# ADDENDUM # 007

Date: 05/08/18

- RE: Cherokee Nation Entertainment Tahlequah Casino
- From: James R Childers Architect, Inc. 45 South 4<sup>th</sup> Street Fort Smith, Arkansas 72901

This addendum forms part of the Contract Documents, and modifies the documents as noted below. Bidder must acknowledge receipt of this addendum in the FMC Bid Form. Failure to do so may subject the bidder to disqualification.

- *Item 1* Spec Section 07 8100 Applied Fireproofing Revised, 09 2116 Gypsum Board Assemblies Revised, and 10 2226 Operable Partitions
- *Item 2* Structure Summary of Changes
- Item 3 Structure Drawings

## SECTION 07 8100 APPLIED FIREPROOFING

### PART 1 GENERAL

## 1.01 SECTION INCLUDES

A. Fireproofing of interior structural steel.

## 1.02 RELATED REQUIREMENTS

- A. Section 00 3105 Fire Protection Report
- B. Section 05 1200 Structural Steel Framing.
- C. Section 05 2100 Steel Joist Framing.
- D. Section 05 3100 Steel Decking.
- E. Section 07 8400 Firestopping.
- F. Section 09 2116 Gypsum Board Assemblies: Gypsum board fireproofing.

## 1.03 REFERENCE STANDARDS

- A. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2017.
- B. ASTM E736 Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2000 (Reapproved 2011).
- C. ASTM E760/E760M Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members; 1992, with Editorial Revision (2015).
- D. ASTM E937 Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 1993 (Reapproved 2011).

## 1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section.

## 1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittals procedures.
- B. Product Data: Provide data indicating product characteristics.
- C. Test Reports: Reports from reputable independent testing agencies for proposed products, indicating compliance with specified criteria, conducted under conditions similar to those on project, for:
  - 1. Bond Strength.
  - 2. Bond Impact.
  - 3. Compressive Strength.
  - 4. Fire tests using substrate materials similar those on project.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Manufacturer's Certificate: Certify that sprayed-on fireproofing products meet or exceed requirements of contract documents.
- F. Manufacturer's Field Reports: Indicate environmental conditions under which fireproofing materials were installed.

#### 1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

## 1.07 MOCK-UP

- A. Construct mock-up, 100 square feet (9 square meters) in size.
- B. Conform to project requirements for fire ratings.
- C. Locate where directed.

- D. Examine installation within one hour of application to determine variances from specified requirements due to shrinkage, temperature, and humidity.
- E. Where shrinkage and cracking are evident, adjust mixture and method of application as necessary. Remove materials and re-construct mock-up.
- F. Mock-up may remain as part of the Work.

#### 1.08 FIELD CONDITIONS

- A. Do not apply spray fireproofing when temperature of substrate material and surrounding air is below 40 degrees F (4 degrees C) or when temperature is predicted to be below said temperature for 24 hours after application.
- B. Provide ventilation in areas to receive fireproofing during application and 24 hours afterward, to dry applied material.
- C. Provide temporary enclosure to prevent spray from contaminating air.

#### 1.09 WARRANTY

- A. See Section 01 7800 Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
  1. Include coverage for fireproofing to remain free from cracking, checking, dusting, flaking,
  - spalling, separation, and blistering.
  - 2. Reinstall or repair failures that occur within warranty period.

#### PART 2 PRODUCTS

#### 2.01 PERFORMANCE REQUIREMENTS

- A. Assemblies: Provide fireproofing, including auxiliary materials, according to requirements of each fire-resistance design and manufacturer's written instructions.
  - 1. Provide as required by applicable building codes and
  - 2. The Fire Protection Report, Section 00 3105
- B. Source Limitations: Obtain fireproofing for each fire-resistance design from single source.
- C. Fire-Resistance Design: Indicated on Drawings, tested according to ASTM E 119 or UL 263 ; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Steel members are to be considered unrestrained unless specifically noted otherwise.
  - UL design listings must state that the loading was determined by Allowable Stress Design Method or Load and Resistance Factor Design Method. UL design listings requiring a load restriction factor are not allowed.
- D. Asbestos: Provide products containing no detectable asbestos.

#### 2.02 SPRAYED FIRE-RESISTIVE MATERIALS

- A. Standard Durability SFRM, Manufacturer's standard, factory-mixed, lightweight, dry formulation, complying with indicated fire-resistance design, and mixed with water at Project site to form a slurry or mortar before conveyance and application. Dry mix inorganic spray-applied fire resistive material containing mineral slag wool and Portland-cement are not permitted.
  - Basis-of-Design Product: Subject to compliance with requirements, provide GCP Applied Technologies <a href="http://www.specagent.com/LookUp/?uid=123456895192&mf=&src=wd">http://www.specagent.com/LookUp/?uid=123456895192&mf=&src=wd</a>; Monokote MK-6
  - 2. Bond Strength: Minimum 150-lbf/sq. ft. (9.57-kPa) cohesive and adhesive strength based on field testing according to ASTM E 736.
  - 3. Density: Not less than density specified in the approved fire-resistance design, according to ASTM E 605.
  - 4. Thickness: As required for fire-resistance design indicated, measured according to requirements of fire-resistance design or ASTM E 605, whichever is thicker, but not less than 0.375 inch (9 mm).

- 5. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - a. Flame-Spread Index: 0 or less.
  - b. Smoke-Developed Index: 0 or less.
- 6. Compressive Strength: Minimum 10 lbf/sq. in. (68.9 kPa) according to ASTM E 761.
- 7. Corrosion Resistance: No evidence of corrosion according to ASTM E 937.
- 8. Deflection: No cracking, spalling, or delamination according to ASTM E 759.
- 9. Effect of Impact on Bonding: No cracking, spalling, or delamination according to ASTM E 760.
- 10. Air Erosion: Maximum weight loss of 0.025 g/sq. ft. (0.270 g/sq. m) in 24 hours according to ASTM E 859.
- Fungal Resistance: Treat products with manufacturer's standard antimicrobial formulation to result in rating of 10 according to ASTM D 3274 when tested according to ASTM D 3273.
- 12. Sound Absorption: NRC 0.50 according to ASTM C 423 for Type A mounting according to ASTM E 795.
- 13. Finish: Spray-textured finish

## **PART 3 EXECUTION**

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of the Work and according to each fire-resistance design.
  - 1. Verify that substrates are free of dirt, oil, grease, release agents, rolling compounds, mill scale, loose scale, incompatible primers, paints, and encapsulants, or other foreign substances capable of impairing bond of fireproofing with substrates under conditions of normal use or fire exposure.
  - 2. Verify that objects penetrating fireproofing, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
  - 3. Verify that substrates receiving fireproofing are not obstructed by ducts, piping, equipment, or other suspended construction that will interfere with fireproofing application.
- B. Verify that roof construction, installation of rooftop HVAC equipment, and other related work are complete before beginning fireproofing work.
- C. Conduct tests according to fireproofing manufacturer's written instructions to verify that substrates are free of substances capable of interfering with bond.
- D. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Cover other work subject to damage from fallout or overspray of fireproofing materials during application.
- B. Clean substrates of substances that could impair bond of fireproofing.
- C. Prime substrates where included in fire-resistance design and where recommended in writing by fireproofing manufacturer unless compatible shop primer has been applied and is in satisfactory condition to receive fireproofing.
- D. For applications visible on completion of Project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections and fill voids that would telegraph through fire-resistive products after application.

## 3.03 APPLICATION

- A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, sealers, topcoats, finishing, and other materials and procedures affecting fireproofing work.
- B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.
- C. Coordinate application of fireproofing with other construction to minimize need to cut or remove fireproofing.
  - 1. Do not begin applying fireproofing until clips, hangers, supports, sleeves, and other items penetrating fireproofing are in place.
  - 2. Defer installing ducts, piping, and other items that would interfere with applying fireproofing until application of fireproofing is completed.
- D. Metal Decks:
  - 1. Do not apply fireproofing to underside of metal deck substrates until concrete topping, if any, is completed.
  - 2. Do not apply fireproofing to underside of metal roof deck until roofing is completed; prohibit roof traffic during application and drying of fireproofing.
- E. Install auxiliary materials as required, as detailed, and according to fire-resistance design and fireproofing manufacturer's written instructions for conditions of exposure and intended use. For auxiliary materials, use attachment and anchorage devices of type recommended in writing by fireproofing manufacturer.
- F. Spray apply fireproofing to maximum extent possible. After the spraying operation in each area, complete the coverage by trowel application or other placement method recommended in writing by fireproofing manufacturer.
- G. Extend fireproofing in full thickness over entire area of each substrate to be protected.
- H. Install body of fireproofing in a single course unless otherwise recommended in writing by fireproofing manufacturer.
- I. Where sealers are used, apply products that are tinted to differentiate them from fireproofing over which they are applied.
- J. Provide a uniform finish complying with description indicated for each type of fireproofing material and matching finish approved for required mockups.
- K. Cure fireproofing according to fireproofing manufacturer's written instructions.
- L. Do not install enclosing or concealing construction until after fireproofing has been applied, inspected, and tested and corrections have been made to deficient applications.
- M. Retain or revise "Finishes" Paragraph below to suit Project; coordinate with finishes retained in "Sprayed Fire-Resistive Materials" Article.
- N. Finishes: Where indicated, apply fireproofing to produce the following finishes:
- O. N.
  - 1. Spray-Textured Finish: Finish left as spray applied with no further treatment.

