

**EXISTING CONSTRUCTION**

THE GENERAL CONTRACTOR SHALL COORDINATE AND FIELD VERIFY ALL EXISTING BUILDING CONSTRUCTION. THIS COORDINATION INCLUDES THE MATERIALS AND TYPES OF EXISTING CONSTRUCTION, ALL DIMENSIONS OF EXISTING CONSTRUCTION (HORIZONTAL AND VERTICAL DIMENSIONS, WALL THICKNESS, TOP OF FOOTING ELEVATIONS, SLAB THICKNESS, ETC.) AND ANY OTHER CONDITIONS OF EXISTING CONSTRUCTION WHICH RELATES TO NEW WORK.

THE GENERAL CONTRACTOR SHALL COORDINATE AND FIELD VERIFY ALL DIMENSIONS RELATING TO EXISTING AND NEW CONSTRUCTION PRIOR TO THE SUBMITTAL OF ANY SHOP DRAWINGS FOR APPROVAL AND PRIOR TO RELEASING ANY MATERIALS FOR FABRICATION.

THE GENERAL CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE METHODS AND MEANS USED IN SHORING, BRACING AND SUPPORTING THE EXISTING CONSTRUCTION WHILE ERECTING AND INSTALLING THE NEW CONSTRUCTION. THIS RESPONSIBILITY APPLIES TO THE ENTIRE PROJECT, TO INCLUDE THE SHORING, BRACING AND SUPPORTING OF FLOOR AND ROOF CONSTRUCTION ALONG WITH ANY EXISTING WALLS (BOTH LOAD BEARING AND NON-LOAD BEARING) WHICH ARE TO REMAIN IN THE EXISTING BUILDING. COORDINATION WITH THE CONTRACT DOCUMENTS IS TO INCLUDE BOTH THE ARCHITECTURAL DEMOLITION DRAWINGS AND ALL CONTRACT DRAWINGS OF NEW WORK.

SHORING, BRACING AND SUPPORTING OF EXISTING CONSTRUCTION SHALL BE DONE IN A MANNER TO PROVIDE COMPLETE SAFETY TO ALL PERSONNEL AND TO THE PUBLIC. WORK SHALL BE DONE IN A MANNER TO PREVENT DAMAGE BOTH TO EXISTING AND NEW CONSTRUCTION.

THIS WORK SHALL MEET ALL SAFETY REQUIREMENTS OF LOCAL, STATE AND FEDERAL AUTHORITIES OR GOVERNING AGENCIES. THE CONTRACTOR MAY VISIT THE PROJECT SITE TO REVIEW THE EXISTING BUILDING PRIOR TO BIDDING THE PROJECT.

**STRUCTURAL DESIGN CRITERIA**

**APPLICABLE BUILDING CODES:**

NORTH CAROLINA STATE BUILDING CODE (2012 EDITION)  
(INTERNATIONAL BUILDING CODE (IBC), 2009 EDITION WITH NORTH CAROLINA AMENDMENTS.

**REFERENCED STANDARDS:**

- ACI - AMERICAN CONCRETE INSTITUTE
  - 318-08 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
  - 530-08 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
  - 530.1-08 SPECIFICATIONS FOR MASONRY STRUCTURES.
- AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION
  - 341-05, ANSI/AISC 341-05 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.
  - STEEL CONSTRUCTION MANUAL, THIRTEENTH EDITION.
  - 360-05, SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS.
  - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
  - 303-05, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
- AISI - AMERICAN IRON AND STEEL INSTITUTE
  - 5100-07 NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
  - 5200-07 N/A5 COLD-FORMED STEEL FRAMING, GENERAL PROVISIONS.
  - 5214-07 N/A5 COLD-FORMED STEEL FRAMING, TRUSS DESIGN, SUPPLEMENT 2 (2008).
  - 2007 COLD FORMED STEEL DESIGN MANUAL.
- ASCE/SEI - AMERICAN SOCIETY OF CIVIL ENGINEERS
  - 5-05 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
  - 6-05 SPECIFICATIONS FOR MASONRY STRUCTURES.
  - 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- AWS - AMERICAN WELDING SOCIETY
  - D11-04 STRUCTURAL WELDING CODE - STEEL.

