NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B

OWNER:
NCDOT - DIVISION 14
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

ARCHITECT:
6302 Fairview Rd., Suite 102
Charlotte, North Carolina, 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com

PROJECT ADDRESS:
2447 Tallulah Road
Robbinsville, NC 28771

LIST OF DRAWINGS

GENERAL		
G001	COVER	
G002	APPENDIX B	
G003	LIFE SAFETY	
CIVIL		
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C001	TOPOGRAPHIC SURVEY	
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C200	SITE NOTES & DETAILS	
C201	SITE DETAILS	
STRUCTURAL		
S200	FOUNDATION PLAN	
S201	ROOF FRAMING PLAN	
S800	STRUCTURAL NOTES	
ARCHITECTURAL		
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A400	BUILDING THRU-SECTIONS	
A401	WALL SECTIONS	
A402	WALL SECTIONS	
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A404	TYPICAL WALL TYPES	
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P000	PLUMBING SCHEDULES, LEGEND AND GENERAL NOTES	
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P800	PLUMBING DETAILS	
ELECTRICAL		
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E300	ELECTRICAL LIGHTING PLAN	
E900	ELECTRICAL SCHEDULES AND RISER DIAGRAM	

LOCATION MAP

LIST OF ABBREVIATIONS

AFF	ABOVE FINISHD FLOOR	CJT	CONSTRUCTION JOINT	FF	FINISH FLOOR	JAN	JANITOR	OC	ON CENTER
AP	ACCESS PANEL	CONT	CONTINUOUS	FEC	FIRE EXTINGUISHER CABINET	JS	JANITOR SINK	OPNG	OPENING
ACOUS	ACOUSTICAL	CONTR	CONTRACTOR	FH	FIRE HOSE	JT	JOINT	OD	OUTSIDE DIAMETER
ADJ	ADJACENT	CJ	CONTROL JOINT	FL, FLR	FLOOR			OH	OVERHEAD
ACT	ACOUSTICAL CEILING TILE			FD	FLOOR DRAIN	KIT	KITCHEN		
AWP	ACOUSTICAL WALL PANEL	DP	DAMP PROOFING	FTG	FOOTING			PTD	PAINTED
A/C	AIR CONDITIONING	DEMO	DEMOLISH	FND	FOUNDATION	LBL	LABEL	PR	PAIR
ALT	ALTERNATE	DEPT	DEPARTMENT	FS	FULL SIZE	LAB	LABORATORY	PTR	PAPER TOWEL RECEPTOR
ALUM	ALUMINUM	DET,DTL	DETAIL	FUT	FUTURE	LAM	LAMINATE(D)	PKG	PARKING
AB	ANCHOR BOLT	DIA	DIAMETER			LAV	LAVATORY	PART BD	PARTICLE BOARD
ANOD	ANODIZED	DIM	DIMENSION	GALV	GALVANIZED	LYR	LAYER	PART	PARTITION
APPROX	APPROXIMATE	DISP	DISPENSER	G	GAS	LDR	LEADER	PL	PROPERTY LINE
ARCH	ARCHITECT, ARCHITECTURAL	DSP	DISPOSAL	GA	GAUGE	LH	LEFT HAND	PLAM	PLASTIC LAMINATE
AD	AREA DRAIN	DO	DITTO, REPEAT, SAME	GEN	GENERAL	LIB	LIBRARY	PL	PLATE
@	AT	DR	DOOR	GC	GENERAL CONTRACTOR	LT	LIGHT	PLBG	PLUMBING
AUTO	AUTOMATIC	DBL	DOUBLE	GL	GLASS, GLAZING	LW	LIGHT WEIGHT	PLYWD	PLYWOOD
		DN	DOWN	GB	GRAB BAR			PRE FAB	PREFABRICATED
BM	BEAM	DS	DOWNSPOUT	GR	GRADE, GRADING	MACH	MACHINE	PRT	PRESSURE TREATED
BP	BEARING PLATE	DT	DRAIN TILE	GSF	GROSS SQUARE FOOT	MH	MAN HOLE	PT	PAINT
BM	BENCH MARK	DWR	DRAWER	GWB	GYPSUM WALL BOARD	MHC	MAN HOLE COVER	PVC	POLYVINYL CHLORIDE
BITUM	BITUMINOUS	DWG	DRAWING	GYP	GYPSUM	MFR	MANUFACTURE	PC CONC	PRECAST CONCRETE
BLKG	BLOCKING	DF	DRINKING FOUNTAIN	GYP BD	GYPSUM BD	MFRR	MANUFACTURER	PVMT	PAVEMENT
BLK	BLOCK					MAS	MASONRY		
BD	BOARD	EA	EACH	HDWR	HARDWARE	MO	MASONRY OPENING	QTY	QUANTITY
BOT	BOTTOM	EF	EACH FACE	HDWD	HARDWOOD	MAT	MATERIALS	QT	QUARRY TILE
BRK	BRICK	EW	EACH WAY	HVAC	HEATING, VENTILATING & AIR CONDITIONING	MAX	MAXIMUM	QTB	QUARRY TILE BASE
BLDG	BUILDING	E	EAST			MECH	MECHANICAL		
BN	BULLNOSE	ELEC	ELECTRICAL	HT, HGT	HEIGHT	MET	METAL	RAD	RADIUS
		ELEV	ELEVATION	HEX	HEXAGONAL	M	METER	RECP	RECEPTACLE
CAB	CABINET	EL	ELEVATOR	HWY	HIGHWAY	MEZZ	MEZZANINE	REF	REFERENCE
CI	CAST IRON	EMER	EMERGENCY	HM	HOLLOW METAL	MIN	MINIMUM	REFR	REFRIGERATOR
CPT	CARPET(ED)	ENCL	ENCLOSURE	HORZ	HORIZONTAL	MISC	MISCELLANEOUS	RE:	REFER TO
CB	CATCH BASIN	ENTR	ENTRANCE	HB	HOSE BIBB	MR	MOISTURE RESISTANT	REINF	REINFORCED(ING)
CLG	CEILING	EQ	EQUAL	HW	HOT WATER	MTD	MOUNTED	REQ'D	REQUIRED
CLG HT	CEILING HEIGHT	EQUIP	EQUIPMENT	HR	HOUR	MTL	METAL	RVT	RESILIENT VINYL TILE
CL	CENTER LINE	EST	ESTIMATE(D)					REV	REVISED
CER	CERAMIC	EXHST	EXHAUST	IN	INCH	NAT	NATURAL	RH	RIGHT HAND
CT	CERAMIC TILE	EXIST	EXISTING	INCL	INCLUDING	NRC	NOISE REDUCTION COEFFICIENT	R	RISER
CB	CHALK BOARD	EXP	EXPANSION	ID	INSIDE DIAMETER			RD	ROOF DRAIN
CIRC	CIRCUMFERENCE	EJ	EXPANSION JOINT	INSUL	INSULATION	NOM	NOMINAL	RM	ROOM
CO	CLEAN OUT			INT	INTERIOR	N	NORTH	RO	ROUGH OPENING
CLR	CLEAR	F	FABRIC	INTERM	INTERMEDIATE	NIC	NOT IN CONTRACT		
COL	COLUMN	FAB	FABRICATE	INV	INVERT	NTS	NOT TO SCALE	SAN	SANITARY
CONC	CONCRETE	FT	FEET			NO, #	NUMBER	SCHED	SCHEDULE
CMU	CONCRETE MASONRY UNIT	FIG	FIGURE					SEC	SECOND
CONST	CONSTRUCTION	FIN	FINISH						

SECT	SECTION
SIM	SIMILAR
STC	SOUND TRANSMISSION COEFFICIENT
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE, STRUCTURAL
SGFT	STRUCTURAL GLAZED FACING TILE
ST, STL	STRUCTURAL STEEL
SUSP	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
TEL	TELEPHONE
TEMP	TEMPERATURE
THK	THICKNESS
TPD	TOILET PAPER DISPENSER
TOS	TOP OF SLAB/STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNFIN	UNFINISHED
UNO	UNLESS OTHERWISE NOTED
U	URINAL
VEN	VENEER
VIF	VERIFY IN FIELD
VEST	VESTIBULE
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VF	VINYL FABRIC
VWC	VINYL WALL COVERING
VT	VINYL TILE
VOL	VOLUME
WC	WATER CLOSET
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WIND	WINDOW
W/	WITH
W/O	WITHOUT
WD	WOOD
YD	YARD

MATERIAL SYMBOLS

EARTH	BRICK	RIGID INSULATION	1 HR RATING
GYPSUM BOARD	STEEL	BATT OR LOOSE INSULATION	2 HR RATING
GRAVEL TYPE 1 (ENGINEERED FILL)	GROUT	CAVITY DRAINAGE MAT	SMOKE RATING
PRECAST CONCRETE	ROUGH WOOD BLOCKING	ALUMINUM	EXISTING BUILDING MATERIALS
CRUSHED STONE	ROUGH WOOD BLOCKING, NON-CONTINUOUS	STANDING SEAM ROOF	
CONCRETE MASONRY UNIT (CMU)	WOOD, FINISHED WOODWORK	CONCRETE	
METAL STUD PARTITION	PLYWOOD (LARGE SCALE)	TERRAZZO	

GRAPHIC SYMBOLS

A — COLUMN CENTERLINE A	1i — PARTITION TYPE 1I (1hr RATED) SEE PARTITION LEGEND	PROPERTY LINE	3052 / 36x30x14 — CASEWORK TAG
3 / A201 SIM — DETAIL #3 on SHEET A201	1 — REVISION NO. 1	FENCE	A — ACCESSORY TAG
1 / A101 SIM — BUILDING SECTION (NO.) or WALL SECTION (LETTER) on SHEET A101	+ 100.75 — EXISTING SPOT ELEVATION	EXISTING TREE TO REMAIN	W1 — WINDOW TAG (TYPE LETTER)
ROOM NAME / 1000 — ROOM NUMBER 1000	+ 100.75 — EXISTING SPOT ELEVATION	EXISTING TREE TO BE REMOVED	1i — EQUIPMENT SYMBOL (NUMBER)
3 / A701 / 2 — INTERIOR ELEVATIONS # 2 and #3 on SHEET A501	100 — EXISTING CONTOURS	BENCHMARKS: FLOOR ELEV., or OTHER VERICAL ELEV.	1000-1 — DOOR TAG
3 / A301 — EXTERIOR ELEVATIONS #3 on SHEET A301	100 — FINISHED CONTOURS	A — KEYNOTE SYMBOL: DEMOLITION and NEW CONSTRUCTION	1 / A101 — VIEW NAME, 1/8" = 1'-0" — PLAN VIEW TITLE WITH NORTH ARROW

SET NO.

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Rd., Suite 102
Charlotte, North Carolina, 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA — CLARK PATTERSON ENGINEERS/ARCHITECTS — DBA CLARK PATTERSON LEE — CHARLOTTE, NC — 51301 — REGISTERED ARCHITECTS

TIMOTHY SCOTT KNAPP — REGISTERED ARCHITECT — 7444 — NORTH CAROLINA — CHARLOTTE, N.C.

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: COVER

PROJECT NUMBER: 13283.00

G001
DRAWING NUMBER

2/18/2016 11:15:10 AM
C:\Users\dsceney\Documents\Graham DOT_13283_arch_2014_DSceney.rvt

APPENDIX B

GENERAL INFORMATION

Name of Project: NCDOT - DIVISION - 14 ASSEMBLY OFFICE BUILDING
Address: 2447 TALLULAH ROAD, ROBBINSVILLE, N.C.
Proposed Use: OFFICE
Owner or Authorized Agent: STATE Phone #
Owned By: ☐ City/County ☐ Private ■ State
Code Enforcement Jurisdiction: State of North Carolina ☐ City ROBBINSVILLE ☐ County GRAHAM

LEAD DESIGN PROFESSIONAL: Timothy Knapp, AIA, Clark Patterson Lee

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural	Clark Patterson Lee	Timothy Knapp	7444	800-274-9000 x 3136
Civil	Clark Patterson Lee	Rich Edinger	031877	800-274-9000 x 3003
Electrical	Clark Patterson Lee	Tom Bucher	034252	800-274-9000 x 3625
Fire Alarm				
Plumbing	Clark Patterson Lee	Greg Kyzer	27581	800-274-9000 x 3209
Mechanical	Clark Patterson Lee	Greg Kyzer	27581	800-274-9000 x 3209
Sprinkler/Standpipe				
Structural	Clark Patterson Lee	Joe Rausch	031320	800-274-9000 x 1074
Retaining Walls > 5'-0" High				
Other				

2012 EDITION OF NC CODE FOR: ■ New Construction ☐ Addition ☐ Upfit

EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair ☐ Renovation

CONSTRUCTED: (Date) N/A **ORIGINAL USE(S):** N/A

RENOVATED: (Date) N/A **CURRENT USE(S):** N/A

PROPOSED USE(S): N/A

BASIC BUILDING DATA

Construction Type: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B
Mixed Construction ■ No ☐ Yes Types
Sprinklers: ■ No ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D ☐ NFPA 14
Standpipes: ■ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ■ No ☐ Yes
Building Height: 22' - 4" Feet 1 Number of Stories ☐ Unlimited Per
Mezzanine: ■ No ☐ Yes
High Rise: ■ No ☐ Yes Central Refer. Sheet # (if provided)
Flood Hazard Area: ■ No ☐ Yes
Gross Building Area:

FLOOR	EXISTING (SQ. FT.)	RENOVATED (SQ. FT.)	NEW (SQ. FT.)	SUB-TOTAL
Basement:	-	-	-	-
Ground:	-	-	-	-
First Floor:	-	-	2,825	2,825
TOTAL			2,825	

ALLOWABLE AREA

Primary Occupancy: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
■ Business ☐ Educational ☐ Factory-Industrial ☐ F-1 ☐ F-2
☐ High-Hazard ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5
☐ Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Use Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile ☐ Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ Storage ☐ S-1 ☐ S-2 ☐ High-Piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open
☐ Enclosed ☐ Repair

Secondary Occupancy: N/A
Special Occupancy: ☐ 508.2 ☐ 508.3 ☐ 508.4 ☐ 508.5 ☐ 508.6 ☐ 508.7 ☐ 508.8
Mixed Occupancy: ■ No ☐ Yes Separation: Hr. Exception:

☐ Non-Separated Mixed Occupancy (302.3.2)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Mixed Occupancy (302.3.3) - See Below for Area Calcs.
For each story, the area of occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B ≤ 1
N/A + N/A + ____ = ____ ≤ 100

Accessory Occupancies: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☐ Business ☐ Educational ☐ Factory-Industrial ☐ F-1 ☐ F-2
☐ High-Hazard ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5
☐ Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Use Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile ☐ Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ Storage ☐ S-1 ☐ S-2 ☐ High-Piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open
☐ Enclosed ☐ Repair

Accessory Occupancies:
☐ Furnace room where any piece of equipment is over 400,000 BTU per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located in occupancies other than Group F
☐ Laboratories ☐ Repair shops, not classified as Group H. Located in a Group E or I-s occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427

Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

N/A

APPENDIX B CONTINUED

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 503 [5] AREA	(C) AREA FOR FRONTAGE [1] INCREASE	(D) AREA FOR SPRINKLER INCREASE [2]	(E) ALLOWABLE AREA OR UNLIMITED [3]	(F) MAXIMUM BUILDING AREA [4]
1	OFFICE	2825	6000		N/A	6000	6000
-	-	-	-	-	-	-	

1 Frontage area increases from Section 506.2 are computed as thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)
b. Total Building Perimeter = N/A (P)
c. Ratio (F/P) = N/A (F/P)
d. W = Minimum Width of Public Way = N/A (W)
e. Percent of Frontage Increase I = 100 [f/p - 0.25] x W/30 = N/A (%)

2 The Sprinkler Increase per Section 506.3 is as follows:
a. Multi-Story Building I = 200 Percent
b. Single Story Building I = 300 Percent
s

3 Unlimited area applicable under conditions of Section 507

4 Maximum Building Area = Total number of stories in the building x E (506.4)

5 The maximum area of open parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
TYPE OF CONSTRUCTION	TYPE V-B		TYPE V-B	
BUILDING HT. IN FEET	FEET 40'-0"	FEET = H + 20' = 60'-0"	22'-4"	
BUILDING HT. IN STORIES	STORIES 2	STORIES + 1 = 3	STORIES 1	

FIRE PROTECTION REQUIREMENTS
Life Safety Plan Sheet #, if Provided G003

BUILDING ELEMENT FIRE	SEPARATION	RATING REQ'D DISTANCE	DETAIL # PROVIDED (W/ REDUCTION	DESIGN # AND FOR SHEET	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETR.	RATED JOINTS
Structural frame, including columns, girders, trusses	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bearing Walls							
Exterior	>30'	0	N/A	N/A	N/A	N/A	N/A
North	>30'	0	N/A	N/A	N/A	N/A	N/A
East	>30'	0	N/A	N/A	N/A	N/A	N/A
West	>30'	0	N/A	N/A	N/A	N/A	N/A
South	>10'	0	N/A	N/A	N/A	N/A	N/A
Interior	N/A	0	N/A	N/A	N/A	N/A	N/A
Nonbearing walls and partitions							
Exterior							
North	>30'	0	N/A	N/A	N/A	N/A	N/A
East	>30'	0	N/A	N/A	N/A	N/A	N/A
West	>30'	0	N/A	N/A	N/A	N/A	N/A
South	>30'	0	N/A	N/A	N/A	N/A	N/A
Interior	N/A	0	N/A	N/A	N/A	N/A	N/A
Rated Rooms	N/A	0	N/A	N/A	N/A	N/A	N/A
Rated Rooms	N/A	0	N/A	N/A	N/A	N/A	N/A
Floor construction, including supporting beams and joists	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof construction, including supporting beams and joists	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shafts - Exit	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shafts - Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Corridor Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Occupancy Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Party/Fire Wall Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Smoke Barrier Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tenant Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A = NOT APPLICABLE

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ■ Yes
Exit Signs: ☐ No ■ Yes
Fire Alarm: ■ No ☐ Yes ☐ Partial
Smoke Detection Systems: ■ No ☐ Yes
Panic Hardware: ☐ No ■ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet # G003

☐ Fire and/or smoke rated wall locations (Chapter 7)
■ Assumed and real property line locations
■ Exterior wall opening area with respect to distance to assumed property line (705.8)
■ Existing structures within 30' of the proposed building
■ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
■ Occupant loads for each area
■ Exit access travel distances (1016)
■ Common path of travel distances (1014.3 & 1028.8)
■ Dead end lengths (1018.1.10)
■ Clear exit widths for each exit door
■ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
■ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
■ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The Square footage of each fire area (902)
☐ The square footage of each smoke compartment (407.4)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

N/A

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR W/ 5' ACCESS AISLE	VAN SPACES W/ 8' ACCESS AISLE	
TOTAL PARKING	11	36	-	1	1
-					
TOTAL	37 spaces				

STRUCTURAL DESIGN - See Structural Sheet S800

DESIGN LOADS

Importance Factors: Wind (Iw) 1.0; Snow (Is) 1.0; Seismic (Ie) 1.0
Live Loads: Roof 20 psf; Mezzanine n/a psf; Floor 100 psf
Ground Snow Load: 15 psf
Wind Load: Basic Wind Speed 90 mph (ASCE 7-05); Exposure Category B; Wind Base Shears (for MWFRS) Vx = 15.4 kips Vy = 15.4 kips

SEISMIC DESIGN CATEGORY ☐ A ☐ B ■ C ☐ D

Occupancy Category II
Spectral Response Acceleration Ss 38.6 %g S1 12.1 %g
Site Classification C (Field Test)
Basic Structural System (check one)
■ Bearing Wall ☐ Dual w/ Special Moment Frame
☐ Building Frame ☐ Dual w/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Seismic Base Shear Vx = 10.7 kips Vy = 10.7 kips
Analysis Procedure ☐ Simplified ■ Equivalent Lateral Force ☐ Modal
Architectural, Mechanical, Components Anchored? ■ Yes ☐ No

LATERAL DESIGN CONTROL: ☐ Earthquake ■ Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2500 psf

SPECIAL INSPECTIONS REQUIRED ■ Yes ☐ No

PLUMBING FIXTURE REQUIREMENTS:

USES	WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NEW	2	1	1	2	1	1	1	1
REQUIRED	1	1	-	1	1	-	-	1

SPECIAL APPROVALS
Special Approval: (Local Jurisdiction, Dept. of Insurance, SBCCI, ICC, etc., Describe Below)
N/A

APPLICABLE CODES
Edition Year of Code: See List Below
[X] New Construction ☐ Renovation (Existing Building) ☐ Upfit ☐ Alteration

TRADE	CODE	EDITION
General Construction	NCSBC: Building Code	2012
Administration and Enforcement	NCSBC: Administration Code	2012
Plumbing	NCSBC: Plumbing Code	2012
Mechanical	NCSBC: Mechanical Code	2012
Electrical	NCSBC: Electrical Code - NFPA 70	2011
Fire Prevention	NCSBC: Fire Prevention Code	2012
Gas	NCSBC: Fuel Gas Code	2012
Energy-Commercial	NCSBC: Energy Conservation Code	2012
Accessibility	NCSBC: Building Code: Chapter 11 & ANSI 117.1	2003
Rehabilitation	NCSBC: Rehabilitation Code	2012
Life Safety	NFPA 101 - Life Safety Code	2000 & 2009
Special Occupancy	Class	
	Code	
Special Fire Codes		
Zoning		NA

MECHANICAL SUMMARY - Refer to Mechanical Drawings
MECHANICAL SYSTEM AND EQUIPMENT
Thermal Zone:
winter dry bulb:
summer dry bulb:
Interior Design Conditions:
winter dry bulb:
summer dry bulb:
relative humidity:
Building Heating Load:
Building Cooling Load:
Mechanical Spacing Conditioning System:
Unitary
description of unit:
heating efficiency:
cooling efficiency:
size category of unit:
Boiler
size category. If oversized, state reason:
Chiller
size category. If oversized, state reason:
List equipment efficiencies:

SCHEDULE OF SPECIAL INSPECTION SERVICES
The following sheets comprise the required schedule of special inspections for this project. The construction divisions require special inspections for this project are as follows:

☐ IT-1 Verification of Soils
■ IT-2 Excavation and Fill
☐ IT-3 Piling and Drilling Piers
☐ IT-4 Modular Retaining Walls
■ IT-5 Reinforced Concrete
☐ IT-6 Post Tension Slab
☐ IT-7 Pre-Cast Concrete Erection
☐ IT-8 Pre-Stressed Concrete
☐ IT-9 Inspection of Pre-Cast Fabricators
☐ IT-10 Inspection of Structural Steel Fabricators
☐ IT-11 Structural Masonry
☐ IT-12 Welding
☐ IT-13 High Strength Bolts & Steel Framing Insp.
☐ IT-14 Sprayed Fire-Resistance Materials
☐ IT-15 Exterior Insulation and Finish System
☐ IT-16 Seismic Resistance
☐ IT-17 Smoke Control
☐ IT-18 Detention Basin
☐ IT-19 Special Cases

ENERGY SUMMARY

ENERGY REQUIREMENTS

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Climate Zone: ☐ 3 ■ 4 ☐ 5
Method of Compliance:
☐ Prescriptive (Energy Code)
■ Performance (Energy Code)
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly)
Description of assembly: Wood truss with shingles - Thermal insulation at ceiling, vented attic
U-Value of total assembly: .032
R-Value of insulation: 30.0
Skylights in each assembly: N/A
U-Value of skylights: N/A
Total square footage of skylights in each assembly: N/A

Exterior Walls (each assembly)
Description of assembly: Wood studs with 5/8" sheathing, vapor barrier, 2" ci R10, 2 1/4" air cavity, brick. 1" furring strip at fiber cement siding
U-Value of total assembly: .045
R-Value of insulation: R10 continuous, R13 batt insulation
Openings (windows or doors with glazing) Operable fiberglass window, insulated metal door, full glass door
U-Value of assembly: .32 (window), .65 (door 1), .8 (door 2)
Solar Heat Gain Coefficient: .29 (window), n/a (door 1), .7 (door 2)
Projection Factor:
Door R-Values N/A

Walls below grade (each assembly)
Description of assembly: N/A
U-Value of total assembly: N/A
R-Value of insulation: N/A

Floors over unconditioned space (each assembly)
Description of assembly: Patio - Slab on Grade
U-Value of total assembly:
R-Value of insulation:

Floors slab on grade
Description of assembly: Slab on Grade
U-Value of total assembly: .62
R-Value of insulation: R15
Horizontal/vertical requirement: 2'-0"
Slab heated: N/A

ELECTRICAL SUMMARY - See Electrical Report E900

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting Schedule
Lamp Type Required in Fixture -
Number of Lamps in Fixture -
Ballast Type Used in this Fixture -
Number of Ballasts in Fixture
Total Wattage per Fixture -
Total Interior Wattage Specified vs Allowed -
Total Exterior Wattage Specified vs Allowed

Additional Prescriptive Compliance
☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylight Control Systems

COMcheck Software Version 4.0.0

Envelope Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title:
Location: Robbinsville, North Carolina
Climate Zone: 4a
Project Type: New Construction
Vertical Glazing / Wall Area: 9%

Construction Site: Owner/Agent: Designer/Contractor:

Building Area	Floor Area
1-Office : Nonresidential	2825

Additional Efficiency Package

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Office] (c)	222	---	15.0	0.520	0.550
Exterior Wall 1: Steel-Framed, 16" o.c., [Bldg. Use 1 - Office]	2664	13.0	10.0	0.055	0.064
Window 1: Vinyl/Fiberglass Frame:Operable, Perf. Specs.: Product ID NA, SHGC 0.40, [Bldg. Use 1 - Office] (b)	144	---	---	0.250	0.450
Door 1: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	42	---	---	0.650	0.610
Door 2: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Double Pane with Low-E, Clear , SHGC 0.70, [Bldg. Use 1 - Office]	84	---	---	0.800	0.770
Roof 1: Attic Roof with Wood Joists, [Bldg. Use 1 - Office]	2664	0.0	30.0	0.032	0.027

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2012 IECC requirements in COM*check* Version 4.0.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title:
Data filename: S:\Projects\NCDOT\Graham_Co Maint\D Design\D03 Job Info\COMCHECK\GRAHAM DOT_13283_COMCHECK.cck

Report date: 09/15/15
Page 1 of 8

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
CEA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE 12" = 1'-0"