#### 3.04 FIELD QUALITY CONTROL

- A. Special Inspections to be provided by Contractor: a qualified special inspector to perform the following special inspections:
  - 1. First option in subparagraph below applies to the 2012 IBC. Retain second option if including a Schedule of Special Inspections in the Contract Documents. Verify requirements with authorities having jurisdiction.
  - 2. Test and inspect as required by Chapter 17 of the applicable building code.

- B. Perform the tests and inspections of completed Work in successive stages. Do not proceed with application of fireproofing for the next area until test results for previously completed applications of fireproofing show compliance with requirements. Tested values must equal or exceed values as specified and as indicated and required for approved fire-resistance design.
- C. Fireproofing will be considered defective if it does not pass tests and inspections.
  - 1. Remove and replace fireproofing that does not pass tests and inspections, and retest.
  - 2. Apply additional fireproofing, per manufacturer's written instructions, where test results indicate insufficient thickness, and retest.
- D. Prepare test and inspection reports.

## 3.05 CLEANING, PROTECTING, AND REPAIRING

- A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.
- B. Protect fireproofing, according to advice of manufacturer and Installer, from damage resulting from construction operations or other causes, so fireproofing is without damage or deterioration at time of Substantial Completion.
- C. As installation of other construction proceeds, inspect fireproofing and repair damaged areas and fireproofing removed due to work of other trades.
- D. Repair fireproofing damaged by other work before concealing it with other construction.
- E. Repair fireproofing by reapplying it using same method as original installation or using manufacturer's recommended trowel-applied product.

## END OF SECTION

## SECTION 09 2116 GYPSUM BOARD ASSEMBLIES

### PART 1 GENERAL

## **1.01 SECTION INCLUDES**

- A. Metal stud wall framing.
- B. Metal channel ceiling framing.
- C. Fire rated area separation walls.
- D. Exterior sheathing.
- E. Cementitious backing board.
- F. Gypsum wallboard.
- G. Joint treatment and accessories.
- H. Secuity Mesh at Security Walls
- I. Water-resistive barrier over exterior wall sheathing.

### 1.02 RELATED REQUIREMENTS

- A. Section 03300 Cast in place concrete
- B. Section 05500 Metal Fabrications
- C. Section 05 5214 Ornametal and misc Metals
- D. Section 06 2000 Finish Carpentry
- E. Section 06 8300 High Pressure Decrative Laminates
- F. Section 06 4100 Architectural Wood Casework
- G. Section 06 6100 Simulated Stone Fabrications
- H. Section 08110 Steel doors and frmaes
- I. Section 08410 Metal framed storefronts
- J. Section 08462 Automatic sliding doors
- K. Section 08520 Aluminum windows
- L. Section 09300 Tile
- M. Section 09650 Resilient flooring
- N. Section 09685 Carpet
- O. Section 09900 Paints and coatings
- P. Section 10170 Plastic toilet compartments
- Q. Section 10523 Fire extinguisher cabinets
- R. Section 10810 Toilet Accessories
- S. Section 05 4000 Cold-Formed Metal Framing: Exterior wind-load-bearing metal stud framing.
- T. Section 06 1000 Rough Carpentry: Building framing and sheathing.
- U. Section 06 1054 Wood Blocking and Curbing: Wood blocking for support of wall mounted equipment and cabinets.
- V. Section 07 2100 Thermal Insulation: Acoustic insulation.
- W. Section Joint Sealers: Acoustic sealant.
- X. Section 09511 Suspended Acoustical Ceilings: Suspension and trim for specialty gypsum ceilings.

#### 1.03 REFERENCE STANDARDS

- A. ANSI A108/A118/A136.1 American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2017.
- B. ANSI A108/A118/A136.1 American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2017.
- C. ASTM C 36/C 36M Standard Specification for Gypsum Wallboard; 2001.
- D. ASTM C 442/C 442M Standard Specification for Gypsum Backing Board, Gypsum Coreboard, and Gypsum Shaftliner Board; 1999a.
- E. ASTM C475/C475M Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.
- F. ASTM C645 Standard Specification for Nonstructural Steel Framing Members; 2014, with Editorial Revision (2015).
- G. ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2017.
- H. ASTM C840 Standard Specification for Application and Finishing of Gypsum Board; 2017a.
- I. ASTM C954 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- J. ASTM C1002 Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2016.
- K. ASTM C1047 Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2014a.
- L. ASTM C1280 Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing; 2013a.
- M. ASTM C1325 Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units; 2017a.
- N. ASTM C1396/C1396M Standard Specification for Gypsum Board; 2014.
- O. ASTM C1658/C1658M Standard Specification for Glass Mat Gypsum Panels; 2013.
- P. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- Q. GA-216 Application and Finishing of Gypsum Panel Products; 2016.
- R. GA-226 Application of Gypsum Board to Form Curved Surfaces; Gypsum Association; 2016.

## 1.04 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate special details associated with fireproofing.
- C. Product Data: Provide data on metal framing, gypsum board, accessories, joint finishing system, and cementitous backer board.
- D. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.
- E. Test Reports: For all stud framing products that do not comply with ASTM C645 or C 754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

### 1.05 QUALITY ASSURANCE

- A. Perform in accordance with ASTM C 840. Comply with requirements of GA-600 for fire-rated assemblies.
  - 1. Maintain one copy of standards at project site.

## 1.06 REGULATORY REQUIREMENTS

A. Conform to IBC 2003 code for fire rated assemblies as indicated on drawings.

## PART 2 PRODUCTS

## 2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

#### 2.02 METAL FRAMING MATERIALS

- A. Manufacturers Metal Framing, Connectors, and Accessories:
  - 1. Clarkwestern Dietrich Building Systems LLC: www.clarkdietrich.com.
  - 2. Dale/Incor: www.daleincor.com.
  - 3. Dietrich Metal Framing: www.dietrichindustries.com.
  - 4. Marino: www.marinoware.com.
  - 5. Substitutions: See Section 01 6000 Product Requirements.
- B. Metal Framing Connectors and Accessories:
  - 1. Same manufacturer as framing.
  - 2. Substitutions: See Section 01 6000 Product Requirements.
- C. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf (240 Pa).
  - Exception: The minimum metal thickness and section properties requirements of ASTM C 645 are waived provided steel of 40 ksi (275 MPa) minimum yield strength is used, the metal is continuously dimpled, the effective thickness is at least twice the base metal thickness, and maximum stud heights are determined by testing in accordance with ASTM E 72 using assemblies specified by ASTM C 754.
  - 2. Studs: 25 gauge C shaped with knurled faces.
  - 3. Runners: U shaped, sized to match studs.
  - 4. Ceiling Channels: C shaped.
  - 5. Furring: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
- D. Loadbearing Studs for Application of Gypsum Board: As specified in Section 05 4000.
- E. Shaft Wall Studs and Accessories: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754.
  - 1. Manufacturers Shaft Wall Studs and Accessories:
    - a. Same manufacturer as other framing materials.
    - b. Phillips Manufacturing Co: www.phillipsmfg.com.
    - c. Substitutions: See Section 01 6000 Product Requirements.
- F. Shaft Wall Studs and Accessories: ASTM C 645; galvanized sheet steel, of size and properties necessary to comply with ASTM C 754.
- G. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- H. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and screwed to secondary deflection channel set inside but unattached to top track.

#### 2.03 BOARD MATERIALS

- A. Manufacturers Gypsum-Based Board:
  - 1. Georgia-Pacific Gypsum: www.gpgypsum.com.
  - 2. National Gypsum Company: www.nationalgypsum.com.
  - 3. USG Corporation: www.usg.com.
  - 4. Substitutions: See Section 01 6000 Product Requirements.
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.

- Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   a. Mold-resistant board is required at all locations.
- 3. Thickness:
  - a. Vertical Surfaces: 5/8 inch (16 mm).
- C. Cement Backing Board For Wet Areas: One of the following products:
  - 1. Application: Surfaces behind plastic paneling at all kitchens walls.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 3. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A108/A118/A136.1 or ASTM C1325.
    - a. Thickness: 1/2 inch (12.7 mm).
    - b. Products:
      - 1) Custom Building Products; Wonderboard.
      - 2) National Gypsum Company; PermaBase Brand Cement Board.
      - 3) National Gypsum Company; PermaBase Flex Brand Cement Board.
      - 4) USG Corporation; Durock Brand Cement Board.
- D. Gypsum Wallboard: ASTM C 1396/C 1396M. Sizes to minimize joints in place; ends square cut. All gypsum board shall be "Mold Resistant" type.
  - 1. Regular Type, Mold & Water Resistant:
    - a. Application: Use for vertical surfaces, unless otherwise indicated.
    - b. Thickness: 5/8 inch (16 mm).
    - c. Edges: Tapered.
  - 2. Fire Resistant Type: Mold & Water Resistant, Complying with Type X requirements; UL or WH rated.
    - a. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X.
    - b. Application: Where required for fire-rated assemblies, unless otherwise indicated.
    - c. Thickness: 5/8 inch (16 mm).
    - d. Edges: Tapered.
    - Ceiling Board: Special sag-resistant type.
      - a. Mold & Water Resistant
      - b. Application: Ceilings, unless otherwise indicated.
      - c. Thickness: 1/2 inch (13 mm).
      - d. Edges: Tapered.
- E. Exterior Sheathing Board: Sizes to minimize joints in place; ends square cut.
  - 1. Basis of Design: National Gypsum Company; Gold Bond® BRAND eXP® Extended Exposure Sheathing & Gold Bon Brand eXP Fire-Shield Extended Exposure Gypsum Sheathing
  - 2. Description

3.

