Inspections Division
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THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:

IBC 2009	EDITION OF THE IBC INTERNATIONAL BUILDING CODE
ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 301	AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ACI 318	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
NDS	NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BY NATIONAL FOREST PRODUCTS ASSOCIATION, 2005.

REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. REFERENCE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF WALL AND SLAB OPENINGS, DUCTS, PIPING, CURBS, AND EQUIPMENT PADS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, OR NOTES ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION.

EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DEVIATIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES.

THE STRUCTURE IS SELF-SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE AND ENSURE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL ENGINEER TO DESIGN TEMPORARY BRACING/SHORING AND DETERMINE WHERE THE TEMPORARY BRACING/SHORING IS NEEDED.

GENERAL NOTES

SCALE: NTS

LIVE LOAD:
LIVING SPACE = 40 PSF

SNOW LOADS:
GROUND SNOW LOAD, Pg = 60 PSF
SNOW EXPOSURE FACTOR, Ce = 1.0
SNOW LOAD IMPORTANCE FACTOR, I = 1.0
THERMAL FACTOR, Ct = 1.1
FLAT ROOF SNOW LOAD, Pf = 46.2 PSF + DRIFT

WIND LOADS:
BASIC WIND SPEED = 100 MPH
IMPORTANCE FACTOR, Iw = 1.0
WIND EXPOSURE B
MAIN WINDFORCE-RESISTING SYSTEM (INCLUDES WINDWARD + LEEWARD) = 12 PSF

DESIGN CRITERIA

SCALE: NTS

ALL CONCRETE WORK, INCLUDING MATERIAL SELECTION, ADMIXTURES, MIXING, AND PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES. IN ADDITION, REFERENCE THE FOLLOWING CONCRETE STANDARDS AND SPECIFICATIONS:

ACI 318 AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ACI 301 AMERICAN CONCRETE INSTITUTE SPECIFICATIONS FOR STRUCTURAL CONCRETE
ACI 305 STANDARD SPECIFICATION FOR HOT WEATHER CONCRETING
ACI 306 STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING
ACI 308 STANDARD PRACTICE FOR CURING CONCRETE

REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

LOCATION	MAX W/C RATIO	f'c	AIR-ENTRAINMENT
INT. CONC./WALLS/SLABS	.52	3,000 PSI	2% ± 1½%
FOUNDATIONS, FOOTINGS, & FOUNDATION WALLS	.52	3,000 PSI	5-7%
INT. SLAB-ON-GRADE	.47	4,000 PSI	2% ± 1½%
EXT. SLAB-ON-GRADE	.45	4,000 PSI	6% ± 1½%

WHERE: W/C = WATER TO CEMENT RATIO AND
f'c = COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS

MAXIMUM AGGREGATE SIZE SHALL BE ¾", IN CONFORMANCE WITH ASTM C33.
USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150.
AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260.
ADMIXTURES SHALL CONFORM TO "SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE" ASTM C 494.
FLY ASH USED AS ADMIXTURES SHALL CONFORM TO ASTM C 618.
CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE IS NOT PERMITTED.

MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 8 INCHES.

CONCRETE EXPOSED TO FREEZING AND THAWING, INCLUDING FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, AND EXTERIOR WALKWAYS SHALL BE AIR ENTRAINED WITH AIR CONTENT BETWEEN 5% AND 6%. CONTRACTOR SHALL NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING NEAR-FREEZING OR FREEZING WEATHER. REFERENCE ACI 306, AS NOTED ABOVE, FOR RECOMMENDATIONS FOR COLD WEATHER CONCRETING.

CONTRACTOR SHALL SUBMIT PROPOSED CONCRETE MIX DESIGN AND LABORATORY TESTS OF FABRICATED CYLINDERS VERIFYING CONCRETE STRENGTH OR PERFORMANCE HISTORY OF MIX TO ENGINEER FOR ACCEPTANCE PRIOR TO PLACEMENT OF CONCRETE. CONCRETE USED ON SITE SHALL BE FIELD TESTED IN ACCORDANCE WITH AND IN THE PRESENCE OF AN APPROVED TESTING AGENCY. FIELD TESTING INFORMATION SHALL INDICATE SLUMP, AIR CONTENT, AND TEMPERATURE. COMPRESSION TEST 1 CYLINDER AT 7 DAYS AND 2 AT 28 DAYS. HOLD AN ADDITIONAL CYLINDER FOR A 56 DAY BREAK, IF NECESSARY. PROVIDE A SET OF 4 CYLINDERS FOR EACH PLACEMENT AND PER 50 CUBIC YARDS OF CONCRETE PLACED. THE OWNER SHALL PAY FOR ALL CONCRETE TESTING.

