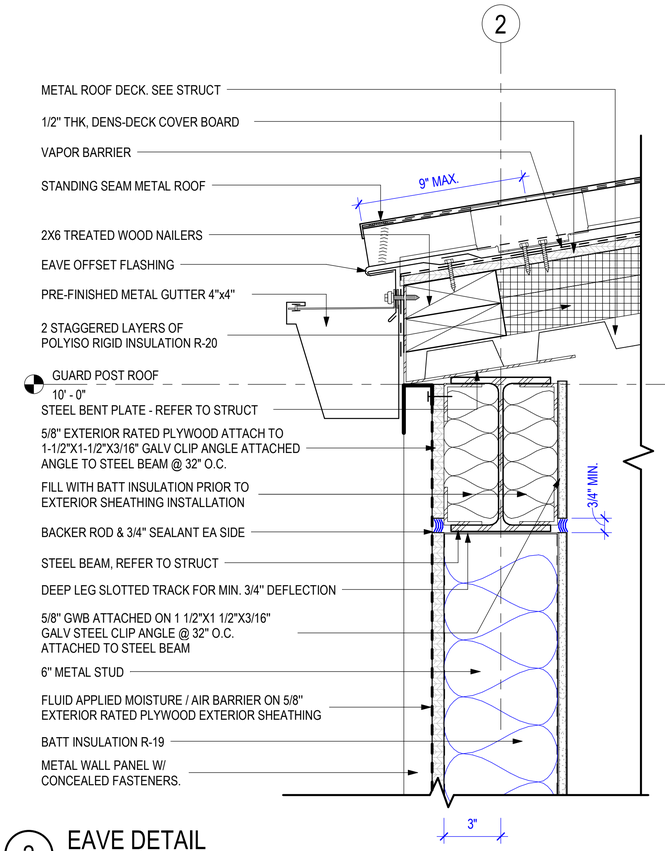
A-402



1 EAVE DETAIL

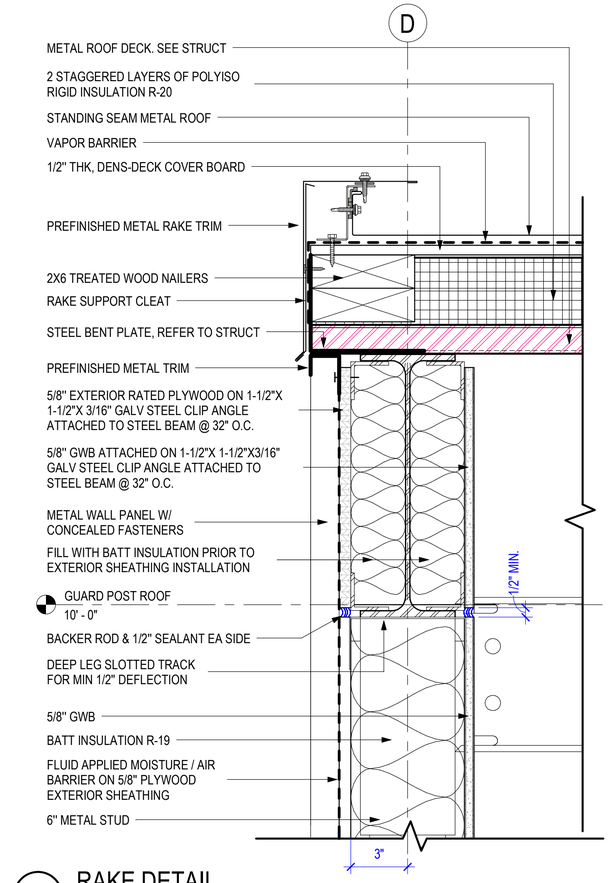
6" = 1'-0"

SCALE : 6" = 1'-0"



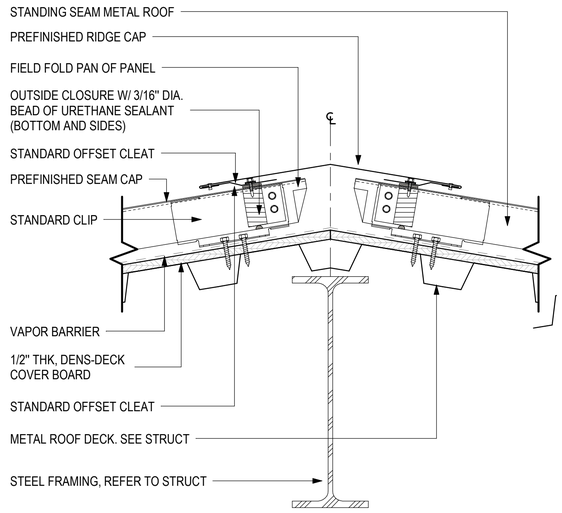
2 EAVE DETAIL

3" = 1'-0"



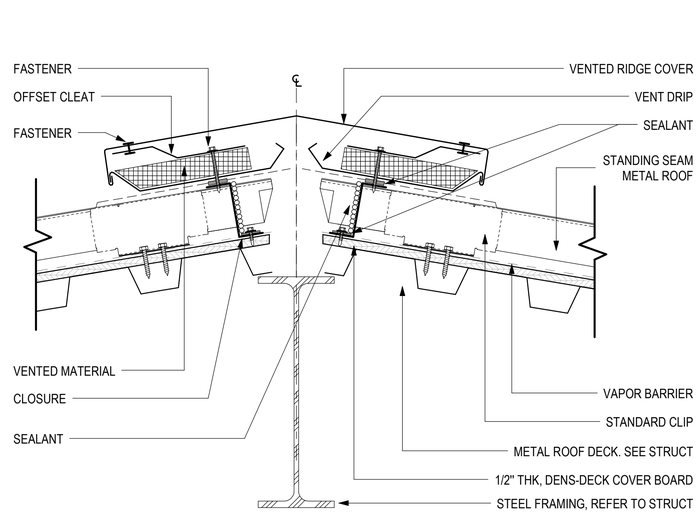
3 RAKE DETAIL

3" = 1'-0"



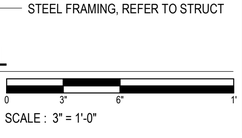
4 FIXED RIDGE DETAIL

3" = 1'-0"



5 FIXED VENTED RIDGE SECTION DETAIL

3" = 1'-0"



SCALE : 3" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

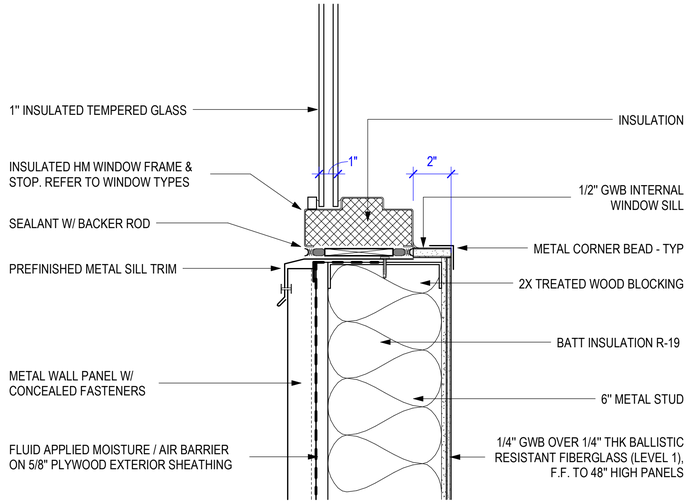
Issue Date **07-17-2024**

Sheet Title

DETAILS

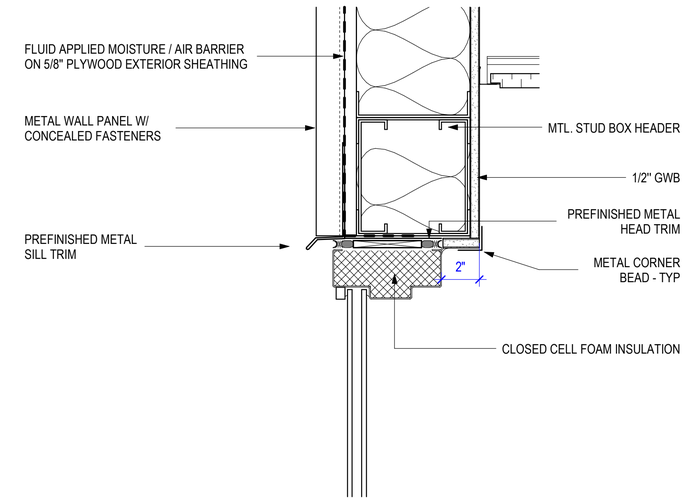
Sheet Number

A-403



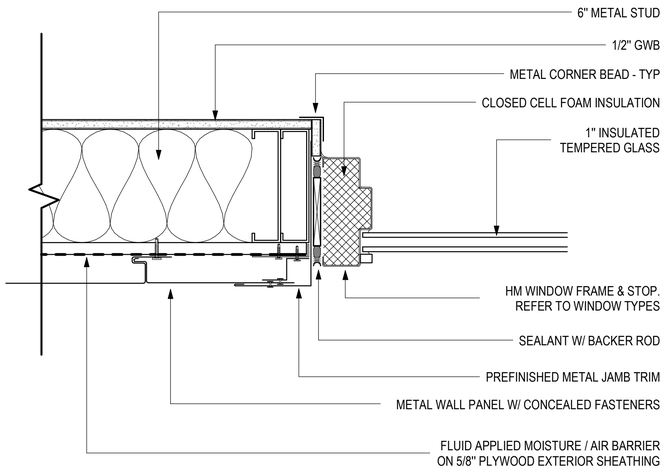
1 WINDOW SILL DETAIL

3" = 1'-0"



2 WINDOW HEAD DETAIL

3" = 1'-0"



3 WINDOW JAMB DETAIL

3" = 1'-0"

0 3" 6" 1'

SCALE : 3" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

ORDINANCE ARCHITECTS ENGINEERS INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

WINDOW DETAILS

Sheet Number

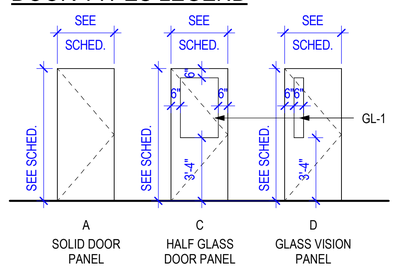
A-404

DOOR SCHEDULE

DOOR NO.	DOOR TYPE	SIZE W	SIZE HT	SIZE THK	MATERIAL	LOUVER W	LOUVER H	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS THRSHLD.	FIRE RATING IN MINUTES	HARDWARE SET NO.	DOOR NO.	COMMENTS
100.1	C	3' - 0"	7' - 0"	1 3/4	IHM			HM - 1	HM	P	5/A-601	1/A-601	TH		105	100.1	
101.1	A	3' - 0"	7' - 0"	1 3/4	HM			HM - 2	HM	P	2/A-601	3/A-601			T141	101.1	HARDENED ROOM DOOR. THIS DOOR IS TO HAVE ICC500-2020 FEMA COMPLIANCE LABEL
102.1	D	3' - 0"	7' - 0"	1 3/4	IHM			HM - 1	HM	P	5/A-601	1/A-601	TH		C205	102.1	
102.2	D	3' - 0"	7' - 0"	1 3/4	IHM			HM - 1	HM	P	5/A-601	1/A-601	TH		C205I	102.2	
103.1	A	3' - 0"	7' - 0"	1 3/4	IHM			HM - 1	HM	P	5/A-601	1/A-601	TH		205	103.1	

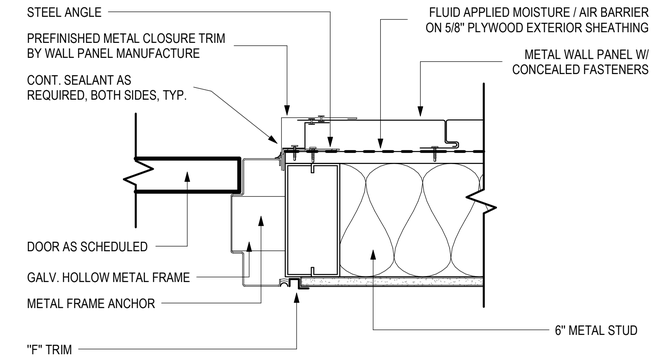
MATERIALS	
AL	ALUMINUM
CT	CLEAR TEMPERED GLASS
GHM	GALVANIZED HOLLOW METAL
HM	HOLLOW METAL
IHM	INSULATED HOLLOW METAL
SCW	SOLID CORE WOOD
ST	STEEL
W	WOOD
MATERIALS	
S	STAIN
P	PAINT

DOOR TYPES LEGEND



DOOR TYPES LEGEND

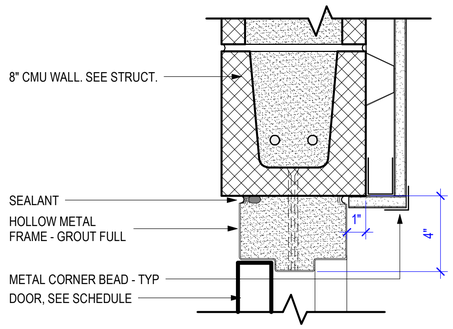
1/4" = 1'-0"



1 JAMB - HM DOOR

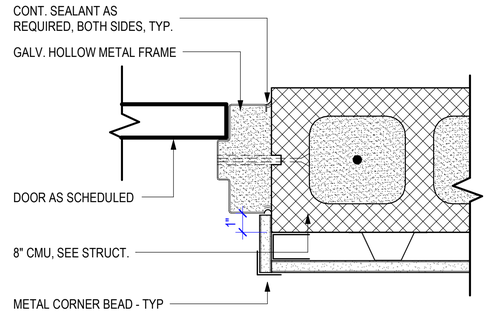
3" = 1'-0"

SCALE : 3" = 1'-0"



2 HEAD - HM DOOR AT CMU WALL

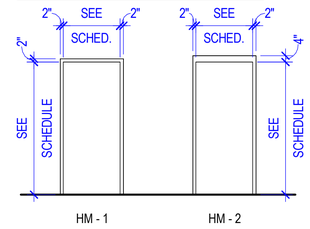
3" = 1'-0"



3 JAMB - HM DOOR AT CMU WALL

3" = 1'-0"

FRAME TYPES LEGEND



FRAME TYPES LEGEND

1/4" = 1'-0"

5 HEAD - HM DOOR

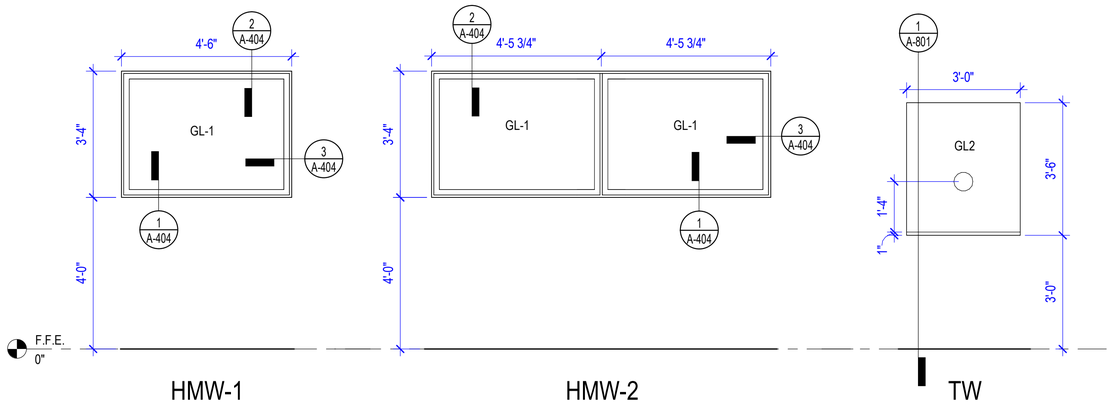
3" = 1'-0"

EXISTING GUARD POST - DEMOLITION REQUIREMENTS:

1. THE EXISTING GUARD POST SHALL BE DEMOLISHED AS A PART OF THE CONTRACTOR'S SCOPE OF WORK. EXISTING GUARD POST SHALL REMAIN FULLY FUNCTIONAL UNTIL THE NEW GUARD POST 2 IS SUBSTANTIALLY COMPLETE. EXISTING GUARD POST IS A SINGLE-STORY APPROXIMATELY 15' X 15' SQUARE. EXISTING GUARD POST SHALL BE COMPLETELY DEMOLISHED, INCLUDING SITE PAVING, FOUNDATION, AND UTILITY CONNECTIONS. ALL SECURITY DEVICES SHALL BE SALVAGED AND TURNED OVER TO THE OWNER. REFER TO ALL DISCIPLINES' DRAWINGS FOR ADDITIONAL DEMOLITION NOTES. REFER TO GENERAL CONSTRUCTION NOTES FOR FIELD VERIFICATIONS AND OTHER REQUIREMENTS.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT OF ALL KNOWN HAZARDOUS MATERIALS AND ANY HAZARDOUS MATERIALS DISCOVERED DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING HIS EMPLOYEES OF CONDITIONS NOTED THEREIN AND FOLLOWING ALL SAFETY GUIDELINES AND RECOMMENDATIONS ASSOCIATED WITH THIS WORK. NO KNOWN HAZARDOUS MATERIALS EXIST.

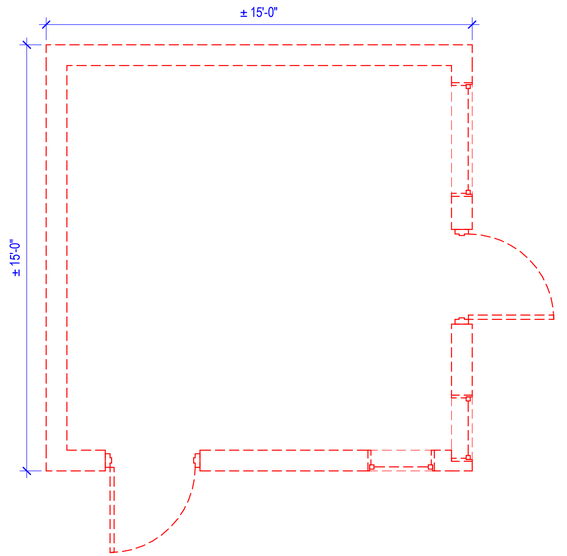
3. IF THE CONTRACTOR ENCOUNTERS ANY MATERIALS THAT APPEAR TO CONTAIN ASBESTOS OR LEAD-BASED PAINT, CONTACT THE AEROJET ONSITE PROJECT MANAGER IMMEDIATELY AND DO NOT REMOVE MATERIAL UNTIL SPECIFIC DIRECTIONS HAVE BEEN ISSUED. THE CONTRACTOR SHALL COORDINATE ABATEMENT ACTIVITIES WITH THE AEROJET ROCKETDYNE ASBESTOS SPECIALIST.



GLAZING SCHEDULE

GL-1 1" INSULATED TEMPERED GLASS
GL-2 1/4" CLEAR LAMINATED SAFETY GLAZING

NOTE: APPLY BALLISTIC FILM ON EXTERIOR WINDOWS



4 EXISTING GUARD POST - DEMOLITION PLAN

3/8" = 1'-0"

SCALE : 3/8" = 1'-0"

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

Notes

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

SCHEDULES & DEMOLITION PLAN

Sheet Number

A-601

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	NORTH WALL MATERIAL	NORTH WALL COLOR	SOUTH WALL MATERIAL	SOUTH WALL COLOR	EAST WALL MATERIAL	EAST WALL COLOR	WEST WALL MATERIAL	WEST WALL COLOR	CEILING MATERIAL	CEILING COLOR	ROOM NUMBER	REMARKS
100	GUARD OFFICE	RES-1	RESB-1	MRGWB/ALG	EPT-1/- - -	MRGWB/ALG	EPT-1/- - -	MRGWB	EPT-1	MRGWB/ALG	EPT-1/- - -	ACT	ACT-1	100	
101	RESTROOM / HARDENED ROOM	RES-1	RESB-1	TBB	PT-1,EPT-1	CMU	PT-1,EPT-1	CMU	PT-1,EPT-1	CMU	PT-1,EPT-1	ACT	ACT-1	101	
102	VISITOR BADGE-UP	WOT-1	RB-1	MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	ACT	ACT-1	102	
103	UTILITY ROOM	RES-1	RESB-1	MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	CMU	EPT-1	ACT	ACT-1	103	

GENERAL NOTES:

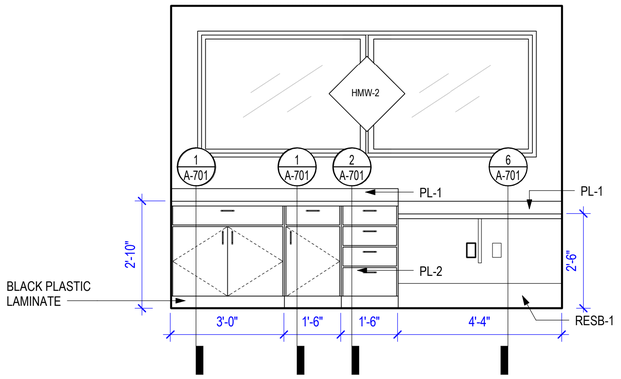
1. SUBMIT ALL SAMPLES TO OWNER FOR FINAL APPROVALS PRIOR TO ORDERING FINISH MATERIALS.
2. WALL TILE WAINSCOT TO BE APPROXIMATLEY 4'-0" H ABOVE FINISHED FLOOR (AFF) AND TO BEGIN AT TOP OF SCHEDULED BASE MATERIAL. TOP OF WAINSCOT TO BE FINISHED WITH SCHLUTER SYSTEMS, JOLLY EDGE TRIM 3/8", BLACK ALUMINUM.
3. GROUT COLORS TO BE AS FOLLOWS:
   HIGH PERFORMANCE CEMENTITIOUS GROUT TO BE USED WITH ALL WALL TILING. COLOR TO BE SELECTED FROM MANUFACTURER'S STANDARD OFFERING. 1/8" GROUT JOINTS.
4. HOLLOW METAL DOORS AND FRAMES TO BE P-1. WOOD DOOR TO BE FACTORY FINISHED. STAIN TO BE SELECTED FROM MANUFACTURER'S STANDARD OFFERING.
5. ALL MILLWORK BASE CABINETS TO RECEIVE PL-2. COUNTERTOPS AND SPLASHES TO RECEIVE PL-1 WITH 3MM PVC EDGEBANDING.
6. PASS THROUGH WINDOW LEDGE TO BE A PRE-FABRICATED PIECE WITH INTEGRAL STAINLESS STEEL COUNTERTOP.

