

# COLLETON COUNTY FIRE AND RESCUE EXPANSION

## MABEL T WILLIS BLVD.

## WALTERBORO, SOUTH CAROLINA

### STANDARD ABBREVIATIONS

<b>A</b> A.C. AIRCONDITIONED A.H.U. AIR HANDLING UNIT ALT. ALTERNATIVE ALUM. ALUMINUM A.O. ACCESS OPENING APPROX. APPROXIMATELY ARCH. ARCHITECTURAL ACMU ARCHITECTURAL CONC. MASONRY UNIT ACT ACOUSTIC CEILING TILE AV AUDIO VISUAL  <b>B</b> BD. BOARD BLDG. BUILDING BM. BEAM BOT. BOTTOM BRG. BEARING  <b>C</b> CABT. CABINET CAP. CAPACITY CCTV CLOSED CIRCUIT TV C.A. CEILING DIFFUSER CEM. CEMENT  <b>D</b> DET. DETAIL DIA. DIAMETER DIFF. DIFFUSER DIM. DIMENSION DN. DOWN DR. DRAIN D.S. DOWN SPOUT DWG.(S) DRAWINGS(S)  <b>E</b> EA. EACH E.F. EXHAUST FAN ELEV. ELEVATION ELEC. ELECTRICAL EQUIP. EQUIPMENT E.W.C. ELECTRIC WATER COOLER EL. EXHAUST EXP. JT. EXPANSION JOINT EXT. EXTERIOR EXIST. EXISTING  <b>F</b> F.A. FIRE ALARM F.D. FLOOR DRAIN F.E. FIRE EXTINGUISHER F.E.C. FIRE EXTINGUISHER CABINET FIN. FINISH FL. FLOOR F.O. FACE OF FR. FRAME FT. FOOT, FEET FTG. FOOTING  <b>G</b> GA. GAGE GAL. GALLON GALV. GALVANIZED GL. GLASS GND. GROUND GOV'T GOVERNMENT G.P.H. GALLONS/HOUR G.P.M. GALLONS/MINUTE GR. GRILLE G.B. GYPSUM BOARD  <b>H</b> H.B. HOSE BIBB H.C. HOLLOW CORE HEWC HANDICAPPED ELECTRICAL WATER COOLER HT. HEIGHT H.M. HOLLOW METAL HR. HOUR HTG. HEATING HTR. HEATER HW. HARDWARE  <b>I</b> IN. INCHES INSUL. INSULATION INT. INTERIOR  <b>J</b> J.B. JUNCTION BOX JCT. JUNCTION JT. JOINT  <b>L</b> LB., # POUND L.P. LIGHTING PANEL LTG. LIGHTING  <b>M</b> MAINT. MAINTENANCE MAX. MAXIMUM MECH. MECHANICAL MTL. METAL MIN. MINIMUM MSC. MISCELLANEOUS M.O. MASONRY OPENING M.T. METAL THRESHOLD MTD. MOUNTED MTG. MOUNTING  <b>N</b> N.A. NOT APPLICABLE N.I.C. NOT IN CONTACT NO. NUMBER  <b>O</b> O.C. ON CENTER O.D. OUTSIDE DIAMETER O.F..I. OWNER FURNISH CONTRACTOR INSTALL O.F.O.I. OWNER FURNISH OWNER INSTALL OH. OVERHEAD OPNG. OPENING  <b>P</b> PART. PARTITION PEMB PRE-ENGINEERED MANUF. BUILDING PL. PLATE PLBGO PLUMBING PLY'WD PLYWOOD PNL. PANEL PRESS. PRESSURE PSF POUNDS/SQUARE FOOT PSI POUNDS/SQUARE INCH P.T. PRESSURE TREATED  <b>Q</b> QTR. QUARTER  <b>R</b> R.A. RETURN AIR RAD. RADIUS RCP REFLECTED CEILING PLAN RD. ROUND REC'D RECESSED RECP. RECEPTACLE REINF. REINFORCING REQ. REQUIRED RM. ROOM  <b>S</b> SAB SOUND ATTENUATION BLANKET S.A. SUPPLY AIR SCH. SCHEDULE S.D. SOAP DISPENSER SECT. SECTION SHT. SHEET S.J. SLIP JOINT SPEC. SPECIFICATIONS SQ. FT. SQUARE FEET STL. STEEL STOR. STORAGE  <b>T</b> T. TOILET U. TELEPHONE THD. THRESHOLD TOIL. TOILET TYP. TYPICAL  <b>U</b> U.N.O. UNLESS NOTED OTEHRWISE  <b>V</b> V.T. VINYL TILE VENT. VENTILATION VERT. VERTICAL  <b>W</b> W/ WITH WD. WOOD	<b>STRUCT. STRUCTURAL</b> SUSP. SUSPENDED
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**DESIGN DATA**  
-- IBC 2012  
-- THIS DESIGN IS FOR WIND , SEISMIC AND GRAVITY FORCES.

