

SCHEDULE OF SPECIAL INSPECTIONS			
MATERIAL/ACTIVITY	SERVICE	Y/N	FREQUENCY
1704.2 INSPECTION OF FABRICATORS			
VERIFY FABRICATION/OC PROCEDURES	IN-PLANT REVIEW	Y	CONTINUOUS
WOOD CONSTRUCTION			
PRE-FABRICATED STRUCTURAL ELEMENTS (1704.2)	IN-PLANT OR FIELD REVIEW	Y	PERIODIC
SITE BUILT ASSEMBLIES (1704.1)	FIELD REVIEW	Y	PERIODIC
DIAHRAGMS (BC TABLE 2306.3.2)	FIELD REVIEW	Y	PERIODIC
TRUSS BRACING PER MFR. RECOMMENDATIONS	FIELD REVIEW	Y	PERIODIC
1704.4 CONCRETE CONSTRUCTION			
INSPECTION OF REINFORCING STEEL INSTALLATION	FIELD INSPECTION	Y	CONTINUOUS
CAST IN PLACE EMBEDMENTS, ANCHOR RODS, BOLTS	FIELD INSPECTION	Y	CONTINUOUS
VERIFICATION OF REQUIRED CONCRETE MIX DESIGN	REVIEW SUBMITTALS	Y	CONTINUOUS
FRESH CONCRETE SAMPLING	FIELD TESTING	Y	PERIODIC
CONCRETE PLACEMENT	FIELD REVIEW	Y	PERIODIC
CONCRETE CURING OPERATIONS	FIELD REVIEW	Y	CONTINUOUS
EVALUATION OF CONCRETE STRENGTH	FIELD TESTING AND REVIEW OF LABORATORY REPORTS	Y	CONTINUOUS
1708.3 REINFORCING STEEL			
REVIEW CERTIFIED MILL TEST REPORTS	FIELD REVIEW	Y	CONTINUOUS
VERIFY REINFORCING STEEL WELDABILITY	REVIEW TESTING REPORTS	Y	CONTINUOUS
1704.5.1 MASONRY CONSTRUCTION - LEVEL 1			
VERIFY PROPORTIONS OF SITE-MIXED MORTAR AND GROUT	REVIEW SUBMITTALS	Y	PERIODIC
VERIFY CONSTRUCTION OF MORTAR JOINTS	FIELD INSPECTION	Y	PERIODIC
VERIFY LOCATION OF REINFORCEMENT AND CONNECTORS	FIELD INSPECTION	Y	PERIODIC
VERIFY LOCATION OF STRUCTURAL MASONRY ELEMENTS	FIELD AND SUBMITTAL REVIEW	Y	PERIODIC
VERIFY TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTR.	FIELD INSPECTION	Y	PERIODIC
VERIFY SIZE, GRADE AND TYPE OF REINFORCEMENT	FIELD INSPECTION	Y	PERIODIC
VERIFY WELDING OF REINFORCING BARS	FIELD INSPECTION	Y	CONTINUOUS
VERIFY PROTECTION OF MASONRY DURING HOT/ COLD WEATHER	FIELD INSPECTION	Y	PERIODIC
VERIFY GROUT SPACE IS CLEAN PRIOR TO GROUTING	FIELD INSPECTION	Y	PERIODIC
VERIFY GROUT PLACEMENT COMPLES WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS	FIELD INSPECTION	Y	PERIODIC
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	FIELD INSPECTION	Y	PERIODIC
VERIFY CONSTRUCTION OF MORTAR JOINTS	FIELD INSPECTION	Y	PERIODIC
1704.7 SOILS			
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	FIELD INSPECTION	Y	PERIODIC DURING TASK LISTED
VERIFY SITE PREPARATION COMPLES WITH FINAL GEOTECHNICAL REPORT	FIELD INSPECTION	Y	CONTINUOUS
VERIFY PLACEMENT AND COMPACTION OF FILL MATERIALS COMPLES WITH FINAL GEOTECH REPORT	FIELD INSPECTION	Y	CONTINUOUS
VERIFY DRY-DENSITY OF COMPACTED FILL COMPLES WITH FINAL GEOTECH REPORT	FIELD INSPECTION	Y	CONTINUOUS