- a. Core: [Regular gypsum core] [Type X gypsum core], with additives to enhance [fire resistance], moisutre and mold resistant
- b. Facing: water resistant glass mat on both face and back surfaces
- c. long edges wrapped with water repellant glass mat
- d. overall thickness 1/2"
- 3. Application: Exterior sheathing, unless otherwise indicated.
- 4. Physical Characteristics
  - a. Panel complies with requirements of both ASTM C 1177 / C 1177M and C 1396 / C 1396M
  - b. Cass: Type X when tested in accordance with ASTM E 119
  - c. Racking strength Ultimate 711 lbs / Lin Ft. when tested in accordance with ASTM E72
  - d. Humidified Deflection: less than 1/8 inch when tested in accordance with ASTM C473
  - e. Nail pull resistance: [80] [90] lbs, when tested in accordance with ASTM C473

- f. Water Absorption: less than 10% when tested in accordance with ASTM C473
- g. Surface Water Absorption: less than 1% when tested in accordance with ASTM C473
- h. Permeance: greater than 10 perms, when tested in accordance with ASTM E96
- i. Combustibility: Noncombustible when tested in accordance with ASTM E136
- j. Flame spreads/Smoke Developed: 5/0 when tested in accordance with ASTM E84
- k. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273
- F. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut. Mold & Water Resistant.
  - 1. Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.
  - 2. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X.
  - 3. Types: Regular and Type X, in locations indicated.
  - 4. Type X Thickness: 5/8 inch (16 mm).
  - 5. Regular Type Thickness: 1/2 inch (13 mm).
  - 6. Edges: Tapered.
  - 7. Products:
    - a. American Gypsum; Exterior Soffit Wallboard.
    - b. CertainTeed Corporation; ProRoc Brand Exterior Soffit Board.
    - c. Georgia-Pacific Gypsum; ToughRock Soffit Board.
    - d. Lafarge North America Inc; Soffitboard.
    - e. National Gypsum Company; Gold Bond Brand Exterior Soffit Board.
    - f. Pacific Coast Building Products, Inc; PABCO.
    - g. Temple-Inland Inc; Exterior Gypsum Soffit Board.
    - h. USG Corporation; Sheetrock Exterior Gypsum Ceiling Board.
    - i. Substitutions: See Section 01 6000 Product Requirements.
- G. Shaftwall and Coreboard: Type X; 1 inch (25 mm) thick by 24 inches (610 mm) wide, beveled long edges, ends square cut.
  - 1. Glass Mat Faced Type: Glass mat shaftliner gypsum panel or glass mat coreboard gypsum panel as defined in ASTM C1658/C1658M.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  - 3. Products:
    - a. American Gypsum; Shaft Liner.
    - b. Georgia-Pacific Gypsum; DensGlass Shaftliner (mold-resistant).
    - c. National Gypsum Company; Gold Bond Brand 1" Fire-Shield Shaftliner XP (mold-resistant).
    - d. National Gypsum Company; Gold Bond Brand e2XP Extended Exposure Shaftliner.
    - e. Temple-Inland Inc; GreenGlass Liner Panel.
- H. Gypsum Shaftwall or Coreboard: ASTM C 1396/C 1396M; Type X core; sizes to minimize joints in place; 1 inch (25 mm) thick; square, tongue and groove, or double beveled edges, ends square cut. Mold & Water resistant.

## 2.04 ACCESSORIES

- A. Acoustic Insulation: As specified in Section 07 2100.
- B. Acoustic Sealant: As specified in Section .
- C. Water-Resistive Barrier: No. 15 asphalt felt.
- D. Water-Resistive Barrier: No. 15 asphalt felt.
- E. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
   1. Types: As detailed or required for finished appearance.
  - 2. Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead at exposed panel edges.
- F. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.

- 1. Tape: 2 inch (50 mm) wide, coated glass fiber tape for joints and corners.
- 2. Ready-mixed vinyl-based joint compound.
- G. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
- H. Screws for Attachment to Steel Members Less Than 0.03 inch (0.7 mm) In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type; cadmium-plated for exterior locations.
- I. Screws for Attachment to Steel Members From 0.033 to 0.112 inch (0.8 to 2.8 mm) in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.
- J. Screws: ASTM C 1002; self-piercing tapping type; cadmium-plated for exterior locations.
- K. Screws: ASTM C 954; steel drill screws for application of gypsum board to loadbearing steel studs.

## 2.05 SECURITY MESH

- A. Expamet Flattened Security Mesh 50-76MF
- B. Instal as indicated on drawings
- C. Instal per manufacturers requirements

## PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

## 3.02 SHAFT WALL INSTALLATION

- A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.
  - 1. Fasten runners to structure with short leg to finished side, using appropriate power-driven fasteners at not more than 24 inches (600 mm) on center.
  - 2. Install studs at spacing required to meet performance requirements.
- B. Shaft Wall Liner: Cut panels to accurate dimension and install sequentially between special friction studs.

## 3.03 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as indicated.
  - 1. Level ceiling system to a tolerance of 1/1200.
  - 2. Laterally brace entire suspension system.
  - 3. Install bracing as required at exterior locations to resist wind uplift.
- C. Studs: Space studs at 16 inches (400 mm) on center.
  - 1. Extend partition framing to structure in all locations.
  - 2. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.
- D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- E. Standard Wall Furring: Install at concrete and masonry walls scheduled to receive gypsum board, not more than 4 inches (100 mm) from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches (600 mm) on center.
  - 1. Orientation: Horizontal.
  - 2. Spacing: As indicated.
- F. Blocking: Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, and hardware. Comply with Section 06 1054 for wood blocking.

#### 3.04 BOARD INSTALLATION

- A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
  - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- D. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
  - 1. Paper-Faced Sheathing: Immediately after installation, protect from weather by application of water-resistive barrier.
- E. Exterior Soffit Board: Install perpendicular to framing, with staggered end joints over framing members or other solid backing.
- F. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108/A118/A136.1 and manufacturer's instructions.
- G. Installation on Metal Framing: Use screws for attachment of all gypsum board .
- H. Curved Surfaces: Apply gypsum board to curved substrates in accordance with GA-226.
- I. Moisture Protection: Treat cut edges and holes in moisture resistant gypsum board with sealant.

#### 3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as directed.
  - 1. Not more than 30 feet (10 meters) apart on walls over 50 feet (16 meters) long and at each side of all windows, doors, cased openings and all other openings (coordinate final locations with architect prior to installation.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials .

#### 3.06 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use fiberglass joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  - 1. Level 4: Walls and ceilings to receive satin, eggshell or flat paint finish or wall coverings, unless otherwise indicated.
  - 2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- C. Finish gypsum board in scheduled areas in accordance with levels defined in ASTM C 840 and as scheduled below.
  - 1. Above Finished Ceilings Concealed From View: Level 1.
  - 2. Utility Areas and Areas Behind Cabinetry: Level 2.
  - 3. Walls and Ceilings to Receive Flat or Eggshell Paint Finish: Level 4.
  - 4. Walls and Ceilings to Receive Semi-Gloss or Gloss Paint Finish: Level 5.
- D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
  - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).
  - 2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.
- E. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

- F. Spray apply high build drywall surfacer over entire surface after joints have been properly treated to achieve Level 5 finish in areas indicated.
- G. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

### 3.07 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

## 3.08 FINISH LEVEL SCHEDULE

- A. Level 1: Above finished ceilings concealed from view.
- B. Level 2: Utility areas and areas behind cabinetry.
- C. Level 5: Walls and ceilings scheduled to receive semi-gloss or gloss paint finish.

## END OF SECTION

# **SECTION 10 2226**

## **OPERABLE PARTITIONS**

## PART 1 - GENERAL

## 1.01 DESCRIPTION

- A. General
  - 1. Furnish and install operable partitions and suspension system. Provide all labor, materials, tools, equipment, and services for operable walls in accordance with provisions of contract documents.

#### 1.02 RELATED WORK BY OTHERS

- A. Preparation of opening will be by General Contractor. Any deviation of site conditions contrary to approved shop drawings must be called to the attention of the architect.
  - 1. All header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles as required in 1.04 Quality Assurance.
  - 2. Prepunching of support structure in accordance with approved shop drawings.
  - 3. Paint or otherwise finishing all trim and other materials adjoining head and jamb of operable partitions.

#### 1.03 SUBMITTALS

A. Complete shop drawings are to be provided prior to fabrication indicating construction and installation details. Shop drawings must be submitted within 60 days after receipt of signed contract.

