ABBREVIATIONS

ADD'L	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AR	ANCHOR RODS
ARCH	ARCHITECTURAL
B PL	BASE PLATE
BF	BOTTOM OF FOOTING
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
C	CHANNEL SHAPE (i.e. C8x11.5)
C	COLD FORMED C SHAPE
C.G.	CENTER OF GRAVITY
CJ	(KEYED) CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DEG	DEGREES
DIA	DIAMETER
DIM	DIMENSION
DSE	COLD-FORMED DOUBLE SLOPED EAVE
DTL	DETAIL
DWLS	DOWELS
EA	EACH
EJ	EXPANSION JOINT
EL.	ELEVATION
ELEV	ELEVATOR
EMBED	EMBEDMENT LENGTH
EOS	EDGE OF SLAB
ERECT	ERECTION
EWEF	EACH WAY, EACH FACE
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
FF	FINISHED FLOOR
FV	FIELD VERIFY
FAS	FROM ADJACENT SPAN
FFE	FINISHED FLOOR ELEVATION
FIN FLR EL	FINISHED FLOOR ELEVATION
FS	FAR SIDE
FTG	FOOTING
Fy	STEEL YIELD STRENGTH
GA	GAUGE
HORIZ	HORIZONTAL
HS	HEADED STUD
HSS	HOLLOW STRUCTURAL SECTION
I/S	INSIDE
INFO	INFORMATION
INT	INTERIOR
JBE	JOIST BEARING ELEVATION
JT	JOINT
K	KIPS (KILO-POUNDS)
k/ft	KIPS PER FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	ANGLE (i.e. L3x3x1/4)
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LW	LONG WAY
M.B.	METAL BUILDING
MC	MOMENT CONNECTION
MAT'L	MATERIAL
MAX	MAXIMUM
MC	MISC. CHANNEL SHAPE (i.e. MC12x10.6)
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC.	MISCELLANEOUS
MPH	MILES PER HOUR
MTL	METAL
N	JOIST SPACES ON GIRDER
NO.	NUMBER
N.S.	NON-SHRINK
NS	NEAR SIDE
NTS	NOT TO SCALE
o.c.	ON CENTER
O/S	OUTSIDE
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP.	OPPOSITE
OSB	ORIENTED STRAND BOARD
PF###	PAD FOOTING (###-SIZE IN FEET)
P/T	POST-TENSIONED
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
R	RADIUS
RE:	REFERENCE
REINF	REINFORCING
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
S	STANDARD STEEL SHAPE (i.e. S10x35)
SCHED.	SCHEDULE
SECT	SECTION
SH	COLD-FORMED HAT SHAPE
SIM	SIMILAR
S.J.	STEEL JOIST (i.e. 12k1 S.J.)
SJ	(SAWN) CONTROL JOINT
SQ	SQUARE
SSE	COLD-FORMED SINGLE SLOPED EAVE STRUT
STIFF	STIFFENER
SW	SHORT WAY
T&B	TOP AND BOTTOM
TEMP	TEMPERATURE
TF	TOP OF FOOTING
TO COL	TOP OF COLUMN
TOC	TOP OF CONCRETE
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TYP	TYPICAL
UE	COLD-FORMED UNIVERSAL EAVE STRUT
UH	COLD-FORMED UNIVERSAL HAT SHAPE
UNO	UNLESS NOTED OTHERWISE
VER	VERIFY
VERT	VERTICAL
W	WIDE FLANGE SHAPE (i.e. W8x10)
WP	WORK POINT
w/	WITH
w/o	WITHOUT
WT	T SHAPE (i.e. WT8x13)
WWR	WELDED WIRE REINFORCING (i.e. WIRE MESH)
Z	COLD FORMED Z SHAPE

