

DIVISION 1. GENERAL

- A. NO FIELD SUPERVISION PROVIDED UNDER THIS SEAL. IT IS UNDERSTOOD THAT THE AUTHORITY HAVING JURISDICTION (AHJ) WILL INSPECT THE WORK. CONTACT CYPRESS ENGINEERING FOR CONSTRUCTION ADMINISTRATION.
B. PLANS ARE TO BE USED FOR THE SPECIFIED SITE AND FOR A ONE TIME USE ONLY. REPRODUCTION OF THESE PLANS WITHOUT THE EXPRESS WRITTEN CONSENT OF CYPRESS IS STRICTLY PROHIBITED.
C. ALL WORK/MATERIALS SHALL CONFORM TO LOCAL, STATE AND FEDERAL CODES. THE STRICTER PROVISIONS OF CODES, SPECIFICATIONS AND THESE NOTES AND NOTES ON INCLUDED DRAWINGS SHALL GOVERN.
D. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER TRADES.
E. DO NOT SCALE DRAWINGS. USE PRINTED DIMENSIONS OR REQUEST INFORMATION FROM ENGINEER.
F. COMMUNICATION FROM CONTRACTOR TO ENGINEER SHALL BE IN WRITING.
G. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF MISSING INFORMATION OR QUESTIONS REGARDING DRAWINGS BY CYPRESS ENGINEERING. CONTRACTOR SHALL SUBMIT PROPOSED DEVIATIONS FROM PROJECT DOCUMENTS TO ENGINEER IN WRITING.
H. CODE COMPLIANCE
1. INTERNATIONAL BUILDING CODE (IBC) 2012
2. INTERNATIONAL RESIDENTIAL CODE (IRC) 2012
I. LOADS (PER ASCE 7)
1. DEAD LOAD: SELF WEIGHT OF ALL MATERIALS OF CONSTRUCTION INCORPORATED INTO THE BUILDING (BUILDINGS ENGINEERED BY OTHERS SHALL INCLUDE A MINIMUM COLLATERAL LOAD OF 5 PSF PER CEILING).
2. LIVE LOAD: PER TABLE 4-1 OF ASCE 7
3. FLOOD LOADS: PER ASCE 7
4. WIND LOADS:
a. BASIC WIND SPEED, V: SEE STRUCTURAL PLAN
b. ENCLOSED STRUCTURE, INTERIOR PRESSURE BASED ON GcPi = +/- 0.18
c. COMPONENTS AND CLADDING (DOORS, WINDOWS, VENEERS, ETC.) SHALL MEET THE PRESSURE REQUIREMENTS FOR THE WIND SPEED AND EXPOSURE CATEGORY.
5. SNOW LOADS: GROUND SNOW LOAD PER FIGURE 7-1 OF ASCE 7
6. RAIN LOADS: PER CHAPTER 8 OF ASCE 7
7. ICE LOADS: PER FIGURE 10-2 OF ASCE 7
8. SEISMIC LOADS: PER CHAPTERS 11 THROUGH 22 OF ASCE 7
9. FLOOD ZONE: SEE PROJECT SURVEY