NOTES:

- The Owner shall employ one or more special inspector(s) to provide inspections during construction as noted in this section. The Special Inspector shall be a qualified person who shall demonstrate competence in the inspection services performed by the contractor of the Engineer of Record and the Building Official. The Special Inspector shall meet the minimum qualifications as set forth in section 1704.2 and have experience with at least five other projects similar in nature.
- Special inspection reports and final report in accordance with Section 1704.7.1 (see also Section 3 below) shall be submitted to the building official prior to the time that phase of the work is approved for occupancy.
- Special inspectors shall keep record of inspections. The Special Inspector shall submit reports to the Building Official and to the registered design professional in responsible charge. Reports shall indicate when the work inspected was performed in conformance to the approved Construction Documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the Building Official and to the registered design professional in responsible charge prior to the completion of the phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspection shall be submitted to the building official prior to the time that phase of the work is approved for occupancy.
- The purpose of the inspections shall be to enforce compliance with the Construction Drawings, Specifications, Geotechnical Report and State and Local Building Codes in effect.
- Special inspections shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to, the following examples:
 - Construction materials and systems that are alternatives to materials and systems prescribed by the code.
 - Unusual design applications of materials described in the code.
 - Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirement not contained in the code or in standards referenced by this code.
- Each Special Inspector is responsible to review the plans thoroughly and sufficiently ahead of the construction to establish if he can inspect those items entrusted to him. All ambiguities or omissions in the approved plans that create any form of doubt for the Special Inspector shall be resolved through the proper channels prior to construction.
- The Special Inspector shall inspect the concrete frame including bearing walls, shear walls, connection of structural slabs to shear walls, elevated slabs, beams, columns, mat foundations and pier caps.
- The Geotechnical and Special Inspector should examine footing excavation, pier and pier cap installation, and fill placement to determine that the proper design requirements have been reached. The inspection should be performed prior to the placement of the slab reinforcement in the excavation.
- The Special Inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship. If fabricator is enrolled in a nationally accepted inspections program (satisfactory to the registered design professional in responsible charge and Building Official), this is not required. Any corrections that were not completed by the Contractor shall be brought to the attention of the Building Official and the registered design professional in responsible charge.

CONCRETE MIX CLASSES

FOOTINGS & PIERS	
COMPRESSIVE STRENGTH	3000 PSI
MAXIMUM WATER/CEMENT RATIO	0.58
AIR CONTENT	0-3 PERCENT
WATER-REDUCING ADMIXTURE	OPTIONAL
SUMP	4" +/- 1"
INTERIOR CONCRETE SLABS	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	517 LB/CU YD
AIR CONTENT	0-3 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SUMP	4" +/- 1"
EXTERIOR CONCRETE SUBJECT TO FREEZE-THAW	
COMPRESSIVE STRENGTH	4000 PSI
MINIMUM CEMENTITIOUS MATERIAL CONTENT	564 LB/CU YD
AIR CONTENT	6 +/- 1 PERCENT
WATER-REDUCING ADMIXTURE	REQUIRED
SUMP	4" TO 6"
COARSE AGGREGATE	CRUSHED STONE
INCREASE COMPRESSIVE STRENGTH TO 4500 PSI FOR EXTERIOR REINFORCED CONCRETE SUBJECT TO THE USE OF DECKERS.	
LEAN CONCRETE FILL	
COMPRESSIVE STRENGTH	2000 PSI
MAXIMUM WATER/CEMENT RATIO	0.65
AIR CONTENT	OPTIONAL
WATER-REDUCING ADMIXTURE	OPTIONAL
SUMP	4" +/- 1"

