

Structural Notes:

Applicable Codes:

- FBC 2023 8th Ed.
- ACI 318-19 (22)
- ACI 530/530.1-13
- TMS 402/602-22
- ASCE 7-22
- ANSI/AWC NDS-2018

General

1. All materials and construction shall comply with the latest version of the Florida building code, the latest versions of ASCE-7, ACI-318, ACI 530, AISC, NDS for wood construction and all applicable federal, state, and local ordinances.

2. The contractor shall verify all conditions of existing structures affecting new construction. Any variations in actual field conditions from those shown in the construction documents shall be reported to the architect/engineer for determining the need of redesign prior to the contractors submittal of shop drawings for review.

3. The drawings shall be worked together with the architectural, mechanical, electrical, plumbing, fire protection and fire alarm drawings. Locations of depressed slabs, slopes, drains, outlets, recessed openings, reglets, bolts, sleeves, ect shall be verified. Any discrepancies must be immediately communicated to the architect/engineer.

4. When performing work below grade, care shall be taken to avoid damaging any existing utilities. All unknown utilities discovered during construction shall be brought to the attention of the architect/engineer. Any damaged utilities shall be reported to all parties affected including the architect/engineer.

5. General contractor shall be responsible for updating his/her construction documents with the revised drawings, specifications, shop drawings, filed orders, change orders, and clarification sketches issued during the course of the construction.

6. Typical details and notes on the drawings shall apply unless specifically noted otherwise. Construction details not completely shown shall be similar to details shown for similar conditions.

7. The general contractor shall be solely responsible for all excavation procedures including lagging, shoring, and protection of adjacent property, structures and utilities in accordance with the local building department.

8. Backfill around the exterior perimeter of walls shall not be placed until after the walls are supported by completion of interior floor systems. Do not proceed with backfill until 7 days after the completion of the interior floor system, unless walls are adequately braced. Backfill shall not be placed until after completion and inspection of the waterproofing where waterproofing occurs.

9. General contractor shall be responsible for the disposal of all accumulated water from excavations and dewatering operations in such a way as to not cause inconvenience to the work or cause damage to the structural elements.

10. Structural notes shall be used in conjunction with the specifications. If a conflict exists, the more stringent shall be used.

11. General contractor is solely responsible for job safety, means and methods of construction, construction procedures, and any damage or injury due to negligence.

12. Drawings must not be scaled. Use the dimensions as shown. If any dimension is missing or unclear, contact the architect/engineer for clarification.

Shop drawing submittals:

- Submittals to structural engineer of record may include but are not limited to the items listed below:
 - Concrete test reports for cast-in-place concrete as per ACI.
 - Reinforcing steel shop drawings.
 - Prefabricated wood and/or metal truss erection drawings and design data.
 - Structural steel shop drawings and erection drawings.
 - Post-Tensioned concrete shop drawings and design data as required.
 - Shoring and reshoring shop drawings and calculations.
 - Railings and guardrail shop drawings and design data.
 - Precast/prestressed concrete joists and soffit beams show drawings and design data.
 - Window and door shop drawings.

Note that this is not a final list and the submittals to the engineer of record are not limited to the items herein listed. If deemed necessary, engineer may request any other drawings and/or test reports, even if they are not listed above.

2. Shop drawings requiring engineering by a specialty engineer shall comply with the following:

- The specialty engineer shall be a Florida registered professional engineer.
- The shop drawings and calculations require the signature and seal of the delegated professional engineer.

3. All shop drawings are an aid for field placement and shall be superseded by the structural drawings. It shall be the responsibility of the general contractor to make certain that all construction is in full agreement with the latest structural drawings.

4. The contractor shall supply the engineer five copies of shop drawings a minimum of two weeks prior to the placement/installation of such. The review of the shop drawings by the engineer is only for general compliance the the structural drawings, and specifications. The review does not in any way guarantee that the shop drawings are correct, nor does it infer that they supersede the structural drawings. Review will not include check of dimensions, lengths and quantities.

5. These structural drawings shall not be used to produce shop drawings without prior written approval from the structural engineer of record.

6. Shop drawings re-submitted for approval shall be clearly clouded and noted "Re-review shall be limited to those items which caused the re-submittal".

Foundations:

1. The foundations have been designed to be supported on shallow spread/wall footings to bear on a densified soil with an allowable bearing capacity of 2000PSF.

2. Foundation work shall be performed in strict accordance with the subsurface exploration & geotechnical evaluation if applicable.

3. Provide any bracing or shoring as required in order to prevent settlement or displacement of adjacent existing foundations and structures.

4. All foundation excavations shall be kept dry. Foundation concrete shall be poured only when excavations are completely dry. Take every precaution during dewatering operations so that existing adjacent structures, utilities, piping, ect. are not damaged.

