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DESIGN NOTES FOR BOATHOUSE

DESIGN BASIS:

IBC 2015	INTERNATIONAL BUILDING CODE
ASCE 7-10	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-11	MANUAL FOR CONCRETE CONSTRUCTION
ACI 530-11	BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
AISC 360-10	SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

PROJECT LOADS

	UNIFORM (PSF)	CONC. (LBS)
ROOF LIVE LOAD:	20	
FLOOR LIVE LOAD:	100	
STAIRS AND EXITWAYS:	100	300
HANDRAILS AND GUARDS:		200
GROUND SNOW LOAD:	5	
SNOW EXPOSURE FACTOR, Ce:	0.9	
SNOW LOAD IMPORTANCE FACTOR, I	1.0	
SNOW LOAD IMPORTANCE FACTOR, I	1.2	
FLAT-ROOF SNOW LOAD, Pf	3.2 PSF	

WIND LOAD PER ASCE 7-10

WIND BORN DEBRIS:	APPLICABLE
BUILDING RISK CATEGORY:	III
DESIGN WIND SPEED	
ULTIMATE (V_{ult}):	146 MPH
NOMINAL (V_{asd}):	113 MPH
DIRECTIONALITY FACTOR (K_d):	0.85
WIND EXPOSURE:	D
TOPOGRAPHIC FACTOR (K_{zt}):	1.0
GUST EFFECT FACTOR (G_f):	0.85
ENCLOSURE CLASSIFICATION:	ENCLOSED
INTERNAL PRESSURE COEFF:	±0.18
MWFRS DESIGN PROCEDURE:	DIRECTIONAL

MWFRS

WALL PRESSURE	MAX. (PSF)	MIN. (PSF)
WINDWARD:	39.0	20
LEEWARD:	-10.0	-29.0
SIDEWALL:	-10.0	-29.0
ROOF PRESSURE		
MAX ALL ZONES & COND.:	21.0	-32.0

COMPONENTS AND CLADDING:

ROOF — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 1	-100.0	-81.0	-67.0	-67.0	-67.0
NEG. ZONE 2	-127.0	-111.0	-98.0	-98.0	-98.0
NEG. ZONE 3	-131.0	-112.0	-98.0	-98.0	-98.0
POS. ALL ZONES	58.0	54.0	51.0	51.0	51.0

WALL — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 4	-64.0	-60.0	-58.0	-55.0	-51.0
NEG. ZONE 5	-77.0	-70.0	-64.0	-58.0	-51.0
POS. ALL ZONES	59.0	55.0	52.0	50.0	46.0

** REFER TO ASCE 7-10, CHAPTER 30 FOR ZONE DEFINITIONS**

SEISMIC DESIGN CRITERIA

RISK CATEGORY:	III
SEISMIC IMPORTANCE FACTOR (I_e):	I_e = 1.25
MAPPED SPECTRAL RESPONSE ACC'L:	S_s = 1.165 g S_1 = 0.371 g
SITE CLASS:	E
SPECTRAL RESPONSE ACCELERATIONS:	S_{ds} = 0.699 g S_{d1} = 0.622 g
SEISMIC DESIGN CATEGORY:	D

SEISMIC DESIGN FACTORS

BASIC SEISMIC-FORCE-RESISTING SYSTEM(S):

LEVEL 1: FOUNDATION TO FLOOR: SPECIAL REINFORCED MASONRY SHEARWALL

LEVEL 2: FLOOR TO ROOF: LIGHT FRAME (COLD FORMED STEEL) WALLS STEEL SHEET PANELS RATED FOR SHEAR RESISTANCE

RESPONSE MODIFICATION FACTOR:	R = 5
SEISMIC RESPONSE COEFFICIENT:	C_s = 0.175
DESIGN BASE SHEAR:	$F_x = F_1$ = 190 k

DESIGN NOTES FOR PAVILION (BID ALT NO. 2)

DESIGN BASIS:

IBC 2015	INTERNATIONAL BUILDING CODE
ASCE 7-10	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-11	MANUAL FOR CONCRETE CONSTRUCTION
ACI 530-11	BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
AISC 360-10	SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