- SUMP: MIXES CONTAINING TYPE A WRDA 5 IN. MAXIMUM
MIXES CONTAINING MID-RANGE WRDA 5-8 1/2" IN.
MIXES CONTAINING HIGH-RANGE WRDA 5-8 IN.
- SPECIFIED MINIMUM CEMENTITIOUS MATERIAL CONTENTS ARE BASED ON THE USE OF WATER REDUCING ADMIXTURES.
- INCLUDE AN AIR-ENTRAINING ADMIXTURE FOR ALL CONCRETE EXPOSED TO FREEZING AND THAWING IN SERVICE AND FOR ALL CONCRETE EXPOSED TO COLD WEATHER DURING CONSTRUCTION, BEFORE ATTAINING ITS SPECIFIED DESIGN COMPRESSIVE STRENGTH. REF. ACI 306 FOR DEFINITION OF COLD WEATHER.
- CLASS C OR F FLY ASH MAY BE USED AS A CEMENT SUBSTITUTE WITH A MAXIMUM 20% SUBSTITUTION RATE ON A LB. PER LB. BASIS.
- SLAG CEMENT MAY BE USED AS A SUBSTITUTE FOR PORTLAND CEMENT WITH A MAXIMUM 50% SUBSTITUTION RATE ON A LB. PER LB. BASIS WITH THE EXCEPTION OF CLASS E CONCRETE, WHICH SHALL BE LIMITED TO 30%.
- WHEN SLAG CEMENT AND FLY ASH ARE USED IN THE SAME CONCRETE MIX, THE MAXIMUM SUBSTITUTION RATES SHALL COMPLY WITH THE FOLLOWING:
PORTLAND CEMENT/SLAG/FLY ASH RATIO:
CLASS E EXTERIOR CONCRETE 70%/20%/10%
ALL OTHER CLASSES 50%/30%/20%
- FOR CONCRETE TO BE CAST DURING COLD WEATHER, THE MAXIMUM SUBSTITUTION RATE FOR SLAG CEMENT SHALL BE 30%. IF SLAG CEMENT AND FLY ASH ARE USED IN THE SAME MIX, THE MAXIMUM SUBSTITUTION RATES SHALL COMPLY A RATIO OF PORTLAND CEMENT/SLAG/FLYASH OF 70%/20%/10%.
- PROPORTION CONCRETE MIXES TO PROVIDE WORKABILITY AND CONSISTENCY TO PERMIT CONCRETE TO BE WORKED READILY AND TO THE CORNERS AND ANGLES OF THE FORMS AND AROUND REINFORCEMENT BY THE METHODS OF PLACEMENT AND CONSOLIDATION TO BE EMPLOYED WITH MINIMUM VIBRATION AND EXCESSIVE BLEEDING.
- ADJUSTMENTS TO THE MIXED DESIGNS MAY BE REQUESTED BY THE CONTRACTOR WHEN JOB CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT THESE REVISIONS. THESE REVISIONS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO USE.

CONCRETE REINFORCING

- Reinforcement, other than cold drawn wire for spirals and welded wire fabric, shall be performed surfaces in accordance with ASTM A305.
- Reinforcing steel shall conform to ASTM A615, Grade 60, unless noted.
- Welded wire fabric shall conform to ASTM A185, unless noted.
- Where hooks are indicated, provide standard hooks per ACI and CRSI for all bars unless other hook dimensions are shown on the plans or details.
- Reinforcement in footings, walls and beams shall be continuous. Lap bars a minimum of 36 bar diameters, unless noted otherwise.
- Reinforcement shall be supported and secured against displacement in accordance with the CRSI Manual of Standard Practice.
- Details of reinforcing steel fabrication and placement shall conform to ACI 315 "Details and Detailing of Concrete Reinforcement" and ACI 315R "Manual of Engineering and Placing Drawings for Reinforced Concrete Structures", unless otherwise indicated.
- Reinforcing steel around small openings and sleeves in slabs and walls, where possible, and where bar spacing will not exceed 1.5 times the normal spacing. Discontinue bars at all large openings where necessary, and provide an area of reinforcement, equal to the interrupted reinforcement, in full length bars, distributing one-half each side of the opening. Where shrinkage and temperature reinforcement is interrupted, add (2) #5 x opening dimension + 4"-0" on each side of the opening. Provide #5 x 4"-0" long diagonal bars in both faces, at each corner of openings larger than 12" in any dimension.
- Provide standees for the support of top reinforcement for footings, pier caps, and mat foundations.
- Provide individual high chairs with support bars, as required for the support of top reinforcement for support slabs. Do not provide standees.
- Provide snap-on plastic spacer wheels to maintain required cover for vertical wall reinforcement.
- Where walls sit on column footings, provide dowels with bars. Dowels shall be the same size and spacing as the vertical wall reinforcement, unless noted otherwise, with lap splices as shown on the applicable sections. Install dowels in the footing forms prior to concrete placement. Do not stick dowels into footings after concrete is placed.
- Field bending of reinforcing steel is prohibited, unless noted on the drawings.
- Minimum concrete cover over reinforcing steel shall 3" at unformed surfaces and bottoms in contact with earth.