### 1.04 QUALITY ASSURANCE

- A. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions
  - 1. The partition STC (Sound Transmission Classification) shall be achieved per the standard test methods ASTM E90.
  - Noise isolation classifications shall be achieved per the standard test methods ASTM E336 and ASTM E413.
  - 3. Noise Reduction Coefficient (NRC) ratings shall be per ASTM C423.
  - 4. Rack testing for 10 years. (tensional strength stress test)
  - 5. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.

## 1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Proper storage of partitions before installation and continued protection during and after installation will be the responsibility of the General Contractor.

### 1.06 WARRANTY

A. Partition system shall be guaranteed for a period of two years against defects in material and workmanship, excluding abuse.

#### **PART 2 PRODUCTS**

## 2.01 ACCEPTABLE MANUFACTURERS

A. Hufcor Model 642 with manual operating top and bottom seals, number 11L track and trolley system, factory covered with architects chozen material. Modernfold Encore with operating top and SM2 Bottom seals.

## 2.02 MATERIALS

- A. Product to be top supported paired panels as manufactured by Hufcor Inc. or Moderfold.
  - 1. Panels shall be nominally 4" [102] thick, to 48" [1219] in width, and hinged in pairs.
    - a. Panel faces shall be laminated to appropriate substrate to meet the STC requirement in 2.04 Acoustical Performance.
      - 1) Steel
    - b. Frames shall be of 16 gauge [1.42mm] painted steel. Face finish shall wrap around the vertical panel edges and provide low profile vertical face trim.

- c. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
- d. Horizontal top seals shall be retractable, provide 1" [25] nominal operating clearance, and exert upward force when extended. All panels, including pass door panels and lever closure panels must have retractable top and bottom seals.
- B. Horizontal bottom seals shall be retractable, provide up to 2" [51] nominal
  - 1. operating clearance, and exert downward force when fully extended.
    - a. Horizontal trim shall be of aluminum.
    - b. Low profile hinges on basic panels shall be of steel and project no more than 1/4" [6] beyond panel faces. Each pair of panels to have a minimum of three hinges.
  - 2. Weight of the panels shall be 10.2 lbs./sq. ft.
  - 3. Suspension system:
    - a. Tracks: Steel and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum ½" threaded steel hanger rods. Guide rails and/or track sweep seals shall not be allowed.
      - 1) Each panel shall be supported by one 4-wheeled carrier. Wheels to be of hardened steel ball bearings encased with steel tires.
    - b. Provide special automatic crossover switches to allow for various set-up options for
- C. the owner. Switches shall not require power or manual operators, poles etc to
- D. operate. Direction of trolley going through switch shall cause automatic rotation.
  - 1. Plenum closure (by others): Design of plenum closure must permit lifting out of header panels to adjust track height. Plenum closure required for optimum sound control of partition.
  - 2. Finishes
    - a. Face finish shall be:
      - 1) The Architect will advise by addendum what covering is to be factory applied to the panels.
    - b. Exposed metal trim and seal color shall be as selected from Hufcor Standard Trim selector:
      - 1) Lamb's Wool (standard)
      - 2) Brown (standard)
      - 3) Gray (standard)
    - c. Track cover shall be aluminum clear anodized. Mill finish not acceptable.
      - E. Accessories/Options
    - d. ADA compliant pass door of the same thickness and construction as the basic panels. Pass door panel legs require bottom seals that provide downward force to maintain stability during door operation. Pass door leaf has perimeter trim to protect face finish and to provide visual identification as required by International Building Code. Pass door leaf incorporates a self-adjusting retractable bottom seal providing sound control when door is closed.
    - e. Pocket doors shall be of same design as panels and provided as detailed on the1) drawings.

## 2.03 OPERATION

- A. Panels shall be manually moved from the storage area, positioned in the opening, and seals set.
  - 1. Retractable Horizontal Seals
    - a. Retractable horizontal seals shall be activated by a removable quick-set operating handle located approximately 42" [1067] from the floor in the panel edge.
    - b. All retractable seals in each hinged panel group shall be operated simultaneously.
    - c. Seal activation requires a 190 degree turn of the removable handle.
  - 2. Final partition closure to be by lever closure panel with expanding jamb which compensates for minor wall irregularities and provides a minimum of 250 lbs. [113.4 kg]

seal force against the adjacent wall for optimum sound control. The jamb activator shall be located approximately 45" [1143] from the floor in the panel face and be accessed from either side of the panel. The jamb is equipped with a mechanical rack and pinion gear drive mechanism and shall extend 4"-6" [102-152] by turning the removable operating handle.

- 3. Stack/Store Panels
  - a. Retract seals with removable operating handle and move to storage area. Panels may be stored at either or both ends of the track or in a pocket.

#### 2.04 ACOUSTICAL PERFORMANCE

- A. Acoustical performance shall be tested at a laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP) and in accordance with ASTM E90 Test Standards. Standard panel construction shall have obtained an STC rating of \_ 52.
  - 1. Complete, unaltered written test report is to be made available upon request.

### 2.05 PART 3 - EXECUTION

- A. Installation. The complete installation of the operable wall system shall be by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.
  - 1. Cleaning
    - a. All track and panel surfaces shall be wiped clean and free of handprints, grease, and soil.
    - b. Cartoning and other installation debris shall be removed to onsite waste collection area, provided by others.
  - 2. Training
    - a. Installer shall demonstrate proper operation and maintenance procedures to owner's representative.
    - b. Operating handle and owners manuals shall be provided to owner's representative.

## END OF SECTION



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May 8, 2018

# Tahlequah Casino Addendum #07 summary

Sheet No.	Addendum
S0.1	Revised concrete notes and seismic notes.
S0.2	• Added sheet S0.2 – Special Inspections
S1.2	• Added Pier Cap Marks and top of cap elevations.
S1.3	• Added Pier Cap Marks and top of cap elevations.
	• Revised columns at braced frame on Grid 1.
	Revised columns along EE and EE.2 for porte-cocheres
S1.4	• Added Pier Cap Marks and top of cap elevations.
	<ul> <li>Revised columns along EE and EE.2 for porte-cocheres</li> </ul>
	Deleted north dock leveler.
S1.5	• Added top of pedestal elevations.
	Cleaned up some annotations.
S1.7	• Added details 7 & 8.
S1.8	Added top of cap elevations.
S2.1	• Added detail 7
	Deleted north dock leveler.
S3.1	<ul> <li>Added mechanical piping loads. Revised joist loading and WF beams to</li> </ul>
	accommodate.
	<ul> <li>Added MAU-2 to roof framing plan</li> </ul>
	Added bottom flange braces and BCX's at braced frames.
S3.2	<ul> <li>Added bottom flange braces and BCX's at braced frames.</li> </ul>
	• Revised braced frame columns at Grid 1.
	• Deleted braced frame at Grid F. Revised columns and beams.
S3.3	<ul> <li>Added bottom flange braces and BCX's at braced frames.</li> </ul>
	<ul> <li>Added mechanical piping loads. Revised joist loading and WF beams to</li> </ul>
~	accommodate.
<u>\$4.2</u>	Deleted Frame Elevation (a) Grid F
<u>\$4.3</u>	Added bottom flange brace details
S5.1	Revised detail 6
S5.2	• Added sheet S5.2



## CONCRETE MATERIAL

1. ALL CONCRETE SHALL BE NORMAL WEIGHT (DENSITY=145 PCF) AND SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE FOLLOWING, U.N.O.:

-DAT COMI RESSIVE STRENGTI IN ACCORDANCE WI	
ALL FOUNDATIONS	3000 PSI
FOUNDATION WALLS	3000 PSI
DRILLED PIERS	4000 PSI
INTERIOR SLABS	3000 PSI
SLAB ON MTL. DECK	3000 PSI
TILT-WALL PANELS	4000 PSI
EXTERIOR STRUCTURAL SLABS	4500 PSI
ALL OTHER CONCRETE (U.N.O.)	3000 PSI
CURBS & SIDEWALKS	SEE CIVIL

WATER-TO-CEMENT PLUS POZZOLANIC MATERIALS RATIO SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

	-			
	F'c (psi)	NON-AIR ENTRAINED	AIR ENTRAINED	$\prec$
$\triangle$	4,500	0.52	0.44	ζ
$\angle \prime $	4,000	0.57	0.48	
	3,000	0.68	0.59	$\sim$
$\land \land$	$\Lambda \sim \Lambda$	$\sim$	$\sim$	$\sim$

- 2. ALL FOUNDATION CONCRETE SHALL BE 4-6% AIR ENTRAINED. SLAB CONCRETE SHALL NOT HAVE ENTRAINED AIR, U.N.O. 3. THE SLUMP OF ALL CONCRETE SHALL NOT EXCEED 4" UNLESS A HIGH RANGE WATER-REDUCING ADMIXTURE IS USED. THE SLUMP OF CONCRETE PRIOR TO ADDITION OF A HIGH-RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 4".
- THE SLUMP OF CONCRETE CONTAINING A HIGH RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 9". DRILLED PIER CONCRETE SHALL HAVE A SLUMP OF 5"-7".
- THE COARSE AGGREGATE SIZE SHALL BE #57 OR LARGER. 5. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT OF ANY CONCRETE. THE CONCRETE MIX DESIGNS SHALL INCLUDE ALL STRENGTH DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS FOR EITHER THE TRIAL BATCH OR FIELD EXPERIENCE METHOD.
- 6. FLY ASH TO BE LIMITED TO 25% OF TOTAL CEMENTITIOUS MATERIAL BY WEIGHT.