STRUCTURAL NOTES

GENERAL NOTES

1. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL CONTRACT DOCUMENTS AND INFORM THE ARCHITECT OF CONFLICTS OR DISCREPANCIES PRIOR TO BIDDING, FABRICATION, AND CONSTRUCTION.
2. IN CASES OF DISCREPANCIES IN DIMENSIONS AND ELEVATIONS BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS, CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.
3. THE CONTRACTOR SHALL COORDINATE THE FIELD VERIFICATION OF ALL EXISTING SITE CONDITIONS SUCH AS EXISTING FLOOR ELEVATIONS, EXISTING FOOTING ELEVATIONS, EXISTING UTILITIES, ETC. WHETHER NOTED OR NOT IN THE CONTRACT DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS, DISCREPANCIES OR UNKNOWN CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
4. REPRODUCTION OF CONTRACT DRAWINGS, IN ANY FORM, WILL NOT BE ACCEPTED AS SHOP DRAWINGS.
5. CONTRACTOR SHALL PROVIDE TEMPORARY GUYS AND BRACING AS REQUIRED DURING CONSTRUCTION. STRUCTURE IS NOT STABLE UNTIL ALL STRUCTURAL MEMBERS, CONNECTIONS, AND DECKING IS IN PLACE.
6. ACI, AISC, AITC AND AWS SPECIFICATIONS SHALL GOVERN ALL PHASES OF FABRICATION AND CONSTRUCTION.

CONCRETE NOTES

CONCRETE REINFORCEMENT

1. CONCRETE REINFORCEMENT SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO CONSTRUCTION.
2. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
3. PROVIDE THE FOLLOWING PROTECTIVE COVERING FOR ALL REINFORCING BARS UNLESS DETAILED OR NOTED OTHERWISE:

SLAB-ON-GRADE BARS (BOTTOM)	3" CLEAR
BELOW GRADE (CAST AGAINST EARTH)	3" CLEAR
BELOW GRADE (FORMED EDGE)	2" CLEAR
ELEVATED SLABS	0.75" CLEAR

4. DO NOT CUT TIES OR CONTINUOUS BARS TO PROVIDE CLEARANCE FOR EMBEDDED ITEMS OR OTHER OBSTRUCTIONS. INDIVIDUAL BARS AND TIES MAY BE MOVED VERTICALLY UP TO 1.5" AS REQUIRED TO PROVIDE CLEARANCE FOR EMBEDS, HOOKS, ETC. DO NOT HEAT REINFORCING TO BEND IT.
5. IF DOWELS OR VERTICAL REINFORCING ARE CUT OR SEVERELY BENT, CONTRACTOR MAY BE REQUIRED TO REMOVE THE CONCRETE BACK TO THE PREVIOUS POUR JOINT AND REPLACE THE DAMAGED BARS AND CONCRETE AT THE CONTRACTOR'S EXPENSE.
6. REINFORCEMENT SHALL BE SPLICED ONLY AS SHOWN OR NOTED IN THE CONTRACT DOCUMENTS. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER-OF-RECORD PRIOR TO FABRICATION.
7. REINFORCING BARS MARKED AS CONTINUOUS SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICES ONLY.
8. ALL TENSION LAP SPLICES SHALL BE CLASS "B" UNLESS NOTED OTHERWISE.
9. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185. LAP REINFORCEMENT 8 INCHES ON SIDES AND ENDS. MAINTAIN WIRE 1 TO 2 INCHES BELOW TOP SURFACE OF SLAB-ON-GRADE, UNLESS NOTED OTHERWISE. WELDED WIRE REINFORCEMENT MUST BE PLACED ON CHAIRS OR BOLSTERS AS REQUIRED TO MAINTAIN POSITION IN THE SLAB.
10. ONCE SHOP DRAWINGS HAVE BEEN REVIEWED, DO NOT ADD REINFORCING OR INFORMATION TO PREVIOUSLY SUBMITTED SHEETS FOR SUBSEQUENT SUBMITTALS UNLESS SHOP DRAWINGS ARE BEING RESUBMITTED AFTER BEING RETURNED "NOT REVIEWED".
11. WHERE ANCHOR RODS ARE CAST INTO CONCRETE, PROVIDE SUPPLEMENTAL REINFORCING EACH WAY, TIED NEAR THE TOP AND BOTTOM OF ALL ANCHOR RODS TO THE ADJACENT REBAR TO SECURE RODS DURING CONCRETE PLACEMENT. (MINIMUM SIZE #4)

