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Passive resisting: 275 pcf assuming on site soil Coefficient of sliding friction: 0.4 INFORCE CONCRETE: Interdet 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). RUCTURAL CONCRETE: SHALL HAVE THE FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): innum 28 day compressive strength (*) as follows: Cement Type: III Maximum Aggregate Size: 3.44 Foodings: 4.000 ps (Max W/C Ratio 0.50); Entrained Ari 0.54 (± 1.5%); Slump 4 inches (± 1*) Exposed Walls: 4.000 ps (Max W/C Ratio 0.50); Entrained Ari 0.54 (± 1.5%); Slump 4 inches (± 1*) Structural Sibb on Deck: 3.500 ps (Max W/C Ratio 0.50); Entrained Ari 0.50 (± 1.5%); Slump 4 inches (± 1*) Structural Sibb-on-Grade: 3.500 ps (Max W/C Ratio 0.50); Entrained Ari 0.5% (± 1.5%); Slump 4 inches (± 1*) Interior Sibb-on-Grade: 3.500 ps (Max W/C Ratio 0.50); Entrained Ari 0.5% (± 1.5%); Slump 4 inches (± 1*) Interior Sibb-on-Grade: 3.500 ps (Max W/C Ratio 0.50); Entrained Ari 0.5% (± 1.5%); Slump 4 inches (± 1*) Interior Sibb-on-Grade: 3.500 ps (Max W/C Ratio 0.50); Entrained Ari 0.5% (± 1.5%); Slump 4 inches (± 1*) Interior Sibb-on-Grade: 3.500 ps (Max	Minimum dead load pressure: 1100 p ARTH RETAINING STRUCTURES: arth equivalent fluid lateral pressure:		
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ncrete 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). RUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): inimum 28 day compressive strength (ft) as follows: Cement Type: UII Maximum Aggregate Size: 3.4* Footings: 3.000 psi (Max W/C Ratio 0.52): Entrained Air 3.0% (± 1.5%); Slump 5 inches (± 1') Wals: 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') Structural Bridge Slab: 5.050 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') Exterior Slabs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') Exterior Slabs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') Exterior Slabs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') enter of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor of labs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1') entor slabs-on-Grade (excludes flatwork): 3.500 psi (Max W/C Ratio 0.50): Entraine	Minimum dead load pressure: 1100 p ARTH RETAINING STRUCTURES: arth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf	assuming on site soil	1
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Structural Bridge Slab: 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (+f - 1.5%); Slump 4 inches (+f.1") Structural Slab on Deck: 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (+f - 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% (+f - 1.5%); Slump 4 inches (± 1") Inforcing steel shall be fabricated and placed in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." Information (+f, 1.5%); Slump 4 inches (± 1") Ided wire fabric shall conform to ASTM AT85. Formed 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. Image: Content Stall Be domestic new billet steel conforming to ASTM A706. Iess otherwise noted on the structural drawings, lap bars 50 diameters (50" Bar Diameter minimum). Xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	Minimum dead load pressure: 1100 p RTH RETAINING STRUCTURES: rth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 INFORCED CONCRETE: ncrete design is based on the American Concre constructed in accordance with the "Standard RUCTURAL CONCRETE SHALL HAVE THE F nimum 28 day compressive strength (fc) as follow Cement Type: I/II Maximum Aggregate Size: 3/4"	assuming on site soil assuming on site soil of assuming on site soil ete Institute "Building Code Requirements for Reinforced Concrete" (ACI 318) and shall be Specifications for Structural Concrete" (ACI 301). FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): ows: 3,000 psi (Max W/C Ratio 0.52); Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1")	
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Interior Slabs-on-Grade: 3,500 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1°) inforcing steel shall be fabricated and placed in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." inforcing steel shall be fabricated and placed in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." inforcing steel shall be fabricated and placed in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." inforcing with is required to be welded shall conform to ASTM A706. It is required to be welded shall conform to ASTM A706. It is the structural drawings, lap bars 50 diameters (50" Bar Diameter minimum). Day coated reinforcing bars shall conform to ASTM A775. It is coated (galvanized) reinforcing bars shall conform to ASTM A767. It is a the abutting members. It is a structural drawings, lap bars per lap splice schedule. Inforcing at all abutting concrete (including footings) shall be continuous through or around all corners and intersections <u>OR</u> use matching corner bars of equal size and loops shown on the abutting members. It all 2.45 bars (minimum) around all sides of all openings in concrete and extend 2'.0" past edges of openings, unless otherwise noted. If orcing at all abutting concrete (including footings) shall be continuous through or around all consets. It all 2.45 bars (minimum) around all sides of all openings in concrete and extend 2'.0" past edges of openings, unless otherwise noted. If ormed surface cast against and permanently exposed to earth: 3' If ormed surface cast against and permanently exposed to earth: 3' If ormed surface cast against and permanently exposed to earth: 3' If ormed surface cast against and smaller 1-1/2'' If ormed surface cast against and smaller 1-1/2'' If ormed surface cast against and smaller 1-1/2'' If all chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement to wood, brick, or other unacceptable m	Minimum dead load pressure: 1100 p RTH RETAINING STRUCTURES: rth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 INFORCED CONCRETE: ncrete design is based on the American Concrection constructed in accordance with the "Standard RUCTURAL CONCRETE SHALL HAVE THE F nimum 28 day compressive strength (fc) as follow Cement Type: I/II Maximum Aggregate Size: 3/4" Footings: Walls: Exposed Walls: Exposed Walls:	 assuming on site soil assuming on site soil assuming on site soil assuming on site soil ete Institute "Building Code Requirements for Reinforced Concrete" (ACI 318) and shall be Specifications for Structural Concrete" (ACI 301). FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): ows: 3,000 psi (Max W/C Ratio 0.52); Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") 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 	
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Support of reinforcement on wood, brick, or other unacceptable materials shall not be permitted. ep reinforcement clean and free of dirt and oil. Oil forms prior to placing reinforcement. er admixture shall be 100% virgin polypropylene, fibrillated fibers, type 111 4.1.3, performance level one, per ASTM C1116. pperly place, accurately position and maintain securely in place all embedded items prior to and during concrete placement. chor bolts and rods for beam and column-bearing plates shall be placed with setting templates. less 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.	Minimum dead load pressure: 1100 p RTH RETAINING STRUCTURES: rth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 INFORCED CONCRETE: 0.4 INTO 28 day compressive strength (fc) as follow 0.4 Cement Type: 1/11 Maximum Aggregate Size: 3/4" Footings: Walls: Exposed Walls: Structural Slab on Deck: <td< td=""><td> assuming on site soil assuming on site soil f assuming on site soil ete Institute "Building Code Requirements for Reinforced Concrete" (ACI 318) and shall be Specifications for Structural Concrete" (ACI 301). 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Stirrups, ties, spirals 1-1/2" tall 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. ep reinforcement clean and free of dirt and oil. Oil forms prior to placing reinforcement. her admixture shall be 100% virgin polypropylene, fibrillated fibers, type 111 4.1.3, performance level one, per ASTM C1116. poperly place, accurately position and maintain securely in place all embedded items prior to and during concrete placement. chor bolts and rods for beam and column-bearing plates shall be placed with setting templates. less 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.	Minimum dead load pressure: 1100 p ARTH RETAINING STRUCTURES: In the equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 ENFORCED CONCRETE: ncrete design is based on the American Concre- constructed in accordance with the "Standard RUCTURAL CONCRETE SHALL HAVE THE F nimum 28 day compressive strength (f ⁻ c) as follow Cement Type: 1/11 Maximum Aggregate Size: 3/4" Footings: Walls: Exposed Walls: Structural Bridge Slab: Structural Slab on Deck: Exterior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade: inforcing steel shall be fabricated and placed in nen cold weather conditions exist, place and cu elded wire fabric shall conform to ASTM A185. formed reinforcement shall be domestic new bi reinforcing which is required to be welded shal less otherwise noted on the structural drawings oxy coated reinforcing bars shall conform to ASTM A185. formed reinforcing bars shall conform to ASTM Context tal 2-#5 bars (minimum) around all sides of all continuous members, splice top bars at mid-spir rm intermittent shear keys at all construction joi less otherwise noted on the drawings, minimum Unformed surface cast against and permanent Formed surface cast against and permanent Formed surface not exposed to weather or in Slabs, walls, joists: #11 bars and smaller	 assuming on site soil assuming on site soil assuming on site soil assuming on site soil ete Institute "Building Code Requirements for Reinforced Concrete" (ACI 318) and shall be Specifications for Structural Concrete" (ACI 301). FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): ows: 3,000 psi (Max W/C Ratio 0.52): Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1") 4,000 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 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 4,000 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50): Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50): Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50): Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." re concrete in accordance with ACI 306. Illet stel conforming to ASTM A615, Grade 60 including stirrups and ties, except that II conform to ASTM A706. a) ap bars 50 diameters (50" Bar Diameter minimum). STM A775. form to ASTM A767. a) ap bars per lap splice schedule. a) bars per lap splice bottom bars over supports. ints and as shown on the structural drawings. n concrete cover over reinforcing shall be as follows: tity exposed to earth: 3" 2" 1-1/2" contact with ground: 	S S S S S S S S S S S S S S S S S S S
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	Minimum dead load pressure: 1100 p ARTH RETAINING STRUCTURES: Irth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 INFORCED CONCRETE: ncrete design is based on the American Concre constructed in accordance with the "Standard RUCTURAL CONCRETE SHALL HAVE THE F himum 28 day compressive strength (f _c) as folle Cement Type: //// Maximum Aggregate Size: 3/4" Footings: Walls: Exposed Walls: Structural Bridge Slab: Structural Bridge Slab: Structural Slab on Deck: Exterior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade: inforcing steel shall be fabricated and placed in then cold weather conditions exist, place and cu alded wire fabric shall conform to ASTM A185. formed reinforcement shall be domestic new bi reinforcing which is required to be welded sha less otherwise noted on the structural drawings oxy coated reinforcing bars shall conform to ASTM to coated (galvanized) reinforcing bars shall corf less otherwise noted on the structural drawings inforcing at all abutting concrete (including foot corner bars of equal size and spacing to reinfor tall 2.#5 bars (minimum) around all sides of all continuous members, splice top bars at mid-spi rem intermittent shear keys at all construction jo less otherwise noted on the drawings, minimum Unformed surface cast against and permanen Formed surface not exposed to earth or weather: #6 through #18 bars #5 bar, w31 or d31 wire, and smaller Formed surface not exposed to weather or in Slabs, walls, joist: #11 bars and smaller Formed surface not exposed to weather or in Slabs, walls, joist: #11 bars and smaller Beams and columns: Primary reinforcement Stirrups, ties, spirals tall chairs, bolsters, additional reinforcement, at of reinforcement on wood, brick, or other unac ep reinforcement on sood, brick, or other unac ep reinforcement on sood, brick, or other unac ep reinforcement on wood,	assuming on site soil assuming on site soil f assuming on site soil specifications for Structural Concrete" (ACI 301). FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): ows: 3,000 psi (Max W/C Ratio 0.52); Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." re concrete in accordance with ACI 306. We start that all conform to ASTM A615, Grade 60 including stirrups and ties, except that all conform to ASTM A761. (ap bars por lap splice schedule. Ings) shall be continuous through or around all corners and intersections <u>OR</u> use matching preing in the abutting members. openings in concrete and extend 2'-0" past edges of openings, unless otherwise noted. an between supports and splice bottom bars over supports. Ints and as shown on the structural drawings. In concrete cover over reinforcing shall be as follows: tty exposed to earth: 3" 2" 1-1/2" ontact with ground: 3/4" 1-1/2" nd accessories necessary to support reinforcement at position shown on drawings. Support compate materials shall not be permitted. Oil forms prior to placing reinforcement. e, fibrillated fibers, type 1114.13, performance level one, per ASTM C1116. ecurely in place all embedded items prior to and during concrete placem	SILMOE F FEFMMFAO " N HA NNFUF F NF
	Minimum dead load pressure: 1100 p ARTH RETAINING STRUCTURES: arth equivalent fluid lateral pressure: Walls restrained at top (at rest): 60 pcf Cantilevered walls (active): 50 pcf Passive resisting: 275 pc Coefficient of sliding friction: 0.4 EINFORCED CONCRETE: Destructed in accordance with the "Standard TRUCTURAL CONCRETE SHALL HAVE THE F inimum 28 day compressive strength (fc) as folle Cement Type: 1/11 Maximum Aggregate Size: 3/4" Footings: Walls: Exposed Walls: Structural Bridge Slab: Structural Bridge Slab: Structural Slab on Deck: Exterior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade (excludes flatwork): Interior Slabs-on-Grade: einforcing steel shall be fabricated and placed in hen cold weather conditions exist, place and cu elded wire fabric shall conform to ASTM A185. Sory coated reinforcing bars shall conform to AS nc coated (galvanized) reinforcing bars at mid-spo neless otherwise noted on the structural drawings einforcing at all abutting concrete (including foot corner bars of equal size and spacing to reinfor stall 2-#5 bars (minimum) around all sides of all continuous members, splice top bars at mid-spo porm intermittent shear keys at all construction op neless otherwise noted on the drawings, minimum Unformed surface cast against and permanen Formed surface cast against and permanen Formed surface cont exposed to earth or weather: #6 through #18 bars #5 bar, w31 or d31 wire, and smaller Beams and columns: Primary reinforcement Stirrups, ties, spirals stall chairs, bolsters, additional reinforcement, a of reinforcement clean and free of di	assuming on site soil assuming on site soil f assuming on site soil specifications for Structural Concrete" (ACI 301). FOLLOWING PROPERTIES (normal weight concrete unless noted otherwise): ows: 3,000 psi (Max W/C Ratio 0.52); Entrained Air 1.5% (± 1.5%); Slump 5 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 4,000 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 6.0% (± 1.5%); Slump 4 inches (± 1") 3,500 psi (Max W/C Ratio 0.50); Entrained Air 3.0% (± 1.5%); Slump 4 inches (± 1") accordance with ACI 315 "Details and Detailing of Concrete Reinforcement." re concrete in accordance with ACI 306. We start that all conform to ASTM A615, Grade 60 including stirrups and ties, except that all conform to ASTM A761. (ap bars por lap splice schedule. Ings) shall be continuous through or around all corners and intersections <u>OR</u> use matching preing in the abutting members. openings in concrete and extend 2'-0" past edges of openings, unless otherwise noted. an between supports and splice bottom bars over supports. Ints and as shown on the structural drawings. In concrete cover over reinforcing shall be as follows: tty exposed to earth: 3" 2" 1-1/2" ontact with ground: 3/4" 1-1/2" nd accessories necessary to support reinforcement at position shown on drawings. Support compate materials shall not be permitted. Oil forms prior to placing reinforcement. e, fibrillated fibers, type 1114.13, performance level one, per ASTM C1116. ecurely in place all embedded items prior to and during concrete placem	