## CONCRETE REINFORCING STEEL

- 1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED
- OTHERWISE. ALL WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706. 2. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. WIRE FABRIC SHALL BE SUPPLIED IN SHEETS. ROLLED FABRIC WILL NOT BE ACCEPTED. WIRE FABRIC SHALL BE PLACED AT THE MID-DEPTH OF THE SLAB. WIRE FABRIC SHALL BE SUPPORTED ON CONTINUOUS HIGH CHAIRS SPACED NOT MORE THAN 4 FEET O.C.
- 3. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL. ALL DOWELS ARE TO BE TIED IN PLACE. IF ANY DOWELS ARE 'STABBED' AFTER THE CONCRETE HAS BEEN PLACED,
- THE CONCRETE SHALL BE REMOVED AND REPLACED. 4. ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH THE LATEST EDITION OF
- THE CRSI "MANUAL OF STANDARD PRACTICE". 5. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE

3 IN.
2 IN
2 IN. 1½ IN.
<b>२</b> :
1½ IN.
37 101

- #11 DARS AND SWALLER #14 AND #18 BARS
- 6. ALL BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., WHICH ARE BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" OF CONCRETE.
- 7. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALLS, CONCRETE BEAMS, CONTINUOUS FOOTINGS, THICKENED SLABS AND TURNDOWNS. CORNER BAR SIZE SHALL MATCH HORIZONTAL BAR SIZE. CORNER BARS ARE TO BE LAPPED 40 BAR DIAMETERS.
- 8. ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B" SPLICES.

BAR	TOF	BARS	OTHE	R BARS	
SIZE	CLASS A	CLASS B	CLASS A	CLASS B	SPLICES (IN.)
#3	16	21	12	16	12
#4	21	28	16	21	15
#5	27	35	21	27	19
#6	32	42	25	32	23
#7	47	61	36	47	26
#8	53	69	41	53	30
#9	60	78	46	60	34
#10	68	88	52	68	38
#11	75	98	58	75	42

## FOUNDATION, SLAB-ON-GRADE - GENERAL

- 1. FOUNDATION DESIGN IS BASED ON THE INFORMATION & RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT PREPARED BY BUILDING & EARTH DATED JANUARY 17, 2018.
- 2. PIERS ARE DESIGNED FOR A NET ALLOWABLE END BEARING PRESSURE OF 100 KSF IN THE LIMESTONE MATERIAL 3. DRILLED PIERS MUST EXTEND THROUGH THE RESIDUAL SOILS AND SOCKETED AT LEAST 3 FEET INTO THE
- LIMESTONE MATERIAL. RE: GEOTECHNICAL REPORT. 4. ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE
- PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED. 5. FOOTINGS MAY BE POURED INTO AN EARTHEN FORMED TRENCH IF SOIL CONDITIONS PERMIT.
- 6. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACK FILLING PRESSURES UNTIL FLOOR SLABS AT TOP AND BOTTOM ARE IN PLACE OR UNTIL THE CONCRETE HAS ATTAINED ITS FULL COMPRESSIVE STRENGTH FOR CANTILEVER WALLS.
- 7. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. 8. VERIFY THE USE AND EXTENT OF PERIMETER INSULATION WITH ARCHITECTURAL DRAWINGS PRIOR TO THE
- INSTALLATION OF FOUNDATIONS. INSTALL PERIMETER INSULATION AS REQUIRED. 9. UNDER-SLAB DRAINAGE FILL TO BE A MINIMUM 4-INCH COMPACTED LAYER OF WASHED ASTM No. 57 STONE
- 10. NO BUILDING FOUNDATIONS, INCLUDING GRADE BEAMS, ARE TO BE PENETRATED WITH CONDUITS, PIPES, ETC. UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL PLANS OR EXPRESS CONSENT IS GIVEN BY THE E.O.R.

## POST-INSTALLED ANCHORS

- 1. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE
- INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.
- 4. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
- 5. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS. 6. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL
- DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY HILTI FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS. 7. MECHANICAL ANCHORS FOR USE IN CONCRETE TO BE HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-1917.
- 8. MECHANICAL ANCHORS FOR USE IN GROUTED MASONRY TO BE HILTI KWIK BOLT 3 EXPANSION ANCHORS PER ICC ESR-1385.

- 1. STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
  - ALL CHANNELS, ANGLES, PLATES, ETC. (UNLESS NOTED OTHERWISE) ALL WIDE FLANGES (UNLESS NOTED OTHERWISE)
  - STRUCTURAL TUBE STEEL PIPE
  - ANCHOR RODS BOLTS
- WELD ELECTRODES

- A36 A992 (FY=50 KSI) A500, GRADE B (FY=46 KSI) A53 (FY-35 KSI) F1554, GRADE 55
- A325-N (UNLESS NOTED OTHERWISE) F70XX
- 2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD
- PRACTICE (LATEST EDITION), EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS. 3. THE STEEL STRUCTURE IS A NON-SELF-SUPPORTING STEEL FRAME AND IS DEPENDENT UPON DIAPHRAGM ACTION OF THE ROOF DECK, FLOOR SLABS AND ATTACHMENT TO THE WALL SYSTEM FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THESE ELEMENTS ARE COMPLETE AND ARE CAPABLE OF PROVIDING THIS SUPPORT.
- 4. WHERE A325 BOLTS OF ANY DIAMETER OR A490 EQUAL TO OR LESS THAN 1 INCH IN DIAMETER ARE TO BE INSTALLED AND TIGHTENED IN AN OVERSIZE OR SHORT SLOTTED HOLE IN AN OUTER PLY, A HARDENED WASHER CONFORMING TO ASTM F436 SHALL BE USED.
- 5. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH RED OR GRAY PRIMER. DO NOT PAINT TOP OF BEAMS WHERE HEADED STUD
- ANCHORS ARE TO BE ATTACHED 6. AFTER ANCHOR RODS HAVE BEEN SET, AND BEFORE CONCRETE IS PLACED, IT IS STRONGLY SUGGESTED THAT THE CONTRACTOR ENGAGE A SURVEYOR TO VERIFY THE PROPER LOCATION AND ELEVATION OF THE ANCHOR RODS.
- 7. PER THE AISC MANUAL OF STEEL CONSTRUCTION, ANCHOR ROD HOLES IN BASE PLATES AND WASHERS SHALL BE THE FOLLOWING

ANCHOR ROD Ø	MAX. HOLE SIZE IN BASE PL	WASHER SIZE	MIN. WASHER THICK.	MAX HOLE SIZE IN WASHEF
3/4"	1-5/16"	2"	1/4"	13/16"
7⁄8"	1-9/16"	21/2"	5/16"	15/16"
1"	1-13/16"	3"	3/8"	1-1/16"
11⁄4"	2-1/16"	3"	1/2"	1-5/16"
11⁄2"	2-5/16"	31⁄2"	1/2"	1-9/16"
1¾"	2-3/4"	4"	5/8"	1-13/16"
2"	3-1/4"	5"	3/4"	2-1/16"
21/2"	3-3/4"	5½"	7/8"	2-9/16"

## METAL DECK

- 1. METAL DECK SHALL COMPLY WITH THE REQUIREMENTS OF THE STEEL DECK INSTITUTE
- "SPECIFICATIONS AND COMMENTARY FOR STEEL DECK" (LATEST EDITION). 2. ALL METAL DECK SHALL BE OF CONFIGURATION, DEPTH, AND MINIMUM GA., AS SPECIFIED ON THE
- DRAWINGS. ATTACHMENT OF METAL DECK TO THE SUPPORTING STRUCTURAL MEMBERS SHALL BE, AT
- A MINIMUM, AS SPECIFIED ON THE DRAWINGS. SEE THE PLAN NOTES. DO NOT HANG OR SUPPORT ANY LOADS FROM METAL DECK.
- 4. ALL METAL DECK SHEETS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.
- 5. ALL NON COMPOSITE METAL DECK SHEET ENDS SHALL BE LAPPED A MINIMUM OF 2". BUTTED ENDS ARE NOT PERMITTED. END LAPS SHALL BE STAGGERED WHEN THE THICKNESS OF THE DECK EXCEEDS 20GA.

