PROJECT:

NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

FEMA P-361 (2021 EDITION)
ICC 500 (2014 EDITION)
TORNADO SAFE ROOM

OWNER:

DAWSON SPRINGS INDEPENDENT SCHOOLS
118 E ARCADIA AVE
DAWSON SPRINGS, KY 42408

ARCHITECT:

R.B.S. DESIGN GROUP, P.S.C.
723 HARVARD DRIVE
OWENSBORO, KENTUCKY 42301
270-683-1158 (F)270-683-2446

M.E.P. ENGINEER:

CMTA, INC.
115 MEMORIAL DRIVE, SUITE 115
PADUCAH, KENTUCKY 42001
270-984-0066

STRUCTURAL ENGINEER:

POAGE ENGINEERING & ASSOCIATES INC.
880 SPARTA COURT, SUITE 200
LEXINGTON, KENTUCKY 40504
859-255-9034

CIVIL ENGINEER:

RONALD JOHNSON & ASSOCIATES, P.S.C.
24 W CENTER ST.
MADISONVILLE, KY 42431
270-821-6392

STATE OF COMPLIANCE

THE DESIGN INTENT OF THE CONTRACT DOCUMENTS HEREIN IS TO PROVE FOR A TORNADO RATED SAFE ROOM CONFORMING TO THE PROVISIONS OF THE FOLLOWING CODES:

ICC 500 (2014 EDITION) STANDARD ICC/NSSA DESIGN AND CONSTRUCTION OF STORM SHELTERS

FEMA P-361 (2021 EDITION) SAFE ROOMS FOR TORNADOES AND HURRICANES

FEMA P-361 FUNDING CRITERIA

ALL CODE SECTIONS NOT SPECIFICALLY ADDRESSED BY EITHER ICC 500 OR FEMA P-361 SHALL BE BASED ON:

THE 2015 IBC WITH KBC AMENDMENTS AS APPLICABLE WHERE REQUIRED

CODE INFORMATION

BASED ON ICC 500 (2020) & FEMA P-361 (2021) AND ALSO BASED ON 2015 IBC WITH 2018 KBC AMENDMENTS WHERE APPLICABLE FOR EACH SECTION

ICC 500 EVENT DURATION: 2 HOURS FOR TORNADO

2015 IBC
USE GROUP/OCCUPANCY: A3 ASSEMBLY
CONSTRUCTION TYPE: 2B NON-COMBUSTIBLE

FIRE PROTECTION SYSTEMS: NONE

IBC TABLE 504.3 ALLOWABLE HEIGHT = 75'
IBC TABLE 504.4 ALLOWABLE STORIES = 3
IBC TABLE 506.2 ALLOWABLE AREA = 38,000 SF

BUILDING SQUARE FEET (SF) AREAS

TOTAL BUILDING GROSS	= 6,913 SF GROSS
SAFE ROOM	= 5,911 SF NET
RESTROOMS / STORAGE / MECH	= 462.5 SF NET
TOTAL USABLE FLOOR AREA	= 6,374.5 SF NET

ICC 500
SECTION 502.4.1 - #3 FOR OPEN PLAN
15% REDUCTION OF SAFE ROOM AREA ONLY
5,911 SF - 15% = 5,025 SF

OCCUPANT DENSITY
SECTION 502.2.1 ASSIGNED CAPACITY : 1,000 PEOPLE
SECTION 502.2.2 CALCULATED CAPACITY:

TYPE	FACTOR	COUNT
STANDING	5 SF NET	995 OR 4,975 SF
WHEELCHAIR	10 SF NET	5 OR 50 SF
		TOTAL NET AREA = 5,025 SF

ICC SECTION 701.2.2
FIXTURE COUNTS
REQUIRED: 1 WC PER 500 PERSONS & 1 LAVATORY PER 500 PERSONS
PROVIDED: 3 WC & 3 LAVATORY

MATERIAL & GRAPHIC SYMBOLS

EARTHWORK	DRAINAGE FILL	DGA
TOP SOIL	COMPACT FILL/BACKFILL	
CONCRETE	PRECAST CONCRETE	CEMENTITIOUS DECKS AND TOPPINGS
CAST-IN-PLACE CONC.		
MASONRY	GROUT	BRICK (SECT., PLAN)
CMU (PLAN)	CMU (ELEV)	FIRE BRICK (SECT., PLAN)
CMU (SECTION)	SPLIT FACE CMU (ELEV)	BRICK (ELEV.)
STONE	CUT STONE (SECT.)	MARBLE
RUBBLE STONE (ELEV.)	CAST STONE (SECT.)	
METAL	STEEL (SECT.)	
WOOD	CONT. WOOD FRAMING	WOOD BLOCKING
FINISH WOOD (SECT.)	PLYWOOD (SECT.)	OSB
PARTICAL BOARD		
GLAZING	GLASS (PLAN)	GLASS BLOCK (ELEV.)
GLASS (ELEV.)		
INSULATION	E.I.F.S. (ELEV.)	E.I.F.S. (SECT.)
BATT/BLANKET INSUL.	RIGID INSULATION	SPRAY/FOAM INSUL.
FINISHES	CERAMIC TILE	CARPET (SECT.)
GYP. BOARD	LATH AND PLASTER	TERRAZZO
PARTITIONS	CM U	CAST-IN-PLACE CONC
WOOD STUD	METAL STUD	PRECAST CONCRETE

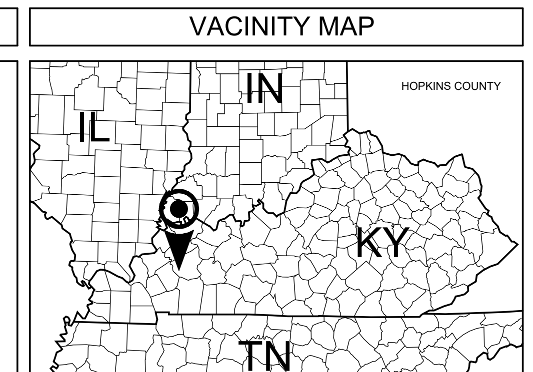
SYMBOLS

ROOM 028 B 8' - 0" ROOM TAG (ROOM FINISH KEY; CLG HT (IF SHOWN); ROOM #)	C WINDOW TYPE	7 / A3.2 DETAIL
	101 DOOR NUMBER	ELEVATION POINT
A COLUMN REFERENCE GRID	04-A1 KEYNOTE FORMAT: (SPEC SECTION)-(NOTE ID)	POSITIVE DRAINAGE
A 8' - 0" CEILING TAG (CLG TYPE)	2 TOILET ACCESSORY	1 / A2.1 SECTION/ELEVATION

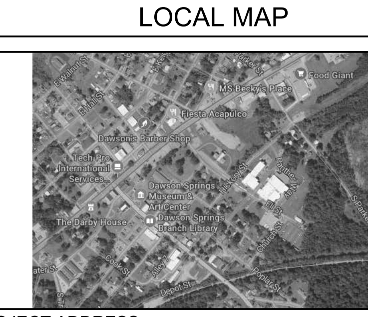
ABBREVIATIONS

A.F.F. - ABOVE FINISH FLOOR
ACOUS. - ACOUSTICAL
ADJ. - ADJUSTABLE
A.C. - AIR CONDITIONER
A.H.U. - AIR HANDLING UNIT
ALUM. - ALUMINUM
A.B. - ANCHOR BOLT
APPROX. - APPROXIMATE
A/E - ARCHITECT/ENGINEER
A.D. - AREA DRAIN
AVG. - AVERAGE
B.C. - BASE CABINET
BSMT. - BASEMENT
BM. - BEAM
BRG - BEARING
B.M. - BENCH MARK
BLK. - BLOCK
BLKG. - BLOCKING
BD. - BOARD
BOT. - BOTTOM
B.O.F. - BOTTOM OF FOOTING
B.T.U. - BRITISH THERMAL UNIT
BLDG. - BUILDING
B.U.R. - BUILT-UP ROOFING
B.N. - BULL NOSE
B.B. - BULLETIN BOARD
CAB. - CABINET
C.I. - CAST IRON
C.I.P. - CAST IRON PIPE
CLG. - CEILING
CLG. HT. - CEILING HEIGHT
CTR. - CENTER
C - CENTER LINE
C/C - CENTER TO CENTER
CER. - CERAMIC
CB. - CHALKBOARD
CLRM. - CLASSROOM
CO. - CLEANOUT
CLR. - CLEAR
C.W. - COLD WATER
COL. - COLUMN
COMB. - COMBINATION
CONC. - CONCRETE
C.M.U. - CONCRETE MASONRY UNIT
CONF. - CONFERENCE
CONN. - CONNECTION
CONSTR. - CONSTRUCTION
CONT. - CONTINUOUS
CONTR. - CONTRACTOR
C.J. - CONTROL JOINT
CORR. - CORRIDOR
CTSK. - COUNTERSINK
C.F.M. - CUBIC FEET PER MINUTE
D.L. - DEAD LOAD
DTL. - DETAIL
DIAG. - DIAGONAL
DIA. - DIAMETER
DIM. - DIMENSION
DW. - DISHWASHER
DIV. - DIVISION
DR. - DOOR
DBL. - DOUBLE
DN. - DOWN
DS. - DOWNSPOUT
DRN. - DRAIN
DWG. - DRAWING
D.F. - DRINKING FOUNTAIN
EA. - EACH
E.W. - EACH WAY
E.W.C. - ELECTRIC WATER COOLER
ELEC. - ELECTRICAL
E.C. - ELECTRICAL CLOSET
EL. - ELEVATION
ELEV. - ELEVATOR
EQ. - EQUAL
EQUIP. - EQUIPMENT
EXH. - EXHAUST
EXIST. - EXISTING
EXP. - EXPANSION
E.J. - EXPANSION JOINT
EXT. - EXTERIOR
FIN. - FINISH
FIN. FL. - FINISH FLOOR
F.F.E. - FROM FLOOR ELEVATION
FIN. GRD. - FINISH GRADE
FRD. - FIRE DAMPER
F.E. - FIRE EXTINGUISHER
F.E.C. - FIRE EXTINGUISHER AND CABINET
F.H.C. - FIRE HOSE CABINET
F.H. - FIRE HYDRANT
F.TD. - FIRE TREATED
FIX. - FIXTURE
F.G. - FIXED GLASS
FLEX. - FLEXIBLE
FLR. - FLOOR
F.D. - FLOOR DRAIN
FLOUR. - FLOURESCENT
FT. - FOOT/FEET
FTG. - FOOTING
FDN. - FOUNDATION
FRM. - FRAME
GA. - GUAGE
GALV. - GALVANIZED
G.I. - GALVANIZED IRON
G.C. - GENERAL CONTRACTOR
G.B. - GRAB BAR
GRD. - GRADE
GRD. BM. - GRADE BEAM
GYP. - GYPSUM
H.D. - HAND DRYER
HC. - HANDICAPPED
HDBD. - HARDBOARD
HDW. - HARDWARE
HTR. - HEATER
H.V.A.C. - HEATING, VENTALATING AND AIR CONDITIONING
HT. - HEIGHT
H.M. - HOLLOW METAL
H.B. - HOSE BIBB
HORIZ. - HORIZONTAL
HR. - HOUR
I.D. - INSIDE DIAMETER
INSUL. PNL. - INSULATED PANEL
INSUL. - INSULATION
INT. - INTERIOR
I.P. - IRON PIPE
JT. - JOINT
JST. - JOIST
KIT. - KITCHEN
KD. - KNOCKDOWN
LAM. - LAMINATED
LAV. - LAVATORY
LH. - LEFT HAND
L.L. - LIVE LOAD
LONG. - LONGITUDINAL
LVR. - LOUVER
MH. - MANHOLE
MFR. - MANUFACTURER
M.B. - MARKER BOARD
M.O. - MASONRY OPENING
MATL. - MATERIAL
MAX. - MAXIMUM
MECH. - MECHANICAL
M.C. - MEDICINE CABINET
MTL. - METAL
M.T. - METAL THRESHOLD
MIN. - MINIMUM
MIR. - MIRROR
M.S. - MOP SINK
MTD. - MOUNTED
MTG. - MOUNTING
M.HT. - MOUNTING HEIGHT
MULL. - MULLION
NOM. - NOMINAL
N.I.C. - NOT IN CONTRACT
N.T.S. - NOT TO SCALE
NO. - NUMBER
O.C. - ON CENTER
OPNG. - OPENING
OPP. - OPPOSITE
OZ. - OUNCE
O.D. - OUTSIDE DIAMETER
OA. - OVERALL
PR. - PAIR
PNL. - PANEL
PERF. - PERFORATED
P.LAM. - PLASTIC LAMINATE
P - PLATE
PV.C. - POLYVINYL CHLORIDE
P.P. - POWER POLE
PREFAB. - PREFABRICATED
P.T. - PRESSURE TREATED
PROJ. - PROJECTED
P.L. - PROPERTY LINE
QTY. - QUANTITY
Q.T. - QUARRY TILE
RAD. - RADIUS
REF. - REFERENCE
REFR. - REFRIGERATOR
REINF. - REINFORCING/REINFORCEMENT
REBAR - REINFORCING BAR
REQD. - REQUIRED
R.A. - RETURN AIR
REV. - REVISE/REVISION
R.H. - RIGHT HAND
R./W. - RIGHT-OF-WAY
R. - RISER
R.D. - ROOF DRAIN
R.E.S. - ROOF EDGE SYSTEM
R.T.U. - ROOF TOP UNIT
RM. - ROOM
R.O. - ROUGH OPENING
SCHED. - SCHEDULE
SECT. - SECTION
SHTHG. - SHEATHING
SHT. - SHEET
SIM. - SIMILAR
S.P.M. - SINGLE PLY MEMBRANE
S.B.C. - SINK BASE CABINET
S.C. - SOLID CORE
S.A.F.B. - SOUND ATTENUATION FIRE BLANKETS
S.T.C. - SOUND TRANSMISSION CLASSIFICATION
SPEC. - SPECIFICATION
SB. - SPLASHBACK
SQ. - SQUARE
S.F. - SQUARE FOOT
STAG. - STAGGERED
S.S. - STAINLESS STEEL
STD. - STANDARED
STL. - STEEL
STOR. - STORAGE
S.A.P.C. - SUSPENDED ACOUSTICAL PANEL CEILING
TB. - TACKBOARD
TH. - THRESHOLD
T.M.E. - TO MATCH EXISTING
T.&G. - TONGUE AND GROOVE
T.&B. - TOP AND BOTTOM
T.O.C. - TOP OF CONCRETE
T.O.F. - TOP OF FOOTING
T.O.M. - TOP OF MASONRY
T.O.S. - TOP OF STEEL
T.O.W. - TOP OF WALL
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
UTIL. - UTILITY
V.T.R. - VENT THRU ROOF
VENT. - VENTILATING
VERT. - VERTICAL
VEST. - VESTIBULE
V.A.T. - VINYL ASBESTOS TILE
V.C.T. - VINYL COMPOSITION TILE
V.W.C. - VINYL WALL COVERING
VOL. - VOLUME
W.H. - WALL HYDRANT
WRB. - WARDROBE
W.C. - WATER CLOSET
WT. - WIGHT
W.W.F. - WELDED WIRE FABRIC
W.F. - WIDE FLANGE
WDW. - WINDOW
W/ - WITH
W/O - WIITHOUT
WD. - WOOD
W.I. - WROUGHT IRON

VACINITY MAP



LOCAL MAP



PROJECT ADDRESS
314 ELI ST., DAWSON SPRINGS, KY 42408

DESIGN DATA

N/A

PROJECT STATUS

DRAWN BY SD
DATE 5-01-2025

SET NUMBER

SHEET INDEX

RBS DESIGN GROUP
ARCHITECTURE
723 Harvard Drive, Owensboro, KY 42301
Phone: (270) 683-1158 Fax: (270) 683-2446
E-Mail: office@rbsdesigngroup.com

JOB NUMBER	24011
DRAWN BY	SD
CHECKED BY	CT
DATE	05/01/2025

No.	Description	Date

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
TITLE SHEET

SHEET NUMBER
T1.1

LEGEND

- EXISTING FENCE LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING STORM WATER LINE
- EXISTING CONTOUR
- EXISTING UNDERGROUND CABLE
- EXISTING BUILDING
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING GRAVEL

0 20 40 60

1)I certify that the depicted topographic survey is true and accurate as of the date and time of data collection. Topography is derived utilizing UAV LIDAR in compliance with standard engineering practices. Location and proximity to property boundaries are not included in this certification.

2) All Utilities Shown Hereon Reflect Marked Location By Respective Utility Companies.

3)Private Lines Not Marked At Time Of Survey. Location of private lines approximated based on surface features. Additional Private Lines May Be Located On Site And Not Shown Hereon.

DATE OF TOPOGRAPHIC SURVEY 4/18/2024

POB
N:1949833.43
E:1075550.45

MH
RIM:450.27
INV:444.92

MH
RIM:449.69
INV:447.19

IP 3393
WHITLEDGE

HICKORY STREET
20' PVMT ~ ROW VARIES

HICKORY STREET
23' PVMT ~ 50' ROW

N 46°04'37" E 110.02'

S 57°12'40" E 152.74'

N 47°08'26" W 152.13'

S 54°46'08" E 244.29'

N 52°16'05" W 278.49'

S 30°47'19" W 147.35'

30" OAK

24" OAK

DAWSON SPRINGS
BOARD OF EDUCATION
DB 776, PG 741

KENTUCKY SCHOOLS
BUILDING AUTHORITY

KENTUCKY SCHOOLS
BUILDING AUTHORITY
DB 412, PG 403

DAWSON SPRINGS
BOARD OF EDUCATION
DB 567, PG 155

DAWSON SPRINGS
BOARD OF EDUCATION
DB 430, PG 422
DB 430, PG 559

WALLACE & GLENDA
FRANKLIN
DB 559, PG 644

RHONDA ABBOTT
DB 806, PG 702

DAWSON SPRINGS
BOARD OF EDUCATION
DB 619, PG 147

MARY ANN BEATTY
DB 791, PG 141

JAMES YECKERING
DB 778, PG 162

FAY CORNETTE
DB 360, PG 327

BONNIE BROWN
DB 554, PG 209

ASPHALT DRIVE

MINERAL STREET

ALLEY

RAILROAD

RBS DESIGN GROUP
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723 Harvard Drive, Owensboro, KY 42301
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ALABAMA DRAWINGS
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No.	Description	Date

JOB NUMBER 25-006
DRAWN BY JSL
CHECKED BY JSL
DATE 5/01/2025

COMMONWEALTH OF KENTUCKY
JUSTIN S. LAMB
32660
LICENSED
PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

SITE SURVEY

SHEET NUMBER
SS-1

General Notes

1. Prior to beginning construction, contractor shall be responsible for ensuring that all required permits and approvals have been obtained.
2. In the case of a conflict between site drawings and other drawings/specifications, the engineer shall be notified immediately for clarification.
3. All radial dimensions are measured to the face of curb when present, edge of pavement when no curb exists. See typical section details for driving lane, curb, and gutter widths.
4. Existing pavement, vegetation, or other entities outside of the limits of construction depicted on this plan which are damaged during construction shall be replaced at contractors expense.
5. No grading, stripping, excavation, filling, or other disturbance of the natural ground shall take place unless and until all erosion control structures are properly installed.
6. The erosion control plan is prepared as a guide for initial erosion control measures to be installed in support of the project. If erosion occurs in other areas of the property during construction, the contractor is responsible for installing silt fence or other erosion control measures as needed to prevent erosion and/or control sedimentation.
7. Pipe inlets, perforated piping, and other stormwater facilities shall be protected from sedimentation until the final surface and or vegetation is established. In the instance that sediment protection is inadequate and/or fails inlets and pipes shall be inspected and cleaned at contractor's expense.
8. The contractor is solely responsible for the proper installation and maintenance of the erosion prevention and sedimentation control, structures, silt fence, etc. These devices should be inspected regularly and shall be repaired, cleaned, and/or reinstalled as necessary to meet the intent of the erosion protection plan, SWPPP plan, and local/state/federal regulations.
9. The contractor shall be solely responsible for the removal of erosion protection and sediment control structures after construction is complete but only after permanent ground cover is established at the site.
10. Construction or fabrication shall not begin until the contractor has received and thoroughly reviewed all plans and other documents.
11. Submittal documents shall be submitted and approved by the design engineer prior to ordering any materials. Materials ordered without approved submittal documents are done so at the contractor's financial risk.
12. Earthwork and site work operations shall be in strict conformance with the plans and specifications. Any deviations shall be issued and/or approved in writing by the design engineer.
13. The contractor shall be solely responsible for removing any dirt and debris caused by construction activities related to the site from any on site or off site property including but not limited to paved surfaces and drainage systems.
14. During construction the contractor shall provide a dumpster, concrete washout, sanitary facilities, and secure material storage area.
15. In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and will not be limited to normal working hours.
16. Contractor will be responsible for providing and maintaining all barricades, warning signs, flashing lights, and traffic control devices during construction.
17. Contractor shall comply with OSHA regulations and safety requirements. As well as any other applicable local, state, or federal safety standards/regulations.
18. Contractor is responsible for the safety of all vehicle traffic in and around the construction area.
19. All unpaved areas to receive a minimum of 4" topsoil and shall be seeded and mulched. Landscaped areas shall be watered and maintained throughout the end of construction.
20. Contractor must maintain acceptable cover height above all existing and proposed utility piping per manufacturer's specifications (field verify).
21. All areas must be graded to provide proper drainage away from the building and into stormwater structures and swales. Maintain positive drainage away from all structures.
22. At interface locations of existing and proposed pavement and concrete, the proposed pavement shall match the existing grade unless otherwise noted.
23. Slopes shall not exceed 3:1 unless specified otherwise on the plan.
24. All slopes of 4:1 or greater shall have double net straw blankets installed and properly secured.
25. Site grades around pavement areas shall be graded and maintained during construction to prevent ponding. Any surface water accumulation in the pavement areas shall be drained immediately to avoid saturation and possible degradation of the subgrade soils.
26. Proposed contour lines and spot elevations as shown heron are finished grade elevation. Contractor should review the included details to determine the appropriate subgrade elevation.
27. All excavations, trenching, pipe laying, and backfilling shall be in accordance with OSHA regulations.
28. Contractor shall bid and perform the work in accordance with all local, state, and national codes as well as the requirements of any local utility company.
29. Contact 811 for utility marking prior to any excavation. If necessary retain a private utility locator to identify private lines or any other lines not able to be marked by 811. It is the contractor's responsibility to verify that all local utilities are contacted by 811. Contractor should directly contact any non-participating local utilities.

SITE NOTES

1. ALL WORK AND MATERIAL SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. ALL MATERIAL NOTED ON DRAWINGS WILL BE SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

GRADING NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
3. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
4. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE EPA OR APPLICABLE STATE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
5. EXISTING GRADE CONTOUR INTERVALS ARE SHOWN AT 1 FOOT INTERVALS. PROPOSED GRADE CONTOUR INTERVALS ARE SHOWN AT 0.5 FOOT INTERVALS.
6. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
8. ALL TOPSOIL MUST BE REMOVED BEFORE FILL IS PLACED.
9. ALL WET, OR OTHERWISE UNSUITABLE, SOILS MUST BE STABILIZED. THIS MAY BE ACCOMPLISHED BY DRYING, REMOVAL & REPLACEMENT, REMOVAL & DRYING RECOMPACTION, OR SOIL TREATMENT (LIME/CEMENT). ALL EXCAVATION IS "UNCLASSIFIED."
10. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4"-6" INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL REPAIR GRASS DISTURBED AREAS IN ACCORDANCE WITH SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. A 95% GRASS COVER MUST BE ESTABLISHED PRIOP TO ACCEPTANCE.
11. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
12. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.
13. PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION. IF PRECAST STRUCTURES ARE UTILIZED, THE CONTRACTOR SHALL VERIFY ELEVATIONS AT CONNECTION POINTS OR ANY EXISTING UTILITY CROSSING PRIOR TO ORDERING STRUCTURES. REPORT ANY CONFLICTS TO THE ENGINEER.
14. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
    HIGH DENSITY POLYETHYLENE PIPE (HDPE)
    REINFORCED CONCRETE PIPE (RCP)
15. SAWCUT LINE PROVIDED IS FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXTENT OF THE SAWCUT THAT WILL BE REQUIRED.
16. ALL STORM SEWER STRUCTURE GRATES AND FRAMES WITHIN PAVEMENT AREAS SHALL BE HEAVY DUTY.
17. ALL STORM DRAINAGE SHALL BE PREFORMED IN ACCORDANCE WITH CITY STANDARDS AT THE DIRECTION OF THE CITY OFFICIALS AND KYTC STANDARDS.
18. PROVIDE CONCRETE APRON AROUND LOT STORM SEWER STRUCTURES.
19. ALL STORM SEWER PIPES SHALL BE INSTALLED WITH CONCRETE HEADWALL AT DISCHARGE UNLESS OTHERWISE NOTED.
20. THE STORM SEWER GRADE WILL BE SUCH THAT A MINIMUM COVER IS MAINTAINED TO WITHSTAND AASHTO HS-25 LOADING ON THE PIPE. PROVIDE MINIMUM 1 FOOT OF COVER FOR ALL STORM SEWERS UNLESS OTHERWISE NOTED.

STORMWATER POLLUTION PREVENTION PLAN NOTES

SITE EPSC SHALL BE CHECKED AND IF NECESSARY, REPAIR WEEKLY AND WITHIN 24 HOURS AFTER EACH RAINFALL GREATER THAN 1/2". IN THE EVENT OF CONTINUOUS RAINFALL, EROSION CONTROLS SHALL BE CHECKED DAILY.

REMOVE TRAPPED SEDIMENT FROM SEDIMENT CONTROLS AT OR BEFORE 50% OF DESIGN CAPACITY.

ALL AREAS TO REMAIN BARE GREATER THAN 7 DAYS MUST BE TEMPORARILY STABILIZED.

THERE SHALL BE NO DIRT, DEBRIS, OR STORAGE OF MATERIALS IN THE STREET.

GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STONE LAYER OF THE CONSTRUCTION ENTRANCE.

STRAW BALES SHALL NOT BE USED AS A FORM OF EROSION CONTROL.

ALL EPSC PROPOSED MUST BE INSTALLED TO CONTROL RAINFALL AND RUNOFF FOR THE 2-YR, 24-HOUR STORM EVENT.

QUALITY ASSURANCE INSPECTION OF EROSION AND SEDIMENT CONTROLS SHALL BE PERFORMED WITHIN ONE MONTH OF CONSTRUCTION COMMENCING.

1. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED ACCORDING TO: SWPPP AND DETAIL PLANS; ACCORDING TO THE LATEST AUTHORIZATION FOR CONSTRUCTION ACTIVITY UNDER THE "KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM" (KPDES); ANY AND ALL REQUIRED PERMITS, REPORTS AND RELATED DOCUMENTS. SEE KENTUCKY DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR SWPPP RULES AND REGULATIONS. ALL CONTRACTORS AND SUBCONTRACTORS MUST BECOME FAMILIAR WITH ALL OF THE ABOVE. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.
2. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AND GRADE CHANGES TO THE SITE AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. CONTRACTOR SHALL MINIMIZE CLEARING AND DISTURBANCE TO THE ENVIRONMENT TO THE MAXIMUM EXTENT POSSIBLE OR AS REQUIRED BY THE GENERAL PERMIT. DO NOT DISTURB AREA OUTSIDE OF THE LIMITS OF DISTURBANCE (L.O.D.).
4. SEDIMENT STRUCTURE AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING WITHIN SEVEN (7) DAYS FROM THE START OF CLEARING AND GRUBBING AND SHALL CONTINUE TO FUNCTION UNTIL THE SLOPE DEVELOPMENT AREA IS RE-STABILIZED.
5. PERMANENT SOIL STABILIZATION OF DISTURBED AREAS BY MEANS OF VEGETATION, LANDSCAPE TYPE, MULCHING, MATTING, SOD, RIP-RAP AND OTHER APPROVED LANDSCAPING TECHNIQUES TO BE APPLIED AS FOLLOWS:

   WITHIN SEVEN (7) DAYS OF ANY AREA THAT WILL BE DORMANT FOR ONE (1) YEAR OR MORE.

   WITHIN TWO (2) DAYS OF ANY AREA WITHIN 50 FEET OF A STREAM AT FINAL GRADE.
6. TEMPORARY SOIL STABILIZATION OF DISTURBED AREAS BY MEANS OF TEMPORARY VEGETATION, MULCHING, GEOTEXTILES, SOD, PRESERVATION OF EXISTING VEGETATION AND OTHER APPROVED TECHNIQUES TO BE APPLIED AS FOLLOWS:

   WITHIN TWO (2) DAYS OF ANY AREA WITHIN 50 FEET OF A STREAM NOT AT FINAL GRADE.

   WITHIN SEVEN (7) DAYS OF ANY AREA THAT WILL BE DORMANT FOR MORE THAN TWENTY ONE (21) DAYS, BUT LESS THAN ONE (1) YEAR. PRIOR TO THE ONSET OF WINTER WEATHER FOR AREAS THAT WILL BE IDLE OVER WINTER.
7. TEMPORARY SEEDING, MULCHING AND FERTILIZER SPECIFICATIONS:

   SEEDING: ANNUAL RYEGRASS AT 2.02 #/1,000 S.F.

   MULCHING: STRAW MATERIAL SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT A RATE OF TWO (2)TON/ACRE, OR 80-100 POUNDS PER 1,000 S.F. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE FREE OF PROHIBITIVE NOXIOUS WEEDS. MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICAL MEANS. FROM NOVEMBER 01 THRU MARCH 15 INCREASE THE RATE OF STRAW MULCH TO THREE (3)TON/ACRE.

   FERTILIZER: APPLY FERTILIZER AT HALF THE RATE OF PERMANENT APPLICATION AND AS PER STATE DOT SPECIFICATIONS. IF PROJECT CONDITIONS PREVENT FERTILIZING THE SOIL, THEN THIS ITEM MAY BE WAVIED.
8. PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH KENTUCKY DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD SPECIFICATIONS.
9. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRAND PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. ALL SLOPES 3:1 OR GREATER THAN 3:1 SHALL BE FERTILIZED, SEEDED, AND CURLEX BLANKETS, AS SPECIFIED IN THE PLANS SHALL BE INSTALLED ON THE SLOPES.
10. NO SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORM WATER RUNOFF. ALL NON-SEDIMENT POLLUTANTS MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL GUIDELINES. WASH OUT OF CEMENT TRUCKS SHOULD OCCUR IN DESIGNATED PIT OR DIKED AREAS, WHERE WASHINGS CAN BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE WHEN THEY HARDEN. STORAGE TANKS SHOULD ALSO BE LOCATED IN PIT OR DIKED AREAS. IN ADDITION, SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS TO CLEAN AND CONTAIN FUEL AND CHEMICAL SPILLS MUST BE KEPT ON SITE.
11. IF THE ACTION OF VEHICLES TRAVELING OVER THE STABILIZED CONSTRUCTION EXIT DOES NOT SUFFICIENTLY REMOVE MOST OF THE DIRT AND MUD, THEN THE TIRES MUST BE WASHED BEFORE VEHICLES ENTER A PUBLIC ROAD. PROVISIONS MUST BE MADE TO INTERCEPT THE WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
12. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DISPOSED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE SITE THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
13. DUST CONTROL USING APPROVED MATERIALS MUST BE PERFORMED AT ALL TIME. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS PROHIBITED.
14. ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AN SEDIMENTATION BY USE OF BEST MANAGEMENT PRACTICES. THESE AREAS MUST BE SHOWN IN THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS. AT A MINIMUM, A SILT FENCE IS TO BE PLACED AT PERIMETER OF STOCKPILE AREA TO PREVENT SOIL FROM LEAVING THE STOCKPILE AREA.
15. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE ROADWAYS OR INTO THE STORM SEWERS MUST BE REMOVED IMMEDIATELY.
16. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH DAY; THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR ASPHALT FOR ROAD CONSTRUCTION.
17. THE LAST LAYER OF SOIL, INCLUDING THE TOPSOIL, SHALL BE COMPACTED TO 80% - 85% OF THE MAXIMUM STANDARD PROCTOR DENSITY, IN AREAS OUTSIDE THE PAVED AREAS THAT WILL RECEIVE VEGETATION. THIS IS PARTICULARLY IMPORTANT IN CUT SLOPE AND EMBANKMENT AREAS. IN PAVEMENT AND ISLAND AREAS, IT IS RECOMMENDED THAT THE SOIL BE COMPACTED TO 98% AND 95% OF THE MAXIMUM STANDARD DENSITY RESPECTIVELY; THE LAST COMPACTED LAYER MAY BE SCARIFIED TO IMPROVE THE SOIL GROWTH CHARACTERISTICS.
18. IN THE EVENT THAT HIGH GROUND WATER IS ENCOUNTERED, CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND IMPLEMENTING A PLAN TO CONTROL BOTH SURFACE AND GROUND WATER DURING THE COURSE OF CONSTRUCTION. ALL DEWATERING ACTIVITIES SHALL THROUGH A BMP PRIOR TO LEAVING SITE.

INSPECTION / MAINTENANCE NOTES

FILTER BARRIERS, INCLUDING BUT NOT LIMITED TO SILT FENCE AND INLET PROTECTION, SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY HALF THE HEIGHT OF THE BARRIER.

IF THE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE FABRIC SHALL BE REPLACED PROMPTLY.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CON FORM WITH THE EXITING GRADE, PREPARED AND SEEDED.

1. ALL CONTROL MEASURES STATED IN THE SWPPP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL TEMPORARY OR PERMANENT STABILIZATION OF THE SITE IS ACHIEVED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED BY A QUALIFIED PERSON IN ACCORDANCE TO THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT AND REPAIRED TO THE FOLLOWING:
   A. INLET PROTECTION DEVICES AND CONTROLS SHALL BE REPAIRED OR REPLACED WHEN THEY SHOW SIGNS OF UNDERMINING AND OR DETERIORATION.
   B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STANDING OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED
   C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION IF DAMAGED. SEDIMENT ACCUMULATION MUST BE REMOVED WHEN SEDIMENT HEIGHT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE OR CHECK DAM.
   D. OUTLET STRUCTURES IN SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT MUST BE REMOVED FROM BASINS AND OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 40%.
   E. MINIMIZE OFF-SITE SEDIMENT TRACKING OF VEHICLES BY THE USE OF STONE MATERIAL IN ALL CONSTRUCTION ENTRANCES, ALONG WITH REGULARLY SCHEDULED SWEEPING/GOOD HOUSEKEEPING. STABILIZED CONSTRUCTION ENTRANCES TO BE PROPERLY MAINTAINED BY GENERAL CONTRACTOR AND IN GOOD WORKING ORDER AT ALL TIMES; THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE STONE AS CONDITIONS DEMAND.
   F. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE) BY GENERAL CONTRACTOR. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
2. CONTRACTORS AND SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ALL SEDIMENT FROM THE SITE, INCLUDING DETENTION BASINS AND STORM SEWER SYSTEMS. SEDIMENT DEPOSITION DURING SITE STABILIZATION MUST ALSO BE REMOVED.
3. ALL RIP-RAP MUST BE PLACED OVER GEOTEXTILE FILTER.
4. STONE CONSTRUCTION EXIT TO BE MAINTAINED BY GENERAL CONTRACTOR UNTIL SITE HAS BEEN PAVED OR IS NO LONGER REQUIRED.

SOLID / SANITARY / TOXIC WASTES NOTES

1. CONTAINERS SHALL BE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.
2. BRICKS, HARDENED CONCRETE AND SOIL WASTE SHALL BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE.
3. CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY SHALL BE SUBJECT TO ANY LOCAL PROHIBITIONS FROM THIS TYPE OF DISPOSAL.
4. ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN APPROVED C&DD LANDFILL. CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON-SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED OF IN AN APPROVED LANDFILL. ALSO, MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS.
5. AREA SHALL BE DESIGNATED BY CONTRACTOR AND SHOWN ON SWPPP MAP FOR MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME ASPHALT, OR CONCRETE, THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS, OR OTHER STORM WATER DRAINAGE AREA.
6. EQUIPMENT FUELING & MAINTENANCE SHALL BE IN DESIGNATED AREAS ONLY.
7. A SPILL PREVENTING CONTROL AND COUNTERMEASURE (SPCC) PLAN MUST DEVELOPED FOR SITES WITH ONE ABOVE-GROUND STORAGE TANK OF 660 GALLONS OR MORE, TOTAL ABOVE-GROUND STORAGE OF 1,330 GALLONS OR BELOW-GROUND STORAGE OF 4,200 GALLONS OF FUEL.
8. ALL DESIGNATED CONCRETE WASHOUT AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORM WATER DRAINAGE AREAS.
9. ALL CONTAMINATED SOIL MUST BE TREATED AND / OR DISPOSED IN AN APPROVED SOLID WASTE MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES.
10. THE CONTRACTOR SHALL CONTACT KYDEP, THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF SHEEN.
11. OPEN BURNING IS NOT PERMITTED ON THE SITE.

GENERAL NOTES

1. ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED AS IDENTIFIED WITH KENTUCKY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND LOCAL JURISDICTION INSPECTOR.
2. CONTRACTOR SHALL REVIEW THE COMPLETE DRAWING SET AND NOTIFY THE DESIGN PROFESSIONAL IN WRITING PRIOR TO CONSTRUCTION, IF ANY DISCREPANCIES ARE FOUND WITHIN THE DRAWING OR WITH ACTUAL FIELD CONDITIONS.
3. ALL STORM WATER POLLUTION PREVENTION PLANS, NOTES AND DETAILS SHALL COMPLY WITH THE KYDEP PLANNING AND TECHNICAL SPECIFICATIONS MANUAL FOR STORM WATER POLLUTION PREVENTION PLANS.
4. CONTRACTOR IS RESPONSIBLE TO MAINTAIN EROSION CONTROL MEASURES UNTIL ADEQUATE RE-VEGETATION AND STABILIZATION ARE ACHIEVED.

1. EXISTING UTILITIES SHOWN ARE BASED ON ABOVE GROUND EVIDENCE AND INFORMATION AVAILABLE. CONTRACTOR SHALL CONTACT ALL LOCAL UTILITY PROVIDERS TO VERIFY THE EXISTENCE AND LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL USE CAUTION NOT TO DISTURB EXISTING UTILITIES WHETHER SHOWN ON THESE DRAWINGS OR NOT. CONTACT ENGINEER IF CONFLICTS WITH WORK AND EXISTING UTILITIES ARISE. (CALL B. U. D. AT 1-800-752-6007)
2. EFFORTS HAVE BEEN MADE TO INDICATE THE MOST ACCURATE LOCATIONS OF EXISTING STRUCTURES, PIPING, & UTILITIES. EXACT LOCATION OF GAS SERVICE LINES AND LOCATION OF SEWER TAPS ARE UNKNOWN. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES ENCOUNTERED BEFORE BEGINNING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL EXERCISE CAUTION TO PREVENT DAMAGE.
3. CONTRACTOR SHALL INSTALL, MAINTAIN AND REMOVE EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THESE DRAWINGS OR AS SITE CONDITIONS AND CONSTRUCTION ACTIVITIES REQUIRE. MEASURES INCLUDE BUT NOT LIMITED TO: SILT FENCING, DITCH SILT CHECKS, STORM INLET PROTECTION, STORM OUTLET PROTECTION, TEMPORARY SLOPE DRAINS, TEMPORARY SEDIMENT TRAPS, SEEDING AND OTHER MEASURES.
4. PERMISSION MUST BE OBTAINED FROM RESPONSIBLE GOVERNMENTAL AUTHORITY PRIOR TO ENCROACHMENT UPON ANY RIGHT-OF-WAY, EASEMENT OR PROPERTY.
5. CONTRACTOR SHALL LOCATE AND EXPOSE EXISTING MAINS PRIOR TO MAKING CONNECTIONS TO DETERMINE THE EXACT ELEVATION OF THE EXISTING MAIN SO THAT NEEDED ELEVATION ADJUSTMENTS CAN BE MADE TO THE PROPOSED MAIN. ALL CHANGES MUST BE APPROVED BY THE ENGINEER. CONTACT ENGINEER IF CONFLICTS WITH WORK AND EXISTING UTILITIES ARISE. (CALL B. U. D. AT 1-800-752-6007)
6. WATER METERS WILL BE LOCATED ON THE CUSTOMERS PROPERTY IMMEDIATELY PAST THE R/W BOUNDARY. METERS WILL NOT BE SET ON CITY RIGHT-OF-WAY.
7. ALL BENDS, FITTINGS, ETC SHALL HAVE MECHANICAL JOINTS IN EITHER THE HORIZONTAL OR VERTICAL DIRECTION AND SHALL HAVE CONCRETE THRUST BLOCKING AS PER DETAILS IN THE SPECIFICATION AND DETAILS DRAWING SHEETS. CONCRETE TO BE INCIDENTAL TO WATER AND SEWER MAIN CONSTRUCTION.
8. THE CONTRACTOR SHALL COORDINATE ALL WATER CONNECTIONS, CUTS, SERVICE RECONNECTIONS AND CHANGEOVER, ETC. WITH THE OFFICIALS FROM THE CITY.
9. ALL MATERIALS THAT ARE TO BE REMOVED ARE TO BE RETURNED TO THE OWNER, AFTER THEY HAVE BEEN CLEANED. LOCATION TO BE DETERMINED BY THE OWNER.
10. THE WATER CONSTRUCTION IS NOT CONSIDERED COMPLETE UNTIL APPROVED BY THE OWNERS.
11. ALL EXISTING SERVICES ARE TO BE MAINTAINED THRU OUT THE CONSTRUCTION. ALL EXISTING SERVICES TO BE CONNECTED TO THE NEW WATER MAIN (IF APPLICABLE). ALL FITTINGS ARE INCIDENTAL TO THE TIE-INS. CONTRACTOR IS RESPONSIBLE FOR BOILED WATER NOTIFICATION TO ALL RESIDENTS.
12. CONTRACTOR IS RESPONSIBLE FOR INSTALLING 12 GAUGE COPPER TRACER WIRE THE LENGTH OF NEW CONSTRUCTION.
13. SHOULD THERE BE A CONFLICT BETWEEN AWWA SPECIFICATIONS AND THE UTILITY OWNERS SPECIFICATIONS THE MOST STRINGENT SHALL APPLY.
14. BORINGS HAVE NOT BEEN OBTAINED ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR SATISFYING HIMSELF OF ACTUAL SUB-SURFACE CONDITIONS PRIOR TO CONSTRUCTION. ALL MATERIAL IS UNCLASSIFIED.
15. DIMENSIONS OF EXISTING STRUCTURES AND/OR SIZE RESTRICTIONS ARE APPROXIMATE. ALL NECESSARY DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES & TOPOGRAPHY SHALL BE VERIFIED BY THE CONTRACTOR IN THE FILED PRIOR TO CONSTRUCTION OPERATIONS.
16. ALL BURIED PIPES SHALL HAVE A MINIMUM OF 42" COVER INSIDE KYTC RIGHT-OF-WAY AND 36" COVER IN OTHER AREAS, AS MEASURED VERTICAL FROM FINISHED GRADE TO THE TOP OF PIPE, UNLESS OTHERWISE NOTED. MINIMUM COVER OVER VALVE NUT TO BE (12") (NO PAYMENT FOR EXTRA DEPTH TRENCH). MAXIMUM COVER OVER VALVE NUTS TO (30") (NO EXTRA PAYMENT FOR REQUIRED EXTENSIONS).
17. ALL CONSTRUCTION STAKING TO BE PERFORMED BY CONTRACTOR. ENGINEER TO PROVIDE CONTROL.
18. LOCATION OF SEWER TAPS ARE UNKNOWN. CONTRACTOR SHALL EXERCISE CAUTION TO PREVENT DAMAGE.
19. LAY NEW MAIN UNDER EXISTING WATER LINES AND GAS LINES, EXCEPT AS OTHERWISE NOTED OR DETERMINED IN THE FIELD. (NO PAYMENT FOR EXTRA DEPTH TRENCH). ALL D.I. PIPE TO BE CL. 52 OR C900 DR 18 PVC PIPE OR AS SPECIFIED ON PLANS.
20. PAYMENT FOR PIPE WILL BE FOR LENGTHS ACTUALLY INSTALLED AND MEASURED IN THE FIELD.
21. DISTANCES SHOWN ALONG PIPELINE ARE HORIZONTAL DISTANCES BETWEEN HORIZONTAL ANGLES OF 90° AND/OR MATCH LINES EXCEPT WHERE PROFILES ARE SHOWN. PAYMENT FOR PIPE WILL BE FOR LENGTHS ACTUALLY INSTALLED AND MEASURED IN THE FIELD.
22. LOCATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE ONLY. EXACT LOCATIONS MUST BE DETERMINED BY CONTRACTOR BEFORE EXCAVATING FOR NEW FACILITIES.
23. WHEREVER POSSIBLE, FIRE HYDRANTS WILL BE LOCATED FOR MINIMUM DEPTH OF BURY. HOWEVER, EXTENSIONS REQUIRED FOR DEEPER INSTALLATIONS WILL BE AT NO EXTRA COST TO OWNER.
24. ALL TIE-IN LOCATIONS SHALL BE UNCOVERED PRIOR TO CONSTRUCTION TO MAINTAIN PROPER ALIGNMENT AND ELEVATION OF NEW CONNECTIONS.
25. CONTRACTOR SHALL INVENTORY REQUIRED MATERIALS, TRENCH DE-WATERING EQUIPMENT, AND ASSEMBLE IF NECESSARY ALL REQUIRED FITTINGS PRIOR TO CUT-INS OR TIE-INS SO TO INSURE MINIMUM DOWN TIME FOR CONNECTION.
26. THE CONTRACTOR WILL BE REQUIRED TO DISPOSE OF ALL EXCESS EXCAVATED MATERIAL FROM WATER MAIN AND SERVICE LINE CONSTRUCTION.

