# STRUCTURAL GENERAL NOTES cont'd

- 6. PLACE AND SECURE ANCHOR RODS IN FOOTING EXCAVATION PRIOR TO POURING CONCRETE FOR FOOTING. DO NOT PLACE ANCHOR
- RODS IN WET CONCRETE
- 7. PROVIDE LEVELING NUTS OR SHIM PACKS AS REQUIRED TO LEVEL COLUMN BASE PLATES. IF SHIM PACKS ARE USED, ENCASE SHIM PACKS WITH 1" MIN COVER OF NON-SHRINK GROUT WHEN PLACING GROUT UNDER BASE PLATE.
- 8. CONNECTION DETAILING:
- a. CONNECTIONS SHALL BE DETAILED AS INDICATED IN THE DRAWINGS, UNO.
- 9. ALL STEEL FABRICATION AND ERECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.
- 10. THE STRUCTURAL STEEL FRAMING FABRICATOR SHALL BE AN AISC CERTIFIED BUILDING FABRICATOR (BU). 11. ALL STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE REQUIREMENT OF THE LATEST AISC SPECIFICATIONS WITH LATEST
- REVISIONS. 12. SUPPLY STRUCTURAL STEEL FRAMING CONNECTIONS THAT COMPLY WITH OSHA STANDARDS. IF MEETING THESE STANDARDS CONFLICTS WITH ANYTHING SHOWN IN THESE DRAWINGS THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING ADVISING OF ANY REQUIRED REVISIONS AND ACQUIRE THE ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE WORK.
- 13. THE MINIMUM PLATE THICKNESS SHALL BE 1/4", THE MINIMUM WELD SHALL HAVE A 1/4" THICK THROAT, THE MINIMUM BOLT DIAMETER SHALL BE 3/4", AND THE MINIMUM CONNECTION SHALL BE TWO BOLTS, U.N.O.
- 14. ALL COLUMN BEARING PLATES SHALL BE SIZED AS SHOWN ON DETAIL 4/S-302 AND SHALL HAVE ROLLED OR GAS CUT EDGES MINIMUM EDGE DISTANCE TO CENTER OF BOLT HOLE, SPACING OF HOLES, AND SIZES OF HOLES SHALL BE AS PER AISC MANUAL UNLESS NOTED OTHERWISE.
- 15. ALL STEEL NOT REQUIRED TO BE SHOP PAINTED (SEE SPECIFICATIONS) SHALL BE CLEANED OF OIL, GREASE, DIRT, RUST, LOOSE MILL SCALE, ETC. AND ALL OTHER FOREIGN MATERIALS.
- 16. GALVANIZING OF ALL STEEL MEMBERS SHALL CONFORM TO ASTM A123. ALL GALVANIZED STEEL REQUIRED TO BE PAINTED SHALL BE CLEANED AND PREPPED ACCORDING TO ASTM D6386.
- 17. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS LATEST EDITIONS. WELDING SHALL BE INSPECTED AND TESTED AS NOTED IN THE SPECIFICATIONS. WELDING INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELDING INSPECTOR.
- 18. THE STEEL FRAME IS CLASSIFIED AS A NON-SELF SUPPORTING STEEL FRAME WHICH RELIES ON EXTERIOR LOAD BEARING SHEAR WALLS FOR LATERAL STABILITY OF THE STEEL FRAME. TEMPORARY BRACES USED FOR ERECTION OF THE STEEL FRAME SHALL NOT BE REMOVED UNTIL THE ROOF DECK AND SHEAR WALLS ARE IN PLACE AND CONNECTED TO THE STEEL FRAME AS SHOWN ON THE CONTRACT DOCUMENTS.