SHEET TITLE
APPENDIX B

PROJECT NUMBER
13283.00

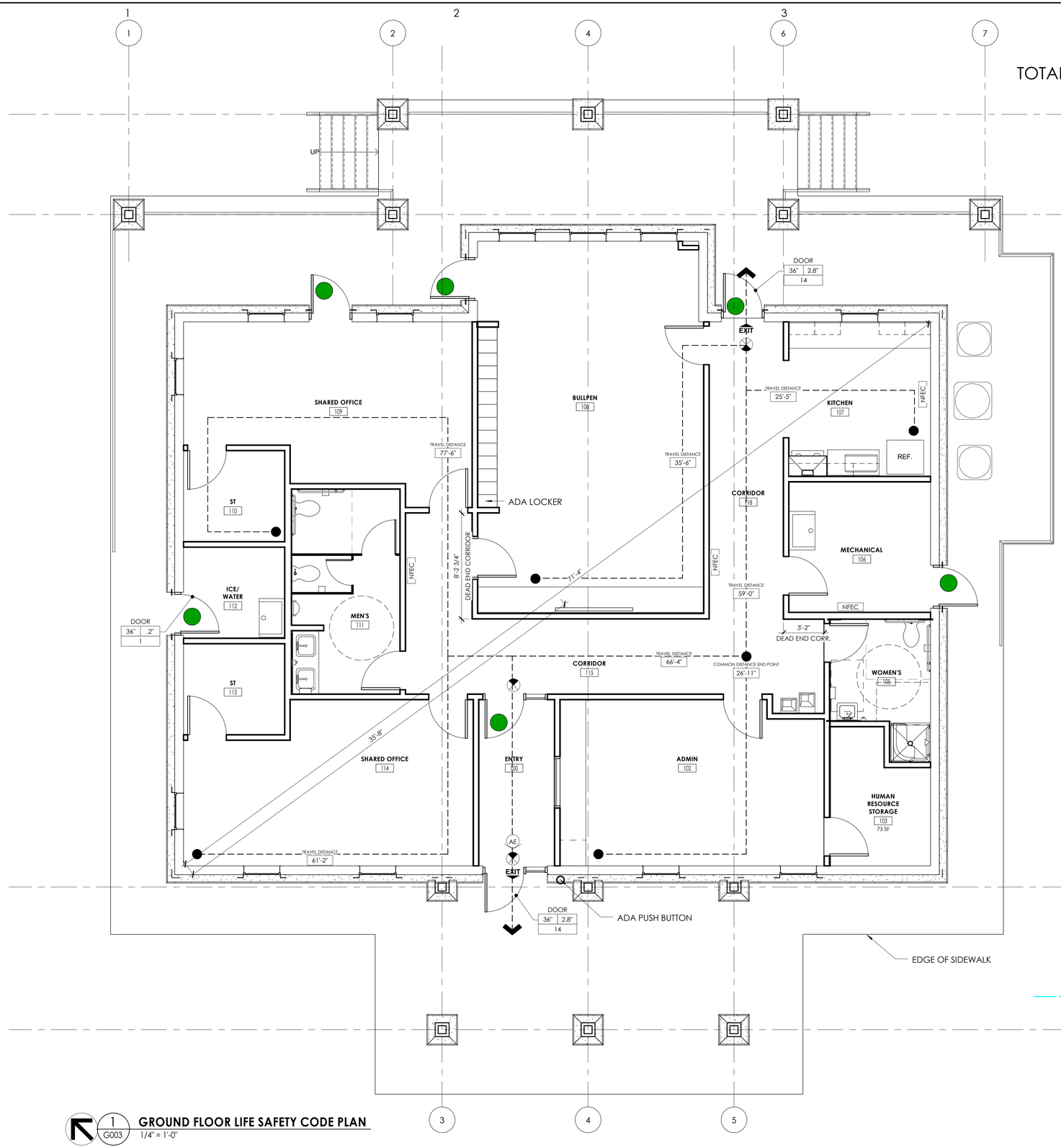
G002
DRAWING NUMBER

2/18/2016 11:15:14 AM
C:\Users\vdscersey\Documents\Graham DOT_13283_arch_2014_DScersey.rvt

GROSS SF = 2825 SF

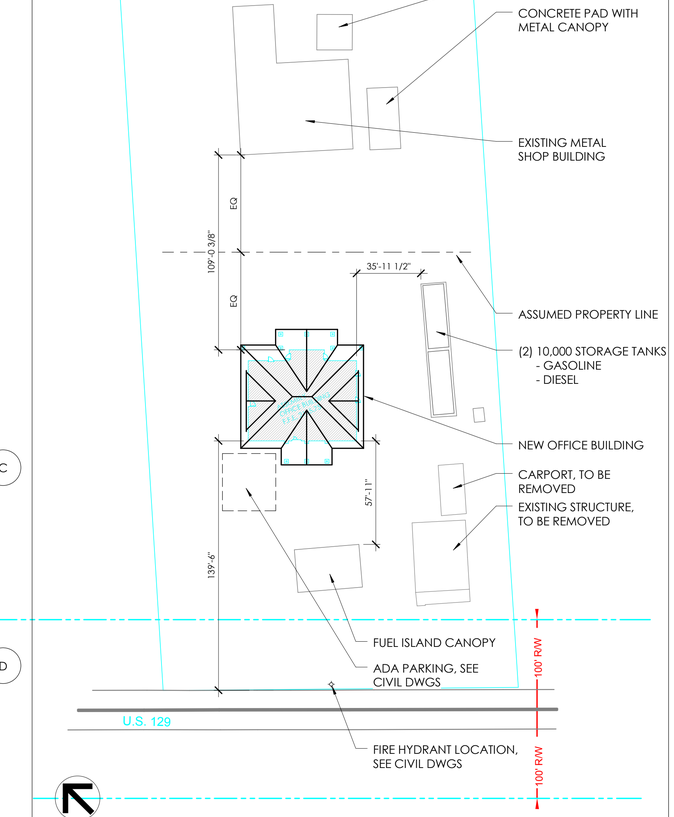
TOTAL BUSINESS OCCUPANCY: 29

SYMBOL LEGEND	
AE	ACCESSIBLE BUILDING ENTRANCE
EXIT	EXIT
ROOM NAME / 101 / 2000 SF / A-15 / 100	ROOM NAME ROOM NUMBER ROOM AREA OCCUPANT TYPE OCCUPANT LOAD
STAIR A / 60" / 44" / 100	PROVIDED WIDTH REQUIRED WIDTH ANTICIPATED LOAD
DOOR / 36" / 20" / 100	PROVIDED WIDTH REQUIRED WIDTH ANTICIPATED LOAD
TRAVEL DISTANCE 20'-0"	TRAVEL DISTANCE TO EXIT
COMMON DISTANCE END POINT 20'-0"	COMMON PATH OF EGRESS DISTANCE
MAXIMUM TRAVEL DISTANCE 20'-0"	MAXIMUM TRAVEL DISTANCE TO EXIT
MAXIMUM COMMON PATH OF EGRESS 20'-0"	MAXIMUM COMMON PATH OF EGRESS
NFEC	NEW FIRE EXTINGUISHER CABINET
FEC	FIRE EXTINGUISHER CABINET
	EXIT SIGN, SEE ELECTRICAL DWGS
	CONTROL ACCESS - CARD READER



1 G003 **GROUND FLOOR LIFE SAFETY CODE PLAN**
1/4" = 1'-0"

OVERALL SITE PLAN WITH SEPARATION DISTANCES



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Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KNOP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: LIFE SAFETY

PROJECT NUMBER: 13283.00

G003
DRAWING NUMBER

2/18/2016 11:15:17 AM

C:\Users\dscesney\Documents\Graham DOT_13283_arch_2014_DScesney.rvt

CONSTRUCTION DRAWINGS FOR

GRAHAM COUNTY ASSEMBLY OFFICE BUILDING

2447 TALLULAH ROAD
ROBBINSVILLE, NC 28771

OWNER:
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
1321 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699

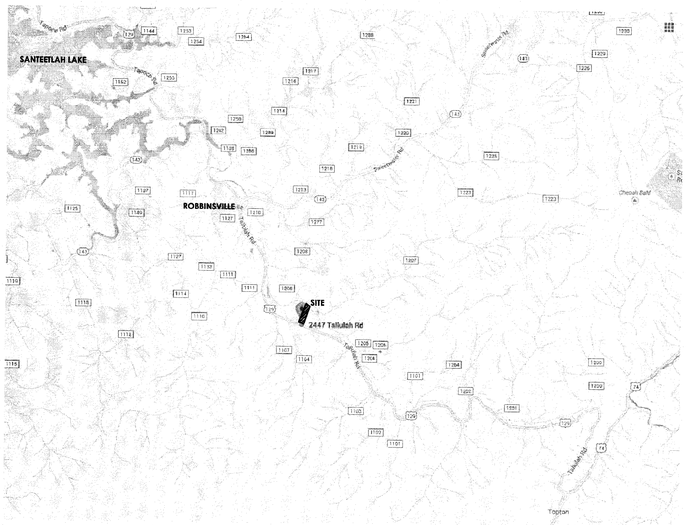
DESIGN PROFESSIONALS:
CLARK PATTERSON LEE
6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NORTH CAROLINA 28210
PHONE: (800) 831-9000
FAX: (704) 331-0402

SHEET INDEX

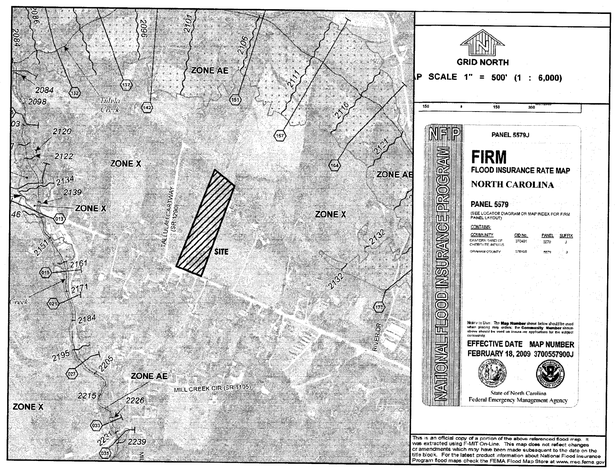
C000	CIVIL COVER SHEET
C001	TOPOGRAPHIC SURVEY
C100	SITE PLANS
C200	SITE NOTES & DETAILS
C201	SITE DETAILS

SITE DATA

PROJECT LOCATION:	2447 TALLULAH ROAD ROBBINSVILLE, NC 28771
SITE AREA:	3.89 AC
DISTURBED AREA (BASE):	0.35 ACRES
DISTURBED AREA (ADD ALTERNATE):	0.08 ACRES



LOCATION MAP ↑ NORTH
NT.S.



PER THE NATIONAL FLOOD INSURANCE PROGRAM AND THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NO PORTION OF THIS SITE LIES WITHIN A FLOOD ZONE, PER FLOOD INSURANCE RATE MAP NUMBER 3700557900J DATED FEBRUARY 18, 2009.

OWNER INFORMATION:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
1321 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699
CONTACT: SHANE EDWARDS

CONSULTANT INFORMATION:

CIVIL ENGINEER -
CLARK PATTERSON LEE
6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NORTH CAROLINA 28210
CONTACT - MEGHAN SIMMONS, PE
PHONE - (800) 831-9000
MSIMMONS@CLARKPATTERSON.COM

24-HOUR CONTACT
PHONE: 828-735-0509
CONTACT: SHANE EDWARDS

North Carolina 811
www.nc811.org

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6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NC 28210
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N.C. Engineering Firm License No.: C-2194

REVISIONS

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER 031877 CHARLES JAMES EDINGER, JR.
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
2/19/16	MCS	RJE

SCALE N.T.S.

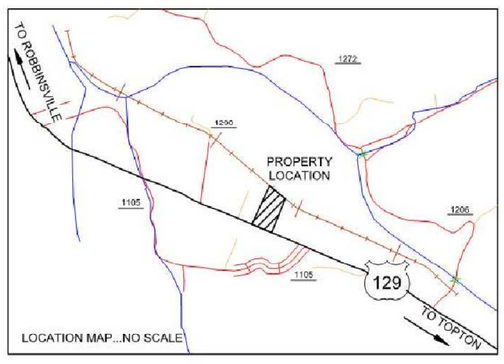
SHEET TITLE
CIVIL COVER SHEET

PROJECT NUMBER
13283.00

C000
DRAWING NUMBER

Drawing Name: S:\Projects\NCDOT\Graham_Co Maint\D Design\D08 CAD\AutoCAD\Civil\C0\Graham Maintenance.dwg Date last accessed: 12/22/2015 9:38 AM Date last plotted: 2/24/2016 1:51 PM Plotted By: Clay Reichert

MOORE SURVEYING PLLC
FIRM LICENSE NO. P-1050
SURVEY AND PLAT BY BRIAN T. MOORE, PLS
PO BOX 249 ANDREWS, N.C. 28901
(828) 321-1384



NOTES:

THIS IS A TOPOGRAPHIC SURVEY ONLY. BOUNDARY INFORMATION TAKEN FROM A SURVEY BY BENJAMIN A. WEST, PLS ENTITLED "THOMAS AND MARTHA MENARD PROPERTY", DATED JANUARY 25, 1994.

THE STATE PLANE COORDINATES (SPC) FOR THIS PROJECT WERE PRODUCED WITH RTK (NETWORK-NTRIP) GPS OBSERVATIONS.

THE NETWORK POSITIONAL ACCURACY OF THE RTK DERIVED POSITIONAL INFORMATION IS: 0.036'

HORIZONTAL POSITIONS ARE REFERENCED TO NAD83\NSRS (2011-EPOCH 2010)
VERTICAL POSITIONS ARE REFERENCED TO NAVD88 USING (GEOID12A)

ALL DISTANCES SHOWN ARE GRID LENGTHS.

COMBINED GRID FACTOR USED: 0.999786310947

CLASS OF GPS SURVEY: CLASS AA

DATE OF GPS SURVEY: 2/17/15 & 2/18/15

THIS IS A CLASS "A" T0POGRAPHIC SURVEY.

ALL DISTANCES SHOWN ARE GRID LENGTHS.

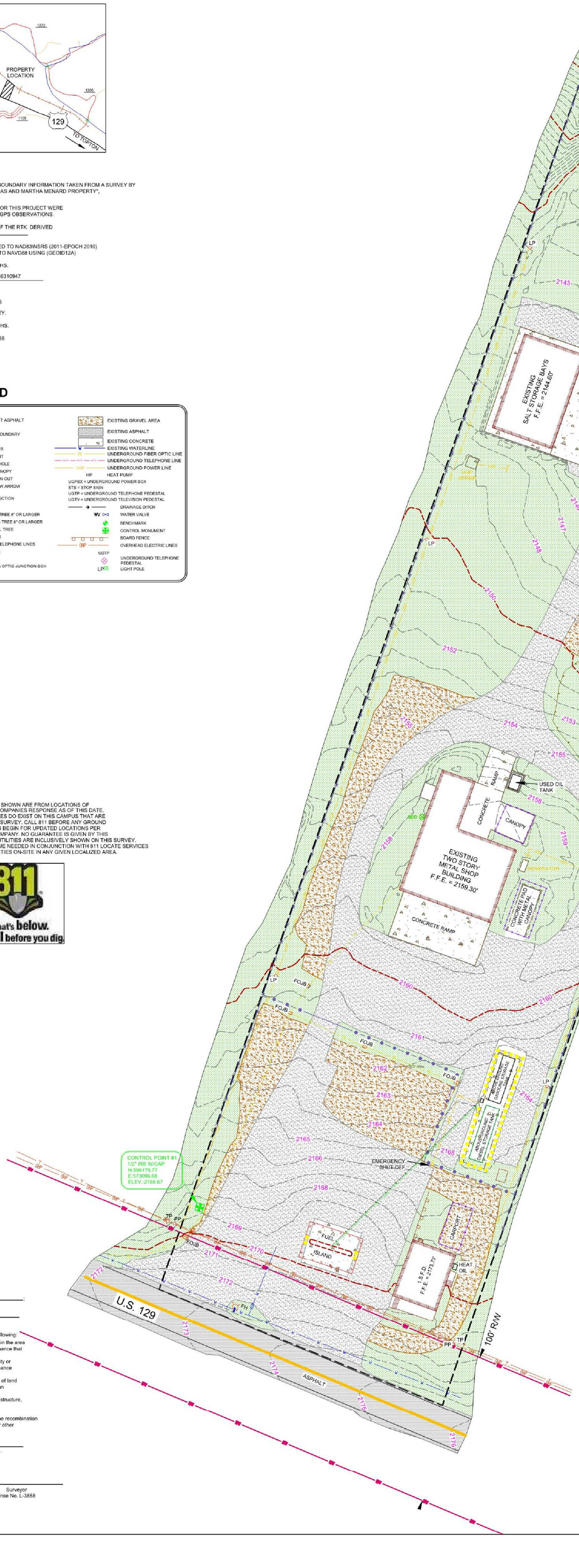
COMBINED GRID FACTOR USED: 0.99978965

LEGEND

- EXISTING BST ASPHALT
- PROPERTY BOUNDARY
- TREELINE
- WM WATER METER
- FIRE HYDRANT
- SEWER MANHOLE
- CARPORT CANOPY
- SCO SEWER CLEAN OUT
- TRAFFIC FLOW ARROW
- ONE WAY TRAFFIC DIRECTION
- BUILDING
- DECIDUOUS TREE 8" OR LARGER
- CONIFEROUS TREE 8" OR LARGER
- ORNAMENTAL TREE
- GA GUY ANCHOR
- OVERHEAD TELEPHONE LINES
- UTILITY POLE
- BORED WELL
- FOJB = FIBER OPTIC JUNCTION BOX
- EXISTING GRAVEL AREA
- EXISTING ASPHALT
- EXISTING CONCRETE
- EXISTING WATERLINE
- UNDERGROUND FIBER OPTIC LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND POWER LINE
- HP HEAT PUMP
- UGPBX = UNDERGROUND POWER BOX
- STS = STOP SIGN
- UGTP = UNDERGROUND TELEPHONE PEDESTAL
- UGTV = UNDERGROUND TELEVISION PEDESTAL
- DRAINAGE DITCH
- WV WATER VALVE
- BENCHMARK
- CONTROL MONUMENT
- BOARD FENCE
- OHP OVERHEAD ELECTRIC LINES
- UGTP UNDERGROUND TELEPHONE PEDESTAL
- LP LIGHT POLE

ALL UTILITIES AS SHOWN ARE FROM LOCATIONS OF RESPECTIVE UTILITY COMPANIES RESPONSE AS OF THIS DATE. UNDERGROUND UTILITIES DO EXIST ON THIS CAMPUS THAT ARE NOT LOCATED ON THIS SURVEY. CALL 811 BEFORE ANY GROUND BREAKING ACTIVITIES BEGIN FOR UPDATED LOCATIONS PER RESPECTIVE UTILITY COMPANY. NO GUARANTEE IS GIVEN BY THIS SURVEYOR THAT UNDERGROUND UTILITIES ARE INCLUSIVELY SHOWN ON THIS SURVEY. INDEPENDENT LOCATOR SERVICES MAY ME NEEDED IN CONJUNCTION WITH 811 LOCATE SERVICES TO LOCATE NON-PUBLIC UTILITIES ON-SITE IN ANY GIVEN LOCALIZED AREA.

811 Know what's below. Call before you dig.



N.C. GRID
N.A.D. 83 (2011)
EPOCH 2010
N.A.V.D. 88

I, Brian T. Moore, certify that this plat was drawn under my supervision from an actual survey made under my supervision; that the ratio of precision as calculated by latitudes and departures is: _____; that the boundaries not surveyed are clearly indicated as drawn from information contained in Book _____ Page _____, that this plat was prepared in accordance with G.S. 47-30 as amended.

I, Brian T. Moore, Further Certify to one of the following:

- ☐ This survey creates a subdivision of land within the area of the county or municipality that has an ordinance that regulates parcels of land;
- ☐ This survey is located in a portion of the county or municipality that is unregulated as to an ordinance that regulates parcels of land;
- ☐ This survey is of an existing parcel or parcels of land and does not create a new street or change an existing street;
- ☐ This survey is of an existing building or other structure, or natural feature, such as a watercourse;
- ☐ This survey is a control survey;
- ☐ This survey is of another category, such as the recombination of existing parcels, a court-ordered survey, or other exception to the definition of subdivision.

Witness my original signature, registration number and seal this _____ day of _____ A.D. _____.

NORTH CAROLINA PROFESSIONAL SEAL L-3868 LAND SURVEYOR BRIAN T. MOORE

_____
Surveyor
License No. L-3868

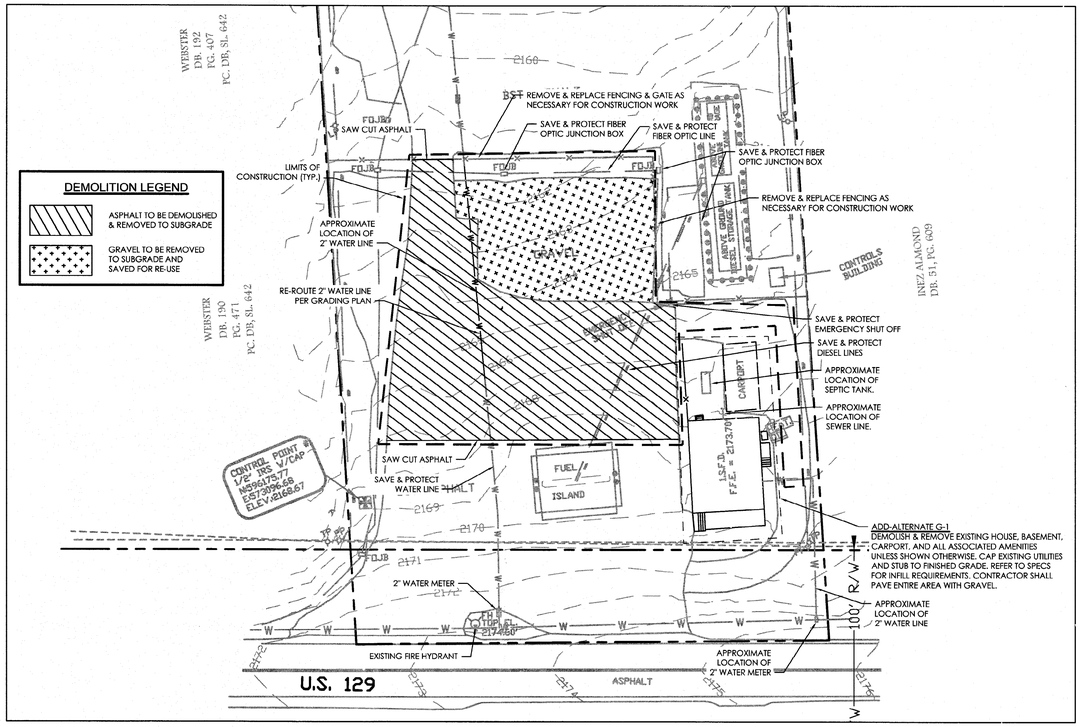
A TOPOGRAPHIC SURVEY FOR STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORATION
CHEOAH TOWNSHIP
GRAHAM COUNTY, N.C.
DEED BOOK, PAGE
FEBRUARY 22, 2015

0 30 60 90
SCALE: 1 INCH = 30 FEET

C001

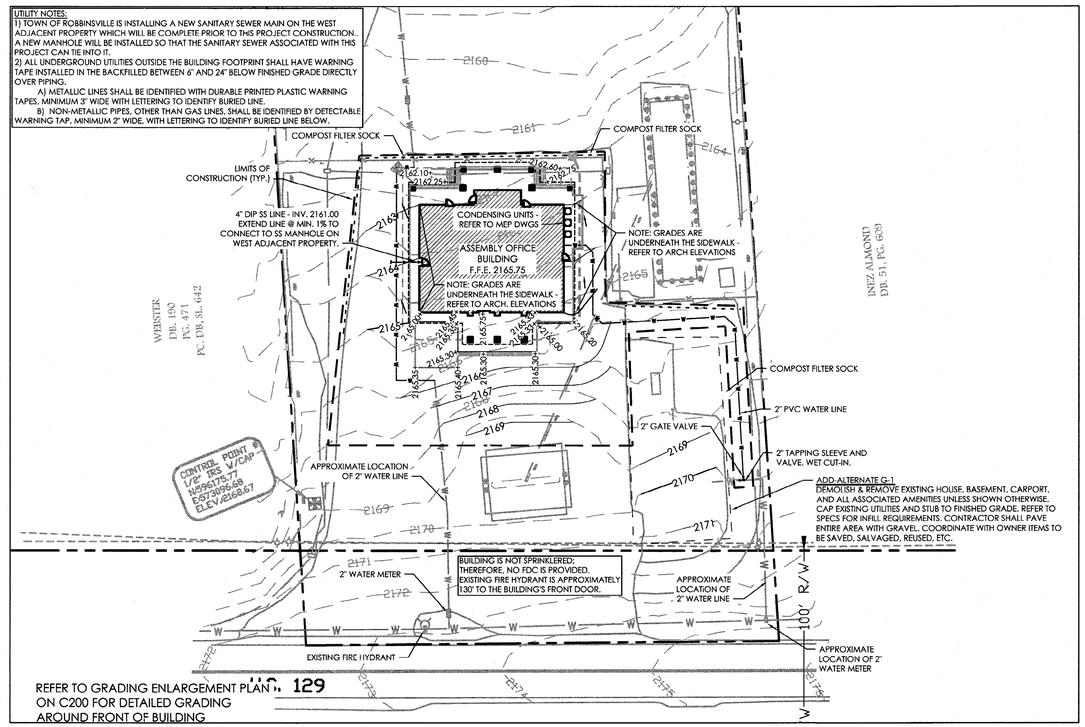
Drawing Name: S:\Projects\NCDOT\Graham_Co Maint\D Design\008 CAD\AutoCAD\Civil\GO\Graham Maintenance.dwg Date last accessed: 12/22/2015 9:38 AM Plotted By: Clay Reichert Date last plotted: 2/24/2016 1:48 PM



NORTH

DEMOLITION PLAN

SCALE: 1"=30'