DIVISION 2. SITE WORK

- A. SOIL
1. FILL, FOUNDATION BEAM DEPTHS AND SITE PREPARATION SHALL BE IN ACCORDANCE WITH PROJECT GEOTECHNICAL (SOIL) REPORT AND PER THESE NOTES.
2. THE FOUNDATION SHOWN HAS BEEN DESIGNED FOR A MINIMUM ALLOWABLE SOIL CAPACITY AS SHOWN ON PLAN ASSUMING COMPRESSIBLE SOIL (NON-EXPANSIVE SOIL AS DEFINED BY THE BUILDING CODE) WITH A MAXIMUM EXPECTED GROUND SETTLEMENT OF LESS THAN 1 INCH. THE OWNER IS REQUIRED TO OBTAIN A SOIL REPORT PRIOR TO CONSTRUCTION TO VERIFY THESE DESIGN PARAMETERS. THE OWNER SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF SOIL CONDITIONS DO NOT MEET THE ABOVE STATED DESIGN ASSUMPTIONS. FAILURE TO PROPERLY TEST THE SOIL WILL VOID THE ENGINEER'S DESIGN AND THE ENGINEER SHALL BE HELD HARMLESS.
3. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, ALL VEGETATION, LOOSE MATERIAL AND ORGANIC MATERIAL SHALL BE STRIPPED FROM THE SITE AT FOUNDATION LOCATIONS. IF MORE THAN 18 INCHES OF LOOSE MATERIAL IS REMOVED CONTACT ENGINEER FOR FURTHER RECOMMENDATIONS. PROOF ROLL ALL AREAS PRIOR TO FILL PLACEMENT. REMOVE ANY SOFT MATERIALS THAT "PUMP" UNDER PROOF ROLLING OPERATIONS AND REPLACE WITH STRUCTURAL FILL.
4. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, STRUCTURAL FILL SHALL HAVE A MAXIMUM LIQUID LIMIT OF 40 AND A MAXIMUM PLASTICITY INDEX (PI) < 20 (THE PI IS THE DIFFERENCE OF THE LIQUID LIMIT AND THE PLASTIC LIMIT OF THE SOIL).
5. UNLESS OTHERWISE STATED IN THE PROJECT GEOTECHNICAL REPORT, CONTRACTOR SHALL PLACE FILL IN 6 TO 8 INCH LIFTS AT MOISTURE CONTENTS WITHIN 3% OF OPTIMUM AND COMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D698) AND SHALL EXTEND A MINIMUM OF 5 FEET BEYOND THE LIMITS OF THE BUILDING (TEST EACH LIFT, MINIMUM OF 1 TEST PER 2,000 S.F. OF AREA PER LIFT). SCARIFY BETWEEN FILL LIFTS FOR BONDING.
6. SOIL COMPACTION IS THE RESPONSIBILITY OF CONTRACTOR/OWNER. FAILURE TO PROPERLY TEST OR COMPACT SOIL MAY CAUSE STRUCTURAL CRACKING IF SETTLEMENT OCCURS.
7. THE MAXIMUM FILL HEIGHT ALLOWED IS AS SHOWN ON THE FOUNDATION PLAN. PLACEMENT OF FILL IN EXCESS OF THIS AMOUNT WILL VOID THE ENGINEER'S DESIGN AND HOLD THE ENGINEER HARMLESS.
8. CONTRACTOR SHALL GRADE SITE FOR PROPER DRAINAGE.
9. OWNER SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM THE FOUNDATION. PONDING WATER AT FOUNDATION EDGES WILL CAUSE SOILS TO GAIN MOISTURE WHICH CAN RESULT IN A LOSS OF BEARING CAPACITY, EXCESSIVE SETTLEMENT AND/OR SWELLING OF THE SOIL; ALL OF WHICH CAUSE DIFFERENTIAL SETTLEMENT.
10. CONTRACTOR SHALL PROVIDE AND OWNER SHALL MAINTAIN PROTECTION FOR FOUNDATION FROM THE EFFECTS OF MOISTURE LOSS DUE TO TREES ADJACENT TO THE FOUNDATION. MOISTURE LOSS IN SOIL CAN RESULT IN SOIL SHRINKAGE WHICH CAN CAUSE DIFFERENTIAL SETTLEMENT.
11. CONTRACTOR SHALL PLAN HIS WORK IN ORDER TO PLACE CONCRETE AS SOON AS POSSIBLE AFTER SOIL HAS BEEN PREPARED FOR CONSTRUCTION IN ORDER TO MINIMIZE DAMAGE OF THE SOIL BY EXPOSURE TO THE ENVIRONMENT. DO NOT PLACE CONCRETE ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL, PONDING WATER OR DESICCATED SOILS (SOILS THAT HAVE EXCESSIVELY DRIED).
12. SEE FOUNDATION DRAWINGS FOR ADDITIONAL NOTES.
13. SEE FOUNDATION PLAN FOR MAXIMUM FILL ALLOWED (LOCAL AUTHORITY HAVING JURISDICTION MAY HAVE STRICTER FILL REQUIREMENTS).
14. LOUISIANA ONE CALL (800) 272-3020
15. IT IS RECOMMENDED THAT A VAPOR BARRIER BE PLACED ON GRADE BELOW RAISED FLOORS.
B. PILES (IF SHOWN ON PLAN)
1. PILES SHALL BE OF THE SIZE STATED ON THE FOUNDATION PLAN, DRIVEN WITH AN IMPACT HAMMER, NOT VIBRATED.
2. PILES SHALL HAVE TIP EMBEDMENT INTO NATURAL SOIL OR DRIVEN TO REFUSAL. REFUSAL SHALL BE AS SPECIFIED IN GEOTECHNICAL REPORT OR BUILDING CODE. IF REFUSAL IS NOT SPECIFIED IN GEOTECHNICAL REPORT OR BY BUILDING CODE, REFUSAL FOR SMALL TIMBER PILES SHALL BE 12 BLOWS PER FOOT FOR TWO CONSECUTIVE FEET USING A VULCAN NO.2 HAMMER OR A 2,000 TO 3,000 LB DROP HAMMER FALLING 5 FT; REFUSAL FOR CLASS B PILES SHALL BE 25 BLOWS PER FOOT FOR TWO CONSECUTIVE FEET USING A VULCAN NO.1 HAMMER OR EQUIVALENT.
3. TIMBER PILES SHALL BE PER ASTM D25.
4. TIMBER PILES SHALL MEET AWPA STANDARDS UC4C (FORMERLY C3) FOR PRESERVATIVE RETENTION.
5. ALL FILL SHALL BE PLACED AND COMPACTED PRIOR TO PILE INSTALLATION.

ASCE 7 LIVE LOADS

Table with 3 columns: OCCUPANCY OR USE, UNIFORM PSF, CONCENTRATED LBS. Rows include ASSEMBLY AREAS, MOVABLE SEATS, BALCONIES AND DECKS, DINING ROOMS AND RESTAURANTS, GARAGES, PASSENGER, MANUFACTURING, LIGHT HEAVY, OFFICE BUILDINGS, LOBBIES & 1ST FLOOR CORRIDORS, OFFICES, CORRIDORS ABOVE 1ST FLOOR, RECREATIONAL USES, GYMNASIUMS, RESIDENTIAL, UNINHABITABLE ATTICS W/O STORAGE, UNINHABITABLE ATTICS W/ STORAGE, HABITABLE ATTICS & SLEEPING AREA, ALL OTHER AREAS EXCEPT STAIRS, ROOFS, ORDINARY FLAT, PITCHED AND CURV, SCHOOLS, CLASSROOMS, CORRIDORS ABOVE 1ST FLOOR, 1ST FLOOR CORRIDORS, STAIRS & EXITWAYS, 1&2 FAMILY DWELLINGS ONLY, STORAGE WAREHOUSES, LIGHT HEAVY, STORES, RETAIL, 1ST FLOOR, RETAIL, UPPER FLOORS, WHOLESALE, ALL FLOORS.