CONSTRUCTION JOINTS IN WALLS SHALL BE PERMITTED AS DETAILED ON THE STRUCTURAL DRAWINGS. SURFACES OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL NOT EXCEED A SPACING OF 40 FEET.

WHERE ELECTRICAL CONDUIT/ RADIANT HEATING TUBES RUN IN THE SLAB, THEY SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. ALUMINUM CONDUIT AND SLEEVES ARE NOT PERMITTED.

ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

CONCRETE NOTES

SCALE: NTS

USE DEFORMED BILLET-STEEL REINFORCING BARS, GRADE 60, IN CONFORMANCE WITH ASTM A615. REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED PRIOR TO CONCRETE PLACEMENT, AND SHALL BE SECURED AGAINST DISPLACEMENT.

THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO COMMENCING FABRICATION. REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES". SHOP DRAWINGS SHALL SHOW REINFORCING STEEL PLACEMENT DETAILS AND SECTIONS.

MINIMUM CONCRETE COVER FOR REINFORCEMENT	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	2 INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN SLABS AND WALLS (FOR PRIMARY REINFORCEMENT, TIES, AND STIRRUPS)	1½ INCHES
CONCRETE NOT EXPOSED TO EARTH OF WEATHER IN COLUMNS AND BEAMS	1½ INCHES

CONTINUOUS REINFORCEMENT SHALL BE TENSION LAP SPLICED PER LAP SPLICE LENGTH TABLE, U.N.O..

LAP SPLICE LENGTH TABLE								
BAR SIZE	#3	#4	#5	#6	#7	#8	#9
MIN LAP SPLICE (INCHES)	18	24	30	36	48	64	81

REINFORCEMENT HOOKS SHALL CONFORM TO STANDARD HOOKS ACCORDING TO ACI 318.
WELDING OF REINFORCEMENT IS NOT PERMITTED, U.N.O.

CONCRETE REINFORCING NOTES

SCALE: NTS

SUBGRADE PREPARATION AND DETERMINATION (INCLUDING ALLOWABLE BEARING PRESSURE, STRUCTURAL FILL GRADATION REQUIREMENTS, COMPACTION REQUIREMENTS AND POST-CONSTRUCTION SETTLEMENT ANALYSIS) BENEATH FOOTINGS AND SLABS-ON-GRADE AND BEHIND FOUNDATION WALLS SHALL BE PROVIDED BY A GEOTECHNICAL ENGINEER. ALL FILL USED TO SUPPORT FOUNDATIONS AND SLABS-ON-GRADE SHALL CONSIST OF A WELL-GRADED, GRANULAR MATERIAL PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. STRUCTURAL SLABS SHALL BE CONSTRUCTED ON A MINIMUM 12" THICK LAYER OF STRUCTURAL FILL SOIL WITH PROPERTIES PER THE GEOTECHNICAL ENGINEER.

PRESUMED ALLOWABLE SOIL BEARING PRESSURE USED IN DESIGN = 2,000 PSF.
BEARING CAPACITIES SHALL BE VERIFIED BY GEOTECHNICAL ENGINEER.
MINIMUM FROST DEPTH COVER = 4'-6" FOR EXTERIOR FOOTINGS BELOW FINAL EXTERIOR GRADE. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

FOUNDATIONS SHALL BEAR ON UNDISTURBED NATIVE SOIL, UNLESS NOTED OTHERWISE. BEARING ELEVATIONS SHALL BE LOWERED WHERE SUITABLE SOILS ARE NOT ENCOUNTERED. WHERE OVEREXCAVATION HAS OCCURRED, CONTRACTOR MAY PLACE LEAN CONCRETE ON TOP OF NATIVE SOIL. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEER IF ANY UNSUITABLE SOILS ARE ENCOUNTERED PRIOR TO PLACING FOUNDATIONS.

FOUNDATION WALLS SHALL BE BACKFILLED SIMULTANEOUSLY ON BOTH SIDES OF THE WALL. FOUNDATION WALLS AND SLAB-ON-GRADES SHALL REACH THEIR FULL 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING FOR WALLS WHEN BACKFILL IS PLACED PRIOR TO CONCRETE ACHIEVING ITS FULL 28 DAY STRENGTH. BACKFILL FOR FOUNDATION WALLS IS BASED ON DRAINED CONDITIONS. SEE ARCHITECTURAL, CIVIL, AND MECHANICAL DRAWINGS FOR FOUNDATION DRAINAGE SYSTEM.