-- WIND LOADS:  
--> BASIC WIND SPEED (3 SECOND GUST): 110 MPH  
--> IMPORTANCE FACTOR: 1.0  
--> WIND EXPOSURE: C  
--> INTERNAL PRESSURE COEFFICIENT: ASCE 7-02 (OPEN STRUCTURE)  
--> COMPONENTS AND CLADDING PRESSURE: ASCE 7-02

-- EARTHQUAKE DESIGN DATA:  
--> SEISMIC USE GROUP: I  
--> Sds: 0.83  
--> Sd1: 0.44  
--> SITE CLASS: D (ASSUMED)  
--> BASIC SEISMIC FORCE-RESISTING SYSTEM: LIGHT FRAMED SHEARWALLS  
--> ANALYSIS PROCEDURE: SPECTRAL ANALYSIS METHOD  
FLOOR LL 40 PSF  
FLOOR DL 25 PSF  
ROOF LL 20 PSF  
ROOF DL 20 PSF  
DECKS, PORCHES LL40 PSF  
DECKS,PORCHES DL 15 PSF  
STAIRS LL 40 PSF

-- ALLOWABLE SOIL BEARING PRESSURE: 2000 PSF (ASSUMED IN ACCORDANCE WITH TABLE 1804.2, IBC 2006)

THIS DESIGN WAS PERFORMED IN THE ABSENCE OF A SOILS INVESTIGATION. THE CONTRACTOR / OWNER SHOULD CONDUCT A SOILS INVESTIGATION PRIOR TO COMMENCEMENT OF CONSTRUCTION TO VERIFY THE REASONABLENESS OF THIS ASSUMPTION. A SOILS INVESTIGATION IS REQUIRED FOR ALL SITES LOCATED IN SEISMIC DESIGN CATEGORIES C,D,E, OR F AS INDICATED IN IBC 2006, SECTIONS 1802.2.2.6 & 1802.2.2.7. SOILS INVESTIGATION SHALL INCLUDE EVALUATIONS OF POTENTIAL SEISMIC HAZARDS INCLUDING SLOPE INSTABILITY, LIQUEFACTION, SURFACE RUPTURE DUE TO FAULTING OR LATERAL SPREADING, AND ADDITIONAL REQUIREMENTS AS INDICATED IN SECTION 1802.2.2.7 FOR SEISMIC DESIGN CATEGORIES D,E, OR F.

**FILL & EXCAVATION**  
-- ALL FILL MATERIAL SHALL BE SELECT MATERIAL CAPABLE OF ATTAINING 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST.  
-- BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, CONSTRUCTION MATERIAL, COBBLE, BOULDERS, BOTTLES, CANS, OR OTHER DELETERIOUS MATERIAL THAT AFFECTS THE COMPATIBILITY OF THE MATERIAL. BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION, WATERPROOFING, OR DAMPROOFING MATERIAL.  
-- THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING TO PROVIDE FOR POSITIVE DRAINAGE.  
-- FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 6" AND SHALL BE COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.  
-- CONTRACTOR SHALL TAKE MEASURES AS TO PREVENT CAVE-IN OF FOOTING EXCAVATIONS AS MAY BE REQUIRED.  
-- 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.

**FOUNDATIONS & FOOTINGS**  
-- FOOTINGS & FOUNDATIONS SHALL BE BUILT ON UNDISTURBED SOIL OR COMPACTED FILL MATERIAL  
-- TOP SURFACE OF FOOTINGS SHALL BE LEVEL. BOTTOM SURFACE OF FOOTINGS ARE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 1:10 SLOPE. STEPPED FOOTINGS ARE ACCEPTABLE.  
-- MINIMUM DEPTH OF FOOTINGS SHALL BE 12" BELOW EXISTING GROUND SURFACE IN ACCORDANCE WITH IBC 2012.

**STEEL BOLTS**  
-- ALL BOLTS SHALL BE ASTM A325, EXCEPT ANCHOR BOLTS MAY BE ASTM A-307 OR ASTM A-36  
-- ALL GROUT TO BE USED UNDER BEARING DEVICES, BASE PLATES, EQUIPMENT BASES, ETC., IS TO BE NON-METALLIC, NON-SHRINK, PRE-MIXED GROUT, AND SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C827  
-- BOLT HOLES SHALL NOT BE CUT OR ENLARGED BY FLAME CUTTING IN THE FIELD.