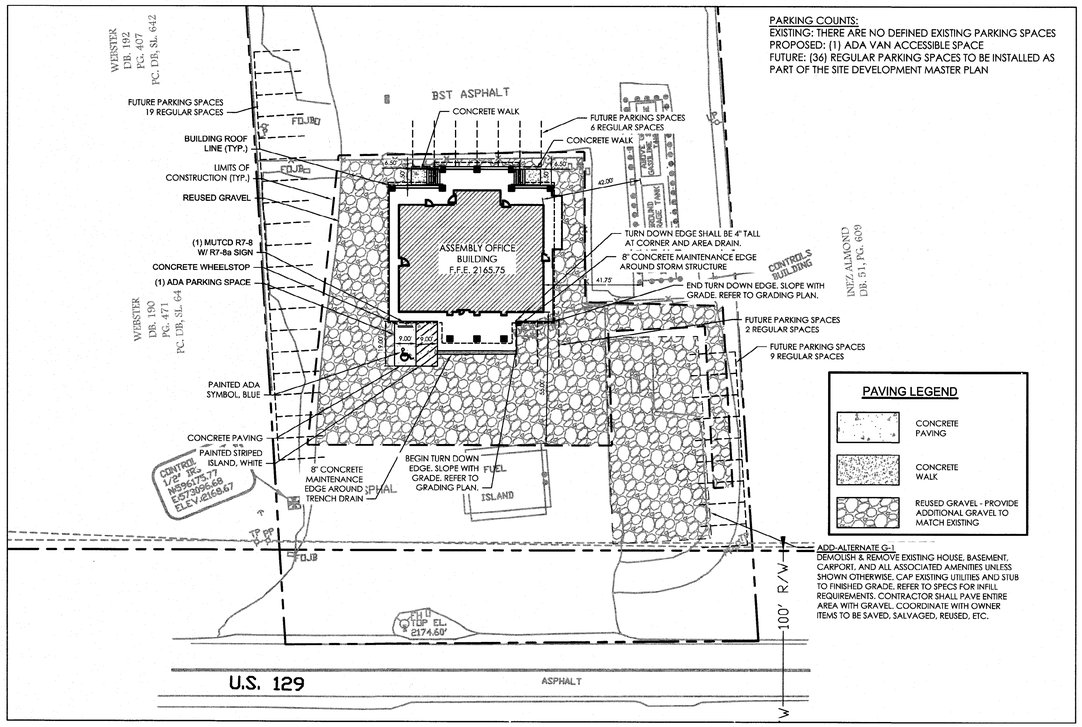


REFER TO GRADING ENLARGEMENT PLAN ON C200 FOR DETAILED GRADING AROUND FRONT OF BUILDING

NORTH

GRADING & EROSION CONTROL PLAN

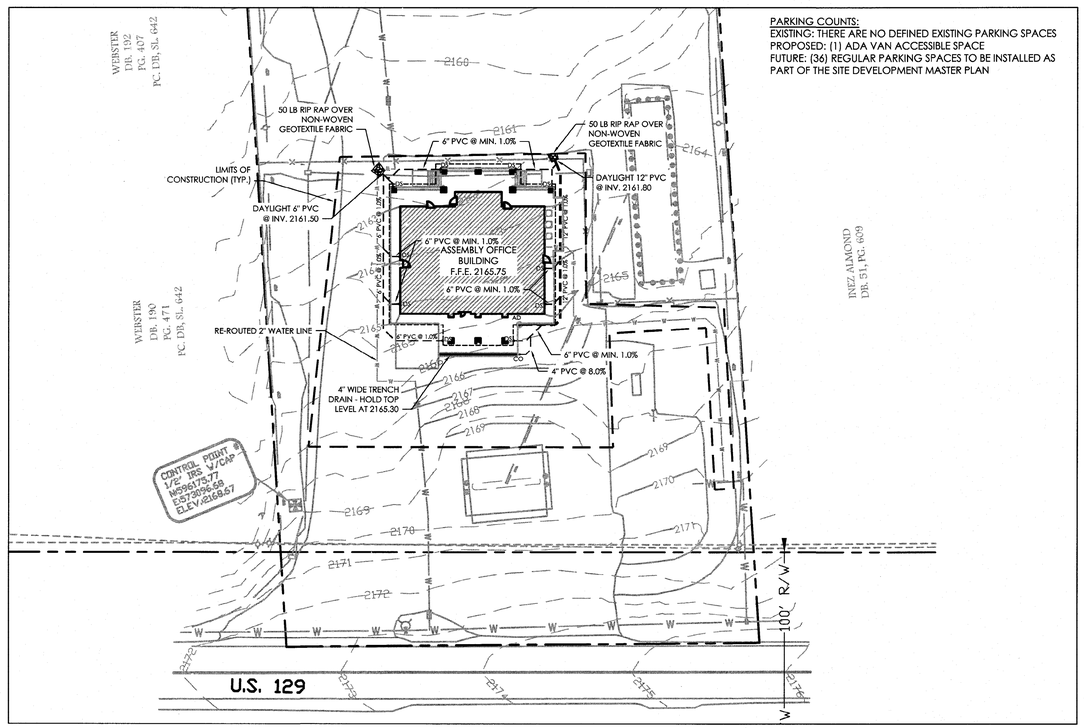
SCALE: 1"=30'



NORTH

LAYOUT PLAN

SCALE: 1"=30'



NORTH

DRAINAGE PLAN

SCALE: 1"=30'

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NC 28210
TEL (800) 274-9000
FAX (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

REVISIONS			
NO.	DATE	BY	CHKD	DESCRIPTION

SEAL 031877 ENGINEER RICHARD JAMES EDINGER, JR. 2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

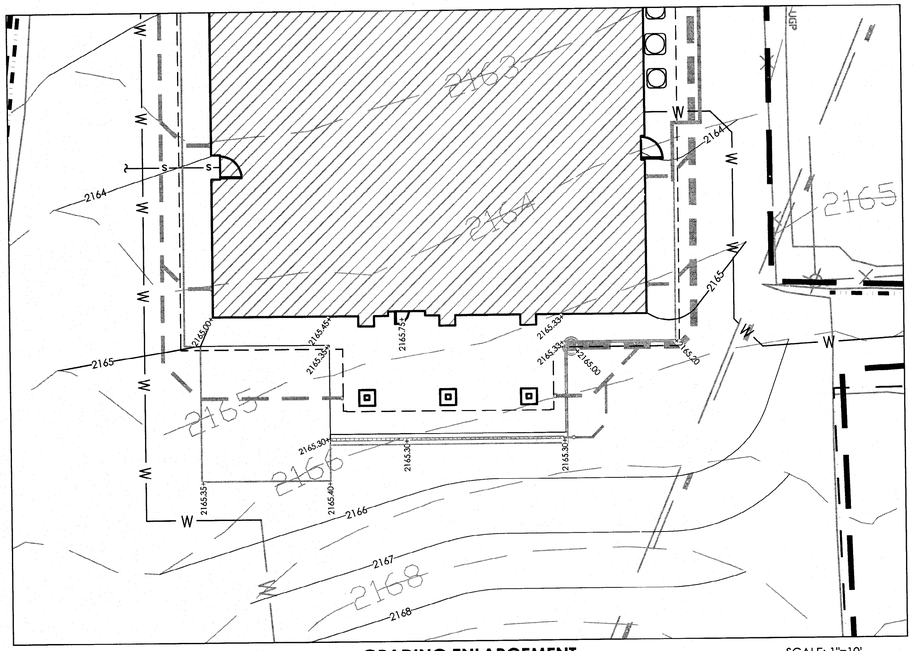
DATE	DRAWN	CHECKED
2/19/16	MCS	RJE

SCALE: SEE ENLARGEMENTS

SHEET TITLE: SITE PLANS

PROJECT NUMBER: 13283.00

C100
DRAWING NUMBER



NORTH

GRADING ENLARGEMENT

SCALE: 1"=10'

Practice Standards and Specifications

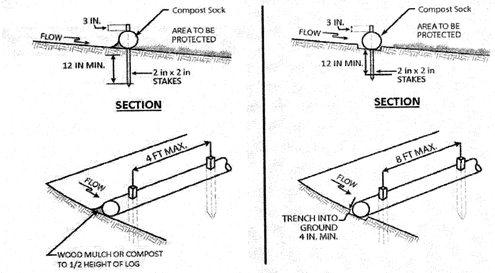
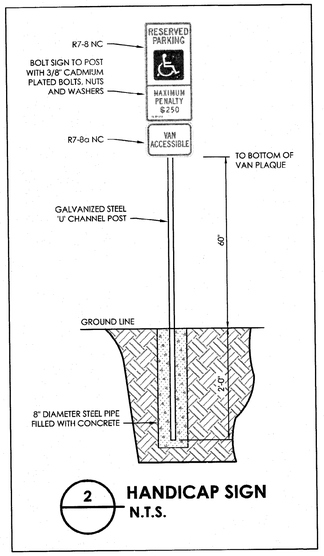


Figure 6.66b Compost Sock Installation

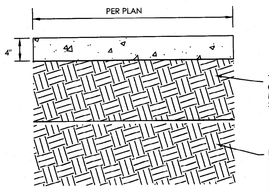
6.66.8

1 COMPOST FILTER SOCK N.T.S.

Rev. 5/13



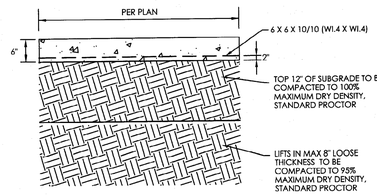
2 HANDICAP SIGN N.T.S.



NOTES:
1. CONCRETE - 3000 P.S.I. @ 28 DAYS
2. PROVIDE 0.5 INCH WIDE EXPANSION JOINT @ 20' INTERVALS AND AT ALL CURBS, RIGID STRUCTURES, AND RIGID PAVEMENT. PROVIDE EXPANSION JOINTS PER PLAN.
3. PROVIDE 1.5 INCH DEEP TRANSVERSE GROOVES @ 5' INTERVALS.
4. TOOL ALL EXPOSED EDGES AND JOINTS TO 1/4 INCH RADIUS.
5. BROOM FINISH UNLESS NOTED OTHERWISE ON PLAN.
6. FIBERMESH 300 TO BE MIXED WITH CONCRETE AT A RATE OF 1.5 POUNDS PER CUBIC YARD.

GEOGRID SUCH AS TENSAR BX1100 OR EQUAL AND ADDITIONAL STONE BASE MAY BE NECESSARY IN LOCALIZED AREAS TO ACHIEVE SUBGRADE STABILIZATION. THE NEED FOR SUCH WILL BE A FUNCTION OF SUGRADE CONDITIONS AT THE TIME OF PAVEMENT CONSTRUCTION.

3 CONCRETE WALK N.T.S.



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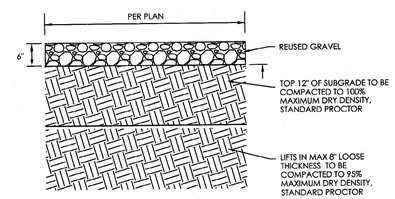
GEOGRID AND ADDITIONAL STONE BASE MAY BE NECESSARY IN LOCALIZED AREAS TO ACHIEVE SUBGRADE STABILIZATION. THE NEED FOR SUCH WILL BE A FUNCTION OF SUGRADE CONDITIONS AT THE TIME OF PAVEMENT CONSTRUCTION.
ACCEPTABLE GEOGRIDS ARE:
TENSAR BX1100
BASEGRID 11
TENAX MS220

4 CONCRETE PAVING N.T.S.



5 GRAVEL PAVING N.T.S.

GENERAL NOTES:

1. THE EXISTING BOUNDARY AND TOPOGRAPHIC SURVEY WAS PREPARED BY MOORE SURVEYING PLLC.
2. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE GRAHAM COUNTY NORTH CAROLINA.
3. THE CONTRACTOR IS TO VERIFY ALL LOCATIONS AND/OR TYPES OF UTILITIES IN THE FIELD BEFORE CONSTRUCTION BEGINS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR PER OWNERS SPECIFICATIONS. SUCH DAMAGE SHALL BE THE CONTRACTOR'S EXPENSE TO PAY FOR ALL MATERIALS, LABOR AND NECESSARY PERMITS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EROSION AND SEDIMENT CONTROL AND ALL REASONABLE MEASURES SHALL BE TAKEN TO PROTECT DOWNSTREAM AND OFF-SITE LAND FROM EROSION AND SEDIMENT DAMAGE DUE TO GRADING OPERATIONS.
5. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING OR OTHER LAND DISTURBANCE ACTIVITY AND SHALL BE MAINTAINED IN ACCORDANCE TO THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
6. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE SHORING OR OTHER APPROVED METHOD IN ORDER TO MAKE THE WORK AREA ABSOLUTELY STABLE AND SAFE.
7. THE CONTRACTOR SHALL PROVIDE SAFE ENTRY ACCESS TO AND FROM THE BUILDING SITE TO ALL CUSTOMERS AND EMPLOYEES, INCLUDING HANDICAP PERSONS. ANY TEMPORARY RAMPS SHALL BE CONSTRUCTED PER ADA STANDARDS.
8. ALL WORK PERFORMED BY THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS FOR ALL EMERGENCY VEHICLES AT ALL TIMES.
10. TOPS OF ALL EXISTING STRUCTURES THAT ARE TO REMAIN WITHIN THE AREA REQUIRING REGRADING SHALL BE RAISED OR LOWERED AS REQUIRED TO MEET GRADES. PRIOR TO ANY ADJUSTMENT THE CONTRACTOR IS TO COORDINATE SUCH WORK WITH THE OWNER.
11. ALL SURFACE AREAS TO HAVE POSITIVE DRAINAGE AWAY FROM BUILDINGS AT THE CONCLUSION OF THE CONTRACT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION WORK. MATERIALS SHALL BE REMOVED FROM THE SITE AS SOON AS POSSIBLE AND SHALL NOT BE ALLOWED TO ACCUMULATE. CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING OFF AND DISPOSING OF ANY DEBRIS TO AN APPROVED STATE LICENSED LANDFILL.
13. DISTURBANCE IS LESS THAN ONE ACRE, SO NPDES REGULATIONS DO NOT APPLY ON THIS PROJECT.
14. CONTRACTOR TO MAINTAIN ALL STORM DRAINAGE STRUCTURES DURING THE COURSE OF CONSTRUCTION (EXCEPT AS NOTED TO BE DEMOLISHED).
15. ANY DAMAGE CAUSED BY THE CONTRACTOR'S PERSONNEL OR EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND COST TO REPAIR PER OWNERS SPECIFICATIONS AND REQUIREMENTS.
16. CONTRACTOR SHALL ACQUIRE ALL PERMITS NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.
17. NO OUTSIDE STORAGE PROPOSED. THIS INCLUDED SUPPLIES, EQUIPMENT, PRODUCTS, ETC.
18. NOTIFY GRAHAM COUNTY INSPECTIONS DEPARTMENT 24 HOURS BEFORE BEGINNING OF EVERY PHASE OF CONSTRUCTION. FOR ALL WORK IN THE STATE RIGHT OF WAY, CONTACT G.A.D.O.T. INSPECTIONS 24-HOURS PRIOR TO CONSTRUCTION.

GRADING NOTES:

1. REMOVE ALL TREES, GRASS, WEEDS, ROOTS, AND OTHER DEBRIS FROM THE AREA TO BE EXCAVATED, FILLED OR GRADED.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SURFACE AND GROUNDWATER CONTROL MEASURES.
3. GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPE SHALL BE WELL ROUNDED.
4. CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT CAUSED BY CONSTRUCTION.
5. CONTRACTOR SHALL REMOVE EROSION CONTROL DEVICES AFTER SITE IS COMPLETELY STABILIZED.
6. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS. ALL TREE PROTECTION FENCING TO BE INSPECTED DAILY AND REPLACED OR REPAIRED AS NEEDED.
7. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
8. DISTURBED AREAS LEFT IDLE FOR TWO TO FOUR WEEKS, AND NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION (DS2). DISTURBED AREAS LEFT IDLE FOR 14 DAYS OR MORE WILL BE ESTABLISHED TO PERMANENT VEGETATION (DS3). ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION WITHIN TWO WEEKS.
9. GRAHAM COUNTY LAND DISTURBANCE PERMIT MUST BE DISPLAYED ON SITE AT ALL TIMES DURING CONSTRUCTION AND IN PLAIN VIEW FROM A ROAD OR STREET.
10. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE.
11. SEDIMENT / EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF OF THE CAPACOUNTY OF THE DEVICE.
12. FILL SHALL BE PLACED IN EIGHT INCH LIFTS (OR THINNER AS REQUIRED BY SPECIFICATIONS) (COMPACTED THICKNESS).
13. THERE ARE NO ANTICIPATED CHEMICALS OR RAW MATERIALS TO BE STORED
14. ALL CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
15. MAXIMUM CUT OR FILL SLOPES SHALL BE 2:1.
16. SITE SHALL BE PROOF ROLLED TO DETECT SOFT SPOTS. FILL SHALL BE PROOF COMPACTED. ANY SOFT AND WET SOILS AT BUILDING AND PAVEMENT AREAS SHALL BE UNDERCUT.
17. STRUCTURAL FILL MATERIALS SHALL BE FREE OF ORGANIC MATERIALS AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAX. DRY DENSITY WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT PER STANDARD PROCTOR ASTM D 698.

CONSTRUCTION SPECIFICATIONS:

1. ALL TIMBER HAVING A MARKETABLE VALUE SHALL BE SALVAGED TIMBER LOGS, BRUSH, RUBBISH AND VEGETABLE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATIONS OR AFFECT THE PLANNED STABILITY OF FILL AREAS SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE PLAN AND IN ACCORDANCE WITH ALL LOCAL AND STATE LAWS.
2. TOPSOIL IS TO BE STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY OR AVAILABLE ON SITE TO COMPLETE FINISH GRADING OF ALL EXPOSED AREAS.
3. FILL MATERIAL IS TO BE FREE OF BRUSH RUBBISH, ROCKS, LOGS, AND STUMPS IN AMOUNTS THAT ARE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
4. CUT SLOPES WHICH ARE TO BE TOP SOILED WILL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.
5. ALL FILLS INTENDED TO SUPPORT BUILDING STRUCTURES, SEWERS, AND CONDUITS ARE TO BE COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR COMPACTION OF OTHER FILLS WILL BE AS REQUIRED TO REDUCE SLIPPING EROSION OR EXCESS SATURATION.
6. FROZEN MIXTURES OF SOFT, MUCKY OR EASILY COMPRESSIBLE MATERIALS ARE NOT TO BE INCORPORATED IN FILLS INTENDED TO SUPPORT BUILDINGS PARKING LOTS ROADS, STRUCTURES SEWERS OR CONDUITS.
7. MAXIMUM THICKNESS OF LAYERS TO BE COMPACTED BY SHEEP FOOT ROLLERS ARE NOT TO EXCEED 8 INCHES (OR THINNER AS REQUIRED BY SPECIFICATIONS) OTHER COMPACTION METHODS REQUIRE PRIOR APPROVAL.
8. ALL AREAS ARE TO BE ROUGH GRADED TO WITHIN 0.2 FOOT OF THE PLANNED ELEVATION AFTER ALLOWANCE HAS BEEN MADE FOR THICKNESS OF TOPSOIL, PAVING OR OTHER INSTALLATIONS.
9. ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND STABILIZED WITH THE APPOINTEE PERMANENT PROTECTIVE COVER.
10. PERMANENT STRUCTURES TEMPORARY OR PERMANENT VEGETATION AND MULCH OR A COMBINATION OF THESE MEASURES SHOULD BE EMPLOYED AS QUICKLY AS POSSIBLE AFTER THE LAND IS DISTURBED TEMPORARY MEASURES SHOULD BE EMPLOYED IMMEDIATELY AFTER ROUGH GRADING IS COMPLETED IF A DELAY IS ANTICIPATED IN OBTAINING FINISHED GRADE MULCH TEMPORARY VEGETATION, OR PERMANENT VEGETATION SHALL BE COMPLETED ON ALL EXPOSED AREAS WITHIN 14 DAYS AFTER DISTURBANCE MULCH AND/OR TEMPORARY GRASSING MAY BE USED UP TO SIX MONTHS PERMANENT VEGETATION SHALL BE PLANTED IF THE AREAS TO BE LEFT UNDISTURBED FOR GREATER THAN SIX MONTHS.

SITE NOTES:

1. ALL WORK AND MATERIALS SHALL COMPLY WITH GRAHAM COUNTY REGULATIONS, CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL OBTAIN ALL PERMITS BEFORE CONSTRUCTION BEGINS.
3. ACCORDING TO FLOOD INSURANCE RATE MAP NO. 3700557900J DATED FEBRUARY 18, 2009 NO PORTION OF THIS PROPERTY LIES IN A FLOODPLAIN.
7. DURING CONSTRUCTION ACCESS ROADWAYS CONSTRUCTED OF AN ALL WEATHER SURFACE CAPABLE OF SUPPORTING 80,000 POUNDS GROSS WEIGHT SHALL BE PROVIDED PER STANDARD FIRE.
8. CLEAR HEIGHT OF ACCESS ROADWAY SHALL BE 13 FEET 6 INCHES MINIMUM PER STANDARD FIRE PREVENTION CODE.
11. DURING CONSTRUCTION WIDTH OF ACCESS ROADWAYS SHALL BE 20 FEET MINIMUM PER STANDARD FIRE PREVENTION CODE 1994 EDITION SECTION 602.6.1.
12. PROVIDE MINIMUM VERTICAL CLEARANCE OF 114 INCHES AT ACCESSIBLE PASSENGER LOADING ZONES AND ALONG AT LEAST ON VEHICLE ROUTE TO SUCH AREAS FROM SITE ENTRANCE(S) AND EXIT(S). AT PARKING SPACES COMPLY WITH 120-3-20-.07(e)(2), PROVIDE MINIMUM VERTICAL CLEARANCE OF 98 INCHES AT THE PARKING SPACE AND ALONG AT LEAST ONE VEHICLE ACCESS ROUTE TO SUCH SPACE FORM SITE ENTRANCE'(S) AND EXIT(S). 120-3-20-.17(5) NORTH CAROLINA ACCESSIBILITY CODE 1994 EDITION SECTION 602.6.1
13. ISSUANCE OF DEVELOPMENT PERMITS MAY BE WITHHELD WHEN IT IS IN THE OPINION OF THE COUNTY INSPECTOR THAT THE SPECIFICATIONS OF THE SITE PLAN HAVE NOT BEEN COMPLIED WITH.

TRENCH DRAIN SHALL BE MANUFACTURED BY: APPROVED EQUALS ARE:

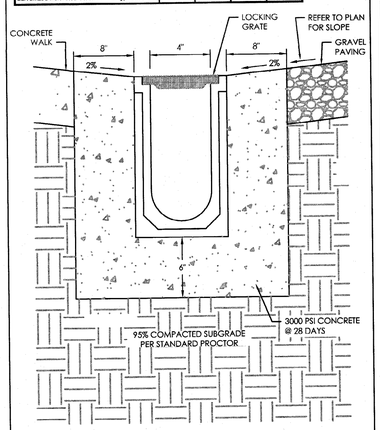
ACO POLYMER PRODUCTS, INC.
421 I PLEASANT ROAD
FORT MILL, SC 29708
P: 800-543-4764
F: 803-802-1063

ABT, INC.
POLYDRAIN TRENCH DRAIN SYSTEM
WITH GALVANIZED STEEL PERFORATED GRATE

ZURN
Z684 TRENCH DRAIN SYSTEM
WITH GALVANIZED STEEL PERFORATED GRATE

K100 SYSTEM
PARTS LIST:

K100 System Parts table	Part No Galv Rail	Female Invert Inches	Male Invert Inches	Weight lbs
K1-00 Neutral channel - 39.37" (1m)	74041	3.94	3.94	28.1
K1-1 Sloped channel - 39.37" (1m)	74001	3.94	4.13	28.1
K1-2 Sloped channel - 39.37" (1m)	74002	4.13	4.33	28.9
K1-3 Sloped channel - 39.37" (1m)	74003	4.33	4.53	29.7
K1-4 Sloped channel - 39.37" (1m)	74004	4.53	4.72	30.5
K1-5 Sloped channel - 39.37" (1m)	74005	4.72	4.92	31.3
K1-6 Sloped channel - 39.37" (1m)	74006	4.92	5.12	32.1
K1-7 Sloped channel - 39.37" (1m)	74007	5.12	5.31	32.9
K1-8 Sloped channel - 39.37" (1m)	74008	5.31	5.51	33.7
K1-9 Sloped channel - 39.37" (1m)	74009	5.51	5.71	34.5
K1-10 Sloped channel - 39.37" (1m)	74010	5.71	5.91	35.3
K1 Universal end cap - 4" outlet	99222	11.81	11.81	0.4
Galvanized Perforated Steel Grate - Type 410Q	98868	N/A	N/A	N/A



6 TRENCH DRAIN N.T.S.

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NC 28210
TEL (800) 274-9000
FAX (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

REVISIONS			
NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 031877 ENGINEER RICHARD JAMES EICHERT
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
2/19/16	MCS	RJE

SCALE N.T.S.

SHEET TITLE

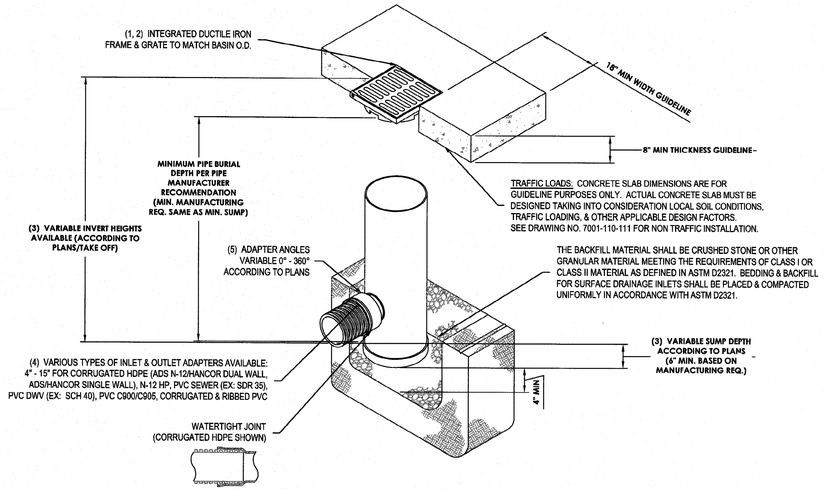
SITE NOTES & DETAILS

PROJECT NUMBER
13283.00

C200
DRAWING NUMBER

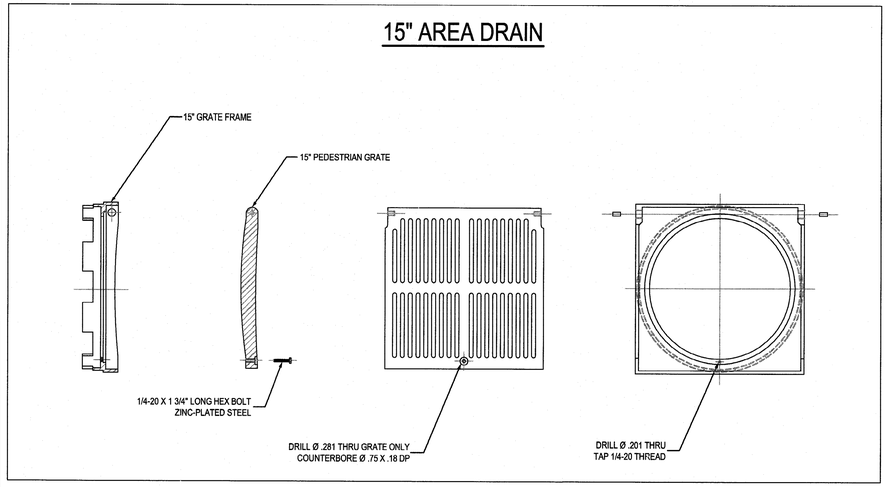
Drawing Name: S:\Projects\NCDOT\Graham_Co Maint\D Design\D0B CAD\AutoCAD\Civil\C0\Graham Maintenance.dwg Date last accessed: 12/22/2015 9:38 AM Date last plotted: 2/24/2016 1:49 PM Plotted By: Clay Reichert

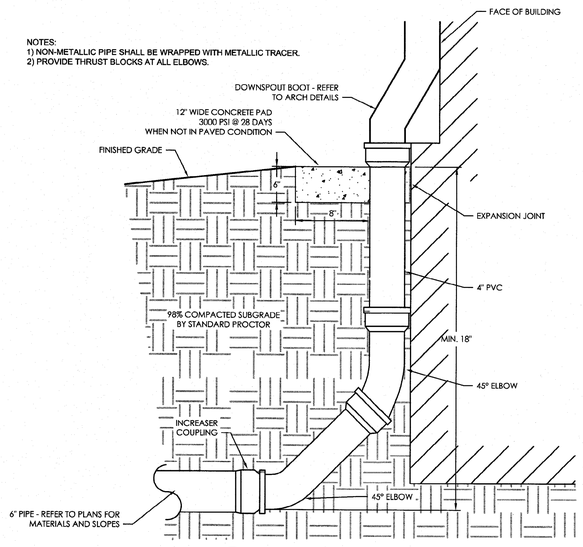
15" AREA DRAIN



1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

15" AREA DRAIN





1 **DOWNSPOUT CONNECTION**
N.T.S.