PROJECT LOADS

	UNIFORM (PSF)	CONC. (LBS)
ROOF LIVE LOAD:	20	
FLOOR LIVE LOAD:	100	
GROUND SNOW LOAD:	5	
SNOW EXPOSURE FACTOR, Ce:	0.9	
SNOW LOAD IMPORTANCE FACTOR, I	1.0	
SNOW LOAD IMPORTANCE FACTOR, I	1.2	
FLAT-ROOF SNOW LOAD, Pf	3.2 PSF	

WIND LOAD PER ASCE 7-10

WIND BORN DEBRIS:	APPLICABLE
BUILDING RISK CATEGORY:	II
DESIGN WIND SPEED	
ULTIMATE (V_{ult}):	146 MPH
NOMINAL (V_{asd}):	113 MPH
DIRECTIONALITY FACTOR (K_d):	0.85
WIND EXPOSURE:	D
TOPOGRAPHIC FACTOR (K_{zt}):	1.0
GUST EFFECT FACTOR (G_f):	0.85
ENCLOSURE CLASSIFICATION:	OPEN
MWFRS DESIGN PROCEDURE:	DIRECTIONAL

MWFRS

WALL PRESSURE	MAX. (PSF)	MIN. (PSF)
WINDWARD:	39.0	20
LEEWARD:	-10.0	-29.0
SIDEWALL:	-10.0	-29.0
ROOF PRESSURE		
MAX ALL ZONES & COND.:	21.0	-32.0

COMPONENTS AND CLADDING:

ROOF — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 1	-100.0	-81.0	-67.0	-67.0	-67.0
NEG. ZONE 2	-127.0	-111.0	-98.0	-98.0	-98.0
NEG. ZONE 3	-131.0	-112.0	-98.0	-98.0	-98.0
POS. ALL ZONES	58.0	54.0	51.0	51.0	51.0

WALL — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 4	-64.0	-60.0	-58.0	-55.0	-51.0
NEG. ZONE 5	-77.0	-70.0	-64.0	-58.0	-51.0
POS. ALL ZONES	59.0	55.0	52.0	50.0	46.0

** REFER TO ASCE 7-10, CHAPTER 30 FOR ZONE DEFINITIONS**

SEISMIC DESIGN CRITERIA

RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I_e):	I_e = 1.0
MAPPED SPECTRAL RESPONSE ACC'L:	S_s = 1.165 g S_1 = 0.371 g
SITE CLASS:	E
SPECTRAL RESPONSE ACCELERATIONS:	S_{ds} = 0.699 g S_{d1} = 0.622 g
SEISMIC DESIGN CATEGORY:	D

SEISMIC DESIGN FACTORS

BASIC SEISMIC-FORCE-RESISTING SYSTEM(S):

LEVEL 1: FOUNDATION TO ROOF: SPECIAL REINFORCED MASONRY SHEARWALL

RESPONSE MODIFICATION FACTOR:	R = 5
SEISMIC RESPONSE COEFFICIENT:	C_s = 0.140
DESIGN BASE SHEAR:	$F_x = F_1$ = 9 k

DESIGN NOTES FOR DOCK HOUSE (BID ALT NO. 3)

DESIGN BASIS:

IBC 2015	INTERNATIONAL BUILDING CODE
ASCE 7-10	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 318-11	MANUAL FOR CONCRETE CONSTRUCTION
ACI 530-11	BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
AISC 360-10	SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS

PROJECT LOADS

	UNIFORM (PSF)	CONC. (LBS)
ROOF LIVE LOAD:	20	
FLOOR LIVE LOAD:	100	
GROUND SNOW LOAD:	5	
SNOW EXPOSURE FACTOR, Ce:	0.9	
SNOW LOAD IMPORTANCE FACTOR, I	1.0	
SNOW LOAD IMPORTANCE FACTOR, I	1.2	
FLAT-ROOF SNOW LOAD, Pf	3.2 PSF	