MATERIAL LEGEND

---	"NO" OR "NONE"
ACT	ACOUSTICAL CEILING TILE
ALG	ALUMINUM/ GLASS
CMU	CONCRETE MASONRY UNIT
EPT	EPOXY PAINT
GWB	GYPSUM WALL BOARD
MRGWB	MOISTURE RESISTANT GYPSUM WALL BOARD
P	PAINT
PL	PLASTIC LAMINATE
PT	PORCELAIN TILE
RES	RESINOUS FLOORING
RESB	RESINOUS INTEGRAL COVE BASE
TBB	TILE BACKER BOARD
WOT	WALK OFF CARPET TILE

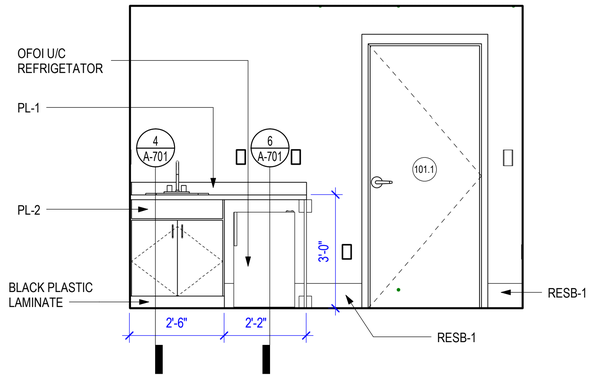
FINISHES LEGEND

FLOORS	
RES-1	DOUBLE BROADCAST: SHERWIN WILLIAMS, RESUFLOR MPE PRIMER; RESUFLOR MPE-CLEAR APPLIED BROADCAST 1/8" DECORATIVE VINYL FLAKE BLEND 2 COATS; GROUT COAT: RESUFLOR MPE-CLEAR (MAY REQUIRE MULTIPLE COATS TO OBTAIN A SMOOTH FLOOR); TOPCOAT: SATIN FINISH RESUTILE HTS 100 CLEAR SATIN URETHANE TOPCOAT. COLOR: TBD.
WOT-1	MILLIKEN, OBEX TILE, CUTX FIZZ, FZX118-119 DARK GREY, 50CM X 50CM
BASE	
RB-1	FLEXCO VCB-058 BLUE SHADOW COVE BASE 4"H
RESB-1	MONOLITHIC RESINOUS INTEGRAL BASE 8"H TO MATCH RES-1
WALLS	
PT-1	MSI, CEMENTINO GRAY, 12" X 24" MATTE PORCELAIN TILE. (HOME DEPOT)
EPT-1	SHERWIN WILLIAMS, COLOR: AEROJET (CONFERENCE ROOM) GRAY, EPOXY, SEMI-GLOSS FINISH
P-1	SHERWIN WILLIAMS, COLOR: AEROJET (CONFERENCE ROOM) GRAY, SEMI-GLOSS FINISH (HOLLOW METAL DOORS/FRAMES)
CEILINGS	
ACT-1	ARMSTRONG, CERAMAGUARD FINE FISSURED, SQUARE LAY-IN #607, 24" X 24" X 5/8" WITH 15/16" PRELUDE GRID
MILLWORK	
PL-1	WILSONART, PATTERN AND COLOR TBD (COUNTERTOPS AND SPLASHES)
PL-2	WILSONART, PATTERN AND COLOR TBD (BASE CABINETS)



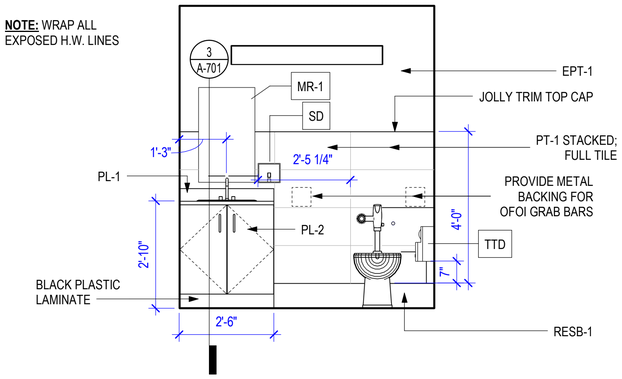
1 GUARD OFFICE WEST WALL
1/2" = 1'-0"

SCALE : 1/2" = 1'-0"

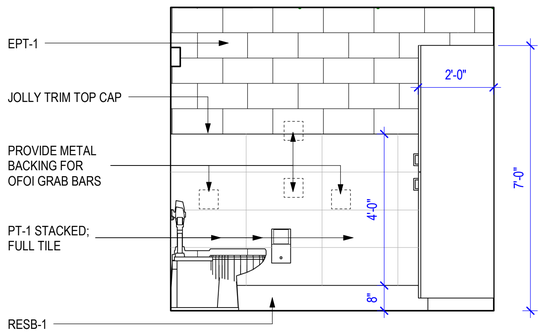


2 GUARD OFFICE EAST WALL
1/2" = 1'-0"

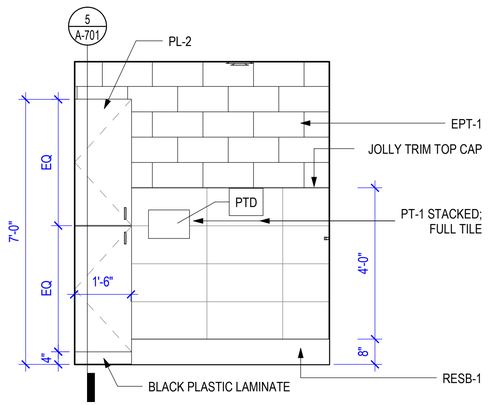
NOTE: WRAP ALL EXPOSED H.W. LINES



3 RESTROOM / HARDENED ROOM NORTH WALL
1/2" = 1'-0"



4 RESTROOM / HARDENED ROOM EAST WALL
1/2" = 1'-0"



5 RESTROOM / HARDENED ROOM SOUTH WALL
1/2" = 1'-0"

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

07-17-2024

Notes

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Project Number **2024-052**

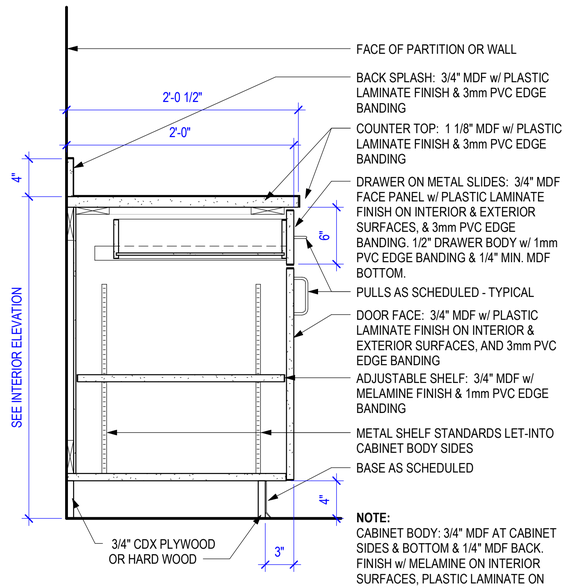
Issue Date **07-17-2024**

Sheet Title

ROOM FINISH NOTES AND LEGENDS

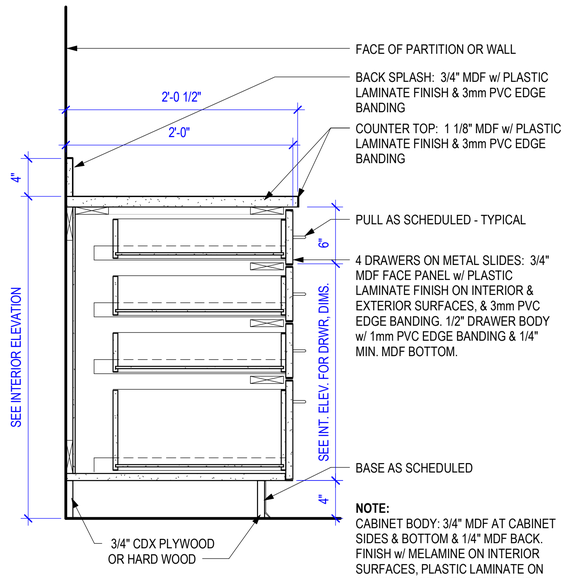
Sheet Number

A-602



1 BASE CABINET w/ DOORS, 1 DRWR & LAMINATE TOP

1 1/2" = 1'-0"

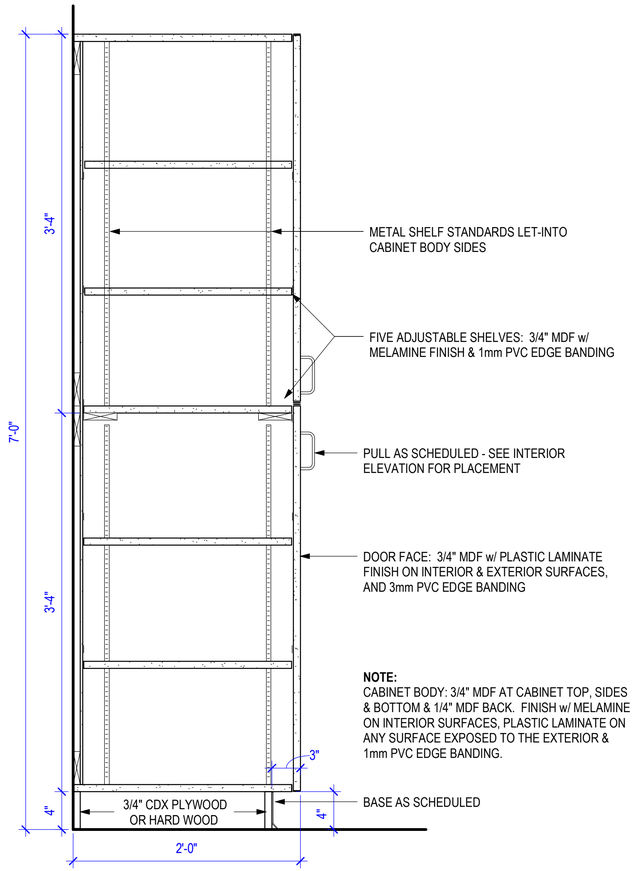


2 BASE CABINET w/ 4 DRWRS & LAMINATE TOP

1 1/2" = 1'-0"

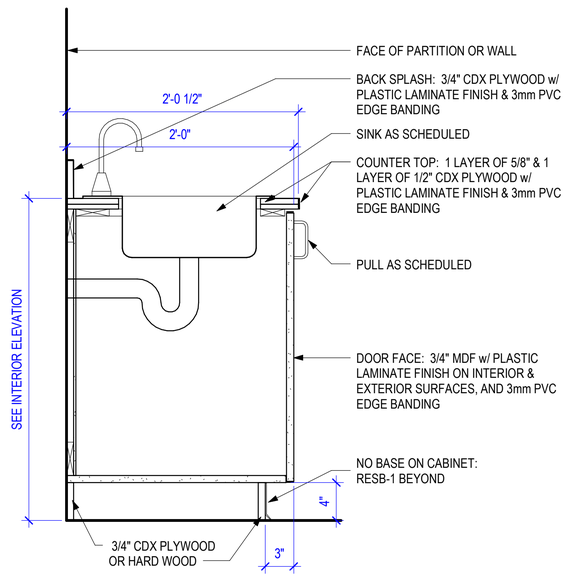
0 1 2 4

SCALE : 1/2" = 1'-0"



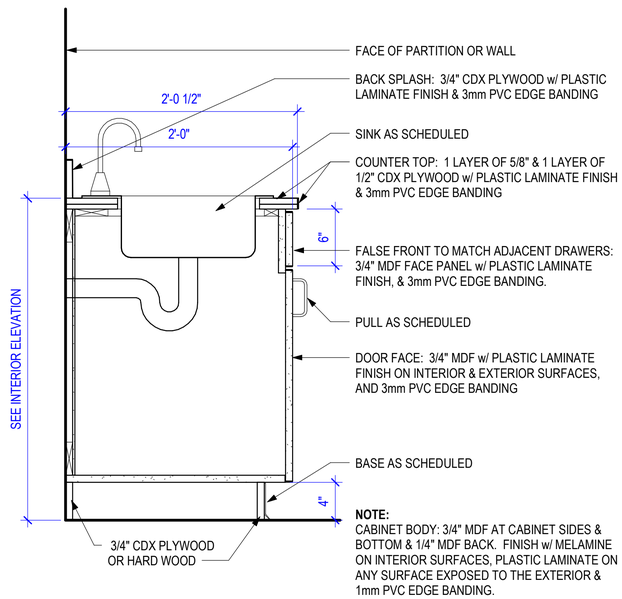
5 TALL CABINET w/DOOR & SHELVING

1 1/2" = 1'-0"



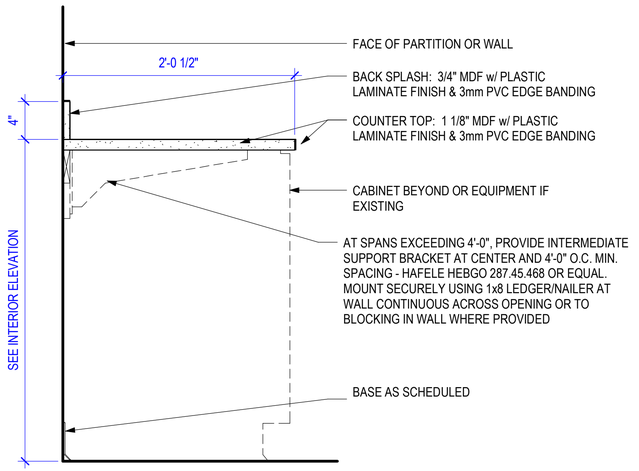
3 SINK BASE CABINET w/ DOORS & LAMINATE TOP

1 1/2" = 1'-0"



4 SINK BASE CABINET w/DOORS, FALSE FRONT & LAMINATE TOP

1 1/2" = 1'-0"



6 BASE CABINET OPEN BELOW - LAMINATE TOP

1 1/2" = 1'-0"

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AEROJET New Guard Post - 2

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REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

01-17-2024

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Project Number **2024-052**

Issue Date **07-17-2024**

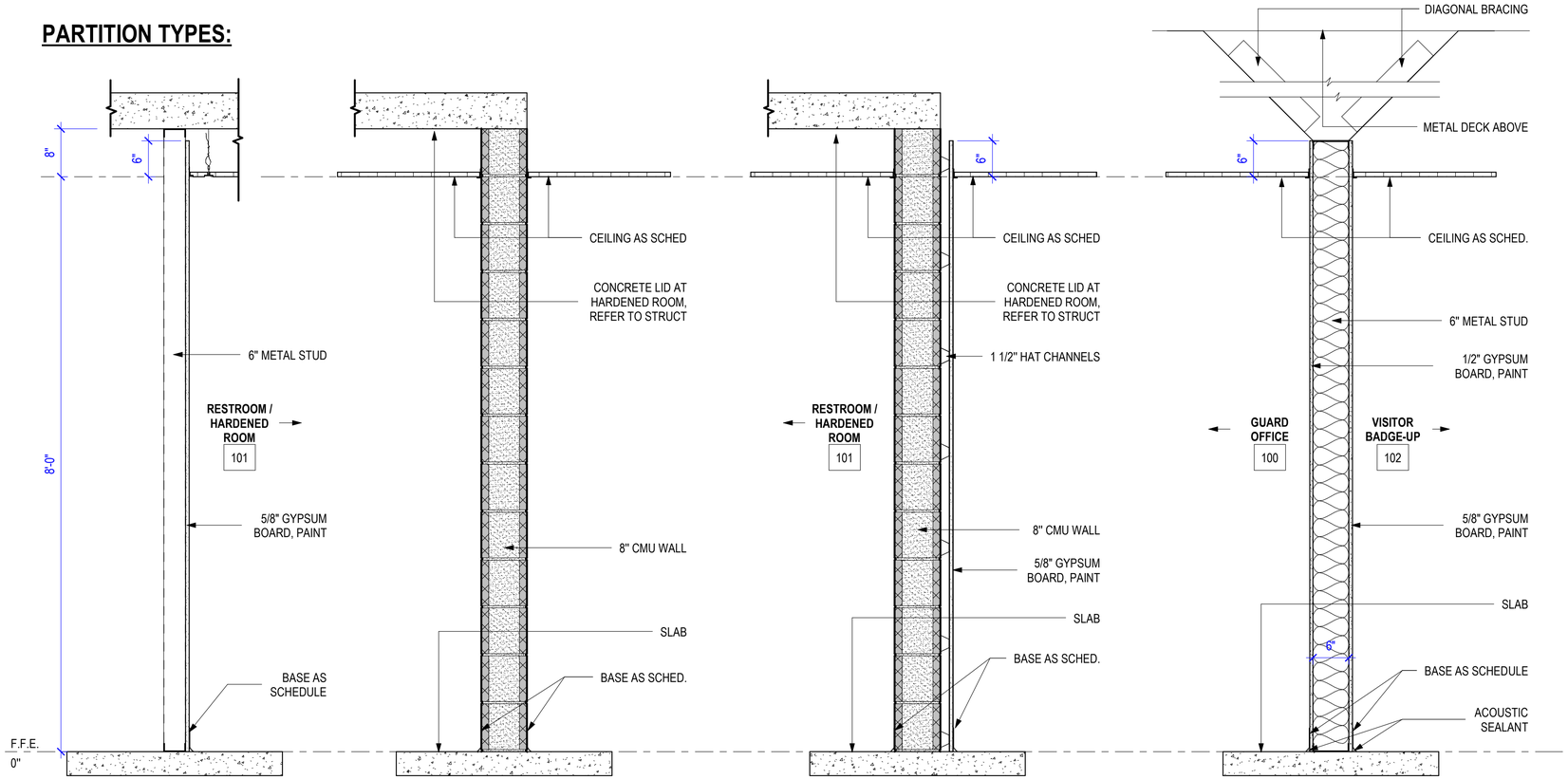
Sheet Title

MILLWORK DETAILS

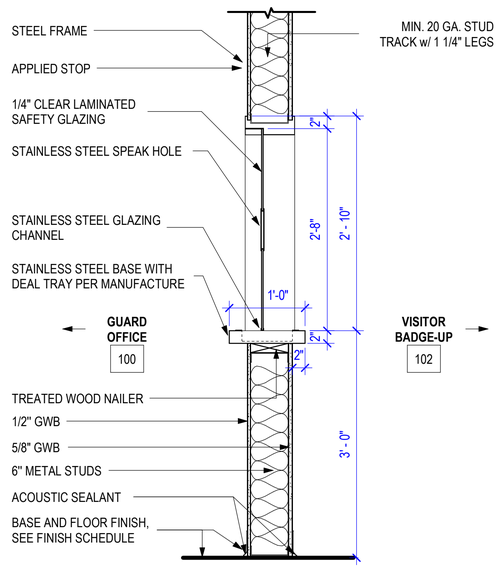
Sheet Number

A-701

PARTITION TYPES:

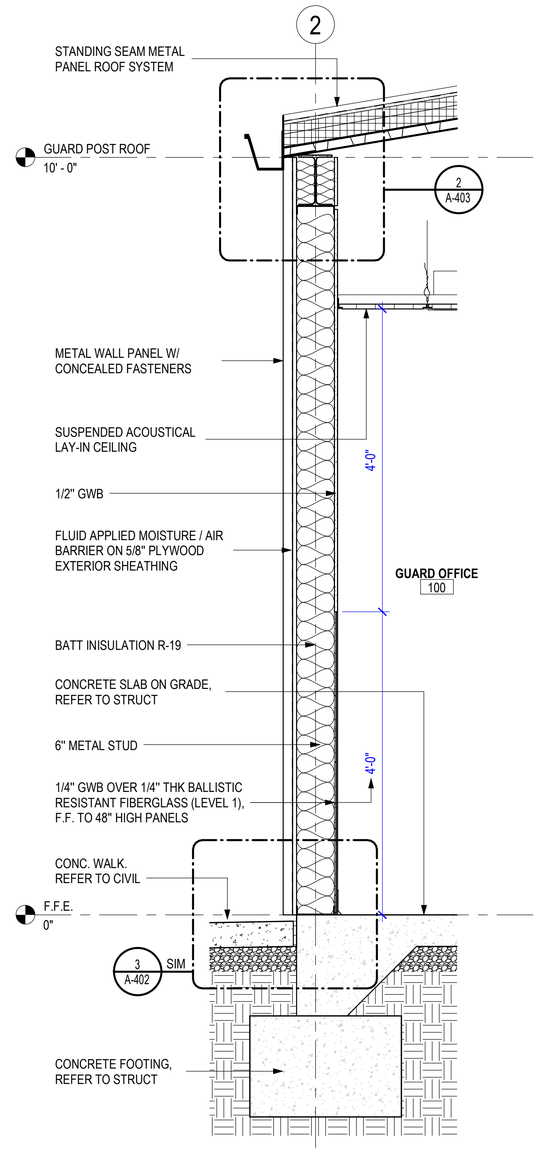


P4 P3 P2 P1



1 INTERIOR TRANSACTION WINDOW - SECTION

1" = 1'-0"



2 WALL SECTION

1" = 1'-0"

SCALE : 1" = 1'-0"

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AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

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REGISTERED ARCHITECT DANIEL K. POWERS No. 3339 ARKANSAS

07-17-2024

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

PARTITION TYPES AND WALL SECTIONS

Sheet Number

A-801

ABBREVIATIONS

AC	AIR COMPRESSOR	HVAC	HEATING, VENTILATION, AIR COND.
ACU	AIR CONDITIONING UNIT	HP	HORSE POWER
AD	AREA DRAIN	HRWH	HEAT RECLAIM WATER HEATER
AFC	ABOVE FINISH CEILING	HS	HOSE STATION
AFF	ABOVE FINISH FLOOR	HW	HOT WATER
AFG	ABOVE FINISHED GRADE	HWG	HOT WATER GENERATOR
AHJ	AUTHORITY HAVING JURISDICTION	HWR	HOT WATER RETURN
APPROX	APPROXIMATE	HWST	HOT WATER STORAGE TANK
ARCH	ARCHITECT/ARCHITECTURAL	ID	INSIDE DIAMETER/DIMENSION
ARD	AUXILIARY ROOF DRAIN	KW	KILOWATTS
BFF	BELOW FINISH FLOOR	LV	LAVATORY
BLDG	BUILDING	LF	LINEAR FEET
BTU	BRITISH THERMAL UNITS	LPG	LIQUID PETROLEUM GAS
BTUH	BRITISH THERMAL UNITS/HOUR	LWT	LEAVING WATER TEMPERATURE
CAP	CAPACITY	MAX	MAXIMUM
CB	CATCH BASIN	MBH	THOUSAND BTU/PER HOUR
CD	CONDENSATE DRAIN	MECH	MECHANICAL
CFH	CUBIC FEET/HOUR	MDL	MODEL
CFM	CUBIC FEET/MINUTE	MFR	MANUFACTURER
CI	CAST IRON	MH	MANHOLE
CLG	CEILING	MIN	MINIMUM
CO	CLEAN OUT	MISC	MISCELLANEOUS
COL	COLUMN	MTD	MOUNTED
CONC	CONCRETE	NA	NOT APPLICABLE
CONN	CONNECT	NFPA	NATIONAL FIRE PROTECTION ASSO.
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUE	OA	OUTSIDE AIR
COTG	CLEAN OUT TO GRADE	OD	OUTSIDE DIAMETER/DIMENSION
CP	CIRCULATING PUMP	PD	PRESSURE DROP
CR	CONDENSATE RETURN	PLBG	PLUMBING
CW	COLD WATER	PRESS	PRESSURE
DCOTG	DOUBLE CLEANOUT TO GRADE	PRV	PRESSURE REDUCING VALVE
DD	DESICCANT DEHUMIDIFIER	PSI	POUNDS PER SQUARE INCH
DEG(°)	DEGREE	RA	RETURN AIR
DEMO	DEMOLITION	RD	ROOF DRAIN
DF	DRINKING FOUNTAIN	REF	REFERENCE
DS	DOWN SPOUT	REQD	REQUIRED
DIA	DIAMETER	REV	REVISION, REVISED
DTL	DETAIL	RM	ROOM
	DOMESTIC WATER HEATER (G) GAS	RPM	REVOLUTIONS PER MINUTE
(G/E)WH	(E) ELECTRIC	RPZ	REDUCED PRESSURE ZONE
EFF	EFFICIENT	SCH	SCHEDULE
ELEV	ELEVATION	SECT	SECTION
ELEC	ELECTRICAL	SK	SINK
EQ	EQUAL	SP	STATIC PRESSURE
EQUIP	EQUIPMENT	SPEC	SPECIFICATION(S)
EWT	ENTERING WATER TEMPERATURE	SS	SANITARY SEWER
EX, EXT	EXISTING	ST	STEAM
EXP	EXPANSION	SUCT	SUCTION
FCO	FLOOR CLEANOUT	TEMP	TEMPERATURE
FD	FLOOR DRAIN	TDH	TOTAL DYNAMIC HEAD
FL	FLOW LINE	TH	TOTAL HEAD
FLEX	FLEXIBLE CONNECTION	TWMV	THREE WAY MODULATING VALVE
FLR	FLOOR SINK	TMV	THERMOSTATIC MIXING VALVE
FPM	FLOOR	TYP	TYPICAL
FS	FEET PER MINUTE	UL	UNDERWRITERS LABORATORY
FPWH	FREEZE PROOF WALL HYDRANT	UR	URINAL
FPRH	FREEZE PROOF ROOF HYDRANT	V	VENT
G	GAS	VLV	VALVE
GA	GAUGE	VERT	VERTICAL
GAL	GALLON	VTR	VENT THROUGH ROOF
GALV	GALVANIZED	VOL	VOLUME
GI	GREASE INTERCEPTOR	WC	WATER CLOSET
GPH	GALLONS PER HOUR	WCO	WALL CLEANOUT
GPM	GALLONS PER MINUTE	WF	WATER FILTER
GT	GREASE TRAP	WH	WATER HEATER
HB	HOSE BIBB	WM	WATER METER
HT	HEIGHT	WTR	WATER
HTG	HEATING	WP	WORKING PRESSURE
		WT	WEIGHT

GENERAL PLUMBING SYMBOLS

- REVISION NUMBER SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- DEMOLISH TO POINT INDICATED
- 1 / P-001 — NUMBER OF DETAIL ON SHEET NUMBER OF SHEET WHERE DETAIL APPEARS
- 1 — KEYNOTE
- PIPE CONTINUATION

SPACE TAG:

- OFFICE — SPACE NAME
- 101 — SPACE NUMBER
- 100 SF — SPACE AREA

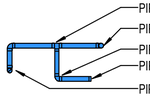
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT

PIPING LEGEND

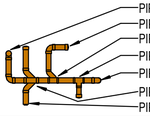
- (E) — EXISTING PIPE TAG
- (D) — DEMOLISHED PIPE TAG

NEW CONSTRUCTION	EXISTING	
CW		DOMESTIC COLD WATER
HW		HOT WATER 120°F
HWR		HOT WATER 120°F RECIRC.
G		NATURAL GAS
CD		CONDENSATE DRAIN
SPD		PUMP DISCHARGE
SS		SANITARY SEWER
V		SANITARY VENT
SD		STORM DRAIN
ASD		STORM DRAIN OVERFLOW / AUX

PRESSURE PIPE SYMBOLS

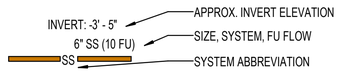


GRAVITY PIPE SYMBOLS

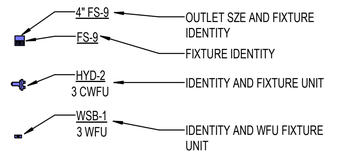


PLUMBING TAGS

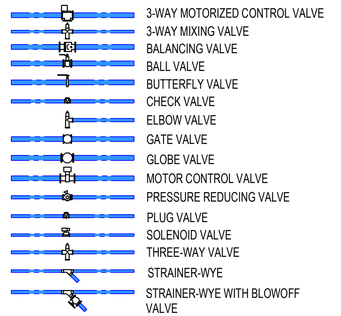
PIPE TAG



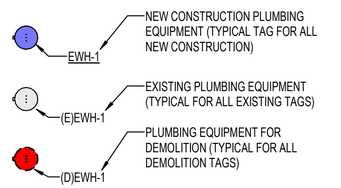
FIXTURE TAG



PIPE ACCESSORIES



PLUMBING PHASING



PLUMBING SHEET SET NOTE

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.

SEISMIC DESIGN CRITERIA

1. SEISMIC DESIGN DATA:
   A. SEISMIC DESIGN CATEGORY: C
      a. SEE SHEET S-001 FOR MORE INFO.
2. THE FOLLOWING COMPONENT IMPORTANCE FACTORS ARE USED:
   A. WATER HEATERS (STORAGE WATER 140°F): 1.0
   B. WATER PIPING (GREATER THAN 120°F): 1.0
   C. SEWER PIPING: 1.0
3. SEISMIC BRACING IS NOT REQUIRED FOR THE PLUMBING COMPONENTS.
4. REFER TO THE SPECIFICATIONS.

PLUMBING GENERAL NOTES

1 ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES.

2 ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR COMPLETE INFORMATION.

3 BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.

4 EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.

5 CONTRACTOR SHALL PAY ALL UTILITY FEES & CHARGES AS PART OF BASE BID IN THE CONTRACT.

6 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES; i.e., ARCHITECTURAL, HVAC, ELECTRICAL, STRUCTURAL, FIRE PROTECTION AND CIVIL PRIOR TO CONSTRUCTION.

7 THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS, SIZES AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION; i.e., SANITARY SEWER, FIRE PROTECTION, DOMESTIC WATER. ALL SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT WHERE SHOWN OTHERWISE. SEE SITE UTILITY DRAWINGS FOR CONTINUATION OF ALL SERVICE LINES.

8 PROVIDE ISOLATION VALVES AT EACH FIXTURE GROUP OR BATTERY OF FIXTURES IN THE DOMESTIC CW, HW, HWR AND GAS PIPING. VALVES SHALL BE EASILY ACCESSIBLE. WHERE HARD CEILINGS ARE LOCATED, VALVES SHALL BE ACCESSED THROUGH ACCESS PANELS. ACCESS PANELS SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION.

9 PROVIDE STOP VALVES AT ALL PLUMBING FIXTURES ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC., SHALL BE CHROME PLATED AND INSTALLED TIGHT TO WALL. WHERE PIPING IS EXPOSED, CHROME PLATED PIPE SHALL BE USED.

10 ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.

11 SLOPE 2-1/2" AND SMALLER DRAIN WASTE AND VENT (DWV) LINES AT MIN, (2%) 1/4" FALL PER FT., 3" TO 6" DWV LINES AT MIN. (1%) 1/8" FALL PER FT. SANITARY SEWER AND WATER SHALL BE A MINIMUM OF 10' APART OR THE DOMESTIC WATER SERVICE SHALL BE 12" ABOVE THE TOP OF THE SEWER LINE, AT ITS HIGHEST POINT, IF PLACED IN SAME TRENCH.

12 PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTERS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROPER OPERATIONS OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT.

13 REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.

14 PROVIDE CLEANOUTS IN ALL SEWERS, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH CHANGE OF DIRECTION GREATER THAN 45°, AND ALL VERTICAL STACKS AT A HEIGHT OF 30" ABOVE FINISH FLOOR AT THE BASE OF EACH STACK.

15 WHERE WATER PRESSURES EXCEED 80 PSI, PROVIDE WATER PRESSURE REDUCING VALVES (PRV) CONFORMING TO ASSE 1003 WITH STRAINER IN WATER SUPPLY LINES, SETTING AT 80 PSI. SEE CODE AND MANUFACTURER INFORMATION FOR ACCEPTABLE PRESSURE REQUIREMENTS.

16 ALL PIPING PENETRATIONS OF THE RATED CEILING AND WALL MUST BE MADE WITH METAL PIPE OR UL LISTED APPROVED DEVICES. FIRE STOP ALL PIPE PENETRATIONS THRU RATED WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, RATINGS AND FIRE STOPPING DETAILS.

17 DO NOT ROUTE ANY PIPING OVER ELEC. ROOMS, COMPUTER ROOMS, OR ELEC. PANELS.

18 INSTALL AN AGA LISTED NATURAL GAS COCK, DIRT LEG AND UNION IMMEDIATELY UPSTREAM OF EQUIPMENT CONNECTIONS. AS NOTED ON DRAWINGS PROVIDE AN AGA LISTED VENT LIMITING GAS REGULATOR. GAS REGULATORS SHALL NOT BE INSTALLED IN AIR PLENUMS (SEE HVAC PLANS FOR AIR PLENUM LOCATIONS). PAINT ALL NATURAL GAS PIPING WITH TWO COATS OF OIL BASED YELLOW PAINT IN ALL LOCATIONS NOT SPECIFIED BY ARCHITECT.

19 ALL DOMESTIC WATER PIPING ROUTED IN AREAS SUBJECT TO FREEZING TEMPERATURES SHALL BE ROUTED BELOW INSULATION AND WITHIN THE HEATED ENVELOPE OF THE BUILDING. WHERE PIPING CAN NOT BE ROUTED BELOW INSULATION, PIPING SHALL HAVE 5 WATT/FT HEAT TRACING ATTACHED. SEE ARCHITECTURAL DRAWINGS FOR INSULATION PLACEMENT AND DETAILS. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND ENGINEER.

20 UNLESS OTHERWISE INDICATED, DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS. WHEN ROUTED IN EXTERIOR WALLS, CAREFULLY POSITION WATER PIPING ON THE HEATED SIDE (INTERIOR SIDE) OF THE WALL INSULATION.

21 MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES, OPERABLE WINDOWS AND FLUES, PLUMBING VENTS AND GAS REGULATORS.

22 ALL SEWER & VENT PIPING SHALL BE RODDED AND CLEANED AT END OF CONSTRUCTION. ALL TRAPS SHALL BE CLEANED AND PRIMED AT END OF CONSTRUCTION.

23 ALL PIPE DROPS FROM CEILING PLENUM TO FLOOR SHALL BE MADE IN FURROUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS OR IN WALLS. PIPING SHALL BE CONCEALED UNLESS APPROVED BY ARCHITECT.

24 PROVIDE WATER HAMMER ARRESTORS IN FIXTURE BRANCHES WHERE QUICK CLOSING VALVES ARE INSTALLED; i.e., FLUSH VALVES, ICE MAKERS, DISHWASHERS, ETC.

25 BELOW SLAB WATER PIPE TO BE TYPE K SOFT DRAWN COPPER WITHOUT FITTINGS OR JOINTS. SLEEVE IN ENTIRETY WITH ARMAFLEX OR APPROPRIATE POLYETHYLENE SLEEVE MATERIAL.

26 PROVIDE APPROVED BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL FIXTURES THAT COULD CONTAMINATE THE POTABLE WATER SYSTEM.

27 INSULATE ALL WATER PIPING ABOVE FINISH FLOOR. SEE SPECIFICATIONS FOR THICKNESS SCHEDULE.

28 INSULATE ALL EXPOSED HOT WATER & DRAIN PIPING FOR ACCESSIBLE FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS.

29 FLOOR DRAINS IN MECHANICAL ROOMS ARE SHOWN FOR GENERAL LOCATION ONLY. FLOOR DRAINS SHALL BE ACCESSIBLE AND SHALL BE VERIFIED WITH EQUIPMENT LAYOUT FOR INTERFERENCES.

30 AN APPROVED TRAP SEAL DEVICE CONFORMING TO ASSE 1072 SHALL BE INSTALLED AT ALL FLOOR AND HUB DRAINS. ALL DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM. INSTALL TRAP GUARD DEVICES PER MANUFACTURER'S INSTRUCTIONS.

31 DOMESTIC WATER SERVICE PIPING AND FITTINGS; E.G., CHECK VALVES, RPZA, SHUT-OFF VALVES, STRAINERS, PRESSURE REGULATORS, ETC. SHALL COMPLY WITH NSF 61 CRITERIA. ALL CAST IRON EQUIPMENT IS TO BE INTERNALLY EPOXY COATED.

ADA REQUIREMENTS

WATER CLOSETS: THE HEIGHT OF WATER CLOSETS SHALL BE 17"-19" MEASURED FROM THE TOP OF THE TOILET SEAT. SEATS SHALL NOT BE SPRUNG OR RETURN TO A LIFTED POSITION. THE WATER CLOSET SHALL BE LOCATED 18" FROM THE SIDE WALL TO THE CENTER OF THE BOWL. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS NO MORE THAN 29" ABOVE FINISHED FLOOR. SEE ARCHITECTURAL SHEETS FOR GRAB BAR LOCATIONS.

