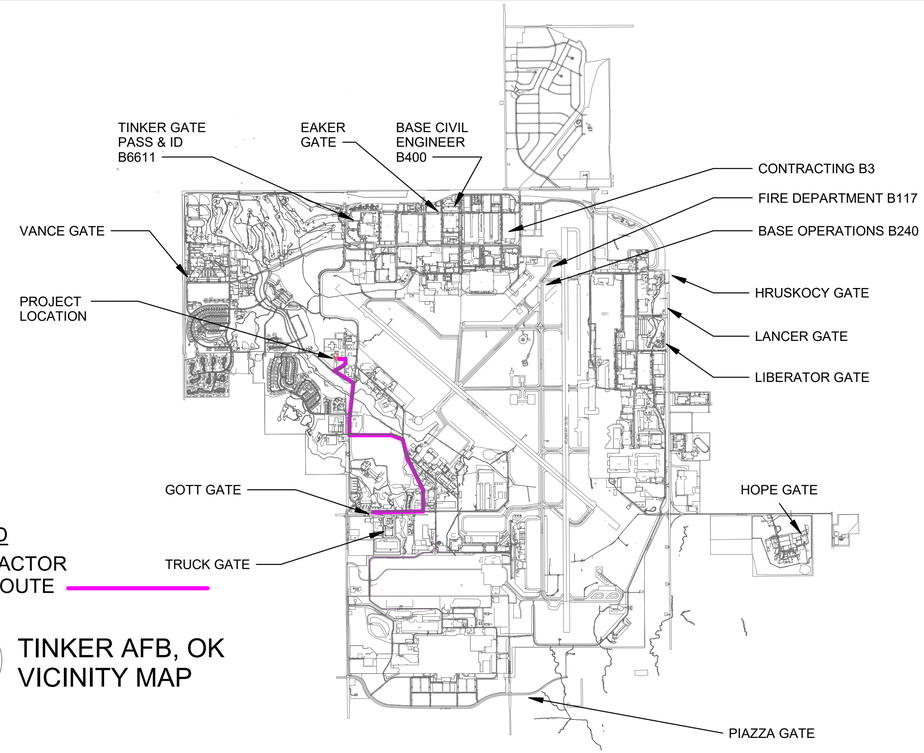
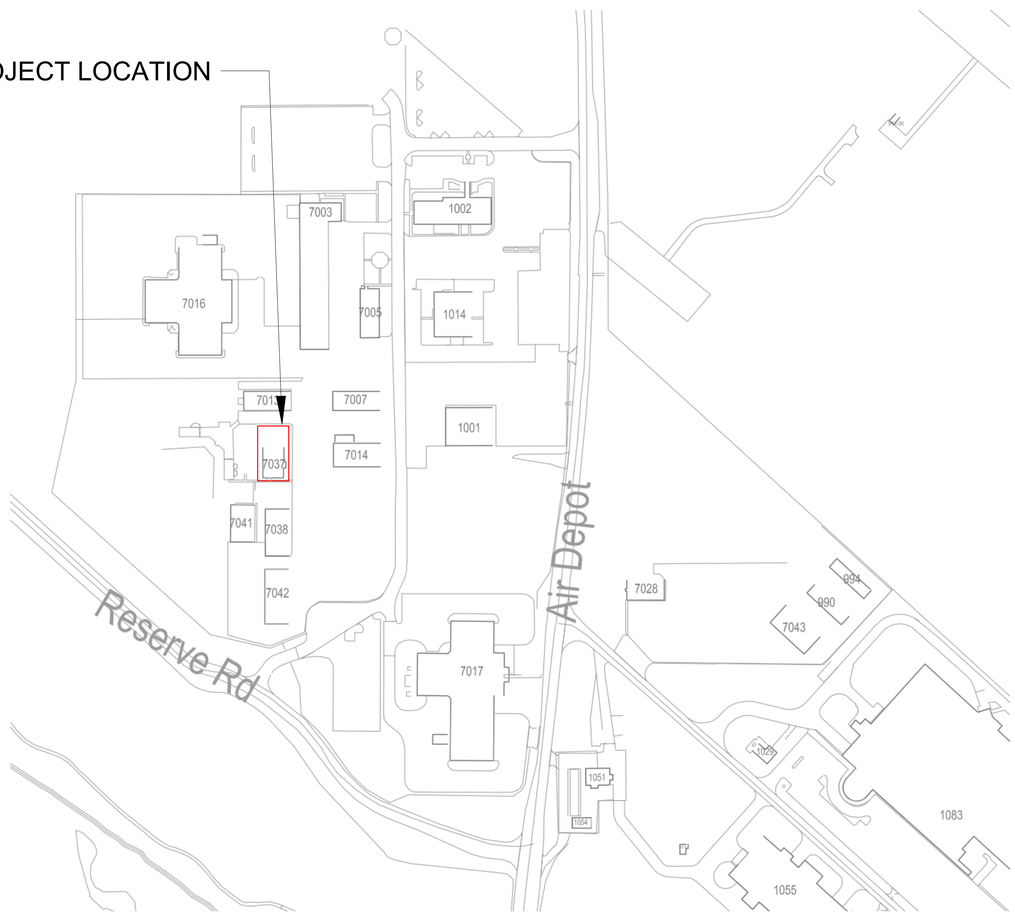
WWYK200270
DRUG TEST OFFICE RENOVATION, BLDG 7037



LEGEND

CONTRACTOR HAUL ROUTE

TINKER AFB, OK
VICINITY MAP



GENERAL NOTES:

1. BRAND NAMES: REFERENCE TO SPECIFIC BRAND NAMES OR COMPANIES IS FOR THE PURPOSE OF ESTABLISHING MINIMUM QUALITY STANDARDS, IDENTIFICATION AND GUIDANCE AND IS NOT INTENDED TO LIMIT SELECTION OF OTHER MANUFACTURERS THAT ARE EQUAL OR EXCEED THE SPECIFIED ITEMS IN TERMS OF PHYSICAL PROPERTIES, INCLUDING, COLOR RANGE, FINISH, DURABILITY, APPEARANCE, PERFORMANCE CHARACTERISTICS, AND OTHER FACTORS. OTHER PRODUCTS, MATERIALS, COLORS AND SYSTEMS, MAY BE SUBMITTED FOR EVALUATION AND APPROVAL/DISAPPROVAL BY THE CONTRACTING OFFICER.

2. THIS SET OF CONSTRUCTION DOCUMENTS SHALL BE CONSIDERED AS A WHOLE IN THAT THE GENERAL CONTRACTOR AND ALL THE SUB-CONTRACTORS ARE RESPONSIBLE FOR THE INFORMATION PRESENTED ON ALL SHEETS ON THE SET OF DRAWINGS AND ALL SECTIONS OF THE SPECIFICATIONS.

3. THE CONTRACTOR IS RESPONSIBLE FOR ERECTING ALL CONSTRUCTION FENCING AND BARRICADES AS REQUIRED TO PROTECT CONSTRUCTION MATERIAL AND TO PREVENT ANY UNAUTHORIZED PERSONNEL FROM ENTERING THE CONSTRUCTION SITE.

4. ANY DAMAGE TO THE EXISTING GROUNDS OR FACILITIES CAUSED BY CONSTRUCTION TRAFFIC OR ANY CONSTRUCTION OPERATION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO MATCH OR EXCEED EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE GOVERNMENT.

5. ALL WORK NOTED & LOCATED IN THESE DOCUMENTS SHALL BE UNDERSTOOD BY THE CONTRACTOR TO REQUIRE ALL NEW LABOR & MATERIALS UNLESS SPECIFICALLY NOTED TO BE "EXISTING" OR "BY OTHERS".

SIGNATURES

CORROSION ENGINEER: (CECE)	DATE:
CE OPERATIONS: (CECO)	DATE:
ZONE MANAGER:	DATE:
CONSTRUCTION MANAGEMENT: (CECE)	DATE:
FIRE DEPARTMENT: (CEFT)	DATE:
SAFETY:	DATE:
INDUSTRIAL HYGIENE:	DATE:
ENVIRONMENTAL:	DATE:
ASBESTOS EVALUATION:	DATE:
COMMUNICATIONS: (COMM)	DATE:
USING AGENCY:	DATE:
REVIEWED BY:	DATE:
REVIEWED BY:	DATE:
DESIGN MANAGER: (CECE)	DATE:
CHIEF DESIGN BRANCH: (CECE)	DATE:
CHIEF ENGINEER DIR: (CECE)	DATE:
BASE CIVIL ENGINEER: (CE)	DATE:

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE

TINKER AFB, OK

STATE OF OKLAHOMA
ROBERT ANDREW MATJASKO
A7250
LICENSED ARCHITECT
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION

ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: JW
DRAWN BY: KH
CHECKED BY: CG
DESIGN FILE LOCATION:

SHEET TITLE
GENERAL NOTES AND VICINITY MAP

SHEET NUMBER
G-001

SHEET LIST

SHEET NUMBER	SHEET NAME	35%	65%	95%	100%
GENERAL					
G-001	COVER SHEET	X	X	X	X
G-002	SHEET INDEX	X	X	X	X
G-003	GENERAL NOTES, ABBREVIATIONS	X	X	X	X
G-100	CODE ANALYSIS	X	X	X	X
G-101	CODE ANALYSIS	X	X	X	X
G-102	LIFE SAFETY PLAN	X	X	X	X
G-103	CODE COMPLIANCE SITE PLAN			X	X
CIVIL					
C-001	GENERAL NOTES AND LEGEND		X	X	X
C-101	EXISTING CONDITIONS AND DEMOLITION PLAN	X	X	X	X
C-102	SITE PLAN	X	X	X	X
C-103	UTILITY PLAN	X	X	X	X
C-104	GRADING AND EROSION CONTROL PLAN		X	X	X
C-501	SITE DETAILS		X	X	X
C-502	SITE DETAILS		X	X	X
C-503	EROSION CONTROL DETAILS		X	X	X
STRUCTURAL					
S-001	GENERAL NOTES AND STANDARD DETAILS	X	X	X	X
S-002	STRUCTURAL SPECIAL INSPECTIONS	X	X	X	X
S-003	STRUCTURAL TYPICAL CONCRETE DETAILS 1	X	X	X	X
S-004	STRUCTURAL TYPICAL CONCRETE DETAILS 2	X	X	X	X
S-005	STRUCTURAL CONCRETE DRILLED PIER AND PEDESTAL SCHEDULES AND DETAILS	X	X	X	X
SB100	SOIL BORING PLAN AND LOG			X	X
SD101	STRUCTURAL FIRST FLOOR DEMOLITION PLAN				X
S-101	FLOOR FRAMING PLAN	X	X	X	X
S-102	ROOF FRAMING PLAN		X	X	X
S-103	ROOF LOADING DIAGRAM		X	X	X
S-201	FRAMING ELEVATIONS		X	X	X
S-301	FOUNDATION SECTIONS		x	X	X
S-302	FOUNDATION SECTIONS		X	X	X
S-501	STRUCTURAL DETAILS		X	X	X
ARCHITECTURAL					
AD101	DEMOLITION - FLOOR PLAN	X	X	X	X
AD102	DEMOLITION - ROOF PLAN	X	X	X	X
A-101	FLOOR PLAN	X	X	X	X
A-102	ROOF PLAN	X	X	X	X
A-103	REFLECTED CEILING PLAN	X	X	X	X
A-104	FINISH PLAN		X	X	X
A-201	ELEVATIONS	X	X	X	X
A-301	BUILDING SECTION		X	X	X
A-302	PARTIAL BUILDING SECTION		X	X	X
A-310	WALL SECTIONS		X	X	X
A-430	INTERIOR ELEVATIONS		X	X	X
A-431	INTERIOR ELEVATIONS		X	X	X
A-501	ARCHITECTURAL DETAILS		X	X	X
A-502	ARCHITECTURAL DETAILS		X	X	X
A-503	CASEWORK DETAILS		X	X	X
A-504	ABA DETAILS		X	X	X
A-601	PARTITION TYPES		X	X	X
A-603	DOOR & WINDOW SCHEDULES		X	X	X
A-604	DOOR & WINDOW DETAILS		X	X	X
FIRE PROTECTION					
F-001	FIRE PROTECTION GENERAL NOTES	X	X	X	X
FA101	FIRE ALARM AND MASS NOTIFICATION PLAN - NEW WORK	X	X	X	X
FA102	ACOUSTICALLY DISTINGUISHABLE SPACE		X	X	X
FA501	FIRE ALARM DETAILS	X	X	X	X
FA601	FIREALARM MATRIX AND DIAGRAM	X	X	X	X
FD101	FIRE ALARM AND MASS NOTIFICATION PLAN - DEMOLITION	X	X	X	X

SHEET LIST

SHEET NUMBER	SHEET NAME	35%	65%	95%	100%
PLUMBING					
P-001	PLUMBING LEGENDS, SYMBOLS, AND ABBREVIATIONS	X	X	X	X
PD100	PLUMBING UNDERFLOOR DEMO PLAN	X	X	X	X
PD101	PLUMBING DEMO FLOOR PLAN	X	X	X	X
P-100	PLUMBING UNDERFLOOR PLAN	X	X	X	X
P-101	PLUMBING FLOOR PLAN	X	X	X	X
P-102	PLUMBING ROOF PLAN	X	X	X	X
P-501	PLUMBING DETAILS	X	X	X	X
P-502	PLUMBING ISOMETRIC - WATER			X	X
P-503	PLUMBING ISOMETRIC - SANITARY	X	X	X	X
P-601	PLUMBING SCHEDULES	X	X	X	X
P-602	PLUMBING SCHEDULES	X	X	X	X
MECHANICAL					
M-001	MECHANICAL LEGENDS, SYMBOLS, AND ABBREVIATIONS	X	X	X	X
MD101	MECHANICAL DEMO PLAN	X	X	X	X
M-101	MECHANICAL FLOOR PLAN	X	X	X	X
M-301	MECHANICAL SECTIONS			X	X
M-501	MECHANICAL DETAILS	X	X	X	X
M-502	MECHANICAL DETAILS	X	X	X	X
M-503	MECHANICAL DETAILS	X	X	X	X
M-601	MECHANICAL SCHEDULES	X	X	X	X
M-602	MECHANICAL SCHEDULES	X	X	X	X
M-603	MECHANICAL SCHEDULES	X	X	X	X
M-701	MECHANICAL CONTROLS			X	X
M-702	MECHANICAL CONTROLS			X	X
M-703	MECHANICAL CONTROLS			X	X
M-704	MECHANICAL CONTROLS				X
ELECTRICAL					
E-001	ELECTRICAL SYMBOLS, LEGEND, & ABBREVIATIONS	X	X	X	X
ED101	ELECTRICAL SITE DEMOLITION PLAN	X	X	X	X
ED102	ELECTRICAL DEMOLITION PLANS		X	X	X
ES101	ELECTRICAL SITE PLAN	X	X	X	X
E-101	ELECTRICAL POWER PLAN		X	X	X
E-102	ELECTRICAL LIGHTING PLAN	X	X	X	X
E-103	LIGHTING PHOTOMETRIC PLAN		X	X	X
E-104	EMERGENCY LIGHTING PHOTOMETRIC PLAN			X	X
E-501	ELECTRICAL DETAILS		X	X	X
E-601	ELECTRICAL SCHEDULES	X	X	X	X
E-602	ELECTRICAL ONE-LINE AND PANEL SCHEDULES	X	X	X	X
TELECOMMUNICATIONS					
T-001	TELECOM AND SECURITY LEGEND		X	X	X
T-101	TELECOM FLOOR PLAN		X	X	X
T-401	ENLARGED TELECOM ROOM		X	X	X
T-501	TELECOM DETAILS		X	X	X
TY101	SECURITY FLOOR PLAN		X	X	X
TY501	SECURITY DETAILS		X	X	X

AFMC
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SHEET TITLE
SHEET INDEX

SHEET NUMBER
G-002

DRAWING ABBREVIATIONS

A ----------
A LABEL CLASS A DOOR
A/C AIR CONDITION
A/C UNIT AIR CONDITIONING UNIT
A/E ARCHITECT/ENGINEER
AB ANCHOR BOLT
ACC ACCESSIBLE
ACS AUTOMATIC CONTROL SYSTEM
ACS DR ACCESS DOOR
ACS PNL ACCESS PANEL
ACT ACOUSTICAL CEILING TILE
ADA AMERICANS WITH DISABILITIES ACT
ADMIN ADMINISTRATION
AFC ABOVE FINISHED COUNTER
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
AFS ABOVE FINISHED SLAB
AGGR AGGREGATE
AHU AIR HANDLING UNIT
AIB AIR INFILTRATION BARRIER
ALT ALTERNATE
ALUM ALUMINUM
ANOD ANODIZE
APC ACOUSTICAL PANEL CEILING
APPROX APPROXIMATE
AR AS REQUIRED
ARCH ARCHITECT
ASC ABOVE SUSPENDED CEILING
ASSY ASSEMBLY
ATC ACOUSTICAL TILE CEILING
AVG AVERAGE
AW ARCHITECTURAL WOODWORK
AWT ACOUSTICAL WALL TREATMENT

B ----------
B LABEL CLASS B DOOR
BALC BALCONY
BB BASEBOARD
BC BOOKCASE
BD BOARD
BDRY BOUNDARY
BFF BELOW FINISH FLOOR
BHMA BUILDER'S HARDWARE MANUFACTURER'S ASSOCIATION
BLDG BUILDING
BLKG BLOCKING
BLT IN BUILT-IN
BN BULLNOSE
BOS BOTTOM OF STEEL
BOT BOTTOM
BP BUILDING PAPER
BRKT BRACKET
BSMT BASEMENT
BTWN BETWEEN
BUR BUILT-UP ROOFING

C ----------
C CONC CAST CONCRETE
C LABEL CLASS C DOOR
CAB CABINET
CATW CATWALK
CAV CAVITY
CBB CEMENTITIOUS (BACKER) BOARD
CD CONSTRUCTION DOCUMENTS
CDW CHILLED DRINKING WATER
CEM PLAS CEMENT PLASTER
CER CERAMIC
CF CONTRACTOR FURNISHED
CF/CI CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CFE CONTRACTOR FURNISHED EQUIPMENT
CFLG COUNTERFLASHING
CFM CUBIC FEET PER MINUTE
CFMF COLD-FORMED METAL FRAMING
CFS CUBIC FEET PER SECOND
CG CORNER GUARD
CI CAST IRON
CIP CAST-IN-PLACE
CJ CONTROL JOINT
CL CENTER LINE
CLG CEILING
CLG DIFF CEILING DIFFUSER
CLG HT CEILING HEIGHT
CLL COLUMN LINE
CLO CLOSET
CLR COLOR
CLRM CLASSROOM
CMU CONCRETE MASONRY UNIT
CNDS CONDENSATE
CDR CARD READER
CO CLEANOUT
COL COLUMN
COMM COMMUNICATION
CONC CONCRETE
CONC FLR CONCRETE FLOOR
CONF CONFERENCE
CONT CONTINUE
COORD COORDINATE
CORR CORRIDOR
CP CONCRETE PIPE
CPT CARPET
CR CONTROL ROOM
CS CAST STONE
CSWK CASEWORK
CT CERAMIC TILE
CTB CERAMIC TILE BASE
CTF CERAMIC TILE FLOOR
CTR CENTER
CU FT CUBIC FEET
CW CASEMENT WINDOW

D ----------
D DEPTH
D LABEL CLASS D DOOR
DBL DOUBLE
DEMO DEMOLITION
DEPT DEPARTMENT
DET DETAIL
DIA DIAMETER
DIR DIRECTION
DIST DISTANCE
DOC DOCUMENT
DR DOOR
DS DOWNSPOUT

E ----------
E LABEL CLASS E DOOR
EA EACH
EF EACH FACE
EIFS EXTERIOR INSULATION AND FINISH SYSTEM
EJ EXPANSION JOINT
ES EACH SIDE
EL ELEVATION
ELEV ELEVATOR
ENTR ENTRANCE
EPS EXPANDED POLYSTYRENE BOARD (INSULATION)
EQ EQUAL
EWC ELECTRIC WATER COOLER
EXP EXPOSED
EXT EXTERIOR
EXT EXTINGUISHER
EXT GR EXTERIOR GRADE

F ----------
FA FIRE ALARM
FAAP FIRE ALARM ANNUNCIATOR PANEL
FAS BD FASCIA BOARD
FC BRK FACE BRICK
FCO FLOOR CLEANOUT
FD FLOOR DRAIN
FDTN FOUNDATION
FE FIRE EXTINGUISHER
FEC FIRE EXTINGUISHER CABINET
FED FEDERAL
FF FINISH FACE
FF EL FINISH FLOOR ELEVATION
FF INSUL FOIL BACKED INSULATION
FGL FIBERGLASS
FH FIRE HOSE
FHP FULL HEIGHT PARTITION
FIN FINISH
FIN BS FINISH BOTH SIDES
FIN FLR FINISH FLOOR
FIN GR FINISH GRADE
FIXT FIXTURE
FLDG FOLDING
FLEX FLEXIBLE
FLG FLOORING
FLMT FLUSH MOUNT
FLR FLOOR
FM FACTORY MUTUAL
FOC FACE OF CONCRETE
FOM FACE OF MASONRY
FR FIRE RESISTANT
FRG FIBER REINFORCED GYPSUM
FRMG FRAMING
FRP FIBERGLASS REINFORCED PLASTIC
FRTW FIRE RETARDANT TREATED WOOD
FS FEDERAL SPECIFICATION
FSTNR FASTENER
FT FEET
FTG FOOTING
FWC FABRIC WALLCOVERING

G ----------
G NATURAL GAS
GALV GALVANIZED
GB GRAB BAR
GFCI GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFGI GOVERNMENT INSTALLED GOVERNMENT INSTALLED
GFRG GLASS-FIBER-REINFORCED GYPSUM
GLZ GLAZING
GR FL GROUND FLOOR
GUT GUTTER
GYP BD GYPSUM BOARD
GYP PLAS GYPSUM PLASTER

H ----------
HB HOSE BIBB
HDPE HIGH DENSITY POLYETHYLENE
HDW HARDWARE
HDWD HARDWOOD
HEPA HIGH EFFICIENCY PARTICULATE AIR (FILTER)
HM HOLLOW METAL
HMD HOLLOW METAL DOOR
HORIZ HORIZONTAL
HT HEIGHT
HYDR HYDRAULIC

I ----------
IBC INTERNATIONAL BUILDING CODE
INSUL INSULATION
INT INTERIOR
ILO IN LIEU OF

J ----------
JAN JANITOR

K ----------
KPD KEYPAD
KIT KITCHEN
KPL KICKPLATE

L ----------
LAM LAMINATE
LAV LAVATORY
LBR LUMBER
LBS POUND
LDG LANDING
LF LINEAR FEET (FOOT)
LIB LIBRARY
LIN LINEAR
LKR LOCKER
LOC LOCATION
LT LIGHT
LVDR LOUVER DOOR
LVR LOUVER

M ----------
MACH RM MACHINE ROOM
MATL MATERIAL
MAX MAXIMUM
MC MOISTURE CONTENT
MD METAL DECK
MECH MECHANICAL
MECH RM MECHANICAL ROOM
MEMB MEMBRANE
MF MILL FINISH
MFR MANUFACTURER
MID MIDDLE
MIL STD MILITARY STANDARD
MIN MINIMUM, MINUTE
MIRR MIRROR
MISC MISCELLANEOUS
MLDG MOLDING (MOULDING)
MO MASONRY OPENING
MOD MODIFY
MB MOISTURE BARRIER
MTG MOUNTING
MTL METAL
MVBL MOVABLE
MWP MEMBRANE WATERPROOFING

N ----------
N NORTH
NA NOT APPLICABLE
NFPA NATIONAL FIRE PROTECTION ASSOCIATION
NIC NOT IN CONTRACT
NO NUMBER
NOM NOMINAL
NP NO PAINT
NRC NOISE REDUCTI

O ----------
OA OVERALL
OC ON CENTER
OD OUTSIDE DIAMETER
OFD OVERFLOW DRAIN
OFF OFFICE
OGL OBSCURE GLASS
OPH OPPOSITE HAND
OPNG OPENING
OPP OPPOSITE
OPQ OPAQUE
OWSJ OPEN WEB STEEL JOIST
OPR OPERABLE
ORD OVERFLOW ROOF DRAIN
ORIG ORIGINAL

P ----------
PA PUBLIC ADDRESS
PAR PARAPET
PAT PATTERN
PB PULL BOX
PBD PARTICLEBOARD
PCC PRECAST CONCRETE
PCF POUNDS PER CUBIC FOOT
PCT PERCENT
PERF PERFORATED
PERIM PERIMETER
PH PHASE
PIL PILASTER
PL PROPERTY LINE
PL GL PLATE GLASS
PLAM PLASTIC LAMINATE
PLAS PLASTER
PLBG PLUMBING
PLG PILING
PLYWD PLYWOOD
PNL PANEL
PP PL PUSH/PULL PLATE
PR PAIR
PRCST PRECAST
PRKG PARKING
PS CONC PRESTRESSED CONCRETE
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PT PRESSURE TREATED
PTD PAPER TOWEL DISPENSER
PTDR PAPER TOWEL DISPENSER AND RECEPTACLE
PTN PARTITION
PWR POWER

Q ----------
QT QUARRY TILE
QTY QUANTITY

R ----------
RB RESILIENT BASE
RBM REINFORCED BRICK MASONRY
RBR RUBBER
RC REINFORCED CONCRETE
RCP REFLECTED CEILING PLAN
RD ROOF DRAIN
RDG INS RIGID INSULATION, SOLID
REC RECESSED
REC ROOM RECREATION ROOM
REF REFERENCE
REM REMOVABLE
REP REPAIR
REPL REPLACE
REQ REQUIRE
REQD REQUIRED
RESIL RESILIENT
REST RESTROOM
RF RESILIENT FLOORING
RFG ROOFING
RH ROOF HATCH
RHR RIGHT HAND REVERSE
RL ROOF LEADER
RLG RAILING
RM ROOM
RO ROUGH OPENING
RSD ROLLING STEEL DOOR
RV ROOF VENT
RVL REVEAL

S ----------
SB SPLASH BLOCK
SCHED SCHEDULE
SD SMOKE DETECTOR
SF SQUARE FOOT (FEET)
SFTWD SOFTWOOD
SGL SINGLE
SHT MTL FLASH (FLASHING) SHEET METAL
SHTHG SHEATHING
SHV SHELVING
SIM SIMILAR
SJ SCORED JOINT
SKLT SKYLIGHT
SLNT SEALANT
SMK SMOKE
SMLS SEAMLESS
SP EL SPOT ELEVATION
SPEC SPECIFICATION
SQ SQUARE
SQ IN SQUARE INCH
SQ YD SQUARE YARD
SST STAINLESS STEEL
ST STAIRS
STD STANDARD
STL JST STEEL JOIST
STL RF DK STEEL ROOF DECK
STOR STORAGE
STR STRINGERS
STRB/HRN STROBE/HORN
SUB FL SUBFLOOR
SV SHEET VINYL
SW SIDEWALK

T ----------
T TREAD
T/S TUB/SHOWER
TC TERRA COTTA
TD TRENCH DRAIN
TEL TELEPHONE
TEMP TEMPORARY
TER TERRAZZO
TFF TOP OF FINISH FLOOR
THK THICKNESS
TK BD TACKBOARD
TMPD GL TEMPERED GLASS
TN TRUE NORTH
TOF TOP OF FOOTING
TOM TOP OF MASONRY
TOP TOP OF PARAPET
TOPO TOPOGRAPHY
TOS TOP OF SLAB
TRANS TRANSOM
TRTD TREATED
TV TELEVISION

INDEX OF DRAWINGS

NUMBERING SYSTEM:

DISCIPLINE:
C - CIVIL
L - LANDSCAPE
A - ARCHITECTURE
M - MECHANICAL
E - ELECTRICAL
P - PLUMBING
S - STRUCTURAL
K - FOOD SERVICE

DISCIPLINE MODIFIER

SHEET NUMBER WITHIN SERIES

XX100

REFER TO A/E/C CAD STANDARD FOR SHEET NUMBERINGSTANDARDS

ANNOTATION CALLOUTS/DRAWING SYMBOLS

INTERIOR ELEVATION
SHEET NUMBER
ELEVATION NUMBER
EXTERIOR ELEVATION
SHEET NUMBER
SECTION
SHEET NUMBER
ENLARGEMENT, DETAIL
SHEET NUMBER

REVISION TAG
ROOM TAG
SPOT ELEVATION
LEVEL NAME
SHEET KEYNOTE

ARCHITECTURAL SYMBOLS

NORTH ARROW

ROOM NAME
ROOM NUMBER

EXISTING COLUMN GRID DESIGNATOR

DETAIL NUMBER

SHEET NUMBER DETAIL IS DRAWN ON

TITLE
XXXXXXXX
SCALE:

ARCHITECTURAL ELEVATIONS EXTERIOR

ARCHITECTURAL ELEVATIONS INTERIOR

ARCHITECTURAL DETAIL

KEYNOTE

PARTITION TYPE REF A-601

REVISION DELTA

FINISH FLOOR ELEVATION
EL. = 100 - '0"

ARCHITECTURAL LEGEND

GRID LINE

EXISTING TO REMAIN

EXISTING TO BE REMOVED

EXISTING TO REMAIN

NEW CONSTRUCTION

DIMENSION LINE
(PLAN, SECTION, DETAIL OR ELEVATION)

DOOR NUMBER
(MATCHES ROOM NUMBER, WITH LETTER SUFFIX FOR MULTIPLE DOORS)

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE UNIFIED FACILITY CRITERIA, INTERNATIONAL (IBC) BUILDING CODE REQUIREMENTS, & TINKER AIR FORCE BASE STANDARDS.

2. THE CONTRACTOR SHALL CHECK ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, AND DIMENSIONS FOR ACCURACY AS SHOWN BEFORE PROCEEDING WITH THE CONSTRUCTION. IF THERE ARE ANY QUESTIONS, THE CONTRACTOR SHALL OBTAIN A CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK IN QUESTION OR RELATED WORK.

3. DRAWINGS SHALL NOT BE SCALED. WRITTEN DIMENSIONS SHALL ALWAYS GOVERN. CONTRACTOR REQUIRING DIMENSIONS NOT NOTED, SHALL CONTACT THE ARCHITECT FOR SUCH INFORMATION PRIOR TO PROCEEDING WITH WORK RELATED TO THOSE DIMENSIONS.

4. LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE, DETAILS TAKE PRECEDENCE OVER ALL. CONTRACTOR SHALL NOTIFY ARCHITECT OF CONFLICTS IN WRITING, PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.

5. DETAILS ARE USUALLY KEYED ONLY ONCE (ON THE PLANS OR ELEVATIONS WHEN THEY FIRST OCCUR) AND ARE TYPICAL FOR SIMILAR CONDITIONS THROUGHOUT UNLESS OTHERWISE NOTED.

6. "TYPICAL" OR "TYP." MEANS THAT THE CONDITION IS REPRESENTATIVE FOR ALL SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLANS AND ELEVATIONS. "ALIGN" AS USED IN THESE DOCUMENTS MEANS TO ACCURATELY LOCATE FINISHES IN THE SAME PLANE.

7. "AS REQUIRED" MEANS AS REQUIRED BY REGULATORY REQUIREMENTS, BY REFERENCED STANDARDS, BY EXISTING CONDITIONS, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICE OR BY THE CONTRACT DOCUMENTS.

8. ALL DIMENSIONS GIVEN AS CLEAR ARE NOT ADJUSTABLE WITHOUT ARCHITECT/ENGINEER'S APPROVAL.

9. DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS OTHERWISE NOTED.

10. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING HANGERS OR OTHER SUPPORTS FOR ALL FIXTURES, EQUIPMENT, CABINETRY, FURNISHINGS AND ALL OTHER ITEMS REQUIRING SAME.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR PROPER INSTALLATION OF MATERIAL AND EQUIPMENT. PROVIDE DEMOLITION AND PATCH/REPAIR IN ALL AREAS (WHETHER SPECIFICALLY SHOWN OR NOT) TO ACCOMMODATE ALL WORK INCLUDING MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION.

12. CONTRACTOR SHALL PROTECT, PATCH AND REFINISH TO MATCH EXISTING AREAS TO REMAIN AND AREAS DISTURBED BY NEW CONSTRUCTION, U.O.N.

13. ALL PIPE CONDUIT AND DUCT PENETRATIONS THROUGH FLOORS AND FIRE-RATED WALLS AND CEILINGS SHALL BE SEALED WITH A UL LISTED ASSEMBLY SUCH THAT FIRE RATINGS ARE MAINTAINED.

14. THERE WILL BE ADJACENT AREAS OF THE BUILDING THAT MUST REMAIN OPERATIONAL DURING THE COURSE OF THIS PROJECT. ACCESS TO CEILING AREAS AND SHUT DOWNS OF SERVICES ARE REQUIRED TO BE COORDINATED WITH THE OWNERS REPRESENTATIVE.

15. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AND QUANTITIES FOR THEIR RESPECTIVE TRADES PRIOR TO SUBMITTING PRICING TO THE GENERAL CONTRACTOR. THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING EXISTING CONDITIONS AND/OR MATERIALS THAT MUST BE REMOVED AND/OR SURFACES PREPARED FOR NEW MATERIALS/WORK: DRYWALL PARTITIONS AND WALLS, MASONRY WALLS, CEMENTITIOUS WALLS, CERAMIC FLOORS AND WALLS AND/OR FINISHES AND MECHANICAL/ELECTRICAL EQUIPMENT AND DEVICES.

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PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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SHEET NUMBER
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CODE ANALYSIS
REFERENCED CODES AND STANDARDS:

UNIFIED FACILITIES CRITERIA (UFC)

UFC 1-200-01, DOD BUILDING CODE (1 SEPTEMBER 2022 WITH CHANGE 4, 17 DECEMEBER 2024)
UFC 1-300-02, UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS) FORMAT STANDARD (9 SEPTEMBER 2025)
UFC 3-600-01, FIRE PROTECTION ENGINEERING FOR FACILITIES (8 AUGUST 2016 WITH CHANGE 6, 06 MAY 2021)
UFC 3-601-02, FIRE PROTECTION SYSTEMS INSPECTION, TESTING, AND MAINTENANCE (07 OCT 2021 WITH CHANGE 1, 04 APRIL 2025)
UFC 4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS (12 DEC 2018 WITH CHANGE 3, 24 MAY 2024)
UFC 4-021-01, DESIGN AND O&M: MASS NOTIFICATION SYSTEMS (09 APRIL 2008 WITH CHANGE 1, 01 JAN 2010)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - LATEST EDITIONS

NFPA 1, FIRE CODE, 2024 EDITION.
NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2026 EDITION.
NFPA 51B, STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK, 2024 EDITION.
NFPA 70, NATIONAL ELECTRIC CODE, 2023 EDITION.
NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2025 EDITION.
NFPA 90A, STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, 2024 EDITION.
NFPA 101, LIFE SAFETY CODE, 2024 EDITION.
NFPA 170, STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS, 2024 EDITION.
NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, 2022 EDITION.
NFPA 291, RECOMMENDED PRACTICE FOR WATER FLOW TESTING AND MARKING OF HYDRANTS, 2025 EDITION.

OTHER REFERENCES

INTERNATIONAL CODE COUNCIL, INTERNATIONAL BUILDING CODE (IBC), 2024 EDITION. (AS AMENDED BY UFC 1-200-01).
INTERNATIONAL CODE COUNCIL, INTERNATIONAL EXISTING BUILDING CODE (IEBC), 2024 EDITION
TAFB FP FIRE PROTECTION STANDARDS (2026)

PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF THE COMPLETE RENOVATION OF THE EXISTING B7037 AND A NEW 2,500 SFT ADDITION AT TINKER AIR FORCE BASE, OKLAHOMA.

PROJECT DESCRIPTION (IEBC AND NFPA 101):

IEBC - ALTERATION LEVEL 3: — IEBC § 604.1

LEVEL 3 ALTERATIONS APPLY WHERE THE WORK AREA EXCEEDS 50 PERCENT OF THE BUILDING AREA.

NFPA 101 - ADDITION: — NFPA 101 § 43.2.2.1.7

ADDITION; AN INCREASE IN THE BULDING AREA, AGGREGATE FLOOR AREA, BUILDING HEIGHT, OR NUMBER OF STORIES OF A STRUCTURE.

GENERAL REQUIREMENTS:

WHERE AN ADDITION, AS DEFINED BY NFPA 101, IS MADE TO A BUILIDNG, BOTH OF THE FOLLOWING CITERIA SHALL BE MET: 1) THE ADDITION SHALL COMPLY WITH OTHER SECTIONS OF NFPA 101 APPLICABLE TO NEW CONSTRUCTION FOR THE OCCUPANCY AND 2) THE EXISTING PORTION OF THE BUILDING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 101 APPLICABLE TO EXISTING BUILDINGS FOR THE OCCUPANCY.

BUILDING USE AND OCCUPANCY CLASSIFICATION:

IBC CHAPTER 3 AND UFC 3-600-01 APPLY. — UFC 1-200-01 § 2-3

IBC APPLIES TO OCCUPANCY CLASSIFICATION AS IT RELATES TO BUILDING HEIGHT, BUILDING AREA, BUILDING SEPARATION AND OCCUPANCY SEPARATION. — UFC 3-600-01 § 3-2.1.2

- IBC OCCUPANCY CLASSIFICATIONS - MIXED USE AND OCCUPANCY - NON-SEPARATED OCCUPANCY: — IBC § 508.3

GROUP B	BUSINESS	IBC § 304 (BUSINESS)
GROUP A-3	ASSEMBLY	IBC § 303 (ASSEMBLY)

NFPA 101 APPLIES TO OCCUPANCY CLASSIFICATION AS IT RELATES TO FIRE/SMOKE RESISTANCE RATING OF INTERIOR LOAD-BEARING PARTITIONS (OTHER THAN OCCUPANCY SEPARATION), INTERIOR FINISH, FIRE PROTECTION FEATURES AND MEANS OF EGRESS. — UFC 3-600-01 § 3-3.1.2

- NFPA OCCUPANCY CLASSIFICATIONS - MIXED USE AND OCCUPANCY - NON-SEPARATED OCCUPANCY: — NFPA 101 § 6.1.14.3

NEW BUSINESS OCCUPANCIES	NFPA 101 CHAPTER 38
NEW ASSEMBLY OCCUPANCIES	NFPA 101 CHAPTER 12

SPECIAL DETAILED REQUIREMENTS BASED ON USE:

USE UFC 3-600-01 CHAPTER 4 IN LIEU OF IBC CHAPTER 4. — UFC 1-200-01 § 2-4
- THERE ARE NO SPECIAL DETAILED REQUIREMENTS BASED ON USE

GENERAL BUILDING HEIGHTS AND AREAS:

IBC CHAPTER 5 AND UFC 3-600-01 APPLY. — UFC 1-200-01 § 2-5

• TYPE IIB CONSTRUCTION (IBC) - II(000) PER NFPA 220		IBC § 602 & TABLE 601
• ALLOWABLE TABULATED FLOOR AREA:	9,500 SF (SINGLE STORY, MIXED USE; GROUP A-3 WITHOUT AUTOMATIC SPRINKLERS.)	IBC Table 506.2.2
• ACTUAL TOTAL BUILDING AREA:	4,600 SFT	IBC § 506 BUILDING AREA
• ALLOWABLE HEIGHT:	55 FT AND 2 STORIES (GROUP A-3 WITHOUT AUTOMATIC SPRINKLER)	IBC § 504.1 TABLE 504.3/504.4
• ACTUAL BUILDING HEIGHT AND STORIES:	14FT AND ONE (1) STORY	IBC § 504 BUILDING HEIGHT

TYPES OF CONSTRUCTION:

IBC CHAPTER 6 AND UFC 3-600-01 APPLY. — UFC 1-200-01 § 2-6
- TYPE IIB CONSTRUCTION (IBC) - II(000) PER NFPA 220 — IBC § 602 & TABLE 601

REQUIRED STRUCTURAL ELEMENTS:

• STRUCTURAL FRAME (INCLUDING COLUMNS, GIRDERS, AND TRUSSES):	0 HOUR	IBC 601 & TABLE 601 ALL ALLOWABLE COMBUSTIBLE MATERIALS AS DEFINED IN SECTION 603
• BEARING WALLS - EXTERIOR SEPARATION DISTANCE >30 FT:	0 HOUR	
• BEARING WALLS - INTERIOR:	0 HOUR	
• NON-BEARING WALLS - EXTERIOR SEPARATION DISTANCE >30 FT:	0 HOUR	
• NON-BEARING WALLS & PARTITIONS - INTERIOR:	0 HOUR (NOTE 1)	
• FLOOR CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS):	0 HOUR	
• ROOF CONSTRUCTION (INCLUDING SUPPORTING BEAMS AND JOISTS):	0 HOUR	

NOTE 1: FIRE RATING MAYBE INCREASED DUE TO OTHER CRITERIA SUCH AS FIRE AREA SEPARATION.

FIRE AND SMOKE PROTECTION FEATURES:

IBC CHAPTER 7 AND UFC 3-600-01 APPLY. — UFC 1-200-01 § 2-7
CONFORM TO THE REQUIRMENTS OF NFPA 101 CHAPTER 8, EXCEPT WHERE IBC CHAPTERS 5 AND 6 SPECIFICALLY REFERENCE IBC CHAPTER 7. — UFC 3-600-01 § 7-1

PROTECTION FROM HAZARDS
- NO PROTECTION FROM HAZARDS REQUIRED.

INTERIOR WALL, CEILING, AND FLOOR FINISHES: NFPA 101 CHAPTER 10 TABLE A.10.2.2, AND 12.3.3.5

GROUP	WITH SPRINKLER SYSTEM			
	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES	INTERIOR FINISH FLOOR
NEW ASSEMBLY < 300	A	A OR B	A, B, OR C	CLASS II
NEW BUSINESS	A OR B	A OR B	A, B, OR C	CLASS I OR II

FIRE PROTECTION SYSTEMS:

USE UFC 3-600-01 IN LIEU OF IBC CHAPTER 9. — UFC 1-200-01 § 2-9

FIRE DEPARTMENT VEHICLE ACCESS
- FIRE DEPARTMENT VEHICLE ACCESS EXISTS AND WILL NOT BE MODIFIED FOR THIS BUILDING.

FIRE FLOW FOR FACILITIES
- FIRE FLOW FOR NON-SPRINKLERED BUILDINGS MUST MEET THE REQUIREMENTS OF NFPA 1 — UFC 3-600-01 § 9-2.2
  - REQUIRED FIRE FLOW FOR A NON-SPRINKLERED FACILITY OF TYPE II(000) CONSTRUCTION AND LESS THAN 5,900 SFT IS 1,500 GPM. — NFPA 1 TABLE 18.4.4.2.1
  - ACTUAL FIRE FLOW BASED ON A FIRE HYDRANT FLOW TEST IS 1,636 GALLONS AT 20 PSI.

FIRE HYDRANT PLACEMENT AND COVERAGE (SEE CODE COMPLIANCE SITE PLAN)
- THERE WILL BE NO ALTERATION TO THE EXISTING FIRE HYDRANT PLACMENT AND COVERAGE AS PART OF THE OF THIS PROJECT'S SCOPE OF WORK.

AUTOMATIC SPRINKLER PROTECTION
- AUTOMATIC SPRINKLER PROTECTION IS NOT REQUIRED FOR SINGLE STORY TYPE I OR II CONSTRUCTION BUILDING UNDER 15,000 SFT. — UFC 3-600-01 § 9-7.2.1.1

STANDPIPE SYSTEMS
- STANDPIPE SYSTEMS IS NOT REQUIRED. — UFC 3-600-01 § 9-10.2.1

PORTABLE FIRE EXTINGUISHERS
- PORTABLE FIRE EXTINGUISHERS WILL BE LOCATED IN ACCORDANCE WITH NFPA 10. — UFC 3-600-01 § 9-17.2.1
- EXTINGUISHERS FOR ELECTRONIC EQUIPMENT AREAS SPACES WILL BE SUITABLE FOR ELECTRONICS (EG: CLEAN AGENT). — UFC 3-600-01 § 9-17.2.2
- RECESSED OR SEMI-RECESSED CABINETS TO BE PROVIDED IN FINISHED SPACES. — UFC 3-600-01 § 9-17.3.1
- MECHANICAL ROOMS WILL HAVE BRACKET MOUNTED FIRE EXTINGUISHERS. — UFC 3-600-01 § 9-17.3.2

FIRE ALARM AND MASS NOTIFICATION SYSTEM (MNS)
- A FIRE ALARM SYSTEM IS NOT REQUIRED AS THE BUILDING IS NOT THREE OR MORE STORIES IN HEIGHT, IS NOT SUBJECT TO 50 OR MORE OCCUPANTS ABOVE OR BELOW THE LEVEL OF EXIT DISCHARGE, AND IS NOT SUBJECT TO 500 OR MORE TOTAL OCCUPANTS. HOWEVER, A FIRE ALARM SYSTEM WILL BE PROVIDED TO FACILITE THE REQUIRED MASS NOTIFICATION SYSTEM AND EMERGENCY REPORTING TO THE BASE FIRE DEPARTMENT. — NFPA 101 § 12.3.4.1.1
- A MASS NOTIFICATION SYSTEM IS REQUIRED THROUGHOUT. — UFC 4-010-01 § 3-22
  - BUILDING TO BE INHABITED (ROUTINELY OCCUPIED BY 11 OR MORE OCCUPANTS). — UFC 4-010-01 § 1-8
- FIRE ALARM SYSTEM TO BE INSTALLED IN ACCORDANCE WITH UFC-3-600-01, NFPA 70, NFPA 72, ABA AND TINKER FIRE PROTECTION STANDARD. — UFC 3-600-01 § 9-18.3.1
- MASS NOTIFICIATION SYSTEM TO BE INSTALLED IN ACCORDANCE WITH UFC 4-021-01. — UFC 3-600-01 § 9-18.4
- ANALOG / ADDRESSABLE FIRE ALARM SYSTEM WILL BE PROVIDED. — UFC 3-600-01 § 9-18.4
- MONACO MAAP-X FIRE ALARM/MASS NOTIFICATION CONTROL PANEL REPORTING TO BASE-WIDE MONACO D-21 MONITORING STATION. — CAANG IDG
- MANUAL PULL STATION AT ALL EXIT DOORS. — UFC 3-600-01 § 9-18.7.4
- LOCAL OPERATOR CONSOLE (LOC) INSTALLED SO OCCUPANTS DO NOT NEED TO TRAVEL MORE THAN 200 FT OR TRAVEL TO OTHER FLOORS TO ACCESS LOC. — UFC 4-021-01 § 4-5.1
- VOICE INTELLIGIBILITY TO BE PROVIDED THROUGHOUT (CIS >0.8 OR STI > 0.70). — UFC 4-021-01 § 4-6.1.2
- THE FIRE ALARM EVACUATION SIGNAL WILL BROADCAST OVER THE MNS SYSTEM. — UFC 3-600-01 § 9-18.1.2.1
- BREAKER LOCK WILL BE PROVIDED FOR FIRE ALARM AND MNS IAW UFC 3-520-01. — UFC 3-600-01 § 9-18.11.1
- SURGE PROTECTION DEVICE WILL BE PROVIDED FOR ALL 120 VAC POWERED FIRE ALARM AND MNS EQUIPMENT. — UFC 3-600-01 § 9-18.11.2

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G-100

MEANS OF EGRESS (SEE LIFE SAFETY PLANS):

USE UFC 3-600-01 IN LIEU OF IBC CHAPTER 10.		UFC 1-200-01 § 2-10
• DO NOT USE IBC CHAPTER 10, EXCEPT WHERE REFERENCED BY ARCHITECTURAL BARRIERS ACT (ABA) STANDARDS.		
• WHERE ABA STANDARDS REFERENCES PREVIOUS VERSIONS OF IBC, THE APPLICABLE REQUIRMENTS OF THE 2015 IBC ARE ACCPETABLE.		
NFPA 101 EXIT ACCESS CORRIDORS		
• CORRIDORS USED AS EXIT ACCES AND SERVING AN AREA HAVING AN OCCUPANT LOAD EXCEEDING 30 SHALL BE SEPARATED FROM OTHER PARTS OF THE BUILDING BY WALLS HAVING NOT LESS THAN A 1-HOUR FIRE RESISTANCE RATING.		NFPA 101 § 7.1.3.1
ACCESS-CONTROLLED EGRESS DOOR ASSEMBLIES		
• DOOR ASSEMBLIES IN THE MEANS OF EGRESS WILL BE PERMITTED TO BE EQUIPPED WITH ELECTRICAL LOCKING HARDWARE THAT PREVENTS EGRESS, PROVIDED THAT THE FOLLOWING ARE MET:		NFPA 101 § 7.2.1.6.2
• SENSOR WILL BE PROVIDED ON THE EGRESS SIDE, ARRANGED TO UNLOCK THE DOOR IN THE DIRECTION OF EGRESS UPON DETECTION OF APPROACHING OCCUPANT.		NFPA 101 § 7.2.1.6.2(1)
• DOOR LEAVE WILL AUTOMATICALLY UNLOCK IN THE DIRECTION OF TRAVEL UPON LOSS OF POWER TO THE SENSOR OR TO THE PART OF THE SYSTEM THAT LOCKS THE DOOR.		NFPA 101 § 7.2.1.6.2(2)
• DOOR LOCKS WILL BE ARRANGED TO UNLOCK IN THE DIRECTION OF EGRESS FROM A MANUAL RELEASE DEVICE COMPLYING WITH THE FOLLOWING:		NFPA 101 § 7.2.1.6.2(3)
• MANUAL RELEASE DEVICE WILL BE LOCATED ON THE EGRESS SIDE 40 IN TO 48 IN ABOVE THE FLOOR AND WITHIN 60 IN. OF THE SECURED DOOR OPENING.		
• THE MANUAL RELEASE DEVICE WILL BE READILY ACCESSIBLE AND CLEARLY IDENTIFIED BY A SIGN THAT READS "PUSH TO EXIT".		
• WHEN OPERATED, THE MANUAL RELEASE DEVICE WILL RESULT IN DIRECT INTERRUPTION OF POWER TO THE LOCK, INDEPENDENT OF LOCKING SYSTEM ELECTRONICS.		
• ACTIVATION OF THE BUILDING SPRINKLER SYSTEM OR FIRE PROTECTION SIGNALING SYSTEM WILL UNLOCK THE EGRESS DOORS IN THE DIRECTION OF EGRESS AND THEY WILL REMAIN UNLOCKED UNTIL THE FIRE PROTECTIVE SIGNALLING SYSTEM IS MANUALLY RESET.		NFPA 101 § 7.2.1.6.2(6)
• THE EGRESS SIDE OF ACCESS-CONTROLLED EGRESS DOORS WILL BE PROVIDED WITH EMERGENCY LIGHTING IN ACCORDANCE WITH NFPA 101 § 7.9.		NFPA 101 § 7.2.1.6.2(7)
DOOR LEAF SWING DIRECTION		
• DOORS WILL SWING IN THE DIRECTION OF TRAVEL FROM ROOMS SERVING MORE THAN 50 PERSONS.		NFPA 101 § 7.2.1.4.2 (1)
DOOR LEAF ENCROACHMENT		
• DOORS LEAVES SWINGING INTO THE MEANS OF EGRESS WILL LEAVE NOT LESS THAN ON HALF OF THE REQUIRED EGRESS WIDTH.		NFPA 101 § 7.2.1.4.3.1
PROJECT OCCUPANCY LOAD FACTORS		
• ASSEMBLY - WAITING SPACES	15 SQ FT/PERSON GROSS FLOOR AREA	NFPA 101 12.1.7.2
• BUSINESS - OTHER	150 SQ FT/PERSON GROSS FLOOR AREA	NFPA 101 TABLE 7.3.1.2
• STORAGE - IN STORAGE	500 SQ FT/PERSON GROSS FLOOR AREA	NFPA 101 TABLE 7.3.1.2
• MECHANICAL, ELECTRICAL, OTHER BUILDING EQUIPMENT SPACES	500 SQ FT/PERSON GROSS FLOOR AREA	UCF 3-600-01 § 10-3.1, TABLE 10-1
• IT EQUIPMENT ROOMS OR TELOCOMMUNICATIONS ROOMS	300 SQ FT/PERSON GROSS FLOOR AREA	UCF 3-600-01 § 10-3.1, TABLE 10-1
TRAVEL DISTANCE TO AN EXIT		
• NEW ASSEMBLY (NON-SPRINKLERED): 200 FEET		NFPA 101 § 38.2.5.3
• NEW BUSINESS (NON-SPRINKLERED): 200 FEET		NFPA 101 § 38.2.6.2
COMMON PATH OF TRAVEL		
• NEW ASSEMBLY (NON-SPRINKLERED): 20 FEET		NFPA 101 § 12.2.5.2
• NEW BUSINESS (NON-SPRINKLERED): 75 FEET		NFPA 101 § 38.2.5.2.3
DEAD END CORRIDOR		
• NEW ASSEMBLY (NON-SPRINKLERED): 20 FEET		NFPA 101 § 12.2.5.3
• NEW BUSINESS (NON-SPRINKLERED): 20 FEET		NFPA 101 § 38.2.5.3.2
ILLUMINATION OF MEANS OF EGRESS		
• MINIMUM ILLUMINATION FOR MEANS OF EGRESS WILL BE AT LEAST 10 FC (MEASURED FROM WALKING SURFACE).		NFPA 101 § 7.8.1.3 (1)
• MINIMUM ILLUMINATION FOR FLOORS AND OTHER WALKING SURFACES WILL BE AT LEAST 1 FC.		NFPA 101 § 7.8.1.3 (2)
MARKING MEANS OF EGRESS		
• EXITS OTHER THAN MAIN EXTERIOR EXIT DOORS THAT ARE OBVIOUSLY AND CLEARLY IDENTIFIED AS EXITS, WILL BE MARKED BY APPROVED SIGNS.		NFPA 101 § 7.10.1.2.1
• ACCESS TO EXITS WILL BE MARKED BY APPROVED, READILY VISIBLE SIGNS IN ALL CASES WHERE THE EXIT OR WAY TO REACH EXITIS NOT READILY APPARENT TO OCCUPANTS.		NFPA 101 § 7.10.1.5.1
• A SIGN WITH DIRECTIONAL INDICATOR SHOWING DIRECTION OF TRAVEL WILL BE PLACED IN EVERY LOCATION WHERE DIRECTION OF TRAVEL TO REACH THE NEAREST EXIT IS NOT APPARENT.		NFPA 101 § 7.10.2.1
• EVERY EXIT OR DIRECTIONAL SIGN WILL BE ILLUMINATED BY A RELIABLE LIGHT SOURCE.		NFPA 101 § 7.10.5.1

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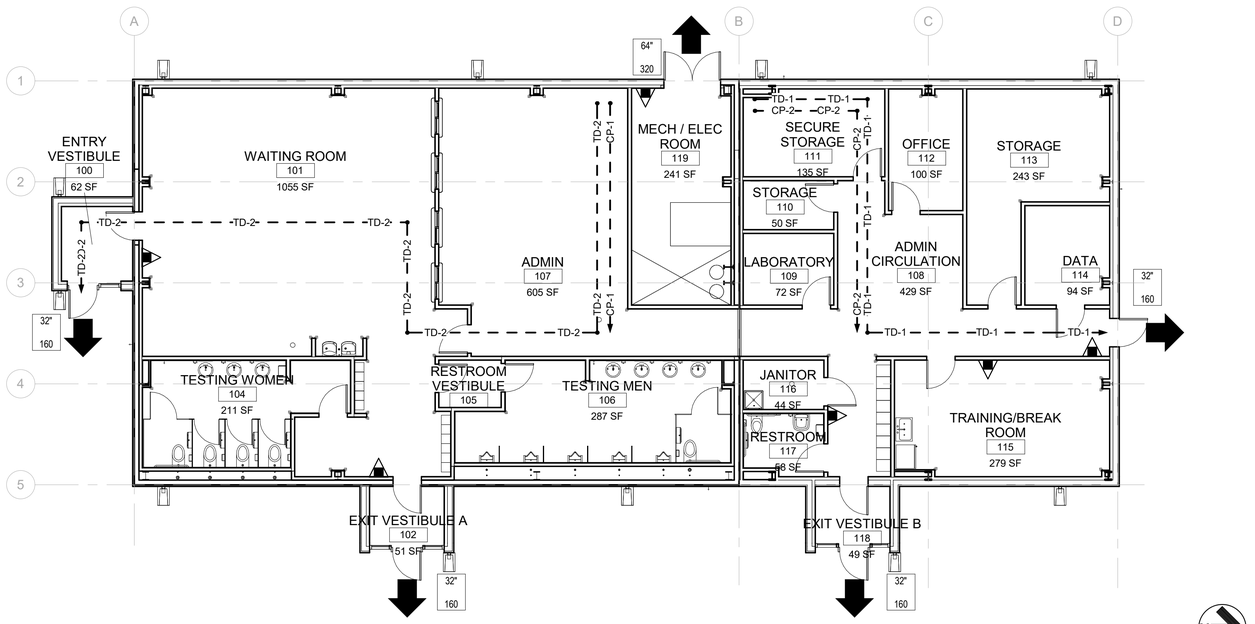

01
G-102

LIFE SAFETY PLAN

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

MEANS OF EGRESS				
EGRESS PATH ID	OCCUPANCY	SPRINKLER	ACTUAL	MAXIMUM PERMITTED
CP-1	BUSINESS	NO	24' - 6"	75' - 0"
CP-2	BUSINESS	NO	34' - 0"	75' - 0"
TD-1	BUSINESS	NO	62' - 0"	200' - 0"
TD-2	BUSINESS	NO	98' - 0"	200' - 0"

OCCUPANT LOAD SCHEDULE BY USE					
ROOM #	ROOM DESCRIPTION	OCCUPANT TYPE	AREA (SQ SF)	OCCUPANT LOAD FACTOR (SQ SF/PERSON)	OCCUPANT LOAD
104	TESTING WOMEN	BUSINESS CONCENTRATED	204	150	2
106	TESTING MEN	BUSINESS CONCENTRATED	291	150	2
115	TRAINING/BREAK ROOM	BUSINESS COLLABORATION	280	150	2
113	STORAGE	STORAGE	305	500	1
111	SECURE STORAGE	STORAGE	111	500	1
109	LABORATORY	BUSINESS CONCENTRATED	73	150	1
110	STORAGE	STORAGE	50	500	1
119	MECH / ELEC ROOM	MECH/ELEC	179	500	1
107	ADMIN	BUSINESS COLLABORATION	605	150	5
114	DATA	IT EQUIPMENT ROOM	36	300	1
103	STORAGE	STORAGE	14	150	1
112	OFFICE	BUSINESS CONCENTRATED	100	150	1
117	RESTROOM	BUSINESS CONCENTRATED	58	150	1
116	JANITOR	BUSINESS CONCENTRATED	45	150	1
101	WAITING ROOM	ASSEMBLY	1047	15	71
100	ENTRY VESTIBULE	BUSINESS CONCENTRATED	64	150	1
107	ADMIN CIRCULATION	BUSINESS CONCENTRATED	605	150	5
102	VESTIBULE A	BUSINESS COLLABORATION	51	150	1
118	VESTIBULE B	BUSINESS COLLABORATION	51	150	1
				TOTAL	100

GENERAL NOTES

KEY NOTES

LEGEND

LIFE SAFETY PLAN LEGEND

NOTE: ALL SYMBOLS MAY NOT BE USED.

EXITS

X" CLEAR DOOR WIDTH [INCHES]

XXX EXIT EGRESS CAPACITY [NO.OF PEOPLE]

EGRESS PATH

TRAVEL DISTANCE — TD —

COMMON PATH — CP —

DEAD END — DE —

EGRESS DISCHARGE

EXIT DISCHARGE

FIRE EXTINGUISHERS

FIRE EXTINGUISHER

EXIT SIGNS

1. REFER TO ELECTRICAL LIGHTING DRAWINGS FOR EXIT SIGNS AND EMERGENCY LIGHTING.

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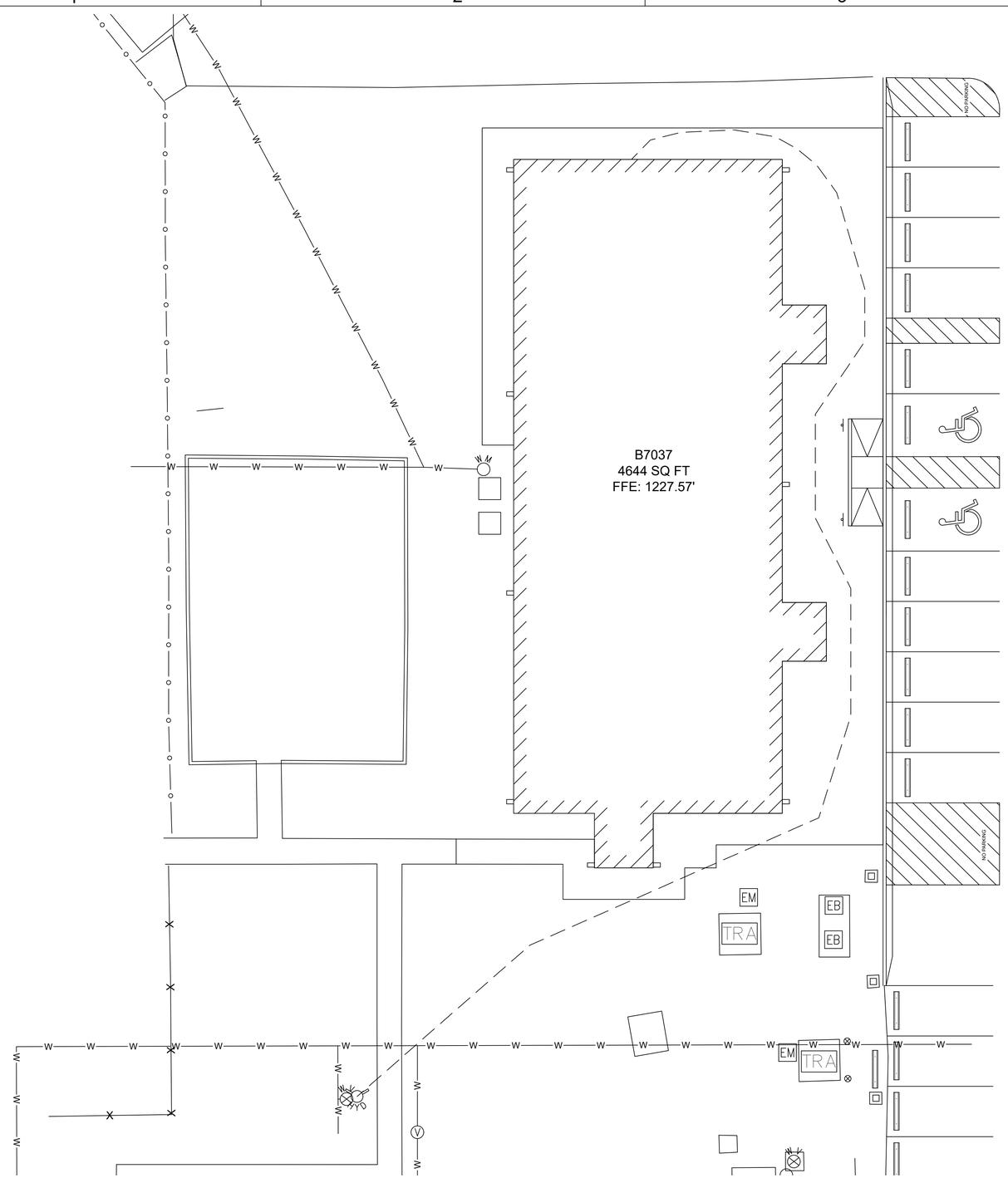

01
G-103
CODE COMPLIANCE SITE PLAN
SCALE: 1" = 10'

0 10' 20' 40'
SCALE: 1" = 10'

GENERAL NOTES

1. THIS IS THE FIRE CODE COMPLIANCE SITE PLAN, DIMENSIONS ARE NOT APPLICABLE FOR CIVIL CONSTRUCTION.
2. EXISTING FIRE HYDRANT LOCATED NEAR BUILDINGS 7007 AND 7014 IS WITHIN 235 FEET OF DRUG TESTING FACILITY (BUILDING 7037).

KEY NOTES

LEGEND

- EXISTING FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- UNDERGROUND WATER MAIN
- FIRE HOSE DISTANCE

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CHECKED BY: JM
DESIGN FILE LOCATION:

SHEET TITLE
CODE COMPLIANCE SITE PLAN

SHEET NUMBER
G-103

GENERAL NOTES

1. REMOVE AND REPLACE ALL EXISTING PAVEMENTS, CURBS, DRIVEWAYS, SIDEWALKS, GRAVEL ROADWAYS, PIPE CULVERTS, CULVERT HEADWALLS, FENCES, SIGNS, AND MISCELLANEOUS ITEMS WHERE REQUIRED TO COMPLETE THE CONSTRUCTION.
2. REPAIR TO ORIGINAL CONDITION ANY DAMAGE INCURRED DURING CONSTRUCTION AT NO EXPENSE TO OWNER.
3. PRIOR TO BEGINNING ANY CONSTRUCTION, FIELD VERIFY AND PROTECT THE LOCATIONS AND ELEVATIONS OF ALL EXISTING FACILITIES (UTILITIES, PIPING, EQUIPMENT, STRUCTURES, FENCING, BARRIERS, PAVEMENT, SIDEWALKS, SIGNAGE, ETC.) WHICH PERTAIN TO AND/OR AFFECT CONSTRUCTION OF THIS PROJECT.
4. VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ALL UTILITIES MAY NOT BE SHOWN. CONTACT UTILITY SERVICE PROVIDERS AT LEAST 48 HOURS PRIOR TO TRENCHING OR EXCAVATION, AND REQUEST FIELD LOCATION OF UTILITIES. ONE-CALL LOCATOR SERVICES MAY NOT COVER ALL UTILITIES IN THIS AREA.
5. ANY EXISTING FACILITIES THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL CONDITIONS AT NO ADDITIONAL COSTS.
6. RESTORE ALL DRIVEWAYS, CULVERTS, HEADWALLS, LANDSCAPING, AND OTHER IMPROVEMENTS (REGARDLESS OF WHETHER THEY WERE CONSTRUCTED OR INSTALLED BY PUBLIC AGENCIES, UTILITIES, OR INDIVIDUALS) THAT ARE DISTURBED BY CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL CONDITIONS.
7. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED AND RESTORED TO ORIGINAL CONDITIONS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
8. ALL WATER LINE AND SEWER FORCE MAIN PIPE INSTALLED SHALL HAVE RESTRAINED JOINTS. PROVIDE CONCRETE THRUST BLOCKS ONLY WHERE APPROVED.
9. IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNREPORTED OBSTACLES THAT MAY IMPEDE OR PREVENT THE CONSTRUCTION OF THE WORK.
10. ANY PORTION OF THE PROJECT IMPROPERLY PLACED AND/OR CONFLICTING WITH ANY EXISTING STRUCTURE SHALL BE REMOVED, CORRECTLY PLACED AND NO SEPARATE PAY SHALL BE APPROVED FOR ASSOCIATED COSTS.
11. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED IN SUCH A MANNER AS TO PROTECT EXISTING FACILITIES AT ALL TIMES.
12. RECORD AND SUPPLY TO ENGINEER THE FOLLOWING INFORMATION:
    - A. LOCATION AND ELEVATION OF ALL SUPPLEMENTARY CONNECTIONS.
    - B. "AS-BUILT" INVERTS AND PROFILE OF CONSTRUCTED PIPELINE.
    - C. THE NEW LOCATION AND DEPTH OF ALL RELOCATED AND/OR ADJUSTED UTILITIES.
    - D. LOCATION AND ELEVATION OF ALL UTILITIES ENCOUNTERED.
13. ALL HOLES, TRENCHES, AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY PROTECTIVE DEVICES.
14. ALL TRENCHES SHALL BE BACKFILLED WITHIN SEVEN (7) DAYS OF INITIAL EXCAVATION UNLESS APPROVED IN WRITING BY ENGINEER.
15. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE IMPLEMENTED BEFORE CONSTRUCTION COMMENCES AND SHALL BE MAINTAINED UNTIL SITE IS STABILIZED AFTER COMPLETION OF WORK IN EACH WORK AREA.
16. ANY DEWATERING SHALL BE INCLUDED IN THE CONTRACT PRICE. NO SPECIAL PAY ITEM.
17. ALL SPOIL AND EXCESS MATERIAL NOT USED IN CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF, AS COORDINATED WITH THE CONTRACTING OFFICER.
18. CONFORM TO THE APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING TRENCH SAFETY. PREPARE A TRENCH SAFETY PLAN FOR ALL EXCAVATIONS EXCEEDING 4-FEET IN DEPTH AND 4-FEET IN WIDTH, TO BE INCLUDED IN HEALTH AND SAFETY PLAN.
19. CONFINE WORK AREAS TO WITHIN THE PROJECT BOUNDARY. PRIOR TO FINAL ACCEPTANCE, REMOVE ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS AND TEMPORARY EASEMENTS.
20. FIELD CHANGES TO THE HORIZONTAL AND VERTICAL DESIGN MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE ENGINEER. FIELD CHANGES SHALL COMPLY WITH THE DESIGN INTENT AS NOTED ON THE DRAWINGS AND SPECIFICATIONS.
21. ALL CONSTRUCTION SHALL FOLLOW OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) SPECIFICATIONS, STANDARDS, AND MATERIAL ITEM NUMBERS AS CLOSELY AS POSSIBLE.

ENVIRONMENTAL QUALITY NOTES:

1. PRIOR TO COMMENCING CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES SHALL BE PROPERLY SELECTED AND INSTALLED. ALL TEMPORARY E&S CONTROL MEASURES SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. THE CONTROLS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS ARE REVEGETATED AND THE AREAS HAVE BECOME PERMANENTLY STABILIZED.
2. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS TO WATER QUALITY (E.G., FUGITIVE SEDIMENT IN STREET BEING WASHED INTO SURFACE STREAMS OR SENSITIVE FEATURES BY THE NEXT RAIN).
3. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES (E.G., SCREENING OUTFALLS, PICKED UP DAILY).
4. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE AND STORED ON-SITE MUST HAVE PROPER E&S CONTROLS INSTALLED.
5. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND CONSTRUCTION ACTIVITIES WILL NOT RESUME WITHIN 21 DAYS. WHEN THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY IS PRECLUDED BY WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
6. THESE GENERAL CONSTRUCTION NOTES SHALL BE PROVIDED TO ALL SUBCONTRACTORS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CONTRACT.
2. SILT FENCE, ROCK BERMS, SEDIMENTATION BASINS, SILT SOCK AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE ENGINEER, THEY ARE WARRANTED.
3. MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES.

TRENCH SAFETY NOTES:

1. ALL WORK PERTAINING TO OPEN TRENCHING SHALL COMPLY WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
2. THE CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEM, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH OSHA STANDARDS FOR TRENCH EXCAVATION. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE OF ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

TRAFFIC CONTROL NOTES:

1. PROVIDE AND MAINTAIN ANY REQUIRED TRAFFIC CONTROL DEVICES DURING CONSTRUCTION IN ACCORDANCE WITH THE STATE'S DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. ALL TRAFFIC CONTROL DEVICES, LAYOUTS, AND MAINTENANCE SHOULD BE INCIDENTAL TO THE COST ASSOCIATED WITHIN THE VICINITY OF HIGHWAYS, ROADS, AND STREETS INDICATED ON THE CONTRACT DRAWINGS.
3. MARK ALL CONSTRUCTION EQUIPMENT AND VEHICLES WITH COMPANY PAINT DESIGNS, INSIGNIAS OR OTHER COMPANY MARKINGS WHICH ARE CLEARLY VISIBLE.
4. CONSTRUCTION EQUIPMENT SHALL HAVE AUTOMATIC SIGNALING DEVICES TO SOUND AN ALARM WHEN MOVING IN REVERSE.
5. ONLY RUBBER TIRED VEHICLES WILL BE ALLOWED ON EXISTING PAVEMENT WHICH IS TO REMAIN.

COORDINATION AND COMMUNICATION DURING CONSTRUCTION

1. IF AFTER HOURS OR WEEKEND WORK IS REQUIRED, THE CONTRACTING OFFICER SHALL BE NOTIFIED 14 CALENDAR DAYS PRIOR TO DAY OF NEED. AFTER HOURS OR WEEKEND WORK ARE SUBJECT TO GOVERNMENT APPROVAL AND AVAILABILITY OF ESCORTS.
2. ALL PERSONNEL ARE RESPONSIBLE FOR OBTAINING PROPER PASS PRIOR TO ENTERING SITE. COORDINATE WITH CONTRACTING OFFICER ON SUBMITTING ACCESS REQUESTS A MINIMUM OF 14 CALENDAR DAYS PRIOR (ACCESS REQUIREMENTS ARE SUBJECT TO SUDDEN CHANGES TO MEET SECURITY REQUIREMENTS).
3. KEEP ALL ROADS CLEAN OF CONSTRUCTION DEBRIS, MUD, ETC. AT ALL TIMES. PROVIDE EQUIPMENT AND PERSONNEL TO CLEAN ROADS AS REQUESTED BY CONTRACTING OFFICER.
4. VIDEO DOCUMENT CONDITION OF ALL PAVEMENTS, SIDEWALKS, GRAVEL AREAS, LANDSCAPED AREAS, STREETS, PARKING AREAS, ETC. PRIOR TO CONSTRUCTION AND REPAIR DUE TO DAMAGE CAUSED BY CONSTRUCTION AND/OR DEMOLITION ACTIVITIES AT NO ADDITIONAL COST TO THE GOVERNMENT AS REQUESTED BY CONTRACTING OFFICER.
5. CONTRACTOR SHALL PROVIDE OIL/FUEL SORBENT SOCKS DURING CONSTRUCTION IN THE FUEL TRUCK PARKING AREA. SORBENT SOCKS SHALL BE IMMEDIATELY DEPLOYED TO PROTECT CONSTRUCTION TRENCH IN THE EVENT OF A FUEL SPILL.