UTILITY NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF O.S.H.A. DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS TO INCLUDE BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR O.S.H.A.
3. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITY DURING CONSTRUCTION AT NO COST TO THE OWNER.
4. ALL FILL MATERIAL IS TO BE PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
5. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY'S INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
6. WATER AND SANITARY UTILITIES SHALL BE TEN (10') FEET CLEARANCE (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE.)
7. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
8. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. THE CONTRACTOR SHALL CONDUCT ALL REQUIRED TESTS TO THE SATISFACTION OF THE RESPECTIVE UTILITY REGULATIONS AND THE OWNER'S INSPECTION AUTHORITIES.

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JOB NUMBER	25-006
DRAWN BY	JSL
CHECKED BY	JSL
DATE	5/01/2025

No.	Description	Date

STATE OF KENTUCKY
JUSTIN S. LAMB
32660
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
SITE LAYOUT

SHEET NUMBER
C-0

LEGEND

- APPROXIMATE PROPERTY LINE/RIGHT OF WAY
- BUILDING SETBACK LINE
- U/T — EXISTING UNDERGROUND TELEPHONE
- FO — EXISTING FIBER OPTIC LINE
- G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD ELECTRIC
- W — EXISTING WATERLINE
- EDGE OF ASPHALT/CONCRETE
- 500 — EXISTING CONTOUR
- 500 — PROPOSED CONTOUR
- PROPOSED STORM WATER DITCH
- PROPOSED STORM WATER PIPING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LANDSCAPING (GRAVEL)
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED SEGMENTAL BLOCK RETAINING WALL
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING GAS METER
- EXISTING WATER METER

0 10 20 30

MH
RIM:450.27
INV:443.92

HICKORY STREET

ELI STREET

END RETAINING WALL

EXISTING SIDEWALK
DO NOT DISTURB

6" STANDING CURB

R10.00'

6" CURB AT
REAR OF ADA RAMP

ADA RAMP WITH TACTILE
WARNING STRIP
DO NOT EXCEED 1:12

LIMITS OF DISTURBANCE

SAWCUT AND TIE
TO EXISTING ASPHALT

SIGHT SIGN
SEE ARCH.

MECHANICAL PAD

RIP RAP BIRM AND
TURBIDITY DISSIPATER

58' SEGMENTAL BLOCK
RETAINING WALL (SEE DETAIL)

STORM WATER
DETENTION AREA

PROPOSED STORM SHELTER
FFE:453.65'

182' SEGMENTAL BLOCK
RETAINING WALL (SEE DETAIL)

START RETAINING WALL

EXTENTS OF EXCAVATION

EXISTING CAST IN PLACE
RETAINING WALL
DO NOT DISTURB

EXISTING PARKING

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RELEASE/SEAL/DRAWINGS

USE OF THIS DRAWING FOR THE PURPOSES OF CONSTRUCTION SHALL BE RELEASED BY THE ARCHITECT AND SEALED BY THE ARCHITECT OF RECORD IN THE STATE IN WHICH THE PROJECT IS LOCATED.

No.	Description	Date

JOB NUMBER 25-006
DRAWN BY JSL
CHECKED BY JSL
DATE 5/01/2025

STATE OF KENTUCKY
JUSTIN S. LAMB
29560
LICENSED ARCHITECT

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

SITE LAYOUT

SHEET NUMBER

C-1

LEGEND

- APPROXIMATE PROPERTY LINE/RIGHT OF WAY
- BUILDING SETBACK LINE
- U/T — EXISTING UNDERGROUND TELEPHONE
- FO — EXISTING FIBER OPTIC LINE
- G — G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD ELECTRIC
- W — W — EXISTING WATERLINE
- EDGE OF ASPHALT/CONCRETE
- 500 — EXISTING CONTOUR
- 500 — PROPOSED CONTOUR
- PROPOSED STORM WATER DITCH
- PROPOSED STORM WATER PIPING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LANDSCAPING (GRAVEL)
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED SEGMENTAL BLOCK RETAINING WALL
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING GAS METER
- EXISTING WATER METER

0 10 20 30

MH
RIM:450.27
INV:443.92

HICKORY STREET

ELI STREET

EXISTING PARKING

PROPOSED STORM SHELTER
FFE:453.65'

DO NOT EXCEED
2% IN ADA SPACES
OR ACCESS PATHWAYS

END EXPOSED STEM WALL
4.71' EXPOSED

5.18' EXPOSED STEM WALL

BEGINNING EXPOSED STEM WALL

GRADE TO EXISTING
RETAINING WALL
DO NOT DISTURB

RBS DESIGN GROUP
ARCHITECTURE
723 Harvard Drive, Owensboro, KY 42301
Phone: (270) 683-1199 Fax: (270) 683-2445
Email: rbs@rbsdesigngroup.com

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No.	Description	Date

JOB NUMBER 25-006
DRAWN BY JSL
CHECKED BY JSL
DATE 5/01/2025

COMMONWEALTH OF KENTUCKY
JUSTIN S. LAMB
25660
LICENSED ARCHITECT

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

GRADING

SHEET NUMBER

C-2

LEGEND

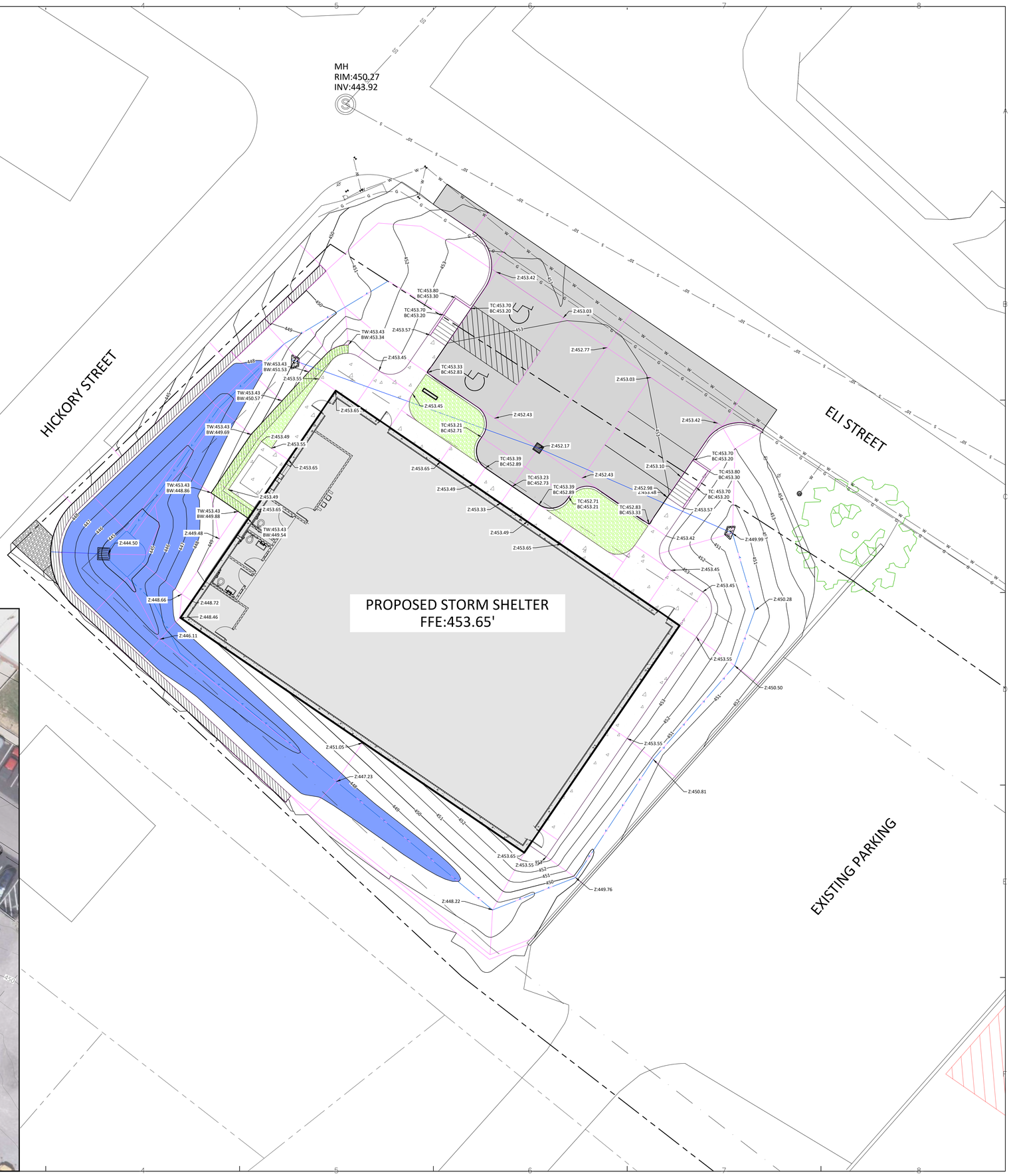
- APPROXIMATE PROPERTY LINE/RIGHT OF WAY
- BUILDING SETBACK LINE
- U/T — EXISTING UNDERGROUND TELEPHONE
- FO — EXISTING FIBER OPTIC LINE
- G — G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD ELECTRIC
- W — W — EXISTING WATERLINE
- EDGE OF ASPHALT/CONCRETE
- 500 — EXISTING CONTOUR
- 500 — PROPOSED CONTOUR
- PROPOSED STORM WATER DITCH
- PROPOSED STORM WATER PIPING
- GRADING BREAKLINE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LANDSCAPING (GRAVEL)
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED SEGMENTAL BLOCK RETAINING WALL

0 10 20 30

EXCESS MATERIAL NOTE:

VOLUMETRIC ANALYSIS OF PROPOSED SITE GRADING INDICATES APPROXIMATELY 875-900 CUBIC YARDS OF EXCESS SOIL WILL BE PRODUCED DUE TO GRADING ACTIVITIES. ALL SUITABLE EXCESS MATERIAL SHALL BE PLACED ON THE PROPOSED EXCESS MATERIAL PLACEMENT AREA SHOWN BELOW. MATERIAL SHALL BE PLACED AS ENGINEERED FILL AS OUTLINED IN THE SPECIFICATIONS FOR USE AS A FUTURE BUILDING SITE. FINAL FILL SURFACE SHALL BE A PLATEAU SLOPED TO THE SOUTH WEST AT 2% WITH 3:1 SLOPE TIE IN TO EXISTING SITE AS REQUIRED.

ALL DEBRIS AND UNSUITABLE MATERIAL TO BE DISPOSED OF AT CONTRACTORS EXPENSE.



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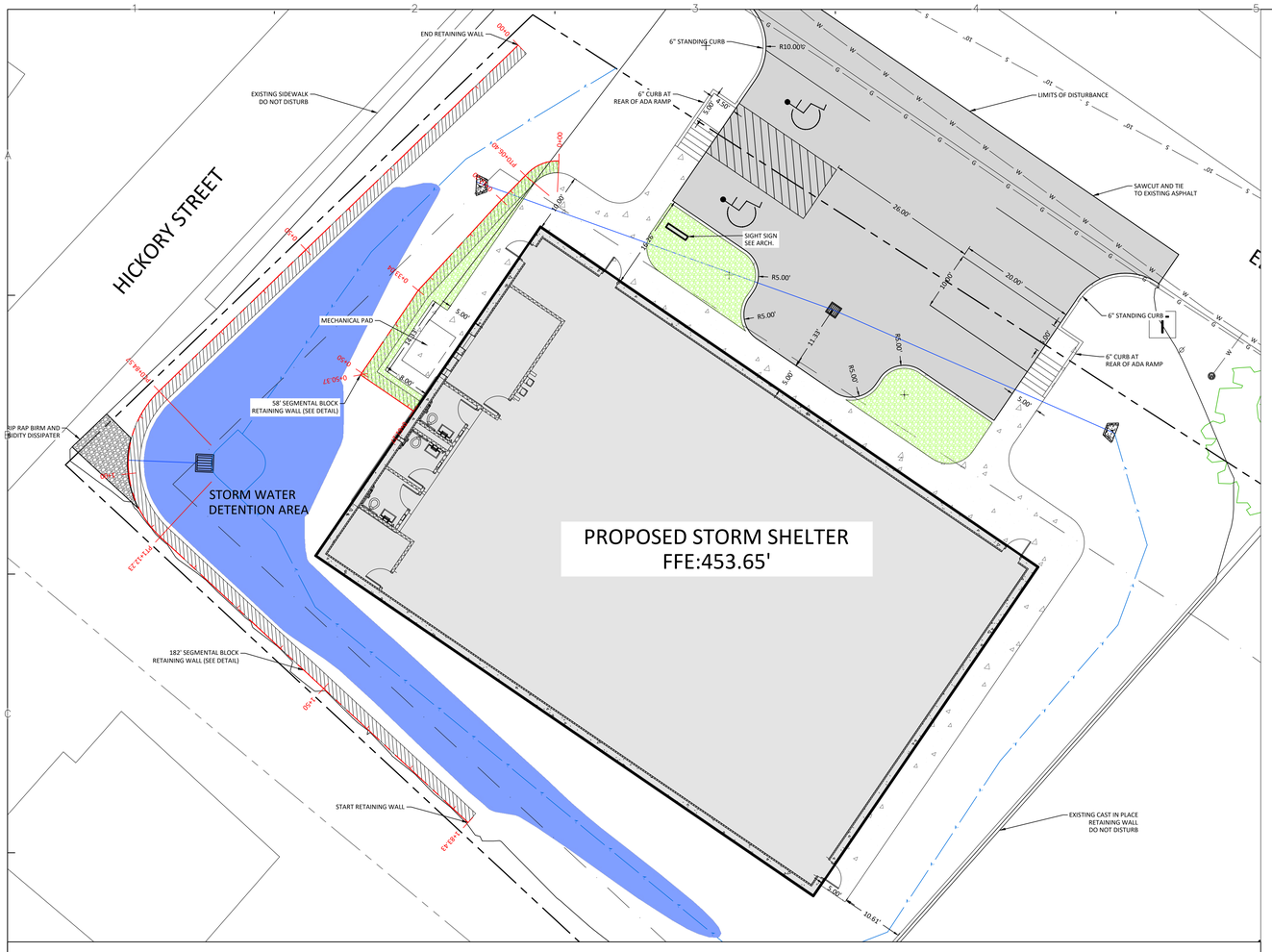
JOB NUMBER	25-006
DRAWN BY	JSL
CHECKED BY	JSL
DATE	5/01/2025

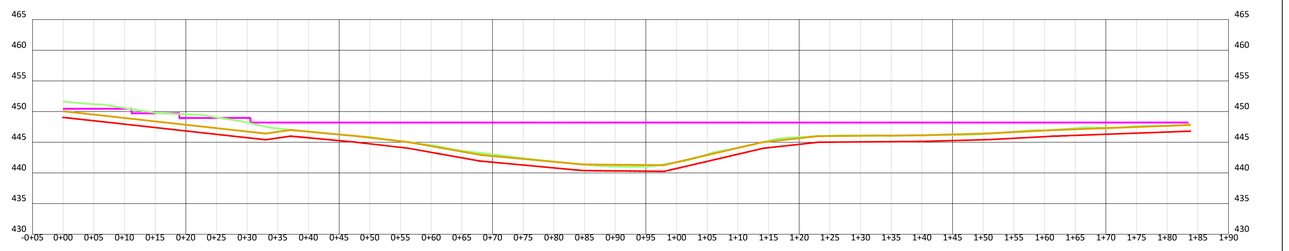
No.	Description	Date

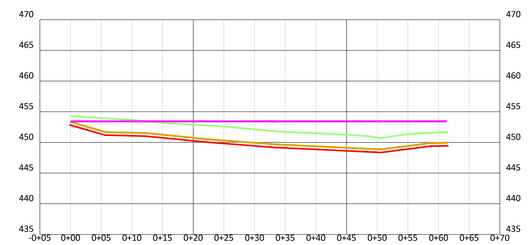
COMMONWEALTH OF KENTUCKY
JUSTIN S. LAMB
29660
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
GRADING EXPANDED

SHEET NUMBER
C-3





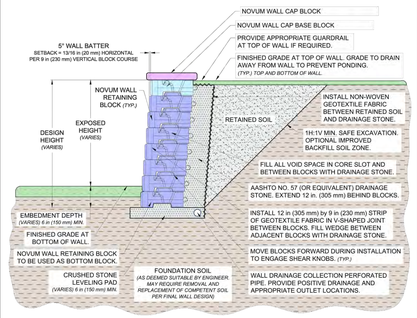


LEGEND

- EXISTING GROUND
- PROPOSED TOP OF WALL
- GROUND AT BASE OF WALL
- MINIMUM EMBEDMENT DEPTH

0 10 20 30

TYPICAL GRAVITY WALL SECTION
NOT TO SCALE



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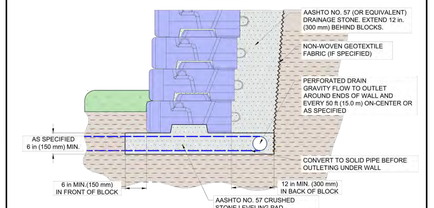
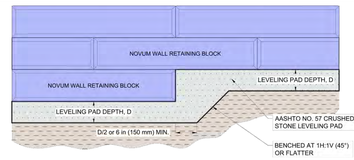
DRAWN BY: JSL	TITLE: TYPICAL GRAVITY WALL SECTION (CAP)	NOVUM WALL™	
APPROVED BY:			
DATE: 05-MAY-2024			
SHEET: 1 of 1	FILE: Typical_Gravity_Wall_Section_wCap.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

LEVELING PAD AND STEP DETAILS
NOT TO SCALE



CROSS SECTION - CRUSHED STONE LEVELING PAD



PROFILE VIEW - CRUSHED STONE LEVELING PAD WITH STEP

NOTE: The use of unreinforced mass concrete for leveling pads is also acceptable and may be preferred in certain applications, but is not structurally required.

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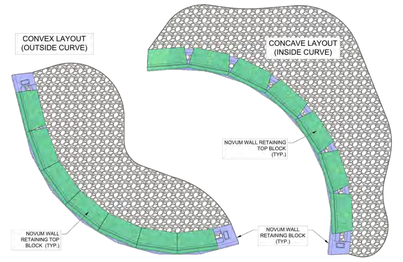
DRAWN BY: LBH	TITLE: LEVELING PAD AND STEP DETAILS	NOVUM WALL™	
APPROVED BY: DJC			
DATE: 04-APR-2024			
SHEET: 1 of 1	FILE: Leveling_Pad_And_Step_Details.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

CONCAVE AND CONVEX CURVES GRAVITY LAYOUT
NOT TO SCALE



MINIMUM RADIUS FOR BOTTOM ROW

NUMBER OF COURSES	HEIGHT OF WALL	RADIUS FROM FACE OF BASE BLOCK
1	0 ft - 9 in (0.23 m)	14 ft - 6 in (4.42 m)
2	1 ft - 6 in (0.46 m)	14 ft - 7 in (4.45 m)
3	2 ft - 3 in (0.69 m)	14 ft - 8 in (4.47 m)
4	3 ft - 0 in (0.91 m)	14 ft - 9 in (4.50 m)
5	3 ft - 9 in (1.14 m)	14 ft - 10 in (4.52 m)
6	4 ft - 6 in (1.37 m)	14 ft - 11 in (4.55 m)
7	5 ft - 3 in (1.60 m)	15 ft - 0 in (4.58 m)
8	6 ft - 0 in (1.83 m)	15 ft - 1 in (4.60 m)

14 ft - 6 in (4.42 m) is the minimum radius for Novum blocks. It occurs when all of the blocks are placed tight together. A larger radius is required on the bottom row of a Novum Wall to account for the batter between courses of blocks and still provide enough space to construct the top row of blocks.

This radius layout is based on a standard Novum Wall 5° face batter.

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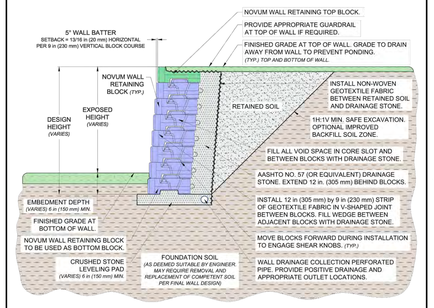
DRAWN BY: TOG	TITLE: CONCAVE AND CONVEX CURVES GRAVITY LAYOUT	NOVUM WALL™	
APPROVED BY: LBH			
DATE: 14-MAR-2025			
SHEET: 1 of 1	FILE: Concave_and_Convex_Curves_Gravity_Layout.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

TYPICAL GRAVITY WALL SECTION
NOT TO SCALE



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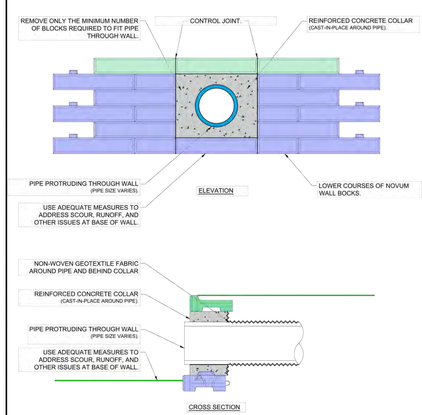
DRAWN BY: LBH	TITLE: TYPICAL GRAVITY WALL SECTION	NOVUM WALL™	
APPROVED BY: DJC			
DATE: 04-APR-2024			
SHEET: 1 of 1	FILE: Typical_Gravity_Wall_Section.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

PIPE INSTALLED THROUGH WALL DETAIL
NOT TO SCALE



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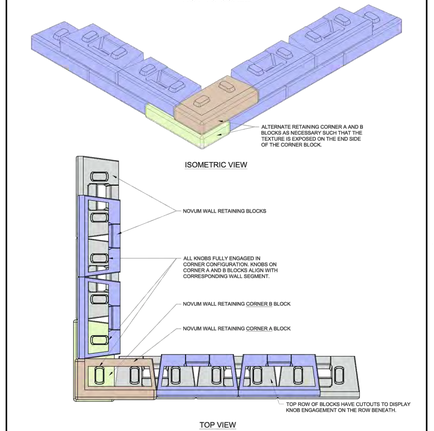
DRAWN BY: EGS	TITLE: PIPE INSTALLED THROUGH WALL DETAIL	NOVUM WALL™	
APPROVED BY: LBH			
DATE: 10-MAR-2025			
SHEET: 1 of 1	FILE: Pipe_Installed_Through_Wall_Detail.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

OUTSIDE 90 DEGREE CORNER
NOT TO SCALE



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DRAWN BY: LBH	TITLE: OUTSIDE 90 DEGREE CORNER	NOVUM WALL™	
APPROVED BY: DJC			
DATE: 21-MAY-2024			
SHEET: 1 of 1	FILE: Outside_90_Degree_Corner.dwg	3990 CHARLEVOIX AVE, PETOSKEY, MI 49720 (866) 222-8400 ext 59019 • engineers@ard-rock.com • www.novumwall.com	

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ARCHITECTURE
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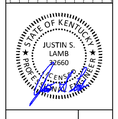
JOB NUMBER	25-006
DRAWN BY	JSL
CHECKED BY	JSL
DATE	5/01/2025

No.	Description	Date



DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
RETAINING WALL PLAN/PROFILE

SHEET NUMBER
C-4

LEGEND

- APPROXIMATE PROPERTY LINE/RIGHT OF WAY
- BUILDING SETBACK LINE
- U/T — EXISTING UNDERGROUND TELEPHONE
- FO — EXISTING FIBER OPTIC LINE
- G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD ELECTRIC
- W — EXISTING WATERLINE
- EDGE OF ASPHALT/CONCRETE
- 500 — EXISTING CONTOUR
- 500 — PROPOSED CONTOUR
- PROPOSED STORM WATER DITCH
- PROPOSED STORM WATER PIPING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LANDSCAPING (GRAVEL)
- PROPOSED CONCRETE
- PROPOSED GRAVEL
- PROPOSED SEGMENTAL BLOCK RETAINING WALL
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING GAS METER
- EXISTING WATER METER

0 10 20 30

CONTRACTOR RESPONSIBLE FOR ALL TAP COORDINATION AND ALL TAP FEES AT CONTRACTORS EXPENSE

MH
RIM:450.27
INV:443.92

INSTALL 6" SANITARY SEWER TAP COORDINATE TAP WITH CITY OF DAWSON SPRINGS

INSTALL 7" WATER TAP COORDINATE TAP WITH CITY OF DAWSON SPRINGS

PROPOSED 2" WATER METER COORDINATE WITH LOCAL MUNICIPALITY

PROPOSED 2" GAS SERVICE LINE

2" PVC MUNICIPAL WATER SERVICE

KYTC STYLE HEADWALL INV: 449.41'

119' 4" SANITARY SEWER LATERAL DO NOT EXCEED 5% SLOPE

SEE MEP FOR PENETRATION

PROPOSED GAS METER LOCATION

64' 12" N-12 HDPE 0.5% SLOPE

3X3 CONCRETE CATCH BASIN WITH CONCRETE APRON RIM: 452.17' INV: 449.73'

52' 12" N-12 HDPE 0.5% SLOPE

12" KYTC STYLE HEADWALL INV: 449.99'

INSTALL CLEANOUT WITHIN 5' OF STRUCTURE

4" SANITARY SEWER INV: 450.11 SEE MEP FOR CONTINUATION

12' OF 18" N-12 HDPE INLET:441.50' OUTLET:441.25'

3X3 CONCRETE OUTLET STRUCTURE
3X3 GRATED EMERGENCY INLET: 447.0'
10" OUTLET ORIFICE: 446.0'
6" OUTLET ORIFICE: 444.5'

PROPOSED STORM SHELTER
FFE:453.65'

HICKORY STREET

ELI STREET

EXISTING PARKING

RBS DESIGN GROUP
ARCHITECTURE
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Phone: (270) 683-1199 Fax: (270) 683-2445
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JOB NUMBER	25-006
DRAWN BY	JSL
CHECKED BY	JSL
DATE	5/01/2025

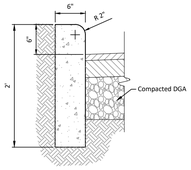
No.	Description	Date

COMMONWEALTH OF KENTUCKY
JUSTIN S. LAMB
26661
LICENSED ARCHITECT

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

UTILITIES

SHEET NUMBER
C-5

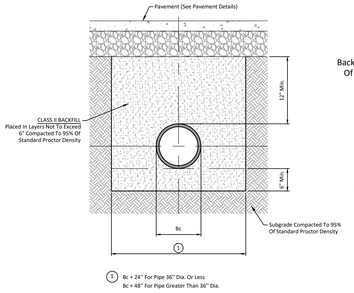


Note:

1. Curb To Be Constructed With 4,000 P.S.I. Concrete.
2. Trowled Contraction Joints Are Required At 10' Spacing.

STANDING CURB DETAIL

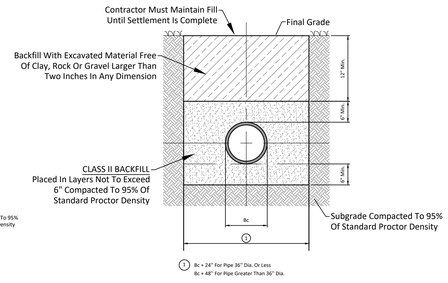
N.T.S.



1 Bc = 24" For Pipe 36" Dia. Or Less
Bc = 48" For Pipe Greater Than 36" Dia.

PIPE BEDDING DETAIL - PAVEMENT

N.T.S.



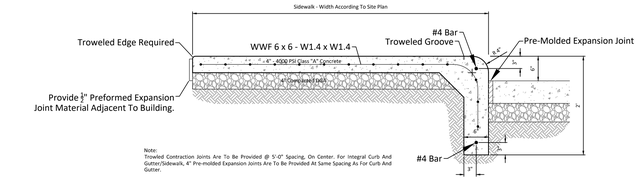
1 Bc = 24" For Pipe 36" Dia. Or Less
Bc = 48" For Pipe Greater Than 36" Dia.

PIPE BEDDING DETAIL - GRASS

N.T.S.

4" CONCRETE SIDEWALK

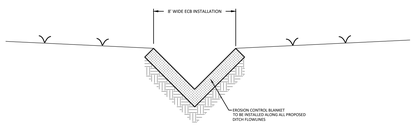
N.T.S.



Note:
Troweled Contraction Joints Are To Be Provided @ 5'-0" Spacing, On Center. For Integral Curb And Gutter/Sidewalk, 4" Pre-molded Expansion Joints Are To Be Provided At Same Spacing As For Curb And Gutter.

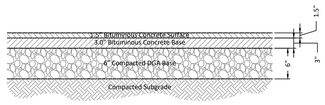
INTEGRAL CONCRETE CURB AND SIDEWALK DETAIL

N.T.S.



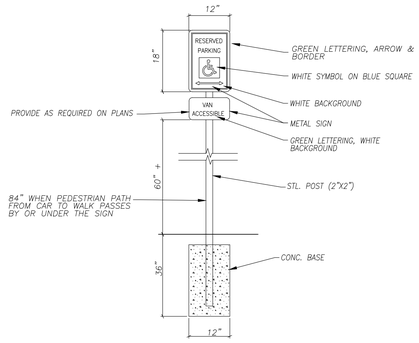
DITCH DETAIL

N.T.S.



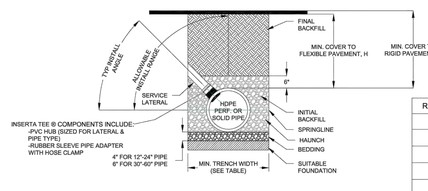
FULL DEPTH ASPHALT PAVEMENT SECTION

N.T.S.



ACCESSIBLE PARKING SIGN DETAIL

INSERTA TEE ® DETAIL (HDPE)



RECOMMENDED MINIMUM TRENCH WIDTHS	
PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
54" (1350mm)	88" (2235mm)
60" (1500mm)	96" (2438mm)

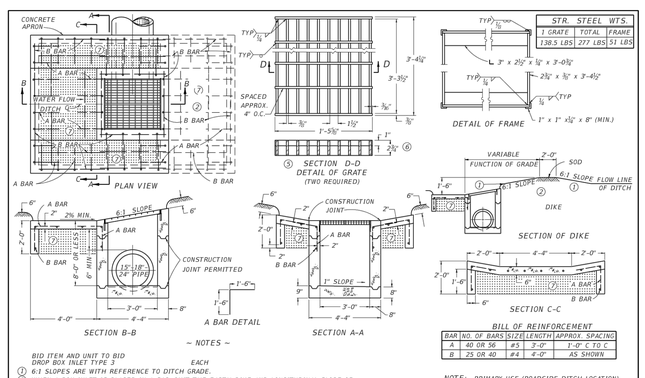
NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. THE INSERTA TEE CONNECTION CAN BE INSTALLED UP TO A VERTICAL ORIENTATION, BUT A 45° INSTALL ANGLE IS MOST COMMON. GREATER ANGLES ARE SUBJECT TO DESIGN ENGINEER APPROVAL AND MAY REQUIRE PREMIUM BACKFILL.
4. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
5. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm), 6" (150mm) FOR 30"-60" (750mm-1500mm).
6. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
7. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

NOTE: FOR INSTALLATION INSTRUCTIONS, REFER TO DETAIL STD-1100. FOR PROTRUSION INFORMATION, REFER TO DETAIL STD-1101. FOR HOLE SAW INFORMATION, REFER TO DETAIL STD-1102.

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS VISITED THE JOBSITE. ADS DOES NOT WARRANT THE SUITABILITY OF THE PRODUCTS SHOWN FOR ANY PARTICULAR USE. DRAWINGS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

INSERTA TEE DETAIL (HDPE)	ADS 4640 TRUEMAN BLVD HILLIARD, OH 43026
DRAWING NUMBER STD-1011	DRAWN BY HAK; DATE 07/19/23; CHECKED BY ENG; SCALE NTS; SHEET NO. 1



BID ITEM AND UNIT TO BID
DROP BOX INLET TYPE 3 EACH

~ NOTES ~

1. 6:1 SLOPES ARE WITH REFERENCE TO DITCH GRADE.
2. WHEN A BOX INLET IS PLACED IN A SAG, OMIT THE EARTH DIKE AND LONGITUDINAL SLOPE OF THE GRATE, AND PROVIDE A CONCRETE APRON ON EACH SIDE OF THE INLET.
3. RATE OF INCREASE OR DECREASE 0.36 CU. YD. PER FOOT IN HEIGHT.
4. DEDUCT APPROX. 0.1 CU. YD. OF CONCRETE PER PIPE.
5. RELIANCE STEEL (CAT. NO. H2-1220) AND GARY STEEL (CAT. NO. HW3-D-300) ARE ACCEPTABLE ALTERNATES PROVIDED MATCHED GRATE'S ARE SUPPLIED.
6. THE 2½" BAR SHALL BE NOTCHED TO RECEIVE THE 1" BAR.
7. COMPACT THIS VOLUME WITH D.C.A. BASE OR GRAVEL BASE AND INCLUDE IN THE UNIT PRICE OF THE BOX.
8. DOWNSTREAM DIKE COMPLETE AND IN PLACE IS INCLUDED IN THE CONTRACT UNIT PRICE OF THE INLET. SODDING IS NOT INCLUDED.

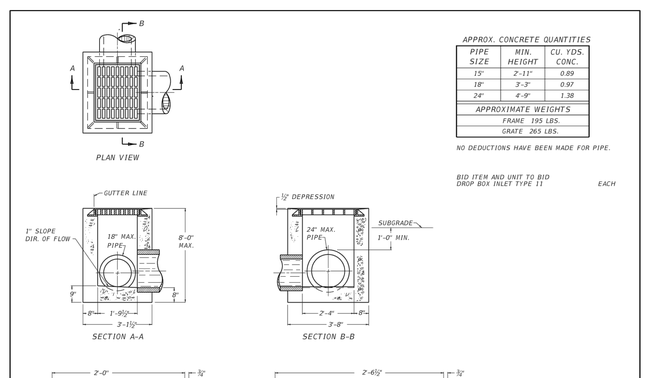
APPROX. QUANTITIES

TYPE	CONCRETE 3'-9" @ BOX	REINF. STEEL
SAG	4.4 CU. YD. ⑦	282 LBS
GRADE	3.4 CU. YD. ⑦	192 LBS

KENTUCKY DEPARTMENT OF HIGHWAYS

DROP BOX INLET TYPE 3

STANDARD DRAWING NO. RDB-003-08



APPROX. CONCRETE QUANTITIES

PIPE SIZE	MIN. HEIGHT	CU. YDS. CONC.
15"	2'-11"	0.89
18"	3'-3"	0.97
24"	4'-9"	1.38

APPROXIMATE WEIGHTS

FRAME 195 LBS.
GRATE 265 LBS.

NO DEDUCTIONS HAVE BEEN MADE FOR PIPE.

BID ITEM AND UNIT TO BID
DROP BOX INLET TYPE 11 EACH

KENTUCKY DEPARTMENT OF HIGHWAYS

DROP BOX INLET TYPE 11

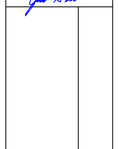
STANDARD DRAWING NO. RDB-011-08

RBS DESIGN GROUP
ARCHITECTURE
723 Harvard Drive, Owensboro, KY 42301
Phone: (270) 683-1199 Fax: (270) 883-2445
Email: rbs@rbsdesigngroup.com

RELIANCE ON ELECTRONIC DRAWINGS
USE OF ANY DRAWINGS FROM AT THIS SCHOOL, IN ELECTRONIC FORMAT, IS AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO RBS DESIGN GROUP ARCHITECTURE. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY RBS DESIGN GROUP ARCHITECTURE FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO RBS DESIGN GROUP ARCHITECTURE.

JOB NUMBER	25-006
DRAWN BY	JSL
CHECKED BY	JSL
DATE	5/01/2025

No.	Description	Date



DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
DETAILS

SHEET NUMBER
C-6

STRUCTURAL QUALITY ASSURANCE PLAN - SAFE ROOM

GENERAL

THE NEW STRUCTURE TO BE CONSTRUCTED IS ASSIGNED BY THE KENTUCKY BUILDING CODE, 2018 EDITION, TO SEISMIC USE GROUP AND SEISMIC DESIGN AS SPECIFIED. AS SUCH, THE BUILDING CODE MANDATES SPECIAL INSPECTION (SECTION 1704), SPECIAL INSPECTIONS FOR WIND RESISTANCE (SECTION 1705.11), SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SECTION 1705.12). STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE (SECTION 1704.6.1) AND STRUCTURAL OBSERVATIONS FOR WIND REQUIREMENTS (SECTION 1704.6.2). STRUCTURAL QUALITY ASSURANCE PLAN SPECIFICALLY IDENTIFIES THE RESPONSIBILITIES OF THE CONTRACTOR AND THE SPECIAL INSPECTOR IN PERFORMING THE REQUIRED TESTING AND INSPECTION OF THE STRUCTURAL WORK.

CONTRACTOR RESPONSIBILITIES

In accordance with Section 1704.4 of the Building Code, the Contractor shall submit to the Building Official and the Architect a written statement of responsibility that contains the following:

1) Acknowledgement of awareness of the special requirements contained within this Structural Quality Assurance Plan.

2) Acknowledgement that control shall be exercised to obtain conformance with the construction documents approved by the Building Official.

3) Procedures for exercising control with the Contractor's organization, the method and frequency of reporting, and the distribution of reports.

4) Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.

The Structural Testing / Inspection Agency that is to act as the Special Inspector will be hired by the Owner.

Contractor shall pay for any additional structural testing/inspection required for work or materials not complying with the Construction Documents due to negligence or nonconformance and shall pay for any additional structural testing/inspection required for his convenience.

The Contractor is responsible to ensure that the Special Inspector is present for all work requiring special inspection. Any work that requires special inspection and is performed without the Special Inspector being present is subject to being demolished and reconstructed.

The Contractor has the following responsibilities to the Special Inspector:

1) Provide copy of Construction Documents to the Special Inspector.

2) Notify the Special Inspector sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.

3) Cooperate with Special Inspector and provide access to work.

4) Provide samples of materials to be tested in required quantities.

5) Provide storage space for the Special Inspector's exclusive use, such as for storing and curing concrete testing samples.

6) Provide labor to assist the Special Inspector in performing tests/inspections.

SPECIAL OBSERVER RESPONSIBILITIES

Structural Observations shall be performed by a registered professional engineer "specializing in structures" to conduct visual observations relating to the structural systems at significant stages of construction and at completion of the structural systems.

SPECIAL INSPECTOR RESPONSIBILITIES

The Special Inspector shall maintain records of inspections in accordance with Section 1704.2.4 and shall distribute these records to the Architect and Structural Engineer on a weekly basis. At the conclusion of the project, the Special Inspector shall submit a written statement that the special inspections during construction have complied with this Structural Quality Assurance Plan and that any discrepancies noted during construction have been corrected.

SOILS

1) Verify structural fill complies with specifications and the geotechnical report.

2) Observer proofrolling.

3) Perform field density tests to verify compaction of structural fill. As a minimum, perform one test per lift for every 2500 square feet of fill placed.

4) Inspect all footing trenches & subgrade areas for adequate bearing per specifications & Geotechnical report.

5) The special inspector shall observe all aggregate pier installation to confirm compliance w/specs & approved shop drawings.

6) The Special Inspector shall observe all foundation excavations and bearing conditions.

7) The bearing conditions of foundation soils (stiff or better residual soil) shall be checked by means of portable dynamic cone penetration (DCP) testing at the direction of the Special Inspector.

ROCK BEARING FOOTINGS

Special Inspector observe all footing trenches and insure all rock bearing footings to bear directly on rock or lean concrete (f'c 1000 psi min) placed to rock.

CAISSONS

Special Inspector shall observe all caisson drilling and insure bottom of caissons bear on solid rock (unweathered). SI shall check all test holes and document bottom of caisson elevations, top of rock elevations and rock removal for each shaft.

Special inspector shall provide summary report for all caissons. Refer to Caisson Specifications for all required information.

CAST-IN-PLACE CONCRETE

The Contractor shall perform the following:

1. Establish concrete mix design proportions per ACI 318, Chapter 5. Submit 5 copies (minimum) of the concrete mix designs. Include the following:

a. Type and quantities of materials
b. Slump
c. Air content
d. Fresh unit weight
e. Aggregates sieve analysis
f. Design compressive strength
g. Location of placement in structure
h. Method of placement
i. Method of curing
j. Seven-day and 28-day compressive strengths

2. Submit a certification from each manufacturer or supplier stating that materials meet the requirements of the specified ASTM and ACI standards.

3. Submit certification that the ready-mixed concrete plant complies with the requirements of the National Ready Mix Concrete Association.

The Special Inspector shall perform the following:

1. Verify quantity, location, and placement of reinforcing steel prior to concrete placement.

2. Examine concrete in truck to verify that concrete appears properly mixed.

3. Perform a slump test as deemed necessary for each concrete load. Record if water or admixtures are added to the concrete at the job site. Perform additional slump tests after job site adjustments.

4. Mold four specimens per set for compressive strength testing; one set for each 50 cubic yards (or portion thereof) of each mix design in any one day. For each set set molded, record:

a. Slump
b. Air content
c. Unit weight
d. Temperature, ambient and concrete
e. Location of placement
f. Any pertinent information, such as addition of water, addition of admixtures, etc.

5. Perform one 7-day and two 28-day compressive strength tests. (Use one as a spare to be broken as directed by the Structural Engineer if compressive strengths do not appear adequate.)

6. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, concrete design compressive strength, location of concrete placement in structure, concrete mix proportions and materials, compressive breaking strength and type of break.

The structural observer shall perform the following:

1) Shall confirm intent of the structural drawings relating to reinforcement placement and details.

CONCRETE MASONRY

Contractor shall perform the following:

1. Submit a certification from each manufacturer or supplier stating that the following materials comply with the specified ASTM or ACI Standards:

a. Concrete masonry units.
b. Mortar materials: Portland cement, hydrated lime, and aggregates.
c. Grout materials: Portland cement and aggregates.
d. Joint reinforcement steel.
e. Reinforcing steel.

2. For reinforcing steel used in concrete masonry walls, submit certified mill test reports.

Special Inspector shall perform the following:

1. Verify compressive strength of concrete masonry units, mortar, and coarse grout for every 5,000 sq. ft. of surface area (or portion thereof) as follows:

a. Three (3) concrete masonry units shall be tested in accordance with ASTM C140.
b. Six (6) mortar cube specimens shall be tested, three (3) at 7-days and three (3) at 28-days, in accordance with ASTM C109.
c. Four (4) coarse grout specimens shall be tested, two (2) at 7-days and two (2) at 28-days, in accordance with ASTM C-109.
d. In lieu of individual tests of masonry units, mortar, and grout, perform one (1) prism test (which consists of three prisms) in accordance with ASTM E447.

