

STRUCTURAL GENERAL NOTES

GOVERNING CODE: 2018 INTERNATIONAL BUILDING CODE (IBC) AND ALL LOCAL AMENDMENTS.

DESIGN LOADS:	
RISK CATEGORY:	II, Standard
ROOF LIVE LOADS:	
Roof Live Load:	20 psf
Ground Snow Load (p _s):	116 psf
Fat Roof Snow Load (p _f):	90 psf
Snow Exposure Factor (C _e):	1.0
Snow Load Importance Factor (I _s):	1.0
Thermal Factor (C _t):	1.1
Slope Factor (C _s):	1.0
Snow Drifting and Unbalanced Loads:	In accordance with ASCE 7-16 and as depicted on the roof plans.
FLOOR LIVE LOADS:	
Occupancy or Use:	
Storage Areas:	120 psf
ROOF AND FLOOR DEAD LOADS:	
Roof - Metal Roof Deck:	25 psf
Roof - M/E/P:	5 psf
Floor - Concrete Topping:	Varies with thickness
Floor - M/E/P:	3 psf
WIND LOADS (ASCE 7-10):	
Ultimate Wind Speed, 3-second gust (V _{ult}):	115 mph
Allowable Stress Design Wind Speed (V _{asd}):	90 mph
Occupancy Risk Category:	II
Internal Pressure Coefficient (C _{pi}):	-0.18
Wind Exposure:	C
COMPONENTS AND CLADDING DESIGN WIND PRESSURES (PSF) (ASCE 7-16):	
Roof Zone (Fig. 30.3-1): USING TRIBUTARY AREA OF 50 SF	
5 Within 3'-0" of corners:	+17.1 psf, -21.5 psf
4 Internally:	+17.1 psf, -18.7 psf
Roof Zone (Fig. 30.3-2A): USING TRIBUTARY AREA OF 25 SF	
3 Within 3'-0" of corners:	+16.0 psf, -23.3 psf
2 Overhangs within 3'-0" of corners and ridges:	+16.0 psf, -47.3 psf
2 Within 3'-0" of edges and ridges:	+16.0 psf, -40.1 psf
2 Overhangs:	+16.0 psf, -35.7 psf
1 Internally:	+16.0 psf, -30.3 psf
Note: All Component and Cladding pressures are Ultimate pressures. To convert to Allowable Stress Design pressures, multiply Ultimate pressures by 0.6.	
SEISMIC LOADS:	
Occupancy Risk Category:	II, Standard
Seismic Importance Factor (I _s):	1.0
Spectral Response Acceleration Coefficients	
One Second	S _{0.1} : 0.133g S _{0.2} : 0.333g
Soils Site Class:	D
Seismic Design Category:	C per local Amendment
Basic Seismic-Force-Resisting System(s):	Ordinary reinforced masonry shear walls
Design Base Shear:	25 kips factored (17.5 kips service)
Seismic Response Coefficient(s) (C _s):	0.17
Response Modification Factor(s) (R):	2.0
Analysis Procedure:	Equivalent Lateral Force Procedure

FOUNDATION DESIGN:
Foundation design is in accordance with recommendations contained in soils investigation Report Number 20-12047 prepared by NWCC dated December 18, 2020.
Soil conditions shall be verified by the Geotechnical Engineer prior to placement of formwork or concrete. If different soil conditions exist the structural engineer shall be notified to re-evaluate the foundation design at additional expense to the owner.

FOOTINGS:
Footings, selected by the owner shall bear on the natural undisturbed soils or approved compacted structural fill.
Exterior footings shall bear below frost depth; minimum frost depth shall be 4'-0" below adjacent exterior finished grade.
Design of footings is based on:
Maximum allowable bearing pressure: 3500 psf assuming on site soil
Minimum dead load pressure: 1100 psf at Non-retaining wall elements

EARTH RETAINING STRUCTURES:
Earth equivalent fluid lateral pressure:
Walls restrained at top (at rest): 60 psf assuming on site soil
Cantilevered walls (active): 50 psf assuming on site soil
Passive resisting: 275 psf assuming on site soil
Coefficient of sliding friction: 0.4

REINFORCED CONCRETE:
Concrete design is based on the American Concrete Institute "Building Code Requirements for Reinforced Concrete" (ACI 318) and shall be constructed in accordance with the "Standard Specifications for Structural Concrete" (ACI 301).
STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise):
Minimum 28 day compressive strength (f'_c) as follows:
Cement Type: III
Maximum Aggregate Size: 3/4"
Footings: 3,000 psi (Max W/C Ratio 0.52); Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1")
Walls: 4,000 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1")
Exposed Walls: 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1")
Maximum 28-day shrinkage = 0.05% per ASTM C157
Structural Bridge Slab: 4,000 psi (Max W/C Ratio 0.50); Entrained Air 5.0% (+/- 1.5%); Slump 4 inches (+/- 1")
Structural Slab on Deck: 3,500 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1")
Exterior Slabs-on-Grade (excludes flatwork): 3,500 psi (Max W/C Ratio 0.45); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1")
Interior Slabs-on-Grade: 3,500 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1")
Reinforcing steel shall be fabricated and placed in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement."
When cold weather conditions exist, place and cure concrete in accordance with ACI 306.
Welded wire fabric shall conform to ASTM A185.
Deformed reinforcement shall be domestic new billet steel conforming to ASTM A615, Grade 60 including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.
Unless otherwise noted on the structural drawings, lap bars 50 diameters (50" Bar Diameter minimum).
Epoxy coated reinforcing bars shall conform to ASTM A775.
Zinc coated (galvanized) reinforcing bars shall conform to ASTM A767.
Unless otherwise noted on the structural drawings, lap bars per lap splice schedule.
Reinforcing at all abutting concrete (including footings) shall be continuous through or around all corners and intersections OR use matching corner bars of equal size and spacing to reinforcing in the abutting members.
Install 2-#5 bars (minimum) around all sides of all openings in concrete and extend 2'-0" past edges of openings, unless otherwise noted.
In continuous members, splice top bars at mid-span between supports and splice bottom bars over supports.
Form intermittent shear keys at all construction joints and as shown on the structural drawings.
Unless otherwise noted on the drawings, minimum concrete cover over reinforcing shall be as follows:
Unformed surface cast against and permanently exposed to earth: 3"
Formed surface exposed to earth or weather: 2"
#6 through #18 bars 1-1/2"
#5 bar, w/31 or G31 wire, and smaller 1-1/2"
Formed surface not exposed to weather or in contact with ground:
Slabs, walls, joists: #11 bars and smaller 3/4"
Beams and columns:
Primary reinforcement 1-1/2"
Stirrups, ties, spirals 1-1/2"

Install chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement on wood, brick, or other unacceptable materials shall not be permitted.
Keep reinforcement clean and free of dirt and oil. Oil forms prior to placing reinforcement.
Fiber admixture shall be 100% virgin polypropylene, fibrillated fibers, type 111 4.1.3, performance level one, per ASTM C1116.
Properly place, accurately position and maintain securely in place all embedded items prior to and during concrete placement.
Anchor bolts and rods for beam and column bearing plates shall be placed with standard templates.
Unless otherwise shown in the architectural drawings, provide 3/4" chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

