- ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE FLORIDA BUILDING CODE, 5TH EDITION, 2014.
- D2 DESIGN LOADS PER FLORIDA BLDG. CODE REFER TO SHEET S1.1 FOR GRAVITY LOADS (DL & LL) WIND DESIGN PER ASCE 7-10. EXPOSURE C, ENCLOSED BLDG.

V(ult.)=170 MPHV(ult.)=170 MPH V(all.)=132 MPH V(all.)=132 MPH RISK CATEGORY= II RISK CATEGORY= I qh(ult.)=54.8 PSF ah(ult.)=61.4 PSF qh(all.)=36.8 PSF qh(all.)=32.9 PSF Kd = 0.85Kd = 0.85

a=3'-0"D3 FOUNDATION DESIGN VALUES: 2500 PSF PER GEOTECHNICAL REPORT AS PREPARED BY: ARDAMAN & ASSOCIATES, INC. DATED: AUGUST 3th, 2015

TO THE BEST OF THE ENGINEER'S KNOWLEDGE. THE STRUCTURAL PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE LATEST EDITION.

GENERAL

a=6'-6'

- PREPARATION OF THE STRUCTURAL DOCUMENTS ASSUMES THE GENERAL CONTRACTOR HAS A MINIMUM OF 5 YEARS EXPERIENCE IN SIMILAR TYPE METHOD OF CONSTRUCTION. PRIOR TO START OF CONSTRUCTION ANY NOTES OR DETAILS THAT ARE NOT FULLY UNDERSTOOD SHALL BE BROUGHT TO THE A/E FIRM IN WRITING FOR CLARIFICATION.
- G2 THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, THE WORK PERSONS, AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERIOR OF THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.
- G4 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.
- THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ANCHORED, EMBEDDED, SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES
- G6 ATTACHMENT OF GLAZING AND DOORS TO BE PER DADE COUNTY - NOA.

SLAB ON GRADE

- SG1 UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT REFERENCED ABOVE COMPACT INTERIOR FILL TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) SOIL COMPACTION SHALL BE FIELD CONTROLLED BY REPRESENTATIVE TECHNICIAN OF QUALIFIED LABORATORY. EACH LAYER OF FILL SHALL NOT EXCEED 12" THICK AND SHALL BE COMPACTED PRIOR TO PLACEMENT OF NEXT LAYER.
- SG2 MINIMUM PLACEMENT OF CONTROL JOINTS SHALL BE AS SET IN THE TABLE BELOW. JOINTS OCCUR IN EACH DIRECTION.

SLAB	COLUMN SPACING (FT.)				
THK IN.	15' OR LESS	15'-1" TO 32'-0"	32-1" TO 48'-0"	48-1" TO 60'-0"	
4"	AT COL. GRID		AT COL. GRID & @ 1/3 POINTS (3 EQ.)	AT COL. GRID & @ 1/4 POINTS (4 EQ.)	
5"	AT COL. GRID	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & @ 1/3 POINTS (3 EQ.)	
6"	AT COL. GRID	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & 1/2 WAY BTWN (2 EQ)	AT COL. GRID & @ 1/3 POINTS (3 EQ.)	

<u>CONCRETE AND REINFORCING</u>

TYPICAL DETAILS)

- CONCRETE WORK SHALL CONFORM TO ACI CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-08)
- ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH & PROPERTIES AS FOLLOWS:

FOUNDATIONS SLAB ON GRADE	3000 PSI	SLUMP 6±1"	WATER/0.54
COLS. AND BEAMS	4000 PSI	5±1"	0.54
FILLED CELLS	3000 PSI	9±1"	0.62

- CONCRETE MIX DESIGN SUBMITTALS MUST INCLUDE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (e.g. FOUNDATIONS, SLAB-ON-GRADE, FILLED CELLS, COLUMNS, etc.). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.
- C4 REBARS SHALL CONFORM TO ASTM-615 GRADE 60. WIRE FABRIC SHALL CONFORM TO ASTM A-185.
- C5 MIMIMUM COVER FOR REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.