2. Provide continuous inspection to verify compliance of the following:
a. Cleanliness of grout space prior to grouting.
b. Placement of grout in reinforced cells.
c. Preparation of required grout and mortar specimens.
d. Welding of reinforcing bars.

3. Provide periodic inspection to verify compliance of the following:

a. Proportions of site-prepared mortar or grout.
b. Construction of mortar joints.
c. Quantity, size, location, and support of reinforcing steel.
d. Quantity, size, and placement of horizontal joint reinforcement.
e. Type, size and location of anchors.
f. Protection of masonry during cold or hot weather.

4. Provide infared images of wall to confirm grout placement.

The structural observer shall perform the following:

1) Shall confirm intent of the structural drawings relating to reinforcement placement and details.

STRUCTURAL STEEL

The Contractor shall perform the following:

1) The steel fabricator shall be AISC or AWS Certified, refer to Spec. 05120.

2) Submit certified mill test reports for structural steel.

3) Submit manufacturer's certificate of compliance for high-strength bolting and weld filler materials.

** If the fabricator is not certified, then the fabricator shall reimburse the owner for the costs of these tests.

The Special Inspector shall perform the following:

1) Provide continuous inspection to verify compliance of the following:

a. Inspection of slip-critical connections, except periodic inspection may be performed when using torque control bolts (twist off)
b. Complete and partial penetration groove welds. Ultrasonically inspect 100% of the complete penetration welds.
c. Multi-pass fillet welds and single-pass fillet welds greater than 5/16".

2) Provide periodic inspection to verify compliance of the following:

a. Material verification of high-strength bolts, nuts, and washers.
b. Material verification of structural steel.
c. Material verification of weld filler material.
d. Anchor bolt size, configuration, and embedment shall be verified prior to placement of concrete.
e. Visually inspect all field-welded connection. Visual inspection of welded joints includes periodic examination of fitup.
f. Verify stud shear connector spacing and location. Visually inspect welding of stud shear connectors.

3) Weld Inspections

a. Weld inspections shall be in accordance with AWS D1.1.
b. Review and verify compliance of written welding procedures with AWS requirements.
c. Verify that welding procedures are being adhered to during field welding.
d. Verify welder qualifications.
e. Use all means necessary to determine the quality of welds. The inspector may use gamma ray, magnafluz, trepanning, sonics or any other aid to visual inspection that the Special Inspector may deem necessary to be assured of the adequacy of the welding.
f. Keep a systematic record of all welds that include, in addition to other required records, the identification marks of welders, a list of defective welds, and the manner of correcting defects.

4) Bolting inspection and testing shall be in accordance with AISC Specifications for Structural Joints Using ASTM A325 or A490 Bolts.

STEEL JOIST

The Contractor shall perform the following:

1) Joists shall be manufactured and designed in accordance with the Steel Joist Institute specifications. Submit letter of compliance.

2) Submit shop drawings from a SJI certified firm.

The Special Inspector shall perform periodic inspections of the following:

1) Visual inspection of bolted and welded connections.

2) Verify installation of bridging or braces.

3) Verify connection for top and bottom chords.

4) Verify reinforcement of members for concentrated loads.

5) Verify proper bearing.

STEEL DECK

The Contractor shall perform the following:

1) Submit mill certification that the supplied steel complies with the specifications.

The Special Inspector shall perform periodic inspections of the following:

1) Verify general alignment and deck lap.

2) Verify screws/welds for size and pattern.

3) Verify spacing and type of sidelap attachments.

4) Verify installation of deck closures.

PRECAST HOLLOW CORE PLANKS

The Contractor shall perform the following:

1) Submit manufacturers certification.

2) Design Mixes: For each concrete mix.

3) Shop Drawings: Detail fabrication and installation of precast structural concrete units. Indicate member locations, plans, elevations, dimensions, shapes, cross sections, openings, and types of reinforcement, including special reinforcement.

4) Comprehensive engineering analysis signed and sealed by the qualified professional engineer responsible for its preparation.

5) Welding Certificates.

6) Participates in PCI's Plant Certification program.

The Special Inspector shall perform the following:

1) Insure all planks installed per approved shop drawings including: welds, layout, bearing, & grout.

SPECIAL INSPECTIONS PER CHAPTER 17 OF THE KENTUCKY BUILDING CODE - SAFE ROOM

SECTION	ITEM	REQUIRED? YES	NO	REMARKS
1704.2.5	FABRICATORS	X		STEEL FABRICATION SPECIAL INSPECTION IS REQUIRED IF THE FABRICATOR IS NOT A.I.S.C. OR AWS CERTIFIED
1704.6.1	STRUCTURAL OBSERVATION FOR SEISMIC REQUIREMENTS		X	SEISMIC DESIGN CATEGORY "D"
1704.6.2	STRUCTURAL OBSERVATION FOR WIND REQUIREMENTS	X		Vasd = 194 MPH
1705.2	STEEL	X		PER AISC 360 & TABLE 1705.2.2
1705.3	CONCRETE	X		PER TABLE 1705.3
1705.4	MASONRY	X		LEVEL C TMS 402/ACI 530/ASCE 5
1705.5	WOOD		X	NONE
1705.6	SOILS	X		PER SECTION 1705.6 AND TABLR 1705.6
1705.7	DRIVEN DEEP FOUNDATIONS		X	NONE
1705.8	CAST IN PLACE DEEP FOUNDATIONS		X	PER SECTION 1705.8 AND TABLR 1705.8
1705.9	HELICAL PILE FOUNDATIONS		X	NONE
1705.11.1	WIND - STRUCTURAL WOOD		X	NONE
1705.11.2	WIND - COLD FORMED STEEL FRAMING		X	NONE
1705.11.3	WIND - WIND RESISTING COMPONENTS	X		Vasd OF 194 MPH-PER SECTION 1705.11.3
1705.12.1	SEISMIC - STRUCTURAL STEEL	X		SEISMIC DESIGN CATEGORY "D"
1705.12.2	SEISMIC - STRUCTURAL WOOD		X	NONE
1705.12.3	SEISMIC - COLD FORMED STEEL FRAMING		X	NONE
1705.12.4	DESIGNATED SEISMIC SYSTEMS	X		SEISMIC DESIGN CATEGORY "D"
1705.12.5	SEISMIC - ARCHITECTURAL COMPONENTS - INTERIOR/EXTERIOR NON-LOAD BEARING WALLS AND VENEER IN STRUCTURES	X		SEISMIC DESIGN CATEGORY "D"
1705.12.6	SEISMIC - MECHANICAL AND ELECTRICAL COMPONENTS	X		SEISMIC DESIGN CATEGORY "D"
1705.12.7	SEISMIC - STORAGE RACKS AND ACCESS FLOORS		X	NONE
1705.14	SPRAYED FIREPROOFING		X	NONE
1705.15	MASTIC & INTUMESCENT FIREPROOFING		X	NONE
1705.16	E.I.F.S.		X	NONE
1705.17	FIRE RESISTANT PENETRATIONS & JOINTS	X		RISK CATEGORY III-PER SECTION 1705.17
1705.18	SMOKE CONTROL	X		PER SECTION 1705.18

EARTHQUAKE DESIGN DATA-SAFE ROOM-ASCE 7-16

RISK CATEGORY	IV
IMPORTANCE FACTOR	1.5
S_S	0.52
S_1	0.202
SITE CLASS	D
S_{DS}	0.48
S_{D1}	0.295
SEISMIC DESIGN CATEGORY	D
BASIC SEISMIC-FORCE RESISTING SYSTEM	SPECIAL REINFORCED CONCRETE SHEAR WALLS
DESIGN BASE SHEAR	0.0144 x W (kips)
SEISMIC RESPONSE COEFFICIENT (C_S)	0.144
RESPONSE MODIFICATION FACTOR	5
ANALYSIS PROCEDURE	ELFP

WIND DESIGN DATA-SAFE ROOM-ASCE 7-22

ULTIMATE DESIGN WIND SPEED (Vt)	250 MPH
NOMINAL WIND SPEED (Vasd)	193 MPH
RISK CATEGORY	IV
WIND PRESSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	+/- 0.55
TORNADO GUST EFFECT FACTOR (Gft)	0.85

COMPONENTS AND CLADDING [H<30 FT (GCP)]

Kzt	1.0
Kd	1.0
Kdt	1.0
EXPOSURE	C

ROOF

	CORNER		END		MIDDLE	
<10 SF	126.4	-518.1	126.4	-397.1	126.4	-349.1
25 SF	121.3	-461.4	121.3	-368.8	121.3	-323.9
50 SF	117.5	-418.6	117.5	-347.4	117.5	-304.9
> 100 SF	113.6	-375.6	113.6	-325.9	113.6	-285.8

WALL

	MIDDLE		CORNER	
<10 SF	208.2	-221.8	208.2	-260.6
50 SF	192.8	-205.8	192.8	-228.6
200 SF	179.0	-192.0	179.0	-201.1
> 500 SF	169.9	-182.9	169.9	-182.9

NOTE: 1) NEGATIVE NUMBERS INDICATE A SUCTION/UPLIFT PRESSURE

2) LOADS SHOWN ARE FACTOURED FOR LRFD

DESIGN LIVE LOADS-SAFE ROOM

CAP LOADING EVENT	100 PSF

DESIGN CRITERIA-SAFE ROOM

1) FEMA P-361-2024 AND ICC 500-23 COMPLIANT

2) FEMA P-361-2024 SAFE ROOM, REFER TO ARCHITECTURAL FOR ADDITIONAL INFORMATION

3) MWFRS INCLUDES: ALL EXTERIOR WALLS & FOOTINGS, ALL SLAB ANCHORING, AND REINFORCEMENT

4) ATMOSPHERIC PRESSURE CHANGE IN ACCORDANCE WITH ICC 500-23 SECTION 304.7

5) WALLS & CAP HAVE BEEN DESIGNED USING COMPONENTS PREVIOUSLY TESTED PER ICC 500 MISSILE TEST

6) SAFE ROOM STRUCTURAL OBSERVATIONS AS REQUIRED BY ICC 500-23 TO BE PERFORMED BY A LICENSED DESIGN PROFESSIONAL WITH A MINIMUM OF 5 YEARS OF STRUCTURAL DESIGN EXPERIENCE.-THIS WILL BE PROVIDED BY AN INDEPENDENT THIRD PARTY.

7) AS REQUIRED BY ICC 500-2023 SECTION 107.4 EACH CONTRACTOR SHALL PROVIDE AND SUBMIT A WRITTEN STATEMENT ACKNOWLEDGING THERE ARE SPECIAL REQUIREMENTS FOR THE SAFE ROOM.

8) BEFORE CONSTRUCTION ON THE SAFE ROOM BEGINS-THERE WILL BE A PRE-CONSTRUCTION MEETING ON SITE WITH ALL INVOLVED CONTRACTORS.

9) SAFE ROOM STRUCTURAL OBSERVATIONS TO BE PERFORMED BY A LICENSED DESIGN PROFESSIONAL WITH A MINUM OF 5 YEARS OF STRUCTURAL DESIGN EXPERIENCE.

10) THE SAFE ROOM REQUIRES STRUCTURAL OBSERVATIONS IN ADDITION TO SPECIAL INSPECTIONS. THE CONTRACTOR SHALL COORDINATE THE SCHEDULING OF THE STRUCTURAL OBSERVATIONS PRIOR TO COVERING UP ANY WORK. AS PART OF THIS COORDINATION, THE CONTRACTOR SHALL PROVIDE A SIGN OFF SHEET FOR THE STRUCTURAL INPSECTOR AND OBSERVER TO CONFIRM THAT THE INSPECTIONS HAVE TAKEN BEFORE UP ANY WORK.

POAGE ENGINEERS & ASSOCIATES
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RBS DESIGN GROUP ARCHITECTURE
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E-Mail: office@rbsdesigngroup.com

JOB NUMBER	24011
DRAWN BY	SRF(25051)
CHECKED BY	BDS
DATE	05/01/25

No.	Description	Date

STATE OF KENTUCKY • 32334 • BRIAN D. SCOTT • LICENSED PROFESSIONAL ENGINEER • 5/16/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
STRUCTURAL NOTES

SHEET NUMBER
S0.0

GENERAL

1. Reference to standards or specifications of technical societies, organizations, or associations, or to codes of local/state authorities, means the latest standard, specification, or code adopted by the date shown on the Drawings, unless specifically noted otherwise.

2. Material, workmanship, and design shall conform to the referenced Building Code.

3. For dimensions not shown in the Structural Drawings, see the Architectural Drawings.

4. Contractor responsibilities include, but are not limited to, the following:

4.1 Coordinate the Structural Documents with the Architectural, Mechanical, Electrical, Plumbing, and Civil Documents. Architect/Structural Engineer shall be notified of any discrepancy or omission.

4.2 The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the Contractor.

4.3 Contractor has sole responsibility for job site safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the job site, for the Contractor's means, methods, sequences, techniques, or procedures in performing the work.

5. Contractor shall field verify all existing conditions, elevations, and site conditions prior to construction and fabrication. Contractor shall immediately notify Structural Engineer of any existing conditions that are in conflict with the Structural Documents.

CONCRETE

1. All concrete shall conform and be designed, mixed, placed, tested, and cured in accordance with the provisions of the ACI Manual of Concrete Practice, (current edition). Special care shall be taken in curing floors, stairs, walls, and other exposed surfaces in accordance with the specifications.

2. All concrete shall develop 3,500 PSI compressive strength in 28 days.

a. W/C ratio, 0.45 for interior slabs and 0.46 for other concrete.

b. Flyash substitution is only permitted in slabs with a 15% max. content. Flyash substitution is NOT permitted in foundations.

c. Concrete structures and slabs exposed to freeze/thaw or subject to hydraulic pressure: air content 3% to 5%.

d. Other concrete, air content 2% to 4%

e. Slump limits (without a water reducer)
-Ramps & sloping surfaces: no more than 3"
-Reinforced foundations not less than 1" not more than 5"
-Other concrete not less than 1" not more than 5"

3. Dropping the concrete in excess of 10 feet, depositing in a large quantity at any point and running or working it along the forms, or any method tending to cause segregation or separation of the aggregates will not be permitted.

REINFORCEMENT STEEL

1. Reinforcement steel shall have a minimum yield strength of 60,000 PSI and conform with material specifications for reinforcing bars, ASTM A615 thru A617; see manual of standard practice, Concrete Reinforcing Steel Institute.

2. Welded wire fabric shall conform to ASTM A185.

3. All rebars shall be securely tied and held in place with a minimum concrete protection cover to all steel as follows:

Walls, Columns, Beams, and Pilasters	1 1/2"
Slabs	3/4"
Footings	3"

4. Reinforcing steel bends shall be made as per diagram, and/or in accordance with A.C.I. Code.

5. Lap all splices as specifically called for, but at least 38 bar diameters for bars less than or equal to #6, and 48 bar diameters, for bars greater than #6, (always 12 in. minimum) unless noted otherwise. Lap all splices in masonry reinforcement a minimum of 48 bar diameters.

FOUNDATION DESIGN

1. Foundations were designed using an assumed maximum earth bearing pressure of 2,000 PSF for normal building loads and 3000 psf for event loading. The contractor shall verify that field conditions comply with these recommendations. This verification shall be performed by Licensed Geotechnical Engineer.

SHALLOW FOUNDATIONS ON SOIL

1. Any soils can lose strength if they become wet, so the foundation sub grades must be protected from exposure to water. Foundation construction the following procedures.
A. For soils that will remain exposed overnight or for an extended period of time, place a "lean" concrete mud-mat over the bearing areas. The concrete should be at least 4 inches thick. Flowable fill concrete or low-strength concrete is suitable for this cover, as conditions allow;
B. Disturbed soil must be removed prior to foundation concrete placement.
C. Foundation bearing conditions must be benched level.
D. Areas loosened by excavation operations must be recompacted prior to reinforcing steel placement.
E. Loose soil, debris, and excess surface water must be removed from the bearing surface prior to concrete placement.
F. The Special Inspector shall observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.
G. The bearing conditions of foundation soils (stiff or better residual soil) shall be checked by means of portable dynamic cone penetration (DCP) testing at the direction of the special inspector.

GRADE SUPPORTED FLOOR SLABS

1. The following features are required as part of grade support slab construction:

A. Keep the crushed stone moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.

B. The Special Inspector shall review the actual subgrade conditions prior to slab construction and to make recommendations for any unsuitable conditions encountered.

C. Slab subgrade conditions are also considered earthwork areas; thus, the recommendations contained in the Earthwork section of the report apply.

STRUCTURAL STEEL

1. Steel Shapes

1.1 W-Shapes: ASTM A992 (Grade 50)

1.2 Angles, Channels, Plates, UNO: ASTM A36

1.3 Square/Rectangular/Round Hollow Structural Sections (HSS): ASTM A500, Grade B

1.4 Structural steel exposed to weather shall be galvanized.

2. Anchor Rods, Bolts, and Studs

2.1 Anchor Rods: ASTM F1554, Grade 36. Headed Rods or threaded rods with plate washer and heavy hex nut.

2.2 All bolts for structural steel joint fasteners shall be 3/4"Ø high strength structural bolts, ASTM A325, Torque Control (Tension Set), unless otherwise noted.

3. Post-Installed Anchors: The procedure listed below are the design basis for these project. Installation of expansion anchors shall be in accordance with the ICC ES report and manufacturer's instructions for the particular anchor.

3.1 Expansion Anchors: Hilti Kwik Bolt TZ (ICC-ES ESR-1917), Simpson Strong- Bolt 2 (ICC-ES ESR-3037), or Power-Stud+ SD2 (ICC_ES ESR-2502). Minimum embedment = 6 times anchor diameter, UNO.

3.2 Adhesive Anchors

3.2.1 All-thread steel anchor conforming to ASTM A307, Grade A or ASTM A36, zinc plated in accordance with ASTM B633.

3.2.2 Adhesive conforming to Hilti Hit RE 500 SD (ICC-ES AC308), Simpson SET-XP Epoxy-Tie (ICC-ES ESR-2508), or Powers PE1000+ Epoxy Adhesive (ICC-ES ESR-2583), or Powers AC100+ Gold Adhesive (ICC_ES ESR-2582). Minimum embedment = 6 times anchor diameter, UNO.

3.2.3 For hollow concrete masonry, use screen tube approved by manufacturer and an adhesive conforming to Simpson Strong-Tie SET (ICC-ES ESR-1772).

3.3 Screw Anchors: Simpson Titan-HD (Concrete: ICC-ES ESR-2713; Grouted Masonry: ICC-ES ESR-1056) or Powers Wedge-Bolt+ (ICC-ES ESR-2526). Minimum Embedment = 6 times anchor diameter, UNO.

3.4 Substitutions will only be considered for products have a code report recognizing the product for the appropriate application. The substitution request shall be accompanied by calculations that demonstrate the substituted product is capable of achieving the equivalent performance values of the design-basis product.

4. Structural steel shall be fabricated and erected according to the "Specification for Structural Steel Buildings" dated August 1, 2022 and the AISC "Code of Standard Practice for Steel Buildings and Bridges" dated May 9, 2022.

5. Connections shall be detailed based on the design information provided in the Structural Documents

5.1 Standard Shear Connections: Details as bolted or welded double-angle, sitble-plate, single-angle, or tee connections in accordance with the connection tables in the "Manual of Steel Construction", Thirteenth Edition.

5.1.1 Shear connections not defined in the AISC Manual shall be designed by an Engineer licensed in the project state. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by the Engineer.

5.2 Factored Design Forces/Reactions: As shown on the Structural Drawings or, if not shown, the factored design reaction shall be half of the "Maximum Total Uniform Load (LRFD)" tabulated in the "Manual of Steel Construction", Thirteenth Edition.

5.3 Steel connections not specifically detailed in the Structural Drawings shall be designed by the Contractor. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by an Engineer licensed in the project state.

6. Shop Drawings: Submittal shall adequately depict structural members and connections.

7. All structural steel shall be fabricated and erected in accordance with the latest OSHA regulations regarding steel erection.

OPEN WEB STEEL JOIST

1. Only the standards of the Steel Joist Institute will be acceptable. The manufacturer's design and method of fabrication must have been checked by and be acceptable to the Steel Joist Insititute.

2. Joist bridging shall be the size and spacing required by the Steel Joist Institute.

3. All open web steel joists shall be handled and erected in accordance with the Steel Joist Institute's recommendations.

4. All open web steel joists shall be handled and erected in accordance with the latest OSHA regulations regarding steel joists erection.

CONCRETE MASONRY

1. CMU Minimum Compressive Strength, f'm = 1,500 psi.

2. Mortar: Walls below grade Type M
Bearing Walls Type M or S

3. Coarse Grout: 3,000 psi. min. compressive strength conforming to ASTM C476.

3.1 Grout solid bond beams, reinforced CMU cores, and CMU cores and wall cavities below grade.

3.2 Masonry webs on each side of grouted cells shall be fully mortared.

4. Horizontal Joint Reinforcement: Two (2) No. 9 gage longitudinal wires at 16" vertically, UNO. Provide accessories for corners, intersections, etc.

5. Provide open bottom beam block units with 3" deep minimum web openings at horizontal reinforcement locations. A minimum clear space of one bar diameter shall be provided between the reinforcing bars and the face of masonry units.

6. CMU has been designed assuming "running bond" placement. Do no use "stack bond" unless approved by Structural Engineer.

7. Submit written construction procedures prior to the start of masonry construction.

8. No chases, risers, conduits, or toothing of masonry shall occur in masonry walls within 18 inches of beam bearing centerline.

9. Lap splices in reinforcing to be 48 bar diameters.

10. In addition to spacing indicated on plans, provide vertical bars at all corners, ends, jambs, intersections and both sides of control joints.

11. Extend all vertical reinforcement thru or into bond beams.

12. Provide dowels from supporting member (footing, beam, or slab) for all reinforced walls same size, location and spacing as wall reinforcing.

13. Vertical reinforcement shall be centered in cells of masonry unit, unless otherwise noted.

14. Bar positioners shall be used to hold vertical and bond beam reinforcement in proper alignment.

15. Vertical bars shall be held in position at top and bottom and at intervals not exceeding 200 bars diameters or 8 feet.

16. Grouting of masonry lintels over openings shall be accomplished in one continuous operation.

17. Grouting shall be stopped 1 1/2" below the top of a course to form a key at the pour joint.

18. Grout all cells of concrete masonry units below grade or slab.

19. Provide cleanout holes at least 3 inches in least dimension for grout pours over 5 feet in height.

A. At structurally reinforced walls provide cleanout holes at each structural vertical reinforcing bar.

B. Cleanout closures shall be braced to resist grout pressures.

20. See architectural drawings for locations of vertical control joints.

21. At vertical control joints, bond beam reinforcement and joint reinforcement shall be discontinuous. Provide two 3/4" diameter smooth dowels by 1'-4" across each control joint. Grease one end.

22. Special Inspections are required for the masonry construction on this project. The inspections include but are not limited to contiuous inspections during the grouting process. Refer to Chapter 17 of the Kentucky Building Code, current edition, for specific requirements.

NOTE TO CONTRACTOR:

The contractor shall coordinate the Structural Drawings with the Architectural, Mechanical, and Electrical Drawings and make certain all pipes, sleeves, ducts, inserts, and openings are located and in place before each concrete pour.

The Contractor shall verify all dimensions shown on the Structural Drawings with dimensions shown on the Architectural Drawings. The Contractor shall check and approve, with reasonable promptness, shop drawings and schedules for coordination of details, sizes, fitting tolerances, and dimensions. The Contractor shall stamp or sign these drawings and schedules with his approval and then submit them to the Architect for review.

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JOB NUMBER	24011
DRAWN BY	SRF(25051)
CHECKED BY	BDS
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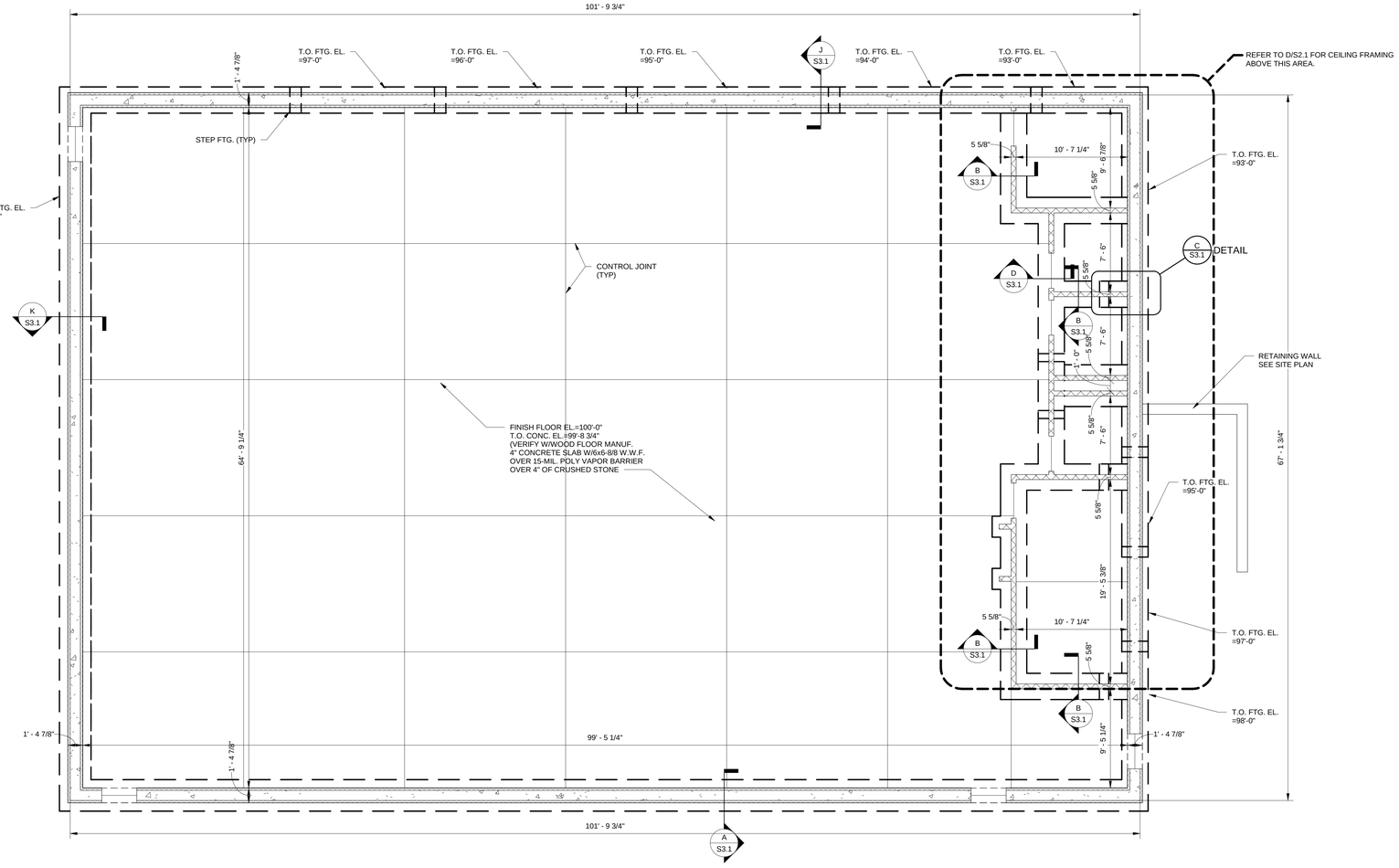
No.	Description	Date

STATE OF KENTUCKY • BRIAN D. SCOTT • 21188 • LICENSED PROFESSIONAL ENGINEER
5/16/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
STRUCTURAL NOTES

SHEET NUMBER
S0.1



FOUNDATION PLAN

NOTES:

1) DATUM ELEVATION 582.45'= 100'-0" ASSUMED.

2) FILL ALL CMU CELLS & VOIDS BELOW FINISHED FLOOR OR GRADE w/CONCRETE GROUT.

3) REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL INTERIOR NONLOAD-BEARING WALLS NOT LOCATED ON STRUCTURAL DRAWINGS.

4) COORDINATE BRICK SEAT ELEVATIONS & LOCATION OF STEPS WITH SITE PLAN & ARCHITECTURAL CONTROL JOINTS.

5) SAW CONTROL JOINTS IN THE CONCRETE SLAB IMMEDIATELY AFTER SET UP. REFER TO DRAWINGS, BUT MAXIMUM SPACING SHALL BE 16'-0" IN EITHER DIRECTION (TYPICAL UNLESS NOTED OTHERWISE).

6) TOP OF ALL EXTERIOR COLUMN & WALL FOOTINGS SHALL BE 2'-0" BELOW FINISHED FLOOR (TYP. U.N.O.)

7) TOP OF ALL INTERIOR COLUMN & WALL FOOTINGS SHALL BE 8" BELOW FINISHED FLOOR (TYP. U.N.O.)

8) PROVIDE THICKENED SLAB UNDER ALL WALLS WITHOUT FOOTINGS SHOWN

9) CONTRACTOR SHALL COORDINATE FLOOR DRAINS, AND DEPTHS WITH MECHANICAL. REFER TO ARCH. FOR REQ'D FLOOR SLOPE.

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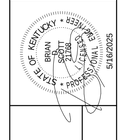
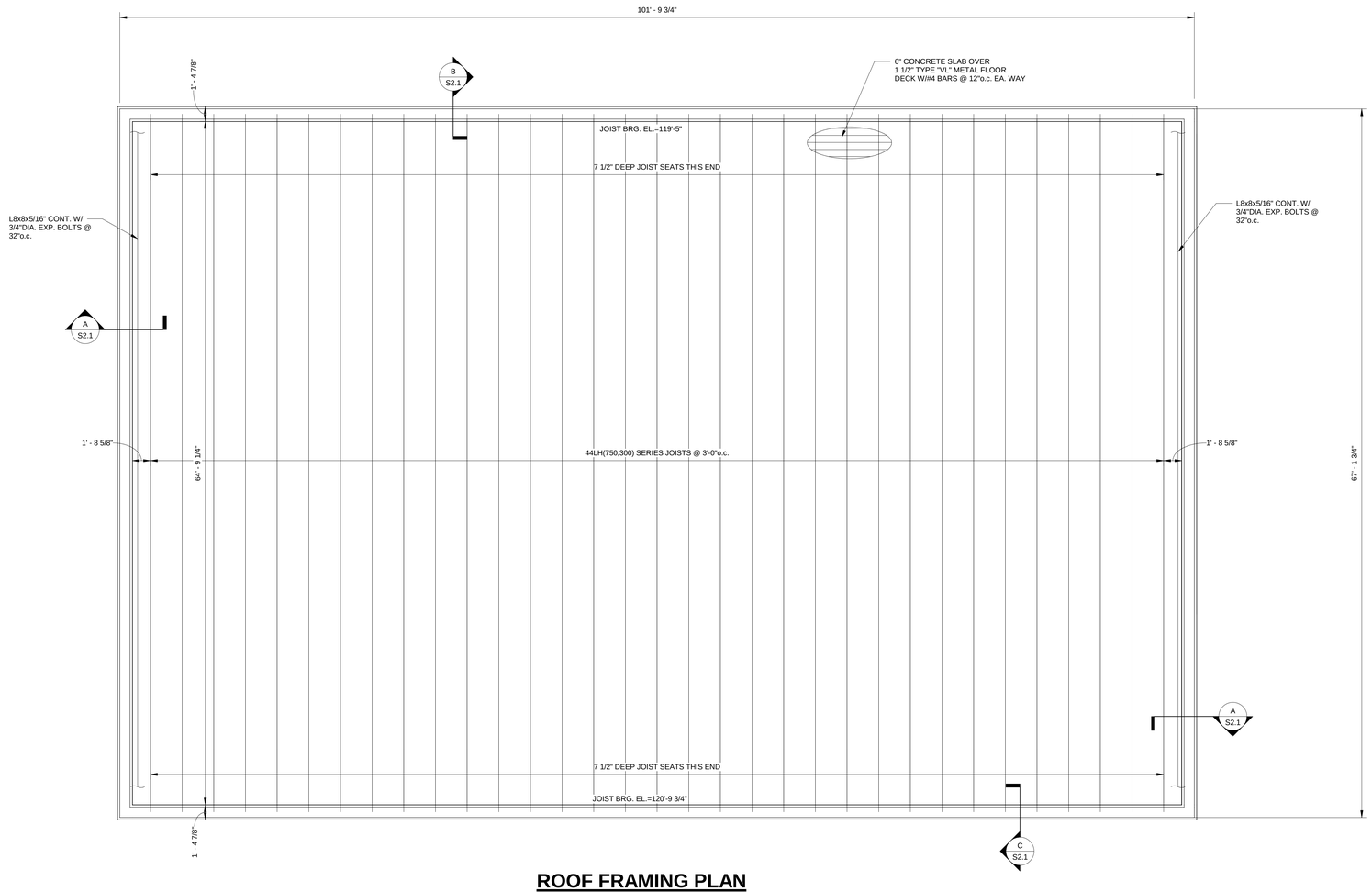


DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
FOUNDATION PLAN

SHEET NUMBER

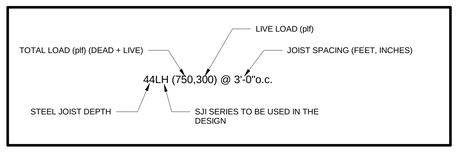
S1.1

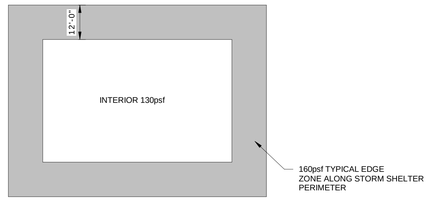


ROOF FRAMING PLAN

NOTES:
1) ALL JOISTS TO HAVE 3/4"x5" HEADED STUDS @ 36"o.c.

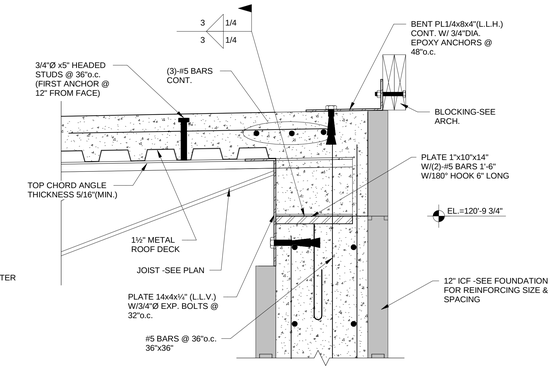
2) REFER TO M/E/P DRAWINGS FOR ALL PENETRATIONS IN SAFE ROOM ENVELOPE. ALL OPENINGS HAVE ICC 500/FEMA 361 RATED ASSEMBLIES EXCEPT FOR SMALL OPENINGS - REFER TO SHEET S4.2 FOR SPECIAL REQUIREMENTS.



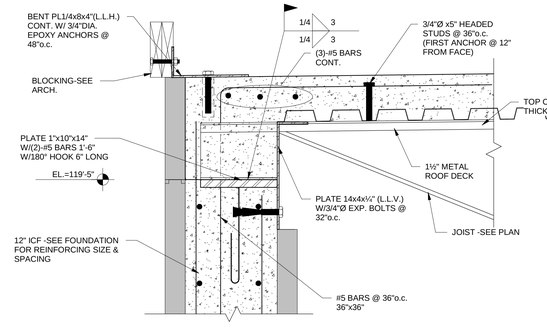


NET WIND UPLIFT DIAGRAM

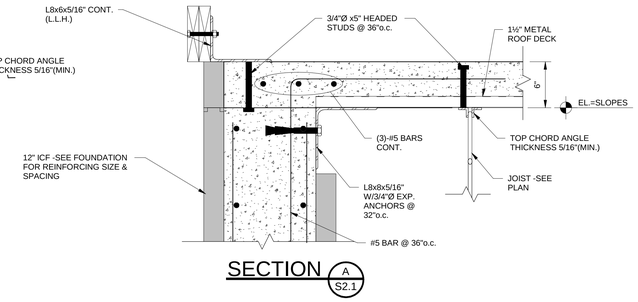
NOTE:
NET UPLIFT ON JOIST IS COMPONENT & CLADDING ZONE UPLIFT (0.6W) MINUS DEAD LOAD. JOISTS MANUF. SHALL DESIGN JOISTS & BRIDGING TO RESIST THESE LOADS.



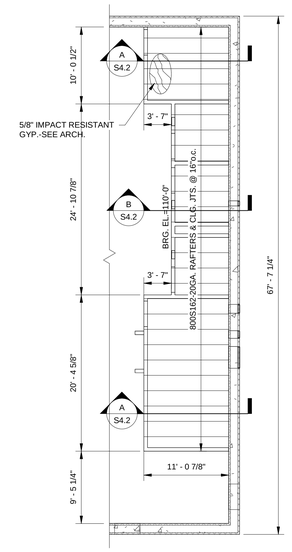
SECTION C S2.1



SECTION B S2.1



SECTION A S2.1



CEILING FRAMING PLAN D S2.1

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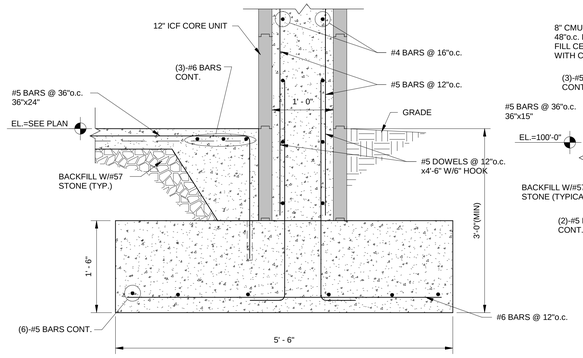
STATE OF KENTUCKY • BRIAN D. SCOTT 21188 • LICENSED PROFESSIONAL ENGINEER
5/16/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

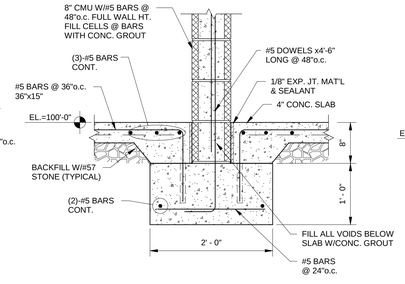
CEILING AND ROOF FRAMING PLANS

SHEET NUMBER
S2.1



SECTION A S3.1

(NOTE: SEE PLAN FOR ADDITIONAL REINFORCEMENT)



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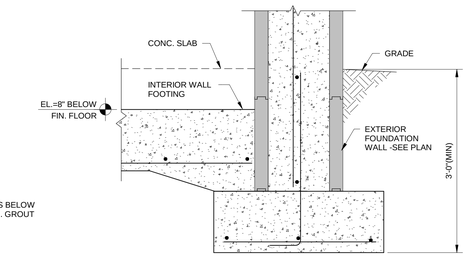
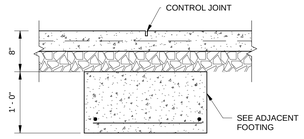
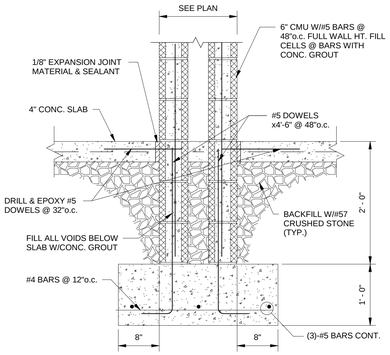


DETAIL C S3.1

(NOTE: SEE ADJACENT SECTION FOR ADDITIONAL REINFORCEMENT)



SECTION D S3.1



SECTION E S3.1

SECTION F S3.1

SECTION H S3.1

SECTION J S3.1

(NOTE: SEE PLAN FOR ADDITIONAL REINFORCEMENT)

SECTION K S3.1

(NOTE: SEE PLAN FOR ADDITIONAL REINFORCEMENT)

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DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

SECTIONS & DETAILS

SHEET NUMBER

S3.1

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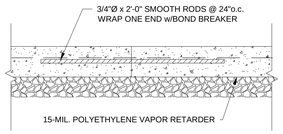
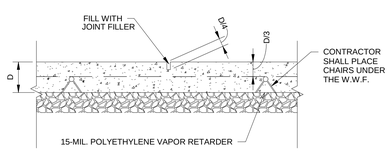
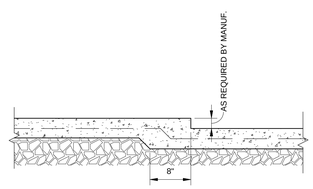


TYPICAL CONSTRUCTION JOINT DETAIL



TYPICAL CONTROL JOINT DETAIL



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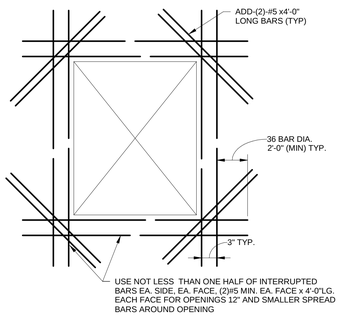
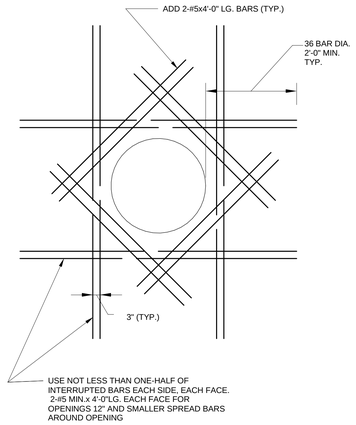
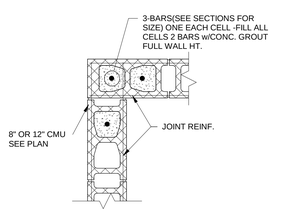


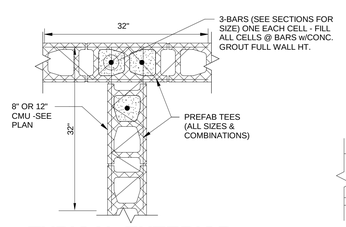
ADDITIONAL REINFORCMENT RECTANGULAR OPENINGS LARGER THAN 12"



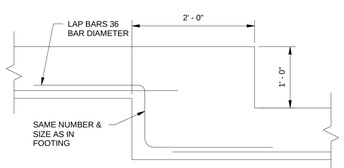
ADDITIONAL REINFORCEMENT ROUND OPENINGS LARGER THAN 12"



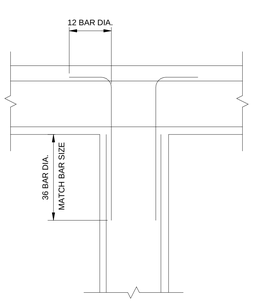
TYPICAL EXTERIOR MASONRY CORNER REINFORCEMENT DETAIL



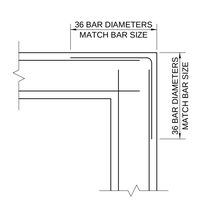
TYPICAL EXTERIOR MASONRY INTERSECTION REINFORCEMENT DETAIL



TYPICAL STEP FOOTING



TYPICAL WALL INTERSECTION REINFORCING DETAIL



TYPICAL CORNER REINFORCING DETAIL

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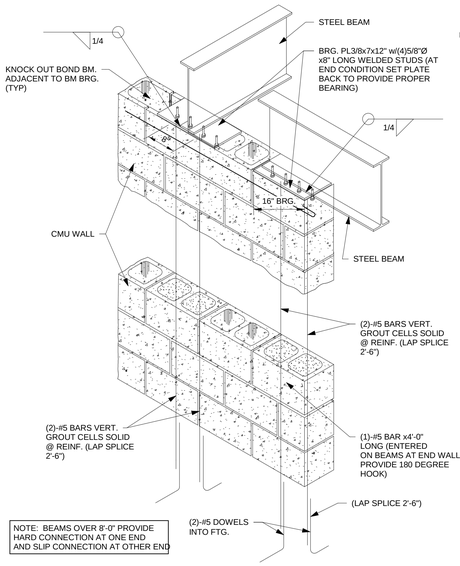
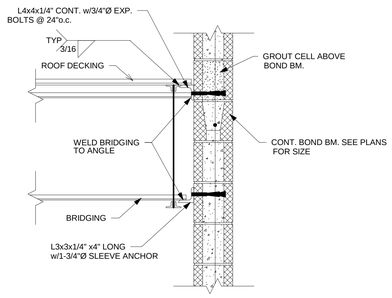
DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

SECTIONS & DETAILS

SHEET NUMBER
S3.2

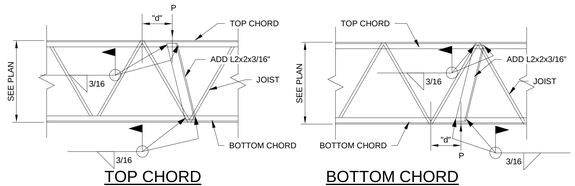


TYPICAL BEAM BRG. @ C.M.U. OR ICF WALL



TYPICAL JOIST BRIDGING DETAIL @ CMU

NOTES: 1) FOR "d" LESS THAN 6"-NO REINFORCING IS REQUIRED
2) FOR "P" LESS THAN 100#-NO REINFORCING IS REQUIRED



REINFORCING REQUIRED AT ALL CONCENTRATED LOADS

LINTEL SCHEDULE

OPENING	4" BRICK		4" BLOCK		6" BLOCK		8" BLOCK		12" BLOCK		8" BLOCK & 4" BRICK		12" BLOCK & 4" BRICK	
	SIZE	SHAPE	SIZE	SHAPE	SIZE	SHAPE	SIZE	SHAPE	SIZE	SHAPE	SIZE	SHAPE	SIZE	SHAPE
0 TO 4'-0"	L3½x3½x1/4"	L	PL1/4x3½"(H) PL1/4x3"(V)	⊥	BOND BM. w/1-#5 BAR		BOND BM w/1-#5 BAR		BOND BM. w/2-#5 BARS		L3½x3½x1/4" BOND. BM w/1-#5 BAR		L3½x3½x1/4" BOND. BM w/2-#5 BAR	
4'-1" TO 6'-0"	L4x3½x1/4"	L	PL5/16x3½"(H) PL5/16x4"(V)	⊥	W8x10 w/ PL1/4x5 1/4"		16" BOND BM w/2-#5 BARS		16" BOND BM w/2-#5 BARS		L4x3½x1/4" 16" BOND BM w/2-#5 BARS		L4x3½x1/4" 16" BOND BM w/2-#5 BARS	
6'-1" TO 8'-0"	L5x3½x5/16"	L	PL3/8x3½"(H) PL3/8x4"(V)	⊥	W8x13 w/ PL1/4x5 1/4"		W8x15 w/ PL1/4x7"		W8x15 w/ PL5/16x11"		W8x18 w/ PL5/16x13"		W8x21 w/ PL3/8x17"	
8'-1" TO 10'-0"					W8x15 w/ PL1/4x5 1/4"		W8x18 w/ PL5/16x7"		W8x18 w/ PL5/16x11"		W8x21 w/ PL5/16x13"		W8x24 w/ PL3/8x17"	
10'-1" TO 12'-0"							W8x21 w/ PL5/16x7"		W8x21 w/ PL5/16x11"		W8x24 w/ PL3/8x13"		W8x24 w/ PL3/8x17"	
12'-1" TO 14'-0"							W8x24 w/ PL3/8x7"		W8x24 w/ PL3/8x11"		W8x24 w/ PL3/8x13"		W8x28 w/ PL3/8x17"	
14'-1" TO 16'-0"							W8x28 w/ PL3/8x7"		W8x28 w/ PL3/8x11"		W8x28 w/ PL3/8x13"		W8x31 w/ PL3/8x17"	

NOTE:

1.) THIS LINTEL SCHEDULE IS FOR ALL MASONRY OPENINGS SHOWN ON THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND PROVIDE ALL NECESSARY STEEL LINTELS AND MISC. FRAMING REQUIRED TO COMPLETE THE PROJECT WHETHER SHOWN ON THIS LINTEL SCHEDULE OR NOT.