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 FAIRVIEW ROAD, SUITE 102
CHARLOTTE, NC 28210
TEL (800) 274-9000
FAX (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

REVISIONS			
NO.	DATE	BY	CHKD	DESCRIPTION

SEAL 031877 ENGINEER RICHARD JAMES EDINGER, JR. NORTH CAROLINA PROFESSIONAL
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
2/19/16	MCS	RJE

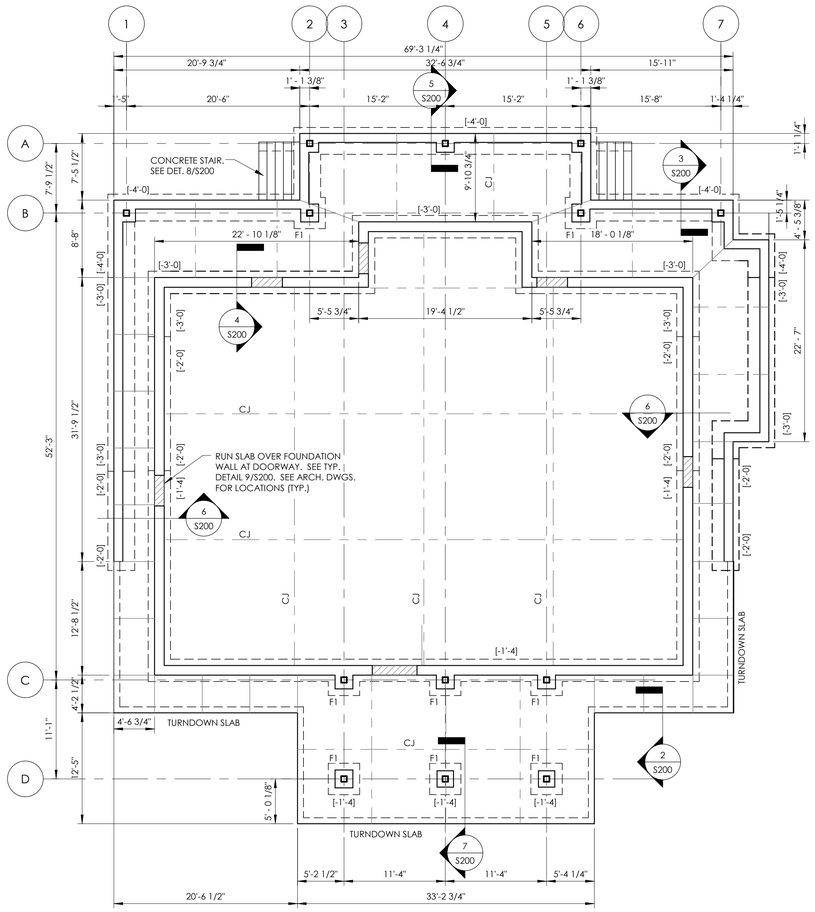
SCALE N.T.S.

SHEET TITLE
SITE DETAILS

PROJECT NUMBER
13283.00

C201
DRAWING NUMBER

Drawing Name: S:\Projects\NCDOT\Graham_Co Maint\D Design\D08 CAD\AutoCAD\Civil\CD\Graham Maintenance.dwg Date last accessed: 12/22/2015 9:38 AM Date last plotted: 2/24/2016 1:50 PM Plotted By: Clay Reichert



1 S200 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION NOTES

1. DATUM 0'-0" = ELEVATION 2165.75' = FINISHED FLOOR ELEVATION

2. FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 2500 PSF PER GEOTECHNICAL REPORT BY ECS CAROLINAS LLP, DATED APRIL 2015.

3. EXTERIOR FOOTING SHALL BEAR AT A MINIMUM OF 1'-6" BELOW FINISHED GRADE UNLESS NOTED OTHERWISE.

4. [XX'-XX"] DENOTES TOP OF PROPOSED FOOTING AS REFERENCED FROM FINISHED FLOOR ELEVATION.

5. SLAB-ON-GRADE SHALL BE 4" THICK, NORMAL WEIGHT CONCRETE WITH 6x6-W2.1xW2.1W.W.F. REINFORCING, UNLESS NOTED OTHERWISE, OVER 6" COMPACTED CRUSHED STONE.

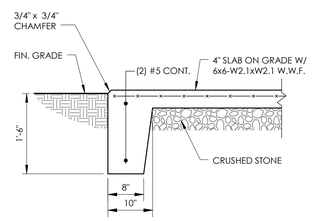
6. PROVIDE CONTROL JOINTS IN SLAB-ON-GRADE. SPACING OF JOINTS SHALL NOT EXCEEDED 15'-0". SEE PLAN.

7. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISHES, FLOOR DRAINS, SLOPES, SLAB DEPRESSIONS, AND WATERPROOFING.

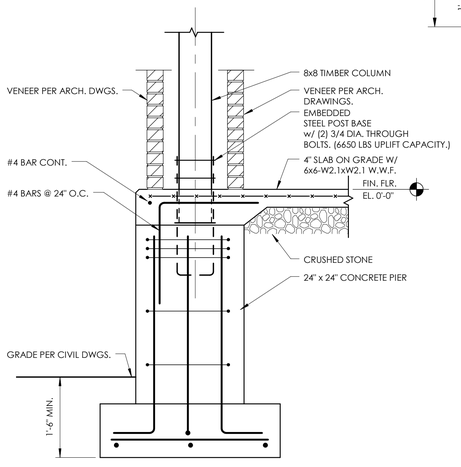
8. REFER TO MASONRY SPECIFICATIONS AND TYPICAL DETAILS FOR CONSTRUCTION DETAILS, VENEER TIES, AND REINFORCING DETAILS.

9. THE FOLLOWING DENOTES SYMBOL REPRESENTATION:
FS = FOOTING STEP
FD = FLOOR DRAIN
CJ = SLAB CONTROL JOINTS

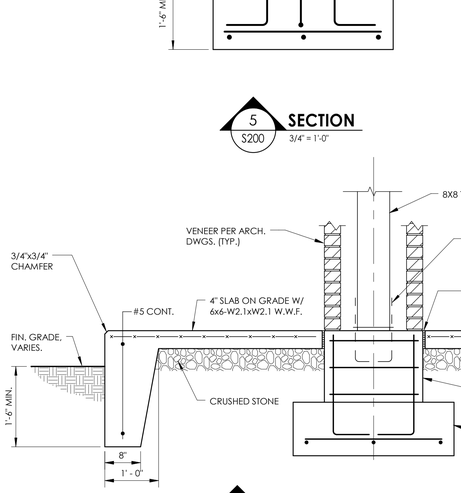
FOOTING SCHEDULE		
MARK	SIZE	REINFORCING
F1	3'-0" x 3'-0" x 1'-0"	3-#5 E.W. TOP & BOT.
F2	4'-0" x 4'-0" x 1'-0"	4-#5 E.W. TOP & BOT.
F3	4'-6" x 4'-6" x 1'-0"	4-#5 E.W. TOP & BOT.
F4	5'-0" x 5'-0" x 1'-0"	5-#5 E.W. TOP & BOT.



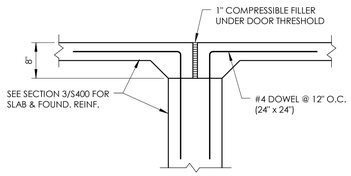
2 S200 TURN DOWN SLAB EDGE
3/4" = 1'-0"



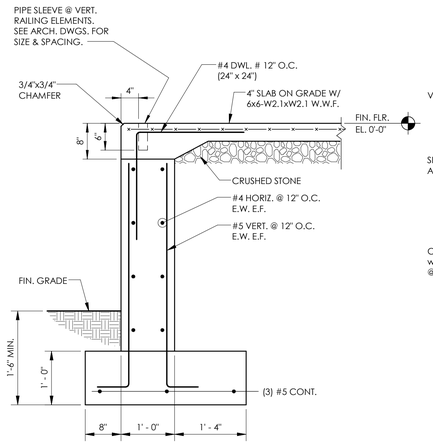
5 S200 SECTION
3/4" = 1'-0"



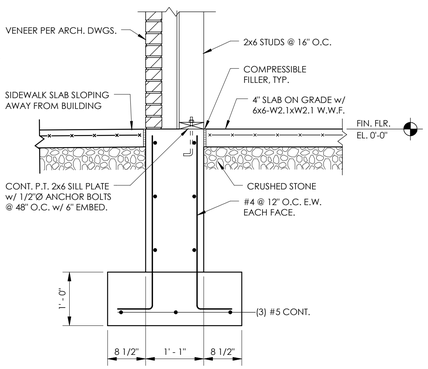
7 S200 SECTION
3/4" = 1'-0"



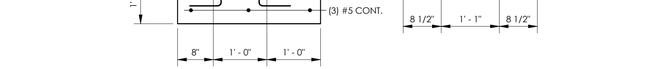
9 S200 SECTION @ DOORWAY
3/4" = 1'-0"



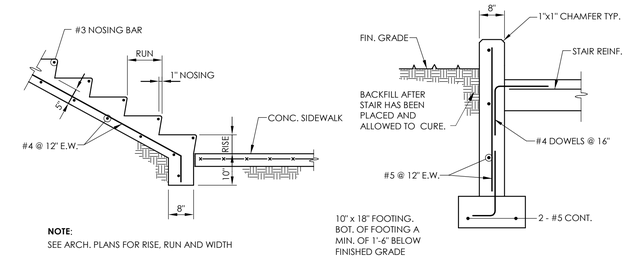
3 S200 SECTION
3/4" = 1'-0"



4 S200 SECTION
3/4" = 1'-0"



6 S200 SECTION
3/4" = 1'-0"



NOTE:
SEE ARCH. PLANS FOR RISE, RUN AND WIDTH

8 S200 TYP. CONCRETE STAIR ON GRADE
3/4" = 1'-0"

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule			
NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031320 JOSEPH P. RAUSCH
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	BSC	JPR

SCALE: As indicated

SHEET TITLE: FOUNDATION PLAN

PROJECT NUMBER: 13283.00

S200
DRAWING NUMBER

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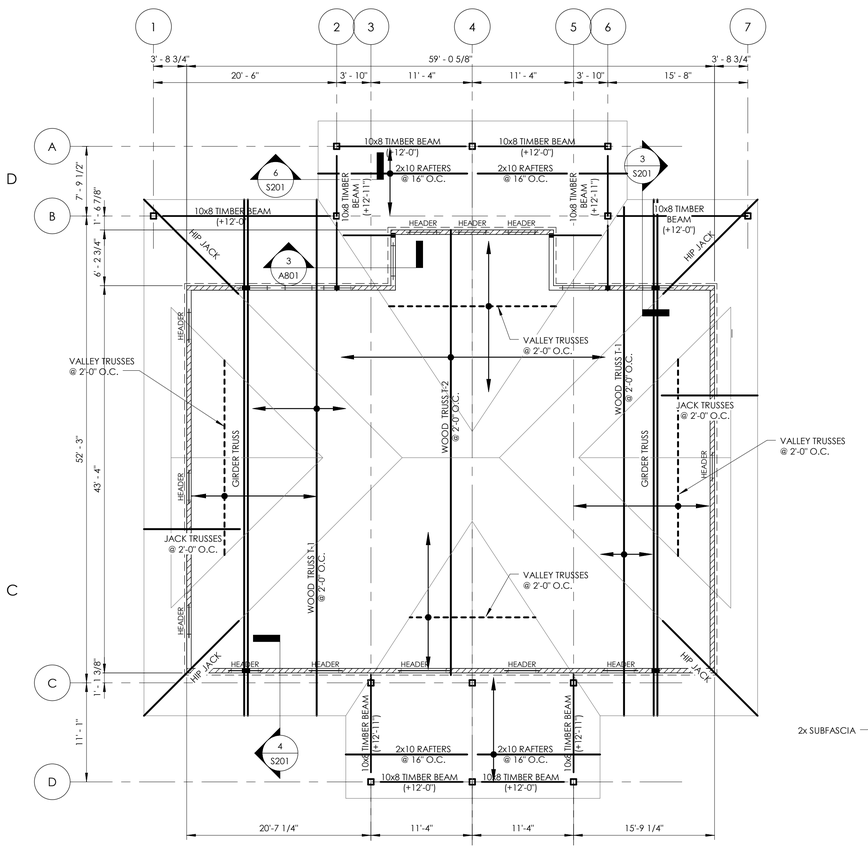
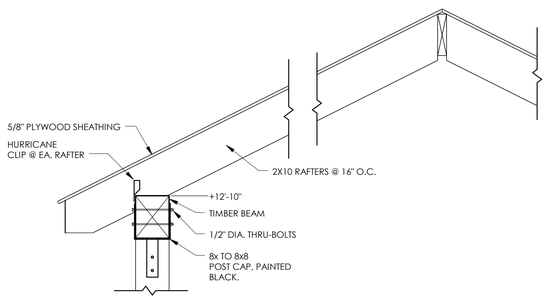


1 S201 **ROOF FRAMING PLAN**
1/8" = 1'-0"

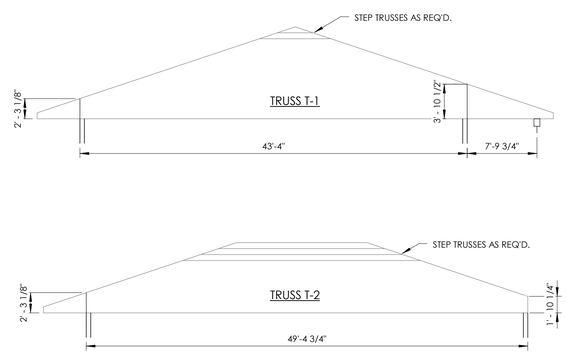
ROOF FRAMING NOTES

1. TOP OF WALL IS 12'-0" ABOVE FINISHED FLOOR.
2. ▨ DENOTES SHEARWALL
3. PROVIDE BUILT-UP HEADERS AT ALL EXTERIOR WALL OPENINGS:

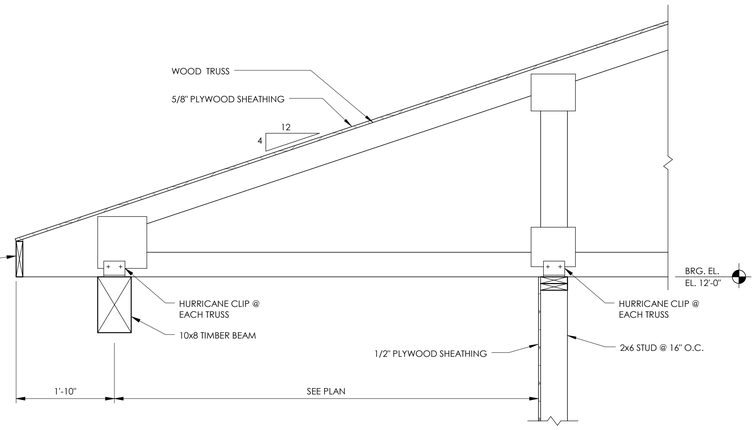
UP TO 3'-6" OPENING	(3) 2x8 WITH PLYWOOD FILLERS	(1) JACK STUD EACH END
3'-7 TO 6'-0" OPENING	(3) 2x10 WITH PLYWOOD FILLERS	(2) JACK STUDS EACH END



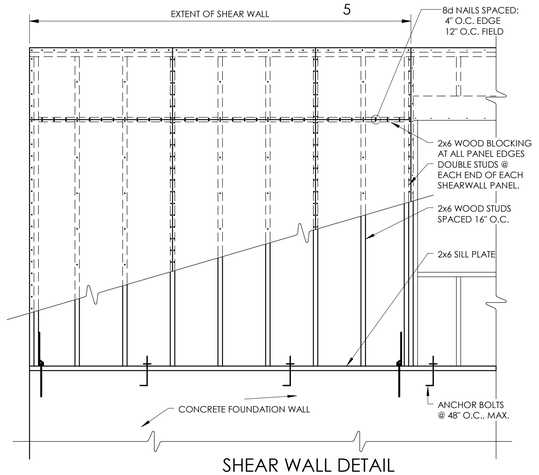
6 S201 **SECTION**
3/4" = 1'-0"



2 S201 **MAIN TRUSS PROFILES**
1/8" = 1'-0"



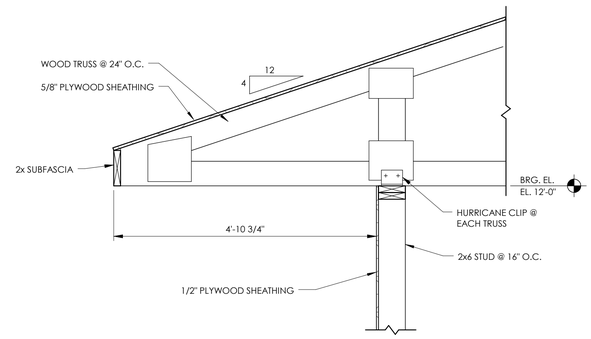
3 S201 **SECTION**
3/4" = 1'-0"



SHEAR WALL DETAIL

NOTES:

1. SHEATHING PANEL IS 15/32" APA RATED STRUCTURAL 1 PLYWOOD SHEATHING.
2. SEE FRAMING PLANS FOR LOCATIONS OF SHEAR WALLS.



4 S201 **SECTION**
3/4" = 1'-0"

FASTENING SCHEDULE

	CONNECTION	ALLOWABLE FASTENERS	LOCATION / METHOD
1	STUD TO TOP/SOLE PLATE	(3) 16d COMMON (4) 3" x 0.131" NAIL	END NAIL
2	DOUBLE STUDS	16d COMMON @ 16" O.C. 3" x 0.131" NAIL @ 8" O.C.	FACE NAIL
3	DOUBLE TOP PLATES	16d COMMON @ 16" O.C. 3" x 0.131" NAIL @ 12" O.C.	TYPICAL FACE NAIL
	DOUBLE TOP PLATES	(8) 16d COMMON (12) 3" x 0.131" NAIL	AT LAP SPLICES
4	BLOCKING BETWEEN JOISTS, TRUSSES, OR RAFTERS TO TOP PLATE	(3) 8d COMMON (3) 3" x 0.131" NAIL	TOENAIL
5	TOP PLATES, LAPS, AND INTERSECTIONS	(2) 16d COMMON (3) 3" x 0.131" NAIL	FACE NAIL
6	CEILING JOISTS TO PLATE	(3) 8d COMMON (5) 3" x 0.131" NAIL	TOE NAIL
7	CONTINUOUS HEADER TO STUD	(4) 8d COMMON (4) 3" x 0.131" NAIL	TOE NAIL
8	CEILING JOISTS TO PARALLEL RAFTERS	(3) 16d COMMON, MIN. (4) 3" x 0.131" NAIL	FACE NAIL
9	RAFTER / TRUSS TO TOP PLATE	(3) 16d COMMON (4) 3" x 0.131" NAIL	TOENAIL UPLIFT TIES ALSO REQUIRED
10	BUILT UP CORNER STUDS	16d COMMON @ 24" O.C. 3" x 0.131" NAIL @ 16" O.C.	
11	BUILT UP GIRDER AND BEAMS	20d COMMON @ 24" O.C. 3" x 0.131" NAIL @ 16" O.C.	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES
12	COLLAR TIE TO RAFTER	(3) 10d COMMON (4) 3" x 0.131" NAIL	FACE NAIL
13	JACK RAFTER TO HIP	(3) 10d COMMON (4) 3" x 0.131" NAIL	TOENAIL
		(2) 16d COMMON (3) 3" x 0.131" NAIL	FACE NAIL
14	ROOF RAFTER TO 2x RIDGE	(2) 16d COMMON (3) 3" x 0.131" NAIL	TOENAIL
		(2) 16d COMMON (3) 3" x 0.131" NAIL	FACE NAIL
15	PANEL EDGE BLOCKING	(3) 8d COMMON (3) 3" x 0.131" NAIL	TOE NAIL
16	STRUCTURAL WOOD PANEL FLOOR AND ROOF SHEATHING	8d NAILS 2 3/8" x 0.113" NAIL	PATTERN: 6" O.C. PANEL PERIMETER, 12" O.C. AT INTERMEDIATE SUPPORTS
17	STRUCTURAL WOOD PANEL WALL SHEATHING	8d NAILS 2 3/8" x 0.113" NAIL	PATTERN: 6" O.C. PANEL PERIMETER, 12" O.C. AT INTERMEDIATE SUPPORTS
18	STRUCTURAL WOOD PANEL SHEARWALL PANEL SHEATHING	8d NAILS ONLY	PATTERN: 4" O.C. PANEL PERIMETER, 12" O.C. AT INTERMEDIATE SUPPORTS

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Charlotte, North Carolina 28210
Tel: (800) 274-9000
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Revision Schedule

NO.	DATE	BY	DESCRIPTION

STATE OF NORTH CAROLINA — REGISTERED ARCHITECTS — CLARK PATTERSON ENGINEERS/ARCHITECTS — CBA CLARK PATTERSON LEE — CHARLOTTE, NC — 51301

NORTH CAROLINA — PROFESSIONAL ENGINEER SEAL 031320 — JOSEPH P. RAUSCH — 2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	BSC	JPR

SCALE: As indicated

SHEET TITLE: ROOF FRAMING PLAN

PROJECT NUMBER: 13283.00

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DRAWING NUMBER

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GENERAL NOTES

1. THE STRUCTURE SHOWN ON THESE DRAWING IS SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL TEMPORARILY BRACE THE STRUCTURE AND ITS COMPONENTS TO RESIST ALL LATERAL FORCES DURING CONSTRUCTION.

2. REFER TO THE "SPECIAL INSPECTIONS" SECTION OF THE SPECIFICATIONS FOR PROJECT REQUIREMENTS AND PERTINENT INFORMATION.

3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS SHOWN ON THE DRAWINGS AND IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO ORDERING OR FABRICATING MATERIALS OR OTHERWISE PROCEEDING WITH THE WORK.

4. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES REQUIRED TO EXECUTE AND COMPLETE ALL ITEMS OF WORK AS SHOWN OR INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN, INCLUDING INCIDENTAL ITEMS TO EFFECT A FINISHED AND COMPLETE JOB, EVEN THOUGH SUCH ITEMS ARE NOT SHOWN OR PARTICULARLY MENTIONED.

5. ALL STRUCTURAL WORK, INCLUDING MATERIAL STRESSES AND METHODS OF CONSTRUCTION, SHALL BE IN COMPLIANCE WITH THE 2012 NORTH CAROLINA STATE BUILDING CODE, THE UNIFORM BUILDING CODE, OSHA AND GOVERNING AGENCIES HAVING JURISDICTION.

6. CONTRACTOR SHALL MAINTAIN SAFE PUBLIC ACCESS TO AND FROM ALL BUILDING EXITS AT ALL TIMES AND SHALL NOT BLOCK SHIPPING OR RECEIVING.

7. CONTRACTOR SHALL USE CONSTRUCTION METHODS THAT ARE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

8. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE ARE ANY QUESTIONS REGARDING DIMENSIONS, CONTACT THE ARCHITECT/ENGINEER FOR INFORMATION PRIOR TO SUBMITTING SHOP DRAWINGS.

9. THE CONTRACTOR SHALL COORDINATE ALL STRUCTURAL WORK WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS, AND WITH THE WORK OF ALL OTHER TRADES.

10. REFER TO MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MECHANICAL OPENINGS.

11. ALL FLOOR, WALL AND CEILING PENETRATIONS THROUGH FIRE WALLS SHALL BE SEALED AGAINST SMOKE AND FIRE TRANSMISSION.

12. MATERIAL AND EQUIPMENT STORAGE SHALL BE ON SITE AND AS DIRECTED BY OWNER.

13. MAINTAIN PREMISES AND PUBLIC PROPERTIES FREE FROM ACCUMULATIONS OF WASTE MATERIALS, DEBRIS AND RUBBISH CAUSED BY OPERATIONS.

14. AFTER COMPLETION OF WORK, CONTRACTOR SHALL REMOVE ALL WASTE MATERIALS, RUBBISH, TOOLS, AND SURPLUS MATERIALS AND CLEAN SIGHT EXPOSED SURFACES. CONSTRUCTION SITE SHALL BE ORGANIZED AND CLEANED UP BY CONTRACTOR ON A DAILY BASIS.

15. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION ALL SITE APPURTENANCES DAMAGED UNDER THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.

16. ALL MATERIAL SCHEDULED FOR DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE AND SHALL BE DISPOSED OF LEGALLY.

17. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AN SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS SPECIFICALLY SHOWN OTHERWISE.

19. INFORMATION IN THESE STRUCTURAL NOTES IS A SELECTED SUMMARY OF REQUIREMENTS. REFER TO SPECIFICATIONS FOR AMPLIFICATIONS OF REQUIREMENTS.

EXCAVATION & BACKFILL NOTES

1. EXCAVATIONS TO BE SHEETED AND BRACED, OR LAID BACK TO PREVENT SLOUGHING IN OF THE EXCAVATED AREAS PER OSHA REGULATIONS.

2. PLACE ALL FOOTINGS ON FIRM, DRY, LEVEL, ACCEPTABLE BEARING SOIL.

3. REMOVE AND DISPOSE OF LEGALLY FROM SITE:
-UNACCEPTABLE BEARING SOIL
-EXCESS EXCAVATED MATERIAL
-ASPHALT MATERIAL (SEE SITE PLANS)

4. BACKFILL WITHIN BUILDING - TO WITHIN 6 INCHES OF UNDERSIDE OF FLOOR SLAB SHALL BE "SUBBASE COURSE" CONSISTING OF HARD DURABLE PEBBLES, ROCK FRAGMENTS AND SOIL BINDER. IT SHALL BE FREE OF CLAY, ORGANIC MATTER, AND OTHER DELETERIOUS MATERIAL.
GRADATION: 2 INCHES MAXIMUM SIZE, 25-60% PASSING THE 1/4" SIEVE, 5-40% PASSING NO. 40 SIEVE, AND NOT MORE THAN 10% PASSING NO. 200 SIEVE.

5. UNDER SLABS ON GRADE -COMPACTED 6 INCH LIFT OF ASTM #57 STONE.

6. BACKFILL OUTSIDE OF BUILDING - "SELECT GRANULAR FILL" CONSISTING OF SAND, FINE GRAVEL, COARSE SILT, OR SIMILAR NON-COHESIVE HARD DURABLE MATERIALS AND SOIL BINDERS WITHOUT EXCESSIVE CLAY, ORGANIC MATTER, OR FROZEN OR DELETERIOUS MATERIAL.
GRADATION: 4 INCHES MAXIMUM SIZE, 0-70% PASSING THE #40 SIEVE AND 0-15% PASSING THE #200 SIEVE.

7. FILL COMPACTION:

A. WITHIN BUILDING - 98% DRY DENSITY STANDARD PROCTOR
B. OUTSIDE OF BUILDING - 90% DRY DENSITY STANDARD PROCTOR

8. FILL PLACEMENT - PLACE FILL SIMULTANEOUSLY ON EACH SIDE OF FOUNDATION WALL IN 6 INCH LIFTS. THE MAXIMUM DIFFERENCE IN ELEVATION ON EITHER SIDE OF WALL SHALL NOT EXCEED 1'-6".