FOUNDATIONS

- Proform slab on grade areas with a medium-weight roller or other suitable equipment to check for pockets of soft material hidden beneath a thin crust of better soil. Any unsuitable materials thus exposed should be removed and replaced with compacted, engineered fill as outlined in the specifications. Proofrolling operations shall be monitored by the Geotechnical Testing Agency.
- Refer to the site specific Geotechnical Report (per note 8 below) for recommendations on existing materials that may or may not be used for engineered fill, and specifics on materials that will qualify and new engineered fill. All areas of structural fill beneath slabs and footings should be compacted to a minimum dry density of at least 98% of the Standard Proctor (ASTM D-598) maximum dry density (MDD), with the upper aggregate base 12" below slabs and pavement compacted to at least 100% MDD. All fill placement should be observed by a qualified field technician working under the direction of the project Geotechnical Engineer. In-place density tests should be performed as the fill is being placed in order to evaluate whether the recommended compaction is being achieved. Compaction shall be accomplished by placing fill in lifts not to exceed 8" and mechanically compacting each lift to at least the specified minimum dry density. For under-floor areas, field density tests shall be performed for each 2,500 square feet. In addition, a minimum of one density test per 50 feet of bearing wall and one density test in each column pad, should be performed in the excavated footing areas to confirm compliance with the project specifications.
- Column footings and wall footings to bear on firm natural soils or well- compacted engineered fill with allowable bearing pressures of 2,500 PSF, as outlined in the Subsurface Investigation Report. It is essential that the foundations be inspected to insure that all loose, soft, or otherwise undesirable material (such as organics, existing uncontrolled fill, etc.) is removed and that the foundations will bear on satisfactory material. The Geotechnical Testing Agency shall inspect the subgrade and perform any necessary tests to insure that the actual bearing capacities meet or exceed the design capacities. The Geotechnical Testing Agency shall verify the bearing capacity of each spread column footing and every 10 feet on center for strip footings prior to placement of concrete.
- Place footings the same day the excavation is performed. If this is not possible, the footings shall be adequately protected against any detrimental change in condition, such as from disturbance, rain, or freezing.
- It is the responsibility of the Contractor and each Sub-Contractor to verify the location of all utilities and services shown, or not shown, and establish safe working conditions before commencing work.
- The Contractor shall layout the entire building and field verify all dimension prior to excavation.
- For information regarding subsurface conditions refer to the Geotechnical Report prepared by TTL, Inc.; TTL Project No. 000190101860.00 dated August 9, 2019.

REINFORCED MASONRY NOTES

- All construction of reinforced masonry walls to be in accordance with the Building Code Requirements for Concrete Masonry Structures (ACI 530) and Commentary.
A) f'm = 2000 PSI
B. Reinforcing Steel Shop Drawings.
C. Pre-Manufactured Wood Truss or Wall Panel Systems.
D. Product Data for Continuous Wood Framing and Rough Carpentry.
E. Cold Formed Steel Framing.
- Resubmitted Shop Drawings: Information on the original submittal will not be changed in any way on the resubmitted drawings.
- The calculations are included in the submittal for components of Work designed and certified by a Specialty Structural Engineer (SSE), the review by the Structural Engineer of Record (SER) shall be in conformance with the relevant Contract Documents. The SER's review does not relieve the SSE from responsibility for the design of their system(s) and the coordination with the elements of the structure under the certification of the SER, or other SSE's. The SER's review does not constitute a warrant of the accuracy or completeness of the SSE's design.
- Contractors shall visit the site prior to bid to ascertain conditions which may adversely affect the work or cost thereof.
- No structural member may be cut, notched, or otherwise reduced in strength without written direction from the SER.
- When modifications are proposed to structural elements under the design and certification of a SSE, written authorization by the SSE must be obtained and submitted to the SER for review prior to performing the proposed modifications.