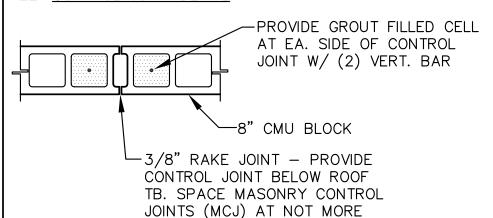
SLABS ON GRADE 1/2" FROM TOP 1 1/2" (ON TIES) COLS. AND BEAMS

- C6 SPLICES AND ANCHORAGE OF REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED. WELDED WIRE FABRIC 6"
- 36 DIA. (12" MIN) ALL OTHER C7 REINFORCEMENT IN WALLS, FOOTINGS AND BEAMS SHALL BE CONTINUOUS AND LAPPED AS SHOWN ON NOTE M11. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE
- TERMINATE ALL DISCONTINUED ELEVATED SLAB TOP BARS WITH A 180 DEGREE STANDARD HOOK UNLESS OTHERWISE
- CONTINUOUS TOP BARS SHALL BE SPLICED AT MIDSPAN. CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER-LINE OF SUPPORTS (OR AS SHOWN ON TYPICAL DETAILS).
- C10 AT CHANGES IN DIRECTION OF CONCRETE WALLS, STRIP FOOTINGS AND GRADE BEAMS PROVIDE CORNER BARS AT SAME SIZE AND SPACING AS HORIZONTAL BARS. (REFER TO B/S4.0)

MASONRY

- MASONRY CONSTRUCTION SHALL CONFORM TO ACI STANDARD BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 530-05/ASCE 5-05/TMS 402-05) SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-05 /ASCE 6-05/TMS 602-05) ASTM C476, ASTM C1019, AND NCMA TEK 107.
- M2 CONCRETE BLOCKS SHALL CONFORM TO ASTM C-90.