CIVIL LEGEND

- AIR CONDITIONER UNIT
- FIRE HYDRANT
- FLAG POLE
- GAS METER
- GAS VALVE
- GAS VENT
- GROUND TRANSFORMER
- GUARD POST
- LIGHT POLE
- STORM DRAIN MANHOLE
- ROOF DRAIN
- ELECTRIC MANHOLE
- SANITARY SEWER MANHOLE
- TELEPHONE MANHOLE
- PAY PHONE
- TRANSFORMER POLE
- POWER POLE
- GUY POLE
- DOWN GUY
- MONUMENT FOUND
- MONUMENT SET
- SANITARY SEWER CLEANOUT
- COMMERCIAL SIGN
- SIGN
- SPRINKLER HEAD
- SPRINKLER VALVE
- TELEPHONE RISER
- COMMUNICATIONS VAULT
- TRAFFIC/ELECTRIC PULL BOX
- WATER METER
- WATER VALVE BOX
- UST FUEL FILL POINT
- GROUND LIGHT
- HANDHOLE, ELECTRIC
- ELECTRIC METER
- HOSE BIB
- WATER VENT
- TRAFFIC DETECTOR LOOP
- TRAFFIC SIGNAL POLE
- TRAFFIC CONTROL BOX
- PARKING METER
- DOUBLE PARKING METER
- BORE HOLE LOCATION
- GEO PROBE
- MONITORING WELL
- XXX.XX GUTTER ELEVATION, UNLESS OTHERWISE NOTED

- CHAINLINK FENCE
- PIPE FENCE
- SECURITY FENCE
- HOG WIRE FENCE
- ELECTRIC FENCE
- ELECTRIC UNDERGROUND LINE
- OVERHEAD ELECTRIC LINE
- GAS LINE
- GAS LINE (ATLAS)
- SANITARY SEWER LINE
- SANITARY SEWER LINE (ATLAS)
- STORM DRAIN LINE
- UNDERGROUND COMMUNICATIONS LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND CABLE TV LINE
- WATER LINE
- WATER LINE (ATLAS)
- WATER LINE (IRRIGATION)
- MARKED PIPELINE
- EXISTING CONTOUR
- CURB AND GUTTER
- SURFACE DRAINAGE FLOWLINE
- LIMITS OF CONSTRUCTION
- TREE DRIP LINE
- SHRUB LINE
- EXISTING CONCRETE
- EXISTING ASPHALT
- EXISTING CONCRETE SIDEWALK
- CONCRETE DEMO
- ASPHALT DEMO
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED SIDEWALK

LEGEND NOTES

1. ALL SYMBOLS OR LINETYPES/PATTERNS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE .

ABBREVIATIONS

ME: MATCH EXISTING
FL: FLOW LINE
TC: TOP OF CURB
TW: TOP OF WALL
TYP: TYPICAL
DIA: DIAMETER
NTS: NOT TO SCALE
OCEW: ON CENTER EACH WAY
UNO: UNLESS NOTED OTHERWISE

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OKLAHOMA
04/24/26

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, BLDG 7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
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CIVIL GENERAL NOTES AND LEGEND

SHEET NUMBER
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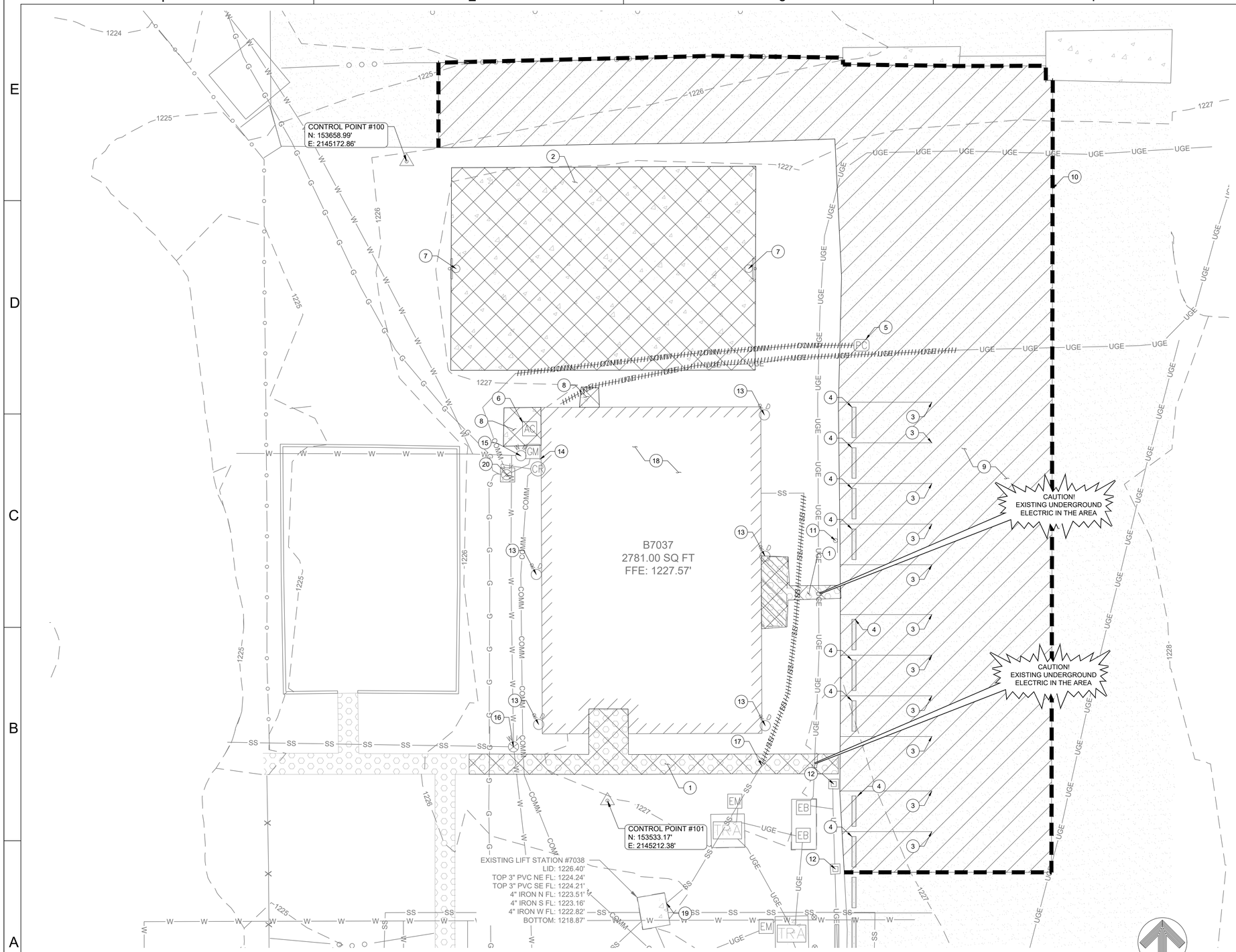

01
C-101

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 10'

0 10' 20' 40'

SCALE: 1" = 10'

GENERAL NOTES

1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES AND ALL SURVEY INFORMATION PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ADJUST MANHOLES AND VALVE BOXES WITHIN PROJECT LIMITS TO FINISH GRADE.
3. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORS IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITHIN OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
4. UTILITIES NOTED TO REMAIN SHALL BE PROTECTED IN PLACE.

KEY NOTES

1. EXISTING CONCRETE SIDEWALK TO BE REMOVED.
2. EXISTING BASKETBALL COURT TO BE REMOVED.
3. EXISTING PAVEMENT MARKINGS TO BE REMOVED AND REPLACED. SEE DETAIL 4/C-501.
4. EXISTING WHEEL STOPS TO BE RELOCATED.
5. EXISTING COMMUNICATIONS PEDESTAL TO REMAIN. CONTRACTOR SHALL ADJUST TO GRADE
6. EXISTING CONDENSER TO BE REMOVED. REFERENCE MECHANICAL SHEETS.
7. EXISTING BASKETBALL GOALS TO BE REMOVED.
8. EXISTING CONCRETE TO BE REMOVED.
9. ±6,650 S.F. EXISTING ASPHALT PAVEMENT TO BE REMOVED.
10. FULL DEPTH SAWCUT.
11. EXISTING SIGN TO BE REMOVED.
12. EXISTING ELECTRICAL PEDESTAL TO REMAIN. CONTRACTOR SHALL PROTECT IN PLACE.
13. EXISTING ROOF DRAIN SPLASH BLOCK TO BE REMOVED.
14. EXISTING GAS METER TO REMAIN. CONTRACTOR SHALL PROTECT IN PLACE.
15. EXISTING WATER TEST MANHOLE TO REMAIN. CONTRACTOR SHALL PROTECT IN PLACE.
16. EXISTING VALVE TO REMAIN. CONTRACTOR SHALL PROTECT IN PLACE.
17. EXISTING SANITARY SEWER LINE TO BE REMOVED UP TO THE LIMITS OF SIDEWALK REMOVAL. CONTRACTOR SHALL GROUT AND PLUG SANITARY SEWER LINE AT THE LIMIT OF DEMOLITION AND ABANDON REMAINDER IN PLACE.
18. REFERENCE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL BUILDING DEMOLITION DETAILS.
19. CONTRACTOR SHALL GROUT AND PLUG EXISTING SANITARY SEWER OUTFALL AND ABANDON IN PLACE.
20. GAS VALVE AND CONCRETE PAD TO REMAIN. CONTRACTOR SHALL PROTECT IN

LEGEND

W	EXISTING WATER LINE
SS	EXISTING SANITARY SEWER LINE
SS	EXISTING SANITARY SEWER LINE TO BE REMOVED
G	EXISTING GAS LINE
OHE	EXISTING OVERHEAD ELECTRIC
UGE	EXISTING UNDERGROUND ELECTRIC
UGE	EXISTING UNDERGROUND ELECTRIC TO BE REMOVED
COMM	EXISTING COMMUNICATION LINE
COMM	EXISTING COMMUNICATION LINE TO BE REMOVED
XXXX	EXISTING CONTOUR
	EXISTING CONCRETE SIDEWALK
	EXISTING CONCRETE PAVEMENT
	EXISTING ASPHALT PAVEMENT
	EXISTING CONCRETE SIDEWALK TO BE REMOVED
	EXISTING CONCRETE PAVEMENT TO BE REMOVED
	EXISTING ASPHALT PAVEMENT TO BE REMOVED
	FULL DEPTH SAWCUT

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04/24/26

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, BLDG 7037
TINKER AIR FORCE BASE, OKLAHOMA

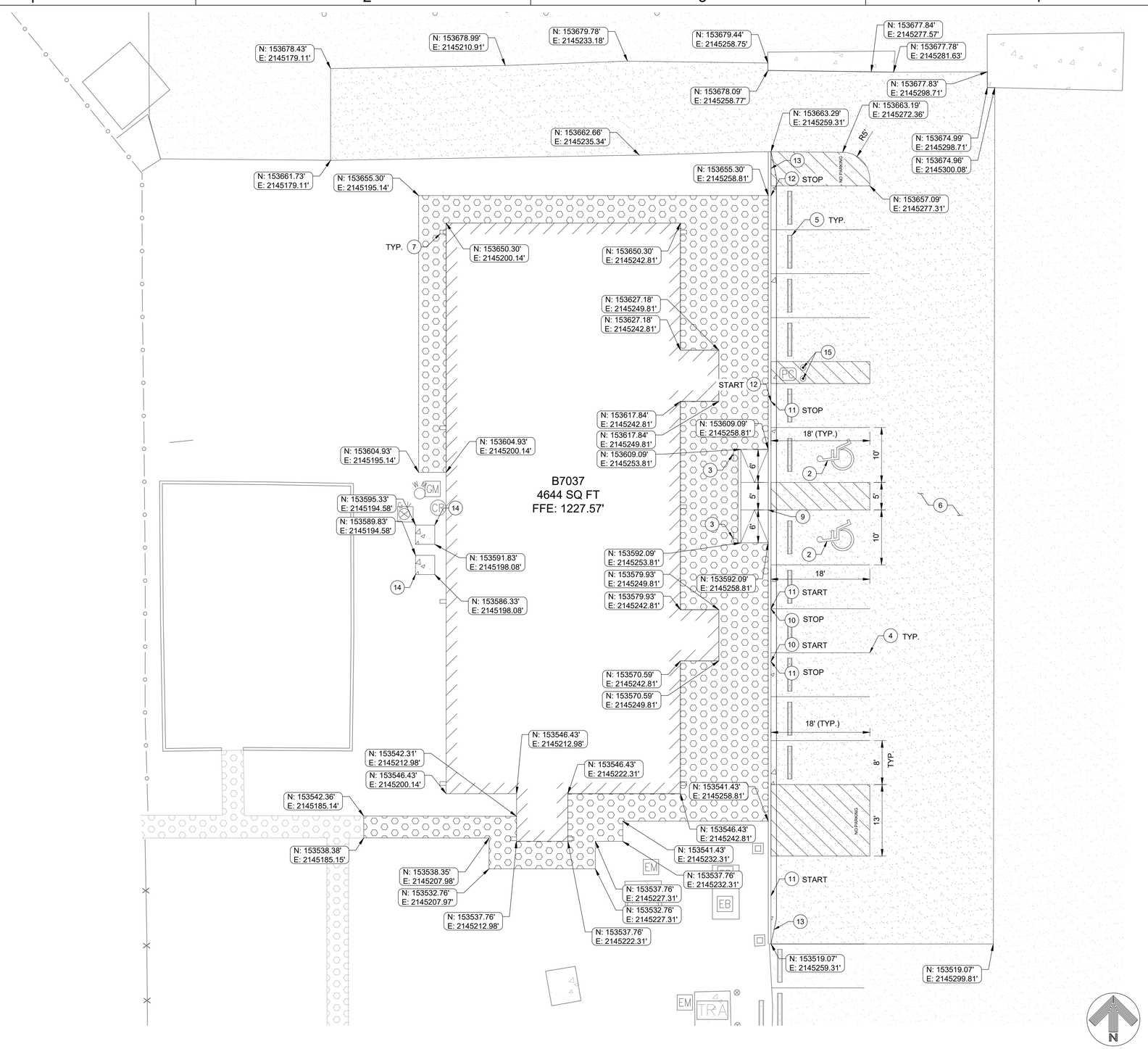
REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: NW
DRAWN BY: JS
CHECKED BY: EP
DESIGN FILE LOCATION:

SHEET TITLE
CIVIL
EXISTING CONDITIONS AND DEMOLITION PLAN

SHEET NUMBER
C-101



01
C-102
SITE PLAN
SCALE: 1" = 10'

0 10' 20' 40'
SCALE: 1" = 10'

GENERAL NOTES

1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES AND ALL SURVEY INFORMATION PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ADJUST MANHOLES AND VALVE BOXES WITHIN PROJECT LIMITS TO FINISH GRADE.
3. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORS IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITHIN OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
4. UTILITIES NOTED TO REMAIN SHALL BE PROTECTED IN PLACE.

KEY NOTES

1. PROPOSED 5' CONCRETE SIDEWALK. SEE DETAIL 06/C-501.
2. HANDICAP PARKING SYMBOL. SEE DETAIL 02/C-501.
3. HANDICAP PARKING SIGN. SEE DETAIL 03/C-501.
4. 4" PARKING STRIPING. SEE DETAIL 05/C-501.
5. RELOCATED WHEEL STOP.
6. PROPOSED ASPHALT PAVEMENT. SEE DETAIL 01/C-501.
7. PROPOSED DOWNSPOUTS. REFERENCE ARCHITECTURAL PLANS FOR DETAILS.
8. PROPOSED CONCRETE CURB AND GUTTER. SEE DETAIL 07/C-501.
9. PROPOSED CURB RAMP. SEE DETAIL 01/C-502.
10. PROPOSED 4" CONCRETE CURB. SEE DETAIL 07/C-501
11. PROPOSED 6" CONCRETE CURB. SEE DETAIL 07/C-501.
12. PROPOSED 9" CONCRETE CURB. SEE DETAIL 07/C-501.
13. TRANSITION CURB TO FLUSH.
14. CONCRETE UTILITY PAD. SEE STRUCTURAL PLANS FOR DETAILS.
15. PROPOSED BOLLARDS. SEE DETAIL 06/C-502.

LEGEND

- EXISTING CONCRETE SIDEWALK
- EXISTING CONCRETE PAVEMENT
- EXISTING ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT

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TINKER AIR FORCE BASE, OKLAHOMA

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MANAGEMENT INFORMATION
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DESIGN GROUP: HDR
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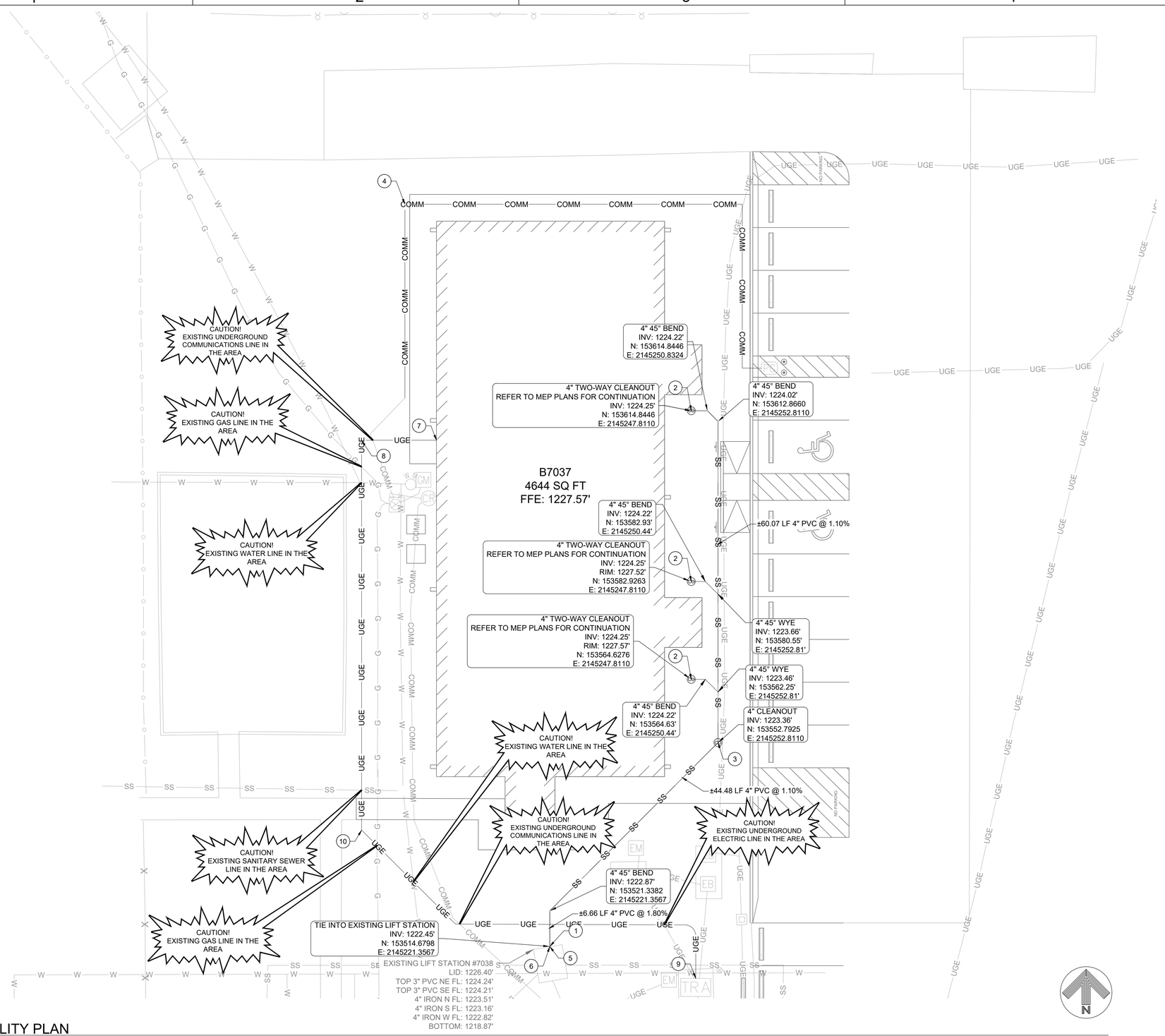
DESIGN FILE LOCATION:

SHEET TITLE
CIVIL SITE PLAN

SHEET NUMBER
C-102



01
C-103
UTILITY PLAN
SCALE: 1" = 10'

0 10' 20' 40'
SCALE: 1" = 10'

GENERAL NOTES

1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES AND ALL SURVEY INFORMATION PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ADJUST MANHOLES AND VALVE BOXES WITHIN PROJECT LIMITS TO FINISH GRADE.
3. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORS IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITHIN OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
4. UTILITIES NOTED TO REMAIN SHALL BE PROTECTED IN PLACE.
5. PRIOR TO CONSTRUCTION

KEY NOTES

1. PROPOSED SANITARY SEWER LINE TO TIE INTO EXISTING LIFT STATION.
2. PROPOSED SANITARY SEWER LATERAL AND 4" TWO-WAY CLEANOUT. SEE DETAIL 04/C-502.
3. PROPOSED 4" CLEANOUT. SEE DETAIL 02/C-502.
4. PROPOSED COMMUNICATIONS LINE REROUTE. CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH GOVERNMENT PRIOR TO CONSTRUCTION.
5. PRIOR TO CONSTRUCTION, PLANS MUST BE REVIEWED AND REVISED IN ACCORDANCE WITH OCWUT TS-0007 AS-BUILT DRAWINGS TO VERIFY THE DOWNSTREAM CONNECTION. TS-007 PROJECT INITIATION ANTICIPATED MAY 2026. CONTACT OKLAHOMA CITY UTILITIES DEPARTMENT (OCWUT) AT 405-297-3843 FOR DETAILS.
6. CONTRACTOR SHALL VERIFY INVERTS OF EXISTING LIFT STATION PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES.
7. PROPOSED SECONDARY ELECTRICAL CONDUIT TO CONNECT TO BUILDING. REFERENCE ELECTRICAL PLANS FOR CONTINUATION.
8. ±167 L.F. SECONDARY ELECTRICAL CONDUIT.
9. PROPOSED SECONDARY ELECTRICAL CONDUIT TO CONNECT TO EXISTING TRANSFORMER. REFERENCE ELECTRICAL PLANS FOR DETAILS.
10. PROPOSED HANDHOLE. REFERENCE DETAIL 9/E-501.

LEGEND

—W—W—	EXISTING WATER LINE
—SS—SS—	EXISTING SANITARY SEWER LINE
—G—G—	EXISTING GAS LINE
—OHE—	EXISTING OVERHEAD ELECTRIC
—UGE—	EXISTING UNDERGROUND ELECTRIC
—COMM—	EXISTING COMMUNICATION LINE
—COMM—	PROPOSED COMMUNICATION LINE
—UGE—	PROPOSED UNDERGROUND ELECTRIC LINE
—SS—SS—	PROPOSED SANITARY SEWER LINE
CO	PROPOSED CLEANOUT

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
NATHAN ERIS WEEKS JR
36388
OKLAHOMA
04/24/26

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, BLDG 7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: NW
DRAWN BY: JS
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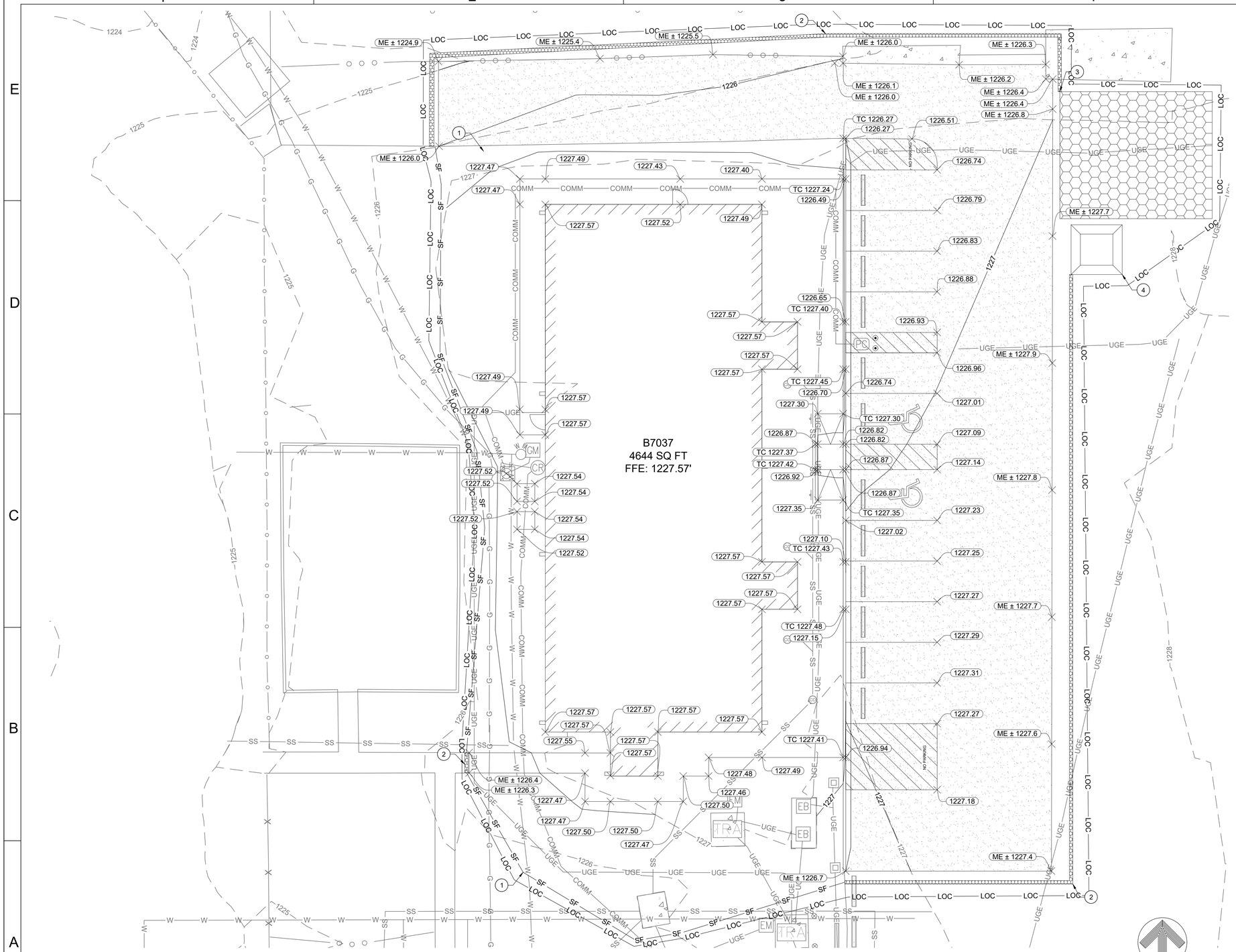
SHEET TITLE
CIVIL
UTILITY PLAN

SHEET NUMBER
C-103



01
C-104

GRADING AND EROSION CONTROL PLAN

SCALE: 1" = 10'

GENERAL NOTES

1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES AND ALL SURVEY INFORMATION PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ADJUST MANHOLES AND VALVE BOXES WITHIN PROJECT LIMITS TO FINISH GRADE.
3. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTORS TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORS IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITHIN OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
4. UTILITIES NOTED TO REMAIN SHALL BE PROTECTED IN PLACE.

KEY NOTES

1. SILT FENCE. SEE DETAIL 01/C-503.
2. SILT LOG. SEE DETAIL 02/C-503.
3. PROPOSED CONSTRUCTION ENTRANCE. SEE DETAIL 03/C-503.
4. PROPOSED CONCRETE WASHOUT PIT. SEE DETAIL 04/C-503.

LEGEND

XXXX	EXISTING CONTOUR
XXXX	PROPOSED CONTOUR
SF	SILT FENCE
LOC	LIMITS OF CONSTRUCTION (±0.51 AC.)
	SILT LOG
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED ASPHALT PAVEMENT
XX.XX	PROPOSED ELEVATION
TC XX.XX	TOP OF CURB ELEVATION
ME ± XX.XX	MATCH EXISTING ELEVATION

AIR FORCE MATERIEL COMMAND
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WWYK200270
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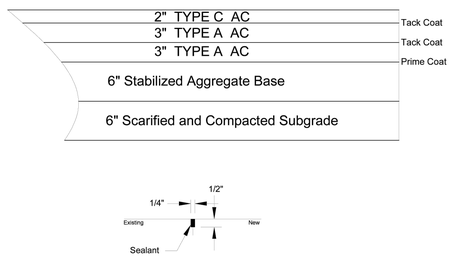
DESIGNED BY:	N. WEEKS
DRAWN BY:	J. SAMORA
CHECKED BY:	E. PODUSKA
DESIGN FILE LOCATION:	

SHEET TITLE
CIVIL
GRADING AND
EROSION CONTROL
PLAN

SHEET NUMBER
C-104



Joint Detail

1. ALL MATERIALS, EQUIPMENT AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. SUBGRADE SHALL BE COMPACTED TO 95% STANDARD DENSITY, HAVE A CBR > 8, AND A PI < 14.
3. ALL FILL AND LOOSE MATERIAL BELOW THE 6" MODIFIED SUBGRADE LAYER SHALL BE COMPACTED TO 80 % STANDARD DENSITY IN LIFTS NO GREATER THAN 6"..

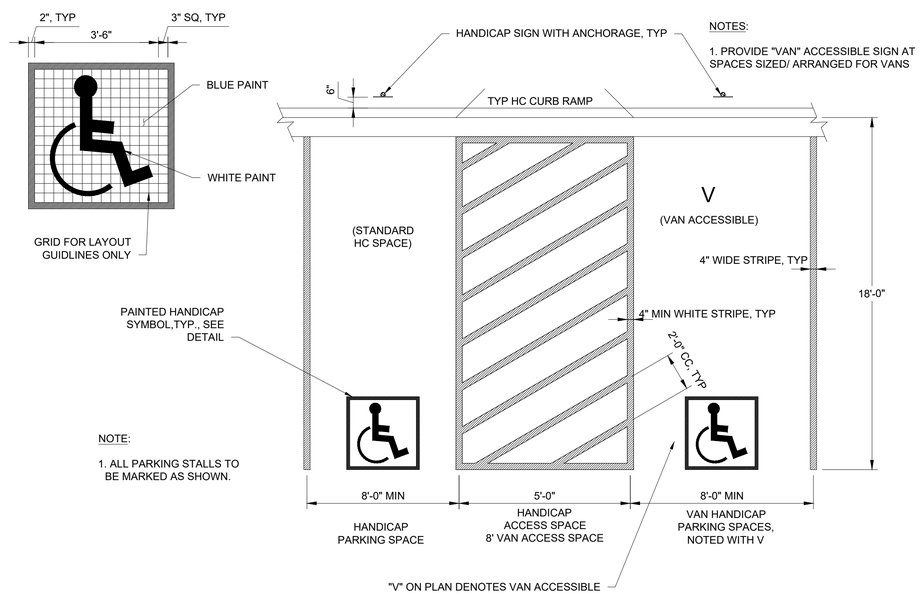
95%

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE

Tinker AFB, OK Standard Detail

Appr. By:	Rev. BY:	Title: 8" AC Repair	
Appr. Date:	Rev. Date:	Rev. No.:	Detail No.: A-4

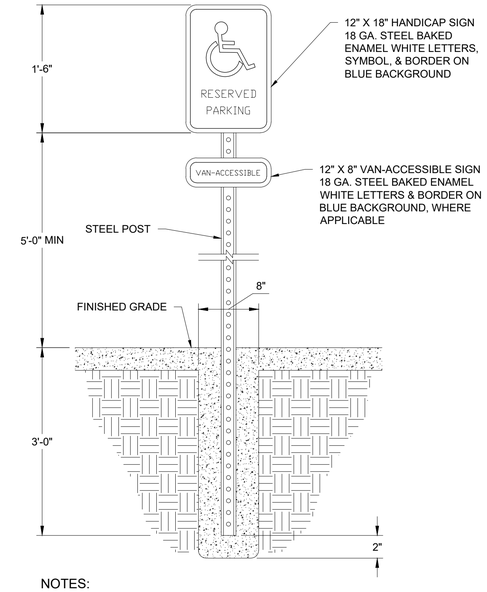
01 / C-501 ASPHALT PAVEMENT REPAIR DETAIL
SCALE: N.T.S.



NOTES:
1. PROVIDE "VAN" ACCESSIBLE SIGN AT SPACES SIZED/ ARRANGED FOR VANS

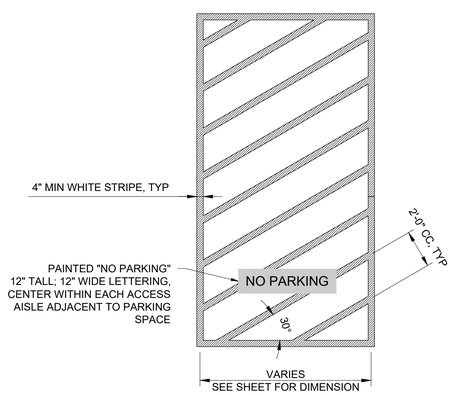
NOTE:
1. ALL PARKING STALLS TO BE MARKED AS SHOWN.

02 / C-501 TYPICAL HANDICAP PARKING SPACES
SCALE: N.T.S.

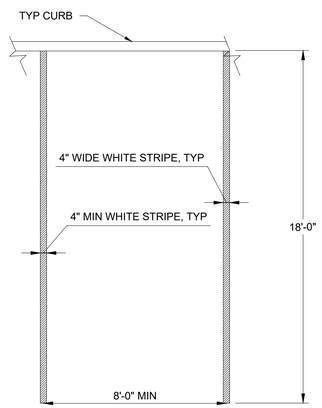


NOTES:
1. POSTS SHALL BE 8' LONG (MIN) HOT-ROLLED HIGH TENSILE RAIL STEEL, PERFORATED WITH 3/8" HOLES AT 1" CENTERS, FINISHED WITH GREEN BAKED ENAMEL.

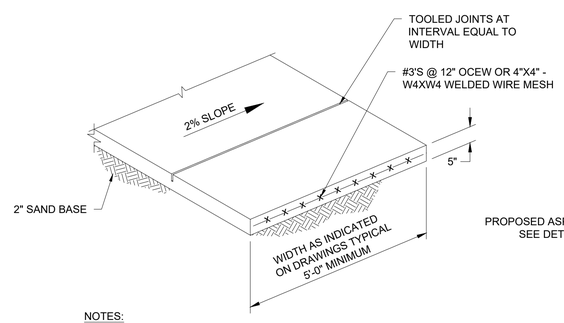
03 / C-501 HANDICAP SIGNAGE
SCALE: N.T.S.



04 / C-501 PAVEMENT STRIPING W/ NO PARKING PAVEMENT MARKER
SCALE: N.T.S.

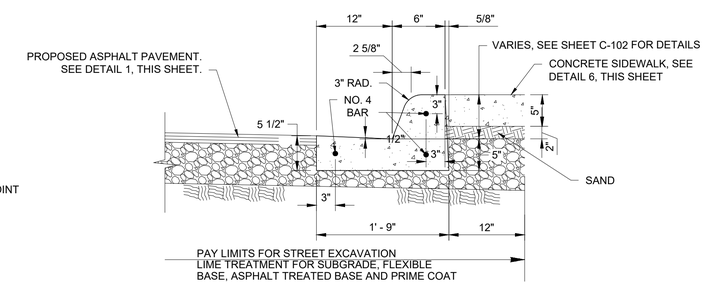


05 / C-501 TYPICAL PARKING AND STRIPING DETAIL
SCALE: N.T.S.



NOTES:
1. PLACE FULL DEPTH THRU JOINTS WITH 1/2" X 5" PREMOLDED EXPANSION JOINT FILLER WITH SEALANT AT ALL STRUCTURES, POINT OF TANGENCY AND AT MINIMUM 25' INTERVALS.
2. MINIMUM STEEL REINFORCING AREA = 0.0018 X SLAB THICKNESS (INCHES) X 12

06 / C-501 CONCRETE SIDEWALK DETAIL
SCALE: N.T.S.



07 / C-501 TYPICAL CURB & GUTTER DETAIL
SCALE: N.T.S.

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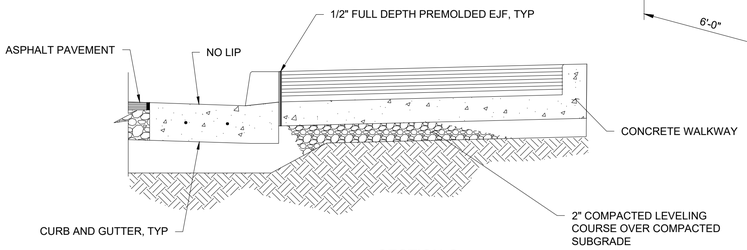
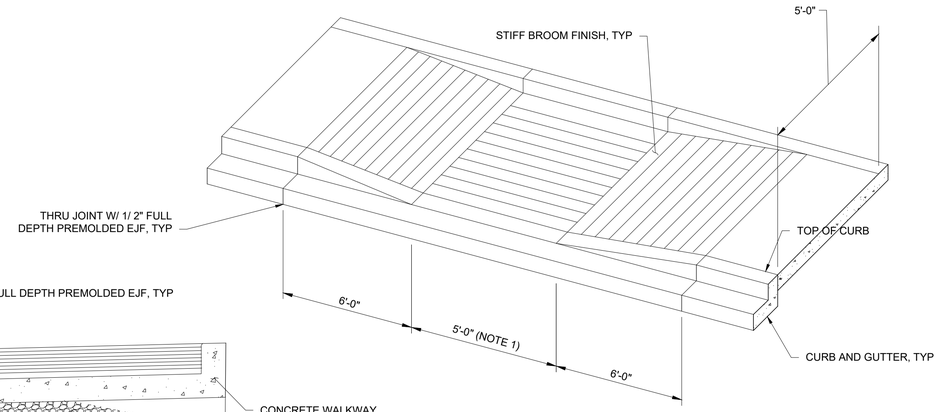
CIVIL
SITE DETAILS - SHEET 1 OF 2

SHEET NUMBER
C-501



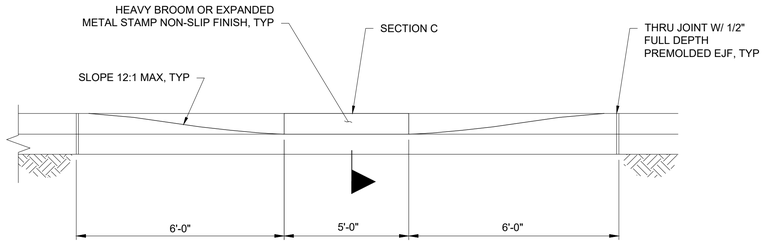
SECTION C



PLAN

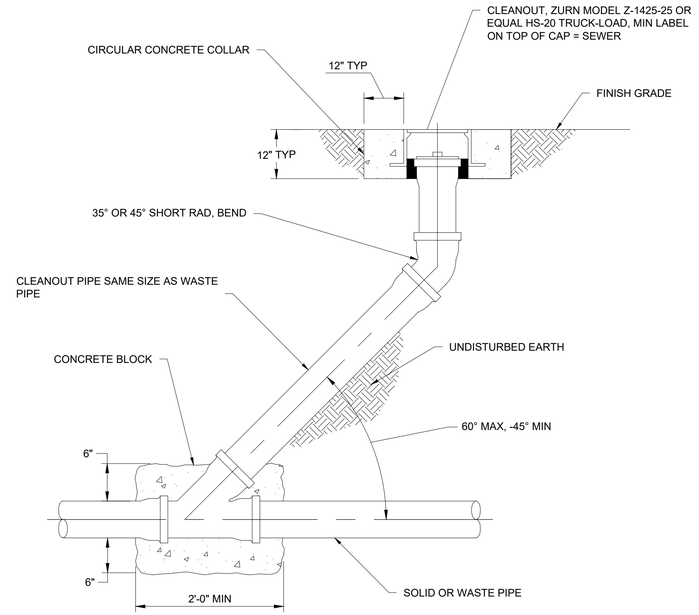
NOTES:

1. PLACE THRU JOINT AT MID-WIDTH WHEN TOTAL WIDTH OVER 24'-0".
2. RAMP CONCRETE TO BE A MINIMUM 6" IN THICKNESS AND PLACED ON 2" COMPACTED LEVELING COURSE OVER COMPACTED SUBGRADE.

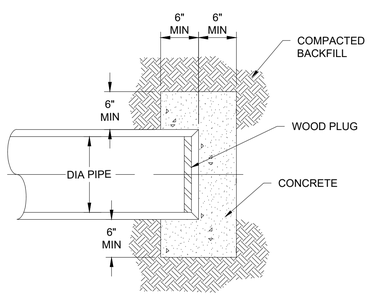


ELEVATION

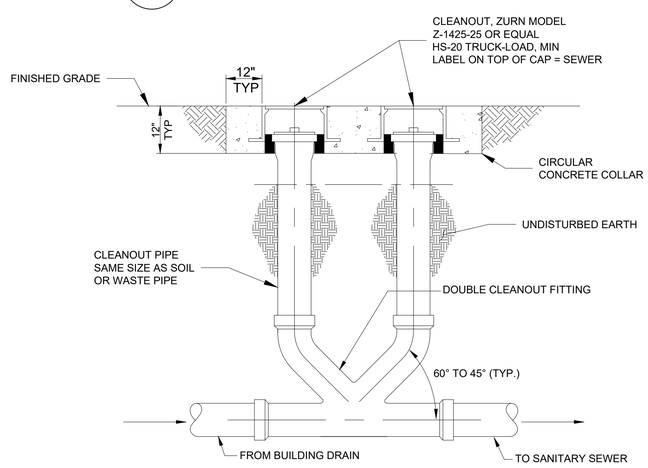
01 C-502 TYPICAL CURB RAMP
SCALE: N.T.S.



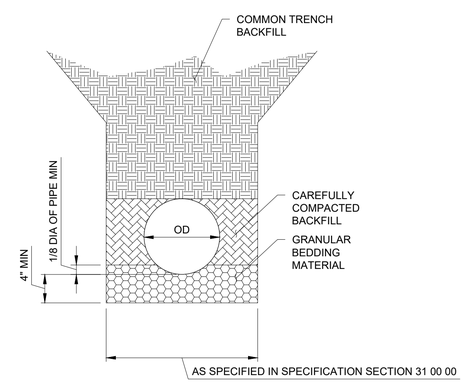
02 C-502 CLEANOUT DETAIL
SCALE: N.T.S.



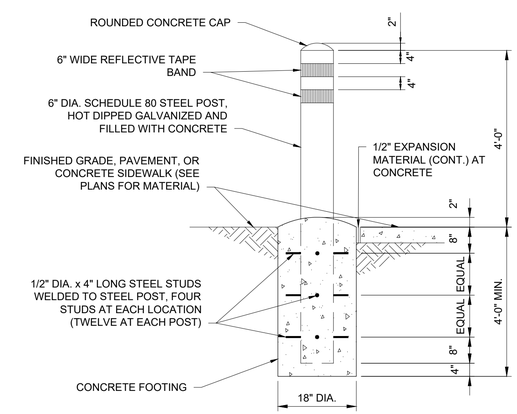
03 C-502 PIPE PLUG DETAIL
SCALE: N.T.S.



04 C-502 DOUBLE GRADE CLEANOUT DETAIL
NO SCALE



05 C-502 PIPE BEDDING
SCALE: N.T.S.



NOTES:

1. WHERE APPLICABLE, LOCATE EDGE OF BOLLARDS 1.5' MINIMUM FROM THE BACK OF CURB.
2. PAINT EXTERIOR ONE COAT PRIMER AND TWO COATS SAFETY YELLOW ENAMEL PAINT UNLESS OTHERWISE NOTED IN THE PLANS.

06 C-502 6-INCH PERMANENT BOLLARD DETAIL
SCALE: N.T.S.

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04/24/26

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CHECKED BY: EP
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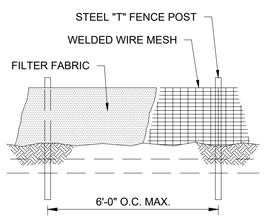
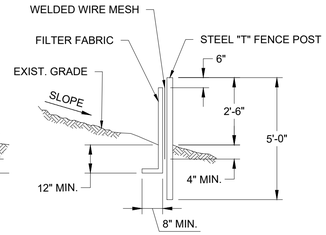
SHEET TITLE
CIVIL
SITE DETAILS - SHEET 2 OF 2

SHEET NUMBER
C-502



TYPICAL ELEVATION

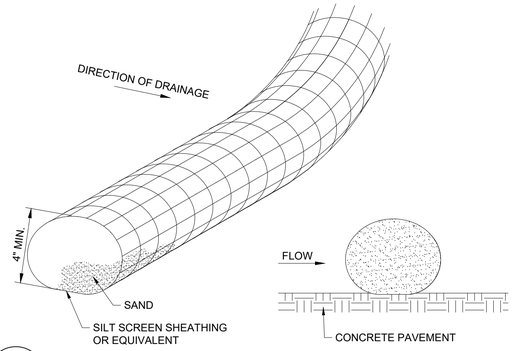


TYPICAL SECTION

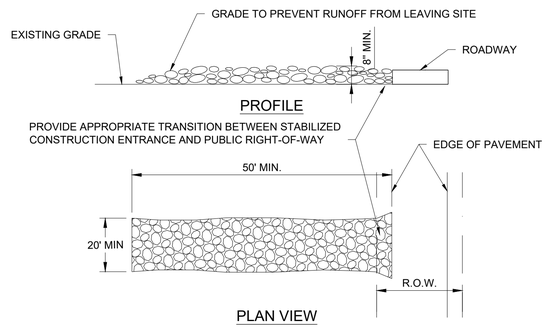
SILT FENCE NOTES:

1. CLEAR THE GROUND OF DEBRIS, ROCKS, AND PLANTS (INCLUDING GRASSES TALLER THAN 2") SO THAT A SMOOTH SURFACE CAN BE UTILIZED FOR ANCHORING THE SKIRT.
2. LAY OUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
3. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
4. ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE "T" FENCE POSTS WITH 11 1/2 GAUGE GALVANIZED "T" POST CLIPS. THE TOP OF THE WIRE SHOULD BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH SHALL BE OVERLAPPED 6" AND TIED AT LEAST SIX TIMES WITH HOG RINGS.
5. THE TOE OF THE SILT FENCE SHALL BE TRENCHED-IN SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE THE SILT FENCE CAN NOT BE TRENCHED-IN (E.G. PAVEMENT), WEIGHT THE FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER THE SILT FENCE.
6. SILT FENCE SHALL BE SECURELY FASTENED TO THE WOVEN WIRE MESH, WHICH IS IN TURN SECURELY ATTACHED TO THE STEEL FENCE POSTS.
7. SILT FENCE SPLICES SHOULD BE A MINIMUM OF 18" WIDE, ATTACHED IN AT LEAST SIX PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
8. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
9. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
10. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
11. THE CONTRACTOR SHALL FIELD VERIFY THE TYPE, LOCATION, AND DEPTH OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION IN ORDER TO ADJUST THE PIPE GRADE IF NECESSARY AND AVOID DAMAGING THOSE UTILITIES. ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER.
12. INSTALL SILT FENCE AND TWO-FOOT WIDE VEGETATIVE FILTER MAT, ACROSS THE LIMITS OF CONSTRUCTION WHERE APPLICABLE, ALONG CONTOUR AT INTERVALS OF TEN VERTICAL FEET DOWNSLOPE OF ANY DISTURBANCE. WHEN THE SLOPE MEETS OR EXCEEDS 25%, OR WHERE DISTURBED AREA IS WITHIN FIFTY LINEAR FEET OF TOP OF BANK OF A WATER BODY, THE VEGETATIVE FILTER MAT SHALL BE INSTALLED WITH A 100% COVERAGE, IN ADDITION TO OTHER REQUIRED ENVIRONMENTAL PROTECTION MEASURES.

01 / C-503 SILT FENCE DETAIL
SCALE: N.T.S.



02 / C-503 SILT LOG DETAIL
NO SCALE

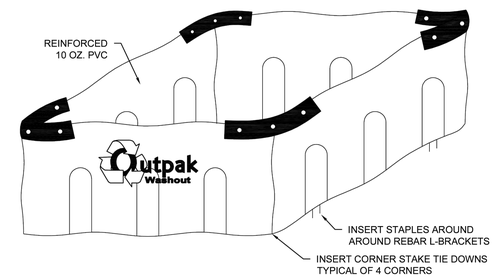


CONSTRUCTION ENTRANCE NOTES:

1. STONE SIZE: 3" - 5" OPEN GRADED ROCK.
2. LENGTH: AS REQUIRED TO BE EFFECTIVE BUT NOT LESS THAN 50 FEET.
3. THICKNESS: NOT LESS THAN 8 INCHES.
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE, AS CONDITIONS DEMAND, AND REPAIR AND CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENTS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
8. LOCATION: THE EXACT LOCATION OF CONSTRUCTION ENTRANCE INSTALLATION SHALL BE DETERMINED IN THE FIELD ACCORDING TO EXISTING SITE CONDITIONS.

03 / C-503 CONSTRUCTION ENTRANCE
SCALE: N.T.S.

OR APPROVED EQUAL



NOTES:

1. THE WASHOUT SHALL BE INSTALLED PRIOR TO ANY USING MATERIALS THAT REQUIRE WASHOUT ON THIS PROJECT.
2. AS NECESSARY, SIGNS SHALL BE PLACED THROUGHOUT THE SITE TO INDICATE THE LOCATION OF THE WASHOUT.
3. THE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR LIQUID WASTE.
4. WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE FACILITY.
5. DO NOT WASHOUT INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
6. AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
7. LOCATE WASHOUT AT LEAST 50' (15 METERS) FROM STORM DRAIN, OPEN DITCHES, OR WATER BODIES.
8. THE WASHOUT SHALL BE USED ONLY FOR NON-HAZARDOUS WASTES.

PVC WASHOUT / SECONDARY CONTAINMENT
SPECIFICATIONS

Outpak Washout
Boise, Idaho
208-890-0383
outpak.com

04 / C-503 CONCRETE WASHOUT PIT DETAIL
SCALE: N.T.S.

AFMC
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GENERAL STRUCTURAL NOTES (GSN)

GENERAL

G1. SCOPE
THE NOTES ON THIS SHEET AND THE STANDARD STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODES
- A. UFC 3-301-01 WITH CHANGE 4, DATED 3 JUNE 2025
- B. INTERNATIONAL BUILDING CODE, IBC 2024 WITH APPLICABLE EDITIONS OF THE CODE REFERENCED STANDARDS.
- C. INTERNATIONAL EXISTING BUILDING CODE, IEBC 2024
- D. TINKER AIR FORCE BASE FACILITY STANDARDS
- E. ACI 318-19
- F. ASCE 7-22
- G. AISC 360-22
- H. MBMA 2024

G3. DESIGN CRITERIA
1. APPLIES TO ALL STRUCTURES (UNO)

A.	DEAD LOAD:	
1.	ACTUAL TRIBUTARY STRUCTURE WEIGHT	
2.	SUPERIMPOSED DEAD LOAD:	5 PSF
3.	MECHANICAL AND ELECTRICAL EQUIPMENT SELF-WEIGHT	
B.	LIVE LOAD:	
1.	OFFICES:	50 PSF
2.	LOBBIES AND FIRST FLOOR CORRIDORS:	100 PSF
3.	ROOF:	20 PSF (NON-REDUCIBLE)
C.	WIND:	
1.	ULTIMATE WIND SPEED (V_{ULT}):	109 MPH
2.	NOMINAL WIND SPEED (V_{ASD}):	84 MPH
3.	TORNADO WIND SPEED (V_T):	NOT APPLICABLE PER ASCE 7 FIGURE 32.1-2
3.	RISK CATEGORY:	II
4.	EXPOSURE:	C
5.	INTERNAL PRESSURE COEFFICIENT (GC_{pi}):	±0.18
6.	ALL STRUCTURES ARE ENCLOSED	
7.	DESIGN WIND PRESSURE:	25 PSF
D.	SEISMIC:	
1.	RISK CATEGORY:	II
2.	IMPORTANCE FACTOR:	1.0
3.	SPECTRAL RESPONSE ACCELERATION, S_S =	0.32g
4.	SPECTRAL RESPONSE ACCELERATION, S_1 =	0.081g
5.	SITE CLASS:	D
6.	SEISMIC DESIGN CATEGORY:	B
7.	SPECTRAL RESPONSE ACCELERATION, S_{DS} =	0.233g
8.	SPECTRAL RESPONSE ACCELERATION, S_{D1} =	0.113g
9	BASIC SEISMIC FORCE RESISTING SYSTEM:	STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
10.	ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
11.	SEISMIC RESPONSE COEFFICIENT (C_s):	0.078
12.	RESPONSE MODIFICATION FACTOR (R):	3.00
13.	DESIGN BASE SHEAR:	0.078*WEIGHT
E.	SNOW LOAD:	
1.	GROUND SNOW LOAD (P_g):	18 PSF
2.	FLAT ROOF SNOW LOAD (P_f):	14 PSF
3.	MINIMUM BALANCED ROOF SNOW LOAD (P_{min}):	18 PSF
4.	EXPOSURE FACTOR (C_e):	0.9
5.	RISK CATEGORY:	II
6.	THERMAL FACTOR (C_t):	1.18
7.	SLOPE FACTOR (C_s):	1.00
8.	UNBALANCED SNOW LOAD SURCHARGE:	9.0 PSF
9.	WIDTH OF UNBALANCED SNOW LOAD:	17' - 6 1/2"
10.	WINTER WIND PARAMETER (W_2):	0.55
11.	FROST DEPTH:	18 INCHES
F.	ICE LOADS	
1.	ICE THICKNESS:	1.45 IN
2.	ICE THICKNESS HEIGHT FACTOR:	0.918
3.	DESIGN ICE THICKNESS:	1.33 IN
4.	DESIGN WEIGHT OF ICE:	6.21 PSF
G.	ROOF RAIN LOAD	
1.	15-MINUTE PRECIPITATION INTENSITY:	7.79 IN/HR
2.	60-MINUTE PRECIPITATION INTENSITY:	3.93 IN/HR

G4. THE FOLLOWING NON-CONTRACTUAL GEOTECHNICAL REPORT WAS DEVELOPED FOR THIS PROJECT AND IS THE BASIS OF THIS STRUCTURAL DESIGN:
GEOTECHNICAL FIRMS NAME: HDR ENGINEERING, INC.
4401 WET GATE BLVD., SUITE 400
AUSTIN, TX 78745
ECS SOUTHWEST, LLP
7801 N. ROBINSON AVE., SUITE D8
OKLAHOMA CITY, OK 73116
HDR REPORT: 14026895 - TASK 7.4
DRILLED PIERS DESIGNED FOR SIDE SHEAR RESISTANCE AND END BEARING IN BEDROCK
MINIMUM PENETRATION INTO BEDROCK = 6'-0"
ALLOWABLE END PRESSURE = 20 KSF
ALLOWABLE SIDE SHEAR RESISTANCE FOR GRAVITY AND UPLIFT = 2,000 PSF

G5. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G6. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

G7. SPECIAL INSPECTIONS
THE OWNER MUST EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER SECTION 1705 OF THE IBC REQUIRING VERIFICATION AND INSPECTION. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS DEFINED IN SECTION 110. THE INSPECTING AGENCY MUST PROVIDE REPORTS OF THE SPECIAL INSPECTIONS DIRECTLY TO THE CONTRACTING OFFICER.

G8. STANDARD DETAILS
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF CONTRACTING OFFICER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10. CONTRACTOR TO SUBMIT FOR REVIEW ALL EQUIPMENT SIZES, OPERATING WEIGHTS, VIBRATION FORCES, SUPPORT LOCATIONS, ALONG WITH ANY FLOOR OPENINGS, NOTCHES, AND RECESSES REQUIRED BY SUCH EQUIPMENT. CONCRETE SUPPORT PADS AND/OR FRAMING REQUIRED TO SUPPORT SAID EQUIPMENT SHALL NOT BE FABRICATED AND PLACED UNTIL THE CONCRETE SUPPORT PADS AND/OR FRAMING IS APPROVED TO SUPPORT THE EQUIPMENT.

CONCRETE

C1. DESIGN STRENGTHS:
F'c = 4,500 PSI
Fy = 60,000 PSI

C2. CONCRETE COVER
UNLESS OTHERWISE NOTED, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS:

CONCRETE DEPOSITED AGAINST EARTH:	3"
CONCRETE IN CONTACT WITH GROUND:	1 1/2"
CONCRETE NOT IN CONTACT WITH GROUND:	
SLABS:	3/4"
BEAMS:	1 1/2"

SEE DRAWINGS FOR EXCEPTIONS

C3. SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS.

C4. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C5. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C6. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C7. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OKLAHOMA, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A STAMPED SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C8. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED.

C9. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C10. ALL CAST IN PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH CHAPTER 17 OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

PRE-ENGINEERED METAL BUILDING

PB1. DESIGN THE BUILDING SYSTEM(S) IN ACCORDANCE WITH THE BUILDING CODE.

PB2. DESIGN THE BUILDING SYSTEM FOR THE LIVE LOADS OR SNOW LOADS (WHICHEVER IS GREATER) INDICATED AND A COLLATERAL DEAD LOAD, WIND LOAD OR SEISMIC LOADS. PARAMETERS FOR THE DEVELOPMENT OF THE SNOW, WIND, AND SEISMIC LOADS ARE LISTED IN THE GENERAL NOTES. INCLUDE THE EFFECTS OF UNBALANCED SNOW LOADS, SNOW DRIFT, SLIDING SNOW, ICE LOADING, AND WINDWARD AND LEEWARD WIND PRESSURE AND CONCENTRATED LIVE LOAD OF 250 LBS LOCATED ANYWHERE ALONG THE LENGTH OF THE PURLIN IN ADDITION TO MECHANICAL EQUIPMENT LOADS INDICATED. USE SPREADER BEAMS WHERE CONCENTRATED LOADS EXCEED PURLIN CAPACITY.

PB3. LOAD COMBINATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE UNLESS THE LATEST EDITION OF THE MBMA METAL BUILDING SYSTEMS MANUAL LOAD COMBINATIONS ARE MORE STRINGENT.

PB4. DESIGN THE BUILDING SYSTEM WITH HINGED COLUMN BASES. FIXED BASE COLUMNS ARE NOT PERMITTED.

PB5. BUILDING LATERAL DEFLECTIONS AND RACKING LIMITS SHALL BE IN ACCORDANCE WITH "SERVICEABILITY CONSIDERATIONS" SUMMARY TABLES CONTAINED IN AISC STEEL DESIGN GUIDE SERIES 3 " SERVICEABILITY DESIGN CONSIDERATIONS FOR LOW RISE BUILDINGS" 2003. DEFLECTIONS SHALL BE LIMITED TO ENSURE THAT BUILDING COMPONENTS DO NOT CONTACT INTERIOR PARTITIONS. DEFLECTION LIMITS SHALL NOT EXCEED DEFLECTION TOLERANCES OF EQUIPMENT SUPPORTED BY THE BUILDING.

PB6. THE BUILDING FOUNDATIONS SHOWN ARE PRELIMINARY. SIGNED AND SEALED CALCULATIONS BY A LICENSED ENGINEER IN THE STATE OF OKLAHOMA SHALL BE SUBMITTED FOR REVIEW FOR THE SUPERSTRUCTURE. DO NOT PLACE FOUNDATIONS PRIOR TO REVIEW AND APPROVAL OF THE BUILDING SYSTEM FOUNDATION LOADINGS.

PB7. FOOTING SIZES AND LOCATIONS SHOWN ARE BASED UPON ASSUMPTIONS OF THE BUILDING SYSTEMS COMPONENTS, CONFIGURATION AND LOADS. COORDINATE ALL FINAL DETAILS AND DIMENSIONS TO ENSURE THAT THE FOUNDATION SYSTEM IS COMPATIBLE WITH THE BUILDING SYSTEM USED. THE BUILDING FOUNDATION HAS BEEN DESIGNED USING THE ASSUMED COLUMN REACTIONS FOR BIDDING PURPOSES ONLY. FINAL FOUNDATION SIZES AND REINFORCEMENT DETAILS WILL BE VERIFIED AFTER THE BUILDING DRAWINGS AND REACTIONS HAVE BEEN SUBMITTED BY THE BUILDING MANUFACTURER TO THE CONTRACTING OFFICER. SUBMIT AT LEAST 30 WORKING DAYS PRIOR TO THE START OF THE FOUNDATION CONSTRUCTION.

PB8. DESIGN AND PROVIDE STRUCTURAL MEMBERS FOR THE SUPPORT OF HVAC UNITS, DUCTS, FANS, PIPING, ELECTRICAL COMPONENTS, SUPPORTED PARTITIONS, OR OTHER APPLICABLE COMPONENTS OF THE FINISHED BUILDING.

PB9. DESIGN OF THE ANCHOR BOLT DIAMETER IS THE RESPONSIBILITY OF THE PEMB MANUFACTURER. EMBEDMENT IS PER DETAIL 03 ON S-005, UNLESS NOTED OTHERWISE.

PB10. COLUMN AND VERTICAL BRACING LOCATIONS ARE AS INDICATED ON PLANS AND SHALL NOT BE CHANGED.

PB11. CONTRACTOR SHALL PROVIDE FINAL, APPROVED PEMB SHOP DRAWINGS INTO THE FINAL AS-BUILT, RECORD SET.

EARTHWORK

E1. ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE LICENSED GEOTECHNICAL ENGINEER.

E2. ANY EXISTING FILLS OR UNSUITABLE SOILS AS DETERMINED BY THE GEOTECHNICAL ENGINEER SHALL BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED GRANULAR FILL PER SPECIFICATIONS SECTION 31 00 00.

E3. CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES SO AS TO NOT DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.

E4. DO NOT EXCAVATE BELOW THE BEARING ELEVATION OF ANY COMPLETED FOOTING NOR ANY CLOSER TO THE FOOTING THAN A SLOPE OF ONE AND A HALF HORIZONTAL (MEASURED FROM EDGE OF FOOTING TO NEAREST POINT IN EXCAVATION) TO ONE VERTICAL.

DELEGATED DESIGN SUBMITTALS

D1. DEFINITION:
DELEGATED DESIGN SUBMITTALS ARE ITEMS FOR WHICH THE FINAL DESIGN OF A SPECIFIC ELEMENT OF THE PERMANENT CONSTRUCTION WORK EXPRESSLY DELEGATED TO A PROPERLY LICENSED AND REGISTERED DESIGN PROFESSIONAL LICENSED IN THE STATE OF OKLAHOMA RETAINED OR EMPLOYED BY THE CONTRACTOR, SUBCONTRACTOR, SUPPLIER OF ANY TIER. "DELEGATED DESIGN" APPLIES ONLY TO PERMANENT WORK THAT WILL BE PART OF THE COMPLETED PROJECT AS A FUNCTIONING WHOLE.

D2. DELEGATED DESIGN LIST:
THE FOLLOWING IS A LIST OF DELEGATED SUBMITTALS THAT ARE EXPECTED TO CONTAIN STAMPED STRUCTURAL CALCULATIONS OF SAFETY-RELATED SYSTEM INFORMATION FOR REVIEW. THESE SUBMITTALS APPLY TO DELEGATED DESIGNED SYSTEMS PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, COMPONENT, OR ITS ANCHORAGE. THE CONTRACTOR SHALL SUBMIT THE REQUIRED ENGINEER CERTIFICATION, SUPPORTING DATA, AND STAMPED DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CONTRACTING OFFICER.

DELEGATED DESIGN SUBMITTALS

SPEC SECTION	ITEM
05 05 20	POST-INSTALLED CONCRETE ANCHORS
05 50 13	MISCELLANEOUS METAL FABRICATIONS
13 34 19	METAL BUILDING SYSTEMS
VARIOUS	ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS

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TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
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04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TESTING OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
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DESIGN GROUP: HDR
DESIGNED BY: CM
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CHECKED BY: KT
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SHEET TITLE
GENERAL NOTES AND STANDARD DETAILS

SHEET NUMBER
S-001

STATEMENT OF SPECIAL INSPECTIONS (IBC 1705):
UNLESS NOTED OTHERWISE

SI1. SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATIONS ARE REQUIRED IN ACCORDANCE WITH IBC CHAPTER 1 AND CHAPTER 17. PAYMENT FOR THESE INSPECTIONS IS NOT THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE FOR FULL ACCESS TO THE WORK BY THE SPECIAL INSPECTOR AND SHALL PROVIDE FOR THESE INSPECTIONS IN THEIR CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS

SI2. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES ARE BEING CONDUCTED ON THE PREMISES OF A FABRICATION SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION, EXCEPT WHERE THE FABRICATOR HAS BEEN APPROVED TO PERFORM THE WORK WITHOUT SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1704.2.5.1.1

SI3. SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN FABRICATION PROCEDURES AND QUALITY CONTROL MANUALS THAT PROVIDE A BASIS FOR CONTROL OF MATERIALS AND WORKMANSHIP, WITH PERIODIC AUDITING OF FABRICATION AND QUALITY CONTROL PRACTICES BY AN APPROVED AGENCY OR THE BUILDING OFFICIAL. AT COMPLETION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR THE OWNER'S AUTHORIZED AGENT FOR SUBMITTAL TO THE BUILDING OFFICIAL AS SPECIFIED IN IBC SECTION 1704.5 STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SI4. SHOP FABRICATED ITEMS BY APPROVED FABRICATOR ARE EXEMPT FROM SPECIAL INSPECTION. UPON COMPLETION, APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE STATING WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

SI5. CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY PRIOR TO CONSTRUCTION, INCLUDING:
A. ACKNOWLEDGEMENT OF SPECIAL INSPECTION REQUIREMENTS.
B. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO CONFORM WITH APPROVED CONSTRUCTION DOCUMENTS.
C. PROCEDURES FOR EXERCISING CONTROL, INCLUDING METHOD AND FREQUENCY OR REPORTING, AND DISTRIBUTION OF REPORTS.
D. IDENTIFICATION AND QUALIFICATION OF PERSON(S) EXERCISING SUCH CONTROL.

SI6. STRUCTURAL OBSERVATIONS ARE REQUIRED IN ACCORDANCE WITH IBC SECTION 1704. STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY A REGISTERED DESIGN PROFESSIONAL (RDP). RDP SHALL BE HIRED BY THE OWNER FOR GENERAL COMPLIANCE WITH DESIGN DOCUMENTS AND INTENT, OBSERVATION SCHEDULE SHALL BE SUBMITTED PRIOR TO OBSERVATION COMMENCEMENT. RDP SHALL PREPARE A REPORT INDICATING SITE VISITS MADE AND IDENTIFYING ANY STRUCTURAL DEFICIENCIES THAT HAVE NOT BEEN CORRECTED. OBSERVATIONS ARE REQUIRED DURING INSTALLATION OF DRILLED PIERS, GRADE BEAMS, AND FLOOR SLABS.

SI8. THE FOLLOWING CONSTRUCTION IS SUBJECT TO SPECIAL INSPECTIONS.

SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY		CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
GENERAL STRUCTURAL OBSERVATIONS				
CONDUCT VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS. PREPARE WEEKLY REPORT OF OBSERVATIONS DESCRIBING WORK PROGRESS AND NON-CONFORMING ITEMS.	-	X		
SOIL AND EARTHWORK			TABLE 1705.6	
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X		
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X		
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X		
DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X		
CONCRETE AND REINFORCING STEEL			TABLE 1705.3	
INSPECTION OF REINFORCING STEEL SIZE AND PLACEMENT.	-	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3	
INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 26.13.3.3	
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-	ACI 318: 26.13.3.2	
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN ITEM A ABOVE.	-	X	ACI 318: 26.13.3	
VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH 19, 26.4.3, 26.4.4	
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	
INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	
VERIFY FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLAB.	-	X	ACI 318: 26.11.2	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	

SCHEDULE OF SPECIAL INSPECTION SERVICES (CONT)

INSPECTION ITEM REQUIRED	FREQUENCY		CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC		
METAL BUILDING SYSTEMS				
INSTALLATION OF RAFTER/BEAM FLANGE BRACES AND COLUMN FLANGE BRACES.	-	X		
INSTALLATION OF PURLINS AND GIRTS, INCLUDING SPECIFIED LAPPING.	-	X		
PURLINS AND GIRTS RESTRAINT/BRIDGING/BRACING.	-	X		
INSTALLATION OF X-BRACING, TIGHTENED TO REMOVE ANY SAG.	-	X		
CAST-IN PLACE DEEP FOUNDATIONS				
INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X	-		
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X	-		
FOR CONCRETE ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.3	IN ACCORDANCE WITH IBC SECTION 1705.3			

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ISSUE DATE: 24 APRIL 2026
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CHECKED BY: KT
DESIGN FILE LOCATION:

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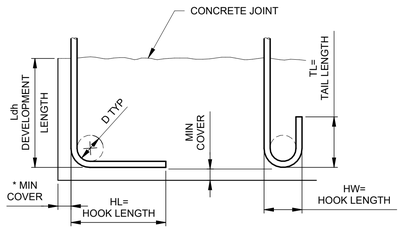
STRUCTURAL SPECIAL INSPECTIONS

SHEET NUMBER
S-002



90 DEG STD HOOK **180 DEG STD HOOK**

BAR SIZE GRADE 60	HL	HW	TL	D	f'c=4.5 KSI
					Ldh
#3	6"	3"	3"	2 1/4"	6"
#4	8"	4"	4 1/2"	3"	7"
#5	10"	5"	5"	3 3/4"	9"
#6	1'-0"	6"	6"	4 1/2"	10"
#7	1'-2"	7"	7"	5 1/4"	12"
#8	1'-4"	8"	8"	6"	14"
#9	1'-7"	11 3/4"	10 1/2"	9 1/2"	15"
#10	1'-10"	1'-1 1/4"	11 1/2"	10 3/4"	17"
#11	2'-0"	1'-2 3/4"	1'-1"	12"	19"

NOTES:

1. PROVIDE MINIMUM HOOK DEVELOPMENT LENGTHS PER TABLE ABOVE, UNO.
2. ALL HOOKS SHOWN IN THE DRAWINGS SHALL BE STANDARD HOOKS, UNO.
3. COMPLYING WITH MINIMUM COVER REQUIREMENTS OF ACI 318 SECTION 25.4.3, OTHERWISE Ldh MUST BE RE-CALCULATED.

01 S-003 REINFORCING HOOK SCHEDULE

NTS

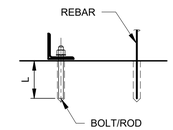
LAP SPLICE AND EMBEDMENT LENGTHS f'c =4.5 ksi fy = 60 ksi		
BAR	BARS SPACED GREATER THAN 4"	BARS SPACED LESS THAN OR EQUAL TO 4"
#3	14"	20"
#4	19"	32"
#5	29"	46"
#6	39"	62"
#7	55"	87"
#8	69"	107"
#9	76"	116"
#10	97"	140"
#11	120"	146"

NOTES:

1. PROVIDE MINIMUM LAP SPLICE LENGTHS AND EMBEDMENTS PER TABLE UNLESS NOTED OTHERWISE. EMBEDMENT LENGTH EQUALS THE LAP SPLICE LENGTH UNLESS OTHERWISE NOTED.
2. BAR SPACING AT LAP SPLICE IS THE MINIMUM CLEAR DISTANCE BETWEEN LAPPED BARS PLUS ONE BAR DIAMETER.
3. ALL SPLICES TO BE CONTACT SPLICES AND WIRED TOGETHER UNLESS OTHERWISE APPROVED BY THE ENGINEER.

02 S-003 CONCRETE REINFORCING LAP AND EMBEDMENT SCHEDULE

NTS



VERTICAL

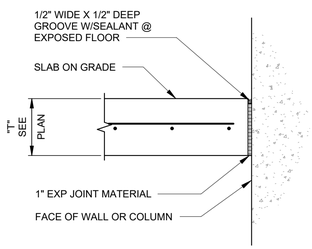
REINFORCING BARS		ANCHOR BOLTS/RODS	
BAR SIZE	EMBED LENGTH (L)	DIA (IN)	EMBED LENGTH (L)
#3	4"	3/8"	5"
#4	5"	1/2"	6"
#5	6"	5/8"	7"
#6	7"	3/4"	8"
#7	8"	7/8"	9"
#8	9"	1"	10"

NOTES:

1. ADHESIVE TYPE IS SUBJECT TO APPROVAL OF THE CONTRACTING OFFICER.
2. EMBEDMENT LENGTHS SHOWN ARE MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS OR AS OTHERWISE REQUIRED BY SPECIFICATIONS.
3. FOR ADDITIONAL REQUIREMENTS, SEE SPECIFICATION SECTION 05 05 20.

03 S-003 ADHESIVE ANCHOR DETAIL AND SCHEDULE

NTS

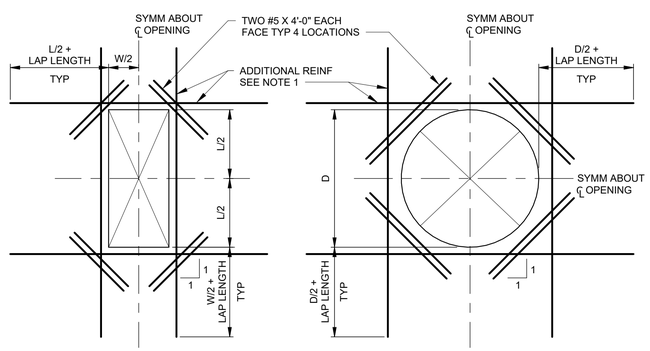


NOTES:

1. AT SLAB-ON-GRADE AND NEW SPREAD FOOTINGS

04 S-003 TYPICAL ISOLATION JOINT (IJ)

NTS



RECTANGULAR OPENING DETAIL CIRCULAR OPENING DETAIL

NOTES:

1. PROVIDE ADDITIONAL REINFORCING THE SAME SIZE AS DISCONTINUOUS REINFORCEMENT AT OPENING. QUANTITY OF REINFORCING IN EACH DIRECTION SHALL BE EQUAL TO OR ONE GREATER THAN THE NUMBER OF DISCONTINUOUS BARS. PLACE 1/2 OF ADDITIONAL REINFORCING BARS EACH SIDE OF OPENING, PLACE ADDITIONAL REINFORCEMENT AT 3" OC (TYPICAL BOTH DIRECTIONS AND ALL LAYERS OF REINFORCEMENT). START FIRST BAR 2" CLEAR TO OPENING.
2. EXTEND ADDITIONAL REINFORCING BEYOND EDGE OF OPENING AS SHOWN ABOVE. ADDITIONAL BARS MAY TERMINATE AT THE END OF THE WALL WITH A STANDARD HOOK WHERE THE LENGTH OF THE WALL WILL NOT PERMIT BARS TO EXTEND AS SHOWN ABOVE.
3. TYPICAL WALL OR SLAB REINFORCING NOT SHOWN FOR CLARITY. TERMINATE TYPICAL REINFORCING 2" CLEAR TO OPENING.
4. OPENINGS 12" OR LESS IN SLABS AND WALLS, NO EXTRA REBARS ARE REQUIRED UNLESS SHOWN OTHERWISE. TYPICAL REINFORCING SHALL BE RESPACED (NOT CUT) TO ALLOW FOR OPENINGS TO BE MADE.
5. UNLESS SHOWN OTHERWISE ON DRAWINGS, PROVIDE EXTRA REINFORCING AROUND OPENINGS AS SHOWN AND INDICATED ABOVE.
6. PROVIDE ADDITIONAL DOWELS PER NOTE 1 ABOVE FOR ALL OPENINGS NEAR THE FLOOR SLAB, BASE SLAB, OR CORNERS.