STRUCTURAL STEEL:
Structural steel shall be detailed, fabricated and erected in accordance with the "Specification for Structural Steel Buildings" (AISC 360) and the "Code of Standard Practice for Steel Buildings and Bridges" (AISC 303) by the American Institute of Steel Construction (AISC).
All structural steel shall conform to the ASTM Standards and grades indicated below, unless noted otherwise on the drawings or details.
Structural steel wide flange beams and WTs: ASTM A992, 50 ksi yield
Rolled steel floor plates: ASTM A786, Commercial grade
Other rolled shapes, including plates, channels, and angles: ASTM A588, 36 ksi yield
Hollow structural section (HSS) rectangular shapes: ASTM A500, Grade B, 46 ksi yield
HSS round shapes: ASTM A500, Grade B, 42 ksi yield
Pipe shapes: ASTM A53, Grade B, 35 ksi yield.
Adjustable pipe columns:
3" diameter 11 gauge, shall be certified by the manufacturer for a safe load capacity of 13,500 lbs at 7'-6".
3" diameter "Heavy Duty" schedule 40 shall be certified for a safe load capacity of 28,000 lbs at 7'-6".
Unless otherwise noted, framed beam connections shall be bearing-type with 3/4" diameter, snug tight, ASTM F3125, Grade A325 bolts, detailed in conformance with the structural drawings and the "Steel Construction Manual" by the AISC, 14th edition. Install bolts in accordance with AISC's "Specification for Structural Joints Using High-Strength Bolts".
All beams shall have full depth web stiffeners each side of webs above and below columns (1/4" plate or as noted).
Anchor rods shall conform to ASTM F1554, Grade 36, 3/4" diameter. Where not specifically noted, minimum weld shall be S1.
Headed anchor studs (HAS) shall conform to ASTM A108 and shall be connected to structural steel with equipment approved by the stud manufacturer according to the stud manufacturer's recommendations.
Welding shall be done by a certified welder in accordance with the AISC documents listed above, the American Welding Society (AWS) D1.1: 2010 Structural Welding Code, and the recommendations for use of E70XX electrodes. Where not specifically noted, minimum weld shall be 3/16" fillet by length of contact edge.
All post-installed anchors shall have current International Code Council Evaluation Service (ICC-ES) reports and shall be installed in accordance with the manufacturer's requirements.
Expansion anchors shall be approved "wedge" type unless specifically noted to be "sleeve" type as noted on the structural drawings.
Chemical anchors shall be approved epoxy or similar adhesive type as appropriate for installation in solid and non-solid base materials.
Grout beneath column base and beam bearing plates shall have a minimum 28-day, compressive strength of <7,500>+5,000 psi and shall be non-shrink, non-metallic, and tested in accordance with ASTM C1107.
See S0.02 for Special Inspection requirements. QA inspections are permitted to be waived if steel fabricator or erector is AISC certified and the Authority Having Jurisdiction approves. At completion of fabrication, fabricator shall submit certificate of compliance stating materials supplied and work performed in accordance to the Construction Documents.

STEEL DECKING:
Steel roof, non-composite floor (or "form"), and composite floor deck shall be manufactured and erected in accordance with the standard deck specifications and the "Manual of Construction with Steel Deck" (SDI No. MOC1) as prepared by the Steel Deck Institute (SDI).
Roof deck shall be connected to supporting members and interconnected to develop the diaphragm shears and net uplift pressures due to lateral loads as noted on the structural drawings.
Non-composite and composite floor deck shall be connected to supporting members and interconnected as required to satisfy SDI minimum requirements except as noted on the structural drawings.
Welding patterns, screw patterns, and details shall be indicated on the deck supplier's shop drawings.

SHOP DRAWINGS:
The structural drawings are copyrighted and shall not be copied for use as erection plans or shop details. Use of Anthem's electronic files as the basis for shop drawings requires prior approval by Anthem, a signed release of liability by the general contractor and/or his subcontractors, and deletion of Anthem's name and logo from all sheets so used.
The general contractor shall submit in writing any requests to modify the structural drawings or project specifications.
All shop and erection drawings shall be checked and stamped (after having been checked) by the general contractor prior to submission for structural engineer's review; shop drawing submittals not checked by the general contractor prior to submission to the structural engineer will be returned without review.
Furnish two (2) prints of shop and erection drawings to the structural engineer for review prior to fabrication for:
reinforcing steel,
structural steel,
steel form, floor, and roof deck,
CMU product data, unit strength testing,
Submit in a timely manner to permit 10 working days for review by the structural engineer.
Shop drawings submitted for review do not constitute "request for change in writing" unless specific suggested changes are clearly marked, in any event, changes made by means of the shop drawing submittal process become the responsibility of the one initiating the change.

FIELD VERIFICATION OF EXISTING CONDITIONS:
The general contractor shall thoroughly inspect and survey the existing structure to verify conditions that affect the work shown on the drawings.
The general contractor shall report any variations or discrepancies to the architect and structural engineer before proceeding.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:
The structural drawings illustrate and describe the completed structure with elements in their final positions; properly supported, connected, and/or braced.
The structural drawings illustrate typical and representative details to assist the general contractor. Details shown apply at all similar conditions unless otherwise indicated. Although due diligence has been applied to make the drawings as complete as possible, not every detail is illustrated and not every exceptional condition is addressed.
All proprietary connections and elements shall be installed in accordance with the manufacturers' recommendations.
All work shall be accomplished in a workmanlike manner and in accordance with the applicable codes and local ordinances.
The general contractor is responsible for coordination of all work, including layout and dimension verification, materials coordination, shop drawing review, and the work of subcontractors. Any discrepancies or omissions discovered in the course of the work shall be immediately reported to the architect and structural engineer for resolution. Continuation of work without notification of discrepancies relieves the architect and structural engineer from all consequences.
Unless otherwise specifically indicated, the structural drawings do not describe methods of construction.
The general contractor, in the proper sequence, shall perform or supervise all work necessary to achieve the final completed structure, and to protect the structure, workmen, and others during construction. Such work shall include, but not be limited to temporary bracing, shoring for construction equipment, shoring for excavation, formwork, scaffolding, safety devices and programs of all kinds, support and bracing for cranes and other erection equipment.
Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored, unless adequate temporary bracing is installed.
Temporary bracing shall remain in place until all floors, walls, roofs and any other supporting elements are in place.
The architect and structural engineer bear no responsibility for the above items, and observation visits to the site do not in any way include inspections of these items.
These plans have been engineered for construction at one specific building site. Builder assumes ALL responsibility for use of these plans at ANY OTHER building site. Plans shall not be used for construction at any other building site without specific review by the engineer.

STRUCTURAL MASONRY:
Design is based on ACI 530/ASCE 5/TMS 402, "Building Code Requirements for Masonry Structures."
Masonry work shall conform to ACI 530.1/ASCE 6/TMS 602 "Specification for Masonry Structures".
Compressive strength of masonry assembly used for design is 2000 psi (f_m = 2000 psi), based on net bedded area.
Except at masonry lintels using standard lintel units, bond beam units shall be produced from standard vertically voided units with pre-cut knockout cross walls.
Hollow load-bearing concrete masonry units (CMU) shall be lightweight, 85 to 105 pcf density, conforming to ASTM C90, with a minimum compressive strength of 2,800 psi based on average net area.
Facing brick shall conform to ASTM C216 Grade SW.
Building brick shall conform to ASTM C62-04 Grade SW.
Hollow brick shall conform to ASTM C652 Grade SW.
Mortar shall be type "S" conforming to ASTM C270. Mortar SHALL NOT be substituted for grout.
Masonry cement shall not be used unless part of a pre-packaged mortar or grout mix approved by the structural engineer.
Provide full shovled mortar in all head and bed joints.
Admixtures shall not be used unless approved by the architect and/or structural engineer.
Grout used in masonry walls and block cells shall be coarse grout, as defined by ASTM C476, with a minimum cube strength = 2,000 psi or 3,000 psi concrete using 3/8" diameter aggregate and placed by vibrating unless an approved self-consolidating mix is used.
Low-Lift grouting shall not exceed 5' feet in height unless ACI 530.1 high-lift grouting procedures are reviewed and approved by the architect and structural engineer.
Vertically space continuous horizontal joint reinforcing at 16" maximum in all CMU walls. Joint reinforcing shall be welded type with 9 gage side rods and 9 gage trussed or ladder cross rods.
In exterior walls, joint reinforcement shall be stainless steel or hot-dip galvanized.
All other joint reinforcement shall be mill galvanized, hot-dip galvanized, or stainless steel. Horizontal joint reinforcing shall be lapped no less than 6" all splices.
Wire ties for veneer shall be 9 gage diameter for cavity widths 2" or less.
Where nominal cavity width exceeds 2 inches, veneer ties shall be 1/4" diameter. Ties shall be spaced a maximum of 16" in each direction.
Reinforcing bars shall be as for reinforced concrete except as noted.
Unless otherwise noted on the structural drawings, lap bars 50 diameters (50" Bar Diameter minimum) all splices.
Reinforcement shall be secured against displacement prior to grouting by wire bar locators or other suitable devices at intervals not exceeding 200 bar diameters or 10 feet.
Reinforce and fully grout vertical cells at corners, ends of walls, jambs of openings, each side of vertical control joints, and at spacing shown on drawings.
Vertical reinforcing bars shall have a minimum clearance of 3/4" from masonry.
Foundation dowels shall match vertical reinforcing, unless otherwise noted on the drawings.
Where noted on the drawings, provide clearance between masonry and structural elements, or wrap steel with polyethylene film.
Locate vertical control joints in all masonry walls as shown on the architectural drawings, structural drawings, or spaced horizontally at 25'-0" maximum spacing where not shown.
Cold weather construction shall conform to guide specifications from the International Masonry Industry All-Weather Council (IMIABC), latest version.