## STEEL JOISTS AND JOIST GIRDERS

- 1. ALL STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SJI STANDARD SPECIFICATIONS FOR STEEL JOISTS AND JOIST GIRDERS (LATEST EDITION).
- 2. ALL STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED BY THE JOIST MANUFACTURER. THE MANUFACTURER'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ALL STEEL JOISTS AND JOIST GIRDERS. JOIST MANUFACTURER SHALL PROVIDE A LETTER, SIGNED AND SEALED, STATING THAT ALL JOIST AND JOIST GIRDERS HAVE BEEN DESIGNED BY OR UNDER THE DIRECT SUPERVISION OF AN ENGINEER LICENSED IN THE STATE WHERE THE STRUCTURE IS LOCATED.
- . EXCEPT WHERE ADDITIONAL AND/OR SPECIFIC DESIGN LOADS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, STEEL JOISTS SHALL BE DESIGNED AS SIMPLY SUPPORTED, UNIFORMLY LOADED TRUSSES WITH THE TOP CHORD BRACED AGAINST LATERAL BUCKLING. THE UNIFORM DESIGN LOAD SHALL BE THE TOTAL SAFE UNIFORMLY DISTRIBUTED LOAD AS SHOWN IN THE SJI STANDARD LOAD TABLE, OR INDICATED ON THE DRAWINGS. THE JOIST DESIGN SHALL ALSO INCLUDE A MAXIMUM OF 2-200# POINT LOADS ON THE TOP OR BOTTOM CHORD AT ANY LOCATION WITHOUT ADDITIONAL WEB REINFORCING.
- 4. EXCEPT WHERE ADDITIONAL AND/OR SPECIFIC DESIGN LOADS ARE SPECIFIED ON THE STRUCTURAL DRAWINGS, STEEL JOIST GIRDERS SHALL BE DESIGNED AS SIMPLY SUPPORTED PRIMARY MEMBERS, WITH ALL LOADS EQUAL IN MAGNITUDE AND EVENLY SPACED ALONG THE JOIST GIRDER TOP CHORD (UNLESS NOTED OTHERWISE).
- 5. ALL FLOOR JOISTS AND JOIST GIRDERS, UNLESS NOTED OTHERWISE, SHALL BE DESIGNED TO SUPPORT THE LIVE DESIGN LOAD WITHOUT EXCEEDING A DEFLECTION OF L/360, AND THE TOTAL DESIGN LOAD WITHOUT EXCEEDING A DEFLECTION OF L/180. 6. ALL ROOF JOISTS AND JOIST GIRDERS, UNLESS NOTED OTHERWISE, SHALL BE DESIGNED TO SUPPORT THE LIVE (OR SNOW) DESIGN LOAD
- WITHOUT EXCEEDING A DEFLECTION OF L/240, AND THE TOTAL DESIGN LOAD WITHOUT EXCEEDING A DEFLECTION OF L/180. . STEEL JOIST BRIDGING SHOWN ON THE DRAWINGS IS FOR ILLUSTRATIVE PURPOSES ONLY. ALL STEEL JOIST BRIDGING SHALL BE PROVIDED IN ACCORDANCE WITH THE SJI SPECIFICATION, AND SHALL BE SPECIFIED BY THE JOIST MANUFACTURER. ALL BRIDGING AND BRIDGING ANCHORS SHALL BE INSTALLED, AND STEEL JOIST ENDS FIXED. PRIOR TO THE APPLICATION OF ANY LOADS, BRIDGING THAT TERMINATES AT, OR IS
- INTERRUPTED BY, STRUCTURAL STEEL BEAMS, OR CONCRETE WALLS SHALL BE ATTACHED THERETO. THE JOIST MANUFACTURER MUST COORDINATE BRIDGING LOCATIONS TO AVOID INTERFERENCE WITH ALL MECHANICAL, ELECTRICAL, AND FIRE PROTECTION EQUIPMENT. 3. THE JOIST MANUFACTURER SHALL DESIGN ALL ROOF JOISTS AND JOIST GIRDERS, AND SHALL DESIGN AND SPECIFY ALL REQUIRED ADDITIONAL BRIDGING AND/OR BRACING, FOR MINIMUM NET UPLIFT FORCES OF 20 PSF, U.N.O.
- 9. ALL JOIST GIRDERS SHALL BE PROPORTIONED SUCH THAT THEY CAN BE ERECTED WITHOUT BRIDGING. 10. UNLESS NOTED OTHERWISE, K-SERIES JOISTS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS, OR STEEL BEARING PLATES, WITH (2)-LONG 3/16" FILLET WELDS (ONE EACH SIDE)
- 11. UNLESS NOTED OTHERWISE, LH-SERIES JOISTS AND JOIST GIRDERS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS, OR STEEL BEARING PLATES, WITH (2)-2" LONG 1/4" FILLET WELDS (ONE EACH SIDE). 12. STEEL JOIST AT COLUMN CENTERLINES SHALL BE BOLTED TO THE SUPPORTING STEEL MEMBER WITH TWO ERECTION BOLTS, 1/2 Ø FOR K-
- SERIES JOISTS & 3/1 / Ø FOR LH-SERIES JOISTS. WHERE STEEL JOISTS DO NOT SPACE TO COLUMN CENTER LINES, USE BOLTED CONNECTIONS FOR THE STEEL JOIST CLOSEST TO THE CENTER LINE. WHERE THE DRAWINGS INDICATE THAT THE JOIST SEAT IS TO BE WELDED TO THE SUPPORTING STEEL, THE BOLTS PROVIDED ARE FOR ERECTION ONLY AND MAY BE REMOVED AFTER THE WELDS ARE COMPLETED. 13. STEEL JOISTS AT COLUMN CENTER LINES SHALL BE PROVIDED WITH 6"SQ. x ½" KNIFE PLATE AT THE BOTTOM CHORD, WELDED TO THE
- COLUMN, FOR STABILIZATION. DO NOT WELD THE JOIST CHORD TO THE PLATE. 14. STEEL JOIST GIRDERS AT COLUMN CENTERLINES SHALL BE BOLTED TO THE STRUCTURAL STEEL COLUMN WITH (2)-¾"Ø BOLTS. 15. HOLES IN STEEL JOIST CHORDS WILL NOT BE PERMITTED, EXCEPT FOR BOLTED CONNECTIONS AT THE BEARING END OF THE STEEL JOIST, OR
- WHERE SPECIFIED ON THE DRAWINGS AND SPECIFICALLY DESIGNED FOR BY THE JOIST MANUFACTURER. 16. ALL ITEMS SUCH AS MECHANICAL, EQUIPMENT, DUCT WORK, PIPES, CEILING SUPPORTS, FIXTURES, DISPLAYS, ETC., WHICH ARE TO BE SUPPORTED BY, OR HUNG FROM, STEEL JOISTS OR JOIST GIRDERS SHALL BE FRAMED WITH AUXILIARY FRAMING TO THE PANEL POINTS OF THE STEEL JOIST OR GIRDER WHEN THE CONCENTRATED LOAD EXCEEDS 50LBS. METHODS OF FRAMING THAT INDUCE BENDING IN THE STEEL
- JOIST OR GIRDER CHORDS OR WEB MEMBERS WILL NOT BE PERMITTED. 17. ADDITIONAL DESIGN LOADS FROM ARCHITECTURAL FEATURES, ROOF TOP EQUIPMENT, OR ANY OTHER CONCENTRATED LOADS SHOWN ON THE DRAWINGS. SHALL BE CONSIDERED AS COLLATERAL LOADS. THESE LOADS SHALL BE CONSIDERED IN THE DESIGN OF THE JOISTS AND JOIST GIRDERS, IN ADDITION TO THE SPECIFIED UNIFORM AND PANEL LOADS. COORDINATE WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS AND WEIGHTS OF ALL EQUIPMENT. WHERE SUCH LOADS DO NOT OCCUR AT THE PANEL POINTS OF THE JOISTS OR JOIST GIRDERS, AUXILIARY FRAMING SHALL BE ADDED, OR THE TOP CHORD SHALL BE DESIGNED FOR THE EFFECTS OF THE LOAD. 18. NO LOADS SHALL BE PLACED ON ANY JOIST GIRDER UNTIL THE STEEL JOISTS BEARING ON THE GIRDER ARE IN PLACE, AND FASTENED TO THE
- GIRDER AS SPECIFIED. 19. ALL DAMAGED JOISTS AND JOIST GIRDERS SHALL BE REPAIRED OR REPLACED. THE PROFESSIONAL-OF-RECORD SHALL BE THE SOLE JUDGE AS TO WHETHER A JOIST, OR JOIST GIRDER, CAN BE REPAIRED OR MUST BE REPLACED. ALL REPAIRS TO JOISTS SHALL BE DESIGNED AND
- SPECIFIED BY THE JOIST SUPPLIER'S ENGINEER. 20. JOIST SEATS TO HAVE A MINIMUM PLATE THICKNESS OF 3/16".
- 21. ALL NECESSARY JOIST TOP CHORD EXTENSIONS SHALL BE "R" TYPE, MEETING OR EXCEEDING THE LOAD CAPACITY OF THE JOIST, U.N.O. 22. ALL JOIST & JOIST GIRDERS SHALL BE PAINTED WITH RED OR GRAY PRIMER.
- LIGHT-GAUGE STRUCTURAL STEEL FRAMING