DIVISION 3. CONCRETE

- A. ALL CONCRETE WORK (INCLUDING MIX DESIGN, FORMWORK & MATERIALS) SHALL COMPLY WITH ACI 301
B. STRUCTURAL CONCRETE: NORMAL WEIGHT, MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45 U.N.O. (MAXIMUM WATER/CEMENT RATIO SHALL BE 0.40 FOR CONCRETE IN MARINE ENVIRONMENTS).
C. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
D. CALCIUM CHLORIDE SHALL NOT BE USED FOR PRESTRESSED/POST-TENSIONED CONCRETE. ALL OTHER CONCRETE SHALL MEET THE REQUIREMENTS OF ACI301 FOR WATER-SOLUBLE CHLORIDE-ION LIMITS.
E. UNLESS SPECIFICALLY NOTED IN THE STRUCTURAL DRAWINGS, IT IS UNDERSTOOD THAT CONCRETE IS NOT EXPOSED TO SULFATE.
F. TOTAL AIR CONTENT SHALL BE 5%.
G. FINISHES SHALL BE PER ACI301, UNLESS NOTED OTHERWISE.
H. SLAB REINFORCEMENT SHALL BE SUPPORTED AT 4 FT ON CENTER MAX. IN BOTH DIRECTIONS (THE USE OF CONCRETE BRICKS OF AN EQUAL OR GREATER COMPRESSIVE STRENGTH AS REQUIRED FOR THE SLAB IS ACCEPTABLE).
I. SEE ATTACHED FOUNDATION NOTES AND DETAILS FOR ADDITIONAL INFORMATION.
J. TOLERANCES FOR CONCRETE CONSTRUCTION SHALL BE PER ACI117 EXCEPT THAT SLAB ON GROUND THICKNESS SHALL BE THE MINIMUM SPECIFIED ON THE DRAWINGS AT ANY AREAS.
K. CONTRACTOR SHALL THOROUGHLY CONSOLIDATE CONCRETE (ESPECIALLY AT ANCHORAGES AND DOWELS).
L. CONTRACTOR SHALL CURE CONCRETE IN ACCORDANCE WITH ACI-308 IMMEDIATELY AFTER FINISHING TO MINIMIZE THE APPEARANCE OF SHRINKAGE CRACKS.
M. ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI-301.
N. WHERE CONSTRUCTION JOINTS ARE REQUIRED BUT ARE NOT INDICATED ON THE DRAWINGS, THEY SHALL BE LOCATED BY THE CONTRACTOR, SUBJECT TO REVIEW BY THE OWNER'S ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE KEPT, WITH REINFORCING CONTINUOUS THROUGH THE JOINT.
O. ANCHOR BOLTS SHALL BE ASTM A307 HOT DIP GALVANIZED MATERIAL & SPACED AT 48" O.C. MAX., UNLESS NOTED OTHERWISE.
P. REBAR & WWR REINFORCEMENT
1. ALL REBAR SHALL CONFORM TO ASTM A615, GRADE 60.
2. MINIMUM CLEAR COVER FOR REBAR SHALL BE AS FOLLOWS (PER ACI 318.7):
CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: 2" (1 1/2" FOR #5, W#1 WIRE, D#1 WIRE OR SMALLER)
SLABS, WALLS OR JOISTS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 3/4" (1 1/2" FOR #14 OR #18 BARS)
BEAMS OR COLUMNS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 1 1/2"
3. PROVIDE CORNER BARS AT ALL BEAM CORNERS AND "T" INTERSECTIONS TO MATCH HORIZONTAL REBAR REINFORCEMENT. MINIMUM LAP LENGTH OF EACH LEG 48 BAR DIAMETERS (SEE PROVIDED DETAIL).
4. ALL WELDED WIRE REINFORCEMENT (WWR & WWR) SHALL CONFORM TO ASTM A185 (FLAT SHEETS UNLESS SPECIFICALLY NOTED OTHERWISE).
WWR #x6 W4.0xW4.0 INDICATES 0.225" DIAMETER WIRE (4 GAGE)
WWR #x6 W2.9xW2.9 INDICATES 0.192" DIAMETER WIRE (6 GAGE)
WWR #x6 W1.4xW1.4 INDICATES 0.135" DIAMETER WIRE (10 GAGE)
5. SLAB REINFORCEMENT SHALL BE SUPPORTED AT 4 FT ON CENTER MAX. IN BOTH DIRECTIONS (THE USE OF CONCRETE BRICKS OF AN EQUAL OR GREATER COMPRESSIVE STRENGTH AS REQUIRED FOR THE SLAB IS ACCEPTABLE).
6. WWR STIRRUPS ARE AN ACCEPTABLE SUBSTITUTION TO #3 STIRRUPS FOR NON-PILE SUPPORTED FOUNDATIONS.
7. PROVIDE CORNER BARS AT ALL BEAM CORNERS AND "T" INTERSECTIONS TO MATCH HORIZONTAL REBAR REINFORCEMENT. MINIMUM LAP LENGTH OF EACH LEG 48 BAR DIAMETERS (SEE PROVIDED DETAIL).