LOOSE LINTELS:
Unless noted otherwise, provide loose lintels as follows: (one angle for each 4' of wall thickness to bear 4" minimum each end)
Opening Angle
0'-0" to 4'-0" L3 1/2x3 1/2x14
4'-1" to 5'-4" L5x3 1/2x14 (LLV)
5'-5" to 10'-0" L6x3 1/2x5/16 (LLV)

PRECAUTIONARY NOTES ON STRUCTURAL BEHAVIOR:
Interior architectural finish detailing must accommodate the relative differential movements of supporting structural elements.
Where the roof framing element spans are long, applied loading will naturally cause substantial deflection. Interior elements hung from the roof structure will deflect with the roof.
The floor is a floating concrete slab-on-grade and may experience movements independent of the structural foundations. Interior elements supported on the slab-on-grade floor will move with the floor. Interior elements supported on foundations and columns will not experience similar or measurable movements.
Exterior/perimeter wall assemblies hung from the edge of the building structure will be directly affected (to some degree) by changes in external temperature and floor deflection.
Exterior/perimeter and interior architectural finish details should allow for relative movements between elements with different support conditions.
The foundation design report assumes that the owner/builder is aware of the presence of expansive soils, and that he has read the previously referenced soils report. Use of these plans is indication that the owner/builder accepts the risks associated with building on this site, especially those related to slab on grade construction in finished areas. Anthem, LLC will not be held liable for damages caused by slab movement.

DEFERRED SUBMITTALS:
Portions of the structure have elements of proprietary design and fabrication, which shall be submitted by the supplier for approval after award of contract.
These items shall conform to the load, capacity, size, geometry, connection, and support criteria noted on the structural drawings.
Shop drawings and calculations shall be prepared by an engineer registered in the State of Colorado. Final shop drawing submittals shall be stamped and signed.
Submittals will be reviewed by the structural engineer of record for compliance with the specified design requirements, stamped as "Reviewed," and forwarded to the local building authority for review as required.
Final issue of the building permit may, at the approval authority's option, be contingent on its approval of the deferred submittal documents.
Deferred submittal items shall not be installed until their design calculations and drawings have been reviewed by the architect, structural engineer, and/or local building authority as required.

LETTERS OF CONSTRUCTION COMPLIANCE:
The general contractor shall determine from the local building authority, at the time the building permit is obtained, whether any letters of construction compliance will be requested from the structural engineer.
The contractor shall notify the structural engineer of all such requirements in writing prior to the start of construction.
Two day advance notice shall be given when requesting site visits necessary as the basis for the compliance letter.
The general contractor shall provide copies of all third-party testing and inspection reports to the architect and structural engineer a minimum of one week prior to the date that the compliance letter is needed.

SPECIAL INSPECTIONS (valid for IBC 2018):
The following Special Inspections and Testing shall be performed by a qualified Special Inspector, retained by the Owner, in accordance with the following sections of IBC Chapter 17:
Section 1704
1704.2.5 Special inspections of fabricated items and fabricators
Section 1705 Special inspections and the following sub-sections:
1705.2 Steel Construction including 1705.2.1 Structural Steel, 1705.2.2 Cold-formed steel deck
1705.3 Concrete Construction including 1705.3.1 Welding of reinforcing bars, 1705.3.2 Material tests
1705.4 Masonry Construction, level B
1705.6 Soils
1705.10 Fabricated items
Section 1705.12 Special Inspections for seismic resistance with the following sub-sections:
1705.12.1 Structural Steel
1705.12.1.1 Seismic force-resisting system
1705.12.1.2 Structural steel elements (struts, collector, chords and foundation elements)
1705.12.4 Designated seismic systems
1705.12.5 Architectural components
1705.12.6 Plumbing, mechanical and electrical components
Section 1705.13 Structural Testing for Seismic Resistance and the following sub-sections:
1705.13.1 Structural Steel
1705.13.1.1 Seismic force-resisting systems
1705.13.1.2 Structural steel elements (struts, collectors, chords and foundation elements)
1705.13.2 Nonstructural components
1705.13.3 Designated seismic systems
Section 1706 Design Strengths of Materials
Section 1707 Alternative Test Procedures
Section 1708 In-Situ Load Tests
Section 1709 Preconstruction Load Tests

The Special Inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection.
Duties and responsibilities of the Special Inspector shall be to inspect and/or test the work outlined above and within the Statement of Special Inspections in accordance with Chapter 17 of the IBC for conformance with the approved construction documents. All discrepancies shall be brought to the immediate attention of the contractor for correction.
Per section 1704.2.4 the Special Inspector shall furnish regular reports to the building official and the structural engineer. Progress reports for continuous inspection shall be furnished weekly. Individual reports of periodic inspections shall be furnished within one week of inspection dates. The reports shall note uncorrected deficiencies, correction of previously reported deficiencies, and changes to the approved construction documents authorized by the Structural Engineer of Record.
The Special Inspector shall submit a final signed report within 10 days of the final special inspection stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved construction documents and the applicable workshop provisions of the IBC. Work not in conformance shall be noted in the report.
The contractor shall submit a statement of responsibility to the building official and the owner prior to the commencement of work on a main wind- or seismic-force-resisting system, designated seismic system or a wind- or seismic-resisting component listed in the Statement of Special Inspections per section 1704.5.
Except as noted, the special inspections outlined above are in addition to, and beyond the scope of, periodic Structural Observations as defined in section 1704.6. Structural Observations are included in the structural engineering design and construction administration services provided by the structural engineer.