LAVATORIES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO MORE THAN 34" ABOVE FINISHED FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE APRON. KNEE SPACE SHALL BE 8" FROM THE BOTTOM EDGE OF APRON TO THE LEADING EDGE OF THE BOTTOM OF BOWL. THE BOTTOM OF THE BOWL SHALL BE A MINIMUM OF 27" ABOVE FINISHED FLOOR. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH FOAM INSERT, COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

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Project

AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 12375 — JAMIE L. QUIDRY

07-17-2024

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Project Number **2024-052**

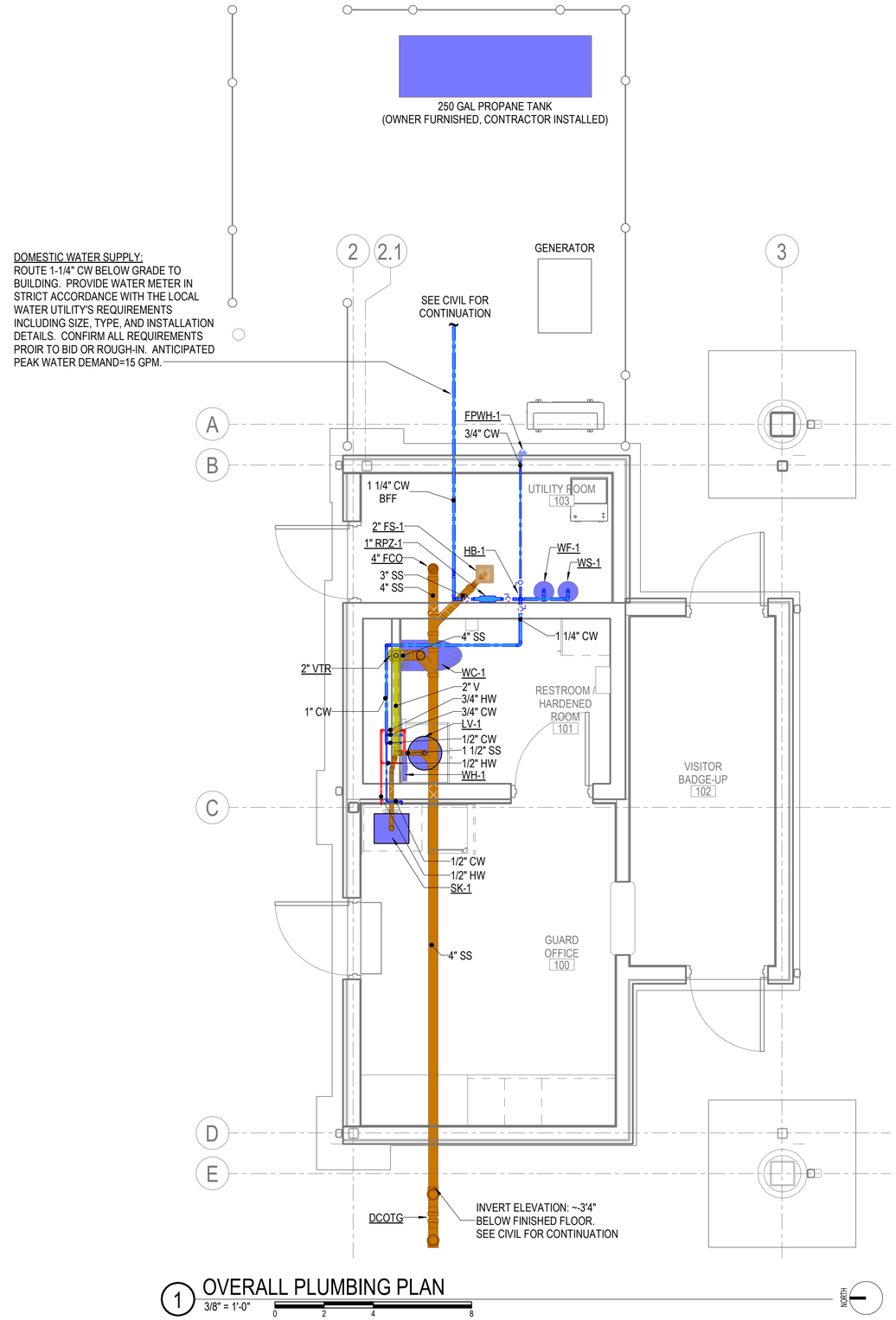
Issue Date **07-17-2024**

Sheet Title

PLUMBING LEGEND AND NOTES

Sheet Number

P-001



1 OVERALL PLUMBING PLAN
3/8" = 1'-0"
0 2 4 8
NORTH

GENERAL NOTES

1 REFER TO SHEET P-001 FOR LEGEND AND NOTES.

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AEROJET New Guard Post - 2

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07-17-2024

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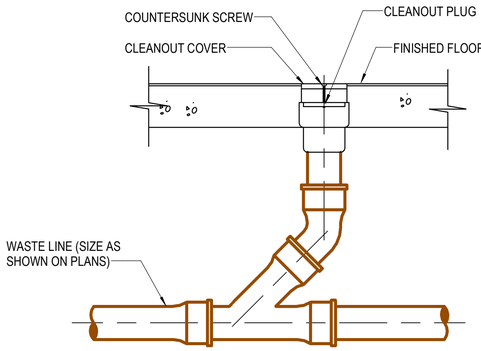
Sheet Title

OVERALL PLUMBING PLAN

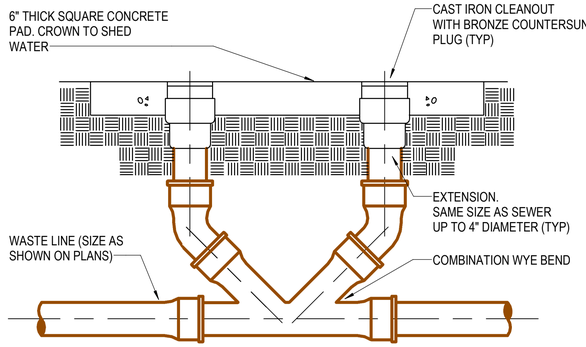
Sheet Number

P-101



A FLOOR CLEANOUT

NOTE: SEE SPECIFICATIONS FOR MATERIALS

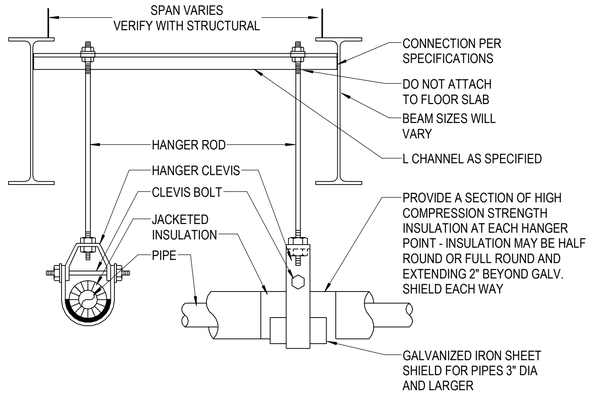


B DOUBLE CLEANOUT-TO-GRADE

NOTE: SEE SPECIFICATIONS FOR MATERIALS

1 TYPICAL CLEANOUTS

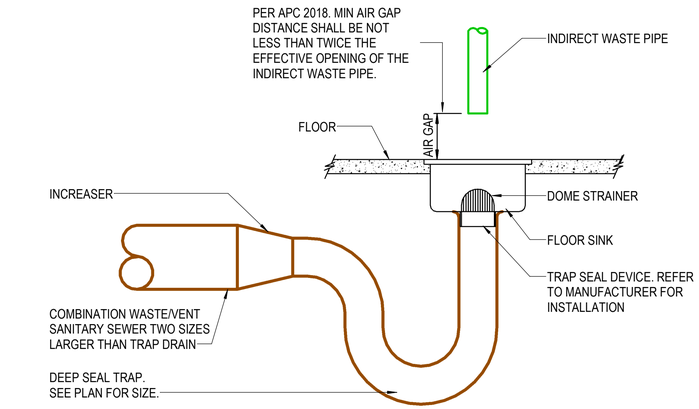
NOT TO SCALE



NOTES:
1. INSULATION TO BE CONTINUOUS THROUGH HANGERS. DO NOT BREAK INSULATION AT SUPPORTS, DO NOT INSULATE AROUND HANGERS.
2. INSULATION JACKET TO BE CONTINUOUS THROUGH PIPE SUPPORT COMPONENTS.
3. USE CLEVIS HANGERS FOR SINGLE PIPE RUNS, USE TRAPEZE HANGERS TO GROUP AS MUCH PIPING AS POSSIBLE PER HANGER.

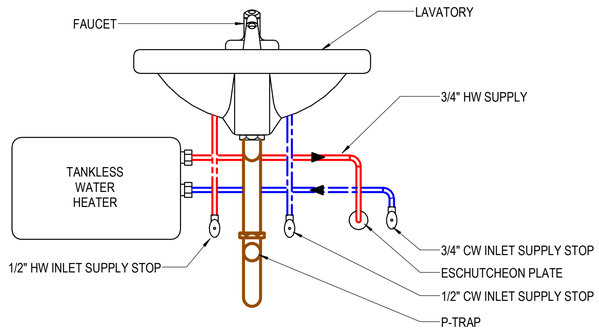
2 ADJUSTABLE CLEVIS HANGER

NOT TO SCALE



3 FLOOR SINK - FS-1

NOT TO SCALE



4 P.O.U INSTANT WATER HEATER - WH-1

NOT TO SCALE

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Project

AEROJET New Guard Post - 2

Design Phase

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CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

ARKANSAS REGISTERED PROFESSIONAL ENGINEER — No. 12375 — JAMIE L. GUIDRY

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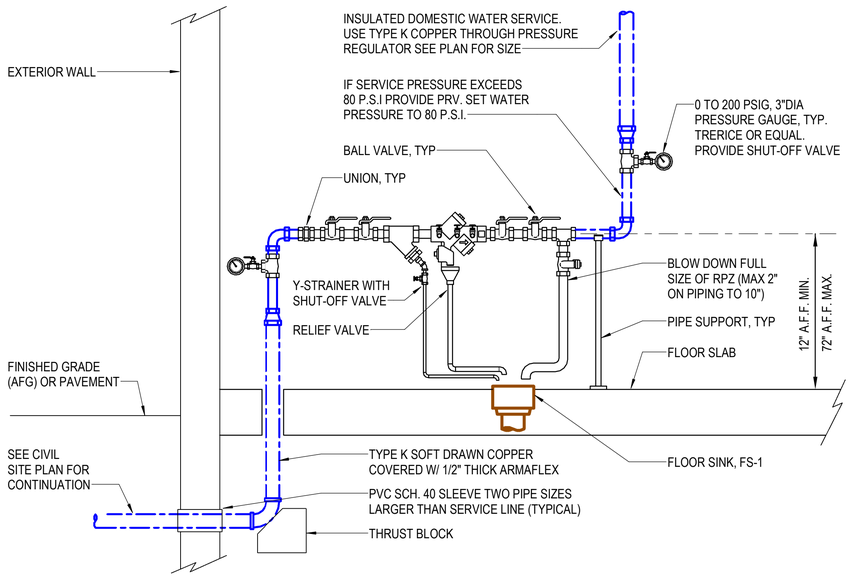
Sheet Title

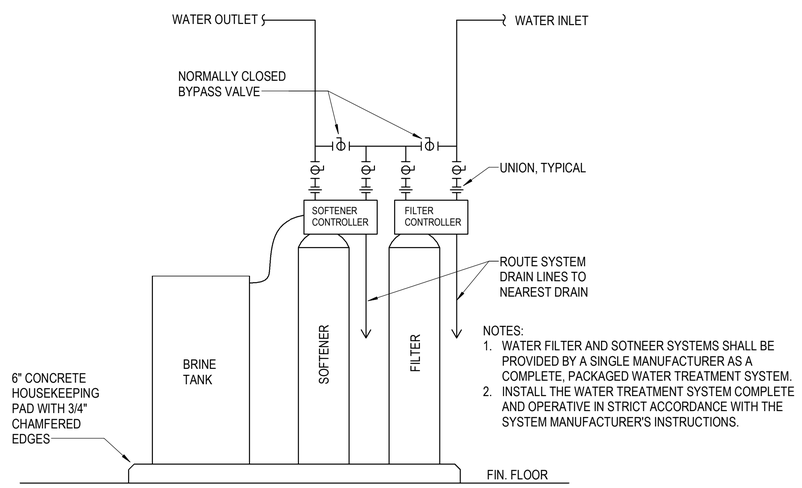
PLUMBING DETAILS

Sheet Number

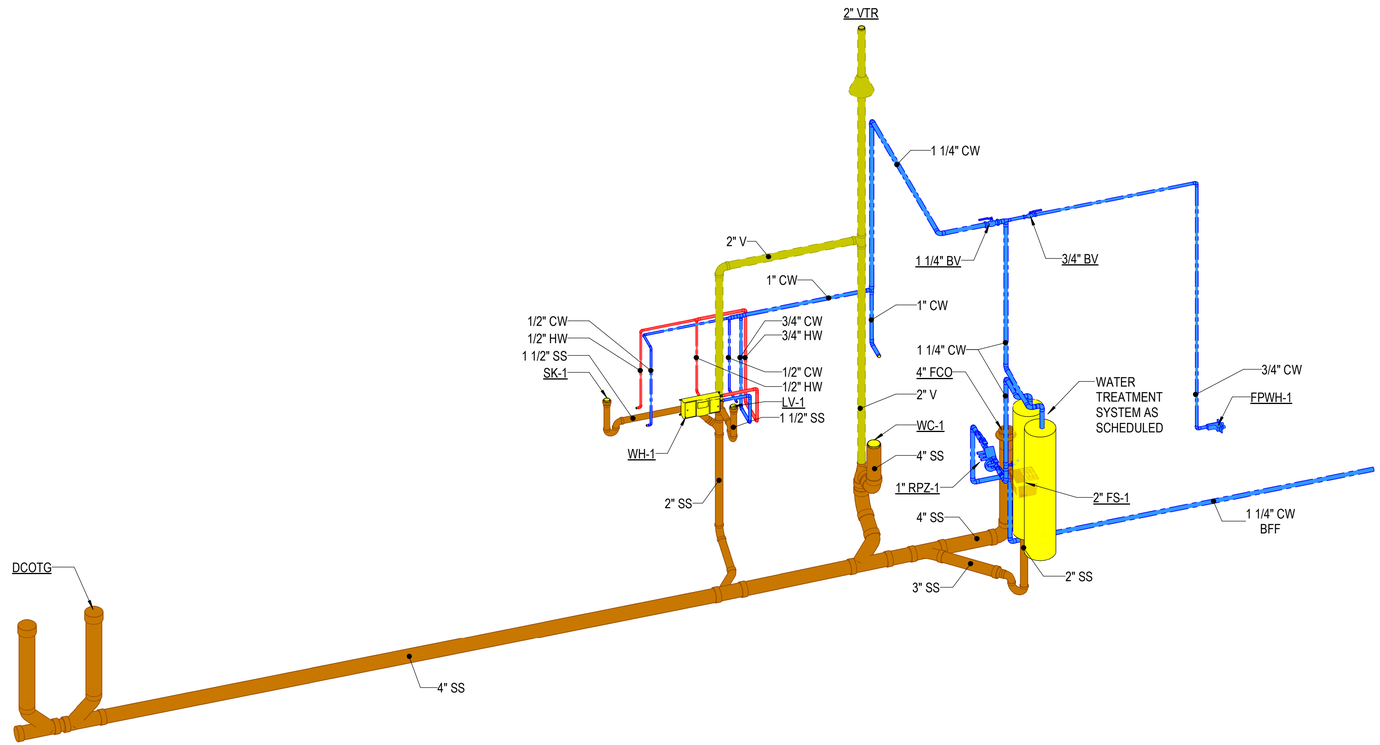
P-501



1 DOMESTIC WATER BUILDING SERVICE - RPZ-1
NOT TO SCALE



2 WATER FILTER / SOFTENER SYSTEM
NOT TO SCALE



3 OVERALL PLUMBING RISER

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CONSTRUCTION DOCUMENTS

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CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUIDRY
07-17-2024

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Sheet Title

PLUMBING DETAILS & RISER

Sheet Number

P-502

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PLUMBING ACCESSORY

ID	BASIS OF DESIGN MANUFACTURER & MODEL	UTILITY CONNECTION	SPECIFICATION
RPZ-1	FEBCO #825YA,	1"CW	REDUCED PRESSURE ZONE ASSEMBLY - 13-1/3"x8-1/2"x8", 1" ASSEMBLY, VERTICAL UP FLOW IN/HORIZONTAL FLOW OUT, MAINLINE VALVE & RELIEF VALVE BODY SHALL BE BRONZE, CHECK VALVE MOVING MEMBERS SHALL BE CENTER STEM GUIDED, RELIEF VALVE SHALL HAVE REMOVABLE SEAT RING, ALL SEAT DISCS SHALL BE REVERSIBLE, INCLUDES TWO INDEPENDENTLY OPERATING, SPRING LOADED, "Y' PATTERN CHECK VALVES, AND ONE HYDRAULICALLY DEPENDENT DIFFERENTIAL RELIEF VALVE, INCLUDE WYE-STRAINER ON VERTICAL INLET, MAX WORKING PRESSURE 175 PSI, MAX TEMPERATURE RANGE 32F-140F, 11 PSI HEAD LOSS @23 GPM, ASSE 1013 CERTIFIED, ANSI/AWWA C511 APPROVED
FCO	WATTS #CO-1200-RX-4-NH,	SAME SIZE AS LINE, MAX 4"	FLOOR CLEANOUT - SAME SIZE AS LINE, MAX. 4", EPOXY COATED CAST IRON FLOOR CLEANOUT WITH 5" ROUND ADJUSTABLE GASKETED EXTRA HEAVY DUTY STAINLESS STEEL TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB OUTLET
DCOTG	WADE, 6000-12 SERIES	SAME SIZE AS LINE, MAX 4"	CLEANOUT-TO-GRADE/DOUBLE-CLEANOUT-TO-GRADE - SAME SIZE AS LINE, MAX. 4 INCH, HEAVY DUTY CAST IRON, FERRULE, THREADED ADJUSTABLE HOUSING, INTEGRAL CLAMPING COLLAR, ABS PLUG, 7-1/8 INCH SQUARE HEAVY DUTY DUCTILE IRON TOP

PLUMBING EQUIPMENT

ID	BASIS OF DESIGN	ELECTRICAL						SPECIFICATION
	MANUFACTURER & MODEL	UTILITY CONNECTIONS	CONNECTION TYPE	VOLTAGE	PHASE	POWER	AMPS	
WH-1	CHRONOMITE #CMI-15L/240,	1/2"CW, 1/2"HW	HARDWIRED WITH GFCI PROTECTION	240 V	1	3.6 kW	15	ELECTRIC TANKLESS WATER HEATER - 49°F RISE @ 0.5 GPM, 13-7/16"x6-1/4"x2-3/4"D, POINT-OF-USE, MULTIPLE LAVATORY, 0.2 GPM ACTIVATION FLOW, FACTORY SET TO 110°F, 99% ENERGY EFFECIENT, MICROPROCESSOR THERMOSTATIC TEMPERATURE CONTROL, ASSE 1070 COMPLIANT, LESS DISCONNECT SWITCH

PLUMBING FIXTURE

ID	BASIS OF DESIGN MANUFACTURER & MODEL	ACCESSORIES	COLD	HOT	WASTE	INDIRECT	VENT	TRAP	SPECIFICATION
WC-1	WATER CLOSET - AMERICAN STANDARD "MADERA" #3043.001, FLUSH VALVE - SLOAN #111-1.6,	AMERICAN STANDARD SEAT #5901.100SS,	1"	---	4"	---	2"	INTEGRAL	WATER CLOSET - ADA ACCESSIBLE, 16-1/2" RIM HEIGHT, FLOOR MTD, VITREOUS CHINA LESS EVERCLEAN SURFACE, ELONGATED BOWL, INTEGRAL STOPS AND TRAP, SIPHON JET, 1-1/2" EXPOSED TOP SPUD, FLUSH VALVE - 1.6 GPF, POLISHED CHROME FINISH, TOP SPUD, MANUAL SINGLE FLUSH, PERMEX SYNTHETIC RUBBER DIAPHRAGM WITH LINEAR FILTERED BYPASS AND VORTEX CLEANSING ACTION, VACUUM BREAKER WITH FLUSH CONNECTION, VANDAL RESISTANT STOP CAP ON ANGLE CHECK STOP, SEAT - OPEN FRONT ELONGATED SEAT, SELF SUSTAINING, LESS COVER
LV-1	SINK - AMERICAN STANDARD "AQUALYN" #0476.028 FAUCET - DELTA #22C451,	OPEN GRID STRAINER - DELTA #33T260, P-TRAP - ZURN #Z8701-PC, SUPPLY STOP VALVES - ZURN #Z8807-XL-LR-PC,	1/2"	1/2"	1-1/2"	---	2"	1-1/4"	LAVATORY - ADA COMPLIANT, 20-3/8"x17-3/8"x5-5/8"D (16"x10"x5-5/8" INSIDE), DROP IN-COUNTERTOP, WHITE VITREOUS CHINA, FRONT OVERFLOW, THREE FAUCET HOLES ON 4" CENTERS, FAUCET - 0.5 GPM, MANUAL, SINGLE LEVER, POLISHED CHROME-PLATED FINISH, LEAD FREE, 2.8" SPOUT HEIGHT, 5.9" SPOUT REACH, VANDAL RESISTANT SPRAY OUTLET, OPEN GRID STRAINER INCLUDED, CARRIER - CONCEALED ARM WALL CARRIER
SK-1	SINK - JUST MANUFACTURING #SLADA17519A55-J, FAUCET - DELTA #100LF-HDF,	DRAIN - JUST MANUFACTURING #J-35, P-TRAP - ZURN #8702-PC, SUPPLY STOP VALVES - ZURN #Z8807-XL-LR-PC,	1/2"	1/2"	2"	---	2"	1-1/2"	SINK - ADA COMPLIANT, 19"x18"x5-1/2"D, 1 COMPARTMENT (16"x11-1/2"x5-3/8"D INSIDE), COUNTER-TOP DROP IN, SELF RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, LUSTROUS SATIN FINISH, CENTER DRAIN OUTLET, THREE FAUCET HOLES ON 8" CENTERS, FAUCET - 1.5 GPM, CHROME PLATED LEAD FREE, MANUAL SINGLE HANDLE, 4-3/4" SPOUT HEIGHT, 8-11/16" SPOUT REACH, SWIVEL SPOUT, DECK MTD, 10-1/2" DECK PLATE
HB-1	WOODFORD, 26	PROVIDE FULL PORT ISOLATION BALL VALVE FOR FIXTURE,	3/4"	---	---	---	---	---	HOSE BIBB - 3-3/4"x4-3/4", BRASS CONSTRUCTION, EPDM PACKING, POLYCARBONATE WHEEL HANDLE AND LOOSE TEE KEY, 1/2" INLET, 125 PSI MAX PRESSURE, 120F MAX TEMP, INCLUDES BACKFLOW PREVENTER WITH TWO INDEPENDENT CHECKS, DRAINS AUTOMATICALLY, ASSE 1052 APPROVED T
FPWH-1	WOODFORD #B67,	PROVIDE FULL PORT ISOLATION BALL VALVE FOR FIXTURE,	3/4"	---	---	---	---	---	FREEZEPROOF WALL HYDRANT - SIZE FOR WALL THICKNESS+4", RED BRASS VALVE BODY, 3/8" SOLID BRASS OPERATING ROD, HARDENED STAINLESS STEEL STEM, ONE PIECE VALVE PLUNGER, COPPER CASTING TUBES, DRAIN PORT UNDER NOZZLE, 3/4" HOSE CONNECTION W/ HIGH FLOW DOUBLE CHECK BACKFLOW PREVENTER, ADJUSTABLE WALL CLAMP, ASSE 1052 CERTIFIED
FS-1	ZURN #Z1910,	TRAP SEAL DEVICE,	---	---	SEE PLAN	---	2"	SEE PLAN	FLOOR SINK - 8"x8"x6-1/2"D, ACID RESISTANT PORCELAIN ENAMEL COATING ON DRAIN AND GRATE, LOOSE SET 1/2 GRATE, ANTI-SPLASH ALUMINUM DOME STRAINER, DEEP SEAL TRAP. PROVIDE TRAP SEAL EQUAL TO MIFAB MI-GUARD.
WS-1	CULLIGAN, HE-60, 12"		1-1/4"	---	---	---	---	---	WATER SOFTENER SYSTEM, 2.0 CU. FT. RESIN,12.6 GPM @ 15 PSIG AUXILIARY FLOW, 3.0 GPM MAX. DRAIN FLOW, 59267 @ 24 DOWNFLOW REGEN. MAX. CAPACITY.
WF-1	CULLIGAN, HE 10" FILTER CLEER		1-1/4"	---	---	---	---	---	WATER FILTER SYSTEM, 12.0 GPM @ 15 PSIG RATED SERVICE FLOW, 7.0 GPM MAX. DRAIN FLOW.