Q. POST-TENSION REINFORCEMENT
1. WELDED WIRE REINFORCEMENT IS RECOMMENDED IN AREAS OF EXPOSED CONCRETE TO MINIMIZE THE APPEARANCE OF SHRINKAGE CRACKS.
2. ALL POST-TENSION TENDONS SHALL CONFORM TO THE REQUIREMENTS OF THE POST-TENSION INSTITUTES'S (PTI) SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS.
3. ALL POST-TENSION TENDONS SHALL BE FABRICATED IN A PLANT CURRENTLY CERTIFIED BY PTI IN ACCORDANCE WITH PTI'S MANUAL FOR CERTIFICATION OF PLANTS PRODUCING UNBONDED SINGLE-STRAND TENDONS.
4. ALL TENDONS SHALL BE SEVEN WIRE STRESS RELIEVED STRAND, CONFORMING TO ASTM A416 LOW-RELAXATION STRAND. THE MINIMUM ULTIMATE TENSILE STRENGTH SHALL BE 270,000 PSI. STRANDS SHALL BE COATED WITH A PERMANENT RUST PREVENTATIVE LUBRICANT AND A PLASTIC SHEATH. ALL TENDONS SHALL BE 1/2" DIAMETER, UNLESS NOTED OTHERWISE. TENDONS SHALL BE INITIALLY STRESSED TO 33 KIPS AND SHALL BE ANCHORED AT 28.9 KIPS.
5. FINAL TENDON STRESSING SHALL NOT BE PERFORMED UNTIL THE CONCRETE ATTAINS A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI, TYPICALLY 6 DAYS AFTER CONCRETE PLACEMENT.
6. TENDONS SHALL BE STRESSED AS SOON AS POSSIBLE TO MINIMIZE SHRINKAGE CRACKS, AND IN NO CASE LATER THAN 14 DAYS OF CONCRETE PLACEMENT.
7. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED TO PREVENT BOTH HORIZONTAL AND VERTICAL MOVEMENT/DISPLACEMENT DURING CONCRETE PLACEMENT. SUPPORTS SHALL NOT PENETRATE THE VAPOR BARRIER (VAPOR RETARDER). SUPPORTS SHALL NOT EXCEED 4"-6" ON CENTER.
8. SEE SECTIONS AND DETAILS FOR ANCHORAGE LOCATIONS. ANCHORS SHALL HAVE 4" MIN. CONCRETE COVERAGE.
9. TOLERANCE FOR REINFORCEMENT PLACEMENT SHALL BE AS SPECIFIED IN ACI-301 AND PTI'S DESIGN OF SLABS ON GROUND.
10. ALL DAMAGED SHEATHING SHALL BE REPAIRED WITH THE EXCEPTION THAT UP TO 12 INCHES OF SHEATHING CAN BE REMOVED AT ANCHORAGES. DAMAGED SHEATHING SHALL BE REPAIRED WITH PTI APPROVED MATERIALS.
11. ALL JACKS USED TO STRESS TENDONS SHALL BE ACCOMPANIED BY CALIBRATION SHEETS CORRELATING HYDRAULIC PRESSURE TO JACKING FORCE. CALIBRATION SHEETS SHALL INDICATE JACK ID, PUMP ID AND GAGE ID.
12. THE POST-TENSION CONTRACTOR IS RESPONSIBLE FOR OBTAINING PROPER ELONGATIONS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF JOBSITE CONDITIONS WILL PREVENT CONTRACTOR FROM OBTAINING PROPER ELONGATIONS. ELONGATIONS SHALL BE CALCULATED PER PTI TECHNICAL NOTE #10.
13. TENDONS IN EXCESS OF 110 FEET IN LENGTH SHOULD BE STRESSED FROM BOTH ENDS TO OBTAIN PROPER ELONGATIONS.
14. POST-TENSION CONTRACTOR MAY REVERSE LIVE ENDS OF TENDONS SHOWN ON THE PLAN ONLY WITH WRITTEN APPROVAL FROM THE GENERAL CONTRACTOR/OWNER TO THE ENGINEER.
15. TENDONS SHALL BE FILLED FLUSH TO FACE OF CONCRETE WITH A NON-SHRINK GROUT. THIS WORK SHALL BE COMPLETED AS SOON AS PRACTICAL AFTER STRESSING BY THE POST-TENSION CONTRACTOR, BUT NO LATER THAN 7 DAYS AFTER STRESSING IS COMPLETE.
16. POST-TENSION FIELD PERSONNEL SHOULD MAINTAIN A COPY OF PTI "CONSTRUCTION & MAINTENANCE PROCEDURES FOR POST-TENSIONED SLAB-ON-GROUND CONSTRUCTION."
17. POST-TENSION CONTRACTOR SHALL SUBMIT IN WRITING EVIDENCE THAT THE SYSTEM WAS INSTALLED & STRESSED PER PLANS AND SPECIFICATIONS AND THAT INSTALLER HAS CURRENT PTI LEVEL 1 FIELD CERTIFICATION.