CAST-IN-PLACE CONCRETE

1. CONCRETE SUPPLIER SHALL SUBMIT CONCRETE MIX DESIGN DATA TO THE ARCHITECT FOR REVIEW PRIOR TO CONSTRUCTION.
2. CONCRETE SHALL HAVE AT LEAST THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:

A.	FOOTINGS	3000 PSI
B.	STAIR LANDINGS & STAIR TREADS	4000 PSI
C.	SLABS-ON-GRADE& PEDESTALS	4000 PSI
D.	ELEVATED SLABS	4000 PSI

3. **SEE CONCRETE MIX DESIGN TABLE**
4. PROPORTIONS OF CONCRETE MIX DESIGNS SHALL BE DETERMINED BY THE PROCEDURES ESTABLISHED IN SECTION 5.3 OF ACI 318-19.
5. MIX DESIGN MAY INCLUDE (TYPE C) FLYASH AS A REPLACEMENT FOR PORTLAND CEMENT UP TO A MAXIMUM OF 20% OF THE TOTAL CEMENTITIOUS MATERIAL. DO NOT USE A FLYASH-CONTAINING CONCRETE MIX WHEN THE TEMPERATURE DURING PLACEMENT OR CURING IS PROJECTED TO FALL BELOW 60 DEGREES FAHRENHEIT.
6. MIX DESIGN MAY INCLUDE WATER REDUCING ADMIXTURES CONFORMING TO ASTM C494, TYPE A, TO PROVIDE WORKABILITY AND SPECIFIED SLUMP WITHOUT EXCEEDING SPECIFIED WATER/CEMENT RATIOS. **WATER SHALL NOT BE ADDED ON SITE WITHOUT PRIOR APPROVAL**. ANY APPROVED WATER AMOUNTS ADDED ON SITE MUST BE RECORDED & REPORTED BY THE TESTING AGENCY.
7. ALL CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5.5% AIR ENTRAINMENT (±1.5%). DO NOT EXCEED 3% AIR CONTENT IN CONCRETE RECEIVING A STEEL TROWEL FINISH.