WIND LOAD PER ASCE 7-10

WIND BORN DEBRIS:	APPLICABLE
BUILDING RISK CATEGORY:	II
DESIGN WIND SPEED	
ULTIMATE (V_{ult}):	146 MPH
NOMINAL (V_{asd}):	113 MPH
DIRECTIONALITY FACTOR (K_d):	0.85
WIND EXPOSURE:	D
TOPOGRAPHIC FACTOR (K_{zt}):	1.0
GUST EFFECT FACTOR (G_f):	0.85
ENCLOSURE CLASSIFICATION:	ENCLOSED
INTERNAL PRESSURE COEFF:	±0.18
MWFRS DESIGN PROCEDURE:	DIRECTIONAL

MWFRS

WALL PRESSURE	MAX. (PSF)	MIN. (PSF)
WINDWARD:	39.0	20
LEEWARD:	-10.0	-29.0
SIDEWALL:	-10.0	-29.0
ROOF PRESSURE		
MAX ALL ZONES & COND.:	21.0	-32.0

COMPONENTS AND CLADDING:

ROOF — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 1	-100.0	-81.0	-67.0	-67.0	-67.0
NEG. ZONE 2	-127.0	-111.0	-98.0	-98.0	-98.0
NEG. ZONE 3	-131.0	-112.0	-98.0	-98.0	-98.0
POS. ALL ZONES	58.0	54.0	51.0	51.0	51.0

WALL — SURFACE PRESSURE (PSF)

AREA	20SF	50SF	100SF	200SF	500SF
NEG. ZONE 4	-64.0	-60.0	-58.0	-55.0	-51.0
NEG. ZONE 5	-77.0	-70.0	-64.0	-58.0	-51.0
POS. ALL ZONES	59.0	55.0	52.0	50.0	46.0

** REFER TO ASCE 7-10, CHAPTER 30 FOR ZONE DEFINITIONS**

SEISMIC DESIGN CRITERIA

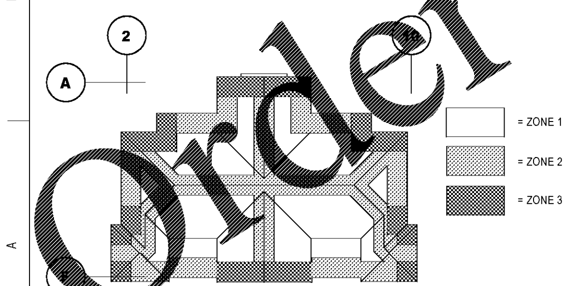
RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I_e):	I_e = 1.0
MAPPED SPECTRAL RESPONSE ACC'L:	S_s = 1.165 g S_1 = 0.371 g
SITE CLASS:	E
SPECTRAL RESPONSE ACCELERATIONS:	S_{ds} = 0.699 g S_{d1} = 0.622 g
SEISMIC DESIGN CATEGORY:	D

SEISMIC DESIGN FACTORS

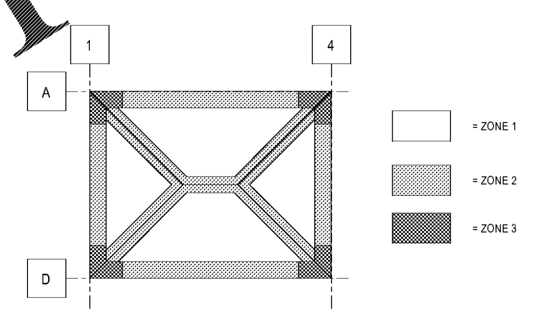
BASIC SEISMIC-FORCE-RESISTING SYSTEM(S):

FOUNDATION TO ROOF: SPECIAL REINFORCED MASONRY SHEARWALL

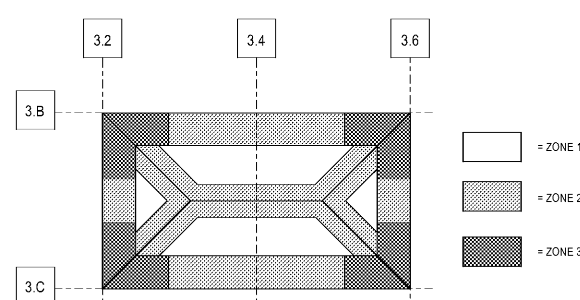
RESPONSE MODIFICATION FACTOR:	R = 5
SEISMIC RESPONSE COEFFICIENT:	C_s = 0.140
DESIGN BASE SHEAR:	$F_x = F_1$ = 5 k