FLOOR LIVE LOADS  
ENTRY LOBBY 100 PSF  
STEEPLE ENCLOSURE 60 PSF

ROOF LIVE LOAD 20 PSF

ROOF RAIN LOAD (ds=3.5', dhs1') 23.4 PSF

ROOF SNOW LOAD  
GROUND SNOW LOAD Pg = 15 PSF, (FORSYTH COUNTY, NC)  
OCCUPANCY CATEGORY = III  
IMPORTANCE FACTOR Is = 1.10  
THERMAL FACTOR Ct = 1.0  
SNOW EXPOSURE FACTOR, Ce Ce = 1.0 PARTIALLY EXPOSED  
FLAT ROOF SNOW LOAD Pf = 11.6 PSF  
SLOPED ROOF FACTOR Cs = 1.0  
BALANCED SNOW LOAD Ps = 11.6 PSF  
UNIFORM ROOF DESIGN SNOW LOAD 16.6 PSF

WIND LOADS (SEI/ASCE 7-05)  
MAIN WIND FORCE RESISTING SYSTEM (MWFERS)  
WIND LOAD DESIGN PROCEDURE = METHOD II, ANALYTICAL  
BASIC WIND SPEED (3-SEC. GUST) V3s = 40 MPH  
IMPORTANCE FACTOR Im = 1.15  
OCCUPANCY CATEGORY III  
TOPOGRAPHIC FACTOR Kzt = 1.0  
EXPOSURE CATEGORY C  
ENCLOSURE CLASSIFICATION ENCLOSED  
INTERNAL PRESSURE COEFFICIENT Gcpi = 30.18  
BASE VELOCITY PRESSURE qh = 19.2 PSF  
WIND DESIGN BASE SHEAR Vx = 9.8 kips, TRUE N/S  
Vy = 7.5 kips, TRUE E/W

COMPONENTS & CLADDING:  
ALL BUILDING COMPONENTS AND CLADDING ENGINEERED BY THE COMPONENT MANUFACTURER ARE TO BE DESIGNED BY THE MANUFACTURER'S ENGINEER FOR WIND LOADS DETERMINED PER THE 2012 NORTH CAROLINA STATE BUILDING CODE FOR THE BASIC DESIGN WIND VELOCITY, (MRI 50 YR), IMPORTANCE FACTOR, AND EXPOSURE LISTED ABOVE. EXTERNAL PRESSURE COEFFICIENT, GCP MAY BE CALCULATED BASED ON EFFECTIVE WIND AREA FOR EACH COMPONENT, MINIMUM AREA 10 SF). NO FURTHER REDUCTION TO THE G4C LOAD PRESSURES ARE ALLOWED FOR STRENGTH OR DEFLECTION CALCULATIONS.

COMPONENTS & CLADDING PRESSURE, (TRIB. AREA = 10 SF)  
ROOF: ZONE 1: +P = 10.0 psf -P = -22.7 psf  
ZONE 2: +P = 10.0 psf -P = -30.1 psf  
ZONE 3: +P = 10.0 psf -P = -51.4 psf  
OVERHANG Z2: +P = 0.0 psf -P = -32.7 psf  
OVERHANG Z3: +P = 0.0 psf -P = -53.9 psf  
WALLS: ZONE 4: +P = 20.8 psf -P = -22.5 psf  
ZONE 5: +P = 20.8 psf -P = -27.7 psf

SEISMIC LOADS (SEI/ASCE 7-05)  
ANALYTICAL PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE  
SITE CLASSIFICATION D  
OCCUPANCY CATEGORY III  
SEISMIC IMPORTANCE FACTOR Is = 1.25  
SEISMIC DESIGN CATEGORY C  
MAPPED SPECTRAL RESPONSE ACCELERATION (Sg=B)  
SHORT PERIOD Ss = 0.231 g  
1 SECOND PERIOD S1 = 0.088 g  
SITE COEFFICIENT, (FUNCTION OF SITE CLASS WITH Ss AND S1)  
SHORT PERIOD Fa = 1.600  
1 SECOND PERIOD Fv = 2.400  
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS,  
SHORT PERIOD Sds = 0.253 g  
1 SECOND PERIOD Sd1 = 0.141 g  
PEAK GROUND ACCELERATION PGA = \*, %g  
BASIC SEISMIC-FORCE-RESISTING SYSTEM:  
MAIN BUILDING: NORTH/SOUTH  
BUILDING FRAME SYSTEM: ORDINARY STEEL CONCENTRICALLY BRACED FRAMES  
MAIN BUILDING: EAST/WEST  
BUILDING FRAME SYSTEM: MOMENT RESISTING FRAME IN STEEL  
STRUCTURALLY STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR AISC SEISMIC PROVISIONS, PART 1, (ANSI/AISC 341-05)