- MORTAR SHALL COMPLY WITH ASTM C270, TYPE M OR S. (COMPRESSIVE STRENGTH = 2500 PSI AND 1800 PSI, RESPECTIVELY. SITE TESTED MORTAR CUBES SHALL ACHIEVE A MINIMUM OF 80% OF THE DESIGN COMPRESSIVE STRENGTH)
- M4 BLOCK SHALL NOT BE MOISTENED BEFORE GROUTING.
- M5 ALL MASONRY CROSS WEBS SHALL BE FULLY BEDDED IN MORTAR AROUND CELLS TO BE GROUTED.
- THE MINIMUM CONTINUOUS UNOBSTRUCTED CELL AREA IN CELL TO RECEIVE GROUT MUST BE NOT LESS THAN 2"x3". MORTAR FINS MUST BE REMOVED AS BLOCK PLACEMENT PROCEEDS. MORTAR DROPPINGS MUST BE KEPT OUT OF CELLS WHICH ARE TO BE GROUTED.
- M7 REINFORCE WALLS WITH LADDER TYPE (ASTM A-82, #9 GAGE WIRE) REINFORCEMENT EQUAL TO DURO-WALL IN BED JOINTS AT 16" OC UNO, MEASURED VERTICALLY PLACE PER MFR INSTR. LAP ALL HORIZONTAL JOINT REINFORCING 8", MIN. EXTEND HORIZONTAL REINFORCEMENT 4 INCHES INTO CONC COLS. OR TIE COLS.
- WHERE SHOWN, CELLS OF BLOCK MASONRY SHALL BE FILLED WITH GROUT WITH MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, AND MEET ASTM C476. GROUT SHALL BE PROVIDED BY CONCRETE SUPPLIER FROM THEIR BATCH PLANT WITH A SLUMP OF 8" TO 10". JOB SITE MIXING OF GROUT SHALL NOT BE PERMITTED. TESTING SHALL CONFORM TO ASTM C1019.
- GROUT FOR FILLED CELLS SHALL BE POURED OR PUMPED IN LIFTS NOT TO EXCEED FOUR (4) FEET IN HEIGHT, AND A MAX POUR OF 12 FT. FILLED CELLS SHALL BE CONSOLIDATED AT TIME OF POURING BY RODDING OR VIBRATING BETWEEN LIFTS.
- M10 PROVIDE KNOCK-OUT CMU AT BASE OF EACH FILLED CELL TO ALLOW VISUAL VERIFICATION OF COMPLETE GROUT PENETRATION (FOR LIFTS OF 5'-0" OR LESS, A KNOCK-OUT AT BASE OF LIFT WILL NOT BE REQUIRED)
- VERTICAL REINFORCING MUST HAVE A MINIMUM CLEARANCE OF 1/2" TO INSIDE FACE. MIN VERTICAL BAR LAP = $48 \times BAR$ DIAMETER. VERTICAL REINFORCEMENT IN WALLS SHALL BE SECURED AND LATERALLY SUPPORTED AGAINST DISPLACEMENT AT INTERVALS NOT EXCEEDING 192 x BAR DIAMETER NOR 10 FT.
- M12 GROUT PLACEMENT STOPPED FOR (1) HOUR OR MORE SHOULD BE STOPPED (1 1/2") BELOW THE TOP OF THE MASONRY UNIT TO PROVIDE A KEY FOR SUBSEQUENT GROUTING.
- M13 SEE FOUNDATION PLANS FOR ALL VERT REINFORCING. TYP VERTICAL REINFORCING SIZE & SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.
- M14 TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING CONSTRUCTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
- M15 MASONRY CONSTRUCTION MATERIALS AND INSPECTIONS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI-ASCE 530.1)" EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE DOCUMENTS.
- M16 PROVIDE FILLED PRECAST U-LINTELS WITH (1) #5 CONT AT ALL OPENINGS WHERE CONCRETE BEAMS ARE NOT SHOWN OR NOTED MINIMUM UNFILLED LINTEL CAPACITY = 400 lb/LF FOR SPAN
- M17 STOPPING AND RESUMING WORK: RACK BACK 1/2-UNIT LENGTH IN EACH COURSE. DO NOT TOOTH. CLEAN EXPOSED SURFACES OF SET MASONRY WET UNITS LIGHTLY (IF REQ'D) AND REMOVE LOOSE MAS UNITS AND MORTAR PRIOR TO LAYING FRESH MASONRY.
- M18 REINFORCE MASONRY OPENINGS GREATER THAN 1'-0" WIDE, WITH HORIZ JT REINF PLACED IN (2) HORIZ JT'S APPROXIMATELY 8" APART IMMEDIATELY ABOVE THE LINTEL AND IMMEDIATELY BELOW THE SILL. EXTEND REINFORCING A MINIMUM OF 2'-0" BEYOND JAMBS OF THE OPENING EXCEPT AT CONTROL JOINTS. SEE PLAN FOR ADDITIONAL REQUIREMENTS.
- M19 DO NOT APPLY UNIFORM LOADS TO MASONRY WALLS FOR (3) DAYS. M20 DO NOT APPLY CONCENTRATED LOADS TO MASONRY WALLS FOR (7) DAYS.
- M21 EXTEND ALL VERTICAL WALL REINFORCEMENT TO WITHIN 2" OF TOP OF WALL OR BEAM UNLESS NOTED OTHERWISE. TERMINATE REIN-FORCING WITH STANDARD ACI HOOK.
- M22 CONTROL JOINT DETAIL



THAN 25'-0" O.C.

<u>STRUCTURAL STEEL</u>

- SS1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.
- SS2 STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATIONS" FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS", LATEST EDITION.
- SS3 STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE B.
- SS4 STRUCTURAL WF SHAPES SHALL BE TO ASTM A572 Fy=50KSI, UNLESS NOTED OTHERWISE. ALL OTHER SHAPES SHALL BE A36. ALL STRUCTURAL STEEL SHALL BE DOMESTICALLY PRODUCED.
- SS5 BRACE AND MAINTAIN ALL STEEL IN ALIGNMENT UNTIL OTHER PARTS OF CONSTRUCTION NECESSARY FOR PERMANENT SUPPORT ARE COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY SHORING AS REQUIRED FOR THE STABILITY OF THE STEEL FRAME UNTIL ALL STRUCTURAL
- ELEMENTS HAVE BEEN COMPLETED AND BUILDING IS ENCLOSED SS6 ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF "THE STANDARD CODE FOR WELDING IN BUILDING CONSTRUCTION" OF THE AMERICAN WELDING SOCIETY. WELDING ELECTRODES SHALL BE E70XX-LOW HYDROGEN FOR SHIELD AND METAL ARC