CONCRETE NOTES: GENERAL

1. ALL CONCRETE WORK, CONSTRUCTION AND REINFORCING DETAILS SHALL CONFORM TO THE 2012 NORTH CAROLINA STATE BUILDING CODE AND "THE SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS" (ACI-318).

2. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, U.N.O. SEE SPECIFICATIONS FOR MIX DESIGN REQUIREMENTS.

LOCATION	W/C RATIO	SLUMP (±1")	% AIR (±1%)	MAXIMUM AGGREGATE	MIN. STRENGTH @ 28 DAYS
FOOTINGS	.50	3.5"	N/A	1 1/2"	3000 PSI
FOUNDATIONS	.45	3.5"	4	1 1/2"	4000 PSI
SLAB ON GRADE	.45	3.5"	4	3/4"	3000 PSI

3. CONTRACTOR SHALL SUBMIT MIX DESIGNS PROPORTIONED BY A LICENSED TESTING LABORATORY.

4. PROVIDE MINIMUM OF FOUR (4) CYLINDERS PER EACH FIFTY (50) YARDS OR FRACTION THEREOF POURED IN ONE DAY. BREAK ONE AT 7 DAYS AND TWO AT 28 DAYS.

5. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315).

6. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

7. LAP SPLICES AND EMBEDMENT LENGTHS SHALL CONFORM TO ACI 318 - CHAPTER 12.

8. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING WHERE WALLS OR BEAMS MEET AT CORNERS OR INTERSECT. THIS ALSO INCLUDES INTERSECTIONS OF CONCRETE WITH MASONRY WORK.

9. PROVIDE SHOP DRAWINGS FOR REINFORCING INCLUDING ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN PLACE.

10. CLEAR COVER CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE:

3" - CONCRETE CAST AGAINST EARTH.
2" - FORMED SURFACES IN CONTACT WITH SOIL OR EXPOSED TO WEATHER.
1" - FORMED SURFACES NOT IN CONTACT WITH SOIL OR EXPOSED TO WEATHER.

FOUNDATIONS

1. ALL FOUNDATIONS ARE TO BEAR ON APPROVED BEARING MATERIAL. (SEE GEOTECHNICAL EVALUATION BY ECS CAROLINAS LLP, DATED APRIL 2015.)

2. ALL FOUNDATION EXCAVATIONS ARE SUBJECT TO APPROVAL BY THE OWNER'S REPRESENTATIVE BEFORE ANY CONCRETE IS PLACED.

3. ALL FORMS AND REINFORCING STEEL IN PLACE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE ANY CONCRETE IS PLACED.

4. NO FOUNDATION SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

5. IN GENERAL, EXTERIOR CONSTRUCTION SHALL BE CARRIED DOWN A MINIMUM OF 1'-6" BELOW FINISHED EXTERIOR GRADE.

6. CENTERLINE OF FOOTINGS, WALLS, GRADE BEAMS, COLUMNS, AND BEAMS SHALL COINCIDE, UNLESS OTHERWISE NOTED.

7. REFER TO ARCHITECTURAL DRAWINGS FOR FOUNDATION DRAINAGE.

8. ALL EXTERIOR CONCRETE USED ABOVE GRADE SHALL HAVE AN AIR ENTRAINING AGENT.

9. RUB ALL SIGHT EXPOSED CONCRETE AFTER FORMS HAVE BEEN REMOVED.

10. ALL EXPOSED CONCRETE PIER CORNERS SHALL BE CHAMFERED 3/4".

11. ALL GROUT FOR BASE PLATES SHALL BE NON-SHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.

12. ANCHOR BOLTS - ASTM F1554, Fy=36 KSI, 1" DIAMETER U.N.O.

13. ISOLATION JOINT - ASPHALT IMPREGNATED FILLER STRIP CONFORMING TO ASTM D-944.

14. ALL STEEL COLUMNS BELOW GRADE SHALL BE TWICE COATED WITH A BITUMINOUS COATING.

15. CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON THE JOB BEFORE COMMENCING WORK. REFER TO ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS AND DETAILS NOT SHOWN. REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATION AND DIMENSIONS OF ANY OPENING, SLEEVES, INSERTS, SLAB DEPRESSIONS, ETC.

16. EPOXY ANCHORS SHALL BE HIT HY-200 INJECTION ADHESIVE ANCHORS AS MANUFACTURED BY HILTI, INC., TULSA OK (800-879-8000).

SLABS ON GRADE

1. ALL SLABS ON GRADE SHALL BE PLACED OVER A STEGO 15 MIL VAPOR BARRIER. TAPE ALL SEAMS AND PROVIDE FLASHING/BOOTS AROUND PIPE PENETRATIONS.

2. UNDER SLABS ON GRADE: COMPACTED 6 INCH LIFT OF ASTM #57 STONE.

3. SLAB ON GRADE REINFORCEMENT SHALL BE 6x6-W2.1x2.1WWF, UNLESS NOTED OTHERWISE.

4. WET CURE FOR 7 DAYS BEFORE APPLYING ANY WHEELED TRAFFIC OR MASONRY PARTITIONS.

5. CONTRACTION JOINTS: JOINTS SHALL BE SPACED NO FARTHER THAN 15'-0" O.C. JOINTS SHALL TYPICALLY RUN BETWEEN COLUMNS AND TERMINATE AT A COLUMN ISOLATION POUR. THE LENGTH OF ANY INDIVIDUAL JOINTED AREA SHALL NOT EXCEED 1.5 TIMES ITS WIDTH.

6. CONSTRUCTION/COLD JOINTS: TERMINATE DAY'S CONCRETE WORK AT A CONTROL JOINT LOCATION. PROVIDE A KEYWAY OR DOWELS FOR CONTINUATION OF WORK WITH NEXT POUR.

7. CONCRETE SURFACE SHALL BE HARD STEEL TROWEL FINISH.

8. FOR FLOOR FINISH, FLOOR DRAINS, SLAB DEPRESSIONS, AND WATERPROOFING DETAILS SEE ARCHITECTURAL DRAWINGS.
APPLYING ANY WHEELED TRAFFIC OR MASONRY PARTITIONS.

GENERAL FRAMING

1. DETAILS OF WOOD FRAMING SUCH AS NAILING, BLOCKING, BRIDGING, FIRESTOPPING, ETC. SHALL CONFORM TO 2012 NORTH CAROLINA STATE BUILDING CODE.

2. DO NOT NOTCH, BORE, OR CUT MEMBERS FOR PIPES, DUCTS, CONDUITS, OR ANY OTHER REASON EXCEPT AS SHOWN ON THE DRAWINGS OR AS SPECIFICALLY APPROVED IN ADVANCE BY THE ENGINEER.

3. MAKE ALL BEARINGS FULL UNLESS OTHERWISE INDICATED ON THE DRAWINGS. FINISH ALL BEARING SURFACES ON WHICH STRUCTURAL MEMBERS ARE TO REST SO AS TO GIVE SURE AND EVEN SUPPORT. WHERE FRAMING MEMBERS SLOPE, CUT OR NOTCH THE ENDS AS REQUIRED TO GIVE UNIFORM BEARING SURFACE.

4. ON ALL FRAMING MEMBERS TO RECEIVE A FINISHED WALL OR CEILING, ALIGN THE FINISHED SUBSURFACE TO VARY NOT MORE THAN 1/8" FROM THE PLANE OF SURFACE OF ADJACENT FRAMING AND FURRING MEMBERS.

5. PLACE ALL PLYWOOD SHEATHING WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND CONTINUOUSLY OVER AT LEAST THREE SUPPORTS. CENTER JOINTS ACCURATELY OVER SUPPORTS, STAGGER THE END JOINTS OF PLYWOOD PANELS TO ACHIEVE CONTINUITY OVER TRUSSES.

6. NAILING

A. USE ONLY COMMON WIRE NAILS OR SPIKES OF THE DIMENSIONS SHOWN ON THE NAILING SCHEDULE, EXCEPT WHERE OTHERWISE CALLED FOR ON THE DRAWINGS.

B. FOR CONDITIONS NOT COVERED IN THE NAILING SCHEDULE, PROVIDE PENETRATION INTO THE PIECE OF RECEIVING THE POINT OF NOT LESS THAN 1/2 THE LENGTH OF THE NAIL OR SPIKE PROVIDED, HOWEVER, THAT 16D NAILS MAY BE USED TO CONNECT TWO PIECES OF TWO INCH NOMINAL THICKNESS.

C. DO ALL NAILING WITHOUT SPLITTING WOOD. PRE-BORE AS REQUIRED. REPLACE ALL SPLIT MEMBERS.

7. BOLTING - DRILL HOLES 1/16 INCH LARGER IN DIAMETER THAN THE BOLTS BEING USED. DRILL STRAIGHT AND TRUE FROM ONE SIDE ONLY. BOLT THREADS SHALL NOT BEAR ON WOOD. USE WASHERS UNDER HEAD AND NUT WHERE BOTH BEAR ON WOOD; USE WASHERS UNDER ALL NUTS.

8. SCREWS - FOR LAG SCREWS AND WOOD SCREWS, PRE-BORE HOLES SAME DIAMETER AS ROOT OF THREAD; ENLARGE HOLES TO SHANK DIAMETER FOR LENGTH OF SHANK. SCREW, DO NOT DRIVE, ALL LAG SCREWS AND WOOD SCREWS.

9. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED SHALL BE IN ACCORDANCE WITH ASTM A153.

FRAMING MATERIALS

1. FRAMING LUMBER (NOMINAL 2" THICK) SHALL BE KILN DRIED No. 2 HEM-FIR, No. 1/No. 2 SPRUCE-PINE-FIR, OR No. 2 DOUGLAS FIR, SURFACED FOUR SIDES, CONFORMING TO THE FOLLOWING REQUIREMENTS.

A. MOISTURE CONTENT NOT TO EXCEED 19%.

B. MINIMUM ALLOWABLE BENDING STRESS (Fb) TO BE NOT LESS THAN 875 PSI.

C. MINIMUM ALLOWABLE COMPRESSIVE STRESS (Fc) TO BE NOT LESS THAN 1150 PSI.

D. MINIMUM ALLOWABLE HORIZONTAL SHEAR STRESS (Fv) TO BE NOT LESS THAN 135 PSI.

E. MODULUS OF ELASTICITY: E = 1,400,000 PSI.
Emin = 510,000 PSI.

F. EACH PIECE OF LUMBER CLEARLY MARKED WITH GRADE MARK OF APPLICABLE GRADING ASSOCIATION.

G. EACH PIECE OF LUMBER MUST BE SOUND, THOROUGHLY SEASONED, WELL MANUFACTURED AND FREE OF EXCESSIVE WARP THAT CANNOT BE CORRECTED BY PROPER NAILING. SPLIT LUMBER SHALL BE REJECTED.

2. PLYWOOD SHEATHING SHALL CONFORM TO U.S. VOLUNTARY PRODUCT STANDARD PS1-95 AND/OR PS2-92.

A. ROOF SHEATHING: 1/2" APA STRUCTURAL 1 RATED EXPOSURE 1, SPAN RATING 32/16.

B. WALL SHEATHING: 1/2" APA STRUCTURAL 1 RATED EXPOSURE 1, SPAN RATING 32/16.

3. WOOD THAT IS EMBEDDED IN EARTH OR CONCRETE, OR PLACED ON CONCRETE IN DIRECT CONTACT WITH THE EARTH, OR DIRECTLY EXPOSED TO WEATHER SHALL BE PRESERVATIVE-TREATED INCLUDING BUT NOT LIMITED TO POSTS, BEAMS, COLUMNS, JOISTS, SLEEPERS, SILLS, AND SOLE PLATES.

4. NAILS - COMMON NAILS, EXCEPT WHERE NOTED, MEETING FEDERAL SPECIFICATION FF-N-1-1. USE GALVANIZED NAILS AT ALL EXPOSED LOCATIONS.

5. JOIST HANGERS AND FRAMING ANCHORS - MINIMUM 14 GA. MATERIAL, EXCEPT WHERE NOTED OR RECOMMENDED BY ACCEPTABLE MANUFACTURERS.

6. MISCELLANEOUS FASTENERS:

A. LAG SCREWS - HEX HEAD, CONFORMING TO FEDERAL SPECIFICATIONS FF-B-561. 3/8" DIAMETER EXCEPT AS NOTED. LENGTH OF EMBEDMENT 75% OF MEMBER THICKNESS, MAXIMUM 6".

B. MACHINE BOLTS AND THREADED RODS - ASTM A307, 5/8" DIAMETER EXCEPT WHERE NOTED.

C. STEEL HARDWARE - ASTM A36.

7. PROVIDE BOLTING ASSEMBLY INCLUDING PLATE WASHERS, LOCK WASHERS, NUTS BOLTS, ETC.

PRE-FABRICATED WOOD TRUSS NOTES

1. PRE-FABRICATED WOOD TRUSSES SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

- CODES AND STANDARDS AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.

- "NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER AND ITS FASTENINGS" NATIONAL FOREST PRODUCTS ASSOCIATION.

- TRUSS PLATE INSTITUTE, "HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" HIB-91.

2. SHOP DRAWINGS SHALL CLEARLY SHOW ALL TRUSS DIMENSION, MEMBER SIZES, TEMPORARY AND PERMANENT BRACING, CONNECTOR PLATE SIZES, AND MISCELLANEOUS ANCHORS. CALCULATIONS SHALL INDICATE ASSUMED LOADINGS, MEMBER FORCES, JOINT DISPLACEMENTS, AND DESIGN OF ALL CONNECTIONS.

3. PREENGINEERED TRUSSES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA.

4. SUBMIT SHOP DRAWINGS FOR REVIEW. SHOP DRAWINGS AND CALCULATIONS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER CURRENTLY LICENSED IN THE STATE OF NORTH CAROLINA. ALL PREENGINEERED TRUSS SHOP DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE DURING THE TIMES OF INSPECTION AND SHALL BEAR CLEAR INDICATION THAT THEY HAVE BEEN REVIEWED AND APPROVED BY THE PROJECT STRUCTURAL ENGINEER OF RECORD. (ENGINEER OF RECORD TO FURNISH COPY OF APPROVED STAMPED TRUSS SHOP DRAWINGS TO STATE CONSTRUCTION OFFICE.)

5. TRUSSES SHALL BE DESIGNED TO SUSTAIN THE FOLLOWING LOADS, AND LOAD COMBINATIONS, AS MANDATED BY THE 2012 NORTH CAROLINA STATE BUILDING CODE:

TOP CHORD DEAD LOAD: 15 POUNDS PER SQUARE FOOT

TOP CHORD LIVE LOAD: 20 POUNDS PER SQUARE FOOT

BOTTOM CHORD DEAD LOAD: 10 POUNDS PER SQUARE FOOT

BOTTOM CHORD LIVE LOAD: 5 POUNDS PER SQUARE FOOT

MAXIMUM ALLOWABLE TOTAL LOAD DEFLECTION: 1/360 OF TOTAL SPAN OF TRUSS.

6. TRUSSES SHALL BE DESIGNED TO EXERT NO HORIZONTAL THRUST AT THEIR POINTS OF SUPPORT.

7. LUMBER SPECIES AND GRADE SHALL BE AS SPECIFIED BY TRUSS MANUFACTURER.

8. CONNECTOR PLATES SHALL BE A MINIMUM 20 GAUGE GALVANIZED "GANGNAIL" CONNECTOR. TRUSS MANUFACTURER SHALL SUBMIT ENGINEERING DATA ON PARTICULAR PLATES USED.

9. STRAP ANCHORS AND METAL TIES MINIMUM 18 GAUGE MATERIAL, EXCEPT WHERE NOTED.

10. ERECT TRUSSES IN STRICT ACCORDANCE WITH INSTRUCTIONS FROM THE TRUSS MANUFACTURER. DO NOT HANDLE TRUSSES IN ANY WAY WHICH WILL WEAKEN THEM OR CAUSE TRUSSES TO DISTORT ABOUT THEIR WEAK AXIS. DO NOT PLACE ANY LOADS ON TRUSSES BEFORE THEY HAVE BEEN INSTALLED AND FULLY BRACED.

11. FURNISH AND INSTALL ALL TRUSS BRACING IN STRICT ACCORDANCE WITH THE TRUSS PLATE INSTITUTE'S "BUILDING COMPONENT SAFETY INFORMATION BOOKLET, BCSI 1-03, AND RELATED SUMMARY SHEETS.

12. BUILT-UP TRUSSES SHALL CONSIST OF TWO OR MORE SINGLE TRUSSES, FABRICATED AS INDIVIDUAL TRUSSES, AND FASTENED TOGETHER TO FORM A SINGLE TRUSS. ALL HARDWARE REQUIRED FOR CONNECTIONS BETWEEN PREENGINEERED TRUSSES SHALL BE DESIGNED AND SPECIFIED BY THE TRUSS DESIGN ENGINEER.

DESIGN CRITERIA

1. BUILDING OCCUPANCY CATEGORY II

2. DESIGN LOADS AND INFORMATION:

A. FLOOR LIVE LOADS.....

1. STAIRS AND LANDINGS: 100 PSF
2. MECHANICAL ROOMS: 100 PSF
3. GROUND FLOOR: 100 PSF.

B. ROOF LIVE LOAD..... 20 PSF

C. SNOW LOAD.....

1. GROUND SNOW LOAD [Pg] = 15 PSF
2. FLAT ROOF SNOW LOAD [Pf] = 12.6 PSF
3. SNOW EXPOSURE FACTOR [Ce] = 1.0
4. SNOW IMPORTANCE FACTOR [Is] = 1.0
5. THERMAL FACTOR [Ct] = 1.0

D. WIND DESIGN CRITERIA.....

1. BASIC WIND SPEED (3-SECOND GUST) = 90 MPH
2. WIND IMPORTANCE FACTOR [Iw] = 1.0
3. WIND EXPOSURE: C
4. INTERNAL PRESSURE COEFFICIENT [GCpi] = ±0.18
5. COMPONENTS AND CLADDING (SEE DIAGRAM)
6. NET UPLIFT = 20 PSF

E. SEISMIC DESIGN CRITERIA.....

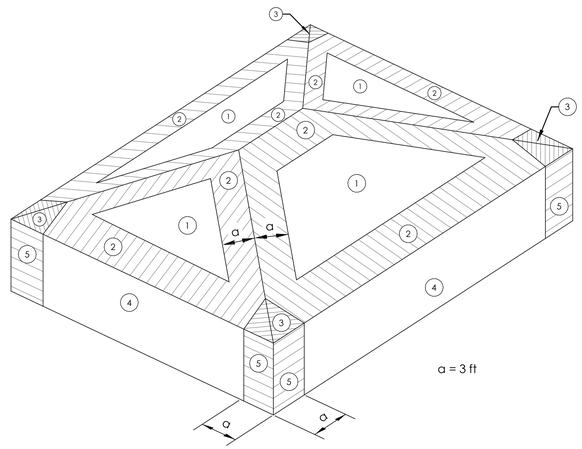
1. SEISMIC IMPORTANCE FACTOR [Ie] = 1.0
2. MAPPED SPECTRAL RESPONSE ACCELERATIONS:
Ss = 0.386g
S1 = 0.121g
3. SITE CLASS C
4. SPECTRAL RESPONSE COEFFICIENTS:
SDs = 0.308g
SD1 = 0.136g
5. SEISMIC DESIGN CATEGORY: C
6. BASIC SEISMIC FORCE RESISTING SYSTEM: A-13
(BEARING WALL SYSTEM: LIGHT FRAMED WALLS w/ WOOD STRUCTURAL PANEL SHEAR WALLS)
7. DESIGN BASE SHEAR = 15 KIPS
8. SEISMIC RESPONSE COEFFICIENT (Cs) = 0.048
9. RESPONSE MODIFICATION FACTOR (R) = 6.5
10. ANALYSIS PROCEDURE: EQUIV. LATERAL FORCE METHOD
11. ALLOWABLE STRESS DESIGN METHOD (ASD) UTILIZED IN THE STRUCTURAL DESIGN OF THIS PROJECT.

F. FOUNDATION DESIGN CRITERIA.....

1. ALLOWABLE BEARING PRESSURE = 2500 PSF.
2. MINIMUM CONSTRUCTION DEPTH = 18" BELOW FINISHED GRADE.
3. MODULUS OF SUBGRADE = 110 PCI

G. FLOOD LOAD.....
THIS STRUCTURE IS NOT LOCATED IN A FLOOD HAZARD AREA.

H. SPECIAL LOADS..... N/A



COMPONENTS AND CLADDING PRESSURES					
	COMPONENT TRIBUTARY AREA				
ZONE	10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	100 SQ. FT.	500 SQ. FT.
1	16.1 psf	15.7 psf	15.1 psf	14.6 psf	14.6 psf
2	28.1 psf	25.9 psf	22.9 psf	20.6 psf	20.6 psf
3	41.5 psf	38.8 psf	35.2 psf	32.5 psf	32.5 psf
4	19.2 psf	18.3 psf	17.3 psf	16.5 psf	14.6 psf
5	23.6 psf	22.1 psf	20.0 psf	18.3 psf	14.6 psf

COMPONENTS AND CLADDING DIAGRAM

1. PRESSURES ARE ASSUMED TO ACT IN EITHER DIRECTION.

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DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

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STATE OF NORTH CAROLINA
CLARK PATTERSON ENGINEERS/ARCHITECTS
CPA CLARK PATTERSON LEE
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51301
REGISTERED ARCHITECTS

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 031320
JOSEPH P. RAISOR
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	BSC	JPR

SCALE 12" = 1'-0"

SHEET TITLE
STRUCTURAL NOTES

PROJECT NUMBER
13283.00

S800
DRAWING NUMBER

2/23/2016 7:51:47 AM
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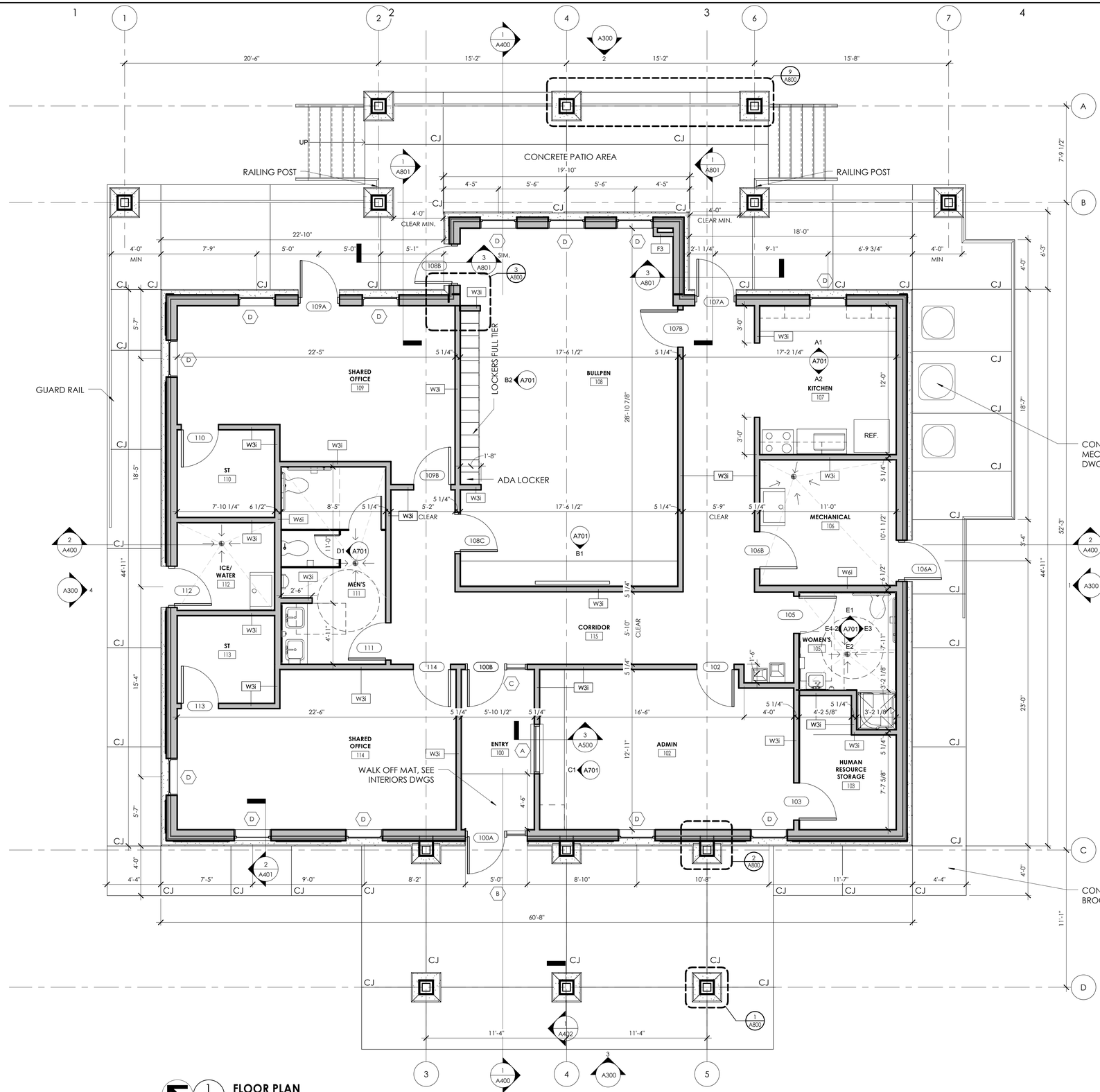

1 A201 **FLOOR PLAN**
1/4" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. THE GENERAL CONTRACTOR IS RESPONSIBLE TO FIRESTOP ALL NEW PARTITIONS TO THE STRUCTURAL DECK ABOVE. FIRESTOPPING HEADS OF WALLS IS TO OCCUR AT ALL NEW WALL CONSTRUCTION WITHIN THE PROJECT.
3. MODULAR CASEWORK IS FURNISHED BY OTHERS AND INSTALLED BY CONTRACTOR (OFCI).
4. ALL WALL DIMENSIONS INDICATED ON FLOOR PLANS ARE TO FACE OF GWB OR MASONRY UNLESS OTHERWISE NOTED.
5. SEE SHEET A500 FOR INTERIOR PARTITION TYPES
6. SEE A900s FOR INTERIOR AND EXTERIOR DOORS, WINDOWS, CURTAINWALLS, AND STOREFRONTS
7. PROVIDE AN EDGE/TRANSITION STRIP CENTERED UNDER ALL DOORS WHERE ADJACENT FLOOR FINISHES ARE OF DIFFERENT MATERIALS.
8. PROVIDE ACCESS PANELS, MINIMUM 24" x 24", OR OF SIZES REQUIRED, WHERE PLUMBING AND HEATING VALVES, WATER SWITCHES, VENTILATION SPLITTER DAPMERS, ETC. ARE SHOWN ON PLUMBING, HEATING AND VENTILATION DRAWINGS.
9. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOMED CLEAN AT END OF EACH DAY.
10. ALL DOORS AND WINDOW SYSTEMS TO HAVE SEALANT AROUND THE ENTIRE PERIMETER (BOTH SIDES) OF FRAMES.
11. CONTRACTOR TO COORDINATE WITH OTHER TRADES FOR SEQUENCING OF WORK.
12. REFER TO A700 FOR TYPICAL FIXTURE MOUNTING HEIGHTS AND ACCESSORIES LEGEND.
13. ALL DOOR FRAMES ARE LOCATED 4" FROM THE PERPENDICULAR WALL UNLESS NOTED OTHERWISE.