METALS NOTES

STRUCTURAL STEEL

1. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. ALL STRUCTURAL STEEL SHAPES SHALL BE AS FOLLOWS:
   - A. ALL WIDE FLANGE STRUCTURAL STEEL SHAPES SHALL BE ASTM A992.
   - B. SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500, GRADE C, Fy = 50 KSI
   - C. ROUND HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500, GRADE C, Fy = 46 KSI
   - D. ROUND STEEL PIPES SHALL BE ASTM A53, GRADE B, Fy = 35 KSI
   - E. ALL OTHER STRUCTURAL STEEL (CHANNELS, ANGLES, PLATES, ETC.) SHALL BE ASTM A36.
3. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36.
4. STRUCTURAL BOLTS SHALL BE ASTM A325-N, UNLESS OTHERWISE NOTED.
5. POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE SHALL BE STANDARD ASTM A36 THREADED RODS (OR APPROVED EQUAL) WITH A MINIMUM STEEL YIELD STRENGTH OF Fy=36 KSI, OR ASTM F593 STAINLESS STEEL ANCHORS WITH A MINIMUM YIELD STRENGTH OF Fy=45 KSI, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. ADHESIVE SHALL BE HILTI "HIT-RE 500-SD" SYSTEM (REF: ICC-ES ESR-2322), SIMPSON STRONG-TIE "SET-3G" SYSTEM (REF: ICC-ES ESR-4057), (OR APPROVED EQUAL).
6. POST-INSTALLED EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI "KWIK BOLT TZ" (REF: ICC-ES ESR-1917), SIMPSON STRONG-TIE "STRONG BOLT 2" (REF: ICC-ES ESR-3037), (OR APPROVED EQUAL) CARBON STEEL ANCHORS UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
7. POST-INSTALLED SCREW ANCHORS SHALL BE HILTI "KWIK HUS EZ" (REF: ICC-ES ESR-3027), SIMPSON STRONG-TIE "TITEN HD" (REF: ICC-ES ESR-2713), (OR APPROVED EQUAL), UNLESS NOTED OTHERWISE.
8. CONNECTIONS WITH HIGH STRENGTH BOLTS SHALL BE DESIGNED CONSIDERING BOLT THREADS INCLUDED IN THE SHEAR PLANE (A325-N). ALL BOLTING SHALL BE INSTALLED BY THE TURN-OF-THE-NUT METHOD, REMOVABLE LOAD INDICATOR BOLTS, OR CALIBRATED WRENCH. SNUG TIGHT BOLTING WILL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
9. ALL WELDS SHALL BE E70XX, MINIMUM AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS, CERTIFIED WITHIN THE PREVIOUS TWELVE (12) MONTHS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE BUILDING AND COMPONENTS DUE TO FIRE HAZARDS FROM WELDING.
10. DO NOT PRIME PAINT STEEL THAT RECEIVES SPRAYED FIREPROOFING.
11. ALL STRUCTURAL STEEL EXPOSED TO WEATHER (SUCH AS MECHANICAL FRAMES) SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

METAL DECKING

1. METAL DECKING SUPPLIER SHALL SUBMIT SHOP DRAWINGS PREPARED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. FLOOR DECKING SHALL BE 1.5VL20 GALVANIZED COMPOSITE FLOOR DECK ATTACHED TO THE STRUCTURE WITH 5/8" DIAMETER PUDDLE WELDS AT 12" ON CENTER AT ALL SUPPORTS. SHEAR STUD WELDING ATTACHMENT MAY REPLACE PUDDLE WELDS WHERE STUD SPACING IS EQUAL TO OR LESS THAN 12" ON CENTER.
3. POWDER ACTUATED OR PNEUMATIC FASTENERS MAY NOT BE SUBSTITUTED FOR PUDDLE WELDS.

COLD-FORMED STRUCTURAL STEEL FRAMING

1. COLD-FORMED METAL FRAMING SUPPLIER SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. SHOP DRAWINGS SHALL DETAIL A COMPLETE SYSTEM SHOWING MEMBER SIZES, SPACING AND CONNECTIONS TO THE STRUCTURE.
3. ALL STRUCTURAL STUDS, TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A653/A653M.
4. ALL COLD-FORMED STEEL STUD SECTIONS ARE IDENTIFIED ACCORDING TO THE DESIGNATIONS GIVEN IN THE "STEEL STUD MANUFACTURERS ASSOCIATION" (SSMA) PRODUCT TECHNICAL INFORMATION MANUAL. SEE SSMA FOR MINIMUM SECTION PROPERTIES

   EXAMPLE: 600S162-43

600	=	MEMBER DEPTH (600 x 1/100 INCHES = 6")
S	=	STYLE (S = STUD, T = TRACK, U = CHANNEL)
162	=	FLANGE WIDTH (162 x 1/100 INCHES = 1.625" = 1-5/8")
43	=	MATERIAL THICKNESS (43 = 43 MILS x 1/1000 INCHES = 0.043")

   YIELD STRENGTH SHALL BE 33 KSI UNLESS NOTED ON PLANS AS FOLLOWS:

   600S162-43 (50 KSI) - FOR 50 KSI YIELD STRENGTH
5. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. PROVIDE COLUMNS BUILT-UP OF MULTIPLE STUDS (2 STUDS MIN.) FOR HEADER AND BEAM BEARING.
7. ALL STUDS AT LOADBEARING WALLS SHALL BE CUT FULL LENGTH WITH TRACKS (TOP & BOTTOM) INSTALLED TIGHT AGAINST ENDS OF STUD. NO GAPS BETWEEN END OF STUDS AND TRACK WILL BE ALLOWED IN LOAD BEARING STUDS.
8. ALL COLD-FORMED STEEL FRAMING SHAPES (SUCH AS Z-PURLINS, C-PURLINS, HAT CHANNELS AND EAVE STRUTS) ARE IDENTIFIED ACCORDING TO THE DESIGNATIONS GIVEN IN THE LIGHT GAGE STEEL INSTITUTE (LGSI) "LIGHT GAGE STRUCTURAL STEEL FRAMING SYSTEM DESIGN HANDBOOK". SEE LGSI FOR MINIMUM SECTION PROPERTIES.

PRE-ENGINEERED METAL BUILDING SYSTEMS

1. METAL BUILDING MANUFACTURER SHALL PROVIDE CALCULATIONS AND SHOP DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
2. METAL BUILDING SHOP DRAWINGS WILL NOT BE REVIEWED IF THE LAYOUT DOES NOT FOLLOW THE LAYOUT PROPOSED IN THE CONTRACT DRAWINGS AND IF ANY DEVIATIONS FROM THE PROPOSED LAYOUT ARE NOT CLEARLY MARKED ON THE SHOP DRAWINGS OR APPROVED IN WRITING PRIOR TO SUBMITTAL.
3. METAL BUILDING FRAMING LAYOUT AND MEMBERS SHOWN ARE SUGGESTED ONLY. MANUFACTURER IS RESPONSIBLE FOR COORDINATING REQUIREMENTS WITH OWNER AND PROVIDING A COMPLETE STRUCTURAL FRAMING SYSTEM DESIGNED BY THE MANUFACTURER. METAL BUILDING MANUFACTURER SHALL COORDINATE ALL DIMENSIONS, ELEVATIONS, BRACING, AND SIZES AND SHAPES OF MEMBERS WITH OWNER PRIOR TO FABRICATION AND CONSTRUCTION. ALL MEMBERS, CONNECTIONS AND DECKING NOT SPECIFICALLY SIZED ON DRAWINGS SHALL BE DESIGNED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER.
4. METAL BUILDING VERTICAL BRACING SHALL CONSIST OF PORTAL FRAMES OR ROD BRACES AT THE LOCATIONS SHOWN ON THE PLANS. THE METAL BUILDING MANUFACTURER SHALL COORDINATE THE LOCATION OF ALL BRACES TO MINIMIZE INTERFERENCE WITH ARCHITECTURAL FEATURES. ROD OR CABLE BRACES MAY NOT BE SUBSTITUTED WHERE PORTAL FRAMES ARE SHOWN. WHERE X-BRACES ARE USED, THE METAL BUILDING MANUFACTURER SHALL CLEARLY IDENTIFY TO THE ARCHITECT WHERE ALL INTERFERENCES WITH ARCHITECTURAL FEATURES. WHERE ARCHITECTURAL FEATURES (COLUMN SURROUNDS, CEILINGS, FURR DOWNS, ETC) ARE PROVIDED TO COVER OR SURROUND THE METAL BUILDING COMPONENTS (COLUMNS, FRAMES, ETC.), THE METAL BUILDING COMPONENTS SHALL BE SIZED TO STAY WITHIN THE LIMITS OF THE ARCHITECTURAL FEATURES UNLESS THE ARCHITECT IS NOTIFIED IN WRITING PRIOR TO SUBMISSION OF THE APPROVAL DRAWINGS AND APPROVAL IS GIVEN FOR AN EXCEPTION.
5. MAXIMUM PURLIN LIVE LOAD DEFLECTION FOR PURLINS SUPPORTING CEILINGS SHALL NOT EXCEED SPAN/360 OR 1", WHICHEVER IS LESS. MAXIMUM PURLIN LIVE LOAD DEFLECTION FOR PURLINS NOT SUPPORTING CEILINGS SHALL NOT EXCEED SPAN/180.
6. FRAME LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/360 OR 1-1/2" FOR FRAMES SUPPORTING CEILINGS. SPAN/240 AT NO CEILINGS.
7. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/240 FOR GIRTS PROVIDING LATERAL SUPPORT FOR METAL SIDING ONLY. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/360 FOR GIRTS PROVIDING LATERAL SUPPORT FOR BRICK.
8. MAXIMUM BUILDING SIDEWAY (DRIFT) FROM WIND OR GRAVITY LOADS SHALL NOT EXCEED WALL HEIGHT/240. SEISMIC DRIFT SHALL BE WITHIN THE LIMITS PRESCRIBED IN ASCE 7, TABLE 12.12-1 WITH ACTUAL DRIFT DETERMINED PER SECTION 12.8.6.
9. THE GENERAL CONTRACTOR AND METAL BUILDING MANUFACTURER SHALL BE RESPONSIBLE FOR OVERALL BUILDING COORDINATION. ALL COORDINATION OF THE INTERFACE AND COMPATIBILITY BETWEEN THE METAL BUILDING AND THE ARCHITECTURAL FEATURES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE METAL BUILDING MANUFACTURER.
10. DESIGN OF THE METAL BUILDING USING DEAD, LIVE, SEISMIC, WIND AND SNOW LOADS IN THE CODE REQUIRED COMBINATIONS SHALL BE PERFORMED BY THE METAL BUILDING MANUFACTURER.