Reinforcing Steel:

- Centers of columns shall coincide with centers of footings, unless otherwise noted in foundation plan or in details.
- Top of foundation elevations shown in plans are based on the best available information gathered from the subsurface investigation. Soil conditions encountered during foundation excavations might dictate the top of footing elevations to be adjusted in order to embed the foundations as necessary.
- Foundations may be earth formed if soil conditions permit. Excavate to exact foundation sizes.
- Contractor must rinse the reinforcing steel clean of all deleterious material before placement of concrete.
- Foundation excavations shall be inspected by the engineer of record. If soil conditions are deemed to vary from initial observations, geotechnical engineer may be required to make revisions to foundation plan.

Concrete:

- All concrete work shall conform to all the requirements of ACI 301 "Specifications for Structural Concrete for Buildings".
- Concrete compressive strength at 28 days shall be as follows:

Foundations:	3000 PSI
Slab on grade:	3000 PSI
Structural Slabs:	5000 PSI
Structural Beams:	5000 PSI
Columns:	5000 PSI
Shear Walls:	5000 PSI
All other:	3000 PSI

3. Formwork shall comply with ACI 347 "Recommended Practice for Concrete Work".

4. Mix designs shall be submitted to the engineer for approval prior to commencement of any concrete work.

5. No water shall be added to the concrete at the jobsite.

6. Transporting, placong, curing and depositing of concrete shall comply with ACI 301 "Specifications for Structural Concrete".

7. Concrete used at balconies and terraces shall have a water cement ration of 0.40.

8. Construction joints in structural slabs and beams shall be located at 1/3 of the span unless otherwise noted.

9. Pouring concrete vertically, the drop shall not exceed 8 feet.

10. Concrete cover shall be as follows unless otherwise shown on plan or in details:

For members cast against and permanently in contact with the ground cover shall be 3 inches minimum for all reinforcing bar sizes.

For members exposed to weather or in contact with the ground cover shall be 2 inches minimum for bar sizes No.6 through No. 18, and 1-1/2 inches for bar sizes No. 5 and smaller.

For slabs joists and walls not in contact with the ground or exposed to weather, cover shall be 1-1/2 inches for bar sizes No. 11 and smaller.

For beams and columns not in contact with the ground or exposed to the weather, cover shall be 1-1/2 inches for all bars.

3. Provide any bracing or shoring as required in order to prevent settlement or displacement of adjacent existing foundations and structures.

4. All foundation excavations shall be kept dry. Foundation concrete shall be poured only when excavations are completely dry. Take every precaution during dewatering operations so that existing adjacent structures, utilities, piping, ect. are not damaged.

5. Centers of columns shall coincide with centers of footings, unless otherwise noted in foundation plan or in details.

6. Top of foundation elevations shown in plans are based on the best available information gathered from the subsurface investigation. Soil conditions encountered during foundation excavations might dictate the top of footing elevations to be adjusted in order to embed the foundations as necessary.

7. Foundations may be earth formed if soil conditions permit. Excavate to exact foundation sizes.

8. Contractor must rinse the reinforcing steel clean of all deleterious material before placement of concrete.

9. Foundation excavations shall be inspected by the engineer of record. If soil conditions are deemed to vary from initial observations, geotechnical engineer may be required to make revisions to foundation plan.

10. All top reinforcement shall be terminated with standard hooks, discontinuous edges or ends.

11. Reinforcing bars shall be detailed and placed in accordance with ACI 318.

12. Reinforcing steel shall be deformed bars conforming to ASTM A615 for grade 60.

13. All welded wire fabric shall conform to ASTM A185.

14. Reinforcement shall be held securely in position with standard accessories during pouring of concrete, in accordance with CRSI "Manual of Standard Practice".

15. All top reinforcement shall be terminated with standard hooks, discontinuous edges or ends.

16. All bottom bars shall bear a minimum of 6 inches over supports.

17. All reinforcing bars labeled as continuous shall be lapped 36 bar diameters minimum at splices and corners unless otherwise noted. Lap continuous bars at center between supports as required. Terminate continuous bars at non-continuous ends with standard hooks.

18. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

19. All reinforcement shall be terminated with standard hooks, discontinuous edges or ends.

20. Use running bond for all masonry walls.

21. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

22. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

23. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

24. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

25. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

26. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

27. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

28. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

29. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

30. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

31. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

32. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

33. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

34. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

35. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

36. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

37. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

38. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

39. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

40. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

41. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

42. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

43. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

44. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

45. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

46. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

47. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

48. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

49. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

50. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

51. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

52. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

53. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

54. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

55. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

56. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar to cure before placing grout.

57. Masonry units shall have 3/8 inch full bedding. Mortar protruding into cell cavities that are to be reinforced and grouted shall be removed. Allow a minimum of 24 hours for mortar