## J. STEEL ROOF DECKING:

- 1. THE DESIGN, FABRICATION, AND ERECTION OF STEEL DECKING SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE LATEST SDI STANDARDS AND SPECIFICATIONS:
- a. STEEL ROOF DECK: ANSI/SDI RD-2017, STANDARD FOR STEEL ROOF DECK.
- 2. STEEL DECKING FOR THE CONSTRUCTION OF ROOF DIAPHRAGMS IS BASED ON THE SDI DIAPHRAGM DESIGN MANUAL (FOURTH EDITION) AND AISI S310, NORTH AMERICAN STANDARD FOR THE DESIGN OF PROFILED STEEL DIAPHRAGM PANELS.
- 3. STEEL DECK SHALL BE ATTACHED TO SUPPORTING STEEL AS INDICATED ON:
- a. ROOF DECK: DETAIL 1/S-501.
- 4. ROOF DECK ENDS SHALL BE BUTTED OR LAPPED OVER SUPPORTS.
- 5. DO NOT SUPPORT ROOFTOP EQUIPMENT OR EQUIPMENT CURBS DIRECTLY FROM ROOF DECK. ATTACH CURBS DIRECTLY TO STRUCTURAL STEEL SUPPORTS OR PROVIDE TREATED BLOCKING IN FLUTES OF DECK BETWEEN STRUCTURAL STEEL SUPPORTS AND CURBS.
- 6. PROVIDE SUPPORT FOR METAL DECK AROUND COLUMNS, SCREED PLATES AROUND OPENINGS, AND EDGES OF SLABS.
- PROVIDE MINIMUM 3/16" X 8" BENT PLATES AT HIPS, VALLEYS, AND RIDGES AS REQUIRED TO SUPPORT AND CONNECT DECK TO STRUCTURE
- 8. SUSPENDED CEILINGS, LIGHT FIXTURES, EQUIPMENT, DUCTS, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL ROOF DECK.

### K. COLD-FORMED STEEL FRAMING:

- 1. THE DESIGN OF THE COLD FORMED STEEL FRAMING SHALL BE BASED ON AISI S100-16 w/S2-20, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- 2. COLD-FORMED STEEL STUDS SHALL CONFORM TO THE REQUIREMENTS ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS
- EXTERIOR COLD-FORMED STEEL WALL STUDS SHALL A MINIMUM OF 18 GAUGE. LIMIT DEFLECTION OF STUDS TO L/240. 3. EXTERIOR NON-LOAD-BEARING STEEL STUDS SHALL BE CONNECTED TO THE BUILDING FRAME WITH RIGID CLIPS OR VERTICAL SLIDE CLIPS AS SHOWN ON THE STRUCTURAL DETAILS.
- 4. ALL MATERIAL SHALL BE COLOR CODED TO INDICATE THE GAUGE OF THE MATERIAL