DIVISION 4. MASONRY

- A. ALL MASONRY WORK SHALL CONFORM TO BRICK INDUSTRY ASSOCIATION STANDARDS & THE BUILDING CODE.
B. BRICK
1. VERTICAL EXPANSION JOINTS IN BRICK VENEER WALLS ARE RECOMMENDED TO BE SPACED AT 30 FEET MAX. (LACK OF EXPANSION JOINTS MAY RESULT IN CRACKING OF THE BRICK VENEER).
2. TIES SHALL BE SPACED A MAXIMUM OF 16 IN. O.C. VERTICALLY AND 16 IN. O.C. HORIZONTALLY. ALL TIES MUST BE EMBEDDED AT LEAST 1 1/2 IN. INTO THE BRICK VENEER WITH A MINIMUM MORTAR COVER OF 5/8 IN. TO THE OUTSIDE FACE OF THE WALL. THEY MUST BE SECURELY ATTACHED TO THE STUDS THROUGH THE SHEATHING, NOT TO THE SHEATHING ALONE. AROUND THE PERIMETER OF OPENINGS, ADDITIONAL TIES SHOULD BE INSTALLED SPACED AT A MAXIMUM OF 3 FT O.C. WITHIN 12 IN. OF THE OPENING.
3. BRICK UNITS SHALL CONFORM TO ONE OF THE FOLLOWING:
a. ASTM C216 SPECIFICATION FOR FACING BRICK.
b. ASTM C682 SPECIFICATION FOR HOLLOW BRICK.
c. ASTM C1405 SPECIFICATION FOR GLAZED BRICK (SINGLE-FIRED, SOLID UNITS) OR
d. ASTM C126 SPECIFICATION FOR CERAMIC GLAZED STRUCTURAL CLAY FACING TILE, FACING BRICK AND SOLID MASONRY UNITS.
e. ALL BRICK UNITS SHOULD BE OF GRADE SW. THE USE OF SALVAGED BRICK IS NOT RECOMMENDED SINCE SUCH BRICK WILL NOT BOND PROPERLY WITH MORTAR AND MAY BE LESS DURABLE.
4. MORTAR SHALL CONFORM TO ASTM C270 SPECIFICATION FOR MORTAR FOR UNIT MASONRY, TYPE S.
5. WEEPHOLES SHALL BE PROVIDED IN THE OUTSIDE WYTHE OF MASONRY WALLS AT A MAXIMUM SPACING OF 33 INCHES ON CENTER. WEEPHOLES SHALL NOT BE LESS THAN 3/16" IN DIAMETER. WEEPHOLES SHALL BE LOCATED IMMEDIATELY ABOVE FLASHING.
6. LINTELS SHALL HAVE AT LEAST 8" BEARING ON BRICK WALL ON BOTH SIDES OF OPENINGS. LINTEL SIZES (FOR BRICK VENEER) ASTM A36 STEEL:
a. 0 TO 6FT OPENINGS: L5x3 1/2x3/8
b. >6 TO 8FT OPENINGS: L6x3 1/2x3/8
c. >8 TO 10FT OPENINGS: L7x4x1/2
d. >10 TO 12 FT OPENINGS: L8x4x1/2
e. >12 TO 16 FT OPENINGS: L9x4x5/8
C. CONCRETE MASONRY UNITS (CMU)
1. CONCRETE BLOCK SHALL BE PER ASTM C90 (HOLLOW) fm = 1,900 PSI (MIN).
2. MORTAR SHALL CONFORM TO ASTM C270 SPECIFICATION FOR MORTAR FOR UNIT MASONRY, TYPE S (1,800 PSI @ 28 DAYS).
3. FILL ALL CELLULAR SPACES WITH 3,000 PSI 28-DAY COMPRESSIVE STRENGTH CONCRETE, U.N.O.
4. VERTICAL CONTROL JOINTS SHALL BE SPACED AT 20 FEET (MAX.) ON CENTER.
5. MAXIMUM UNSUPPORTED HEIGHT OF PIERS/COLUMNS SHALL BE 10 TIMES THEIR LEAST PLAN DIMENSION.
6. VERTICAL REINFORCEMENT SHALL BE #5'S SPACED AT 48" O.C. UNLESS NOTED OTHERWISE (UNO)
7. BOND BEAMS SHALL BE REINFORCED WITH 2 - #4'S AND BE SPACED AT 48" O.C. VERTICALLY UNO