EARTHWORK & FOUNDATION NOTES

EXCAVATION & FILL

1. ALL UNDERCUTTING, SITE PREPARATION, FILL SELECTION, BACKFILLING AND COMPACTION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND SOILS ENGINEER'S RECOMMENDATIONS.
2. SELECT FILL BENEATH THE BUILDING SHALL BE PLACED IN LIFTS NOT EXCEEDING 8" LOOSE THICKNESS AND COMPACTED TO AT LEAST 95" OF MAXIMUM MODIFIED PROCTOR DRY DENSITY (ASTM D1557). THE IN-PLACE DENSITY AND MOISTURE CONTENT SHALL BE ESTABLISHED AND APPROVED FOR EACH LIFT PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.

SPREAD FOOTINGS

1. BOTTOM OF FOOTING ELEVATIONS (BF) SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY AND ARE NOT NECESSARILY TO BE USED FOR CONSTRUCTION. THE SOILS ENGINEER OR HIS REPRESENTATIVE SHALL BE ENGAGED TO INSPECT ALL FOOTING EXCAVATIONS TO VERIFY THAT THE REQUIRED ALLOWABLE BEARING CAPACITY IS ATTAINABLE. BOTTOM OF FOOTING ELEVATIONS SHALL BE ADJUSTED PER THE ON-SITE RECOMMENDATIONS OF THE SOILS ENGINEER OR HIS REPRESENTATIVE.
2. ALL SPREAD FOOTINGS SHALL BE FOUNDED IN PROPERLY COMPACTED SELECT FILL OR IN THE NATURAL SOILS WITH AN ALLOWABLE NET BEARING CAPACITY OF AT LEAST 5000 PSF. (REF: GEOTECHNICAL INVESTIGATION, JOB NO. 025-03787 DATED SEPTEMBER 15, 2026 BY OLSSON.)
3. MAINTAIN FINISHED GRADE (AND/OR BOTTOM OF FOOTING ELEVATIONS) TO PROVIDE AT LEAST 2'-0" COVER ABOVE THE BOTTOM OF ALL EXTERIOR FOOTINGS FOR FROST PROTECTION.