PLAN LEGEND

1000-1	DOOR TARGET, SEE SCHEDULE
W1	WINDOW TARGET, SEE WINDOW TYPES
1 / A	COLUMN LINE IDENTIFICATION
ROOM NAME 1000	ROOM TAG
CPT. / WOOD	DENOTES CHANGE IN FLOOR MATERIAL
WH	WATER HEATER/ AIR HANDLER, SEE MECHANICAL DRWINGS
1 / A3.1	SECTION MARK
2 / A701	INTERIOR ELEVATION MARK
3 / A301	EXTERIOR ELEVATION MARK; INCLUDES ALTERNATES, SEE A300
1 / A4.1	DETAIL FOR REFERENCE MARK
	BLOCKING IN WALLS FOR FUTURE GRAB BAR INSTALLATION
	DENOTES FINISH FLOOR GRADE ELEVATION
1i	WALL TYPE SEE A/500
NFEC	NEW FIRE EXTINGUISHER CABINET
NFEM	NEW FIRE EXTINGUISHER WALL MOUNTED
CJ	CONCRETE CONTROL JOINT @ SIDEWALK
	SLOPE SLAB TO FLOOR DRAIN, SEE PLUMBING DWGS
	DIRECTION OF SLOPE TOWARDS DRAINS

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
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NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
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CHARLOTTE, NC
51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: BUILDING FLOOR PLAN

PROJECT NUMBER: 13283.00

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A201
DRAWING NUMBER

2/18/2016 11:14:26 AM

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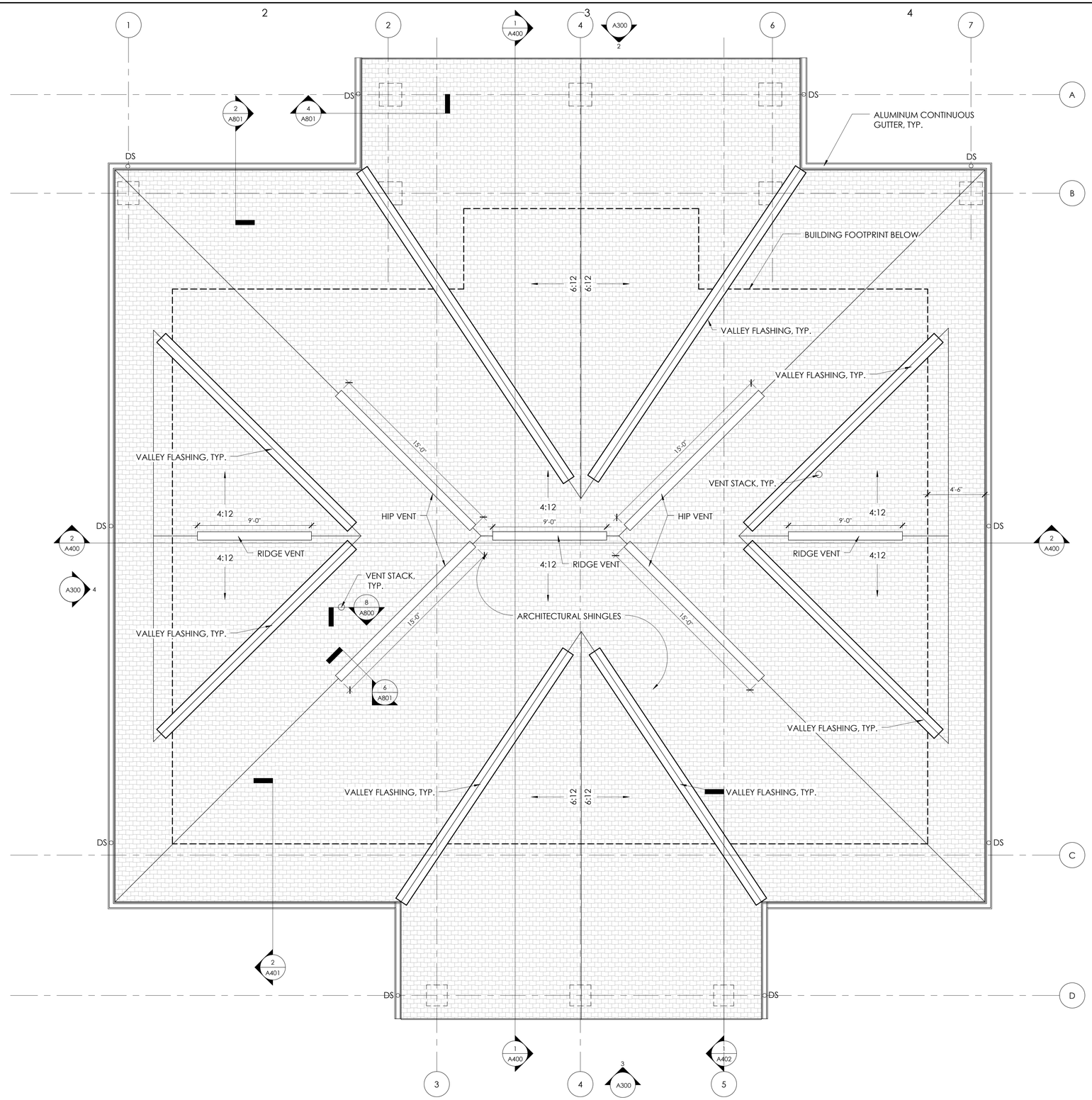

ROOF PLAN GENERAL NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF MATERIALS. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL CONTRACTORS PRIOR TO THE COMMENCEMENT OF WORK.
2. REFER TO THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR LOCATIONS OF ALL ROOF PENETRATIONS. PROVIDE FRAMING AS REQUIRED.
3. CONTRACTOR SHALL PAINT ALL ROOF FASTENERS EXPOSED TO VIEW AT UNDERSIDE OF DECK TO MATCH.
4. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE BROOM CLEAN AT THE END OF EACH DAY.
5. ALL WOOD BLOCKING USED SHALL BE PRESSURE TREATED.
6. THE ROOF ELEVATIONS SHOWN ON THE PLAN ARE SHOWN TO ESTABLISH RELATIVE HEIGHTS OF THE INDIVIDUAL ROOFS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN WATER TIGHTNESS AND PROVIDE PROTECTION AT ANY/ALL OPENINGS IN THE ROOF LEFT AT THE END OF EACH DAY.

ROOF PLAN LEGEND

DS	ALUMINUM DOWN SPOUT LOCATION, COLOR TO MATCH GUTTER
	DIRECTION OF ROOF PITCH; SLOPED STRUCTURE, RE: STRUCT. DWG'S
Y:X	ROOF SLOPE
	RIDGE/HIP VENT
	VALLEY FLASHING
	VENTS, SEE PLUMBING DWGS

ROOF
1/4" = 1'-0"

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NORTH CAROLINA
CHARLOTTE, N.C.
2/18/16

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ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: ROOF PLAN

PROJECT NUMBER: 13283.00

A202
DRAWING NUMBER

2/18/2016 11:14:29 AM

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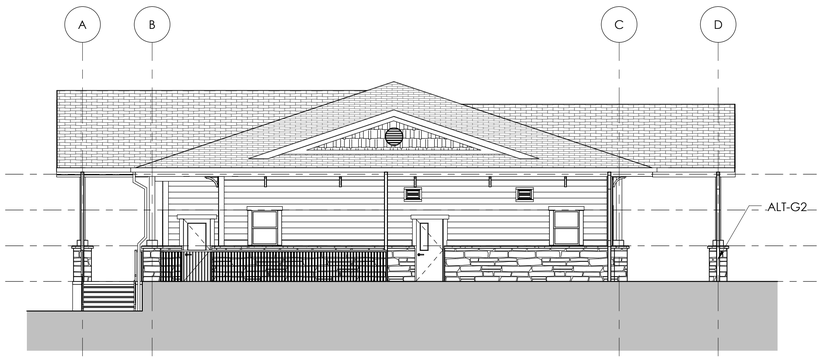
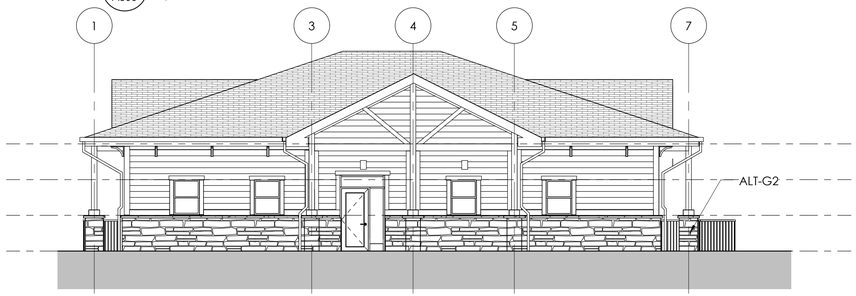


THE ADD - ALT - G2 ELEVATIONS SHOW LOCATION OF STONE VENEER, SEE BASE BID FOR ALL OTHER MATERIALS.

5 A300 **WEST ELEVATION - ADD ALT G2 - STONE VENEER**

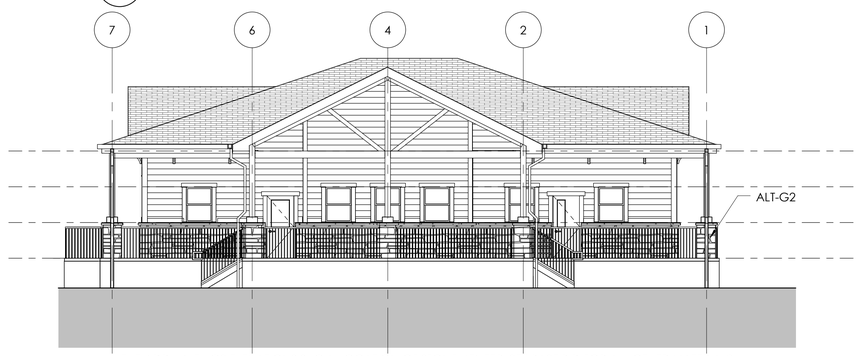
1/8" = 1'-0"



THE ADD - ALT - G2 ELEVATIONS SHOW LOCATION OF STONE VENEER, SEE BASE BID FOR ALL OTHER MATERIALS.

6 A300 **SOUTH ELEVATION - ADD ALT G2 - STONE VENEER**

1/8" = 1'-0"



THE ADD - ALT - G2 ELEVATIONS SHOW LOCATION OF STONE VENEER, SEE BASE BID FOR ALL OTHER MATERIALS.

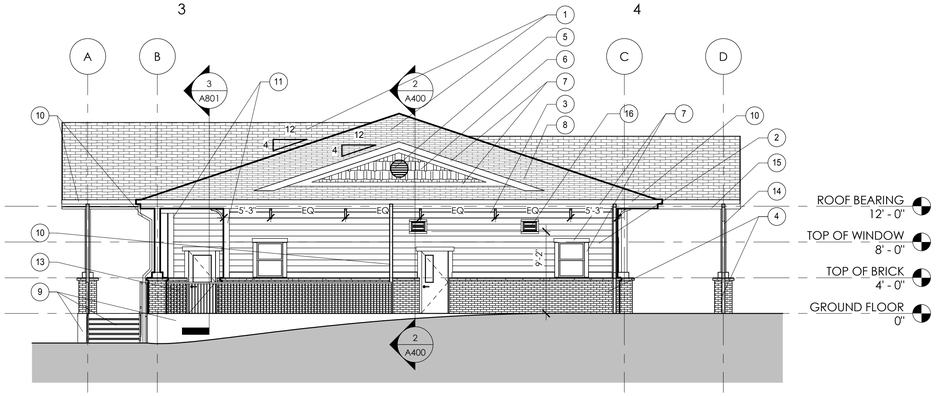
7 A300 **NORTH ELEVATION - ADD ALT G2 - STONE VENEER**

1/8" = 1'-0"

THE ADD - ALT - G2 ELEVATIONS SHOW LOCATION OF STONE VENEER, SEE BASE BID FOR ALL OTHER MATERIALS.

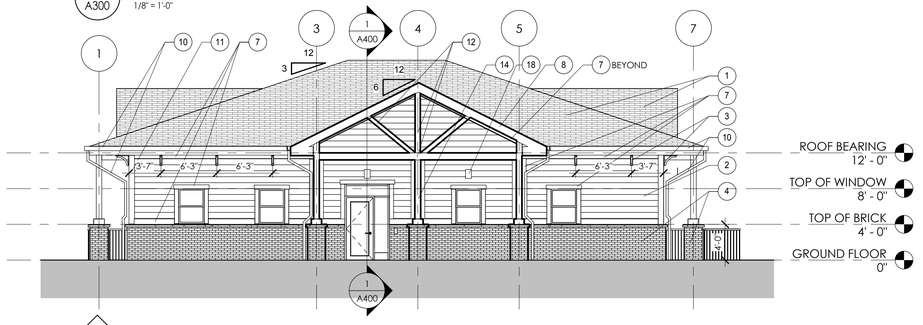
8 A300 **EAST ELEVATION - ADD ALT G2 - STONE VENEER**

1/8" = 1'-0"



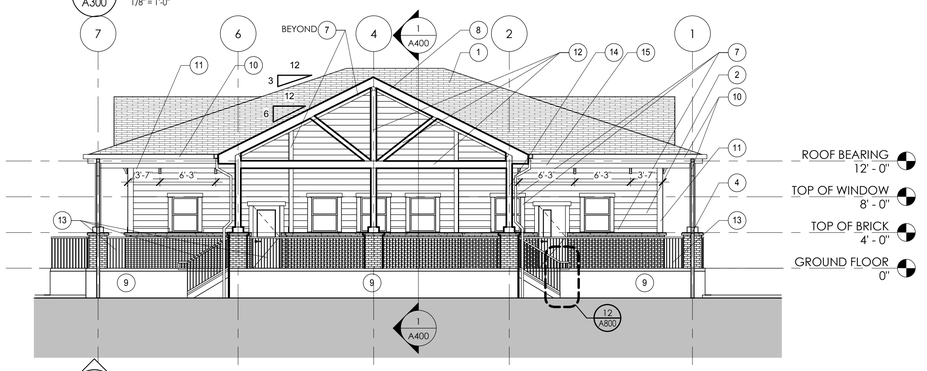
4 A300 **WEST ELEVATION - BASE BID**

1/8" = 1'-0"



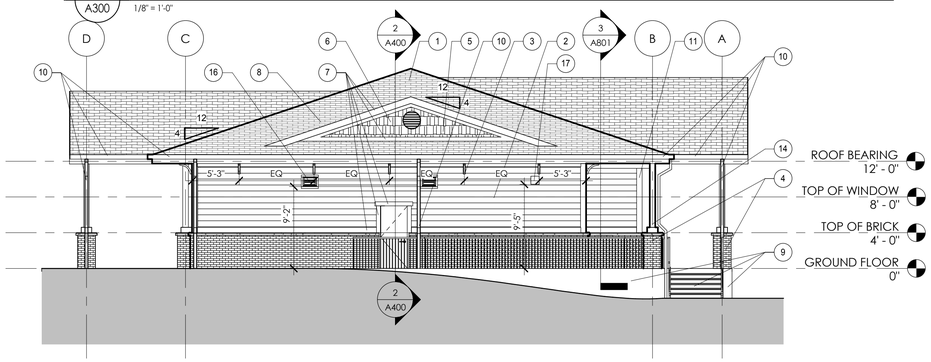
3 A300 **SOUTH ELEVATION - BASE BID**

1/8" = 1'-0"



2 A300 **NORTH ELEVATION - BASE BID**

1/8" = 1'-0"



1 A300 **EAST ELEVATION - BASE BID**

1/8" = 1'-0"

GENERAL ELEVATION NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. CONCRETE OPENINGS ARE APPROXIMATE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS.
3. REFER TO A900'S DRAWINGS FOR DOOR, FRAME, AND WINDOW TYPES.
4. PROVIDE ALL LOUVER OPENINGS AS REQUIRED. COORDINTE WITH MECHANICAL CONTRACTOR FOR FINAL SIZE AND LOCATION.
5. ARCHITECTURAL ELEVATION 0' -0" EQUALS CIVIL DATUM OF 258.30'
6. CONTROL JOINT = C.J
7. SOFT JOINT = S.J
8. ALL EXPOSED CONCRETE SHALL BE RUB FINISH.

ELEVATION KEYNOTES

1	ARCHITECTURAL SHINGLES - WEATHERED WOOD
2	CEMENT BOARD LAP SIDING - TIMBER BARK - 8 1/4" PLANK STYLE
3	DECORATIVE BRACKET - PAINT TO MATCH TRIM - SEE 5/A800, 6/A800
4	FACE BRICK (BASE BID), WALNUT GROVE - BORAL BRICK
5	CEMENT BOARD SHAKE SHINGLES - MOUNTAIN SAGE
6	ROUND ARCHITECTURAL LOUVER - 24" DIAMETER
7	6" TRIM BOARD - KHAKI BROWN; TYP. AT ALL GABLE ENDS, WINDOWS, DOORS, WATERTABLES(ABOVE), AND SOFFITS(BELOW)
8	CEMENT BOARD FASCIA - PAINT TO MATCH GUTTER
9	EXPOSED CONCRETE WITH RUB FINISH
10	ALUMINUM CONTINUOUS GUTTER WITH DOWNSPOUT - NATURAL CLAY
11	8" CORNER TRIM BOARD - KHAKI BROWN
12	HEAVY TIMBER TRUSS, SEE STRUCTURAL DRAWINGS - STAIN TBD
13	TUBE STEEL GUARDRAIL SYSTEM, PRIMED AND PAINTED.
14	8" X 8" HEAVY TIMBER COLUMN - STAIN TBD - SEE STRUCTURAL DWGS
15	8" X 10" HEAVY TIMBER BEAM - STAIN TBD - SEE STRUCTURAL DWGS
16	LOUVER WITH 2" TRIM BOARD ALL SIDES, SEE HVAC DWGS
17	VENT CAP - SEE HVAC DWGS
18	WALL MOUNTED LIGHT FIXTURE, SEE ELECTRICAL DWGS

ALT - G2 PROVIDE STONE VENEER - SUEDE - DRYSTACK LEDGESTONE IN LIEU OF FACE BRICK

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DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
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Revision Schedule

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CHARLOTTE, NC
51301

TIMOTHY SCOTT KNOP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/18/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE As indicated

SHEET TITLE
BUILDING ELEVATIONS

PROJECT NUMBER
13283.00

A300
DRAWING NUMBER

2/18/2016 11:14:39 AM

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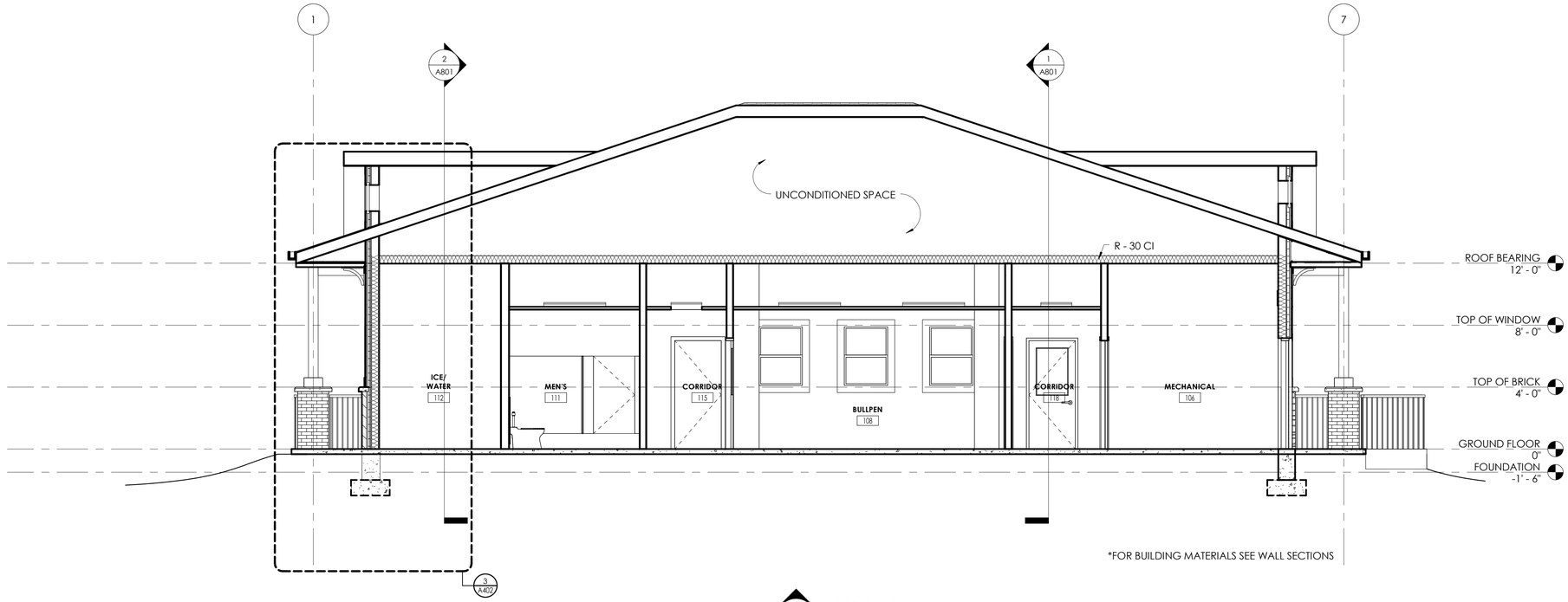
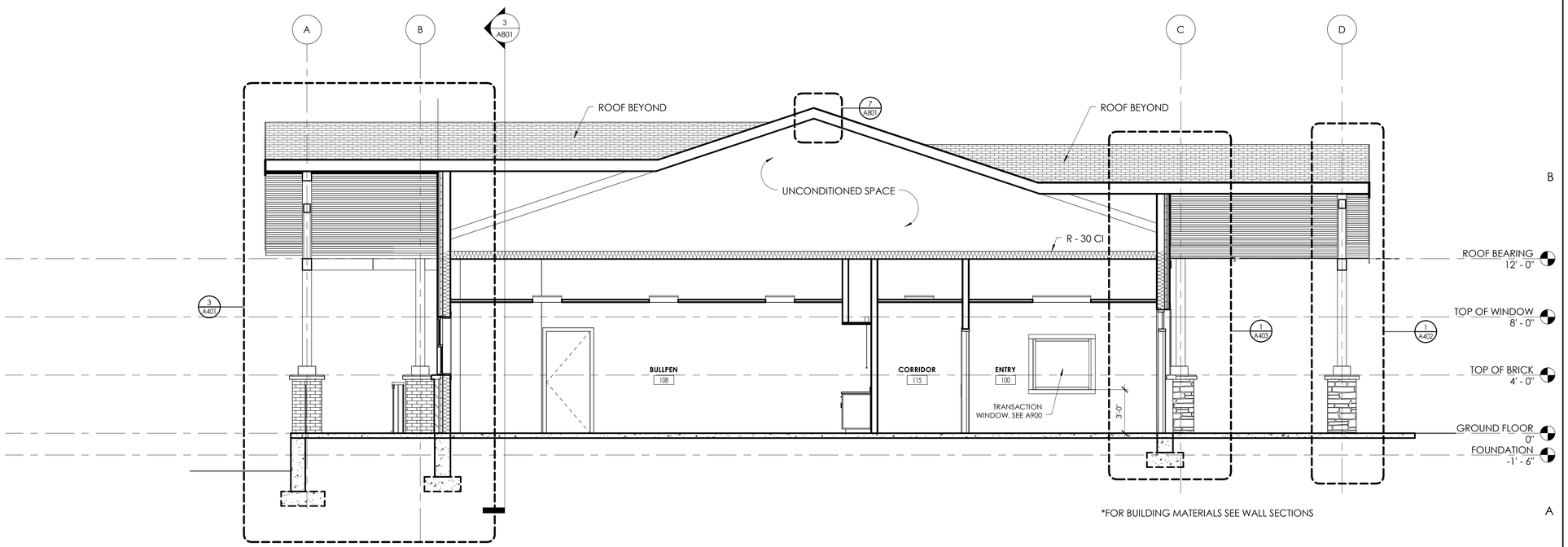


*FOR BUILDING MATERIALS SEE WALL SECTIONS

2 A400 SECTION 2

1/4" = 1'-0"



*FOR BUILDING MATERIALS SEE WALL SECTIONS

1 A400 SECTION 1

1/4" = 1'-0"

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TIMOTHY SCOTT KNAPP REGISTERED ARCHITECT 7444 NORTH CAROLINA CHARLOTTE, N.C.