05 S-003 EXTRA REINFORCING AROUND OPENINGS

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WWYK200270
DRUG TESTING OFFICE RENOVATION, B7037
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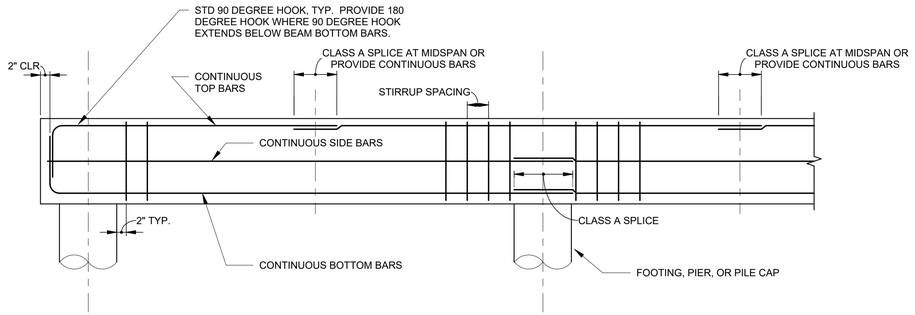
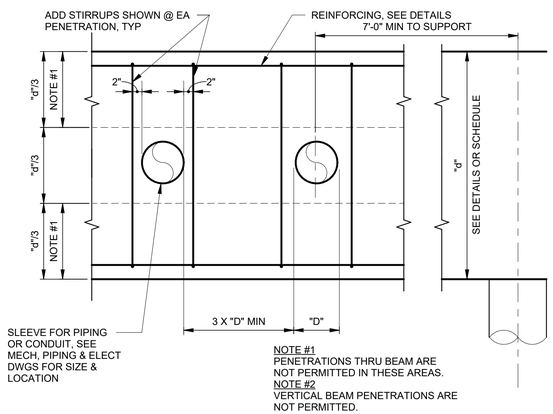
SHEET TITLE
STRUCTURAL TYPICAL CONCRETE DETAILS 1

SHEET NUMBER
S-003



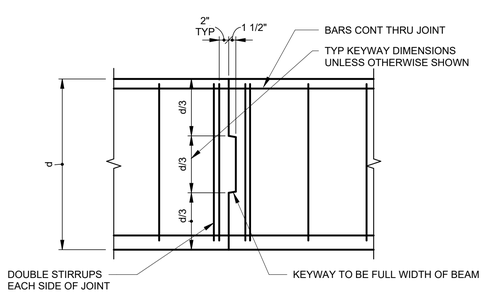
01 / S-004 TYPICAL GRADE BEAM REINFORCEMENT PLACEMENT DETAIL

NTS



02 / S-004 TYPICAL PIPING AND CONDUIT THROUGH GRADE BEAM

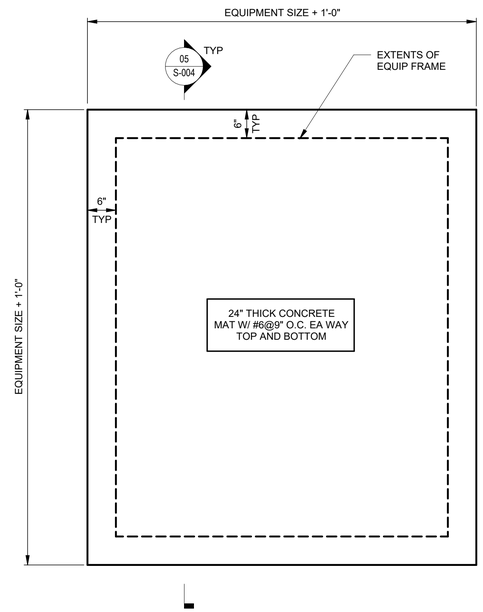
NTS



NOTE: LOCATE CONSTRUCTION JOINT WITHIN MIDDLE THIRD OF SPAN BETWEEN SUPPORTS.

03 / S-004 TYPICAL GRADE BEAM CONSTRUCTION JOINT ELEVATION

NTS

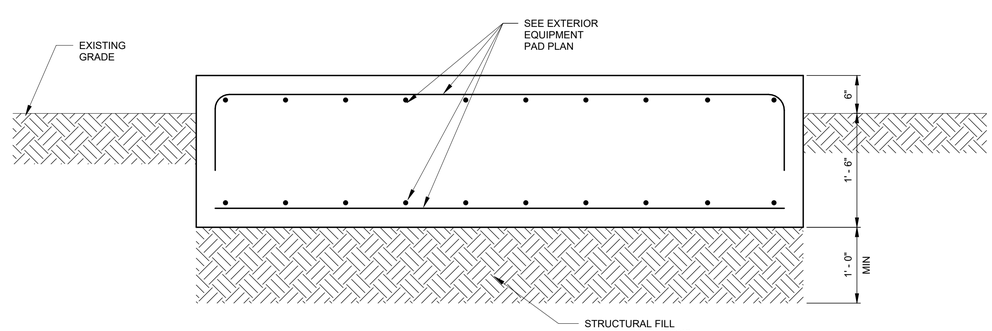


NOTES:

1. COORDINATE WITH MECHANICAL AND CIVIL DRAWINGS FOR LOCATIONS ON EQUIPMENT PADS.

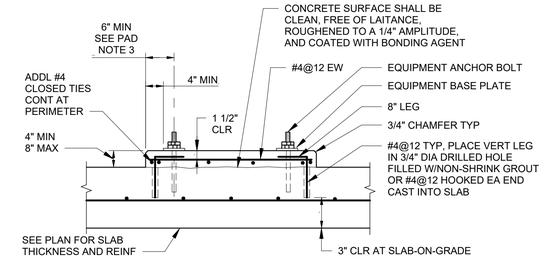
04 / S-004 TYPICAL EXTERIOR EQUIPMENT PAD

SCALE: 3/4" = 1'-0"



05 / S-004 TYPICAL EXTERIOR PAD EDGE SECTION

SCALE: 1" = 1'-0"



NOTES:

1. PROVIDE ABOVE PAD UNDER ALL ELECTRICAL AND MECHANICAL EQUIPMENT SUPPORTED ON STRUCTURAL SLABS. ALSO PROVIDE FOR EQUIPMENT WEIGHING LESS THAN 5000 POUNDS WHICH ARE SUPPORTED ON GRADE, OR WHERE SPECIFICALLY NOTED ON PLANS.
2. PAD THICKNESS SHALL BE A MINIMUM OF 4". CONTRACTOR SHALL VERIFY THE PAD DIMENSIONS.
3. PROVIDE EMBEDDED CHANNELS FOR ANCHORING ELECTRICAL EQUIPMENT WHERE REQUIRED.

PAD NOTES:

1. EQUIPMENT PAD DETAILS ON THIS SHEET APPLY FOR SUPPORT OF ALL EQUIPMENT UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
2. BEFORE EQUIPMENT SUPPORT PADS ARE CAST, THE PAD SIZES AND REINFORCING SHALL BE APPROVED BY THE ENGINEER AS BEING CAPABLE OF SUPPORTING EQUIPMENT TO BE PLACED THEREON. EQUIPMENT BASE DIMENSIONS SHALL BE THE LARGER OF AS DETERMINED BY THE EQUIPMENT MANUFACTURER OR AS INDICATED ON THE DRAWINGS. SUBMIT ALL EQUIPMENT DIMENSIONS AND LOADS TO ENGINEER.
3. 6" MINIMUM PAD EDGE DIMENSION TO EQUIPMENT ANCHOR BOLT APPLIES FOR ALL NON-ELECTRICAL EQUIPMENT SUPPORT PADS. AT ELECTRICAL EQUIPMENT, PROVIDE 1" FROM EDGE OF EQUIPMENT TO EDGE OF PAD.
4. THE SIZE, NUMBER, TYPE, LOCATION AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE EQUIPMENT BASE IS BEING CAST.
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE, TOLERANCE IS 1/8" ACROSS PLAN DIAGONALS.

06 / S-004 SHALLOW EQUIPMENT PAD

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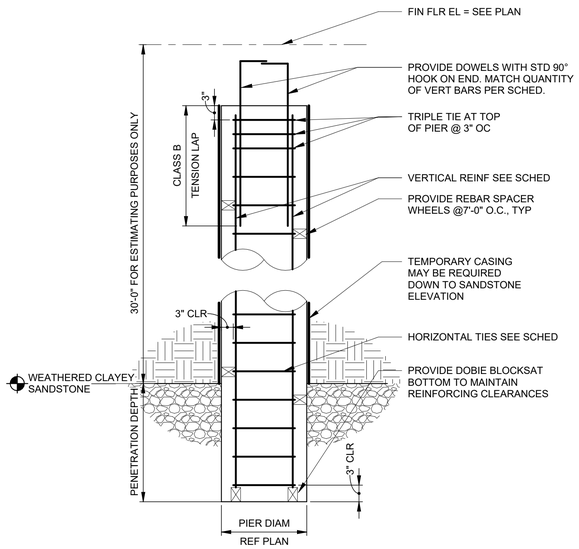
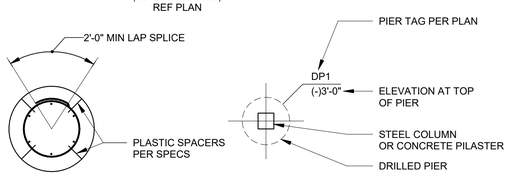
SHEET TITLE
STRUCTURAL
TYPICAL CONCRETE DETAILS 2

SHEET NUMBER
S-004

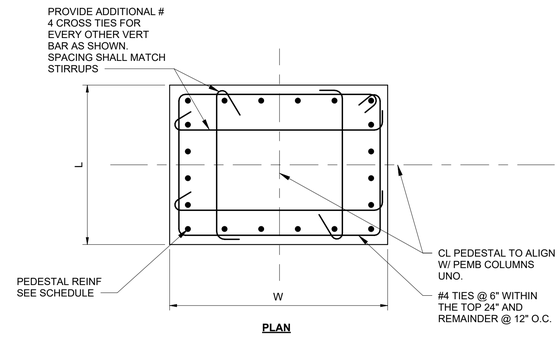




DRILLED PIER SCHEDULE				
PIER DESIGNATION	PIER DIAMETER (INCHES)	VERTICAL REINF	HORIZONTAL TIES	PENETRATION
DP1	24	8-#8	#4 @ 12"	6'-0"
DP2	18	6-#8	#4 @ 12"	6'-0"

01 S-005 TYPICAL DRILLED PIER DETAIL
NTS

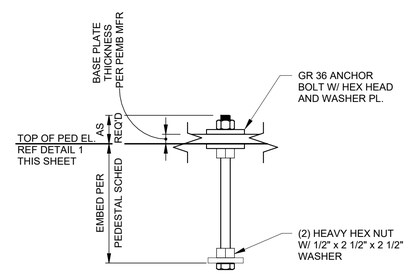
PEDESTAL SCHEDULE							
MARK	PEMB COL	PEDESTAL SIZE (IN)		VERTICAL REINFORCING	HORIZONTAL TIES	ANCHOR BOLTS	REMARKS
		W	L				
P1	TYPICAL	36	36	(18)#8	#4 AS INDICATED	3/4"Ø** W/ 18" EMBED	--



NOTES:

1. TOP OF PEDESTAL ELEVATION: EL. 0'-0".
2. ** - REFER TO GENERAL NOTE PB9.

02 S-005 PEDESTAL SCHEDULE
NTS



03 S-005 ANCHOR BOLT
NTS

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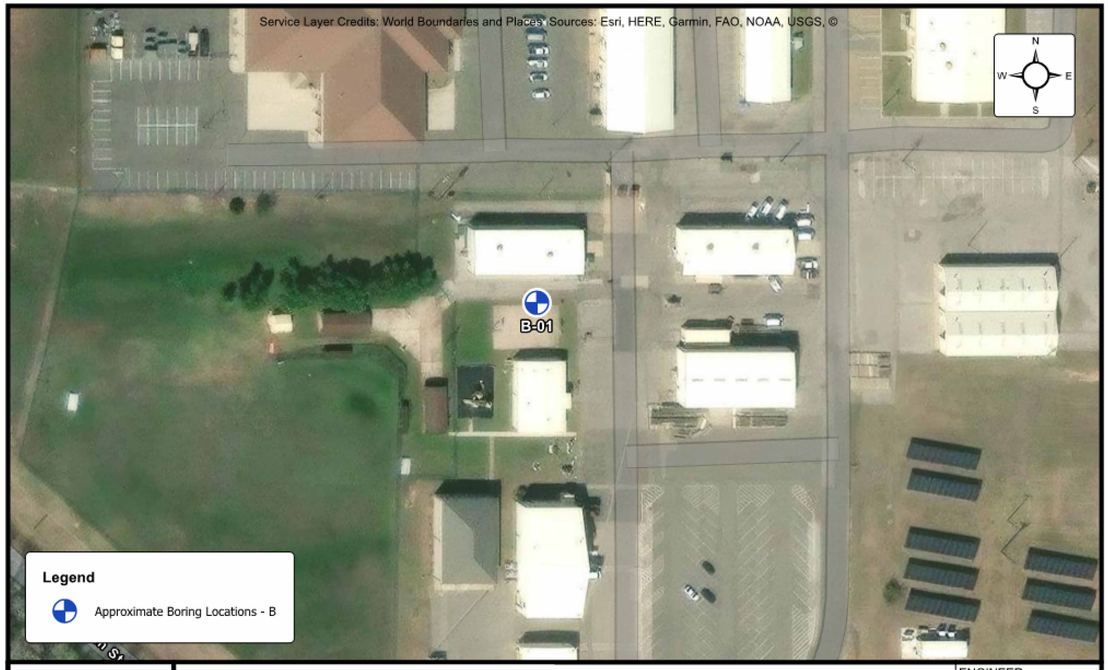
STRUCTURAL CONCRETE DRILLED PIER AND PEDESTAL SCHEDULES AND DETAILS

SHEET NUMBER
S-005



BORING LOCATION DIAGRAM

Tinker AFB - B7307 Renovation

3192 Industrial Blvd, Oklahoma City, Oklahoma
HDR Engineering, Inc.

ENGINEER	AW
SCALE	1" = 100"
PROJECT NO.	58:2278
SHEET	1 of 1
DATE	1/29/2026

CLIENT: HDR Engineering, Inc.	PROJECT NO.: 58:2278	BORING NO.: B-01	SHEET: 1 OF 1
PROJECT NAME: Tinker AFB - B7307 Renovation	DRILLER/CONTRACTOR: Drilling Services of Oklahoma, LLC		
SITE LOCATION: 3192 Industrial Blvd, Oklahoma City, Oklahoma, 73145			LOSS OF CIRCULATION
LATITUDE: 35.420636	LONGITUDE: -97.406938	STRUCTURE:	SURFACE ELEVATION: 1229
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	ELEVATION (FT)	WATER LEVELS	BLOWS/6" (TCP/MC/SPT N-VALUE)	Rec % / RQD % / Moisture	SPT / TCP	LIQUID LIMIT	PLASTICITY INDEX	MOISTUE CONTENT (%)	QP (TSF)	FINES CONTENT	DRY UNIT WEIGHT (PCF)	COMPRESSIVE STR. (TSF)
					Topsoil [Thickness=6"].													
	S-1	SS	S-1	18	(CL) LEAN CLAY WITH SAND - dark brown, moist, soft.				2-2-2 (4)		4	42	27	25.0		82.1		
	S-2	ST	S-2	24	(CH) FAT CLAY - gray and yellowish brown, moist, stiff.		1225					50	30	21.2		93.6		
5	S-3	SS	S-3	18	(CL) LEAN CLAY - red, moist, soft to stiff.				2-4-6 (10)		10	44	28	26.1		93.1		
	S-4	SS	S-4	18			1220		3-3-6 (9)		9			18.5				
10	S-5	ST	S-5	24								46	28	22.2		98.0		
	S-6	SS	S-6	18			1215		2-3-4 (7)		7			21.7		95.5		
15	S-7	SS	S-7	18					1-2-2 (4)		4			23.0				
	S-8	SS	S-8	18			1210		WoH-2-3 (5)		5	34	20	20.9		94.0		
20																		
	S-9	SS	S-9	18			1205		2-3-3 (6)		6			21.4		96.5		
25																		
	S-10	SS	S-10	18			1200		10-30-50/3" (106)		106			19.0				
					(WR) WEATHERED CLAYEY SANDSTONE - red, very dense.													
					END OF BORING at 30.0 FT													

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered):	NA	BORING STARTED:	01/08/2026	CAVE IN DEPTH:	22FT
WL (Completion):	dry	BORING COMPLETED:	01/08/2026	HAMMER TYPE:	Automatic
WL (Seasonal High Water):		EQUIPMENT:	LOGGED BY:	DRILLING METHOD:	Mud Rotary (0'-30')
WL (Stabilized):		ATV	DW		

GEOTECHNICAL BOREHOLE LOG

NOTES:

A. GROUNDWATER WAS NOT OBSEREVED IN THE BORINGS AT THE TIME OF THE BORING EXPLORATION.

B. GROUNDWATER LEVEL OBSERVATIONS WERE NOT MADE DURING DILLING OPERATIONS DUE TO THE USE OF WET ROTARY DRILLING.

C. VARIATIONS IN THE LONG-TERM WATER TABLE MAY OCCUR AS A RESULT OF CHANGES IN PRECIPITATION, EVAPORATION, SURFACE WATER RUNOFF, CONSTRUCTION ACTIVITIES, AND OTHER FACTORS.

D. CONSTRUCTION CONTRACTOR SHALL MONITOR GROUNDWATER LEVELS DURING CONSTRUCTION ACTIVITIES.

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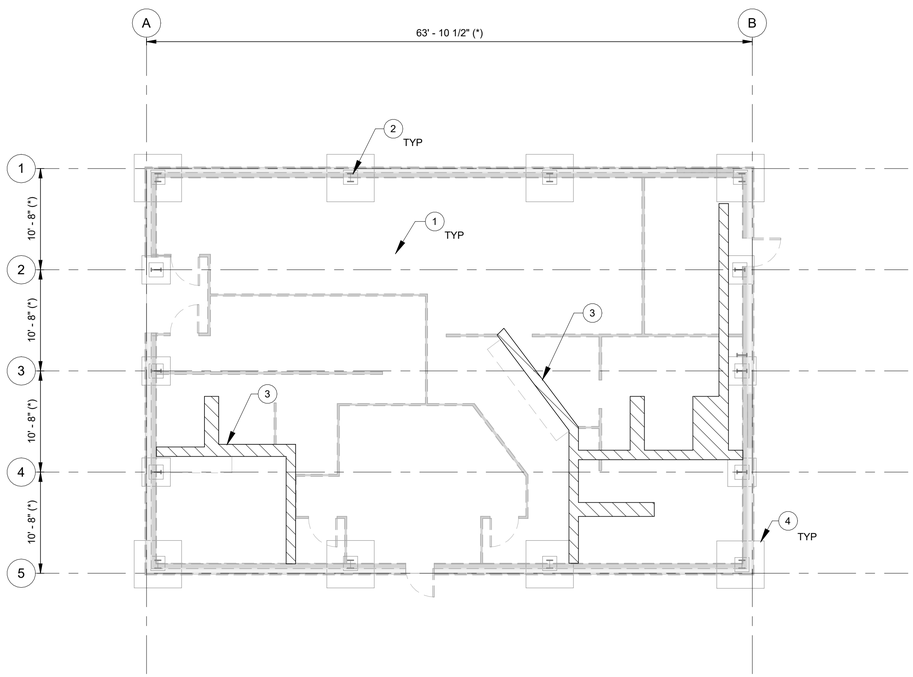
SOIL BORING PLAN AND LOG

SHEET NUMBER
SB100



01 SD101 STRUCTURAL FIRST FLOOR DEMOLITION PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. SEE SHEETS S-001 THRU S-005 FOR GENERAL STRUCTURAL NOTES AND STANDARD DETAILS.
2. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.
3. EXISTING BUILDING INFORMATION IS AS INDICATED ON THE AS-BUILT DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.
4. TOP OF EXISTING CONCRETE SLAB EL. 0'-0".

KEY NOTES

1. EXISTING CONCRETE FLOOR SLAB.
2. EXISTING PRE-ENGINEERED METAL BUILDING COLUMNS.
3. REMOVE PORTION OF EXSITING FLOOR SLAB FOR NEW BELOW SLAB PIPING. COORDINATE EXTENTS WITH MECHANICAL/PLUMBING DRAWINGS. EXTENTS INDICATED ARE PRELIMINARY ESTIMATES OF SLAB-ON-GRADE DEMOLITION. FINAL EXTENTS OF DEMOLITION MUST BE DETERMINED BY CONSTRUCTION CONTRACTOR BASED ON MECHANICAL/PLUMBING REQUIREMENTS AND CONSTRUCTION CONTRACTOR'S MEANS AND METHODS.
4. EXISTING CONCRETE SPREAD FOOTING. CONTRACTOR TO VERIFY EXTENTS OF EXISTING FOUNDATIONS TO VERIFY NO CONFLICTS WILL OCCUR WITH NEW FOUNDATIONS.

LEGEND

EXISTING CONCRETE SLAB TO BE REMOVED

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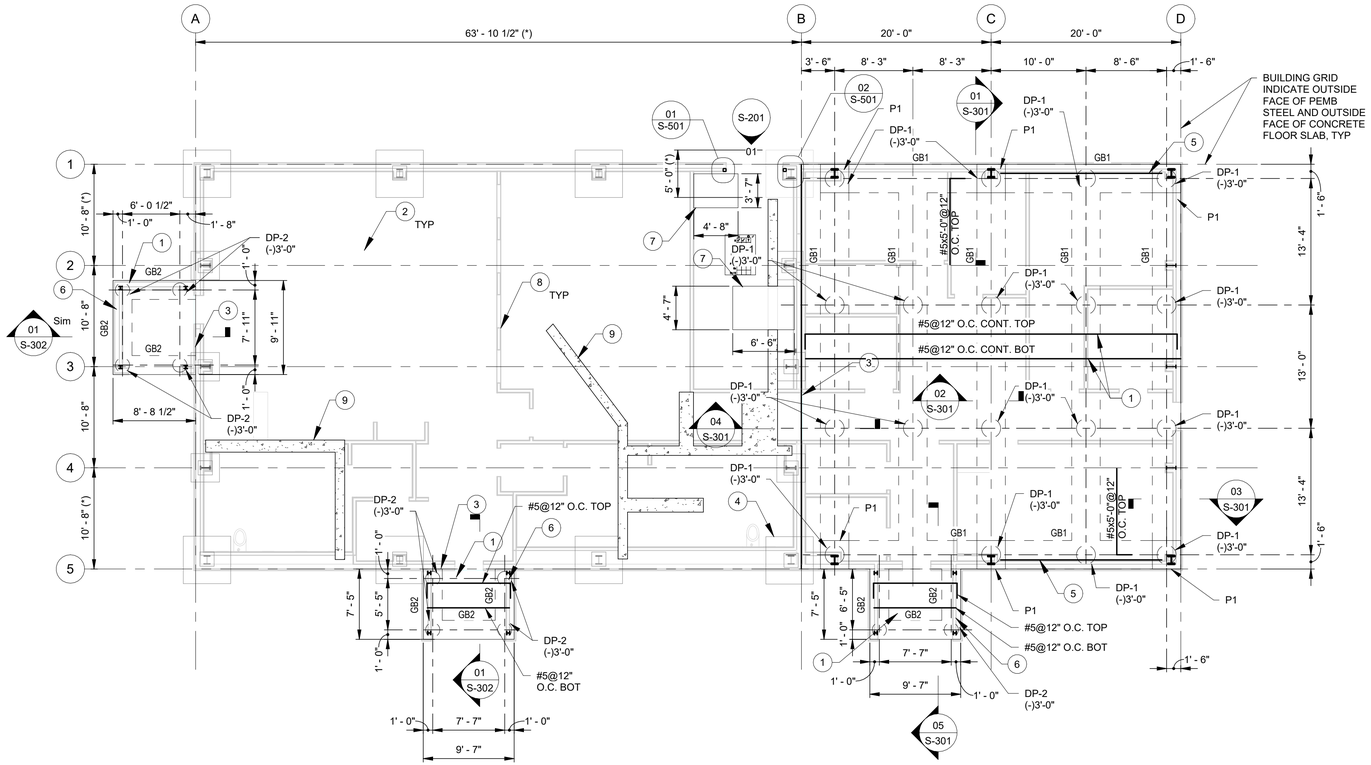
STRUCTURAL FIRST FLOOR DEMOLITION PLAN

SHEET NUMBER
SD101



GENERAL NOTES

1. SEE SHEETS S-001 THRU S-005 FOR GENERAL STRUCTURAL NOTES AND STANDARD DETAILS.
2. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.
3. EXISTING BUILDING INFORMATION IS AS INDICATED ON THE AS-BUILT DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.
4. TOP OF EXISTING CONCRETE SLAB EL. 0'-0", FLUSH TO EXISTING ADJACENT SLAB.
5. GBX DENOTES GRADE BEAM GBX. REFER TO S-300 SERIES FOR REINFORCING.
6. PX DENOTES PEDESTAL TYPE PX. REFER TO SHEET S-005 FOR PEDESTAL SCHEDULE.
7. DPX DENOTES DRILLED PIER TYPE DPX. REFER TO SHEET S-005 FOR DRILLED PIER SCHEDULE. TOP OF PIER ELEVATION PER PLAN.
8. THE BUILDING FOUNDATION HAS BEEN DESIGNED USING THE ASSUMED COLUMN REACTIONS FOR BIDDING PURPOSES ONLY. FINAL FOUNDATION SIZES AND REINFORCEMENT DETAILS WILL BE VERIFIED AFTER THE BUILDING DRAWINGS AND REACTIONS HAVE BEEN SUBMITTED BY THE BUILDING MANUFACTURER TO THE CONTRACTING OFFICER. REFER TO PRE-ENGINEERED METAL BUILDING NOTES ON SHEET S-001. SUBMIT AT LEAST 30 WORKING DAYS PRIOR TO THE START OF THE FOUNDATION CONSTRUCTION.

KEY NOTES

1. NEW 6" CONCRETE SLAB REINFORCED PER PLAN. PROVIDE #5@18" O.C. TEMPERATURE AND SHRINKAGE BARS PLACED PERPENDICULAR TO AND BETWEEN MAIN REINFORCING.
2. EXISTING CONCRETE FLOOR SLAB.
3. ISOLATION JOINT BETWEEN STRUCTURES PER DETAIL 04 ON SHEET S-003.
4. EXISTING CONCRETE SPREAD FOOTING. CONTRACTOR TO VERIFY EXTENTS OF EXISTING FOUNDATIONS TO VERIFY NO CONFLICTS WILL OCCUR WITH NEW FOUNDATIONS.
5. TIE ROD BRACING BETWEEN COLUMNS, BY PEMB MFR.
6. PORTAL FRAME VESTIBULES PER PEMB SUPPLIER.
7. EQUIPMENT PAD PER DETAIL 06 ON SHEET S-004.
8. INTERIOR NON-LOAD BEARING PARTITIONS PER ARCHITECTURAL DRAWINGS.
9. NEW CONCRETE INFILL SLAB. INFILL SLAB DEPTH TO MATCH EXISTING. SEE DETAIL 02 AND 03 ON SHEET S-302 FOR REPAIR DETAIL AND VAPOR BARRIER REPAIR PROCEDURES.

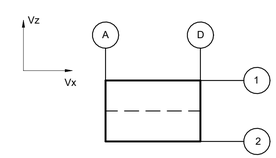
LEGEND

NEW CONCRETE INFILL SLAB

ASSUMED REACTION TABLE (KIPS)				
GRID	MAXIMUM VERTICAL REACTION (DOWN)	MAXIMUM UPLIFT REACTION (UP)	MAXIMUM SHEAR (Vx)	MAXIMUM SHEAR (Vz)
B1	23	-6	1	10
B5	23	-6	1	10
C1	23	-6	1	10
C5	23	-6	1	10
D1	12	-3	1	10
D5	12	-3	1	10
ENDWALL LINE D	3.5	-1.5	3.5	1

NOTES:

1. ALL REACTIONS LISTED ARE ULTIMATE (LRFD)
2. MAXIMUM SHEAR REACTION (Vx, Vz) NOT APPLIED SIMULTANEOUSLY.
3. Vx, Vz DIRECTIONS INDICATED BELOW.
4. BASES ARE ASSUMED TO BE PINNED.



01 S-101 FLOOR STRUCTURAL PLAN

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

0 4' 8' 16'

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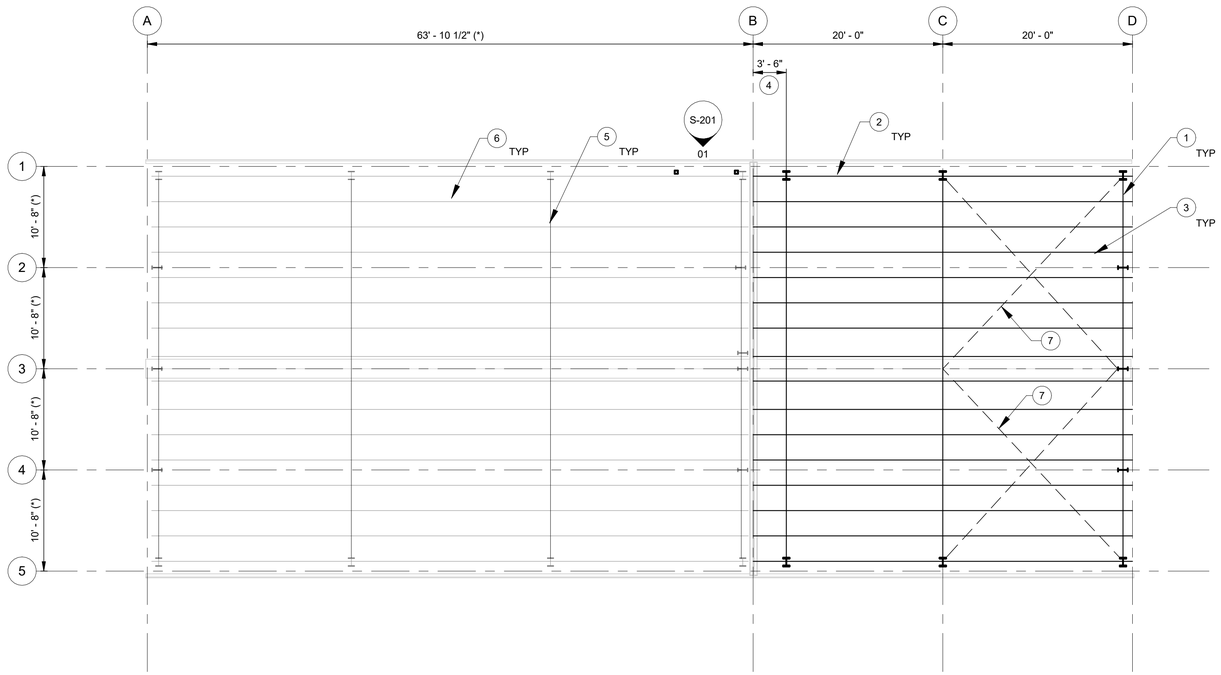
FLOOR FRAMING PLAN

SHEET NUMBER
S-101



01 S-102 ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. SEE SHEETS S-001 THRU S-005 FOR GENERAL STRUCTURAL NOTES AND STANDARD DETAILS.
2. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.
3. EXISTING BUILDING INFORMATION IS AS INDICATED ON THE AS-BUILT DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.

KEY NOTES

1. BUILDING FRAME, BY PEMB MFR.
2. EAVE STRUTS AT PERIMETER, EACH SIDE, EACH BAY, BY PEMB MFR.
3. ROOF PURLINS, BY PEMB MFR.
4. PEMB MFR TO DESIGN NEW ROOF PURLINS AND WALL GIRTS BETWEEN EXISTING BUILDING AND FRAME GRID TO CANTILEVERED LENGTH SHOWN.
5. EXISTING BUILDING FRAME.
6. EXISTING ROOF PURLINS.
7. HORIZONTAL X-BRACING, BY PEMB MFR.

LEGEND

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DESIGNED BY: CM
DRAWN BY: CM
CHECKED BY: KT
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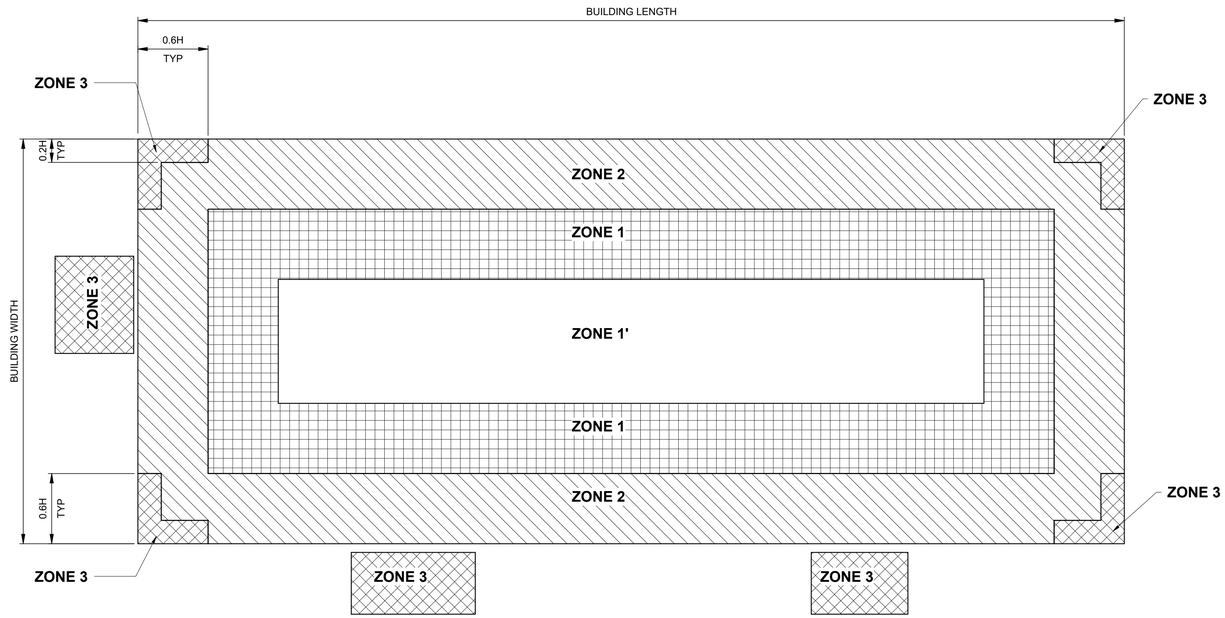
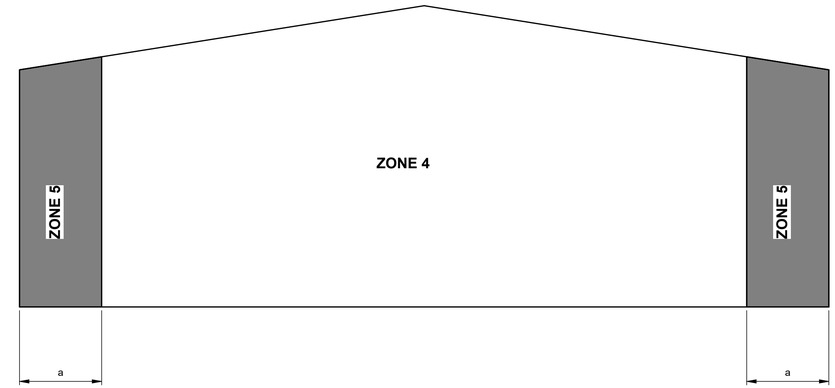
SHEET TITLE
ROOF FRAMING PLAN

SHEET NUMBER
S-102





ULTIMATE WIND PRESSURES (PSF) COMPONENTS AND CLADDING												
ZONE / SQ. FT.	1'		1		2		3		4		5	
	+	-	+	-	+	-	+	-	+	-	+	-
≥10	16	23	16	40	16	52	16	71	23	25	23	30
100	16	23	16	31	16	41	16	49	19	21	19	26
200	16	16	16	28	16	38	16	42	18	20	18	22
500	16	16	16	25	16	33	16	33	17	19	17	19

NOTES:
1. PRESSURES NOTED IN THE TABLE ARE MINIMUMS.
2. ENDZONE WIDTH, a = 4.33'
3. REFER TO ASCE 7 FIGURES 30.3-1 AND 30.3-2A FOR PRESSURE DIAGRAMS.
4. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD OR AWAY FROM THE SURFACES.
5. EACH COMPONENT SHALL BE DESIGNED FOR MAXIMUM POSITIVE AND NEGATIVE PRESSURES.

01 / S-103 ROOF LOADING DIAGRAMS
NTS

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LICENSED PROFESSIONAL ENGINEER
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34849
OKLAHOMA
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TESTING OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

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ROOF LOADING DIAGRAM

SHEET NUMBER
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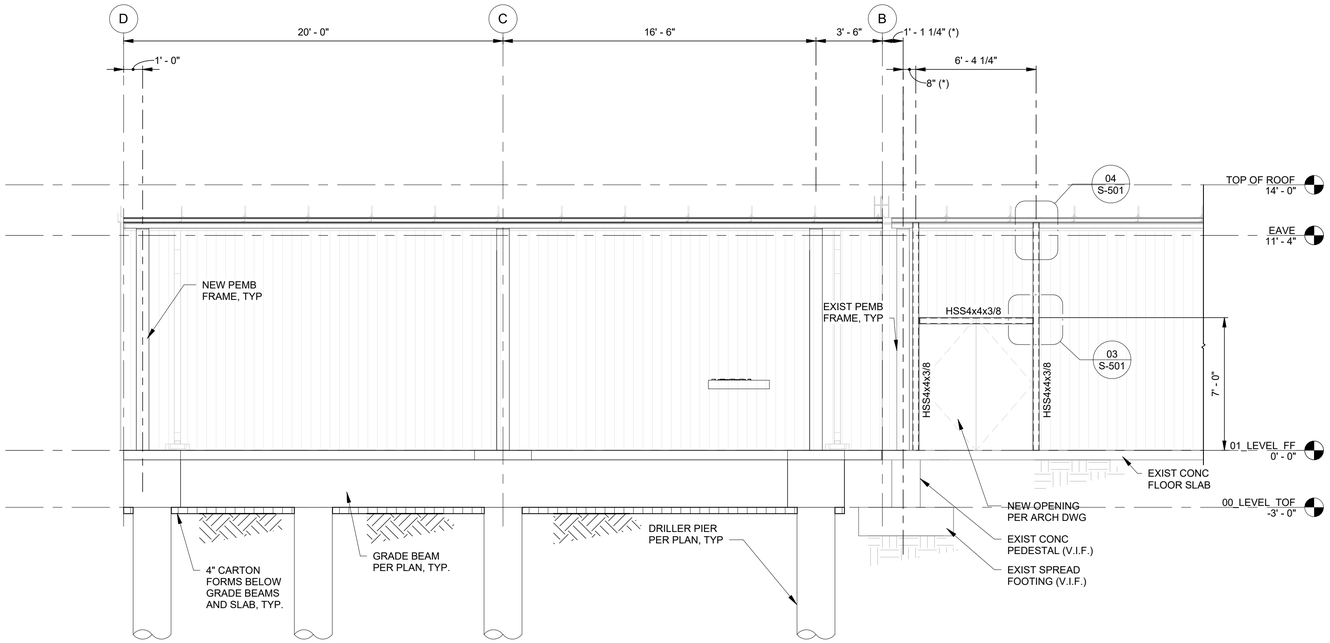

NOTES:
1. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.
2. REFER TO SHEET S-101 FOR DRILLED PIER DEPTHS, SIZE, AND SPACING.
3. REFER TO SHEET S-005 FOR DRILLED PIER SCHEDULE.

01 / S-201 FRAMING ELEVATION AT NEW WALL OPENING

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

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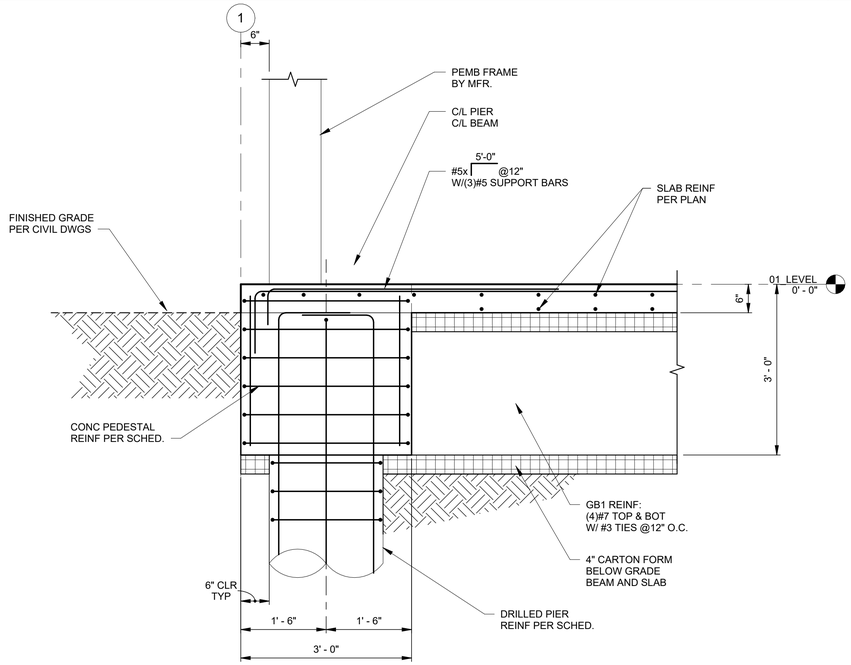
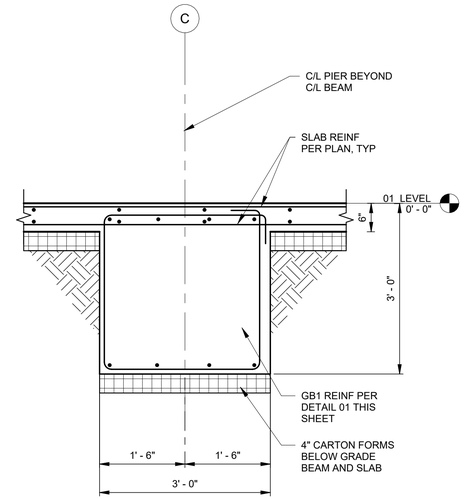
FRAMING ELEVATIONS

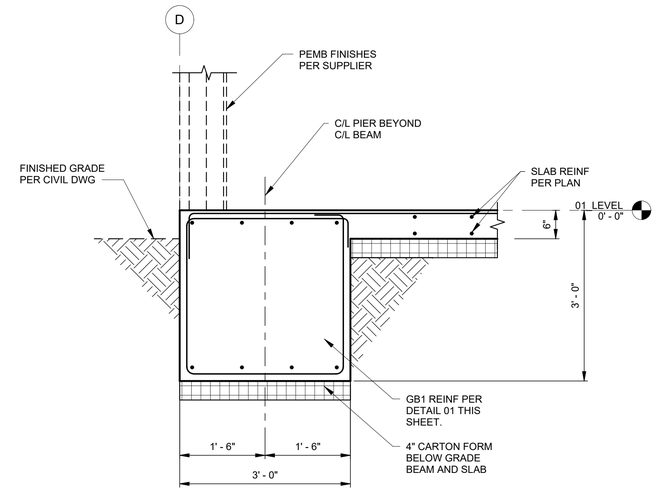
SHEET NUMBER
S-201



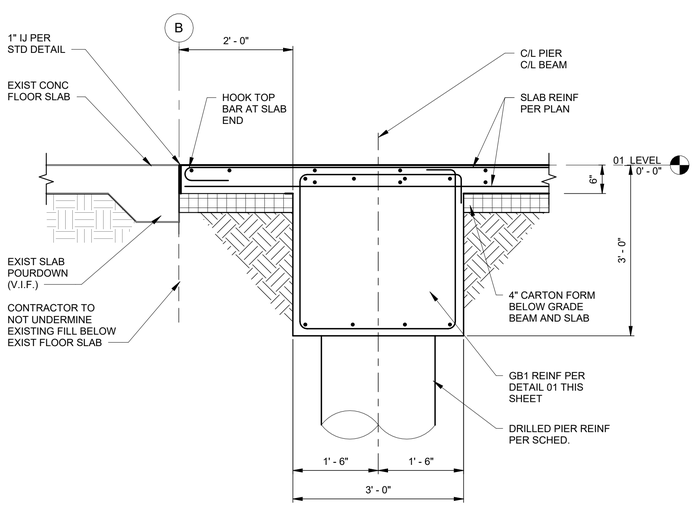
01 S-301 SECTION AT DRILLED PIER PEDESTAL
SCALE: 3/4" = 1'-0"



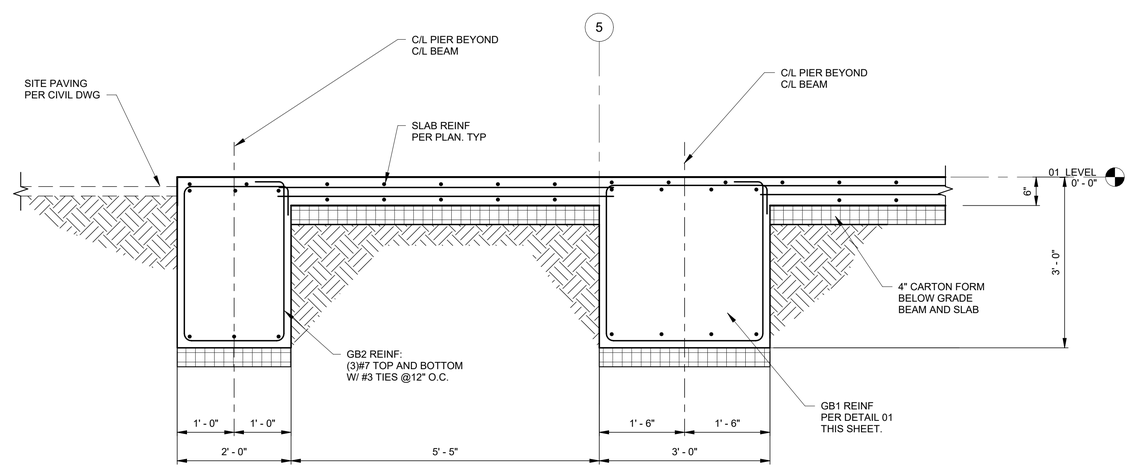
02 S-301 GRADE BEAM SECTION
SCALE: 3/4" = 1'-0"



03 S-301 SECTION AT PERIMETER BEAM
SCALE: 3/4" = 1'-0"



04 S-301 SECTION AT EXISTING FLOOR SLAB
SCALE: 3/4" = 1'-0"



05 S-301 SECTION AT VESTIBULE
SCALE: 3/4" = 1'-0"

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04/24/2026

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FOUNDATION
SECTIONS

SHEET NUMBER
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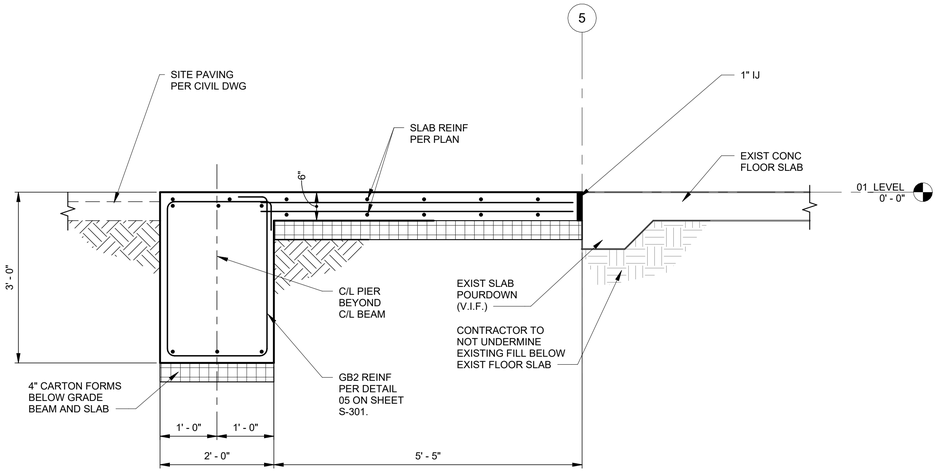
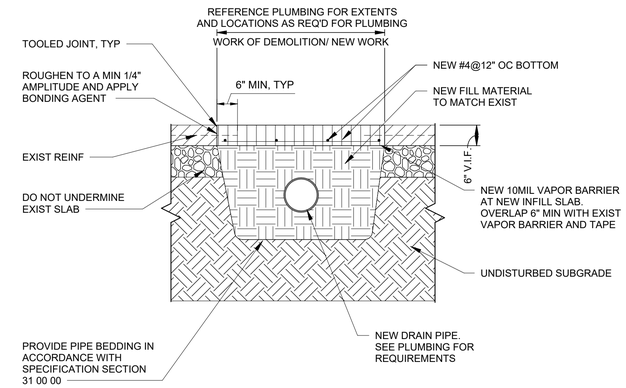


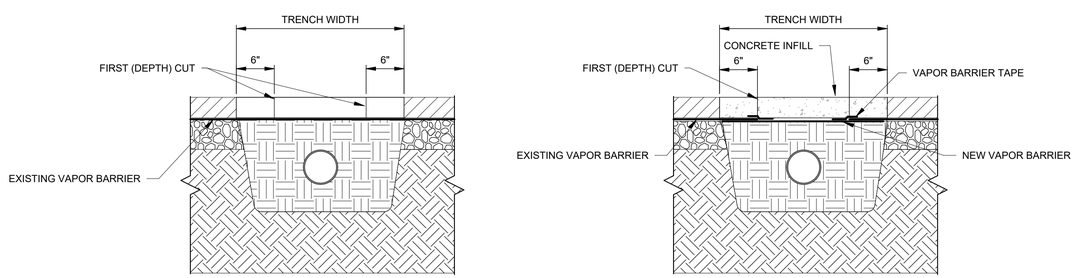
01 S-302 SECTION AT VESTIBULE AT EXISTING BUILDING

SCALE: 3/4" = 1'-0"



02 S-302 SLAB REPAIR INFILL DETAIL

NTS



DEMOLITION NOTES:

1. MARK EXTENTS OF TRENCH WIDTHS TO BE EXCAVATED THROUGHOUT FIRST FLOOR.
2. PROVIDE FULL DEPTH SAW CUTS THROUGH EXISTING CONCRETE SLAB AND VAPOR BARRIER STARTING 6" (MIN) CLEAR EACH SIDE OF TRENCH WIDTH.
3. PROVIDE TWO ADDITIONAL CUTS AT TRENCH WIDTH EDGES TO A DEPTH 1/2" LESS THAN THE EXISTING SLAB DEPTH.
4. CHIP OUT CUT SECTIONS OF THE EXISTING SLABS SO AS NOT TO DAMAGE THE EXISTING VAPOR BARRIER.
5. LAP EXISTING VAPOR BARRIER WITH NEW VAPOR BARRIER 6" MIN. LAP VAPOR BARRIER IN ACCORDANCE WITH MANUFACTURER'S RECCOMENDATIONS.
6. INFILL SLAB AND COMPLETE REPAIRS TO FIRST FLOOR SLAB AS INDICATED.

03 S-302 VAPOR BARRIER TRENCH REPAIR PROCEDURES

NTS

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04/24/2026

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FOUNDATION
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SHEET NUMBER
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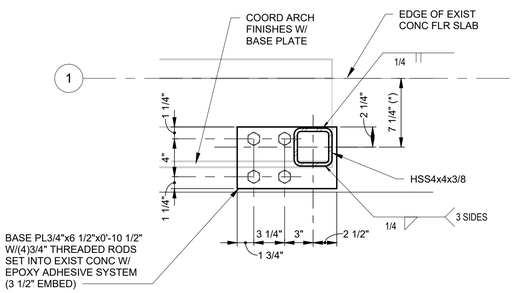
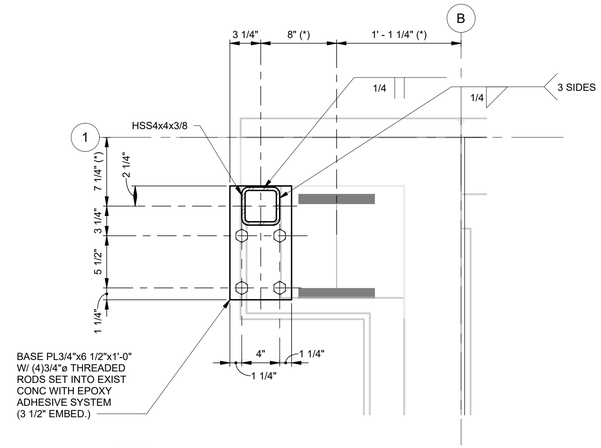


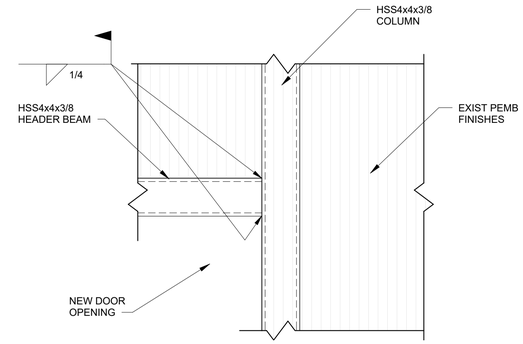
NOTES:
1. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.

01 S-501 DOOR FRAME BASE PLATE
SCALE: 1 1/2" = 1'-0"

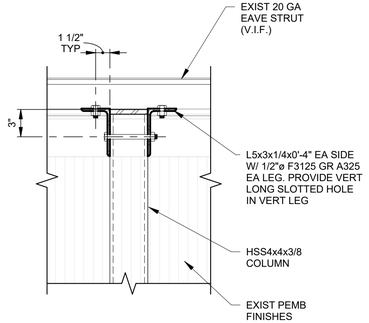


NOTES:
1. (*) INDICATES EXISTING DIMENSION TO BE FIELD VERIFIED BY CONTRACTOR.
2. VERIFY PLACEMENT OF NEW DOOR JAMB FRAMING WITH NEW DOOR AND LOCATION OF EXISTING PEMB FRAME.
3. COORDINATE ARCH FINISHES WITH COLUMN BASE PLATE.

02 S-501 DOOR FRAME BASE PLATE
SCALE: 1 1/2" = 1'-0"



03 S-501 CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



04 S-501 CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"

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04/24/2026

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SHEET NUMBER
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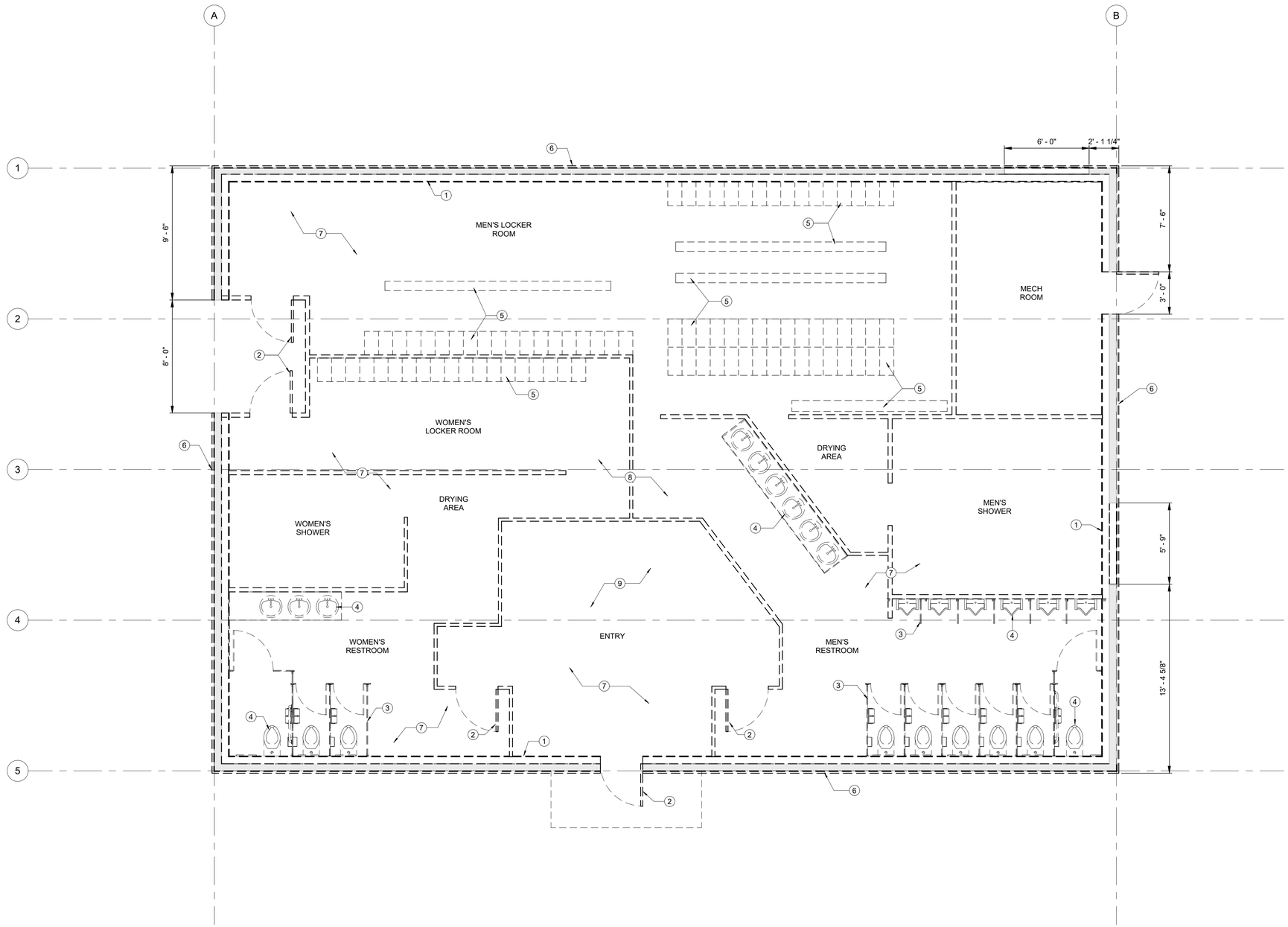

01 AD101 DEMOLITION - FLOOR PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS & SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS, OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, FACE OF FINISHED WALLS, OR SURFACES, UNLESS NOTED OTHERWISE.
4. REFER TO OTHER DISCIPLINE DRAWINGS FOR ITEMS NOT SHOWN.
5. PATCH AND REPAIR EXISTING FLOOR SLAB WHERE EXISTING PLUMBING FIXTURES ARE BEING REMOVED.

KEY NOTES

1. DEMOLISH METAL STUD FRAMING, SHEATHING, INSULATION, & INTERIOR WALL FINISHES IN THEIR ENTIRETY
2. DEMOLISH EXISTING DOOR AND FRAME
3. DEMOLISH EXISTING TOILET & URINAL PARTITIONS
4. DEMOLISH EXISTING PLUMBING FIXTURES
5. REMOVE EXISTING LOCKERS & BENCHES AND RETURN BACK TO CLIENT
6. DEMOLISH METAL WALL PANELS, TRIM, LOUVERS, LIGHTING, & SIGNAGE OF EXISTING BUILDING. EXISTING STRUCTURE & GIRTS TO REMAIN
7. DEMOLISH ALL EXISTING FLOOR FINISHES
8. DEMOLISH ALL INTERIOR PARTITIONS
9. DEMOLISH ALL INTERIOR GYPSUM WALL BOARD AND ACOUSTIC CEILING TILE AND SUSPENSION SYSTEM ASSEMBLIES. DEMOLISH ALL MECHANICAL, ELECTRICAL, FIRE ALARM, AND OTHER COMPONENTS

LEGEND

DEMOLITION

EXISTING TO REMAIN

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TINKER AFB, OK

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A7250
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04/24/2026

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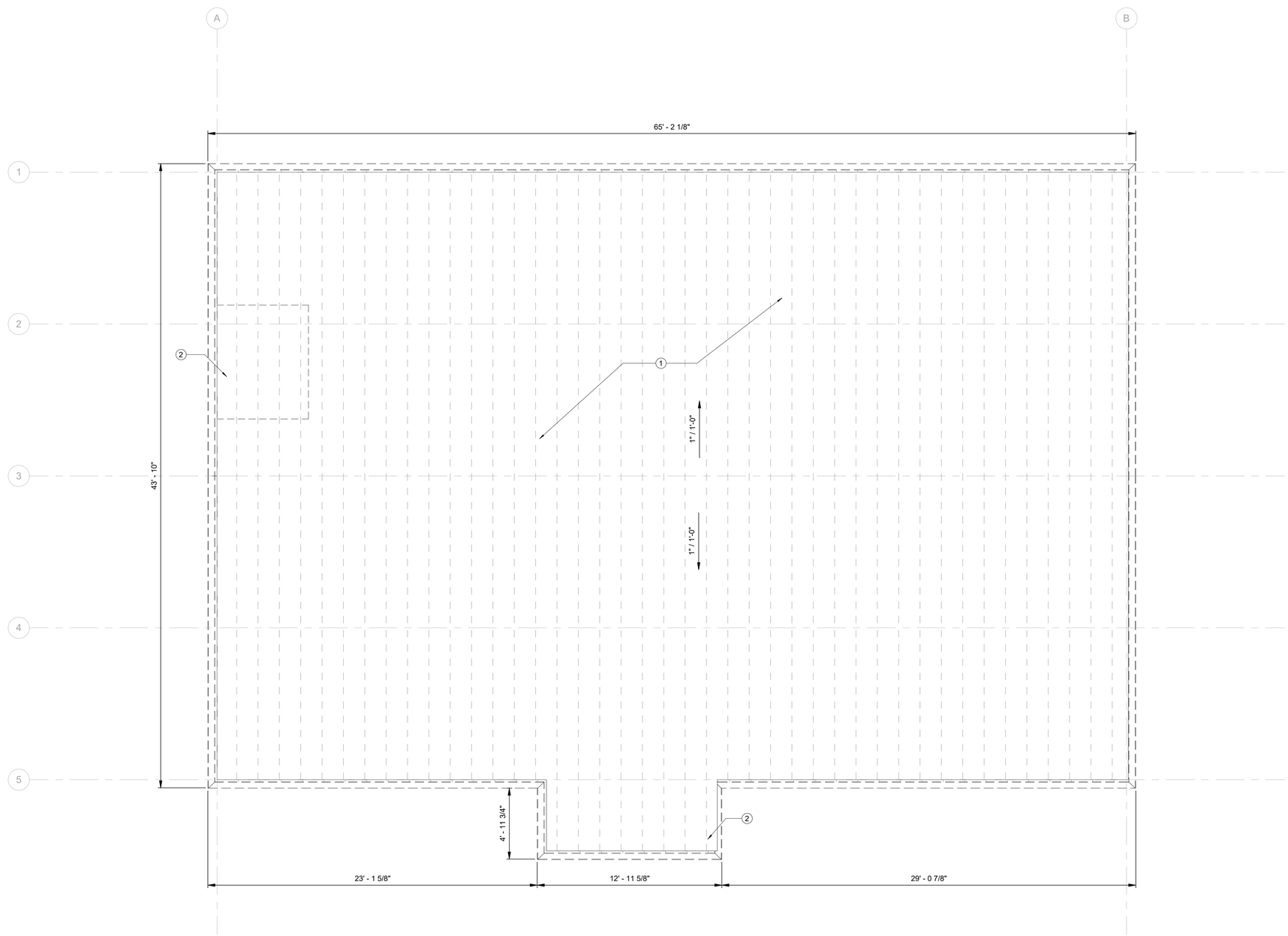
DEMOLITION - FLOOR PLAN

SHEET NUMBER
AD101



01 AD102 DEMOLITION - ROOF PLAN

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

GENERAL NOTES

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2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, FACE OF FINISHED WALLS, OR SURFACES, UNLESS NOTED OTHERWISE.
4. REFER TO OTHER DISCIPLINE DRAWINGS FOR ITEMS NOT SHOWN.

KEY NOTES

1. DEMOLISH EXISTING ROOF PANELS, GUTTERS, DOWNSPOUTS, AND ROOF PENETRATION ITEMS OF EXISTING BUILDING
2. DEMOLISH SOFFIT PANELS AND LIGHTING

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SHEET NUMBER
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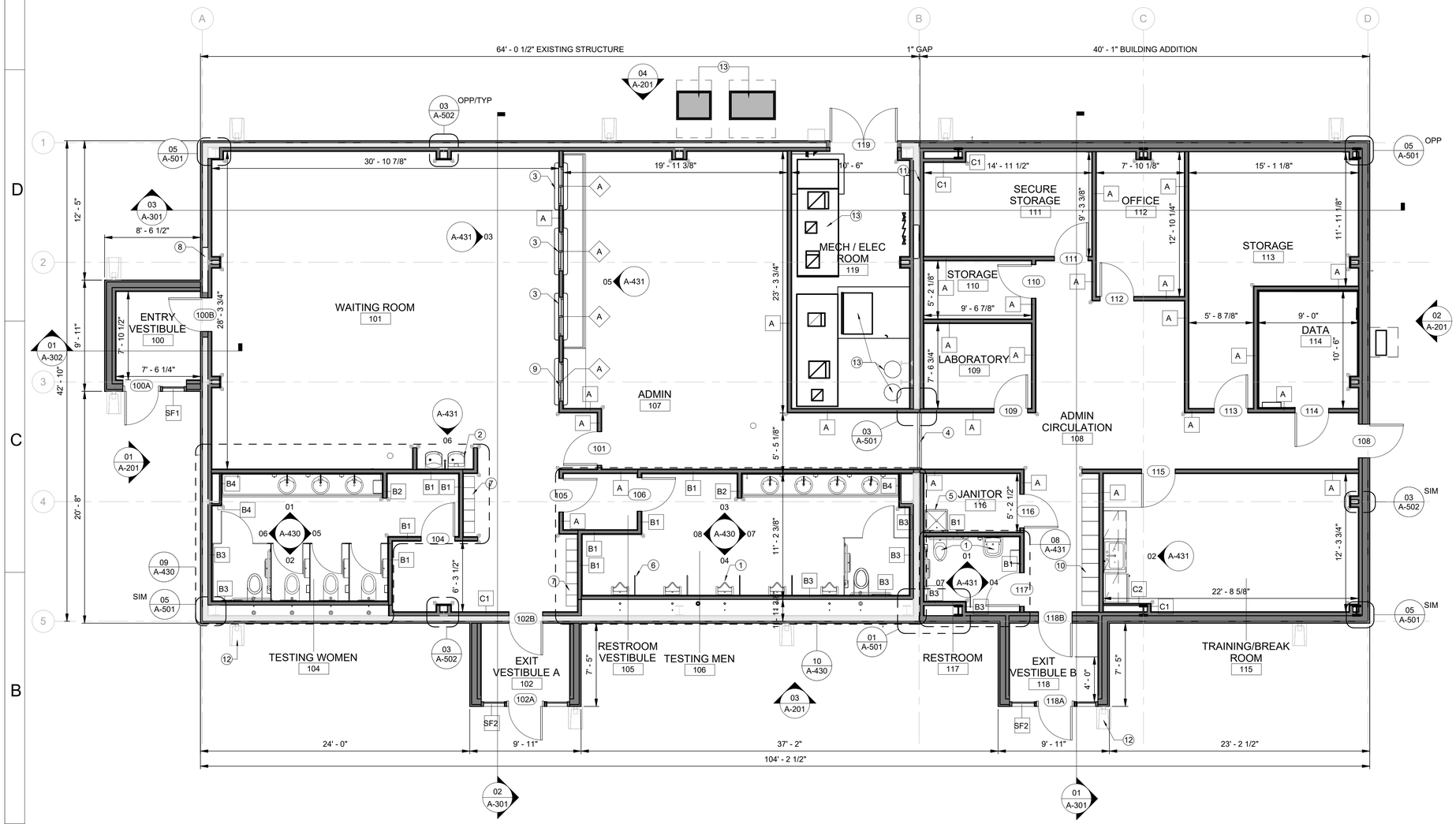

01 A-101 FLOOR PLAN

SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS & SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS, OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, FACE OF FINISHED WALLS, OR SURFACES, UNLESS NOTED OTHERWISE.
4. DOOR FRAMES TO BE INSTALLED 4 INCHES FROM ADJACENT PERPENDICULAR FINISHED SURFACE, UNLESS NOTED OTHERWISE.

KEY NOTES

1. PLUMBING FIXTURE - REFER TO PLUMBING
2. DUAL HEIGHT DRINKING FOUNTAIN WITH BOTTLE FILLING STATION
3. SLIDING TRANSACTION WINDOW WITH COUNTER
4. EXPANSION JOINT COVER AT FLOOR - SEE DETAIL 02/A-502
5. MOP SINK - REF. MECHANICAL
6. WALL-MOUNTED URINAL PARTITION
7. 12" X 12" SOLID SURFACE CUBBIES
8. INFILL WALL TO MATCH EXISTING
9. SLIDING TRANSACTION WINDOW WITH ABA COUNTER
10. 15" X 18" DOUBLE STACKED LOCKERS
11. ELECTRICAL EQUIPMENT, REFER TO ELECTRICAL
12. CONCRETE SPLASHBLOCK
13. MECHANICAL EQUIPMENT, REF. MECHANICAL

LEGEND

NEW PARTITON

EXISTING STRUCTURAL 6" GIRTS AND PEMB FRAMING TO REMAIN

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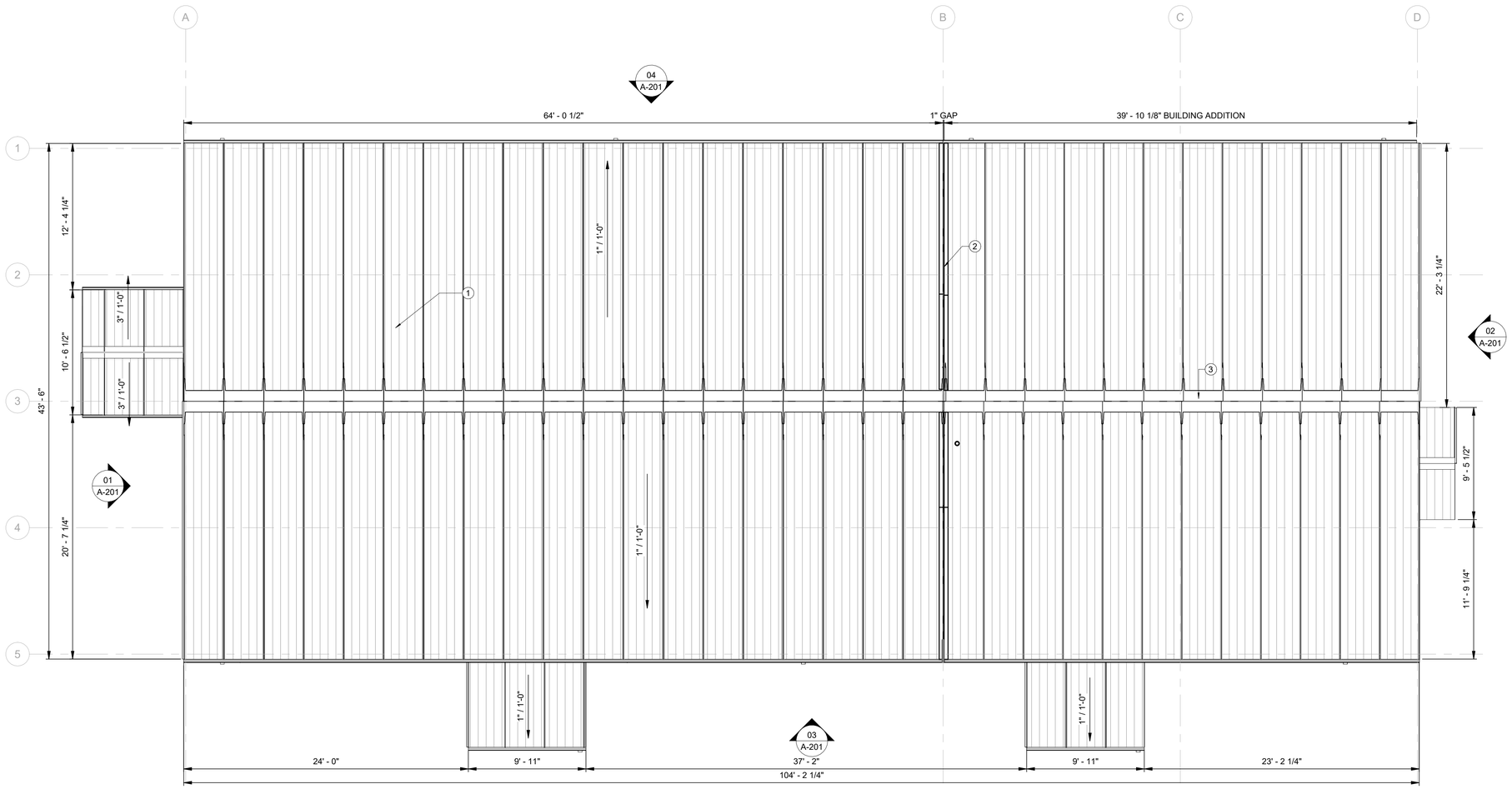
FLOOR PLAN

SHEET NUMBER
A-101



01 A-102 ROOF PLAN

SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS & SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS, OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, FACE OF FINISHED WALLS, OR SURFACES, UNLESS NOTED OTHERWISE.
4. REFER TO OTHER DISCIPLINE DRAWINGS FOR ITEMS NOT SHOWN.

KEY NOTES

1. PRE-FINISHED INSULATED METAL ROOF PANEL
2. EXPANSION ROOF JOINT WITH PRE-FINISHED METAL COVER, SEE DETAIL 02/A-501
3. PRE-FINISHED METAL ROOF RIDGE CAP

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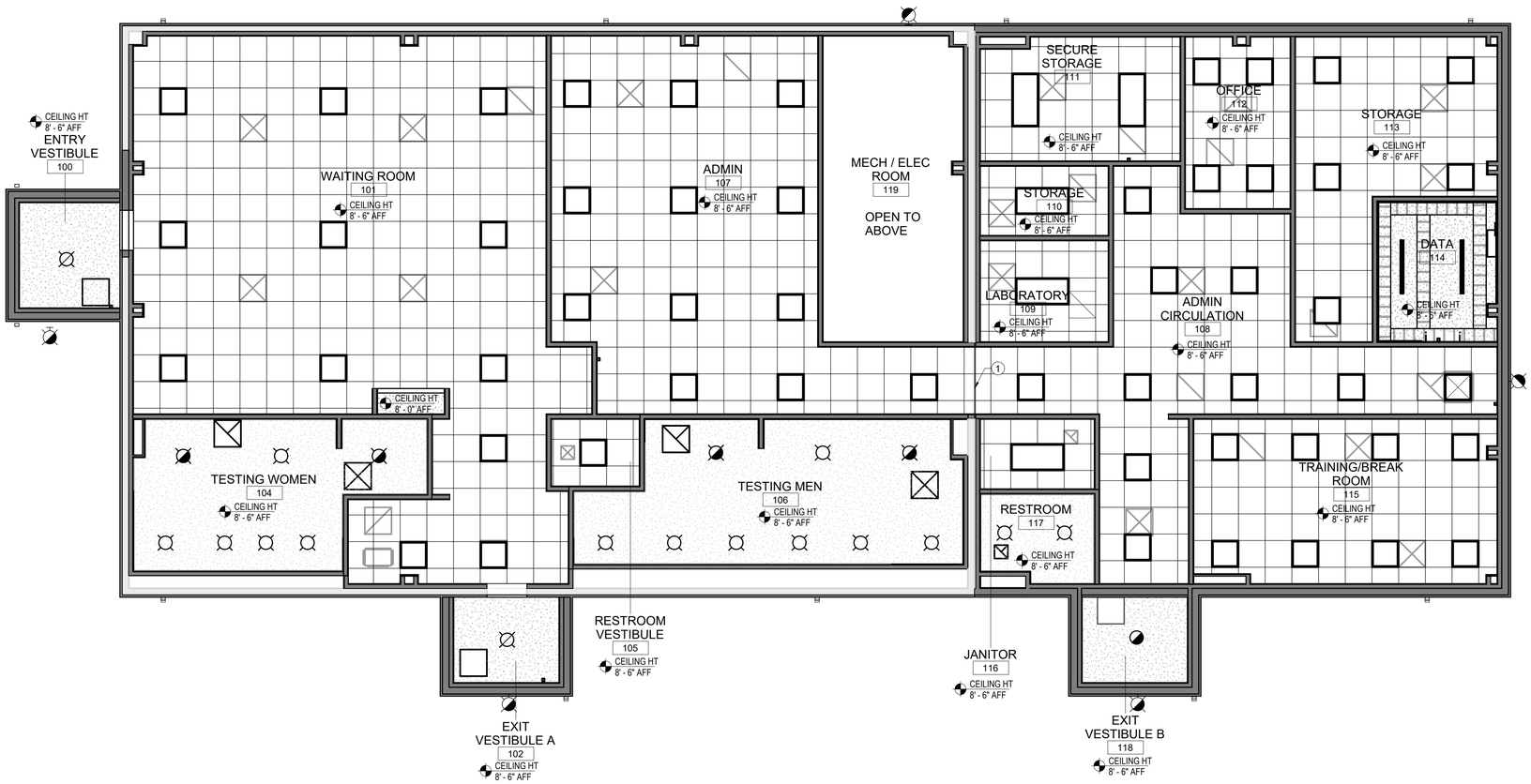

01 A-103 REFLECTED CEILING PLAN

SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

GENERAL NOTES

1. DRAWINGS & SPECIFICATIONS ARE COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS & SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION IF INCONSISTENCIES, CONTRADICTIONS, OR OMISSIONS ARE DISCOVERED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED & NOT FOUND, NOTIFY CONSTRUCTION INSPECTOR IMMEDIATELY FOR CLARIFICATION.
3. ALL DIMENSIONS ARE TO COLUMN CENTERLINES, FACE OF FINISHED WALLS, OR SURFACES, UNLESS NOTED OTHERWISE.
4. REFER TO OTHER DISCIPLINE DRAWINGS FOR ITEMS NOT SHOWN.
5. LIGHT FIXTURES, DIFFUSERS, AND REGISTERS ARE FOR COORDINATION ONLY - REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.