3 / 0.S001 BOATHOUSE LEGEND - ROOF PRESSIRE ZONES (FOR C&C ONLY)
1/32" = 1'-0"



5 / 0.S001 PAVILLION LEGEND - ROOF PRESSIRE ZONES (FOR C&C ONLY)
1/16" = 1'-0"



6 / 0.S001 DOCK HOUSE LEGEND - ROOF PRESSIRE ZONES (FOR C&C ONLY)
1/8" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING WORK. IF ANY DISCREPANCIES ARE NOTED, CONTRACTOR SHALL NOTIFY ARCHITECT AND ENGINEER IMMEDIATELY.

2. DO NOT SCALE DRAWINGS. CONSULT ENGINEER FOR DIMENSIONS.

3. CONTRACTOR SHALL FULLY COORDINATE ALL ARCHITECTURAL AND STRUCTURAL DRAWINGS AND SHALL FULLY RESOLVE ANY CONFLICTS PRIOR TO COMMENCING WORK. MISCELLANEOUS STRUCTURAL ITEMS, CONDITIONS OR PIECES OF STEEL MAY BE SHOWN ON ARCHITECTURAL DRAWINGS.

4. CONTRACTOR MUST SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL. CONTRACTOR SHALL REVIEW SHOP DRAWINGS BEFORE SUBMITTING THEM TO ENGINEER NOTING ANY DISCREPANCIES FOUND. FAILURE TO SUBMIT THE SHOP DRAWINGS TO THE ENGINEER IS AT THE CONTRACTOR'S OWN RISK.

5. STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL AND/OR ANY OTHER TRADE RELATED DRAWINGS.THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ORDER TO COMPLY WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

7. THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND IN ITS COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE DESIGN, ADEQUACY AND SAFETY OF TEMPORARY ERECTION BRACING AND SHORING.

8. THE ENGR HAS NO EXPERTISE IN, AND TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

9. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.

10.THE CONTRACTOR SHALL MAKE NO DEVIATION FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE OWNER.

HOLLOW CORE SLAB NOTES

1. SHOP DRAWINGS INCLUDING LAYOUT PLAN, SHALL BE SUBMITTED. MANUFACTURER SHALL NOT PROCEED WITH THE MANUFACTURE PRIOR TO RECEIVING APPROVED SHOP DRAWINGS.

2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS.

3. DESIGN CALCULATIONS, SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA, SHALL BE SUBMITTED FOR REVIEW.

4. PRESTRESSED HOLLOW-CORE CONCRETE PLANKS SHALL BE DESIGNED IN ACCORDANCE WITH PRESTRESSED CONCRETE INSTITUTE (PCI) STANDARD MNL-126-85 (MANUAL FOR THE DESIGN OF HOLLOW-CORE SLABS) TO SUPPORT LOADING INDICATED IN THE GENERAL NOTES.

5. SLABS TO BE DESIGNED WITH APPROPRIATE CAMBER TO PROVIDE A LEVEL SURFACE AFTER ERECTION.

6. BALCONY UNITS TO SLOPE AS INDICATED.

7. PRESTRESSED HOLLOW-CORE PLANK UNIT NOMENCLATURE USED IS THAT OF CORESLAB STRUCTURES, INC.

8. CONCRETE STRENGTH FOR HOLLOW CORE SLAB UNITS SHALL BE 5000 PSI AT 28 DAYS.

9. PRESTRESSING STEEL SHALL BE HIGH TENSILE THREE WIRE, 5/16" DIAMETER STRESSED RELIEVED STRAND (250 KSI).

10.CONTRACTOR SHALL FURNISH SIZES AND LOCATION OF ALL REQUIRED PENETRATIONS FOR WORK OF OTHER TRADES TO CONCRETE PLANK MANUFACTURER FOR APPROVAL.

11.ALL PRESTRESSED HOLLOW-CORE CONCRETE PLANKS SHALL BE INSTALLED AND GROUTED IN ACCORDANCE WITH MANUFACTURER'S AND SPECIFICATION REQUIREMENTS.