2.) AT EXTERIOR WALL CONDITIONS, ONLY THE STEEL PLATE SHALL BE GALVANIZED, PROVIDED THE STEEL BEAM IS NOT EXPOSED.

3.) IF THE LINTEL OCCURS AT A CORNER, THE STEEL PLATE SHALL BE EXTENDED TO A MITERED CORNER.

4.) ALL LINTEL BEAMS OVER MASONRY OPENINGS GREATER THAN 6'-0" SHALL HAVE NELSON STUDS. REFER TO TYPICAL LINTEL BEAM DETAIL.

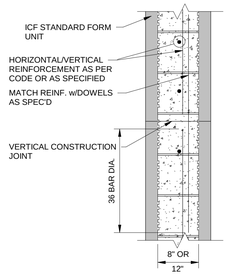
5.) ALL LINTEL BEAMS SPANNING GREATER THAN 8'-0" SHALL HAVE BEARING PLATES AND THE BOTTOM PLATE SHALL EXTEND FULL BEAM LENGTH. REFER TO TYPICAL BEAM BEARING DETAIL.

6.) PLATE WIDTH MAY VARY FROM STANDARD SIZES SHOWN. CONTRACTOR SHALL VERIFY SIZE SO THAT WIDTH=(WALL THICKNESS - 1").

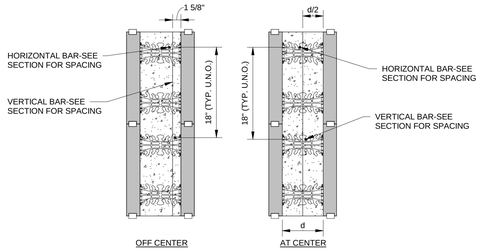
7.) IN LOCATIONS WHERE BOND BEAMS WILL ATTACH TO STEEL COLUMNS, THE CONTRACTOR SHALL SUBSTITUTE A STEEL BEAM AND PLATE. REFER TO THE SCHEDULE FOR THE NEXT AVAILABLE SIZE.

8.) THIS SCHEDULE APPLIES FOR MASONRY OPENINGS REQUIRED BY SOFFITS OR RECESSED DOOR OPENINGS SHOWN ON ARCHITECTURAL DRAWINGS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

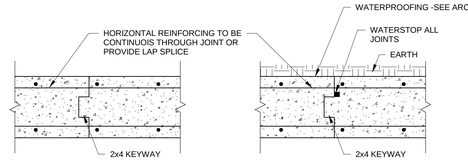
9.) ALL LINTELS SHALL BEAR A MINIMUM OF 8" ON CMU. BEARING ON BRICK VENEER DOES NOT COUNT TOWARDS THE MINIMUM BEARING REQUIREMENTS.



ICF STANDARD FORM CONSTRUCTION JOINT



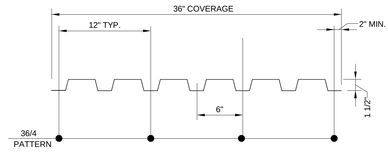
REINFORCEMENT PLACEMENT DETAIL



TYPICAL CONCRETE WALL CONSTRUCTION JOINT

NOTES:

1) MAX LENGTH OF WALL POUR = 40'-0"
2) PERMIT 48 HOURS BETWEEN POURS
3) FOR STEM WALLS THAT ARE BELOW GRADE (BOTH SIDES) MAX. POUT LENGTH = 64'-0"

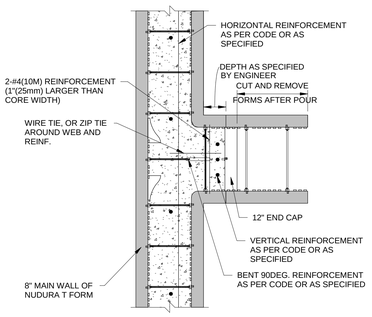


TYPE VL GAGE 20
FINISH GALVANIZED
Sp .218 in.3 Sn .226 in.3
I .182 in.4 In .216 in.4
Fy min. 50 ksi

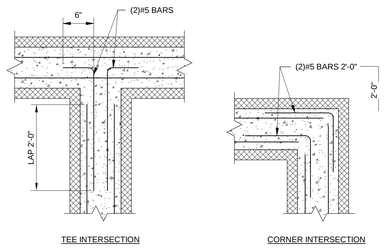
DECK/DECK (SIDELAP)
FASTEN @ 24"o.c. (MAX.)
(#10 x 3/4" TYPE NO. 3)

DECK/SUPPORT
WELD W/ 5/8"DIA. PUDDLE
WELD @ 36/4 PATTERN

SAFE ROOM DECK ATTACHMENT



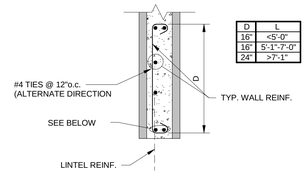
8" TO 12" T INTERSECTION



TYPICAL C.M.U. BOND BEAM REINFORCEMENT LAP DETAILS

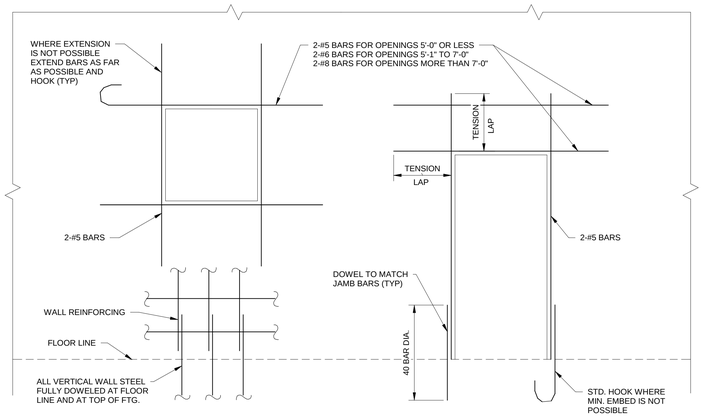
(12" BLOCK SHOWN - FOR 8" BLOCK 1-#5 BAR)

ICF OPENING SCHEDULE



LINTEL SECTION 8" & 12" WALL

JAMB SECTION 8" & 12" WALL



TYP. REINFORCEMENT DETAILS AT ICF WALL OPENINGS

(UNLESS NOTED OR DETAILED OTHERWISE)

RBS DESIGN GROUP
ARCHITECTURE
POAGE ENGINEERS
1400 Broadway
Bowling Green, KY 42104
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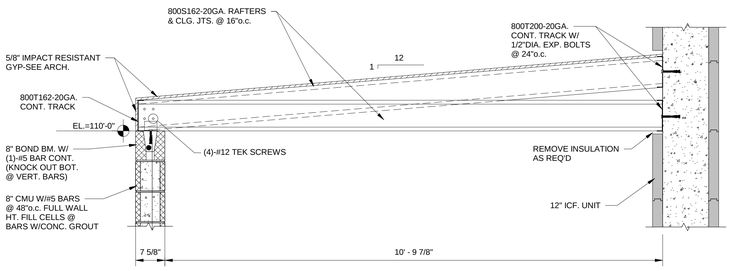
JOB NUMBER	24011
DRAWN BY	SRF(25051)
CHECKED BY	BDS
DATE	05/01/25

No.	Description	Date

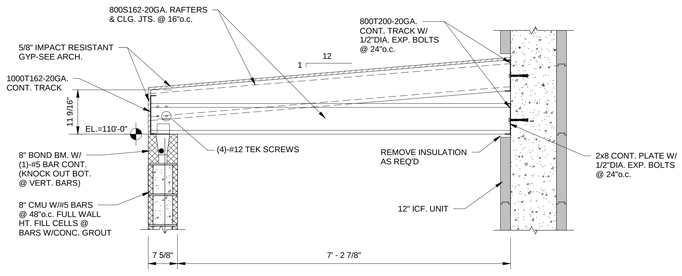
STATE OF KENTUCKY · 32334 · BRIAN D. SCOTT · LICENSED PROFESSIONAL ENGINEER · 5/16/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
SECTIONS & DETAILS

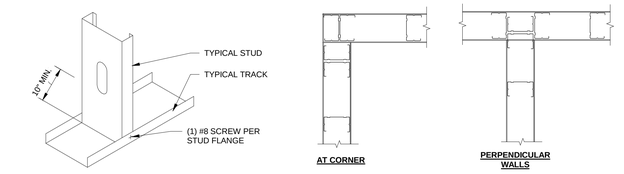
SHEET NUMBER
S4.1



SECTION A S4.2

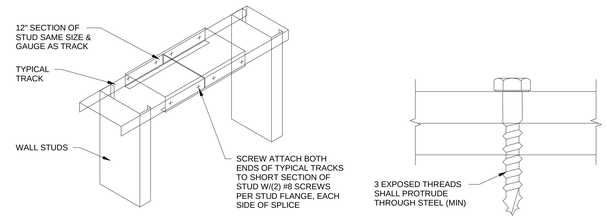


SECTION B S4.2



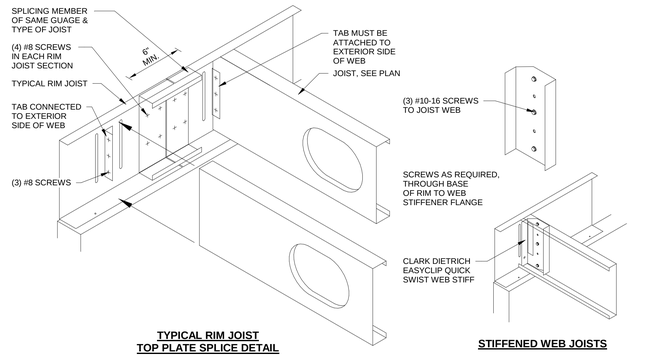
DETAIL AT HOLES IN STUDS

TYPICAL WALL INTERSECTION PLAN DETAILS



TYPICAL STUD WALL TOP PLATE SPLICE DETAIL

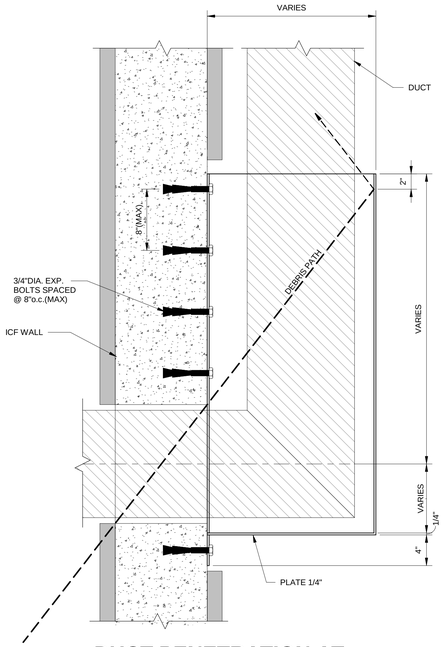
SCREW CONNECTION REQUIREMENTS



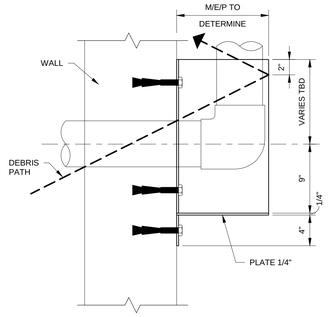
TYPICAL RIM JOIST TOP PLATE SPLICE DETAIL

STIFFENED WEB JOISTS

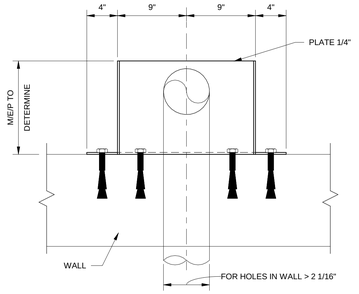
TYPICAL METAL STUD FRAMING DETAILS



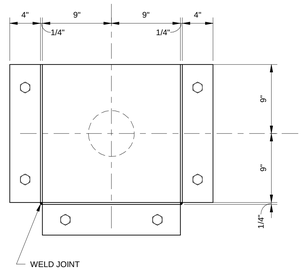
DUCT PENETRATION AT ICF WALL



SECTION



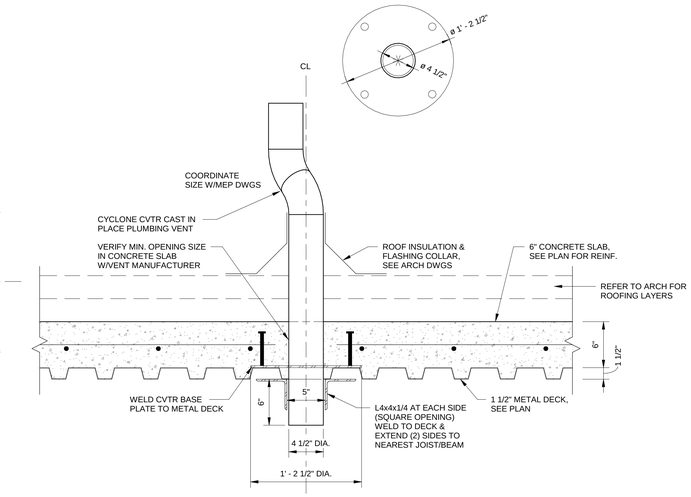
PLAN



ELEVATION

SAFE ROOM WALL PIPE PENETRATION

NOTES: 1) THIS DETAIL APPLIES TO ALL PIPING/CONDUIT PENETRATIONS IN STORM SHELTER ENVELOPE- REFER TO M/E/P DRAWINGS.
2) CONDUITS MAY BE GROUPED TOGETHER PROVIDE THE PLATE SIZE TO A MAXIMUM OF 3'-0" SQUARE. QUANTITY OF ANCHORS TO BE ADJUSTED.



CVTR VENT THROUGH STORM SHELTER CAP

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JOB NUMBER	24011
DRAWN BY	SRF(P25051)
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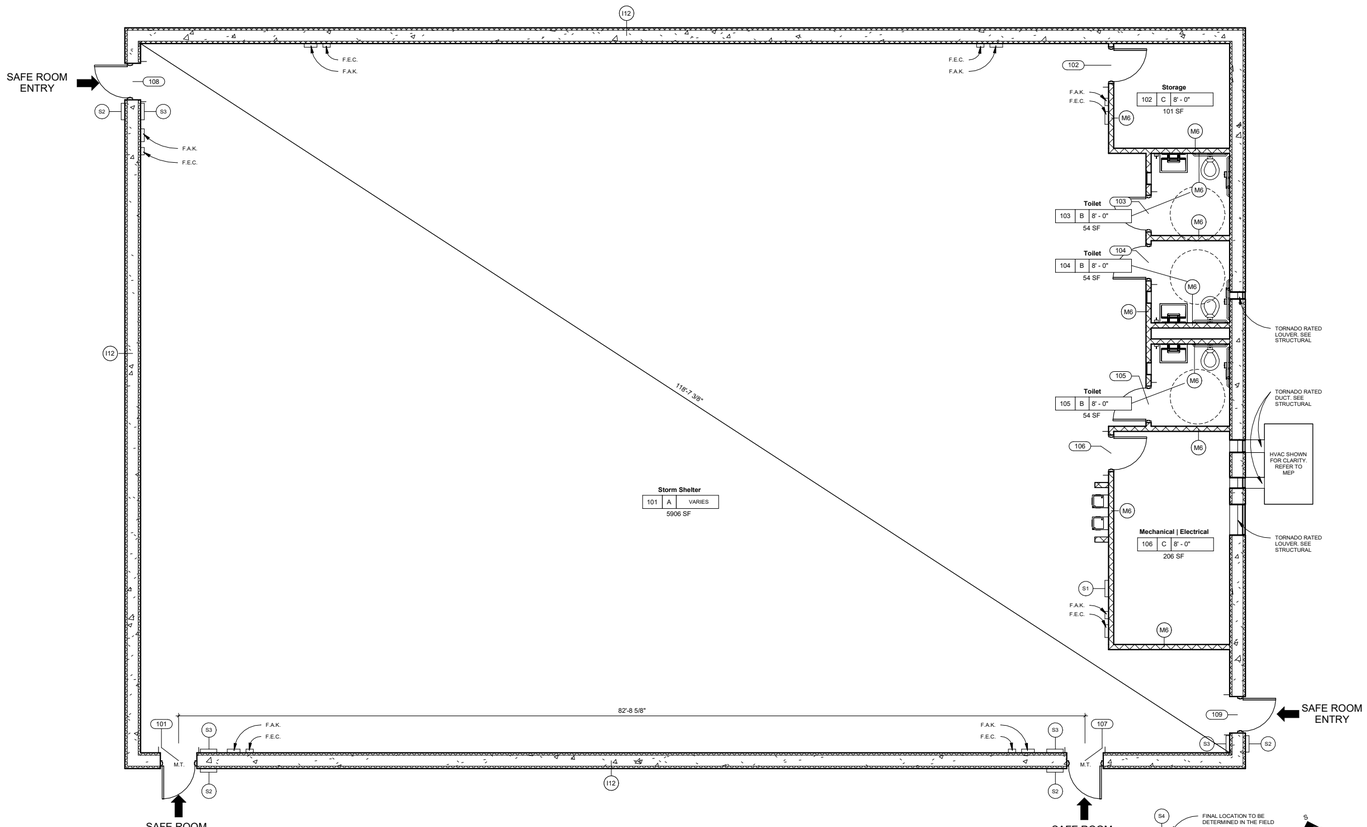
DATE	05/01/25

No.	Description	Date

COMMONWEALTH OF KENTUCKY · 33394 · LICENSED PROFESSIONAL ENGINEER · BRIAN D. SCOTT · 5/16/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
SECTIONS & DETAILS

SHEET NUMBER
S4.2



1 ICC FLOOR PLAN
3/16" = 1'-0"

#	ICC 500 CHECKLIST	ANSWER
1.	TYPE OF SHELTER - (RESIDENTIAL OR COMMUNITY TORNADO, HURRICANE, OR A COMBINATION OF BOTH).	COMMUNITY TORNADO
2.	A STATEMENT THAT THE WIND DESIGN CONFORMS TO THE PROVISIONS OF THE ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS, WITH THE EDITION YEAR SPECIFIED	THE SHELTER HAS BEEN DESIGNED ACCORDING TO THE STRUCTURAL PROVISION OF THE ICC 500-2024
3.	THE SHELTER WIND SPEED, MPH.	250 MPH
4.	THE WIND EXPOSURE CATEDORY (INDICATE ALL IF MORE THAN ONE IS USED)	CATEGORY C
5.	THE INTERNAL PRESSURE COEFFICIENT, GCpi.	GCpi. +/- 0.55
6.	THE TOPOGRAPHIC FACTOR, Kzt.	Kzt. 1.0
7.	THE DIRECTIONALITY FACTOR, Fd	Kd. 1.0
8.	A STATEMENT THAT THE SHELTER HAS,HAS NOT BEEN CONSTRUCTED WITHIN AN AREA SUSCEPTIBLE TO FLOOODING IN ACCORDANCE WITH CHAPTER 4 OF THIS STANDARD	THE PROJECT IS NOT SUSCEPTIBLE TO FLOODING AFTER REVIEW OF FEMA FLOOD MAP 21093C03IID
9.	THE DESIGN FLOOD ELEVATION AND BASE FLOOD ELEVATION FOR THE SITE (IF APPLICABLE)	N/A
10.	DOCUMENTATION SHOWING THAT COMPENENTS OF THE SHELTER ENVELOPE WILL MEET THE PRESSURE AND MISSILE IMPACT TEST REQUIREMENTS IDENTIFIED IN CHAPTER 3 AND 8 OF THIS STANDARD.	
11.	A FLOOR PLAN DRAWING OR IMAGE INDICATED LOCATION OF THE STORM SHELTER ON A SITE OR WITHIN A BUILDING OR FACILITY; INCLUDING A DRAWING OR IMAGE INDICATED THE ENTIRE FACILITY.	SEE 1/ICC ON THIS SHEET
12.	A STORM SHELTER SECTION OR ELEVATION INDICATING THE HEIGHT OF THE STORM SHELTER RELATIVE TO THE FINISHED GRADE, FINISHED FLOOR AND THE HOST BUILDING, WHERE APPLICABLE	SEE 1/A3.1 & 2/A3.1
13.	THE LOWEST SHELTER FLOOR ELEVATION AND CORRESPONDING DATUM, EXCEPT FOR RESIDENTIAL SHELTER OUTSIDE OF SPECIAL FLOOD HAZARD AREAS.	LOWEST SHELTER FLOOR ELEVATION: 453.65'
14.	THE OCCUPANT LOAD OF THE STORM SHELTER	SHELTER OCCUPANCY = 995 SEATING/STANDING + 5 WHEEL CHAIR - 5,911 SF
15.	THE USABLE STORM SHELTER FLOOR AREA.	5,025 SF
16.	VENTING AREA (SQUARE INCHES) PROVIDED AND LOCATIONS IN THE SHELTER	SEE SHEET M2.0 FOR VENTILATION. 2.5 CFM PER OCCUPANT OR 2,500 CFM REQUIRED, 5.4 CFM PER OCCUPANT OR 5,400 CFM LOUVER PROVIDED
17.	CALCULATIONS FOR THE NUMBER OF SANITATION FACILITIES OF COMMUNITY SHELTERS	SHELTER OCCUPANCY > 50, 1 PER 250 FOR THE FIRST 500 OCCUPANTS AND 1 ADDITIONAL PER 500 OCCUPANTS OR PORTIONS THEREOF > 500 OCCUPANTS
18.	MINIMUM FOUNDATION CAPACITY REQUIREMENT	MINIMUM FOUNDATION CAPACITY REQUIREMENT, 1,500 psf FOR NORMAL DESIGN LOADS AND 4,500 PSF FOR DESIGN EVENT LOADING
19.	SHELTER INSTALLATION REQUIREMENTS, INCLUDING ANCHOR LOCATION AND MINIMUM REQUIRED CAPACITY EACH ANCHOR	SHELTER IS CONSTRUCTED FROM STEEL BEARING JOISTS WITH COMPOSITION DECKING AND SHEAR STUDS FULLY GROUTED-REINFORCED ICF WALLS ON CONCRETE FOOTINGS. THE LOCATION OF THE REINFORCING STEEL BETWEEN THE VARIOUS COMPONENTS ARE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
20.	FOR HURRICANE SHELTERS, THE RAINFALL RATE OF THE ROOF PRIMARY DRAINAGE SYSTEM.	N/A
21.	FOR HURRICANE SHELTERS, THE RAIN FALL RATE OF THE ROOF SECONDARY (OVERFLOW) DRAIN SYSTEM WHERE REQUIRED	N/A
22.	FOR HURRICANE SHELTERS, THE RAINWATER DRAINAGE DESIGN RAINFALL RATE FOR FACILITIES SUBJECT TO RAINWATER IMPOUNDMENT.	EXTERIOR DRAINAGE FEATURES HAVE BEEN FLOOD CHECKED USING AN SCS TYPE II DISTRIBUTION FOR THE AREA, EQUATING TO 7" PER 24 HOUR PERIOD EVENTS

ICC 500 STORM SHELTER DOOR HARDWARE DOORS 101, 107, 108, 109	
3EA. HINGES	FBB191 4-1/2 X 4-1/2
IEA. FEMA 361 LOCK	63-FM7313 LNL
IEA. CLOSER	351 P10
IEA. KICKPLATE	K0050
IEA. WALL STOP	1270CXCP
IEA. FASKETING	797B
IEA. DOOR BOTTOM	772A

5 sf * 995 Standing = 4,975 sf
10 sf * 5 Wheelchair = 50 sf
4,975 sf + 50 sf = 5,025 sf
5,025 sf = 85% of REQUIRED
therefore, REQUIRED = 5,911 sf

CODE INFORMATION

BASED ON ICC 500 (2020) & FEMA P-361 (2021) AND ALSO BASED ON 2015 IBC WITH 2018 KBC AMENDMENTS WHERE APPLICABLE FOR EACH SECTION

ICC 500 EVENT DURATION: 2 HOURS FOR TORNADO

2015 IBC
USE GROUP/OCCUPANCY: A3 ASSEMBLY
CONSTRUCTION TYPE: 2B NON-COMBUSTIBLE

FIRE PROTECTION SYSTEMS: NONE

IBC TABLE 504.3 ALLOWABLE HEIGHT = 75'
IBC TABLE 504.4 ALLOWABLE STORIES = 3
IBC TABLE 506.2 ALLOWABLE AREA = 38,000 SF

BUILDING SQUARE FEET (SF) AREAS

TOTAL BUILDING GROSS	= 6,913 SF GROSS
SAFE ROOM	= 5,911 SF NET
RESTROOMS / STORAGE / MECH	= 462.5 SF NET
TOTAL USABLE FLOOR AREA	= 6,374.5 SF NET

ICC 500
SECTION 502.4.1 - #3 FOR OPEN PLAN
15% REDUCTION OF SAFE ROOM AREA ONLY
5,911 SF - 15% = 5,025 SF

OCCUPANT DENSITY
SECTION 502.2.1 ASSIGNED CAPACITY : 1,000 PEOPLE
SECTION 502.2.2 CALCULATED CAPACITY:

TYPE	FACTOR	COUNT
STANDING	5 SF NET	995 OR 4,975 SF
WHEELCHAIR	10 SF NET	5 OR 50 SF
		TOTAL NET AREA = 5,025 SF

ICC SECTION 701.2.2
FIXTURE COUNTS
REQUIRED: 1 WC PER 500 & 1 LAVATORY PER 500
PROVIDED: 3 WC & 1 LAVATORY IN EACH

REQUIRED ACCESSORIES

FEC = WALL BRACKET MOUNTED FIRE EXTINGUISHER WITH LABEL AND WALL SIGN - PROVIDE ACADEMY SERIES COSMIC 10 POUNDS ABC OR EQUAL

FAK = FIRST AID KID - CLASS A AND ANSI/ISEAI Z308.1 COMPLIANT - PROVIDE AMERICAN RED CROSS 150 PERSON XL METAL SMART COMPLIANCE FIRST AID CABINET OR EQUAL

REFER TO MEP DRAWINGS FOR ALL LIGHT FIXTURE TYPES EMERGENCY LIGHTING, EXIT SIGNS, AND REMOTE HEADS

REQUIRED SIGNAGE

ALL SIGNS SHALL COMPLY WITH VISUAL CHARACTER REQUIREMENTS OF ICC A117.1

SIGN TYPE S1
DESIGN INFORMATION SIGN TO BE LOCATED WITHIN ROOM 101 IN CONSPICUOUS AREA

SIGN TYPE S2
SAFE ROOM ENTRY SIGNS TO BE LOCATED AT EXTERIOR SIDE OF EACH ENTRANCE DOOR ON LATCH SIDE

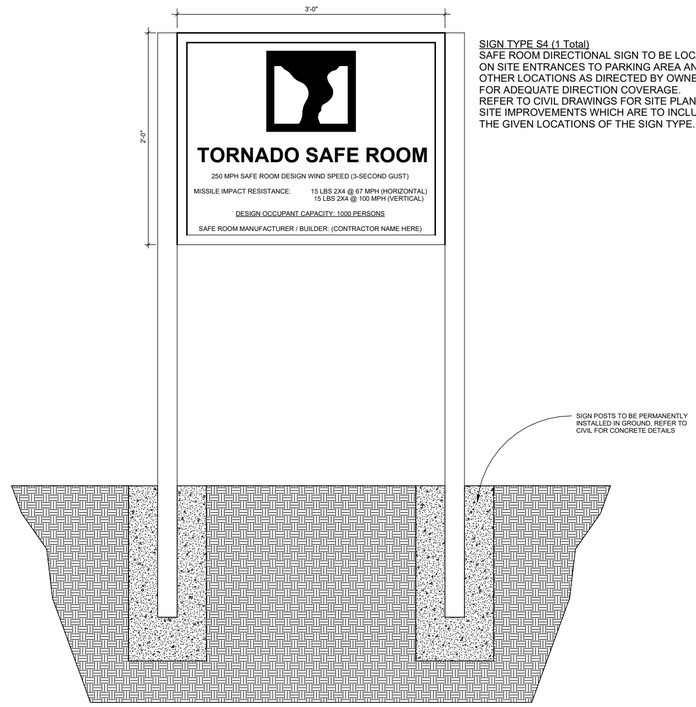
SIGN TYPE S3
SAFE ROOM PERIMETER SIGNS TO BE LOCATED AT INTERIOR SIDE OF EACH EXIT DOOR ON LATCH SIDE

SIGN TYPE S4
SAFE ROOM DIRECTIONAL SIGN TO BE LOCATED ON SITE ENTRANCES TO PARKING AREA AND AT OTHER LOCATIONS AS DIRECTION BY OWNER FOR ADEQUATE DIRECTIONAL COVERAGE. REFER TO CIVIL DRAWINGS FOR SITE PLAN AND SITE IMPROVEMENTS WHICH ARE TO INCLUDE THE GIVEN LOCATIONS OF THIS SIGN TYPE

SIGN TYPE S1 (1 Total)
DESIGN INFORMATION SIGN
TO BE LOCATED WITHIN STORM SHELTER 101
IN CONSPICUOUS AREA

SIGN TYPE S2 (4 Total)
SAFE ROOM ENTRY SIGNS
TO BE LOCATED AT EXTERIOR SIDE OF
EACH ENTRANCE DOOR ON LATCH SIDE

SIGN TYPE S3 (4 Total)
SAFE ROOM PERIMETER SIGNS
TO BE LOCATED AT INTERIOR SIDE
OF EACH EXIT DOOR ON LATCH SIDE



SIGN TYPE S4 (1 Total)
SAFE ROOM DIRECTIONAL SIGN TO BE LOCATED
ON SITE ENTRANCES TO PARKING AREA AND AT
OTHER LOCATIONS AS DIRECTED BY OWNER
FOR ADEQUATE DIRECTION COVERAGE.
REFER TO CIVIL DRAWINGS FOR SITE PLAN AND
SITE IMPROVEMENTS WHICH ARE TO INCLUDE
THE GIVEN LOCATIONS OF THE SIGN TYPE.

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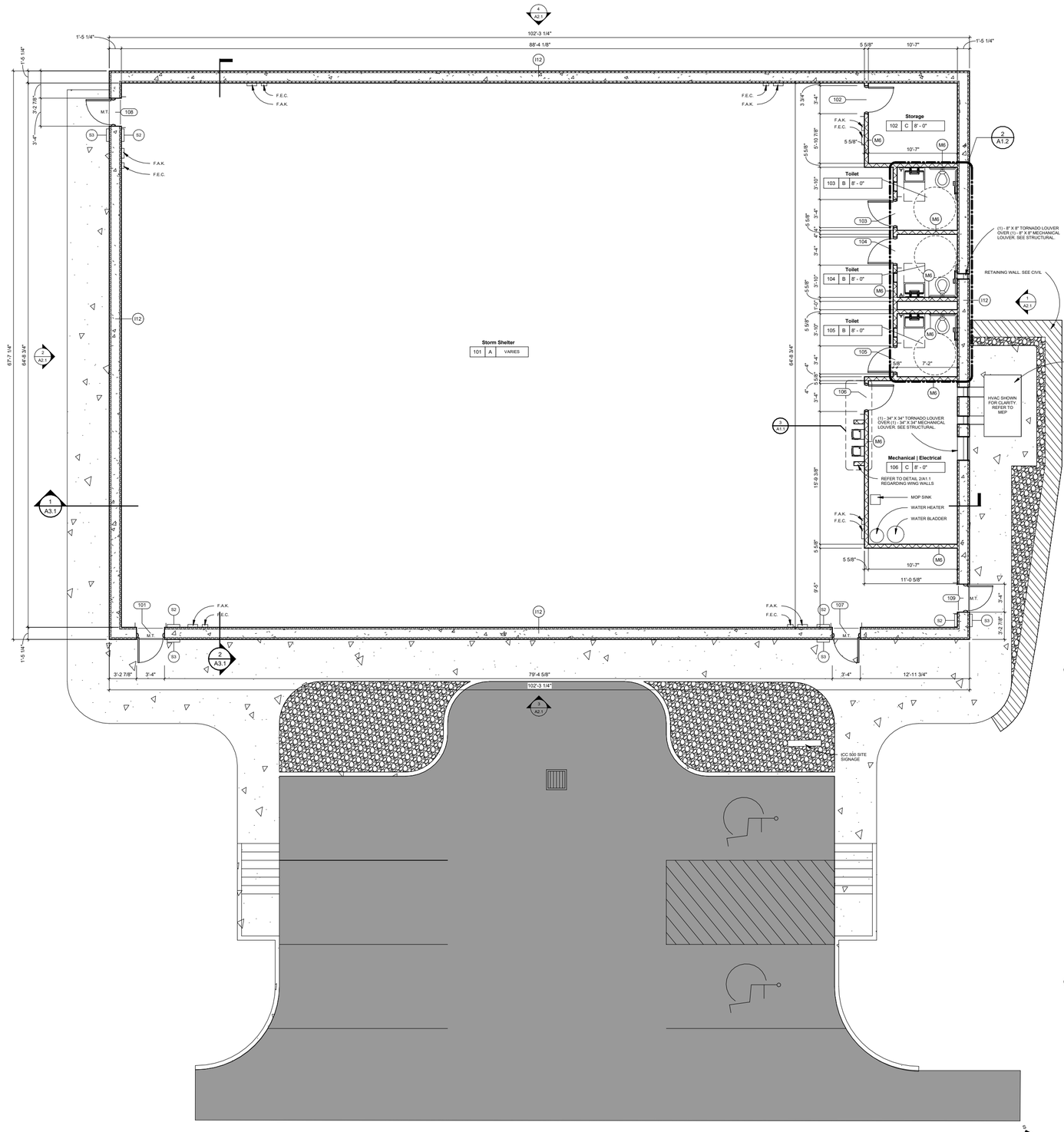
No	Description	Date

JOB NUMBER	24011
DRAWN BY	SD
CHECKED BY	CT
DATE	05/01/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
ICC 500 STORM SHELTER REQUIREMENTS

SHEET NUMBER
ICC

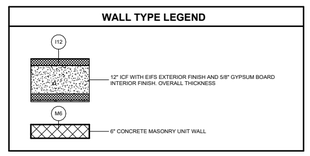


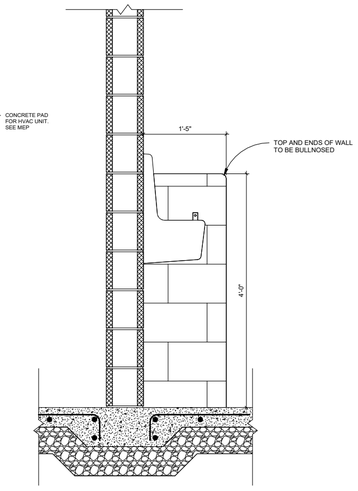
1 OVERALL FLOOR PLAN
3/16" = 1'-0"

ROOM FINISH SCHEDULE

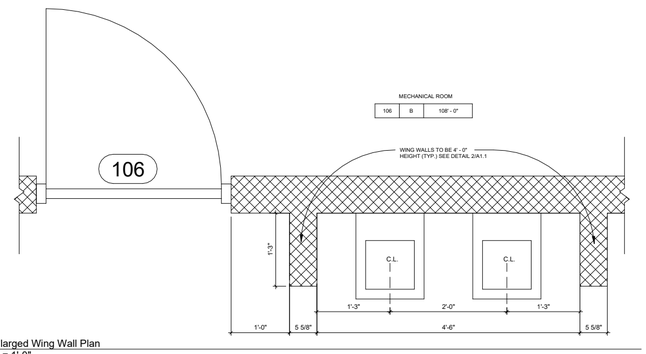
FINISH KEY	CLG	WALL	BASE	FLOOR	REMARKS
A	EXPOSED	PAINTED GYP. BD.	RUBBER	POLISHED CONCRETE	-
B	2X2 S.A.P.C.	PAINTED CMU	RUBBER	VCT	-
C	2X2 S.A.P.C.	PAINTED CMU	RUBBER	POLISHED CONCRETE	-

WALL TYPE LEGEND





2 Wing Wall Detail (TYP.)
1" = 1'-0"



3 Enlarged Wing Wall Plan
1" = 1'-0"

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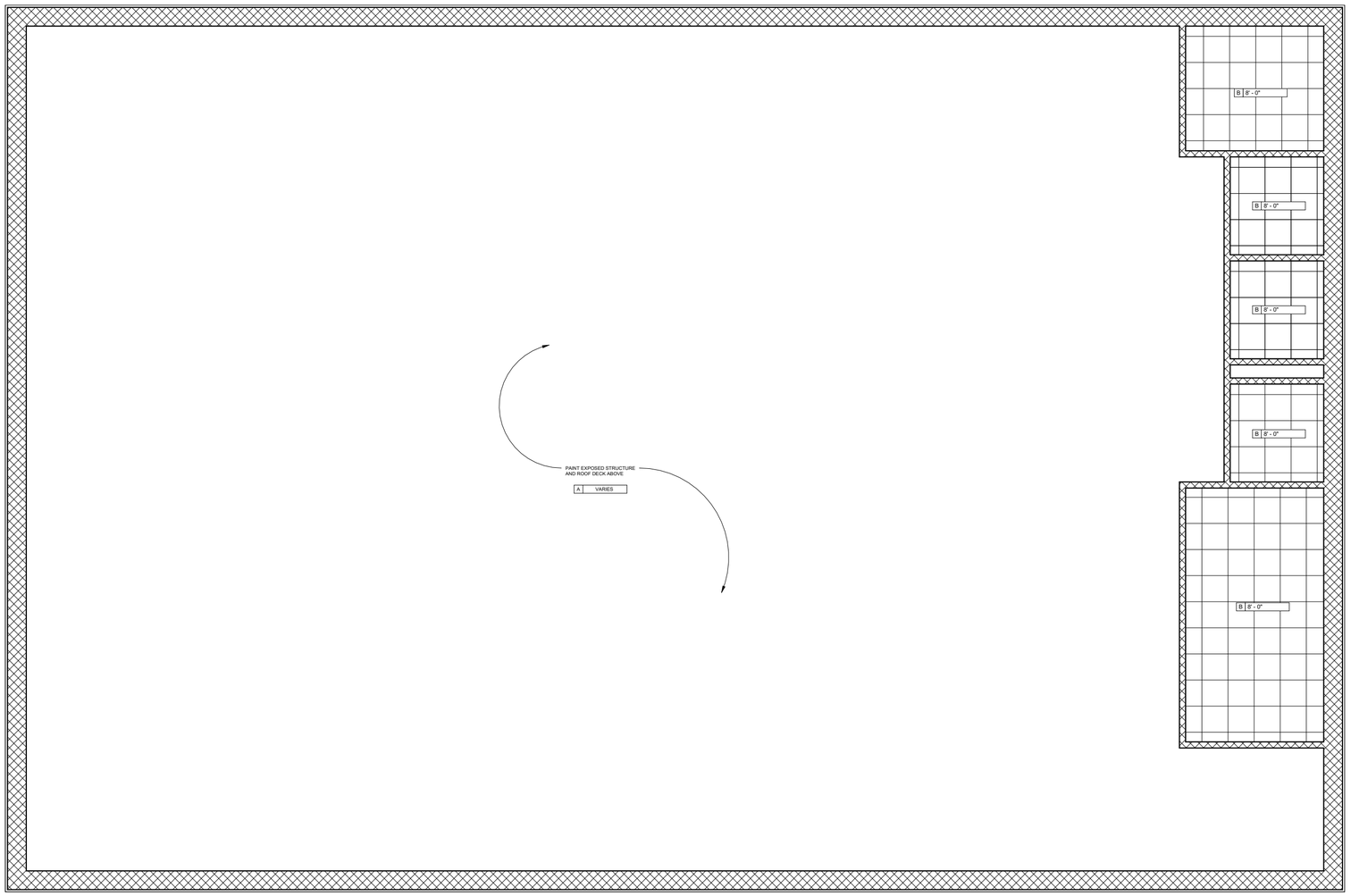
No	Description	Date

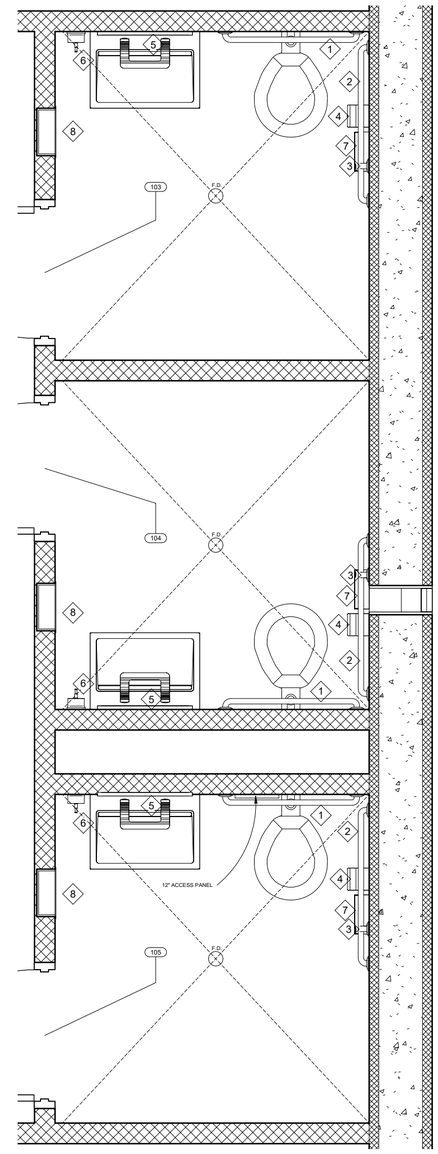
JOB NUMBER	24011
DRAWN BY	SD
CHECKED BY	CT
DATE	05/01/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
OVERALL FLOOR PLAN

SHEET NUMBER
A1.1



1 LEVEL 1 - REFLECTED CEILING PLAN
1/4" = 1'-0"



2 ENLARGED TOILET PLANS
3/4" = 1'-0"

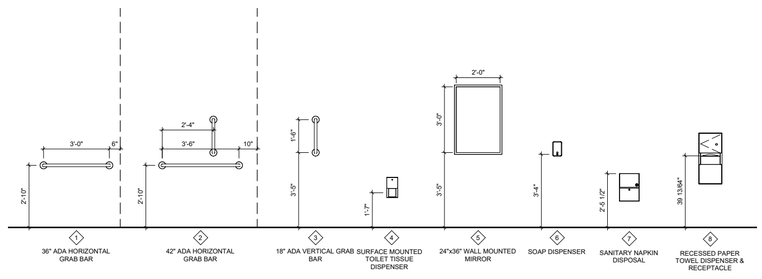
REFLECTED CEILING PLAN LEGEND

A	EXPOSED PAINTED STRUCTURE
B	2X2 SUSPENDED ACOUSTICAL CEILING

ALL CLGS @ 8'-0" U.N.O.