PROTECT FOUNDATIONS FROM FROST AND KEEP BOTTOM OF TRENCH DRY DURING CONSTRUCTION. IF GROUNDWATER IS ENCOUNTERED NEAR OR ABOVE THE BASE OF THE FOOTINGS, EXCAVATIONS SHALL BE DEWATERED DURING CONSTRUCTION. SURFACE WATER SHALL BE DIVERTED AWAY FROM EXCAVATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHORING AND BRACING OF EXISTING STRUCTURES DURING EXCAVATION, BACKFILLING, AND CONSTRUCTION. CONTRACTOR SHALL SLOPE EXCAVATIONS TO ACHIEVE SOIL STABILITY.

FOUNDATION NOTES

SCALE: NTS

ALL LUMBER SHALL BE VISUALLY GRADED AND STAMPED WITH GRADE DESIGNATION, SPECIES, AND ADDITIONAL INSPECTION INFORMATION, U.N.O..

CARE SHALL BE TAKEN TO PROTECT TIMBER FROM WEATHER AND DAMPNESS. DO NOT STACK IN SUCH A WAY AS TO CAUSE WARPING OR PREVENT ADEQUATE AIR CIRCULATION.

WOOD GRADES AND SPECIES:
1. SPRUCE-PINE-FIR, No.1/No.2 OR BETTER FOR TYPICAL LUMBER (JOISTS, WALLS, ETC) U.N.O.
2. USE SOUTHERN YELLOW PINE FOR EXTERIOR EXPOSURE APPLICATIONS AND WHERE SHOWN ON DRAWINGS AS PRESERVATIVE PRESSURE TREATED LUMBER (PT OR PPT).
3. WHERE NOTED LVL ON DRAWINGS, PROVIDE VERSA LAM 3100 BY BOISE CASCADE, OR EQUIVALENT, WHICH HAS THE FOLLOWING MINIMUM ALLOWABLE STRESSES:

A. LVL PROPERTIES:
Fb = 3100 PSI Fc = 2510 PSI (PARALLEL TO GRAIN)
Fv = 285 PSI Fc = 750 PSI (PERPENDICULAR TO GRAIN)
Ft = 1555 PSI E = 2,000,000 PSI

STRUCTURAL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%.

PROVIDE PRESSURE TREATED OR WOLVANIZED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE. ALL CONNECTORS THAT ARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP GALVANIZED, U.N.O.

NOMINAL SIZES ARE TYPICALLY REFERENCED ON THE DRAWINGS. PROVIDE ACTUAL SIZES AS SET FORTH IN U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD PS20-99.

ALL PLYWOOD SHALL BE APA RATED CDX SHEATHING:
1. USE ½" PLYWOOD WALL SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO WALL STUDS. STAGGER PANEL ENDS AND BLOCK ALL PANEL EDGES.
2. USE ⅝" PLYWOOD ROOF SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS. USE SHEATHING CLIPS BETWEEN SHEETS WHERE BLOCKING IS NOT REQUIRED.
3. USE ¾" PLYWOOD FLOOR SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS.

PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL JOISTS AND RAFTERS WHERE JOISTS AND RAFTERS FRAME OVER SUPPORTS. PROVIDE 1x3 DIAGONAL BRIDGING OR FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" OF SPAN FOR ALL JOISTS AND RAFTERS.

WHERE BEAMS ARE LABELED ON PLAN, DO NOT SPLICE BEAM NOR ANY PLY OF BEAM BETWEEN SUPPORTS.

FASTENERS SHALL COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF REFERENCED BUILDING CODE, U.N.O. ON DRAWINGS, SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" O.C. STAGGERED, UNLESS OTHERWISE NOTED IN BOCA OR ON THE DRAWINGS. NAIL MULTIPLE LVL'S TOGETHER AS RECOMMENDED BY THE MANUFACTURER USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" o.c. STAGGERED. ALL FASTENERS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED.

ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT.

PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.

SUBMIT SHOP DRAWINGS FOR ALL PREFABRICATED WOOD JOISTS AND WALL PANELS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

WOOD NOTES

SCALE: NTS

ALL STRUCTURAL STEEL WORK SHALL CONFORM TO:

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, NINTH EDITION
AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES

STRUCTURAL STEEL MEMBERS SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

ALL STEEL, U.N.O.	ASTM A992, GRADE 50
ANGLES, PLATES	ASTM A36, Fy=36 KSI
STRUCTURAL TUBING	ASTM A500, GRADE B, Fy=46 KSI
STEEL PIPE	ASTM A53, TYPE E OR S, GRADE B, Fy=35 KSI

SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO COMMENCING FABRICATION.