LINTEL SCHEDULE

- Where lintels are not specified on the Structural Architectural Drawings, provide the lintel over all openings and recesses in both interior and exterior load-bearing walls.
- | | |
|--------------------------|--------------|
| A) Brick Masonry Lintel | Angle Size |
| Up to 5'-0" | L4 x 4 x 3/8 |
| Over 5'-0" & up to 7'-0" | L6 x 4 x 3/8 |
| Over 7'-0" | L7 x 4 x 3/8 |
- All angles are to be along leg vertical, unless noted otherwise. Provide 1" of lap for each span each end with minimum 8".
- All exterior walls are to be galvanized.

CAST IN PLACE CONCRETE

- Details of fabrication of reinforcement, handling, and placing of the concrete, construction of forms and placement of reinforcement not otherwise covered by the Plans and Specifications, shall comply with the ACI Code requirements of the latest revised date.
- Cold weather concreting shall be in accordance with ACI 306. Cold weather is defined as a period when for more than 3 successive days the average daily air temperature drops below 40F and stays below 50F. The Contractor shall maintain a copy of this publication on site.
- Hot weather concreting shall be in accordance with ACI 305. Hot weather is defined as any combination of the following conditions that tends to impair the quality of the freshly mixed and hardened concrete: high ambient temperature, high concrete temperature, low relative humidity, wind speed, or solar radiation. The Contractor shall maintain a copy of this publication on site.
- A certified Testing Agency shall be retained to perform industry standard testing including measurement of slump, air temperature, concrete cylinder testing, etc. to insure conformance with the Contract Documents. Submit reports to the Architect/Engineer.
- FINISHING OF SLABS: After screeding, bull floating and floating operations have been completed, apply Final Finish as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual.

A. Floor Slabs	Hard Trowel Finish
B. Ramps, Stairs, & Sidewalks	Broom Finish
C. Surfaces to Receive Topping Slabs	Float Finish
D. Driveway Surfaces	Rough Swirl Finish

 Sample Finishes: See the Specifications for sample and mockup requirements, if any.
Floor Tolerances: FF and FI testing shall be performed by the Testing Agency in accordance with ASTM E 1155. Results, including acceptance or rejection of the work will be provided to the Contractor and the Architect/Engineer within 48 hours after data collection. Remedies for out-of-tolerance work shall be in accordance with the Specifications. When approved by the SER, measurement of the gaps beneath a 10-foot straightedge may be used in lieu of FF and FI testing. Approval must be obtained in writing prior to the beginning of concrete operations.
- FINISHING OF FORMED SURFACES: Finish formed surfaces as indicated below, and as described in the Division 3 Cast In Place Concrete Specification of the Project Manual.

A. Surfaces not exposed to public view	Rough Form Finish
B. Surfaces exposed to public view	Smooth Form Finish
- The Contractor shall consult with the Engineer before starting concrete work to establish a satisfactory placing schedule and to determine the location of construction joints so as to minimize the effects of shrinkage in the floor system.
- Sawn or toiled control/contraction joints shall be provided in all slabs on grade as indicated on plan.
- Where vinyl composition tile, vinyl sheets goods, thin-set epoxy terrazzo, or other similar material is the specified finish floor material, the Contractor shall coordinate the locations of control/contraction and construction joints with the Finish Flooring Contractor. Submit a dimensioned plan showing joint locations and proposed sequence of floor pours.
- Joints in slabs to receive a finish floor may remain unfilled, unless required by the Finish Flooring Contractor. All exposed slab joints shall be filled with specified elastomeric sealant. Defer filling of joints as long as possible, preferably a minimum of 4 to 6 weeks after the slab has been cured. Prior to filling, remove all debris from the slab joints, then fill in accordance with the manufacturer's recommendations.
- Refer to the Architectural Drawings for exact locations and dimensions of recessed slabs, ramps, stairs, thickened slabs, etc. Slope slabs to drains where shown on the Architectural and Plumbing Drawings.
- Sidewalks, stoops, porches, drives, exterior retaining walls, and other site concrete are not indicated on the Structural Drawings. Refer to the Site/Civil and Architectural Drawings for locations, dimensions, elevations, jointing and finishing details.
- When modifications are proposed to elements under the design and certification of the SSE, written authorization by the SSE must be obtained and submitted to the SER for review prior to performing the proposed modification.