KEY NOTES

1. EXPANSION JOINT AT CEILING, SEE DETAIL 05/A-502

LEGEND

- NEW PARTITON
- 2' X 2' ACOUSTIC CEILING TILE & SUSPENSION SYSTEM
- GYPSUM CEILING - SEE 06/A-501
- RECESSED LIGHT FIXTURE, REF. ELECTRICAL
- RECESSED EMERGENCY BACKUP LIGHT FIXTURE, REF. ELECTRICAL
- MECHANICAL DIFFUSER, REF. MECHANICAL
- MECHANICAL REGISTER. REF. MECHANICAL

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TINKER AFB, OK

STATE OF OKLAHOMA
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A7250
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04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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REFLECTED CEILING PLAN

SHEET NUMBER
A-103

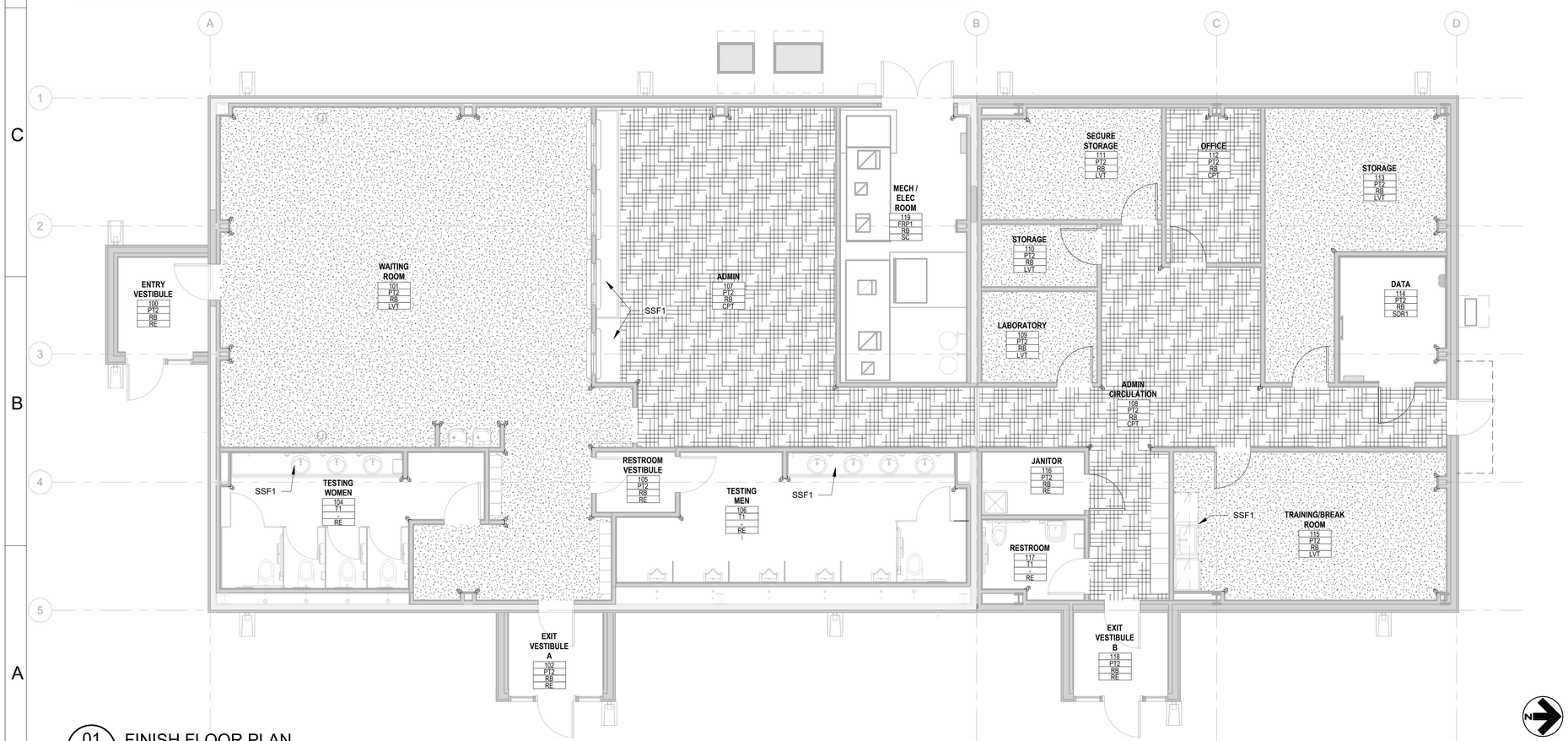
I-001s - INTERIOR FINISH LEGEND - BASIS OF DESIGN

CODE	MANUFACTURER	SERIES/STYLE	COLOR	SIZE	COMMENTS
ACOUSTICAL CEILINGS					
ACT1	ARMSTRONG	DUNE	WHITE	24" 248" X 3/4"	ANGLED TEGULAR 15/16 / NRC 0.65 / CAC 35
FIBERGLASS REINFORCED PANELS					
FRP1	VALTO ENGINEERED MATERIALS	GLASBORD WALL PANELS	GRAY 636 SMOOTH TEXTURE	10' HEIGHT (4' H X 10' W PANEL; 0.075" THICK)	INSTALL PANEL VERTICALLY IN MECHANICAL ROOMS ONLY. ALIGN BOTTOM EDGE OF PANEL WITH TOP OF WALL BASE. TOP EDGE OF PANEL SHALL BE SET AT 10'-6" AFF / FIRE RATING: ASTM E-84 CLASS A.
INTERIOR PAINTING					
PT1	SHERWIN WILLIAMS	LATEX / EGGSHELL, FLAT FOR CEILINGS	SW 7006 - EXTRA WHITE	--	FIELD COLOR
PT2	SHERWIN WILLIAMS	LATEX / EGGSHELL	SW 0054 - TWILIGHT GRAY	--	FIELD COLOR
PAINTS AND COATINGS					
SC					SEALED CONCRETE
RESILIENT BASE					
RB1	ROPPE	PINNACLE / STANDARD COVE TOE	193 BLACK BROWN	4"	--
RB2	ROPPE	PINNACLE / STANDARD COVE TOE	193 BLACK BROWN	6"	TO BE INSTALLED IN MECHANICAL ROOMS ONLY.
RESILIENT FLOORING					
LVT	BENTLEY	CLASSIC ROCK	YACHT ROCK - 802125	18" X 36"	INSTALL METHOD: VERTICAL ASHLAR
SOLID SURFACE FABRICATIONS					
SSF1	CORIAN	CORIAN SOLID SURFACE	PLATINUM	--	RESTROOM VANITIES & COUNTERTOPS
STANDARD RESINOUS FLOORING					
RE					RESINOUS EPOXY FLOOR
STATIC DISSIPATIVE RUBBER TILE FLOORING					
SDR1	ROPPE	ESD RUBBER STATIC CONTROL TILE	GALAXIA F337	24" X 24"	--
TILE CARPETING					
CPT1	MANNINGTON	HAZE	RAVINE 34934	24" X 24"	INSTALL METHOD: VERTICAL ASHLAR
TILING					
T1	DALTILE	COLOR WHEEL LINEAR	MATTE DESERT GRAY X714	8" X 24"	WALL TILE - RESTROOMS
WALL AND DOOR PROTECTION					
CG1	INPRO	150 HIGH IMPACT CORNER GUARD	--	8' H X 3" WING	CORNER GUARD

ROOM FINISH SCHEDULE

ROOM NO	ROOM NAME	STC	AREA	WALL FINISH	BASE FINISH	FLOOR MAT	CEILING MAT	CEILING HEIGHT	NOTES & REMARKS
104	TESTING WOMEN		211 SF	T1	RB	RE	GWB	8'-6"	
106	TESTING MEN		287 SF	T1	RB	RE	GWB	8'-6"	
113	STORAGE		243 SF	GWB/PT	RB	LVT	ACT	8'-6"	
115	TRAINING/BREAK ROOM		279 SF	GWB/PT	RB	LVT	ACT	8'-6"	
111	SECURE STORAGE		135 SF	GWB/PT	RB	LVT	ACT	8'-6"	
109	LABORATORY		72 SF	GWB/PT	RB	LVT	ACT	8'-6"	
110	STORAGE		50 SF	GWB/PT	RB	LVT	ACT	8'-6"	
119	MECH / ELEC ROOM		241 SF	GWB/FRP/PT	RB	SC	-		
107	ADMIN		605 SF	GWB/PT	RB	CPT	ACT	8'-6"	
114	DATA		94 SF	GWB/PT	RB	SDR1	GWB	8'-6"	
112	OFFICE		100 SF	GWB/PT	RB	CPT	ACT	8'-6"	
117	RESTROOM		58 SF	T1	RB	RE	GWB	8'-6"	
116	JANITOR		44 SF	GWB/PT	RB	RE	ACT	8'-6"	
101	WAITING ROOM		1056 SF	GWB/PT	RB	LVT	ACT	8'-6"	
105	RESTROOM VESTIBULE		33 SF	GWB/PT	RB	RE	ACT	8'-6"	
118	EXIT VESTIBULE B		50 SF	GWB/PT	RB	RE	GWB	8'-6"	
108	ADMIN CIRCULATION		429 SF	GWB/PT	RB	CPT	ACT	8'-6"	
102	EXIT VESTIBULE A		50 SF	GWB/PT	RB	RE	GWB	8'-6"	
100	ENTRY VESTIBULE		59 SF	GWB/PT	RB	RE	GWB	8'-6"	

GWB/PT GYPSUM WALL BOARD - PAINTED
LVT LUXURY VINYL TILE
CPT CARPET
ACT ACOUSTICAL CEILING TILE
RB RUBBER BASE



01 A-104 FINISH FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 4' 8' 16'

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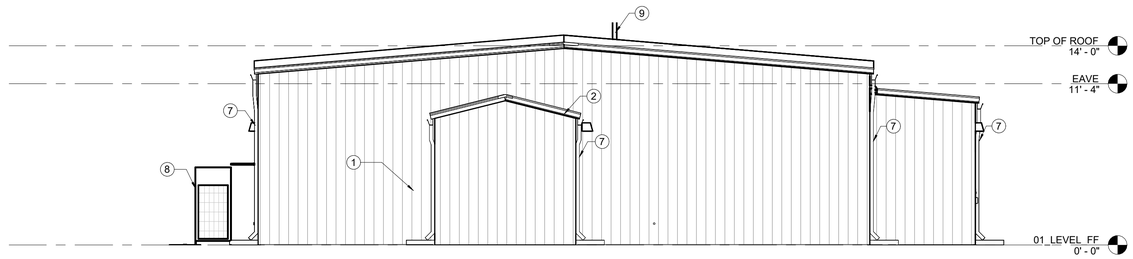
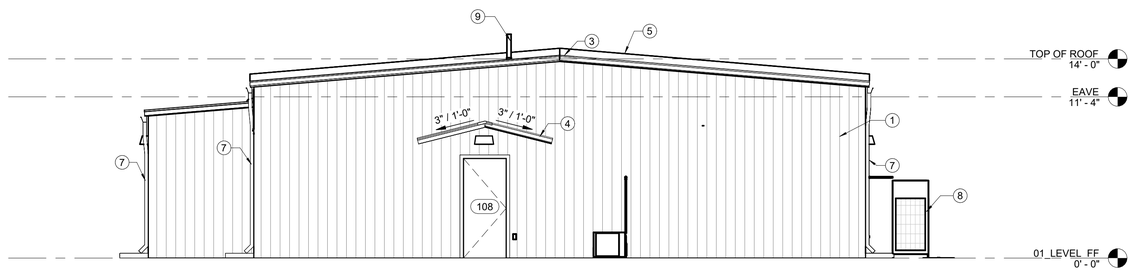
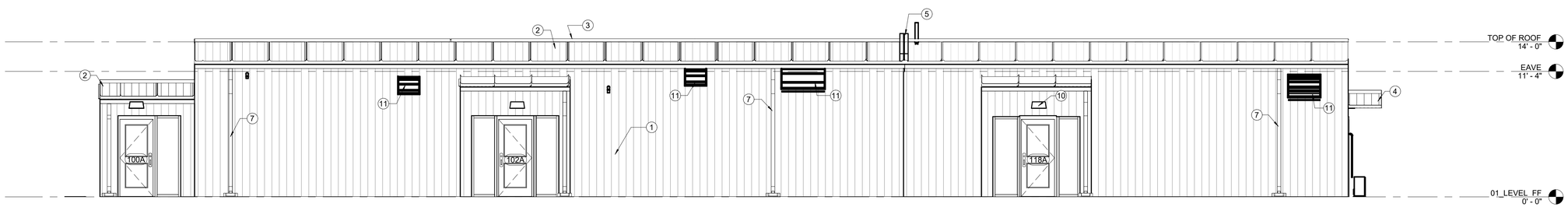


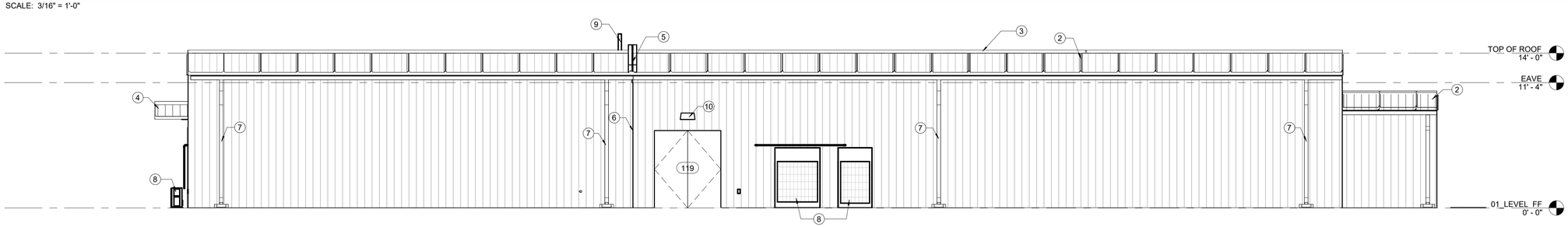
01 / A-201 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



02 / A-201 NORTH ELEVATION
SCALE: 3/16" = 1'-0"



03 / A-201 EAST ELEVATION
SCALE: 3/16" = 1'-0"



04 / A-201 WEST ELEVATION
SCALE: 3/16" = 1'-0"

KEY NOTES

1	PRE-FINISHED METAL WALL PANEL
2	PRE-FINISHED INSULATED METAL ROOF PANEL
3	PRE-FINISHED METAL ROOF RIDGE CAP
4	COORDINATE ROOF CANOPY AND ASSOCIATED SUPPORT FRAMING WITH THE PEMB SUPPLIER/DESIGNER.
5	EXPANSION ROOF JOINT WITH PRE-FINISHED METAL COVER, SEE DETAIL 02/A-501
6	EXPANSION JOINT WITH PRE-FINISHED METAL COVER, SEE DETAIL 04/A-501
7	PRE-FINISHED METAL GUTTER, DOWNSPOUT, & SPLASH BLOCK
8	MECHANICAL EQUIPMENT, REFER TO MECHANICAL
9	MECHANICAL EQUIPMENT, REF MECHANICAL. SEE 07/A-501 FOR PENETRATION DETAIL.
10	LIGHTING FIXTURE, REF. ELECTRICAL
11	MECHANICAL LOUVER, REF MECHANICAL. SEE SHEET A-604 FOR DETAILS.

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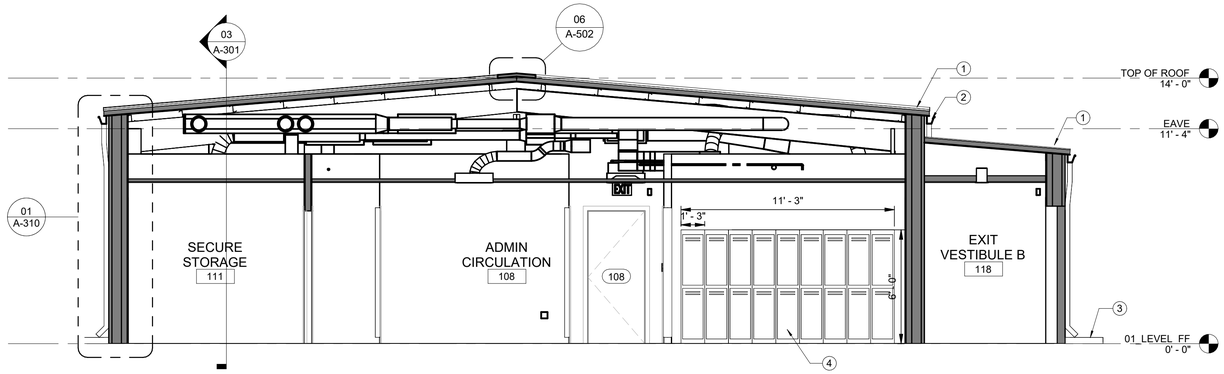
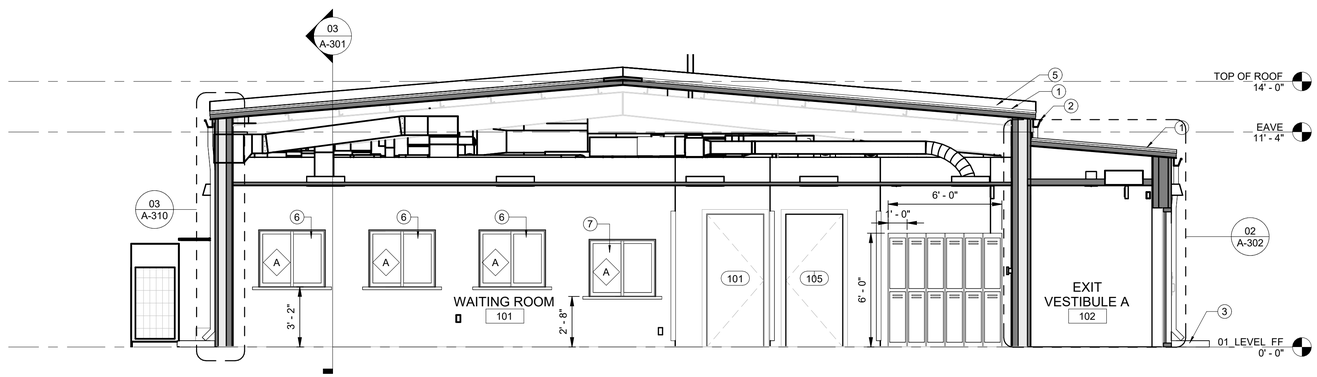


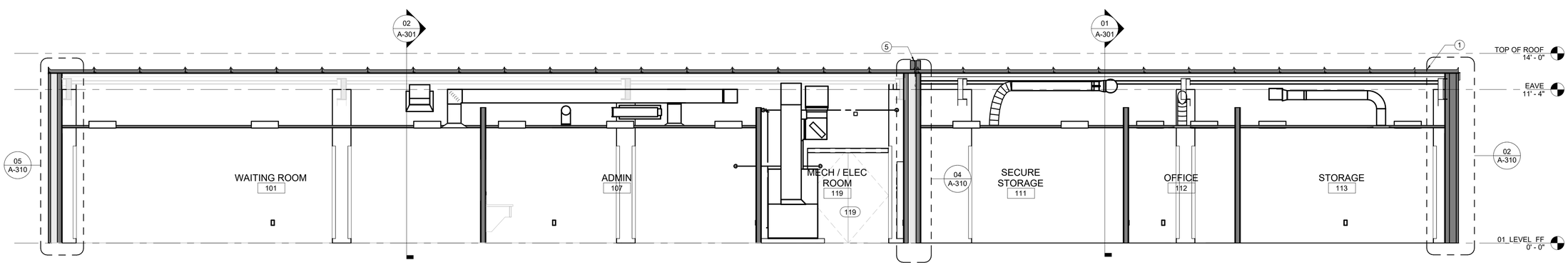
01 A-301 BUILDING SECTION @ NEW ADDITION

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



02 A-301 BUILDING SECTION @ EXISTING STRUCTURE

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



03 A-301 LONGETUDIAL BUILDING SECTION

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

KEY NOTES

1. PRE-FINISHED INSULATED METAL ROOF PANEL
2. PRE-FINISHED METAL GUTTER, DOWNSPOUT, & SPLASH BLOCK
3. CONCRETE SPLASHBLOCK
4. 15" X 18" DOUBLE STACKED LOCKERS
5. EXPANSION ROOF JOINT WITH PRE-FINISHED METAL COVER, SEE DETAIL 02/A-501
6. SLIDING TRANSACTION WINDOW WITH COUNTER
7. SLIDING TRANSACTION WINDOW WITH ABA COUNTER

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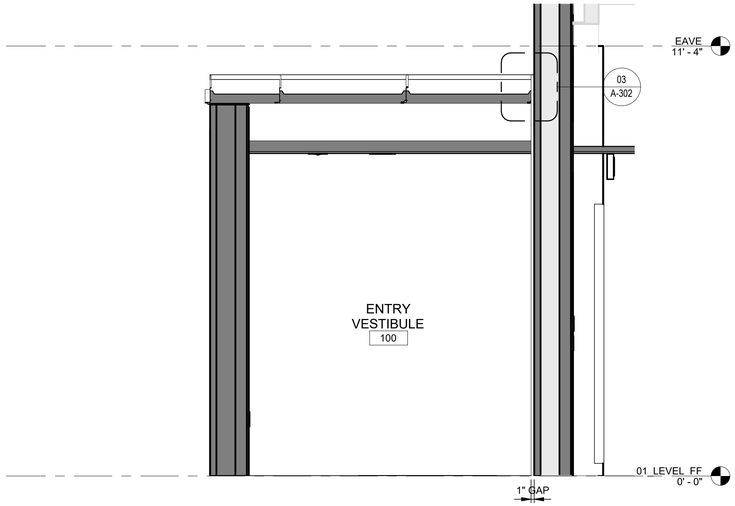
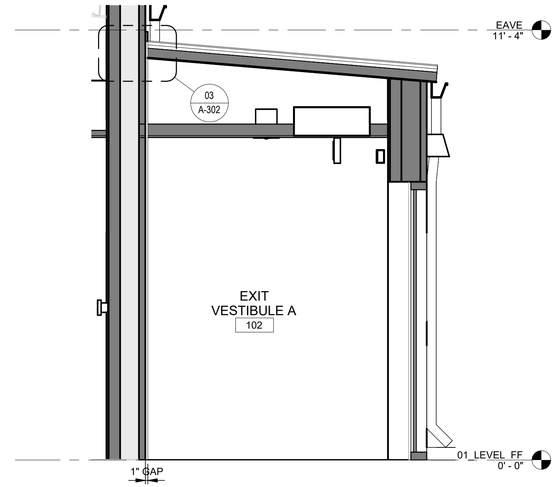
SHEET TITLE
BUILDING SECTION

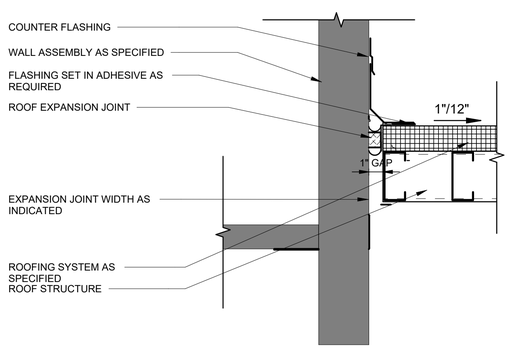
SHEET NUMBER
A-301



01 A-302 SECTION @ ENTRY VESTIBULE
SCALE: 1/2" = 1'-0"



02 A-302 SECTION @ EXIT VESTIBULE A
SCALE: 1/2" = 1'-0"



03 A-302 ROOF TO WALL EXPANSION JOINT - SECTION
SCALE: 1" = 1'-0"

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PARTIAL BUILDING SECTION

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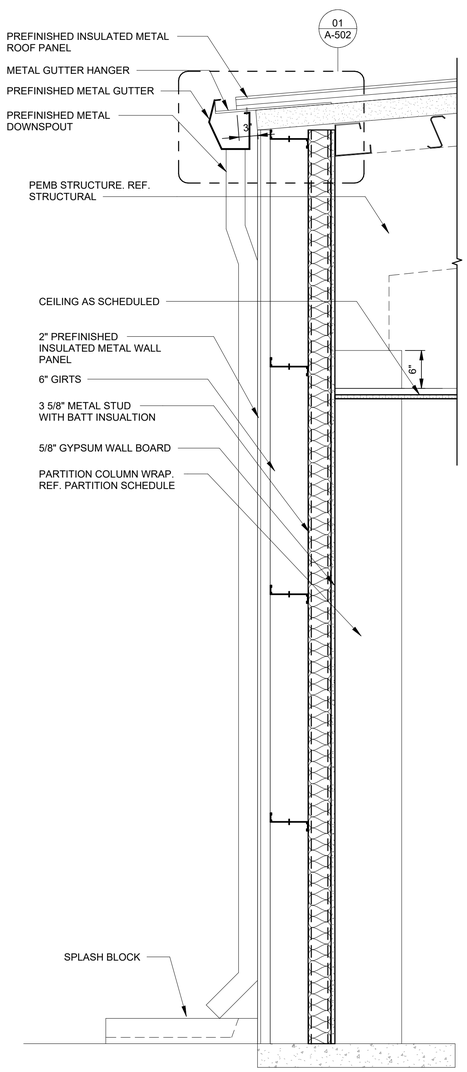
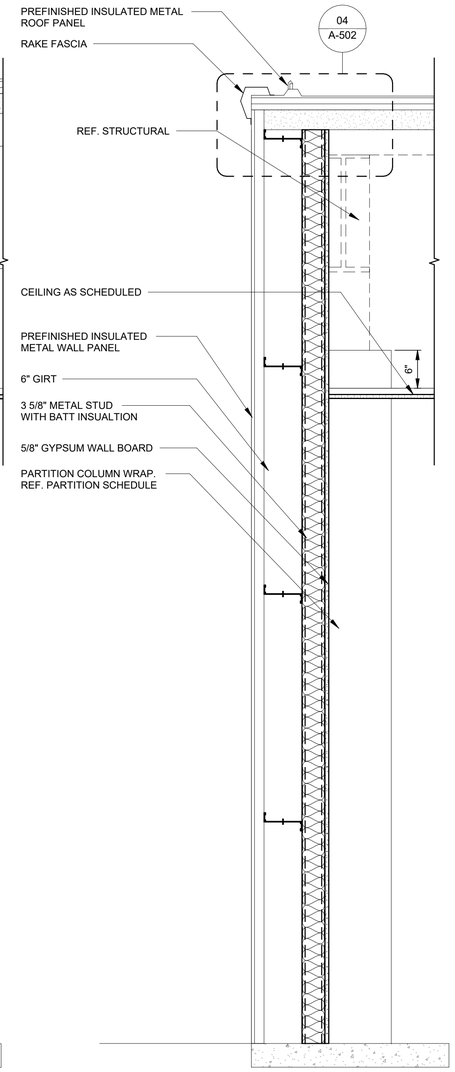
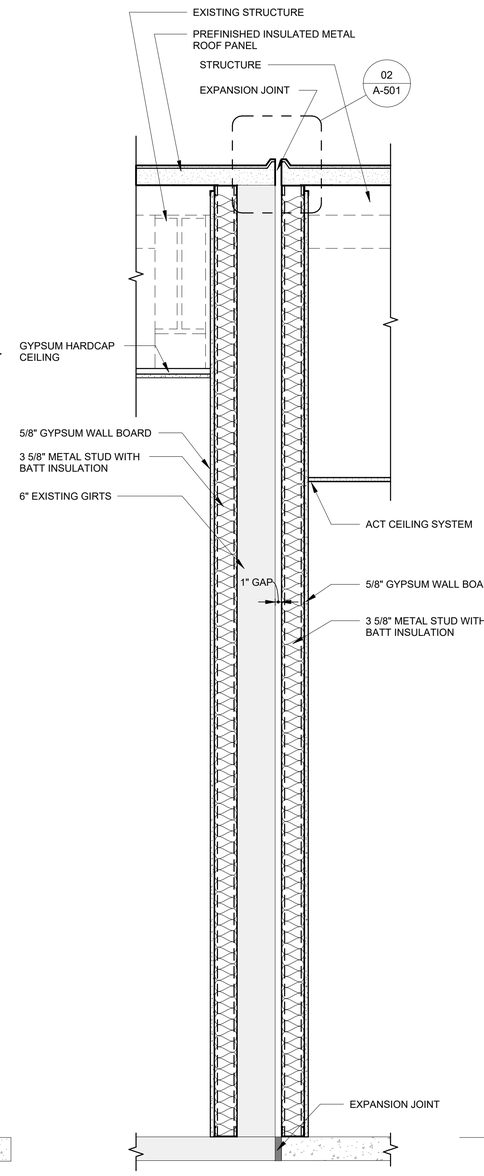


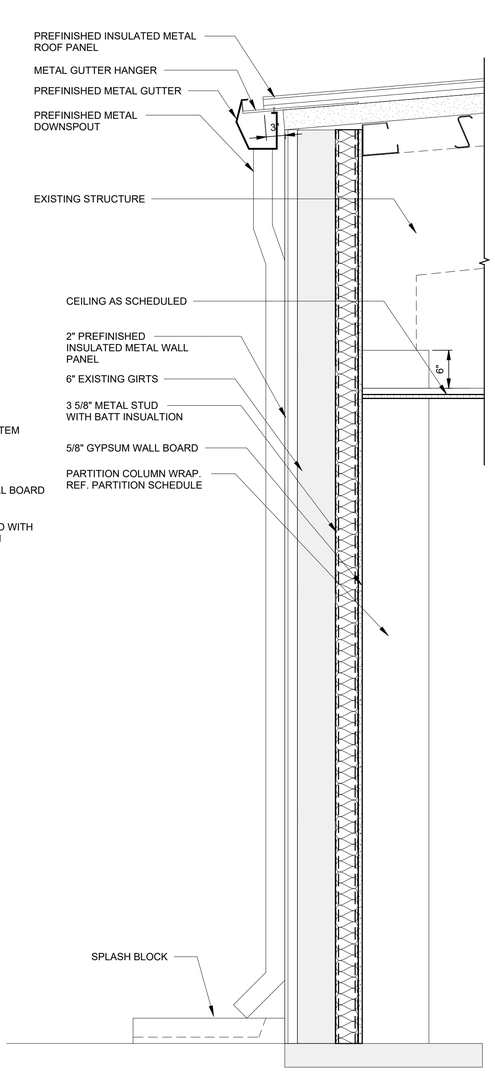
01 A-310 WALL SECTION @ EAVE
SCALE: 1" = 1'-0"



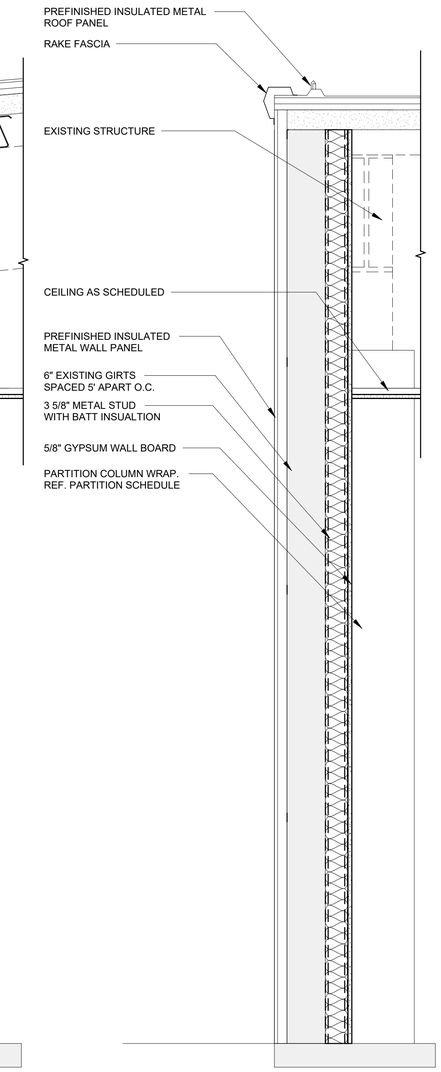
02 A-310 WALL SECTION @ RAKE
SCALE: 1" = 1'-0"



03 A-310 WALL SECTION @ NEW ADDITION
SCALE: 1" = 1'-0"



04 A-310 WALL SECTION @ EAVE EXISTING
SCALE: 1" = 1'-0"



05 A-310 WALL SECTION @ RAKE
SCALE: 1" = 1'-0"

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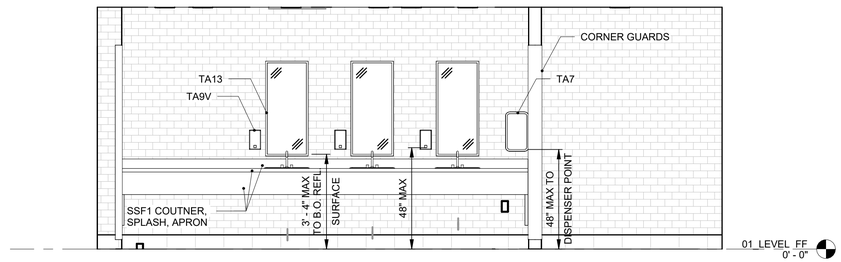
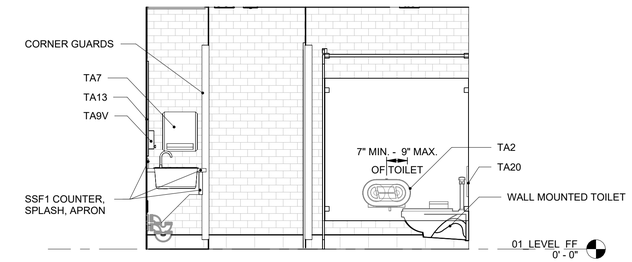


01 A-430 WOMENS TESTING - WEST
SCALE: 3/8" = 1'-0"



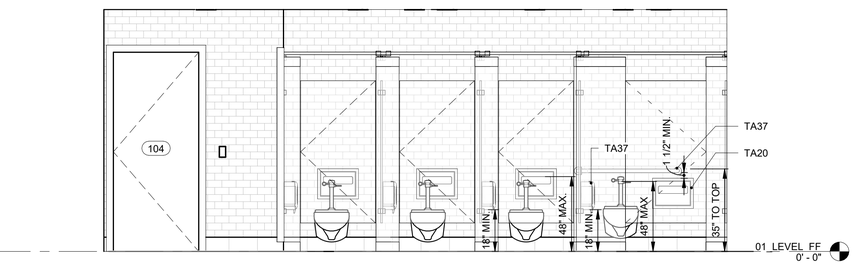
05 A-430 WOMENS TESTING - NORTH
SCALE: 3/8" = 1'-0"

TOILET ACCESSORY LEGEND

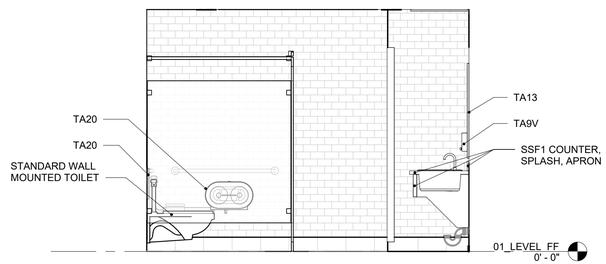
*ACCESSORIES LISTED MAY HAVE GAPS IN ALPHA-NUMERIC LISTING

TA2 - JUMBO DOUBLE ROLL TOILET TISSUE DISPENSER - SURFACE MOUNTED
TA5 - FEMININE NAPKIN DISPOSAL (WOMENS ONLY) - SURFACE MOUNTED
TA7 - PAPER TOWEL DISPENSER - SURFACE MOUNTED
TA9V - SOAP DISPENSER - SURFACE MOUNTED VERTICAL
TA13 - 18"W x 36"H STAINLESS STELL FRAMED MIRROR - SURFACE MOUNTED
TA20 - TOILET SEAT COVER DISPENSER - SURFACE MOUNTED
TA37 - 42" GRAB BAR

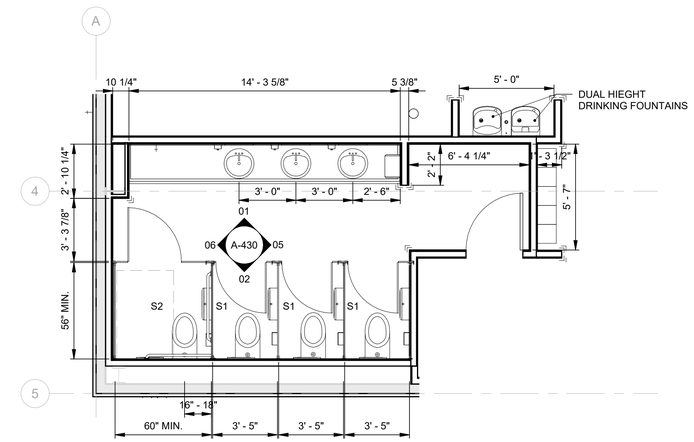
S1 - STANDARD STALL
S2 - ACCESSIBLE STALL
U1 - STANDARD URINAL
U2 - ACCESSIBLE URINAL



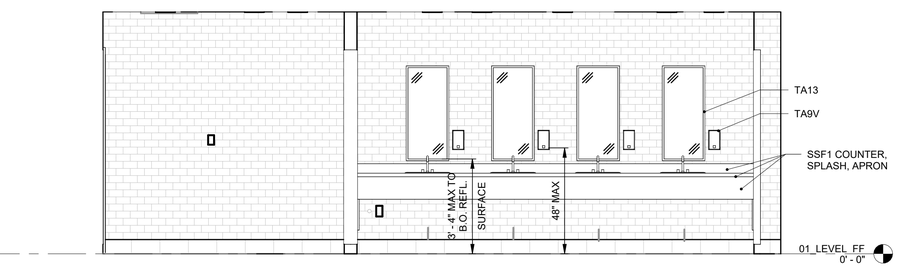
02 A-430 WOMENS TESTING - EAST
SCALE: 3/8" = 1'-0"



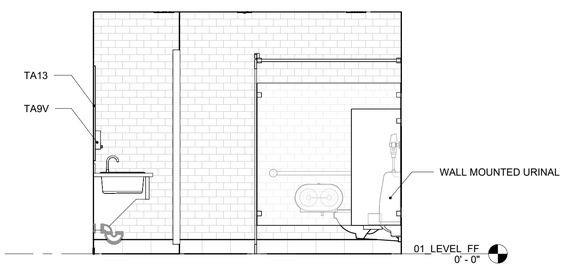
06 A-430 WOMENS TESTING - SOUTH
SCALE: 3/8" = 1'-0"



09 A-430 ENLARGED FLOOR PLAN - WOMENS TESTING
SCALE: 1/4" = 1'-0"



03 A-430 MENS TESTING - WEST
SCALE: 3/8" = 1'-0"



07 A-430 MENS TESTING - NORTH
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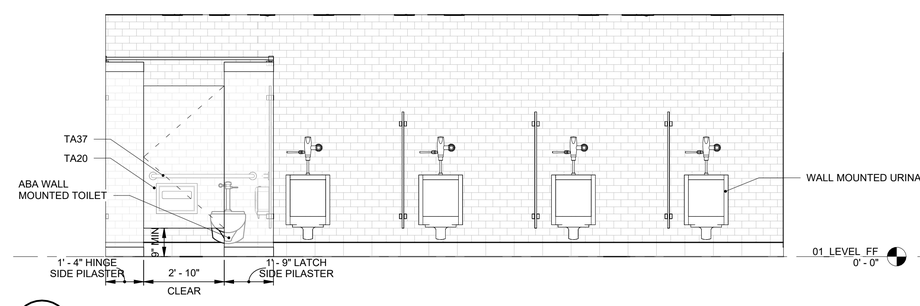
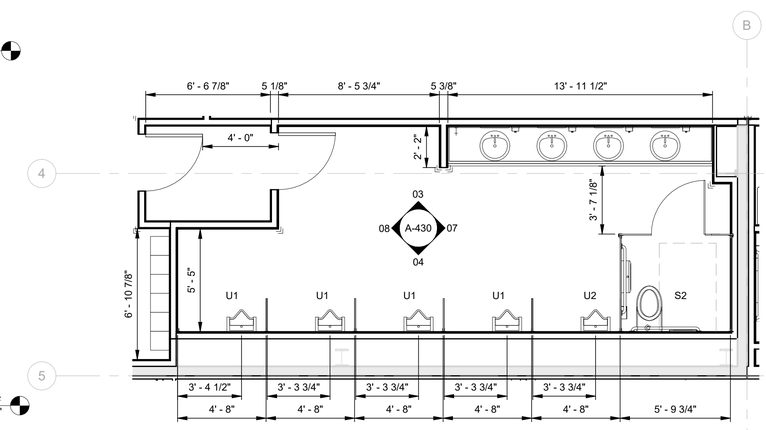


04 A-430 MENS TESTING - EAST
SCALE: 3/8" = 1'-0"

08 A-430 MENS TESTING - SOUTH
SCALE: 3/8" = 1'-0"



10 A-430 ENLARGED FLOOR PLAN - MENS TESTING
SCALE: 1/4" = 1'-0"

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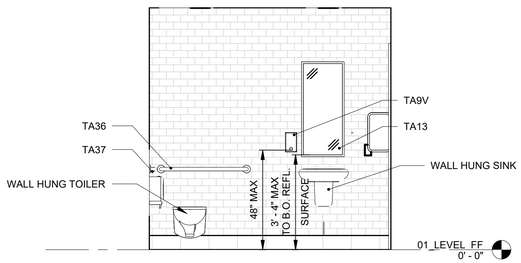
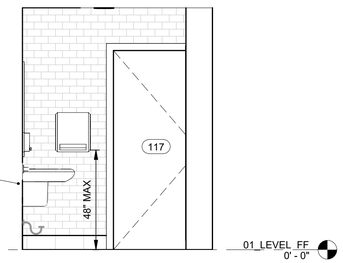
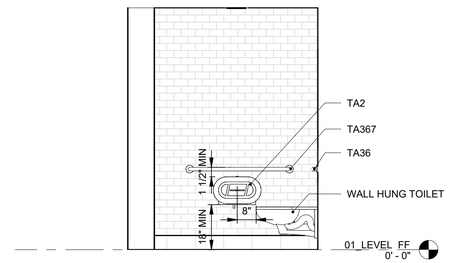


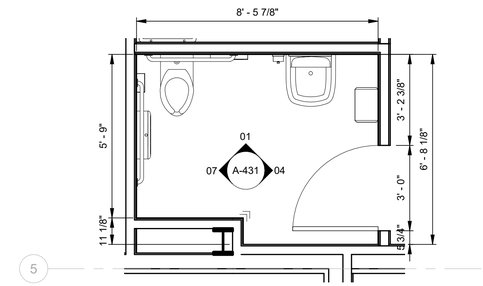
01 A-431 STAFF RESTROOM - WEST
SCALE: 3/8" = 1'-0"



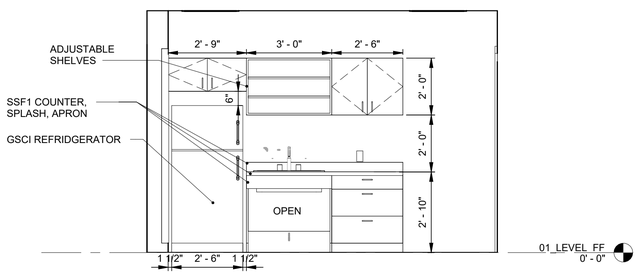
04 A-431 STAFF RESTROOM - NORTH
SCALE: 3/8" = 1'-0"



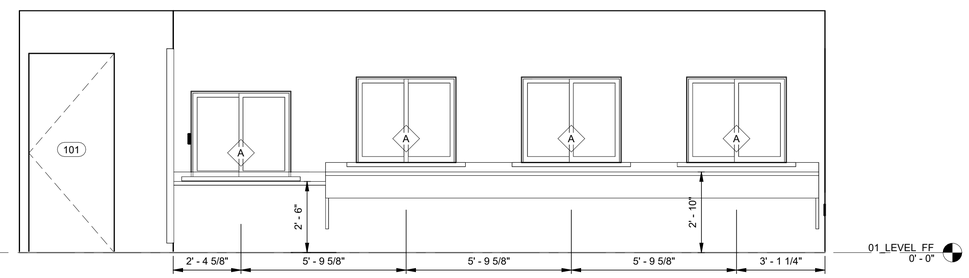
07 A-431 STAFF RESTROOM - SOUTH
SCALE: 3/8" = 1'-0"



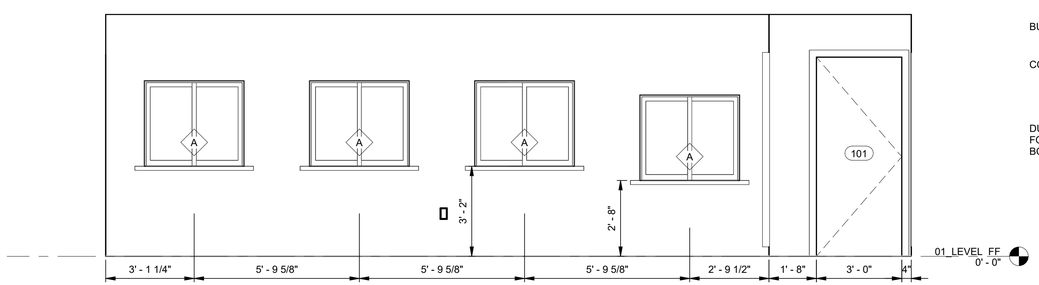
08 A-431 ENLARGED FLOOR PLAN -RESTROOM
SCALE: 3/8" = 1'-0"



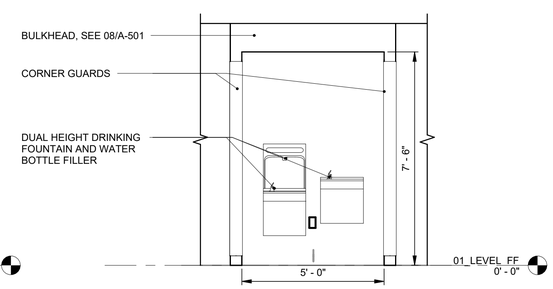
02 A-431 BREAKROOM - SOUTH
SCALE: 3/8" = 1'-0"



05 A-431 ADMIN - SOUTH
SCALE: 3/8" = 1'-0"



03 A-431 WAITING ROOM - NORTH
SCALE: 3/8" = 1'-0"



06 A-431 WATER FOUNTAIN
SCALE: 3/8" = 1'-0"

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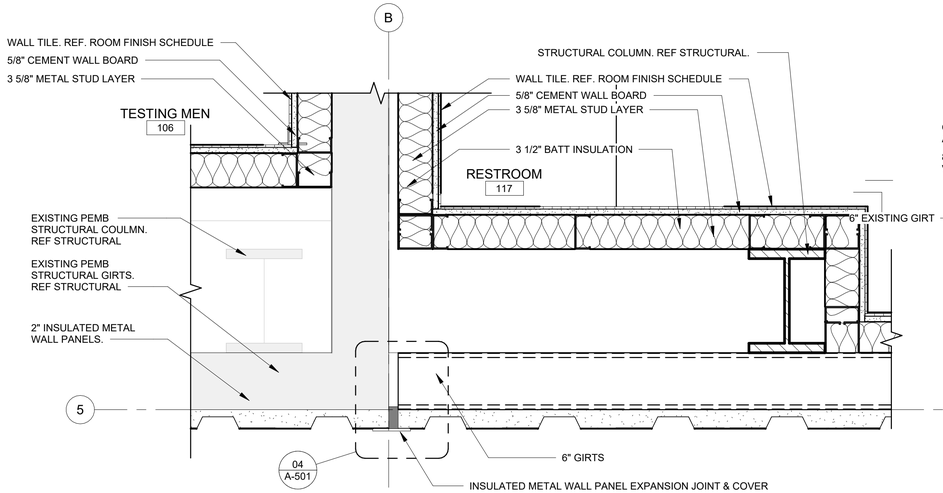
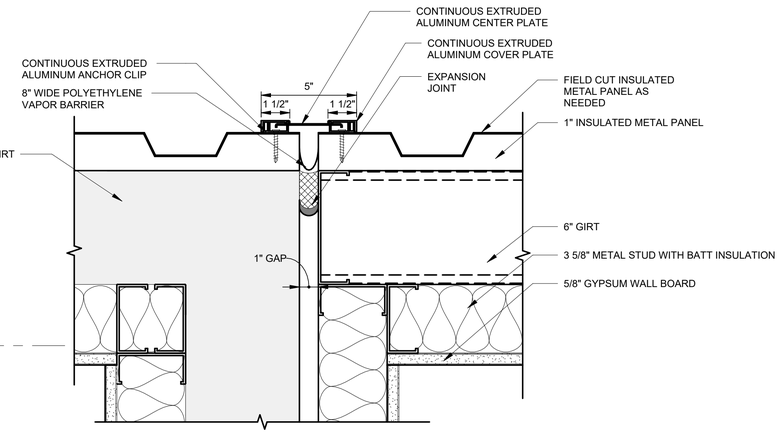


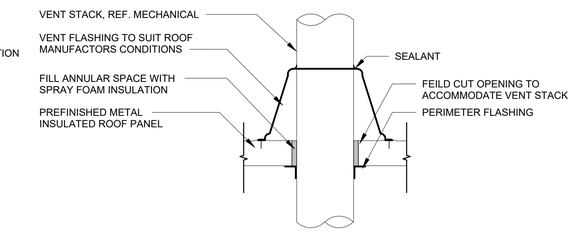
01 A-501 WALL DETAIL EXISTING STRUCTURE TO NEW ADDITION

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



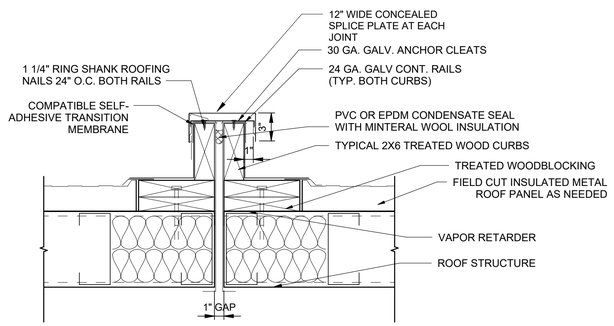
04 A-501 EXPANSION JOINT @ EXTERIOR INSULATED METAL PANEL

SCALE: 3" = 1'-0"



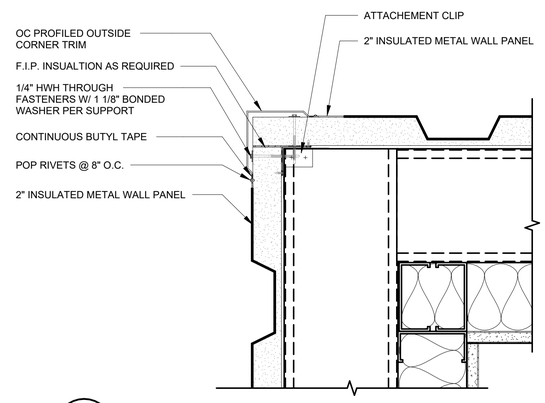
07 A-501 VENT STACK PENETRATION @ ROOF

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



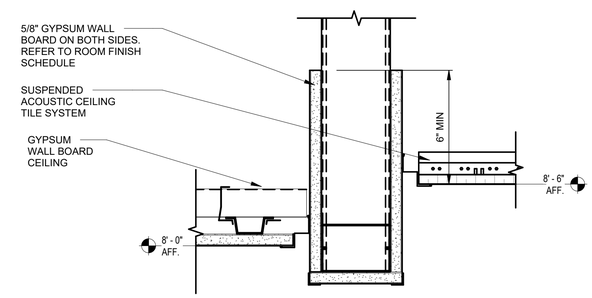
02 A-501 ROOF CURB DETAIL

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



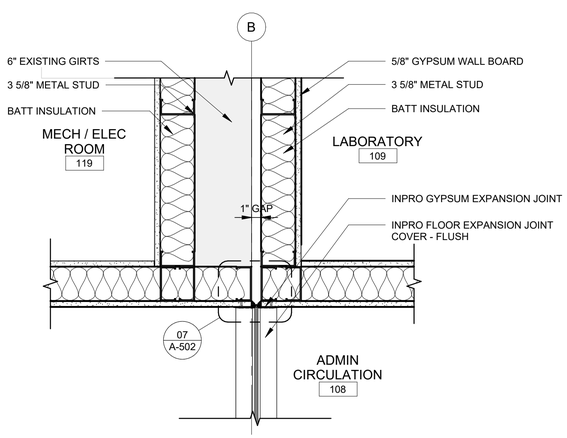
05 A-501 CORNER TRIM

SCALE: 3" = 1'-0"



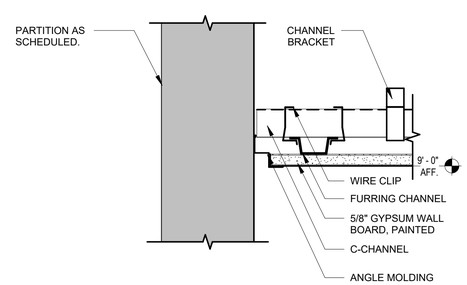
08 A-501 BULKHEAD CEILING DETAIL

SCALE: 3" = 1'-0"



03 A-501 WALL DETAIL EXISTING STRUCTURE TO NEW ADDITION

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



06 A-501 HARD CAP DETAIL

SCALE: 3" = 1'-0"

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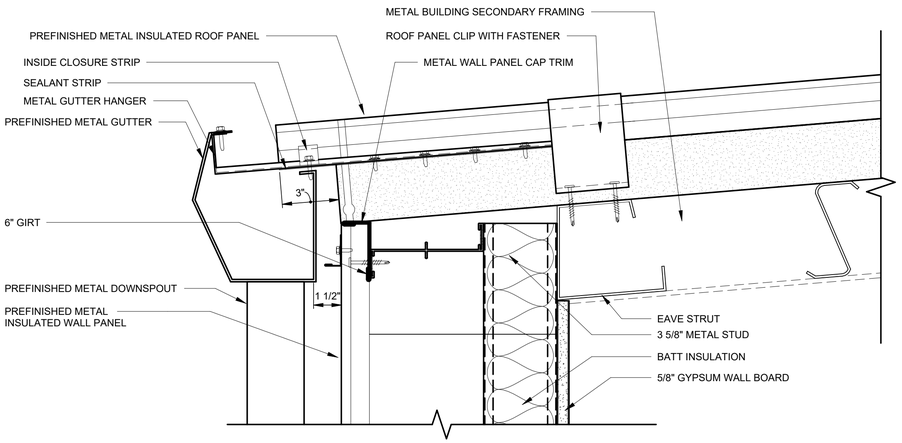
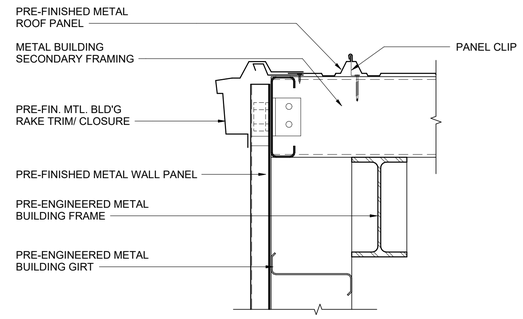
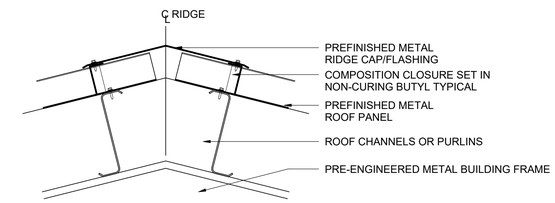


01 A-502 EAVE DETAIL
SCALE: 3" = 1'-0"



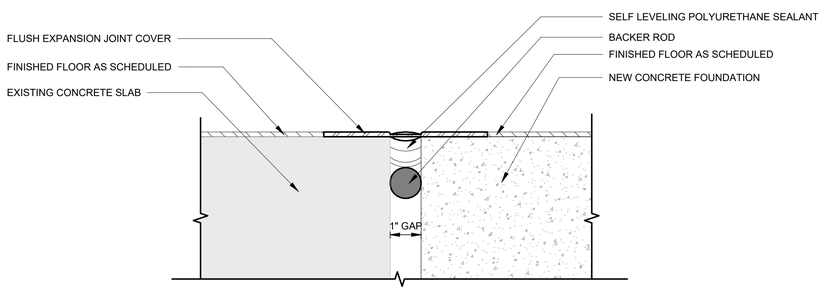
04 A-502 RAKE DETAIL
SCALE: 1 1/2" = 1'-0"



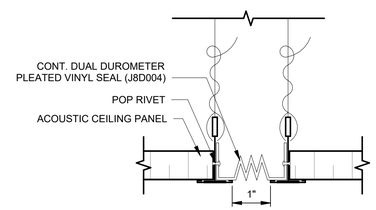
NOTE:

1. TO FACILITATE ERECTION OF WEATHERTIGHT CONDITION, 3" MINIMUM BEARING OF FLASHING ON PANEL IS REQUIRED.

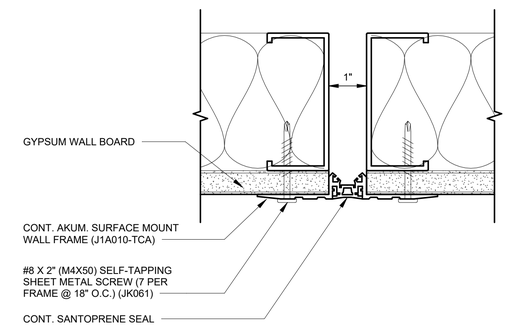
06 A-502 RIDGE CAP DETAIL
SCALE: 1 1/2" = 1'-0"



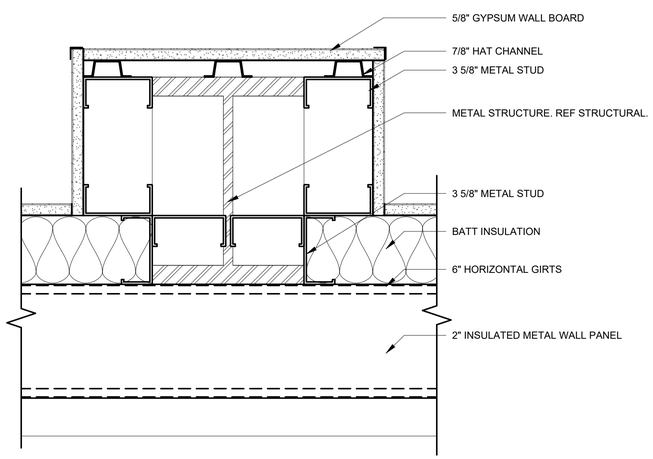
02 A-502 EXPANSION JOINT @ EXSITING FOUNDATION TO NEW FOUNDATION
SCALE: 6" = 1'-0"



05 A-502 EXPANSION JOINT @ CEILING
SCALE: 6" = 1'-0"



07 A-502 EXPANSION JOINT @ GYPSUM WALL BOARD
SCALE: 6" = 1'-0"



03 A-502 COLUMN FURROUT
SCALE: 3" = 1'-0"

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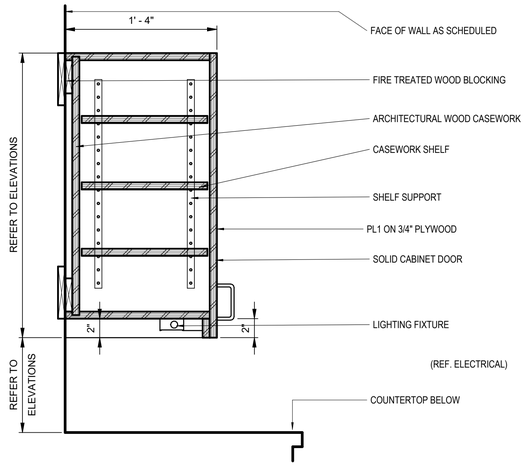
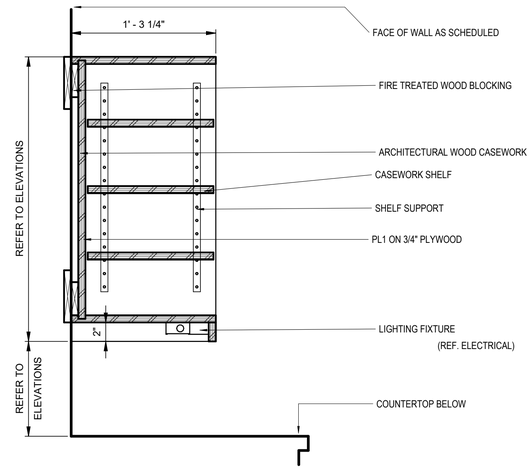
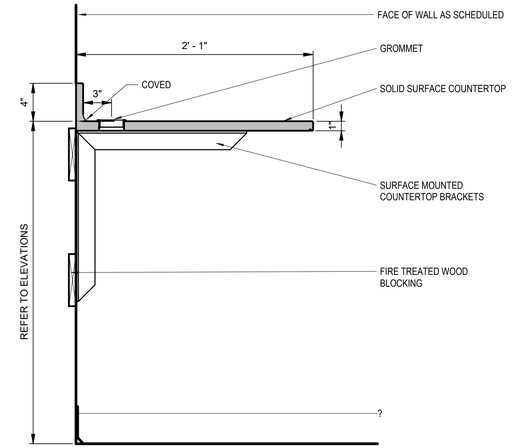


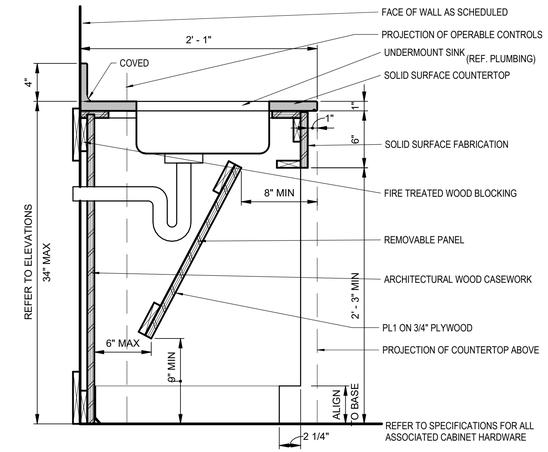
01 A-503 SECTION DTL @ UPPER CABINET
SCALE: 1 1/2" = 1'-0"



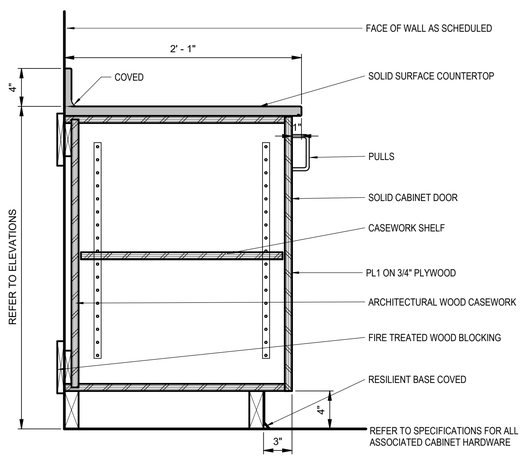
03 A-503 SECTION DETAIL @ OPEN UPPER CABINET
SCALE: 1 1/2" = 1'-0"



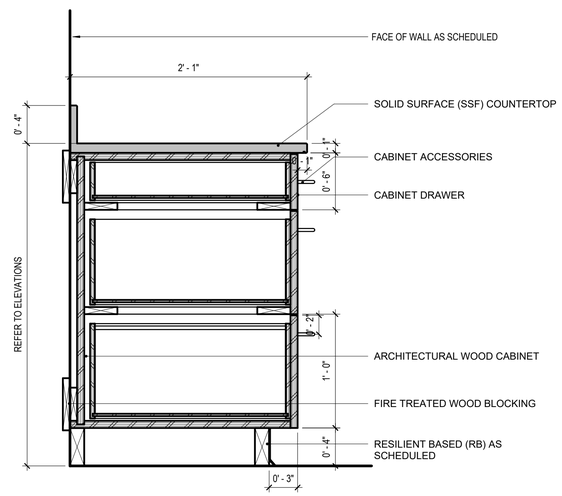
05 A-503 SECTION DETAIL @ COUNTERTOP
SCALE: 1 1/2" = 1'-0"



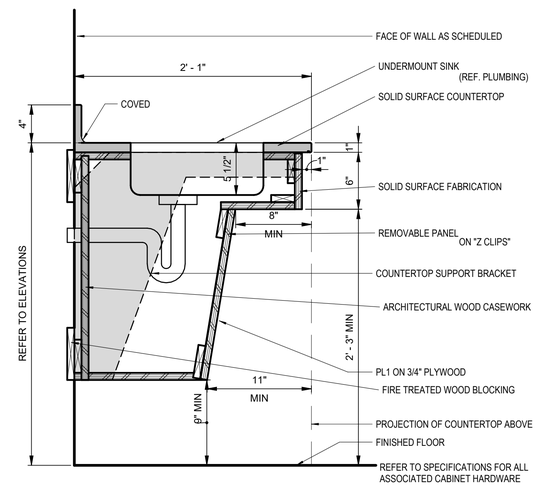
07 A-503 SECTION DETAIL @ ABA SINK BASE
SCALE: 1 1/2" = 1'-0"



02 A-503 SECTION DETAIL @ BASE CABINET
SCALE: 1 1/2" = 1'-0"



04 A-503 SECTION DETAIL @ BASE CABINET W/ DRAWERS
SCALE: 1 1/2" = 1'-0"



06 A-503 SECTION DETAIL @ ABA SINK BASE: RESTROOMS
SCALE: 1 1/2" = 1'-0"

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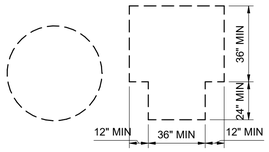
CHAPTER 3: BUILDING BLOCKS



SECTION 304.3.1 CIRCULAR TURNING SPACE

FIGURE 304.3.2 T- SHAPED TURNING SPACE

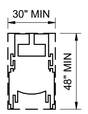
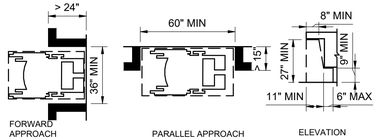
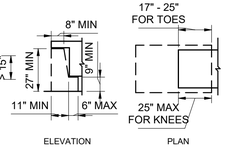


FIGURE 305.3 CLEAR FLOOR SPACE



FIGURES 305.7.1 & 305.7.2 ALCOVE MANEUVERING CLEARANCE



FIGURES 306.2 & 306.3 KNEE AND TOE CLEARANCE

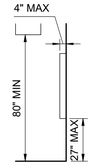


FIGURE 307.2 LIMITS OF PROTRUDING OBJECTS

FIGURE 308.2.1 UNOBSTRUCTED FORWARD REACH

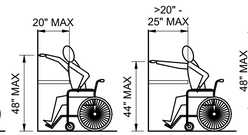


FIGURE 308.2.2 OBSTRUCTED FORWARD REACH

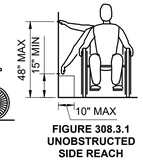


FIGURE 308.3.1 UNOBSTRUCTED SIDE REACH

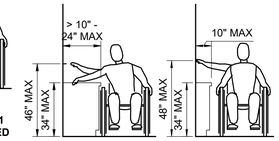


FIGURE 308.3.2 OBSTRUCTED SIDE REACH

GENERAL NOTES

1. NOT ALL ABA ITEMS SHOWN ARE APPLICABLE TO BUILDING, COORDINATE ACTUAL ITEMS USED.

CHAPTER 4: ACCESSIBLE ROUTES

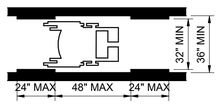
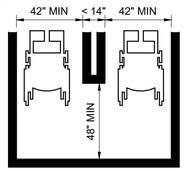
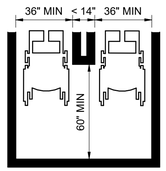


FIGURE 403.5.1 CLEAR WIDTH OF AN ACCESSIBLE ROUTE





NOTE: CLEAR OPENING IS FROM THE DOOR STOP TO THE FACE OF DOOR OPEN AT 90°

FIGURE 404.2.3 CLEAR DOORWAY OPENING

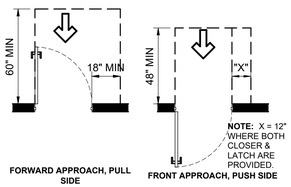
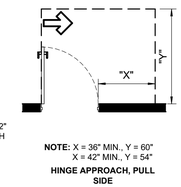
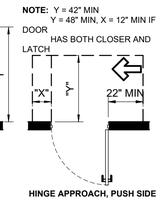
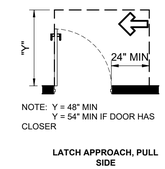
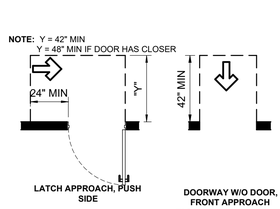


FIGURE 404.2.4.1 MANEUVERING CLEARANCES AT MANUAL SWING DOORS AND GATES









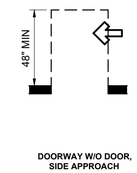
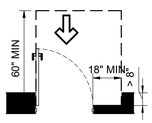


FIGURE 404.2.4.2 MANEUVERING CLEARANCES AT DOORWAYS WITHOUT DOORS, SLIDING DOORS, GATES, AND FOLDING DOORS

FIGURE 403.5.2 CLEAR WIDTH AT TURN



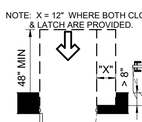


FIGURE 404.2.4.3 MANEUVERING CLEARANCES AT RECESSED DOORS AND GATES

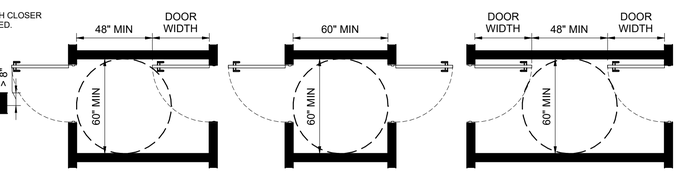
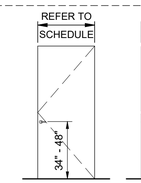
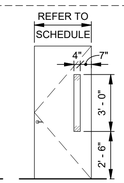


FIGURE 404.2.6 DOORS IN SERIES AND GATES IN A SERIES

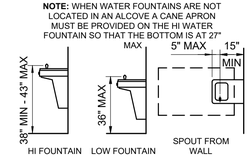


SECTION 404.2.6 DOOR HARDWARE LOCATION

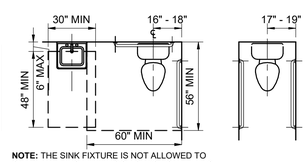


SECTION 404.2.11 VISION LIGHTS

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES



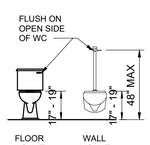
SECTIONS 602.4 & 602.7 & FIGURE 602.5 WATER FOUNTAIN SPOUT LOCATION



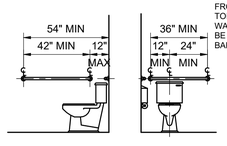
NOTE: THE SINK FIXTURE IS NOT ALLOWED TO OVERLAP THE CLEAR FLOOR SPACE OF THE WC

FIGURES 604.2, 604.3.1, &SECTION 606.2 CLEAR FLOOR SPACE FOR WATER CLOSET AND LAVATORY

FIGURE 604.2 WATER CLOSET LOCATION AMBULATORY



SECTIONS 604.4 & 604.7 WATER CLOSET SEAT HEIGHT



FIGURES 604.5.1 & 604.5.2 GRAB BAR LOCATION AT WATER CLOSET

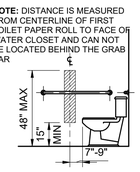


FIGURE 604.7 DISPENSER OUTLET LOCATION

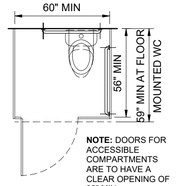
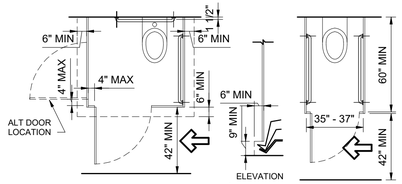


FIGURE 604.8.1.1 SIZE OF WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT



FIGURES 604.8.1.2 & 604.8.1.4 TOILET COMPARTMENT DOORS & TOE CLEARANCE

FIGURES604.8.2 AMBULATORY ACCESSIBLE TOILET COMPARTMENT

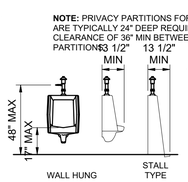
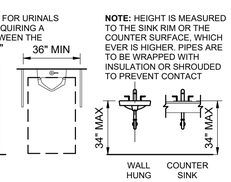


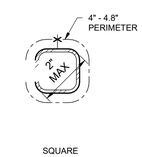
FIGURE 605.2 HEIGHT AND DEPTH OF URINAL AND FLUSH VALVE



SECTION 605.3 URINAL CLEAR FLOOR SPACE

NOTE: HEIGHT IS MEASURED TO THE SINK RIM OR THE COUNTER SURFACE, WHICH EVER IS HIGHER. PIPES ARE TO BE WRAPPED WITH INSULATION OR SHROUDED TO PREVENT CONTACT

SECTION 606.3 SINK HEIGHT



SECTION 609.2 & FIGURE 609.2.2 GRAB BAR GRIPPING SURFACE CROSS SECTION

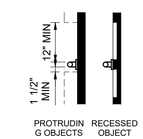


FIGURE 609.3 SPACING OF GRAB BARS

CHAPTER 9: BUILT-IN ELEMENTS

SECTION 902.3 DINING SURFACES AND WORK SURFACES HEIGHTS

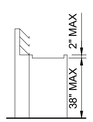
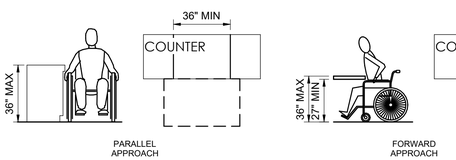


FIGURE 904.3.2 CHECK-OUT AISLE COUNTERS



SECTION 904.4 SALES AND SERVICE COUNTERS

CHAPTER 8: SPECIAL ROOMS, SPACES, AND ELEMENTS

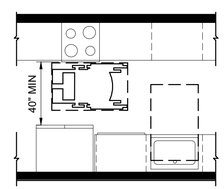
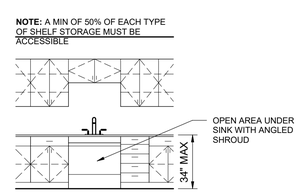


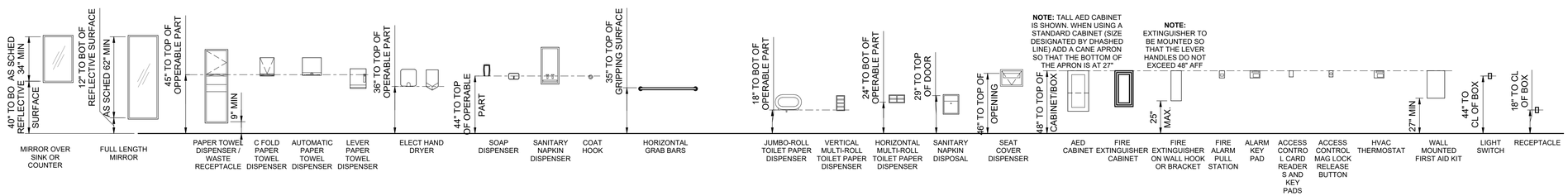
FIGURE 804.2.1 PASS THROUGH KITCHENS



SECTIONS 804.3.2 & 804.5 CABINETRY HEIGHT AND STORAGE

TYPICAL HDR ACCESSORY AND EQUIPMENT MOUNTING HEIGHTS PER ABA/ABA DESIGN GUIDELINES

NOTE:
ALL ITEMS THAT ARE TO BE MOUNTED TO THE WALL MUST FALL WITH IN THE PROTRUSION LIMITS PER SECTION 307.2. ANY ITEM PROTRUDING FROM THE FACE OF THE WALL MORE THAN 4" MUST HAVE AN AFFIXED CANE APPRON, BE RECESSED INTO THE WALL SO NO MORE THAN 4" PROTRUDES FROM THE WALL, OR POSITIONED SO THAT IT IS OVER A COUNTER/BUILT-IN ITEM AND THE OBJECT DOES NOT PROTRUDE MORE THAN 4" INTO THE CLEAR FLOOR SPACE FOR THE BUILT-IN ITEM



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72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

STATE OF OKLAHOMA
ROBERT ANDREW MATJASKO
A7250
LICENSED ARCHITECT
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

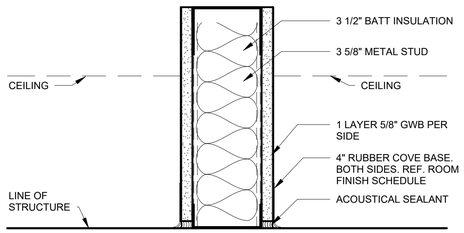
REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: AM
DRAWN BY: KB
CHECKED BY: JJ
DESIGN FILE LOCATION:

SHEET TITLE
ABA DETAILS

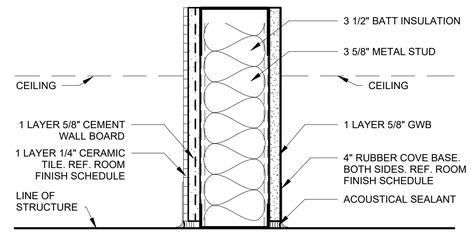
SHEET NUMBER
A-504



PARTITION SCHEDULE A

MARK	STUD WIDTH	PRTN WIDTH
A	3 5/8"	4 7/8"

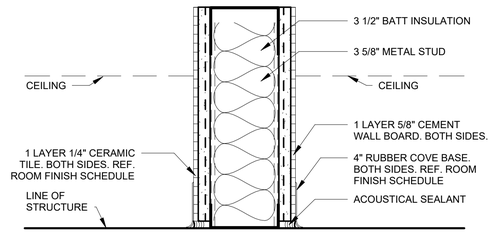
01 A-601 TYPE A
SCALE: 3" = 1'-0"



PARTITION SCHEDULE B

MARK	STUD WIDTH	PRTN WIDTH
B1	3 5/8"	5 1/8"

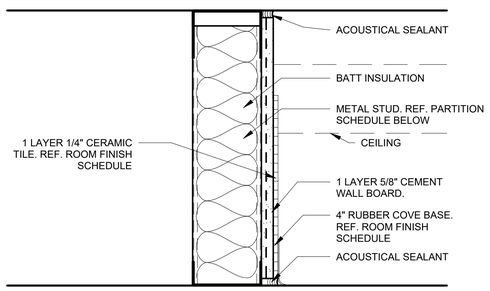
03 A-601 TYPE B1
SCALE: 3" = 1'-0"



PARTITION SCHEDULE B

MARK	STUD WIDTH	PRTN WIDTH
B2	3 5/8"	5 3/8"

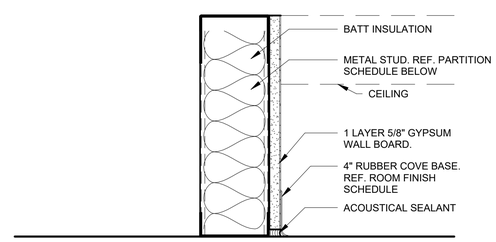
05 A-601 TYPE B2
SCALE: 3" = 1'-0"



PARTITION SCHEDULE B

MARK	STUD WIDTH	PRTN WIDTH
B3	3 5/8"	4 1/2"
B4	1 5/8"	2 1/2"

02 A-601 TYPE B3 & B4
SCALE: 3" = 1'-0"



PARTITION SCHEDULE C

MARK	STUD WIDTH	PRTN WIDTH
C1	3 5/8"	4 1/4"
C2	1 5/8"	2 1/4"

04 A-601 TYPE C1 & C2
SCALE: 3" = 1'-0"

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MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: AM
DRAWN BY: KB
CHECKED BY: JJ
DESIGN FILE LOCATION:

SHEET TITLE
PARTITION TYPES

SHEET NUMBER
A-601

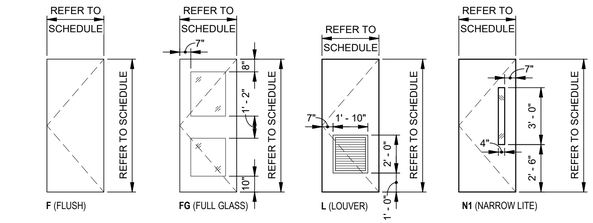
DOOR SCHEDULE

DOOR NO.	To Room: Name	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SIZE THICKNESS	DOOR PANEL TYPE	DOOR MATERIAL	FRAME FRAME TYPE	FRAME MATERIAL	FRAME DETAILS DOOR HEAD	FRAME DETAILS DOOR JAMB	DOOR HARDWARE SET#	COMMENTS:
100A	ENTRY VESTIBULE	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	C715A	
100B	ENTRY VESTIBULE	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	801AV	
101	ADMIN	3' - 0"	7' - 0"	0' - 1 3/4"	N1	WD	F1	HM	3/A-501	4/A-501	C201	
102A	EXIT VESTIBULE A	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	C715A	
102B	EXIT VESTIBULE A	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	801AV	
104	TESTING WOMEN	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	801	
105	RESTROOM VESTIBULE	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	801	
106	TESTING MEN	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	801	
108	ADMIN CIRCULATION	3' - 0"	7' - 0"	0' - 1 3/4"	F	STL	F1	STL	5/A-501	6/A-501	C715	
109	LABORATORY	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	103	
110	STORAGE	3' - 0"	7' - 0"	0' - 1 3/4"	L	WD	F1	HM	3/A-501	4/A-501	201	
111	SECURE STORAGE	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	C201	
112	OFFICE	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	103	
113	STORAGE	3' - 0"	7' - 0"	0' - 1 3/4"	L	WD	F1	HM	3/A-501	4/A-501	201	
114	DATA	3' - 0"	7' - 0"	0' - 1 3/4"	L	WD	F1	HM	3/A-501	4/A-501	C201C	
115	TRAINING/BREAK ROOM	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	407	
116	JANITOR	3' - 0"	7' - 0"	0' - 1 3/4"	L	WD	F1	HM	3/A-501	4/A-501	203	
117	RESTROOM	3' - 0"	7' - 0"	0' - 1 3/4"	F	WD	F1	HM	3/A-501	4/A-501	341	
118A	EXIT VESTIBULE B	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	C715A	
118B	EXIT VESTIBULE B	3' - 0"	7' - 0"	0' - 1 3/4"	FG	AL/GLZ	F1	AL	1/A-501	2/A-501	801AV	
119	MECH / ELEC ROOM	6' - 0"	7' - 0"	0' - 2"	F	STL	F2	STL	5/A-501	6/A-501	714M	

HM	HOLLOW METAL	WD	WOOD	GLZ	GLAZING
PTD	PAINTED	AL	ALUMINUM	STL	STEEL

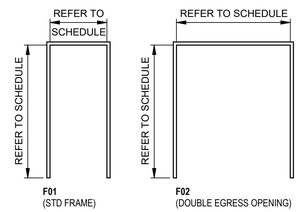
WINDOW SCHEDULE.