DIVISION 5. METAL -- STRUCTURAL STEEL

- A. SPECIFICATIONS: DESIGN, FABRICATION, AND ERECTION ARE TO BE GOVERNED BY THE LATEST REVISIONS OF THE FOLLOWING U.N.O.:
1. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (ALLOWABLE STRESS DESIGN 9TH EDITION).
2. AISC CODE OF STANDARD PRACTICE (CONTRACTOR SHALL SUBMIT STEEL SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION).
3. AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS (ALLOWABLE STRESS DESIGN).
4. PROJECT SPECIFICATION "STRUCTURAL STEEL FABRICATION AND ERECTION"
5. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1.
B. MATERIALS:
1. WIDE FLANGE AND WT SHAPES SHALL BE ASTM A992, Fy = 50 KSI, U.N.O.
2. ALL OTHER HOT-ROLLED SHAPES SHALL BE ASTM A36, Fy = 36 KSI, U.N.O.
3. STEEL PIPES SHALL BE ASTM A53, TYPE-S (SEAMLESS) GRADE B, U.N.O.
4. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL BE ASTM A500, GRADE B, U.N.O.
5. PLATES AND BARS SHALL BE ASTM A36, U.N.O.
C. BOLTS
1. ALL BOLTS SHALL BE ASTM A325 HIGH STRENGTH WITH HARDENED WASHERS AND HEAVY HEX NUTS UNLESS NOTED OTHERWISE.
2. ALL BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER U.N.O.
3. ALL BOLTS, NUTS, & WASHERS SHALL BE GALVANIZED, U.N.O.
D. CONNECTIONS:
1. ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED UNLESS NOTED OTHERWISE
2. MINIMUM NUMBER OF BOLTS FOR ALL CONNECTIONS SHALL BE (2) UNLESS NOTED OTHERWISE
3. SPACING OF BOLTS SHALL BE 3" UNLESS NOTED OTHERWISE.
4. EDGE DISTANCE OF BOLTS SHALL BE 1 1/2" UNLESS NOTED OTHERWISE.
5. ALL CLIP ANGLES SHALL BE MINIMUM L3X3X1/4 UNLESS NOTED OTHERWISE.
6. GUSSET PL 3/8 (MIN) THICKNESS REQUIRED U.N.O.
E. WELDS
1. ALL WELDS SHALL BE WITH E70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1. USE HIGHER STRENGTH ELECTRODE IF REQUIRED BY AWS D1.1 [ALL WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS].
2. MINIMUM SIZE OF FILET WELD SHALL BE 3/16" UNLESS NOTED OTHERWISE
3. SEAL WELD AROUND ALL WELDED CONNECTIONS WHERE WELDING IS NOT INDICATED TO PROVIDE WATERTIGHT CONNECTION.
4. FULL STRENGTH FIELD WELDS IN MATERIALS OVER 5/8" THICK AND WELDED FIELD SPLICES OF MAIN MEMBERS SHALL BE SUBJECTED TO NON-DESTRUCTIVE TESTING BY AN INDEPENDENT LABORATORY.
F. COATINGS
1. ALL UNEXPOSED STEEL SHALL BE SHOP PAINTED (IN ACCORDANCE WITH AISC STANDARDS) OR GALVANIZED.
2. ALL STEEL SHALL BE GALVANIZED OR PAINTED PER PROJECT SPECIFICATIONS.
3. AFTER ERECTION CONTRACTOR SHALL "TOUCH UP" WITH PAINT, GALVANIZING COMPOUND OR APPROVED COATING ALL ABRADED AREAS.
G. MISCELLANEOUS
1. METAL ROOFING (IF APPLICABLE) SHALL BE PER OWNER & MEET THE WIND REQUIREMENTS OF THIS DWG & GOVERNING BUILDING CODE.