GENERAL NOTES

- The Contractor shall be responsible for complying with all safety precautions and regulations during the work. The SER will not advise on, nor issue direction as to safety precautions and programs.
- The Structural Drawings herein represent the finished structure. The Contractor shall provide all temporary guying and bracing required to erect and hold the structure in proper alignment until all Structural Work and connections have been completed. The investigation, design, safety, adequacy and inspection of the bracing, shoring, temporary supports, etc. is the sole responsibility of the Contractor.
- The SER shall not be responsible for the methods, techniques, and sequences of procedures to perform the Work. The supervision of the Work is the sole responsibility of the Contractor.
- The Drawings indicate general and typical details of construction. Where conditions are not specified, similar details of construction shall be used, subject to approval of the SER.
- All structural systems which are to be composed of components to be field erected shall be supervised by the Supplier during manufacturing, delivery, handling, storage, and erection in accordance with the Supplier's instructions and requirements.
- Loading applied to the structure during the process of construction shall not exceed the safe load-carrying capacity of the structural members. The live loads used in the design of this structure are indicated in the "Design Criteria Notes". Do not apply any construction loads until structural framing is properly connected together and until all permanent bracing is in place.
- All ASTM and other referenced standards and codes are for the latest editions of these publications, unless noted otherwise.
- Shop Drawings and other items shall be submitted to the SER for review prior to fabrication. All shop drawings shall be reviewed by the Contractor before submittal. The SER's review is to be for conformance with the design concept and general compliance with the relevant Contract Documents. The SER's review does not relieve the Contractor of the sole responsibility to review, check, and coordinate the Shop Drawings prior to submission. The Contractor shall be solely responsible for errors and omissions associated with the preparation of Shop Drawings as they pertain to member sizes, details, dimensions, etc.
- Submit Shop Drawings and Product Data electronically. In no case shall the production of the Contract Documents be used as Shop Drawings. As a minimum, submit the following:
 - Concrete Mix Design(s).
 - Reinforcing Steel Shop Drawings.
 - Pre-Manufactured Wood Truss or Wall Panel Systems.
 - Product Data for Continuous Wood Framing and Rough Carpentry.
 - Cold Formed Steel Framing.
- Resubmitted Shop Drawings: Information on the original submittal will not be changed in any way on the resubmitted drawings.
- The calculations are included in the submittal for components of Work designed and certified by a Specialty Structural Engineer (SSE), the review by the Structural Engineer of Record (SER) shall be in conformance with the relevant Contract Documents. The SER's review does not relieve the SSE from responsibility for the design of their system(s) and the coordination with the elements of the structure under the certification of the SER, or other SSE's. The SER's review does not constitute a warrant of the accuracy or completeness of the SSE's design.
- Contractors shall visit the site prior to bid to ascertain conditions which may adversely affect the work or cost thereof.
- No structural member may be cut, notched, or otherwise reduced in strength without written direction from the SER.
- When modifications are proposed to structural elements under the design and certification of a SSE, written authorization by the SSE must be obtained and submitted to the SER for review prior to performing the proposed modifications.