STRUCTURAL STEEL: Structural steel shall be detailed, fabricated and erected in accordance with the "Specifica "Code of Standard Practice for Steel Buildings and Bridges" (AISC 303) by the Americ All structural steel shall conform to the ASTM Standards and grades indicated below, unle Structural steel wide flange beams and WTs: ASTM A992, 50 ksi yie ASTM A786, Commerc Rolled steel floor plates: Other rolled shapes, including plates, channels, and angles: ASTM A36, 36 ksi yield Hollow structural section (HSS) rectangular shapes: ASTM A500, Grade B HSS round shapes: ASTM A500, Grade B Pipe shapes: ASTM A53, Grade B, Adjustable pipe columns: 3" diameter 11 gauge, shall be certified by the manufacturer for a safe load capac 3" diameter "Heavy Duty" schedule 40 shall be certified for a safe load capacity of Jnless otherwise noted, framed beam connections shall be bearing-type with 3/4" diameter detailed in conformance with the structural drawings and the "Steel Construction Mar 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 column Anchor rods shall conform to ASTM F1554, Grade 55 as noted on the structural drawings Headed anchor studs (HAS) shall conform to ASTM A108 and shall be connected to struct manufacturer according to the stud manufacturer's recommendations. Nelding shall be done by a certified welder in accordance with the AISC documents lister 2010 Structural Welding Code, and the recommendations for use of E70XX electrode be 3/16" fillet by length of contact edge. All post-installed anchors shall have current International Code Council Evaluation Service with the manufacturer's requirements. Expansion anchors shall be approved "wedge" type unless specifically noted to be "sleeve Chemical anchors shall be approved epoxy or similar adhesive type as appropriate for ins Grout beneath column base and beam bearing plates shall have a minimum 28-day, com non-shrink, non-metallic, and tested in accordance with ASTM C1107. See S0.02 for Special Inspection requirements. QA inspections are permitted to be waive Authority Having Jurisdiction approves. At completion of fabrication, fabricator shall subm and work performed is in accordance to the Construction Documents. STEEL DECKING: Steel roof, non-composite floor (or 'form'), and composite floor deck shall be manufacture specifications and the "Manual of Construction with Steel Deck" (SDI No. MOC1) as Roof deck shall be connected to supporting members and interconnected to develop the lateral forces as noted on the structural drawings. Non-composite and composite floor deck shall be connected to supporting members and requirements except as noted on the structural drawings. Nelding patterns, screw patterns, and details shall be indicated on the deck supplier's sho SHOP DRAWINGS: The structural drawings are copyrighted and shall not be copied for use as erection plans the basis for shop drawings requires prior approval by Anthem, a signed release of li 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 drawir All shop and erection drawings shall be checked and stamped (after having been checke structural engineer's review; shop drawing submittals not checked by the general con will be returned without review. Furnish two (2) prints of shop and erection drawings to the structural engineer for review 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 enginee Shop drawings submitted for review do not constitute "request for change in writing" unle any event, changes made by means of the shop drawing submittal process become t FIELD VERIFICATION OF EXISTING CONDITIONS: The general contractor shall thoroughly inspect and survey the existing structure to verify drawings The general contractor shall report any variations or discrepancies to the architect and st STRUCTURAL ERECTION AND BRACING REQUIREMENTS: The structural drawings illustrate and describe the completed structure with elements in t and/or braced. The structural drawings illustrate typical and representative details to assist the general c conditions unless otherwise indicated. Although due diligence has been applied to m detail is illustrated and not every exceptional condition is addressed. All proprietary connections and elements shall be installed in accordance with the manufa All work shall be accomplished in a workmanlike manner and in accordance with the app

The general contractor is responsible for coordination of all work, including layout and din drawing review, and the work of subcontractors. Any discrepancies or omissions disc immediately reported to the architect and structural engineer for resolution. Continuat relieves the architect and structural engineer from all consequences. Unless otherwise specifically indicated, the structural drawings do not describe methods

The general contractor, in the proper sequence, shall perform or supervise all work nece protect the structure, workmen, and others during construction. Such work shall inclu for construction equipment, shoring for excavation, formwork, scaffolding, safety devi cranes and other erection equipment.

Do not backfill against basement or retaining walls until supporting slabs and floor framing adequate temporary bracing is installed. Temporary bracing shall remain in place until all floors, walls, roofs and any other suppor

The architect and structural engineer bear no responsibility for the above items, and obse inspections of these items. These plans have been engineered for construction at one specific building site. Builder a

ANY OTHER building site. Plans shall not be used for construction at any other building STRUCTURAL MASONRY:

Design is based on ACI 530/ASCE 5/TMS 402, "Building Code Requirements for Masonry Masonry work shall conform to ACI 530.1/ASCE 6/TMS 602 "Specification for Masonry S Compressive strength of masonry assembly used for design is 2000 psi (f m = 2000 psi), Except at masonry lintels using standard lintel units, bond beam units shall be produced fi knockout cross walls.

Hollow load-bearing concrete masonry units (CMU) shall be lightweight, 85 to 105 pcf der 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 Masonry cement shall not be used unless part of a pre-packaged mortar or grout mix app Provide full shoved 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 (3,000 psi concrete using 3/8" diameter aggregate and placed by vibrating unless an a 'Low-Lift' grouting shall not exceed 5 feet in height unless ACI 530.1 'high-lift' grouting pro and structural engineer.

/ertically space continuous horizontal joint reinforcing at 16" maximum in all CMU walls. side rods and 9 gage trussed or ladder cross rods.

n 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 than 6" all splices.

Nire ties for veneer shall be 9 gage diameter for cavity widths 2" or less. Nhere nominal cavity width exceeds 2 inches, veneer ties shall be 1/4" diameter. Ties sh

Reinforcing bars shall be as for reinforced concrete except as noted. Unless otherwise noted on the structural drawings, lap bars 50 diameters (50*Bar Diamet Reinforcement shall be secured against displacement prior to grouting by wire bar locator

200 bar diameters or 10 feet. Reinforce and fully grout vertical cells at corners, ends of walls, jambs of openings, each

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 drawing

Nhere noted on the drawings, provide clearance between masonry and structural elemen Locate vertical control joints in all masonry walls as shown on the architectural drawings,

maximum spacing where not shown. Cold weather construction shall conform to guide specifications from the International Mas version.

LOOSE LINTELS:

Unless noted otherwise, provide loose lintels as follows: (one angle for each 4" of wall thi Opening Angle

0'-8" to 4'-0" L3 1/2x3 1/2x1/4 4'-1" to 5'-4" L5x3 1/2x1/4 (LLV)