ABBREVIATIONS KEY									
AB	Anchor Rod (Bolt)	E-E	End to End	LVL	Laminated Veneer Lumber (generic)	RMO	Rough Masonry Opening		
ADDL	Additional	EF	Each Face	LW	Light Weight	RO	Rough Opening		
AFF	Above Finished Floor	EJ	Expansion Joint	MASY	Masonry	SC	Slip Critical		
ALT	Alternative	EL	Elevation	MATL	Material	SCH	Schedule		
AMT	Amount	EN	Edge Nailing	MAX	Maximum	SDST	Self Drilling Self Tapping		
APPROX	Approximate	ENGR	Engineer	MECH	Mechanical	SECT	Section		
ARCH	Architect, Architectural	EQ	Equal	MEZZ	Mezzanine	SF	Square Feet		
ASD	Allowable Stress Design	EQUIP	Equipment	MFR	Manufacture, -er, -rd	SHT	Sheet		
AVG	Average	EQUIV	Equivalent	MIN	Minimum	SHTG	Sheathing		
BC	Bottom of Concrete	ES	Each Side	MTL	Metal	SIM	Similar		
BL	Brick Ledger	EST	Estimate	<N>	"New"	SL	Sloped		
BLK	Block	E-W	East to West	NIC	Not In Contact	SOG	Slab On Grade		
BLKG	Blocking	EXC	Excavate	N-S	North to South	SP	Space, -s		
BM	Beam	EXP	Expansion	NTS	Not to Scale	SPEC	Specifications		
BOT	Bottom	EXT	Exterior	OD	Outside Diameter	SQ	Square		
BRG	Bearing	FDN	Foundation	OF	Outside Face	STD	Standard		
CANT	Cantilever	FF	Finished Floor	OH	Opposite Hand	STL	Steel		
CF	Cubic Foot	FIG	Figure	OPNG	Opening	STIFF	Stiffener		
CFS	Cold Form Steel	FL	Flush	OPP	Opposite	STRUCT	Structure (Structural)		
CIP	Cast In Place	FLR	Floor	OSB	Oriented Strand Board	SY	Square Yard		
CJ	Construction Joint (Control Joint)	FP	Full Penetration	PAF	Powder Actuated Fastener	SYM	Symmetrical		
CLG	Ceiling	FTG	Footing	PC	Precast	T&B	Top and Bottom		
CLR	Clear	GA	Gage (Gauge)	PE	Pre-engineered (trusses)	T&G	Tongue and Groove		
CMU	Concrete Masonry Unit	GALV	Galvanized	PEN	Penetration	TB	Top of Beam		
COL	Column	GC	General Contractor	PERP	Perpendicular	TC	Top of Concrete		
COM	Common	GEN	General	PKT	Pocket	TJ	Top of Joist		
CONC	Concrete	GL	Glu Laminated (Glu-lam)	PL	Property Line	TL	Total Load, Top of Ledge		
CONN	Connection	GR	Grade	PLF	Pounds per Linear Foot	TM	Top of Masonry		
CONT	Continue (Continuous)	GR	Girder Truss	PSF	Pounds per Square Foot	T O	Top of		
CONSTR	Construction	GYP BD	Gypsum Board	PSI	Pounds per Square Inch	TRANS	Transverse		
COORD	Coordinate, Coordination	HAS	Headed Anchor Stud	PSL	Parallel Strand Lumber (generic)	TYP	Typical		
CS	Countersink	HNGR	Hanger	PT	Pressure Treated	ULT	Ultimate		
CTR	Center	HORIZ	Horizontal	P.T	Post Tensioned	UNO	Unless Noted Otherwise		
CY	Cubic Yard	HT	Height or Heavy Timber	PV	Photovoltaic	VERT	Vertical		
DAB	Deformed Anchor Bar	ID	Inside Diameter	QTY	Quantity	VIF	Verify In Field		
DIAG	Diagonal	INT	Interior	<R>	To Be Removed	VIA	Wedge Anchor		
DIM	Dimension	K	Kip (1,000 lbs)	R	Radius	WF	Wide Flange		
DL	Dead Load	LGS	Light Gage Stud	RE	Reference (refer to)	WP	Work Point		
DN	Down	LL	Live Load	RECT	Rectangle	WT	Weight		
DP	Drilled Pier	LLH	Long Leg Horizontal	REIN	Reinforcement	WWF	Welded Wire Fabric		
DWG	Drawing	LLV	Long Leg Vertical	REQ	Required	XS	Extra Strong		
<E>	Existing	LSH	Long Side Horizontal	REQMT	Requirement	XSECT	Cross Section		
EA	Each	LSV	Long Side Vertical	RET	Retaining Wall	XXS	Double Extra Strong		
ECC	Eccentric	LT	Light	RM	Room				

LEGEND			
	X" King studs, "Y" Trimmer studs, studs to match wall thickness		CMU
	Indicates column continuous through level shown		Concrete
	Indicates bottom of column at level shown, see next level framing plan for size; install squash blocking in floor cavity of equal size and equal column size below to foundation - unless noted otherwise		Earth fill
	Indicates top of column and type below framing level STUB indicates shorter column that extends vertically between beams		Porous fill (i.e. gravel)
	Indicates top of concrete slab or wood subfloor elevation		Interior wood bearing wall below framing
	Indicates step in floor elevation		Wood shear wall below framing
	Indicates direction of slope		Structural wall above framing
	Indicates floor drain		Indicates Wood Stud wall type, see schedule
	Indicates top of footing or pier elevation Indicates minimum pier penetration into bedrock		Indicates Building Wall type, see schedule
	Continuous spread footing. See schedule for size and reinforcing		Indicates shear wall. See schedule for sheathing type and nailing
	Isolated pad footing. See schedule for size and reinforcing		Indicates holdown. See schedule for description
	Indicates top of concrete elevation Indicates bottom of concrete elevation		Joist, or Truss bears on wall or beam below
	Indicates step in bottom of concrete elevation		Beam, Joist, or Truss connected to support with metal hanger
	Indicates top of concrete ledge elevation		Beam, Joist, or Truss connected to support with concealed hanger
	Indicates beam pocket in concrete wall (X=width, Y=height, Z=ledge depth in inches) with bottom of pocket elevation		Indicates steel deck or concrete slab span direction
	Indicates step in top of concrete wall or ledge elevation. Arrow points toward lower elevation		Indicates top of steel beam elevation
	Indicates shoring		Indicates location of bend in bent beam
	Indicates 'existing'		Indicates braced frame
	Indicates 'new'		Indicates brace location
	Indicates 'to be removed'		Indicates rigid frame
	Indicates Baseplate		Moment connection

SHEET LIST	
SHEET NUMBER	SHEET NAME
S 0.01	STRUCTURAL COVER SHEET

SI 2018 - REQUIRED SPECIAL INSPECTION AND TESTS OF SEISMIC FORCE RESISTING SYSTEMS (REQUIRED WHEN SDC = C, D, E, OR F) AND DESIGNATED SEISMIC SYSTEMS (REQUIRED WHEN SDC = D, E, OR F)

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS SPECIAL INSPECTIONS	PERIODIC SPECIAL INSPECTIONS	IBC REFERENCE
N	1. STRUCTURAL STEEL: a. STRUCTURAL WELDING REQUIRED BY AISC 341	X		1707.2
N	2. STRUCTURAL WOOD: a. FIELD GLUING OPERATIONS OF ELEMENTS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X		1707.3
N	b. NAILING, BOLTING, ANCHORING, AND OTHER FASTENINGS OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLD-DOWNS. (ENGINEERS NOTE: SEE SECTIONS 1707.3 AND 1705.3 EXCEPTION.)		X	1707.3
	3. COLD - FORMED STEEL FRAMING: a. WELDING OF ELEMENTS IN SEISMIC-FORCE RESISTANCE		X	1707.4
Y	b. SCREW ATTACHMENTS, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM.		X	1707.4
N	4. PIER FOUNDATIONS: a. PLACEMENT OF REINFORCING STEEL		X	1707.5
N	b. PLACEMENT OF CONCRETE	X		
N	5. STORAGE RACKS AND ACCESS FLOORS: a. ANCHORAGE		X	1707.6

SI 2018 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
Y	1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		X	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
N	2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X	AWS D1.4; ACI 318: 26.6.4	
N	b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND		X	AWS D1.4; ACI 318: 26.6.4	
N	c. INSPECT ALL OTHER WELDS	X		ACI 318: 17.8.2	
Y	3. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
Y	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS	X		ACI 318: 17.8.2	
Y	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2	
Y	b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X		ACI 318: 17.8.2	
Y	5. VERIFY USE OF REQUIRED DESIGN MIX	X		ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
Y	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		ASTM C172, ASTM C31; ACI 318: 26.4, 26.12	1908.10
Y	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		ACI 318: 26.5	1908.6-1908.8
Y	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	ACI 318: 26.5.3-26.5.5	1908.9
N	9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND	X		ACI 318: 26.10	
N	b. GROUTING OF BONDED PRESTRESSING TENDONS	X		ACI 318: 26.10	
N	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS		X	ACI 318: CH. 26.9	
N	11. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X	ACI 318: 26.11.2	
N	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1.2(b)	
N	13. WELDING OF REINFORCING BARS a. INSPECTION OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS SHALL BE IN ACCORDANCE WITH AWS D1.4 FOR SPECIAL INSPECTION AND AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION			AWS D1.4	1705.3.1
N	14. MATERIAL TESTS a. IN THE ABSENCE OF SUFFICIENT DATA OR DOCUMENTATION PROVIDING EVIDENCE OF CONFORMANCE TO QUALITY STANDARDS FOR MATERIALS IN CHPT. 19 AND 20 OF ACI 318-14, TESTING SHALL BE DONE OF MATERIALS IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND CRITERIA FOR THE MATERIAL IN CHAPTERS 19 AND 20 OF ACI 318-14			ACI 318: CH. 19, 20	1705.3.2