COORDINATION WITH OTHER TRADES

- The Contractor shall coordinate and check all dimensions relating to Architectural finishes, mechanical equipment and openings, elevator shafts and overides, etc. and notify the Architect/Engineer of any discrepancies before proceeding with any work in the area under question.
- The Structural Drawings shall be used in conjunction with the Drawings of all other disciplines and the Specifications. The Contractor shall verify the requirements of other trades as to sleeves, chases, hangers, inserts, anchors, holes, and other items to be placed or set in the Structural Work.
- There shall be no vertical or horizontal sleeves set, or holes cut or drilled in any beam or column unless it is shown on the Structural Drawings or approved in writing by the SER.
- Mechanical and electrical openings through supported slabs and walls, 8" diameter, or larger not shown on the Structural Drawings must be approved by the SER. Openings less than 8" diameter shall have at least 1'-0" clear between openings, unless approved in writing by the SER.
- Verify locations and dimensions of mechanical and electrical openings through supported slabs and walls shown on the Structural Drawings with the Mechanical and Electrical Contractors.
- Do not install conduit in supported slabs, slabs on grade, or concrete walls unless explicitly shown or noted on the Structural Drawings.
- Do not suspend any items, such as ductwork, mechanical or electrical fixtures, ceilings, etc. from steel roof deck or wood roof sheathing.
- The Mechanical Contractor shall verify that mechanical units supported by steel framing are capable of spanning the distance between the supporting members indicated on the Structural Drawings. The Mechanical Contractor shall supply additional support framing as required.
- If the Drawings and Specifications are in conflict, the most stringent restrictions and requirements shall govern.

SPECIALTY STRUCTURAL ENGINEERING (SSE)

- A Specialty Structural Engineer (SSE) is defined as a Professional Engineer licensed in the State of Mississippi, not the Structural Engineer of Record (SER), who performs Structural Engineering functions necessary for the structure to be completed and who has shown experience and/or training in the specialty.
- It is the SSE's responsibility to review the Construction Drawings and Specifications to determine the appropriate scope of engineering.
- It is the intent of the Drawings and Specifications to provide sufficient information for the SSE to perform his design and analysis. If the SSE determines there are details, features, or unanticipated project limits which conflict with the engineering requirements as described in the project documents, the SSE shall in a timely manner contact the SER for resolution of conflicts.
- The SSE shall forward documents to the SER for review. Such documents shall bear the stamp of the SSE and include:
 - Drawings introducing engineering input, such as defining the configuration or structural capacity of structural components and/or their assembly into structural systems.
 - Calculations.
 - Contractors are referred to the specific technical specification sections and the structural drawings for those elements requiring Specialty Structural Engineering. Examples of components requiring Specialty Structural Engineering include, but are not limited to the following:
 - Cold-Formed Steel Framing.
 - Prefabricated Wood Trusses.
 - Prefabricated Wood Wall Panels.
- When modifications are proposed to elements under the design and certification of the SSE, written authorization by the SSE must be obtained and submitted to the SER for review prior to performing the proposed modification.

DESIGN CRITERIA

- DESIGN STANDARDS: The intended design standards are as follows:

General	The 2012 International Building Code
Concrete	ACI 318
Masonry	ACI 530
Cold-Formed Metal	ASD-A550
Wood Framing	NDS
Wood Trusses	TPI

All referenced standards and codes, as well as ASTM numbers, are for the editions of these publications referenced in the Building Code listed above, unless noted otherwise.

- DEAD LOADS: Gravity dead loads used in the design of the structure are as computed for the materials of construction incorporated into the building, including but not limited to walls, floors, roofs, ceilings, stairways, feed partitions, finishes, cladding, and other similar architectural and structural items, as well as mechanical, electrical and plumbing equipment and fixtures, and material handling and fixed service equipment, including the weight of cranes.
- LIVE LOADS: Gravity live loads on the design of the structure meet, or exceed the following table (IBC 2009 §607.1):

OCCUPANCY CATEGORY	UNIFORM (DF)	CONCENTRATED (LB)
A. Restaurants	100	---
B. Structures with Vehicular Highways & Trucking	250 Note "a"	8000 Note "b"
Stairs & Exits	100	300 on A=4 sq. in.

NOTE: "a": Other uniform loads in accordance with an approved method which contains provisions for truck loadings have also been considered where appropriate.

NOTE "b": The concentrated wheel load has been applied on an area of 20 sq. in.

LIVE LOAD REDUCTION: Live load reductions have been used.

COLLATERAL LOAD: Unless otherwise noted, a minimum uniform collateral load of 10 PSF has been used to account for ductwork, ceilings, sprinklers, lighting, etc. The collateral load is in addition to the weight of mechanical units, large piping (greater than 4" diameter) and suspended fixtures or equipment that have been specifically accounted for in the design.