- SS7 GROUT FOR COLUMN BASE PLATES AND PRESET BEARING PLATES SHALL BE NON-SHRINK, NON-METALLIC GROUT. (5000 PSI MIN)
- SS8 SUBMIT SHOP DRAWINGS INDICATING ALL SHOP AND ERECTION DETAILS | SJ11 ALL SPRINKLER AND ROOF DRAIN PIPES MUST BE SUPPORTED INCLUDING PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTION ATTACHMENTS, FASTENERS, LOADS AND TOLERANCES.
- SS9 ALL WELDED CONN. SHALL BE 1/4" FILLET ALL AROUND, UNO. ALL BOLTED CONN. SHALL BE 3/4"\$\phi\$ A325 BOLTS, UNO.
- SS10 STEEL PAN STAIRS SHALL BE DESIGNED BY THE FABRICATOR AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS PROJECT LOCATION. DESIGN FOR 100 PSF LIVE LOAD.
- SS11 ALL STEEL EXPOSED TO WEATHER SHALL HAVE ZINC RICH PRIMER

PRE-ENGINEERED METAL STUD TRUSSES

- MST1 SEE ROOF FRAMING PLANS AND ARCHITECTURAL DRAWINGS FOR
- EXTENT, LAYOUT, PROFILES, AND SLOPES OF METAL STUD TRUSSES. MST2 ALL TRUSSES SHALL BE DESIGNED BY A SPECIALTY ENGINEER WITH
- WITH A MINIMUM OF 5 YEARS EXPERIENCE IN SIMILAR TYPE STRUCTURES. MST3 ALL TRUSSES SHALL BE TEMPORARY AND PERMANENTLY BRACED AS
- REQUIRED BY TRUSS MFR. MST4 MIN SIZE FOR ANY BRACE OR TRUSS MEMBER SHALL BE 3 5/8"-18 GA.
- MST5 SHOP DRAWINGS, INCLUDING PLANS, DETAILS AND CALCULATIONS SHALL BE SUBMITTED TO A/E FOR REVIEW PRIOR TO FABRICATION. CALCULATIONS SHALL BE SIGNED & SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER.

<u>STRUCTURAL METAL STUDS</u>

- SMS1. METAL STUD VERTICAL FRAMING SIZES TO BE PER SECTIONS. MAX SPACING TO BE 16" O.C.
- SMS2. PROVIDE MECHANICAL BRIDGING AT 4'-0" O.C. VERTICAL SPACING. -REFER TO STUD MFR'S STANDARD DETAILS FOR TYPICAL BRIDGING TYPES AND INSTALLATION METHODS.
- SMS4. MINIMUM BACK- TO BACK STUD CONNECTIONS TO BE WITH (2) # 10 TEKS @ 16" O.C. VERT. SPACING.
- SMS5. CONNECTING CLIP ANGLE GAGE TO MATCH HEAVIEST GAGE OF CONNECTING MATERIAL U.N.O..
- <u>METAL DECKING</u> MD1a ROOF DECKING SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE AND SHALL BE 1.5" TYPE "B" GALV. G90, METAL ROOF DECK. REFER TO ROOF PLAN FOR DECK GAGE.
- MD1b FLOOR DECKING SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE AND SHALL BE 3.0" TYPE "3VLI" GALV. G90, METAL FLOOR DECK. REFER TO FLOOR PLAN FOR DECK GAGE.
- MD2 UNLESS OTHERWISE NOTED ON ROOF FRAMING PLAN, ATTACH METAL ROOF DECK USING 5/8" PUDDLE WELDS IN ACCORDANCE WITH SDI PATTERN 36/7 AT ALL SUPPORTS. USE (9) #10 TEKS SIDELAP SCREW FASTENERS, EQUALLY SPACED BETWEEN SUPPORTS.
- MD3 FRAME ALL ROOF OPENINGS LARGER THAN 12 SQUARE INCHES WITH STEEL FRAMING. (L 2 1/2"x2 1/2"x1/4" TYPICAL)