WATER HAMMER ARRESTOR

P.D.I. UNITS	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

WADE "SHOKSTOP" #4481 SERIES WATER HAMMER ARRESSTOR, SEAMLESS COPPER CONSTRUCTION, POLYPROPYLENE PISTON, (2) EPDM ORINGS, MNPT CONNECTION, MAX. PRESS. 350 PSI, MAX. TEMP. 250°F, PROVIDE PROPERLY SIZED WATER HAMMER ARRESSTORS AND LOCATE ON PIPING IMMEDIATELY UPSTREAM OF ALL QUICK CLOSING VLAVES (E.G. FLUSH VLAVES, DISHWASHER, ICE MAKERS, SOLENOID VALVES, ETC.)

Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

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ARKANSAS ENGINEER

ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUIDRY
07-17-2024

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Sheet Title

PLUMBING SCHEDULES

Sheet Number

P-601

MINI SPLIT-SYSTEM HEAT PUMP SCHEDULE

INDOOR UNIT					OUTDOOR UNIT		COOLING					HEATING			ELECTRICAL			REMARKS
MARK	*MANUF'R./ MODEL	TYPE	SERVES	FAN CFM (HI/MED/LO)	MARK	*MANUF'R./ MODEL	TOT. CAP. (BTUH)	EDB (F)	EWB (F)	AMB (F)	SEER2	TOT. CAP. (BTUH)	AMB (F)	HSPF2	VOLTAGE	MCA	BKR	
MSFC-1	LG LVN120HCV	VERTICAL AIR HANDLER	GUARD POST BUILDING	580 / 480 / 380	MSHP-1	LG LVU120HCV	12,000	80.0	67.0	95.0	16.0	15,000	47.0	9.3	208/1/60	13.8	20A	SEE NOTES

* OR APPROVED EQUAL

NOTES:

1. SYSTEM SHALL BE COMPLETE WITH INDOOR AND OUTDOOR UNIT FROM SAME MANUFACTURER
2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT
3. VARIABLE SPEED INVERTER SCROLL COMPRESSOR
4. ELECTRICALLY COMMUTATED INDOOR FAN MOTOR
5. ELECTRICALLY COMMUTATED OUTDOOR FAN MOTOR
6. HARD-WIRED WALL THERMOSTAT
7. AUTO RESTART
8. 24-HOUR ON/OFF TIMER
9. LOW AMBIENT TO 14-DEGREES F
10. CONDENSATE SENSOR CONNECTION
11. FIVE YEAR COMPRESSOR WARRANTY
12. TWO YEAR FUNCTIONAL PARTS WARRANTY

EXHAUST FAN SCHEDULE

GENERAL			FAN						ELECTRICAL			REMARKS
EF-1	GREENHECK CSP-A110	RESTROOM / STORM SHELTER 101	DIRECT	CENT.	70	1/8"	728	0.3	120/1/60	20W	INTERLOCK W/TLT RM LIGHTS	SEE NOTES

* OR APPROVED EQUAL

NOTES:

1. FACTORY MOUNTED INTEGRAL DISCONNECT AND BACKDRAFT DAMPER.
2. SOLID STATE SPEED CONTROL FACTORY MOUNTED ON FAN HOUSING.
3. WALL CAP EQUAL TO A GREENHECK #WC-10X3 WITH INTEGRAL BIRDSCREEN, BACKDRAFT DAMPER, AND BLACK ENAMEL FINISH.

AIR CURTAIN SCHEDULE

MARK	MANUF'R./MODEL	SERVES	CFM	DOOR WIDTH (IN)	HEATING (BTUH)	VOLTAGE	MOTOR	CONTROL	
AC-1	POWEREDAIR MP-1-36	SEE PLANS	984	36.0	N/A	120/1/60	1/5 HP	MOTION DETECTOR	SEE NOTES

NOTES:

1. PROVIDE WITH MOUNTING BRACKETS, INTEGRAL DISCONNECT SWITCH, AND MANUFACTURER'S STANDARD MOTION DETECTOR.

AIR DEVICE

KEY NO. IF MORE THAN ONE — MARK: A | 4 | 210 — 4 = THROW, 210 = CFM

MARK	DESCRIPTION	SIZE	MOUNTING	MATERIAL	FINISH	*MANUF'R	MODEL	REMARKS
A	SQUARE CONE	24x24	LAY-IN CLG.	ALUMINUM	WHITE	PRICE	ASCD	NONE
B	SQUARE CONE	12x12	LAY-IN CLG.	ALUMINUM	WHITE	PRICE	ASCD	NOTE 1
1	CUBE CORE	12x12	LAY-IN CLG.	ALUMINUM	WHITE	PRICE	80	NOTE 1
2	CUBE CORE	24x24	LAY-IN CLG.	ALUMINUM	WHITE	PRICE	80	NONE
3	45-DEG FIXED BLADE	12x12	SOFFIT	ALUMINUM	FIELD PAINT	PRICE	630	NONE

NOTES: * OR APPROVED EQUAL
1. PROVIDE BLANK PANEL BORDER FOR INSTALLATION OF AIR DEVICE IN FULL LAY-IN GRID SPACE.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2021EDITION OF THE "INTERNATIONAL MECHANICAL CODE", THE 2014 EDITION OF THE "ARKANSAS ENERGY CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.
2. REFER TO THE PROJECT MANUAL FOR ALL REQUIREMENTS
3. REFER TO ARCHITECTURAL PLANS FOR:
   A. REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES.
   B. EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS.
   C. ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.
4. ALL DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION.
5. U.L. LISTED FLEXIBLE DUCT RUN-OUTS MAY BE USED, BUT SHALL NOT EXCEED 5'-0" IN LENGTH. ALL FLEXIBLE DUCT TO BE PROPERLY SUPPORTED WITH NO KINKS OR HARD BENDS.
6. DUCT FITTINGS:
   A. SUPPLY TAKE-OFFS TO CEILING SUPPLY DIFFUSERS TO BE CONICAL TAP OR 45° SIDE TAP.
   B. ALL DUCT RUN-OUTS TO HAVE LOCKING QUADRANT VOLUME DAMPERS. PROVIDE STAND-OFF BRACKET TO ACCOMMODATE INSULATION THICKNESS.
   C. ALL 90° ROUND ELBOWS TO HAVE R/D=1.5 (UNLESS OTHERWISE NOTED).
   D. ALL 90° RECTANGULAR ELBOWS TO HAVE TURNING VANES (UNLESS OTHERWISE NOTED).
   E. PROVIDE HARD ELBOW WHEN TRANSITIONING FROM RIGID TO FLEXIBLE DUCT WHEN CONNECTING TO AIR DEVICES. REFER TO DETAIL.
7. DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE SLOPED WITH 2-30° ELBOWS UNLESS OTHERWISE NOTED.
8. COMPLETELY INSULATE THE TOPS OF ALL CEILING DIFFUSERS.
9. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
10. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.
11. PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.
12. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
13. ALL WALL-MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, I.E., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.
14. COORDINATE WORK CLOSELY WITH CONTROL CONTRACTOR. PROVIDE ALL NECESSARY DUCT, PIPE TAPS, TEES, WELLS, CONTROL DAMPERS, AIR MEASURING STATIONS, AND OTHER ACCESSORIES REQUIRED BY CONTROL SYSTEM
15. SLEEVE AND SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED AND NON-RATED SLABS AND PARTITIONS.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MBH	THOUSAND BTUs PER HOUR
AHU	AIR HANDLING UNIT	MCA	MINIMUM CIRCUIT AMPS
BHP	BRAKE HORSE POWER	MOCP	MAXIMUM OVER CURRENT PROTECTION
BTU	BRITISH THERMAL UNIT	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NO	NORMALLY OPENED
CV	CONSTANT VOLUME	NTS	NOT TO SCALE
CU	CONDENSING UNIT	OA	OUTSIDE AIR
DB	DRY BULB TEMPERATURE (°F)	PSI	POUNDS PER SQUARE INCH
DDC	DIRECT DIGITAL CONTROLS	PSIG	PSI GAUGE
DOAS	DEDICATED OUTSIDE AIR SYSTEM	PVC	POLYVINYL CHLORIDE PIPE
DN	DOWN	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RH	RELATIVE HUMIDITY
EF	EXHAUST FAN	RHC	REHEAT COIL
ESP	EXTERNAL STATIC PRESSURE	RLA	RUNNING LOAD AMPS
EWT	ENTERING WATER TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
FCU	FAN COIL UNIT	RS/RL	REFRIGERANT SUCTION & LIQUID LINES
FD	FIRE DAMPER	RTU	ROOFTOP AIR HANDLING UNIT
FLA	FULL LOAD AMPS	SA	SUPPLY AIR
FPI	FINS PER INCH	SF	SUPPLY FAN
FPM	FEET PER MINUTE	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	TSP	TOTAL STATIC PRESSURE
IV	INTAKE VENTILATOR	VAV	VARIABLE AIR VOLUME
KW	KILOWATT	VRF	VARIABLE REFRIGERANT FLOW
LAT	LEAVING AIR TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
LRA	LOCKED ROTOR AMPS	WB	WET BULB TEMPERATURE (°F)
LWT	LEAVING WATER TEMPERATURE		

GENERAL MECHANICAL SYMBOLS

- 1 — REVISION NUMBER SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- DEMOLISH TO POINT INDICATED
- 1 / M-001 — NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- 1 — KEYNOTE

CONTINUATION SYMBOLS:

- ROUND DUCT
- RECTANGULAR DUCT

SPACE TAG:

- OFFICE — SPACE NAME
- 101 — SPACE NUMBER
- 100 SF — SPACE AREA

- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT

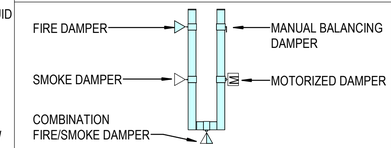
SEISMIC DESIGN CONDITIONS

1. SEISMIC DESIGN DATA:
   A. SEISMIC DESIGN CATEGORY: C
   B. MECHANICAL COMPONENTS IMPORTANCE FACTOR:1.0
2. SEISEMIC RESTRAINTS ARE NOT REQUIRED FOR THE MECHANICAL COMPONENTS AND SYSTEMS PER THE REQUIREMENTS FOR THE INTERNATIONAL BUILDING CODE (IBC) AS DEFINED PER ASCE 7 - SECTION 13.6.
3. REFER TO THE SPECIFICATIONS.

HVAC DUCTWORK LEGEND

22/14	SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
22/14Ø	OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
22Ø	ROUND DUCT SIZE TAG (DIAMETER)
S/A	SUPPLY AIR
O/A	OUTSIDE AIR
R/A	RETURN AIR
E/A	EXHAUST AIR

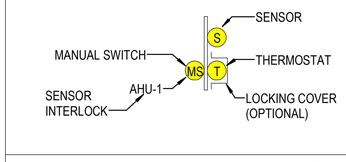
DUCT ACCESSORIES



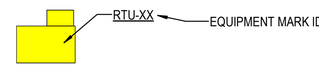
HVAC GRILLES/DIFFUSERS

- SUPPLY DIFFUSER (SEE PLANS OR SCHEDULE FOR SIZES)
- RETURN GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)
- EXHAUST GRILLE (SEE PLANS OR SCHEDULE FOR SIZES)

MECHANICAL DATA DEVICES



MECHANICAL EQUIPMENT TAGS



MECHANICAL SHEET SET NOTE

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.

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Project

AEROJET
New Guard Post - 2

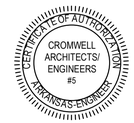
Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp



07-17-2024

Notes

2. **THIS SHEET DESIGNED FOR COLOR PRINTING. CRITICAL INFORMATION MAY BE LOST WITH BLACK AND WHITE PRINTING.**

Project Number **2024-052**

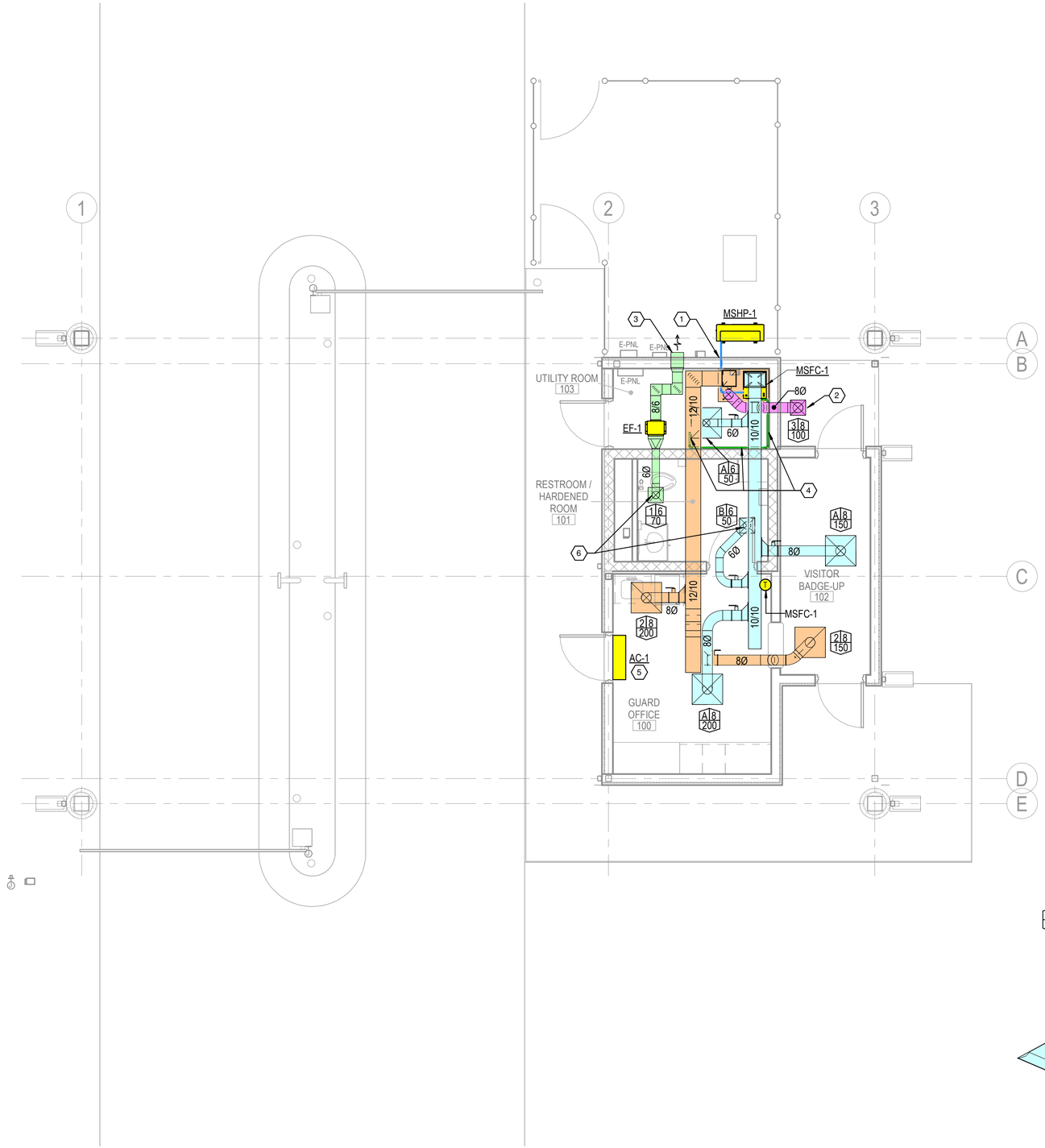
Issue Date **07-17-2024**

Sheet Title

MECHANICAL LEGEND, SYMBOLS, GENERAL NOTES, AND SCHEDULES

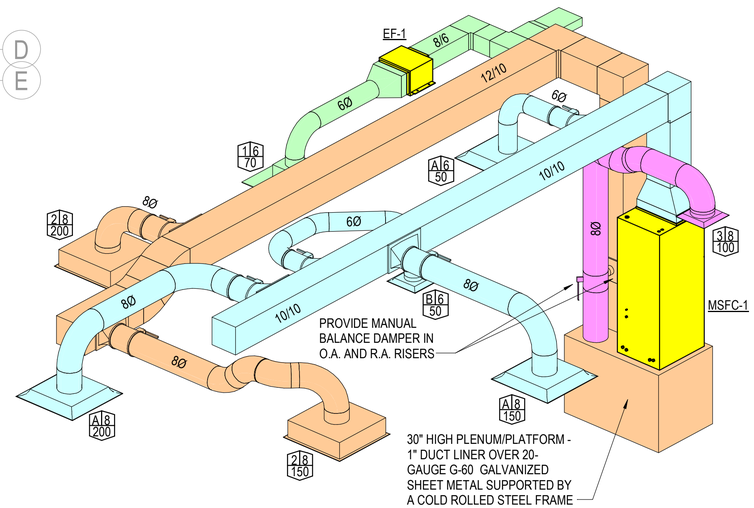
Sheet Number

M-001



1 MECHANICAL PLAN
1/4" = 1'-0"
0 2 4 8

NORTH



2 DUCT RISER
NOT TO SCALE

GENERAL NOTES

1 REFER TO SHEET M-001 FOR MECHANICAL NOTES, ABBREVIATIONS, AND LEGEND SYMBOLS.

KEYED NOTES

1 ROUTE THE INSULATED REFRIGERANT LINE SET UP CONCEALED IN THE EXTERIOR WALL AND CONTINUE AS REQUIRED TO CONNECT TO THE INDOOR FAN COIL UNIT COMPLETE AND OPERATIVE.

2 INSTALL THE ALUMINUM OUTSIDE AIR INTAKE GRILLE IN THE SOFFIT. GRILLE SHALL BE FIELD PAINTED TO MATCH THE SOFFIT.

3 TERMINATE THE EXHAUST DUCT AT A WALL CAP. REFER TO THE "EXHAUST FAN SCHEDULE".

4 ROUTE THE INSULATED CONDENSATE DRAIN LINE ALONG THE WALL AS SHOWN PITCHED TO DRAIN TO THE FLOOR SINK. PIPE SHAL BE FASTENED TO THE WALL AT ALL ELBOWS AND AT 5' O.C. ON STRAIGTH LENGTHS. PIPE SHALL BE CLAMPED TO FLOOR SLAB AT SHORT RUN TO FLOOR SINK. COORDINATE PIPE ROUTING ALONG WALL WITH OTHER TRADES PRIOR TO ROUGH-IN.

5 MOUNT THE AIR CURTAIN AS HIGH AS POSSIBLE ABOVE THE DOOR, TIGHT TO THE CELING.

6 COORDINATE AS REQUIRED TO PROVIDE A SCHEDULE 40 STEEL CAST-IN-PLACE PIPE SLEEVE IN THE CONCRETE LID OF THE SAFE ROOM. SLEEVE SHALL BE SIZED JUST LARGE ENOUGH TO ALLOW FOR DUCT+INSULATION AND SHALL NOT BE OVERSIZED.