RAMMED AGGREGATE PIER FOUNDATION NOTES

1. THE RAMMED AGGREGATE PIER INSTALLER SHALL SUBMIT DETAILED DESIGN CALCULATIONS AND CONSTRUCTION DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARKANSAS TO THE ARCHITECT FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
2. QUANTITIES AND LAYOUT OF PIERS SHOWN ON THE CONTRACT DRAWINGS ARE FOR ESTIMATING PURPOSES ONLY AND ARE NOT NECESSARILY TO BE USED FOR CONSTRUCTION. THE ENGINEER MAY INCREASE THE NUMBER OF PIERS SUPPORTING FOOTINGS AND/OR GRADE BEAMS AS NECESSARY, HOWEVER THE NUMBER OF PIERS SUPPORTING FOOTINGS AND/OR GRADE BEAMS SHALL NOT BE DECREASED. THE ENGINEER MAY INCREASE OR DECREASE THE NUMBER AND MODIFY THE LAYOUT OF THE PIERS UNDER THE SLAB AND THE PIERS SHOWN OUTSIDE THE BUILDING TO BEST MEET THE DESIGN REQUIREMENT FOR SOIL IMPROVEMENT AND LIQUEFACTION MITIGATION IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION AND AS REQUIRED BY THE ACTUAL SITE CONDITIONS.
3. ALL SPREAD FOOTINGS SHALL BEAR ON THE RAMMED AGGREGATE PIER IMPROVED SOIL WITH AN ALLOWABLE NET BEARING PRESSURE OF AT LEAST 5000 PSF. (REF: GEOTECHNICAL INVESTIGATION, JOB NO. 025-03787 DATED SEPTEMBER 15, 2026 BY OLSSON.)
4. RAMMED AGGREGATE PIER IMPROVED SOIL AT BOTTOM OF FOOTING ELEVATION SHALL PROVIDE AT LEAST 5000 PSF ALLOWABLE NET SOIL BEARING PRESSURE WITH LONG TERM TOTAL AND DIFFERENTIAL SETTLEMENT LESS THAN 1" AND 1/2", RESPECTIVELY WITH SETTLEMENT CALCULATED AT 5000 PSF NET SOIL BEARING PRESSURE.
5. A RAMMED AGGREGATE PIER LOAD TEST SHALL BE PERFORMED TO VERIFY THE DESIGN OF A COMPRESSION AND UPLIFT PIER AND SHALL BE MONITORED BY AN INDEPENDENT TESING AGENCY.
6. MAINTAIN FINISHED GRADE (AND/OR BOTTOM OF FOOTING ELEVATIONS) TO PROVIDE AT LEAST 2'-0" COVER ABOVE THE BOTTOM OF ALL EXTERIOR FOOTINGS.
7. ALL RAMMED AGGREGATE PIERS SHALL BE A MINIMUM OF 4 FT LONG.