EXPANSION ANCHORS

- EA1. CARBON STEEL EXPANSION ANCHORS SHALL HAVE A ONE PIECE ANCHOR BODY WITH A LENGTH IDENTIFICATION CODE. THE ANCHORS SHALL HAVE AN EXPANSION MECHANISM WHICH CONSISTS OF A PAIR OF INTERLOCKING INDEPENDENT WEDGES. CARBON STEEL COMPONENTS SHALL BE PLATED ACCORDING TO ASTM SPECIFICATION B 633. EXPANSION ANCHORS MUST MEET THE FEDERAL SPECIFICATION FF-S-325 FOR CONCRETE EXPANSION ANCHORS.
- EA2.EXPANSION ANCHORS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- EA3.EXPANSION ANCHORS SHALL HAVE A MINIMUM ULTIMATE TENSILE AND SHEAR LOADS (LBS) AS SHOWN IN SCHEDULE BELOW:

DIA.	EMBEDMENT	f'c=3,000 psi f'c=4,000 psi INSTA		f'c=4,000 psi		INSTALLATION TORQUE (ft/lbs)
	(IN)	TENSILE	SHEAR	TENSILE	SHEAR	TORQUE (ft/lbs)
1/2"	3 1/2 6"	4925 8000 8650	7360 9200 9200	5450 9000 9500	7360 9200 9200	65
5/8"	2 3/4" 4" 7"	7000 10670 13000	11500 14200 14200	8000 12350 14000	11500 14200 14200	110
3/4"	4 3/4" 8"	8700 15500 18500	15500 19200 19200	10000 18000 22000	15500 19200 19200	235
1"	4 1/2" 6" 9"	15200 22500 28750	28500 34500 34500	17500 26500 32500	30500 34500 34500	450

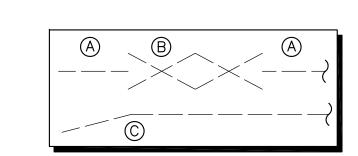
- SJ1 GENERAL CONTRACTOR SHALL ENGAGE A CERTIFIED TESTING AGENCY TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (II PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER
- ALL DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS AND BRIDGING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT SPECIFICATIONS OF STEEL JOIST INSTITUTE AND RECOMMENDED CODE OF STANDARD PRACTICE
- THE ENDS OF ALL BRIDGING LINES TERMINATING AT WALLS OR BEAMS SHALL BE ANCHORED TO THE WALL OR BEAM.
- SJ4 ALL STEEL JOISTS ARE TO BE CAMBERED AS SPECIFIED BY SJI.
- PROVIDE BOTTOM AND/OR TOP CHORD EXTENSIONS AS SHOWN ON DRAWINGS.
- SJ6 UNLESS NOTED OTHERWISE, MINIMUM JOIST BEARING SHALL BE 2 1/2" ON A STEEL MEMBER OR EMBED PLATE. BRIDGING SHALL BE FURNISHED AND INSTALLED TO MEET THE
- SIZE AND SPACING REQUIREMENTS OF THE SJI STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE COMPLETELY INSTALLED BEFORE CONSTRUCTION LOADS ARE PLACED ON THE JOISTS THE LAST TWO JOIST SPACES IN A LINE OF BRIDGING SHALL BE "X" TYPE. ALL JOISTS 40'-0" OR LONGER REQUIRE A ROW OF BOLTED BRIDGING TO BE IN PLACE BEFORE SLACKENING OF HOISTING LINES. OTHER JOISTS REQUIRE SIMILAR BRIDGING CONSULT LATEST SJI SPECIFICATIONS.
- ALL HANGERS TO SUPPORT MECHANICAL EQUIPMENT, ETC. TO BE SUPPORTED BY THE BOTTOM CHORD OF JOISTS SHALL BE LOCATED AT THE PANEL POINT OF THE JOIST. IF HANGERS MUST BE LOCATED BETWEEN PANEL POINTS, PROVIDE JOIST STIFFENERS. L1 1/2 x 1 1/2 x 3/16 JOIST STIFFENERS MUST BE INSTALLED FROM HANGER TO OPPOSITE CHORD PANEL POINT BEFORE LOAD IS APPLIED.
- CONTRACTOR TO FURNISH BAR JOIST CERTIFICATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION.