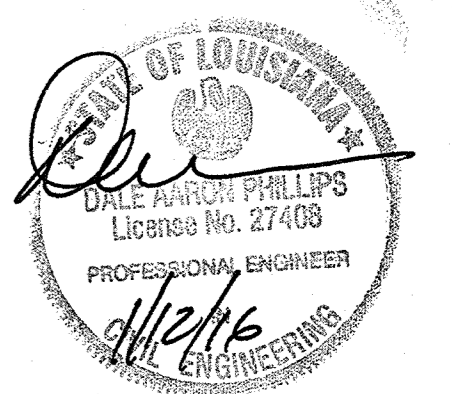
DIVISION 6. WOOD

- A. ALL WOOD FRAMING, FABRICATION AND ERECTION SHALL CONFORM TO THE FOLLOWING:
1. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION BY THE AFPA.
2. PLYWOOD DESIGN SPECIFICATION BY THE APA.
3. PRESSURE TREATED WOOD REQUIREMENTS OF AWPA.
4. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.
B. LUMBER SHALL BE SOUTHERN YELLOW PINE (SYP) #2 OR BETTER, EXCEPT STUDS SHALL BE SPRUCE-PINE STUD GRADE, MIN. 3" STUD COL. EACH END. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL ENGINEERED BEAMS/JOISTS SHOWING ALL REQUIRED CONNECTORS, BLOCKING AND SUPPORT REQUIREMENTS FOR APPROVAL. CONNECT MULTIPLE PLY LAM BEAMS TOGETHER WITH 2 ROWS OF SIMPSON SDS 1/4"x8" WOOD SCREWS ON BOTH OUTSIDE FACES. SPACE SCREWS AT 16 INCHES ON CENTER. STAGGER SCREWS FROM ONE FACE OF BEAM TO THE OTHER FACE OF BEAM. SCREWS SHALL BE 2 INCHES CLEAR FROM TOP AND BOTTOM OF BEAM.
C. WOOD CONNECTIONS SHALL BE GALVANIZED MATERIAL AND IN ACCORDANCE WITH THE FASTENING SCHEDULE OF THE GOVERNING BUILDING CODE.
1. UPLIFT CONNECTORS: CONNECTORS SHALL BE PROVIDED FOR A CONTINUOUS LOAD PATH FROM FOUNDATION TO RAFTER. CONNECTORS ARE IN ADDITION TO BUILDING CODE NAILING REQUIREMENTS.
2. JOIST HANGERS, TIES, SEATS SHALL BE SIMPSON STRONG-TIE (OR APPROVED EQUAL)
3. ALL CONNECTORS SHALL BE INSTALLED WITH THE MAXIMUM NUMBER OF FASTENERS PER THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
4. NAILS: ARE COMMONS UNLESS OTHERWISE NOTED.
5. LAG SCREWS:
a. ALL LAG SCREWS SHALL BE IN ACCORDANCE WITH ANSIB18.2.1.
b. PRE-DRILL 5/16" DIAMETER HOLES IN WOOD MEMBERS FOR 1/2" DIAMETER LAG SCREWS.
c. PRE-DRILLING WOOD MEMBERS IS NOT REQUIRED FOR 3/8" DIAMETER OR SMALLER LAG SCREWS.
D. HEADERS FOR 4'-0" MAX OPENINGS, HEADERS FOR OPENINGS GREATER THAN 4'-0" SHALL BE AS INDICATED ON THE PLANS. FOR 4'-0" MAX OPENINGS, HEADERS FOR EXTERIOR WINDOWS & DOORS SHALL BE 2-2x10 WW 1 JACK STUD EACH END (U.N.O.), HEADERS FOR INTERIOR DOORS SHALL BE 2-2x10 WW 1 JACK STUD EACH END (U.N.O.).
E. STUDS SHALL BE AS FOLLOWS:
1. 2x4 @ 16" O.C., 10'-0" MAX. HEIGHT (BLOCK ALL STUDS AT MID-HEIGHT)
2. 2x6 @ 16" O.C., 13'-9" MAX. HEIGHT (BLOCK ALL STUDS AT 6'-0" MAX.)
3. 2x8 @ 16" O.C., 18'-0" MAX. HEIGHT (BLOCK ALL STUDS AT 6'-0" MAX.)
F. RAFTERS SHALL BE 2x6 (MIN.) SPACED AT 24" O.C. (MAX.) OR AS INDICATED ON THE PLANS. SUPPORT ROOF BRACING ON LOAD BEARING WALLS, ATTIC BEAMS ONLY (SUPPORT ON CEILING BEAMS IF SPECIFICALLY SHOWN ON PLANS). ROOF BRACING SHALL NOT BEAR ON CEILING JOISTS OR BEAMS, UNO. RIDGE BOARDS SHALL HAVE A DEPTH GREATER THAN THE SLOPED CUT DEPTH OF THE RAFTER. CONNECT RAFTERS TO HIPS & VALLEYS WITH 7-16d NAILS. LATERAL SUPPORT SHALL BE PROVIDED FOR RAFTERS LARGER THAN 2x8.
G. CEILING JOISTS SHALL BE AS INDICATED ON THE PLANS (USE 2x6+2x4 STRONGBACK AT ALL CEILING JOIST SPANS OVER 10'-0").
H. FLOOR JOISTS SHALL BE AS INDICATED ON THE PLANS (IT IS RECOMMENDED TO PLACE GLUE BETWEEN FLOOR JOISTS AND HANGERS). PROVIDE SOLID BLOCKING BETWEEN FLOOR JOISTS AT 8 FT O.C. MAX AND AT LOAD BEARING WALLS OR COLUMNS.
I. FLOOR SHEATHING SHALL BE 3/4" (23/32") APA RATED T & G PLYWOOD ON ALL FLOOR JOISTS U.N.O. GLUE & NAIL TO FLOOR JOISTS (IT IS RECOMMENDED THAT T & G JOINTS BE FILLED WITH GLUE DURING INSTALLATION. ALTERNATE SHEATHING WITH ADEQUATE SPAN RATING FOR JOIST SPACING IS ACCEPTABLE).
J. ANCHOR BOLTS SHALL BE ASTM A307 BOLTS WITH A MINIMUM EMBEDMENT OF 7" (SEE PLAN(S) FOR SIZE, SPACING & LOCATIONS). ANCHOR BOLTS SHALL BE WITHIN 12" OF EACH BUILDING CORNER, PLATE SPLICES & DOOR OPENINGS. EACH BOLT SHALL HAVE A 3"x3"x1/4" WASHER. SEE ADDITIONAL NOTES FOR ANCHOR BOLTS SIZE AND SPACING. FASTEN INTERIOR WALLS TO FOUNDATION WITH RAMSET 1516 DRIVE PINS @ 16" O.C. (OR APPROVED EQUAL) [1" CONCRETE EMBEDMENT].
K. SHEAR WALLS: PROVIDE APA SHEATHING, PANELS ON ALL EXTERIOR WALLS. SHEATHING SHALL EXTEND FROM SLAB TO UPPER TOP PLATE (OR BOTTOM OF SILL PLATE TO UPPER TOP PLATE FOR RAISED WOOD FLOORS). PROVIDE SOLID BLOCKING AT ALL PANEL EDGES. SEE STRUCTURAL FRAMING PLANS AND SHEAR WALL DETAIL FOR NAILING & CONNECTOR REQUIREMENTS.
L. ROOF SHEATHING SHALL BE 15/32" (MIN.) EXPOSURE 1, 2/40 APA RATED PANELS (ALTERNATE SHEATHING WITH ADEQUATE SPAN RATING FOR JOIST SPACING IS ACCEPTABLE). FASTEN WITH 8d NAILS AT 6" O.C. AT ALL FRAMING. USE 8d RING SHANK NAILS WITHIN 5'-0" OF ROOF EDGES.
M. TREATED LUMBER: ALL LUMBER IN CONTACT WITH EARTH, CONCRETE AND/OR MASONRY SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARDS (RESIDENTIAL USE SHALL COMPLY WITH AWPA U1 - NOTE THAT INORGANIC BORON [SBX] IS LESS CORROSIVE THAN OTHER ALTERNATIVE PRESERVATIVE TREATMENTS SUCH AS ACQ, CA-B, CBA, ACZA & MCO).
N. STAIR STRINGERS: SHALL BE 2X12'S SPACED AT 16" O.C. MAXIMUM
O. ALTERNATE PRODUCTS: APPROVED EQUAL PRODUCTS ARE ACCEPTABLE AND MAY BE SUBSTITUTED.
P. DETAILS NOT SHOWN: CONTRACTOR SHALL FOLLOW "DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION" PUBLISHED BY THE AMERICAN FOREST & PAPER ASSOCIATION FOR ALL DETAILS NOT SHOWN.