SI 2018 - SPECIAL INSPECTION AND VERIFICATION OF COLD FORM STEEL DECK PER SDI QA/QC - 2017

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	QC		QA	
		CONTINUOUS SPECIAL INSPECTIONS	PERIODIC SPECIAL INSPECTIONS	CONTINUOUS SPECIAL INSPECTIONS	PERIODIC SPECIAL INSPECTIONS
Y	1. INSPECTION TASK PRIOR TO DECK PLACEMENT a. VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL PROPERTIES, AND BASE METAL THICKNESS	X		X	
Y	b. DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	X		X	
Y	2. INSPECTION TASK AFTER DECK PLACEMENT a. VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS	X		X	
Y	b. VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILL CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS			X	
Y	c. DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	X		X	
Y	3. INSPECTION TASK PRIOR TO WELDING a. WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE		X		X
Y	b. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		X		X
Y	c. MATERIAL IDENTIFICATION (TYPE/GRADE)		X		X
Y	d. CHECK WELDING EQUIPMENT		X		X
Y	4. INSPECTION TASK DURING WELDING a. USE OF QUALIFIED WELDERS		X		X
Y	b. CONTROL AND HANDLING OF WELDING CONSUMABLES		X		X
Y	c. ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)		X		X
Y	d. WPS FOLLOWED		X		X
Y	5. INSPECTION TASK AFTER WELDING a. VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS	X		X	
Y	b. WELDS MEET VISUAL ACCEPTANCE CRITERIA	X		X	
Y	c. VERIFY REPAIR ACTIVITIES	X		X	
Y	d. DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	X		X	
Y	6. INSPECTION TASK PRIOR TO MECHANICAL FASTENING a. MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS		X		X
Y	b. PROPER TOOLS AVAILABLE FOR FASTENER INSTALLATION		X		X
Y	c. PROPER STORAGE OF MECHANICAL FASTENERS		X		X
Y	7. INSPECTION TASK DURING MECHANICAL FASTENING a. FASTENERS ARE POSITIONED AS REQUIRED		X		X
Y	b. FASTENERS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS		X		X
Y	8. INSPECTION TASK AFTER MECHANICAL FASTENING a. CHECK SPACING, TYPE, AND INSTALLATION OF SUPPORT FASTENERS	X		X	
Y	b. CHECK SPACING, TYPE, AND INSTALLATION OF SIDELAP FASTENERS	X		X	
Y	c. CHECK SPACING, TYPE, AND INSTALLATION OF PERIMETER FASTENERS	X		X	
Y	d. VERIFY REPAIR ACTIVITIES	X		X	
Y	e. DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	X		X	

SI 2018 - SPECIAL INSPECTION AND VERIFICATION OF MASONRY - LEVEL 2

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA	
		CONTINUOUS DURING TASK LISTED	PERIODICAL LY DURING TASK LISTED	TMS 402	TMS 602
	MINIMUM VERIFICATION				
	1. PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS	-	-	-	ART. 1.5
	2. PRIOR TO CONSTRUCTION, VERIFICATION OF Fm AND Fm,c EXCEPT WHERE SPECIFICALLY EXEMPTED BY CODE	-	-	-	ART. 1.4B
	3. DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE	-	-	-	ART. 1.5, 1.6.3
	INSPECTION TASK				
	1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE				
Y	a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X		ART. 2.1, 2.6A, 2.6C
N	b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	ART. 2.4B, 2.4H
Y	c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	ART. 3.4, 3.6A
N	d. PRESTRESSING TECHNIQUE	-	X	-	ART. 3.6B
N	e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	-	-	ART. 2.1C.1
Y	f. SAMPLE PANEL CONSTRUCTION	-	X	-	ART. 1.6D
	2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE				
Y	a. GROUT SPACE IS CLEAN	-	X	-	ART. 3.2D, 3.2F
N	b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	-	X		SEC. 10.8, 10.9
Y	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	-	X		ART. 3.2E, 3.4
Y	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	X	-	ART. 2.6B, 2.4G.1.b
	3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION				
Y	a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	-	X	-	ART. 1.5
Y	b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	-	X	-	ART. 3.3B
Y	c. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	X	-	ART. 3.3.F
Y	d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	-	X		SEC. 1.2 i(e), 6.2.1, 6.3.1
N	e. WELDINGS OF REINFORCEMENT	X	-		SEC. 6.1.6.1.2
Y	f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)	-	X	-	ART. 1.8C, 1.8D
N	g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X	-	-	ART. 3.6B
N	h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	-	-	ART. 3.5, 3.6C
N	i. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	-	-	ART. 3.3B.9, 3.3F.1.b
Y	4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X	-	ART. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, 1.4B.4

SI 2018 - SPECIAL INSPECTION AND VERIFICATION OF STEEL CONSTRUCTION PER AISC 360

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	QC		QA	
		CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTIONS	CONTINUOUS SPECIAL INSPECTIONS	PERIODIC SPECIAL INSPECTIONS
	1. INSPECTION TASKS PRIOR TO WELDING - TABLE N5.4-1 / AWS D1.1				
Y	a. WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	X			X
Y	b. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	X		X	
Y	c. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X		X	
Y	d. MATERIAL IDENTIFICATION (TYPE/GRADE)		X		X
Y	e. WELDER IDENTIFICATION SYSTEM		X		X
Y	f. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		X		X
Y	f.1. JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)		X		X
Y	g. FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)		X		X
Y	g.1. JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)	X			X
Y	h. CONFIGURATION AND FINISH OF ACCESS HOLES		X		X
Y	i. FIT UP OF FILLET WELDS		X		X
Y	i.1. DIMENSIONS (ALIGNMENT, GAPS AND ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)		X		X
Y	j. CHECK WELDING EQUIPMENT		X		X
	2. INSPECTION TASKS DURING WELDING - TABLE N5.4-2 / AWS D1.1				
Y	a. CONTROL AND HANDLING OF WELDING CONSUMABLES		X		X
Y	a.1. PACKAGING, EXPOSURE CONTROL		X		X
Y	b. NO WELDING OVER CRACKED TACK WELDS		X		X
Y	c. ENVIRONMENTAL CONDITIONS		X		X
Y	c.1. WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE		X		X
Y	d. WPS FOLLOWED		X		X
Y	d.1. SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), PROPER POSITION (F,V,H,OH)		X		X
Y	e. WELDING TECHNIQUES		X		X
Y	e.1. INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATION, EACH PASS MEETS QUALITY REQUIREMENTS		X		X
Y	f. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	X		X	
	3. INSPECTION TASKS AFTER WELDING - TABLE N5.4-3 / AWS D1.1				
Y	a. WELDS CLEANED		X		X
Y	b. SIZE, LENGTH AND LOCATION OF WELDS	X		X	
Y	c. WELDS MEET VISUAL ACCEPTANCE CRITERIA		X		X
Y	c.1. CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, POROSITY	X		X	
Y	d. ARC STRIKES	X		X	
Y	e. K-AREA	X		X	
Y	f. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	X		X	
Y	g. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	X		X	
Y	h. REPAIR ACTIVITIES	X		X	
Y	i. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	X		X	
Y	j. NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR		X		X
	4. INSPECTION TASKS PRIOR TO BOLTING - TABLE 5.6-1				
Y	a. MANUFACTURERS CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		X		X
Y	b. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		X		X
Y	c. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		X		X
Y	d. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		X		X
Y	e. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		X		X
Y	f. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	X			X
Y	g. PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		X		X
	5. INSPECTION TASKS DURING BOLTING - TABLE 5.6-2				
Y	a. FASTENER ASSEMBLIES OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		X		X
Y	b. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		X		X
Y	c. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		X		X
Y	d. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		X		X
	6. INSPECTION TASKS AFTER BOLTING - TABLE 5.6-3				
Y	a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	X		X	

SI 2018- SPECIAL INSPECTION AND VERIFICATION OF SOILS

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	IBC REFERENCE
Y	1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X	1705.6
Y	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X	1705.6
Y	3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.		X	1705.6
Y	4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X		1705.6
Y	5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X	1705.6