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE 1/4" = 1'-0"

SHEET TITLE
BUILDING
THRU-SECTIONS

PROJECT NUMBER
13283.00

A400
DRAWING NUMBER

2/18/2016 11:14:42 AM
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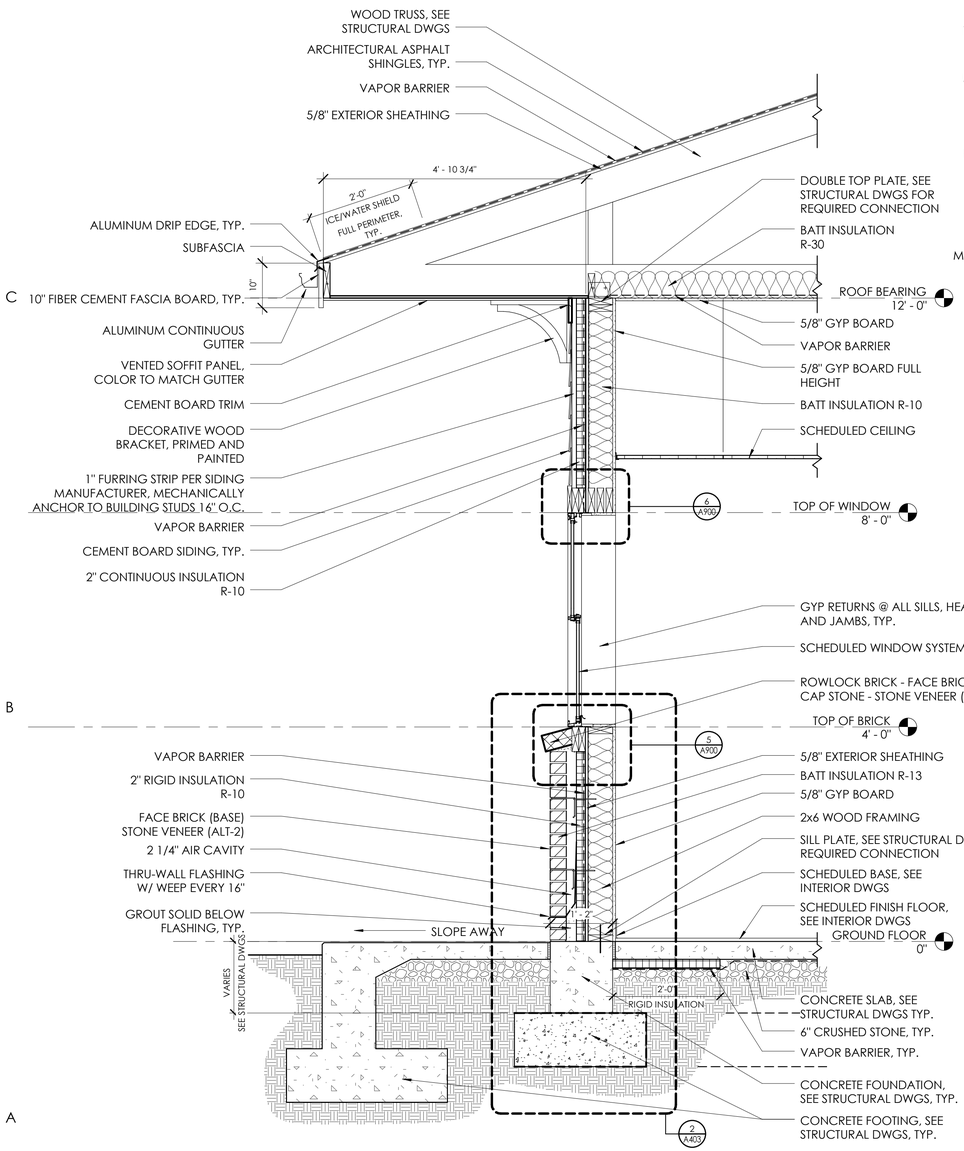
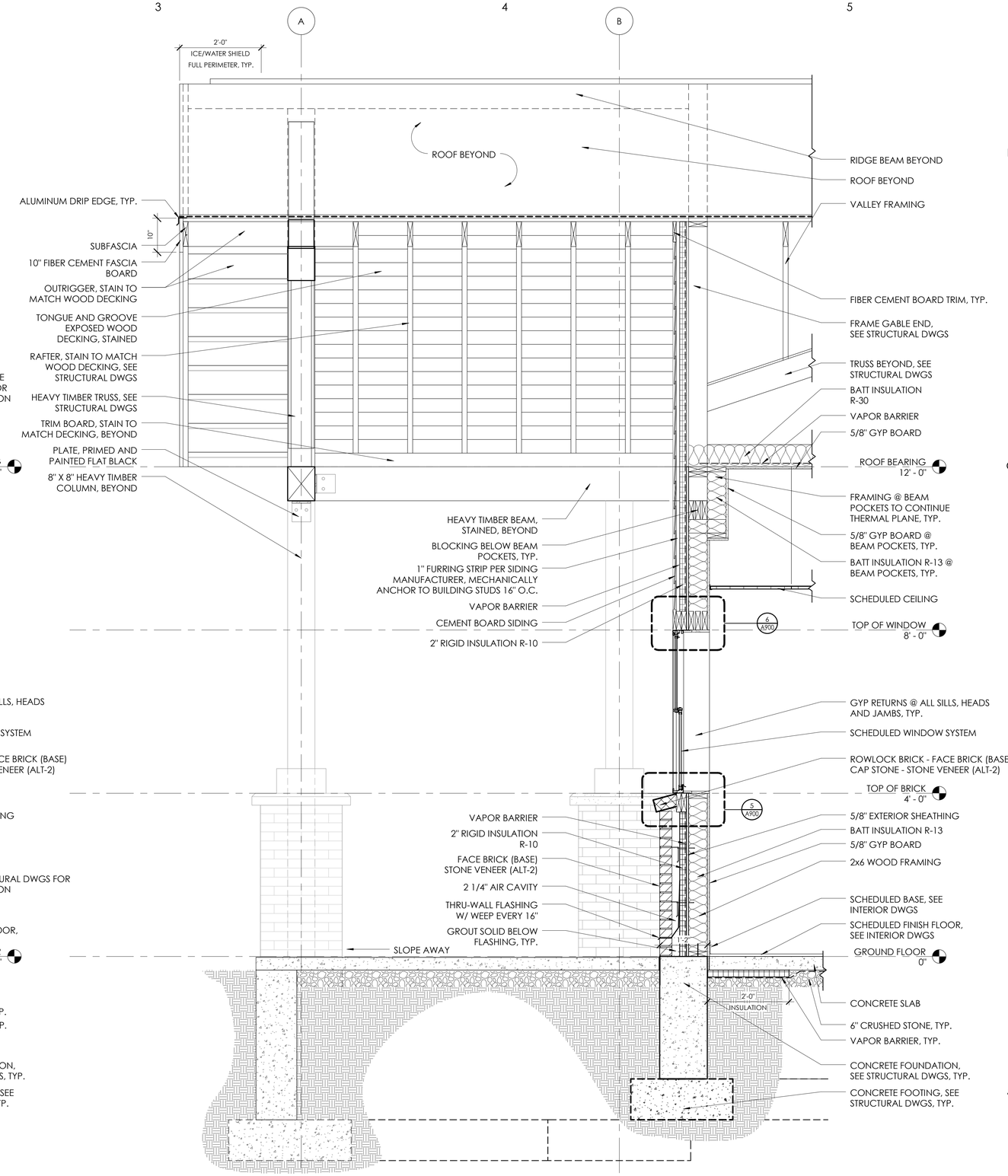


2 A401 WALL SECTION @ WINDOW 3/4" = 1'-0"



3 A401 WALL SECTION @ BACK PORCH 3/4" = 1'-0"

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DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
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N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS — CLARK PATTERSON ENGINEERS/ARCHITECTS DBA CLARK PATTERSON LEE CHARLOTTE, NC 51301

TIMOTHY SCOTT KNAPP — REGISTERED ARCHITECT — 7444 — NORTH CAROLINA — CHARLOTTE, N.C. — 2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE 3/4" = 1'-0"

SHEET TITLE
WALL SECTIONS

PROJECT NUMBER 13283.00

A401
DRAWING NUMBER

2/18/2016 11:14:44 AM

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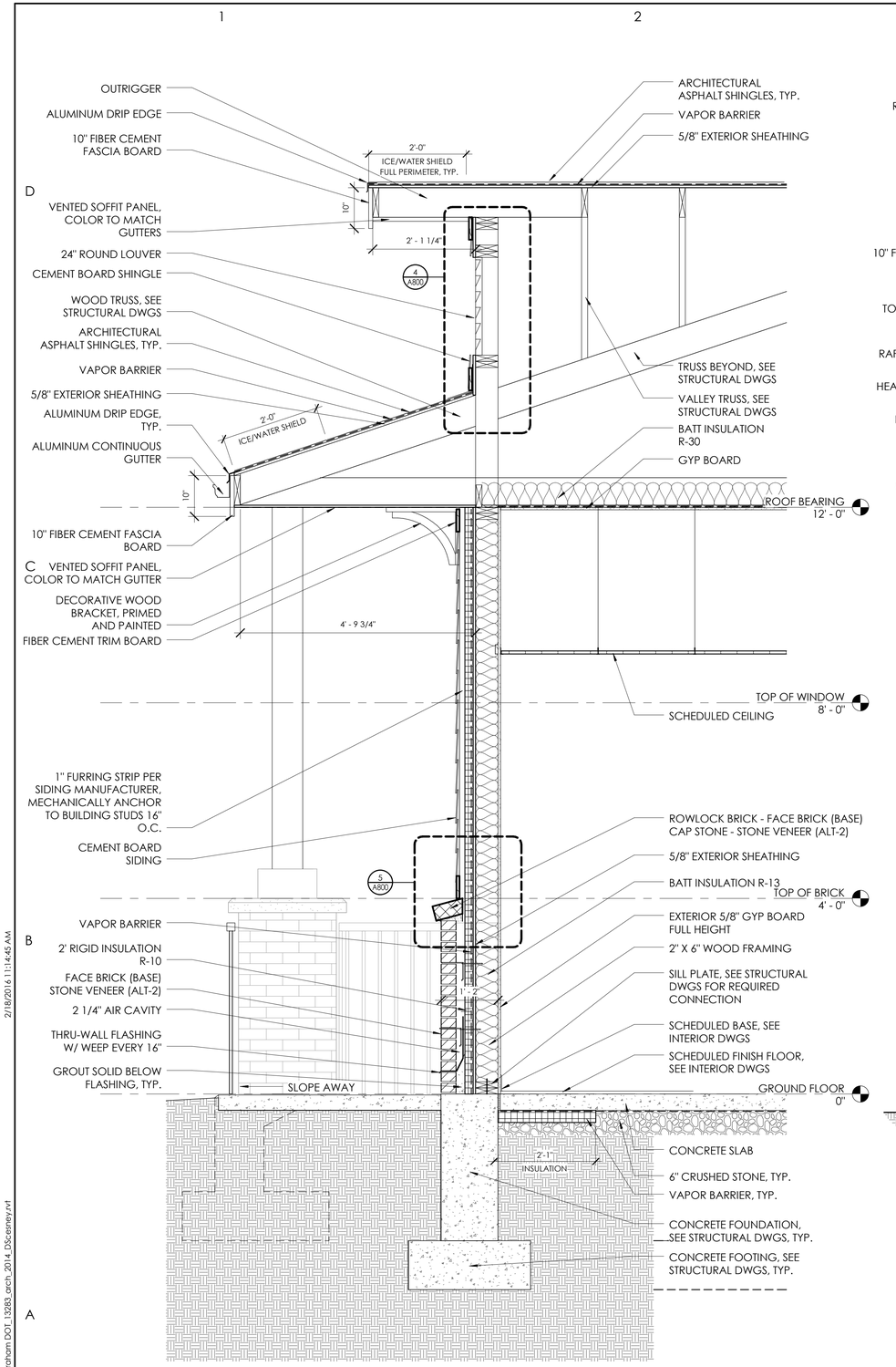
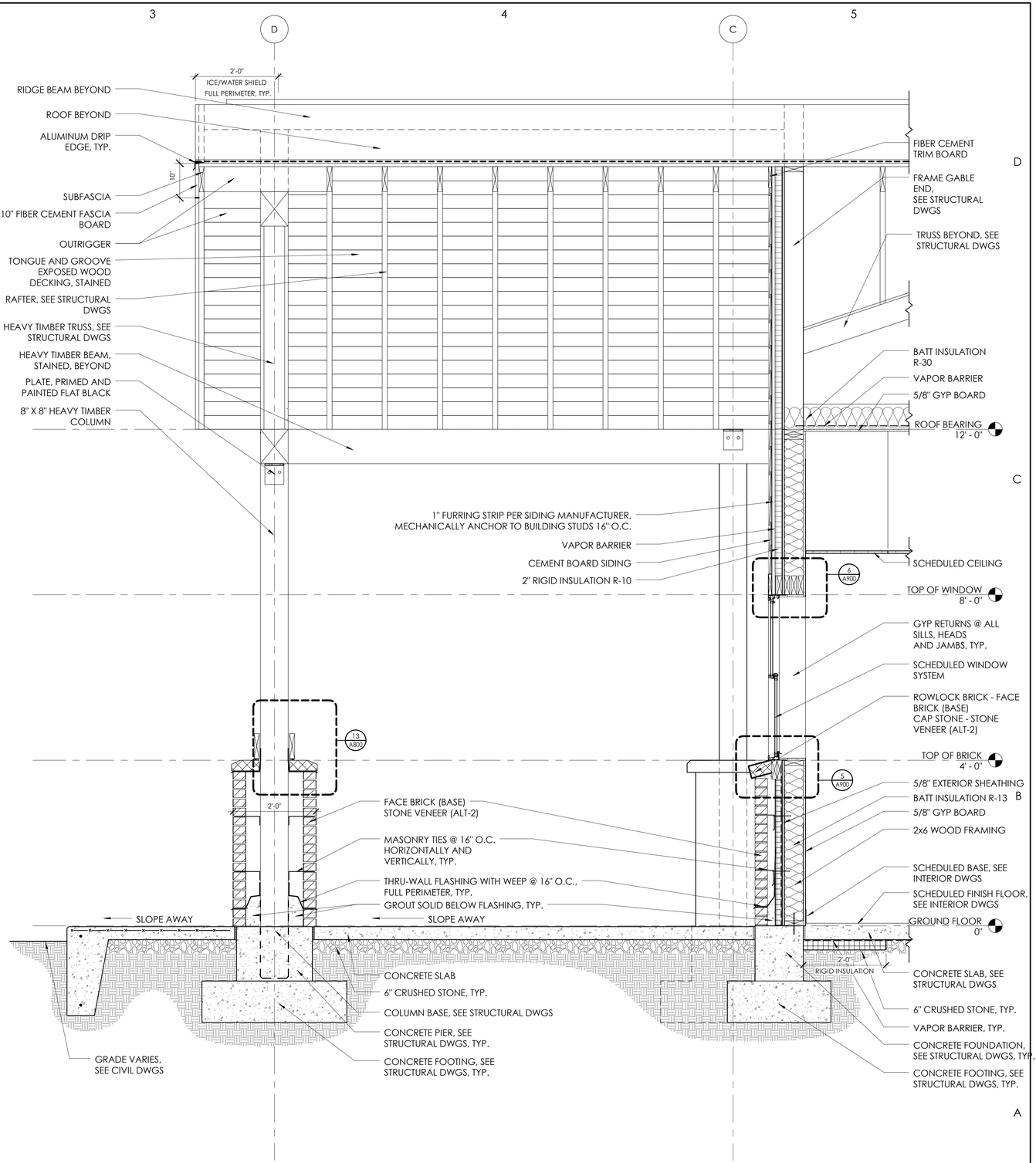


3 A402 **WALL SECTION**
3/4" = 1'-0"



1 A402 **WALL SECTION @ COLUMN**
3/4" = 1'-0"

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Revision Schedule

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STATE OF NORTH CAROLINA
CLARK PATTERSON ENGINEERS/ARCHITECTS DBA CLARK PATTERSON LEE CHARLOTTE, NC 51301
REGISTERED ARCHITECTS

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE 3/4" = 1'-0"

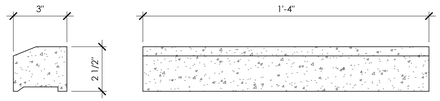
SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
13283.00

A402
DRAWING NUMBER

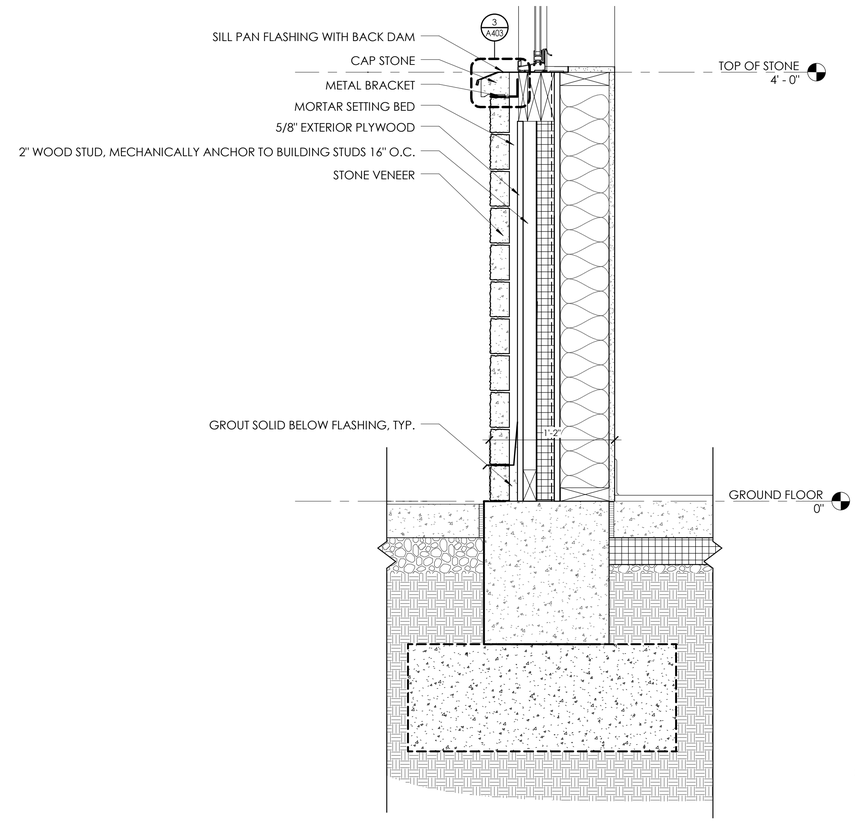
2/18/2016 11:14:45 AM

C:\Users\dscesney\Documents\Graham DOT_13283_arch_2014_DScesney.rvt



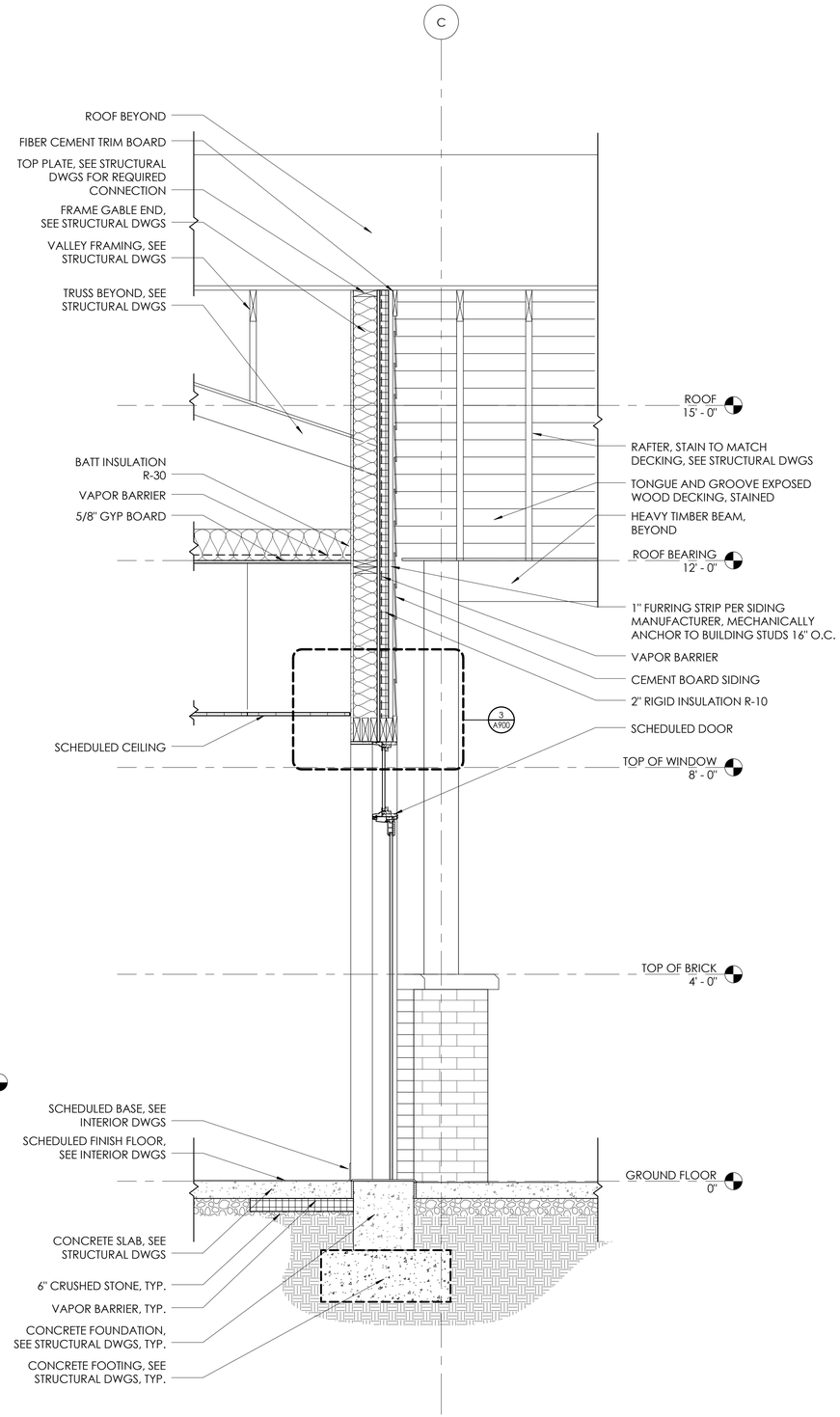
3 A403 TYPICAL DETAIL @ CAPSTONE

3" = 1'-0"



2 A403 TYPICAL ADD - ALT - G2 DETAIL @ STONE

1 1/2" = 1'-0"



1 A403 WALL SECTION @ FRONT ENTRANCE

3/4" = 1'-0"

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NORTH CAROLINA
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NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: WALL SECTIONS

PROJECT NUMBER: 13283.00

A403
DRAWING NUMBER

2/18/2016 11:14:46 AM

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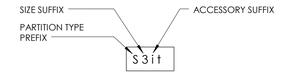
PARTITION GENERAL NOTES:

1. ALL WALL TYPES MAY NOT BE USED ON THIS PROJECT.
2. FULL HEIGHT PARTITIONS EXTEND TO UNDERSIDE OF GYPSUM PLANE.
3. PROVIDE UL APPROVED JOINT AT ALL TOP OF WALL AND WALL TO WALL CONDITIONS AT ALL RATED WALLS.
4. ALL PENETRATIONS IN FIRE RATED PARTITIONS TO BE FIRE STOPPED AND SEALED. REFER TO SPEC DIVISION 7.
5. PROVIDE ABUSE RESISTANT 5/8" TYPE 'X' GYPSUM WALL BOARD AT ALL LOCATIONS.
6. REFER TO STRUCTURAL DRAWINGS FOR MASONRY WALL REINFORCEMENT.
7. ALL PARTITIONS SHALL BE SEALED TO PREVENT PASSAGE FOR SMOKE.
8. ALL MASONRY EXPOSED EDGES AND CORNERS PROVIDE BULL NOSE EDGES.
9. CONTRACTOR TO REFER TO CODE/LIFE SAFETY DRAWINGS FOR RATED PARTITIONS AND UL ASSEMBLIES.
10. REFER TO INTERIOR DRAWINGS FOR LOCATIONS OF WALL TILE, PROVIDE ADDITIONAL LAYER OF BACKING BOARD.
11. PARTITION TYPES WITH ONE SIDE OF DOUBLE DRYWALL TO BE PLACED SO THAT THE DOUBLE SIDE IS ON CORRIDOR AND/OR HIGH TRAFFICE SIDE OF WALL.

PARTITION TYPE LEGEND:

W WALL ASSEMBLY, WOOD STUD

PARTITION TYPE TAG LEGEND:



PARTITION TYPE SUFFIX:

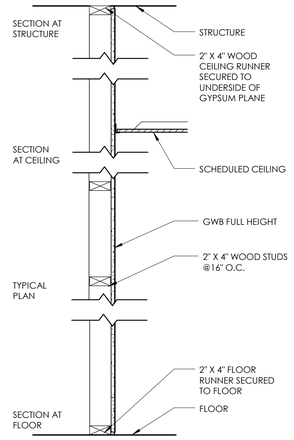
SIZE SUFFIX:

4 2" X 4" WOOD STUD

6 2" X 6" WOOD STUD

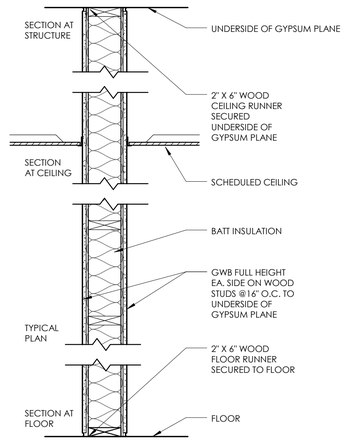
ACCESSORIES SUFFIX:

i SOUND ATTENUATION BATT INSULATION



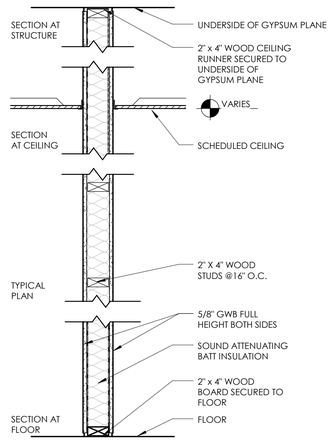
TYPE	FIRE TEST LAB DESIGN NUMBER	FIRE RATING	STC	NOTES
F3	NA	NR	NA	

3 A404 **WALL TYPE F4**
1" = 1'-0"



TYPE	FIRE TEST LAB DESIGN NUMBER	FIRE RATING	STC	NOTES
S6i	NA	NR	47	

2 A404 **WALL TYPE W6i**
1" = 1'-0"



TYPE	FIRE TEST LAB DESIGN NUMBER	FIRE RATING	STC	NOTES
S3i	NA	NR	35	

1 A404 **WALL TYPE W4i**
1" = 1'-0"

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DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
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51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE 1" = 1'-0"

SHEET TITLE
TYPICAL WALL TYPES

PROJECT NUMBER
13283.00

A404
DRAWING NUMBER

2/18/2016 11:14:47 AM
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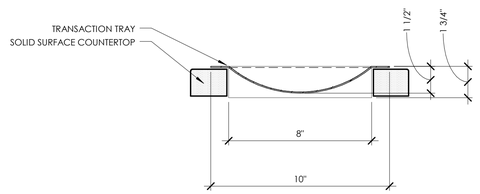
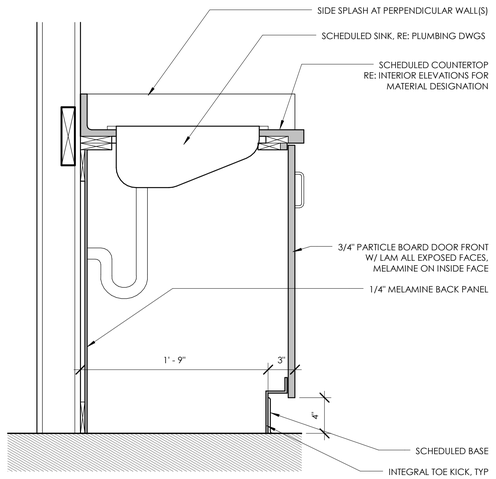


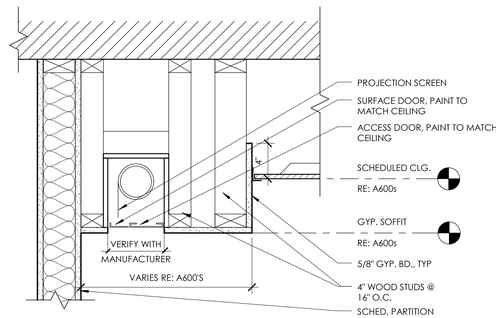
7 A500 DETAIL @ TRANSACTION TRAY

3" = 1'-0"



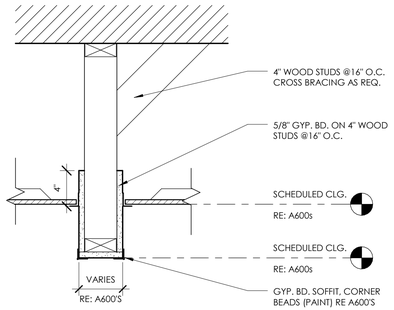
6 A500 TYPICAL BASE CABINENT WITH INTERGAL TOE KICK @ KITCHEN

1 1/2" = 1'-0"