NOTE:

- NO FIELD SUPERVISION PROVIDED UNDER THIS SEAL. IT IS UNDERSTOOD THAT THE AUTHORITY HAVING JURISDICTION (AHJ) WILL INSPECT THE WORK.
• PLANS ARE TO BE USED FOR THE SPECIFIED SITE AND FOR A ONE TIME USE ONLY. REPRODUCTION OF THESE PLANS WITHOUT THE EXPRESS WRITTEN CONSENT OF CYPRESS IS STRICTLY PROHIBITED.
• NO CONSTRUCTION ADMINISTRATION PROVIDED UNDER THIS SEAL UNLESS SPECIFICALLY INCLUDED IN CONTRACT.
• ALL WORK/MATERIALS SHALL CONFORM TO LOCAL, STATE AND FEDERAL CODES. THE STRICTER PROVISIONS OF CODES, SPECIFICATIONS AND THESE NOTES AND NOTES ON INCLUDED DRAWINGS SHALL GOVERN. CYPRESS ENGINEERING DOCUMENTS HAVE BEEN PREPARED FOR USE BY KNOWLEDGEABLE & EXPERIENCED LICENSED GENERAL CONTRACTORS.
• CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER TRADES.
• DO NOT SCALE DRAWINGS. USE PRINTED DIMENSIONS OR REQUEST INFORMATION FROM ENGINEER.
• COMMUNICATION FROM CONTRACTOR TO ENGINEER SHALL BE IN WRITING.
• CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF MISSING INFORMATION OR QUESTIONS REGARDING DRAWINGS BY CYPRESS ENGINEERING. CONTRACTOR SHALL SUBMIT PROPOSED DEVIATIONS FROM PROJECT DOCUMENTS TO ENGINEER IN WRITING.

Table with 3 columns: REV., REVISION DESCRIPTION, DATE. Row 0: ISSUED FOR CONSTRUCTION



ASCE-7 CODE SUMMARY

OCCUPANCY CATEGORY: 2
DEAD LOAD: PER CHAPTER 3, ACTUAL CONSTRUCTION MATERIALS & FIXED SERVICE EQUIPMENT
LIVE LOADS: PER CHAPTER 4, SEE TABLE THIS DRAWING
FLOOD LOADS: PER CHAPTER 5
SNOW LOADS: GROUND SNOW LOAD PER FIGURE 7-1 OF ASCE 7
RAIN LOADS: PER CHAPTER 8 OF ASCE 7
ICE LOADS: PER FIGURE 10-2 OF ASCE 7
SEISMIC LOADS: PER CHAPTERS 11 THROUGH 22 OF ASCE 7
WIND LOADS PER ASCE-7, ANALYTICAL METHOD: PER CHAPTERS 26 & 27
BASIC WIND SPEED, Vult: 142 MPH (PER FIGURE 26.5-1A, B or C)
DIRECTIONALITY FACTOR: 0.85 (PER SECTION 26.6)
WIND EXPOSURE CATEGORY: D (PER SECTION 26.7)
TOPOGRAPHY FACTOR: (PER SECTION 26.8)
GUST EFFECT FACTOR: 0.85 (PER SECTION 26.9)
ENCLOSURE CLASSIFICATION: ENCLOSED STRUCTURE (PER SECTION 26.10)
INTERNAL PRESSURE COEFFICIENT: GcPi = +/- 0.18 (PER SECTION 26.11)
WIND LOADS ON MWFRS PER CHAPTER 27
DIRECTIONAL PROCEDURE
WIND LOADS ON COMPONENTS & CLADDING PER CHAPTER 30
COMPONENTS AND CLADDING (DOORS, WINDOWS, VENEERS, ETC.) SHALL MEET THE PRESSURE REQUIREMENTS FOR THE WIND SPEED AND EXPOSURE CATEGORY.
WIND-BORNE DEBRIS REGIONS: GLAZED OPENINGS SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 26.10.3.2 IN THE FOLLOWING LOCATIONS:
1. WITHIN 1 MILE OF THE COASTAL MEAN HIGH WATER LINE WHERE THE BASIC WIND SPEED IS 130 MPH OR GREATER
2. IN AREAS WHERE THE BASIC WIND SPEED IS EQUAL TO OR GREATER THAN 140 MPH

LEGEND OF SYMBOLS

Table with 2 columns: Symbol, Description. Symbols include section cut, section title, detail call-out, key note call-out.

GENERAL STRUCTURAL NOTES

CATHEY RESIDENCE
LOT 17, PONTLAKE ESTATES S/D
SLIDELL, LA
ST. TAMMANY PARISH

Cypress Engineering logo and contact information. Includes FDN AREA 2323, AREA U. B. 3481, PROJECT No. 15-0295FE, DRAWN BY CE, CHECKED BY DAP, DRAWING S1.

THE CONTRACTOR AND ANY OTHER PARTY THAT MAKES USE OF THESE DRAWINGS OR SPECIFICATIONS SHALL INDEMNIFY AND HOLD HARMLESS CYPRESS ENGINEERING, LLC AND ITS PROFESSIONAL STAFF FROM AND AGAINST ALL DAMAGES, LOSSES AND COSTS INCLUDING REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, EXCEPT TO THE EXTENT THAT SUCH DAMAGES, LOSSES OR COSTS ARE CAUSED BY THE NEGLIGENCE OF CYPRESS ENGINEERING, LLC OR ITS PROFESSIONAL STAFF.