12. CONTRACTOR RESPONSIBLE FOR DESIGN OF HORIZONTAL DIAPHRAGM AT PRECAST LEVEL. DESIGN FORCE OF $V_{seismic}$ = 190 KIPS, $V_{wind\ n\text{-}s}$ = 97 KIPS. ALL LOADS ARE IN ULTIMATE.

NON-STRUCTURAL ITEM NOTES

1. DESIGN ALL STRUCTURES IN ACCORDANCE WITH THE 2015 IBC, APPLICABLE SECTIONS OF THE AISI SPECIFICATIONS, AND THE MBMA RECOMMENDED DESIGN PRACTICE MANUAL.

2. CONNECTIONS OF THE ITEMS TO THE MAIN STRUCTURAL MEMBERS SHALL NOT RESULT IN TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. PROVIDE DESIGN FOR GRAVITY AND SEISMIC FORCES AS INDICATED OR REQUIRED BY APPLICABLE BUILDING CODES.

3. THE STRUCTURAL DESIGN OF THE FOLLOWING ITEMS IS NOT COVERED BY THIS SET OF DRAWINGS AND SHALL BE DEFERRED APPROVAL ITEMS TO BE DESIGNED BY OTHERS. ENGINEERING CALCULATIONS AND SHOP DRAWINGS THAT ARE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE SAME STATE AS THE PROJECT LOCATION, SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL. INSTALLATION OF ITEMS SHALL NOT BE PERMITTED UNTIL APPROVAL IS OBTAINED

A. SEISMIC RESTRAINTS FOR MECHANICAL, ELECTRICAL, COMMUNICATIONS AND PLUMBING EQUIPMENT,
B. SEISMIC RESTRAINT OF DISTRIBUTION SYSTEMS INCLUDING PIPING, SPRINKLERS, DUCTWORK, CONDUIT, AND CABLE TRAYS
C. SEISMIC RESTRAINT FOR RAISED ACCESS FLOOR SYSTEMS
D. CURTAIN WALL AND EXTERIOR ENCLOSURE SYSTEMS OF FRAMING AND GLAZING
E. MISCELLANEOUS CLADDING SYSTEMS AND SUPPORTS OTHER THAN BRICK
F. PRE-MANUFACTURED CANOPIES, SIGNS, EXTERIOR SHADES, ETC. AND REQUIRED SUPPLEMENTAL FRAMING FOR THEIR SUPPORT
G. ROLL-UP AND OVERHEAD DOOR ANCHORAGE TO STRUCTURE
H. WINDOW WASHING EQUIPMENT & ROOF TOP SAFETY TIE-OFFS
I. METAL STAIRS
J. COLD-FORMED, LIGHT GAUGE METAL FRAMING
K. ELEVATOR RAILS, SUPPORTS, AND EQUIPMENT ANCHORAGE
L. POST-TENSIONING SYSTEMS, LAYOUT AND DETAILS

4. CALCULATION AND DRAWINGS FOR THE DIFFERED SUBMITTAL ITEMS SHALL BE SUBMITTED IN A TIMELY MANNER THAT ALLOWS A MINIMUM OF 30 WORKING DAYS FOR REVIEW. ALL COMMENTS RELATED TO THE DIFFERED SUBMITTAL MUST BE ADDRESSED TO THE SATISFACTION OF THE BUILDING OFFICIAL / PLAN CHECK DIVISION PRIOR TO THE APPROVAL OF THE SUBMITTED ITEMS

FOUNDATION, EXCAVATION AND FILL

1. THE FOUNDATION DESIGN WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY SOIL CONSULTANTS INC. ON JANUARY 01-22-2018. THE SOILS REPORT IS CONSIDERED A PART OF THE CONSTRUCTION DOCUMENTS AND AS SUCH THE RECOMMENDATIONS IN THE SOILS REPORT SHALL BE FOLLOWED BY THE CONTRACTOR.

2. THE DESIGN ASSUMES A PILE BEARING CAPACITY OF 20 TONS AT A LENGTH OF 50 FEET WITH AN AXIAL TENSILE CAPACITY OF 10 TONS, PLACED IN ACCORDANCE WITH THE REPORT.