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Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

ARKANSAS REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUIDRY
07-17-2024

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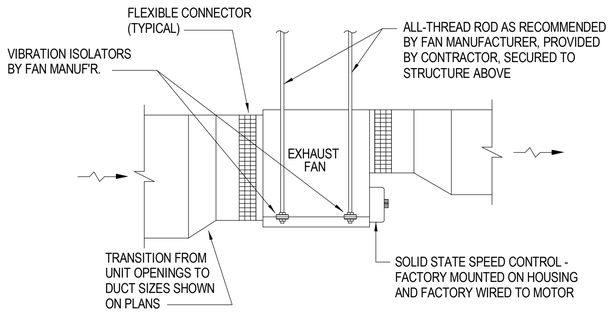
Sheet Title

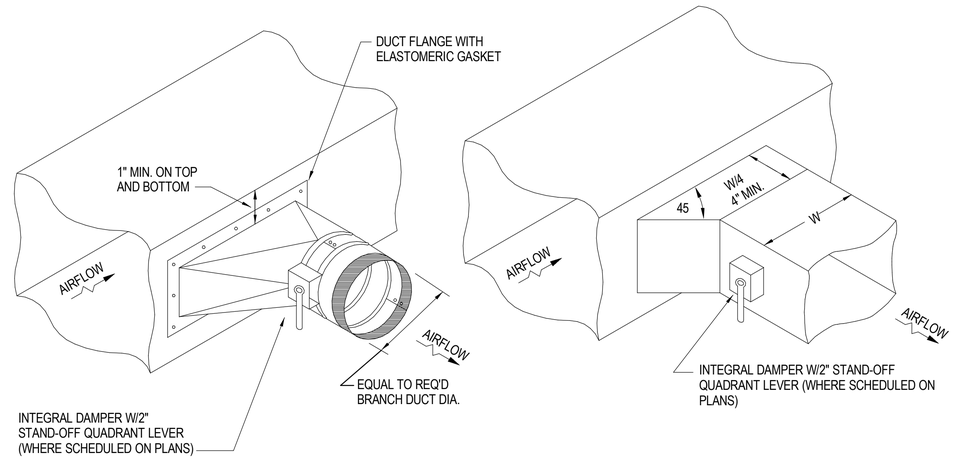
FIRST FLOOR MECHANICAL PLAN

Sheet Number

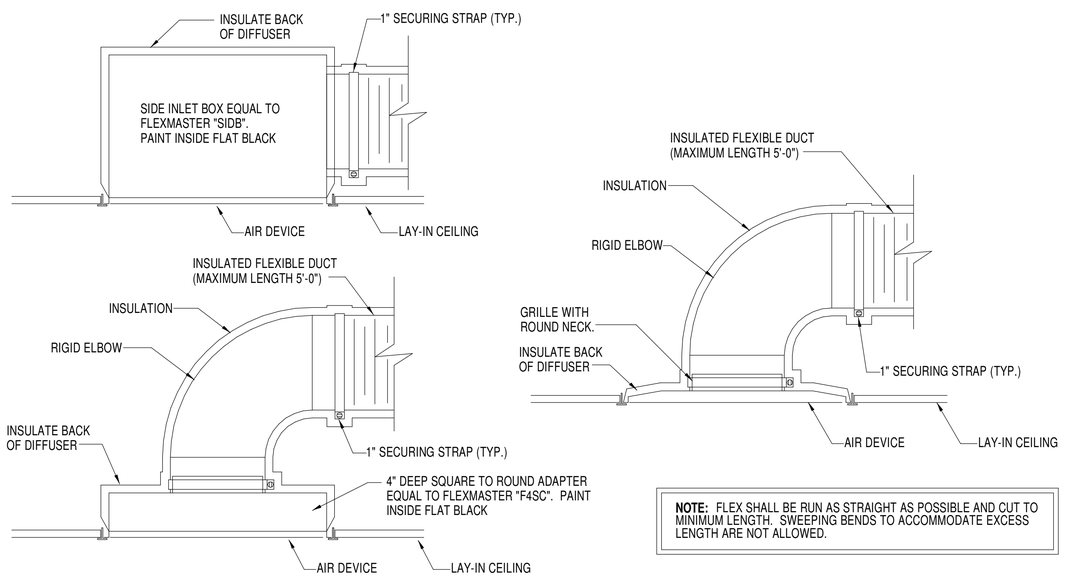
M-101



1 IN-LINE EXHAUST FAN
NONE

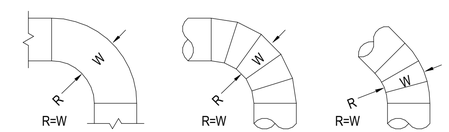


2 LOW PRESSURE BRANCH DUCT TAKE-OFF
NONE

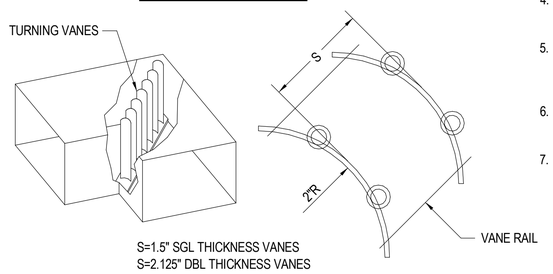


NOTE: FLEX SHALL BE RUN AS STRAIGHT AS POSSIBLE AND CUT TO MINIMUM LENGTH. SWEEPING BENDS TO ACCOMMODATE EXCESS LENGTH ARE NOT ALLOWED.

3 CEILING AIR DEVICE INSTALLATION
NONE



STANDARD RADIUS ELL



MITERED ELL

NOTES:
1. WHERE FULL RADIUS TURNS ARE NOT POSSIBLE, MITERED ELL'S WITH TURNING VANES SHALL BE PROVIDED FOR ALL CHANGES IN HORIZONTAL AND VERTICAL DUCT DIRECTION 45-DEGREE OR GREATER.
2. CONSTRUCT ELBOWS IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
3. TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-9 WITH SINGLE WIDTH VANES FOR VANE LENGTHS UP TO 24".
4. TURNING VANE ELBOW SHALL BE ASHRAE FITTING CR3-15 WITH DOUBLE WIDTH VANES FOR VANE LENGTHS OVER 24".
5. ROUND ELBOWS SHALL BE SMOOTH OR GORED. 90-DEGREE GORED ELL'S SHALL BE MINIMUM 5-PIECE AND 45-DEGREE GORED ELL'S SHALL BE MINIMUM 3-PIECE.
6. VANES SHALL BE WELDED TO THE VANE RAIL IN DUCT SYSTEMS WITH AIR VELOCITIES 3000 FPM AND HIGHER.
7. SHORT RADIUS ELBOWS, ELBOWS WITH MITERED THROATS/RADIUS HEELS, AND ELBOWS WITH MITERED THROATS/CHAMFERED HEELS ARE NOT ACCEPTABLE.

4 DUCT ELL
NONE

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Project

AEROJET New Guard Post - 2

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ARKANSAS ENGINEER

ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
SAMUEL L. GUIDRY
07-17-2024

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Sheet Title

MECHANICAL DETAILS

Sheet Number

M-501

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ELECTRICAL SYMBOLS

RECEPTACLES (MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R) MOUNT 4" ABOVE COUNTER TOP, SINK, OR BACKSPLASH (IF PRESENT)
- SINGLE RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- FLOOR RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- SINGLE RECEPTACLE OUTLET (50A, 250V, 3 POLE, 3 WIRE, NEMA 10-50R)
- SINGLE RECEPTACLE OUTLET (20A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-20R)
- SINGLE RECEPTACLE OUTLET (30A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-30R)
- SINGLE RECEPTACLE OUTLET (30A, 250V, 3 POLE, 4 WIRE, TWIST-LOCK, GROUNDING TYPE, NEMA L15-30R)
- 1 SINGLE SPECIAL-PURPOSE RECEPTACLE OUTLET; NUMBER CORRESPONDS TO THE SPECIAL-PURPOSE RECEPTACLE SCHEDULE
- R SINGLE RECEPTACLE FOR ELECTRIC RANGE (50A, 125/250V, 3 POLE, 4 WIRE, GROUNDING TYPE, NEMA 14-50R)
- DUPLEX RECEPTACLE MOUNTED IN CEILING (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES FLOOR MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)

LIGHT FIXTURES (SEE FIXTURE SCHEDULE ON E-601 FOR TYPE)

- LIGHT FIXTURE, CEILING MOUNTED
- LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, WALL MOUNTED
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, CEILING MOUNTED
- LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, WALL MOUNTED
- EMERGENCY BATTERY POWERED LIGHTING UNIT, WITH SELF CONTAINED BATTERY, CHARGER, ETC. (REFER TO FIXTURE SCHEDULE FOR BATTERY TYPE, VOLTAGE, LAMP TYPE, WATTAGE, ETC.) TRIANGLES DEPICT QUANTITY AND AIMING OF LAMP HEADS
- EXIT SIGN, LIGHTED, CEILING MOUNTED. SHADED AREA INDICATES FACE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- EXIT SIGN, LIGHTED, WALL MOUNTED AT 7'-6" AFF (TO BOTTOM OF SIGN) UNLESS INDICATED OTHERWISE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- FLOOD LIGHT, ARROW INDICATES DIRECTION OF BEAM
- DOCK LIGHT
- PARKING AREA LIGHT FIXTURE, POLE MOUNTED

ELECTRICAL SYMBOLS

TELEPHONE/COMMUNICATIONS/DATA (OUTLETS SHALL BE MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- TELEPHONE OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD. SUBSCRIPT: W - WALL MOUNTED AT 54" AFF;
- TELEPHONE FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- COMBINATION VOICE/DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- COMBINATION VOICE/DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- 4'-0" HIGH x 3/4" THICK FIRE-RETARDANT PLYWOOD BACKBOARD. SEE PLANS FOR LENGTH.
- 2 WIRELESS ACCESS POINT OUTLET CEILING MOUNTED. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESS CEILING SPACE AND PULL CORD. NUMBER INDICATES QUANTITY OF DATA JACKS. ABSENCE OF A NUMBER INDICATES ONE DATA JACK.
- CABLE TRAY

LIGHT FIXTURE IDENTIFICATION

A a — A: UPPER CASE LETTER BESIDE EACH FIXTURE DENOTES FIXTURE TYPE. a: LOWER CASE LETTER BESIDE FIXTURE DENOTES SWITCH CONTROL (WHERE APPLICABLE)

SWITCHGEAR

- MAGNETIC MOTOR STARTER (FURNISHED BY DIVISION 23, UNLESS NOTED OTHERWISE)
- ELECTRICAL PANELBOARD, FLUSH MOUNTED
- ELECTRICAL PANELBOARD, SURFACE MOUNTED
- EXISTING ELECTRICAL PANELBOARD, FLUSH MOUNTED
- EXISTING ELECTRICAL PANELBOARD, SURFACE MOUNTED
- SAFETY SWITCH; 30A CURRENT RATING UNLESS NOTED OTHERWISE. +4'-0" TO HANDLE
- 30 F20 FUSIBLE SAFETY SWITCH; CURRENT RATING AND FUSE RATING NOTED. +4'-0" TO HANDLE
- CB CIRCUIT BREAKER IN WALL MOUNTED ENCLOSURE
- T ELECTRICAL TRANSFORMER, FLOOR MOUNTED UNLESS INDICATED OTHERWISE

SWITCHES (MOUNTED AT 46", UNLESS INDICATED OTHERWISE) (LOWER CASE LETTER INDICATES DEVICES CONTROLLED)

- S_a SWITCH, SINGLE POLE, 20A
- S_2 SWITCH, DOUBLE POLE, 20A SWITCH
- S_3 3-WAY, 20A SWITCH
- S_4 4-WAY, 20A SWITCH
- S_K KEY OPERATED
- S_P SINGLE POLE SWITCH, WITH PILOT LIGHT
- S_M SINGLE POLE MANUAL MOTOR STARTING SWITCH, WITH THERMAL OVERLOAD ELEMENT AND PROVISIONS FOR LOCKING OPEN
- S_D SWITCH, DIMMING (COORDINATE WITH FIXTURE MANUFACTURER)
- S_X SWITCH, MULLION SWITCH
- S_{LV} LOW VOLTAGE WITH MOMENTARY CONTACTS SWITCH
- S_O OCCUPANCY SENSOR, WALL MOUNTED, DUAL TECHNOLOGY
- OS OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY
- PC PHOTOCELL
- +6' AFF — MULTIPLE DEVICES LOCATED SIDE BY SIDE (OR ABOVE AND BELOW, IF DIFFERENT ELEVATIONS ARE SHOWN) AT THE LOCATION INDICATED)

ELECTRICAL SYMBOLS

WALL MOUNTED VISUAL DEVICES TO BE LOCATED SUCH THAT THE ENTIRE LENS OF THE STROBE IS BETWEEN 80" AND 96" AFF. ALL WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E.

MISCELLANEOUS

- J JUNCTION BOX, WALL MOUNT AS INDICATED
- J JUNCTION BOX, CEILING MOUNT AS INDICATED
- C CLOCK OUTLET, WALL MOUNTED 7'-6" AFF
- MOTOR
- 10' BARE #6 COILED & EXOTHERMICALLY WELDED TO COLUMN
- TV CABLE TELEVISION OUTLET BOX MOUNTED 18" AFF WITH CONDUIT STUBBED ABOVE CEILING. PROVIDE PULL CORD.
- CONDUIT RUN, EXPOSED
- CONDUIT RUN, CONCEALED
- FLEXIBLE CONDUIT

CIRCUIT INFORMATION

1GL1-1,3,5 — #8, 1"C

- HOMERUN DESIGNATION
- PHASE CONDUCTOR(S)
- EQUIPMENT GROUND (PROVIDE EQUIPMENT GROUND FOR ALL BRANCH CIRCUITS AND FEEDERS, WHETHER SHOWN OR NOT. WHERE SHOWN TO SHARE A CONDUIT, BRANCH CIRCUITS SHALL SHARE EQUIPMENT GROUND UNLESS INDICATED OTHERWISE)
- NEUTRAL
- CONDUIT SIZE
- WIRE SIZE
- CIRCUIT DESIGNATION

- CIRCUIT DESIGNATION INDICATES PANELBOARD AND CIRCUIT(S) TO WHICH HOMERUN IS CONNECTED.
- WIRE SIZE SHALL BE NO. 12, UNLESS INDICATED OTHERWISE.
- CONDUIT SIZE SHALL BE MINIMUM ALLOWED BY SPECIFICATIONS FOR NO. 12 SIZE WIRE, 3/4" FOR NO. 10, UNLESS INDICATED OTHERWISE.
- CIRCUIT INFORMATION PROVIDED AT THE HOMERUN SYMBOL SHALL APPLY THE ENTIRE LENGTH OF THE CIRCUIT (FROM PANELBOARD TO LAST LOAD).
- WHEN NO PHASE CONDUCTOR OR NEUTRAL IS INDICATED AT THE HOMERUN SYMBOL, PROVIDE ONE PHASE CONDUCTOR AND ONE NEUTRAL, BOTH NO. 12.
- SWITCHING CONDUCTORS, CONDUCTORS FOR NIGHT LIGHT CIRCUITS (UNSWITCHED), ETC. ARE NOT SHOWN, BUT SHALL BE PROVIDED AS NECESSARY.
- WIRE SIZE INDICATED ON THESE DOCUMENTS AS INDICATED BY "NO." OR "#" HAS THE SAME MEANING AS "AWG" (N.E.C. NOMENCLATURE). (I.E."NO. 12" OR "# 12" MEANS "12AWG" IN N.E.C. NOMENCLATURE.)

SECURITY

- M MAGNETIC ALARM SWITCH
- D DURESS ALARM SWITCH
- MD MOTION DETECTOR
- CD CAPACITIVE DETECTOR
- CCTV CAMERA LOCATION, CEILING MOUNTED UNLESS INDICATED OTHERWISE
- KS KEYPAD ACCESS ALARM OVERRIDE CONTROL
- ELECTRIC PUSH-BUTTON
- CARD READER
- ES ELECTRIC STRIKE
- REX REQUEST TO EXIT PUSH BUTTON

ELECTRICAL SYMBOLS

ABBREVIATIONS:

AFF = ABOVE FINISHED FLOOR
AFL = ABOVE FINISHED LANDING
GFI = GROUND FAULT INTERRUPTER
IG = ISOLATED GROUND
UIO = UNLESS INDICATED OTHERWISE
WP = WEATHERPROOF CONSTRUCTION
OF/OI = OWNER FURNISHED / OWNER INSTALLED
CF/CI = CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
TYP = TYPICAL
NIC = NOT IN CONTRACT

GENERAL SYMBOLS NOTES:

1. ALL SYMBOLS MAY NOT BE USED.
2. MOUNTING HEIGHTS ARE ABOVE FINISHED FLOOR OR GRADE TO THE CENTER LINE OF THE OUTLET, DEVICE, ETC. UNLESS INDICATED OTHERWISE.
3. LARGE AMPACITY CIRCUIT DESIGNATION EXAMPLE: 4 SETS OF 3#500, #250, #1/0G, 4"C MEANS IN EACH OF FOUR 4" CONDUITS INSTALL THREE 500 kCM CONDUCTORS, ONE 250 KCM NEUTRAL AND ONE #1/0 GROUND.
4. FOR CONCRETE SLAB PENETRATIONS WITH PVC, SEE DETAIL x, SHEET E-50x.

SINGLE LINE

- CIRCUIT BREAKER, TRIP RATING AS INDICATED, 3 POLE OR AS INDICATED
- 60A DISCONNECT SWITCH OR LOAD INTERRUPTER SWITCH, CURRENT RATING AS INDICATED, 3 POLE OR AS INDICATED
- GFI SWITCH WITH GROUND FAULT INTERRUPTER
- F30 FRS FUSE, CURRENT RATING AND TYPE WHEN INDICATED
- TRANSFORMER, DESCRIPTION AS NOTED OR PER SCHEDULE
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- SS PHASE SELECTOR SWITCH
- A AMMETER
- V VOLTMETER
- WH WATT-HOUR METER
- SPD SURGE PROTECTIVE DEVICE
- AUTOMATIC TRANSFER SWITCH
- G GENERATOR

COLOR LEGEND:

- EXISTING TO REMAIN
- DEMOLISH
- NEW CONSTRUCTION

LINESTYLE LEGEND:

- DEMOLISH
- EXISTING TO REMAIN
- NEW

Project

AEROJET New Guard Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 22761 — ALBERT OSBENCHE

07-17-2024

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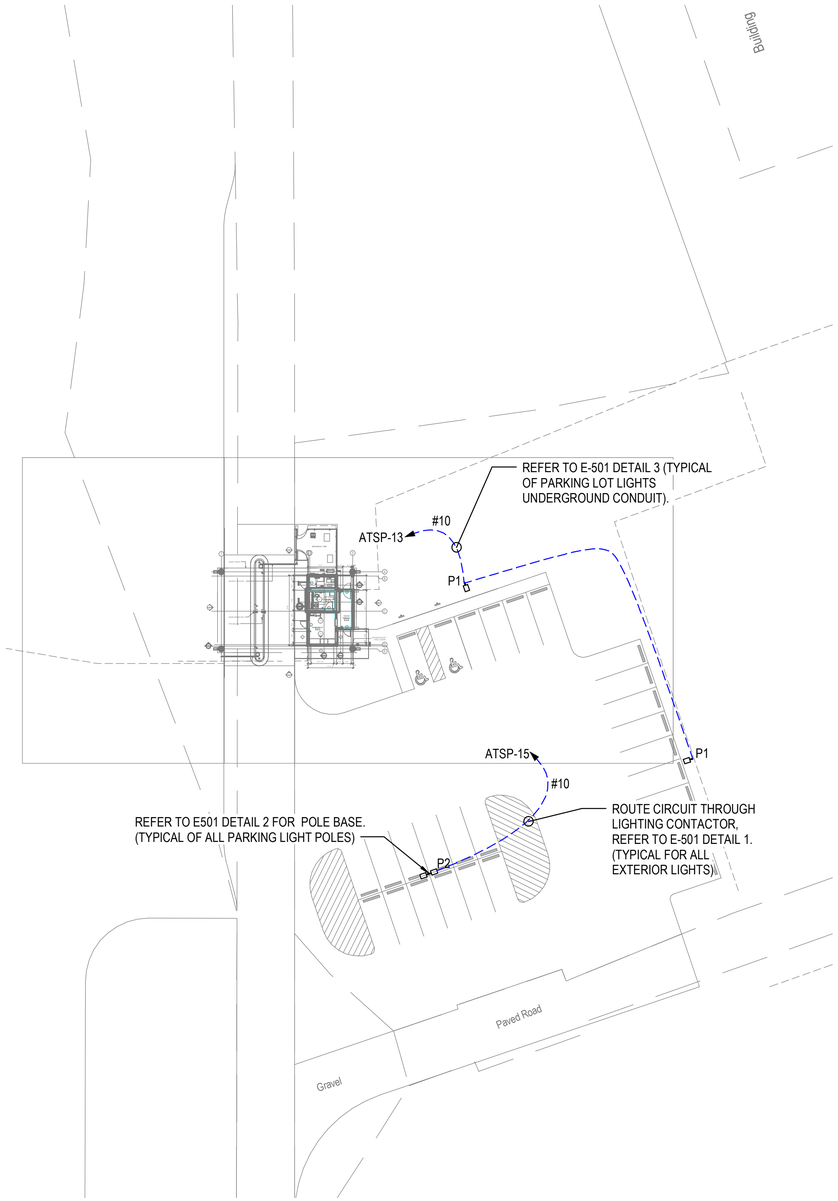
Issue Date **07-17-2024**

Sheet Title

ELECTRICAL LEGEND

Sheet Number

E-001



1 ELECTRICAL SITE PLAN

1" = 30'-0"

0 15 30 60

SCALE : 1" = 30'

NORTH

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE

B. COORDINATE WITH EACH LOCAL UTILITY COMPANY FOR CONNECTION OF NEW LINES AND METERS. PAY COSTS IF ANY.

C. ALL UTILITIES ROUTED UNDERGROUND MAY REQUIRE SAW CUTTING EXISTING PAVEMENTS AND ROAD. PATCH ALL PAVEMENTS AND ROAD TO MATCH EXISTING.