### L. COLD-FORMED STEEL TRUSSES:

- 1. THE DESIGN OF COLD-FORMED STEEL TRUSSES SHALL BE BASED ON AISI S100-16 w/S2-20, NORTH AMERICAN SPECIFICATION FOR
- THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
- 2. THE COLD-FORMED STEEL TRUSS MANUFACTURER SHALL: a. DESIGN FOR THE FORCES INDICATED ON S-001 AND THOSE INDICATED IN THE DRAWINGS.
- b. PROVIDED AT THE INDICATED SPACING. WHEN SINGLE PLY TRUSSES ARE INSUFFICIENT, PROVIDE MULTI-PLY TRUSSES.
- c. DESIGN TRUSSES TO BEAR ONLY ON WALLS INDICATED AS BEARING WALLS. d. DESIGN AND PROVIDE ALL PERMANENT BRACING REQUIRED FOR THE STABILITY OF THE TRUSSES
- e. ATTACH TAGS TO THE TRUSSES INDICATING LOCATIONS WHERE WEB BRACING AND PERMANENT LATERAL BRACING IS TO BE INSTALLED.
- DESIGN AND PROVIDE CONNECTOR MATERIAL AS REQUIRED TO FASTEN TRUSSES TO SUPPORTING STRUCTURAL ELEMENTS (WALLS, BEAMS, GIRDER TRUSSES, ETC.) AND OTHER CONNECTOR MATERIAL REQUIRED BY THE TRUSS DESIGN BUT NOT SHOWN ON THE DRAWINGS.
- 3. EXERCISE CARE DURING LIFTING OPERATIONS TO PREVENT FLAT WISE BENDING OF THE TRUSSES. TRUSSES ARE NOT DESIGNED TO BEND IN THIS FASHION; BUCKLING OF MEMBERS OR DAMAGE TO THE CONNECTIONS MAY OCCUR.
- 4. IN ORDER TO DEVELOP THE DESIGN CAPACITY, COLD-FORMED STEEL TRUSSES SHALL BE INSTALLED PLUMB AND STRAIGHT. THE PLUMB AND STRAIGHTNESS OF EACH TRUSS SHALL BE VERIFIED. TRUSSES SHALL BE HELD IN CORRECT ALIGNMENT WITH THE SPECIFIED TEMPORARY AND PERMANENT BRACING ON THE COLD-FORMED STEEL SHOP DRAWINGS UNTIL SHEATHING IS INSTALLED.
- 5. DO NOT PLACE LOADS ON TRUSSES UNTIL ALL THE BRACING HAS BEEN INSTALLED AND THE SHEATHING PERMANENTLY ANCHORED. BUNDLES OF PLYWOOD SHALL NOT BE PLACED ON TRUSSES; LIFT PLYWOOD SHEETS ONTO ROOF ONLY AS REQUIRED DURING THE SHEATHING PROCESS.
- 6. MECHANICAL EQUIPMENT SHALL BE PLACED ON THE ROOF ONLY AFTER THE COMPLETION OF THE ENTIRE ROOF STRUCTURAL SYSTEM. ENSURE THAT EACH PIECE OF EQUIPMENT IS CORRECTLY POSITIONED OVER THE SPECIFIED TRUSSES BEFORE SLOWLY LOWERING INTO PLACE; AVOID BUMPING THE TRUSSES.
- 7. TRUSSES SHALL BEAR DIRECTLY OVER STUDS. IF A TRUSS CENTERLINE IS MORE THAN TWO INCHES FROM THE CENTERLINE OF
- THE CLOSEST STUD, PROVIDE AN ADDITIONAL STUD DIRECTLY UNDER THE TRUSS BEARING. 8. ROOF DECKING SHALL BE CONTINUOUS UNDER VALLEY SETS. ATTACH VALLEY JACKS TO SUPPORTING TRUSSES AS REQUIRED BY THE TRUSS MANUFACTURER.
- 9. COLD-FORMED STEEL TRUSSES SHALL BE DESIGNED, FABRICATED AND INSTALLED TO PROVIDE ARCHITECTURAL ROOF CONFIGURATION, CEILINGS, OPENINGS INDICATED IN ARCHITECTURAL AND STRUCTURAL DRAWINGS, SEE NOTES ON DETAIL S-201 FOR ADDITIONAL INFORMATION.

### M. POST-INSTALLED ANCHORS IN CONCRETE:

POST-INSTALLED ANCHORS (MECHANICAL OR ADHESIVE) SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS OR DOWELS. POST-INSTALLED ANCHORS SHALL BE BUILDING CODE COMPLIANT, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSPECTED PER THE APPLICABLE ICC-ES OR IAPMO UES EVALUATION REPORT. SEE SPECIFICATIONS SECTION(S) 033000 FOR ADDITIONAL INFORMATION.



**COMPONENTS AND CLADDING WALL WIND PRESSURES** 

COMPONENTS AND CLADDING ROOF WIND PRESSURES

<b>OVERHANG/SOFFIT UP</b>	LIFT
(STRENGTH DESIGN)	

ZONE	TRIBUTARY AREA (SQ. FT.)		
	10	50	100
1 & 2e	-50 PSF	-39 PSF	-30 PSF
2n & 2r	-70 PSF	-55 PSF	-49 PSF
3e	-82 PSF	-56 PSF	-45 PSF
3r	-94 PSF	-61 PSF	-46 PSF

		•	,	
ZONE		TRIBUT	ARY AREA (SQ	. FT.)
		10	50	100
	1 & 2e	-44/+16 PSF	-27/+16 PSF	-16/+16 PSF
	2n, 2r, & 3e	-64/+16 PSF	-44/+16 PSF	-35/+16 PSF
	3r	-76/+16 PSF	-51/+16 PSF	-40/+16 PSF
	4	-28/+18 PSF	-24/+15 PSF	-22/+14 PSF

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