SHOP DRAWINGS SUBMITTALS SHALL INCLUDE:
1. CERTIFIED MILL TEST REPORTS OF STRUCTURAL STEEL (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
2. CERTIFIED MILL TEST REPORTS OF BOLTS, NUTS AND WASHERS (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
3. STRUCTURAL STEEL FABRICATION AND ERECTION DRAWINGS WHICH INCLUDE BOLTED CONNECTIONS (SHOP AND FIELD) AND WELDED CONNECTIONS (SHOP AND FIELD) DEPICTING AWS WELDING SYMBOLS.
4. METAL DECK SHOP DRAWINGS DEPICTING SHEAR STUD LAYOUT ON BEAMS AND GIRDERS.

OWNER SHALL RETAIN A QUALIFIED TESTING AGENCY TO PERFORM AND VERIFY THE FOLLOWING:
1. VISUAL INSPECTION OF ALL WELDS.
2. ULTRASONIC TESTING, IN ACCORDANCE WITH ASTM E-164, ON 100% OF ALL FIELD FULL PENETRATION WELDS.
3. PROVIDE RANDOM VERIFICATION VIA ULTRASONIC TESTING OF SHOP FULL PENETRATION WELDS.
4. FIELD BOLTED CONNECTIONS, INCLUDING VERIFICATION OF BOLT GRADES.
5. SHEAR STUD QUANTITY, PROPER INSTALLATION, SIZE, AND SPACING. SHEAR STUDS SHALL CONFORM TO AWS D1.1.

BOLTED CONNECTIONS:
1. FIELD CONNECTIONS SHALL UTILIZE MINIMUM ¾" DIAMETER A325 HIGH STRENGTH BOLTS, U.N.O.. BOLTED CONNECTION SHALL BE SLIP CRITICAL (SC) AT ALL MOMENT FRAMES, BRACED FRAMES, AND AT ADDITIONAL LOCATIONS INDICATED IN THE DRAWINGS. SLIP CRITICAL CONNECTIONS SHALL UTILIZE LOAD INDICATOR WASHERS OR TENSION CONTROL BOLTS. BOLT HOLES SHALL BE STANDARD SIZE, U.N.O..
2. HIGH STRENGTH BOLTS SHALL BE INSTALLED AND TIGHTENED PER AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36, STANDARD HEX HEAD FURNISHED WITH HEAVY HEX NUTS AND LOCK WASHERS.
4. CONTRACTOR SHALL DESIGN CONNECTIONS NOT ALREADY DETAILED ON STRUCTURAL DRAWINGS. DESIGN SHALL BE STAMPED BY A LICENSED STRUCTURAL ENGINEER AND SUBMITTED PRIOR TO COMMENCING FABRICATION.

WELDED CONNECTIONS:
1. WELDING SHALL CONFORM TO AWS D1.1. USE LOW-HYDROGEN SMAW ELECTRODES WITH MINIMUM TENSILE STRENGTH OF 70 KSI.

STRUCTURAL STEEL SHALL RECEIVE THE FOLLOWING PROTECTIVE COATINGS:
1. DO NOT PAINT SURFACES TO RECEIVE METAL DECK AND/ OR SHEAR CONNECTORS FASTENED BY WELDING, CONTACT SURFACES OF HIGH STRENGTH BOLTED CONNECTIONS, FINISHED BEARING SURFACES, AND SURFACES TO BE WELDED IN THE FIELD. IF REQUIRED, PROTECT THESE SURFACES BY RUST-INHIBITING COATING THAT CAN BE REMOVED EASILY PRIOR TO ERECTION.
2. UNEXPOSED STRUCTURAL STEEL SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP3 AND PAINTED WITH PRIMER PAINT, TNEMEC 10-99, OR EQUIVALENT, U.N.O..
3. EXPOSED STRUCTURAL STEEL TO RECEIVE ZINC-RICH EPOXY PAINT SHALL BE FIRST CLEANED IN ACCORDANCE WITH SSPC-SP6 ,COMMERCIAL BLAST CLEANING. USE TNEMEC ZIN-RICH EPOXY PAINT, OR EQUIVALENT. APPLY FINISH COAT PER ARCHITECT.
4. EXPOSED STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED SHALL BE IN ACCORDANCE WITH ASTM A123.

SHEAR CONNECTOR STUDS:
1. SHEAR CONNECTOR STUDS SHALL BE NELSON, OR EQUIVALENT, ¾" DIAMETER, U.N.O.. WELD STUDS PER STUD MANUFACTURER'S RECOMMENDATIONS THROUGH METAL DECKING. STUD LENGTH SHALL BE 1" BELOW TOP OF CONCRETE SLAB-ON-DECK.
2. SHEAR STUDS, WHERE REQUIRED, ARE INDICATED ON THE DRAWINGS AS [XX], WHERE XX IS THE NUMBER OF STUDS EQUALLY SPACED BETWEEN SUPPORTS ON A BEAM OR GIRDER.