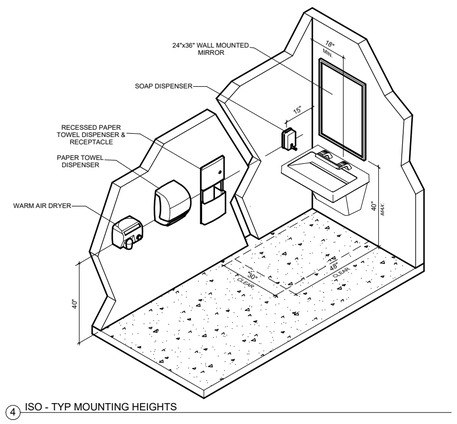
TOILET ACCESSORY LEGEND

MARK	DESCRIPTION	NOTES
1	36" ADA HORIZONTAL GRAB BAR	
2	42" ADA HORIZONTAL GRAB BAR	
3	18" ADA VERTICAL GRAB BAR	
4	SURFACE MOUNTED TOILET TISSUE DISPENSER	
5	24"x36" WALL MOUNTED MIRROR	
6	SOAP DISPENSER	
7	SANITARY NAPKIN DISPOSAL	
8	RECESSED PAPER TOWEL DISPENSER & RECEPTACLE	

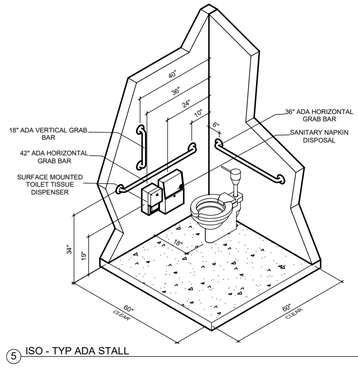


NOTE: **NOT ALL ACCESSORIES SHOWN HERE MAY APPEAR IN PROJECT; REFER TO TOILET ACCESSORY SCHEDULE.**

3 TOILET ACCESSORIES LEGEND (MASTER)
3/8" = 1'-0"



4 ISO - TYP MOUNTING HEIGHTS



5 ISO - TYP ADA STALL

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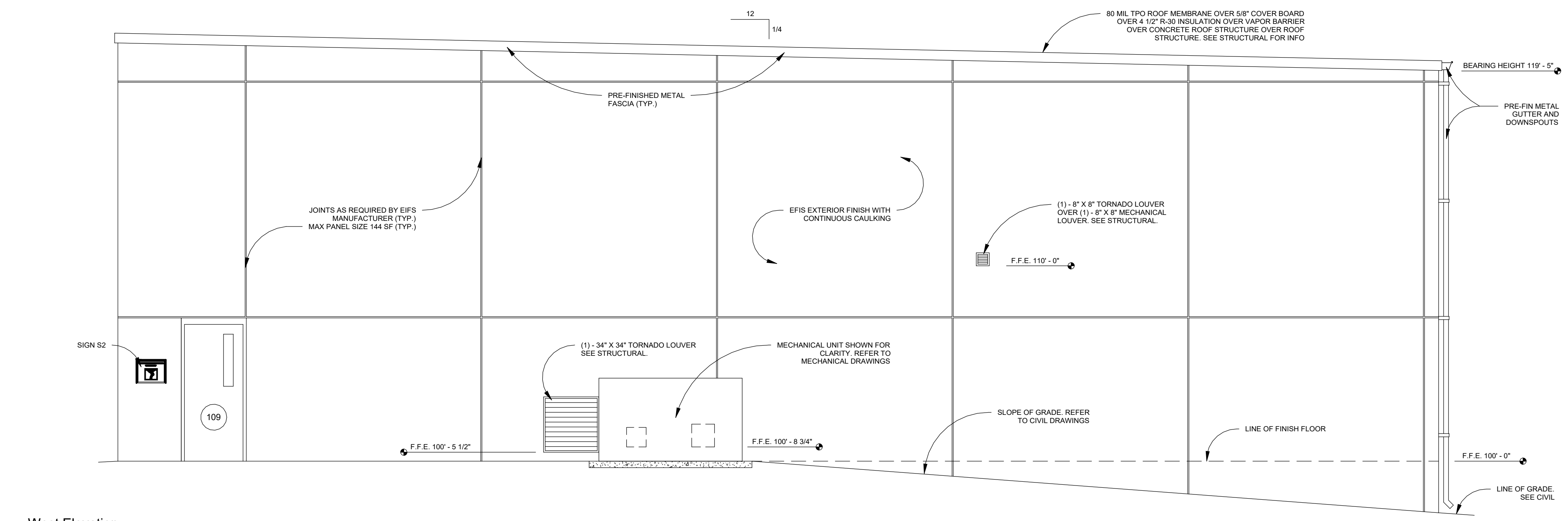
No	Description	Date

JOB NUMBER	24011
DRAWN BY	SD
CHECKED BY	CT
DATE	05/01/2025

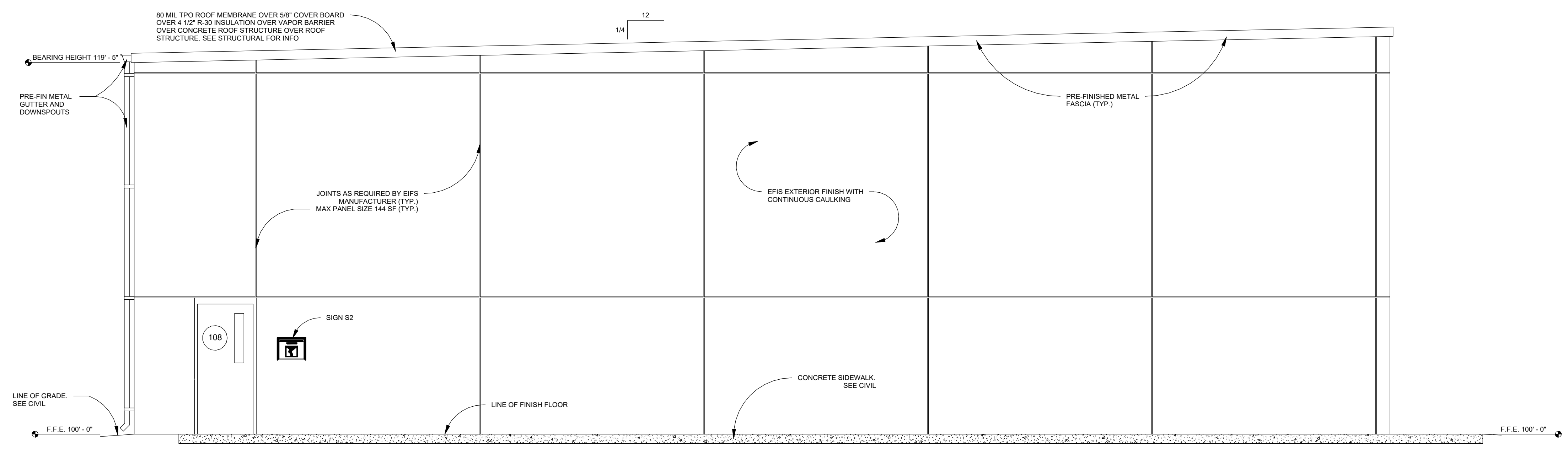
DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

REFLECTED CEILING PLAN & ENLARGED FLOOR PLANS

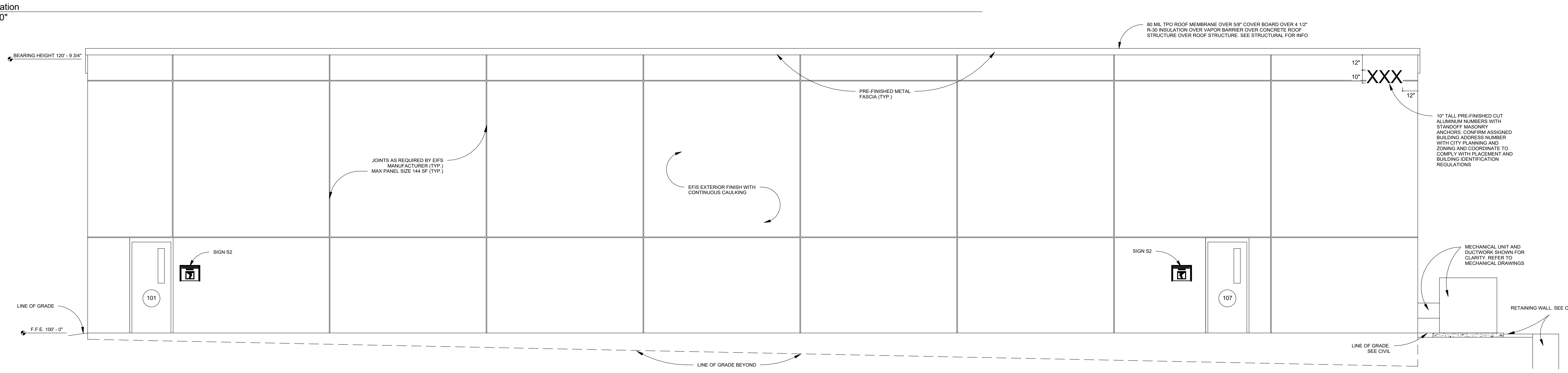
SHEET NUMBER
A1.2



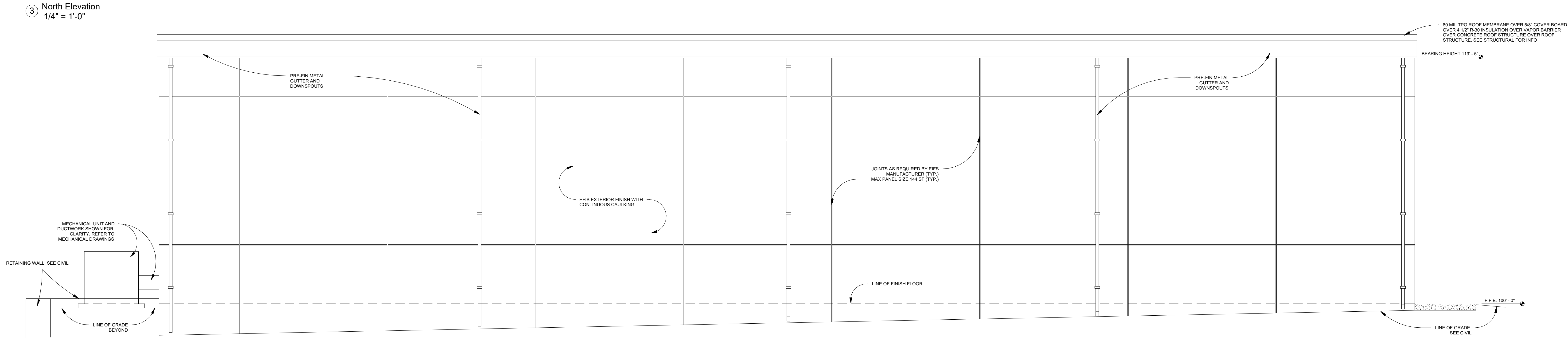
1 West Elevation
1/4" = 1'-0"



2 East Elevation
1/4" = 1'-0"



3 North Elevation
1/4" = 1'-0"



4 South Elevation
1/4" = 1'-0"

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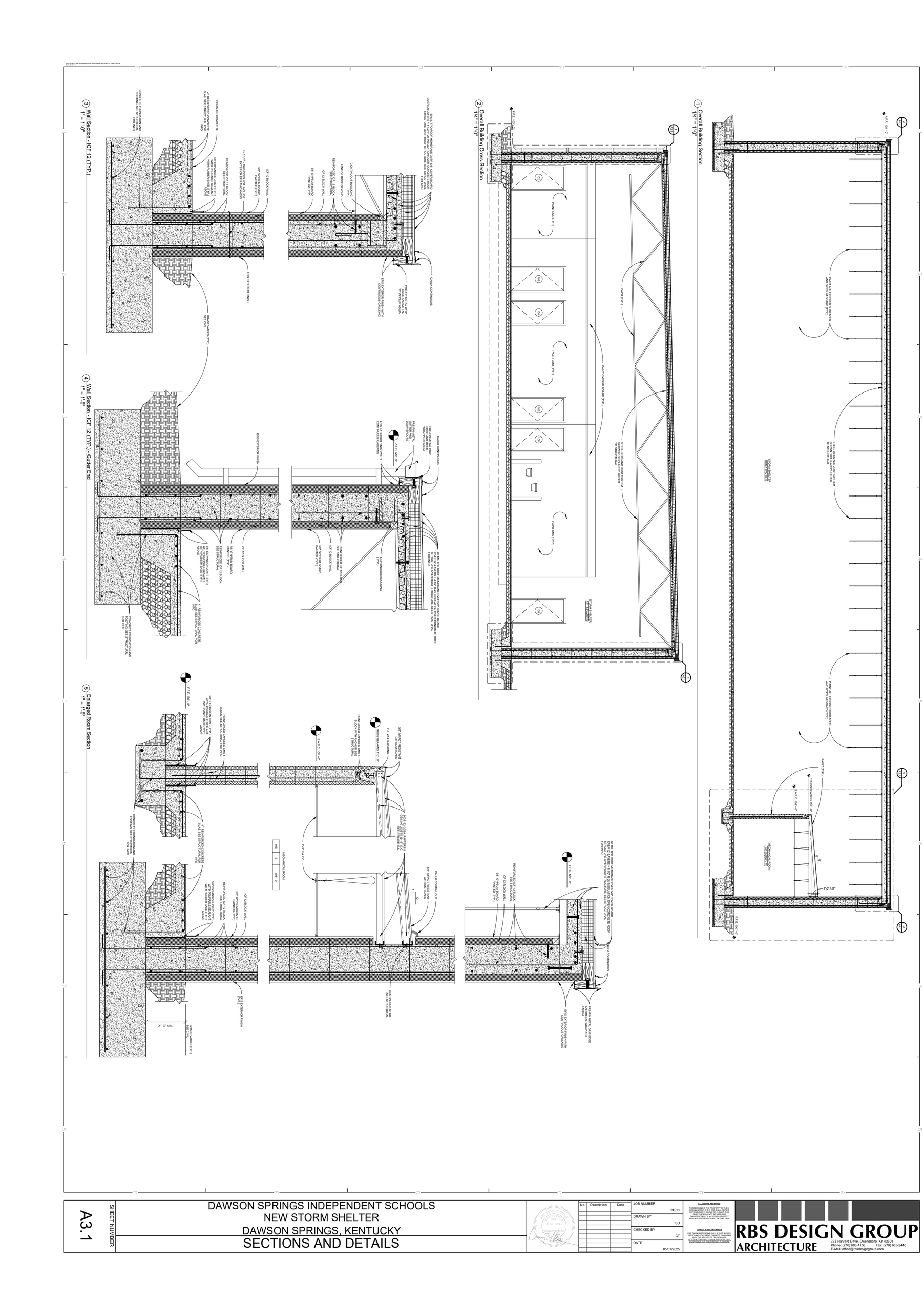
DRAWN BY	SD
CHECKED BY	CT
DATE	05/01/2025

No.	Description	Date

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

OVERALL ELEVATIONS

SHEET NUMBER
A2.1



1 Overall Building Section
1/4" = 1'-0"

2 Overall Building Cross-Section
1/4" = 1'-0"

3 Wall Section - ICF 12 (TYP.)
1" = 1'-0"

4 Wall Section - ICF 12 (TYP.) - Gutter End
1" = 1'-0"

5 Enlarged Room Section
1" = 1'-0"

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY
SECTIONS AND DETAILS

SHEET NUMBER
A3.1

No.	Description	Date

JOB NUMBER 24011
DRAWN BY SD
CHECKED BY CT
DATE 05/01/2025

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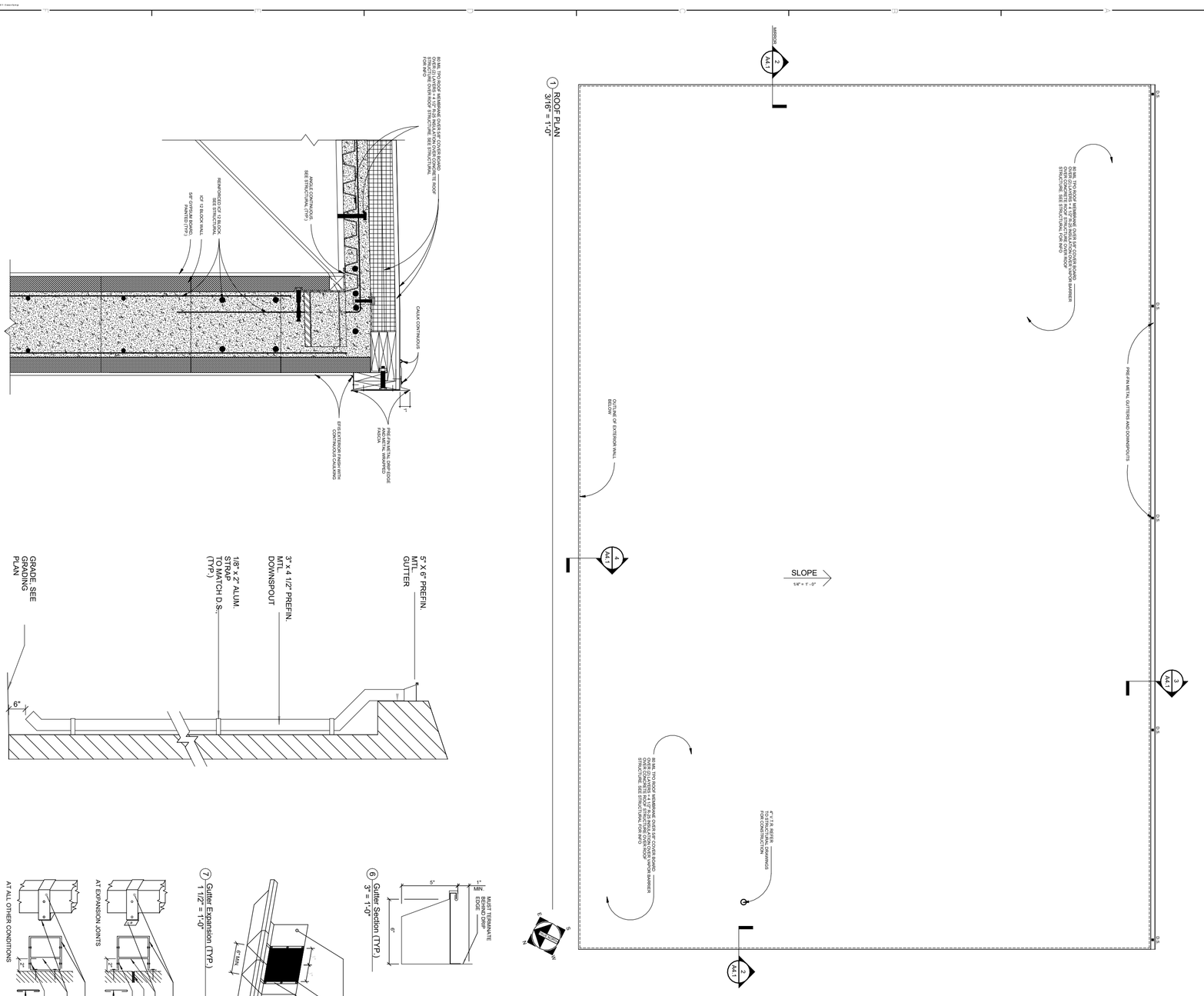
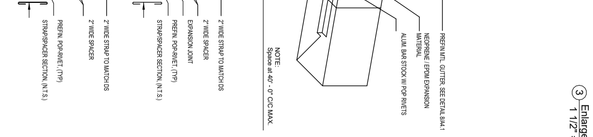


1 ROOF PLAN
3/16" = 1'-0"

4 Enlarged Roof Section - Rake Edge
1 1/2" = 1'-0"

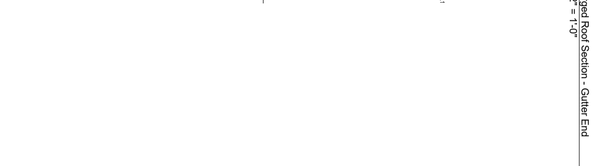
5 Downspout Detail (TYP.)
3/4" = 1'-0"

6 Gutter Section (TYP.)
3" = 1'-0"



7 Gutter Expansion (TYP.)
1 1/2" = 1'-0"

NOTE:
Space at 40' - 0" O/C MAX.

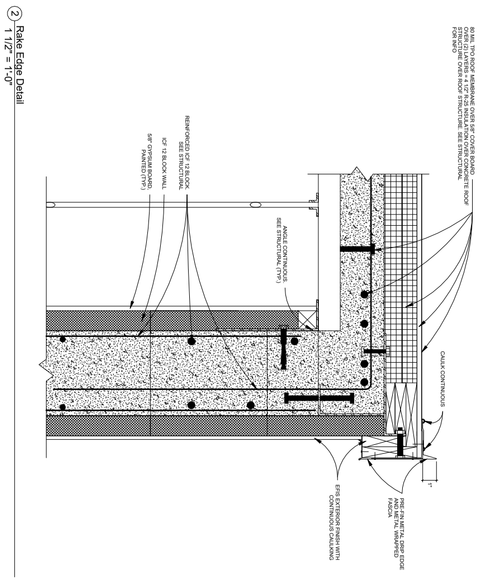


8 Downspout Strap (TYP.)
1 1/2" = 1'-0"

AT EXPANSION JOINTS

AT ALL OTHER CONDITIONS

3 Enlarged Roof Section - Gutter End
1 1/2" = 1'-0"



2 Rake Edge Detail
1 1/2" = 1'-0"

SHEET NUMBER	DAWSON SPRINGS INDEPENDENT SCHOOLS NEW STORM SHELTER DAWSON SPRINGS, KENTUCKY	JOB NUMBER 24011 DRAWN BY SD CHECKED BY CT DATE 05/01/2025
A4.1	ROOF PLAN	No. Description Date

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DOOR & FRAME SCHEDULE

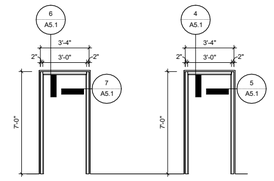
NO.	DOOR SIZE					FRAME				SIGNAGE	LABEL
	PANEL 1	PANEL 2	HGT	THK	TYPE	TYPE	JAMB	HEAD			
101	3' - 0"		6' - 8"	0' - 1 3/4"	P21HM	F00HM	0' - 5 3/4"	0' - 4"			ICC 500 / FEMA P-361
102	3' - 0"		6' - 8"	0' - 1 3/4"	P00HM	F00HM	0' - 5 3/4"	0' - 4"	B		
103	3' - 0"		6' - 8"	0' - 1 3/4"	P00HM	F00HM	0' - 5 3/4"	0' - 4"	A		
104	3' - 0"		6' - 8"	0' - 1 3/4"	P00HM	F00HM	0' - 5 3/4"	0' - 4"	A		
105	3' - 0"		6' - 8"	0' - 1 3/4"	P00HM	F00HM	0' - 5 3/4"	0' - 4"	A		
106	3' - 0"		6' - 8"	0' - 1 3/4"	P00HM	F00HM	0' - 5 3/4"	0' - 4"	B		
107	3' - 0"		6' - 8"	0' - 1 3/4"	P21HM	F00HM	0' - 5 3/4"	0' - 4"			ICC 500 / FEMA P-361
108	3' - 0"		6' - 8"	0' - 1 3/4"	P21HM	F00HM	0' - 5 3/4"	0' - 4"			ICC 500 / FEMA P-361
109	3' - 0"		6' - 8"	0' - 1 3/4"	P21HM	F00HM	0' - 5 3/4"	0' - 4"			ICC 500 / FEMA P-361

GENERAL NOTES:

A. REFER TO STRUCTURAL DETAILS FOR REINFORCEMENT IN TYPICAL ICF WALL AND ADDITIONAL REINFORCEMENT AT HEAD/JAMB/SILL OF ALL OPENINGS IN WALL.

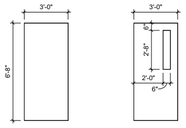
B. ALL OPENINGS IN THE EXTERIOR WALL ARE TO BE CONSTRUCTED TO MEET ICC 500 AND FEMA P-361 REQUIREMENTS. WHICH INCLUDES THE ATTACHMENT OF ALL LOQUERS AND DOOR FRAMES TO DIRECTLY INTO THE CONCRETE CORE OF THE ICF WALL SYSTEM. NO BUCKING OF EITHER WOOD OR INSULATION WILL BE ALLOWED. ATTACHMENT TO WOOD BLOCKING IS NOT PART OF ANY APPROVED AND TESTED SYSTEMS.

C. COORDINATE ALL DOOR AND LOUVER OPENING ATTACHMENT DETAILS SHOWN THROUGHOUT ENTIRE SET WITH MEP DRAWINGS FOR SIZED AND TYPES WITH STRUCTURAL DRAWINGS FOR ADDED REINFORCEMENT AND ANGLE SUPPORTS AND WITH ARCHITECTURAL DRAWINGS FOR ADDED WEATHER PROTECTION AND FLASHING ELEMENTS

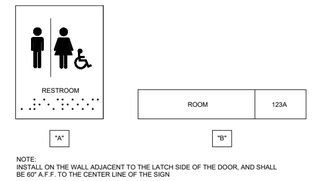


1 DOOR FRAME LEGEND (IN-USE)
1/4" = 1'-0"

NOTE: 3-POINT LOCK SYSTEM AT EXTERIOR DOORS (101, 107, 108, AND 109)

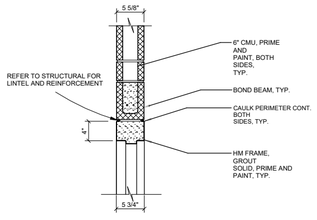


2 DOOR PANEL LEGEND
1/4" = 1'-0"

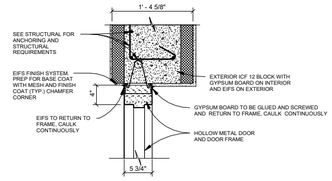


NOTE:
INSTALL ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR, AND SHALL BE 60" A.F.F. TO THE CENTER LINE OF THE SIGN

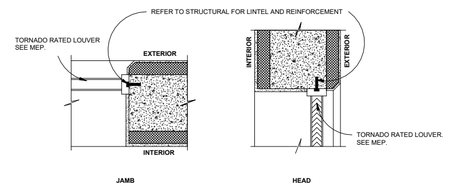
3 Interior Signage Details
3" = 1'-0"



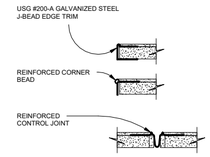
4 Hollow Metal Head - CMU Wall
1" = 1'-0"



6 Hollow Metal Head - ICF Wall
1" = 1'-0"

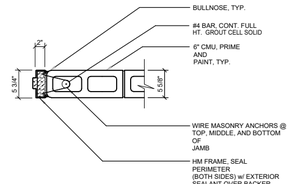


8 Louver Head and Jamb Detail
1" = 1'-0"

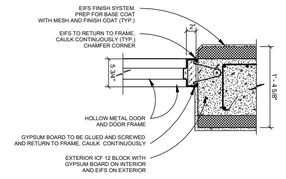


9 Gypsum Board Finish Trims (TYP.)
1" = 1'-0"

NOTE:
PROVIDE AS REQUIRED PER MANUFACTURERS RECOMMENDATIONS



5 Hollow Metal Jamb - CMU Wall
1" = 1'-0"



7 Hollow Metal Jamb - ICF Wall
1" = 1'-0"

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No.	Description	Date

JOB NUMBER 24011
DRAWN BY SD
CHECKED BY CT
DATE 05/01/2025

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
DAWSON SPRINGS, KENTUCKY

DOOR AND WINDOW SCHEDULE

SHEET NUMBER
A5.1

PLUMBING GENERAL NOTES:

A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
D. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
E. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
F. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
G. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)
H. CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
I. IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB. CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.
J. WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
K. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
L. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
M. ALL PIPING IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
N. IN ACCORDANCE WITH K.R.S. ALL PLUMBING WORK SHALL BE CONSTRUCTED IN COMPLIANCE WITH PLANS APPROVED BY AND BEARING THE APPROVAL STAMP OF THE KENTUCKY DIVISION OF PLUMBING AND/OR THE DIVISION OF WATER. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL HE HAS RECEIVED SUCH APPROVED PLANS.
O. LOCATIONS OF PIPING AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
P. ALL OFFSETS IN PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
Q. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES OR OTHER COSTS THAT ANY UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (GAS, SEWER, WATER, ETC.).
R. INSTALL ALL PIPING AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
S. SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
T. THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
U. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
V. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
W. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
X. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
Y. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
Z. NO PIPING SHALL BE ROUTED BELOW A FOOTER OR IN THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHING A 45 DEGREE ANGLE PROJECTING DOWN FROM THE EDGE OF THE FOOTER ON ALL SIDES. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR ROUTING OF PIPES IN THE VICINITY OF BUILDING FOOTERS. CONSULT STRUCTURAL ENGINEER IF IN QUESTION.
AA. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.

ABBREVIATIONS

AC	ALTERNATING CURRENT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHJ	AUTHORITY HAVING JURISDICTION
AMP	AMPERE (AMP, AMPS)
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APD	AIR PRESSURE DROP
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
C.I.	CAST IRON
CLG	CEILING
CLR	CLEAR
CO	CARBON MONOXIDE
COND	CONDENS (-ER, -ING, -ATION, -ATE)
CONT	CONTINU (-ED, -OUS)
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CV	VALVE FLOW COEFFICIENT
dB	DECIBEL
DB	DRY BULB
DC	DIRECT CURRENT
DD	DUCT SMOKE DETECTOR
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE (-S)
DIA	DIAMETER (-S)
DN	DOWN
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVA (-TION, -TOR)
ENGR	ENGINEER
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EVAP	EVAPORAT (-E, -ING, -ED, -OR, -ION)
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
EXT	EXTERIOR
FA	FREE AREA

ABBREVIATIONS (CONTINUED)

FL	FLOOR
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET **OR** FOOT
FUT	FUTURE
FV	FACE VELOCITY
GA	GAGE/GAUGE
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRAINS
H	HUMIDITY
HD	HEAD
HG	MERCURY
HORIZ	HORIZONTAL
HP	H (-ORSEPOWER, -EAT PUMP)
HR	HOUR (-S)
HVAC	HEATING, VENTILATING, & AIR-CONDITIONING
Hz	HERTZ
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
IN	INCH (-ES)
INSUL	INSULAT (-ED, -ION)
INT	INTER (-IOR, -ERVAL)
IPS	IRON PIPE SIZE
kW	KILOWATT
kWh	KILOWATT HOUR
LBS	POUNDS
LF	LINEAR FEET/FOOT
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
MTG	MOUNTING
N/A	NOT APPLICABLE
NC	NOISE CRITERIA **OR** NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NIC	NOT IN CONTRACT

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DI (-AMETER, -MENSION)
OFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
OZ	OUNCE (-S)
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PLBG	PLUMBING
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PPSI GAUGE
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SQ	SQUARE
SQ FT	SQUARE FEET **OR** FOOT
SQ IN	SQUARE INCH **OR** INCHES
TAB	TESTING AND BALANCING
TBD	TO BE DETERMINED
TE	TOP ELEVATION
TEMP	TEMPERATURE
TPA	TRAP PRIMER ADAPTER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WBT	WET BULB TEMPERATURE
WPD	WATER PRESSURE DROP
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

#	TAGGED NOTE DESIGNATOR
1	REVISION TRIANGLE
	ROOM TAG
TAG XXX-# / INSTANCE XXXX	EQUIPMENT TAG
XXX / ##	DOMESTIC WATER RISER TAG
XXX / ##	SANITARY, WASTE, & VENT RISER TAG
XXX / ##	FIRE SUPPRESSION RISER TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION
--D(XXX)--	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
—E(XXX)—	EXISTING PIPING - (XXX) DENOTES SYSTEM
—A(XXX)—	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM

VALVE SYMBOL LEGEND

	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT (AAV)
	MANUAL AIR VENT (MAV)
	MANUAL BALANCING VALVE (BV)
	BALL VALVE
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE (TDV)
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	AUTO-FLOW CONTROL VALVE
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY

PLUMBING PIPING LEGEND

—O	PIPE ELBOW TURNING UP
—◑	PIPE ELBOW TURNING DOWN
—O—	PIPE TEE; CONNECTION ON TOP
—⊖—	PIPE TEE; CONNECTION ON BOTTOM
—∃	PIPE CAP
—AVT—	ACID VENT
—AW—	ACID WASTE
—CA—	COMPRESSED AIR
—CAI/E—	COMBUSTION AIR INTAKE/EXHAUST
—CBS/R—	CHILLED BEAM SUPPLY/RETURN
—CD—	CONDENSATE DRAIN
—CO2—	CARBON DIOXIDE
—CST—	CLEAN STEAM PIPING
— - DCW - —	DOMESTIC COLD WATER (DCW)
—DHW— DHW(#°F)	DOMESTIC HOT WATER (DHW)
—DHR— DHR(#°F)	RECIRCULATED DOMESTIC HOT WATER (DHR)
—HPC—	HIGH PRESSURE STEAM CONDENSATE
—HPS(#)—	HIGH PRESSURE STEAM; (#) DENOTES PRESSURE
—HPS/R—	HEAT PUMP WATER SUPPLY/RETURN
—HRS/R—	HEAT RECOVERY SUPPLY/RETURN PIPING
—HWS/R—	HEATING WATER SUPPLY/RETURN
—LPC—	LOW PRESSURE STEAM CONDENSATE
—LPS(#)—	LOW PRESSURE STEAM; (#) DENOTES PRESSURE
—MPC—	MEDIUM PRESSURE STEAM RETURN
—MPS(#)—	MEDIUM PRESSURE STEAM; (#) DENOTES PRESSURE
—RL—	ROOF LEADER
—SAN—	SANITARY
—SPD—	STEAM CONDENSATE PUMPED DISCHARGE
—SVT—	STEAM VENT PIPING
— —VT— —	VENT

PLUMBING SYMBOL LEGEND

	FLEXIBLE PIPE CONNECTION
	FLOW METER (VENTURI)
	PIPING UNION
P FS	FLOW SWITCH
P PS	PRESSURE SWTICH
P TS	TAMPER SWITCH
T	THERMOMETER
T	PETE'S PLUG; TEMPERATURE/PRESSURE PORT

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	CW	HW	VENT	WASTE/DRAIN	VOLTAGE	EXTERNAL CHECK VALVE
FD-1	FLOOR DRAIN - 6" DIA. : ZURN, ZN-415 OR EQUAL FLOOR DRAIN WITH 6" DIAMETER TOP, TYPE "B" NICKEL BRONZE STRAINER, 4" DRAIN OUTLET AND TRAP PRIMER CONNECTION.	-	-	2"	4"	Yes	Yes
P-1	WATER CLOSET - FLOOR MOUNTED, FLUSH TANK : VITREOUS CHINA, 15" HIGH FLOOR MOUNTED, ELONGATED BOWL, SIPHON JET 1.6 GPF FLUSH TANK WATER CLOSET WITH 3/8" ANGLE SUPPLY WITH STOP, CHINA BOLT CAPS AND WHITE OPEN FRONT PLASTIC SEAT. OUTLET ROUGH-IN SHALL BE 12" TO CENTER.	1-1/2"	-	2"	4"	Yes	Yes
P-2	LAVATORY - WALL HUNG W/GOOSENECK FAUCET : VITREOUS CHINA, 20" X 18", WALL HUNG LAVATORY WITH 4" FAUCET CENTER CENTERS, CONCEALED ARMS AND A 4" HIGH BACKSLASH. PROVIDE WITH A 8" HIGH CHROME PLATED GOOSENECK FAUCET WITH 4" LONG WRIST BLADE HANDLES, GRID DRAIN, 3/8" ANGLE SUPPLIES WITH STOPS, KENTUCKY CODE P-TRAP. TAILPIECE AND ESCUTCHEONS. MOUNT WITH LAVATORY AT A HEIGHT LEAVING A CLEARANCE OF 291/2" FROM THE FLOOR TO THE BOTTOM OF THE APRON AND THE RIM AT 337/8" AFF.	1/2"	1/2"	2"	2"	Yes	Yes
P-3	ELECTRIC WATER COOLER - BI LEVEL - ADA COMPLIANT : BI-LEVEL BARRIER FREE WATER COOLER WITH SINGLE COMPRESSOR, WATER SUPPLY, DRAIN AND ELECTRICAL CONNECTION. 8.0 GPH OF 50°F WATER AT 90°F AMBIENT AND 80°F INLET WATER, 18.8 GAUGE STAINLESS STEEL BASIN, 1/5 HP COMPRESSOR, 115V/1PH, SURFACE MOUNTED TO THE WALL WITH CHILLER BELOW BOWL AND SIDE AND FRONT PUSH BAR OPERATORS. MOUNT SO THE BOTTOM OF THE LOWER COOLER IS AT 9" MINIMUM AFF WITH A CLEARANCE OF 27" MINIMUM FROM THE BOTTOM OF THE APRON OF THE BOWL TO THE FINISHED FLOOR. THE DIMENSION TO THE CENTERLINE OF THE LOWER COOLER BUBBLER SHALL BE 35". PROVIDE WITH STAINLESS STEEL CANE TOUCH APRON ATTACHED TO THE HI COOLER.	1/2"	-	2"	2"	Yes	Yes
P-Z	WATER CLOSET - FLOOR MOUNTED- MANUAL FLUSH VALVE : VITREOUS CHINA, WALL MOUNTED ELONGATED BOWL, SIPHON JET, 11/2" TOP SPUD INLET, CHINA BOLT CAPS AND WHITE OPEN FRONT PLASTIC SEAT WITH SELF-SUSTAINING CHECK HINGES. PROVIDE WITH MANUAL 1.6 GPF FLUSH VALVE. PROVIDE WALL CARRIER. MOUNT WITH BOWL AT 15" AFF.	1-1/2"	-	2"	4"	Yes	Yes

APPLICABLE BUILDING CODES

APPLICABLE BUILDING CODES	DOCUMENT	YEAR
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES	ANSI A117.1	2009
FIRE SPRINKLER CODE	NFPA 13	2013
INTERNATIONAL BUILDING CODE (IBC)	STATE EDITION	2015
INTERNATIONAL ENERGY CONSERVATION CODE (IECC) OR ASHRAE 90.1	STATE EDITION	2012
INTERNATIONAL FIRE CODE (IFC)	STATE EDITION	2015
INTERNATIONAL FUEL GAS CODE (IFGC)	STATE EDITION	2015
INTERNATIONAL MECHANICAL CODE (IMC)	STATE EDITION	2015
INTERNATIONAL PLUMBING CODE (IPC)	STATE EDITION	2015
INTERNATIONAL EXISTING BUILDING CODE (IEBC)	STATE EDITION	2009
NATIONAL ELECTRIC CODE (NEC)	NFPA 70	2017
NATIONAL FIRE ALARM & SIGNALING CODE	NFPA 72	2013
UNIFORM STATEWIDE BUILDING CODE		2018

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No.	Description	Date

JOB NUMBER 24011XDDSS24 | DRAWN BY DRH | CHECKED BY MCW | DATE 05/01/2025

STATE OF KENTUCKY
MATTHEW C. WOOD
31243
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS

NEW STORM SHELTER

PLUMBING LEGEND

SHEET NUMBER

P1.0

TAGGED NOTES

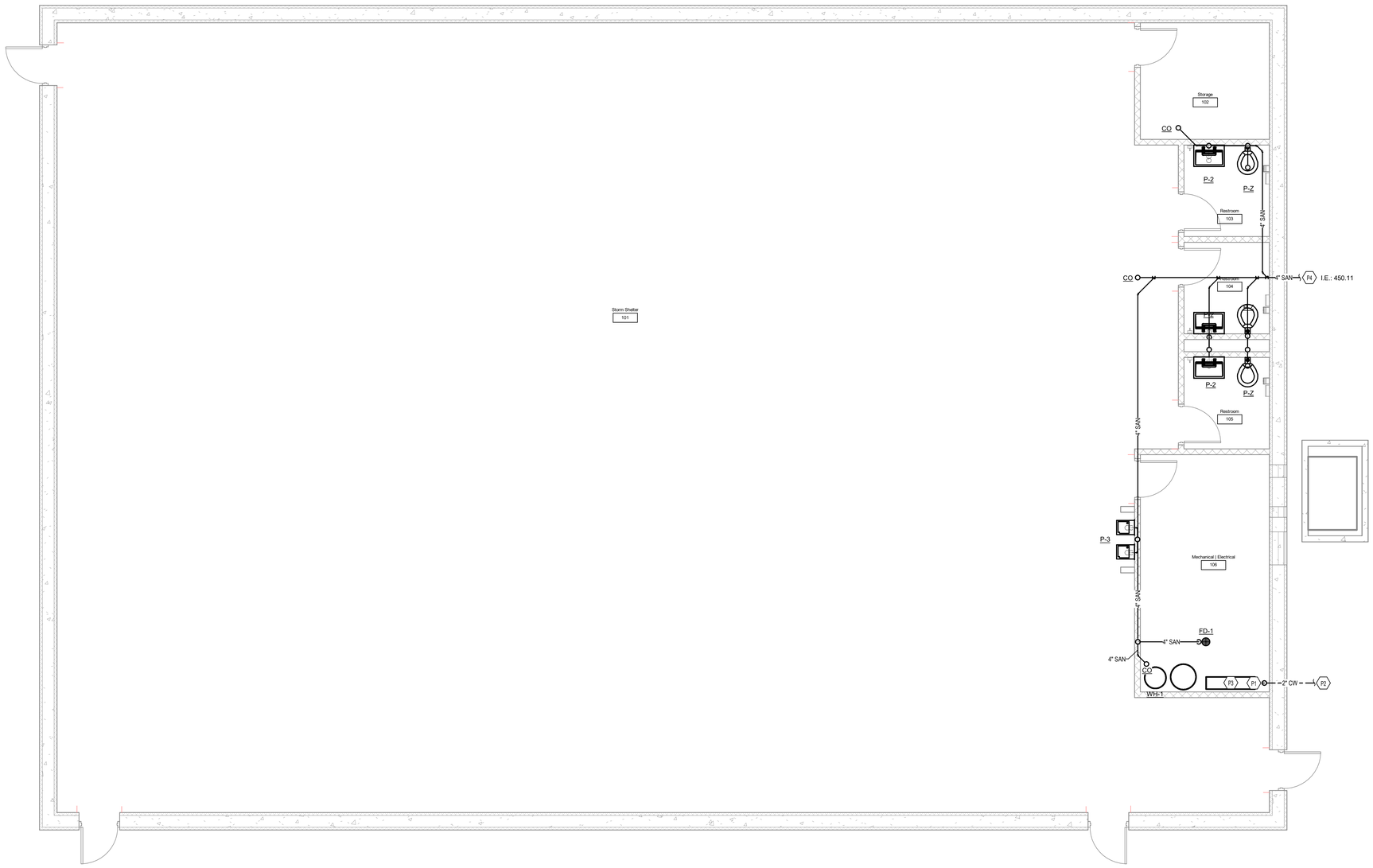
##

P1 DOMESTIC WATER TO ENTER BUILDING AT POINT INDICATDED. REFER TO PLUMBING PLAN FOR CONTINUATION.