SI TABLE N5.4-1 INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QC	QA
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WPS AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM	O	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		
JOINT PREPARATIONS	O	O
DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	O	O
CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O
TACKING (TACK WELD QUALITY AND LOCATION)	O	O
BACKING TYPE AND FIT (IF APPLICABLE)	O	O
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)		
JOINT PREPARATIONS	P	O
DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	P	O
CLEANLINESS (CONDITION OF STEEL SURFACES)	P	O
TACKING (TACK WELD QUALITY AND LOCATION)	P	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT-UP OF FILLET WELDS		
DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	O	O
CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O
TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	-

SI TABLE N5.4-2 INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING WELDING	QC	QA
CONTROL AND HANDLING OF WELDING CONSUMABLES		
PACKAGING	O	O
EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS		
WIND SPEED WITHIN LIMITS	O	O
PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED		
SETTINGS ON WELDING EQUIPMENT	O	O
TRAVEL SPEED	O	O
SELECTED WELDING MATERIALS	O	O
SHIELDING GAS TYPE/FLOW RATE	O	O
PREHEAT APPLIED	O	O
INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O
PROPER POSITION (F,V,H,OH)	O	O
WELDING TECHNIQUES		
INTERPASS AND FINAL CLEANING	O	O
EACH PASS WITHIN PROFILE LIMITATIONS	O	O
EACH PASS MEETS QUALITY REQUIREMENTS	O	O
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P

SI TABLE N5.4-3 INSPECTION TASKS AFTER WELDING

INSPECTION TASKS AFTER WELDING	QC	QA
WELDS CLEANED	O	O
SIZE, LENGTH AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA		
CRACK PROHIBITION	P	P
WELD/BASE METAL FUSION	P	P
CRATER CROSS SECTION	P	P
WELD PROFILES	P	P
WELD SIZE	P	P
UNDERCUT	P	P
POROSITY	P	P
ARC STRIKES	P	P
K-AREA	P	P
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	P	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O

SI TABLE N5.6-1 INSPECTION TASKS PRIOR TO BOLTING

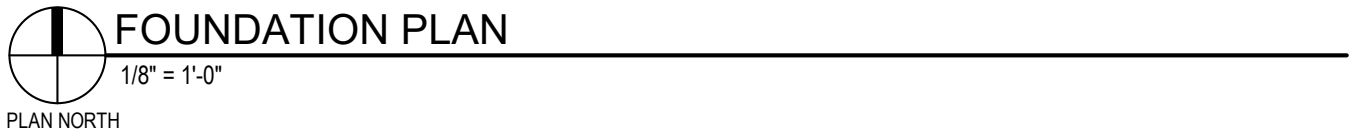
INSPECTION TASKS PRIOR TO BOLTING	QC	QA
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O
INSPECTION TASKS DURING BOLTING	QC	QA
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O
INSPECTION TASKS AFTER BOLTING		
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	O	O

[illegible]

ESF

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Project Phase
Sheet Title
FOUNDATION PLAN
Sheet Number
S 1.01



FOUNDATION PLAN KEYNOTES	
(X)	DESCRIPTION
1	10" WIDE x 24" DEEP CONCRETE BORDER WALL. REINFORCE W/ #4 BARS @ 12" EACH WAY CENTERED IN WALL. PLACE WALL TIGHT TO MODULAR BLOCK WALL.
2	PROVIDE HORIZONTAL CORNER BARS @ 6" OC CENTERED IN WALL AT THIS CORNER. EXTEND EACH LEG OF CORNER BAR MINIMUM OF 4'-0" EACH WAY.
3	24"x24" CONCRETE PIER FOR LIGHT POLE CAST INTEGRAL W/ WALL W/ #6 VERTICALS. #4 TIES @ 12". (3) TIES @ 3' TOP. USE ELECTRICAL FOR ANCHOR BOLTS AND CONDUIT WALL.
4	30"x30" CONCRETE PIER FOR SPIR RAIL SUPPORT CAST INTEGRAL W/ WALL W/ #12 BARS VERTICALS. #4 TIES AND CROSS TIES @ 12". (3) TIES @ 3' TOP. USE DOWELBARS FOR ANCHOR BOLT WALL.
5	24" WALL FOR PARKING RAIL SUPPORT W/ #6 @ 12" VERT. AND HORIZ. EACH FACE. USE DOWELBARS FOR EMBED IN TOP.
6	MIN 12"x12" CONCRETE PIER W/ #4 @ 45 VERT AND #3 TIES @ 12". (3) TIES @ 3' TOP. COORDINATE LOCATION WITH DOWELBARS. MIN DEPTH = 4'-0".

CONCRETE FOOTING SCHEDULE (ISOLATED PADS)					
MARK	LENGTH	WIDTH	THICKNESS	TOP REINFORCEMENT	BOTTOM REINFORCEMENT
F4.0	4'-0"	4'-0"	1'-0"		(5) #5 EA WAY

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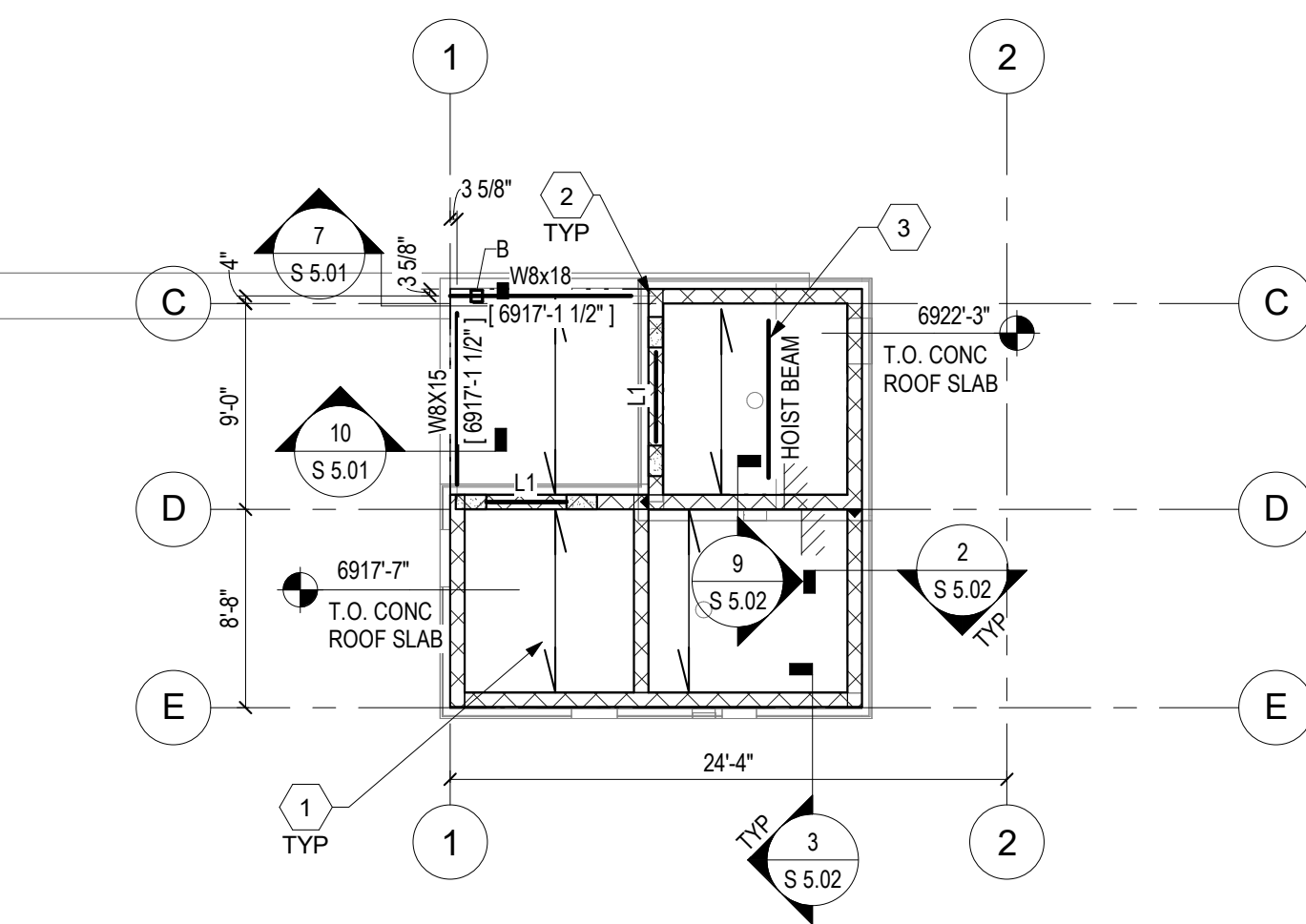
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Project Phase
Sheet Title
MAIN AND ROOF LEVEL FRAMING PLAN
Sheet Number
S 1.02