3. ALL EXCAVATIONS FOR FOOTINGS SHALL BE MADE TO THE GRADES SHOWN FOR CONTINUOUS AND SPREAD FOOTINGS. CONTRACTOR SHALL TAKE MEASURES TO PREVENT CAVE-IN OF THE FOOTING EXCAVATION. THESE MEASURES MAY INCLUDE CUTTING BACK THE SIDE SLOPES AND/OR THE USE OF SIDE FORMS.

4. COMPACTED FILL MATERIAL SHALL BE FREE OF ORGANICS, STONES, ROCKS, BROKEN BRICKS, WOOD FRAGMENTS, OR OTHER DELETERIOUS MATERIAL THAT AFFECTS THE COMPACTIBILITY OF THE MATERIAL.

5. THE MATERIAL SHALL CONSIST OF A MAXIMUM OF 20% FINES (MATERIAL PASSING A #200 SIEVE) AND HAVE A MAXIMUM DRY DENSITY (MODIFIED PROCTOR ASTM D-1567) OF AT LEAST 100 PCF.

6. THE MATERIAL'S LIQUID LIMIT SHALL NOT EXCEED 30 AND THE PLASTICITY INDEX SHALL NOT BE GREATER THAN 15.

7. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 10" AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

8. ANY SOFT AREAS OR AREAS SUSPECTED OF POOR MATERIAL SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN 24" BELOW THE UNSUITABLE MATERIAL AND REPLACED WITH A SUITABLE FILL MATERIAL AS DESCRIBED ABOVE.

9. PRIOR TO PLACEMENT OF ANY CONCRETE, THE THIN LAYER OF DISTURBED SOIL IN THE FOOTING SUBGRADE SHALL BE COMPACTED WITH HAND-OPERATED, GAS POWERED TAMPERS.

10. ROVIDE SHORING, BRACING, AND SHEETING IN ACCORDANCE WITH COE EM 385-1-1.

11. MAINTAIN POSITIVE SURFACE DRAINAGE TO PREVENT ACCUMULATION OF WATER IN EXCAVATED AREAS.

12. EXCAVATIONS FOR STRUCTURES LOCATED BELOW OR WITHIN THREE FEET OF THE GROUNDWATER LEVEL SHALL BE DE-WATERED. GROUNDWATER SHALL BE LOWERED AND CONTINUOUSLY MAINTAINED AT LEAST THREE FEET BELOW THE PROPOSED BEARING ELEVATION.

13. DO NOT DISCONTINUE DE-WATERING BACKFILL OR FILL AGAINST THE STRUCTURE UNTIL THE CONCRETE HAS CURED TO TO A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.

CONCRETE NOTES

1. ALL CONCRETE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-11 AND ACI 301-10.

2. UNLESS NOTED OTHERWISE, PROVIDE CONCRETE DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.

3. CONCRETE SLUMP SHALL NOT EXCEED 4 INCHES, UNLESS OTHERWISE NOTED ON AN APPROVED MIX DESIGN.

4. PROVIDE NEW BILLET STEEL DEFORMED REINFORCING BARS CONFORMING TO ASTM A615, LATEST REVISION, GRADE 60.

5. LOCATE WELDED WIRE FABRIC IN THE UPPER THIRD OF THE SLAB AND LAP IT A MINIMUM OF 8 INCHES AT SPLICES.

6. PROVIDE FABRIC CONFORMING TO ASTM 185, LATEST EDITION.

7. UNLESS NOTED OTHERWISE, DETAIL, FABRICATE AND PLACE REINFORCING STEEL IN CONFORMANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" - ACI 315.

8. PROVIDE REINFORCING BAR SPLICE LENGTHS AND LOCATIONS, EMBEDMENT LENGTHS, HOOKS, ETC. AS SHOWN ON THE DRAWINGS. DEVIATIONS WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

9. UNLESS NOTED OTHERWISE, CHAMFER ALL EXPOSED CONCRETE CORNERS WITH A 3/4" x 45 DEGREE CHAMFER.

10.ALL CONCRETE SHALL BE COMPACTED USING HIGH FREQUENCY, INTERNAL MECHANICAL VIBRATING EQUIPMENT, SUPPLEMENTED BY HAND SPADING AND TAMPING.