P2 DOMESTIC WATER TO CONTIUE UNDERGRADE. REFER TO CIVIL DRAWINGS FOR CONTINUATION.

P3 DOMESTIC WATER ENTRANCE. REFER TO DETAIL ON SHEET P3.0.

P4 SANITARY PIPING TO EXIT BUILDING AT LOCATION INDICATED. REFER TO CIVIL DRAWINGS FOR CONTINUATION.



2 PLUMBING - UNDERSLAB STORM SHELTER PLAN

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

0 1' 2' 4' 8' 12' 16'

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CHECKED BY	MCW
DATE	05/01/2025

No.	Description	Date

STATE OF KENTUCKY
Matthew C. Woodward
31243
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS

NEW STORM SHELTER

PLUMBING - UNDERSLAB STORM SHELTER PLAN

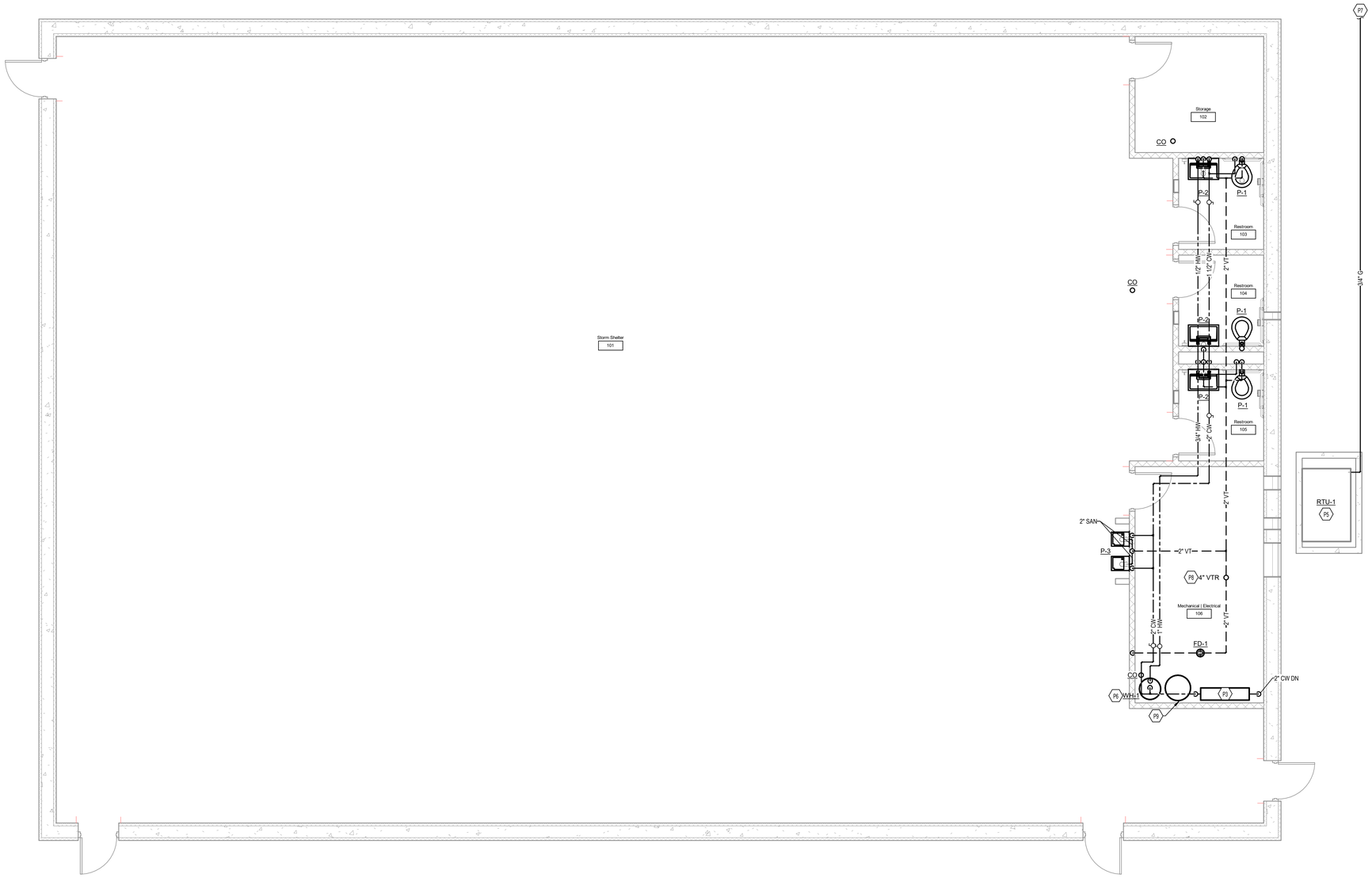
SHEET NUMBER

P2.0

TAGGED NOTES

##

- P3 DOMESTIC WATER ENTRANCE. REFER TO DETAIL ON SHEET P3.0.
- P5 PAD MOUNTED PACKAGED UNIT. REFER TO MECHANIAL DRAWINGS FOR MORE INFORMATION.
- P6 REFER TO WATER HEATER PIPING SCHEMATIC.
- P7 GAS PIPING TO CONTINUE. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
- P8 PROVIDE CYCLONE CVTR MODEL 2004 OR EQUAL. REFER TO STRUCTURAL DRAWINGS FOR PROPER INSTALLATION.
- P9 BLADDER STORAGE TANK TO BE FLOOR MOUNTED. REFER TO PIPING SCHEMATIC FOR FURTHER INFORMATION.



1 PLUMBING - STORM SHELTER PLAN

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

0 1' 2' 4' 8' 12' 16'

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DATE	05/01/2025

No.	Description	Date

STATE OF KENTUCKY
MATTHEW C. WEBB
37243
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS

NEW STORM SHELTER

PLUMBING STORM SHELTER PLAN

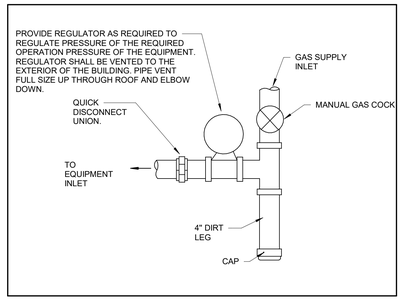
SHEET NUMBER

P2.1

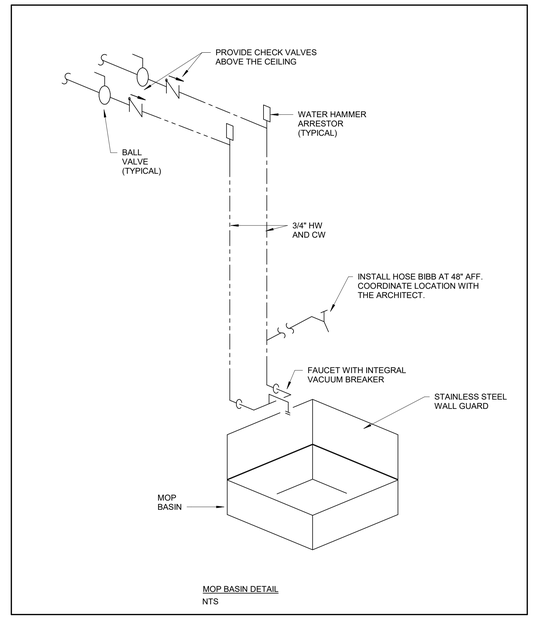
WATER HEATER SCHEDULE - ELECTRIC

MARK	MANUFACTURER	MODEL #	STORAGE (GAL)	RECOVERY @ 100°F RISE (GPH)	KW	VOLTAGE	PHASE	REMARKS
WH-1	AO SMITH	DEL-20	20.00	36.0	6	208 V	3	ALL

REMARKS:
1. PROVIDE WITH SINGLE POINT ELECTRICAL CONNECTION.
2. PROVIDE WITH 4" CONCRETE HOUSEKEEPING PAD.
3. PROVIDE WITH ACID NEUTRALIZATION KIT.
4. LOCHINVAR, STATE, AND RHEEM ARE ACCEPTABLE.

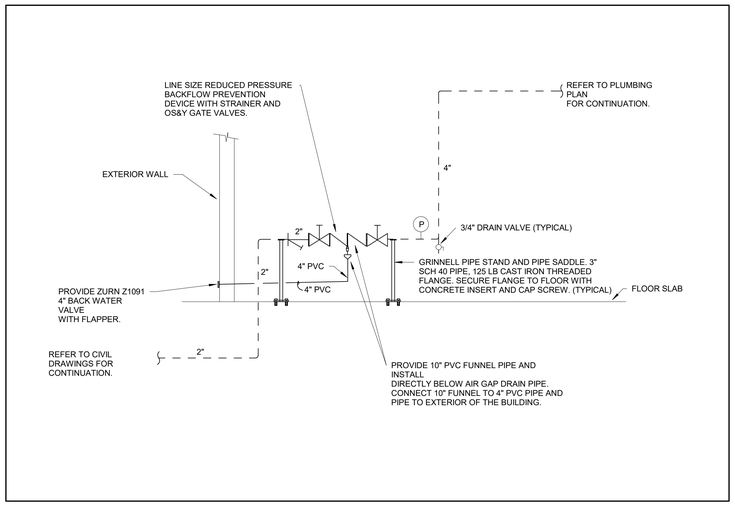


2 TYPICAL GAS CONNECTION DETAIL
SCALE: NONE

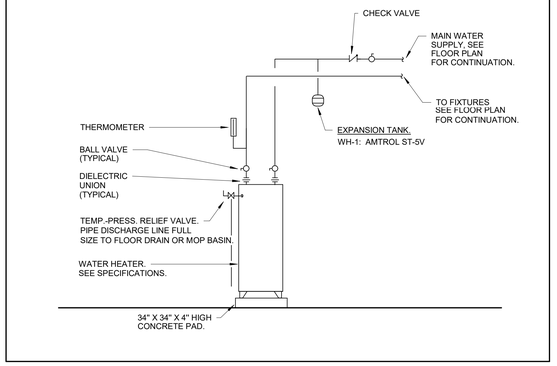


MOP BASIN DETAIL
NTS

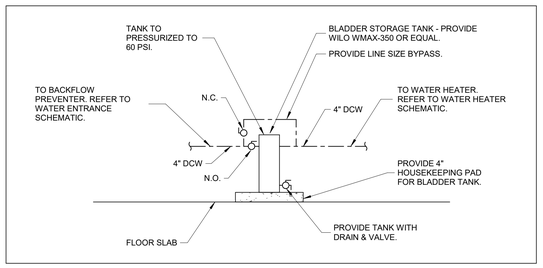
3 MOP BASIC DETAIL
SCALE: NONE



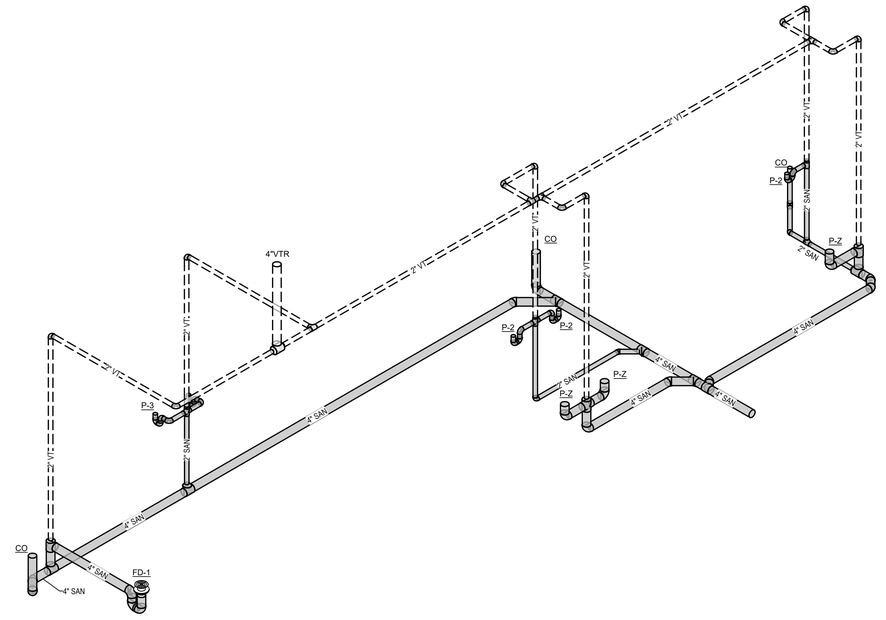
5 DOMESTIC WATER ENTRANCE SCHEMATIC
SCALE: NONE



4 WATER HEATER PIPING SCHEMATIC
SCALE: NONE



6 BLADDER STORAGE TANK DETAIL
SCALE: NONE



1 OVERALL PLUMBING RISER
SCALE: NONE

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No.	Description	Date

JOB NUMBER 24011XDSS24 | DRAWN BY DRH | CHECKED BY MCW | DATE 05/01/2025

COMMONWEALTH OF KENTUCKY — MATTHEW C. WOODALL — 31243 — LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
PLUMBING RISERS & DETAILS

SHEET NUMBER
P3.0

MECHANICAL GENERAL NOTES:

A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
D. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
E. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
F. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
G. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)
H. CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING, HVAC AND ELECTRICAL WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
I. IF AREA OF CONSTRUCTION HAS A POST TENSION FLOOR SLAB. CONTRACTOR SHALL USE ULTRA SOUND OR OTHER APPROVED METHODS TO SURVEY THE EXISTING FLOOR STRUCTURE BEFORE MAKING ANY AND ALL FLOOR PENETRATIONS.
J. WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
K. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
L. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE, AND SHALL COMPLY WITH INTERIM LIFE SAFETY MEASURES.
M. ALL DUCTWORK, PIPING, CONDUITS, ETC. IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
N. INSTALL AIR VENTS AT HIGH POINTS IN PIPING AND DRAINS IN LOW POINTS. USE CARE TO AVOID FREEZING OF EXTERIOR VENTS.
O. LOCATIONS OF PIPING, DUCTS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
P. ALL OFFSETS IN DUCTS AND PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
Q. COORDINATE ALL HVAC WORK WITH ELECTRICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.
R. INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
S. SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
T. SEAL ALL NEW DUCTWORK JOINTS WITH UNITED MCGILL, IRONGRIP 601 OR EQUAL WATER BASED SEALANT.
U. ALL MOTOR DRIVEN EQUIPMENT SHALL BE INSTALLED WITH FLEXIBLE CONNECTIONS TO DUCTWORK, PIPING, ETC., UNLESS OTHERWISE NOTED.
V. THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
W. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
X. DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.
Y. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
Z. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
AA. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
BB. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
CC. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
DD. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.

MECHANICAL SITE NOTES:

A. DO NOT SCALE FROM MECHANICAL AND ELECTRICAL DRAWINGS. FIELD VERIFY REQUIRED DIMENSIONS.
B. CONTRACTOR SHALL CUT AND PATCH ALL PAVEMENT, CURBING, ETC. AS REQUIRED FOR WORK. CONTRACTOR SHALL REPAIR ALL LANDSCAPING THAT IS DAMAGED FOR WORK.
C. FEDERAL, STATE, LOCAL, MUNICIPALITY AND UTILITY COMPANY CODES, RULES, REGULATIONS AND REQUIREMENTS APPLY UNLESS EXCEEDED BY THIS DESIGN.
D. WHEN INTERRUPTION OF AN EXISTING UTILITY OR SERVICES IS PLANNED OR OCCURS ACCIDENTALLY, THE CONTRACTOR(S) SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME PROVIDING PREMIUM TIME AS NEEDED AT NO INCREASE IN THE CONTRACT PRICE.
E. PLANNED INTERRUPTION OF ANY SERVICE SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPALITY OR UTILITY COMPANY, THE ARCHITECT AND THE BUILDING OPERATORS AT LEAST ONE WEEK IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED FROM THEM AT LEAST TWO WEEKS IN ADVANCE IN WRITING AND INSURE THAT THEY DO NOT DELAY WORK.
F. LOCATIONS, DEPTHS, MATERIAL TYPES, ELEVATIONS, ETC. OF ALL APPURTENANCES, LINES, BUILDINGS, ETC. INDICATED ON THESE DRAWINGS WERE TAKEN FROM VARIOUS SOURCES, ARE DIAGRAMMATIC ONLY AND ARE SUBJECT TO SUBSTANTIAL VARIATION FROM EXISTING CONDITIONS. EXISTING UTILITIES LOCATIONS MAY VARY (CONSEQUENTLY ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE, AND/OR LOCAL RULES, REGULATIONS, STANDARDS AND SAFETY REQUIREMENTS. UTILITIES SHALL ALSO BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY. IF ANY VARIATION OCCURS, CONSULT THE BUILDING ENGINEER AND THE MECHANICAL ENGINEER'S REPRESENTATIVE). CONTRACTOR SHALL VISIT SITE AND FIELD VERIFY THE ROUTING OF ALL UTILITIES.
G. CONTRACTOR SHALL VERIFY EXACT LOCATION OF OUTDOOR RECEPTACLES WITH OWNER PRIOR TO ROUGH-IN.
H. CONTRACTOR SHALL REFER TO CIVIL PLANS FOR COORDINATION WITH OTHER UTILITIES.
I. COORDINATE ELEVATION AND LOCATION OF ALL CONDUITS ENTERING BUILDING WITH STRUCTURAL FOUNDATION. CONDUIT SHALL PASS THROUGH STEM WALL OF FOUNDATION OR UNDER FOOTING AS REQUIRED.
J. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE DRAWINGS ARE APPROXIMATE ONLY.
K. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE UNDERGROUND UTILITIES. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY OTHER AFFECTED UTILITY OWNERS PRIOR TO DIGGING. IN THE EVENT OF ACCIDENTAL INTERRUPTION OF SERVICE, CONTRACTOR WILL IMMEDIATELY NOTIFY THE OTHER UTILITY OWNERS.
L. THE UTILITY/CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD OTHER EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE OTHER UTILITIES. THE UTILITY WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT.
M. COORDINATE UNDERGROUND ELECTRICAL WITH ALL LANDSCAPING AND FENCING, ADJUST ELECTRICAL LINES TO AVOID CONFLICTS. REFER TO LANDSCAPING PLANS FOR FURTHER INFORMATION. AVOID ROUTING UNDERGROUND CONDUITS UNDER ROADWAYS OR PARKING LOTS, CROSS ROADWAYS WITH UNDERGROUND CONDUITS AT 90 ANGLES WHERE POSSIBLE.
N. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THAT ANY ABANDONED PIPING UNCOVERED IN THE COURSE OF THEIR WORK SHALL BE CAPPED WATER TIGHT.
O. TRENCHES FOR UTILITIES SHALL BE BACKFILLED PER MECHANICAL DETAILS AND SPECIFICATIONS. PAVEMENT, ASPHALT, AND OTHER SURFACE WORK SHALL BE PER CIVIL ENGINEERING DRAWINGS AND SPECIFICATIONS.
P. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RINGS AND COVERS AFFECTED BY THIS PROJECT AS NECESSARY TO BE FLUSH WITH NEW GRADE.
Q. CONTRACTOR SHALL COORDINATE RESPONSIBILITIES WITH CONSTRUCTION MANAGER. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
R. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND SIZING OF ALL EXPANSION LOOPS PER PIPING MANUFACTURER'S REQUIREMENTS.
S. REFER TO ARCHITECT'S PHASING PLAN FOR CONSTRUCTION PHASING REQUIREMENTS.
T. ALL SITE WORK SHALL BE COORDINATED WITH UNIVERSITY OF KENTUCKY PHYSICAL PLANT DIVISION (PPD). ALL OUTAGES SHALL BE SCHEDULED A MINIMUM OF TWO WEEKS IN ADVANCE.

ABBREVIATIONS

AC	ALTERNATING CURRENT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHJ	AUTHORITY HAVING JURISDICTION
AMP	AMPERE (AMP, AMPS)
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APD	AIR PRESSURE DROP
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
ATU	AIR TERMINAL UNIT
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
C.I.	CAST IRON
CLG	CEILING
CLR	CLEAR
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COND	CONDENS (-ER, -ING, -ATION, -ATE)
CONT	CONTINU (-ED, -OUS)
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CV	VALVE FLOW COEFFICIENT
dB	DECIBEL
DB	DRY BULB
DBT	DRY BULB TEMPERATURE
DC	DIRECT CURRENT
DD	DUCT SMOKE DETECTOR
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE (-S)
DIA	DIAMETER (-S)
DN	DOWN
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVA (-TION, -TOR)
ENGR	ENGINEER
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EVAP	EVAPORAT (-E, -ING, -ED, -OR, -ION)
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
EXT	EXTERIOR
FA	FREE AREA

ABBREVIATIONS (CONTINUED)

FD	FIRE DAMPER
FL	FLOOR
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET **OR** FOOT
FUT	FUTURE
FV	FACE VELOCITY
GA	GAGE/GAUGE
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRAINS
H	HUMIDITY
HD	HEAD
HG	MERCURY
HORIZ	HORIZONTAL
HP	H (-ORSEPOWER, -EAT PUMP)
HR	HOUR (-S)
HVAC	HEATING, VENTILATING, & AIR-CONDITIONING
Hz	HERTZ
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
IN	INCH (-ES)
INSUL	INSULAT (-ED, -ION)
INT	INTER (-IOR, -ERVAL)
IPS	IRON PIPE SIZE
kW	KILOWATT
kWh	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAR FEET/FOOT
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MIN	MIN (-IMUM, -UTE)
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
MTG	MOUNTING
N/A	NOT APPLICABLE
NC	NOISE CRITERIA **OR** NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NIC	NOT IN CONTRACT

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DI (-AMETER, -MENSION)
OFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
OZ	OUNCE (-S)
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PLBG	PLUMBING
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PPSI GAUGE
RH	RELATIVE HUMIDITY [%]
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SD	SMOKE DAMPER
SP	STATIC PRESSURE
SQ	SQUARE
SQ FT	SQUARE FEET **OR** FOOT
SQ IN	SQUARE INCH **OR** INCHES
TAB	TESTING AND BALANCING
TBD	TO BE DETERMINED
TE	TOP ELEVATION
TEMP	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WBT	WET BULB TEMPERATURE
WPD	WATER PRESSURE DROP
WT	WEIGHT
W/	WITH
W/O	WITHOUT
%	PERCENT
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

(#)	TAGGED NOTE DESIGNATOR
1	REVISION TRIANGLE
ROOM NAME (RM #)	ROOM TAG
TAG XXX-# INSTANCE XXXX	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	TRANSFER AIR DIFFUSER W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
	SIDEWALL DIFFUSER/GRILLE
TAG (XXX) AIRFLOW #,###	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER,LOUVER)
##x##	RECTANGULAR DUCT
#ø	ROUND/SPIRAL DUCT
##/##	FLAT OVAL DUCT
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
OA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
CAE	COMBUSTION AIR EXHAUST DUCT
CAI	COMBUSTION AIR INTAKE DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
E(XXX)	EXISTING DUCT - (XXX) DENOTES SYSTEM
D(XXX)	DUCT TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
A(XXX)	DUCT TO BE ABANDONED IN PLACE - (XXX) DENOTES SYSTEM
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
T	THERMOSTAT
TS	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
TC	TEMPERATURE & CARBON DIOXIDE SENSOR
VERT. HORIZ.	MANUAL BALANCING/VOLUME DAMPER
VERT. HORIZ.	MOTORIZED DAMPER
VERT. HORIZ.	FIRE DAMPER
VERT. HORIZ.	SMOKE DAMPER
VERT. HORIZ.	COMBINATION FIRE & SMOKE DAMPER

MECHANICAL PIPING LEGEND

—O	PIPE ELBOW TURNING UP
—Ↄ	PIPE ELBOW TURNING DOWN
—○—	PIPE TEE; CONNECTION ON TOP
—▽—	PIPE TEE; CONNECTION ON BOTTOM
—⊣	PIPE CAP
—BFW—	BOILER FEEDWATER
—CAI/E—	COMBUSTION AIR INTAKE/EXHAUST
—CBS/R—	CHILLED BEAM SUPPLY/RETURN
—CD—	CONDENSATE DRAIN
—CHWS/R—	CHILLED WATER SUPPLY/RETURN
—CST—	CLEAN STEAM PIPING
—CWS/R—	CONDENSER WATER SUPPLY/RETURN
—DTS/R—	DUAL TEMP. WATER SUPPLY/RETURN
—GS/R—	GEOTHERMAL WATER SUPPLY/RETURN
—HPC—	HIGH PRESSURE STEAM CONDENSATE
—HPS(#)—	HIGH PRESSURE STEAM; (#) DENOTES PRESSURE
—HPS/R—	HEAT PUMP WATER SUPPLY/RETURN
—HRS/R—	HEAT RECOVERY SUPPLY/RETURN PIPING
—HWS/R—	HEATING WATER SUPPLY/RETURN
—LPC—	LOW PRESSURE STEAM CONDENSATE
—LPS(#)—	LOW PRESSURE STEAM; (#) DENOTES PRESSURE
—MPC—	MEDIUM PRESSURE STEAM RETURN
—MPS(#)—	MEDIUM PRESSURE STEAM; (#) DENOTES PRESSURE
—SPD—	STEAM CONDENSATE PUMPED DISCHARGE
—SVT—	STEAM VENT PIPING
-·-D(XXX)-·-	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
—E(XXX)—	EXISTING PIPING - (XXX) DENOTES SYSTEM
—A(XXX)—	ABANDONED IN PLACE PIPING - (XXX) DENOTES SYSTEM
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT (AAV)
	MANUAL AIR VENT (MAV)
	MANUAL BALANCING VALVE (BV)
	BALL VALVE
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE (TDV)
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	AUTO-FLOW CONTROL VALVE
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	FLEXIBLE PIPE CONNECTION
	FLOW METER (VENTURI)
	PIPING UNION
FS	FLOW SWITCH
PS	PRESSURE SWTICH
TS	TAMPER SWITCH
	THERMOMETER
	PETE'S PLUG; TEMPERATURE/PRESSURE PORT

APPLICABLE BUILDING CODES

APPLICABLE BUILDING CODES	DOCUMENT	YEAR
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES	ANSI A117.1	2009
FIRE SPRINKLER CODE	NFPA 13	2013
INTERNATIONAL BUILDING CODE (IBC)	STATE EDITION	2015
INTERNATIONAL ENERGY CONSERVATION CODE (IECC) OR ASHRAE 90.1	STATE EDITION	2012 OR 2010
INTERNATIONAL FIRE CODE (IFC)	STATE EDITION	2015
INTERNATIONAL FUEL GAS CODE (IFGC)	STATE EDITION	2015
INTERNATIONAL MECHANICAL CODE (IMC)	STATE EDITION	2015
INTERNATIONAL PLUMBING CODE (IPC)	STATE EDITION	2015
INTERNATIONAL EXISTING BUILDING CODE (IEBC)	STATE EDITION	2009
NATIONAL ELECTRIC CODE (NEC)	NFPA 70	2017
NATIONAL FIRE ALARM & SIGNALING CODE	NFPA 72	2013
UNIFORM STATEWIDE BUILDING CODE	KBC	2018
STORM SHELTER CODE	ICC 500	2014

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

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JOB NUMBER	DRAWN BY	CHECKED BY	DATE
24011XDSS24	DRH	MCW	05/01/2025

No.	Description	Date

STATE OF KENTUCKY
Matthew C. Wood
31243
LICENSED PROFESSIONAL ENGINEER

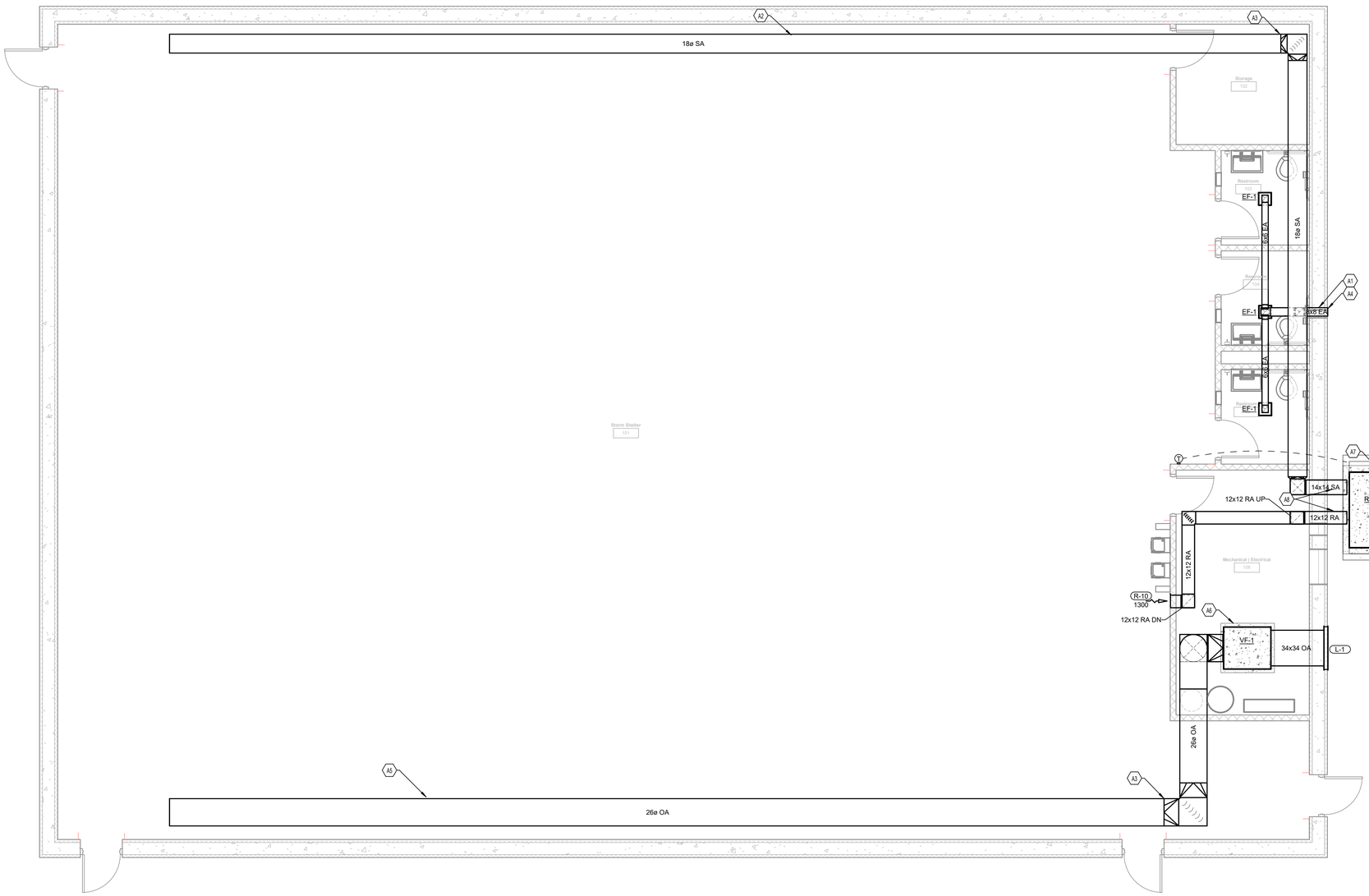
DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
MECHANICAL LEGEND

SHEET NUMBER
M1.0

TAGGED NOTES

##

- A1 DUCT TO PENETRATE WALL AT LOCATION INDICATED. DUCT MUST BE ROUTED BY CONNECTING TO STRUCTURAL DUCTWORK. REFER TO STORM SHELTER DUCT PENETRATION DETAIL AS WELL AS STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- A2 PROVIDE FABRIC DUCT. SIZE TO ACCOMMODATE 2400 CFM. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- A3 TRANSITION TO FABRIC DUCT SYSTEM PER MANUFACTURER REQUIREMENTS AT LOCATION INDICATED. EXPOSED TRANSITION THRU WALL TO BE DUEL WALL DUCT.
- A4 PROVIDE ALUMINUM WALL CAP BROAN-NUTONE MODEL #643 OR EQUAL WITH BACKDRAFT DAMPER AND BIRDSCREEN.
- A5 PROVIDE FABRIC DUCT. SIZE TO ACCOMMODATE 5400 CFM. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- A6 PROVIDE 4" CONCRETE PAD FOR MOUNTING OF VENTILATION FAN.
- A7 PROVIDE CONCRETE PAD PER MANUFACTURER REQUIREMENTS FOR PACKAGE UNIT. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
- A8 PROVIDE PRE-FABRICATED DUCT SUPPORTS MIRO OR EQUAL TO SUPPORT DUCTWORK FROM GRADE.



1 AIR DISTRIBUTION - STORM SHELTER PLAN

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

0 1' 2' 4' 8' 12' 16'

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No.	Description	Date

JOB NUMBER 24011XDSS24
DRAWN BY DRH
CHECKED BY MCW
DATE 05/01/2025

STATE OF KENTUCKY
Matthew C. Wheeler
31243
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
MECHANICAL STORM SHELTER PLAN

SHEET NUMBER
M2.0

PACKAGED ROOFTOP UNIT SCHEDULE

MARK	MANUFACTURER	MODEL #	PHYSICAL DATA				SUPPLY FAN													
			WIDTH (IN.)	LENGTH (IN.)	HEIGHT (IN.)	WEIGHT (LBS)	TOTAL SA CFM	MIN. OA CFM	# OF FANS	FAN RPM	E.S.P. (" WC)	T.S.P. (" WC)	RATED H.P. (PER FAN)	B.H.P. (PER FAN)	VOLT.	PH.	MCA	MOCP	OP. FREQ.	REMARKS
RTU-1	TRANE	YZK072A3S0H	53	88	51	980	2400	1100	1	1206	1.00	1.18	3.00	1.14	208 V	3	42 A	60	60	ALL

MARK	REFRIGERANT	COOLING PERFORMANCE										GAS HEATING			
		DX COIL								HOT GAS REHEAT COIL					
		TOTAL (MBH)	SENSIBLE (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	FACE VELOCITY (FPM)	EER	TOTAL CAPACITY (MBH)	LAT DB (°F)	UNIT LAT DB (°F)	INPUT HEATING CAPACITY (MBH)	OUTPUT HEATING CAPACITY (MBH)	MAX. PRESSURE (PSI)	MIN PRESSURE (PSI)
RTU-1	R-454B	75.55	62.13	82.30	68.10	58.08	58.01	203	13.4	43.08	72.62	75.76	150.00	121.50	14.00	6.00

REMARKS:
1. ECONOMIZER TO BE FACTORY INSTALLED ON THE UNIT WITH DRY-BULB ECONOMIZER CONTROL.
2. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT.
3. HAIL GUARD TO BE FACTORY INSTALLED.
4. PROVIDE WITH SINGLE POINT POWER AND FACTORY DISCONNECT.
5. PROVIDE WITH GAS HEATING.
6. PROVIDE WITH (1) VARIABLE SPEED COMPRESSOR.
7. PROVIDE WITH PLEATED MERV13 FILTERS.
8. PROVIDE WITH FACTORY MOUNTED CONTROLS.
9. DAIKIN AND AAON ARE ACCEPTABLE.

VENTILATION FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	TYPE	CFM	E.S.P. ("WG)	RPM	HP	VOLTAGE	PHASE	DRIVE	STARTER	DISCONNECT	MAX SONES	MAX DBA	WEIGHT	REMARKS
VF-1	CAPTIVE AIRE (K-TECH)	K-SIF24DD -HE	EMERGENCY VENTILATION FAN	DIRECT DRIVE INLINE CENTRIFUGAL FAN	5400	0.75	929	3	208 V	3	DIRECT	Yes	Yes	16.2	53	462	ALL

REMARKS:
1. PROVIDE WITH BACKDRAFT DAMPER.
2. FAN IS TO BE PAD-MOUNTED.
3. GREENHECK AND COOK ARE ACCEPTABLE.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	AIRFLOW (CFM)	E.S.P.	DRIVE	RPM	FAN HP	ELECTRICAL					SONES	REMARKS
									VOLTAGE	PHASE	HZ	MCA	MOCP		
EF-1	TWIN CITY	T150	CEILING MOUNTED	100	0.25	DIRECT	750	0.06	120 V	1	60	0.2 A	0.4	1.3	ALL

REMARKS:
1. PROVIDE WITH INTEGRAL DISCONNECTS.
2. PROVIDE WITH BACKDRAFT DAMPER.
3. FAN TO BE CONTROLLED WITH LIGHT SWITCH.

REGISTERS, GRILLES, AND DIFFUSERS

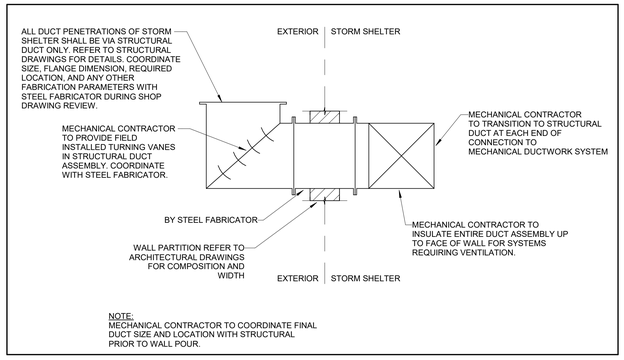
MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE	DUCT INLET SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	NOISE CRITERIA	THROW PATTERN	REMARKS
R-10	TITUS	300FL	ALUMINUM SIDEWALL DOUBLE DEFLECTION BLADES PRALLEL TO LONG DIMENSIONS	24x24	12x12	SEE DWGS	1300	0.05	25	-	ALL

REMARKS:
1. COLOR TO BE SELECTED BY ARCHITECT/OWNER.
2. TITUS, PRICE, KRUEGER ARE ACCEPTABLE.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	DEPTH (IN)	CONSTRUCTION	CFM	WIDTH (IN)	HEIGHT (IN)	FREE AREA	VELOCITY (FPM)	APD (IN. WG.)	BIRD SCREEN	DRAINABLE BLADE	REMARKS
L-1	GREENHECK	AFL-601	VF-1 INTAKE	6	EXTRUDED ALUMINUM	5400	42	42	5.08	1200	0.50	Yes	Yes	ALL

REMARKS:
1. COLOR AND FINISH TO BE SELECTED BY OWNER/ARCHITECT.
2. PROVIDE BIRD SCREEN ON INSIDE FACE OF LOUVER. PROVIDE WITH EXTENDED SILL.
3. LOUVER SHALL BE ICC-500 STORM RATED.
4. REFER TO ARCHITECTURAL ELEVATIONS FOR ADDITIONAL INFORMATION ON MOUNTING LOCATION OF LOUVERS.
5. PROVIDE WITH STANDARD 3" MOUNTING BRACKETS.
6. ACME, CARNES, RUSKIN ARE ACCEPTABLE.