 **ROOF FRAMING PLAN**
1/8" = 1'-0"
PLAN NORTH

ROOF PLAN NOTES:

1. SEE \$0.01 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS AND LEGEND
2. SEE \$5.01 FOR PARTIAL DETAILS AND \$5.03 FOR CMU WALL, PIER AND LINTEL SCHEDULES
3. AT ROOF DRAINS, ACCEPTABLE TO CORE DRILL MAXIMUM 8" HOLE THROUGH COMPOSITE ROOF DECK. NOTIFY ANTHEM IF LARGER OPENING IS REQUIRED PRIOR TO POURING DECK.
4. LOCATE MECHANICAL OPENINGS IN WALLS MIN. 1/4" FROM BEAM BEARING LOCATIONS. PROVIDE 1/4" LINTEL OVER MECHANICAL OPENINGS UP TO 6'-0" IN LENGTH.
5. UNLESS NOTED OTHERWISE, TYPICAL T/S LAB = 6917 6 3/4".

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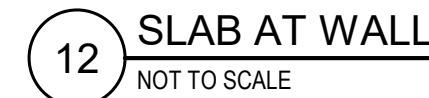
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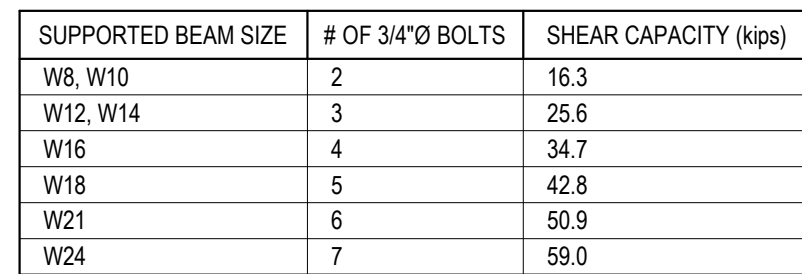
Project Phase
Sheet Title
BURGESS CREEK BRIDGE PLAN
Sheet Number
S 1.03



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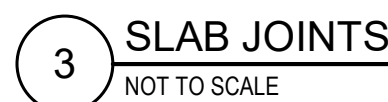


- ## 5 CONCRETE WALL JOINTS



- NOTES:**
1. FLEXIBLE SUPPORT USING A325-N BOLTS IN HORIZONTAL SHORT SLOTTED HOLES, SNUG TIGHT
 2. E70XX ELECTRODES
 3. FIN PLATE $F_y = 36$ KSI
 4. MINIMUM WEB THICKNESS, t_w , FOR WIDE FLANGE BEAMS IS 3/16

TYPICAL SINGLE PLATE SHEAR CONNECTION

[illegible]

NOTICE: DUTY OF COOPERATION

Release of these plans contemplates full cooperation among the owner, his contractor and the architect. Design and construction are complex. Although the architect and his consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect. Every contractor is responsible for his own work. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect will not absolve the contractor of the resulting consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arising out of such changes.

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**STEAMBOAT GONDOLA
RELOCATION**
STEAMBOAT SPRINGS, CO



Job Number:	20034
Date:	3/5/202
Drawn By:	KLM
Checked By:	CRK

Project Phase
Sheet Title
TYPICAL DETAILS

Sheet Number

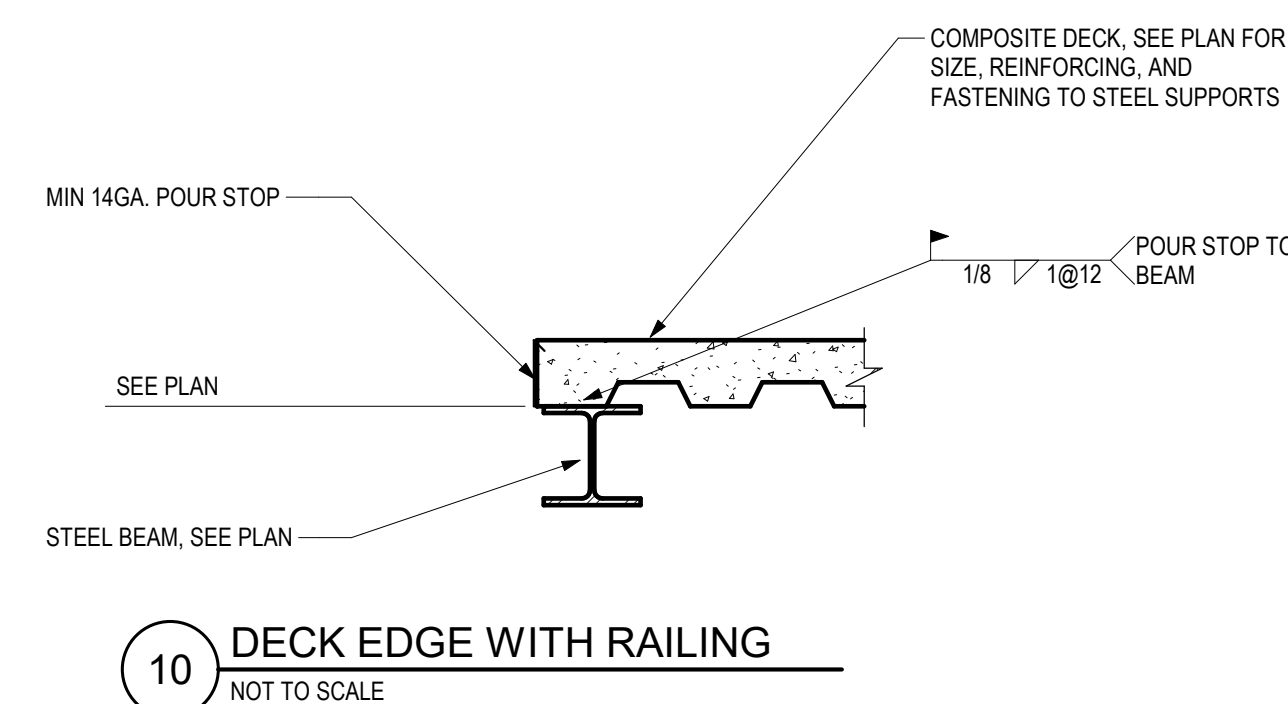
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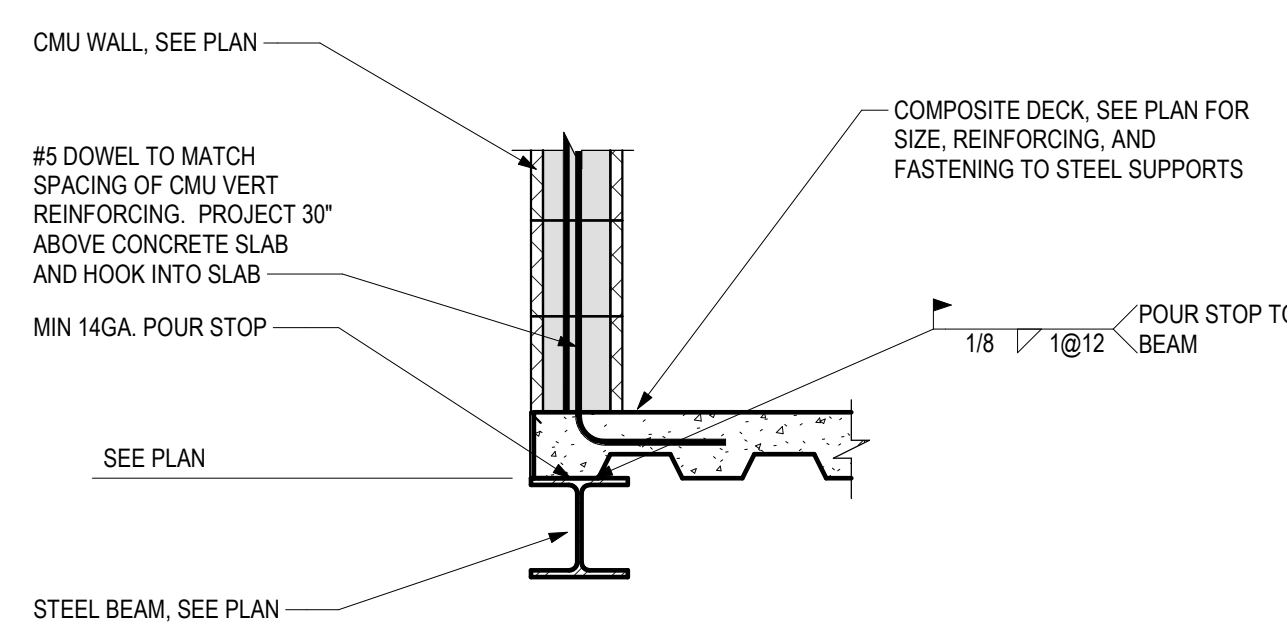
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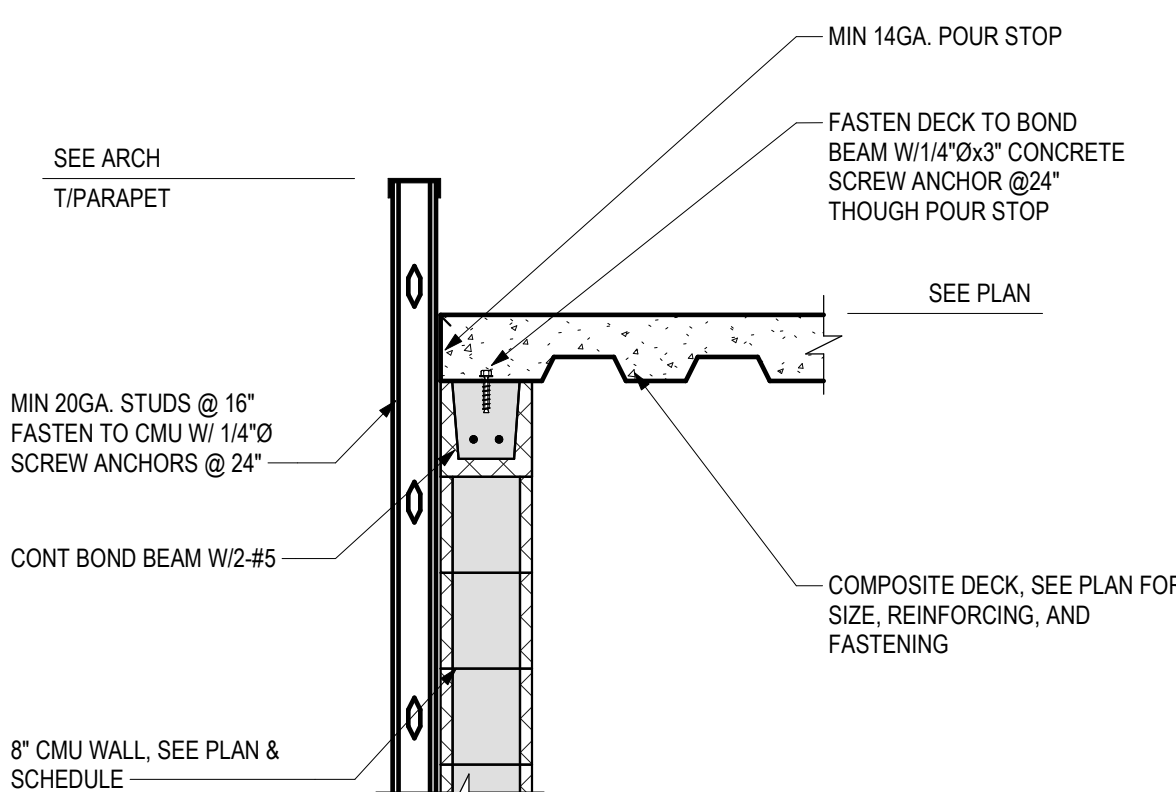
Project Phase
Sheet Title
DETAIL 5
Sheet Number
S 5.02