5'-5" to 10'-0" L6x3 1/2x5/16 (LLV)

cification for Structural Steel Buildings" (AISC 360) and the merican Institute of Steel Construction (AISC). , unless noted otherwise on the drawings or details. si yield mercial grade yield. le B, 46 ksi yield le B, 42 ksi yield e B, 35 ksi yield. apacity of 13,500 lbs at 7'-6".	 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 shown assumes that the owner/builder is aware of the presence of expansive soils, and that he has read the previously 						BOULDER STEAMBOAT SPRINGS 303-848-8497 970-300-3338 Anthem Job #20-163
bity of 28,000 lbs at 7'-6". ameter, snug tight, ASTM F3125, Grade A325 bolts, Manual" by the AISC, 14th edition. Install bolts in Bolts".	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.						
lumns (1/4" plate or as noted). vings with weldability supplement S1. structural steel with equipment approved by the stud	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.	AB Anchor Rod (B	lt) E-E			KEY Laminated Veneer Lumber (generic	c) RMO Rough Masonry Opening
isted above, the American Welding Society (AWS) D1.1: rodes. Where not specifically noted, minimum weld shall	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	ADDL Additional AFF Above Finished	EF Floor EJ	Each Face Expansion Joint	LW MASY	Light Weight Masonry	RO Rough Opening SC Slip Critical
ervice (ICC-ES) reports and shall be installed in accordance		ALT Alternative AMT Amount APPROX Approximate	EL EN ENGR	Elevation Edge Nailing	MATL MAX MECH	Material Maximum Mechanical	SCH Schedule SDST Self Drilling Self Tapping SECT Section
leeve" type as noted on the structural drawings. or installation in solid and non-solid base materials. compressive strength of <7,500><5,000> psi and shall be	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.	APPROX Approximate ARCH Architect, Arch ASD Allowable Stres AVG Average	EQ		MECH MEZZ MFR MIN	Mezzanine Manufacture, -er, -rd Minimum	SF Square Feet SHT Sheet SHTG Sheathing
waived if steel fabricator or erector is AISC certified or the submit certificate of compliance stating materials supplied	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.	BC Bottom of Cond BL Brick Ledge		Each Side Estimate	MTL <n></n>	Metal "New"	SIM Similar SL Sloped
ctured and erected in accordance with the standard deck	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.	BLK Block BLKG Blocking	E-W EXC	East to West Excavate	NIC N-S	Not In Contract North to South	SOG Slab On Grade SP Space,-s
as prepared by the Steel Deck Institute (SDI). the diaphragm shears and net uplift pressures due to	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.	BM Beam BOT Bottom BRG Bearing	EXP EXT FDN	Expansion Exterior Foundation	OD OF	Not to Scale Outside Diameter Outside Face	SPEC Specifications SQ Square STD Standard
and interconnected as required to satisfy SDI minimum shop drawings.	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	CANT Cantilever CF Cubic Foot	FF FIG	Finished Floor Figure	OH OPNG	Opposite Hand Opening	STL Steel STIFF Stiffener
plans or shop details. Use of Anthem's electronic files as	1704.2.5 Special inspections of fabricated items and fabricators Section 1705 Special inspections and the following sub-sections:	CFS Cold Form Stee CIP Cast In Place	I FL FLR Int (Control Joint) FP	Flush Floor Full Penetration	OPP OSB PAF	Opposite Oriented Strand Board Powder Actuated Fastener	STRUCT Structure (Structural) SY Square Yard SYM Symmetrical
of liability by the general contractor and/or his d.	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	CLG Ceiling CLR Clear	FTG GA	Footing Gage (Gauge)	PC PE	Precast Pre-engineered (trusses)	T&B Top and Bottom T&G Tongue and Groove
lrawings or project specifications. ecked) by the general contractor prior to submission for al contractor prior to submission to the structural engineer	1705.6 Soils 1705.10 Fabricated items Section 1705.12 Special Inspections for seismic resistance with the following sub-sections:	CMU Concrete Masc COL Column		Galvanized General Contractor	PEN PERP	Penetration Perpendicular	TB Top of Beam TC Top of Concrete
view prior to fabrication for:	1705.12.1 Structural Steel 1705.12.1.1 Seismic force-resisting system	COM Common CONC Concrete	GEN GL	General Glue Laminated (Glu-lam)	PKT PL	Pocket Property Line	TJ Top of Joist TL Total Load, Top of Ledge
	1705.12.1.2 Structural steel elements (struts, collector, chords and foundation elements) 1705.12.4 Designated seismic systems 1705.12.5 Architectural components	CONN Connection CONT Continue (Cont	,	Grade Girder Truss	PLF PSF	Pounds per Linear Foot Pounds per Square Foot	TM Top of Masonry T.O Top of
ineer. unless specific suggested changes are clearly marked, in	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	CONSTR Construction COORD Coordinate, Co		Headed Anchor Stud	PSI PSL	Pounds per Square Inch Parallel Strand Lumber (generic)	TRANS Transverse TYP Typical ULT Ultimate
me the responsibility of the one initiating the change.	1705.13.1.1 Seismic force-resisting systems 1705.13.1.2 Structural steel elements (struts, collectors, chords and foundation elements)	CS Countersink CTR Center CY Cubic Yard	HNGR HORIZ	Hanger Horizontal Height or Heavy Timber	PT P.T PV	Pressure Treated Post Tensioned Photovoltaic	ULT Ultimate UNO Unless Noted Otherwise VERT Vertical
erify conditions that affect the work shown on the	1705.13.2 Nonstructural components 1705.13.3 Designated seismic systems Section 1706 Design Strengths of Materials	DAB Deformed Anch DIAG Diagonal		Inside Diameter	QTY <r></r>	Quantity To be Removed	VIF Verify In Field WA Wedge Anchor
nd structural engineer before proceeding.	Section 1707 Alternative Test Procedures Section 1708 In-Situ Load Tests	DIM Dimension DL Dead Load	K LGS	Kip (1,000 lbs)	R	Radius Reference (refer to)	WF Wide Flange WP Work Point
s in their final positions, properly supported, connected,	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	DN Down DP Drilled Pier	LLH	Live Load Long Leg Horizontal	RECT REINF	Rectangle Reinforcement	WT Weight WWF Welded Wire Fabric
ral contractor. Details shown apply at all similar to make the drawings as complete as possible, not every	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	DWG Drawing <e> Existing</e>	LLV LSH	Long Leg Vertical Long Side Horizontal	REQ REQMT	Required Requirement	XS Extra Strong XSECT Cross Section
anufacturers' recommendations. applicable codes and local ordinances. d dimension verification, materials coordination, shop s discovered in the course of the work shall be inuation of work without notification of discrepancies	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.	EA Each ECC Eccentric	LSV LT	Long Side Vertical Light	RET RM	Retaining Wall Room	XXS Double Extra Strong
nods of construction. necessary to achieve the final completed structure, and to include, but not be limited to temporary bracing, shoring devices and programs of all kinds, support and bracing for	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 workmanship 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	ХК, ҮТ	"X" King studs, "Y" Trimmer stu wall thickness		GEND	СМИ	
aming are in place and securely anchored, unless	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		Indicates column continuous th	rough level shown	, ` ^	Concrete	
pporting elements are in place. observation visits to the site do not in any way include	provided by the structural engineer.			level shown, see next level framing plan g in floor cavity of equal size and equal		Earth fill	
lder assumes ALL responsibility for use of these plans at building site without specific review by the engineer.			column size below to foundatio Indicates top of column and typ	n - unless noted otherwise	N 74 F	Porous fill (i.e. grav	
sonry Structures,"				n that extends vertically between			·
ny Structures". osi), based on net-bedded area. ced from standard vertically voided units with pre-cut			Indicates top of concrete slab or wood subfloor elevation			Interior wood bearin	ng wall below framing
f density, conforming to ASTM C90, with a minimum		777,777	Indicates step in floor elevation	1		Wood shear wall be	elow framing
ed for grout.		SLOPE	Indicates direction of slope] Structural wall abov	ve framing
approved by the structural engineer.		O FD	Indicates floor drain				ud wall type, see schedule
TM C476, with a minimum cube strength = 2,000 psi or an approved self-consolidating mix is used. g procedures are reviewed and approved by the architect		(XX'-XX") {XX'-XX"}	Indicates top of footing or pier of Indicates minimum pier penetra			BWX Indicates Building V	Nall type, see schedule
alls. Joint reinforcing shall be welded type with 9 gage		FXX	Continuous spread footing. See and reinforcing	e schedule for size		SWX Indicates shear wal type and nailing	II. See schedule for sheathing
steel. Horizontal joint reinforcing shall be lapped no less		FX.X	Isolated pad footing. See sched	dule for size and reinforcing		HDX Indicates holdown.	See schedule for description
es shall be spaced a maximum of 16" in each direction.		TC=XX'-XX" BC=XX'-XX"	Indicates top of concrete eleva Indicates bottom of concrete el			Joist, or Truss bear	rs on wall or beam below
ameter minimum) at splices. cators or other suitable devices at intervals not exceeding		STEP BC	Indicates step in bottom of con			Beam, Joist, or Tru	iss connected to support with metal
ach side of vertical control joints, and at spacing shown on		/	Indicates top of concrete ledge	elevation		hanger Beam, Joist, or Tru	iss connected to support with
awings. ments, or wrap steel with polyethylene film. ngs, structural drawings, or spaced horizontally at 25'-0"		PKT XxYxZ	Indicates beam pocket in conci			concealed hanger	k or concrete slab span direction
Masonry Industry All-Weather Council (IMIAWC), latest		XX'-XX"	Z= ledge depth in inches) with Indicates step in top of concret	bottom of pocket elevation		X'-XX"] Indicates top of ste	
all thickness to bear 4" minimum each end)			Arrow points toward lower elev Indicates shoring				of bend in bent beam
	SHEET LIST SHEET NUMBER SHEET NAME	(E)	Indicates 'existing'				
	S 0.01STRUCTURAL COVER SHEETS 0.02SPECIAL INSPECTIONSS 1.01FOUNDATION PLAN	(L) (N)	Indicates 'new'			BX Indicates braced fra	ation
	S 1.02 MAIN AND ROOF LEVEL FRAMING PLAN S 1.03 BURGESS CREEK BRIDGE PLAN	(R)	Indicates 'to be removed'			//FX Indicates rigid fram	e
	S 5.01TYPICAL DETAILSS 5.02DETAILS	BPX	Indicates Baseplate			Moment connection	
	S 5.03 DETAILS AND SCHEDULES	/					

NOTICE: DUTY OF COOPERATION Release of these plans contemplates further 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 and every contingency cannot be anticipated. 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 shall relieve the architect from responsibility for the consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect of responsibility for all consequences arriving out of such changes. All design, documents and data prepared by Eric Smith Associates, P.C. as instruments of service shall remain property of Eric Smith Associates, P.C. and shall not be copied, changed or disclosed in any form whatsoever without first obtaining the express written consent of Eric Smith Associates, P.C. Eric Smith Associates, P.C. REVISIONS Description Date No. 3-5-2021 PERMIT SET ()() \square 7 \bigcap C М \mathbf{n} M S S Job Number: 20034 3/5/2021 Date: KLM Drawn By: Checked By: CRR Project Phase Sheet Title STRUCTURAL COVER SHEET Sheet Number



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

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		Х	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
	2. REINFORCING BAR WELDING:				
Ν	a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		Х	AWS D1.4; ACI 318: 26.6.4	
Ν	b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND		Х	AWS D1.4; ACI 318: 26.6.4	
Ν	c. INSPECT ALL OTHER WELDS	Х		AWS D1.4; ACI 318: 26.6.4	
Y	3. INSPECT ANCHORS CAST IN CONCRETE		Х	ACI 318: 17.8.2	
	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS				
Y	a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	Х		ACI 318: 17.8.2.4	
Y	b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.		Х	ACI 318: 17.8.2	
Y	5. VERIFY USE OF REQUIRED DESIGN MIX		Х	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	Х		ACI 318: 26.5	1908.6-1908.8
Y	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		Х	ACI 318: 26.5.3-26.5.5	1908.9
	9. INSPECT PRESTRESSED CONCRETE FOR:				
Ν	a. APPLICATION OF PRESTRESSING FORCES; AND	Х		ACI 318: 26.10	
Ν	b. GROUTING OF BONDED PRESTRESSING TENDONS	Х		ACI 318: 26.10	
Ν	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS		Х	ACI 318: CH 26.9	
Ν	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		Х	ACI 318: 26.11.2	
Ν	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		Х	ACI 318: 26.11.1.2(b)	
	13. WELDING OF REINFORCING BARS				
Ν	a. INSPECTION OF WELDING AND QUALIFICATIONS OF SPECIAL INSPECTORS SHALL BE IN ACCORDANCE WITH AWS D.1.4 FOR SPECIAL INSPECTION AND AWS D1.4 FOR SPECIAL INSPECTOR QUALIFICATION			AWS D1.4	1705.3.1
	14. MATERIAL TESTS				
Ν	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			ACI318: CH 19, 20	1705.3.2