ANALYSIS PROCEDURE: EQUIVALENT LATERAL-FORCE ANALYSIS  
DESIGN COEFFICIENTS AND FACTORS:  
RESPONSE MODIFICATION FACTOR R = 3.0 N/S  
DEFLECTION AMPLIFICATION FACTOR Cd = 3.0 N/S  
SYSTEM OVER-STRENGTH FACTOR Ro = 3.0 N/S  
ALLOWABLE STORY DRIFT Δ = 0.015hax  
LONG PERIOD TRANSITION PERIOD TL = 8 SEC  
SEISMIC RESPONSE COEFFICIENT Cs = 0.105  
SEISMIC DESIGN BASE SHEAR Vx = 10.8 kips, N/S  
Vy = 10.8 kips, E/W

**ABBREVIATIONS**

#	And	LB	Long Bar (reinforcing)
@	At	LBS	Pounds
∅	Diameter	LG	Long
CL	Centerline	LLH	Long Leg Horizontal
≥	Greater Than Or Equal To	LLV	Long Leg Vertical
≤	Less Than Or Equal To	LOC	Location
#	Number	LKC	Light Weight Concrete
AB	Anchor Bolt	MATL	Material
AR	Anchor Rod	MAX	Maximum
ACI	American Concrete Institute	MBM	Metal Building Manufacturer
ADD	Addendum	MBS	Metal Building System
ADDL	Additional	MC	Moment Connection
AFF	Above Finished Floor	MECH	Mechanical
AHU	Air Handling Unit	MEZZ	Mezzanine
AISC	American Inst. Of Steel Construction	MFTR	Manufacturer
AISI	American Iron And Steel Institute	MID	Middle
ALT	Alternate	MIN	Minimum
ARCH	Architect's / Architectural	MISC	Miscellaneous
ASTM	Amer. Society For Testing & Materials	MO	Masonry Opening
ANS	American Welding Society	MON	Middle Of Wall
BCX	Bottom Chord Extension	MP	Masonry Pier
BF	Braced Frame	MTL	Metal
BFF	Below Finished Floor	MTW	Metal-To-Wood Screw
BLDG	Building	NLWD	Nominal Laminated Wood Decking
BM	Beam	No or #	Number
BOD	Bottom Of Steel Decking (Deck Bearing)	NS	Near Side
BOS	Bottom Of Steel	NTS	Not To Scale
BOTT	Bottom	NKC	Normal Weight Concrete
BRG	Bearing	OC	On Center
BTWN	Between	OD	Overflow Drain
CANT	Cantilever	OPNG	Opening
CFS	Cold Formed Steel	OPP	Opposite (hand)
CJ	Control / Construction Joint	OWJ	Open Web Joist (Steel)
CJP	Complete Joint Penetration	PAF	Powder-Actuated Fasteners
CL	Centerline	PCF	Pounds Per Cubic Foot
CLG	Celling	PDF	Powder Driven Fasteners
CLR	Clear	PED	Pedestal
CONN	Connection	PL	Plate
CONST	Construction	PSF	Pounds Per Square Foot
CONTR	Contractor	PSI	Pounds Per Square Inch
CIP	Cast-in-place	PT	Pressure Treated
CMU	Concrete Masonry Unit	REF	Reference
COL	Column	RD	Root Drain
CONC	Concrete	REINF	Reinforced / Reinforcement
CONT	Continuous	REQD	Required
CNTR	Center	RO	Rough Opening
CRCB	Cold-Rolled Channel Bridging	RTU	Roof Top Unit
CTRD	Centered	SB	Short Bar (reinforcing)
d	Nail (penny)	SCHD	Schedule
DA	Double Angle	SDS	Self Drilling Screws
DBA	Deformed Bar Anchor	SF	Stepped Footing
DBE	Deck Bearing Elevation	SIM	Similar
DEFL	Deflection	SOG	Slab On Grade
DEPR	Depression / Depressed	SPEC(S)	Specification(s)
DET	Detail	SQ	Square
DIA	Diameter	STD	Standard
DIAG	Diagonal	STIFF	Stiffener
DIM	Dimension	STIRR	Stirrups(s)
DIST	Distance	STL	Steel
DL	Dog-legged	STR	Structural
DWG(S)	Drawing(s)	SVS	TSN Stiffball System
DWL(S)	Dowel(s)	T/	Top
EA	Each	TBE	Truss Bearing Elevation
EE	Each End	TCX	Top Chord Extension
EF	Each Face	TD	Trench Drain
EJ	Expansion Joint	TOBL	Top Of Brick Ledger
EL	Elevation (benchmark)	TOC	Top Of Concrete
ELEV	Elevator / Elevation	TOD	Top Of Deck
EMBED	Embedded / Embedment	TOF	Top Of Footing
ENGR	Engineer	TOGB	Top Of Grade Beam
EOP	Edge Of Deck	TOJ	Top Of Joist
EOS	Edge Of Slab	TOL	Top Of Ledger
EQ	Equal	TOM	Top Of Masonry
EQUIP	Equipment	TOP	Top Of Pier
EW	Each Way	TOPC	Top Of Pile Cap
EXIST	Existing	TOS	Top Of Steel
EXP	Expansion	TOW	Top Of Wall
EXT	Exterior	TSN	The Steel Network, Inc.
FD	Floor Drain	TYP	Typical
FDN	Foundation	UNO	Unless Noted Otherwise
FFE	Finished Floor Elevation	VERT	Vertical
FHS	Full Height Stud	VIF	Verify In Field
FLR	Floor	W/	With
FOB	Face Of Building	WO	Web Opening
FOCN	Face Of Concrete Wall	W/ WRK PT	Work Point
FOEB	Face Of Existing Building	WNF	Welded Wire Fabric
FOM	Face Of Masonry	WWR	Welded Wire Reinforcing
FOS	Face Of Stud		
FOX	Face Of Wall		
FS	Far Side		
FT	Feet		
FTG	Footing		
FV	Field Verify		
GA	Gauge		
GALV	Galvanized		
GB	Grade Beam		
HD	Headed		
HI	High		
HORIZ	Horizontal		
H5	Headed Stud		
HSS	Hollow Structural Section		
IN	Inch		
INT	Interior		
JBE	Joint Bearing Elevation		
JBT	Joint		
JT	Joint		
K	Kip(s)		
KB	Knee Brace		
KSI	Kips Per Square Inch		