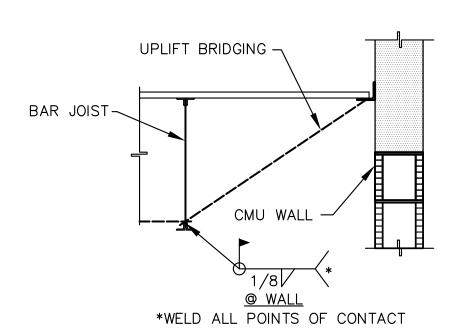
SJ10 FOR NET UPLIFT SEE NET UPLIFT PLAN ON SHEET S2.1 PROVIDE UPLIFT BRIDGING.

- NO FURTHER THAN 3" FROM THE JOIST TOP CHORD PANEL POINTS. THIS WILL BE STRICTLY ENFORCED. WHEN PIPES ARE PERPENDICULAR TO JOISTS, HANGERS SHALL BE PROVIDED EVERY OTHER JOIST (APPROX 10'-0" OC). WHEN PIPES ARE PARALLEL TO JOISTS, TWO CASES EXIST. FIRST, PIPES THAT ARE 4" AND LESS MAY BE SUPPORTED BY A SINGLE JOIST WITH HANGERS NOT TO EXCEED 10'-0" OC. SECOND, PIPES THAT ARE LARGER THAN 4" MUST BE CENTERED BETWEEN TWO JOISTS AND SUPPORTED FROM L4x4x5/16 ANGLE BEARING ON JOIST TOP CHORD PANEL POINTS WITH SPACING NOT TO EXCEED 10'-0" OC. GENERAL CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS WITH THE APPROPRIATE TRADES.
- SJ12 ALL ITEMS SUSPENDED FROM JOISTS (i.e. CATWALKS, BALCONIES, OPERABLE PARTITIONS, etc...) SHALL BE INSTALLED AFTER DEAD LOAD HAS BEEN APPLIED.

