



CODE:

- FLORIDA BUILDING CODE 2020 7th EDITION
- AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-14 ("ACI")
- AMERICAN SOCIETY OF CIVIL ENGINEERS "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES": ASCE 7-16
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" THIRTEENTH EDITION.
- ALUMINUM DESIGN MANUAL 2015

MATERIALS:

UNLESS OTHERWISE NOTED ON DRAWINGS:

- STRUCTURAL STEELS:**
ALL ROLLED SHAPES.....ASTM A572, GRADE 50
ALL PLATES AND CONNECTION MATERIAL.....ASTM A36
ALL HOLLOW STRUCTURAL SECTIONS.....ASTM A500, GRADE B
ANCHOR RODS, U.O.N.....ASTM F1554, GRADE 36
- CAST-IN-PLACE CONCRETE**
FOUNDATION.....4 KSI NORMAL WT.
SLAB-ON-GRADE.....4 KSI NORMAL WT.
FORMED SLAB.....4 KSI NORMAL WT.
COLUMNS AND BEAMS.....4 KSI NORMAL WT.
- REINFORCEMENT:**
DEFORMED BARS.....ASTM A615, GRADE 60
WELDED WIRE FABRIC.....ASTM 185
WELDED REINFORCEMENT.....ASTM A706
- WELDING ELECTRODES:**
E7018 LOW HYDROGEN-STEEL.....E7018
E83556 ALLOY - ALUMINUM.....ASTM A535 OR A490 (U.O.N.)
- BOLTING MATERIALS:**
.....ASTM A325 OR A490 (U.O.N.)
- STRUCTURAL ALUMINUMS:**
6061-T6 ALLOY

GENERAL:

- THE DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTIALLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS, OR TO SERVE AS SHOP DRAWINGS OR PORTIONS THEREOF.
- ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR AND ALL THE SUBCONTRACTORS SHALL VERIFY ALL GRADES, LINES, LEVELS, DIMENSIONS AND COORDINATE EXISTING CONDITIONS AT THE JOB SITE WITH THE PLANS AND SPECIFICATIONS. THEY SHALL REPORT ANY INCONSISTENCIES OR ERRORS IN THE ABOVE TO THE ARCHITECT/ENGINEER BEFORE COMMENCING WORK. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL LAY OUT THEIR WORK FROM ESTABLISHED REFERENCE POINTS AND BE RESPONSIBLE FOR ALL LINES, ELEVATIONS AND MEASUREMENTS IN CONNECTION WITH THEIR WORK.
- IF ANY ERRORS OR OMISSIONS APPEAR IN THE DRAWINGS, GENERAL NOTES OR OTHER DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF SUCH OMISSION OR ERROR PRIOR TO PROCEEDING WITH ANY WORK WHICH APPEARS IN QUESTION. IN THE EVENT OF THE CONTRACTOR'S FAILING TO GIVE SUCH AN ADVANCED NOTICE, HE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERROR OR OMISSIONS AND THE COST OF RECTIFYING THE SAME.
- THE CONTRACTOR SHALL USE THE STRUCTURAL DRAWINGS AND SPECIFICATIONS TOGETHER WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND OTHER TRADE DRAWINGS AND SHOP DRAWINGS, TO LOCATE DEPRESSIONED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, BOLT SETTING, SLEEVE, DIMENSIONS, ETC. NOTIFY ARCHITECT/ENGINEER, IN WRITING, OF ANY POTENTIAL CONFLICTS BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWING TO OBTAIN DIMENSIONAL INFORMATION.
- DO NOT CUT OR ALTER ANY EXISTING STRUCTURAL MEMBERS WITHOUT WRITTEN AUTHORIZATION OF THE ENGINEER.
- THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTS. SEE CONSTRUCTION DOCUMENTS.
- AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONDITIONS OF THE JOBSITE INCLUDING SAFETY OF PERSONS AND PROPERTY. THE ARCHITECT'S AND ENGINEER'S PRESENCE OR REVIEW OF WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S MEANS OR METHOD OF CONSTRUCTION.
- SHORING, BRACING AND PROTECTION OF EXISTING AND ADJACENT STRUCTURES DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. PROTECT AND MAINTAIN THE INTEGRITY OF ADJACENT STREET, BUILDING AND STRUCTURES.
- ALL EXISTING DIMENSION AND LOCATIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWING SHALL BE VERIFIED BY FIELD MEASUREMENTS, ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
- DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE KNOWLEDGE OF EXISTING CONDITIONS. PRIOR TO PREPARATION OF SHOP DRAWINGS, CONTRACTOR SHALL VERIFY AND/OR DETERMINE SIZE, LOCATION, CONFIGURATION, ETC. OF EXISTING STRUCTURE EVERY PLACE WHERE NEW WORK IS ABOUT, ATTACH, CLEAR, ETC. NOTIFY ENGINEER IN WRITING OF ANY AND ALL CONDITION WHICH DIFFER FROM THOSE SHOWN ON DRAWINGS.
- REUSE OF SALVAGE MATERIALS IS NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER IN WRITING.