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

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

SPECIAL		FREQUENCY OF INSPECTION REFERENCE F		FOR CRITERIA	
INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	CONTINUOUS 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 faac, 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	-	Х	-	ART. 3.4, 3.6A
N	d. PRESTRESSING TECHNIQUE	-	Х	-	ART. 3.6B
N	e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	-	-	ART. 2.1C.1
Y	f. SAMPLE PANEL CONSTRUCTION	-	Х	-	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
Ν	b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	-	Х	SEC. 10.8, 10.9	ART. 2.4, 3.6
Y	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	-	Х	SEC. 6.1, 6.3.1, 6.3.6,	ART. 3.2E, 3.4
Y	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	Х	-	ART. 2.6B, 2.4G.1.b
	3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION				
Y	a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	-	Х	-	ART. 1.5
Y	b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	-	Х	-	ART. 3.3B
Y	c. SIZE AND LOCATION OF STRUCTURAL ELEMENTS	-	Х	-	ART. 3.3 F
Y	d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMEBERS, FRAMES, OR OTHER CONSTRUCTION	-	Х	SEC. 1.2.1(e), 6.2.1, 6.3.1	-
N	e. WELDING OF REINFORCEMENT	Х	-	SEC.6.1.6.1.2	-
Y	f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMERATURE ABOVE 90°F)	-	Х	-	ART. 1.8C, 1.8E
N	g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	Х	-	-	ART. 3.6B
Ν	h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	-	-	ART. 3.5, 3.6C
Ν	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		Х	-	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

SP

PECIAL		C	C	QA		
SECTION		CONTINUOUS SPECIAL	SPECIAL	CONTINUOUS SPECIAL	PERIODIC SPECIAL	
Y/N		INPSECTION	INSPECTIONS	INSPECTIONS	INSPECTIONS	
Y	1. INSPECTION TASKS PRIOR TO WELDING - TABLE N5.4-1 / AWS D1.1 a. WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	X			Х	
Y	b. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	X		X	Λ	
Y	c. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X		X		
Y	d. MATERIAL IDENTIFICATION (TYPE/GRADE)	~	X	^	Х	
Y	e. WELDER IDENTIFICATION SYSTEM		X		X	
1	f. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)		X		Χ	
Y	f.1. JOINT PREPERATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE) g. FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WIHTOUT BACKING (INCLUDING JOINT		X		Х	
	GEOMETRY)					
Y	g.1. JOINT PREPERATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOF FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)	Х			Х	
Y	h. CONFIGURATION AND FINISH OF ACCESS HOLES		Х		Х	
Y	i. FIT UP OF FILLET WELDS i.1. DIMENSIONS (ALIGNMENT, GAPS AND ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)		X		Х	
Y	j. CHECK WELDING EQUIPMENT		X			
	2. INSPECTION TASKS DURING WELDING - TABLE N5.4-2 / AWS D1.1					
	a. CONTROL AND HANDLING OF WELDING CONSUMABLES					
Y	a.1. PACKAGING, EXPOSURE CONTROL		Х		Х	
Y	b. NO WELDING OVER CRACKED TACK WELDS		Х		Х	
	c. ENVIRONMENTAL CONDITIONS					
Y	c.1. WIND SPEED WITHIN LIMITS, PERCIPITATION AND TEMPERATURE		Х		Х	
Y	d. WPS FOLLOWED d.1. SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS,		X		Х	
	SHIELDING GAS TYPE/FLOW RATE, PERHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.), PROPER POSTION (F,V,H,OH) e. WELDING TECHNIQUES					
Y	e.1 INTERPASS AND FINIAL CLEANING, EACH PASS WITHIN PROFILE LIMITATION, EACH PASS MEETS		Х		Х	
1	QUALITY REQUIREMENTS				X	
Y	f. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	Х		Х		
	3. INSPECTION TASKS AFTER WELDING - TABLE N5.4-3 / AWS D1.1					
Y	a. WELDS CLEANED		Х		Х	
Y	b. SIZE, LENGTH AND LOCATION OF WELDS	Х		Х		
	c. WELDS MEET VISUAL ACCEPTANCE CRITERIA					
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		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	Х		X		
Y	j. NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR		X		Х	
	4. INSPECTION TASKS PRIOR TO BOLTING - TABLE 5.6-1					
Y	a. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		X	Х	.,	
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		X		Х	
Y	THREADS ARE TO BE EXCULDED FROM SHEAR PLANE)		v		v	
Y Y	d. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		X X		X	
Y 	e. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPERATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS f. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND	X	Å		X X	
Y Y	g. PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER	^	X		х Х	
1	G. PROTECTED STORAGE PROVIDED FOR BOLTS, NOTS, WASHERS AND OTHER FASTENER COMPONENTS 5. INSPECTION TASKS DURING BOLTING - TABLE 5.6-2		^		^	
Y	a. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF		X		Х	
I	REQUIRED) ARE POSITIONED AS REQUIRED		^		^	
Y	b. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		Х		Х	
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.		X		X	
•	PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES 6. INSPECTION TASKS AFTER BOLTING - TABLE 5.6-3					
		1	1	1		
Y	a. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	Х		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.		Х	1705.6		
Y	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		Х	1705.6		
Y	3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.		Х	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.		Х	1705.6		

SI TABLE N5.4-1 INSPECTION

INSPECTION TASKS PRIOR TO WELDING WELDER QUALIFICATION RECORDS AND CONTINUIT WPS AVAILABLE MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE MATERIAL IDENTIFICATION (TYPE/GRADE) WELDER IDENTIFICATION SYSTEM FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOM JOINT PREPARATIONS DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT F CLEANLINESS (CONDITON OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION) BACKING TYPE AND FIT (IF APPLICABLE) FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K WITHOUT BACKING (INCLUDING JOINT GEOMETRY) JOINT PREPARATIONS DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT F CLEANLINESS (CONDITION OF STEEL SURFACES)

TACKING (TACK WELD QUALITY AND LOCATION CONFIGURATION AND FINISH OF ACCESS HOLES FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT CLEANLINESS (CONDITON OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION)

CHECK WELDING EQUIPMENT

SI TABLE N5.4-2 INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING WELDING	QC	QA
CONTROL AND HANDLING OF WELDING		
CONSUMABLES		
PACKAGING	0	0
EXPOSURE CONTROL	0	0
NO WELDING OVER CRACKED TACK WELDS	0	0
ENVIRONMENTAL CONDITIONS		
WIND SPEED WITHIN LIMITS	0	0
PRECIPITATION AND TEMPERATURE	0	0
WPS FOLLOWED		
SETTINGS ON WELDING EQUIPMENT	0	0
TRAVEL SPEED	0	0
SELECTED WELDING MATERIALS	0	0
SHIELDING GAS TYPE/FLOW RATE	0	0
PREHEAT APPLIED	0	0
INTERPASS TEMPERATURE MAINTAINED	0	0
(MIN/MAX)		
PROPER POSITION (F,V,H,OH)	0	0
WELDING TECHNIQUES		
INTERPASS AND FINAL CLEANING	0	0
EACH PASS WITHIN PROFILE LIMITATIONS	0	0
EACH PASS MEETS QUALITY REQUIREMENTS	0	0
PLACEMENT AND INSTALLTION OF STEEL HEADED STUD ANCHORS	Р	Р

INSPECTION TASKS AFTER WELDING	QC	QA
WELDS CLEANED	0	0
SIZE, LENGTH AND LOCATION OF WELDS	Р	Р
WELDS MEET VISUAL ACCEPTANCE CRITERIA		
CRACK PROHIBITION	Р	P
WELD/BASE-METAL FUSION	Р	P
CRATER CROSS SECTION	Р	Р
WELD PROFILES	Р	Р
WELD SIZE	Р	Р
UNDERCUT	Р	Р
POROSITY	Р	Р
ARC STRIKES	Р	Р
K-AREA	Р	Р
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES	Р	Р
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	Р	Р
REPAIR ACTIVITES	Р	Р
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	Р	Р
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	0	0

INSPECTION TASKS PRIC

MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENERS MARKED IN ACCORDANCE WITH ASTM F CORRECT FASTENERS SELECTED FOR THE JOINT D THREADS ARE TO BE EXCLUDED FROM SHEAR PLAN CORRECT BOLTING PROCEDURE SELECTED FOR JOI CONNECTING ELEMENTS, INCLUDING THE APPROPR HOLE PREPARATION, IF SPECIFIED, MEET APPLICABL PRE-INSTALLATION VERIFICATION TESTING BY INST DOCUMENTED FOR FASTENER ASSEMBLIES AND ME PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS COMPONENTS INSPECTION TASKS DURING BOLTING

FASTENER ASSEMBLIES PLACED IN ALL HOLES AND REQUIRED

JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PF FASTENER COMPONENT NOT TURNED BY THE WREI FASTENERS ARE PRETENSIONED IN ACCORDANCE PROGRESSING SYSTEMATICALLY FROM THE MOST I INSPECTION TASKS AFTER BOLTING

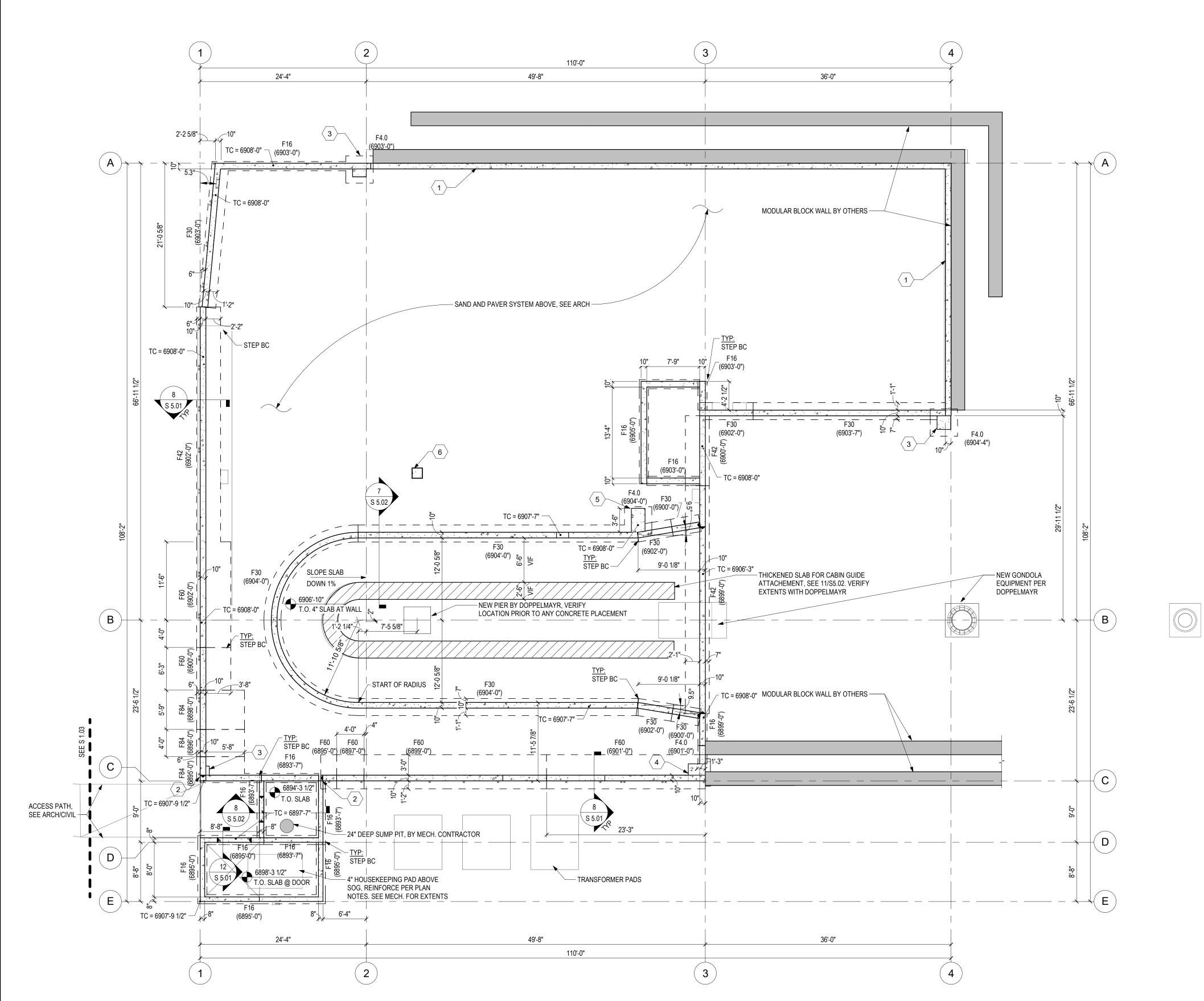
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTE



NG	QC	QA
ITY RECORDS	Р	0
	Р	Р
	Р	Р
	0	0
	0	0
DMETRY)		
	0	0
FACE, BEVEL)	0	0
	0	0
	0	0
	0	0
K-JOINTS)		
	Р	0
FACE, BEVEL)	Р	0
	Р	0
	Р	0
	0	0
	0	0
	0	0
	0	0
	0	-

IOR TO BOLTING	QC	QA
OR FASTENER MATERIALS	0	Р
I REQUIREMENTS	0	0
DETAIL (GRADE, TYPE, BOLT LENGTH IF NNE)	0	0
OINT DETAIL	0	0
PRIATE FAYING SURFACE CONDITION AND BLE REQUIREMENTS	0	0
TALLATION PERSONNEL OBSERVED AND IETHODS USED	Р	0
TS, WASHERS AND OTHER FASTENER	0	0
	QC	QA
D WASHERS AND NUTS ARE POSITIONED AS	0	0
PRIOR TO THE PRETENSIONING OPERATION	0	0
ENCH PREVENTED FROM ROTATING	0	0
E WITH THE RCSC SPECIFICATION, I RIGID POINT TOWARD THE FREE EDGES	0	0
ED CONNECTIONS	0	0

a per the impe Any ti ard misu failu sh cons	Additional and the architect from responsibility sequences. Changes made from the plans near the architect of responsibility for consequences arriving out of such changes and the architect of responsibility for consequences arriving out of such changes and the architect on the architect on the architect on the architect on the set of the architect on the architect on the architect on the architect on the architect of the architect on the architect of the architect on the architect on the architect of the architect on the architect of the archit	her and the iplex. have ligence, ation is ticipated. he use of o the o use of o o the costs. A architect for the s without d shall
S sha and for	II design, documents and data prepared b mith Associates, P.C. as instruments of s all remain property of Eric Smith Associate I shall not be copied, changed or disclosed m whatsoever without first obtaining the e written consent of Eric Smith Associates, Eric Smith Associates, P.C. REVISIONS	y Eric ervice s, P.C. d in any xpress P.C. Date
	STEAMBOAT GONDOLA RELOCATION	-
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- FOUNDATION PLAN NOTES: 1. SEE S0.01 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS
- AND LEGEND 2. SEE S5.01 FOR TYPICAL DETAILS
- 3. SEE S5.03 FOR SCHEDULES 4. CONCRETE FOUNDATION GRADE WALL (UNO):
- 8" THICK CONCRETE WALLS REINFORCED WITH #5 @ 18" EACH WAY CENTERED IN WALL. ALSO INSTALL (2) #5 BARS TOP AND BOTTOM.
- 10" RETAINING WALLS, SEE SCHEDULE AND 8/S5.01 FOR WALL REINFORCING. 5. <u>CONCRETE SLAB ON GRADE:</u> 5" THICK CONCRETE SLAB ON PREPARED SUB-GRADE PER SOILS REPORT. REINFORCE WITH #4 @18" EA WAY PLACED AT MID-DEPTH. SAWCUT OR TOOLED 1/8"x1" CONTROL JOINTS @ 10'-0" MAX EACH WAY. INSTALL (3) #4 x 5'-0" DIAGONAL BARS AT MID-DEPTH OF SLAB AT ALL RE-ENTRANT
- CORNERS 6. INDICATES MODULAR BLOCK RETAINING WALL TO BE
- DESIGNED BY OTHERS, SEE ARCH 7. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, AND OTHER INFORMATION NOT SHOWN.

FOUNDATION PLAN KEYNOTES

$\langle \mathbf{x} \rangle$	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 AT 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/ (8) #6 VERTICALS; #4 TIES AT 12" ,(3) TIES @ 3" TOP. SEE ELECTRICAL FOR ANCHOR BOLTS AND CONDUIT LAYOUT
4	30"x30" CONCRETE PIER FOR SPUR RAIL SUPPORT CAST INTEGRAL W/ WALL W/ (12) #8 VERTICALS; #4 TIES AND CROSSTIES AT 12" ,(3) TIES @ 3" TOP. SEE DOPPELMAYR FOR ANCHOR BOLT LAYOUT
5	24" WALL FOR PARKING RAIL SUPPORT W/ #5 @ 12" VERT. AND HORIZ. EACH FACE. SEE DOPPELMAYR FOR EMBED IN TOP

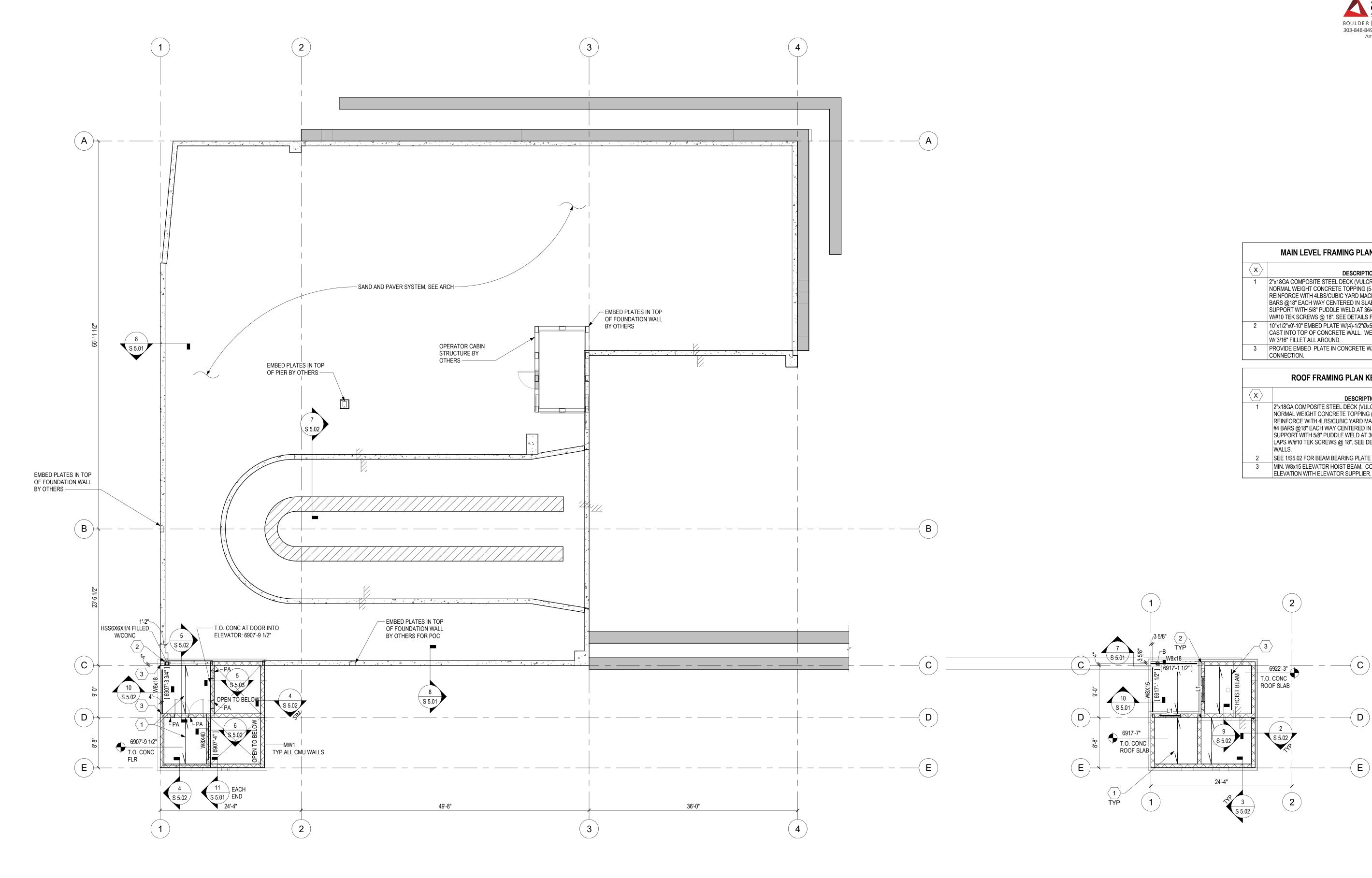
6 MIN 12"x12" CONCRETE PIER W/(4)-#5 VERT AND #3 TIES @ 12"; (3) TIES @3" TOP. COORDINATE LOCATION WITH DOPPELMAYER. MIN DEPTH = 4'-0".

CONCRETE FOOTING SCHEDULE (CONT)

MARK	WIDTH	THICKNESS	REINFORCEMENT
F16	1'-4"	1'-0"	(2) #5's BOT
F30	2'-6"	1'-0"	SEE 8/S5.01
F42	3'-6"	1'-0"	SEE 8/S5.01
F60	5'-0"	1'-0"	SEE 8/S5.01
F84	7'-0"	1'-0"	SEE 8/S5.01
		•	