STORM SHELTER DUCTWORK PENETRATION DETAIL

1 SCALE: NONE

RBS DESIGN GROUP
ARCHITECTURE
710 Main Street Madisonville, KY 42431
Phone: (270) 683-1168 Fax: (270) 683-2446
E-Mail: office@rbsdesigngroup.com

JOB NUMBER	DRAWN BY	CHECKED BY	DATE
24011XDSS24	DRH	MCW	05/01/2025

No.	Description	Date

STATE OF KENTUCKY
MATTHEW C. WOODALL
31243
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
MECHANICAL DETAILS & SCHEDULES

SHEET NUMBER
M3.0

ELECTRICAL GENERAL NOTES:

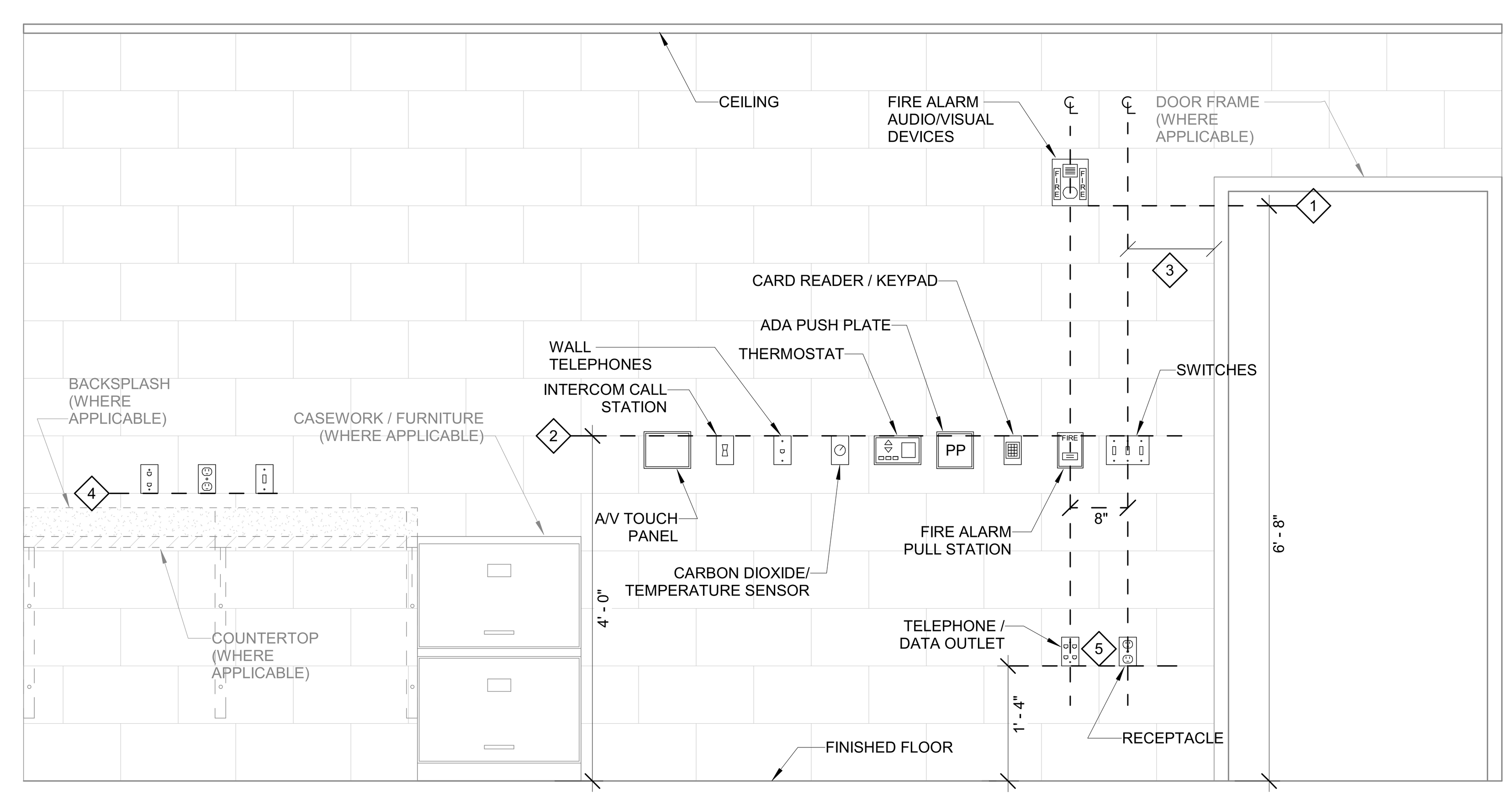
A. EACH CONTRACTOR, PROPOSER, SUPPLIER AND/OR MANUFACTURER SHALL REFER TO ALL DOCUMENTS PERTAINING TO THIS PROJECT AND COORDINATE ACCORDINGLY SO AS TO ENSURE ADEQUACY OF FIT, COMPLIANCE WITH SPECIFICATIONS, PROPER VOLTAGE AND CURRENT CHARACTERISTICS TO AVOID CONFLICT WITH ANY OTHER BUILDINGS SYSTEMS. VERIFY SAME WITH SHOP DRAWINGS.
B. ADDITIONAL ELECTRICAL REQUIREMENTS MAY BE SHOWN ON PLANS FROM OTHER DISCIPLINES IN THIS SET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL PLANS AND SPECIFICATIONS FOR A COMPLETE UNDERSTANDING OF THE PROJECT REQUIREMENTS.
C. WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ALL LOCAL, STATE, AND NATIONAL CODES. INCLUDING BUT NOT LIMITED TO NFPA 70 (NEC), NFPA 72, INTERNATIONAL BUILDING CODES, ETC.
D. CONTRACTOR SHALL FOLLOW SEISMIC RESTRAINT AND DESIGN REQUIREMENTS CONTAINED IN LATEST ADOPTED STATE AND INTERNATIONAL BUILDING CODES, WITH ALL AMENDMENTS AS ADOPTED BY THE CURRENT LEGISLATION. REFER TO ELECTRICAL AND STRUCTURAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
E. ALL OFFSETS, TURNS, FITTINGS, TRIM, DETAIL, ETC. MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSER'S DISCRETION.
F. INSTALL NO PIPING, CONDUIT, DUCTWORK, ETC. IN A LOCATION OR IN A MANNER WHICH WILL ALLOW FREEZING OR THE COLLECTION OF CONDENSATION THEREON. IF IN DOUBT, CONTACT THE ENGINEER.
G. ADVISE THE ENGINEER OF ANY CONFLICTS, ERRORS, OMISSIONS, ETC. AT LEAST TEN DAYS PRIOR TO BID DATE, TO ALLOW CLARIFICATION BY WRITTEN ADDENDUM.
H. WHERE CONFLICTS ARE FOUND BETWEEN DRAWINGS, DETAILS, OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY. NOTIFY ARCHITECT OF DISCREPANCY IN WRITING.
I. DEVIATION FROM SPECIFICATIONS OR PLANS REQUIRES PRIOR WRITTEN APPROVAL FROM THE ENGINEERS AND MUST BE SUBMITTED IN WRITING NO LATER THAN TEN DAYS PRIOR TO THE BID DATE.
J. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, STATE, FEDERAL, MUNICIPALITY, UTILITY COMPANY, OSHA, ETC.).
K. MOUNTING HEIGHTS FOR WALL MOUNTED DEVICES INDICATED ABOVE FINISHED FLOOR ARE TO CENTER OF DEVICE UON. MOUNTING HEIGHTS TO CEILING SUSPENDED DEVICES ARE TO BOTTOM OF DEVICE UON.
L. INSTALL EQUIPMENT, MATERIALS, ETC. IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND DIRECTIONS. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEER PRIOR TO INSTALLATION FOR CLARIFICATION.
M. DO NOT RECESS PANELBOARD TUBS OR OTHER FLUSH-MOUNTED EQUIPMENT IN WALLS THAT HAVE A FIRE RATING. NO INSTALLATION SHALL DIMINISH OR VOID FIRE RESISTIVE RATINGS IN ANYWAY.
N. THE PURPOSE AND INTENT OF ALL OF THE DOCUMENTS PERTAINING TO THIS PROJECT IS TO PROVIDE A COMPLETE, FUNCTIONAL, SAFE, LIKE-NEW FACILITY. ANYTHING LESS SHALL BE UNACCEPTABLE.
O. ALL SYSTEMS, EQUIPMENT AND MATERIALS ARE TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. WORK NOT MEETING THIS CRITERION SHALL BE REMOVED AND REINSTALLED SATISFACTORILY. FINAL DETERMINATION OF THE ACCEPTABILITY OF THE QUALITY OF WORK RESIDES WITH THE ENGINEER
P. ALL WORK, MATERIALS, EQUIPMENT, ETC. SHALL BE FULLY GUARANTEED FOR ONE FULL CALENDAR YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION AS DOCUMENTED BY THE ENGINEER, UNLESS LONGER WARRANTY PERIODS FOR EQUIPMENT ARE SPECIFIED.
Q. UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL EQUIPMENT AND/OR MATERIALS WITHIN OCCUPIED SPACES OR EXPOSED TO VIEW ON THE BUILDING EXTERIOR SHALL BE PRIMED AND FINISHED SO AS TO COMPLEMENT ADJACENT SURFACE, UNLESS OTHERWISE NOTED. COORDINATE WORK AND COLORS WITH ARCHITECT.
R. WHERE PENETRATING ROOFING MEMBRANE OR OTHER MATERIALS USED FOR WEATHERPROOFING THE BUILDING, MAKE SUCH PENETRATION IN A WAY THAT WILL NOT VOID OR DIMINISH THE ROOFING WARRANTY OR INTEGRITY IN ANYWAY. COORDINATE ALL SUCH PENETRATIONS WITH THE ROOFING MANUFACTURER AND ARCHITECT.
S. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY FEES, CASH CONTRIBUTIONS OR OTHER COSTS THAT THE UTILITY COMPANY MAY REQUIRE TO COMPLETE THEIR WORK. (ELECTRIC, TELEPHONE, TELEVISION, DATA, ETC.).
T. COORDINATE WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND CASEWORK DETAILS FOR LOCATION OF ADDITIONAL RECEPTACLES, UTILITY OUTLETS, ELECTRICAL DEVICES, ETC.
U. CEILING-MOUNTED ELECTRICAL DEVICES SHALL BE CENTERED IN 2'X2' CEILING TILE AND INSTALLED CENTERED ON 2' DIMENSION OF 2'X4' TILE AND ON CENTERLINE OR A QUARTER POINT ON 4' DIMENSION.
V. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTORS' EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
W. CHECK ALL THREE PHASE MOTORS WITH A PHASE ROTATION METER, PRIOR TO PLACING IN SERVICE.
X. PROVIDE DETAILED SHOP DRAWINGS TO ENGINEER PRIOR TO PURCHASING OR INSTALLING ANY EQUIPMENT
Y. DEVIATIONS IN SIZES, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT PRIME SPECIFIED SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEER OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
Z. THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, OR WHOMEVER HOLDS THE PRIME CONTRACT(S) FOR THIS CONSTRUCTION IS RESPONSIBLE FOR THE COORDINATION, APPEARANCE, SCHEDULING AND TIMELINESS OF THE WORK OF ALL TRADES, CONTRACTORS, SUPPLIERS, INSTALLERS, ETC. POOR OR UNTIMELY WORK ON THE PART OF ANY SUBCONTRACTOR SHALL BE RESOLVED BY THE PARTY WHO ENGAGED THEM ON THIS PROJECT.
AA. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEER BEFORE AFFECTING INSTALLATION. REFER ALSO TO ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS, CEILING HEIGHTS AND OTHER DETAILS OF THESE DOCUMENTS, AS APPLICABLE.
BB. WHERE FIRE-RATED CEILING ASSEMBLIES ARE NOTED, PROVIDE UL-LISTED FIRE-RATED GYPSUM BOARD OR PRE-MANUFACTURED ENCLOSURES ABOVE LUMINAIRES, CEILING DEVICES, ETC. IN OR ON CEILING, AS REQUIRED TO MAINTAIN CEILING RATINGS.
CC. COORDINATE THE LOCATION OF DRAINS, ELECTRICAL OUTLETS, GAS OUTLETS, ETC. WITH ALL CASEWORK, KITCHEN EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).
DD. ALL ELECTRICAL COMPONENTS OR EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITER'S LABORATORIES OR OTHER APPROVED LISTING AGENCY. APPROVAL AND LABELING OF INDIVIDUAL COMPONENTS ON AN ASSEMBLY IS NOT ACCEPTABLE AS MEETING THIS REQUIREMENT, UNLESS WAIVED BY THE ENGINEER IN WRITING.
EE. ALL WIRING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF SPLICES. CONDUCTORS, WHETHER SINGLE OR MULTI-PAIR, SHALL BE INSTALLED CONTINUOUS INSOFAR AS POSSIBLE FROM TERMINAL POINT TO TERMINAL POINT.
FF. NO CONDUIT, SUPPORTS, ETC. SHALL BE RUN THROUGH ACCESS CLEARANCES OF EQUIPMENT BY OTHER TRADES (I.E. VAV BOXES). COORDINATE WITH ALL TRADES PRIOR TO CONSTRUCTION.
GG. ALL CONTRACTORS SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE OR SUB-SERVICE FOR SAFETY PURPOSES. PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC. OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
HH. ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, DIRECTLY FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE, IN WRITING.
II. WHERE INTERRUPTING AN EXISTING UTILITY OR SERVICE DELIBERATELY OR ACCIDENTALLY, THE RESPONSIBLE CONTRACTOR SHALL WORK CONTINUOUSLY AS NEEDED TO RESTORE SAME, PROVIDING PREMIUM TIME AS NEEDED.
JJ. REFER TO ARCHITECTURAL WALL ELEVATIONS (WHERE GIVEN) FOR HEIGHTS AND MOUNTING RELATIONSHIP OF OUTLETS AND EQUIPMENT. IF IN DOUBT, CONTACT ENGINEER FOR DIRECTION PRIOR TO ROUGH IN.
KK. FLUSH OR PEDESTAL TYPE FLOOR OUTLETS/BOXES, AS INDICATED ON PLAN, SHALL BE LOCATED BY DIMENSIONS PROVIDED BY THE ARCHITECT, UNLESS OTHERWISE SHOWN ON PLANS. IF IN DOUBT, CONTACT THE ENGINEER PRIOR TO ROUGHING-IN ANY WORK.
LL. AS APPLICABLE, REFER TO ARCHITECTURAL PHASING PLANS AND PHASING BOUNDARIES ON THESE DRAWINGS FOR SEQUENCING OF WORK, FULL EXTENT OF AREAS INVOLVED, EXTENT OF CEILING WORK, ETC. PROVIDE TEMPORARY CONNECTIONS FOR CIRCUITS AND WORK AS REQUIRED TO MAINTAIN SEQUENCE OF THE WORK FROM PHASE TO PHASE.
MM. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR HIS WORK. ALL CUTTING AND PATCHING SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S STANDARDS FOR SUCH WORK.
NN. ALL WORK SHALL BE CONCEALED UNLESS SPECIFICALLY INDICATED TO BE EXPOSED, OR REQUIRED TO BE EXPOSED. IF IN DOUBT, CONTACT THE ENGINEER FOR CLARIFICATIONS PRIOR TO INSTALLING ANY SUCH WORK.
OO. INTERRUPTION OF ANY EXISTING SERVICES SHALL BE COORDINATED WITH THE OWNER, GENERAL CONTRACTOR, UTILITY COMPANY AS NECESSARY, AND THE ARCHITECT, AT LEAST TWO WEEKS IN ADVANCE OF ANTICIPATED INTERRUPTION. A SCHEDULE FOR THESE OUTAGES SHALL BE DEVELOPED AND AGREED UPON BETWEEN THE PARTIES MENTIONED TO AVOID UNNECESSARY INCONVENIENCE TO THE OWNER OR ANY AFFECTED PARTY. NOTIFY THE UTILITY COMPANY OF ANY ANTICIPATED SERVICES REQUIRED TWO WEEKS IN ADVANCE, IN WRITING. IF UTILITY COMPANY REQUIRES A LONGER NOTIFICATION PERIOD, SO PROVIDE.
PP. WHERE BACKBOXES ARE LOCATED IN THE SAME VERTICAL CHANNEL/STUD SPACE ON OPPOSITE SIDES OF THE SAME WALL, PROVIDE SOUND-INSULATING PUTTY AROUND BOXES AS REQUIRED TO ELIMINATE SOUND TRANSMISSION FROM ROOM TO ROOM.
QQ. JUNCTION BOXES LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE LOCATED NO MORE THAN 36" ABOVE CEILING LEVEL. LABEL EACH BOX IN AREA OF WORK WITH A PERMANENT MARKER OR IN ACCORDANCE WITH SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
RR. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODES, NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, THE REQUIREMENTS OF LOCAL UTILITY COMPANIES, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AGENCIES OR DEPARTMENTS HAVING JURISDICTION. IF ANY CONFLICTS OR DISCREPANCIES OCCUR THE MOST STRINGENT SHALL APPLY.
SS. DO NOT SCALE FROM DRAWINGS, AS PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM DIMENSIONED DRAWINGS, OR DIMENSIONS SUPPLIED TO THE CONTRACTOR.
TT. NOISY WORK, WORK OUTSIDE CONSTRUCTION BARRIERS, WORK IN OCCUPIED AREAS, ETC. SHALL BE PERFORMED AFTER HOURS OR ON WEEKENDS. COORDINATE EXACT SCHEDULING WITH FACILITY PRIOR TO CONSTRUCTION.
UU. ALL ITEMS HAVING KEYED LOCKS/OPERATORS SHALL HAVE CORED LOCKS/OPERATORS. ALL KEYING SHALL MATCH THE OWNER'S EXISTING KEY-WAYS. COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO CONSTRUCTION.
VV. REFER TO ARCHITECTURAL PLANS FOR PHASING REQUIREMENTS. WORK SHALL BE COMPLETED IN PHASES PER THE PHASING PLAN AND AS COORDINATED WITH OWNER AND GENERAL CONTRACTOR. PROVIDE ALL REQUIRED INCREMENTAL INSPECTIONS, CERTIFICATIONS, ETC. AND ALL TEMPORARY SERVICES AS REQUIRED BY OWNER TO ACCOMPLISH THE PHASING PLAN.

DESCRIPTION	MOUNTING HEIGHT	SYMBOL
LIGHTING CONTROLS		
LIGHT SWITCH: LOW VOLTAGE (WHEN PRESENT, # INDICATES QUANTITY OF CHANNELS)	46"	$ #
EXAM LIGHT SWITCH	46"	$ X
NIGHT LIGHT SWITCH WITH CONSTANTLY ILLUMINATED HANDLE	46"	$ N
SURGICAL LIGHT INTENSITY CONTROL	46"	$ SL
LOW VOLTAGE DIMMER SWITCH (WHEN PRESENT, # INDICATES QUANTITY OF CHANNELS)	46"	$ D#
GRAPHIC TOUCHSCREEN CONTROL STATION	46"	$ G
LINE VOLTAGE SWITCH	46"	$ LV
LINE VOLTAGE THREE-WAY, FOUR-WAY SWITCH	46"	$ LV3 $ LV4
LINE VOLTAGE THREE-WAY, FOUR-WAY DIMMER SWITCH	46"	$ LV3D $ LV4D
KEYED SWITCH	46"	$ K
OCCUPANCY OR VACANCY SENSOR SWITCH	46"	$ OS $ VS
OCCUPANCY OR VACANCY SENSOR SWITCH WITH DIMMING	46"	$ DOS
LIGHT SWITCH FOR UNDER-CABINET LIGHTS	46"	$ U
ILLUMINATED HANDLE LIGHT SWITCH (ILLUMINATED WHEN LOAD IS OFF)	46"	$ IL
PILOT LIGHT SWITCH (ILLUMINATED WHEN LOAD IS ON)	46"	$ PL
TIMER SWITCH	46"	$ T
OCCUPANCY OR VACANCY SENSOR, CEILING MOUNT	CLG	OS VS
OCCUPANCY SENSOR, CORNER MOUNT	CLG	OS
DAYLIGHT SENSOR	AS NOTED	DS
PHOTOCELL	AS NOTED	PC
LIGHTING RELAY	AS NOTED	LR
EMERGENCY AUTOMATIC TRANSFER SWITCH FOR LIGHTING CONTROLS (REFER TO DETAIL)	CLG	ER
POWER OUTLETS		
SIMPLEX RECEPTACLE (TEXT INDICATES NEMA TYPE)	1'-6"	X
DUPLEX RECEPTACLE	1'-6"	
SLASH THROUGH ANY DEVICE INDICATES MOUNTING ABOVE COUNTERTOP 4" ABOVE BACKSPLASH		
'G' INDICATES INTEGRAL GROUND FAULT PROTECTION (GFCI)	1'-6"	G
DEAD FRONT GFCI DEVICE, LABEL AND INSTALL IN READILY ACCESSIBLE LOCATION		G
DUPLEX RECEPTACLE WITH TWO INTEGRAL USB CHARGING PORTS	1'-6"	U
USB CHARGING OUTLET WITH FOUR INTEGRAL USB PORTS	1'-6"	U
GANG RECEPTACLE IN COMBINATION WITH SWITCH (PROVIDE DIVIDER IF LIGHTING CIRCUIT IS 277V)	46"	C/S
DUPLEX RECEPTACLE, CEILING MOUNTED	CLG	
QUADRUPLEX RECEPTACLE	1'-6"	
JUNCTION BOX, CEILING OR WALL		J J
VOLTAGE/2 POLE RECEPTACLE, TEXT INDICATES NEMA TYPE	1'-6"	X
VOLTAGE/3 POLE RECEPTACLE, TEXT INDICATES NEMA TYPE	1'-6"	X
SS INDICATES SURGE SUPPRESION TYPE OUTLET(S)		SS
GROUND FAULT PROTECTED DUPLEX WITH WEATHER-PROOF "WHILE IN USE" TYPE DIE-CAST METAL COVERPLATE WITH LOCKABLE ENCLOSURE AT OUTLET - SEE SPECIFICATIONS	2'-2"	G WP
DUPLEX FOR ELECTRIC WATER COOLER: COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR TO CONCEAL OUTLET BEHIND COOLER, PROVIDE READILY ACCESSIBLE GFI DEVICE AT 18" ADJACENT TO WATER COOLER		G EWC
BOX ON ANY DEVICE INDICATES SURFACE MOUNTED BACKBOX/WIREMOLD		
CIRCLE ON ANY DEVICE INDICATES DEVICE FED FROM STUB UP CONDUIT		
FIRE ALARM		
MAIN CONTROL PANEL CENTRAL PROCESSING UNIT (CPU)	6'-6" TO TOP	FACP
REMOTE L.C.D. FIRE ALARM ANNUNCIATOR	54"	FAA
REMOTE FIRE ALARM ANNUNCIATOR W/ MICROPHONE	54"	FAAM
LOCAL OPERATOR CONSOLE	54"	LOC
SMOKE EVACUATION CONTROL PANEL	54"	SECP
POWER SUPPLY/CONTROL FOR AUDIO/VISUAL DEVICES	46"	NAC
TRANSPONDER CABINET	46"	TRAN
GRAPHICS DISPLAY TERMINAL		GDT
FIRE ALARM CONTROL EXTENDER		EXT
POST INDICATOR VALVE		PIV
PULL STATION : DOUBLE ACTION	46" TO LEVER	F
KEYED, LOCKED PULL STATION : DOUBLE ACTION. STATION SHALL ONLY BE OPERABLE VIA KEY IN POSSESSION OF STAFF.	46" TO LEVER	F K
AUDIO/VISUAL NOTIFICATION APPLIANCE	WALL, CLG	F F
AUDIO-ONLY NOTIFICATION APPLIANCE	WALL, CLG	A A
VISUAL-ONLY NOTIFICATION APPLIANCE	WALL, CLG	V V
BELL / LIGHT	80"	BL
BELL ONLY	80"	B
PHOTO-ELECTRIC SMOKE DETECTOR	CLG	SD
PHOTO-ELECTRIC SMOKE DETECTOR FOR PATIENT ROOM MONITORING (SEE RISER)	CLG	SD P
PROJECTED BEAM SMOKE DETECTOR; EMITTER (BE) AND RECEIVER (BR)		BE BR
HEAT DETECTOR	CLG	HD
CARBON MONOXIDE DUCT DETECTOR	ABOVE CEILING	CD
CARBON MONOXIDE ALARM: SINGLE STATION W/SOUNDER BASE	CLG	CM
CARBON MONOXIDE AUDIO/VISUAL NOTIFICATION APPLIANCE	WALL	F CM
DOOR HOLDER : WALL TYPE	WALL	DH
DOOR HOLDER : CLOSURE TYPE	ABV DOOR	DH C
DUCT SMOKE DETECTOR	ABV CLG	DD
CONNECTION TO SPRINKLER FLOW SWITCH WITH ADDRESSABLE MODULE		FS
CONNECTION TO SPRINKLER TAMPER SWITCH WITH ADDRESSABLE MODULE		TS
PRESSURE SWITCH		PS
ISOLATION MODULE	WALL	I
ZONE ADDRESSABLE MODULE		Z
H.V.A.C. SMOKE DAMPER CONNECTION		SM
FLUSH MOUNTED REMOTE ALARM INDICATING STATION/TEST SWITCH	7'-6"	RI
FIREMAN'S PHONE JACK	4'-6"	FP
FIREMAN'S KNOX BOX CONNECTION		KB
ADDRESSABLE RELAY MODULE		R
INDICATES VANDAL-PROOF POLYCARBONATE COVER, VANDAL PROOF COVERS SHALL BE UL LISTED FOR USE WITH THE SPECIFIC DEVICE THEY ARE PROTECTING		VR
INDICATES CHIME AUDIBLE NOTIFICATION		CH
DEVICE USED FOR ELEVATOR CONTROL		EL

DESCRIPTION	MOUNTING HEIGHT	SYMBOL
LIGHTING FIXTURES AND EQUIPMENT		
REFER TO LUMINAIRE SCHEDULE FOR EXACT FIXTURE SPECIFICATIONS, MOUNTING HEIGHTS, ETC.		
SURFACE OR SUSPENDED CEILING FIXTURE		
RECESSED CEILING FIXTURE		
POLE MOUNTED AREA LIGHT WITH CONCRETE BASE		
LIGHTED BOLLARD WITH CONCRETE BASE		
EMERGENCY BATTERY WALL-PACK		
WALL MOUNT FIXTURE		
TRACK COMPLETE WITH POWER SUPPLIES AND FIXTURE HEADS		
FLOODLIGHT		
EXIT LIGHT (CEILING, END, WALL MOUNT) WITH OR WITHOUT DIRECTIONAL ARROWS, WITH OR WITHOUT EGRESS HEADS		
STRIP FIXTURE		
CROSS-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-CRITICAL BRANCH		
PARALLEL-HATCHING INDICATES LIGHT IS POWERED FROM THE EMERGENCY-LIFE SAFETY BRANCH		
REMOTE LIGHT FIXTURE DRIVER	AS NOTED	RD
REMOTE BATTERY BACKUP	AS NOTED	RB
CENTRAL BATTERY INVERTER	AS NOTED	INV
MISCELLANEOUS		
CONDUIT CONCEALED IN WALLS OR IN CEILING SPACE: ARROW(S) INDICATE(S) HOME RUN & # OF CIRCUITS: HASHMARKS INDICATE # OF CONDUCTORS.		PHASE NEUTRAL GROUND
NON-REVERSING MOTOR STARTER SNAP SWITCH	AS NOTED	$ M
MOMENTARY CONTACT SWITCH	46"	$ MC
HAND-OFF-AUTO 3-POSTION SWITCH	46"	$ HOA
DISCONNECT SWITCH	5'-0"	
MAGNETIC STARTER	5'-0"	
MAGNETIC COMBINATION STARTER	5'-0"	
VARIABLE FREQUENCY DRIVE	5'-0"	
ENCLOSED FLUSH MTD. CIRCUIT BREAKER	5'-0"	
MUSHROOM SWITCH	46"	
PUSHBUTTON STATION WITH 1, 2, OR 3 BUTTONS.	46"	
PANELBOARD, SURFACE OR FLUSH MOUNTED, HATCHING INDICATES EMERGENCY	6'-6" TO TOP	
TRANSFORMER	AS NOTED	
EQUIPMENT HARDWIRE CONNECTION (SEE DETAIL)		J
KITCHEN EQUIPMENT OUTLET COUPLING CONNECTION (SEE DETAIL)		J
MOTOR CONNECTION, REFER TO EQUIPMENT CONNECTION SCHEDULE		
PLUMBING FIXTURE SOLENOID VALVE/ELECTRIC EYE SENSOR CONNECTION. COORDINATE EXACT CONNECTION REQUIREMENTS WITH MANUFACTURER.		
PLUMBING FIXTURE ELECTRIC EYE TRANSFORMER CONNECTION. TRANSFORMER SHALL BE 120V-24V. MOUNT ABOVE SUSPENDED ACCESSIBLE CEILING IN J-BOX. PROVIDE ADDITIONAL TRANSFORMERS OF SAME TYPE AS/IF NEEDED		
PROVIDE CONNECTION TO HAND DRYER (SEE ARCHITECTURAL SPECIFICATIONS)	VERIFY WITH ARCHITECT	
SURGE PROTECTION DEVICE (SURFACE OR FLUSH MOUNTED)		SPD
GENERATOR ANNUNCIATOR PANEL (SURFACE OR FLUSH MOUNTED) - SEE SPECIFICATIONS	46"	GEN-A
CONDUIT UP		
CONDUIT DOWN		
FLEXIBLE CONDUIT		
GROUND BUS BAR ON INSULATED STANDOFFS	2'-0"	
LADDER CABLE TRAY, SIZE AS NOTED	AS SHOWN	
J-HOOK PATHWAY		
EQUIPMENT TAG, REFER TO EQUIPMENT SCHEDULE		EQUIP-#
MECHANICAL EQUIPMENT DESIGNATOR (SEE MECH. SCHEDULES)		EQUIP-#
TAGGED NOTE		
REVISION TAG		
AV SYSTEMS		
PROJECTOR WITH MOUNT (CEILING OR WALL AS INDICATED)	REFER TO DRAWINGS	P P
LOCAL SOUND SPEAKER: CEILING	CLG	LS
WIRELESS MICROPHONE ANTENNA	CLG	MA
LOCAL SOUND SPEAKER: WALL	REFER TO SPECS.	LS
MICROPHONE INPUT: # INDICATES NUMBER OF INPUTS.	1'-6"	M
WIRELESS MICROPHONE ANTENNA, WALL MOUNT	REFER TO SPECS.	MA
AV INPUT (OR OUTPUT) WALL PLATE. REFER TO DRAWINGS AND SPECIFICATIONS FOR TYPE AND QUANTITY OF CONNECTIONS.	1'-6"	AV
BLUETOOTH INPUT MODULE	1'-6"	BT
AV TOUCHSCREEN CONTROL STATION	46"	CS
LOCAL SOUND SYSTEM HEADEND	REFER TO SPECS.	LS
PANEL FURNITURE		
PANEL FURNITURE DUPLEX RECEPTACLE. PROVIDE ALL WIRING AS REQUIRED, COORDINATE EXACT INSTALLATION REQUIREMENTS AND LOCATIONS WITH OWNER'S PANEL FURNITURE VENDOR		
PANEL FURNITURE QUADRUPLEX RECEPTACLE. PROVIDE ALL WIRING AS REQUIRED, COORDINATE EXACT INSTALLATION REQUIREMENTS AND LOCATIONS WITH OWNER'S PANEL FURNITURE VENDOR		
PANEL FURNITURE DATA/VOICE OUTLET. PROVIDE ALL WIRING AS REQUIRED, COORDINATE EXACT INSTALLATION REQUIREMENTS AND LOCATIONS WITH OWNER'S PANEL FURNITURE VENDOR		2D
POWER CONNECTION TO PANEL FURNITURE, PROVIDE SEAL-TIGHT CONDUIT CONNECTION FROM RECESSED WALL BOX TO PANEL FURNITURE, PROVIDE FINAL CONNECTIONS TO PANEL FURNITURE AS REQUIRED BY PANEL FURNITURE VENDOR	1'-6"	J FP
COMBINATION POWER AND LOW VOLTAGE CONNECTION TO PANEL FURNITURE, PROVIDE SEAL-TIGHT CONDUIT CONNECTION FROM RECESSED WALL BOX TO PANEL FURNITURE, PROVIDE FINAL CONNECTIONS TO PANEL FURNITURE AS REQUIRED BY PANEL FURNITURE VENDOR	1'-6"	FF

DESCRIPTION	MOUNTING HEIGHT	SYMBOL
ABBREVIATIONS		
UNLESS OTHERWISE NOTED		UON
OWNER FURNISHED CONTRACTOR INSTALLED		OFCI
OWNER FURNISHED OWNER INSTALLED		OFOI
CONTRACTOR FURNISHED CONTRACTOR INSTALLED		CFCI
CONTRACTOR FURNISHED OWNER INSTALLED		CFOI
INDICATES EMERGENCY POWER		EM
WIREGUARD - PROVIDE MANUFACTURER'S SPECIFIC GUARD FOR DEVICE NOTED		WG
WEATHERPROOF - NEMA-3R, WET LOCATION LISTED. PROVIDE COVERS, RATINGS, ETC AS SUITABLE FOR OUTDOORS.		WP
EXPLOSION PROOF - PROVIDE WIRING METHODS, ENCLOSURES, RATINGS, ETC. AS SUITABLE FOR HAZARDOUS LOCATION.		XP
SPECIAL OUTLETS		
FLOORBOX, AS SCHEDULED	FLOOR	FB#
POKE-THRU, AS SCHEDULED	FLOOR	P#
WALLBOX, AS SCHEDULED	WALL	WB#
SURFACE PLUG-MOLD		
SURFACE WIRE-MOLD		
POWER POLE AS NOTED		PP
OVERHEAD PAGING		
PAGING SPEAKER: CEILING	CLG	S
PAGING SPEAKER W/ VOLUME CONTROL	CLG	SV
PAGING SPEAKER: WALL	8'-0"	S
RECESSED WALL MOUNTED PAGING SPEAKER DUKANE 5A606 SPEAKER. ATLAS 417-8WD	8'-0"	RS
VANDAL PROOF / WEATHERPROOF WALL MOUNTED PAGING SPEAKER. QUAM VP1	SEE FLOOR PLANS	VS V
EXTERIOR VANDAL PROOF / WEATHERPROOF WALL MOUNTED PAGING SPEAKER, SHALL BE PAINTED COLOR SELECTED BY ARCHITECT/OWNER. QUAM VP6	SEE FLOOR PLANS	S WP
WALL MOUNTED PAGING HORN	9'-0"	H
CALL INITIATION STATION	46"	C
WALL VOLUME CONTROL	46"	V
PAGING MICROPHONE	1'-6"	M
PANIC BUTTON (MOUNTING PER DRAWINGS)	46", UNDER DESK	PB PB
NOTIFICATION LIGHT (MOUNTING PER DRAWINGS)	7'-6", CLG	NL PB
LCD WALL DISPLAY		LCD
PAGING SYSTEM HEADEND	46"	PA
DATA / VOICE		
DATA OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA JACKS. NO NUMBER INDICATES 1 JACK.	1'-6"	2D
VOICE OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF VOICE JACKS. NO NUMBER INDICATES 1 JACK.	1'-6"	
COMBINATION OUTLET : NUMBER BESIDE OUTLET INDICATES NUMBER OF DATA/VOICE JACKS	1'-6"	2D/1V
SLASH THROUGH ANY DEVICE INDICATES MOUNTING ABOVE COUNTERTOP 4" ABOVE BACKSPLASH		
OUTLET (VOICE ONLY) : PAYPHONE TYPE	AS REQ'D.	PAY
DATA RACK: TWO POST. REFER TO COMMUNICATIONS RISERS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.		
DATA RACK: FOUR POST. REFER TO COMMUNICATIONS RISERS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.		
TELECOMMUNICATIONS SYSTEM BACKBOARD. PROVIDE 96"H x 3/4"D FIRE-RETARDENT PLYWOOD BACKBOARD WITH TWO (2) COATS OF NON-C0NDUCTIVE, FIRE-RETARDANT LIGHT GRAY PAINT, #3/0 TO GROUND BAR AT MAIN SERVICE SWITCHBOARD, 30-PT GROUND BAR AND A 6'-0", #3 AWG PIGTAIL AT BACKBOARD. INSTALL BOARD AT 2' AFF. (LENGTH OF BOARD AS INDICATED ON FLOOR PLAN)		
WIRELESS ACCESS POINT OUTLET WITH PROVISIONS FOR (2 DATA OUTLET FOR ANTENNA. PROVIDE A COMPLETE DATA OUTLET WITH FACEPLATE ABOVE CEILING, MOUNTED AT AN ACCESSIBLE HEIGHT NO MORE THAN 24" ABOVE CEILING. AT EACH OUTLET, PROVIDE A 20' COIL OF CABLE AHEAD OF THE OUTLET FOR ADJUSTMENT OF FINAL OUTLET LOCATION. THE CONTRACTOR SHALL COORDINATE EXACT LOCATIONS WITH THE OWNER AND ADJUST OUTLET LOCATIONS AT SUBSTANTIAL COMPLETION TO ACCOMMODATE OWNER'S WAP LOCATIONS.	CEILING / WALL	WAP / WAP
LINETYPE LEGEND		
(solid line)	EXISTING	
(dashed line)	DEMOLISHED	
(heavy solid line)	NEW	

DESCRIPTION	MOUNTING HEIGHT	SYMBOL
SECURITY PANIC ALARM		
PANIC ALARM BUTTON	SEE DRAWINGS	PB
PANIC ALARM ANNUNCIATOR	46"	PA
PANIC ALARM STROBE - REFER TO SPECIFICATIONS FOR LENS AND HOUSING COLOR	SAME AS FIRE ALARM	PS PS
PANIC ALARM POWER SUPPLY CABINET	5'-0"	SEC-P
SECURITY INTERCOM		
AUDIO/VIDEO INTERCOM STATION: MASTER WITH SELECTIVE DOOR CONTROLS, POWER SUPPLIES & DOOR RELAY CONTACTS AS REQUIRED FOR OPERATION OF ANY DOOR IN THE SYSTEM AND VIEWING OF ANY AUDIO/VIDEO INTERCOM REMOTE ON THE SYSTEM. AIPHONE#IX-MV W/DESK STAND - COLOR BY ARCHITECT.	DESK MOUNT	IM
AUDIO/VIDEO INTERCOM STATION: REMOTE WITH FLUSH-MTD S.S. ENCLOSURE. AIPHONE #IX-DVF.	46"	IR
SECURITY ACCESS CONTROL		
DOOR ALARM	DOOR FRAME	DA DA
DOOR POSITION SWITCH	DOOR FRAME	DP
MAGNETIC LOCK(S)	ABV DOOR	ML
ELECTRIC LOCKSET	AT LATCH	EL
DOOR DELAYED EGRESS/ELECTRIFIED PANIC MECHANISM	ABV DOOR	DE
ELECTRIC STRIKE	AT LATCH	ES
AUTOMATIC DOOR CONNECTION (MAY ALSO HAVE ELECTRIC STRIKE/MAG-LOCK/ELECTRIFIED PANIC CONNECTION - SEE ARCHITECTURAL HARDWARE SPECIFICATIONS)	CLG	AD
DOOR RELEASE PUSH-PLATE / INFRA-RED OPERATOR STATION. PROVIDE ANY ADDITIONAL ROUGH-IN FOR "EMERGENCY RELEASE" OPERATOR STATIONS AS REQUIRED.	46"	PP
DOOR RELEASE KEYSWITCH STATION	6'-0"	KS
DOOR RELEASE KEYPAD STATION	46"	KP
DOOR RELEASE PROXIMITY READER STATION. PROVIDE ANY ADDITIONAL ROUGH-IN FOR "EMERGENCY RELEASE" OPERATOR STATIONS AS REQUIRED.	46"	PR
SAME AS "PR" EXCEPT MULLION MOUNT	46"	PR M
MOTION SENSOR DOOR CONTROL	CLG	MS MS
PUSH-TO-EXIT BUTTON	46"	PE
REMOTE DOOR RELEASE PUSH-BUTTON	8" ACT	RR
RECESSED JUNCTION BOX	SEE DRAWINGS	JB JB
ACCESS CONTROL HEADEND	5'-0"	SEC-A
SECURITY CCTV VIDEO SURVEILLANCE		
CCTV CAMERA: CEILING MOUNT DOME (TEXT INDICATES TYPE) REFER TO SCHEDULE FOR TYPES	CLG	###
CCTV CAMERA: WALL MOUNT DOME (TEXT INDICATES TYPE) REFER TO SCHEDULE FOR TYPES	WALL	###
INDICATES EXTERIOR CAMERA RATED FOR CONDITIONS, WET LOCATION LISTED, WITH AUXILLARY HEATER		WP
INDICATES CAMERA WITH PAN/TILT/ZOOM FUNCTION		PTZ
CCTV HEAD END	SEE DRAWINGS	SEC-C
SECURITY INTRUSION DETECTION		
MOTION DETECTOR (WALL OR CEILING MOUNT)	CLG	MD MD
GLASS BREAK SENSOR (WALL OR CEILING MOUNT)	CLG	GB GB
LOCAL SOUNDER	SEE DRAWINGS	LS LS
INTRUSION DETECTION KEYPAD CONTROLLER	46"	ID
SECURITY SYSTEM HEAD END	5'-0"	SEC



DEVICE MOUNTING DETAIL - GENERAL NOTES:

A. THIS DETAIL IS INTENDED AS A GENERAL GUIDELINE. SPECIFIC ELEVATIONS SHOWN ON ARCHITECTURAL ELEVATIONS TAKE PRECEDENCE.
B. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN TO BE MOUNTED AT A SIMILAR HEIGHT, ALIGN HORIZONTALLY ALONG TOP OF DEVICE BACKBOX (AS SHOWN IN DETAIL AND DESCRIBED IN KEY NOTE #2).
C. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN MOUNTED AT DIFFERENT HEIGHTS, ALIGN VERTICALLY ALONG THE CENTERLINE OF THE DEVICE BACKBOX (AS SHOWN IN DETAIL).
D. FOR ANY WALL OTHER THAN PAINTED GYPSUM BOARD OR CMU, DEVICE LOCATIONS MUST BE FIELD APPROVED BY ENGINEER OR ARCHITECT PRIOR TO INSTALLATION OF FINISHES.

DEVICE MOUNTING DETAIL - KEY NOTES: X

1. MOUNT VISUAL NOTIFICATION APPLIANCES SO THAT ENTIRE LENS IS BETWEEN 80" AND 96" AFF. IF CEILING IS TOO LOW FOR DEVICE TO BE MOUNTED ABOVE 80", MOUNT SO THAT THE LENS IS WITHIN 6" OF FINISHED CEILING.
2. ALIGN BACKBOXES OF DEVICES AT THE MOUNTING HEIGHT INDICATED. MEASURE TO THE TOP OF THE BACKBOX FOR STANDARD OUTLET BOXES. NON-STANDARD BACKBOXES ARE TO BE INSTALLED SUCH THAT THE FINISHED DEVICES ARE ALIGNED ALONG THEIR RESPECTIVE CENTERLINES.
3. MOUNTING HEIGHTS SHOWN ILLUSTRATE DESIGN INTENT AND ARE TO BE FOLLOWED UNLESS CONTRADICTED BY APPLICABLE CODE. WHERE DEVICES ARE SHOWN ADJACENT TO DOOR FRAMES ON PLANS INSTALL 12" FROM FRAME TO AVOID SLUSHED SECTIONS OR BRACING. SPECIFIC DEVICES ARE SHOWN IN RELATIVE ORDER FROM DOOR FRAME; WHERE INDICATED DEVICES ARE NOT PRESENT AT A PARTICULAR LOCATION, ADJUST LOCATIONS OF INSTALLED DEVICES CLOSER TO DOOR.
4. THE CONTRACTOR IS TO COORDINATE ALL ROUGH-INS WITH ANY COUNTERTOPS/BACKSPLASHES TO AVOID CONFLICT. ALIGN DEVICE BACKBOXES IN THE NEXT FULL BLOCK ABOVE THE BACKSPLASH AS SHOWN. FOR NON-BLOCK WALLS ALIGN BOTTOM OF DEVICE BACKBOXES 4" ABOVE BACKSPLASH. COORDINATE WORK WITH CASEWORK AND KITCHEN SHOP DRAWINGS. MAXIMUM ELEVATION IS TO BE 44" AFF PER ADAAG REQUIREMENTS. IF CONFLICT STILL ARISES CONTACT THE ENGINEER FOR DIRECTION ON HOW TO PROCEED.
5. MAXIMUM SEPARATION FOR POWER AND DATA OUTLETS SERVING THE SAME WORKPLACE TO BE 16".

1 TYPICAL WALL DEVICE MOUNTING DETAIL
SCALE: NONE

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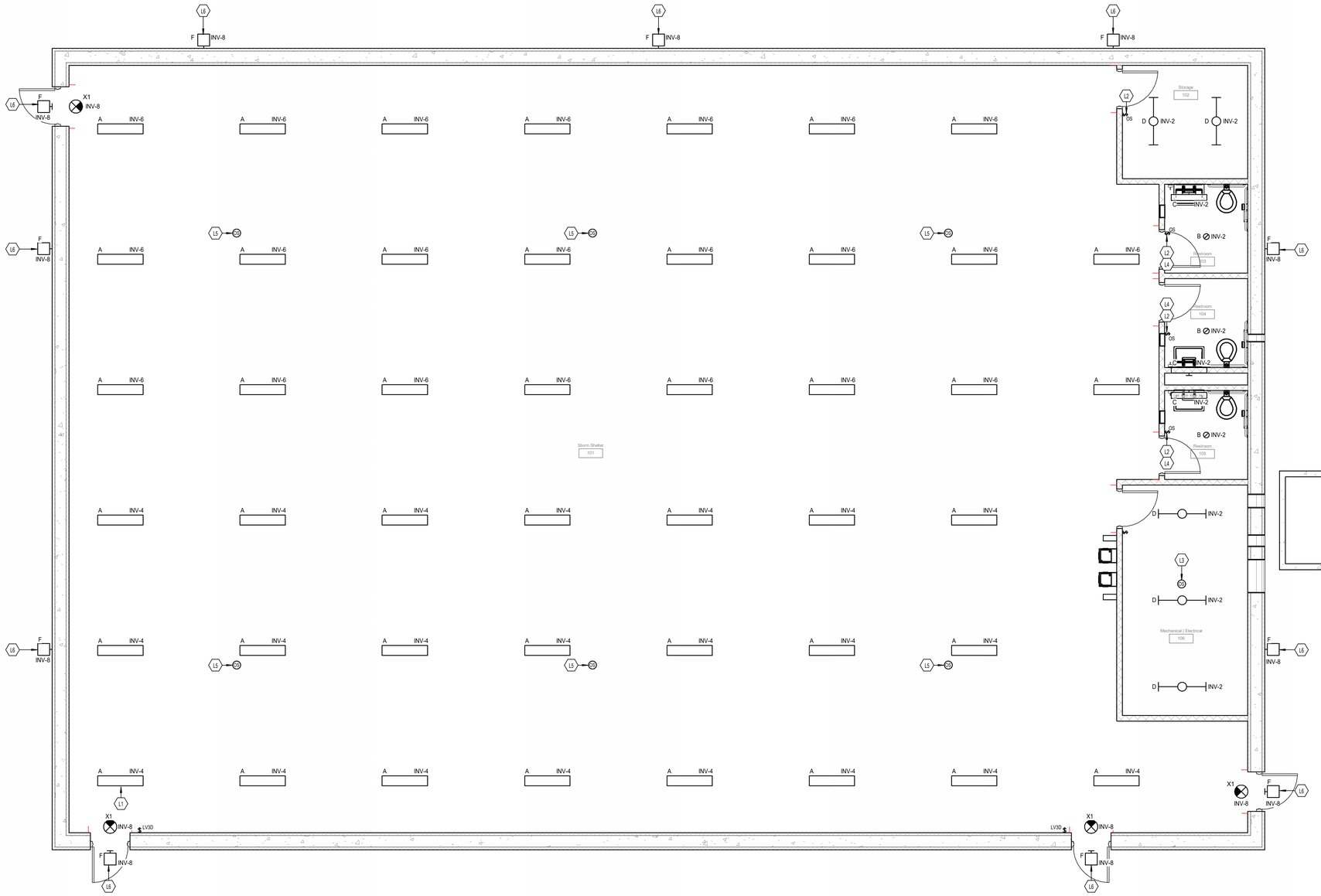
No.	Description	Date

STATE OF KENTUCKY
BRADLEY WYNN REEVES
20984
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
ELECTRICAL LEGEND

SHEET NUMBER
E1.0



1 LIGHTING - STORM SHELTER
1/4" = 1'-0"

ELECTRICAL LIGHTING NOTES:

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
D. LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
E. LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
F. ALL LIGHTING FIXTURE LENSES, PARABOLIC LOUVERS, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
G. RECESSED LUMINAIRES SHALL BE SECURED SUCH THAT THE FORCE REQUIRED INSERTING LAMPS, TRIMS, LENSES, LOUVERS, OR DOOR FRAMES DOES NOT SHIFT HOUSING. ALL TRIMS SHALL BE COMPLETELY FLUSH WITH FINISHED CEILINGS AT COMPLETION OF CONSTRUCTION.
H. CONTRACTOR SHALL PROVIDE UNSWITCHED CONDUCTOR TO ALL EXIT SIGNS, EMERGENCY INVERTER BATTERY PACKS, AND NIGHT LIGHTS AS REQUIRED.
I. ALL LOW VOLTAGE CABLING SHALL BE ROUTED IN CONDUIT WHERE CROSSING AREAS EXPOSED. CONTRACTOR SHALL PAINT CONDUIT IN THESE AREAS TO MATCH ARCHITECT SELECTED COLOR.
J. PROVIDE PROTECTION FOR WIRING AND CABLING DURING PAINTING. UNDER NO CIRCUMSTANCES ARE WIRING OR CABLING TO BE PAINTED. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING WIRING OR CABLING THAT HAS BEEN PAINTED.
K. COORDINATE WALL MOUNT DEVICES WITH MARKERBOARDS, TACKBOARDS AND OTHER WALL MOUNT ARCHITECTURAL COMPONENTS PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS. CONTACT ARCHITECT/ENGINEER FOR RESOLUTION WHERE A CONFLICT EXISTS.
L. REFER TO SHEET E5.0 FOR LIGHT FIXTURE SCHEDULE.
M. IN ORDER TO MAINTAIN ICC 500 STORM SHELTER REQUIREMENTS, NO CONDUITS ARE TO PENETRATE THE STORM SHELTER ENVELOPE. ALL CONDUITS THAT PASS BETWEEN THE STORM SHELTER AND THE REST OF THE BUILDING MUST DO SO BELOW GRADE AND PENETRATE THROUGH SLAB. NO PENETRATIONS OF STORM SHELTER WALLS WILL BE ALLOWED. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR STORM SHELTER CONSTRUCTION INFORMATION.