JOIST BRIDGING NOTES

- BRIDGING STANDARD WITH THE MANUFACTURER AND COMPLYING WITH THE STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS LOAD TABLES & WEIGHT TABLES OF THE LATEST ADOPTION SHALL BE USED FOR BRIDGING ALL JOISTS FURNISHED BY THE MANUFACTURER. POSITIVE ANCHORAGE SHALL BE PROVIDED AT THE ENDS OF EACH BRIDGING ROW AT BOTH TOP AND BOTTOM CHORDS.
- FOR "K" AND "LH" SERIES JOISTS HORIZONTAL BRIDGING IS RECOMMENDED FOR SPANS UP TO AND INCLUDING 60 FEET EXCEPT WHERE THE STEEL JOIST INSTITUTE STANDARD SPEC LOAD TABLES & WEIGHT TABLES REQUIRE BOLTED DIAGONAL BRIDGING FOR ERECTION STABILITY.
- "LH" AND "DLH" SERIES JOISTS EXCEEDING 60 FEET IN LENGTH SHALL HAVE BOLTED DIAGONAL BRIDGING FOR ALL ROWS.
- JB4 REFER TO SJI SECTION 6 IN THE "K" SERIES SPECIFICATIONS AND SECTION 105 IN THE "LH" AND "DLH" SERIES SPECIFICATIONS FOR ERECTION STABILITY REQUIREMENTS
- JB5 REFER TO APPENDIX E FOR OSHA STEEL JOIST ERECTION STABILITY REQUIREMENTS.
- HORIZONTAL BRIDGING SHALL CONSISTS OF CONTINUOUS HORIZONTAL STEEL MEMBERS. THE I/r RATIO FOR HORIZONTAL BRIDGING SHALL NOT EXCEED 300.
- DIAGONAL CROSS BRIDGING CONSISTING OF ANGLES OR OTHER SHAPES CONNECTED TO THE TOP AND BOTTOM CHORDS, OF "K", "LH", AND "DLH" SERIES JOISTS SHALL BE USED WHEN REQUIRED BY THE APPLICABLE STEEL JOIST INSTITUTE STANDARD SPECIFCATIONS LOAD TABLES AND WEIGHT TABLES OF LATEST ADOPTION.
- JB8 DIAGONAL BRIDGING, WHEN USED, SHALL HAVE AN I/r RATIO < 200.
- JB9 WHEN BOLTED DIAGONAL ERECTION BRIDGING IS REQUIRED, THE FOLLOWING SHALL APPLY: A. THE BRIDGING SHALL BE INDICATED ON THE JOIST LAYOUT PLAN | FF B. THE JOIST LAYOUT PLAN SHALL BE THE EXCLUSIVE INDICATOR
 - FOR THE PROPER PLACEMENT OF THIS BRIDGING. C. SHOP INSTALLED BRIDGING CLIPS, OR FUNCTIONAL EQUIVALENT SHALL BE PROVIDED WHERE THE BRIDGING BOLTS TO THE
 - STEEL JOISTS. D. WHEN TWO PIECES OF BRIDGING ARE ATTACHED TO THE STEEL JOIST BY A COMMON BOLT, THE NUT THAT SECURES THE FIRST PIECE OF BRIDGING SHALL NOT BE REMOVED FROM THE
 - BOLT FOR THE ATTACHMENT OF THE SECOND PIECE. BRIDGING ATTACHMENTS SHALL NOT PROTRUDE ABOVE THE TOP CHORD OF THE STEEL JOISTS.
- JB10 PROVIDE UPLIFT BRIDGING AT FIRST BOTTOM CHORD PANEL POINT EACH END OF JOIST. REFER TO SECTION B/S4 FOR UPLIFT BRIDGING CONNECTION DETAILS
- JB11 DO NOT WELD BRIDGING TO JOIST WEB MEMBERS. DO NOT HANG ANY MECHANICAL, ELECTRICAL, PLUMBING, ETC FROM BRIDGING
 - JB12 BRIDGING LEGEND FOR PLAN BELOW:
 - A HORIZONTAL BRIDGING ATTACHED TO TOP AND BOTTOM CHORD
 - (B) BOLTED OR WELDED CROSS BRIDGING AS SHOWN
 - (C) SINGLE LINE HORIZONTAL UPLIFT BRIDGING





BRIDGING DETAILS AND PLAN

ート BRIDGING |TYP. UPLIF BRIDGING LAST BAY HORIZONTAL-JST BRG WALL AT WALLS.

MAXIMUM METAL BUILDING MFR MOMENT CONNECTION MASONRY CONTROL JT **MECHANICAL** MEZZANINE MANUFACTURE(ER) MINIMUM MASONRY OPENING METAL STUD METAL NEAR SIDE NOT TO SCALE OVERALL ON CENTER OUTSIDE DIA OUTSIDE FACE **OPENING OPPOSITE** POWDER ACTUATED **FASTENERS PERPENDICULAR PRECAST** PLATE PLYWOOD PANEL POUNDS PER SQUARE FOOT POUNDS PER

SQUARE INCH

REINFORCE(D) (ING)

PARTITION

REFERENCE

RADIUS

REQUIRE

REQUIRED

RETURN

SCHEDULE

SECTION

SHEET

SLOPE

SPACE(S)