ROOM NUMBER	MARK	R.O. WIDTH	R.O. HEIGHT	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	HEAD HEIGHT	REMARKS (SEE NOTES BELOW)
101	A	3' - 6"	3' - 0"	06/A-604	08/A-604	08/A-604	6' - 2"	
101	A	3' - 6"	3' - 0"	06/A-604	08/A-604	08/A-604	6' - 2"	
107	A	3' - 6"	3' - 0"	06/A-604	08/A-604	08/A-604	6' - 2"	
101	A	3' - 6"	3' - 0"	06/A-604	08/A-604	08/A-604	5' - 8"	



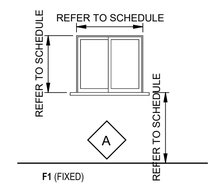
DOOR PANEL LEGEND

1/4" = 1'-0"



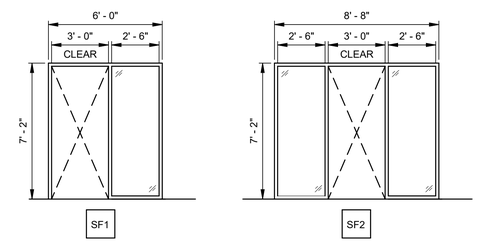
DOOR FRAME LEGEND

1/4" = 1'-0"



WINDOW LEGEND

1/4" = 1'-0"



STOREFRONT LEGEND

1/4" = 1'-0"

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A7250
LICENSED ARCHITECT
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE
RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
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DESIGN GROUP: HDR
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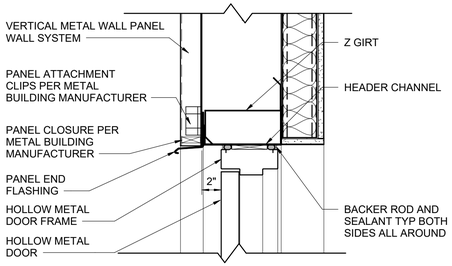
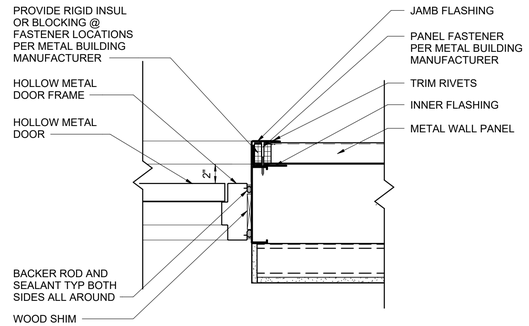
DRAWN BY: KB
CHECKED BY: JJ
DESIGN FILE LOCATION:

SHEET TITLE
DOOR & WINDOW SCHEDULES

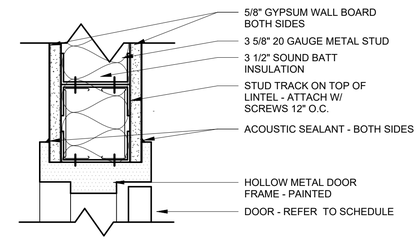
SHEET NUMBER
A-603



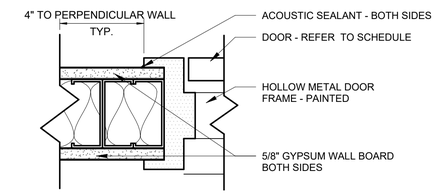
01 A-604 HM DOOR HEAD - EXTERIOR
SCALE: 1 1/2" = 1'-0"



03 A-604 HM DOOR JAMB - EXTERIOR
SCALE: 1 1/2" = 1'-0"



05 A-604 DOOR HEAD - INTERIOR
SCALE: 3" = 1'-0"



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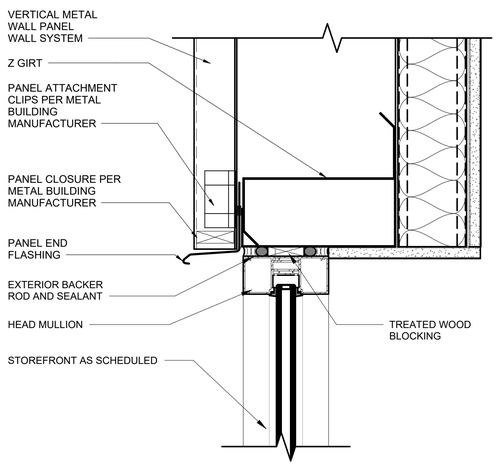
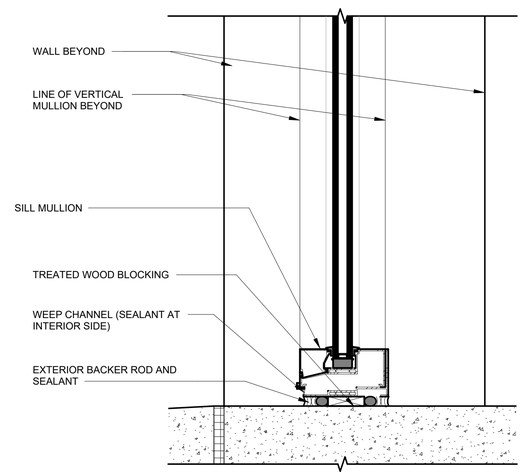
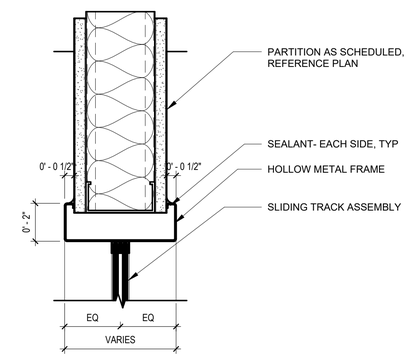


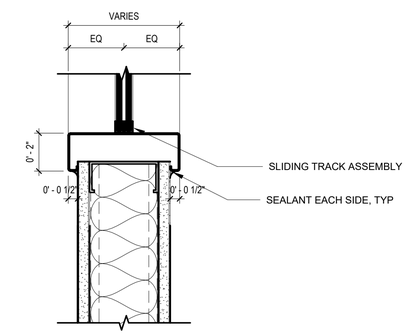
02 A-604 STOREFRONT HEAD
SCALE: 3" = 1'-0"



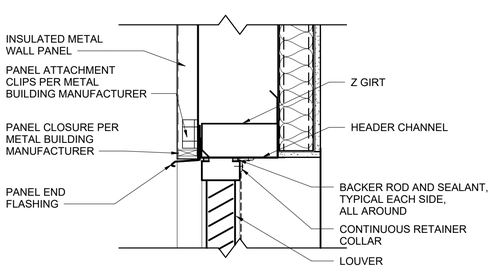
04 A-604 STOREFRONT SILL MULLION
SCALE: 3" = 1'-0"



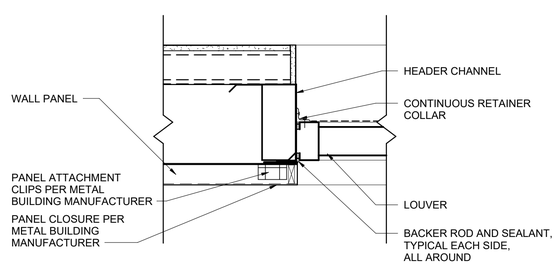
06 A-604 HEAD - HM SLIDING WINDOW
SCALE: 3" = 1'-0"



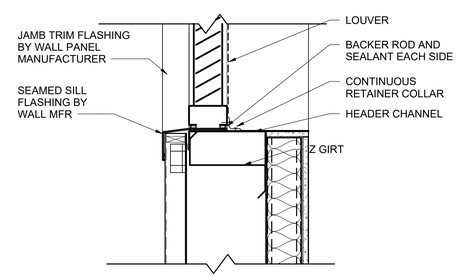
08 A-604 SILL - HM SLIDING WINDOW
SCALE: 3" = 1'-0"



09 A-604 LOUVER HEAD
SCALE: 1 1/2" = 1'-0"



10 A-604 LOUVER JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



11 A-604 LOUVER SILL
SCALE: 1 1/2" = 1'-0"

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

STATE OF OKLAHOMA
ROBERT ANDREW MATJASKO
A7250
LICENSED ARCHITECT
04/24/2026

PROJECT INFORMATION
WWYK200270
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TINKER AIR FORCE BASE, OKLAHOMA

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SHEET TITLE
DOOR & WINDOW DETAILS

SHEET NUMBER
A-604

FIRE ALARM AND MASS NOTIFICATION GENERAL NOTES:

1. PROVIDE COMPLETE OPERATING FIRE ALARM AND MASS NOTIFICATION SYSTEMS AS INDICATED ON THE CONTRACT DOCUMENTS, AS EVIDENTLY INTENDED AND IN ACCORDANCE WITH NFPA 70, NFPA 72, NFPA 90A, APPLICABLE ETL'S, TINKER FIRE PROTECTION STANDARD, UFC 4-010-05, UFC 3-600-01 AND UFC 4-021-01. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE GENERAL ARRANGEMENTS OF SYSTEMS AND WORK, BUT DO NOT INCLUDE INTERCONNECTIONS BETWEEN OTHER SYSTEMS. THE CONTRACTOR SHALL PROVIDE CONDUIT, BACK BOXES, RACEWAY AND WIRING AS REQUIRED TO ACCOMPLISH THE FUNCTIONS INTENDED AND REQUIRED BY CODE.

2. COORDINATE WORK WITH THAT OF OTHER TRADES SO AS TO AVOID CONFLICTS. RESOLVE CONFLICTS THROUGH THE A/E PRIOR TO ROUGH-IN. FAILURE TO PROVIDE SUCH COORDINATION PRIOR TO WORK BEING INSTALLED SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR, AND MAY RESULT IN REJECTION OF THE WORK.

3. PROVIDE NEW MATERIALS, BEARING LABELS OR MARKING INDICATING THIRD PARTY TESTING AND APPROVAL, SUITABLE FOR THE APPLICATION INTENDED.

4. INSTALL FIRE ALARM AND MASS NOTIFICATION CABLE IN METAL RACEWAY. FREE-RUN CABLE IS NOT PERMITTED. RACEWAY SHALL BE CONCEALED IN FINISHED SPACES, AND MAY BE INSTALLED EXPOSED IN UNFINISHED SPACES SUCH AS MECHANICAL AND ELECTRICAL ROOMS. INSTALL RACEWAY PERPENDICULAR OR PARALLEL TO THE BUILDING'S STRUCTURAL COMPONENTS.

5. INSTALL PULL AND JUNCTION BOXES AS REQUIRED TO MEET CODE AND INSTALLATION REQUIREMENTS. PULL AND JUNCTION BOXES SHALL BE CONCEALED IN FINISHED SPACES. COORDINATE WITH OTHER TRADES SO AS TO AVOID CONFLICTS.

6. SUPPORT CEILING MOUNTED BACK BOXES WITH "T" HANGERS OR EQUAL METHOD OF SUPPORT. BACK BOXES SHALL NOT BE SUPPORTED SOLELY BY CONDUIT OR CEILING TILES.

7. IDENTIFY CONDUCTORS AT EACH JUNCTION BOX, OUTLET BOX, CABINET, PULL BOX, ETC., WITH VINYL SELF-ADHESIVE TAGS INDICATING PANEL AND CIRCUIT NUMBER, CONTROL WIRE IDENTIFICATION NUMBER, OR OTHER APPROPRIATE INFORMATION.

8. FASTEN AND SUPPORT CONDUIT AND BACK BOXES BY MEANS OF ANCHORS, RODS, HANGERS, ETC., TO MAINTAIN ALIGNMENT AND PREVENT MOVEMENT.

9. PERFORM WORK ON DE-ENERGIZED SYSTEMS ONLY TO PREVENT PERSONNEL INJURY AND POTENTIAL SYSTEM FAILURE. WHERE WORK ON EXISTING SYSTEMS SHALL REQUIRE INTERRUPTION OF ELECTRICAL SERVICE, TEMPORARY PROVISIONS ACCEPTABLE TO THE OWNER SHALL BE REQUIRED.

10. SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A NICET LEVEL IV IN FIRE ALARM DESIGN.

11. SHOP DRAWINGS, CALCULATIONS, AND MATERAL SUBMITTAL SHALL BE REVIEWED AND BEAR THE REVIEW STAMP OF A QUALIFIED FIRE PROTECTION ENGINEER AS PER UFC 3-600-01.

FIRE ALARM DEMOLITION NOTES:

1. CONTRACT DOCUMENTS WERE PREPARED FROM FIELD SURVEYS AND AS-BUILT DRAWINGS. THEY ARE NOT INTENDED TO DEPICT UNFORESEEN CONDITIONS THAT MAY ADVERSELY AFFECT DEMOLITION OR INSTALLATION. CONTRACTOR WILL FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING ANY WORK.

2. CONTRACTOR WILL COORDINATE DEMOLITION AND INSTALLATION WITH THE BUILDING USER, FIRE DEPARTMENT, AND THE GOVERNMENT, AND PERFORM DEMOLITION AND INSTALLATION IN A MANNER THAT WILL HAVE LEAST ADVERSE EFFECT ON NORMAL BUILDING OPERATION.

3. PROVIDE PROTECTION AS REQUIRED TO PREVENT DAMAGE TO EXISTING EQUIPMENT.

4. ALL DEMOLITION WORK IS TO BE COORDINATED WITH NEW WORK. IF UNDOCUMENTED CONDITIONS EXIST THAT ARE AFFECTED BY NOTED DEMOLITION, CONTACT THE CONTRACTING OFFICER BEFORE PROCEEDING.

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE

TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
DOUGLAS EMANUS
33105
OKLAHOMA
04/24/2026

PROJECT INFORMATION:
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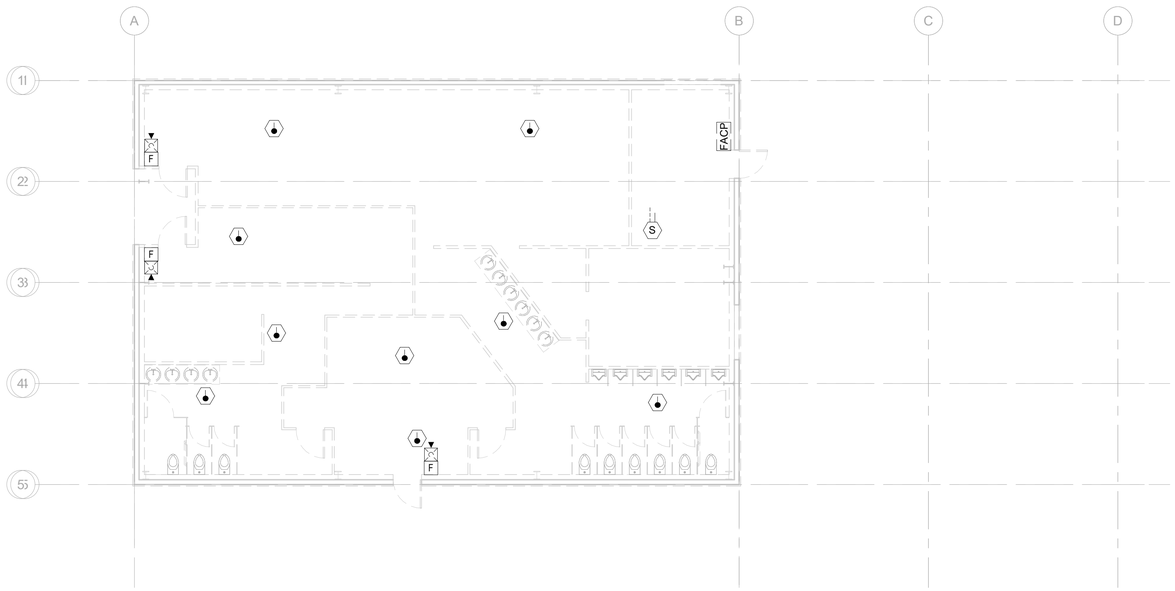
FIRE PROTECTION
GENERAL NOTES

SHEET NUMBER
F-001



01
FD101

FIRE ALARM AND MASS NOTIFICATION PLAN - DEMOLITION

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

0 4' 8' 16'

GENERAL NOTES

1. DEMOLISH ALL EXISTING FIRE ALARM EQUIPMENT IN EXISTING BUILDING. DEMOLITION INCLUDES THE REMOVAL OF FIRE ALARM FIELD DEVICES, CONTROL EQUIPMENT, CONDUIT, CABLE, HANGARS, SUPPORTS, AND MISC. HARDWARE.

KEY NOTES

LEGEND

FMCU	FIRE ALARM MASS NOTIFICATION CONTROL UNIT
LOC	LOCAL OPERATOR CONSOLE
F	MANUAL PULL STATION
C	CEILING MOUNT SPEAKER/STROBE COMBO
S WP	SPEAKER WEATHERPROOF
	CEILING MOUNT STROBE
	WALL MOUNT SPEAKER/STROBE COMBO
	WALL MOUNT STROBE
WF	MONITOR MODULE FOR WATERFLOW SWITCH
VS	MONITOR MODULE FOR TAMPER SWITCH
S	SMOKE DETECTOR
	HEAT DETECTOR
CO	CARBON MONOXIDE DETECTOR
S	DUCT SMOKE DETECTOR
RTS	REMOTE TEST SWITCH
AOM	ADDRESSABLE OUTPUT MODULE
AIM	ADDRESSABLE INPUT MODULE
	LED TEXT SIGN
EOL	END OF LINE RESISTOR

NOTE: NOT ALL SYMBOLS ARE USED.

AIR FORCE MATERIEL COMMAND
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04/24/2026

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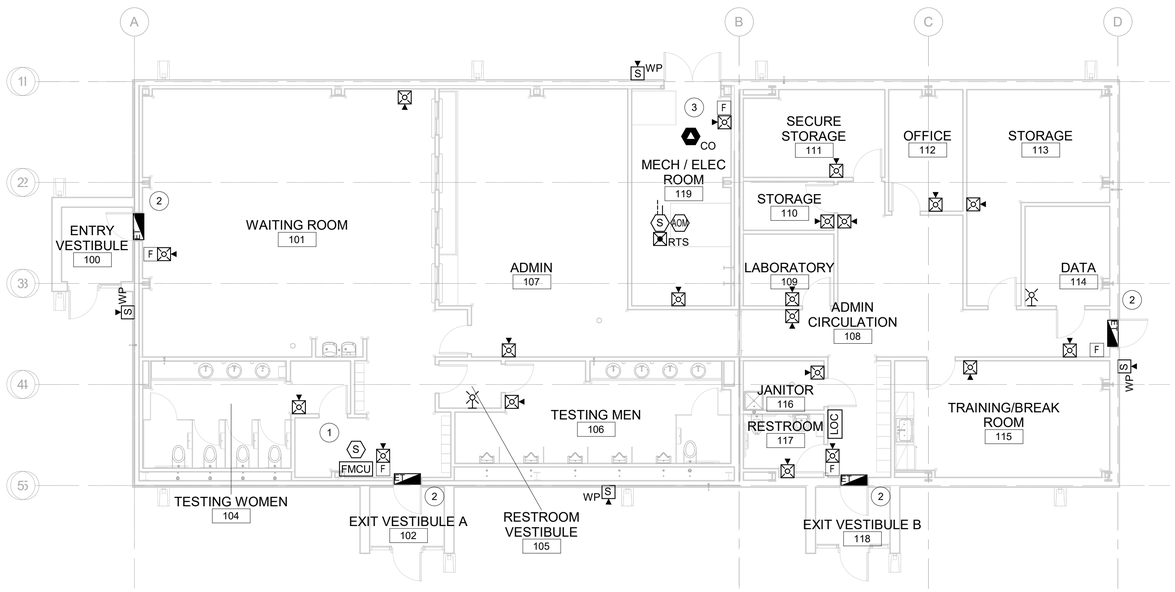
SHEET TITLE
FIRE ALARM AND MASS NOTIFICATION PLAN - DEMOLITION

SHEET NUMBER
FD101



01
FA101

FIRE ALARM AND MASS NOTIFICATION PLAN - NEW WORK

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

0 4' 8' 16'

GENERAL NOTES

1. INSTALL NEW FIRE ALARM AND MASS NOTIFICATION SYSTEM IN ACCORDANCE WITH NFPA 72, UFC 3-600-01, UFC 4-021-01, UFC 4-010-05 AND ABA.

KEY NOTES

1. PROVIDE A MNS/FIRE ALARM NODE WITH INTEGRAL TRANSMITTER FOR OFFSITE REPORTING TO THE D-21 MONACO RECEIVING STATION. PROVIDE OSHA AND NEC REQUIRED WORKING SPACE AROUND THE FMCU TO INCLUDE 30" WIDTH AND 36" DEPTH.
2. COORDINATE FINAL LOCATION OF LED TEXT SIGN WITH EXIT SIGN SO THAT BOTH ARE READILY VISIBLE AND NEITHER OBSCURES THE OTHER.
3. CARBON MONOXIDE DETECTOR SHALL PROVIDE A TEMPORAL 4 AUDIBLE SIGNAL UPON ACTIVATION PER 18.4.3

LEGEND

FMCU	FIRE ALARM MASS NOTIFICATION CONTROL UNIT
LOC	LOCAL OPERATOR CONSOLE
F	MANUAL PULL STATION
C	CEILING MOUNT SPEAKER/STROBE COMBO
S WP	SPEAKER WEATHERPROOF
	CEILING MOUNT STROBE
	WALL MOUNT SPEAKER/STROBE COMBO
	WALL MOUNT STROBE
WF	MONITOR MODULE FOR WATERFLOW SWITCH
VS	MONITOR MODULE FOR TAMPER SWITCH
S	SMOKE DETECTOR
	HEAT DETECTOR
CO	CARBON MONOXIDE DETECTOR
S	DUCT SMOKE DETECTOR
RTS	REMOTE TEST SWITCH
AOM	ADDRESSABLE OUTPUT MODULE
AIM	ADDRESSABLE INPUT MODULE
	LED TEXT SIGN
EOL	END OF LINE RESISTOR

NOTE: NOT ALL SYMBOLS ARE USED.

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72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

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OKLAHOMA
04/24/2026

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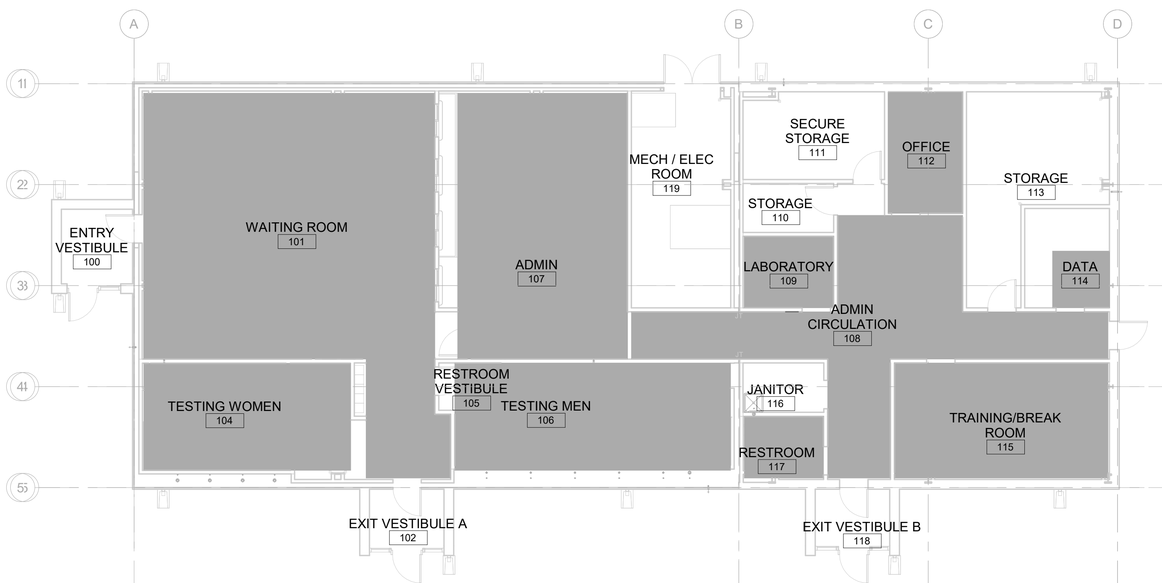
FIRE ALARM AND MASS NOTIFICATION PLAN - NEW WORK

SHEET NUMBER
FA101



01 FA102 ACOUSTICALLY DISTINGUISHED SPACE (ADS)

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

GENERAL NOTES

1. THE MINIMUM REQUIRED INTELLIGIBILITY LEVEL FOR ALL SPACES IDENTIFIED AS ACOUSTICALLY DISTINGUISHABLE IS 0.7 CIS.
2. AREAS OF THE BUILDING PROVIDED WITH HARD WALL AND CEILING SURFACES THAT ARE FOUND TO CAUSE EXCESSIVE SOUND REFLECTIONS MAY BE PERMITTED TO HAVE A CIS SCORE LESS THAN THE MINIMUM REQUIRED VALUE IF APPROVED BY THE DOD INSTALLATION, AND IF BUILDING OCCUPANTS IN THESE AREAS CAN DETERMINE THAT A VOICE SIGNAL IS BEING BROADCAST AND THEY MUST WALK NO MORE THAN 10 M (33 FT) TO FIND A LOCATION WITH AT LEAST THE MINIMUM REQUIRED CIS VALUE WITHIN THE SAME AREA.
3. AREAS OF THE BUILDING WHERE OCCUPANTS ARE NOT EXPECTED TO BE NORMALLY PRESENT ARE PERMITTED TO HAVE A CIS SCORE LESS THAN THE MINIMUM REQUIRED VALUE IF PERSONNEL CAN DETERMINE THAT A VOICE SIGNAL IS BEING BROADCAST AND THEY MUST WALK NOT MORE THAN 15 M (50 FT) TO A LOCATION WITH AT LEAST THE MINIMUM REQUIRED CIS VALUE WITHIN THE SAME AREA.

KEY NOTES

LEGEND

ACOUSTICALLY DISTINGUISHABLE SPACE (ADS). ALL OTHER SPACES ARE TO BE CONSIDERED NON-ACOUSTICALLY DISTINGUISHABLE SPACE (NON-ADS).

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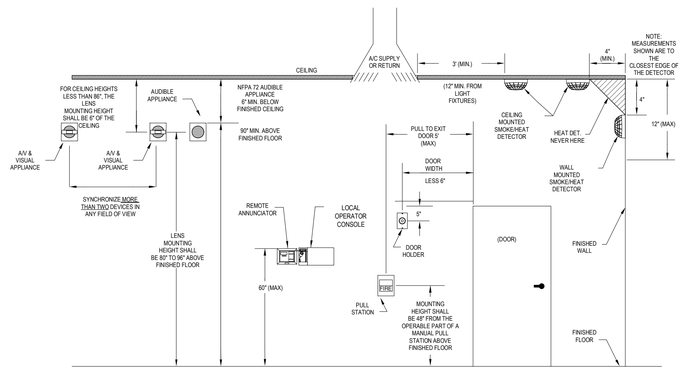
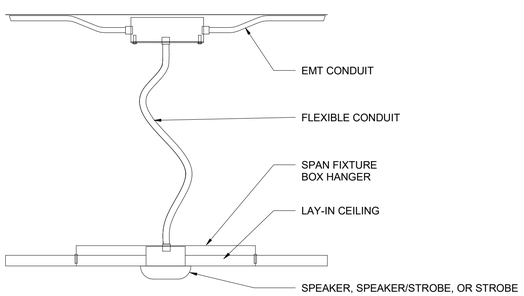
ACOUSTICALLY DISTINGUISHABLE SPACE

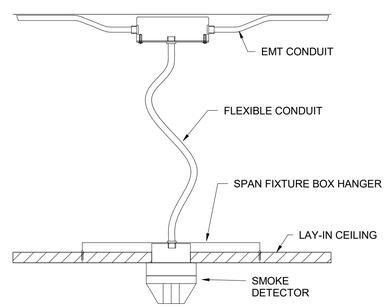
SHEET NUMBER
FA102



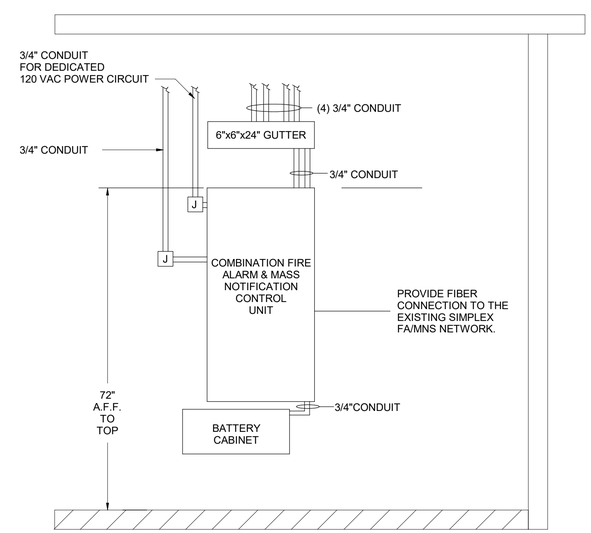
01 FA501 TYPICAL DEVICE MOUNTING DETAIL
SCALE: NTS



03 FA501 TYPICAL DETAIL FOR NOTIFICATION DEVICE MOUNTED ON LAY-IN CEILING
SCALE: NTS



04 FA501 TYPICAL DETAIL FOR SMOKE DETECTOR MOUNTED ON LAY-IN CEILING
SCALE: NTS



05 FA501 FMCU MOUNTING HEIGHT DETAIL
SCALE: NTS

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FIRE ALARM DETAILS

SHEET NUMBER
FA501

NOTE:

1. ALLOW THE MNS TO TEMPORARILY OVERRIDE FIRE ALARM AUDIBLE MESSAGES AND VISUAL SIGNALS, AND TO PROVIDE INTELLIGIBLE VOICE COMMANDS DURING SIMULTANEOUS FIRE AND TERRORIST EVENTS. ALL OTHER FEATURES OF THE FIRE ALARM SYSTEM, INCLUDING THE TRANSMISSION OF SIGNALS TO THE FIRE DEPARTMENT, SHALL FUNCTION PROPERLY. MNS MESSAGES SHALL TAKE PRIORITY AND CONTINUE TO OVERRIDE FIRE ALARM AUDIBLE MESSAGES UNTIL THE MNS MESSAGE IS EITHER MANUALLY OR AUTOMATICALLY ENDED. IF NOT MANUALLY ENDED, THE MNS MESSAGE WILL AUTOMATICALLY END AFTER 10 MINUTES.

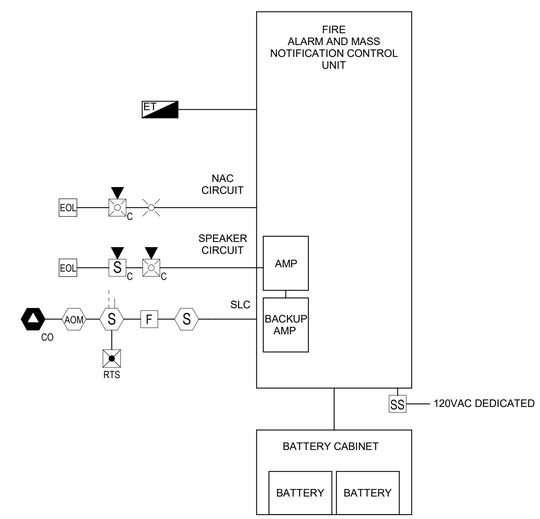
2. FINAL SEQUENCE OF OPERATIONS SHALL MATCH

		INPUT	NOTIFICATION								MONITORING												AUXILIARY FUNCTIONS		
		OUTPUT	ACTIVATE INTERIOR SPEAKERS	ACTIVATE FIRE ALARM/MNS STROBES (CLEAR STROBE)	INITIATE PRE-RECORDED FIRE ALARM MESSAGE (TEMPORAL - 3)	INITIATE PRE-RECORDED FIRE ALARM MESSAGE (TEMPORAL - 4)	DEACTIVATE FIRE ALARM MESSAGE	INITIATE LIVE MESSAGE ANNOUNCEMENT	INITIATE "ALL CLEAR" MESSAGE PLAYBACK	INITIATE EMERGENCY TEXTUAL VISIBLE APPLIANCE - EVACUATE	DISPLAY ALARM SIGNAL AT FMCU	ACTIVATE AUDIO ALARM SIGNAL AT FMCU	DISPLAY TROUBLE SIGNAL AT FMCU	ACTIVATE AUDIO TROUBLE SIGNAL AT FMCU	DISPLAY SUPERVISORY SIGNAL AT FMCU	ACTIVATE AUDIO SUPERVISORY SIGNAL AT FMCU	TRANSMIT MANUAL PULL STATION ALARM TO BASE RECEIVING STATION	TRANSMIT SMOKE DETECTOR ALARM TO BASE RECEIVING STATION	NOT USED	TRANSMIT CARBON MONOXIDE ALARM TO BASE RECEIVING STATION	TRANSMIT TROUBLE SIGNAL TO BASE RECEIVING STATION	TRANSMIT SUPERVISORY TO BASE RECEIVING STATION	TRANSMIT MNS OVERRIDE OF FIRE ALARM SUPERVISORY SIGNAL TO THE BASE-RECEIVING STATION.	SHUT DOWN ASSOCIATED HVAC		
			A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W		
ALARM CONDITIONS	1	SMOKE DETECTION ABOVE FMCU ACTIVATION	●	●	●					●	●	●						●								1
	2	MANUAL PULL STATION ACTIVATION	●	●	●					●	●	●					●									2
	3	CARBON MONOXIDE DETECTOR ACTIVATION	●	●		●				●	●	●								●						3
SUPERVISORY CONDITIONS	4	DUCT MOUNTED SMOKE DETECTOR ACTIVATED													●	●						●			●	4
	5	NOT USED																								5
TROUBLE CONDITIONS	6	LOSS OF FMCU PRIMARY POWER											●	●							●					6
	7	FMCU BATTERY FAULT											●	●							●					7
	8	IDC WIRE OPEN/SHORT/GROUND ON FACU											●	●							●					8
	9	MNS CONTROL UNIT BATTERY FAULT											●	●							●					9
	10	FIRE ALARM SYSTEM TROUBLE											●	●							●					10
	11	LOSS OF PRIMARY REMOTE NAC POWER SUPPLY POWER											●	●							●					11
	12	REMOTE NAC POWER SUPPLY BATTERY FAULT											●	●							●					12
	13	REMOTE NAC POWER SUPPLY TROUBLE											●	●							●					13
	14	FMCU AMPLIFIER FAULT											●	●							●					14
	15	SLC CIRCUIT GROUND FAULT											●	●							●					15
	16	SLC CIRCUIT SHORT											●	●							●					16
	17	SLC CIRCUIT OPEN											●	●							●					17
	18	NAC (FA & MNS STROBES) CIRCUIT GROUND FAULT											●	●							●					18
	19	NAC (FA & MNS STROBES) CIRCUIT SHORT											●	●							●					19
	20	NAC (FA & MNS STROBES) CIRCUIT OPEN											●	●							●					20
	21	SPEAKER CIRCUIT GROUND FAULT											●	●							●					21
	22	SPEAKER CIRCUIT SHORT											●	●							●					22
	21	SPEAKER CIRCUIT OPEN											●	●							●					21
OPERATIONAL CONDITIONS	22	MICROPHONE OFF HOOK	●	●				●							●	●						●				22
	23	MICROPHONE OFF HOOK WITH FIRE ALARM ACTIVE	●	●			●	●							●	●						●	●			23
	24	PRE-RECORDED MESSAGE ACTIVATION	●	●											●	●						●				24
	25	PRE-RECORDED MESSAGE MANUAL ACTIVATION WITH FIRE ALARM ACTIVE	●	●			●								●	●						●	●			25
	26	PRE-RECORDED 'ALL CLEAR' MESSAGE ACTIVATION	●	●											●	●						●				26
	27	PRE-RECORDED 'ALL CLEAR' MESSAGE WITH FIRE ALARM ACTIVE	●	●			●		●						●	●						●	●			27
			A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W		

01 FA601

FIRE ALARM / MASS NOTIFICATION SYSTEM OPERATIONS MATRIX

NTS



02 FA601

FIRE ALARM/MASS NOTIFICATION SYSTEM RISER

NTS

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
DOUGLAS EMANUS
33105
OKLAHOMA
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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MANAGEMENT INFORMATION
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SHEET TITLE
FIREALARM MATRIX AND DIAGRAM

SHEET NUMBER
FA601

GENERAL ABBREVIATIONS

A

AFF - ABOVE FINISHED FLOOR
ALT - ALTERNATE
AP - ACCESS PANEL
AFG - ABOVE FINISHED GRADE

B

BOP - BOTTOM OF PIPE ELEV.

C

CA - COMBUSTION AIR
CAV - CONSTANT AIR VOLUME
CFM - CUBIC FEET PER MINUTE
CL - CENTERLINE
CLG - CEILING
COND - CONDENSATE/CONDENSER
CONN - CONNECTION/CONNECT
COP - CENTER OF PIPE

D

DB - DRY BULB TEMPERATURE
DDC - DIRECT DIGITAL CONTROL
DTC - DATA TERMINAL CABINET

E

EL - ELEVATION
EMCS - ENERGY MONITORING AND CONTROL SYSTEM
ESP - EXTERNAL STATIC PRESSURE
EWT - ENTERING WATER TEMP.

F

FA - FIELD ADJUSTABLE
FC - FAIL CLOSED
FD - FLOOR DRAIN
FID - FIELD INTERFACE DEVICE
FLA - FULL LOAD AMPS
FO - FAIL OPEN

G

GA - GAUGE

H

HD - HUB DRAIN

I

IE - INVERT ELEVATION

K

kW - KILOWATTS

L

LWT - LEAVING WATER TEMP.

N

NA - NOT APPLICABLE
NC - NORMALLY CLOSED
NIC - NOT IN CONTRACT
NO - NORMALLY OPEN
NPS - NOMINAL PIPE SIZE
NPT - NATIONAL PIPE THREAD
NTS - NOT TO SCALE

O

OC - ON CENTER
OED - OPEN END DUCT
OV - OUTLET VELOCITY

P

Pa - PASCALS
PaA - PASCALS ABSOLUTE
PaG - PASCALS GAUGE
PD - PRESSURE DROP

R

RA - RETURN AIR
RPM - REVOLUTIONS PER MINUTE

S

SOG - SLAB ON GRADE
SP - STATIC PRESSURE
SV - SUPPLY VALVE

T

TOP - TOP OF PIPE ELEVATION
TOS - TOP OF SLAB/ TOP OF STEEL
TSP - TOTAL STATIC PRESSURE

V

VP - VELOCITY PRESSURE
VTR - VENT THRU ROOF

W

W - WATTS
WB - WET BULB
WC - WATER COLUMN
WG - WATER GAUGE
WHA - WATER HAMMER ARRESTOR

PIPING SYMBOLS

CONTINUATION
DROP IN PIPE
VALVE IN RISER
ELBOW
ELBOW UP
ELBOW DOWN
TEE
UNION
UNION, FLANGED
TOP CONNECTION
BOTTOM CONNECTION
PIPE PITCH
VTR — VENT THRU ROOF
CONCENTRIC REDUCER
ECCENTRIC REDUCER
PRV — PRESSURE RELIEF
PRESSURE REDUCING VALVE
TPRV — TEMP & PRESS RELIEF
ANCHOR
BALL JOINT
EXPANSION LOOP
GUIDE
EXPANSION JOINT
FLEXIBLE CONNECTOR
PRESSURE/TEMPERATURE TEST PORT)
NFWH — NON-FREEZING WALL HYDRANT

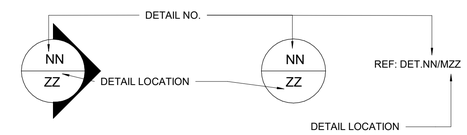
FLOOR DRAIN WITH TRAP
FD CO — FLOOR DRAIN WITH CLEANOUT
FLOOR SINK WITH HALF GRATE
FLOOR SINK WITH FULL GRATE
DIRECTION OF FLOW
FLOOR PENETRATION
WH — WALL HYDRANT
WCO — WALL CLEANOUT
HB — HOSE BIB
WATER HAMMER ARRESTOR/ACCESS
THERMOMETER
THERMOMETER WELL
STRAINER W/BLOW-OFF AND HOSE CONNECTION
PRESSURE GAUGE WITH COCK
PS — PRESSURE SWITCH
FS — FLOW SWITCH
AV — AIR VENT, AUTOMATIC
AIR VENT, MANUAL
AS — AIR SEPARATOR
FLOW METER, ORIFICE
PETE'S PLUG

VALVES

BALL VALVE
GLOBE VALVE
GATE VALVE
CHECK VALVE
PLUG VALVE
SOLENOID VALVE

CALIBRATED BALANCING VALVE
AUTOMATIC BALANCING VALVE
BUTTERFLY VALVE
MODULATING TWO-WAY
S — SOLENOID TWO-WAY
THREE-WAY

REFERENCE SYMBOLOGY



PIPING SYSTEMS

— - —	DOMESTIC COLD WATER	— CHS —	CHILLED WATER SUPPLY
— -- —	DOMESTIC HOT WATER	— CHR —	CHILLED WATER RETURN
— --- —	DOMESTIC HOT WATER RETURN	— HWS —	HEATING WATER SUPPLY
— SS —	SANITARY SEWER	— HWR —	HEATING WATER RETURN
— V —	VENT	— CD —	CONDENSATE DRAIN
— NG —	NATURAL GAS	— CWS —	CONDENSER WATER SUPPLY
— A —	COMPRESSED AIR	— CWR —	CONDENSER WATER RETURN
— F —	FIRE PROTECTION	— RS —	REFRIGERANT SUCTION
— NPW —	NON-POTABLE WATER (PURPLE PIPE) PIPES SHALL BE MARKED WITH "NONPOTABLE WATER, DO NOT DRINK"	— RL —	REFRIGERANT LIQUID
		— RD —	ROOF DRAIN

GENERAL NOTES

A. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.

B. ALL FLOOR MOUNTED EQUIPMENT SHALL BE MOUNTED ON 6" HIGH HOUSEKEEPING PADS. THESE PADS SHALL EXTEND 6" BEYOND THE FOOTPRINT OF THE EQUIPMENT IN ALL DIRECTIONS.

C. DRAWINGS ARE SCHEMATIC AND ARE TO SHOW DESIGN INTENT, AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE PLACEMENTS.

D. SANITARY SEWER PIPING SAMLLER THAN 3" SHALL BE SLOPED AT 1/4" PER FOOT, 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT.

AIR FORCE MATERIEL COMMAND
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TINKER AFB, OK

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36788

4/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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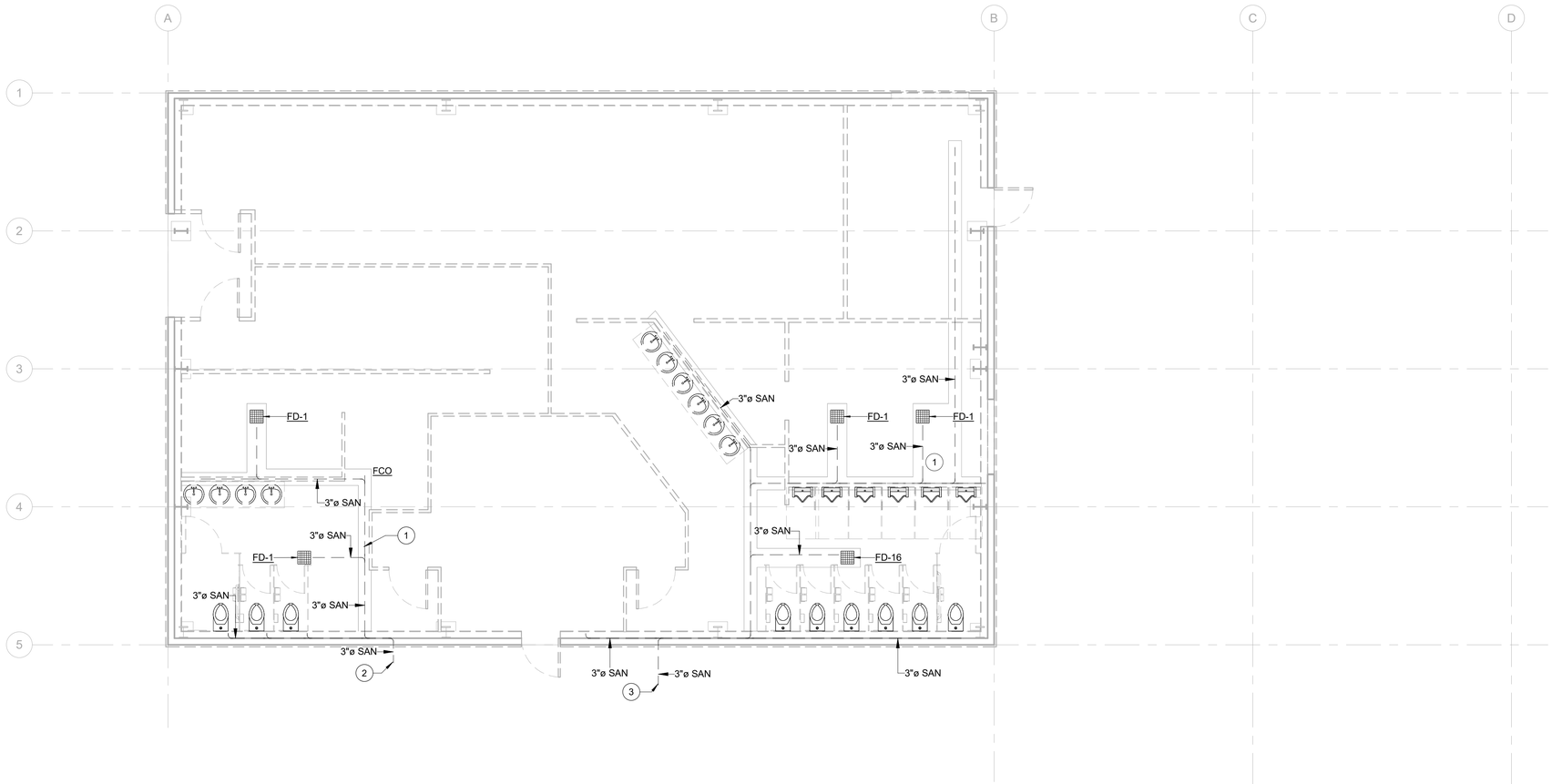
PLUMBING LEGENDS, SYMBOLS, AND ABBREVIATIONS

SHEET NUMBER
P-001



01
PD100
PLUMBING UNDERFLOOR DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. REFER TO P-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO P-600 SERIES FOR SCHEDULES.
3. REFER TO P-500 SERIES FOR DETAILS.

KEY NOTES

1. REMOVE ALL EXISTING SANITARY, VENT, DOMESTIC WATER PIPING AND FIXTURES FOR THE ENTIRE BUILDING. SANITARY PIPING REMOVAL INCLUDES ALL UNDERFLOOR PIPING.
2. EXISTING SANITARY SEWER LOCATION. REFER TO C-103 FOR EXACT LOCATIONS. EXISTING UTILITY SANITARY WASTE INVERT IS 3.27' BELOW GRADE.
3. EXISTING SANITARY SEWER LOCATION. REFER TO C-103 FOR EXACT LOCATIONS. EXISTING UTILITY SANITARY WASTE INVERT IS 3.32' BELOW GRADE.

AIR FORCE MATERIEL COMMAND
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4/24/2026

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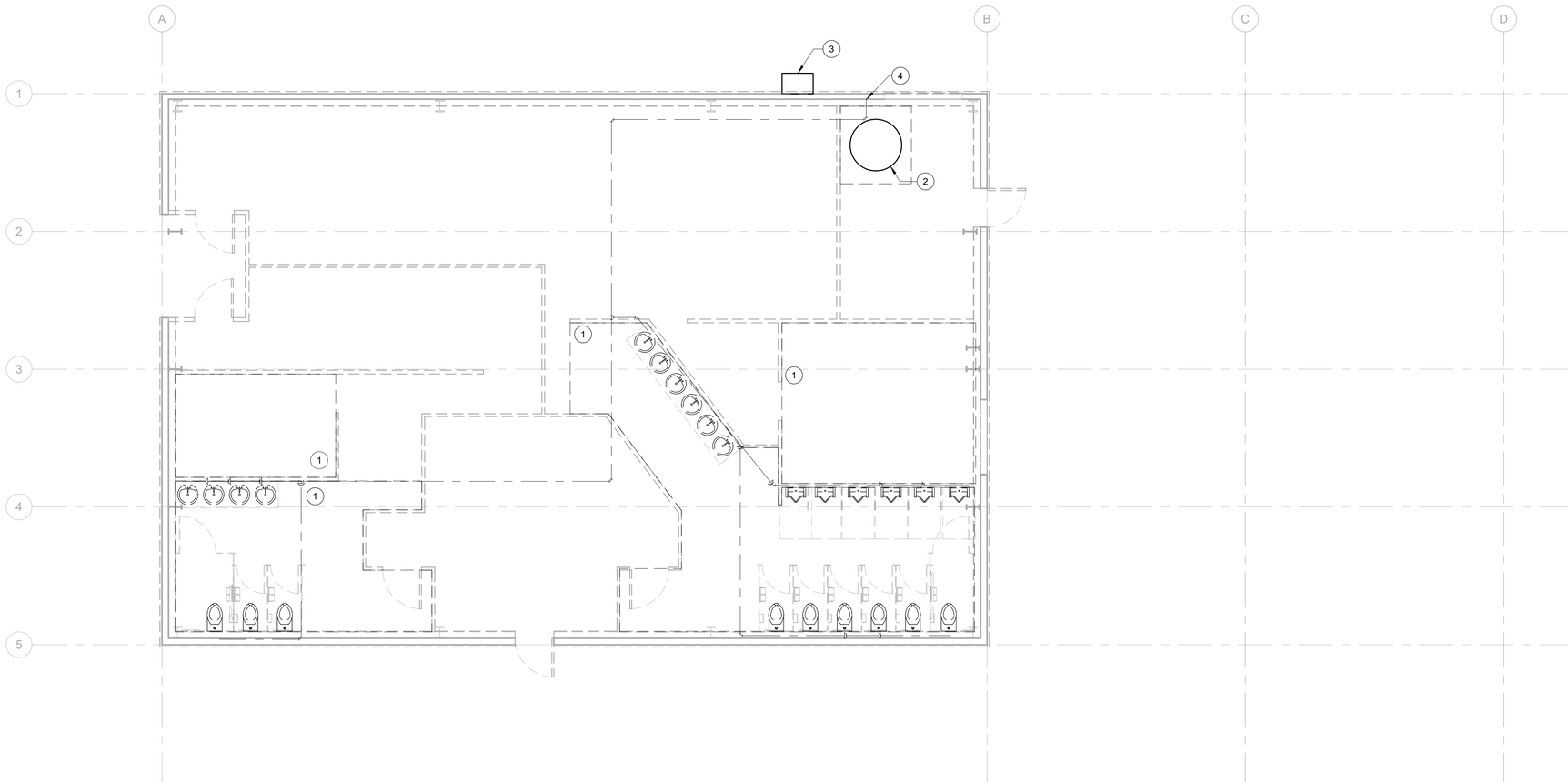
PLUMBING UNDERFLOOR DEMO PLAN

SHEET NUMBER
PD100



01
PD101
PLUMBING DEMOLITION FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. REFER TO P-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO P-600 SERIES FOR SCHEDULES.
3. REFER TO P-500 SERIES FOR DETAILS.
4. FIELD COORDINATE FIXTURES NEW FLOOR PLAN REFER TO A-101.

KEY NOTES

1. REMOVE ALL EXISTING SANITARY, VENT, DOMESTIC WATER PIPING AND FIXTURES FOR THE ENTIRE BUILDING. SANITARY PIPING REMOVAL INCLUDES ALL UNDERFLOOR PIPING.
2. DEMOLISH EXISTING WATER HEATER AND CAP GAS CONNECTIONS BACK TO GAS METER.
3. EXISTING GAS METER LOCATION.
4. EXISTING 4 INCH WATER LINE LOCATION. REFER TO C-103 FOR EXACT LOCATIONS. COORDINATE WITH CIVIL CONTRACTOR FOR EXACT LOCATION.

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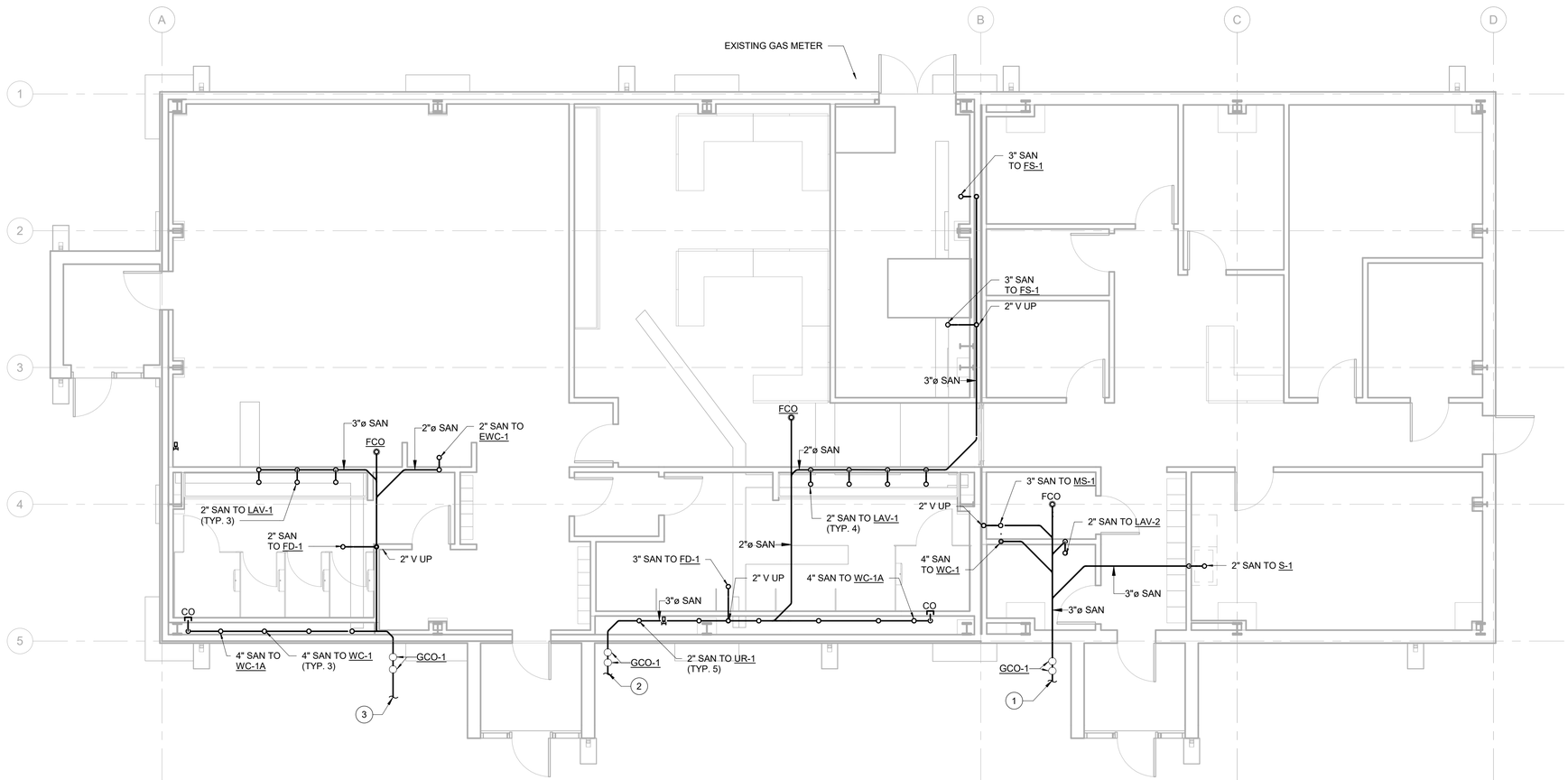
PLUMBING DEMO FLOOR PLAN

SHEET NUMBER
PD101



01
P-100
PLUMBING UNDERFLOOR PLAN
SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

GENERAL NOTES

1. REFER TO P-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO P-600 SERIES FOR SCHEDULES.

KEY NOTES

1. CONNECT SANITARY LINES WITH NEW UTILITY SANITARY WASTE. COORDINATE WITH CIVIL CONTRACTOR. REFER TO CIVIL SHEET C-103 FOR EXACT LOCATION. UTILITY SANITARY WASTE INVERT IS 1224.25'.
2. CONNECT SANITARY LINES WITH EXISTING UTILITY SANITARY WASTE. COORDINATE WITH CIVIL CONTRACTOR. REFER TO CIVIL SHEET C-103 FOR EXACT LOCATION. UTILITY SANITARY WASTE INVERT IS 3.32' BELOW GRADE.
3. CONNECT SANITARY LINES WITH EXISTING UTILITY SANITARY WASTE. COORDINATE WITH CIVIL CONTRACTOR. REFER TO CIVIL SHEET C-103 FOR EXACT LOCATION. UTILITY SANITARY WASTE INVERT IS 3.27' BELOW GRADE.

LEGEND

AIR FORCE MATERIEL COMMAND
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4/24/2026

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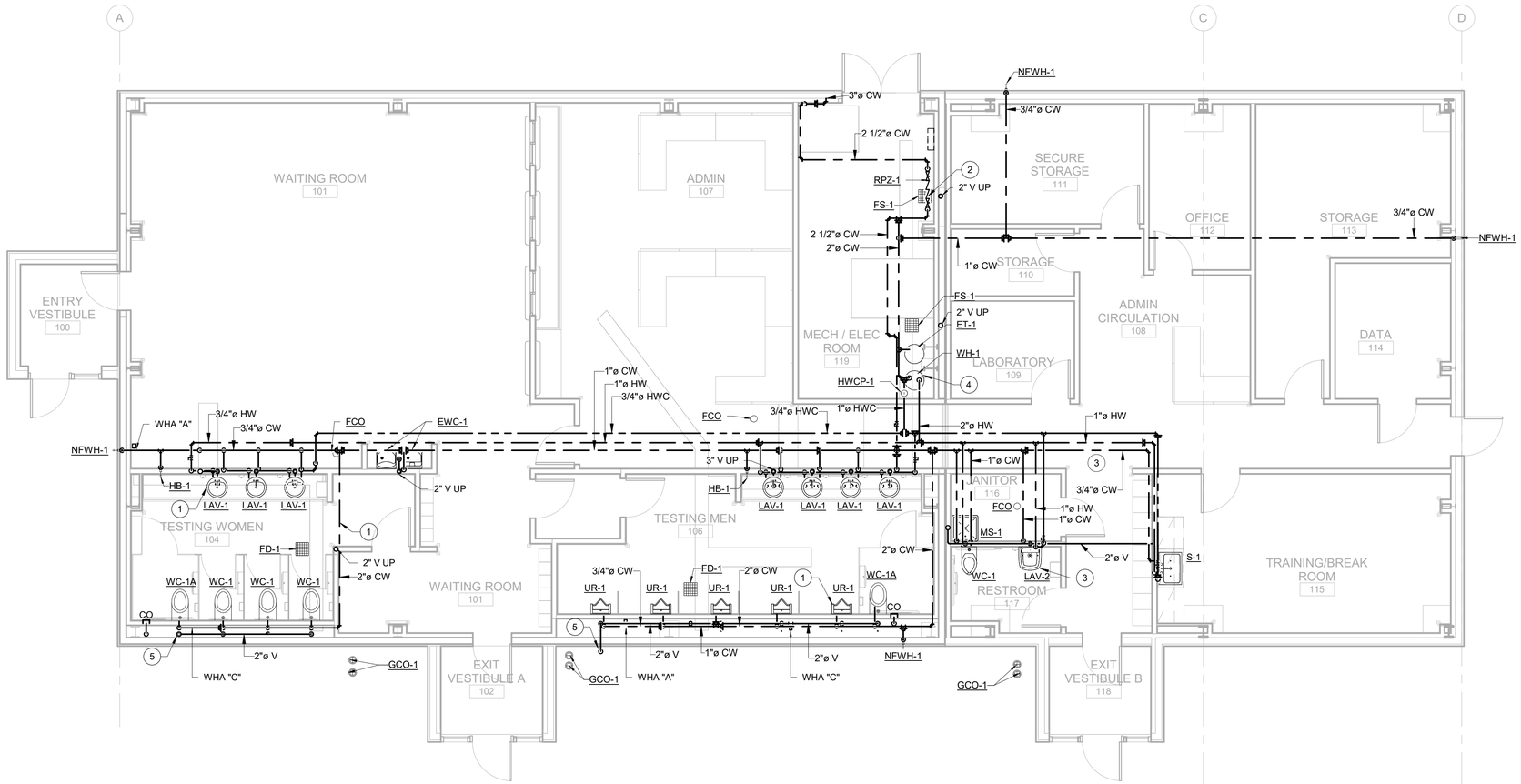
SHEET TITLE
PLUMBING UNDERFLOOR PLAN

SHEET NUMBER
P-100



GENERAL NOTES

1. REFER TO M-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO M-600 SERIES FOR SCHEDULES.
3. ALL RUNOUTS TO DIFFUSERS, GRILLES, AND VAV BOXES SHALL BE SAME AS CONNECTION SIZE UNLESS NOTED OTHERWISE.

KEY NOTES

1. INSTALL NEW FIXTURES AND ASSOCIATED SANITARY, VENT, AND DOMESTIC WATER PIPING FOR THE RESTROOMS. COORDINATE WITH ARCHITECTURE DRAWINGS FOR SPECIFIC FIXTURE LOCATIONS
2. INSTALL NEW BACKFLOW PREVENTER.
3. INSTALL NEW FIXTURES AND ASSOCIATED SANITARY, VENT, AND DOMESTIC WATER PIPING FOR THE PRIVATE RESTROOM, JANITOR CLOSET, AND BREAKROOM SINK
4. INSTALL NEW ELECTRIC WATER HEATER. CONNECT TO EXISTING DOMESTIC COLD WATER LINE. REFER TO P-501 FOR INSTALLATION DETAIL. COORDINATE EQUIPMENT PAD WITH STUCTURAL CONTRACTOR.
5. TERMINATE VENT OUTSIDE WITH ELBOW DOWN AND STAINLESS STEEL INSECT SCREEN.

LEGEND

01 / P-101 PLUMBING FLOOR PLAN

SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

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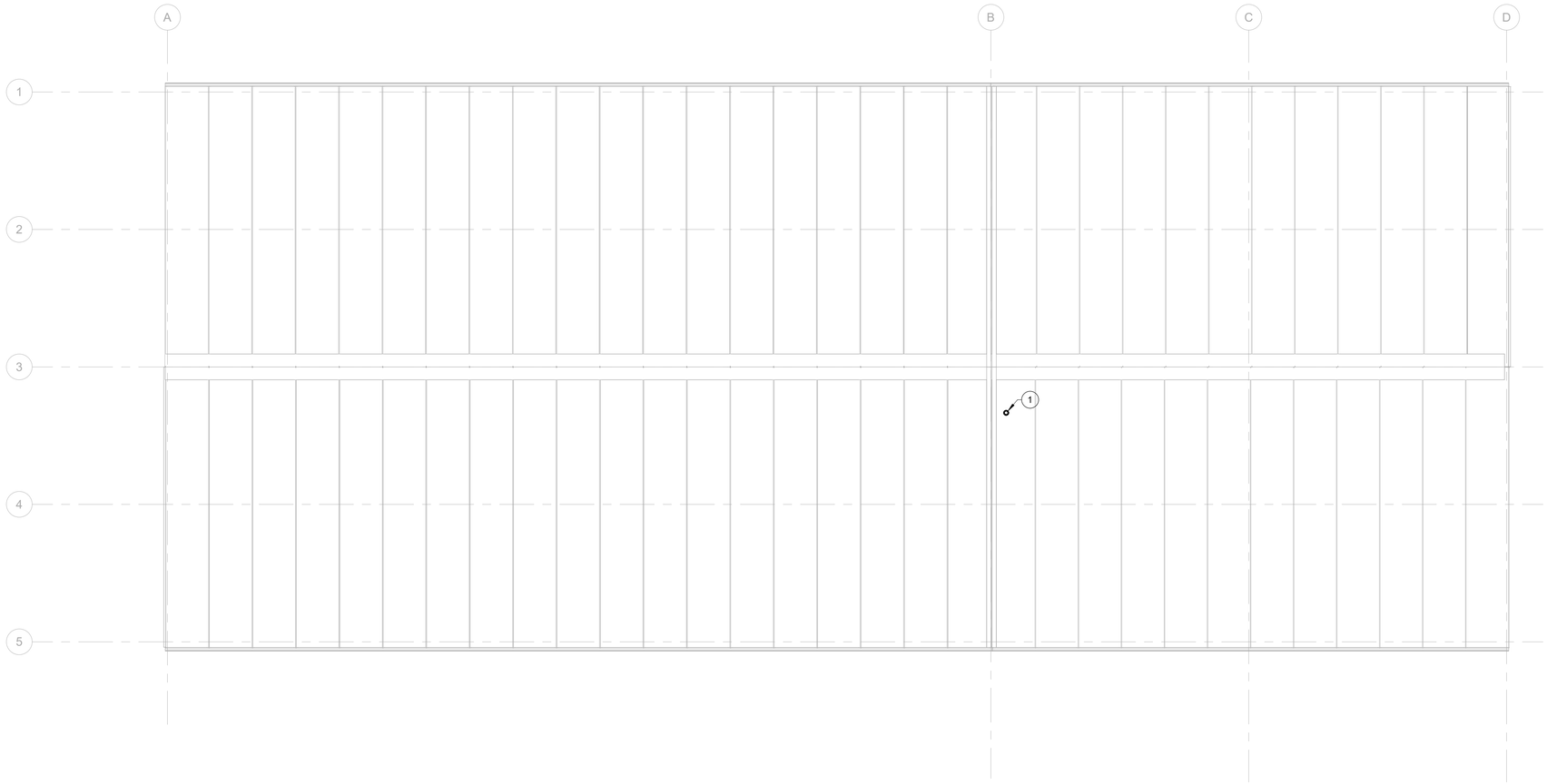
PLUMBING FLOOR PLAN

SHEET NUMBER
P-101



01
P-102
MECHANICAL ROOF PLAN
SCALE: 3/16" = 1'-0"

N

0 2' 4' 8' 12'

GENERAL NOTES

1. REFER TO M-001 FOR GENERAL NOTES.

KEY NOTES

1. 3" VENT PIPING PENETRATION. COORDINATE WITH ARCHITECT FOR DETAIL. REFER TO P-500 SERIES FOR PLUMBING DETAILS.