TAGGED NOTES

L1 LIGHT FIXTURE SHALL BE CIRCUITED THROUGH THE EMERGENCY INVERTER TO PROVIDE AT LEAST 2-HOURS OF EMERGENCY BACK-UP PER 2014 ICC 500. UPON LOSS OF NORMAL POWER, ALL LIGHT FIXTURES SHALL DEFAULT TO FULL OUTPUT. LIGHT FIXTURES SHALL RETURN TO THEIR PREVIOUSLY CONTROLLED CONDITION UPON RETURN OF NORMAL POWER.
L2 PROVIDE LOW VOLTAGE DUAL-TECH WALL OCCUPANCY SENSOR TO CONTROL LIGHTS THAT SERVE THE SPACE.
L3 PROVIDE LOW VOLTAGE DUAL-TECH CEILING OCCUPANCY SENSOR TO CONTROL LIGHTS THAT SERVE THE SPACE. ANY OVER RIDE DIMMERS OR SWITCHES TO BE LOW VOLTAGE. PROVIDE POWERPACKS AS REQUIRED TO MEET CONTROL INTENT AS SHOWN.
L4 CONNECT EXHAUST FAN TO LIGHTING CIRCUIT IN SPACE. FAN TO BE CONTROLLED WITH LIGHTING OCCUPANCY SENSOR SERVING THE SPACE.
L5 PROVIDE LOW VOLTAGE DUAL-TECH HIGH-BAY OCCUPANCY SENSOR FOR CONTROL OF GYMNASIUM LIGHTING. MOUNT OCCUPANCY SENSOR EVEN WITH THE LOWEST LIGHT FIXTURE, HVAC DUCT, STRUCTURAL ELEMENT, ETC.
L6 PROVIDE FIXTURE WITH INTEGRAL PHOTOCELL FOR DUSK TO DAWN OPERATION.

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STATE OF KENTUCKY
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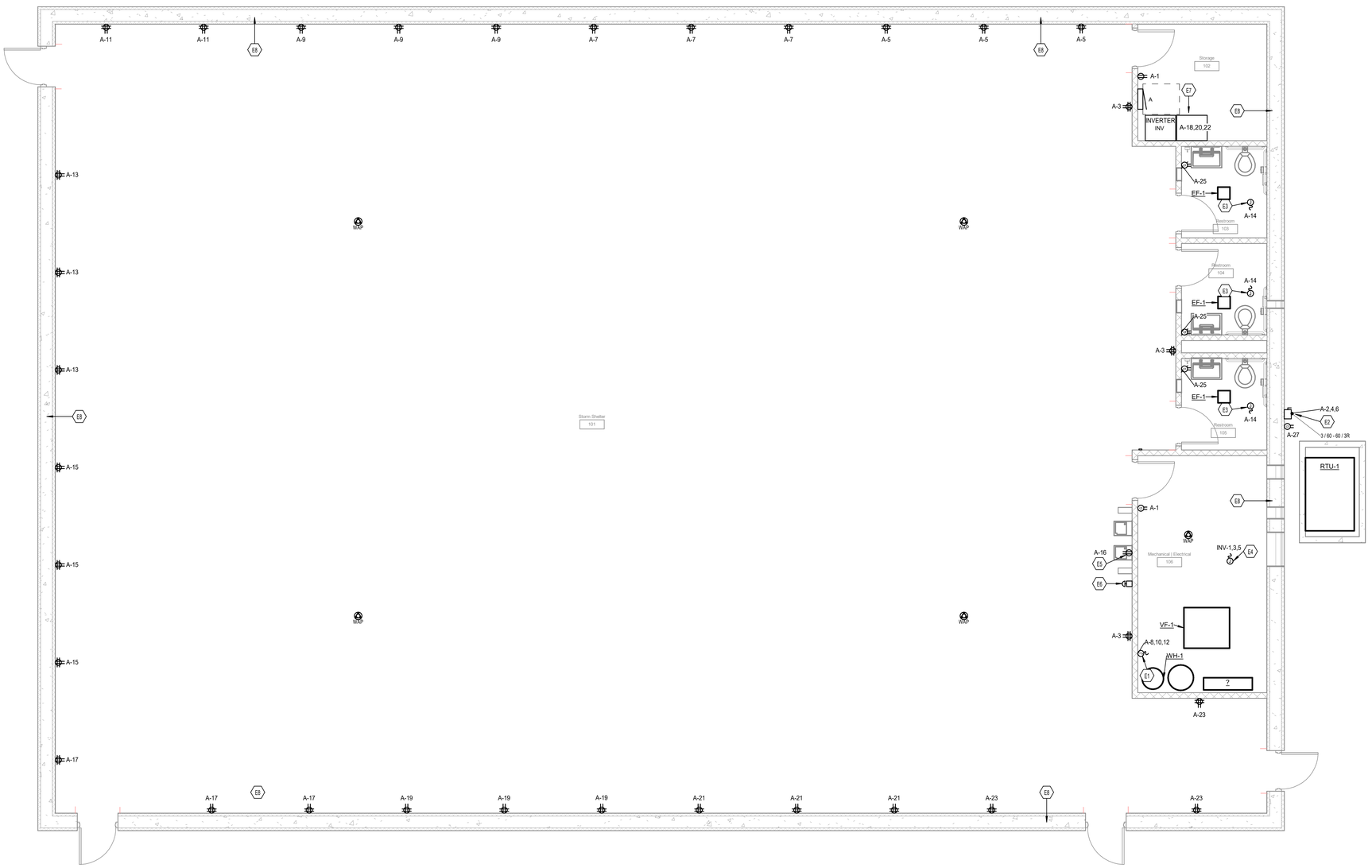
LICENSED
PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
LIGHTING - STORM SHELTER

SHEET NUMBER
E2.0



1 POWER - STORM SHELTER
1/4" = 1'-0"

ELECTRICAL POWER NOTES:

A. REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.

B. CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER NEC 310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER NEC 300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN NEC 100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.

C. IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.

D. RECEPTACLES THAT ARE CONTROLLED BY AN AUTOMATIC MEANS SUCH AS OCCUPANCY SENSOR OR ENERGY MANAGEMENT SYSTEM SHALL BE MARKED IN ACCORDANCE WITH NEC 406.3(E).

E. LOCATIONS OF ELECTRICAL CONNECTIONS AND LOCAL DISCONNECTS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING CONTRACTORS TO ENSURE ACCESS AND WORKING CLEARANCE IS MAINTAINED PER NEC. NOTIFY OTHER TRADES OF REQUIRED CLEARANCE AREAS TO AVOID ROUTING OF OTHER SYSTEMS IN THESE AREAS. DO NOT INSTALL ELECTRICAL EQUIPMENT OVER EQUIPMENT NAMEPLATES OR ACCESS PANELS OR THROUGH ACCESS/MAINTENANCE CLEARANCES OF EQUIPMENT BY OTHER TRADES.

F. PROVIDE PROTECTION FOR WIRING AND CABLING DURING PAINTING. UNDER NO CIRCUMSTANCES ARE WIRING OR CABLING TO BE PAINTED. CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING WIRING OR CABLING THAT HAS BEEN PAINTED.

G. IN ORDER TO MAINTAIN ICC 500 STORM SHELTER REQUIREMENTS, NO CONDUITS ARE TO PENETRATE THE STORM SHELTER ENVELOPE. ALL CONDUITS THAT PASS BETWEEN THE STORM SHELTER AND THE REST OF THE BUILDING MUST DO SO BELOW GRADE AND PENETRATE THROUGH SLAB. NO PENETRATIONS OF STORM SHELTER WALLS WILL BE ALLOWED. REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR STORM SHELTER CONSTRUCTION INFORMATION.

H. ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE IN COMPLIANCE WITH NEC 406.12 EXCEPT THOSE THAT MEET THE REQUIREMENTS OF 406.12 EXCEPTIONS (1) THROUGH (4).

TAGGED NOTES

(##)

E1 PROVIDE 208V/3PH CONNECTION TO WH-1, (3#10, #10G) 3/4"C. COORDINATE FINAL REQUIREMENTS WITH PLUMBING CONTRACTOR.

E2 PROVIDE 208V/3PH CONNECTION TO RTU-1, (3#4,#10G) 1"C. PROVIDE 60A/3P FUSED DISCONNECT WITH 60A FUSES. PROVIDE GFCI WP RECEPTACLE WITHIN 25' OF NEW UNIT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

E3 PROVIDE 120V/1PH CONNECTION TO EF-1, (2#12, #12G)3/4"C. PROVIDE SPST THERMAL OVERLOAD SWITCH IF EF-1 DOES NOT HAVE AN INTEGRAL DISCONNECT. FINAL CONNECTION TO BE FLEXIBLE WHIP. COORDINATE FINAL LOCATION AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR.

E4 PROVIDE 120V/1PH CONNECTION TO VF-1. CIRCUIT THROUGH 120V/20A NORMALLY ON OUTPUT BREAKER IN INVERTER. VF-1 SHALL BE FULLY BACKED-UP AND ABLE TO RUN CONTINUOUSLY FOR 2-HOURS UPON LOSS OF NORMAL POWER. FINAL CONNECTION TO BE FLEXIBLE WHIP. COORDINATE FINAL LOCATION AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR. (2#12, #12G)3/4"C

E5 PROVIDE POWER FOR ELECTRIC WATER COOLER. COORDINATE ROUGH-IN REQUIREMENTS WITH PLUMBING CONTRACTOR.

E6 PROVIDE MUSHROOM SWITCH FOR ACTIVATION OF STORM SHELTER FAN VF-1. PROVIDE CONDUIT AND CABLING FROM BUTTON TO FAN CONTROLS AND ASSOCIATED FAN LOUVERS. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE LABEL ON SWITCH THAT READS "STORM SHELTER FAN".

E7 PROVIDE STORM SHELTER BATTERY INVERTER SYSTEM FOR BACKUP OF STORM SHELTER LIGHTING AND VENTILATION FAN. BASIS OF DESIGN: IOTA IIS3P-8000-120/208IN-120/208OUT-120M-FSREG1-OB1-3P208-20AMP-ON-BOB5-B1P120-B20AMP-BON. REFER TO PANEL SCHEDULES FOR SCHEDULE OF CIRCUITS SERVED BY INVERTER.

E8 STORM SHELTER WALL IS ICF CONSTRUCTION (REFER TO ARCHITECTURAL FOR FULL EXTENT OF ICF AND COORDINATE). DO NOT ROUTE CONDUIT IN CENTRAL CONCRETE CORE. CHANNEL EPS FOAM INSULATION FOR INSTALLATION OF CONDUIT AND BACKBOXES AND FILL IN CHANNELS WITH INSULATION (COORDINATE WORK AND REQUIREMENTS WITH ICF INSTALLER). DO NOT PENETRATE THROUGH ICF WALL HORIZONTALLY. WHERE WALL IS INDICATED TO BE FIRE RATED PROVIDE FIRE RATED PUTTY PADS IN ALL BACKBOXES MOUNTED IN WALL.

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STATE OF KENTUCKY
SHAKSHYNA REYES
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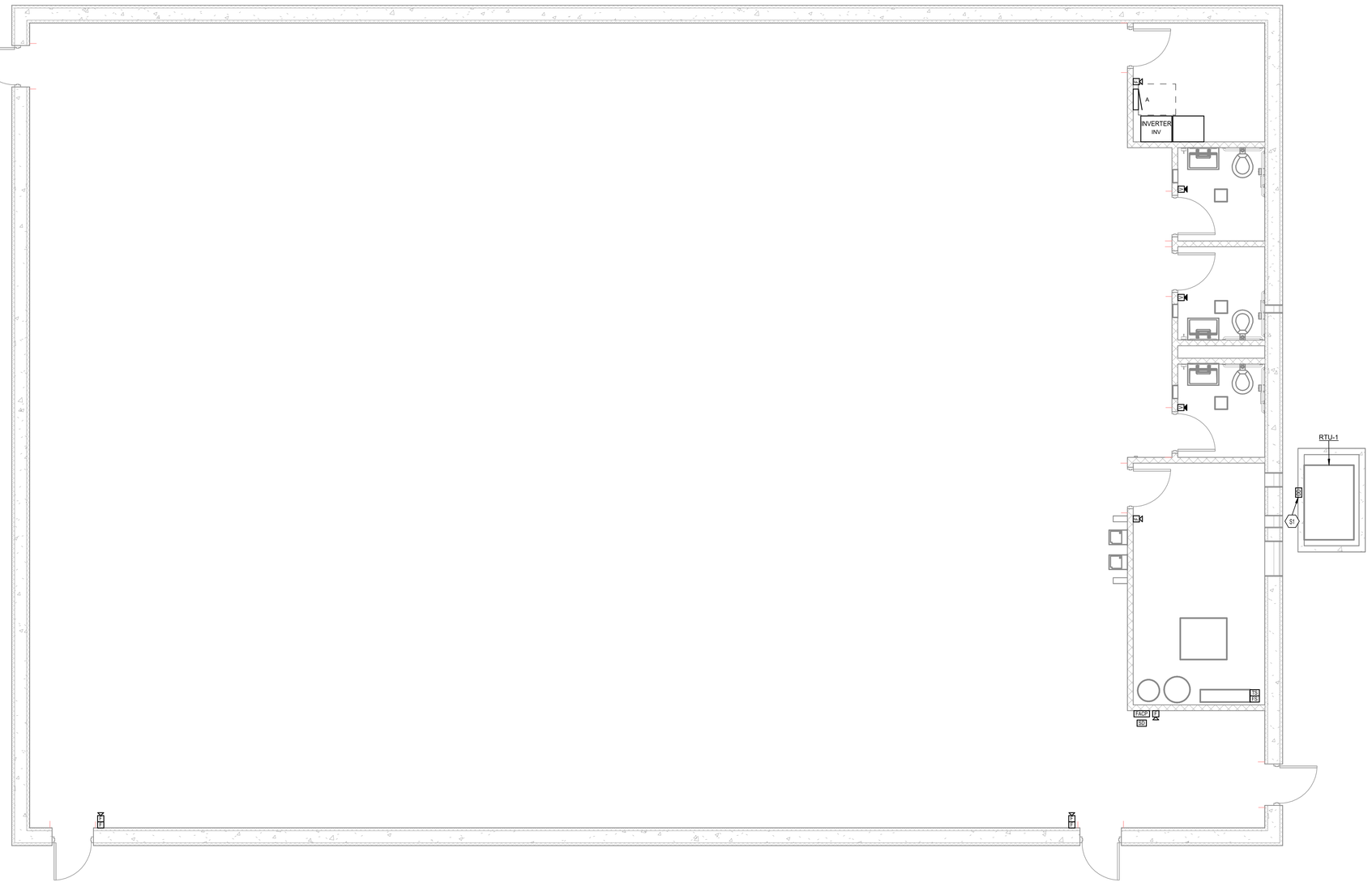
PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
POWER - STORM SHELTER

SHEET NUMBER
E3.0



1 POWER - STORM SHELTER Copy 1
1/4" = 1'-0"

ELECTRICAL FIRE ALARM NOTES:

A. THIS RISER IS PARTIAL. ALL THE DEVICES CONNECTED TO THE "FACP" UNITS ARE NOT SHOWN. THE CONTRACTOR SHALL REFER TO THE ELECTRICAL FLOOR PLANS FOR THE COMPLETE FIRE ALARM SYSTEM.
B. THE EXTENT OF ALL FIRE ALARM SYSTEM WORK IS INDICATED OR IMPLIED ON THE CONTRACT DRAWINGS.
C. FIELD VERIFY THE EXACT NUMBER AND LOCATIONS OF ALL MECHANICALLY RELATED ITEMS (SPRINKLER CONNECTIONS, EXTINGUISHING SYSTEMS, SMOKE DAMPERS, RANGE HOOD SUPPRESSION SYSTEMS, ETC.) AND MAKE CONNECTIONS AS REQUIRED/INDICATED.
D. PROVIDE CONNECTIONS TO ALL FIRE PROTECTION TAMPER AND FLOW SWITCHES VIA ZONE ADDRESSABLE MODULES AS REQUIRED. CONTRACTOR SHALL VERIFY ALL LOCATIONS WITH FIRE PROTECTION SYSTEM SHOP DRAWINGS. CONTRACTOR SHALL PROVIDE A UNIT PRICE FOR COMPLETE INSTALLATION OF A CONNECTION TO EXISTING FIRE PROTECTION SWITCHES.
E. ALL FIRE ALARM STROBE LIGHTS SHALL BE SYNCHRONIZED TO ACCOMMODATE BUILDING STANDARDS AS REQUIRED.
F. TAP SPEAKERS TO PROVIDE SUFFICIENT AUDIBILITY FOR AREA SERVED.
G. SMOKE DETECTORS SHALL NOT BE LOCATED CLOSER THAN 36" TO SUPPLY, RETURN OR EXHAUST AIR OPENINGS NOR CLOSER THAN 12" TO WALL/ CEILING INTERSECTIONS.
H. AIR HANDLING UNITS SHALL ONLY SHUT DOWN WHEN SMOKE IS DETECTED AT THAT PARTICULAR AIR HANDLING UNIT (UON). SMOKE DAMPERS SHALL CLOSE ONLY WHEN SMOKE IS DETECTED AT THAT PARTICULAR SMOKE DAMPER BY ACTIVATION OF THE CONTROLLING SMOKE DETECTOR. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
I. PROVIDE DUCT SMOKE DETECTORS WITH REMOTE TEST SWITCH/INDICATOR LIGHT AT 7'-6" AFF ON WALL IN AREA BELOW DETECTOR.
J. RISER DIAGRAM IS FOR BID PURPOSES ONLY. SYSTEM SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH WIRING DIAGRAMS OBTAINED FROM MANUFACTURER, THAT HAVE BEEN APPROVED BY THE STATE FIRE MARSHAL'S OFFICE OR AUTHORITY HAVING JURISDICTION.
K. PROVIDE FIRE ALARM MANUFACTURER WITH LOCATION DESCRIPTIONS FOR ALL FIRE ALARM DEVICES AS SOON AS POSSIBLE AFTER AWARD OF CONTRACT FOR PRE-PROGRAMMING OF FIRE ALARM SYSTEM. COORDINATE DESCRIPTIONS WITH BUILDING OWNER. UTILIZE FINAL ROOM NAMES AND NUMBERS, NOT NAMES AND NUMBERS FROM FLOOR PLANS.
L. EACH FIRE ALARM DEVICE SHALL BE LABELED WITH SELF ADHESIVE POLYESTER COATED PRINTED LABELS INDICATING DEVICE ADDRESS AND CIRCUIT PER FIRE ALARM SHOP DRAWINGS.
M. PROVIDE CONNECTIONS TO NEW ACCESS CONTROL DOORS TO ALLOW POSITIVE LATCHING AND FREE EGRESS UNDER ALARM CONDITIONS. COORDINATE EXACT REQUIREMENTS WITH SUCCESSFUL DOOR HARDWARE MANUFACTURER PRIOR TO CONSTRUCTION.
N. PROVIDE ACCESS PANELS AS REQUIRED FOR MAINTENANCE AND TESTING FOR SMOKE DETECTORS LOCATED ABOVE INACCESSIBLE CEILINGS. COORDINATE SIZE AND LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
O. PROVIDE APPROVED TESTING AND REQUIRED CERTIFICATION OF SYSTEM COMPONENTS AND PROVE OPERATION OF SYSTEM FOR THE AREA OF WORK WHEN COMPLETE.
P. WIRING TO ALL FIRE ALARM DEVICES SHALL BE PER NEC AND MANUFACTURER'S RECOMMENDATIONS. VERIFY ALL WIRING REQUIREMENTS WITH THE OWNER AND FIRE ALARM VENDOR.
Q. PROVIDE A DEDICATED POWER CIRCUIT TO EACH FIRE ALARM EQUIPMENT PANEL OR POWER SUPPLY.
R. FIRE ALARM OCP DEVICES SHALL HAVE NON-REMOVABLE LOCKABLE HANDLE PAINTED RED.
S. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL BUILDING PERMITS, ELECTRICAL APPROVALS, AND APPROVALS FROM THE STATE OFFICE OF FIRE SAFETY OR AUTHORITY HAVING JURISDICTION (AHJ). THIS INCLUDES PREPARING DRAWINGS, CUTSHEETS, AND OTHER DOCUMENTATION REQUIRED BY THE AHJ OR FIRE ALARM EQUIPMENT MANUFACTURER. A COPY OF THESE REQUIREMENTS SHALL BE OBTAINED FROM AHJ. THE DRAWINGS SHALL BE PREPARED AS A FINAL SUBMITTAL AS OUTLINED IN THE SUBMITTAL REQUIREMENTS. ELECTRONIC COPIES OF THESE PLANS REQUIRED FOR THIS PURPOSE MAY BE OBTAINED FROM THE ENGINEER. DRAWINGS THAT ARE REQUIRED FOR APPROVAL SHALL BE FINISHED WITHIN 7 WORKING DAYS OF AWARD OF CONTRACT.
T. WRITTEN CERTIFICATION OF ENTIRE FIRE ALARM SYSTEM SHALL BE SUBMITTED TO OWNER & ENGINEER AT CLOSE OF PROJECT.
U. A TECHNICAL REPRESENTATIVE OF FIRE ALARM MANUFACTURER SHALL BE PRESENT AT ALL TIMES DURING FIRE ALARM CERTIFICATION.
V. CONTRACTOR SHALL MONITOR TROUBLES ON EXISTING PANEL EQUIPMENT ON A DAILY BASIS. WHERE A TROUBLE IS INDICATED, IT SHALL BE REPORTED TO THE OWNER AND CONSTRUCTION SHALL STOP UNTIL TROUBLE IS RESOLVED UNLESS OTHERWISE INDICATED BY OWNER.
W. INITIATING DEVICE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE IN SEPARATE RACEWAYS. FIRE ALARM SYSTEM JUNCTION BOXES, BACK BOXES, AND PULL BOXES SHALL BE PAINTED RED.
X. PROVIDE QUANTITY OF POWER SUPPLIES AND NAC PANELS BASED UPON FINAL SYSTEM DESIGN AND REQUIRED SPARE CAPACITY. LOCATE ADDITIONAL PANELS ADJACENT TO THOSE SHOWN ON PLANS. DO NOT INSTALL ADDITIONAL EQUIPMENT IN OTHER AREAS OF THE PROJECT WITHOUT WRITTEN CONSENT BY THE ENGINEER.

TAGGED NOTES

S1 PROVIDE DUCT SMOKE DETECTOR FOR AHU.

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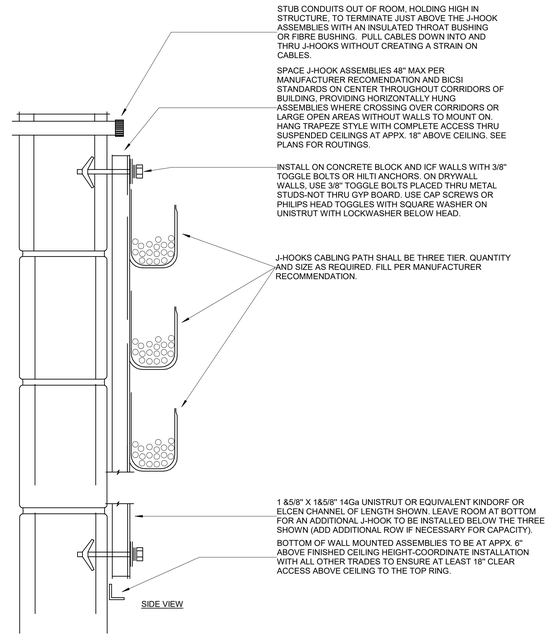
JOB NUMBER 24011XDSDS24
DRAWN BY Author
CHECKED BY Checker
DATE 04/11/2025

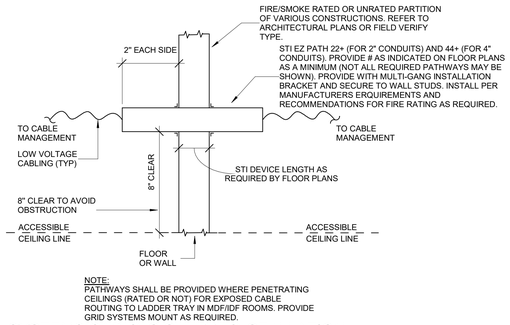
STATE OF KENTUCKY
RYAN C. SMITH
28944
LICENSED
PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
FIRE ALARM - STORM SHELTER

SHEET NUMBER
E4.0

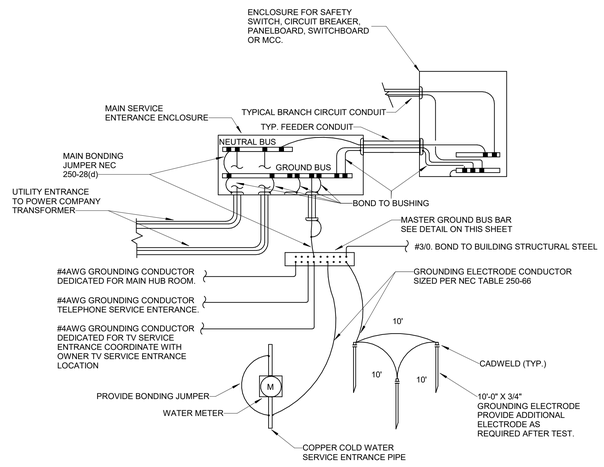


1 J HOOK INSTALLATION DETAIL
SCALE: NONE

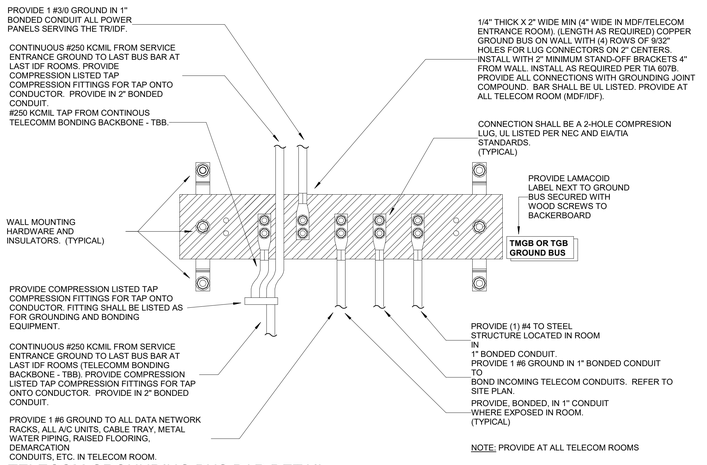


NOTE:
PATHWAYS SHALL BE PROVIDED WHERE PENETRATING CEILINGS (RATED OR NOT) FOR EXPOSED CABLE ROUTING TO LADDER TRAY IN MDF/IDF ROOMS. PROVIDE GRID SYSTEMS MOUNT AS REQUIRED.

2 SYSTEMS CABLING SLEEVE INSTALLATION DETAIL
SCALE: NONE

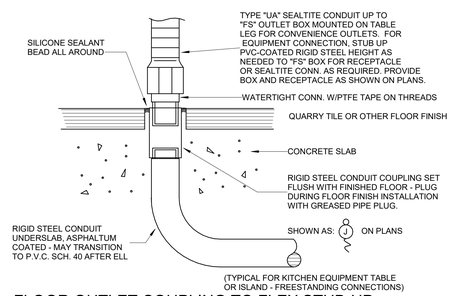


3 ELECTRICAL SYSTEM GROUNDING DETAIL
SCALE: NONE

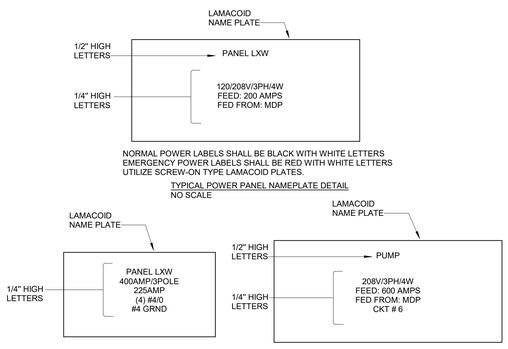


NOTE: PROVIDE AT ALL TELECOM ROOMS

4 TELECOM GROUNDING BUS BAR DETAIL (TGMB & TGB)
SCALE: NONE



5 FLOOR OUTLET COUPLING TO FLEX STUB-UP DETAIL
SCALE: NONE



NORMAL POWER LABELS SHALL BE BLACK WITH WHITE LETTERS
EMERGENCY POWER LABELS SHALL BE RED WITH WHITE LETTERS
UTILIZE SCREW-ON TYPE LAMACOID PLATES.

TYPICAL POWER PANEL NAMEPLATE DETAIL
NO SCALE

NORMAL POWER LABELS SHALL BE BLACK WITH WHITE LETTERS EMERGENCY POWER LABELS SHALL BE RED WITH WHITE LETTERS UTILIZE SCREW-ON TYPE LAMACOID PLATES.

TYPICAL SWITCHBOARD AND DISTRIBUTION PANELBOARD CIRCUIT LABEL NAMEPLATE DETAIL
NO SCALE

NORMAL POWER LABELS SHALL BE BLACK WITH WHITE LETTERS EMERGENCY POWER LABELS SHALL BE RED WITH WHITE LETTERS UTILIZE SCREW-ON TYPE LAMACOID PLATES.

TYPICAL DISCONNECT AND COMBINATION STARTER/DISCONNECT NAMEPLATE DETAIL
NO SCALE

6 PANEL LABELING DETAILS
SCALE: NONE

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STATE OF KENTUCKY
SHAKSHYNA REYES
20644
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
ELECTRICAL DETAILS

SHEET NUMBER
E5.0

ELEC - LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	LAMPS / CCT	DRIVER	MINIMUM LUMENS	MOUNTING	MAXIMUM WATTAGE	VOLTAGE	REMARKS
A	LED LOW BAY FIXTURE, STEEL HOUSING, DIFFUSE ACRYLIC LENS, GENERAL DISTRIBUTION, L70 > 60K HRS, DAMP LOCATION LISTED, WHITE GLOSS FINISH	LITHONIA LIGHTING UFIT-L46-6000LM-SEF-MVOLT-GZ10-35K-80CRI-WH	3500K/80CRI	0-10V DIMMING	5593	SUSPENDED	44	120	
B	4" RECESSED DOWNLIGHT, 45 DEGREE OPTIC, WHITE FLANGED BEVEL, DAMP LOCATION LISTED	ACULUX AX4-D-17LM-35K-80CRI-45D-GZ1-MVOLT-4DBV-BD-WHSF	3500K/80CRI	0-10V DIMMING	1629	RECESSED	14	120	
C	RESTROOM VANITY LIGHT, J-BOX MOUNT, ALUMINUM TUBE HOUSING, STEEL CANOPY AND MOUNT PLATE, FROSTED ACRYLIC LENS, DAMP LOCATION LISTED, FINISH TBD	BROWNLEE LIGHTING 1276-XX-H13-35K	3500K/80CRI	TRIAC DIMMING	1253	SURFACE	13	120	
D	4' STRIP LIGHT, STEEL CHANNEL AND COVER, DIFFUSE ACRYLIC LENS, DAMP LOCATION LISTED, HIGH-GLOSS WHITE ENAMEL FINISH	LITHONIA LIGHTING CSS-L48-4000LM-MVOLT-35K-80CRI	3500K/80CRI	0-10V DIMMING	4732	SURFACE	36	120	
F	EXTERIOR WALL PACK / EGRESS LIGHT, DIE-CAST ALUMINUM HOUSING, REFLECTOR OPTIC, WET LOCATION LISTED, IP66, INTEGRAL PHOTOCELL, POWDER COAT FINISH TBD	LITHONIA LIGHTING WDGE1-LED-P2-35K-80CRI-VW-MVOLT-PE-XXXX	3500K/80CRI	0-10V DIMMING	1929	SURFACE	15	120	
X1	LED EXIT SIGN, THERMOPLASTIC HOUSING, IMPACT RESISTANT, UNIVERSAL MOUNTING, UNIVERSAL CHEVRONS, WHITE HOUSING, GREEN OR RED LETTERING, DAMP LOCATION LISTED, WITH WIRE GUARD	LITHONIA LIGHTING EXRG-M6-ELA-WG1	N/A	N/A	N/A	UNIVERSAL	1	120	

ELECTRICAL LUMINAIRE NOTES:

A. ALL LUMINAIRES AND COMPONENTS SHALL BE UL LISTED.
B. WHERE LUMINAIRES ARE SHOWN SPLIT-WIRED (HALF EMERGENCY POWER/ HALF NORMAL POWER) ON FLOOR PLANS, LUMINAIRES SHALL BE PROVIDED WITH MULTIPLE ELECTRONIC BALLASTS FOR MULTIPLE POWER CIRCUITS AS INDICATED ON FLOOR PLANS.
C. PROVIDE BALLASTS FOR FIXTURE LAMP SWITCHING AS INDICATED ON LIGHTING FLOOR PLANS. WHERE A SINGLE FIXTURE IS POWERED FROM NORMAL AND EMERGENCY POWER, HALF OF THE LAMPS WITH A MINIMUM OF TWO LAMPS SHALL BE ON EMERGENCY POWER.
D. CONTRACTOR SHALL FOCUS, AIM AND ADJUST LUMINAIRES UNDER THE SUPERVISION AND DIRECTION OF THE ENGINEER AND ARCHITECT. ALLOW LABOR FOR FINAL FOCUS AND ADJUSTMENTS AFTER DARK. LIFTS AND SCAFFOLDING SHALL BE AVAILABLE.
E. ALL LAY-IN FIXTURES SHALL BE PROVIDED WITH SCREW ON HOLD DOWN CLIPS AND MAXIMUM 6'-0" LONG FLEXIBLE CONDUIT WHIPS.
F. EXIT SIGNS AND FIXTURES THAT ARE HATCHED OR WHERE THE FIXTURE TYPE CONTAINS THE SUFFIX "E" FOR EMERGENCY OPERATION SHALL HAVE AN INTEGRAL 90 MINUTE BATTERY INVERTER IF NOT POWERED FROM AN EMERGENCY GENERATOR.
G. ALL BATTERY POWERED FIXTURES SHALL HAVE TEST SWITCHES FACTORY INSTALLED INTEGRAL TO THE REFLECTOR, REMOTE TEST SWITCHES WILL NOT BE ACCEPTED.

LIGHTING CONTROLS SCHEDULE

Room Name	VACANCY	OCCUPANCY	DIMMING	MANUAL ON	FULL AUTOMATIC ON	TARGET LIGHT LEVELS (FC)
STORM SHELTER	No	Yes	Yes	No	Yes	40
RESTROOM	No	Yes	No	No	Yes	15
MECHANICAL / ELECTRICAL	No	Yes	No	No	Yes	40
STORAGE	Yes	No	No	Yes	No	40

ONE-LINE FEEDER SCHEDULE (COPPER)

NOTES:
• TAGS WITH SUFFIX "-3W" ARE THREE-WIRE, NO NEUTRAL.

TAG	OCPD SETTING	WIRE SIZE	EQUIP. GROUND SIZE	CONDUIT SIZE
400	400/3 (4W)	(4) #500 KCMIL	(1) #3	3-1/2"

ELECTRICAL RISER NOTES:

A. PROVIDE ENGRAVED LAMACOID LABELS FOR ALL POWER DISTRIBUTION EQUIPMENT FURNISHED OR MODIFIED IN THIS PROJECT, LABELS PER DETAILS AND SPECIFICATIONS.
B. SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIMUM AVAILABLE FAULT-CURRENT AT THE EQUIPMENT AND THE DATE THE CALCULATION WAS PERFORMED. APPLY A TYPE-WRITTEN ADHESIVE LABEL WITH WHITE BACKGROUND, 1/2" HIGH BLACK LETTERING.
C. CONTRACTOR SHALL INSTALL SEPARATE CONDUITS, PULL BOXES, ETC. FOR EACH EMERGENCY POWER BRANCH & NORMAL POWER PER NEC FOR COMPLETE SEPARATION OF POWER SERVICES.
D. ALL CIRCUIT BREAKERS AND/OR DISCONNECTS SERVING THE PRIMARY SIDE OF A TRANSFORMER WHICH ARE NOT WITHIN SIGHT OF THE TRANSFORMER SHALL BE PROVIDED WITH PERMANENTLY INSTALLED MEANS TO LOCK THE BREAKER IN THE OFF POSITION. SUCH TRANSFORMERS SHALL HAVE THE ROOM NAME AND NUMBER OF THE PRIMARY DISCONNECTING MEANS ENGRAVED ON THE EQUIPMENT NAMEPLATE.
E. REFER TO SPECIFICATIONS FOR ARC FLASH AND RELATED POWER SYSTEM STUDY REQUIREMENTS.

ONE-LINE NEW WORK TAGGED NOTES

1 BREAKER TO BE 100% RATED.

ONE-LINE DIAGRAM LINETYPE LEGEND

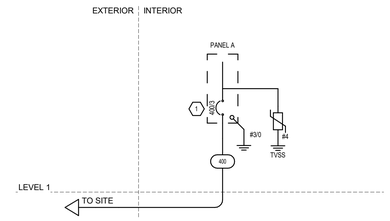
NEW

NEW ENCLOSURE

EXISTING

EXISTING ENCLOSURE

DEMOLITION



1 ONE-LINE DIAGRAM
SCALE: NONE

PANELBOARD AND WIRING SCHEDULE

PANEL: A — **MAINS TYPE:** MCB — **PANEL INTERRUPTING RATING:** <ENGINEER TO SPECIFY>
VOLTAGE: 208Y/120V,3P,4W — **SPD:** — **LOCATION:** Space 3
AMPERES: 400 A — **MOUNTING:** SURFACE — **SUPPLY FROM:**

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
	REC - MECH, STORAGE	1-#12, 1-#12, 1-#12	20	1	1	0.4 5.0			2					
	REC - STORM SHELTER	1-#12, 1-#12, 1-#12	20	1	3		1.1 5.0		4	3	60	3-#4, 1-#4, 1-#10	RTU-1	
	REC - STORM SHELTER	1-#12, 1-#12, 1-#12	20	1	5			0.7 5.0	6					
	REC - STORM SHELTER	1-#12, 1-#12, 1-#12	20	1	7	1.1 2.0			8					
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	9		1.1 2.0		10	3	25	3-#10, 1-#10, 1-#10	WATER HEATER WH-1	
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	11			0.7 2.0	12					
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	13	1.1 0.4			14	1	20	1-#12, 1-#12, 1-#12	EF-1 - RESTROOM EXHAUST (X3)	
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	15		1.1 0.7		16	1	20	1-#12, 1-#12, 1-#12	REC - WATER COOLER	1
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	17			1.1 1.7	18					
	REC - STORM SHELTER	1-#10, 1-#10, 1-#10	20	1	19	1.1 2.2			20	3	20	3-#12, 1-#12, 1-#12	EMERGENCY INVERTER	
	REC - STORM SHELTER	1-#12, 1-#12, 1-#12	20	1	21		1.1 2.2		22					
	REC - STORM SHELTER	1-#12, 1-#12, 1-#12	20	1	23			1.1	24					
	REC - RESTROOM (X3)	1-#12, 1-#12, 1-#12	20	1	25	0.5			26					
	REC - EXTERIOR	1-#12, 1-#12, 1-#12	20	1	27		0.2		28					
					29				30					
					31				32					
					33				34					
					35				36					
					37				38					
					39				40					
					41				42					
						13.8 kVA	14.5 kVA	12.3 kVA						
						117 A	123 A	102 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	25199 VA	100.00%	25199 VA	TOTAL CONNECTED LOAD:	40583 VA
LTNG	2424 VA	100.00%	2424 VA	TOTAL ESTIMATED DEMAND:	39103 VA
REC	12960 VA	88.58%	11480 VA	TOTAL CONNECTED CURRENT:	113 A
				TOTAL ESTIMATED DEMAND CURRENT:	109 A
				25 % ADDITIONAL CAPACITY:	27 A
				TOTAL PANEL CURRENT:	136 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.
1. PROVIDE GFCI CIRCUIT BREAKER.

PANELBOARD AND WIRING SCHEDULE

PANEL: INV — **MAINS TYPE:** — **PANEL INTERRUPTING RATING:** 10 kA
VOLTAGE: 208Y/120V,3P,4W — **SPD:** — **LOCATION:** Space 3
AMPERES: 80 A — **MOUNTING:** SURFACE — **SUPPLY FROM:** A

NOTES	CIRCUIT DESCRIPTION	HOT, NEUT, GND	OCP	P	CKT	A	B	C	CKT	P	OCP	HOT, NEUT, GND	CIRCUIT DESCRIPTION	NOTES
					1	1.2 0.3			2	1	20	1-#12, 1-#12, 1-#12	LTNG - MECH, RR, STORAGE	
	VF-1 - VENTILATION FAN	3-#12, 1-#12, 1-#12	20	3	3		1.2 1.0		4	1	20	1-#10, 1-#10, 1-#10	LTNG - STORM SHELTER	
					5			1.2 1.0	6	1	20	1-#10, 1-#10, 1-#10	LTNG - STORM SHELTER	
	SPARE	--	20	1	7	0.0 0.2			8	1	20	1-#12, 1-#12, 1-#12	LTNG - EXIT SIGNS, EXTERIOR	
					9				10					
					11				12					
					13				14					
					15				16					
					17				18					
						1.7 kVA	2.2 kVA	2.2 kVA						
						14 A	19 A	19 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
EQUIP	3672 VA	100.00%	3672 VA	TOTAL CONNECTED LOAD:	6096 VA
LTNG	2424 VA	100.00%	2424 VA	TOTAL ESTIMATED DEMAND:	6096 VA
				TOTAL CONNECTED CURRENT:	17 A
				TOTAL ESTIMATED DEMAND CURRENT:	17 A
				% ADDITIONAL CAPACITY:	0 A
				TOTAL PANEL CURRENT:	17 A

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STATE OF KENTUCKY
SHAKSHYNA REVES
29044
LICENSED PROFESSIONAL ENGINEER

DAWSON SPRINGS INDEPENDENT SCHOOLS
NEW STORM SHELTER
ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES

SHEET NUMBER
E6.0