F=FURRING CHANNEL



- 2. LIGHT-GAUGE MATERIALS SHALL CONFORM TO THE FOLLOWING:
- A. ZINC-COATED STEEL SHEET MATERIAL: a. ALL STEEL SHEET MATERIAL, FOR STUDS AND JOISTS, OF 12, 14 AND 16 GAUGE SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF ASTM A653 SS, GRADE 50,
- CLASS 1 OR 3 WITH A MINIMUM YIELD OF 50,000 PSI. b. ALL STEEL SHEET MATERIAL, FOR STUDS AND JOISTS, OF 18 GAUGE AND LIGHTER, AND ALL STEEL SHEET MATERIAL FOR TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED
- FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A653 SS, GRADE 33 WITH A MINIMUM YIELD OF 33,000 PSI. c. ALL STEEL SHEET MATERIAL FOR STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE
- FORMED FROM STEEL HAVING A ZINC COATING MEETING THE REQUIREMENTS OF ASTM A525. B. SECTION PROPERTIES: THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY THE STEEL STUD MANUFACTURER ASSOCIATION AND AISI DESIGN MANUAL SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS. SPECIFICALLY, THE FOLLOWING MINIMUM PROPERTIES,
- CALCULATED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATION, SHALL BE PROVIDED: IX (IN.4), SX (IN.3), AREA (IN.2), RX (IN.), FY (KSI), RESISTING MOMENT (IN.-LB.). C. SUBSTITUTIONS: ANY SUBSTITUTIONS MUST BE APPROVED IN WRITING, PRIOR TO DELIVERY, BY THE
- ARCHITECT AND/OR ENGINEER-OF-RECORD. DO NOT WELD 33 MIL AND LIGHTER FRAMING, U.N.O.
- 4. IN METAL STUD WALLS, HORIZONTAL BRIDGING SHALL BE PLACED AT 4'-0" O.C. OR AS PER THE
- MANUFACTURERS RECOMMENDATION IF LESS THAN 4'-0" O.C.
- 5. ALL AXIALLY LOADED STUDS SHALL HAVE FULL FLANGE BEARING AGAINST UPPER AND LOWER TRACK WEBS. SPLICES IN AXIALLY STUDS ARE NOT PERMITTED.
- 6. EXTERIOR METAL STUDS TO BE 800S162-54 @ 16" O.C. W/ 800T125-54 TRACKS, U.N.O.

<u>GE</u>	NERAL	NOTES					
1. 2. 3. 4. 5.	THE ST BUILDI TO DE SAFET INCLUE TIEDOV CONTE IT IS SO SAFET ALL DI THE AF OF AN GOVEF ALL FR	RUCTURE IS DESIGNED TO BE SE NG IS FULLY COMPLETED. IT IS SO TERMINE ERECTION PROCEDURE Y OF THE BUILDING AND ITS COM DES THE ADDITION OF ANY SHORI WNS WHICH MIGHT BE NECESSAF RACTOR'S PROPERTY AFTER THE DLELY THE CONTRACTORS RESPO Y CODES AND REGULATIONS DUF MENSIONS ON THE STRUCTURAL RCHITECTURAL DRAWINGS. THE E Y RELEVANT DIMENSIONAL DISCR RNING CODE: 2015 IBC	ELF-SUPPOR DLELY THE CO AND SEQUED PONENT PAR NG, TEMPOR Y. SUCH MA COMPLETION ONSIBILITY TO RING ALL PHA DRAWINGS S ENGINEER OF EPANCIES.	TING AND STABLE AFTER THE ONTRACTOR'S RESPONSIBILITY NCE AND TO INSURE THE TS DURING ERECTION. THIS ARY BRACING, GUYS OR TERIAL SHALL REMAIN THE N OF THE PROJECT. D FOLLOW ALL APPLICABLE SES OF CONSTRUCTION. SHALL BE COORDINATED WITH RECORD SHALL BE NOTIFIED	Ja	ames R. Ch Architect, 45 South 4th St	nilders Inc.
6.	ENSUR DESIGI RO	RE ADEQUATE CLEARANCES FOR N LOADS: NOF DEAD LOAD	CHASES, DU	CT WORK, PIPING, ETC.		Fort Smith, AR 7 479-783-248 www.childersarchite	2901 0 ect.com
	RO RO RO	OF DEAD LOAD: OF THEMING LOAD: OF LIVE LOAD:		15 PSF 20 PSF	PRO	DFESSIONAL SEAL:	
	SA	FER ROOM: DEAD LOAD: LIVE LOAD:		65 PSF (INCLUDING SLAB WT) 100 PSF		BROFESS	
	SN	OW DESIGN CRITERIA: GROUND SNOW LOAD: SNOW IMPORTANCE FACTOR:		10 PSF 1.10		JASON F MYERS	
	WI	FLAT ROOF SNOW LOAD: ND DESIGN CRITERIA: RISK CATEGORY:		11 PSF		21112	
		FOR RISK CATEGORY I - BAS FOR RISK CATEGORY II - BAS	IC WIND SPE	ED = 105 mph ED = 115 mph ED = 115 mph		OALAHOMA	2018-05-03
	05	EXPOSURE CATEGORY III/IV - E EXPOSURE CATEGORY: COMPONENT AND CLADDING LO	ADS PER IBC	B TABLE 1609.6.2.1(2)		NSULTANT LOGO:	
	SE	ISMIC DESIGN CRITERIA: SITE CLASS: SEISMIC RISK CATEGORY:		C III		Ç ,	4413
		SEISMIC IMPORTANCE FACTOR: SEISMIC DESIGN CATEGORY: Ss = 0.152 Fa = 1.2 SMS =	= 0.182	1.25 B SDS = 0.122		rty PLI 99	72956 ) 474-4 ) m
		S1 = 0.081 Fv = 1.7 SM1 = BASIC SEISMIC-FORCE-RESISTIN	0.137 IG SYSTEM:	SD1 = 0.091		seat g, J 489	t (479 ngr.cc
		ANALYSIS PROCEDURE: EQUIVA RESPONSE MODIFICATION COEF	EALLY DETAI LENT LATERA FICIENT, R:	AL-FORCE PROCEDURE 3.0		s-B strin A 2 ville R	, Arka 12 Fax vers-e
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<u>MIS</u> 1.	SCELLA THESE	<u>NEOUS</u> . GENERAL NOTES SUPPLEMENT <sup>-</sup>	THE PROJEC	T SPECIFICATIONS. REFER TO THE		Entertainn	nent
2.	PROJE	CT SPECIFICATIONS FOR ADDITIC TRUCTURAL DRAWINGS ARE INTE	NAL REQUIR	EMENTS. USED WITH ARCHITECTURAL AND PONSIBLE FOR COORDINATING			
3.	REQUI	REMENTS FROM SUCH DRAWING TAIL TITLED AS A TYPICAL DETAIL	S INTO THEIR	SHOP DRAWINGS AND WORK. BLE THROUGHOUT THE DESIGN			kee
4.	IDENTI NO OP	INGS. THESE DETAILS ARE DEFIN FIED BY SPECIFIC REFERENCE W ENINGS SHALL BE MADE IN ANY S	ED AS GENEI ITHIN THE DR TRUCTURAL	RAL STANDARDS THAT ARE USUALLY AWINGS. MEMBER WITHOUT THE WRITTEN		CASINO	
5.	APPRC NO CH	VAL OF THE PROFESSIONAL-OF-F ANGE IN SIZE OR DIMENSION OF S	RECORD. STRUCTURAL	MEMBERS SHALL BE MADE			
6.	OPENII NOT SI	NGS IN WALLS AND DECK, WHICH HOWN ON THE STRUCTURAL DRA	ARE 1'-4" AN WINGS. REF	D LESS ON A SIDE, ARE GENERALLY ER TO THE ARCHITECTURAL AND			
7.	THE CO LOAD I	ONTRACTOR IS RESPONSIBLE FOR MPOSED ON THE STRUCTURAL FI	enings. R Limiting Th Raming. Co	HE AMOUNT OF CONSTRUCTION NSTRUCTION LOADS SHALL NOT			
8.	EXCEE THE ST CONTE	D THE DESIGN CAPACITY OF THE FRUCTURE IS DESIGNED TO FUNC RACTOR IS RESPONSIBLE FOR FU	FRAMING AT TION AS A UI RNISHING AL	THE TIME THE LOADS ARE IMPOSED. NIT UPON COMPLETION. THE L TEMPORARY BRACING AND/OR		Ę	
0	SUPPC CONST	ORT THAT MAY BE REQUIRED AS T RUCTION METHODS AND/OR SEC	HE RESULT ( UENCES.	OF THE CONTRACTOR'S		Ш МШ М	
9. 10.	CONTR	RACTORS CONSTRUCTION AND/OI DER THE EFFECTS OF THERMAL	R ERECTION MOVEMENTS	SEQUENCES SHALL RECOGNIZE AND OF STRUCTURAL ELEMENTS DURING			
11.	THE CO THE CO DEVIAT	DNSTRUCTION PERIOD. DNTRACTOR SHALL INFORM THE I FION FROM THE CONTRACT DOCL	PROFESSION JMENTS. THE	AL-OF-RECORD IN WRITING OF ANY E CONTRACTOR SHALL NOT BE		SII	A1
	RELIEV RECOF	/ED OF THE RESPONSIBILITY OF S RD'S REVIEW OF SHOP DRAWINGS RACTOR HAS SPECIFICALLY INFOR	SUCH DEVIAT S, PRODUCT I RMFD THF PF	ION BY THE PROFESSIONAL-OF- DATA, ETC., UNLESS THE ROFESSIONAL-OF-RECORD OF SUCH		UTE CA	AHON
	DEVIAT GIVEN	TION AT THE TIME OF SUBMISSION WRITTEN APPROVAL TO THE SPE	N, AND THE P CIFIC DEVIAT	ROFESSIONAL-OF-RECORD HAS		Ľ Ľ	OKL/
<u>SU</u>	<u>BMITTA</u>	L PROCEDURES				NOL	JAH,
1.	SHOP I BE PRO DRAWI	DRAWINGS SHALL BE PRODUCED DDUCED FROM DIGITAL COPIES O INGS ARE DIGITALLY REPRODUCE	FROM SCRA R SCANS OF D AND USED	TCH. THE SHOP DRAWINGS SHALL NOT THE E.O.R. DRAWINGS. IF THE E.O.R. IN SUBMITTED SHOP DRAWINGS. THE		IAT Q	LEQI
2.	SHOP I TRANS	DRAWINGS SHALL BE REJECTED I MIT SUBMITTALS SUFFICIENTLY II	IN WHOLE. N ADVANCE ( STRUCTURAL	OF RELATED CONSTRUCTION ACTIVITIE	6		TAH
0	WITHH	OLD ACTION ON A SUBMITTAL RE ALL RELATED SUBMITTALS ARE R	QUIRING COO	DRDINATION WITH OTHER SUBMITTALS		A H H	
э.	LOCKE	DRAWINGS SHALL BE SUBINITED D 'PDF' FILES WILL NOT BE ACCEP ED UP, AND RETURNED IN 'PDF' EL	PTED. THE SH ECTRONIC F	HOP DRAWINGS WILL BE REVIEWED, ORMAT.		Ц Ц Ц	
		ABBREVIATIONS				CHI	
A.E AF	B. F	ANCHOR BOLT ABOVE FINISH FLOOR	LL LLH	LIVE LOAD LONG LEG HORIZONTAL			
B.C B.C	.сн. ).D. ).S.	BOTTOM OF DECK BOTTOM OF STEEL	LLV LONG. LW	LONG LEG VERTICAL LONGITUDINAL LIGHTWEIGHT			
BF BLI BO	F DG. •T.	BELOW FINISH FLOOR BUILDING BOTTOM	MANUF. MAX. MIN.	MANUFACTURER MAXIMUM MINIMUM			
C.J C.L CI	l.  R	CONSTRUCTION JOINT CENTERLINE CLEAR	MISC. NW	MISCELLANEOUS NORMAL WEIGHT ON CENTER	PRO		
	IU IU IL.	CONCRETE MASONRY UNIT	O.H.D. OH	OVER HEAD DOOR OPPOSITE HAND		(100%SE	T)
CO CO DB	NC. NT.	CONCRETE CONTINUOUS DECK BEARING	PEMB PCF PCI	PRE-ENGINEERED METAL BUILDING POUNDS PER CUBIC FOOT POUNDS PER CUBIC INCH		REVISIONS	
D.E DIA E.E	3.A. \. <u>-</u> .	DEFORMED BAR ANCHOR DIAMETER EACH END	PLF PSF PSI	POUNDS PER LINEAR FOOT POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH	# 5 7	DATE         DESC           04/27/18         ADDENDUM           05/08/18         ADDENDUM	#05 #07
E.F E.V	V.	EACH FACE EACH WAY	QTY. RE:	QUANTITY REFER REINFORCEMENT			
FFI FN	Ev. E D.	FINISH FLOOR ELEVATION FOUNDATION	REINF. REQ'D. S.C.	REQUIRED SAW CUT			
FT G.E GA	G. 3.	FOOTING GRADE BEAM GAUGE	SCHED. SIM. STD.	SCHEDULE SIMILAR STANDARD	DA		
GA H.	LV.	GALVANIZED HORIZONTAL HORIZONTAL	T&B TF TCP	TOP AND BOTTOM TOP OF FOOTING TOP OF CRADE BEAM	SHE		סט- <i>ז</i> ו
HS	A >	HEADED STUD ANCHOR INSULATED METAL PANEL	TP TPC	TOP OF PEDESTAL TOP OF PIER CAP		S0.1	
ICF INS INT	SUL. T.	INSULATED CONCRETE PANEL INSULATION INTERIOR	T.O.S. TW TYP.	TOP OF STEEL TOP OF WALL TYPICAL		07010-	
JB KS LG	I ST	JOIST BEARING KIPS PER SQUARE INCH LIGHT GAGE STEFL TRUSS	U.N.O. V. VERT	UNLESS NOTED OTHERWISE VERTICAL VERTICAL		NOTES	<b>KAL</b>