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



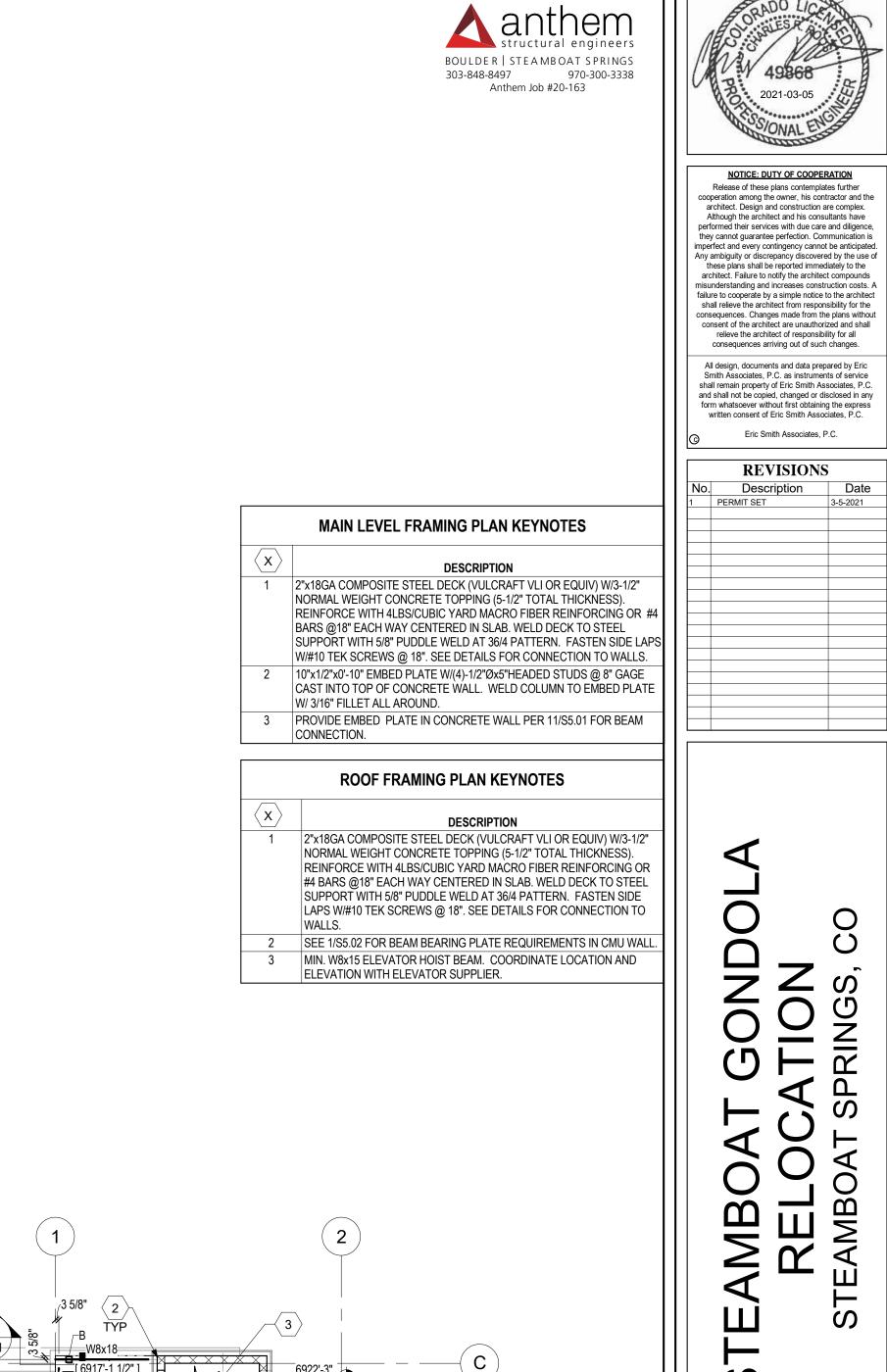


MAIN LEVEL FRAMING PLAN

/ 1/8" = 1'-0" PLAN NORTH

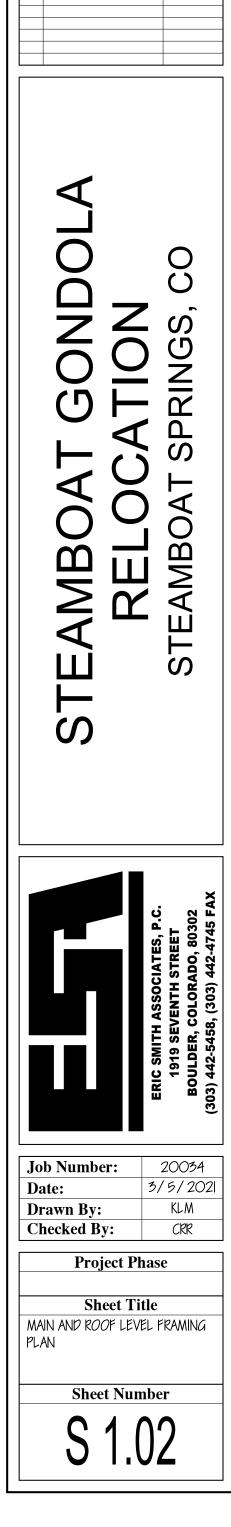
- MAIN LEVEL PLAN NOTES: 1. SEE S0.01 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS AND LEGEND 2. SEE S5.01 FOR TYPICAL DETAILS AND S5.03 FOR CMU WALL, PIER AND LINTEL SCHEDULES
- 3. SEE S1.01 FOR TOP OF FOUNDATION WALL ELEVATION. 4. TYPICAL CMU WALL IS 8" CMU WITH 'MW1' REINFORCING PER S5.03. PROVIDE 5'-0" DOWELS AT TOP OF
- CONCRETE FOUNDATION WALL TO MATCH MASONRY WALL REINFORCING SIZE AND SPACING. PROJECT 30" ABOVE TOP OF FOUNDATION WALL.
- 5. UNLESS NOTED OTHERWISE, TYPICAL TOP OF SLAB = 6907'-9 1/2"