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OSENGA
07-17-2024

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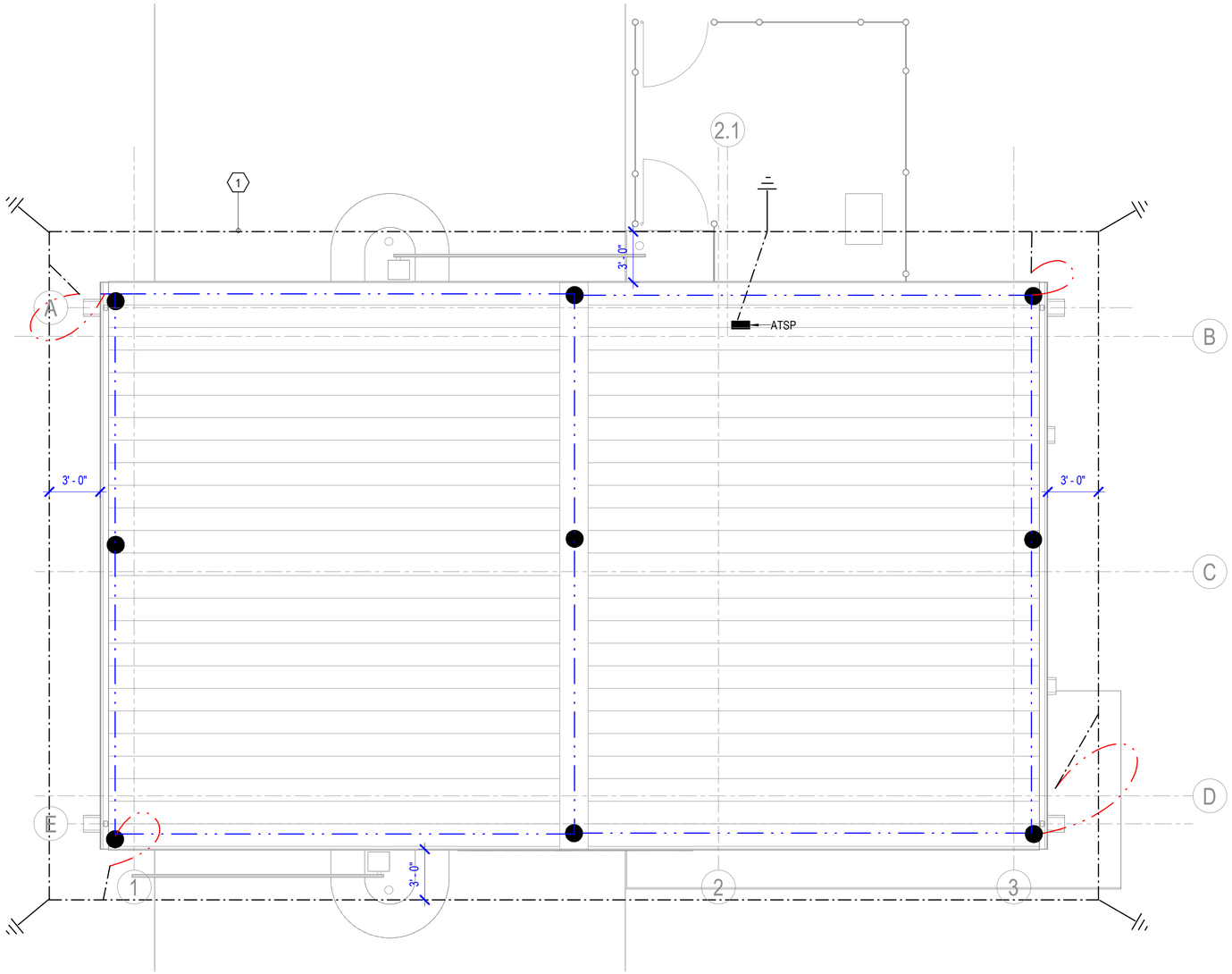
ELECTRICAL SITE PLAN

Sheet Number

ES101

KEYED NOTES:

1. PROVIDE 4/0 BARE COPPER COUNTERPOISE AROUND PERIMETER OF BUILDING. LOCATE COUNTERPOISE 3'-0" MINIMUM AWAY FROM THE BUILDING PERIMETER. THE COUNTER POISE IS INSTALLED 3'-0" UNDERGROUND.



1 LIGHTNING PROTECTION
1/4" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

NORTH

GENERAL NOTES:

A. LIGHTNING PROTECTION DESIGN IS TO SHOW INTENT ONLY, CONTRACTOR SHALL ENGAGE A THIRD PARTY LIGHTNING PROTECTION DESIGNER / ENGINEER WHOSE SOLE PURPOSE IS DESIGNING AND CERTIFYING LIGHTNING PROTECTION SYSTEMS TO PROVIDE A COMPLETE SYSTEM WITH UL MASTER LABEL.

B. LOCATE AIR TERMINALS AS SHOWN AND AS REQUIRED BY NFPA 780. ENSURE THAT ALL AIR TERMINALS ARE WITHIN 2'-0" OF OUTSIDE BUILDING EDGE, OUTSIDE CORNER. ENSURE AIR TERMINAL PROJECTS 10" ABOVE OBJECT PROTECTED AND THAT SPACING DOES NOT EXCEED 20'-0". AIR TERMINALS 2'-0" ABOVE OBJECT PROTECTED SHALL NOT EXCEED SPACING OF 25'-0".

C. MAINTAIN DOWNWARD OR HORIZONTAL COURSING OF MAIN CONDUCTOR CABLE AND ENSURE THAT ALL BENDS HAVE AT LEAST AN 8" RADIUS AND DO NOT EXCEED 90 DEGREES.

D. SUPPORT ALL EXPOSED CONDUCTOR CABLE AT 3'-0" ON CENTER MAXIMUM.

E. BOND TO WATER SERVICE AND OTHER PIPING SYSTEMS AS REQUIRED BY CODE(S).

F. INTERCONNECT LIGHTNING PROTECTION GROUND WITH OTHER BUILDING GROUND SYSTEMS AS REQUIRED BY CODE(S).

G. BOND METAL BODIES ON ROOF THAT ARE OUTSIDE THE ZONE OF PROTECTION THAT ARE SUBJECT TO A DIRECT LIGHTNING STRIKE OR WHICH EXCEED THE HEIGHT OF ADJACENT AIR TERMINALS WITH MAIN SIZE CONDUCTOR CABLE. TYPICAL METAL BODIES INCLUDE BUT ARE NOT LIMITED TO: EXHAUST FANS, VENTS, HANDRAILS, AIR HANDLING UNITS, LADDERS, ANTENNAS, COOLING TOWERS, SKYLIGHTS, ETC.

H. ACTUAL JOBSITE CONDITIONS MAY ALTER SOME AIR TERMINAL AND GROUNDING LOCATIONS.

I. INSTALL GROUND ELECTRODES AS SHOWN AND AS REQUIRED BY CODE(S) BUT IN NO INSTANCE SHALL THEY BE LESS THAN 1'-0" BELOW GRADE AND 2'-0" FROM FOUNDATION WALL. ELECTRODES SHALL PENETRATE EARTH AT LEAST 10'-0".

J. STRUCTURAL STEEL MAY BE USED AS A DOWN CONDUCTOR WHERE PERMITTED BY NFPA 780. MAKE ADDITIONAL CONNECTIONS AS REQUIRED BY NFPA 780.

K. ADJUST LOCATIONS IN FIELD AS REQUIRED TO COMPLY WITH NFPA 780 BASED ON ACTUAL CONDITIONS.

L. PROVIDE SURGE PROTECTION DEVICES MEETING THE REQUIREMENTS OF NFPA 780 FOR ALL POWER SERVICE ENTRANCES AND CONDUCTIVE COMMUNICATIONS SYSTEMS, AND ANTENNA SYSTEMS. MAKE ALL CONNECTIONS.

M. PROTECT DOWN CONDUCTORS IN CONDUIT, ENTIRE VERTICAL ROUTING ON EXTERIOR OF BUILDING. PAINT TO MATCH ADJACENT SURFACE.

N. REPAIR AREAS DISTURBED FOR GROUND ROD INSTALLATION TO EXISTING OR BETTER CONDITIONS AND GRADE PRIOR TO INSTALLATION. CUT CONCRETE AT EXISTING JOINTS WHERE APPLICABLE.

LIGHTNING PROTECTION LEGEND:

- SURFACE MOUNTED LIGHTNING PROTECTION MAIN CONDUCTOR
- AIR TERMINAL
- DOWN CONDUCTOR
- GROUND ROD

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AEROJET New Guard Post - 2

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CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS-ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OSBENE
07-17-2024

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Sheet Title

LIGHTNING PROTECTION PLAN

Sheet Number

EG101

GENERAL NOTES:

A. MOUNT TYPE VA LIGHT FIXTURE 7'-0" ABOVE FINISHED FLOOR.

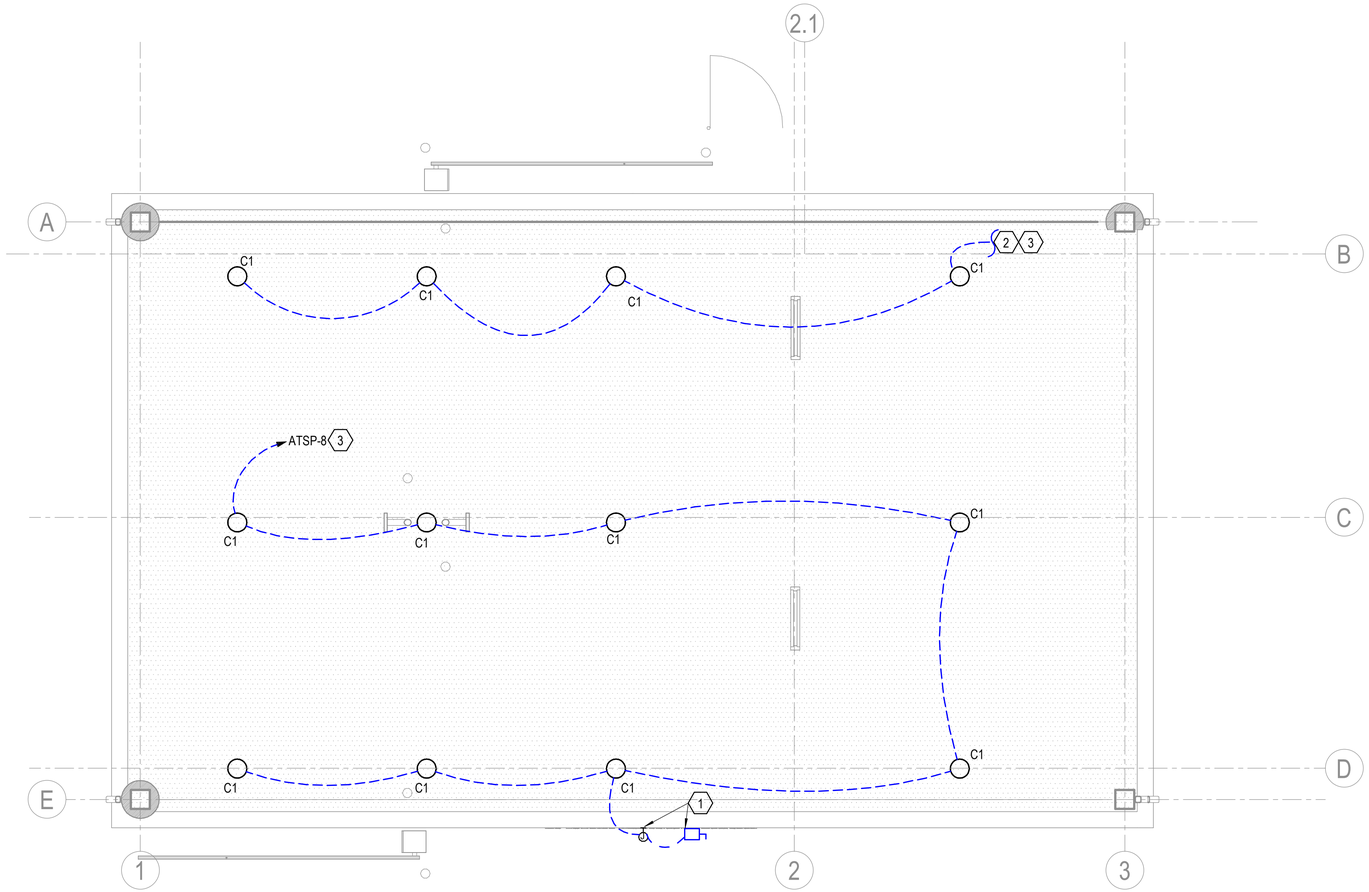
B. TYPE C1 LIGHTS SHALL BE SURFACE MOUNTED ON CANOPY.

C. ALL EXIT LIGHTS SHALL BE POWERED FROM UNSWITCHED LIGHTING CIRCUIT INDICATED.

D. MOUNT ALL EXIT LIGHTS 1' ABOVE DOOR JAMB.

KEYED NOTES:

1. JUNCTION BOX POWERS SIGN LIGHTING, PROVIDED 30A, 240V 2POLE DISCONNECT . COORDINATE WITH INSTALLER FOR EXACT LOCATION .
2. PARTIAL CIRCUIT SEE DETAIL 2 FOR CONTINUATION TO LIGHTS POWERING WALL PACKS. ALL EXTERIOR LIGHTS SHALL BE ROUTED VIA LIGHTING CONTACTOR, REFER TO E501 DETAIL 1.
3. POWER EXTERIOR LIGHTING THROUGH LIGHTING CONTACTOR REFER TO E-501 DETAIL 1.
4. PARTIAL CIRCUIT REFER TO DETAIL 1 KEYNOTE 2 ON THIS SHEET FOR CONTINUATION.



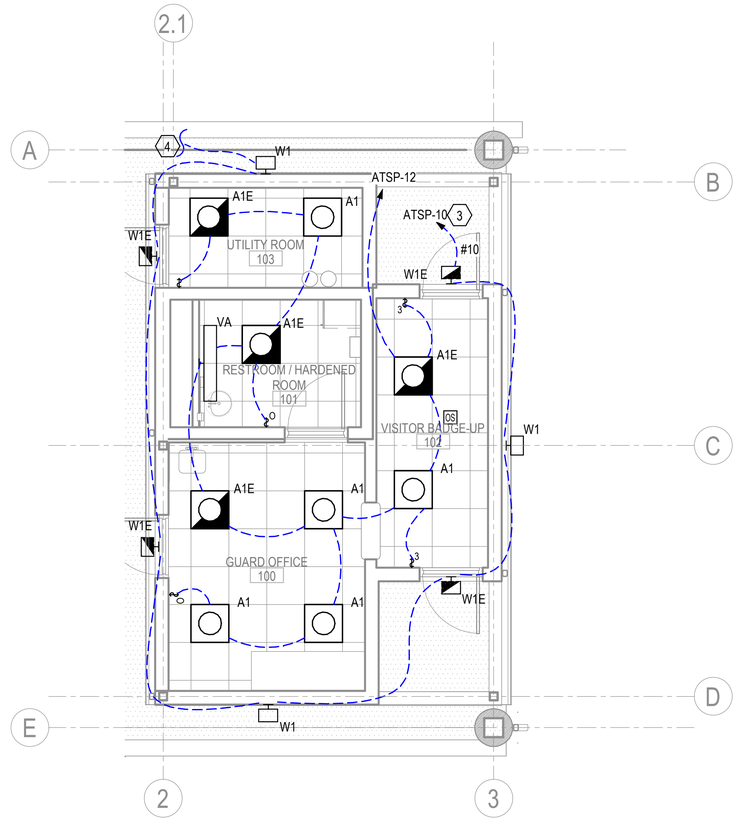
1 CANOPY LIGHTING PLAN

1/4" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

NORTH



2 INTERIOR LIGHTING PLAN

1/4" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

NORTH

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STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 22761 — ALBERT OSCHE

07-17-2024

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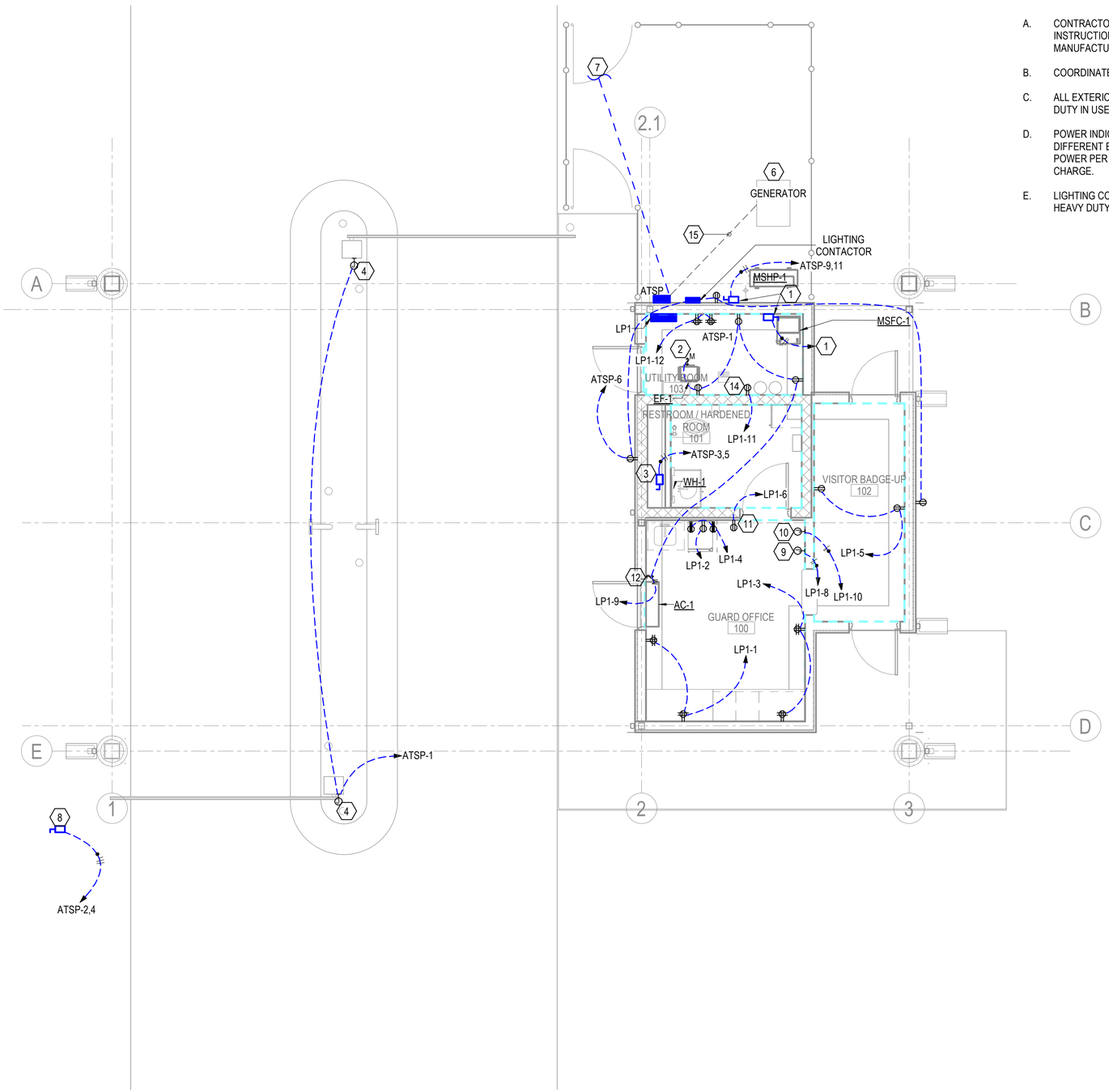
LIGHTING PLAN

Sheet Number

EL101



1 POWER PLAN

1/4" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

NORTH

GENERAL NOTES:

A. CONTRACTOR SHALL WIRE EQUIPMENT PER MANUFACTURER INSTRUCTIONS. ALL WIRING AND CONNECTIONS SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

B. COORDINATE ALL CONDUIT LOCATIONS WITH OTHER DISCIPLINES.

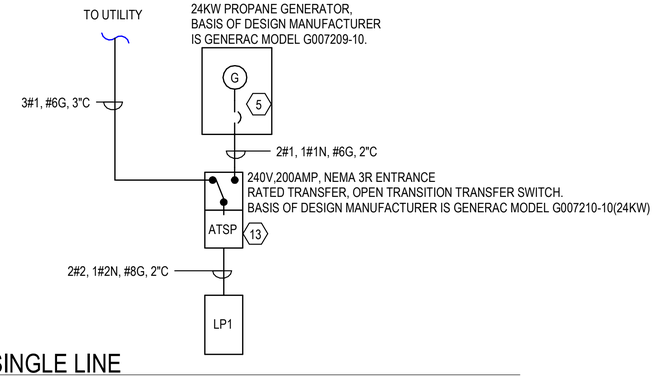
C. ALL EXTERIOR RECEPTACLES SHALL BE GFI TYPE WITH HEAVY DUTY IN USE COVER.