REQUIRED SPECIAL INSPECTIONS - BY TESTING AGENCY In addition to the regular inspections required by Section 110, the following bites require Special Inspection in accordance with Section 1704 and 1705 of the 2015 IBC.

> SECTION 1704.2.5 FABRICATORS

Verify fabrication / quality control procedures.

## SECTION 1705.2.1 STRUCTURAL STEEL tial inspection for structural steel shall be in accordance

TABLE 1705.2.2

Special inspection for structural steel shall be in accordance with the quality assurance inspection requirements of AISC 360.

		VERIFICATION AND INSPECTION TASK	CONTINUOUS (C) OR PERIODIC (P)	REQUIRED
1.	Mat	erial verification of cold-formed steel deck:		
	a.	Identification markings to conform to ASTM standards specified in the approved construction documents.	Р	Y
	b.	Manufacturer's certified test reports.	Р	Y
2.	Insp	pection of welding:		
2.	a.	Cold-formed steel deck:		
		1) Floor and roof deck welds.	Р	Y
	b.	Reinforcing steel:		
		<ol> <li>Verification of weldability of reinforcing steel other than ASTM A 706.</li> </ol>	Р	Ν
		<ol> <li>Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.</li> </ol>	С	Ν
3.	She	ar reinforcement.	С	Ν
4.	Oth	er reinforcing steel	Р	N

TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

	VERIFICATION AND INSPECTION TASK	CONTINUOUS (C) OR PERIODIC (P)	REQUIRED
1.	Inspection of reinforcing steel, including prestressing tendons, and placement.	Р	Ν
2.	Inspection of reinforcing steel welding in accordance with Table 1705.2.2, Item 2b.	-	Ν
3.	Inspection of anchors cast in concrete where allowable loads have been increased or where strength design is used.	Р	Ν
4.	Inspection of anchors post-installed in hardened concrete members.	Р	Y
5.	Verifying use of required mix design.	Р	Y
6.	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	С	Y
7.	Inspection of concrete and shotcrete placement for proper application techniques.	С	Ν
8.	Inspection for maintenance of specified curing temperature and techniques.	Р	Ν
9.	Inspection of prestressed concrete:		
	a. Application of prestressing force.	С	Ν
	<ul> <li>Grouting of bonded prestressing tendons in the seismic force-resisting system.</li> </ul>	С	Ν
10.	Erection of precast concrete members.	Р	N
11.	Verification of 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.	Ρ	N
12.	Inspect formwork for shape, location and dimensions of the concrete member being formed.	Р	N

## SECTION 1705.4 MASONRY CONSTRUCTION

Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 quality assurance programs.

## TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

	VERIFICATION AND INSPECTION TASK	CONTINUOUS (C) OR PERIODIC (P)	REQUIRED
1.	Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Р	Y
2.	Verify excavations are extended to proper depth and have reached proper material.	Р	Y
3.	Perform classification and testing of compacted fill materials.	Р	Y
4.	Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	С	Y
5.	Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	Р	Y

 TABLE 1705.8

 REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS

 VERIFICATION AND INSPECTION TASK

 CONTINUOUS (C)

		OR PERIODIC (P)	
1.	Observe drilling operations and maintain complete and accurate records for each element.	С	Y
2.	Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	С	Y
3.	For concrete elements, perform additional inspections in accordance with Section 1705.3.	-	Y







GRA	DE BEAM S			
RK	WIDTH	THICKNESS		(
	1' - 4"	2' - 0"	1	
	3' - 4"	2' - 0"	1	
				ŀ
				۱F

RETE PEDESTAL SCHEDULE

RK	LENGTH	WIDTH
•	2' - 0"	2' - 0"
6	2' - 4"	2' - 0"
;	3' - 0"	2' - 0"

PIER CAP SCHEDULE				
CAP MARK	LENGTH	WIDTH	HEIGHT	
PC1	2' - 0"	2' - 0"	2' - 0"	
PC2	3' - 0"	2' - 0"	2' - 0"	
PC3	3' - 0"	3' - 0"	2' - 0"	
PC4	3' - 2"	3' - 2"	4' - 0"	
PC5	4' - 0"	2' - 0"	2' - 0"	
PC6	4' - 0"	3' - 0"	2' - 0"	
PC7	4' - 0"	3' - 3"	2' - 0"	
PC8	4' - 5"	4' - 5"	2' - 0"	
PC9A	5' - 4"	5' - 4"	2' - 0"	
PC9B	5' - 4"	5' - 4"	4' - 0"	
PC10	7' - 4"	7' - 4"	4' - 0"	

STRUCTURAL STEEL COLUMN SCHEDULE				
COL MARK	SIZE			
C2	HSS6X6X1/4			
C3	HSS8X8X1/4			
C4	HSS10X10X1/4			
C5	W10X33			
C6	HSS12X12X1/4			
C7	HSS12X12X3/8			
C8	W10X49			





















PLANS



















![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)