LEGEND

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MAESAN CARLEY
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4/24/2026

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WWYK200270
DRUG TEST OFFICE
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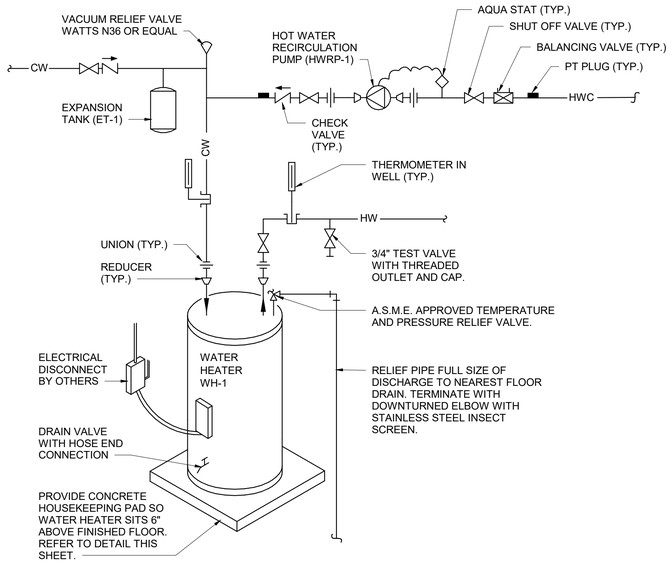
SHEET TITLE
PLUMBING ROOF
PLAN

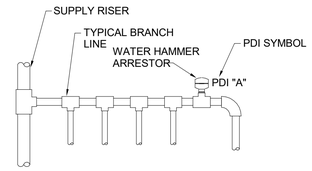
SHEET NUMBER
P-102



NOTES:

1. ROUTE/EXTEND NEW HOT/COLD WATER PIPING TO WATER HEATER.
2. REFER TO PLANS FOR ADDITIONAL PIPE SIZES.

01 / P-501 ELECTRIC WATER HEATER DETAIL
NTS



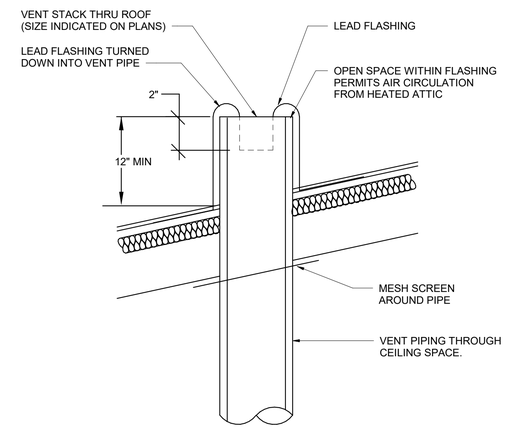
NOTES:

1. PREFERRED INSTALL WATER HAMMER ARRESTORS AT THE END OF BRANCH LINE BETWEEN THE LAST TWO FIXTURES SERVED.
2. ONE WATER HAMMER ARRESTOR PER 20' LINE, AND ANOTHER FOR BRANCHES OVER 20' IN LENGTH.
3. THE SUM OF FIXTURE UNIT RATING OF UNITS OVER 20' IN LENGTH SHALL BE EQUAL TO OR GREATER THAN THE DEMAND OF THE BRANCHES.

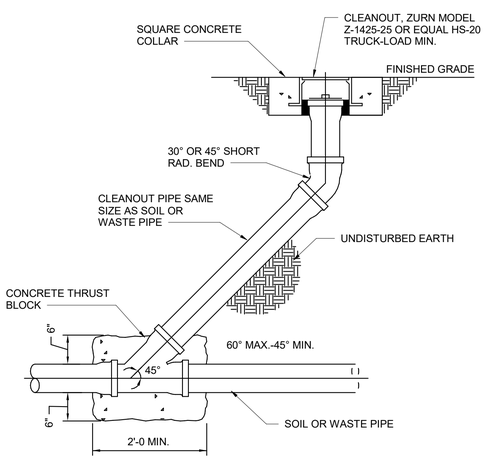
WATER HAMMER ARRESTOR SCHEDULE

PDI SYMBOL	A	B	C	D	E	F
FIXTURE UNIT RATING	1-11	12-32	33-60	61-113	114-154	155-330

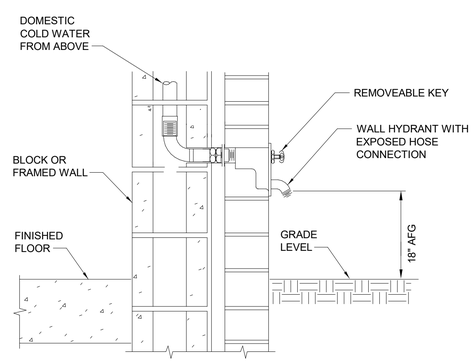
02 / P-501 WATER HAMMER ARRESTOR INSTALLATION DETAIL
NTS



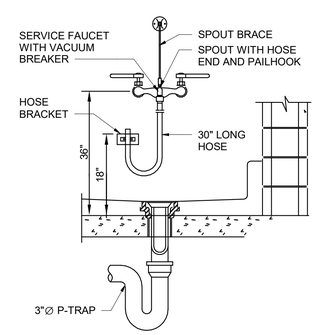
03 / P-501 VENT THRU SLOPED ROOF DETAIL
NTS



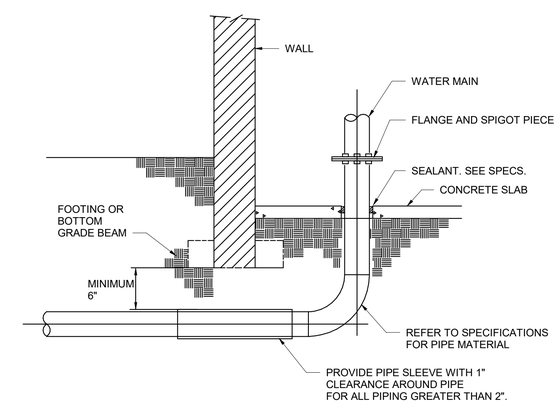
04 / P-501 CLEANOUT AT GRADE DETAIL
NTS



05 / P-501 NON-FREEZE WALL HYDRANT DETAIL
NTS



06 / P-501 MOP SINK DETAIL
NTS



07 / P-501 M_WATER MAIN ENTERING BUILDING DETAIL
SCALE: 12" = 1'-0"

AIR FORCE MATERIEL COMMAND
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TINKER AIR FORCE BASE, OKLAHOMA

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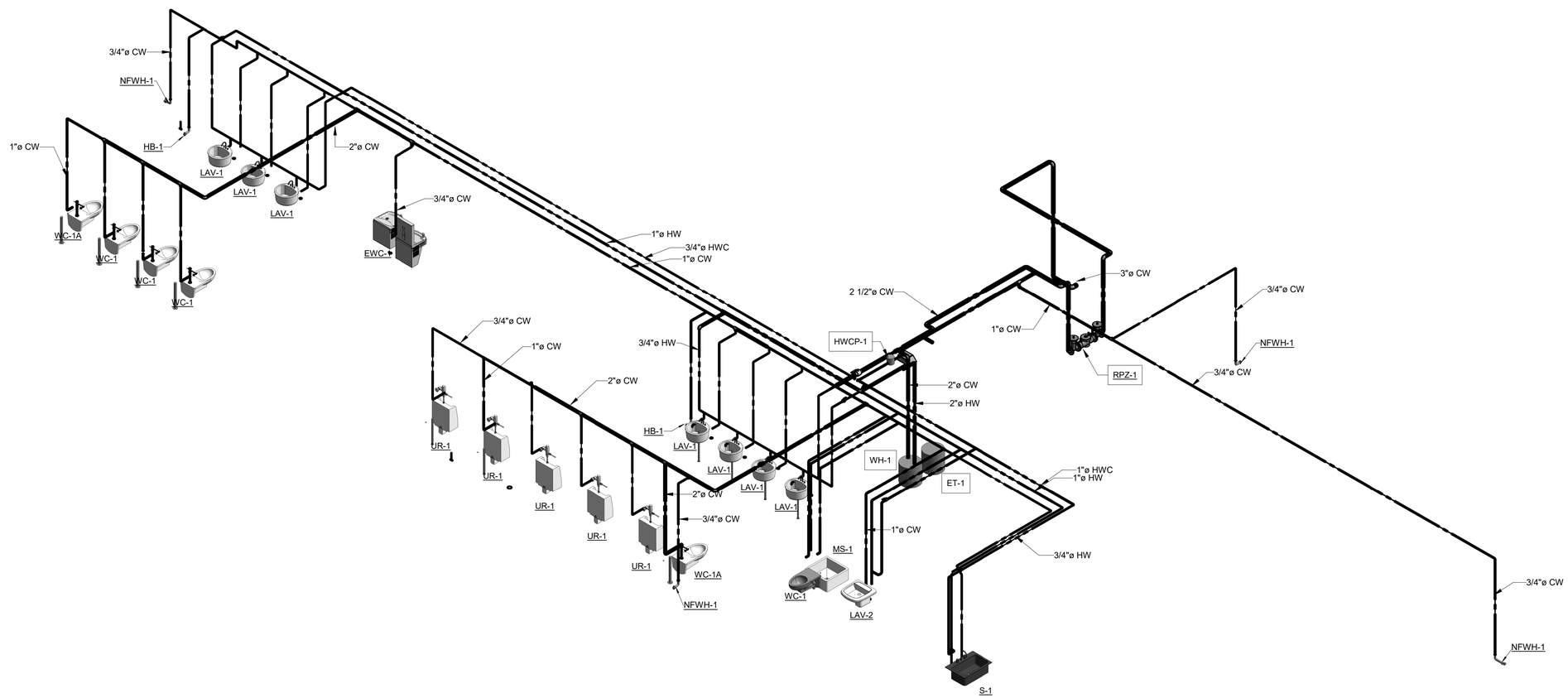
P-501



01
P-502

PLUMBING ISOMETRIC - WATER

NTS

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
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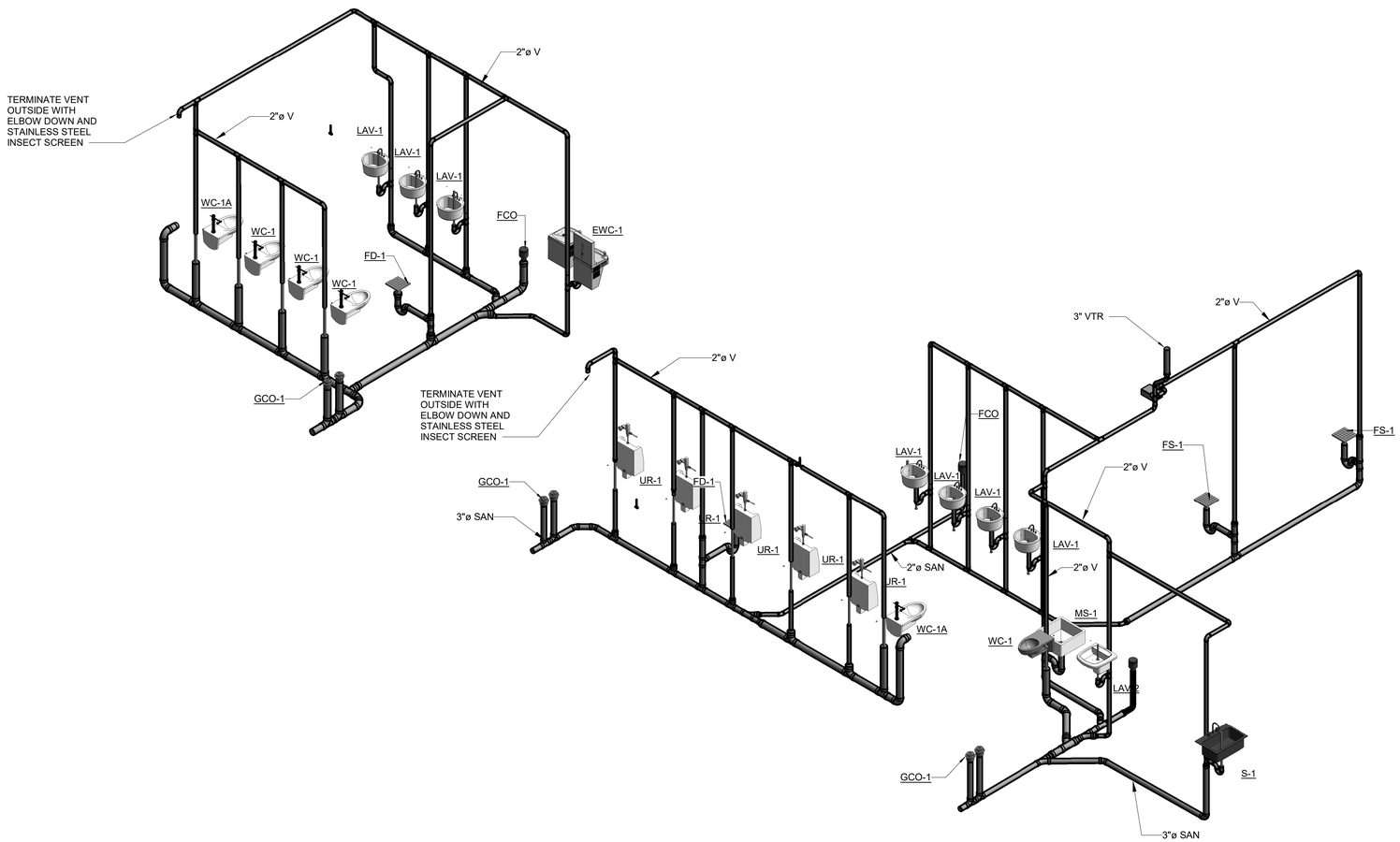
ISOMETRIC - WATER

SHEET NUMBER
P-502



01 P-503 PLUMBING ISOMETRIC - SANITARY

NTS

AIR FORCE MATERIEL COMMAND
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MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION

ISSUE DATE: 24 APRIL 2026
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DESIGNED BY: MC
DRAWN BY: AH
CHECKED BY: AO
DESIGN FILE LOCATION:

SHEET TITLE

PLUMBING ISOMETRIC - SANITARY

SHEET NUMBER

P-503

ELECTRIC HOT WATER HEATER SCHEDULE

SYMBOL	MIN. WORKING PRESSURE (PSI)	STORAGE CAPACITY (GAL)	RECOVERY AT 100 DEGREE RISE (GPH)	ELECTRICAL (NOTE 3)				WEIGHT (DRY) (LBS.)	BASIS OF DESIGN		NOTES
				KW	VOLT-PHASE	DISCONNECT BY	CONTROLLER BY		MANUFACTURER	MODEL	
WH-1	160	65	99	24	240/1	EC	MFR	294	A.O. SMITH	DSE-65-24	1,2

NOTES:
1. PROVIDE WITH HANDHOLE CLEANOUT.
2. SET LEAVING WATER TEMPERATURE TO 140 DEG F.
3. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

CIRCULATION PUMP SCHEDULE

SYMBOL	SERVICE	FLOW RATE (GPM)	TDH (FT.)	MOTOR RPM	ELECTRICAL (NOTE 2)				WEIGHT (LBS)	CONTROL	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	NOTES
					MHP	VOLT-PHASE	DISCONNECT BY	CONTROLLER/ STARTER BY					
HWCP-1	DOMESTIC HOT WATER RECIRCULATION	2.5	20	3,300	1/6	120/1	EC	MFR	20	NOTE 1	BELL AND GOSSETT	PL SERIES	

NOTES:
1. PUMP TO OPERATE WHEN REMOTE SENSOR BULB TEMPERATURE IS AT OR BELOW 130°F (ADJ.) AND RUN UNTIL IT REACHES 135°F (ADJ.).
2. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

EXPANSION TANK SCHEDULE

SYMBOL	SERVICE	TANK VOLUME (GAL.)	TANK DIMENSIONS H x DIA. (IN.)	MOUNTING	BASIS OF DESIGN	
					MANUF.	MODEL
ET-1	DOMESTIC HW	4.0	9.25 x 10.25	INLINE	AMTROL	ST-5-C

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PROJECT INFORMATION
WWYK200270
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TINKER AIR FORCE BASE, OKLAHOMA

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PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	PROVIDE THE FOLLOWING SIZE BRANCH CONNECTION TO THE DISTRIBUTION MAIN - UNLESS OTHERWISE SPECIFIED					SPECIFICATION
		CW	HW	SAN	VENT	REMARKS	
EWC-1	ELECTRIC WATER COOLER	1/2"		2"	2"	ELECTRIC WATER COOLER - WALL HUNG, RECESSED CHILLER, BI-LEVEL STAINLESS STEEL ROUND BASINS, PERFORATED DRAINS, STREAM PROJECTORS WITH PROTECTIVE HOODS, PUSH BUTTON OPERATING CONTROLS ON FRONT, BUILT-IN FLOW REGULATORS, DRAINS AND TRAP ASSEMBLIES, HERMETIC COMPRESSOR TO OPERATE ON HFC-134a REFRIGERANT, CONCEALED ELECTRICAL CONNECTIONS, ADJUSTABLE THERMOSTAT, ELECTRONIC BOTTLE FILLER SENSOR, ABA COMPLIANT. UNIT SHALL PROVIDE 8.0 GPH OF WATER FROM 80°F TO 50°F AT 90°F AMBIENT. WATER SYSTEM SHALL BE OF LEAD FREE CONSTRUCTION. TANK SHALL BE TESTED TO 125 PSIG. LAMINAR FLOW BOTTLE FILLER WITH VISUAL FILTER MONITOR, FILTER IS CERTIFIED TO NSF 42 AND 53 FOR LEAD. ELECTRICAL REQUIREMENTS - 115V-1 PHASE, HARD-WIRED, 1/5 HP MOTOR ORIFICE SHALL BE 36" (MAXIMUM) ABOVE FINISHED FLOOR ON LOWER UNIT AND 40" ABOVE FINISHED FLOOR ON UPPER UNIT IN COMPLIANCE WITH ABA SECTION 602.4 AND 602.7. BOTTOM OF APRON ON LOWER UNIT SHALL BE 27" MINIMUM ABOVE FLOOR IN COMPLIANCE WITH ABA SECTION 306.3.	ELKAY - LZWS-LRPBM28K
FD-1	FLOOR DRAIN	-	-	6"	2"	CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 6" SQUARE STRAINER, DEEP SEAL TRAP. PROVIDE WITH ASSE 1072 COMPLIANT BARRIER-TYPE TRAP SEAL PROTECTION DEVICE.	ZURN - Z1400-K
NFWH	NON FREEZING WALL HYDRANT	3/4"	-	-	-	NON FREEZE WALL HYDRANT - OUTDOOR WALL HYDRANT, BRASS CONSTRUCTION, STANDARD FINISH, VACUUM BREAKERS, 3/4" MALE HOSE THREAD, METAL WHEEL HANDLE. MOUNT AT 18" ABOVE FINISHED FLOOR, COORDINATE FINAL LOCATION WITH CASEWORK. REFER TO ARCH PLANS AND DETAILS.	WOODFORD - 24
LAV-1	COUNTER TOP LAVATORY	1/2"	1/2"	2"	1-1/2"	LAVATORY - UNDER-COUNTER MOUNTED, WHITE VITREOUS CHINA, 18-5/8" L x 12-1/4" W x 8-1/8" D INTERNAL RECTANGULAR SINGLE BOWL BASIN, FRONT OVERFLOW, 1-3/4" DRAIN HOLE. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR. FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE. ACCESSORIES - DRAIN AND TAILPIECE, 1-1/4" 20 GAUGE CAST BRASS P-TRAP. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, COUNTER-TOP MOUNTED, BRASS CONSTRUCTION, POLISHED CHROME FINISH, CONVENTIONAL SPOUT WITH AERATOR, SINGLE PIN HANDLE. MAXIMUM FLOW TO BE 0.5 GPM IN COMPLIANCE WITH ASME/ANSI STANDARD A112.18.1. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR. FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE.	KOHLER - K-2214 DELTA - B501LF
LAV-2	WALL MOUNTED LAVATORY	1/2"	1/2"	2"	1-1/2"	LAVATORY - WALL MOUNTED, WHITE VITREOUS CHINA, 20-1/2" L x 18-1/4" W x 8-1/8" D INTERNAL RECTANGULAR SINGLE BOWL BASIN, FRONT OVERFLOW, 1-3/4" DRAIN HOLE. ACCESSORIES - DRAIN AND TAILPIECE, 1-1/4" 20 GAUGE CAST BRASS P-TRAP. MOP SINK TRIM - EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLES, 3/4" HOSE THREAD SPOUT WITH INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, CHECK STOPS. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES. LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, COUNTER-TOP MOUNTED, BRASS CONSTRUCTION, POLISHED CHROME FINISH, CONVENTIONAL SPOUT WITH AERATOR, SINGLE PIN HANDLE. MAXIMUM FLOW TO BE 0.5 GPM IN COMPLIANCE WITH ASME/ANSI STANDARD A112.18.1. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. COORDINATE OPENINGS REQUIRED IN COUNTERTOP WITH GENERAL CONTRACTOR. FIELD CUT OPENINGS WILL NOT BE ACCEPTABLE.	AMERICAN STANDARD - BCI4865 DELTA - B501LF
TBV-1	THERMOSTATIC BALANCING VALVE	-	SEE PLANS	-	-	THERMOSTATIC BALANCING VALVE - SELF-ACTUATING THERMOSTATIC BALANCING VALVE THAT CONTINUOUSLY ADJUSTS FLOW TO MAINTAIN THE SPECIFIED LOOP TEMPERATURE. LISTED TO NSF 61 AND NSF 372. VALVE SIZE TO MATCH LINE SIZE. CLOSE TEMPERATURE SHALL BE 120 DEG F. PROVIDE EACH ASSEMBLY WITH ISOLATION VALVES AND CHECK VALVE.	THERMOMEGATECH
MS-1	MOP SINK	1/2"	1/2"	3"	2"	MOP SINK - PRECAST TERRAZZO, 24"x24"x12", 6" DROP FRONT, STAINLESS STEEL INTEGRAL DRAIN WITH REMOVABLE STRAINER, 3" OUTLET, STAINLESS STEEL CAP ON ALL EDGES. ACCESSORIES - MOP HANGER, HOSE AND HOSE BRACKET, DEEP SEAL TRAP. CAULK BETWEEN MOP SINK AND WALL WITH SILICONE BASED CAULK.	FIAT-TSB100 ZURN - Z841M1-RC
S-1	SINGLE BASIN SINK	1/2"	1/2"	2"	1-1/2"	SINK - UNDERMOUNT SINGLE COMPARTMENT, 18 GAUGE STAINLESS STEEL, COMPLETELY UNDERCOATED, WITH MOUNTING BRACKETS, 23-1/2"" (SIDE-TO-SIDE) x 18-1/4" (FRONT-TO-BACK) OVERALL SIZE, COMPARTMENT 21" L x 15-3/4" W x 7-1/2" DEEP, 3-3/4" DIAMETER DRAIN OUTLET, REAR CENTER DRAIN LOCATION, REMOVABLE STAINLESS STEEL BASKET STRAINER WITH NEOPRENE STOPPER. COORDINATE SINK OPENING WITH COUNTERTOP FABRICATOR. ACCESSORIES - DRAIN AND TAILPIECE, 1-1/4" 20 GAUGE CAST BRASS P-TRAP. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP. WHERE EXPOSED PROVIDE INSULATION EQUIVALENT TO TRUEBRO INSULATING COVERS FOR DRAIN, STOPS, AND WATER LINES.	ELKAY - ELUH2115 KOHLER - K-22973
UR-1	URINAL (HANDICAPPED)	3/4"	-	2"	1-1/2"	URINAL - WALL MOUNTED, WHITE VITREOUS CHINA, WASHOUT FLUSH VALVE TYPE, HIGH EFFICIENCY, EXTENDED FRONT, 3/4" TOP SPUD, 2" OUTLET. PROVIDE WITH IN-WALL SUPPORT CARRIER. MOUNTING ELEVATION OF THE RIM SHALL BE 17" MAXIMUM IN COMPLIANCE WITH ABA REQUIREMENTS. URINAL TRIM - FLUSH VALVE - EXPOSED, MANUAL OPERATION, 0.5 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME-PLATED, 3/4" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, MULTI-FILTERED CLOG RESISTANT BYPASS, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, CHLORAMINE RESISTANT MATERIALS, 3-YEAR WARRANTY.	ZURN - Z5755 ZURN - Z6003AV
WC-1	WATER CLOSET	1"	-	4"	1-1/2"	WATER CLOSET - WALL MOUNTED, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD. 1,000 LB CAPACITY. WATER CLOSET FLUSH VALVE - EXPOSED, MANUAL OPERATION, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, MULTI-FILTERED CLOG RESISTANT BYPASS, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, CHLORAMINE RESISTANT MATERIALS, ABA COMPLIANT, 3 YEAR WARRANTY. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS. ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 1,000 LB. COORDINATE OUTLET CONFIGURATION WITH PLANS. SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, HINGE, STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 15" ABOVE FINISHED FLOOR, VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER.	ZURN - Z5615-BWL ZURN - Z6000AV
WC-1A	WATER CLOSET (HANDICAPPED)	1"	-	4"	1-1/2"	WATER CLOSET - WALL MOUNTED, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD. 1,000 LB CAPACITY. WATER CLOSET FLUSH VALVE - EXPOSED, MANUAL OPERATION, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, MULTI-FILTERED CLOG RESISTANT BYPASS, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, CHLORAMINE RESISTANT MATERIALS, ABA COMPLIANT, 3 YEAR WARRANTY. FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND BE AT 12" (MAXIMUM) ABOVE BOWL RIM AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH ABA. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS. ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 1,000 LB. COORDINATE OUTLET CONFIGURATION WITH PLANS. SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, HINGE, STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. ...	ZURN - Z5615-BWL ZURN - Z6000AV
WC-2	WATER CLOSET	1"	-	4"	1-1/2"	WATER CLOSET - WALL FLOORMOUNTED, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD. 1,000 LB CAPACITY. WATER CLOSET FLUSH VALVE - EXPOSED, MANUAL OPERATION, 1.28 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, MULTI-FILTERED CLOG RESISTANT BYPASS, NON-HOLD-OPEN HANDLE, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, CHLORAMINE RESISTANT MATERIALS, ABA COMPLIANT, 3 YEAR WARRANTY. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS. ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 1,000 LB. COORDINATE OUTLET CONFIGURATION WITH PLANS. SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, HINGE, STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17" ABOVE FINISHED FLOOR, VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER.	ZURN - Z5635-BWL ZURN - Z6000AV
RPZ-1	REDUCED PRESSURE BACK FLOW PREVENTOR	LINE SIZE	-			BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, BRONZE OR FDA APPROVED EXPOXY COATED CAST IRON CONSTRUCTION, SAME SIZE AS PIPE, LEAD FREE, NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, SPRING-LOADED CHECK VALVES, SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, TEST PORTS WITH SHUT-OFF VALVES, FACTORY TESTED, RATED FOR 175 PSI AT 33 F TO 140 F, 6 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR, AWWA C510-92, ASSE 1015, IAPMO AND SBCCI LISTED. MOUNT AT 60" (MAXIMUM) ABOVE FINISHED FLOOR. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT. INSTALL ADDITIONAL VALVE UPSTREAM FROM EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.	WATTS - LF009

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PROJECT INFORMATION
WWYYK200270
DRUG TEST OFFICE
RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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SHEET NUMBER
P-602

PIPING SYSTEMS

——— – ———	COLD WATER, POTABLE (DCW)
——— – – ———	HOT WATER, POTABLE (HW)
——— – – – ———	HOT WATER RECIRCULATING, POTABLE (HWC)
——— – – —NPW—	NON POTABLE COLD WATER
——— – – –140—	HOT WATER - TEMPERATURE, POTABLE
———TW———	TEPID WATER, POTABLE
– – – – –TWR– – – – –	TEPID WATER RETURN, POTABLE
– – – SAN – – –	SANITARY SEWER BELOW GRADE
———SAN———	SANITARY SEWER ABOVE GRADE
– – – –V– – – –	SANITARY VENT
———AW———	ACID WASTE
– – – –AV– – – –	ACID VENT
– – – –CWV– – – –	COMBINATION WASTE AND VENT
———PD———	PRESSURE DRAINAGE
———SD———	STORM DRAIN ABOVE GRADE
– – – SD – – –	STORM DRAIN BELOW GRADE
———OD———	STORM DRAIN OVERFLOW
———NG———	NATURAL GAS
———LP———	LIQUEFIED PROPANE
———CA———	COMPRESSED AIR
———HWS———	HEATING HOT WATER SUPPLY
– – – – –HWR– – – – –	HEATING HOT WATER RETURN
———GHWS———	GLYCOL HEATING HOT WATER SUPPLY
– – – – –GHWR– – – – –	GLYCOL HEATING HOT WATER RETURN
———CHWS———	CHILLED WATER SUPPLY
– – – – –CHWR– – – – –	CHILLED WATER RETURN
———GCWS———	GLYCOL CHILLED WATER SUPPLY
– – – – –GCWR– – – – –	GLYCOL CHILLED WATER RETURN
———CWS———	CONDENSER WATER SUPPLY
– – – – –CWR– – – – –	CONDENSER WATER RETURN
———RL———	REFRIGERANT LIQUID
———RS———	REFRIGERANT SUCTION
———CD———	CONDENSATE DRAIN
———CPD———	CONDENSATE PUMP DISCHARGE
———STM -15———	STEAM SUPPLY - PSI
———BBD———	BOILER BLOW DOWN
———BF———	BOILER FEED
– – – – –SV– – – – –	STEAM VENT
———MU———	MAKE-UP WATER
———PHWS———	PROCESS HEATING WATER SUPPLY
———PHWR———	PROCESS HEATING WATER RETURN

PIPING SYMBOLOGY

	PIPE ANCHOR
	PIPE GUIDE
	EXPANSION JOINT
PT	PRESSURE/ TEMPERATURE PORT
	THERMOMETER
	THERMOWELL
	PRESSURE GAUGE
T	TEMPERATURE GAUGE
	FLEXIBLE PIPING CONNECTION
	WYE STRAINER
	MANUAL AIR VENT
A	AUTOMATIC AIR VENT
M	METER (WATER, GAS, OTHER)
FCO	FLOOR CLEANOUT
CO	CLEANOUT
WCO	WALL CLEANOUT
GCO	DOUBLE GRADE CLEANOUT
	WATER HAMMER ARRESTOR
E	EARTHQUAKE VALVE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER, FLAT ON BOTTOM
	ECCENTRIC REDUCER, FLAT ON TOP
	ELBOW, 90° TURN DOWN
	ELBOW, 90° TURN UP
	TEE, OUTLET UP
	TEE, OUTLET DOWN
	TEE, OUTLET UP W/ 90° TURN
	TEE, OUTLET DOWN W/ 90° TURN
	PIPE BREAK
	PIPE CAP
	BLIND FLANGE
	UNION
	FLOW ARROW
	SHUTOFF VALVE (NORMALLY OPEN)
	SHUTOFF VALVE (NORMALLY CLOSED)
	DRAIN VALVE
	CHECK VALVE
VB	VACUUM BREAKER
	AUTOMATIC FLOW CONTROL VALVE
	CALIBRATED MANUAL BALANCING VALVE
OR	PRESSURE-RELIEF VALVE
	PRESSURE-REDUCING VALVE (PRV)
	AUTOMATIC CONTROL VALVE, 2-WAY
	AUTOMATIC CONTROL VALVE, 3-WAY
BFP	BACKFLOW PREVENTER
XX-1	PLUMBING FIXTURE

HVAC SYMBOLOGY

24x18	SUPPLY AIR OR OUTSIDE AIR DUCT UP (SECTION CUT, FIRST DIMENSION DUCT WIDTH)
	SUPPLY AIR OR OUTSIDE AIR DUCT DOWN (NO SECTION CUT)
	RETURN AIR DUCT UP (SECTION CUT)
	RETURN AIR DUCT DOWN (NO SECTION CUT)
	EXHAUST AIR DUCT UP (NO SECTION CUT)
	EXHAUST AIR DUCT DOWN (NO SECTION CUT)
	ROUND ELBOW UP
	ROUND ELBOW DOWN
	TRANSITION - RECTANGULAR TO ROUND DUCT
	STANDARD BRANCH
	ELBOW - W/TURNING VANE (RECTANGULAR)
	ELBOW - (RECTANGULAR), SMOOTH RADIUS
18x24	RECTANGULAR DUCT OR OPENING SIZE FIRST NUMBER INDICATES SIZE OF SIDE SHOWN
18ø	ROUND DUCT SIZE
R OR D	RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
R OR D	ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
18x24	HIDDEN DUCT
T 9'-10" B 9'-0" 18x10	DUCT/PIPE ELEVATION TAG ABOVE FINISH FLOOR
	VOLUME DAMPER
M	MOTOR OPERATED DAMPER
	FIRE DAMPER
S	SMOKE DAMPER
S	SMOKE AND FIRE DAMPER
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT - TWO LINE
	FLEXIBLE DUCT - ONE LINE
	ACOUSTICAL LINING - DUCT DIMENSIONS FOR NET FREE AREA
UC	UNDERCUT DOOR
	NEW TO EXISTING CONNECTION
	REMOVE EXISTING UP TO THIS POINT
	HVAC EMERGENCY SHUTDOWN SWITCH
TAG-SIZE CFM	SUPPLY AIR REGISTER
TAG-SIZE CFM	EXHAUST AIR OR RETURN AIR GRILLE
TAG CFM	EXHAUST AIR OR RETURN AIR GRILLE
TAG CFM	SUPPLY AIR ASSEMBLY SQUARE DIFFUSER
TAG CFM	SUPPLY AIR ASSEMBLY ROUND DIFFUSER

TEMPERATURE CONTROL DIAGRAM SYMBOLOGY

MISCELLANEOUS DEVICE IDENTIFIER

CO	SPACE CARBON MONOXIDE SENSOR
CO2	SPACE CARBON DIOXIDE SENSOR
H	SPACE HUMIDITY SENSOR
NO2	SPACE NITROGEN DIOXIDE SENSOR
S	SPACE TEMPERATURE SENSOR
T	THERMOSTAT

CONTROL DEVICE IDENTIFIER

AFS	AIRFLOW MEASURING STATION
AM	AIRFLOW MEASURING SENSOR
CO	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
F	FLOW SWITCH
FRZ	FREEZE STAT
H	HUMIDITY SENSOR
HS	HIGH STATIC SWITCH
LS	LOW STATIC SWITCH
NO2	NITROGEN DIOXIDE SENSOR
P	PRESSURE SENSOR
S	SPACE TEMPERATURE SENSOR
SD	SMOKE DETECTOR
T	TEMPERATURE SENSOR
TS	TEMPERATURE SWITCH
ΔP	DIFFERENTIAL PRESSURE SENSOR

CONTROL INPUT/OUTPUT IDENTIFIER

AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT

COIL IDENTIFIERS

CC	CHILLED WATER COOLING COIL
DG	DIRECT FIRED GAS BURNER
DX	DIRECT EXPANSION COIL
EH	ELECTRIC HEATING COIL
ER	DIRECT EVAPORATIVE COIL
FC	FACE AND BYPASS COOLING COIL
FH	FACE AND BYPASS HEATING COIL
HC	HEATING HOT WATER HEATING COIL
HG	HOT GAS REHEAT COIL
IG	INDIRECT FIRED GAS BURNER
ST	STEAM HEATING COIL

CONTROL ABBREVIATIONS

BTU	BTU METER
COMM	COMMUNICATION
CT	CURRENT TRANSMITTER
EC	ELECTRONICALLY COMMUTATED
EF	EXHAUST FAN
FM	FLOW METER
M	MOTOR ACTUATOR
MA	MIXED AIR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTDOOR AIR
RA	RETURN AIR
RL	RELIEF FAN
RF	RETURN FAN
SA	SUPPLY AIR
SF	SUPPLY FAN
TCC	TEMPERATURE CONTROL CONTRACTOR
VFC	VARIABLE FREQUENCY CONTROLLER

S	DUCT MOUNTED SMOKE DETECTOR
T	TEMPERATURE AVERAGING SENSOR
M	MOTOR OPERATED DAMPER
M	MOTOR OPERATED SINGLE BLADE DAMPER
	BACKDRAFT DAMPER
	HUMIDIFIER
AFS	AIRFLOW MEASURING STATION
	INTAKE/ EXHAUST LOUVER
	FILTER
FRZ	FREEZE STAT
XX	SEE CONTROL ABBREVIATIONS (TYP)
M XX	FAN
EC XX	FAN WITH EC MOTOR
	PUMP
EC	PUMP WITH EC MOTOR

ABBREVIATIONS

AD	ACCESS DOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ARF	ABOVE RAISED FLOOR
AV	AIR VALVE
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSE POWER
BOE	BOTTOM OF EQUIPMENT
BTUH	BRITISH THERMAL UNITS PER HOUR
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CPD	CONDENSATE PUMPED DISCHARGE
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
DB	DRY BULB
DCW	DOMESTIC COLD WATER
DDC	DIRECT DIGITAL CONTROL
DH	DEHUMIDIFIER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ESS	EMERGENCY SHUTOFF SWITCH
EWT	ENTERING WATER TEMPERATURE
F	FUTURE
FA	FREE AREA
FCP	FAN CONTROL PANEL
FCU	FAN COIL UNIT
FDBK	FEEDBACK
FLA	FULL LOAD AMPS
FLT	FILTER
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
GE	GRAVITY EXHAUST
GI	GRAVITY INTAKE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
IAQ	INDOOR AIR QUALITY
IPLV	INTEGRATED PART LOAD VALUE
LAT	LEAVING AIR TEMPERATURE
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MBH	THOUSAND BTUH
MCC	MOTOR CONTROL CENTER
NC	NOISE CRITERIA
NO	NUMBER
NRC	NOISE REDUCTION COEFFICIENT
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP
PPH	POUNDS PER HOUR
RH	RELATIVE HUMIDITY
RTU	ROOFTOP UNIT
S	SIGNAL PORT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SP	STATIC PRESSURE
TC	TECHNOLOGY CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TD	TEMPERATURE DIFFERENTIAL
TES	THERMAL ENERGY STORAGE
TSP	TOTAL STATIC PRESSURE
UH	UNIT HEATER
V&C	VALVE AND CAP
VAV	VARIABLE AIR VOLUME
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

GENERAL NOTES

GENERAL MECHANICAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL PIPING, DUCTWORK, COILS, EQUIPMENT, TERMINAL UNITS, ASSOCIATED CONTROLS, WIRING, AND OTHER ITEMS SHOWN BOLD AND/OR BOLD DASHED LINES UNLESS SPECIFICALLY NOTED OTHERWISE. THE ITEMS INDICATED ON THE DRAWINGS TO BE REMOVED ARE ONLY TO INDICATE IN GENERAL THE AMOUNT OF DEMOLITION WORK INVOLVED. A SITE INVESTIGATION BY THE CONTRACTOR MUST BE PERFORMED TO AID IN DETERMINING THE COMPLETE EXTENT OF WORK INVOLVED.
2. PIPING AND DUCTWORK EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. REMAINING PIPING SHALL BE DRAINED AND CAPPED WITHOUT CREATING DEAD LEGS IN THE SYSTEM. REMAINING DUCTWORK SHALL BE CAPPED.
3. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, NOTIFY OWNER AND INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
4. EXISTING EQUIPMENT BEING REMOVED AND CONSIDERED SALVAGEABLE BY THE OWNER SHALL BE TURNED OVER TO THE OWNER.
5. CONTRACTORS SHALL COORDINATE AND SCHEDULE ALL NECESSARY UTILITY SHUT-OFFS WITH OWNER PRIOR TO PROCEEDING WITH SUCH WORK.
6. COORDINATE SAW-CUTTING OF THE FLOOR OR WALL WITH OTHER TRADES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, FLOORS, CEILINGS, OR OTHER BUILDING ELEMENTS THAT ARE DISTURBED AS PART OF THE DEMOLITION OR INSTALLATION OF MECHANICAL WORK. SUCH WORK SHALL MATCH THE EXISTING CONSTRUCTION, FINISH, AND RATING. FIRE SEAL WALL OPENINGS AS REQUIRED.
8. REPLACE/REPAIR DAMAGED PIPING AND/OR DUCTWORK INSULATION TO MATCH EXISTING.

GENERAL MECHANICAL NOTES

1. THESE NOTES ARE NOT ALL INCLUSIVE. REFER TO DRAWINGS AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. THIS IS A STANDARD MECHANICAL (HVAC AND PLUMBING) SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
3. PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS AS SPECIFIED, OR AS REQUIRED BY CODE.
4. ALL ROOF WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE EXISTING ROOF MANUFACTURER'S REQUIREMENTS. COORDINATE WITH THE EXISTING ROOF MANUFACTURER TO ENSURE WARRANTY IS PRESERVED.
5. DETAILS APPLY TO THE ENTIRE PROJECT AND ARE ONLY REFERENCED TO PROVIDE CLARITY IF THERE ARE MULTIPLE DETAILS THAT COULD APPLY TO A PARTICULAR PROJECT CONDITION.
6. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK AND PIPING WITH OTHER TRADES BEFORE PROCEEDING WITH WORK. DO NOT INSTALL MECHANICAL EQUIPMENT, DUCTWORK OR PIPING ABOVE ELECTRICAL EQUIPMENT WHERE PROHIBITED BY ELECTRICAL CODES (SWITCHBOARDS, PANELS, ETC.)
7. LIGHT LINE WEIGHT INDICATES EXISTING PIPING, DUCTWORK, AND.OR EQUIPMENT TO REMAIN. BOLD LINE WEIGHT INDICATES NEW WORK TO BE INSTALLED AS WORK OF THIS CONTRACT.
8. COORDINATE INSTALLATION OF OUTSIDE AIR INTAKE WITH INSTALLATION OF PLUMBING VENTS, FLUES AND EXHAUST/RELIEF OUTLETS TO MAINTAI N 10' OF SEPARATION.
9. ALL WORK IN FINISHED SPACED SHALL BE LOCATED ABOVE CEILINGS, IN CHASES OR OTHER CONCEALED, ACCESSIBLE LOCATIONS, UNLESS OTHERWISE NOTED. LOCATE AND ARRANGE VALVES, DRAIN FITTINGS, ETC. TO BE ACCESSIBLE THROUGH LAY-IN CEILINGS, ACCESS PANELS, OR ACCESS DOORS. PROVIDE AN ACCESS PANEL OR DOOR FOR ALL NON-ACCESSIBLE INSTALLATIONS. COORDINATE LOCATION OF ACCESS PANELS OR DOORS WITH THE ARCHITECT/ENGINEER AND OTHER TRADES.
10. ALL MATERIALS LOCATED IN PLENUM SHALL BE RATED FOR PLENUM INSTALLATION.
11. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH ALL TRADES. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES OR JOIST GIRDERS SHALL BE A PANEL POINTS OR AS SHOWN ON THE MECHANICAL OR STRUCTURAL DRAWINGS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED.
12. ALL MISCELLANEOUS METALS AND MATERIALS REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE PROVIDED BY THE INSTALLING CONTRACTOR.
13. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS OF DISSIMILAR METALS (SUCH AS COPPER TO GALVANIZED STEEL).

GENERAL HVAC NOTES

1. DUCTWORK DIMENSIONS: FIRST NUMBER INDICATES SIDE OF DUCTWORK SHOWN. ALL DIMENSIONS ARE IN INCHES AND ARE INSIDE CLEAR DIMENSIONS.
2. VOLUME DAMPERS ABOVE PLASTER OR GYPBOARD CEILINGS SHALL HAVE EXTENSION RODS AND CHROME-PLATED ESCUTCHEON PLATES.
3. COORDINATE ALL GRILLE, REGISTER AND DIFFUSER LOCATIONS WITH REFLECTED CEILING PLAN, LIGHTING, AND ALL OTHER CEILING MOUNTED DEVICES.
4. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO FANS, PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION.
5. PROVIDE ACCESSIBLE VOLUME DAMPERS OR OTHER MEANS OF AIRFLOW ADJUSTMENT AT ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES.
6. PROVIDE DUCT ACCESS DOORS AT OUTSIDE AIR INTAKE PLENUMS.
7. ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES SHALL BE THE SAME AS THE DIFFUSER OR GRILLE NECK SIZE UNLESS NOTED OTHERWISE.
8. ALL PIPING RUNOUTS SHALL BE 3/4" UNLESS OTHERWISE NOTED.
9. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK AND PIPING WITH OTHER TRADES BEFORE PROCEEDING WITH WORK. DO NOT INSTALL MECHANICAL EQUIPMENT, DUCTWORK OR PIPING ABOVE ELECTRICAL EQUIPMENT WHERE PROHIBITED BY ELECTRICAL CODES (SWITCHBOARDS, PANELS, ETC.)

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Maesan Carley
4/24/2026

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WWYK200270
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TINKER AIR FORCE BASE, OKLAHOMA

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DRAWN BY:	MC
CHECKED BY:	AO
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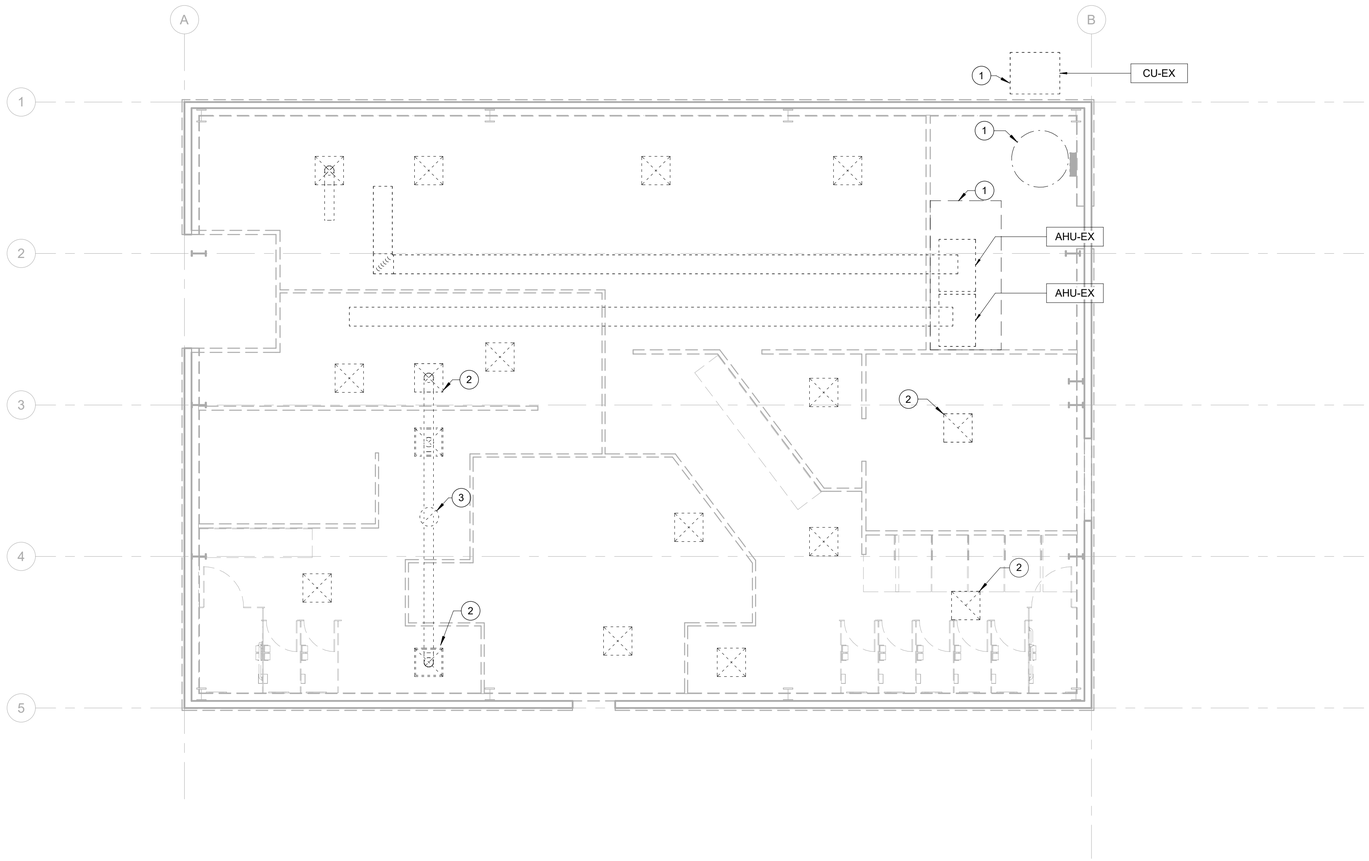
SHEET TITLE
MECHANICAL LEGENDS, SYMBOLS, AND ABBREVIATIONS

SHEET NUMBER
M-001



01 / MD101 MECHANICAL DEMOLITION FLOOR PLAN

SCALE: 3/16" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. REFER TO M-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING DUCTWORK AND DIFFUSERS PRIOR TO BID.
3. ALL EXISTING MECHANICAL EQUIPMENT AND DUCTWORK TO BE DEMOLISHED.
4. CONTRACTOR TO WALK THE SITE PRIOR TO BID TO DETERMINE THE FULL EXTENT OF THE SCOPE OF DEMOLITION.

KEY NOTES

1. DEMOLISH ALL EXISTING MECHANICAL EQUIPMENT. REMOVE ALL ASSOCIATED DUCTWORK, PIPING, CONTROLS, INSULATION, AND OTHER ACCESSORIES. DEMOLISH EQUIPMENT PADS.
2. DEMOLISH DIFFUSERS, REGISTERS, GRILLES, AND CEILING FANS. DEMOLISH CONNECTED DUCTWORK AND CEILING FASTENERS.
3. DEMOLISH EXISTING EXHAUST FAN.

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SHEET NUMBER
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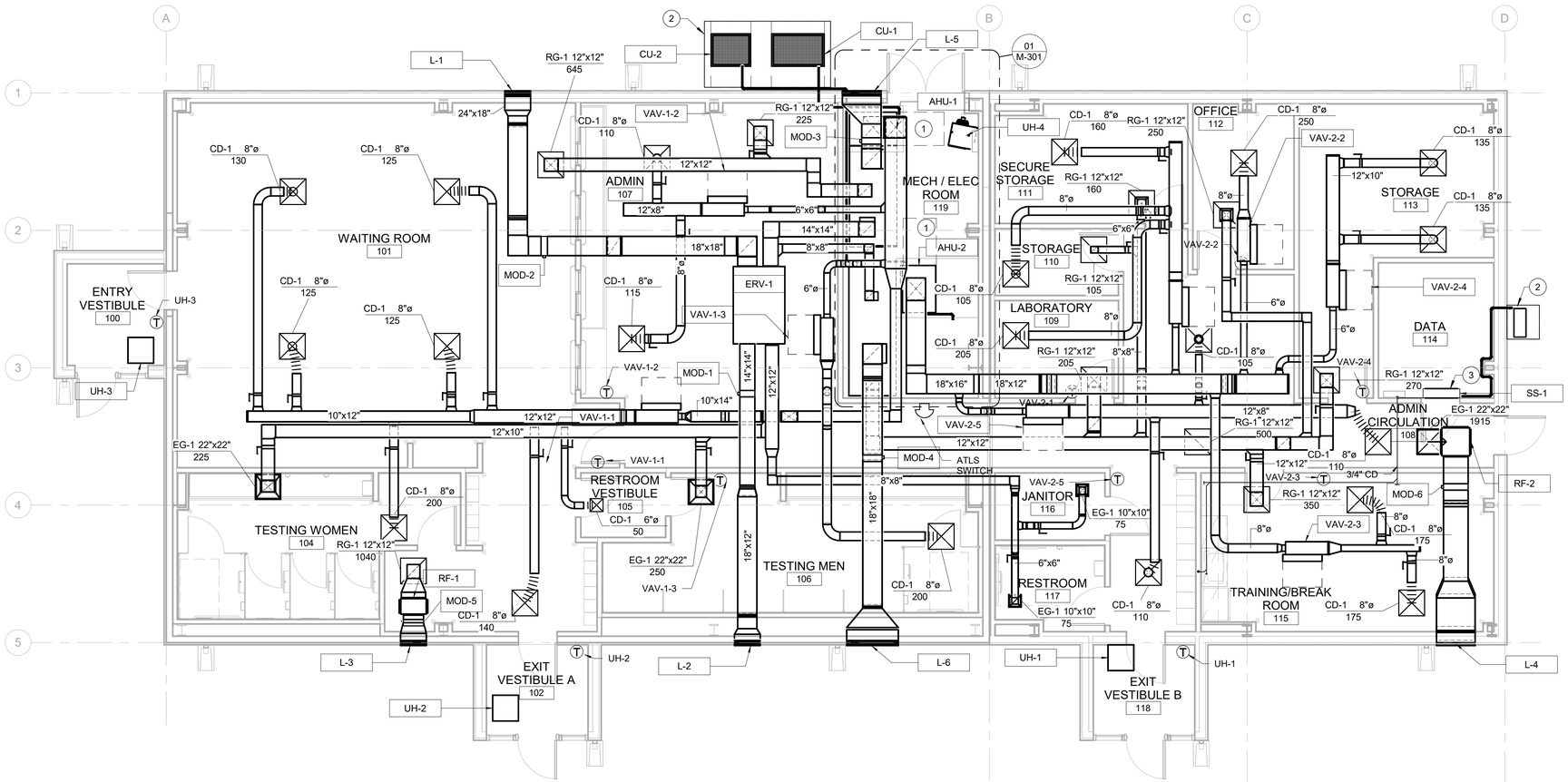

01 M-101 MECHANICAL DUCTWORK PLAN

SCALE: 3/16" = 1'-0"

0 2' 4' 8' 12'

GENERAL NOTES
(APPLY TO ALL MECHANICAL SHEETS)

1. REFER TO M-001 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO M-600 SERIES FOR SCHEDULES.
3. ALL RUNOUTS TO DIFFUSERS, GRILLES, AND VAV BOXES SHALL BE SAME AS CONNECTION SIZE UNLESS NOTED OTHERWISE.
4. REFER TO M-500 SERIES FOR DETAILS.
5. FIELD COORDINATE AIR DEVICES AND CEILING MOUNTED EQUIPMENT TO NEW CEILING PLAN REFER TO A-103.

KEY NOTES

1. SERVICE CLEARANCE FOR AHU.
2. EQUIPMENT PADS FOR OUTSIDE UNITS. SEE STRUCTURAL FOR DETAILS.
3. INSTALL MINI SPLIT SYSTEM OVER THE DOOR OF THE DATA ROOM.

LEGEND

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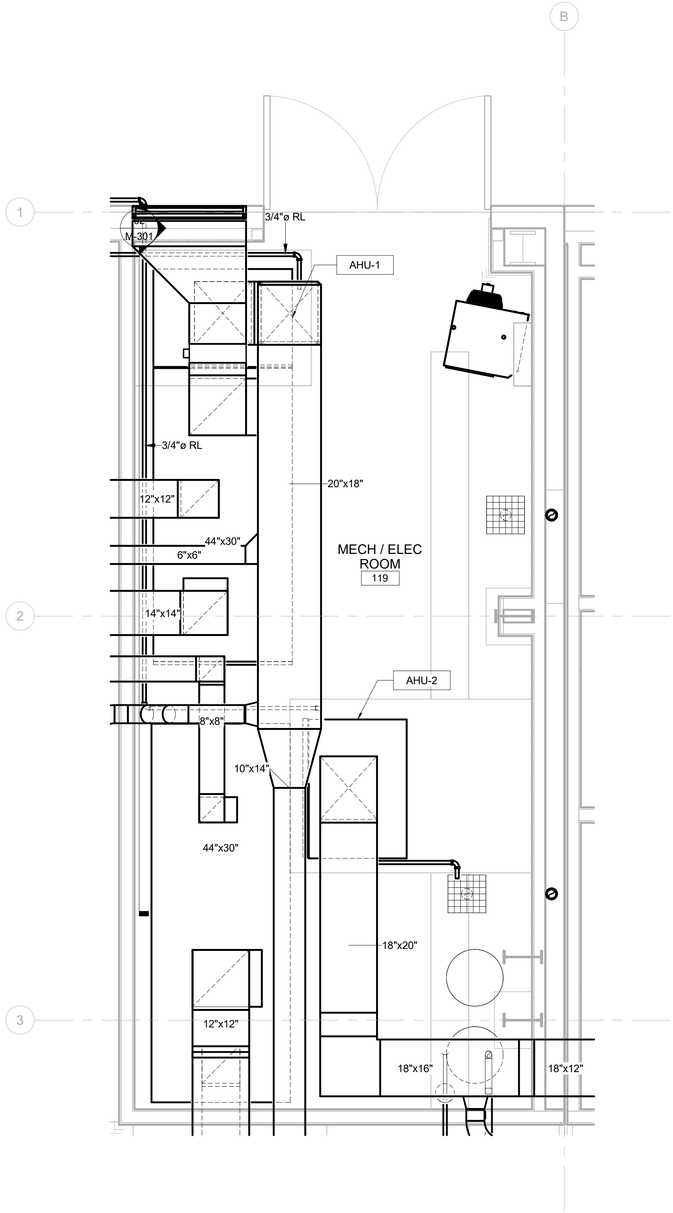
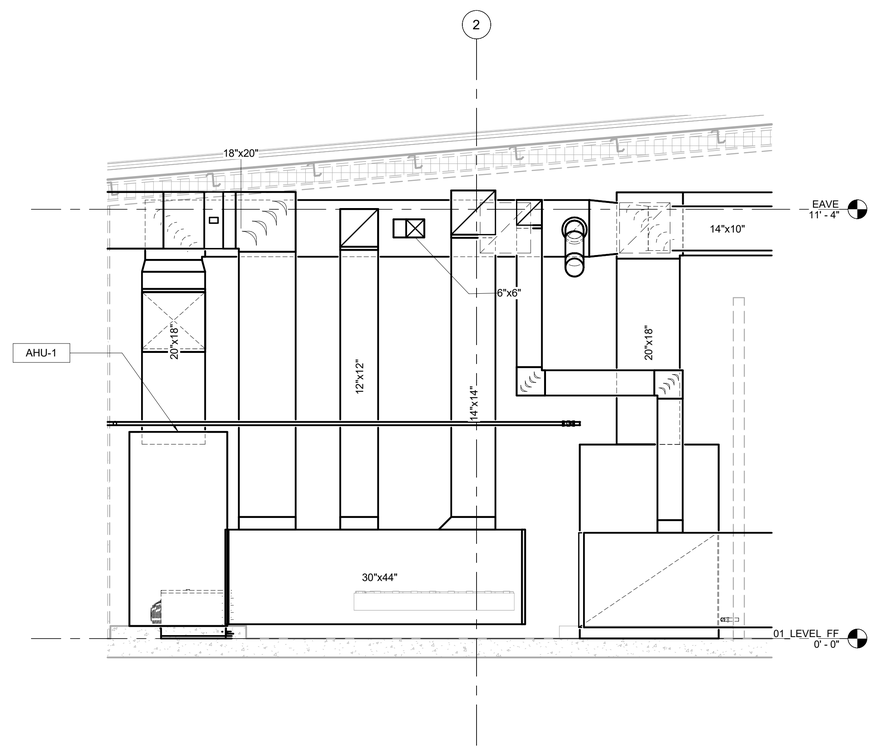
SHEET NUMBER
M-101



01 M-301 MECHANICAL ROOM ENLARGED PLAN
SCALE: 1/2" = 1'-0"



02 M-301 MECHANICAL ROOM SECTION
SCALE: 1/2" = 1'-0"

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MECHANICAL
SECTIONS

SHEET NUMBER
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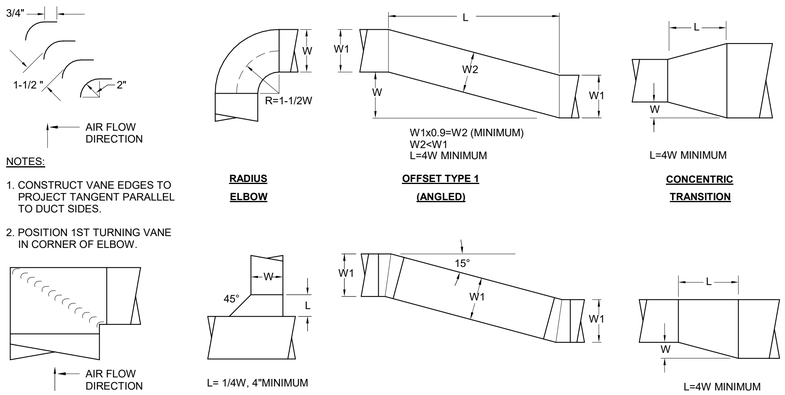
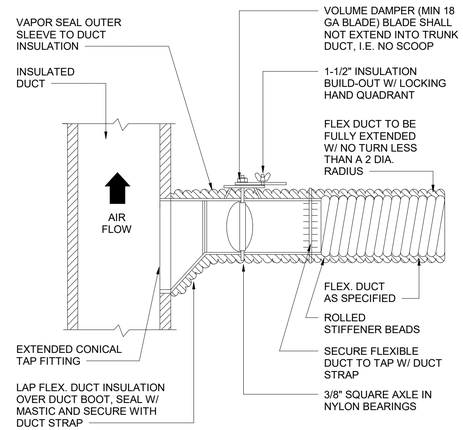


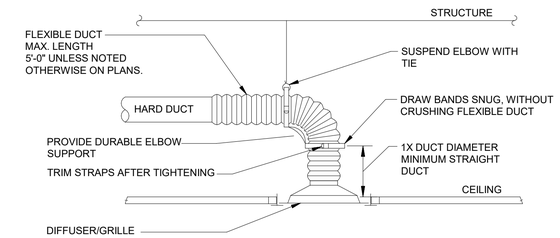
01 M-501 DUCT CONSTRUCTION DETAILS

SCALE: NTS



02 M-501 BOOT TAP DETAIL

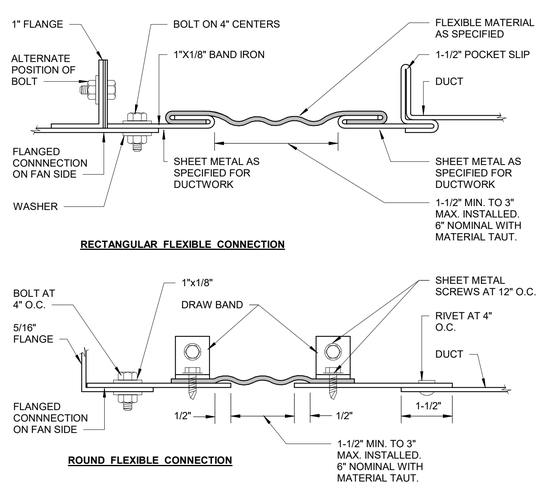
SCALE: NTS



NOTES:
1. TO ATTACH FLEX DUCT TO THE HARD DUCT, TAPE THE INNER LINER TO THE HARD DUCT THEN ATTACH WITH TWO NYLON TIE WRAPS; ONE FOR THE INNER LINER AND ONE FOR THE OUTER SHELL. FOLD THE OUTER SHELL INSIDE ITSELF SO IT HAS NEAT EDGES PRIOR TO TIE WRAPPING.

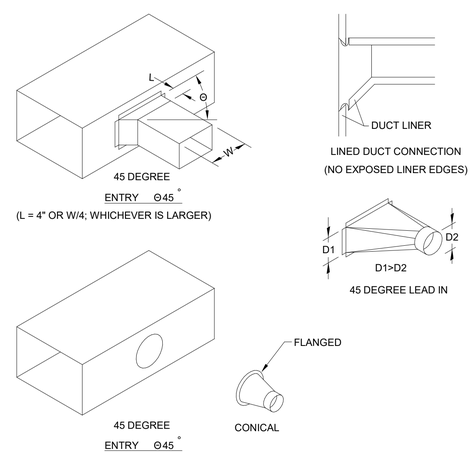
03 M-501 DIFFUSER/GRILLE CONNECTION DETAIL

SCALE: NTS



04 M-501 FLEXIBLE DUCT CONNECTION DETAIL

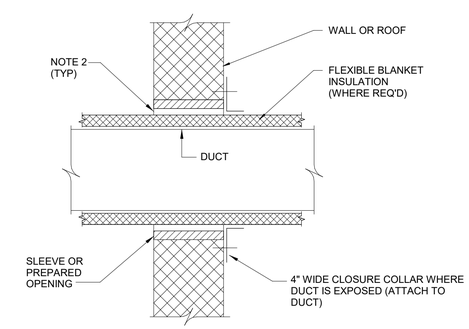
SCALE: NTS



NOTES:
1. DO NOT USE CONNECTIONS WITH SCOOPS.
2. ADDITIONAL MECHANICAL FASTENERS ARE REQUIRED FOR 4" W.G. AND OVER.
3. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

05 M-501 BRANCH CONNECTION DETAIL

SCALE: NTS



NOTES:
1. THIS DETAIL IS FOR NONFIRE-RATED CONSTRUCTION. DUCT PENETRATIONS IN FIRE-RATED CONSTRUCTION SHALL BE FIRESTOPPED WITH A UL-CLASSIFIED SYSTEM.
2. AT PENETRATIONS THRU INSULATED WALLS PROVIDE PACKING AND SEALANT.

06 M-501 DUCT PENETRATION THRU WALL OR ROOF DETAIL

SCALE: NTS

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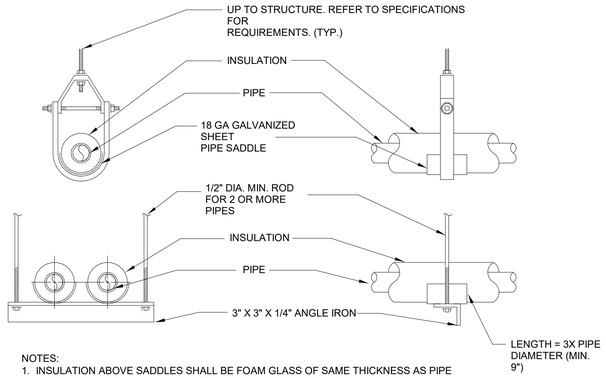
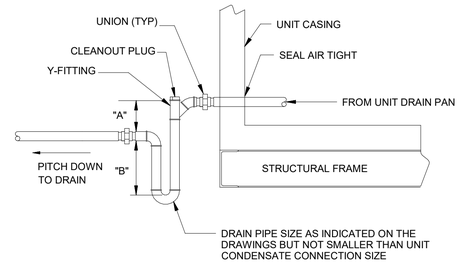


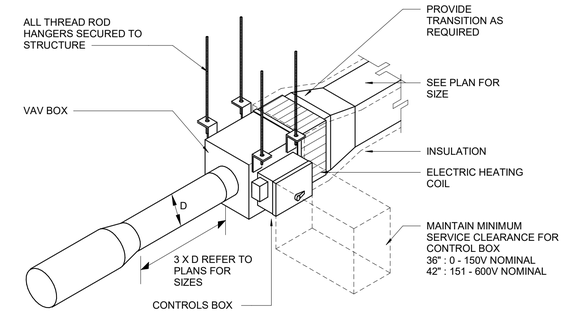
NOTES:
1. INSULATION ABOVE SADDLES SHALL BE FOAM GLASS OF SAME THICKNESS AS PIPE INSULATION AND SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,300 PSI.
2. HANGER RODS SHALL BE OF REQUIRED SIZE, BUT NO SMALLER THAN 1/2" DIA.
3. HANGERS WITHOUT PIPE SADDLES SHALL BE TYPICAL FOR UNINSULATED PIPING.

01 / M-502 PIPE HANGER INSTALLATION DETAIL
SCALE: NTS

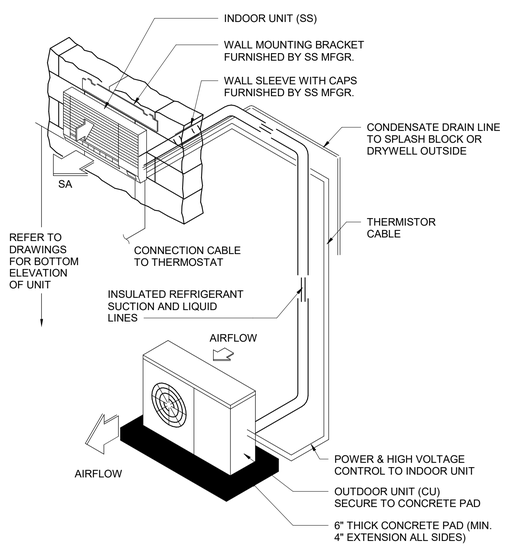


DRAW THRU SYSTEM	BLOW THRU SYSTEM
"A" = 1"+ FAN STATIC PRESSURE	"A" = MIN. 3"
"B" = HALF OF "A"	"B" = 1.5"+ FAN STATIC PRESSURE

02 / M-502 CONDENSATE DRAIN DETAIL
SCALE: NTS

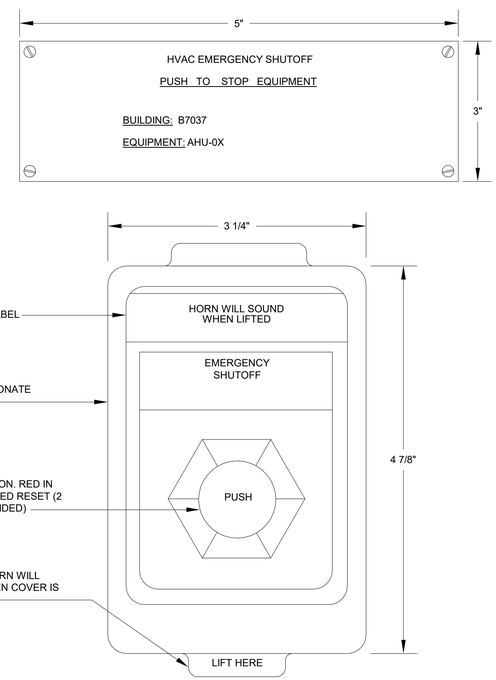


03 / M-502 SINGLE INLET VAV BOX DETAIL
SCALE: NTS



NOTES:
1. INSTALL WALL UNIT AND CONDENSATE PUMP (IF SPECIFIED) PER MANUFACTURER'S RECOMMENDATIONS.

04 / M-502 DUCTLESS SPLIT SYSTEM DETAIL
SCALE: NTS



NOTES:
1. ENGRAVED PLASTIC SIGN, GREEN WITH WHITE LETTERING, INSTALLED 1" ABOVE SHUTOFF BUTTON. 3" TALL x 5" WIDE "EMERGENCY SHUTOFF" LETTERING 1/2" TALL, OTHER LETTERING 3/16" TALL.
2. EMERGENCY SHUTOFF SWITCH TO BE MOUNTED TO NEW SINGLE GANG BOX.
3. REFER TO 1/M-701 FOR CONTROLS.
4. REFER TO M-101 AND M-102 FOR LOCATIONS.
5. COORDINATE WITH CONTRACTING OFFICER FOR NUMBER AND LOCATION OF ADDITIONAL SHUTOFF SWITCHES.

05 / M-502 HVAC EMERGENCY SHUTOFF DEVICE DETAIL
SCALE: NTS

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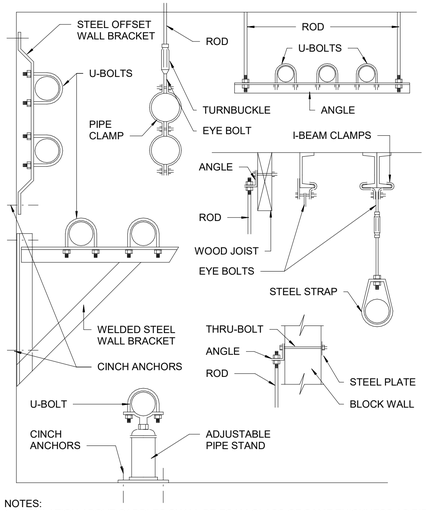
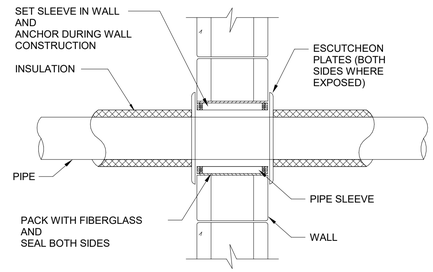
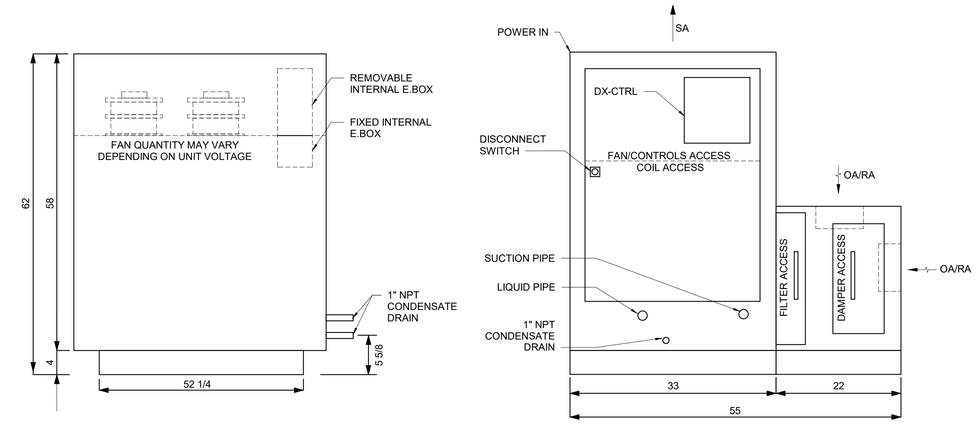


NOTES:
1. INSULATION ABOVE SADDLES SHALL BE FOAM GLASS OF SAME THICKNESS AS PIPE INSULATION AND SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,300 PSI.
2. HANGER RODS SHALL BE OF REQUIRED SIZE, BUT NO SMALLER THAN 1/2" DIA.
3. HANGERS WITHOUT PIPE SADDLES SHALL BE TYPICAL FOR UNINSULATED PIPING.