**STRUCTURAL CONCRETE**  
-- ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.  
-- AIR ENTRAINMENT SHALL BE 5% BY VOLUME  
-- ALL EXTERNALLY EXPOSED CORNERS OF CONCRETE SHALL BE REVEALED WITH A 3/4" X 45 DEGREE SURFACE, UNLESS INDICATED DIFFERENTLY ON DRAWINGS  
-- ALL CONCRETE FLATWORK SHALL CONFORM TO THE FOLLOWING TOLERANCES AS INDICATED BY ASTM E1155:  
--> OVERALL FLATNESS: F2-20  
--> MINIMUM LOCAL FLATNESS: F2-15  
--> OVERALL LEVELNESS: F2-15  
--> MINIMUM LOCAL LEVELNESS: F2-10  
-- WIRE BRUSH AND LIGHTLY OIL ANCHOR BOLTS AFTER CONCRETE PLACEMENT  
-- CONSTRUCTION JOINTS WHEN REQUIRED SHALL BE LOCATED AT MIDSPANS OF SLABS OR BEAM.  
-- WET (NOT FLOOD) FORMS, REINFORCEMENT, AND FOOTING AND GRADE BEAM EXCAVATIONS IMMEDIATELY BEFORE PLACING CONCRETE. REMOVE ALL DELETERIOUS MATERIAL (SAWDUST, WOOD CHIPS, BOTTLES, ETC.) FROM EXCAVATION PRIOR TO CONCRETE PLACEMENT.  
-- CONCRETE SLABS SHALL BE MACHINE TROWELED FINISHED AND RECEIVE A COAT OF SEALER/HARDENER LIQUID MEMBRANE CURING COMPOUND TO BE APPLIED IMMEDIATELY AFTER SLAB IS FINISHED. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.  
-- PROTECT FRESHLY PLACED CONCRETE IN ACCORDANCE WITH ACI 318-99, SECTIONS 5.11, 5.12, & 5.13.  
-- CURING, COLD WEATHER REQUIREMENTS, AND HOT WEATHER REQUIREMENTS\* CONCRETE SHALL BE MAINTAINED ABOVE 50° FAHRENHIEIT FOR AT LEAST THE FIRST 7 DAYS AFTER PLACEMENT.  
-- ALL CONCRETE SHALL BE PLACED IN STRICT ACCORDANCE WITH ACI 318-99, SECTION 5.10

**STRUCTURAL CONCRETE REINFORCEMENT NOTES**  
-- ALL REINFORCEMENT BENDS TO BE IN ACCORDANCE WITH ACI 318-99, SECTION 7.2  
-- ALL REINFORCEMENT TO BE COLD BENT, UNLESS AUTHORIZED BY THE ENGINEER OF RECORD.  
-- ALL REINFORCEMENT SHALL BE FREE FROM MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT DECREASE BOND, WITH THE EXCEPTION OF EPOXY COATED REINFORCEMENT OR C CONSTRUCTION DOWELS AS INDICATED ON STRUCTURAL DRAWINGS.  
-- EXCEPT FOR PRESTRESSING TENDONS, STEEL REINFORCEMENT WITH RUST, MILL SCALE, OR A COMBINATION OF BOTH SHALL BE CONSIDERED SATISFACTORY, PROVIDED THE MINIMUM DIMENSIONS (INCLUDING HEIGHT OF DEFORMATIONS) AND WEIGHT OF A HAND-WIRE-BRUSHED TEST SPECIMEN COMPLY WITH APPLICABLE ASTM SPECIFICATIONS AS REFERENCED BY ACI 318-99, SECTION 3.5  
-- ALL REINFORCEMENT AND DUCTS SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED, AND SHALL BE SECURED AGAINST DISPLACEMENT WITHIN TOLERANCES PERMITTED IN ACI 318-99, SECTION 7.5.2  
-- WELDING OF CROSSING BARS SHALL NOT BE PERMITTED FOR ASSEMBLY UNLESS AUTHORIZED BY THE ENGINEER OF RECORD.  
-- ALL REINFORCEMENT COVER TO BE IN ACCORDANCE WITH ACI 318-99, SECTION 7.7, TO INCLUDE REINFORCEMENT NOT INDICATED IN STRUCTURAL DRAWINGS.  
-- ALL DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL COMPLY WITH THE REQUIREMENTS OF ACI-SP-46  
-- IF NO SPLICE LENGTH DIMENSION IS PROVIDED, THE SPLICE LENGTH SHALL BE CLASS "B" LENGTH AS PER ACI 318-99, SECTION 12.15  
-- DEVELOPMENT LENGTHS SHALL BE IN ACCORDANCE WITH ACI 318-99, SECTION 12.3 FOR COMPRESSION STEEL AND SECTION 12.5 FOR STANDARD HOOKS IN TENSION.  
-- PROVIDE (2) #5 BARS, EACH WAY AT RE-ENTRANT CORNERS.  
-- ALL REINFORCING BARS TO BE GRADE 60 DEFORMED BARS COMPLYING WITH ASTM A615  
-- ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185