11.C.J. DENOTES CONCRETE SLAB "CONTROL JOINT" WHICH SHALL BE CUT INTO THE SLAB AT A DEPTH OF 1/3 TIMES THE THICKNESS OF THE SLAB WITHIN 12 HOURS OF PLACEMENT. JOINTS SHALL BE CUT AS SOON AS CONCRETE HAS CURED ENOUGH TO PREVENT DISLODGING AGGREGATE.

12.SLAB CONSTRUCTION JOINTS SHALL BE USED IN PLACE OF CONTROL JOINTS WHERE NEEDED TO INTERRUPT A CONTINUOUS POUR.

13.SLAB CONSTRUCTION JOINTS SHALL BE KEYED.

14.SAWING OF JOINTS:
A. THE PREFERRED METHOD FOR SAWING CONTROL JOINTS IS WITH THE "SOFF-CUT" SAW WITHIN ONE HOUR OF FINISHED CONCRETE.
B. THE CONVENTIONAL CONCRETE SAW CUTTING A 3/16" (5MM) WIDE GROOVE IS ALSO ACCEPTABLE. SAWING SHALL BEGIN AS SOON AS THE CONCRETE SURFACE HAS SUFFICIENTLY HARDENED TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING AND BEFORE SHRINKAGE CRACKS OCCUR. SAWING SHALL BEGIN WITHIN 10 HOURS OF THE FINAL FINISHING OPERATION.
C. WHERE THE SAW IS OBSTRUCTED, TOOLED OR FORMED JOINTS SHALL BE PROVIDED TO JOIN THE SAW CUT JOINT AND COMPLETE THE CONTROL JOINT
D. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO ENSURE THAT SAWED JOINTS ARE MADE IN THE PROPER INTERVAL INCLUDING, BUT NOT LIMITED TO LIGHTING, TWO SHIFTS, OVERTIME, ETC.

15. ALL DOWELS SHALL BE SAW CUT, NOT SHEARED, CONFORMING TO ASTM A615 PLAIN, GRADE 60, AND SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. DOWELS SHALL BE CAREFULLY AND FIRMLY SUPPORTED DURING CONSTRUCTION. DOWELS SHALL BE COATED WITH A BOND BREAKER PRIOR TO PLACING CONCRETE IN THE SECOND POUR.

16. INSTALL VAPOR BARRIER CONFORMING TO ASTM E1745 AND 10 MIL THICK UNDER SLAB. OVERLAP SPLICES 6" MINIMUM OR PER MANUFACTURER'S RECOMMENDATION.

17. SLAB CONTROL JOINTS SHALL BE PLACED SUCH THAT SPACING DOES NOT EXCEED 36xSLAB THICKNESS UP TO A MAXIMUM 15 FEET BETWEEN JOINTS PER ACI 302. JOINTS SHALL BE CUT INTO THE SLAB AT A DEPTH OF 1/3 TIMES THE THICKNESS OF THE SLAB WITHIN 12 HOURS OF PLACEMENT.

18. VERTICAL CONSTRUCTION JOINTS SHALL BE LOCATED BY THE CONTRACTOR.

19. PROVIDE CLASS "B" LAP SPLICES FOR HORIZONTAL REINFORCING AND 2" x 6" KEYWAYS.

20. PROVIDE 4" PVC WATERSTOPS IN HORIZONTAL CONSTRUCTION JOINTS IN EXTERIOR WALLS.

21. DOWEL WALLS TOGETHER, IF POURED SEPARATELY, WITH BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL WALL REINFORCING.

22. DO NOT BACKFILL AGAINST CONCRETE OR MASONRY WALLS UNTIL WALL, FLOOR SLAB, AND FOOTING HAVE CURED TO 28 DAY STRENGTH.

23. PLUMBING AND ELECTRICAL CONDUITS SHALL BE PLACED BELOW THE SLAB AND NOT WITHIN THE SLAB. VERTICAL PENETRATIONS ARE ALLOWED.

BID DOCUMENTS

coast architects
671 St. Andrews Blvd. Charleston, SC 29407
Phone: 843.763.7064 Fax: 843.763.7061
www.coastarchitects.net

SOUTH CAROLINA — JOHNSON, MIRMIRAN & THOMPSON, INC. No. 3943 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER — No. 17731 — CHRISTOPHER E. REDDICK

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