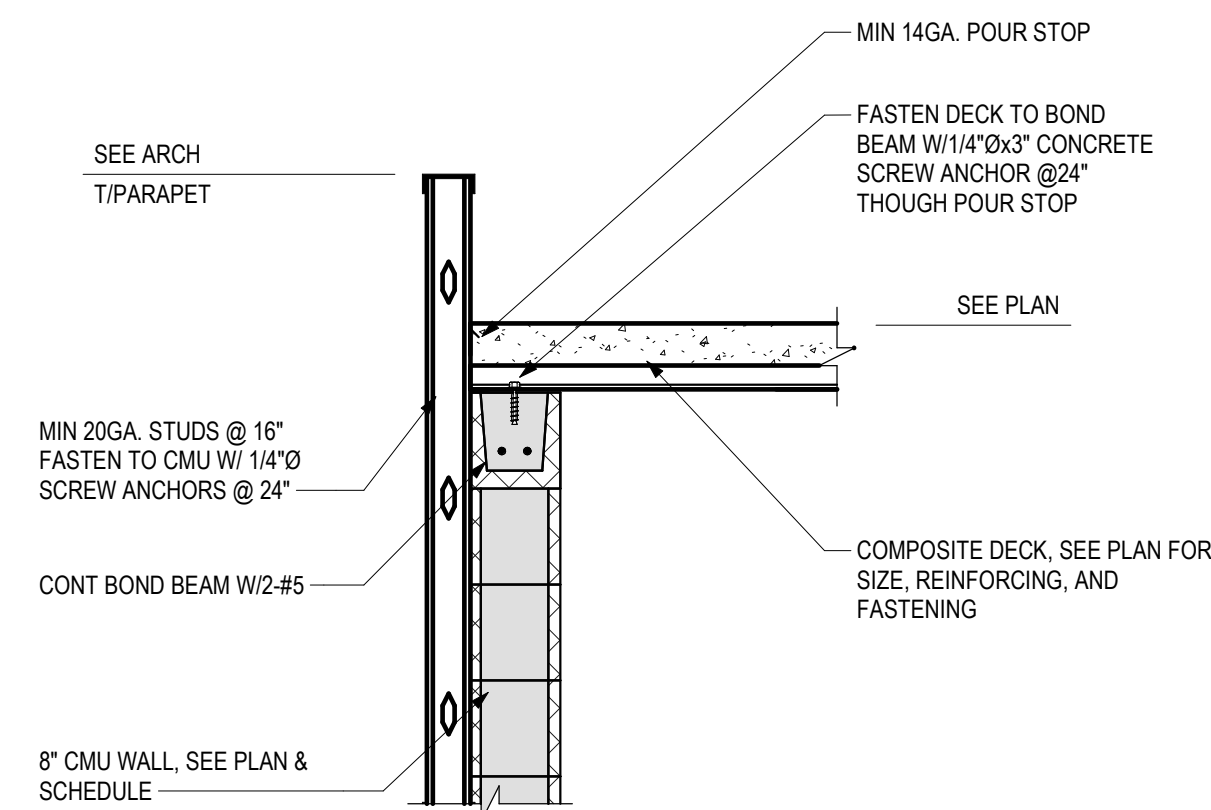
9 ROOF DECK AT CMU
NOT TO SCALE



6 WALL ON BEAM
NOT TO SCALE



2 ROOF DECK AT CMU
NOT TO SCALE



3 ROOF DECK AT CMU
NOT TO SCALE

NOTES:

- 1) WHERE BEAM BEARS ON CMU EACH END, PROVIDE SLIPPED CONNECTION TO BEARING PLATE PER DETAILS A OR B. FASTEN OPPOSITE END OF BEAM PER DETAIL C.
- 2) DO NOT WELD BEAM TO BEARING PLATE AT SLIPPED CONNECTION (DETAIL A OR B)

[illegible]

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Sheet Title
DETAILS AND SCHEDULES
Sheet Number
S 5.03



1 MASONRY WALL SCHEDULE
NOT TO SCALE

2 MASONRY PIER SCHEDULE