SQUARE

STEEL

STANDARD

STRENGTH

TIE BEAM

STRUCTURAL

SHEAR WALL

SYMMETRICAL

TOP & BOTTOM

SIMILAR

SLAB EDGE

SAWCUT JOINT

SPECIFICATIONS

STAINLESS STEEL

STEEL JOIST INSTITUTE

RETAINING WALL

ROOF

MASONRY

STRUCTURAL ABBREVIATIONS

MAX

MBM

MECH

MEZZ

MFR

MIN

OPNG

OPP

PAF

PERP

PLYWD

PSF

REINF

REQ

SCH

SECT

SHT

SIM

SPECS

STD

STR

STRL

SYMM

SW

SYP

T&B

WWF

OR BEAM

PLAN

-SEE JOIST LAYOUT

TRUCTURAL

: markj@johnsonstructural.com JOHNSONSTRUCTURAL.COM

REQ'D

ANCHOR BOLT

INSTITUTE

ADDITIONAL

AGGREGATE

ALUMINUM

ALTERNATE

SOCIETY

BUILDING

BELOW

BOTTOM

BRIDGING

BEARING

BETWEEN

BRICK

BEAM

BOTTOM OF

BOND BEAM

BASE PLATE

BOTH SIDES

CANTILEVER

CENTERLINE

COLUMN

CENTER

CENTERED

DIAMETER

DOWN

DETAIL

DRAWING

EACH END

ENGINEER

ELEVATION

EACH SIDE

EACH WAY

EXTERIOR

FACE OF

FINISH

FLOOR

FLANGE

FAR SIDE

FOOTING

GRADE

HOOK

GAGE, GAUGE

GRADE BEAM

GLU-LAM BEAM

HOLLOW CORE

HORIZONTAL

HIGH POINT

INSIDE FACE

KNOCK OUT

LIVE LOAD

LONGITUDINAL

LOW POINT

LONG LEG HORIZONTAL

LONG SLOTTED HOLES

LONG LEG VERTICAL

INTERIOR

JOIST

LONG

LINTEL

HEADED STUD

INSIDE DIAMETER

GENERAL CONTRACTOR

GALVANIZE

FLOOR DRAIN

FOUNDATION

EACH FACE

DOWEL

EACH

DEAD LOAD

CONCRETE

CONNECTION

CONTINUOUS

CONTRACTOR

COUNTER SINK

CLEAR(ANCE)

BOLTED TIE JOIST

CONCRETE BEAM

CONCRETE COL

CAST IN PLACE

CENTER TO CENTER

CONSTRUCTION JOINT

CONCRETE MASONRY

CONCRETE MASONRY UNIT

OR CONTROL JOINT

AMERICAN CONCRETE

ABOVE FINISH FLOOR

AMERICAN INSTITUTE OF

STEEL CONSTRUCTION

AMERICAN SOCIETY OF

TESTING MATERIALS

AMERICAN WELDING

AMERICAN IRON AND

STEEL INSTITUTE

ARCHITECT(URAL)

ABV

A.C.I.

ADD'L

AGGR

A.I.S.C.

A.I.S.I.

ARCH

A.W.S.

BLDG

BLW

ВМ

ВОТ

BRDG

BRK

l BTJ

BTWN

CANT

CC

CIP

CM

CMU

COL

CONC

CONN

CONT

CSK

CTR

CTR'D

DIA

DWG

FDN

FIN

GALV

GLB

HORIZ

ΙKΟ

LNTL

LONG

CONTR

A.S.T.M.

AFF

SOUTHERN YELLOW PINE

. Z Ш EARNING (
stgate Aven ach Court $\overline{\Xi}$

09.09.16 BID/PERMIT

EXPANSION JOINT TIE COLUMN TURN DOWN SLAB TEMPERATURE THICK EQUAL SPACE(S) (ING) THNS THICKEN SLAB TOP'G TOPPING TYP TYPICAL TOP OF UNO UNLESS NOTED OTHERWISE \bigcirc VERT **VERTICAL** WALL FOOTING $\overline{\mathcal{O}}$ WINDOW OPENING (MASONRY)

WORKING POINT

WELDED WIRE FABRIC

WATERSTOP

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(f'm = 1500 PSI) (1900 PSI ON THE NET AREA)