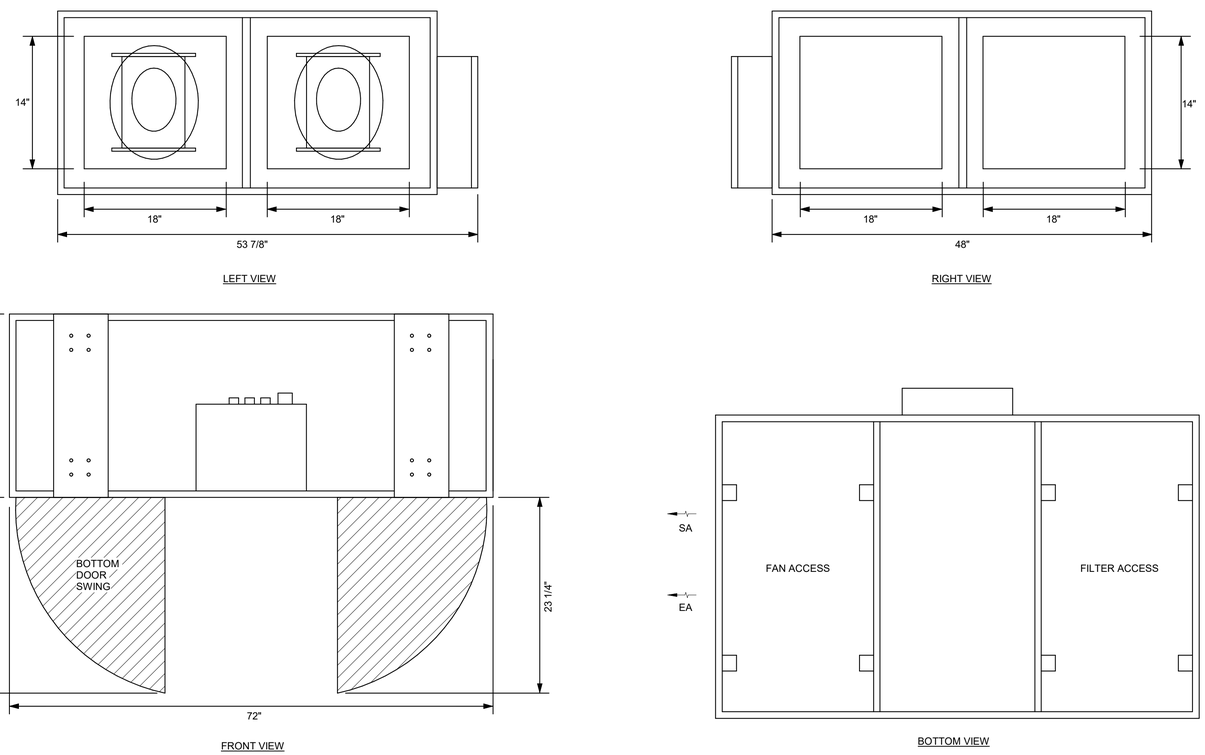
01 M-503 PIPE MOUNTING DETAIL
NTS



02 M-503 PIPE SLEEVE THRU WALL DETAIL
NTS



03 M-503 AIR HANDLER UNIT SYSTEM (AHU-01 & AHU-02)
NTS



04 M-503 ENERGY RECOVERY VENTILATOR SYSTEM (ERV-01)
NTS

AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
MAESAN CARLEY
36788

Maesan Carley
4/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION:
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: MC
DRAWN BY: MC
CHECKED BY: AO
DESIGN FILE LOCATION:

SHEET TITLE
MECHANICAL DETAILS

SHEET NUMBER
M-503

AIR COOLED DUCTLESS MINI-SPLIT HEAT PUMP UNIT SCHEDULE

INDOOR UNIT SYMBOL	OUTDOOR UNIT SYMBOL	SERVICE	CONFIGURATION	REFRIGERANT	MIN. SEER RATING	RATED COOLING CAPACITY (BTU/hr) (NOTE 1)	INDOOR UNIT			OUTDOOR UNIT			ELECTRICAL (NOTE 8)				CONTROL TYPE (NOTE 6)	BASIS OF DESIGN MANUFACTURER	NOTES
							AIR FLOW (CFM)	UNIT WT. (LBS)	INDOOR UNIT MODEL	AMBIENT (DEG F)	UNIT WT. (LBS)	OUTDOOR UNIT MODEL	MCA (A)	MOCP (A)	VOLTS/ PHASE	DISCONNECT BY			
SS-1	SSCU-1	114 DATA	COOLING ONLY	R-32	21	18,100	720	40	FTKF18	95	105	RKF18	14.23	20	208/1	EC	SS-A	DAIKIN	2-7

NOTES:
1. BASED ON AHRI CONDITIONS.
2. EXTEND REFRIGERATION PIPING BETWEEN EVAPORATOR AND CONDENSER AS RECOMMENDED BY MANUFACTURER.
3. SINGLE POINT POWER. INDOOR UNIT SERVED BY OUTDOOR UNIT.
4. PROVIDE WIRED WALL MOUNTED CONTROLLER AND TEMPERATURE SENSOR.
5. PROVIDE INDOOR UNIT WALL MOUNTING BRACKET.
6. REFER TO M-700 SERIES FOR DESCRIPTION OF CONTROL TYPE.
7. PROVIDE WITH INTEGRAL A2L REFRIGERANT MONITORING SENSOR.
8. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.

SITE CRITERIA

WEATHER DATA LOCATION	TINKER AFB, OK
ASHRAE CLIMATE ZONE	3A (MOIST)
ELEVATION	1,291 FT
LATITUDE	35.417 N
LONGITUDE	97.383 W

OUTDOOR DESIGN CONDITIONS

COOLING (1% DB/MCWB)*	97.1 F/ 73.6 F
DEHUMIDIFICATION (1% DP/MCDB)*	73.9 F / 82.6 F
HEATING (99% DB)*	18.8F

* PER ASHRAE 2025 FUNDAMENTALS.

INDOOR DESIGN CONDITIONS

ROOM TYPE	TEMPERATURE		HUMIDIFICATION	
	MAX (DEG. F)	MIN (DEG. F)	MAX (%RH)	MIN (%RH)
OFFICE SPACES	78 DEG. F	68 DEG. F	50	-

LOUVER SCHEDULE

SYMBOL	SERVICE	TYPE	AIRFLOW (CFM)	SIZE WxH (IN)	MAX VELOCITY (FPM)	MIN. FREE AREA (SQ.FT.)	MAX. PRESSURE LOSS (IN.W.G.)	FINISH (NOTE 1)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	NOTES
L-1	ERV-1 / EXHAUST	EXHAUST	650	24X18	750	0.9	0.08	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4
L-2	ERV-1 / INTAKE	INTAKE	700	24X18	500	1.4	0.05	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4
L-3	RF-1	RELIEF	865	24X18	750	1.2	0.08	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4
L-4	RF-2	RELIEF	2,150	36X24	750	2.9	0.08	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4
L-5	AHU-1 / ECONOMIZER	INTAKE	1,045	36X24	500	2.1	0.05	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4
L-6	AHU-2 / ECONOMIZER	INTAKE	1,920	48X24	500	3.8	0.05	ALMOND	RUSKIN	ELF375DX	1, 2, 3, & 4

NOTES:
1. EXACT COLOR TO BE DETERMINED BY GOVERNMENT/ARCHITECT.
2. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION.
3. PROVIDE WITH ALUMINUM INSECT SCREEN.
4. PROVIDE WITH PVDF (KYNAR 500, HYLAR 5000 OR DURANAR).

OUTSIDE AIR SCHEDULE

ZONE INFORMATION			MINIMUM OA REQUIRED TO ZONE	MINIMUM OA DELIVERED TO ZONE
ZONE	AREA (SQ. FT.)	NUMBER OF OCCUPANTS		
AHU-1				
WAITING ROOM - 101	890	72	414	420
ADMIN - 107	600	5	56	60
TESTING WOMEN - 104	196	0	-	-
TESTING MEN - 106	287	0	-	-
AHU-2				
STORAGE - 113	299	-	36	40
SECURE STORAGE - 111	136	-	35	40
LABORATORY OFFICE - 109	72	2	15	20
STORAGE - 110	49	-	6	10
OFFICE - 112	100	2	16	20
RESTROOM - 117	50	-	-	-
JANITOR - 116	48	-	-	-
ADMIN CIRCULATION - 108	431	2	26	30

NOTES:
1. NUMBER OF OCCUPANTS LISTED IS FOR INFORMATION PURPOSES ONLY.
2. OUTSIDE AIR REQUIREMENTS ARE PER ASHRAE 62.1-2019.

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

SYMBOL	MATERIAL	TYPE	MARGIN (NOTE 1)	INLET SIZE (INCHES)	FACE SIZE (INCHES)	FINISH	MANUFACTURER	MODEL	NOTES
CD-1	ALUMINUM	FLUSH PANEL FACE	LAY-IN	SEE PLANS	24x24	WHITE	TITUS	OMNI-AA	2
CD-2	ALUMINUM	FLUSH PANEL FACE	LAY-IN	SEE PLANS	12x12	WHITE	TITUS	OMNI-AA	2
RG-1	ALUMINUM	EGG CRATE	LAY-IN	SEE PLANS	24x24	WHITE	TITUS	50F	3
EG-1	ALUMINUM	EGG CRATE	LAY-IN	SEE PLANS	24x24	WHITE	TITUS	50F	3

NOTES:
1. CONTRACTOR SHALL DETERMINE PROPER MARGIN STYLE TO MATCH CEILING CONSTRUCTION.
2. PROVIDE FORMED INSULATION BLANKET ON BACK OF DIFFUSER.
3. PROVIDE FULL SIZED CORE AREA AND TRANSITION TO CONNECTING DUCTWORK.

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M-601

AIR HANDLING UNIT SCHEDULE

SYMBOL	UNIT TYPE	SUPPLY FAN			DX COOLING PERFORMANCE (NOTE 4)					HEATING PERFORMANCE (NOTE 4)				FILTER			ELECTRICAL					CONTROL TYPE (NOTE 1)	WEIGHT (LBS)	BASIS OF DESIGN		NOTES
		AIR FLOW (MAX/MIN) (CFM)	E.S.P. (IN. W.G.) (NOTE 7)	OUTSIDE AIR	AIR FLOW (CFM)	E.A.T. DB/WB (DEG. F.)	L.A.T. DB/WB (DEG. F.)	TOTAL CAPACITY (MBH) - MAX	SENSIBLE CAPACITY (MBH)	TYPE	CAPACITY (BTU/hr	EAT (DEG. F.)	LAT (DEG. F.)	SIZE	MERV RATING	DIRTY FILTER ALLOWANCE	MCA (A)	MOCP (A)	VOLT/ PHASE	DISCONNECT BY (NOTE 3)	STARTER BY			MANUFACTURER	MODEL	
AHU-1	CDT	1,515	1.5	225	1,515	83.6 / 68.8	55.1 / 53.1	75	48	HEAT PUMP	15	60.7	70.0	2"	13	0.25"	7.5	15	208/3	EC	MFR	AHU-A	710	OXYGEN8	DXM05C11	5
AHU-2	VDT	2,150	1.5	500	2,150	77.8 / 63.9	54.2 / 52.7	116	74	HEAT PUMP	33	55.7	70.0	2"	13	0.25"	7.5	15	208/3	EC	MFR	AHU-A	730	OXYGEN8	DXM05C14	5

NOTES:
1. REFER TO M-700 SERIES FOR DESCRIPTION OF CONTROL TYPE.
2. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.
3. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
4. DOUBLE WALL INSULATED CASING WITH MINIMUM R6.5 PER INCH
5. PROVIDE WITH ECM OR UNIT MOUNTED VFD FOR SUPPLY FAN.
6. EXTERNAL STATIC PRESSURE INCLUDES SYSTEM LOSSES AND FILTER LOADING AS LISTED IN THIS SCHEDULE ONLY.
IT EXCLUDES LOSSES DUE TO ITEMS IN THE AHU ITSELF SUCH AS COILS, DAMPERS, MEAN AIR FILTERS, ETC.

ENERGY RECOVERY UNIT

SYMBOL	BASIS OF DESIGN	MODEL	SUPPLY AIRFLOW	EXHAUST AIRFLOW	SUPPLY ESP	EXHAUST ESP	HEAT EXCHANGER SUMMER									HEAT EXCHANGER WINTER									ELECTRICAL CONNECTIONS			
							OUTDOOR AIR		RETURN AIR		SUPPLY AIR		EFFICIENCY			OUTDOOR AIR		RETURN AIR		SUPPLY AIR		EFFICIENCY			UNIT ELECTRICAL			
	MANUFACTURER						EDB	EWB	EDB	EWB	EDB	EWB	SENSIBLE	LATENT	TOTAL	EDB	EWB	EDB	EWB	EDB	EWB	SENSIBLE	LATENT	TOTAL	VOLTAGE	FLA	MCA	RFS
			CFM	CFM	in W.G.	in W.G.	oF	oF	oF	oF	oF	oF	%	%	%	oF	oF	oF	oF	oF	oF	%	%	%	(V/Ph/Hz)	(A)	(A)	(A)
ERV-1	OXYGEN8	B20_IN	700	650	0.75	0.75	100.4	73.6	78	64	86.7	68.3	75.3	60.1	70.7	18.8	18.5	68	52.9	54.4	44.5	75.3	60.1	73.3	208V/1ph/60Hz	8.4	8.8	15

NOTES:
1. BASE MOUNTED UNIT, SHALL PASS THROUGH A 36-INCH DOORWAY WITHOUT MAJOR DISASSEMBLY
2. MIXING BOX SHALL COME EQUIPPED WITH FACTORY INSTALLED DAMPERS AND ACTUATORS, SHOULD MODULATE BASED ON 0-10V SIGNAL TO ACHIEVE DESIRED MIXED AIR
3. PROVIDE UNITS WITH DIRECT DRIVE PLENUM ECM FANS
4. DOUBLE WALL INSULATED CASING WITH MINIMUM R6.5 PER INCH
5. UNITS SHALL INCLUDE FACTORY MOUNTED BADNET IP CONTROLS WITH BTL CERTIFICATION
6. PROVIDE EACH UNIT WITH HUMAN INTERFACE CONTROLLER
7. FILTER MONITORING WITH REMOTE ALARM VIA PRESSURE MEASUREMENT ACROSS THE FILTER. MERV13 FILTERS ON OA AND MERV 8 ON EA. MOTORIZED DAMPERS MUST BE CLASS 1A LOW LEAKAGE.
8. FACTORY MOUNTED DX COILS, FACTORY MOUNTED AND BRAZED EXPANSION VALVE KITS
9. SHIP LOOSE PRESSURE SENSOR FOR FIELD INSTALLATION. SUPPLY AIRFLOW SHALL VARY BASED ON THE CONSTANT PRESSURE SETPOINT.

CONDENSING UNIT SCHEDULE (HEAT PUMP)

SYMBOL	SERVICE	NOMINAL CAPACITY (TONS)	MIN DESIGN CAPACITY (MBTU/hr)	HEATING MIN DESIGN CAPACITY (MBTU/hr)	EER @ AHRI CONDITIONS	HP COP @ 47°F	REFRIGERANT	AMBIENT TEMP. °F (SUMMER/WINTER)	STAGES	NUMBER OF FANS	ELECTRICAL				CONTROL TYPE (NOTE 1)	WEIGHT (LBS)	BASIS OF DESIGN		NOTES
											MCA (A)	MOCP (A)	VOLT/ PHASE	DISCONNECT BY (NOTE 2)			MANUFACTURER	MODEL	
CU-1	AHU-1	6	67	72	12.4	3.60	R32	105/19	NOTE 7	1	33	35	208/3	EC	AHU-A	550	DAIKIN	RXYA	3,4,5,6,8
CU-2	AHU-2	10	110	104	11.1	3.4	R32	105/19	NOTE 7	1	40	45	208/3	EC	AHU-A	740	DAIKIN	RXYA	3,4,5,6,8

NOTES:
1. REFER TO M-700 SERIES FOR DESCRIPTION OF CONTROL TYPE.
2. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
3. DESIGN CAPACITY REFLECTS A DERATE ASSOCIATED WITH THE PROJECT ELEVATION OF 1,302 FT AND AMBIENT CONDITIONS.
4. PROVIDE WITH MANUFACTURER'S HAIL GUARD ACCESSORY.
5. PROVIDE WITH TXV, CRANKCASE HEATER, FILTER DRIER AND ALL OTHER REQUIRED REFRIGERANT ACCESSORIES.
6. PROVIDE WITH APR RAWAL VALVE OR EQUIVALENT FOR CAPACITY MODULATION ON LEAD CIRCUIT.
7. PROVIDE WITH A SINGLE 2-STAGE SCROLL COMPRESSOR.
8. CONDENSER COIL SHALL BE FACTORY DIPPED WITH ENERGY GUARD COATING OR E-COAT FROM LUVATA.

VARIABLE AIR VOLUME BOX SCHEDULE (ELECTRIC)

SYMBOL	THERMOSTAT LOCATION	CFM			HEATING COIL								MIN. INLET SIZE (IN.)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	NOTES
		COOLING MAX.	HEATING MAX.	MIN.	EAT °F	LAT °F	KW	MCA	MOCP	VOLT/PHASE/WIRES	DISCONNECT BY	CONTROLLER/STARTER BY/TYPE				
VAV-1-1	101	895	740	425	55	80	5.9	36.1	40.0	208/1	MFR	MFR/NOTE 3	14	TUTTLE & BAILEY	SDV	1,2
VAV-1-2	107	470	420	200	55	80	3.3	21.0	25.0	208/1	MFR	MFR/NOTE 3	12	TUTTLE & BAILEY	SDV	1,2
VAV-1-3	106	200	250	250	55	80	2.0	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-1	109	470	105	80	55	80	0.8	6.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-2	112	250	75	50	55	80	0.6	6.0	15.0	208/1	MFR	MFR/NOTE 3	5	TUTTLE & BAILEY	SDV	1,2
VAV-2-3	113	350	215	50	55	80	1.7	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-4	115	270	220	75	55	80	1.7	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-5	108	325	125	100	55	80	1.0	6.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2

NOTES:
1. NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 25 AT 1.0" INLET STATIC PRESSURE WHEN TESTED PER ARI STANDARD 885-98 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2. TOTAL AIR PRESSURE DROP OF TAB AND REHEAT COIL SHALL NOT EXCEED 0.50" W.C.
3. PROVIDE WITH SCR CONTROLLED ELECTRIC REHEAT FOR ALL ELECTRIC REHEAT COILS.
4. REFER TO 02/M-701 FOR DESCRIPTION OF CONTROL TYPE.

UNIT HEATER SCHEDULE - ELECTRIC

SYMBOL	AREA SERVED	CONFIGURATION	CFM	EAT °F	LAT °F	HEATING ELEMENT			ELECTRICAL					CONTROL	MAX. DIMENSIONS			WEIGHT	BASIS OF DESIGN		NOTES
						NUMBER OF STAGES	TOTAL KW (QTY * KW)					DISCONNECT									
							QTY	KW	VOLTAGE	PHASES	AMPS	BY	TYPE		LENGTH	WIDTH	HEIGHT		MANUFACTURER	MODEL	
UH-1	118	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-2	102	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-3	100	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-4	119	SUSPENDED	470	40	80	2	1	5	208	1	19.5	MFR	SWITCH	THSTAT	28	24	16	50	REZNOR	EUH-TSL	1 & 2

NOTES:
1. PROVIDE REMOTE MOUNTED THERMOSTAT.
2. PROVIDE WHITE FINISH.

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M-602

VARIABLE AIR VOLUME BOX SCHEDULE (ELECTRIC)

SYMBOL	THERMOSTAT LOCATION	CFM			HEATING COIL								MIN. INLET SIZE (IN.)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	NOTES
		COOLING MAX.	HEATING MAX.	MIN.	EAT °F	LAT °F	KW	MCA	MOCP	VOLT/PHASE/WIRES	DISCONNECT BY	CONTROLLER/STARTER BY/TYPE				
VAV-1-1	101	895	740	425	55	80	5.9	36.1	40.0	208/1	MFR	MFR/NOTE 3	14	TUTTLE & BAILEY	SDV	1,2
VAV-1-2	107	470	420	200	55	80	3.3	21.0	25.0	208/1	MFR	MFR/NOTE 3	12	TUTTLE & BAILEY	SDV	1,2
VAV-1-3	106	200	250	250	55	80	2.0	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-1	109	470	105	80	55	80	0.8	6.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-2	112	250	75	50	55	80	0.6	6.0	15.0	208/1	MFR	MFR/NOTE 3	5	TUTTLE & BAILEY	SDV	1,2
VAV-2-3	113	350	215	50	55	80	1.7	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-4	115	270	220	75	55	80	1.7	12.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2
VAV-2-5	108	325	125	100	55	80	1.0	6.0	15.0	208/1	MFR	MFR/NOTE 3	6	TUTTLE & BAILEY	SDV	1,2

NOTES:
1. NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 25 AT 1.0" INLET STATIC PRESSURE WHEN TESTED PER ARI STANDARD 885-98 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2. TOTAL AIR PRESSURE DROP OF TAB AND REHEAT COIL SHALL NOT EXCEED 0.50" W.C.
3. PROVIDE WITH SCR CONTROLLED ELECTRIC REHEAT FOR ALL ELECTRIC REHEAT COILS.
4. REFER TO 02/M-701 FOR DESCRIPTION OF CONTROL TYPE.

UNIT HEATER SCHEDULE - ELECTRIC

SYMBOL	AREA SERVED	CONFIGURATION	CFM	EAT °F	LAT °F	HEATING ELEMENT			ELECTRICAL					CONTROL	MAX. DIMENSIONS			WEIGHT	BASIS OF DESIGN		NOTES
						NUMBER OF STAGES	TOTAL KW (QTY * KW)					DISCONNECT									
							QTY	KW	VOLTAGE	PHASES	AMPS	BY	TYPE		LENGTH	WIDTH	HEIGHT		MANUFACTURER	MODEL	
UH-1	118	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-2	102	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-3	100	CEILING	310	40	80	2	1	5	208	1	24.04	MFR	SWITCH	THSTAT	24	24	9	31	REZNOR	ECR	1 & 2
UH-4	119	SUSPENDED	470	40	80	2	1	5	208	1	19.5	MFR	SWITCH	THSTAT	28	24	16	50	REZNOR	EUH-TSL	1 & 2

NOTES:
1. PROVIDE REMOTE MOUNTED THERMOSTAT.
2. PROVIDE WHITE FINISH.

FAN SCHEDULE

SYMBOL	INTERLOCKED AHU	SERVICE	TYPE	AIRFLOW (CFM)	EXT. STATIC PRESSURE (IN. WC.)	RPM (NOTE 1)		DRIVE	COATING	ELECTRICAL (NOTE 4)					CONTROL TYPE (NOTE 3)	BASIS OF DESIGN		WEIGHT (LBS)	NOTES
						FAN	MOTOR			BHP (NOTE 2)	MHP (NOTE 2)	VOLTAGE/PHASE	DISCONNECT BY	CONTROLLER BY/TYPE		MODEL	MANUFACTURER		
RF-1	AHU-1	RELIEF	CABINET	865	0.53	1,070	N/A	DIRECT	STANDARD	0.24	0.50	115/1	MFR	NOTE 5	AHU-A	CSP-A1050	GREENHECK	59	
RF-2	AHU-2	RELIEF	INLINE	2,150	0.50	988	N/A	DIRECT	STANDARD	0.35	0.50	115/1	MFR	NOTE 5	AHU-A	SQ-160-VG	GREENHECK	111	

NOTES:
1. FAN RPM SHALL NOT EXCEED 110% OF SCHEDULED VALUE WITH THE SCHEDULED WHEEL TYPE.
2. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.
3. REFER TO M-700 SERIES FOR DESCRIPTION OF CONTROL TYPE.
4. REFER TO ELECTRICAL PLAN FOR ADDITIONAL INFORMATION.
5. PROVIDE WITH EC MOTOR AND LOCAL FAN SPEED CONTROLLER.
6. PROVIDE WITH MANUFACTURER'S VIBRATION ISOLATORS FOR UNIT SUSPENSION

MOTORIZED DAMPER SCHEDULE

SYMBOL	SERVICE	SIZE WxH (IN.)	AIRFLOW (CFM)	BLADE CONFIGURATION	BLADE ORIENTATION	INSULATED	AMCA 511 CLASS	ACTUATOR TYPE	ACTUATOR STYLE	POWER FAILURE POSITION	POSITIVE POSITION FEEDBACK	CONTROL TYPE (NOTE 3)	BASIS OF DESIGN		NOTES
													MANUFACTURER	MODEL	
MOD-32K-1	AHU-32K-1 OA	88x44	4,000	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32K-2	AHU-32K-1 RELIEF	44x44	3,100	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32K-3	EF-32K-1 EXHAUST	16x16	900	PARALLEL	HORIZONTAL	YES	1A	2-POSITION	ELECTRIC	CLOSED	YES	EF-A	TAMCO	9000	1,2,4
MOD-32L-1	AHU-32L-1 OA	82x44	3,900	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32L-2	AHU-32L-1 RELIEF	38x44	2,600	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32L-3	EF-32L-1 EXHAUST	16x16	1,300	PARALLEL	HORIZONTAL	YES	1A	2-POSITION	ELECTRIC	CLOSED	YES	EF-A	TAMCO	9000	1,2,4
MOD-32M-1	AHU-32M-1 OA	24x24	3,150	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32M-2	AHU-32M-2 OA	14x14	1,000	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32M-3	AHU-32M-2 RA	24x24	6,000	OPPOSED	HORIZONTAL	YES	1	MODULATING	ELECTRIC	OPEN	YES	AHU-A	TAMCO	9000	1,2
MOD-32M-4	AHU-32M-1/2 RELIEF	82x44	3,820	OPPOSED	HORIZONTAL	YES	1A	MODULATING	ELECTRIC	CLOSED	YES	AHU-A	TAMCO	9000	1,2
MOD-32M-5	EF-32M-1 EXHAUST	12x12	330	PARALLEL	HORIZONTAL	YES	1A	2-POSITION	ELECTRIC	CLOSED	YES	EF-A	TAMCO	9000	1,2,4

NOTES:
1. COORDINATE DAMPER ACTUATOR LOCATION AND MOUNTING REQUIREMENTS WITH TEMPERATURE CONTROL CONTRACTOR.
2. SHALL BE 115 V/1 PHASE. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO M-700 SERIES DRAWINGS FOR DESCRIPTION OF CONTROL TYPE.

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PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
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REVISIONS

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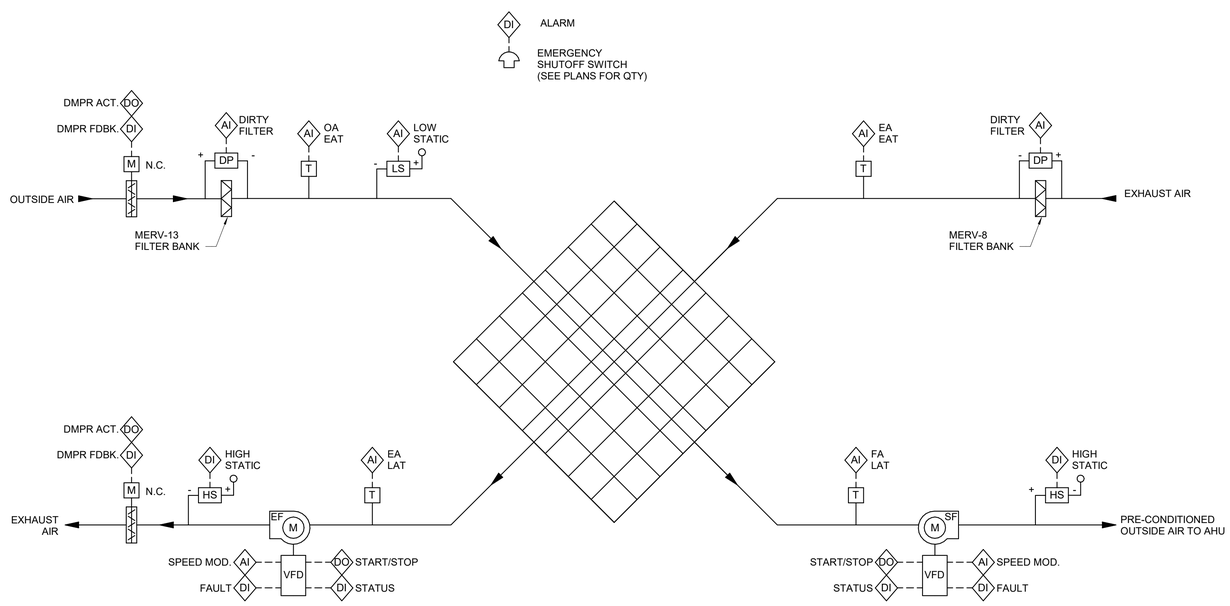


REFER TO "ENERGY RECOVERY VENTILATOR CONTROL: ERV-A POINTS LIST" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SYSTEM DESCRIPTION:
THE ENERGY RECOVERY VENTILATOR CONSTISTS OF A TOTAL ENTHALPY HEAT EXCHANGER, EXHAUST AND OUTSIDE AIR TUNNELS EACH WITH A FILTER AND FAN AND ISOLATION DAMPERS..

SEQUENCE OF OPERATION:
THE ERV SHALL BE INTERLOCKED WITH THE SCHEDULED AHU SYSTEM. WHEN THE ASSOCIATED AHU IS OPERATING IN OCCUPIED MODE, THE ERV SHALL BE ENERGIZED.

WHENEVER THE ERV IS ENERGIZED, THE FOLLOWING SHALL OCCUR:
- THE OUTSIDE AIR DAMPER SHALL BE OPENED.
- THE EXHAUST AIR DAMPER SHALL BE OPENED.
- THE SUPPLY FAN SHALL BE ENERGIZED AND SHALL OPERATE AT A CONSTANT SPEED.
- THE EXHAUST FAN SHALL BE ENERGIZED AND SHALL OPERATE AT A CONSTANT SPEED.

WHEN THE ASSOCIATED AHU IS OPERATING IN UNOCCUPIED MODE OR IS SHUT DOWN FOR ANY REASON, THE ERV SHALL BE DE-ENERGIZED.

WHENEVER THE ERV IS DE-ENERGIZED, THE FOLLOWING SHALL OCCUR:
- THE EXHAUST FAN SHALL BE DE-ENERGIZED.
- THE SUPPLY FAN SHALL BE DE-ENERGIZED.
- THE EXHAUST AIR DAMPER SHALL BECLOSED.
- THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

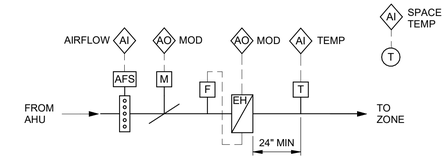
SAFETIES AND ALARMS:
IF ANY OF THE FOLLOWING CONDITIONS ARE MET, AN ALARM SHALL BE SENT TO THE BMS OPERATOR WORK STATION, BUT THE UNIT SHALL CONTINUE TO OPERATE:
- THE DIRTY FILTER PRESSURE SENSOR ON EITHER FILTER BANK DETECTS A DIFFERENTIAL PRESSURE THAT EXCEEDS THE CLEAN FILTER PRESSURE DROP PLUS 0.25 IN W.C. (ADJ.).
- ANY DAMPER'S POSITION FEEDBACK IS REPORTED AS DIFFERENT THAN THE POSITION IT IS COMMANDED TO.

IF ANY OF THE FOLLOWING CONDITIONS ARE MET, AN ALARM SHALL BE SENT TO THE BMS OPERATOR WORK STATION AND THE UNIT SHALL BE SHUT DOWN VIA A HARDWIRED INTERLOCK WITH THE ASSOCIATED FAN VFD:
- STATIC PRESSURE EXCEEDING THE CONNECTED DUCTWORK PRESSURE CLASS IS DETECTED.

IF THE EMERGENCY HVAC SHUTOFF SWITCH IS ACTIVATED, THE FOLLOWING SHALL OCCUR UNTIL MANUALLY RESET:
- AN ALARM SHALL BE GENERATED AT THE BMS OPERATOR WORKSTATION.
- THE ERV SHALL BE DE-ENERGIZED.

REPORT GENERATION:
THE BMS SHALL MONITOR THE FOLLOWING POINT ON 10 MIN (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 365 DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:
- DATE/TIME
- OUTSIDE AIR ENTERING TEMPERATURE (DEG. F.)
- OUTSIDE AIR LEAVING TEMPERATURE (DEG. F.)
- EXHAUST AIR ENTERING TEMPERATURE (DEG. F.)
- EXHAUST AIR LEAVING TEMPERATURE (DEG. F.)

01 / M-701 ERV-A: ENERGY RECOVERY VENTILATOR CONTROL
SCALE: NTS



SEQUENCE OF OPERATION:
REFER TO M-702 FOR VAV TERMINAL UNIT: VAV-A POINTS LIST FOR ADDITIONAL INFORMATION.

SYSTEM DESCRIPTION:
THE SYSTEM CONSISTS OF A VAV TERMINAL UNIT WITH MOTOR OPERATED DAMPER AND ELECTRIC SCR HEATING COIL.

SEQUENCE OF OPERATION:
THE UMCS SHALL MODULATE THE VAV DAMPER AND HEATING COIL SCR CONTROLLER TO MAINTAIN THE SPACE TEMPERATURE SETPOINTS:

- OCCUPIED 68 DEG. F. - 78 DEG. F. (ADJ.)
- UNOCCUPIED 60 DEG. F. - 84 DEG. F. (ADJ.)

DURING FULL COOLING, THE VAV SHALL BE OPEN TO THE MAXIMUM COOLING CFM POSITION AND THE HEATING COIL SHALL BE DE-ENERGIZED.

ON A FALL IN SPACE TEMPERATURE, THE VAV SHALL MODULATE THE DAMPER CLOSED UNTIL THE SPACE COOLING SETPOINT IS MAINTAINED, OR UNTIL IT REACHES THE MINIMUM SCHEDULED CFM. THE HEATING COIL CONTROL SHALL REMAIN DE-ENERGIZED.

ON A FURTHER FALL IN SPACE TEMPERATURE, AND UPON PROOF OF AIRFLOW, THE HEATING COIL SHALL BE ENERGIZED AND SHALL MODULATE AS NEEDED TO MAINTAIN THE SPACE SETPOINT UNTIL THE SUPPLY AIR TEMPERATURE MEETS THE HEATING SUPPLY AIR TEMPERATURE.

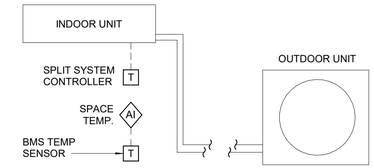
ON A FURTHER FALL IN SPACE TEMPERATURE, THE VAV SHALL MODULATE THE DAMPER TO OPEN UP TO THE MAXIMUM HEATING CFM POSITION WHILE ALSO MODULATING THE HEATING COIL SCR CONTROLLER TO MAINTAIN THE SCHEDULED HEATING SUPPLY AIR TEMPERATURE.

ON A RISE IN SPACE TEMPERATURE, THE SEQUENCE SHALL OPERATE IN REVERSE.

SAFETIES AND ALARMS:
IF ANY OF THE FOLLOWING CONDITIONS ARE MET, AN ALARM SHALL BE SENT TO THE UMCS OPERATOR:

- THE SPACE TEMPERATURE IS MORE THAN 10 DEG. F. (ADJ.) ABOVE OR BELOW THE SETPOINT.

02 / M-701 VAV-A CONTROL SEQUENCE
SCALE: NTS



REFER TO "SPLIT SYSTEM CONTROL: SS-A POINTS LIST" ON M-705 FOR ADDITIONAL INFORMATION AND REQUIREMENTS

SYSTEM DESCRIPTION:
SYSTEM CONSISTS OF A DUCTLESS MINI-SPLIT HEAT PUMP SYSTEM AND ASSOCIATED WALL MOUNTED THERMOSTAT/CONTROLLER. A SEPARATE TEMPERATURE SENSOR SHALL REPORT SPACE TEMPERATURE TO THE BMS.

SEQUENCE OF OPERATION:
THE SPLIT SYSTEM IS CONTROLLED BY A FACTORY ASSEMBLED MICROPROCESSOR BASED CONTROL SYSTEM.

THE CONTROLLER SHALL ENABLE/DISABLE/MODULATE THE SYSTEM TO MAINTAIN THE COOLING SPACE TEMPERATURE SETPOINT OF 75 DEG F (ADJ.) AND HEATING SPACE TEMPERATURE SETPOINT OF 70 DEG F (ADJ.).

THE CONTROLLER SHALL BE CAPABLE OF AUTOMATIC CHANGEOVER AND 7-DAY PROGRAMMABLE SCHEDULE. THE SYSTEM SHALL AUTOMATICALLY RESTART FOLLOWING POWER FAILURE.

A SEPARATE TEMPERATURE SENSOR SHALL REPORT THE SPACE TEMPERATURE TO THE BMS.

SAFETIES AND ALARMS:
IF ANY OF THE FOLLOWING CONDITIONS ARE MET, AN ALARM SHALL BE SENT TO THE BMS OPERATOR WORKSTATION:
- THE SPACE TEMPERATURE EXCEEDS 80 DEG. F. (ADJ.).
- THE SPACE TEMPERATURE FALLS BELOW 60 DEG. F. (ADJ.).

03 / M-701 SPLIT SYSTEM CONTROL SEQUENCE
SCALE: NTS

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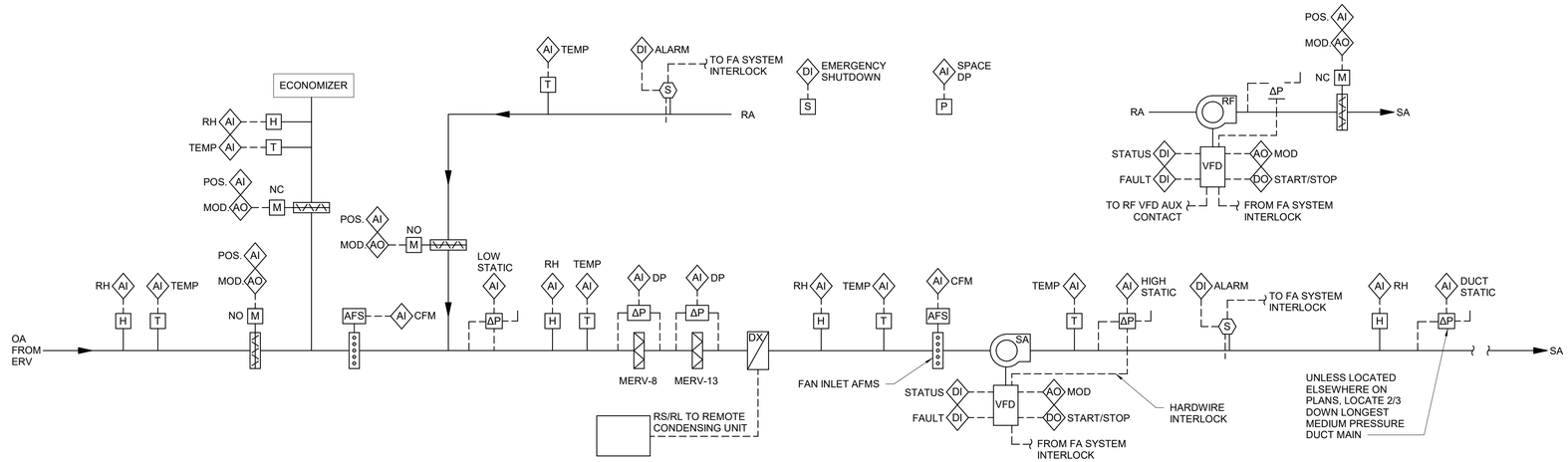

SEQUENCE OF OPERATION:
REFER TO M-70X FOR AIR HANDLING UNIT: AHU-A CONTROL POINTS LIST FOR ADDITIONAL INFORMATION.

SYSTEM DESCRIPTION:
THE SYSTEM CONSISTS IN GENERAL OF A SPLIT SYSTEM DX UNIT WITH ECONOMIZER SECTION WITH MODULATING DAMPERS FOR RETURN AIR, FILTER SECTION WITH MERV-8 AND MERV-13 FILTER, DX COOLING/HEATING COIL, SUPPLY FAN AND DISCHARGE SECTION.

OCCUPANCY MODE:
THE SYSTEM SHALL OPERATE IN EITHER OCCUPIED OR UNOCCUPIED MODE BASED ON A SCHEDULE DETERMINED BY THE USER AND PROGRAMMED THROUGH THE UMCS. OCCUPANCY MODE MAY ALSO BE OVERRIDDEN REMOTELY BY THE UMCS OPERATOR.

SUPPLY FAN OPERATION:
UMCS SHALL MODULATE SIGNAL TO SUPPLY FAN VFD AS REQUIRED TO MAINTAIN DUCT STATIC PRESSURE AS MEASURED BY STATIC PRESSURE TRANSMITTER. UMCS SHALL RESET SUPPLY DUCT STATIC PRESSURE SETPOINT AS REQUIRED TO MAINTAIN AT LEAST ONE SUPPLY TERMINAL UNIT DAMPER 95% (ADJ.) OPEN. UMCS SHALL UTILIZE COMMAND TO ALL SUPPLY TERMINAL UNIT POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

DISCHARGE AIR TEMPERATURE SET POINT:
DISCHARGE AIR SET POINT SHALL BE 55ºF (ADJ.). WHEN THE ENTERING AIR TEMPERATURE EXCEEDS THE SETPOINT, THE PACKAGED CONTROLLER SHALL MODULATE DX CIRCUITS AS NEEDED TO MAINTAIN THE SETPOINT. WHEN THE ENTERING AIR TEMPERAUTRE IS BELOW THE SETPOINT, THE ELECTRIC DUCT HEATER SHALL BE ENABLED AND MODUALTED TO MAINTAIN THE SETPOINT. BOTH COOLING AND HEATING SHALL NOT OCCUR SIMULTANEOUSLY.

DISCHARGE AIR TEMPERATURE RESET:
DISCHARGE AIR TEMPERATURE SETPOINT SHALL RESET BETWEEN THE MINIMUM 55 DEG F (ADJ.) AND MAXIMUM 60 DEG F (ADJ.) AS REQUIRED TO MAINTAIN THE HIGHEST SPACE TEMPERATURES BELOW THE COOLING SETPOINTS.

- WHEN TWO (ADJ.) SPACE TEMPERATURE SENSORS REPORT SPACE TEMPERATURES THAT EXCEED THE EFFECTIVE COOLING SETPOINT FOR 10 MIN (ADJ.), THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL DECREASE BY 1 DEG F (ADJ.) EVERY 10 MIN (ADJ.) UNTIL THE MINIMUM DISCHARGE AIR TEMPERATURE IS REACHED.
- WHEN ALL (ADJ.) SPACE TEMPERATURES ARE BELOW THE EFFECTIVE COOLING SETPOINT FOR 10 MIN (ADJ.), THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL INCREASE BY 1 DEG F (ADJ.) EVERY 10 MIN (ADJ.) UNTIL THE AHU REACHES THE MAXIMUM DISCHARGE AIR TEMPERATURE OR ONLY ONE SPACE TEMPERATURE EXCEEDS THE EFFECTIVE SETPOINT.
- IF RETURN AIR RH EXCEEDS 60%, RESET THE DISCHARGE AIR TEMPERATURE TO 55 DEG F (ADJ.) UNTIL RETURN AIR RH FALLS BELOW 50% (ADJ.).

USER TOGGLE - STATIC PRESSURE AND DISCHARGE AIR TEMPERATURE RESETS:
PROVIDE USER WITH OPTION TO USE EITHER STATIC PRESSURE RESET OR DISCHARGE AIR TEMPERATURE RESET. ONLY ONE CONTROL OPTION SHALL BE USED AT A TIME. GRAPHIC ON AHU SCREEN SHALL ALLOW USER TO TOGGLE FROM EITHER TEMPERATURE OR STATIC PRESSURE RESET.

VENTILATION AIR/ECONOMIZER OPERATION:
WHEN THE SYSTEM IN OCCUPIED MODE, THE SYSTEM SHALL OPERATE IN ONE OF THREE VENTILATION SCHEMES:

- MINIMUM VENTILATION:
  THIS SCHEME SHALL BE ENABLED WHENEVER THE OUTSIDE AIR TEMPERATURE OR DP EXCEEDS THE ECONOMIZER SETPOINTS. IN THIS SCHEME, THE UNIT SHALL OPEN AND MODULATE THE OUTSIDE AIR AND RETURN AIR DAMPERS TO MAINTAIN THE MINIMUM SCHEDULED OUTSIDE AIR RATE, AS MEASURED BY THE OUTSIDE AIR FLOW MEASURING STATION.

- INTEGRATED ECONOMIZER:
  THIS SCHEME SHALL BE ENABLED WHENEVER THE OUTSIDE AIR TEMPERATURE AND DP FALLS BELOW THE ECONOMIZER SETPOINT BUT EXCEEDS THE SUPPLY AIR DB SETPOINT. IN THIS SCHEME, THE UNIT SHALL OPEN THE ECONOMIZER DAMPER COMPLETELY AND SHALL SHUT THE OUTSIDE AIR AND RETURN AIR DAMPER COMPLETELY. THE RELIEF FAN SHALL ENGAGE AND THE RELIEF AIR DAMPER SHALL OPEN FULLY AND MODULATE TO MAINTAIN THE BUILDING PRESSURIZATION SETPOINT. IF THE OUTSIDE AIR TEMPERATURE OR DP RISES ABOVE THE ECONOMIZER SETPOINTS FOR 15 MIN (ADJ.), THE SYSTEM SHALL RETURN TO THE MINIMUM VENTILATION SCHEME.

- MODULATING ECONOMIZER:
  THIS SCHEME SHALL BE ENABLED WHENEVER THE OUTSIDE AIR TEMPERATURE FALLS BELOW THE SUPPLY AIR SETPOINT. IN THIS SCHEME, THE UNIT SHALL OPEN AND MODULATE THE ECONOMIZER AND RETURN AIR DAMPERS TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT. THE RELIEF FAN SHALL CONTINUE TO OPERATE AND MODULATE TO MAINTAIN THE SPACE PRESSURIZATION SETPOINT, UNTIL THE SYSTEM RETURNS TO MINIMUM OA MODE. THE OUTSIDE AIR RATE MUST NOT FALL BELOW THE SCHEDULED VALUE. IF THE OUTSIDE AIR TEMPERATURE RISES ABOVE THE SUPPLY AIR SETPOINT FOR 30 MIN (ADJ.), THE SYSTEM SHALL RETURN TO THE INTEGRATED ECONOMIZER SCHEME.

THE ECONOMIZER SETPOINTS SHALL BE 70 DEG. F. DB(ADJ.) AND 57 DEG. F. DP (ADJ.).

THE SPACE PRESSURIZATION SETPOINT SHALL BE +0.05 IN. W.C. (ADJ.).

WHEN THE SYSTEM IS IN UNOCCUPIED MODE, THE OUTSIDE AIR, ECONOMIZER, AND RETURN AIR DAMPER SHALL BE POSITIONED FOR FULL RECIRCULATION.

SMOKE DETECTION:
IF SMOKE IS DETECTED IN THE SUPPLY OR RETURN AIR STREAM, THE UNIT SHALL SHUT DOWN AND AN ALARM SHALL BE SENT TO THE UMCS OPERATOR. THE SHUTDOWN SEQUENCE SHALL BE ACCOMPLISHED THROUGH THE BUILDING FIRE ALARM CONTROL SYSTEM VIA A HARDWIRED INTERLOCK WITH THE SUPPLY FAN VFD.

HIGH OR LOW STATIC PRESSURE:
IF STATIC PRESSURE HIGHER THAN THE CONNECTED DUCTWORK CLASS IS DETECTED, THE UNIT SHALL SHUT DOWN AND AN ALARM SHALL BE SENT TO THE UMCS OPERATOR. THE SHUTDOWN SEQUENCE SHALL BE ACCOMPLISHED VIA A HARDWIRED INTERLOCK WITH THE SUPPLY FAN VFD.

UNIT SHUTDOWN:
WHENEVER THE SYSTEM IS SHUT DOWN, THE FOLLOWING SHALL OCCUR:

- THE SUPPLY FAN SHALL BE DE-ENERGIZED.
- THE COOLING SECTION SHALL BE DE-ENERGIZED.
- THE ECONOMIZER DAMPER SHALL BE CLOSED.
- THE OA DAMPER SHALL BE CLOSED.
- THE RETURN AIR DAMPER SHALL BE OPENED COMPLETELY.
- THE RELIEF AIR FAN SHALL BE DE-ENERGIZED.

SAFETIES AND ALARMS:
IF ANY OF THE FOLLOWING CONDITIONS ARE MET, AN ALARM SHALL BE SENT TO THE UMCS OPERATOR:

- IF THE DIRTY FILTER PRESSURE SENSOR FOR EITHER FILTER BANK IS ACTIVATED AT 0.25 IN. W.C. (ADJ.) ABOVE CLEAN FILTER PRESSURE DROP.
- A FAULT IS GENERATED AT THE UNIT CONTROLLER.
- ANY DAMPER'S POSITION FEEDBACK IS REPORTED AS DIFFERENT FROM THE POSITION THAT IT IS COMMANDED TO.
- A HIGH STATIC CONDITION IS DETECTED IN THE SUPPLY AIR DUCT.
- A LOW STATIC CONDITION IS DETECTED IN THE RETURN AIR DUCT.

EMERGENCY HVAC SYSTEM SHUTOFF:
IF ANY OF THE EMERGENCY SHUTOFF SWITCHES IS ACTIVATED, THE FOLLOWING SHALL OCCUR:

- THE ECONOMIZER DAMPER SHALL BE CLOSED.
- THE RETURN AIR DAMPER SHALL BE OPENED COMPLETELY.
- THE UNIT SHALL CONTINUE TO OPERATE TO MAINTAIN THE SPACE TEMPERATURE SETPOINTS.
- ECONOMIZER MODE SHALL BE OVERRIDDEN BY THIS SEQUENCE.

THE UNIT MAY NOT RETURN TO NORMAL OPERATION UNTIL THE SWITCH IS MANUALLY DEACTIVATED.

REPORT GENERATION:
DDC UMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MIN (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 365 DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:

- DATE / TIME
- OUTSIDE AIR TEMPERATURE (DEG. F.)
- OUTSIDE AIR HUMIDITY (DEG. F.)
- OUTSIDE AIR FLOW (CFM)
- OUTSIDE AIR DAMPER POSITION (% OPEN)
- SUPPLY AIR TEMPERATURE (DEG. F.)
- SUPPLY AIR RELATIVE HUMIDITY (%)
- SUPPLY AIR FLOW (CFM)
- SUPPLY FAN SPEED (%)
- SPACE TEMPERATURE (DEG. F)
- RETURN AIR TEMPERATURE (DEG. F.)
- RETURN AIR RELATIVE HUMIDITY (%)
- RETURN AIR DAMPER POSITION (% OPEN)
- RELIEF AIR DAMPER POSITION (% OPEN)
- COOLING STATUS (ON/OFF/ALARM)
- OCCUPANCY MODE (OCCUPIED/UNOCCUPIED)
- ECONOMIZER DAMPER POISITON (% OPEN)
- ECONOMIZER SCHEME (MIN OA/INTEGRATED/MODULATING)

01
M-702

PACKAGED MULTI-ZONE VAV AIR HANDLING UNIT
CONTROL: AHU-A
NTS

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CHECKED BY: AO
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MECHANICAL CONTROLS

SHEET NUMBER
M-702

MULTI ZONE VAV DX SYSTEM: AHU-A POINTS LIST

POINT DESCRIPTION	INPUT		OUTPUT		SETPOINT ADJUSTMENT	CRITICAL ALARM	HIGH LIMIT	LOW LIMIT	FAILURE	TREND	EVENT HISTORY	ARCHIVE	TOTALIZATION	GRAPHIC	UNITS
	ANALOG	DIGITAL	ANALOG	DIGITAL											
SUPPLY AIR TEMPERATURE	AI													G	TEMP
SUPPLY AIR RELATIVE HUMIDITY	AI													G	RH
SUPPY AIR STATIC PRESSURE	AI													G	INCHES
SUPPLY AIRFLOW RATE	AI													G	CFM
OUTDOOR AIR TEMPERATURE	AI													G	TEMP
OUTDOOR AIR RELATIVE HUMIDITY	AI													G	RH
RETURN AIR TEMPERATURE	AI													G	TEMP
MIXED AIR TEMPERATURE	AI													G	TEMP
MIXED AIR RELATIVE HUMIDITY	AI													G	TEMP
DISCHARGE TEMPERATURE	AI													G	TEMP
FILTER STATUS (MERV 8)	AI													G	TEMP
FILTER STATUS (MERV 13)	AI													G	TEMP
ECONOMIZER DAMPER POSITION	AI													G	TEMP
ECONOMIZER DAMPER COMMAND			AO												
RETURN DAMPER POSITION	AI													G	TEMP
RETURN DAMPER COMMAND			AO												
OUTSIDE AIR DAMPER POSITION	AI													G	TEMP
OUTSIDE AIR DAMPER COMMAND			AO												
FREEZESTAT STATUS															
SMOKE DETECTOR STATUS		DI				Y								G	ON/OFF
SUPPLY FAN START/STOP				DO											
SUPPLY FAN SPEED			AO												
SUPPLY FAN STATUS		DI												G	ON/OFF
SUPPLY FAN ALARM		DI												G	ALARM
EMERGENCY SHUTDOWN		DI												G	ON/OFF
SPACE DIFFERENCIAL PRESSURE	AI					Y								G	INCHES
DUCT STATIC PRESSURE	AI					Y								G	INCHES
RELIEF FAN START/STOP				DO											
RELIEF FAN STATUS		DI							F		E	A		G	ON/OFF
RELIEF AIR DAMPER COMMAND			AO												
RELIEF AIR DAMPER POSITION		DI							F		E	A		G	OPEN/CLOSED

NOTES:

1. REFER TO AHU-A CONTROL ON M-702 FOR ADDITIONAL INFORMATION.
2. REFER TO PLANS FOR EXACT QUANTITY OF EACH POINT.

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SHEET NUMBER
M-703

ENERGY RECOVERY VENTILATOR: ERV-A POINTS LIST

POINT DESCRIPTION	INPUT		OUTPUT		SETPOINT ADJUSTMENT	CRITICAL ALARM	HIGH LIMIT	LOW LIMIT	FAILURE	TREND	EVENT HISTORY	ARCHIVE	TOTALIZATION	GRAPHIC	UNITS
	ANALOG	DIGITAL	ANALOG	DIGITAL											
OUTSIDE AIR ENTERING AIR TEMPERATURE	AI													G	TEMP
OUTSIDE AIR DAMPER POSITION		DI												G	OPEN/CLOSED
OUTSIDE AIR DAMPER COMMAND				DO											
OUTSIDE AIR STATIC PRESSURE	AI													G	INCHES
OUTSIDE AIR PRE FILTER DIRTY FILTER ALARM	AI													G	DIRTY/CLEAN
FRESH AIR LEAVING AIR TEMPERATURE	AI													G	TEMP
SUPPLY FAN START/STOP				DO											
SUPPLY FAN STATUS		DI												G	ON/OFF
SUPPLY FAN SPEED	AI													G	RPM
SUPPLY FAN ALARM		DI													
FRESH AIR HIGH STATIC PRESSURE		DI												G	INCHES
EXHAUST AIR ENTERING AIR TEMPERATURE	AI													G	TEMP
EXHAUST AIR PRE-FILTER DIRTY FILTER STATUS	AI													G	DIRTY/CLEAN
EXHAUST AIR FAN START/STOP				DO											
EXHAUST AIR FAN STATUS		DI												G	ON/OFF
EXHAUST AIR FAN SPEED	AI													G	RPM
EXHAUST AIR FAN ALARM		DI													
EXHAUST AIR DAMPER POSITION		DI												G	OPEN/CLOSED
EXHAUST AIR DAMPER COMMAND				DO											

NOTES:

1. REFER TO ERV-A CONTROL ON M-701 FOR ADDITIONAL INFORMATION.
2. REFER TO PLANS FOR EXACT QUANTITY OF EACH POINT.

VAV CONTROL WITH ELECTRIC REHEAT: VAV-A POINTS LIST

POINT DESCRIPTION	INPUT		OUTPUT		SETPOINT ADJUSTMENT	GENERAL/ CRITICAL ALARM	HIGH LIMIT	LOW LIMIT	FAILURE	TREND	EVENT HISTORY	ARCHIVE	TOTALIZATION	GRAPHIC	UNITS
	ANALOG	DIGITAL	ANALOG	DIGITAL											
VAV DISCHARGE AIR TEMPERATURE	AI									T		A		G	DEG. F.
ROOM TEMPERATURE	AI				S	CA	H	L		T		A		G	DEG. F.
AIRFLOW VOLUME	AI									T		A		G	CFM
VAV DAMPER ACTUATOR			AO												
VAV DAMPER POSITION	AI									T		A		G	% OPEN
REHEAT COIL MODULATION			AO												

NOTES:

1. REFER TO VAV CONTROL WITH ELECTRIC REHEAT: VAV-A ON M-701 FOR ADDITIONAL INFORMATION.
2. REFER TO PLANS FOR EXACT QUANTITY OF EACH POINT.

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ELECTRICAL SYMBOLS LEGENDS AND ABBREVIATIONS

GENERAL NOTES:

(APPLICABLE TO ALL ELECTRICAL SHEETS)

1. ALL WORKS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH TINKER AFB ELECTRICAL STANDARDS (JAN 2026)
2. EQUIPMENT INTERRUPTING CAPACITIES SPECIFIED IN THE CONTRACT DOCUMENTS ARE BASED UPON EQUIPMENT CHARACTERISTICS AND IMPEDANCES SHOWN ON THE DRAWINGS. IF ACTUAL INSTALLED EQUIPMENT DEVIATES FROM THESE CHARACTERISTICS OR HAS LOWER IMPEDANCES. THE CONTRACTOR SHALL INCREASE THE INTERRUPTING CAPACITIES OF ALL ITEMS ON THE LOAD SIDE OF THE DEVIANT EQUIPMENT IN DIRECT PROPORTION TO THE CHANGED CHARACTERISTICS. INTERRUPTING CAPACITIES SHALL NOT BE REDUCED TO VALUES LESS THAN THOSE REQUIRED BY THE CONTRACT DOCUMENTS.
3. FIRE STOP SHALL BE PROVIDED AT ALL LOCATIONS WHERE ELECTRICAL EQUIPMENT OR SYSTEMS PENETRATE FIRE RATED WALLS. SEE ARCHITECTURAL PLANS FOR RATED WALL LOCATIONS.
4. CONTROL WIRING P&ID'S FOR MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE SHEETS.
5. RISER AND ONE-LINE DIAGRAMS ARE MEANT TO SHOW ELECTRICAL RELATIONSHIPS FOR EQUIPMENT, AND THEREFORE MAY NOT INCLUDE ALL REQUIRED EQUIPMENT DEVICES, AND ACCESSORIES.

POWER SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	RECEPTACLE, DUPLEX, 20A, 120V, GROUNDING 2W+G, NEMA 5-20R
C	RECEPTACLE, DUPLEX, SERVING COMPUTER LOAD. 20A, 120V, GROUNDING 2W+G RECEPTACLE, NEMA 5-20R
F	RECEPTACLE, DUPLEX, FLOOR MOUNTED, FLUSH, 20A, 120V, GROUNDING 2W+G NEMA 5-20R.
	RECEPTACLE, DUPLEX, CEILING MOUNTED, 20A, 120V, GROUNDING 2W+G, NEMA 5-20R
IG	ISOLATED GROUND RECEPTACLE, DUPLEX, ORANGE TYPE. 20A, 120V, GROUNDING 2W+2G RECEPTACLE, NEMA 5-20R
	240 VOLT 20 AMP RECEPTACLE
	RECEPTACLE, DUPLEX, SPECIAL PURPOSE
	RECEPTACLE, QUADRAPLEX
	RECEPTACLE/EQUIPMENT CONNECTION, SPECIAL PURPOSE
C	RECEPTACLE, CLOCK
J	JUNCTION BOX, ABOVE CEILING
C J	JUNCTION BOX, WALL MOUNTED, SERVING COMPUTER LOAD.
	HORIZONTAL WIREMOLD
	VERTICAL WIREMOLD
$	SWITCH, TOGGLE, WALL MOUNTED, 20A., 120/277V RATED (AC ONLY), SINGLE-POLE, MOUNT 54" AFF
$2	SWITCH, TOGGLE, WALL MOUNTED, 20A., 120/277V RATED (AC ONLY), DOUBLE-POLE, MOUNT 54" AFF
$3	SWITCH, TOGGLE, WALL MOUNTED, 20A., 120/277V RATED (AC ONLY), THREE-WAY, SPDT. MOUNT 54" AFF
$4P	SWITCH, LOW VOLTAGE, WALL MOUNTED, 4-SCREEN PRESET. MOUNT 54" AFF
$a,b WS	WALL STATION, LOW VOLTAGE 0-10V, CONTROL ZONES. SEE DETAILS.
$M	SWITCH, MOTOR
$OS	SWITCH, OCCUPANCY SENSOR
OS a,b	OCCUPANCY SENSOR, CEILING MOUNTED. CONTROL ZONES, IF APPLICABLE.
P	PHOTOSENSOR, CEILING MOUNTED
	BRANCH CIRCUIT HOME RUN WITH NEUTRAL, PHASE AND EQUIPMENT GROUND RESPECTIVELY
T	TRANSFORMER, DRY TYPE
	SWITCH, DISCONNECT
	COMBINATION STARTER/DISCONNECT WITH HOA SWITCH-COORDINATE WITH MECH. CONTRACTOR.

POWER SYMBOLS LEGEND (CONTINUED)

SYMBOL	DESCRIPTION
	PANELBOARD, SURFACE MOUNTED
	PANELBOARD, RECESSED
	RACEWAY, ABOVE FLOOR
	RACEWAY, RISER UP
	RACEWAY, RISER DOWN
M	MOTOR
T	THERMOSTAT BY MECHANICAL CONTRACTOR
	CEILING FAN
	TELEPHONE RECEPTACLE, WALL MOUNTED
	DATA RECEPTACLE, WALL MOUNTED
	TELEPHONE/DATA RECEPTACLE, WALL MOUNTED
	BELL
S	SPEAKER, CEILING MOUNTED
M	MICROPHONE, CEILING MOUNTED
	SPEAKER CONTROL
	SOUND CABINET
	AUDIO/VISUAL PROJECTOR
TV	CABLE TV OUTLET
VFD	VARIABLE FREQUENCY DRIVER
HH	HANDHOLE

LIGHTING SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	RECESSED CEILING MOUNTED LED TROFFER
	LED INDUSTRIL STRIP LIGHT, SURFACE OR PENDANT MOUNTED
	FIXTURE WITH INTERGAL EMERGENCY BATTERY
	LED FIXTURE, SURFACE OR PENDANT
	RECESSED DOWNLIGHT
	EXTERIOR WALL PACK
	CFL/HID/LED FIXTURE, AREA LIGHT POLE
	EXIT SIGN, LIGHTED, SURFACE OR PENDANT, CEILING MOUNTED W/LIGHTED FACE AND DIRECTIONAL ARROW.
	EXIT SIGN, LIGHTED, WALL MOUNTED.
	EMERGENCY LIGHT, 2 LAMPS, BATTERY POWERED
	BRANCH CIRCUIT HOME RUN
	LIGHTING SWITCHLEG
TC	DIGITAL TIME CLOCK

ONE-LINE & CONTROL SCHEMATIC LEGEND

SYMBOL	DESCRIPTION
	SCHEMATIC, CIRCUIT CONNECTIONS
	SCHEMATIC CIRCUIT
	ELECTRICAL BUSS
	SEPARABLE (PLUG-IN) CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
	CABLE OR WIRE
	SWITCH, DISCONNECT, FUSED, LOAD BREAK. FUSE AMPERE RATING [A] AND FUSE TYPE SHOWN NEXT TO SYMBOL
	TRANSFORMER, POWER, KVA RATING, WINDING VOLTAGES AND CONNECTIONS ARE SHOWN NEXT TO SYMBOL
	TRANSFORMER, CURRENT, TURNS RATIO, SHOWN NEXT TO SYMBOL
	GROUNDING CONNECTION. WHEN USED WITH TRANSFORMER WINDING SYMBOL IT INDICATES A NEUTRAL GROUNDING CONNECTION (ON SECONDARY SIDE ONLY)
D	DELTA CONNECTED
Y	WYE CONNECTED
	GROUNDED WYE WINDING CONNECTION
	RELAY OR CONTACTOR CONTACTS
	CIRCUIT BREAKER, MOLDED CASE, TRIP CURRENT [A] AND QUANTITY OF POLES [P] SHOWN NEXT TO SYMBOL
1200A 3P	SWITCH, DISCONNECT, NON-FUSED, LOAD BREAK. CONTINUOUS CURRENT RATING [A] AND QUANTITY OF POLES [P] SHOWN NEXT TO SYMBOL
	FUSE, AMPERE RATING [A] AND FUSE TYPE SHOWN NEXT TO SYMBOL
	MOTOR THERMAL OVERLOAD PROTECTOR
	INTEGRAL PHOTOELECTRIC CELL AND RELAY (PHOTOCONTROL)
M	WATTHOUR METER
C	CONTACTOR OR RELAY COIL. LETTER(S) INSIDE OF SYMBOL MATCH CONTACTS CONTROLLED
	SURGE ARRESTER, VALVE TYPE ARRESTER KV RATING SHOWN NEXT TO SYMBOL
	EQUIPMENT ENCLOSURE
SPD	SURGE PROTECTION DEVICE
GFP	GROUND FAULT PROTECTION

SITE UTILITIES LEGEND

SYMBOL	DESCRIPTION
—E—E—	DUCT BANK, OVERHEAD PRIMARY
—ES—ES—	DUCT BANK, OVERHEAD SECONDARY
–E– – –E–	DUCT BANK, UNDERGROUND PRIMARY
–ES– –ES–	DUCT BANK, UNDERGROUND SECONDARY
E	MANHOLE, ELECTRIC
E	HANDHOLE, ELECTRIC
	POWER POLE, ELECTRIC

GROUNDING LEGEND

SYMBOL	DESCRIPTION
—B—	CONDUCTOR, BARE, UON
	GROUNDING CONNECTION, COUNTERPOISE TO GROUND ROD.

SYMBOL MODIFIERS

SYMBOL	DESCRIPTION
AC	DEVICE MOUNTED ABOVE COUNTER TOP
AV	AUDIBLE AND VISUAL
C	RECEPTACLE SERVING COMPUTER LOAD.
E	EXISTING
F	FIXED TEMPERATURE
GFI	GROUND FAULT CIRCUIT INTERRUPTER
N	NEW
NL	NIGHT LIGHT
R	ITEM OR DEVICE RECESSED INTO MOUNTING SURFACE
RF	RADIO FREQUENCY
WP	WEATHERPROOF

ABBREVIATIONS

A	AMPERES OR TRIP AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	SYMMETRICAL AMPS INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
A/R	AS REQUIRED
ARR.	ARRESTOR
BLDG	BUILDING
BOF	BOTTOM OF FIXTURE
BRKT	BRACKET
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CL	CURRENT LIMITING
CO	CONDUIT ONLY
CTRL	CONTROL
DC	DIRECT CURRENT
D.T.C.	DATA TERMINAL CABINET
EMCS	ENERGY MONITORING AND CONTROL SYSTEM
FACP	FIRE ALARM CONTROL PANEL
FT	FOOT, FEET
GFCI	GROUND FAULT CIRCUIT INTERRUPTER, 5MA PERSONNEL PROTECTION UNLESS OTHERWISE NOTED.
GRD	GROUND
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IG	ISOLATED GROUND
IN	INCH, INCHES
IR	INFRARED
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPS REACTIVE
KWH	KILOWATT HOURS
L-L	LINE TO LINE
L-N	LINE TO NEUTRAL
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
N.O.	NORMALLY OPEN
NLT	NOT LESS THAN
NMT	NOT MORE THAN
OH	OVERHEAD
OV	OVERRIDE SWITCH
PAS	PUBLIC ADDRESS SYSTEM
PE	PHOTOELECTRIC
PH	PHASE
PLCS	PLACES
PNL	PANELBOARD
PVC	POLYVINYL CHLORIDE ELECTRICAL RACEWAY USED ONLY U.G., CARLON OR EQUIVALENT
RC	RIGID STEEL CONDUIT
REF	REFERENCE
REQ'D	REQUIRED
RGC	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RMC	RIGID METALIC CONDUIT
SHT	SHEET
SOB	STANDOFF BRACKET
SPACE	SPACE(S) ONLY (NO BREAKER DEVICE)
SPARE	SPARE BREAKER OR DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPECS	CONTRACT SPECIFICATIONS
SPST	SINGLE-POLE, SINGLE-THROW
S/N	SOLID NEUTRAL
TB	TELEPHONE BACKBOARD
TYP	TYPICAL
UG	UNDERGROUND
UL	LISTED BY UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT AMPERES
W	WATT
WAP	WIRELESS ACCESS POINT
WH	WEATHERHEAD
W/	WITH
Ø	PHASE
2W+G	CIRCUIT TYPE
3W+G	CIRCUIT TYPE
4W+G	CIRCUIT TYPE

SYMBOL NOTES

1. THESE SYMBOLS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. ALL SYMBOLS ARE NOT NECESSARILY USED IN THE DRAWINGS FOR THIS PROJECT. LISTING OF SYMBOLS DOES NOT IMPLY THAT ALL SYMBOLS ARE USED IN THE CONTRACT DRAWINGS.
3. COLORS FOR ALL OUTLETS AND SWITCHES SHALL BE AS SHOWN ON ARCHITECTURAL PLANS.
4. ALL MOUNTING HEIGHTS SHOWN IN SYMBOL LEGEND SHALL BE AS PER TASIADA REQUIREMENTS UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS.
5. BRANCH CIRCUIT NUMBERS MAY BE SHOWN NEXT TO SYMBOLS IN MULTIWIRE CIRCUITS.
6. EQUIPMENT IDENTIFIERS, MATCHING EQUIPMENT SCHEDULES, ARE DISPLAYED ATTACHED TO SYMBOLS BY LEADER ARROWS, UON.
7. SYMBOL ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION, UNLESS NOTED AS SUCH. SEE REFLECTED CEILING PLANS FOR LIGHT FIXTURE POSITIONS AND ORIENTATIONS.
8. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON.
9. LOWER CASE LETTER IN POSITION "X" INDICATES FIXTURES CONTROLLED BY SAME LETTER.
10. PLAN SYMBOLS USE THE FOLLOWING LINE TYPE CONVENTION AND ARE REPRESENTED AS FOLLOWS:
    - LINETYPE, DENOTES EXISTING TO REMAIN
    - LINETYPE, DENOTES EXISTING TO BE DEMOLISHED
    - LINETYPE, DENOTES NEW U.G. OR CONCEALED CONSTRUCTION
    - LINETYPE, DENOTES NEW CONSTRUCTION

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04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

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ELECTRICAL SYMBOLS, LEGEND, & ABBREVIATIONS

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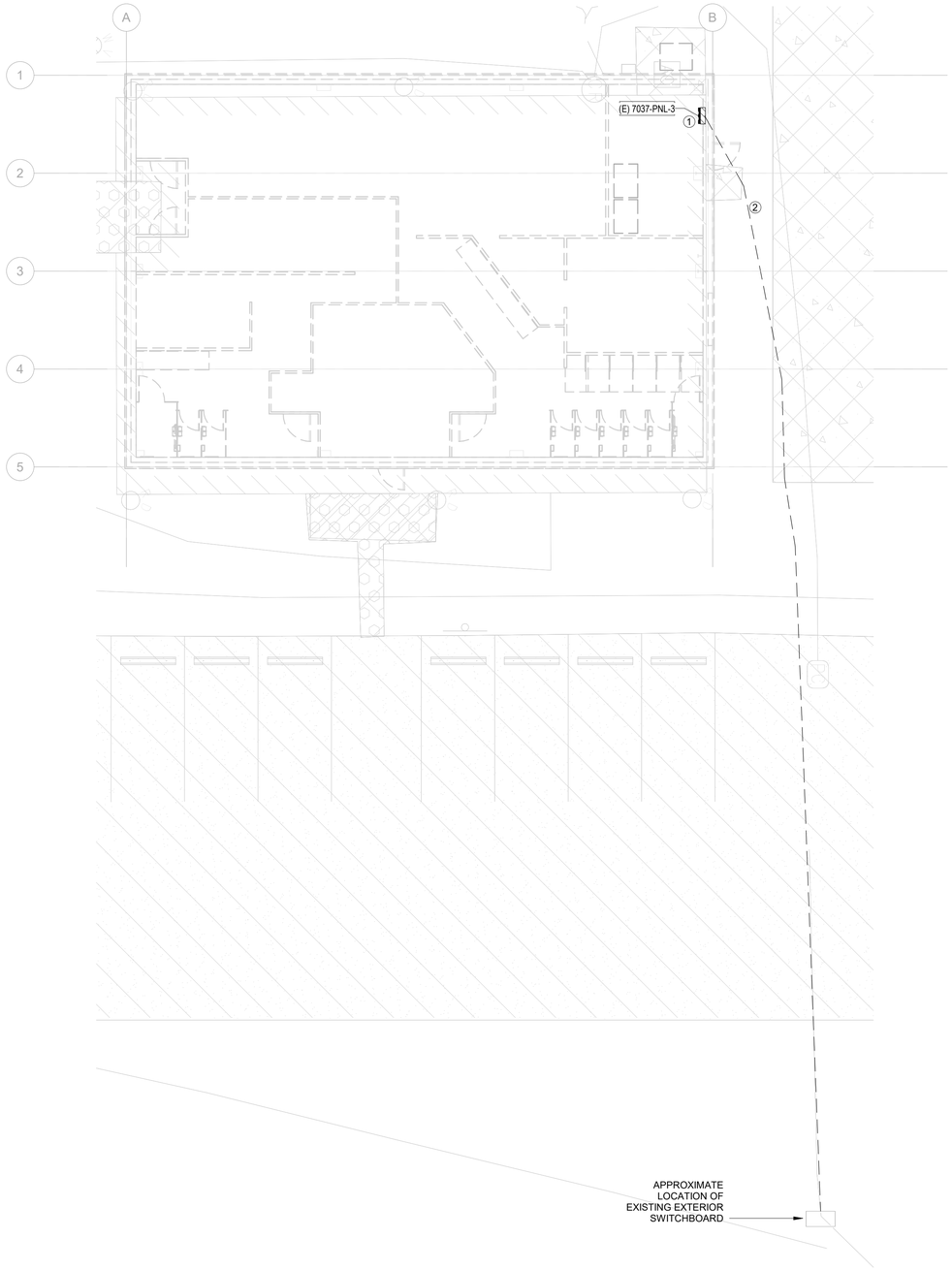
E-001



01
ED101

ELECTRICAL SITE DEMOLITION PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. REFER TO CIVIL PLANS FOR MORE SITE INFORMATION.
2. COORDINATE ALL WORK WITH OTHER DISCIPLINES AND DRAWINGS.
3. REFER TO SHEET E-602 FOR DEMOLITION ONE LINE DIAGRAM.

KEY NOTES

1. DISCONNECT AND REMOVE EXISTING PANELBOARD IN ITS ENTIRETY.
2. REMOVE EXISTING UNDERGROUND CONDUCTORS BACK TO THE SOURCE. REMOVE CONDUITS AS MUCH AS POSSIBLE WITH SITE WORK. REMAINING CONDUIT TO BE CAPPED AND ABANDONED IN PLACE.

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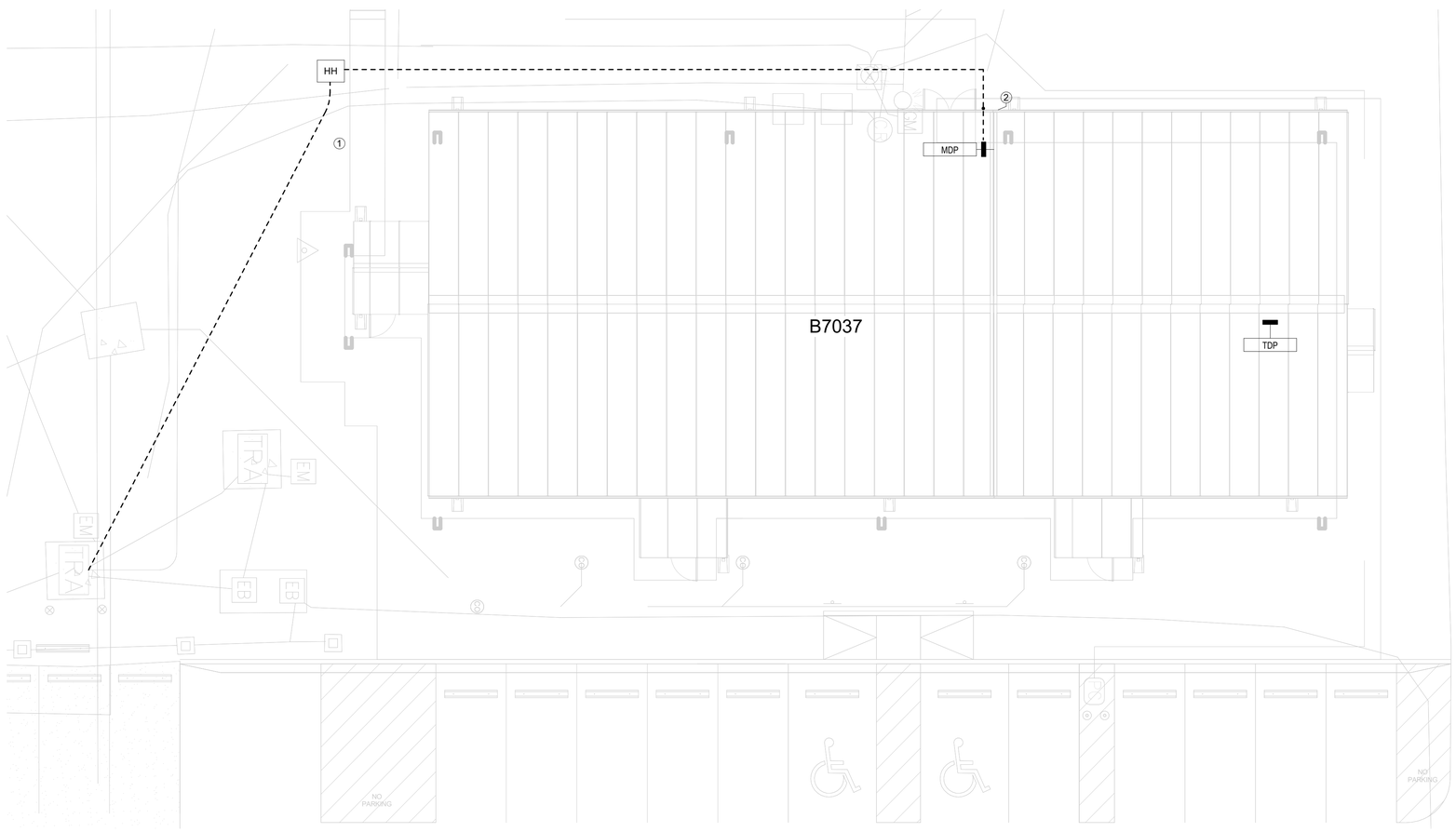

01 ES101 ELECTRICAL SITE PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. REFER TO CIVIL PLANS FOR MORE SITE INFORMATION.
2. COORDINATE SITE WORK WITH OKLAHOMA GAS & ELECTRIC (OG&E) AND ALL OTHER TRADES.