**SYMBOL LEGEND**

- FOOTING MARK
- COLUMN MARK
- CONCRETE PIER MARK
- PILE CAP MARK
- SOIL BORING LOCATION
- CONE PENETRATION TEST
- ROOF DRAIN LOCATION
- SPOT ELEVATION LOCATION
- BRICK
- CONCRETE
- CONCRETE MASONRY UNIT



225 NORTH MAIN STREET - SUITE 501  
SALISBURY, NORTH CAROLINA 28144  
Phone: (704) 655-9121 Fax: (704) 655-5561  
Email: rbsa@rbsarch.com (www.rbsarch.com)

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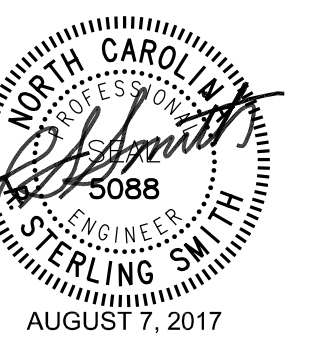


INTERFACE FOR CONSULTING ENGINEERS, PA  
STRUCTURAL ENGINEERING CONSULTANTS  
5222 Begonia Drive, Charlotte, NC 28215  
Tel: 704.599.8811  
NC COA C-1887

TAG	DESCRIPTION	DATE
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**GENERAL NOTES & ABBREVIATIONS**

**CLEMMONS FIRST BAPTIST CHURCH NARTHEX ADDITION**



RSS  
DRAWN BY  
R55  
CHECKED BY  
AUGUST 2017  
DATE  
S1626  
CONC. NO.

SHEET NO.  
**50.2**  
OF 7