DESIGN LOADS

DEAD LOADS:		WEIGHT OF THE STRUCTURE
ROOF LIVE LOADS:		20 PSF
FLOOR LIVE LOADS		
STORAGE		125 PSF
STAIRS		100 PSF
GROUND SNOW LOAD	Pg:	10 PSF
WIND SPEED FOR RISK CATEGORY II & EXPOSURE C	Vult:	105 MPH
BUILDING RISK CATEGORY		II
WIND EXPOSURE CATEGORY		C
INTERNAL PRESSURE COEFFICIENT	GCpi:	±0.18
COMP. & CLADDING WIND PRESSURE	Pnet30:	SEE ASCE 7-16, TABLE 30. 7-2
SEISMIC IMPORTANCE FACTOR	Ie:	1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS	Ss:	0.393
	S1:	0.152
SITE CLASS		D
SPECTRAL RESPONSE COEFFICIENT	Sds:	0.389
	Sd1:	0.233
SEISMIC DESIGN CATEGORY		D
@ PEMB		
BASIC SEISMIC-FORCE-RESISTING SYSTEM (PER ASCE 7-16, TABLE 12. 2-1)		MOMENT RESISTING FRAME SYSTEM STEEL ORDINARY MOMENT FRAME
DESIGN BASE SHEAR	V:	0.12W
SEISMIC RESPONSE COEFFICIENT	Cs:	0.12
RESPONSE MODIFICATION FACTOR	R:	3.50
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE METHOD (PER ASCE 7-16, TABLE 12. 6-1 & SECT. 12.8)
@ MEZZANINE		
BASIC SEISMIC-FORCE-RESISTING SYSTEM (PER ASCE 7-16, TABLE 12. 2-1)		CANTILEVERED COLUMN SYSTEMS DETAILED TO CONFORM TO SPECIFIC CLASSIFICATION STEEL SPECIAL CANTILEVER COLUMN SYSTEMS
DESIGN BASE SHEAR	V:	0.16W
SEISMIC RESPONSE COEFFICIENT	Cs:	0.16
RESPONSE MODIFICATION FACTOR	R:	2.50
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE METHOD (PER ASCE 7-16, TABLE 12. 6-1 & SECT. 12.8)
@ BATHROOM		
BASIC SEISMIC-FORCE-RESISTING SYSTEM (PER ASCE 7-16, TABLE 12. 2-1)		BEARING WALL SYSTEMS LIGHT-FRAMED WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
DESIGN BASE SHEAR	V:	0.20W
SEISMIC RESPONSE COEFFICIENT	Cs:	0.20
RESPONSE MODIFICATION FACTOR	R:	2.00
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE METHOD (PER ASCE 7-16, TABLE 12. 6-1 & SECT. 12.8)
SEISMIC ZONE PER A.C.A. 12-80-101 ET. SEQ.	ZONE:	1
CODES:		2021 ARKANSAS FIRE PREVENTION CODE A.C.A. 12-80-101 ET. SEQ. (ARKANSAS STATE LAW)

THE FOUNDATIONS AND STRUCTURAL FRAMING HAVE BEEN DESIGNED TO RESIST THE LOADS AND FORCES STATED ABOVE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2021 ARKANSAS FIRE PREVENTION CODE AND A.C.A. 12-80-101 ET. SEQ.

PRE-ENGINEERED METAL BUILDING DESIGN LOADS:

ROOF DEAD LOAD:	ACTUAL WEIGHT OF THE STRUCTURE
COLLATERAL LOAD:	HANGING EQUIPMENT, LIGHTS, CEILINGS, ETC. (7 PSF MINIMUM COLLATERAL DEAD LOAD. INCLUDE ACTUAL WEIGHT OF SUSPENDED EQUIPMENT.)
ROOF LIVE LOAD:	20 PSF (PURLINS & FRAMES.) LIVE LOAD REDUCTIONS WILL NOT BE ALLOWED.
SNOW LOAD:	(SEE DESIGN LOADS ABOVE)
WIND LOAD:	(SEE DESIGN LOADS ABOVE)
SEISMIC LOAD:	(SEE DESIGN LOADS ABOVE)
CODES:	2021 ARKANSAS FIRE PREVENTION CODE MBMA METAL BUILDING SYSTEMS MANUAL (LATEST EDITION) A.C.A. 12-80-101 ET. SEQ. (ARKANSAS STATE LAW)

SPECIAL INSPECTION NOTES

1. SPECIAL INSPECTIONS SHALL BE REQUIRED IN ACCORDANCE WITH CHAPTER 17 OF THE BUILDING CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS WITH THE INSPECTION AGENCY.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO PERFORM THE REQUIRED INSPECTION TO THE SATISFACTION OF THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS. INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
4. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
5. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES SHALL BE SUBMITTED TO THE OWNER, BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AT THE COMPLETION OF THE STRUCTURAL PORTION OF THE WORK.

SOIL TESTING AND INSPECTIONS

1. A QUALIFIED TESTING LABORATORY SHALL TEST ALL CONTROLLED STRUCTURAL FILL. A MINIMUM OF TWO SOIL COMPACTION TESTS SHALL BE MADE FOR EACH LIFT.
2. AFTER FOOTING EXCAVATIONS HAVE BEEN MADE TO DESIGN ELEVATIONS, THE INDEPEND