FOUNDATIONS:

- BASED ON VISUAL INSPECTION BY THE ENGINEER OF RECORD AT THE PROJECT SITE, THE SOIL CONSIST OF UNDISTURBED LIME/ROCK BASE MIXED WITH SAND OR SAND ROCK WITH A MAXIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF AS PER 2020 FBC. AT THE TIME OF EXCAVATION FOR FOUNDATIONS THIS ENGINEER SHALL SUBMIT TO THE BUILDING OFFICIAL A SIGNED AND SEALED LETTER ATTESTING THAT THE SITE HAS BEEN OBSERVED AND THE SOIL CONDITIONS ARE SIMILAR TO THOSE UPON WHICH THE DESIGN IS BASED.
- FOOTING WERE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF. PRIOR INSTALLATION OF ANY FOOTING FOUNDATION SYSTEM FOR THE NEW BUILDING, STRUCTURES OR ADDITIONS, THE BUILDING OFFICIAL SHALL BE PROVIDED WITH A STATEMENT OF ALLOWABLE BEARING CAPACITY FROM THE ENGINEER OF RECORD. SAID STATEMENT SHALL CLEARLY IDENTIFY THE ALLOWABLE IN-PLACE BEARING CAPACITY OF THE BUILDING PAD FOR THE NEW BUILDING OR ADDITION AND VERIFY THE EXISTING SOIL CONDITIONS. THE CERTIFIED IN-PLACE BEARING CAPACITY SHALL HAVE BEEN DETERMINED BY WAY OF RECOGNIZED TEST OR RATIONAL ANALYSIS.
- THE MAXIMUM SIZE OF ROCK WITHIN 12 INCHES BELOW THE FLOOR SLAB IN COMPACTED FILL SHALL BE 3 INCHES IN DIAMETER. WHERE FILL MATERIAL INCLUDES ROCK, LARGE ROCKS SHALL NOT BE ALLOWABLE TO NEST AND ALL VOIDS SHALL BE CAREFULLY FILLED WITH SMALL STONES OR SAND, AND PROPERLY COMPACTED.
- WHEN FOUNDATION WALL ARE TO BE POURED SEPARATELY FROM THE FOOTING, THEY SHALL BE KEYS AND DOWELED TO THE FOOTING WITH NO LESS THAN #4 DOWELS, 20 DIAMETERS IN LENGTH ABOVE AND BELOW THE JOINT, SPACED NOT MORE THAN 4 FEET APART. WHERE FOOTING DEPTH DOES NOT ALLOW STRAIGHT DOWELS, STANDARD HOOKS WILL BE ALLOWABLE. SLAB SUBGRADE SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY, DETERMINED IN ACCORDANCE WITH ASTM D-1557.

CONCRETE AND REINFORCING:

- CONCRETE DESIGN AND REINFORCEMENT IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (A.C.I. 318-05/318R-05) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (A.C.I. 318R-94).
- ALL CONCRETE WORK IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING" (A.C.I. 301 - LATEST EDITION). PRODUCTION OF CONCRETE, DELIVERY, PLACING AND CURING TO BE IN ACCORDANCE WITH "HOT WEATHER CONCRETING" (A.C.I. 305R - LATEST EDITION).
- ALL CONCRETE TO BE REGULAR WEIGHT WITH A COMPRESSIVE STRENGTH AT 28 DAYS OF F'c=4,000 PSI. FOUNDATION F'c=4,000 PSI SLUMP 3" MIN. TO 5" MAX. SUBMIT DESIGN MIX FOR REVIEW.
- ALL REINFORCING TO BE NEW BILLET STEEL CONFORMING AS PER ASTM A-615 GRADE 60. FABRICATION IN ACCORDANCE WITH C.R.S.I. MANUAL OF STANDARD PRACTICE AND PLACED IN ACCORDANCE WITH A.C.I. 315 AND C.R.S.I. MANUAL OF STANDARD PRACTICE.
- CONCRETE COVER UNLESS OTHERWISE DETAILED ON DRAWINGS:

FOUNDATIONS:		BEAMS:	
BOTTOM.....	3"	BOTTOM.....	½"
TOP.....	2"	TOP.....	½"
SIDES.....	2"	SIDES.....	½"
SLABS ON GRADE:		INTERIOR STRUCT. SLAB:	
BOTTOM.....	2"	BOTTOM.....	¾"
TOP.....	1"	TOP.....	¾"
SIDES.....	1"	SIDES.....	1"
COLUMNS/WALLS:		EXTERIOR STRUCT. SLAB:	
BOTTOM.....	½"	BOTTOM.....	¾"
SIDES.....	½"	TOP.....	¾"
		SIDES.....	1"

- ALL REINFORCEMENT SHALL BE SECURELY HELD IN POSITION WHILE PLACING CONCRETE. IF NECESSARY ADDITION BARS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT.
- THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES, BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AS WELL AS STRUCTURAL DRAWINGS FOR THE LOCATION, NUMBER AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWING ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED.
- CONCRETE DESIGN MIXED SHALL BE PREPARED ACCORDING WITH THE ACI-318 ARTICLE 5.3 OR 5.4 AND SUBMITTED FOR REVIEW AT LEAST 7 DAYS PRIOR TO THE START OF CONCRETE WORK.
- ALL SLEEVES AND PENETRATION SHALL BE PROVIDED BY THE SUB-CONTRACTOR REQUIRING THE OPENING.
- ALL SLABS SHALL BE FINISHED BY ACI-301 UNLESS OTHERWISE NOTED IN ARCHITECTURAL PLANS.

MASONRY WALLS:

- ALL REINFORCED MASONRY WALLS SHALL BE PROVIDED WITH #9 DUR-O-WALL LADDER TYPE HORIZONTAL REINFORCEMENT AT 1'-4" VERTICALLY LAPPED 72" AND EXTENDED AT "T" AND "L" INTERSECTIONS. PROVIDE "DOVE-TAIL" ANCHORS AT 16" O.C. VERTICALLY FOR ALL MASONRY PLACED ADJACENT TO ALREADY IN PLACE COLUMNS.
- CONCRETE MASONRY UNITS: ASTM#90, GRADE B-1, MODULAR, MINIMUM NET COMPRESSIVE STRENGTH AT 28 DAYS = 1500 PSI.
- MORTAR: ASTM C270, TYPE S. MORTAR ALL FACE SHELLS, AND CROSS SHELLS AROUND ALL GROUT FILLED CELLS WITH A MINIMUM STRENGTH 2000 PSI (USE PORTLAND TYPE CEMENT).
- REINFORCING LADDER TYPE: 9 GAGE LONGITUDINAL WIRE, 9 GAGE CROSS WIRE. "DUR-O-WALL" OR EQUAL AT 16" C/C.
- GROUT: ASTM C476. COARSE GROUT. SLUM 8" MINIMUM PLUS/MINUS 11" MAXIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 3000 PSI. SUBMIT DESIGN MIX FOR REVIEW.
- STRUCTURAL CONCRETE MASONRY SHALL HAVE A COMPRESSIVE STRENGTH AT 28 DAYS = 3000 PSI. SUBMIT DESIGN MIX FOR REVIEW.
- ANY MASONRY OPENINGS BETWEEN 3 AND 8 FT. IN WIDTH SHALL HAVE VERTICAL BARS IN CONCRETE FILLED CELLS ON EACH SIDE OF OPENING AS INDICATED IN THE FOUNDATION PLAN (AND ANY OTHER FLOOR IF APPLICABLE). THESE REBARS SHALL BE HOOKED AT THE FOUNDATION AND AT THE BEAM AND LAPPED 48 BAR DIAMETER MINIMUM.
- PLACE ALL MASONRY UNITS IN RUNNING BOND.
- PROVIDE KNOCK-OUTS AT BASE OF ALL CELLS CONTAINING REINFORCING.
- MAXIMUM POUR LIFT = 4'-0"
- INTERSECTING WALLS:
BONDED AT LOCATIONS WHERE THEY MEET OR INTERSECT BY THE FOLLOWING METHOD: FIFTY PERCENT OF THE UNITS AT THE INTERSECTION SHALL BE LAID IN AN OVERLAPPING MASONRY BONDING PATTERN, WITH ALTERNATE UNITS HAVING A BEARING OF NOT LESS THAN 3 INCHES ON THE UNIT BELOW.
- VERTICAL REINFORCEMENT SHALL BE SPLICED 48 BAR DIAMETER MINIMUM.
- PROVIDE VERTICAL REINFORCEMENT AS INDICATED ON FOUNDATION PLAN AT EACH SIDE OF WALL OPENING AND AT INTERSECTION WALLS.
- SPECIAL INSPECTION IS REQUIRED.
- AT INTERSECTION WITH THE COLUMNS, MASONRY WALLS SHALL BE EXTENDED 8" AT EVERY OTHER BLOCK SO THAT THEY OVERLAP WITH THE COLUMN.