1/8" = 1'-0" PLAN NORTH

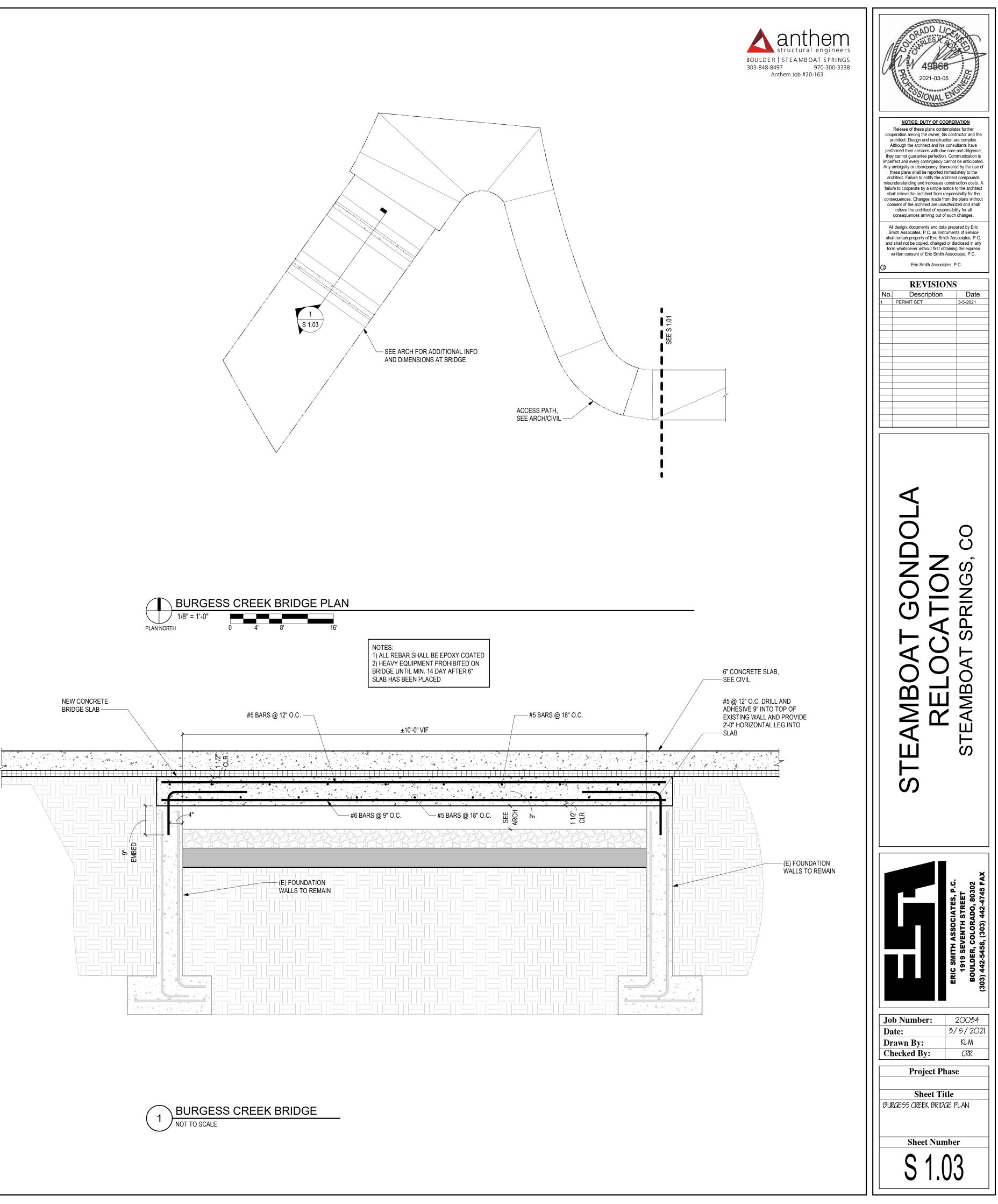


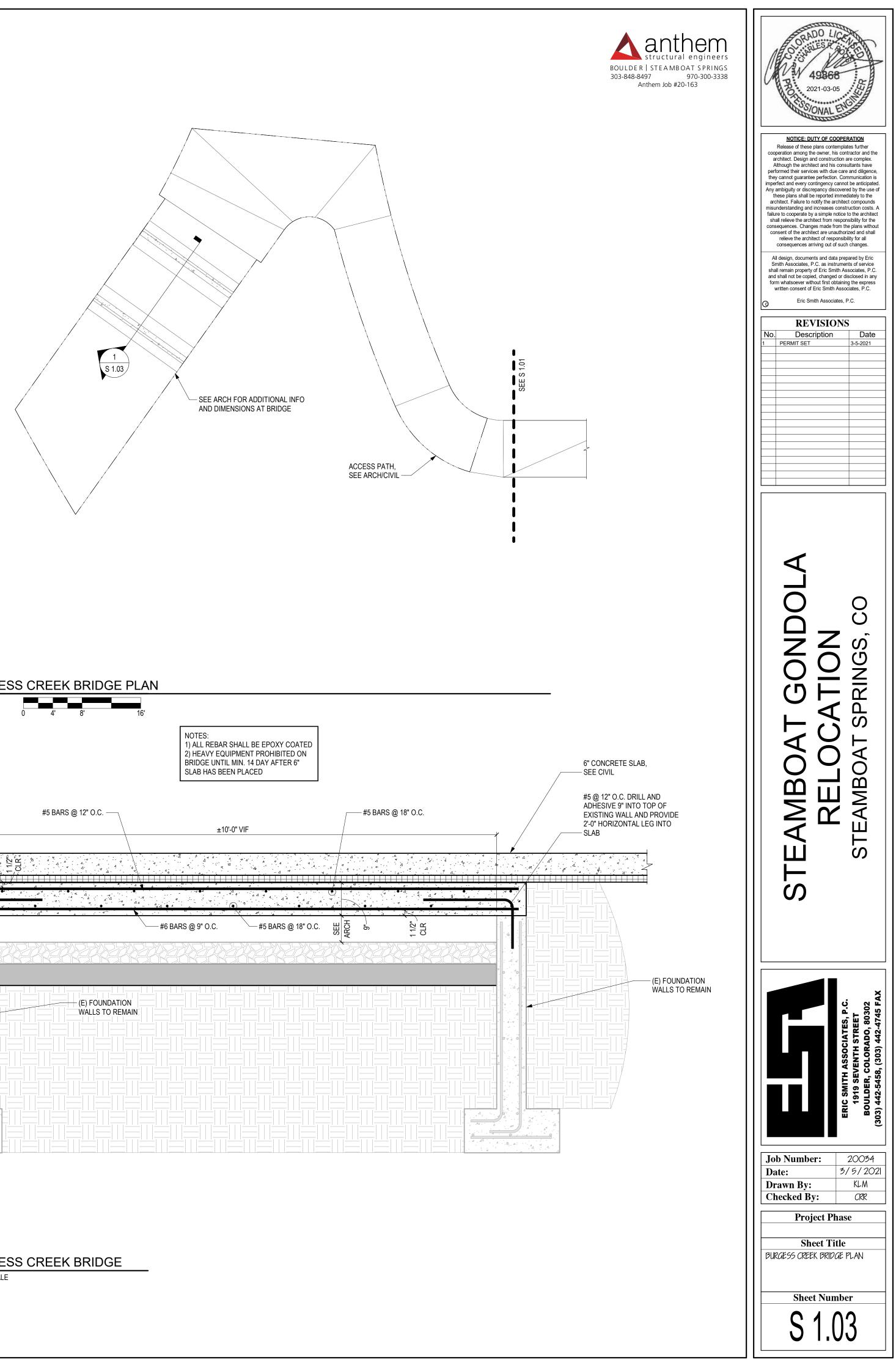
ROOF FRAMING PLAN

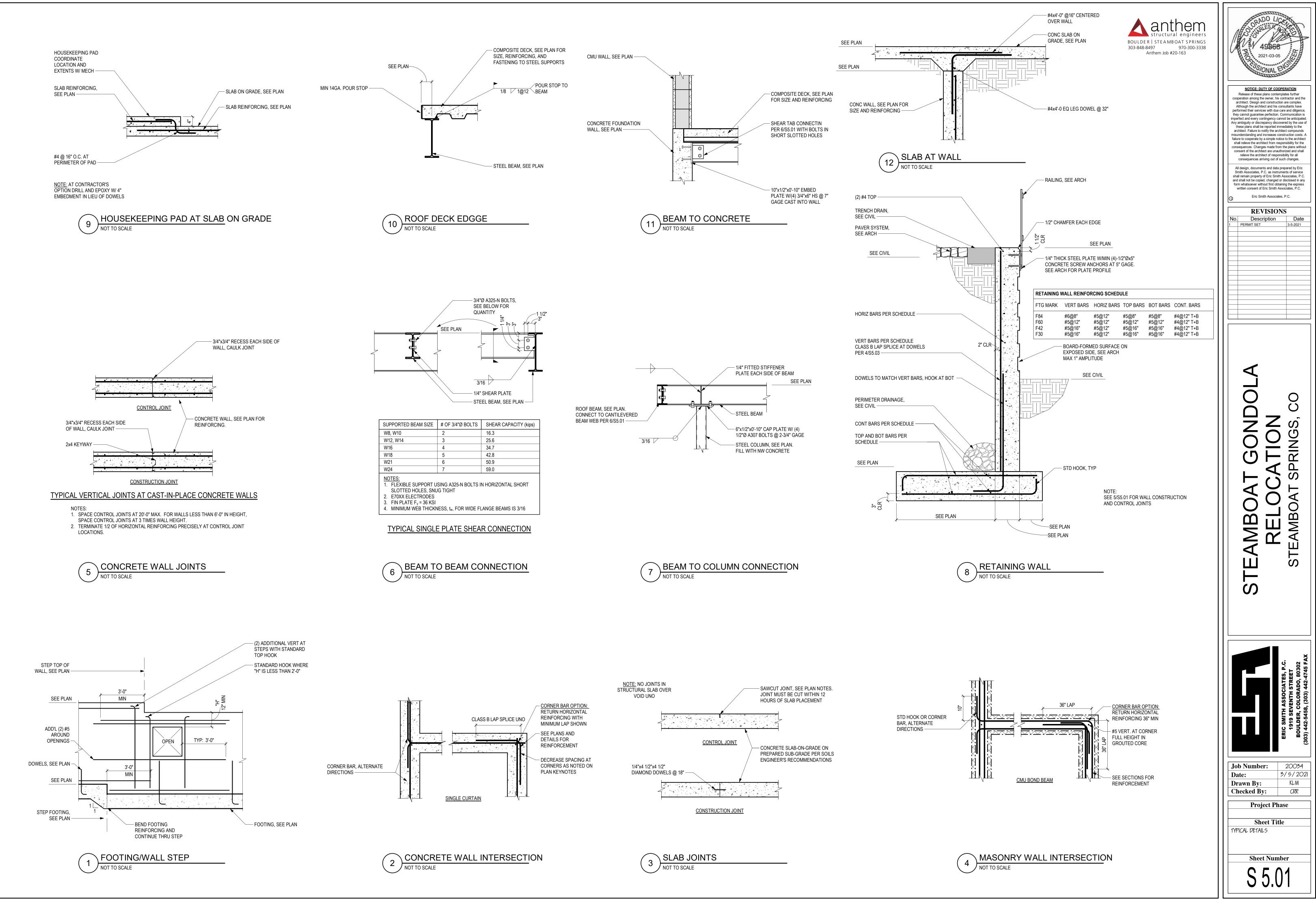
ROOF PLAN NOTES: 1. SEE S0.01 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS AND LEGEND 2. SEE S5.01 FOR TYPICAL DETAILS AND S5.03 FOR CMU WALL, PIER AND LINTEL SCHEDULES 3. AT ROOF DRAINS, ACCEPTABLE TO CORE DRILL MAXIMUM 8" HOLE THROUGH COMPOSITE ROOF DECK. NOTIFY ANTHEM IF LARGER OPENING IS REQUIRED PRIOR TO POURING DECK. 4. LOCATE MECHANICAL OPENINGS IN WALLS MIN. 1'-4" FROM BEAM BEARING LOCATIONS. PROVIDE 'L1' LINTEL OVER MECHANICAL OPENINGS UP TO 6'-0" IN LENGTH. 5. UNLESS NOTED OTHERWISE, TYPICAL T/SLAB = 6917'-6 3/4".