KEY NOTES

1. SERVICE ENTRANCE FEEDER FROM EXISTING UTILITY TRANSFORMER. REFER TO ONE-LINE DIAGRAM ON SHEET E-602 FOR FEEDER SIZE.
2. STUB UP CONDUIT ON THE EXTERIOR WALL BEFORE PENETRATING INTO ELECTRICAL ROOM.

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ELECTRICAL SITE PLAN

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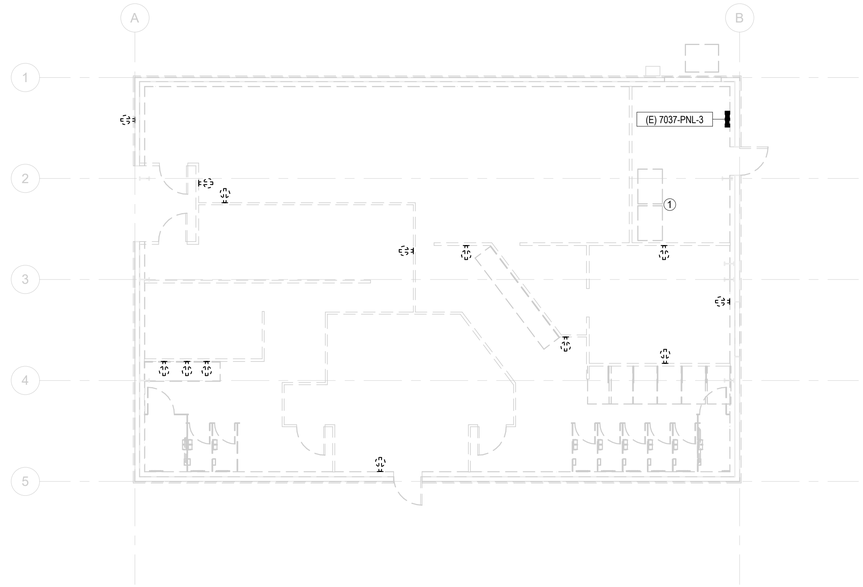
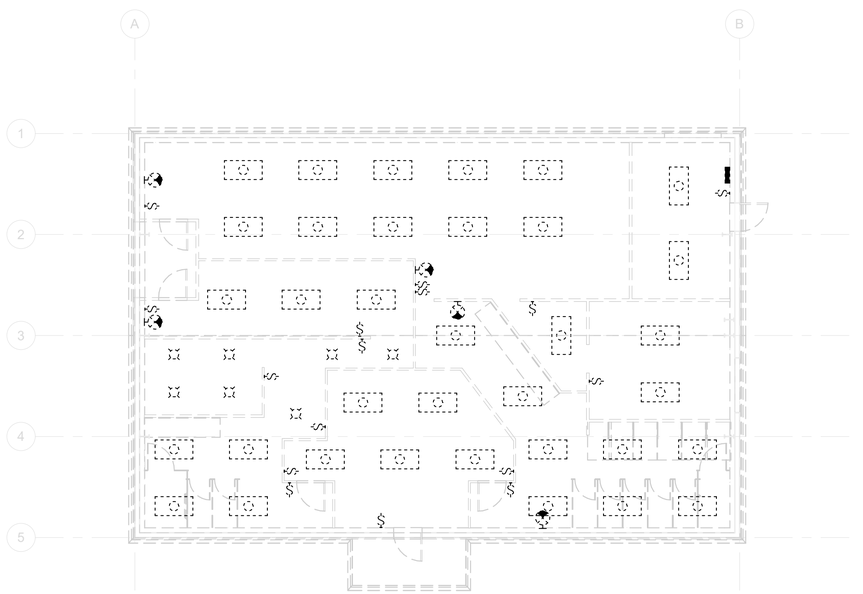


01 ED102 ELECTRICAL DEMOLITION POWER PLAN

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

0 4' 8' 16'



02 ED102 ELECTRICAL LIGHTING DEMOLITION PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. ALL LIGHT FIXTURES, LIGHTING CONTROLS, BRANCH CIRCUITING, AND ANY OTHER ELECTRICAL DEVICES AND EQUIPMENT TO BE REMOVED IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO RACEWAYS, JUNCTION BOXES, CONDUIT SUPPORTS AND FITTINGS, ETC. ALL EXISTING DEVICES MAY NOT BE SHOWN.

KEY NOTES

1 DISCONNECT AND REMOVE WIRING, CONDUIT, DISCONNECTS, AND DEVICES FOR MECHANCICAL EQUIPMENT BEING REMOVED IN ITS ENTIRETY.

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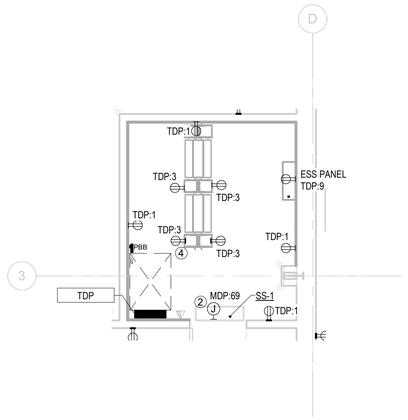
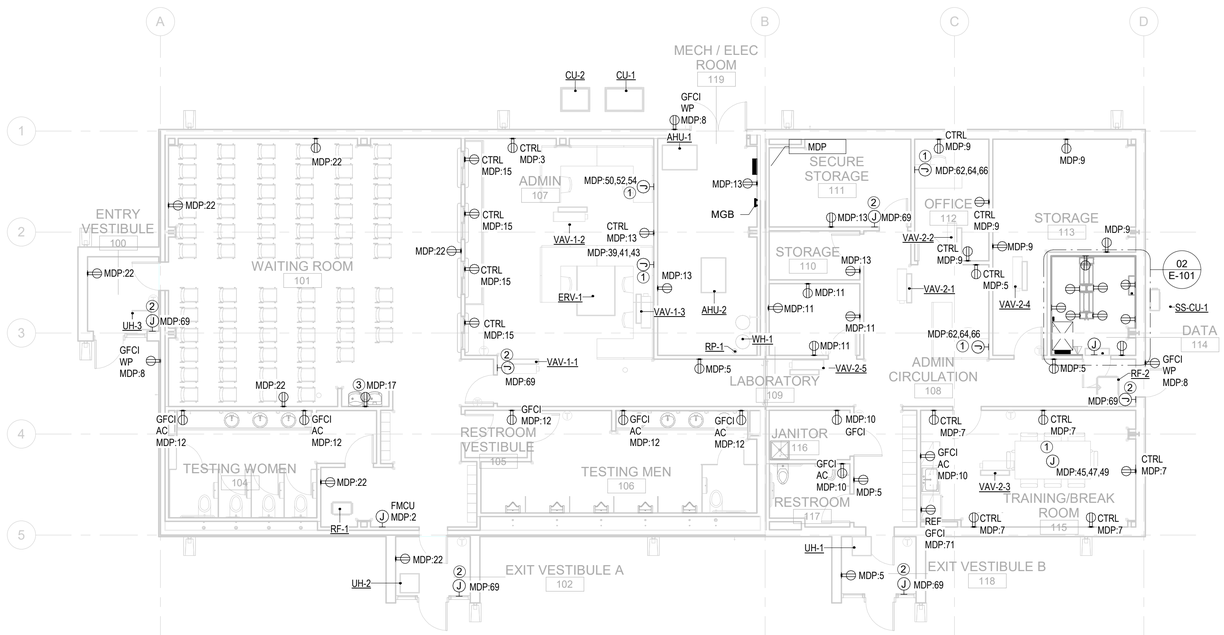


02 E-101 DATA 114 ENLARGED POWER PLAN
SCALE: 1/4" = 1'-0"



01 E-101 ELECTRICAL POWER PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET E-601 FOR CIRCUIT, DISCONNECT, AND CONDUCTORS FOR MECHANICAL AND PLUMBING EQUIPMENT.
2. COORDINATE POWERED FURNITURE JUNCTION BOX LOCATIONS WITH APPROVED FURNITURE SHOP DRAWINGS PRIOR TO ROUGH-IN.
3. POWERED FURNITURE CIRCUITS SHALL BE CONNECTED TO OCCUPANCY SENSOR FOR 50% CONTROLLED RECEPTACLES WITHIN THE FURNITURE. SEE WIRING DIAGRAM ON SHEET E-501.

KEY NOTES

1. JUNCTION BOX FOR POWERED FURNITURE CONNECTION. PROVIDE 8-WIRE FURNITURE WHIP (3#12H, 3#12N, 2#12G). COORDINATE REQUIREMENTS WITH FURNITURE SHOP DRAWINGS PRIOR TO PROCUREMENT.
2. JUNCTION BOXES FOR ELECTRIFIED DOOR HARDWARE. SEE SHEET TY501 FOR DETAILS.
3. PROVIDE GFCI BREAKER FOR WATER COOLER RECEPTACLE.
4. MOUNT RECEPTACLES ON DATA RACK. SEE SHEET T-501 FOR DETAILS.

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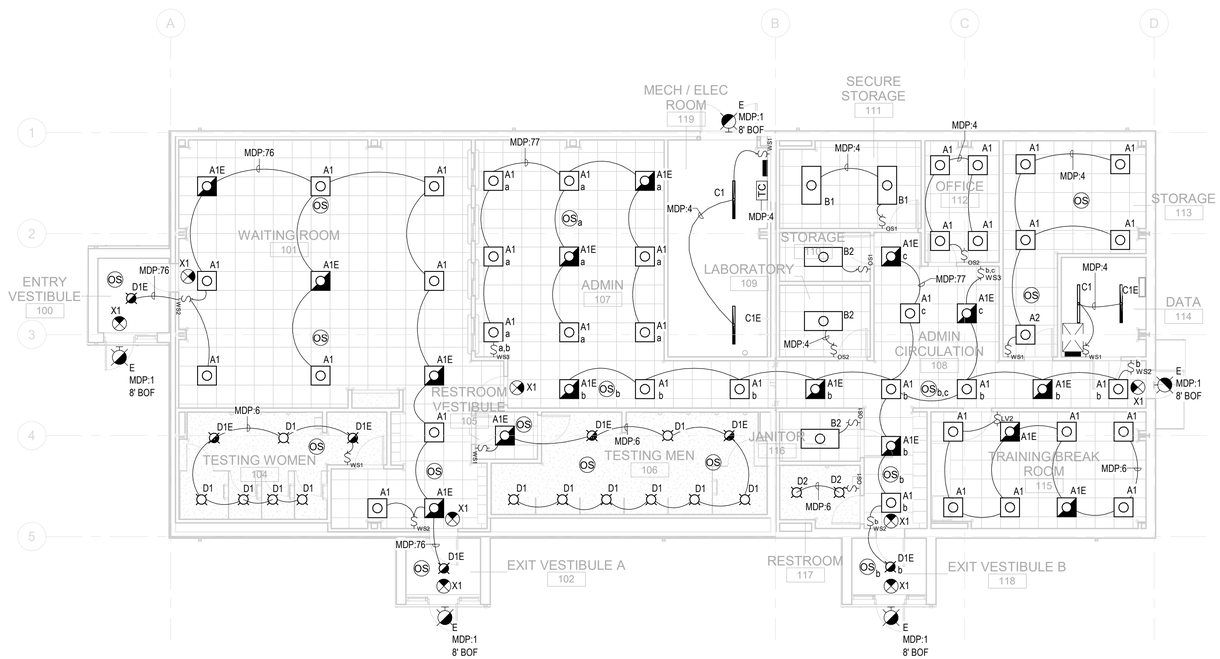

01
E-102

ELECTRICAL LIGHTING PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. ALL EXIT SIGNS SHALL BE CONNECTED AHEAD OF SWITCHING.
2. PROVIDE ALL EXIT SIGNS AND EMERGENCY FIXTURES WITH INTERNAL BATTERIES.
3. FOR LIGHTING IN MECHANICAL AND ELECTRICAL ROOMS, LIGHTING SHALL BE SHIFTED AS REQUIRED AT MECHANICAL EQUIPMENT THAT REQUIRES SPACE FOR FILTERS, ETC. DO NOT SUPPORT LIGHT FIXTURES FROM DUCTS OR PIPING. PROVIDE UNISTRUT BELOW DUCTS WHERE FIXTURE LOCATIONS COINCIDE WITH DUCT RUNS. PROVIDE THREADED RODS FROM STRUCTURAL MEMBERS TO SUPPORT UNISTRUT.
4. PROVIDE ALL PARTS AND PIECES NECESSARY FOR A COMPLETE, OPERATIONAL, AND CODE COMPLIANT SYSTEM.
5. CORRIDORS, VESTIBULES, OPEN OFFICES, AND WAITING ROOMS TO BE CONTROLLED VIA TIME CLOCK. COORDINATE WITH GOVERNMENT FOR HOURS OF OPERATION AND PREFERRED SCHEDULES.
6. TIME CLOCK BOD: TORK DG SERIES WITH 4 CHANNELS MINIMUM.

KEY NOTES

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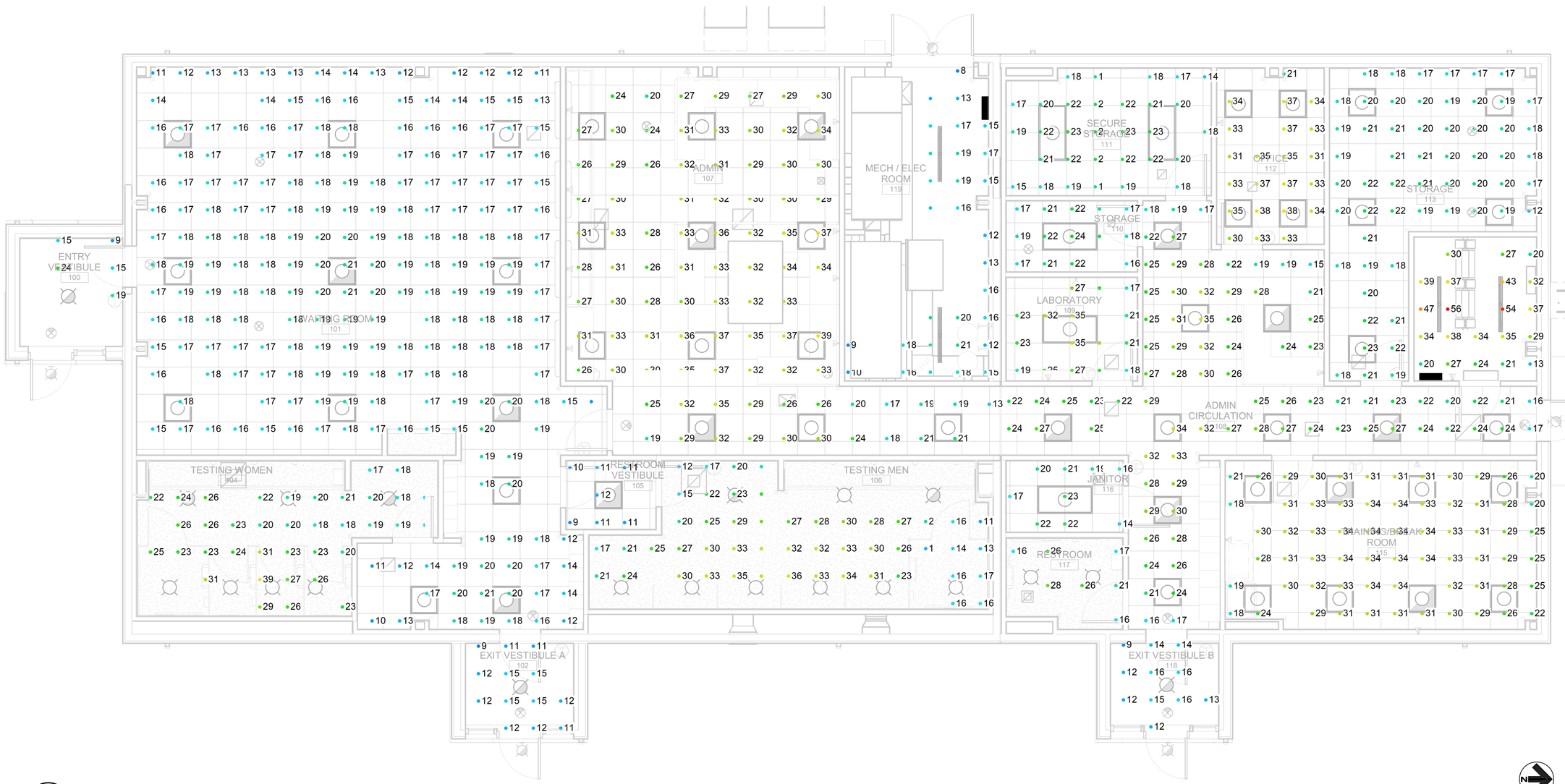
ELECTRICAL LIGHTING PLAN

SHEET NUMBER
E-102

PHOTOMETRIC STATISTICS

ROOM	AVERAGE	MINIMUM	AVG / MIN
ADMIN 107	29 fc	13 fc	2.3
ADMIN CIRCULATION 108	25 fc	15 fc	1.6
DATA 114	33 fc	13 fc	2.5
ENTRY VESTIBULE 100	18 fc	9 fc	2.0
EXIT VESTIBULE A 102	12 fc	9 fc	1.3
EXIT VESTIBULE B 118	13 fc	9 fc	1.4
JANITOR 116	19 fc	14 fc	1.4
LABORATORY 109	25 fc	17 fc	1.5
MECH / ELEC ROOM 119	15 fc	0 fc	88.4
OFFICE 112	33 fc	21 fc	1.6
RESTROOM 117	20 fc	13 fc	1.6
RESTROOM VESTIBULE 105	10 fc	8 fc	1.3
SECURE STORAGE 111	20 fc	14 fc	1.4
STORAGE 110	20 fc	16 fc	1.2
STORAGE 113	20 fc	12 fc	1.6
TESTING MEN 106	24 fc	11 fc	2.2
TESTING WOMEN 104	23 fc	14 fc	1.7
TRAINING/BREAK ROOM 115	30 fc	18 fc	1.6
WAITING ROOM 101	17 fc	10 fc	1.6



01 E-103 LIGHTING PHOTOMETRIC PLAN

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

0 2' 4' 8'

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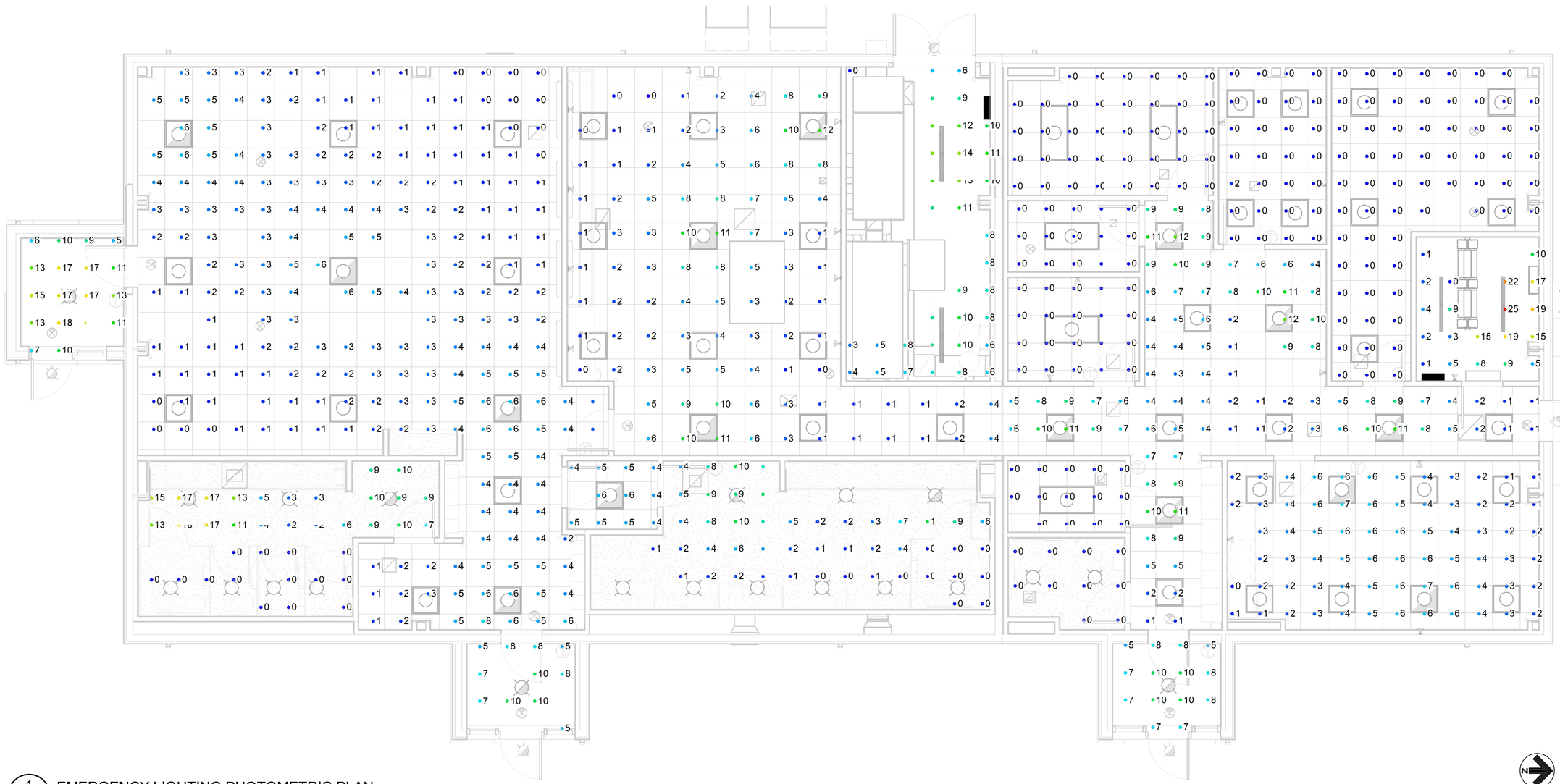
DESIGN GROUP: HDR
DESIGNED BY: MG
DRAWN BY: MG
CHECKED BY: GJ
DESIGN FILE LOCATION:

SHEET TITLE
LIGHTING PHOTOMETRIC PLAN

SHEET NUMBER
E-103

EMERGENCY PHOTOMETRIC STATISTICS	
ROOMS	AVERAGE
ADMIN 107	4 fc
ADMIN CIRCULATION 108	6 fc
ENTRY VESTIBULE 100	13 fc
EXIT VESTIBULE A 102	7 fc
EXIT VESTIBULE B 118	8 fc
RESTROOM VESTIBULE 105	5 fc
TESTING MEN 106	3 fc
TESTING WOMEN 104	5 fc
TRAINING/BREAK ROOM 115	4 fc
WAITING ROOM 101	3 fc



1 E-104 EMERGENCY LIGHTING PHOTOMETRIC PLAN

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

0 2' 4' 8'

AFMC
AIR FORCE MATERIEL COMMAND
72 ABW CIVIL ENGINEER DIRECTORATE
TINKER AFB, OK

LICENSED PROFESSIONAL ENGINEER
BRIAN H JOHNSON
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OKLAHOMA
04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE
RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
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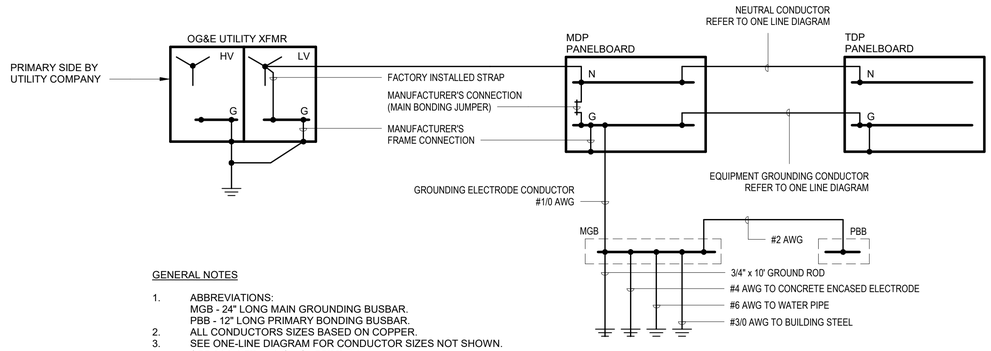
DESIGN FILE LOCATION:

SHEET TITLE
EMERGENCY LIGHTING PHOTOMETRIC PLAN

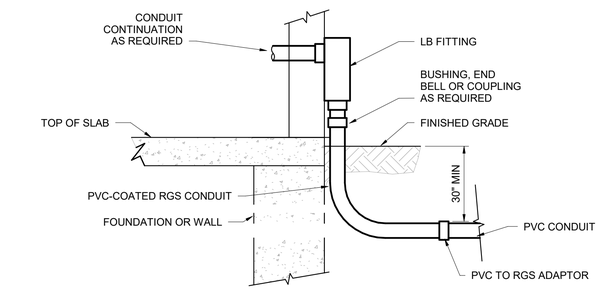
SHEET NUMBER
E-104



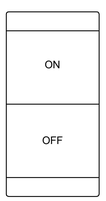
GENERAL NOTES

1. ABBREVIATIONS:
   MGB - 24" LONG MAIN GROUNDING BUSBAR.
   PBB - 12" LONG PRIMARY BONDING BUSBAR.
2. ALL CONDUCTORS SIZES BASED ON COPPER.
3. SEE ONE-LINE DIAGRAM FOR CONDUCTOR SIZES NOT SHOWN.
4. SEE PBB DETAIL 1 ON SHEET T-501.
5. SEE SPECIFICATIONS 26 20 00 AND 27 10 00 FOR ADDITIONAL REQUIREMENTS.

01 E-501 GROUNDING DIAGRAM
NTS

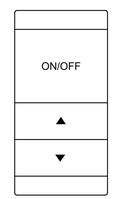


02 E-501 CONDUIT TRANSITION TO ABOVE GRADE (INTERIOR)
NTS



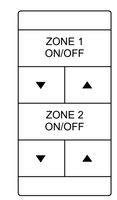
BUTTON 1: ALL ON
BUTTON 2: ALL OFF

03 E-501 WALLSTATION - WS1 DETAIL
NTS



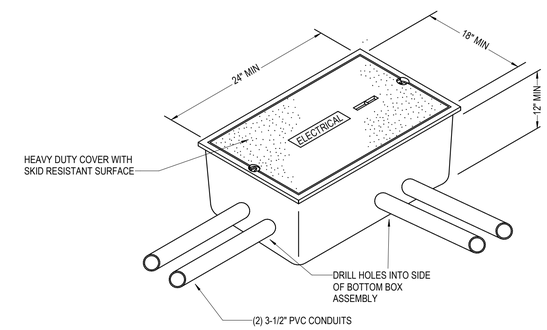
BUTTON 1: ALL ON / ALL OFF
BUTTON 2: RAISE LIGHT LEVEL
BUTTON 3: LOWER LIGHT LEVEL

04 E-501 WALLSTATION - WS2 DETAIL
NTS

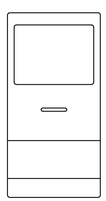


BUTTON 1: ZONE 1 ALL ON / ALL OFF
BUTTON 2: ZONE 1 LOWER LIGHT LEVEL
BUTTON 3: ZONE 1 RAISE LIGHT LEVEL
BUTTON 4: ZONE 2 ALL ON / ALL OFF
BUTTON 5: ZONE 2 LOWER LIGHT LEVEL
BUTTON 6: ZONE 2 RAISE LIGHT LEVEL

07 E-501 WALLSTATION - WS3 DETAIL
NTS

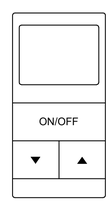


9 E-501 ELECTRICAL PULL BOX DETAIL
NTS



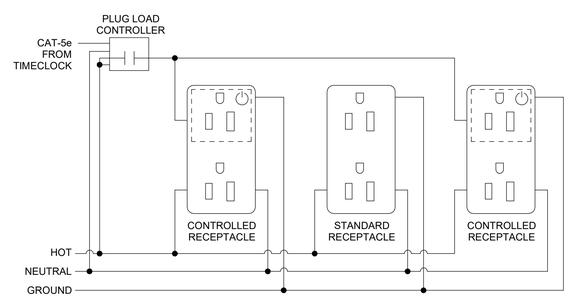
AUTO ON / OFF
MANUAL OVERRIDE

05 E-501 WALLSTATION - OS1 DETAIL
NTS



MANUAL ON / AUTO OFF
BUTTON 1: ALL ON / ALL OFF
BUTTON 2: RAISE LIGHT LEVEL
BUTTON 3: LOWER LIGHT LEVEL

06 E-501 WALLSTATION - OS2 DETAIL
NTS



08 E-501 CONTROLLED RECEPTACLE WIRING DIAGRAM
NTS

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04/24/2026

PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: MG
DRAWN BY: MG
CHECKED BY: GJ
DESIGN FILE LOCATION:

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-501

LIGHTING CONTROL SCHEDULE

ROOM			MANUAL		AUTOMATIC		SCHEDULE*		
NAME	NUMBER	UFC ROOM TYPE	ON	OFF	ON	OFF	ON	OFF	MANUAL OVERRIDE
ADMIN	107	OPEN OFFICE	NO	NO	50%	20 MIN	1 HR BEFORE	1 HR AFTER	YES
ADMIN CIRCULATION	108	CORRIDOR	YES	NO	-	20 MIN	1 HR BEFORE	1 HR AFTER	YES
DATA	114	TELECOM	YES	YES	-	-	-	-	-
ENTRY VESTIBULE	100	ENTRY VESTIBULE	NO	NO	100%	20 MIN	1 HR BEFORE	1 HR AFTER	YES
EXIT VESTIBULE A	102	ENTRY VESTIBULE	NO	NO	100%	20 MIN	1 HR BEFORE	1 HR AFTER	YES
EXIT VESTIBULE B	118	ENTRY VESTIBULE	NO	NO	100%	20 MIN	1 HR BEFORE	1 HR AFTER	YES
JANITOR	116	STORAGE	NO	NO	100%	20 MIN	-	-	-
LABORATORY	109	INDIVIDUAL OFFICE	YES	NO	-	20 MIN	-	-	YES
MECH / ELEC ROOM	119	ELEC/MECH	YES	YES	-	-	-	-	-
OFFICE	112	INDIVIDUAL OFFICE	YES	NO	-	20 MIN	-	-	YES
RESTROOM	117	RESTROOM	NO	NO	100%	20 MIN	-	-	YES
RESTROOM VESTIBULE	105	CORRIDOR	NO	NO	100%	20 MIN		-	YES
SECURE STORAGE	111	STORAGE	YES	NO	-	20 MIN	-	-	-
STORAGE	113	STORAGE	YES	NO	-	20 MIN	-	-	-
STORAGE	103	STORAGE	YES	NO	-	20 MIN	-	-	-
STORAGE	110	STORAGE	NO	NO	100%	20 MIN	-	-	-
TESTING MEN	106	RESTROOM	NO	NO	100%	20 MIN	-	-	YES
TESTING WOMEN	104	RESTROOM	NO	NO	100%	20 MIN	-	-	YES
TRAINING/BREAK ROOM	115	LOUNGE/BREAKROOM	YES	NO	-	20 MIN	-	-	-
WAITING ROOM	101	WAITING / LOBBY	YES	NO	-	20 MIN	1 HR BEFORE	1 HR AFTER	YES

NOTES:
* CONFIRM FINAL SCHEDULE WITH OWNER. TIMECLOCK SCHEDULE BASED ON NORMAL BUSINESS HOURS.

LUMINAIRE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING TYPE	LUMENS	COLOR TEMP	VOLTS	WATTS	COMMENTS
A1	2'x2' TROFFER	LITHONIA	2BLT2-20L-SDSM-120-GZ1-LP835	RECESSED	2045	3500K	120 V	16 W	
A1E	2'x2' TROFFER	LITHONIA	2BLT2-20L-SDSM-120-GZ1-LP835-E10W	RECESSED	2045	3500K	120 V	16 W	INTEGRAL BATTERY PACK
A2	2'x2' TROFFER	LITHONIA	2BLT-33L-SDSM-120-GZ1-LP835	RECESSED	3314	3500K	120 V	26 W	
B1	2'x4' TROFFER	LITHONIA	2BLT4-30L-SDSM-120-GZ1-LP835	RECESSED	2045	3500K	120 V	16 W	
B2	2'x4' TROFFER	LITHONIA	2BLT4-40L-SDSM-120-GZ1-LP835	RECESSED	3313	3500K	120 V	26 W	
C1	4' LINEAR INDUSTRIAL STRIP	LITHONIA	ZL1D-L48-3000LM-FST-MVOLT-40K-80CRI-WH	SURFACE	3000	4000K	120 V	30 W	
C1E	4' LINEAR INDUSTRIAL STRIP	LITHONIA	ZL1D-L48-3000LM-FST-MVOLT-40K-80CRI-E7W-WH	SURFACE	3000	4000K	120 V	30 W	INTEGRAL BATTERY PACK
D1	6" CIRCULAR DOWNLIGHT	LITHONIA	LDN6-AL02-15LM-35K-L06AR-LS-UGZ1	RECESSED	1575	3500K	120 V	18 W	
D1E	6" CIRCULAR DOWNLIGHT	LITHONIA	LDN6-AL02-15LM-35K-L06AR-LS-UGZ1-E10WCP	RECESSED	1575	3500K	120 V	18 W	INTEGRAL BATTERY PACK
D2	6" CIRCULAR DOWNLIGHT	LITHONIA	LDN6-AL01-10LM-35K-L06AR-LS-UGZ1	RECESSED	988	3500K	120 V	10 W	
E	EXTERIOR WALLPACK	LITHONIA	WDGE2-LED-P3-27K-80CRI-VF-MVOLT-SRM-E10WH-PIR1FC3V-DD BXD	WALL	2908	2700K	120 V	18 W	INTEGRAL BATTERY PACK AND PHOTOCELL
X1	CEILING MOUNTED EDGE LIT EXIT SIGN	LITHONIA	EDGR-1-RMR-EL	CEILING	-	-	120 V	3 W	INTEGRAL BATTERY PACK

MECHANICAL EQUIPMENT SCHEDULE

TAG	DESCRIPTION	VOLTAGE	PHASE	FLA	MCA	FEEDER	PANEL	CKT #	DISCONNECT	COMMENTS
AHU-1	AIR HANDLING UNIT	208 V	3	7.2	8 A	3#12, 1#12G, 1"C	MDP	56,58,60	20A/3P NF NEMA 1	
AHU-2	AIR HANDLING UNIT	208 V	3	7.2	8 A	3#12, 1#12G, 1"C	MDP	44,46,48	20A/3P NF NEMA 1	
CU-1	CONDENSING UNIT	208 V	3	-	33 A	3#8, 1#10G, 1"C	MDP	57,59,61	60A/3P NF NEMA 3R	
CU-2	CONDENSING UNIT	208 V	3	-	40 A	3#6, 1#10G, 1"C	MDP	68,70,72	60A/3P NF NEMA 3R	
ERV-1	ENERGY RECOVERY UNIT	208 V	1	8.4 A	9 A	2#12, 1#12G, 3/4"C	MDP	19,21	20A/2P TOGGLE SWITCH	
RF-1	RELIEF FAN	120 V	1	10	13 A	2#12, 1#12G, 3/4"C	MDP	74	20A/1P TOGGLE SWITCH	
RF-2	RELIEF FAN	120 V	1	5	6 A	2#12, 1#12G, 3/4"C	MDP	75	20A/1P TOGGLE SWITCH	
RP-1	RECIRCUILATION PUMP	120 V	1	4.4		2#12, #12G, 3/4"C	MDP	73	20A/1P TOGGLE SWITCH	
SS-1	SPLIT SYSTEM INDOOR UNIT	208 V	1	-	1 A	3#12, 1#12G, 3/4"C	TDP	5,7	-	POWERED FROM OUTDOOR UNIT
SS-CU-1	SPLIT SYSTEM OUTDOOR UNIT	208 V	1	7.5	8 A	2#12, 1#12G, 3/4"C	TDP	5,7	15A/2P NF	
UH-1	UNIT HEATER	208 V	1	24 A	30 A	2#10, 1#12G, 3/4"C	MDP	36,38	30A/1P TOGGLE SWITCH	
UH-2	UNIT HEATER	208 V	1	24 A	30 A	2#10, 1#12G, 3/4"C	MDP	35,37	30A/1P TOGGLE SWITCH	
UH-3	UNIT HEATER	208 V	1	24 A	30 A	2#10, 1#12G, 3/4"C	MDP	40,42	30A/1P TOGGLE SWITCH	
VAV-1-1	VARIABLE AIR VOLUME	208 V	1	28.8 A	36 A	2#8, 1#10G, 3/4"C	MDP	18,20	INTEGRAL SWITCH	
VAV-1-2	VARIABLE AIR VOLUME	208 V	1	16.8 A	21 A	2#10, 1#12G, 3/4"C	MDP	14,16	INTEGRAL SWITCH	
VAV-1-3	VARIABLE AIR VOLUME	208 V	1	9.6 A	12 A	2#12, 1#12G, 3/4"C	MDP	27,29	INTEGRAL SWITCH	
VAV-2-1	VARIABLE AIR VOLUME	208 V	1	4.8 A	6 A	2#12, 1#12G, 3/4"C	MDP	23,25	INTEGRAL SWITCH	
VAV-2-2	VARIABLE AIR VOLUME	208 V	1	4.8 A	6 A	2#12, 1#12G, 3/4"C	MDP	28,30	INTEGRAL SWITCH	
VAV-2-3	VARIABLE AIR VOLUME	208 V	1	9.6 A	12 A	2#12, 1#12G, 3/4"C	MDP	32,34	INTEGRAL SWITCH	
VAV-2-4	VARIABLE AIR VOLUME	208 V	1	9.6 A	12 A	2#12, 1#12G, 3/4"C	MDP	31,33	INTEGRAL SWITCH	
VAV-2-5	VARIABLE AIR VOLUME	208 V	1	4.8 A	6 A	2#12, 1#12G, 3/4"C	MDP	24,26	INTEGRAL SWITCH	
WH-1	ELECTRIC WATER HEATER	208 V	3	16 A	20 A	3#12, 1#12G, 3/4"C	MDP	51,53,55	30A/3P NF NEMA 1	

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DRAWN BY: MG
CHECKED BY: GJ
DESIGN FILE LOCATION:

SHEET TITLE
ELECTRICAL SCHEDULES

SHEET NUMBER
E-601

Branch Panel: MDP

Location: MECH / ELEC ROOM 119
Supply From: 7036-XFMR-2 (344473)
Mounting: SURFACE
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4
INTEGRAL SPD: YES

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 400 A
MCB Rating: 400 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	LTS - EXTERIOR	20 A	1	90 VA	0 VA					1	20 A	HVAC WAITING ROOM 101	2
3	RECPT - ADMIN 107	20 A	1			180 VA	335 VA			1	20 A	LTS - ROOMS: 107-109, 111-114, 119	4
5	RECPT - ROOMS: 108, 118	20 A	1					900 VA	472 VA	1	20 A	LTS - ROOMS: 100-102, 104, 106, 115-118	6
7	RECPT - TRAINING/BREAK ROOM 115	20 A	1	900 VA	540 VA					1	20 A	RECPT - OUTDOOR	8
9	RECPT - ROOMS: 112, 113	20 A	1			1080 VA	540 VA			1	20 A	RECPT/GFCI - ROOMS: 115, 116, 117	10
11	RECPT - LABORATORY 109	20 A	1					720 VA	900 VA	1	20 A	RECPT/GFCI - ROOMS: 104, 106	12
13	RECPT - ROOMS: 110, 111, 119	20 A	1	900 VA	1750 VA					2	25 A	VAV-1-2	14
15	RECPT- ADMIN 107	20 A	1			720 VA	1750 VA			--	--	--	16
17	COOLER RECEPT - WAITING ROOM 101	20 A	1					500 VA	3000 VA	2	40 A	VAV-1-1	18
19	ERV-1 - ADMIN 107	15 A	2	874 VA	3000 VA					--	--	--	20
21	--	--	--			874 VA	1260 VA			1	20 A	RECPT - ROOMS: 100, 101, 102,	22
23	VAV-2-1	15 A	2					500 VA	500 VA	2	15 A	VAV-2-5	24
25	--	--	--	500 VA	500 VA					--	--	--	26
27	VAV-1-3	15 A	2			1000 VA	500 VA			2	15 A	VAV-2-2	28
29	--	--	--					1000 VA	500 VA	--	--	--	30
31	VAV-2-4	15 A	2	1000 VA	1000 VA					2	15 A	VAV-2-3	32
33	--	--	--			1000 VA	1000 VA			--	--	--	34
35	UH-2	30 A	2					2500 VA	2500 VA	2	30 A	UH-1	36
37	--	--	--	2500 VA	2500 VA					--	--	--	38
39	FURNITURE JB - ADMIN 107	20 A	3			1440 VA	2500 VA			2	30 A	UH-3	40
41	--	--	--					1440 VA	2500 VA	--	--	--	42
43	--	--	--	1440 VA	1333 VA					3	35 A	AHU-2 - MECH / ELEC ROOM 119	44
45	FURNITURE JB - ROOM 115	20 A	3			1440 VA	1333 VA			--	--	--	46
47	--	--	--					1440 VA	1333 VA	--	--	--	48
49	--	--	--	1440 VA	1440 VA					3	20 A	FURNITURE JB - ADMIN 107	50
51	WH-1	20 A	3			2000 VA	1440 VA			--	--	--	52
53	--	--	--					2000 VA	1440 VA	--	--	--	54
55	--	--	--	2000 VA	1585 VA					3	45 A	AHU-1 - MECH / ELEC ROOM 119	56
57	CU-1	35 A	3			3960 VA	1585 VA			--	--	--	58
59	--	--	--					3960 VA	1585 VA	--	--	--	60
61	--	--	--	3960 VA	2880 VA					3	20 A	FURNITURE JB - OFFICE 112	62
63	TDP	60 A	3			3900 VA	2880 VA			--	--	--	64
65	--	--	--					900 VA	2880 VA	--	--	--	66
67	--	--	--	780 VA	4800 VA					3	45 A	CU-2	68
69	DOOR SECURITY HARDWARE	15 A	1			1 VA	4800 VA			--	--	--	70
71	FRIDGE - ROOM 115	20 A	1					1000 VA	4800 VA	--	--	--	72
73	RP-1	15 A	1	528 VA	1200 VA					1	20 A	RF-1	74
75	RF-2	20 A	1			600 VA	227 VA			1	20 A	Lighting ENTRY VESTIBULE 100	76
77	Lighting ADMIN 107	20 A	1					370 VA					78
79													80
81							0 VA			1	20 A	Spare	82
83	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	84
			Total Load:	39440 VA		38345 VA		39639 VA					
			Total Amps:	330 A		320 A		332 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Equipment	3121 VA	100.00%	3121 VA		
HVAC	82570 VA	100.00%	82570 VA	**Total Conn. Load:**	117424 VA
Receptacle	30240 VA	66.53%	20120 VA	**Total Est. Demand:**	107678 VA
Lighting	1493 VA	125.00%	1867 VA	**Total Conn.:**	326 A
				Total Est. Demand:	299 A

Notes:
SERVICE ENTRANCE RATED

Branch Panel: TDP

Location: DATA 114
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 1

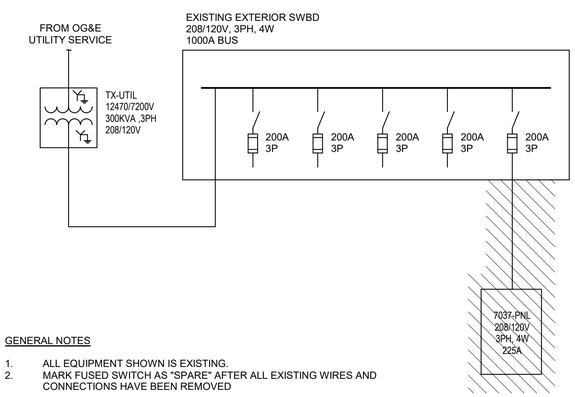
Volts: 120/208 Wye
Phases: 3
Wires: 4
INTEGRAL SPD: YES

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 60 A

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECPT - DATA 114	20 A	1	720 VA	2400 VA					1	20 A	ESS - DATA 114	2
3	RECEPT - DATA/TELECOM RACK	20 A	1			720 VA	0 VA			1	20 A	Spare	4
5	SPLIT SYSTEM SS-CU-1 / SS-1	15 A	2					780 VA	0 VA	1	20 A	Spare	6
7	--	--	--	780 VA	0 VA					1	20 A	Spare	8
9	ESS PANEL - DATA 114	20 A	1			180 VA	0 VA			1	20 A	Spare	10
11	Space	--	1					--	--	1	--	Space	12
13	Space	--	1	--	--					1	--	Space	14
15	Space	--	1			--	--			1	--	Space	16
17	Space	--	1					--	--	1	--	Space	18
19	Space	--	1	--	--					1	--	Space	20
21	Space	--	1			--	--			1	--	Space	22
23	Space	--	1					--	--	1	--	Space	24
			Total Load:	3900 VA		900 VA		780 VA					
			Total Amps:	33 A		8 A		7 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Equipment	1620 VA	100.00%	1620 VA		
HVAC	3960 VA	100.00%	3960 VA	**Total Conn. Load:**	5580 VA
				Total Est. Demand:	5580 VA
				Total Conn.:	15 A
				Total Est. Demand:	15 A

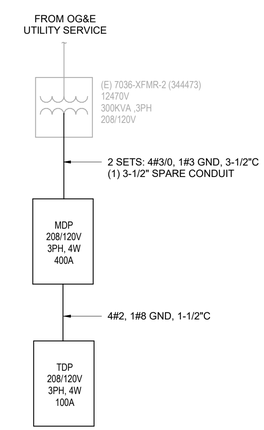
Notes:



GENERAL NOTES

1. ALL EQUIPMENT SHOWN IS EXISTING.
2. MARK FUSED SWITCH AS "SPARE" AFTER ALL EXISTING WIRES AND CONNECTIONS HAVE BEEN REMOVED

01 E-602 ELECTRICAL ONE-LINE DIAGRAM - DEMOLITION
SCALE: NOT TO SCALE



02 E-602 ELECTRICAL ONE-LINE DIAGRAM - NEW WORK
SCALE: NOT TO SCALE

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WWYYK200270
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REVISIONS

MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION
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DESIGNED BY: MG
DRAWN BY: MG
CHECKED BY: GJ
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SHEET TITLE
ELECTRICAL
ONE-LINE AND
PANEL SCHEDULES

SHEET NUMBER
E-602

TELECOMMUNICATIONS INFRASTRUCTURE

TYPICAL OUTLET SYMBOL NOTES

"•" -MOUNTED 4" ABOVE COUNTER, CASEWORK, BACKSLASH OR 48" IF NOTHING BELOW. COORDINATE WITH ARCHITECTURAL DETAILS AND CASEWORK CONTRACTOR.

"•84" -INDICATES MOUNTING HEIGHT IN INCHES ABOVE FINISHED FLOOR.

STANDARD DATA/VOICE OUTLET ROUGH-IN. PROVIDE 1-1/4" CONCEALED CONDUIT TO HOMERUN TO NEAREST CABLE TRAY, UON.

STANDARD VOICE OUTLET ROUGH-IN. PROVIDE 1-1/4" CONCEALED CONDUIT HOMERUN TO NEAREST CABLE TRAY, UON.

STANDARD DATA OUTLET ROUGH-IN. PROVIDE 1-1/4" CONCEALED CONDUIT HOMERUN TO NEAREST CABLE TRAY, UON.

J FLOOR MOUNTED JUNCTION BOX. SIZE TO SUPPORT ACTUAL AMOUNT OF CABLE PROVIDED PLUS AN ADDITIONAL 25% SPARE CAPACITY.

J CONCEALED WALL MOUNTED JUNCTION BOX FOR WIRELESS ACCESS POINT MOUNTED AT 96" AFF. PROVIDE 1" CONCEALED CONDUIT HOMERUN TO NEAREST CABLE TRAY

F FLOOR OUTLET. REQUIRES (1) 1 1/2" CONDUIT TURN UP TO ACCESSIBLE CEILING AS SHOWN ON FLOOR PLAN UON. PATHWAY PROVIDED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL DRAWINGS AND SCHEDULE FOR REQUIREMENTS.

SECURITY INFRASTRUCTURE

ACCESS CONTROL SYSTEM (ACS) ROUGH-IN. REFER TO DETAIL 3/TY501.

CR CARD READER ROUGH-IN. REFER TO DETAIL 2/TY501.

ABBREVIATIONS

A	AMPERE
ACS	ACCESS CONTROL PANEL
ACP	ACCESS CONTROL SYSTEM
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CCTV	CLOSED CIRCUIT TELEVISION
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED
GFI,GF	GROUND FAULT INTERRUPTER
GRD,GND,G	GROUND
CKT ,CCT	CIRCUIT
JB	JUNCTION BOX
MH	MANHOLE, METAL HALIDE OR MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OSP	OUTSIDE PLANT
PB	PULLBOX
PBB	PRIMARY BONDING BAR
PNL	PANEL
POE	POWER OVER ETHERNET
PP	PATH PANEL
PS	POWER SUPPLY
PVC	POLYVINYL CHLORIDE
PWR	POWER
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RX	REQUEST TO EXIT, RECEIVER
SEC	SECURITY EQUIPMENT CABINET
SRV	SERVER
TEL	TELEPHONE
TX	TRANSCEIVER
TTB	TELEPHONE TERMINAL BACKBOARD
TV	TELEVISION
TYP	TYPICAL
UGT	UNDERGROUND TELECOM
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
VAC	VOLTAGE ALTERNATING CURRENT
VDC	VOLTAGE DIRECT CURRENT
VLAN	VIRTUAL LOCAL AREA NETWORK
WAN	WIDE AREA NETWORK
W	WATTS OR WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
WS	WORK STATION

TELECOM GENERAL NOTES

1. DRAWINGS FOR THIS WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY THE EXTENT, GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS CONDUIT FITTINGS, ACCESS PANELS,CABINET SIZES, SLEEVES, PULL BOXES, BACKBOXES, AND JUNCTION BOXES MAY NOT BE SHOWN. INCLUDE ALL ITEMS WHERE REQUIRED BY CODE, OTHER SECTIONS, AND FOR PROPER INSTALLATION OF THE WORK.
2. ALL TELECOMMUNICATIONS WORK SHALL CONFORM TO ALL APPLICABLE NATIONAL, STATE AND LOCAL BUILDING CODES AND SHALL BE IN COMPLIANCE WITH TIA/EIA.
3. DO NOT SCALE ANY DRAWINGS. DIMENSIONS TAKEN FROM CENTERLINE OF DEVICE OR GANG BOX SHALL BE FOLLOWED. TELECOMMUNICATIONS DEVICES ARE SHOWN FOR LOCATION ONLY.
4. INCLUDE SUCH ITEMS AS REQUIRED FOR A COMPLETELY OPERATIONAL AND FULLY FUNCTIONAL CONDUIT SYSTEM, WHETHER OR NOT SPECIFICALLY INDICATED.
5. PROVIDE CONDUIT IN ACCORDANCE WITH THE N.E.C., N.F.P.A. AND DIVISIONS 26 AND 27 OF THE SPECIFICATIONS.
6. ALL OUTLET BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE FURNISHED, INSTALLED AND LABELED BY THE CONTRACTOR AS REQUIRED.
7. ALL COMMUNICATIONS OUTLET BOXES THAT ARE EMPTY AT THE COMPLETION OF WORK SHALL HAVE A MINIMUM 1-1/4" CONDUIT HOMERUN TO CABLE TRAY SYSTEM WITH PULL-STRING HAVING MINIMUM TEST RATING OF 200 LB.
8. SHOULD JOB CONDITIONS REQUIRE RELOCATION OF PLANNED OUTLET BOXES, THE INSTALLER SHALL NOTIFY THE OWNER FOR APPROVAL OF ALTERNATE LOCATION PRIOR TO THE START OF ANY WORK.
9. CONSTRUCTION MANAGER SHALL COORDINATE FINAL LOCATION FOR OWNER SUPPLIED CONTRACTOR INSTALLED EQUIPMENT IF REQUIRED.
10. COORDINATE WALL COMMUNICATION OUTLET LOCATIONS WITH POWER OUTLETS AND FURNITURE TO BE INSTALLED ON WALL OR SYSTEMS FURNITURE.
11. ALL COMMUNICATIONS CONDUIT RUNS, CELLS OR INNERDUCT, REMAINING EMPTY AT THE TIME OF COMPLETED CONSTRUCTION SHALL BE EQUIPPED WITH A PULL-STRING HAVING MINIMUM TEST RATING OF 200 LB.
12. NO ONE CONDUIT SEGMENT SHALL BE MORE THAN 100' WITHOUT THE INSERTION OF A PULL BOX.
13. ALL CONDUIT AND BOXES SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS. REFER TO SECTIONS 26 20 00 FOR SPECIFIC CONDUIT BONDING DETAILS.
14. EMT CONDUIT SHALL BE ELECTRICAL METALLIC TUBING MEETING ANSI C80.3 AND SHALL BE 1" MINIMUM SIZE FOR BOX LOCATIONS UNLESS OTHERWISE NOTED.
15. FLEXIBLE METAL CONDUIT (FMC) IS NOT ACCEPTABLE.
16. OUTLET BOXES SHALL BE A MINIMUM OF 4 11/16 X 4 11/16 X 2 5/8 INCHES IN SIZE WITH EXTENSION RINGS (AS NEEDED), A SINGLE GANG MUD RING MATCHING THE THICKNESS OF THE FINISHED WALL MATERIAL/COVERING AND A SINGLE GANG COVER TO MATCH THE TYPE REQUIRED AT THE SPECIFIC OUTLET ASSEMBLY.
17. JUNCTION BOXES AND PULL BOXES SHALL BE STAMPED STEEL, DEEP DRAWN ONE PIECE (WITHOUT WELDS OR TAB CONNECTIONS), GALVANIZED, WITH KNOCKOUTS FOR CONDUIT OR CONNECTOR ENTRANCE.
18. BOXES 6" x 6" x 4" OR LARGER MAY BE COLD GAUGE FABRICATED STEEL CONTINUOUSLY WELDED AT SEAMS AND PAINTED AFTER FABRICATION.
19. FIRE STOPPING SHALL CONFORM TO BOTH FLAME (F) AND TEMPERATURE (T) RATINGS AS REQUIRED BY LOCAL BUILDING CODES.
20. LABELS SHALL BE AS RECOMMENDED IN ANSI/TIA/EIA 606.
21. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NEC.
22. INSTALL RACEWAYS, BOXES, ENCLOSURES, AND CABINETS AS INDICATED AND ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
23. RUN PARALLEL OR BANKED CONDUITS TOGETHER, ON COMMON SUPPORTS WHERE PRACTICAL AND ALLOWED BY SECURITY STANDARDS AND N.E.C.
24. WHERE CONDUITS CROSS BUILDING EXPANSION JOINTS, USE SUITABLE SLIDING OR OFFSETTING EXPANSION FITTINGS.
25. DO NOT EXCEED 180 DEGREES FOR THE SUM TOTAL OF CONDUIT SWEEPS BETWEEN CONDUIT TERMINATION POINTS FOR A SECTION OF CONDUIT.
26. ALL CONDUIT FIELD BENDS SHALL BE PROVIDED AS PART OF INSTALLATION PROCESS.
27. MATCH STANDARD COMMUNICATIONS OUTLET MOUNTING HEIGHT WITH ELECTRICAL OUTLET HEIGHT UNLESS OTHERWISE NOTED.
28. DEMOLISH ALL EXISTING TELECOMMUNICATION AND SECURITY PATHWAYS AND ASSOCIATIED EQUIPMENT INCLUDING, BUT NOT LIMITED TO, CABLE TRAY, CONDUIT, FITTINGS, JUNCTION BOXES, PASSIVE AND ACTIVE EQUIPMENT.
29. COORDINATE DEMOLITION OF EXISTING TELECOMMUNICATION CABLING WITH BASE COMM SQUADRON.

NOTE:
SYMBOLS SHOWN ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE A CHECK LIST OF DEVICES REQUIRED BY THE CONTRACT

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PROJECT INFORMATION
WWYK200270
DRUG TEST OFFICE RENOVATION, B7037
TINKER AIR FORCE BASE, OKLAHOMA

REVISIONS

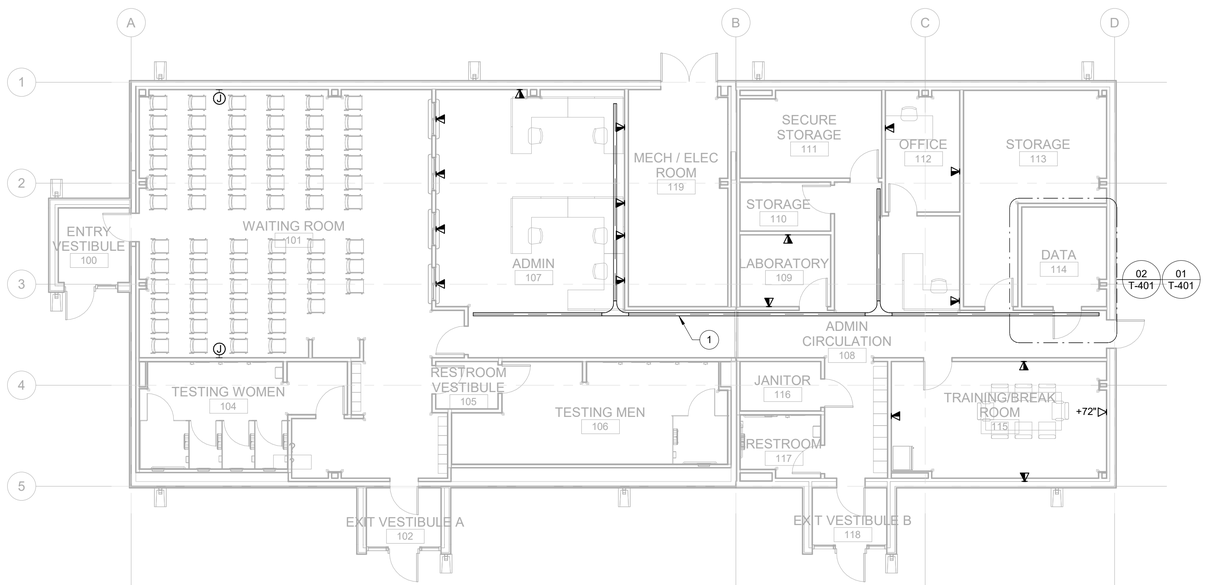
MARK	DATE	DESCRIPTION

MANAGEMENT INFORMATION

ISSUE DATE: 24 APRIL 2026
DESIGN GROUP: HDR
DESIGNED BY: G. CORNELL
DRAWN BY: G. CORNELL
CHECKED BY: B. BRANZ
DESIGN FILE LOCATION:

SHEET TITLE
TELECOM AND SECURITY LEGEND

SHEET NUMBER
T-001



01
T-101
TELECOM FLOOR PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES

1. COORDINATE FURNITURE LAYOUT WITH OWNER.
2. VERIFY OUTLET LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
3. COORDINATE ROUTING OF CONDUITS WITH EXISTING CONDITIONS, BASE COMM SQUADRON, AND BASE SECURITY.
4. ALL CONDUITS 2" OR LARGER TO BE PROVIDED WITH PULL STRINGS.

KEY NOTES

1. 2"x4" WIRE MESH CABLE TRAY. MOUNT CABLE TRAY 6" ABOVE SUSPENDED CEILING USING WALL MOUNTED BRACKETS. PROVIDE 12" CLEARANCE ABOVE TRAY.

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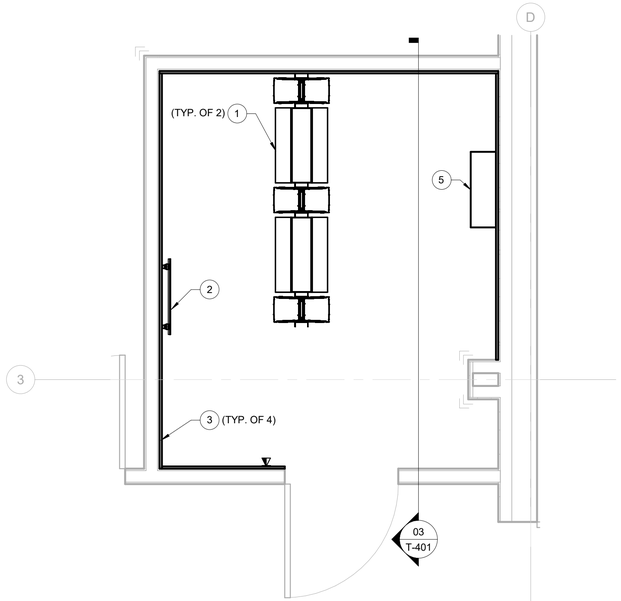
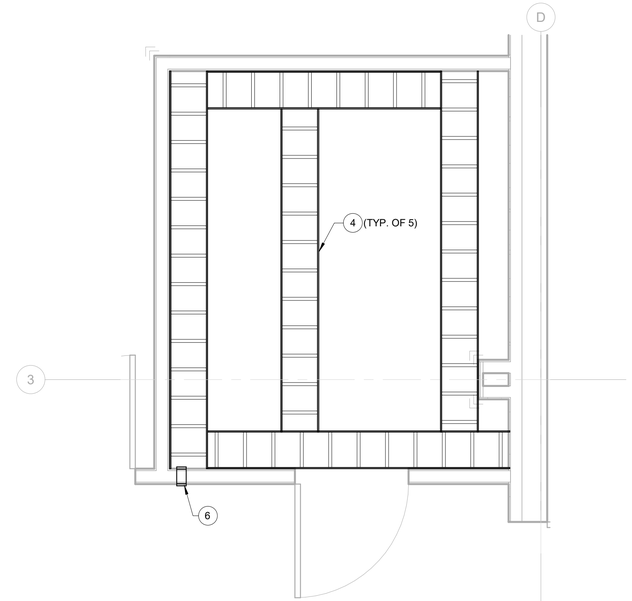
TELECOM FLOOR PLAN

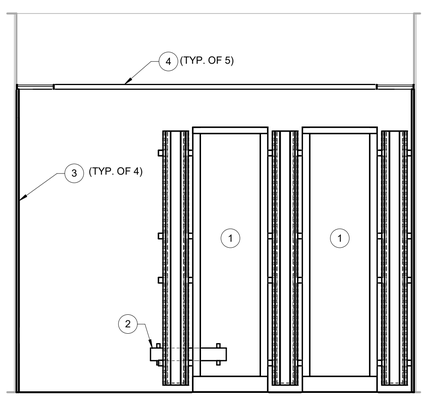
SHEET NUMBER
T-101



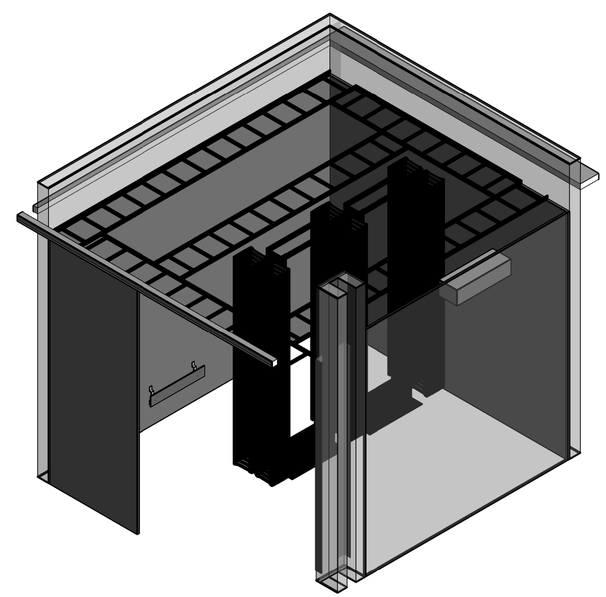
01 T-401 TELECOM ROOM - RACK VIEW
SCALE: 1/2" = 1'-0"



02 T-401 TELECOM ROOM - LADDER VIEW
SCALE: 1/2" = 1'-0"



03 T-401 TELECOM ROOM ELEVATION
SCALE: 1/2" = 1'-0"



04 T-401 TELECOM ROOM ISOMETRIC
SCALE:

GENERAL NOTES

1. COORDINATE ROUTING OF CONDUITS WITH EXISTING CONDITIONS, BASE COMM SQUADRON, AND BASE SECURITY.

KEY NOTES

1. NIPR TELECOMMUNICATONS 2-POST RACK WITH 6" VERTICAL CABLE MANAGEMENT BETWEEN AND AT BOTH ENDS. PROVIDE ANCHORING AS REQUIRED. REFER TO DETAIL 2/T-501.
2. PRIMARY BONDING BUS BAR (PBB). REFER TO DETAIL 1/T-501.
3. 2-HOUR FIRE-RATED PLYWOOD BACKBOARD. RATING OF PLYWOOD SHALL BE VISIBLE AND VERIFIABLE.
4. 12" LADDER RACK MOUNTED AT 8' AFF.
5. ESS PULLBOX. REFER TO DETAIL 1/TY501.
6. 4" CONDUIT PENETRATION MOUNTED AT 9' 6". SEAL IN ACCORDANCE WITH UFC.

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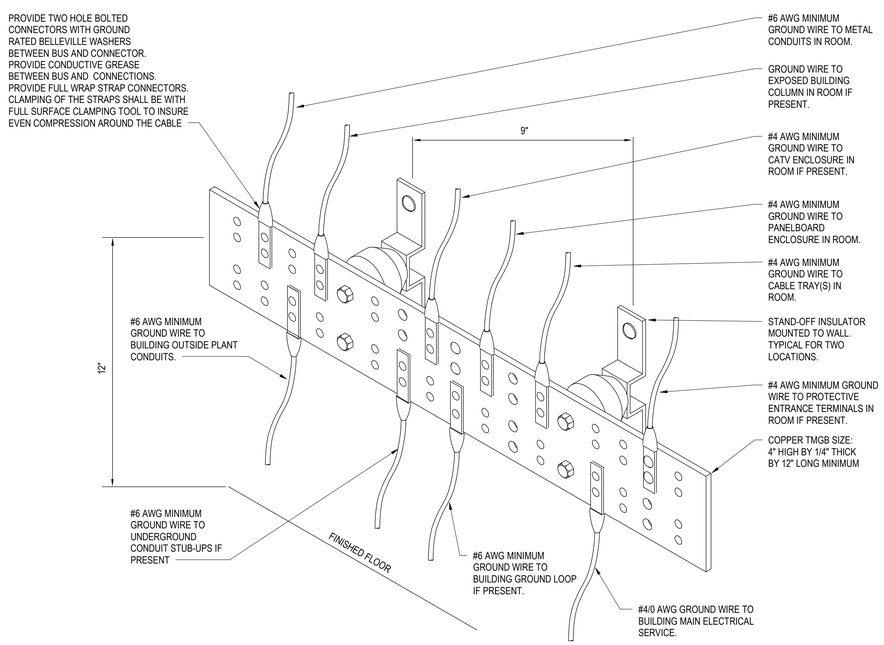
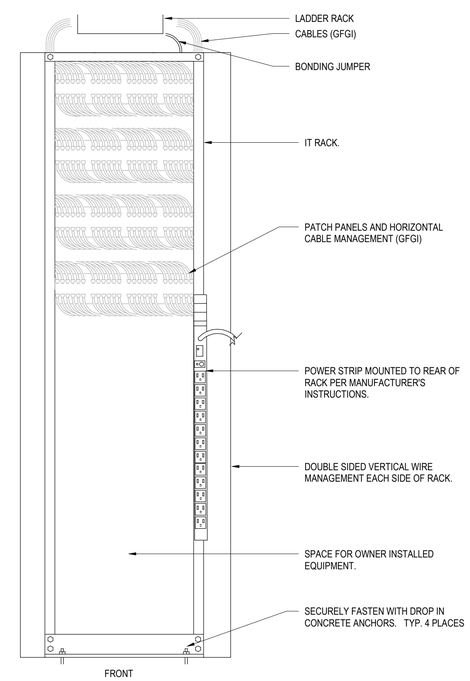
ENLARGED TELECOM ROOM

SHEET NUMBER
T-401



01 / T-501 PRIMARY BONDING BUSBAR (PBB)
SCALE: NOT TO SCALE



02 / T-501 RACK DETAIL
SCALE: NOT TO SCALE

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TELECOM DETAILS

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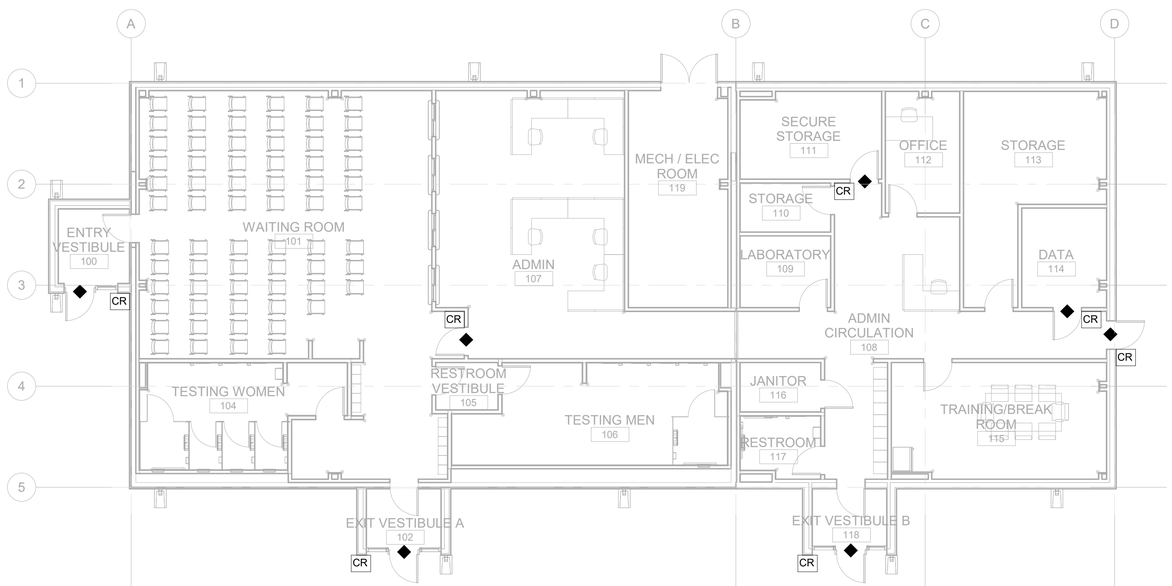
T-501



01 TY101 SECURITY FLOOR PLAN

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

0 4' 8' 16'

GENERAL NOTES

1. COORDINATE ROUTING OF CONDUITS WITH EXISTING CONDITIONS, BASE COMM SQUADRON, AND BASE SECURITY.
2. ACCESS CONTROL SYSTEMS (ACS) COMPONENTS AND HARDWARE WILL BE GFGI. CONTRACTOR RESPONSIBLE TO PROVIDE ALL ROUGH-INS AND RACEWAYS TO SUPPORT THE COMPLETE INSTALLATION. CONFIRM REQUIREMENTS WITH BASE SECURITY AND USER PRIOR TO ROUGH-IN.

KEY NOTES

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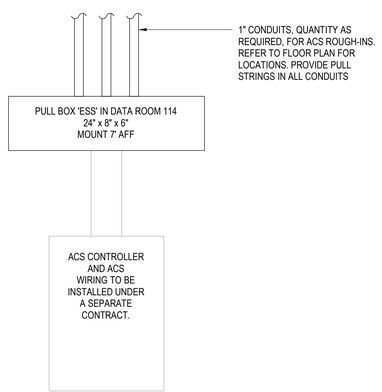
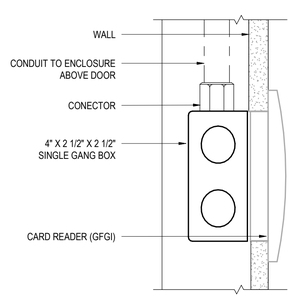
SECURITY FLOOR PLAN

SHEET NUMBER
TY101



01 TY501 ESS PULLBOX ELEVATION

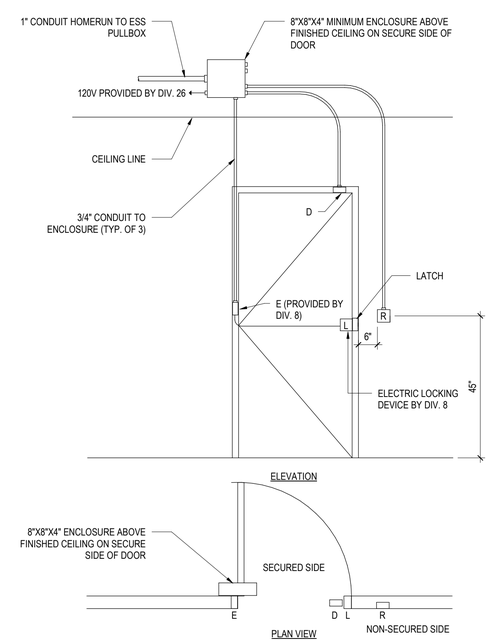
SCALE: NOT TO SCALE



SECTION

02 TY501 CARD READER ELEVATION

SCALE: NOT TO SCALE



NOTE:
1. REFER TO 08 71 00 FOR DOOR HARDWARE SETS.

LEGEND:
L - ELECTRIFIED MORTISED LOCKSET
E - ELECTRICAL HINGE OR ELECTRIC POWER TRANSFER
D - DOOR CONTACT
R - CARD READER (GFGI)

03 TY501 ACCESS CONTROLLED DOOR

SCALE: NOT TO SCALE

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SHEET TITLE
SECURITY DETAILS

SHEET NUMBER
TY501