TERMITE PROTECTION:

- CONTRACTOR TO PROVIDE A CERTIFICATE FROM A LICENSED PEST CONTROL COMPANY STATING:

"THE BUILDING ADDITION HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

INSPECTION AND TESTING:

- ALL WORK ON THIS CONTRACT SHALL BE SUBJECT TO INSPECTION AND TESTING, THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PERFORM THE FOLLOWING INSPECTION AND TESTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE PRIOR NOTICE FOR COMPLETION OF SUCH.
- CONCRETE:
 - THE FOLLOWING ITEMS SHALL BE INSPECTED: ALL REINFORCING STEEL, AND CONCRETE PLACEMENT.
 - THE FOLLOWING TEST SHALL BE MADE PER BUILDING CODE AND ACI REQUIREMENTS, SLUMP, COMPRESSION STRENGTH (CYLINDERS), TEMPERATURE, AIR ENTRAINMENT WHEN REQUESTED BY ENGINEER.
- STEEL:
 - ALL FIELD WELDING SHALL BE VISUALLY INSPECTED FIELD WELDS SHALL BE TESTED PER AWS D1.1 AS FOLLOWS: ALL PENETRATION WELD SHALL BE ULTRASONICALLY TESTED, 50 PERCENT OF FILLED WELDS SHALL BE TESTED BY DYE PENETRANT OR MAGNETIC PARTICLE.
 - INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE INSPECTED.
- MASONRY WALLS:
 - SPECIAL INSPECTION IS REQUIRED.

MISCELLANEOUS:

- PROVIDE ADEQUATE BARRICADES TO PREVENT THE ENTRY OF PEDESTRIANS INTO WORK AREA.

DEMOLITION:

- CONTRACTOR SHALL REPAIR ALL DAMAGE TO STREET, SIDEWALK, UTILITY LINES OR ANY OTHER PUBLIC OR PRIVATE PROPERTIES RESULTING FOR THE EXECUTION OF THE WORK AT NO COST TO THE OWNER OR ENGINEER.
- THE USE OF EXPLOSIVES IS NOT PERMITTED.
- CEASE OPERATIONS AND NOTIFY OWNER AND ENGINEER IMMEDIATELY IF SAFETY OR INTEGRITY OF STRUCTURE APPEARS TO BE ENDANGERED. PROPERLY BRACE AND SUPPORT STRUCTURE BEFORE RESUMING OPERATIONS.
- NOTIFY OWNER AND ENGINEER IMMEDIATELY IF ANY PORTION OF EXISTING STRUCTURE WHICH IS NOT TO BE DEMOLISHED IS DAMAGED. CONTRACTOR SHALL PAY FOR ALL REPAIR COST, INCLUDING DESIGN AND INSPECTION EXPENSES.
- DO NOT CUT OR ALTER ANY STRUCTURAL MEMBERS WITHOUT WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD UNLESS INDICATED ON THE STRUCTURAL DRAWINGS.

DESIGN LOADS:

WIND LOADS:

- DESIGN PRESSURE VARIES WITH DIRECTION OF APPLICATION DUE TO DIFFERENT SHAPE FACTORS, NUMBERS SHOWN REPRESENT MAXIMUM GROSS VALUES.
 - WIND SPEED 180 MPH
 - BUILDING CATEGORY V
 - TOPOGRAPHIC FACTOR KZT = 1.0
 - EXPOSURE "D"
 - DIRECTIONALITY FACTOR Kd = 0.85
- WIND DESIGN CRITERIA (ASCE 7-16):
 - WIND SPEED 180 MPH
 - BUILDING CATEGORY V
 - TOPOGRAPHIC FACTOR KZT = 1.0
 - EXPOSURE "D"
 - DIRECTIONALITY FACTOR Kd = 0.85
- LIVE/DEAD LOADS:

	DEAD LOADS:	LIVE LOADS:
GROUND FLOOR.....	10 PSF	40 PSF
SECOND FLOOR.....	20 PSF	40 PSF
ROOF.....	25 PSF	30 PSF
STAIRS.....	20 PSF	100 PSF
TERRACE.....	20 PSF	100 PSF
BALCONY.....	20 PSF	100 PSF

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LAST DATE REV.:
03-14-2023

STRUCTURAL
GENERAL NOTES

SHEET: 14 OF 26

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