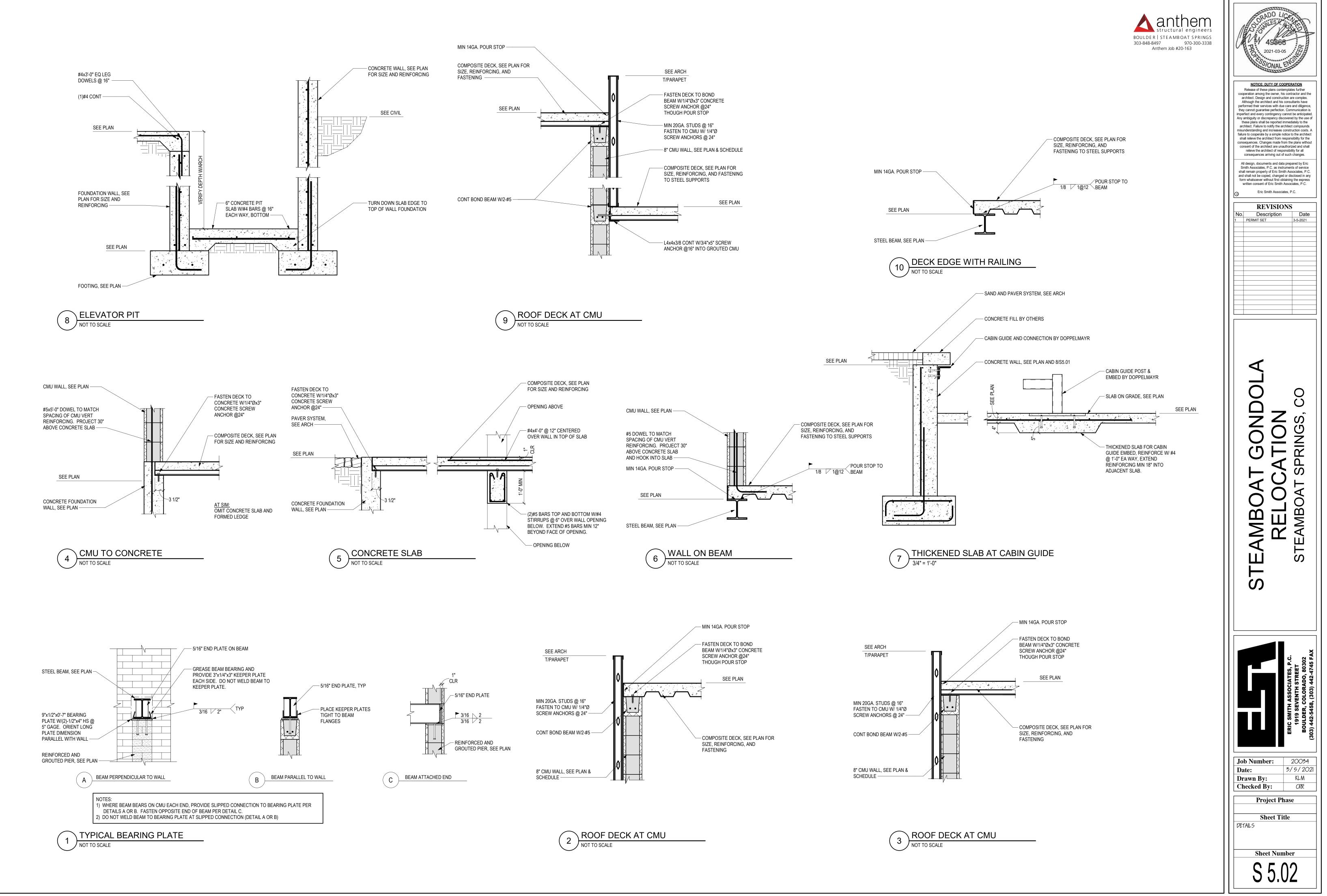




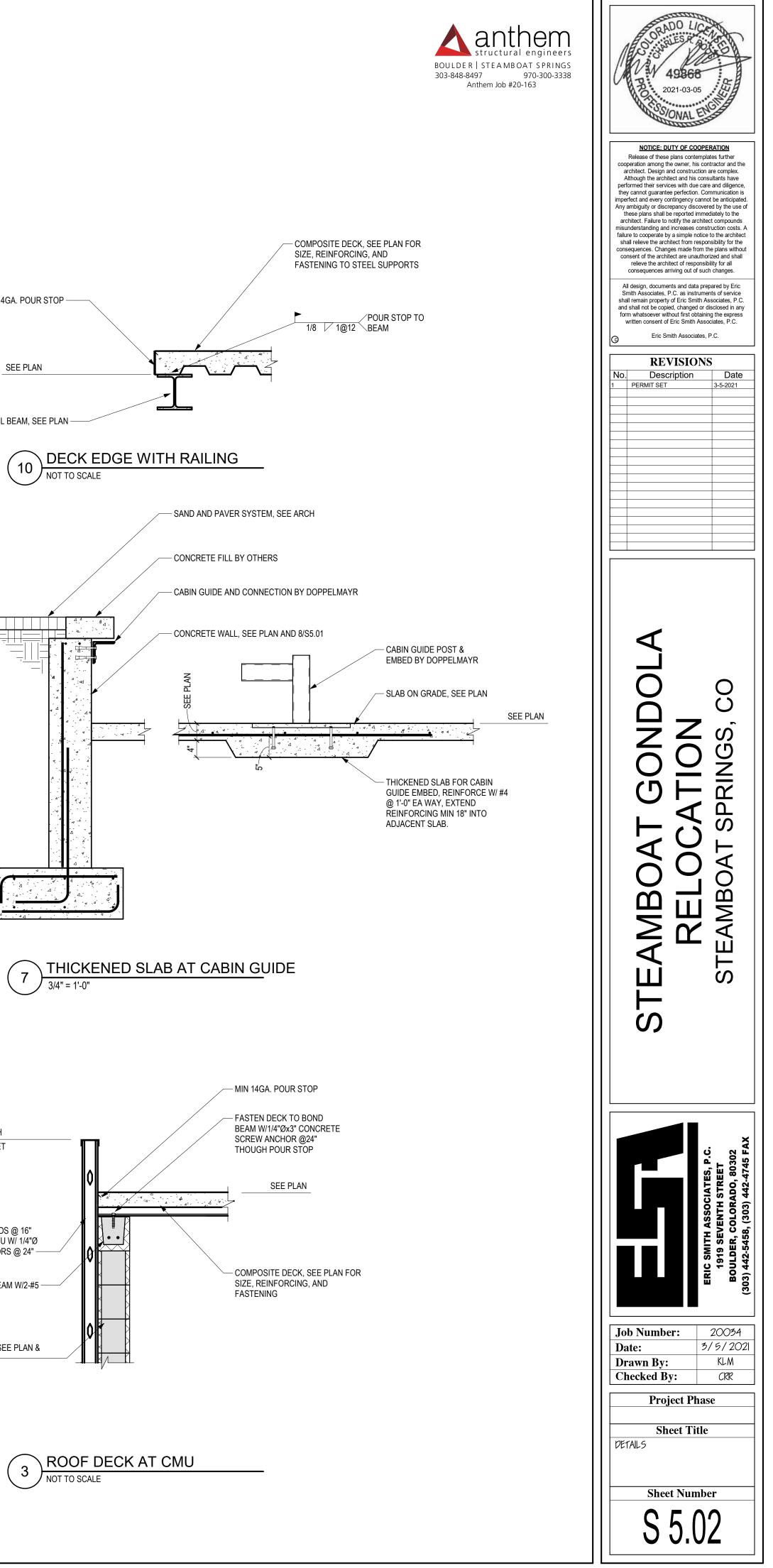


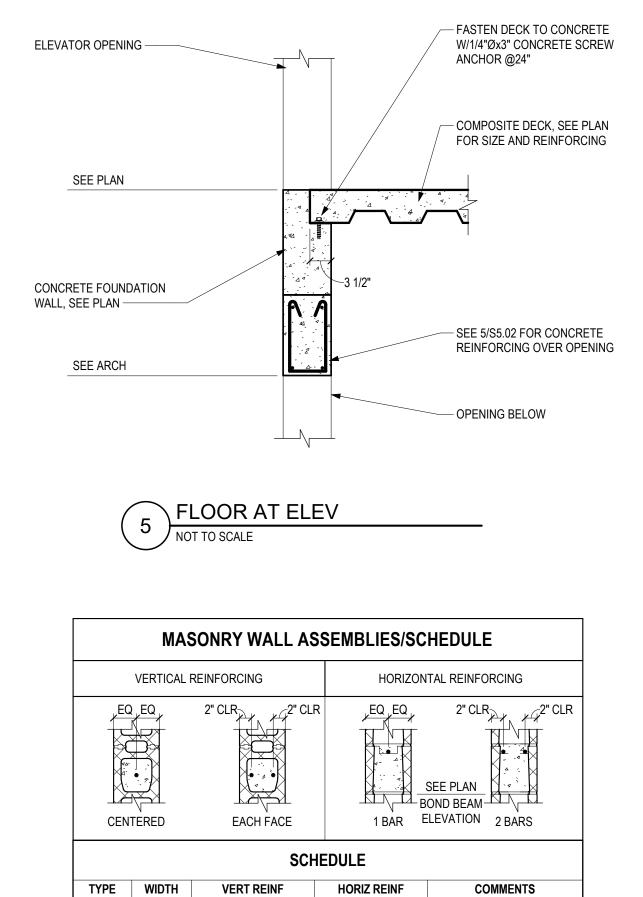












MW1 7 5/8" #5 @ 16" CENTERED 9GA LADDER @ 16"

. WHERE REINFORCING IS NOT NOTED ON PLAN, PROVIDE MW1 REINFORCING IN WALL.

BOTTOM OF DOWELS AND EXTEND A MINIMUM OF 48 BAR DIAMETERS INTO WALL.

MASONRY WALL SCHEDULE

AT OPENINGS IN WALL, SEE DETAIL 3/S5.02 FOR ADDITIONAL INFORMATION.

PROVIDE WALL REINFORCING FROM FOOTING TO 2" CLEAR TOP OF WALL.

5. PROVIDE CONTINUOUS BOND BEAM WITH (2) #5 BARS AT TOP OF WALL.

6. ALL MASONRY SHALL BE RUNNING BOND.

NOT TO SCALE

PROVIDE DOWELS FROM FOOTING INTO WALL TO MATCH WALL REINFORCING SIZE AND

SPACING, CENTER IN WALL UNLESS NOTED OTHERWISE. PROVIDE STANDARD HOOK AT

NOTES:

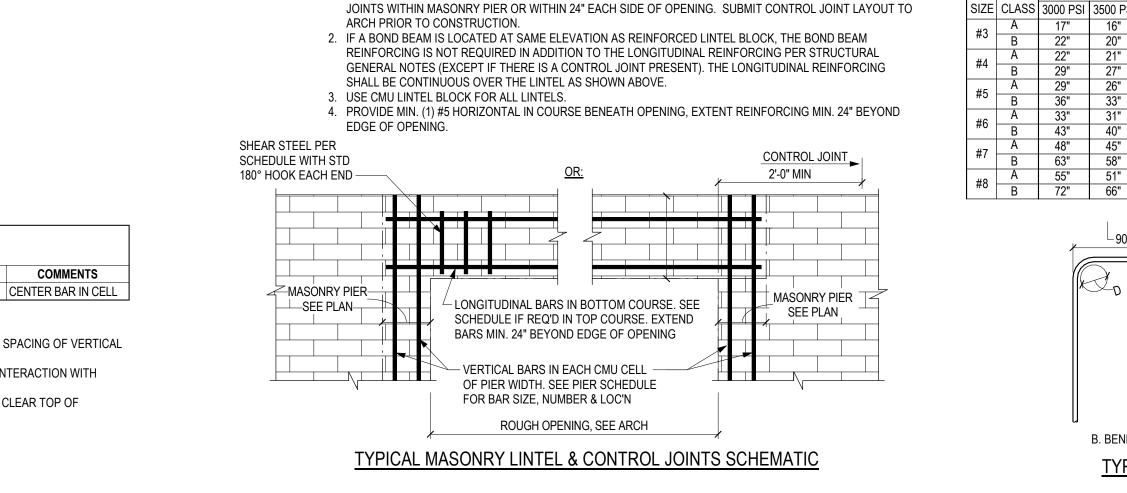
	MASO	NRY PIER SCHEDULE
MARK	SIZE	REINFORCING
PA	16"x WALL WIDTH	(1) #5 VERT @ 8"
		(1) #0 12111 @0

- UNLESS NOTED OTHERWISE: 1. PROVIDE HOOKED DOWELS INTO FOOTING TO MATCH SIZE AND SPACING OF VERTICAL
- REINFORCING. 2. SEE DETAIL 3/S5.02 FOR REINFORCING LAYOUT AT JAMBS AND INTERACTION WITH
- LINTELS.
- 3. EXTEND REINFORCING SHOWN AT LOWEST LEVEL TO WITHIN 2" CLEAR TOP OF PIER/WALL.
- 4. PROVIDE PIER 'PA' IF PIER IS NOT TAGGED ON PLAN.



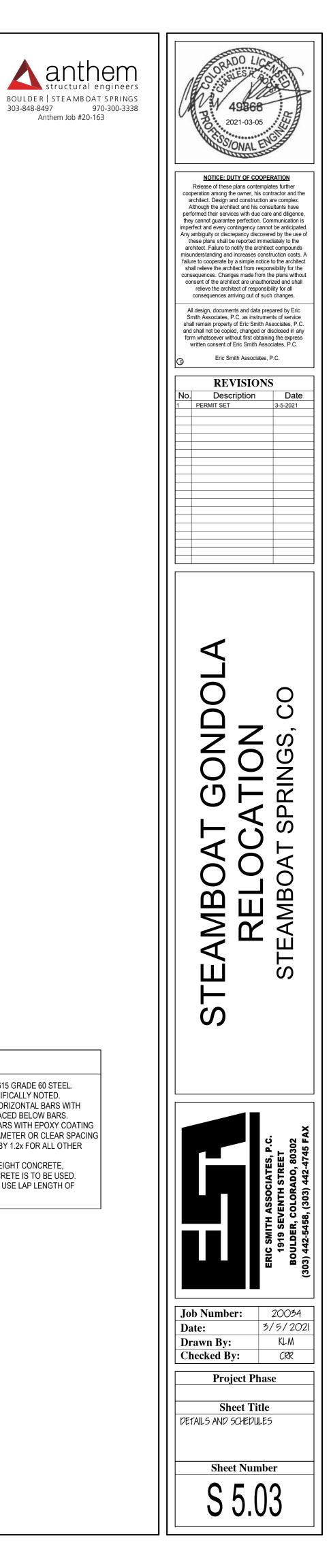
MASONRY LINTEL SCHEDULE

NOT TO SCALE



MASONRY LINTEL SCHEDULE MARK COMMENTS SIZE REINFORCING L1 16" DEEP X WALL WIDTH 2 - #5 BOTTOM UNLESS NOTED OTHERWISE: 1. PROVIDE VERTICAL CONTROL JOINTS IN CMU WALLS AT 20'-0" MAX ON CENTER. PROVIDE (1)#5 BAR

VERTICAL IN BLOCK CORE EACH SIDE OF CONTROL JOINT AND GROUT SOLID. DO NOT PLACE CONTROL



303-848-8497

Anthem Job #20-163

LAP SPLICE LENGTH

A. LAP SPLICES

XD

BAR LAP

LAP SPLICE SCHEDULE							NOTES:	
fc OF NORMAL WEIGHT CONCRETE								
SI	3500 PSI	4000 PSI	4500 PSI	5000 PSI	5500 PSI	6000 PSI	1. ALL SPLICE LENGTHS ARE FOR ASTM A615 GRADE 60 STEEL.	
	16"	15"	14"	13"	13"	12"	2. USE CLASS B LAP SPLICE UNLESS SPECIFICALLY NOTED.	
	20"	19"	18"	17"	16"	16"	3. INCREASE LAP LENGTHS BY 1.3x FOR HORIZONTAL BARS WITH	
	21"	19"	18"	17"	17"	16"	MORE THAN 12" OF FRESH CONCRETE PLACED BELOW BARS.	
	27"	25"	24"	23"	21"	21"	4. INCREASE LAP LENGTHS BY 1.5x FOR BARS WITH EPOXY COAT	
	26"	24"	23"	22"	21"	20"	AND CLEAR COVER LESS THAN 3x BAR DIAMETER OR CLEAR SPACING	
	33"	31"	30"	28"	27"	26"	LESS THAN 6x BAR DIAMETER. INCREASE BY 1.2x FOR ALL OTHER	
	31"	29"	27"	26"	25"	24"	EPOXY COATED BARS.	
	40"	37"	35"	34"	32"	31"	5. ALL LAP LENGTHS ARE FOR NORMAL WEIGHT CONCRETE,	
	45"	42"	40"	38"	36"	34"	CONTACT ANTHEM IF LIGHTWEIGHT CONCRETE IS TO BE USED.	
	58"	54"	51"	49"	47"	45"	6. WHEN SPLICING DIFFERENT SIZE BARS, USE LAP LENGTH OF	
	51"	48"	45"	43"	41"	39"	LARGER BAR.	
	66"	62"	59"	56"	53"	51"		

*					
		В	LE		
	180	BAR SIZE	D	90	180
		#3 #4 #5 #6 #7 #8	2-1/4" 3" 3-3/4" 4-1/2" 5-1/4" 6"	6" 8" 10" 12" 14" 16"	2-1/2" 2-1/2" 2-1/2" 3" 3-1/2" 4"

B. BENDS AND HOOKS

TYPICAL REINFORCING FOR CONCRETE (UNO)

LAP SPLICE SCHEDULE 4

NOT TO SCALE