STRUCTURAL STEEL NOTES

SCALE: NTS

AB	ANCHOR BOLT	L	ANGLE
ADDL	ADDITIONAL	LL	DOUBLE ANGLE
ARCH	ARCHITECT	LB	POUND
&	AND	LF	LINEAR FOOT
		LLH	LONG LEG HORIZONTAL
B/FTG, BOF	BOTTOM OF FOOTING	LLV	LONG LEG VERTICAL
BLDG	BUILDING		
BM	BEAM	MAX	MAXIMUM
BOT	BOTTOM	MECH	MECHANICAL
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MIN	MINIMUM
		MISC	MISCELLANEOUS
C	STRUCTURAL STEEL CHANNEL		
CANT	CANTILEVER	NF	NEAR FACE
CIP	CAST-IN-PLACE CONCRETE	NO	NUMBER
CJ	CONTROL JOINT	NS	NEAR SIDE
CL	CENTERLINE	NTS	NOT TO SCALE
CLR	CLEAR		
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER
CNJ	CONSTRUCTION JOINT	OF	OUTSIDE FACE
COL	COLUMN	OPNG	OPENING
CONC	CONCRETE	OPP	OPPOSITE
CONN	CONNECTION		
CONT	CONTINUOUS	P	PIER DESIGNATION
CONTR	CONTRACTOR	PL	PLATE
CP	COMPLETE PENETRATION WELD	PP	PARTIAL PENETRATION WELD
CY	CUBIC YARD	PREFAB	PREFABRICATED
		PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION		
DISCONT	DISCONTINUOUS	REINF	REINFORCING STEEL
DWG	DRAWING	REQ, REQD	REQUIRED
		RD	ROOF DRAIN
(E), EX, EXIST	EXISTING		
EA	EACH	SC	SLIP CRITICAL
EF	EACH FACE	SECT	SECTION
EL, ELEV	ELEVATION	SHEATH	SHEATHING
EQ	EQUAL	SIM	SIMILAR
EQUIP	EQUIPMENT	SOG	SLAB-ON-GRADE
ES	EACH SIDE	SPAC	SPACING
EW	EACH WAY	SPECS	SPECIFICATIONS
EXP	EXPANSION	SS	STAINLESS STEEL
EXT	EXTERIOR	STD	STANDARD
		STIFF	STIFFENER
F	FOOTING DESIGNATION	STL	STEEL
FDN	FOUNDATION	STR	STRAIGHT
FF	FINISH FLOOR	STRUCT	STRUCTURAL
FLG	FLANGE		
FLR	FLOOR	T	TOP
FT	FOOT	T&B	TOP AND BOTTOM
FTG	FOOTING	TOC, T/CONC	TOP OF CONCRETE
FV	FIELD VERIFY	T/FTG, TOF	TOP OF FOOTING
		TEMP	TEMPERATURE
G	GAGE	T/SHELF	TOP OF SHELF
GALV	GALVANIZED	T/SLAB	TOP OF SLAB
		T/STL	TOP OF STEEL
HOR, HORIZ	HORIZONTAL	T/WALL	TOP OF WALL
HSS	HOLLOW STRUCTURAL SHAPE	TS	STRUCTURAL TUBING
HT	HEIGHT	TYP	TYPICAL
IF	INSIDE FACE	UNO	UNLESS NOTED OTHERWISE
IN	INCH		
INFO	INFORMATION	VER, VERT	VERTICAL
		VIF	VERIFY IN FIELD
JT	JOINT		
		W	STRUCTURAL STEEL WIDE FLANGE
K	KIP (1 KIP = 1,000 LBS)	w/	WITH
KSI	KIPS PER SQUARE INCH	w/O	WITHOUT
		WP	WORK POINT
		WT	WEIGHT
		WWF	WELDED WIRE FABRIC

ABBREVIATIONS

SCALE: NTS

LEGEND

SCALE: NTS

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ISSUED

No.	DESCRIPTION	DR. BY	CKD. BY	DATE
A	ISSUED FOR PERMIT ONLY-NOT FOR CONSTRUCTION	SJP	ED	2-12-14

SHEET TITLE:
STRUCTURAL NOTES

DESIGNED:	SJP
DRAWN:	SJP
DATE:	1-15-14
PROJECT NUMBER:	14-003

S000