- CONCENTRATED LOADS:

A. Single panel points of the lower chord of exposed roof trusses or any point along the primary structural members shall be capable of carrying safely a suspended concentrated load of not less than 200 LBS in addition to dead load, unless noted.						
B. HANDRAIL AND GUARDS: <table border="1"> <tr> <td>A. Handrail Assemblies and Guards</td> <td>50 PLF applied in any direction</td> </tr> <tr> <td></td> <td>200 LB concentrated load applied in any direction (non-concurrent with 50 PLF load)</td> </tr> <tr> <td>B. Components, Intermediate Rails, Balusters, Fillers, etc.</td> <td>50 LBS horizontally applied normal load on an area not to exceed 1 SF, not superimposed with those of handrail assemblies.</td> </tr> </table>	A. Handrail Assemblies and Guards	50 PLF applied in any direction		200 LB concentrated load applied in any direction (non-concurrent with 50 PLF load)	B. Components, Intermediate Rails, Balusters, Fillers, etc.	50 LBS horizontally applied normal load on an area not to exceed 1 SF, not superimposed with those of handrail assemblies.
A. Handrail Assemblies and Guards	50 PLF applied in any direction					
	200 LB concentrated load applied in any direction (non-concurrent with 50 PLF load)					
B. Components, Intermediate Rails, Balusters, Fillers, etc.	50 LBS horizontally applied normal load on an area not to exceed 1 SF, not superimposed with those of handrail assemblies.					
- ROOF LIVE/SNOW LOADS: Gravity live loads used in the design of the roof structure meet or exceed the following table:

A. Snow Load	
Ground Snow Load, Pg	5 PSF
Flat Roof Snow Load, Pf	5 PSF
Minimum Roof Design Snow Load, Pm	5 PSF
Snow Exposure Factor, Ce	1.0
Occupancy Category (IBC Table 1604.5)	II
Importance Factor, I	1.0
Thermal Factor, Ct	1.0
B. Minimum Roof Live Load	20 PSF
C. Overhanging Eaves & Projections	30 PSF
1. Sloped roof snow loads calculated in accordance with Sec. 7.4, ASCE 7.	
2. Unbalanced roof snow loads calculated in accordance with Sec. 7.6, ASCE 7. Specialty Structural Engineers (SSE) must consider unbalanced snow loads in the design of pre-engineered trusses, frames, skylights, curtain walls, cold-formed steel framing, canopies, etc.	
3. Drift loads calculated in accordance with Section 7.7, ASCE 7.	

- LATERAL LOADS: Lateral loads were computed using the following criteria:

A. Wind Load	
Basic Wind Speed	117 MPH
Wind Exposure Category	C
Occupancy Category (IBC Table 1604.5)	II
Internal Pressure Coefficient, GCpi	+/-0.18
B. Seismic Load	
Site Class	D
Occupancy Category (IBC Table 1604.5)	II
Importance Factor, I	1.00
Spectral Response Coeff (Short Period), Sds	0.183g
Spectral Response Coeff (1 Second), Sd1	0.140g
Seismic Design Category, SDc	6.5/3
Response Modification Factor, R	0.028 / .061
Seismic Response Coefficient, Cs	Equivalent Lateral Force Analysis Procedure
Basic Seismic Force Resisting System	Light Framed Walls Sheathed w/ Wood Structural Steel not Specifically Detailed for Seismic Resistance
- SAFETY FACTORS: This structure has been designed with 'Safety Factors' in accordance with accepted principles of structural engineering. The fundamental nature of the 'Safety Factor' is to compensate for uncertainties in the design, fabrication, and erection of structural building components. It is intended that 'Safety Factors' be used such that the load-carrying capacity of the structure does not fall below the design load and that the building will perform under design load without distress. While the use of 'Safety Factors' implies some excess capacity beyond design load, such excess capacity cannot be adequately predicted and SHALL NOT BE RELIED UPON.

PROJECT # 190420
 NOVEMBER 2018 DESIGN RELEASE
 BURGER KING
 2415 NORTH HILLS STREET
 MERIDIAN, MS 39305

STRUCTURAL NOTES & SCHEDULES

DATE: 01-27-2020
 CHECKED BY: SNC
 REVISION

DRAWN BY: DWW
 NCJ DATE

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