D. POWER INDICATED ON PLANS IS BASED ON BASIS OF DESIGN. IF DIFFERENT EQUIPMENT IS USED CONTRACTOR SHALL PROVIDE POWER PER MANUFACTURER'S RECOMMENDATIONS AT NO EXTRA CHARGE.

E. LIGHTING CONTACTOR AND EXTERIOR DISCONNECTS SHALL BE IN HEAVY DUTY WEATHER PROOF COVERS.

KEYED NOTES:

1. DISCONNECT POWERS MECHANICAL EQUIPMENT COORDINATE EXACT LOCATION WITH INSTALLER. OUTDOOR UNIT POWERS INDOOR UNIT.
2. MANUAL MOTOR STARTER POWERS EF-1, COORDINATE EXACT LOCATION WITH INSTALLER.
3. 240V,2POLE,30AMP DISCONNECT SWITCH TO POWER WATER HEATER, MOUNT DISCONNECT ABOVE CEILING. COORDINATE EXACT LOCATION OF WH-1 WITH INSTALLER, MAKE FINAL CONNECTIONS TO WATER HEATER.
4. JUNCTION BOX POWERS GATE, COORDINATE EXACT LOCATION WITH INSTALLER.
5. PROVIDE 12V, GROUP 35AGM 650CCA BATTERY, OTHER MANUFACTURER APPROVED SUBSTITUTES ARE ACCEPTABLE.
6. PROVIDE GENERATOR PAD APPROVED BY MANUFACTURER.
7. ROUTE CONDUCTORS UNDERGROUND TO UTILITY POLE, PROVIDE ALL NECESSARY ACCESSORIES REQUIRED FOR SERVICE.
8. 240V,3POLE,30A NEMA 3R DISCONNECT POWERS SLIDING GATE, COORDINATE EXACT LOCATION WITH INSTALLER.
9. JUNCTION BOX POWERS CAMERA POWER SUPPLY COORDINATE LOCATION WITH INSTALLER.
10. JUNCTION POWERS DOOR POWER SUPPLY. COORDINATE EXACT LOCATION WITH INSTALLER.
11. RECEPTACLE POWERS WATER COOLER, COORDINATE EXACT LOCATION WITH INSTALLER.
12. JUNCTION BOX POWERS AIR CURTAIN INTEGRAL DISCONNECT. COORDINATE WITH AIR CURTAIN INSTALLER ON EXACT LOCATION.
13. PROVIDE SERVICE ENTRANCE RATED ATS DISTRIBUTION PANELBOARD COMBO, BASIS OF DESIGN MANUFACTURER IS GENERAC MODEL;G007228, 250V,200AMP WITH 16 BREAKER SPACE. PROVIDE COMPATIBLE BREAKERS FOR LOADS INDICATED. INSTALL SPD AT PANEL.
14. RECEPTACLE POWERS WATER SOFTENER, COORDINATE WITH INSTALLER ON CONNECTION TYPE REQUIRED, WHERE WATER SOFTENER REQUIRES HARD WIRING PROVIDE JUNCTION BOX IN LIEU OF RECEPTACLE.
15. PROVIDE UNDERGROUND POWER AND COMMUNICATIONS CONDUCTORS FROM GENERATOR TO ATS. REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZING. CONDUCTORS SHALL BE BURIED 3'-0" BELOW FINISHED GRADE.



2 SINGLE LINE

N.T.S.

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REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OSBORNE
07-17-2024

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Project Number **2024-052**

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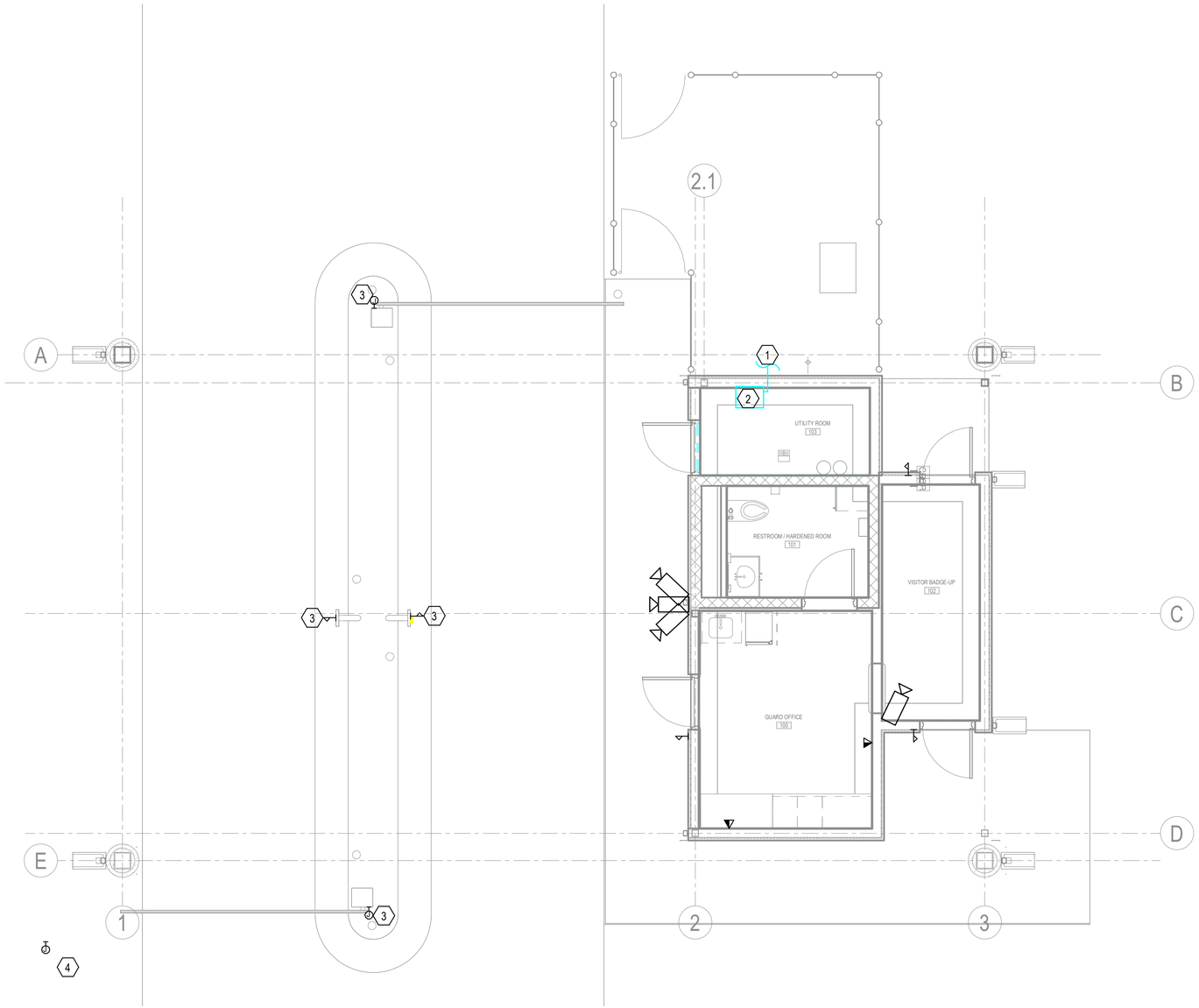
Sheet Title

POWER PLAN & SINGLE LINE DIAGRAM

Sheet Number

EP101



1 SYSTEMS PLAN

1/4" = 1'-0"

0 2 4 8

SCALE : 1/4" = 1'-0"

NORTH

GENERAL NOTES:

A. ALL LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT. ROUTE CONDUIT TO UTILITY ROOM.

B. ALL SECURITY CABLING SHALL BE ROUTED TO UTILITY ROOM OR AS DIRECTED BY SECURITY VENDOR.

C. PROVIDE 24 PORT PATCH PANEL AND TERMINATE CAT 6 DATA CABLES TO THIS PATCH PANEL. LOCATE PATCH PANEL BELOW FIBER OPTIC PATCH PANEL.

D. PROVIDE A 1500KVA RACK MOUNT UPS TO POWER EQUIPMENT LOCATED IN THE RACK.

KEYED NOTES:

1. ROUTE UNDERGROUND CONDUIT TO FIBER LOCATION NEAR BUILDING, EXTEND FIBER TO A 24 PORT PATCH PANEL.
2. PROVIDE A 24 PORT FIBER AND COPPER PATCH PANEL IN A WALL MOUNTED RACK.
3. PROVIDE DATA COMMUNICATIONS JUNCTION BOX. PROVIDE 1" CONDUIT ROUTED TO GUARD POST BUILDING. COORIDINATE EXACT LOCATION WITH SECURITY INSTALLER.
4. JUNCTION BOX IS FOR ROLLING GATE COMMUNICATION CABLES. ROUTE A 1.25" CONDUIT TO GATE CONTROL LOCATION. COORDINATE CONTROL LOCATION WITH OWNER.

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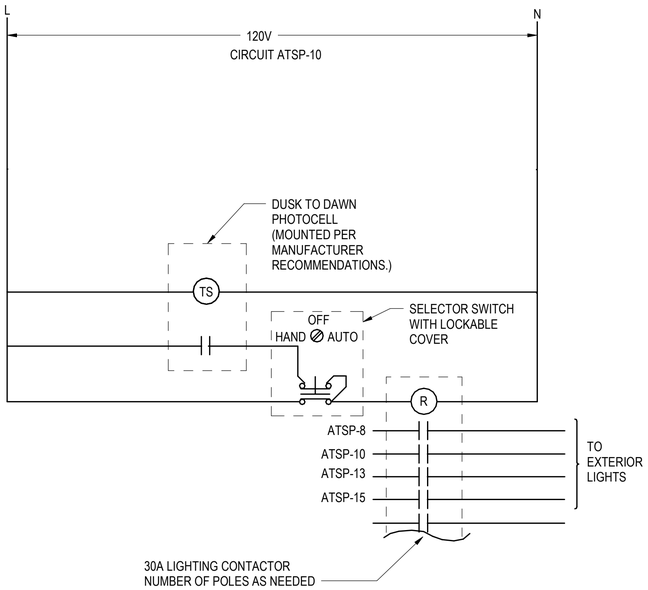
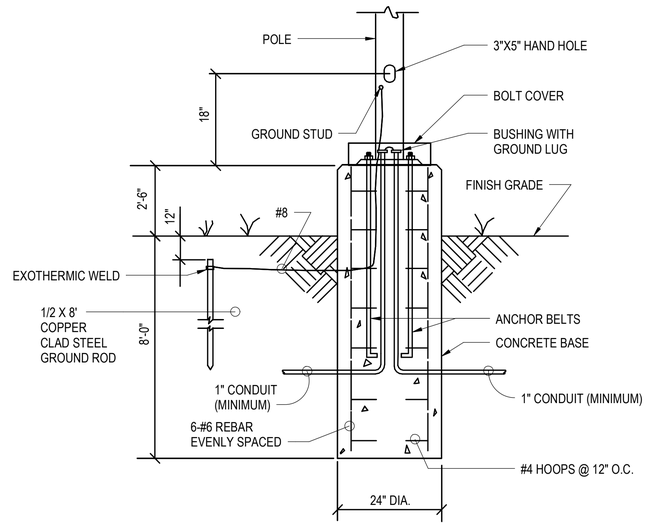
ET101

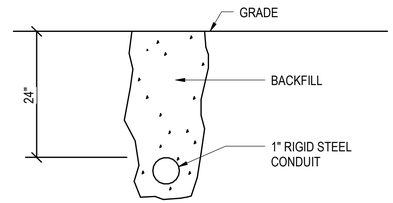


NOTES:
1. PROVIDE LOCK AND 2 KEYS FOR SELECTOR SWITCH COVER.
2. PROVIDE NEMA 3R ENCLOSURE FOR PHOTOCELL, SWITCH, AND CONTACTOR.

1 TIME SWITCH SCHEMATIC DIAGRAM
N.T.S.



2 LIGHTING POLE BASE TYPE 1
N.T.S.



3 TYPICAL UNDERGROUND RACEWAY
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Sheet Title

ELECTRICAL DETAILS

Sheet Number

E-501

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	SOURCE	TOTAL FIXTURE LUMENS	MAXIMUM FIXTURE WATTAGE	DESCRIPTION	KEYED NOTES
A1	COOPER LIGHTING	22CGTX-45-L835	UNV	LED	4500	36	2X2 RECESSED LED PANEL	
A1E	COOPER LIGHTING	22CGTX-45-EL7W-L835	UNV	LED	4500	36	2X2 RECESSED LED PANEL	1
C1	COOPER LIGHTING	TT-D8-740-U-WQ-NW	UNV	LED	18000	153	CANOPY LED LIGHTS	
VA	COOPER LIGHTING	4AWS-L3C39-CA-UNV	UNV	LED	4000	32	VANITY FIXTURE	
P1	BEACON LIGHTING	(1) VP-4-720L-565-4K7-4W-UNV-DBT	UNV	LED	75000	565	PARKING LOT LIGHTING	
P2	BEACON LIGHTING	(2) VP-4-720L-565-4K7-4W-UNV-DBT	UNV	LED	75000 PER HEAD	565 PER HEAD	PARKING LOT LIGHTING	
P-POLE	BEACON LIGHTING	RSS-B-30-60-C-XX-DBT	-	-	-	-	30'-0" SQUARE POLE	3
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
W1E	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK-CBP	UNV	LED	4000	59	EXTERIOR WALL PACK	1
X	COOPER LIGHTING	EDG-1-R-EL	120/277	LED	N/A	3.1	EXIT LIGHT, ARROWS AND FACES PER PLANS	1

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. PROVIDE FLANGE KIT AS REQUIRED

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

1. 90 MIN BATTERY BACK UP.

2. CHAIN MOUNT AT 9'-0" AFF UNLESS NOTED OTHERWISE

3. PROVIDE 2 LOCATION ARMS FOR TYPE P2 LIGHTS AND SINGLE LOCATION ARM FOR TYPE P1 LIGHT

GENERAL NOTES:

A. COORDINATE ALL LIGHT FIXTURE AND POLE FINISHES WITH OWNER.

PANEL SCHEDULE LEGEND

MAIN
CB = CIRCUIT BREAKER
LO = LUGS ONLY

BRANCH CIRCUIT BREAKER TYPE
A = ARC FAULT CIRCUIT INTERRUPTER
G = GROUND FAULT CIRCUIT INTERRUPTER
S = SHUNT TRIP
V = VARIABLE (ADJUSTABLE TRIP)
E = EQUIPMENT GROUND FAULT PROTECTION
L = LOCKOUT DEVICE
O = LOCK ON DEVICE OR BREAKER
R = RED MARKING ON BREAKER

LOAD TYPE
L = LIGHTING
R = RECEPTACLE
H = HVAC
M = MISCELLANEOUS
V = VARIOUS
S = SUBFED

MISCELLANEOUS
SN = SOLID NEUTRAL
EQP GND = EQUIPMENT GROUND BUS
IG = INSULATED GROUND BUS
SPD = SURGE PROTECTIVE DEVICE
AIC = AMPERE INTERRUPTING CAPACITY
KAIC = KILO AMPERE INTERRUPTING CAPACITY

PANEL ATSP — MOUNTING SURFACE — LOCATION MECH RM — MAIN BUS RATING 200 AMPS
MAIN CB — POLES 2 — FRAME 100 — TRIP 100
VOLTAGE 120/240 — PHASE 1 — MINIMUM BREAKER INTERRUPTING CAPACITY 10KA
ACCESSORIES SN + EQP GND + SPD *PREWIRED GENERAC ATS DISTRIBUTION PANELBOARD ATS COMBO"

DEVICE AMPS TRIP	DEVICE POLES	DEVICE TYPE	BRANCH CIRCUIT LOAD	BRANCH CIRCUIT DESCRIPTION	BRANCH CIRCUIT VOLT AMPS	BRANCH CIRCUIT NO	PHASE LOAD VOLT AMPS A	PHASE LOAD VOLT AMPS B	BRANCH CIRCUIT NO	BRANCH CIRCUIT VOLT AMPS	BRANCH CIRCUIT DESCRIPTION	BRANCH CIRCUIT LOAD	DEVICE TYPE	DEVICE POLES	DEVICE AMPS TRIP
20	1		M	BARRIER GATE OPERATOR	1242	1	2162		2	920	ROLLING GATE	M		2	20
15			M	WATER HEATER	1800	3		2720	4	920	-	M			-
-			M	-	1800	5	2340		6	540	EXT RECEPTS	R		1	20
20	1			SPARE		7		918	8	918	CANOPY LIGHTING & SIGN	L		1	20
20	2		H	MSFC-1	1435	9	2401		10	966	EX WALL PACK & CANOPY	L		1	20
-			H	-	1435	11		1687	12	252	INTERIOR LIGHTS	L		1	20
20	1		L	PARKING LOT LIGHTING	1150	13	4840		14	3690	LP1	M		2	80
20	1		L	PARKING LOT LIGHTING	1150	15		3510	16	2360	-	M		-	-
						17			18						
						19			20						
						21			22						
						23			24						
						25			26						
						27			28						
						29			30						
						31			32						
						33			34						
						35			36						
						37			38						
						39			40						
						41			42						
					TOTAL		11743	8835	21 KVA (CONNECTED)			86 AMPS (CONNECTED)			
									18 KVA (DEMAND)			76 AMPS (DEMAND)			

PANEL LP1 — MOUNTING SURFACE — LOCATION UTILITY RM — MAIN BUS RATING 100 AMPS
MAIN CB — POLES 2 — FRAME 80 — TRIP 80
VOLTAGE 120/240 — PHASE 1 — MINIMUM BREAKER INTERRUPTING CAPACITY 10KA
ACCESSORIES SN + EQP GND

DEVICE AMPS TRIP	DEVICE POLES	DEVICE TYPE	BRANCH CIRCUIT LOAD	BRANCH CIRCUIT DESCRIPTION	BRANCH CIRCUIT VOLT AMPS	BRANCH CIRCUIT NO	PHASE LOAD VOLT AMPS A	PHASE LOAD VOLT AMPS B	BRANCH CIRCUIT NO	BRANCH CIRCUIT VOLT AMPS	BRANCH CIRCUIT DESCRIPTION	BRANCH CIRCUIT LOAD	DEVICE TYPE	DEVICE POLES	DEVICE AMPS TRIP
20	1		R	RECEPTS OFFICE	720	1	1520		2	800	FRIDGE OFFICE 100	M	G	1	20
20	1		R	RECEPTS OFFICE	720	3		1080	4	360	RECEPTS COUNTER RM 100	R	G	1	20
20	1		R	VISITOR BADGE UP RECPT	360	5	960		6	600	WATER COOLER	M	G	1	20
20	1			SPARE		7		500	8	500	CAMERA POWER SUPPLY	M		1	20
20	1	G	R	RCPS RM103, AC & EF-1	710	9	1210		10	500	DOOR POWER SUPPLY	M		1	20
20	1	G	R	WATER SOFTNER MECH	180	11		1680	12	1500	SERVER RACK	M		1	20
20	1			SPARE		13			14		SPARE			1	20
20	1			SPARE		15			16		SPARE			1	20
20	1			SPARE		17			18		SPARE			1	20
20	1			SPARE		19			20		SPARE			1	20
20	1			SPARE		21			22		SPARE			1	20
20	1			SPARE		23			24		SPARE			1	20
						25			26						
						27			28						
						29			30						
						31			32						
						33			34						
						35			36						
						37			38						
						39			40						
						41			42						
					TOTAL		3690	3260	7 KVA (CONNECTED)			29 AMPS (CONNECTED)			
									7 KVA (DEMAND)			29 AMPS (DEMAND)			

CROMWELL
1300 East 6th Street Little Rock, AR 72202
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Project

AEROJET
New Guard
Post - 2

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 22761 — ALBERT OSBENCHIK

07-17-2024

Notes

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Project Number **2024-052**

Issue Date **07-17-2024**

Sheet Title

ELECTRICAL SCHEDULES

Sheet Number

E-601