### SCHEDULE OF AREAS:

<b>HEATED AREA:</b>	
VESTIBULE	= 112.00 SQ. FEET
OFFICES	= 2050.56 SQ. FEET
WAREHOUSE	= 5151.05 SQ. FEET
WORKSHOP	= 3473.95 SQ.
TOTAL HEATED	= 10787.56 SQ. FEET

<b>UNHEATED AREA:</b>	
STORAGE	= 184.00 SQ. FEET
TRUCK BAY	= 574.44 SQ. FEET
TOTAL UNHEATED	= 758.44 SQ. FEET

TOTAL HEATED & UNHEATED AREA = 11546.00 SQ. FEET

### CODE ANALYSIS IBC 2012

NEW ADDITION SEPARATED BY 8 FEET  
CHAPTER 3 USE: S-1, B  
CHAPTER 5 AREAS: S-1 9700 S.F ALLOWABLE 17,500  
B- 2051 S.F.  
II-B- Building Separation  $5 \leq X < 10$  - 1Hour  
TWO HOUR SEPARATION BETWEEN B AND S-1  
TWO HOUR RATING FOR STEEL BEAMS AND COLUMNS.  
THREE HOUR SEPARATION (EXISTING) BETWEEN EXISTING BUILDNG AND EXPANSION  
NON SPRINKLERED- FIRE ALARM AND EXTINGUISHERS

### SHEET INDEX

### CS- COVER SHEET

### EXISTING SURVEY

- CIVIL
- 1 CIVIL TITLE SHEET
  - 2 INDEX SHEET
  - 3 DEMOLITION PLAN
  - 4 TREE PROTECTION AND REMOVAL PLAN AND EROSION CONTROL PLAN
  - 5 TREE PROTECTION AND REMOVAL PLAN AND EROSION CONTROL PLAN
  - 6 CIVIL- SEDIMENT AND EROSIN CONTROL DETAILS
  - 7 SITE DEVELOPMENT PLAN
  - 8 SITE DEVELOPMENT
  - 9 PAVING GRADING DRAINAGE DETAILS
  - 10 WATER AND SANITARY SEWER PLAN

### ARCHITECTURAL/STRUCTURAL

S-1.0 STRUCTURAL NOTES  
S-2.0 FOUNDATION PLAN  
S-3.0 MEZZANINE FLOOR FRAMING  
S-4.0 DETAILS  
S-5.0 DETAILS

A0.0 DEMOLITION PLAN  
A1.0 ARCHITECTURAL SITE PLAN  
A-2.0 FLOOR PLAN  
A-2.1 FLOOR PLAN TYPES  
A-2.2 DETAILED PLAN  
A-3.1 REFLECTIVE CEILING PLAN  
A-4.0 ROOF PLAN  
A-5.0 ELEVATIONS  
A-5.1 TOILET ELEVATIONS  
A-6.1 BUILDING SECTION  
A-6.2 SECTIONS  
A-7.0 DETAILS  
A-7.1 SECTION DETAILS

### MECHANICAL

M1.0 MECHANICAL PLAN  
M2.0 MECHANICAL SCHEDULES  
M3.0 MECHANICAL PLAN-DETAILS

### PLUMBING

P1.0 SANITARY SEWER PLAN  
P2.0 WATER DISTRIBUTION PLAN  
P3.0 PLUMBING NOTES, LEGEND, SCHEDULES

### ELECTRICAL

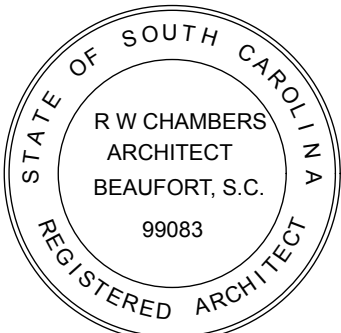
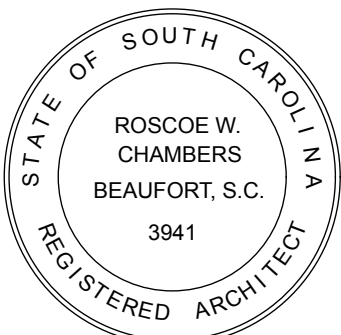
E1.0 LIGHTING PLAN  
E2.0 POWER PLAN

## FIRE AND RESCUE EXPANSION

MABEL T WILLIS  
BLVDC  
WALTERBORO,  
S.C. 29488

### COLLETON COUNTY

R.W. CHAMBERS, ARCHITECT  
P.O. BOX 1181  
BEAUFORT, S.C. 29901



### CONSULTANTS

	10/1/2012	CD
		PP
		DD
MARK	DATE	DESCRIPTION

PROJECT NO:	20120424
MODEL FILE:	
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CHK'D BY:	
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### SHEET TITLE

### COVER SHEET

## CS