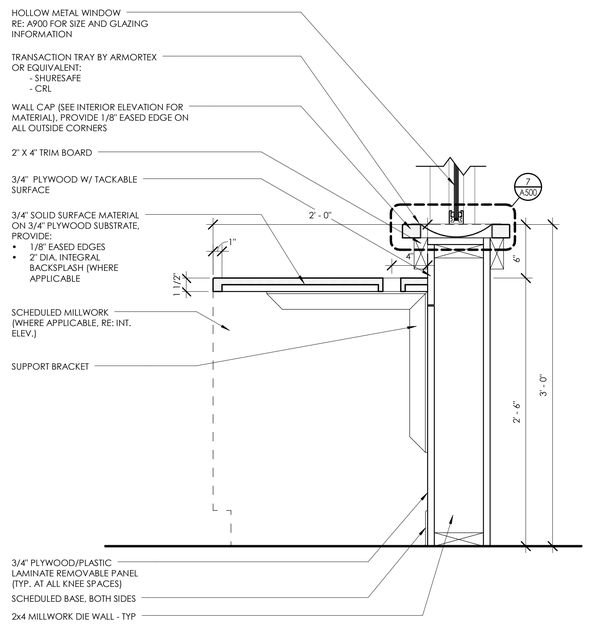
5 A500 GWB soffit @ wall

1 1/2" = 1'-0"



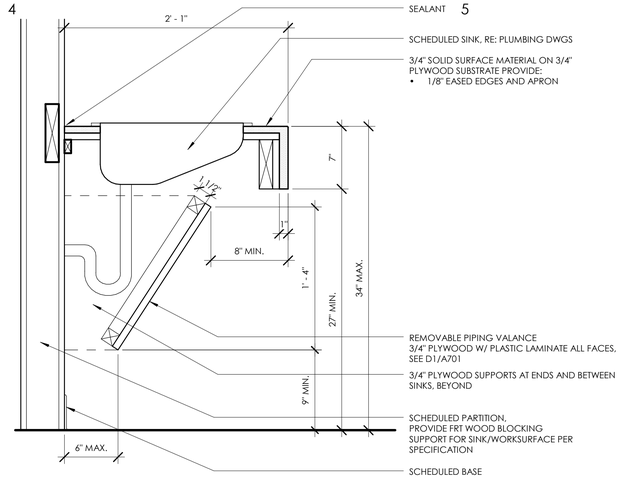
4 A500 GWB bulkhead

1 1/2" = 1'-0"



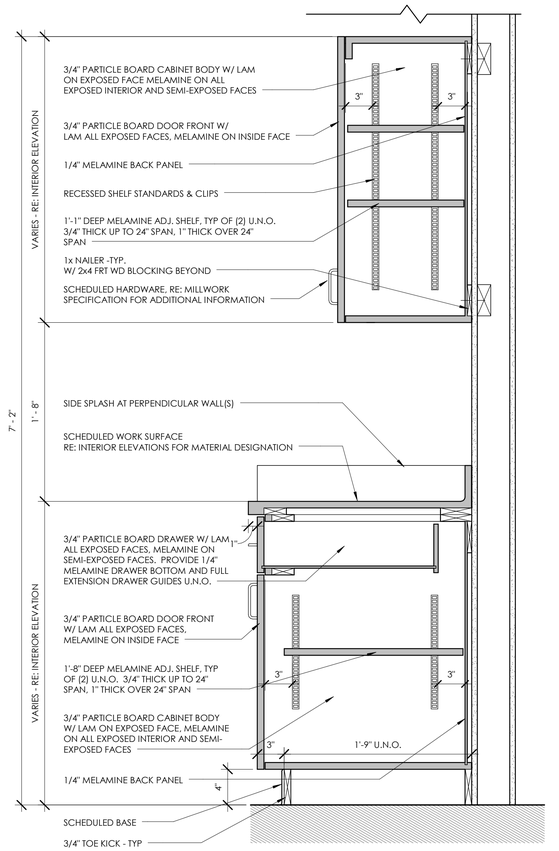
3 A500 RECEPTION DESK SECTION

1 1/2" = 1'-0"



2 A500 TYPICAL SOLID SURFACE COUNTER W/ ADA SINK APRON

1 1/2" = 1'-0"



1 A500 TYPICAL BASE AND UPPER CABINET MILLWORK SECTION

1 1/2" = 1'-0"

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Fax: (704) 331-0402
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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301
REGISTERED ARCHITECTS

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: TYPICAL MILLWORK SECTIONS

PROJECT NUMBER: 13283.00

A500
DRAWING NUMBER

2/18/2016 11:14:49 AM

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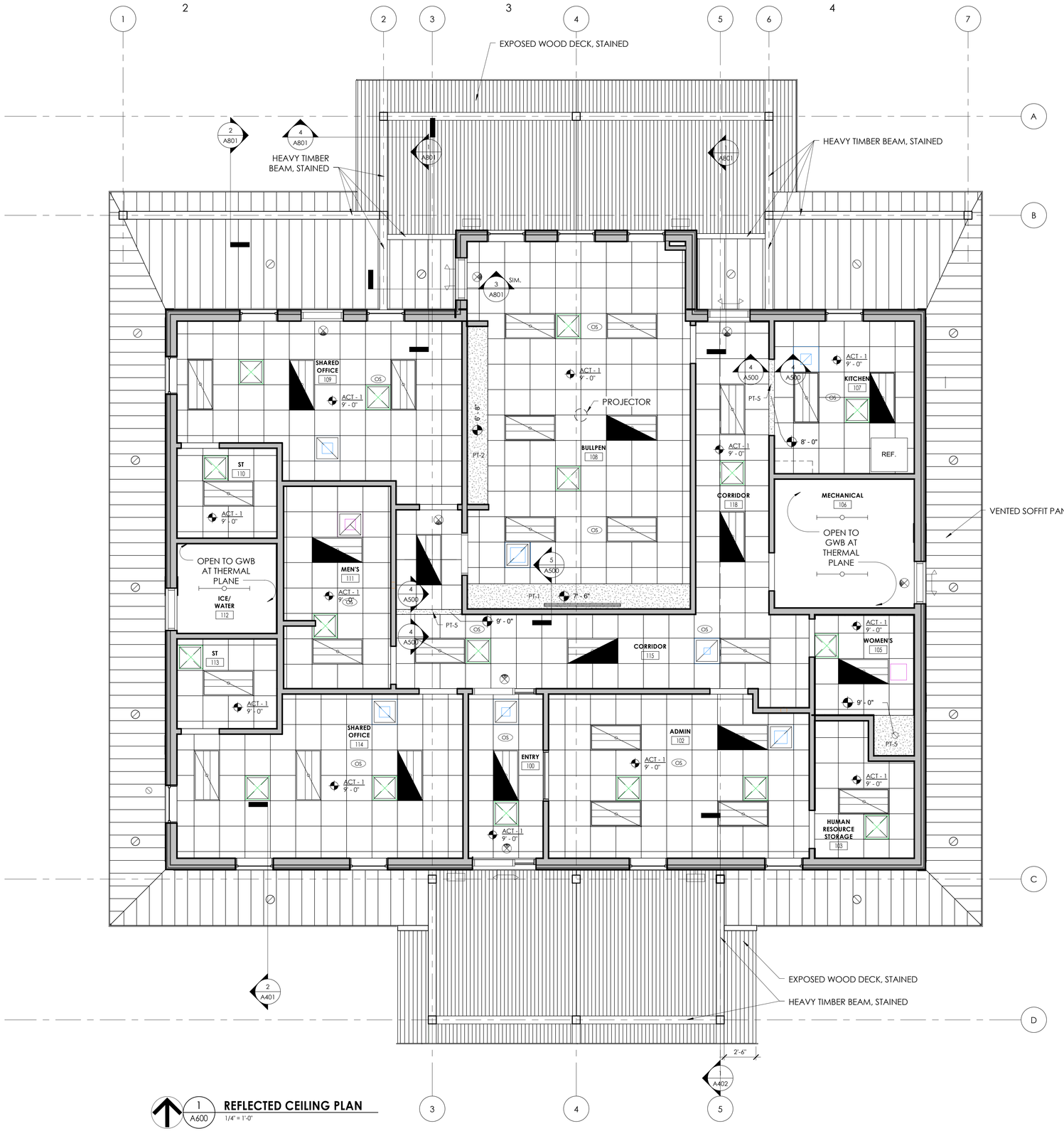

CEILING SYMBOL LEGEND

- 2'X2' LIGHT
- 2'x4' LIGHTS
- 1'X4' LINEAR LIGHT FIXTURE
- RECESSED CAN LIGHT FIXTURE
- PENDANT LIGHT FIXTURES
- WALL SCONCE
- SUPPLY AIR DIFFUSERS
- RETURN AIR DIFFUSERS
- EXHUAST DIFFUSERS
- GYPSUM WALL BOARD CEILING
- ACOUSTICAL TILE CEILING
- PLAM WOOD CEILING
- EXPOSED WOOD DECK
- ACT-1 9'-0" CEILING TYPE AND CEILING HEIGHT ABOVE FINISHED FLOOR

1 A600 REFLECTED CEILING PLAN

1/4" = 1'-0"

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DESIGN PROFESSIONALS
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7444
NORTH CAROLINA
CHARLOTTE, N.C.

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ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: REFLECTED CEILING PLAN

PROJECT NUMBER: 13283.00

A600
DRAWING NUMBER

2/18/2016 11:14:51 AM
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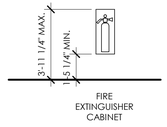
MISC. ACCESSORIES/EQUIPMENT LEGEND WITH MOUNTING HEIGHTS

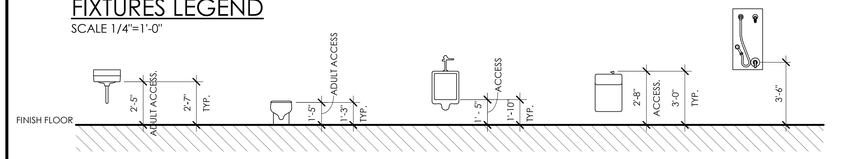


TOILET FIXTURES AND ACCESSORIES LEGENDS WITH MOUNTING HEIGHTS

SPECIAL NOTE: THIS SHEET IS INCLUDED FOR REFERENCE PURPOSES ONLY. SOME MOUNTING HEIGHTS SHOWN MAY NOT APPLY TO THE CURRENT DOCUMENTS

FIXTURES LEGEND

SCALE 1/4"=1'-0"

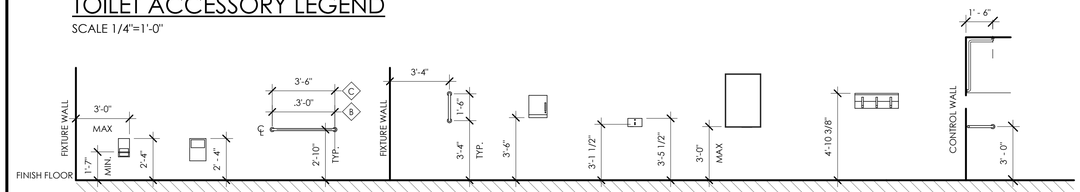


NOTES:

1. DIMENSIONS REFLECT MOUNTING HEIGHT ABOVE FINISH FLOOR
2. REFER TO FLOOR PLANS FOR APPROPRIATE LOCATION FOR FIXTURES.
3. THIS LEGEND MAY CONTAIN FIXTURES THAT ARE NOT SPECIFIED TO BE INCLUDED IN THIS PROJECT.

TOILET ACCESSORY LEGEND

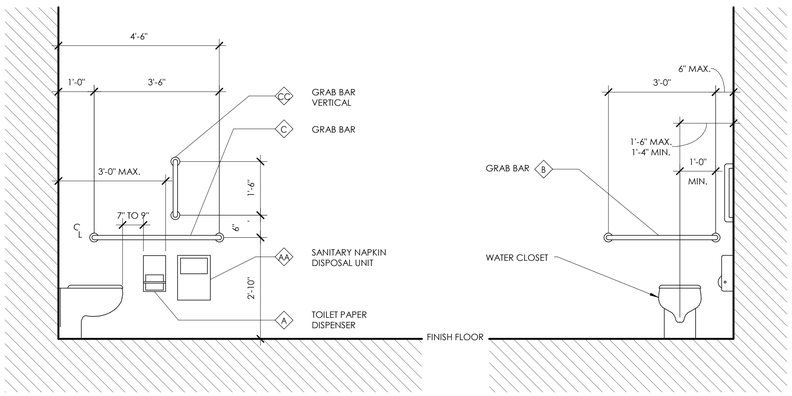
SCALE 1/4"=1'-0"



NOTES:

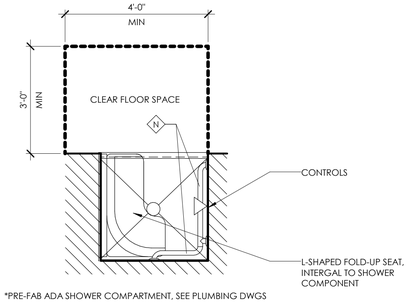
1. DIMENSIONS REFLECT MOUNTING HEIGHT ABOVE FINISH FLOOR
2. REFER TO EQUIPMENT PLANS AND INTERIOR ELEVATIONS FOR APPROPRIATE LOCATION FOR ACCESSORIES.
3. THIS LEGEND MAY CONTAIN ACCESSORIES THAT ARE NOT SPECIFIED TO BE INCLUDED IN THIS PROJECT.
4. (XXX) MODEL NUMBER BASIS OF DESIGN BOBRICK.
5. OFCI - OWNER FURNISHED CONTRACTOR INSTALLED
6. CFCI - CONTRACTOR FURNISHED CONTRACTOR INSTALLED

TOILET ACCESSORY LOCATIONS



TYPICAL TOILET ACCESSORY LOCATIONS AT TOILET

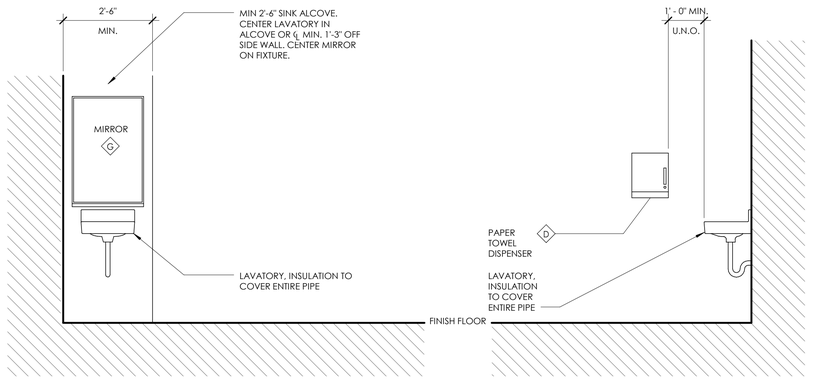
SCALE 1/2"=1'-0" (REF. ABOVE FOR TYP. HEIGHTS)



*PRE-FAB ADA SHOWER COMPARTMENT, SEE PLUMBING DWGS

SHOWER PLAN/ ACCESSORY LOCATIONS

SCALE 1/2"=1'-0" (REF. ABOVE FOR TYP. HEIGHTS)



TYPICAL TOILET ACCESSORY LOCATIONS AT SINK

SCALE 1/2"=1'-0" (REF. ABOVE FOR TYP. HEIGHTS)

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DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
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CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
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SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: TYP. FIXTURE AND ACCESS. HEIGHTS AND LEGENDS

PROJECT NUMBER: 13283.00

A700
DRAWING NUMBER

2/18/2016 11:14:52 AM
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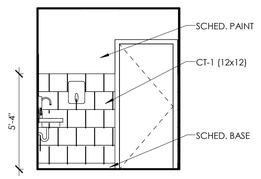
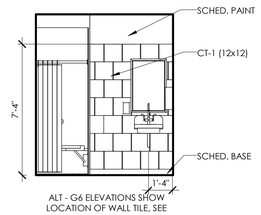
GENERAL INTERIOR ELEVATIONS NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATIONS OF APPROXIMATE LOCATIONS OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. REFER TO A700 FOR TOILET FIXTURE AND ACCESSORIES LEGEND AND MOUNTING HEIGHTS.
3. REFER TO A200 SERIES DRAWINGS FOR ADDITIONAL SPECIALTIES.
4. 1/8" EASED EDGES AT ALL COUNTERTOPS UNLESS OTHERWISE NOTED.
5. ALL FURNITURE AND EQUIPMENT SHOWN IS PROVIDED BY OWNER UNLESS NOTED OTHERWISE. ITEMS SHOWN ON THESE DOCUMENTS ARE FOR COORDINATION OF M,E,P INFRASTRUCTURE TO OPERATE ITEMS INCLUDED UNDER THE SCOPE.
6. PROVIDE SUPPORT BLOCKING AND STRAPPING FOR ALL MILLWORK, CASEWORK, AND WALL MOUNTED ACCESSORIES.
7. REFER TO SPECS FOR ALL TOILET ROOM ACCESSORIES PROVIDED BY OWNER.
8. PROVIDE MOISTURE RESISTANT GWB BEHIND ALL CERAMIC WALL TILE INSTALLATIONS.
9. ALL WALL CABINETS ARE 15" DEEP UNLESS NOTED OTHERWISE.
10. ALL BASE CABINETS ARE 24" DEEP UNLESS NOTED OTHERWISE.
11. PROVIDE FULL FINISHED END PANELS ON ALL EXPOSED MILLWORK.
12. PROVIDE FILLER PANEL WHERE MILLWORK MEETS WALL.
13. PROVIDE SUPPORT BRACKETS AT WORK SURFACES, 48" MAX BETWEEN BRACKETS UNLESS NOTED OTHERWISE.
14. ALL MILLWORK TO BE LOCKABLE UNLESS NOTED OTHERWISE.
15. SEE OWNER APPROVED ROOM FINISH SCHEDULE AND COLOR LEGEND FOR FINISHES.
16. REFER TO A600 SERIES DRAWINGS FOR CEILING HEIGHTS.
17. REFER TO I SERIES DRAWINGS AND A700 SERIES DRAWINGS FOR MILLWORK FINISHES.
18. FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP DRAWING SUBMITTAL.
19. PROVIDE VALANCE COVER AT ALL UNDER CABINET LIGHTING WHEREVER UNDER CABINET LIGHTING IS REQUIRED.
20. ALL OUTSIDE CORNERS OF COUNTERTOPS TO BE 3" RADIUS.
21. GROMMETS TO BE INSTALLED IN FIELD AND COORDINATED WITH I.T. EQUIPMENT.
22. REFER TO A700 FOR TOILET FIXTURE AND ACCESSORIES LEGEND AND MOUNTING HEIGHTS.



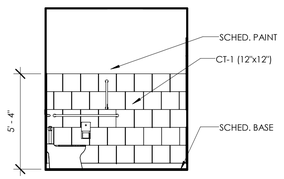
ALT - G6 ELEVATIONS SHOW LOCATION OF WALL TILE, SEE BASE BID FOR ACCESSORIES.

E4-2 / A701 **WOMEN'S RESTROOM - ALT G6 WALL TILE**
1/4" = 1'-0"

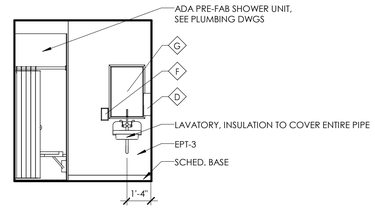


ALT - G6 ELEVATIONS SHOW LOCATION OF WALL TILE, SEE BASE BID FOR ACCESSORIES.

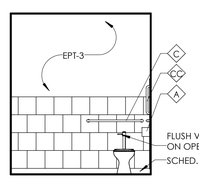
E2-2 / A701 **WOMEN'S RESTROOM - ALT G6 WALL TILE**
1/4" = 1'-0"



E3 / A701 **WOMEN'S RESTROOM - BASE BID**
1/4" = 1'-0"



E2 / A701 **WOMEN'S RESTROOM - BASE BID**
1/4" = 1'-0"



E1 / A701 **WOMEN'S RESTROOM - BASE BID**
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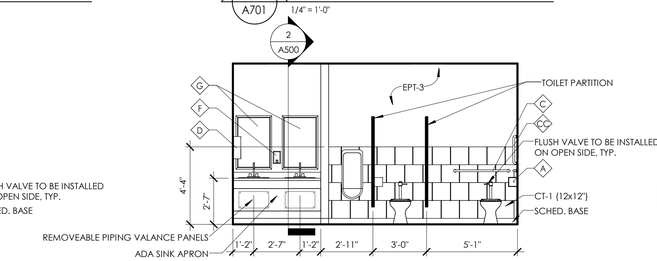
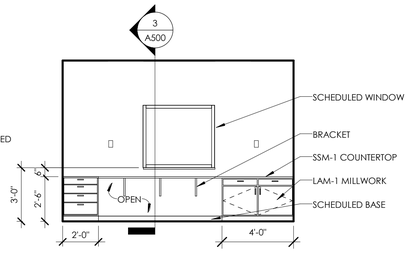
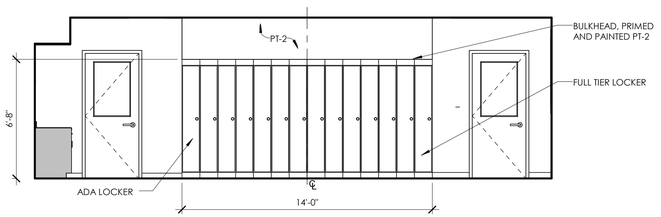


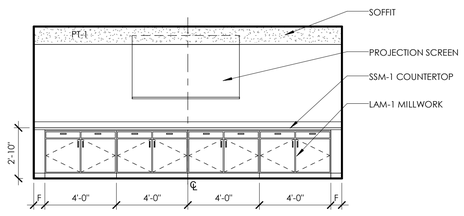
D1 / A701 **MENS RESTROOM**
1/4" = 1'-0"



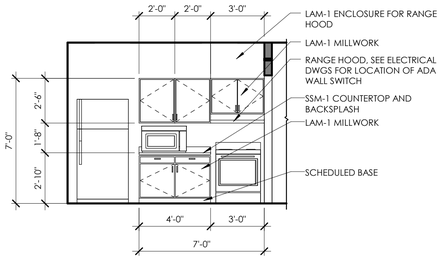
C1 / A701 **ADMIN COUNTER**
1/4" = 1'-0"



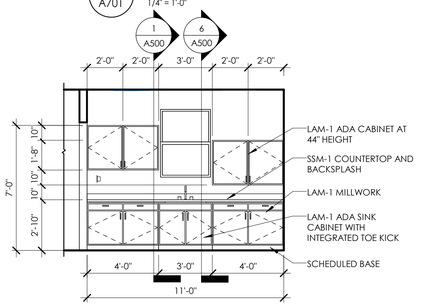
B2 / A701 **LOCKER ELEVATION @ BULLPEN**
1/4" = 1'-0"



B1 / A701 **CASEWORK ELEVATION @ BULLPEN**
1/4" = 1'-0"



A2 / A701 **KITCHEN ELEVATION**
1/4" = 1'-0"



A1 / A701 **KITCHEN ELEVATION**
1/4" = 1'-0"

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
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N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: INTERIOR ELEVATIONS

PROJECT NUMBER: 13283.00

A701
DRAWING NUMBER

2/18/2016 11:14:57 AM
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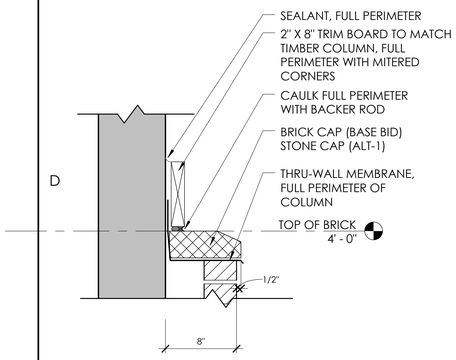
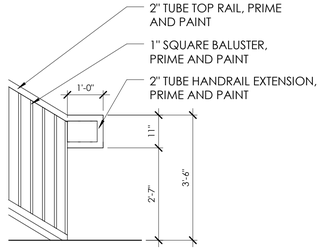


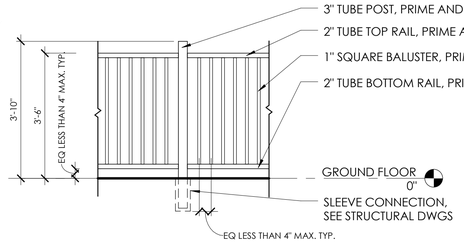
13 A800 TYPICAL DETAIL @ TOP OF WATER TABLE AT COLUMN

1 1/2" = 1'-0"



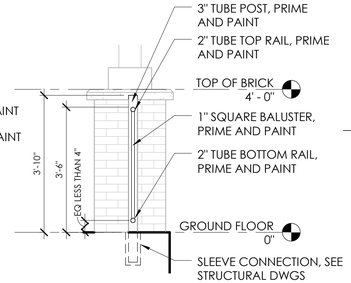
12 A800 ELEVATION DETAIL - TYP. RAILING

1/2" = 1'-0"



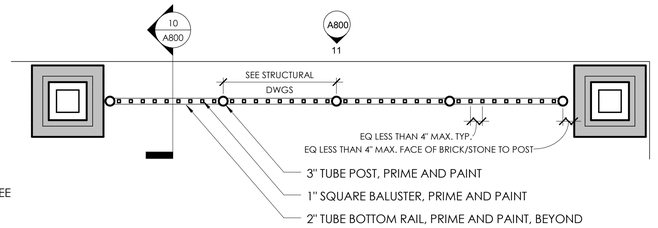
11 A800 ELEVATION DETAIL - TYP. RAILING

1/2" = 1'-0"



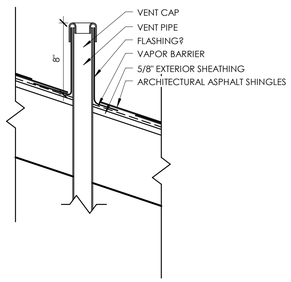
10 A800 SECTION DETAIL - TYP. RAILING

1/2" = 1'-0"



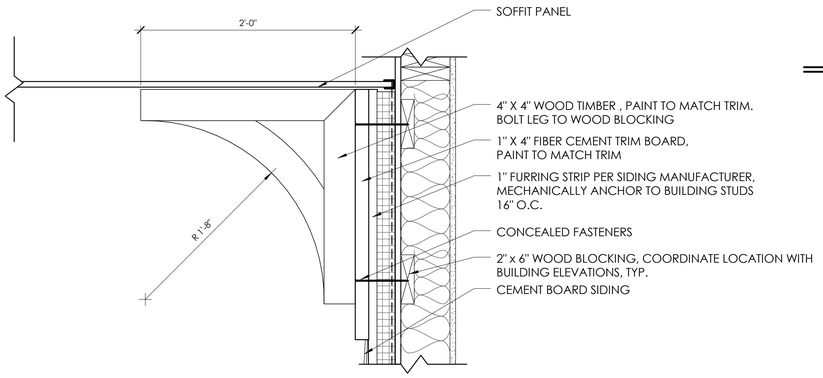
9 A800 TYP. RAILING DETAIL

1/2" = 1'-0"



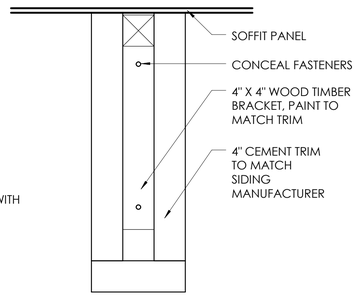
8 A800 DETAIL @ VENT STACK

1 1/2" = 1'-0"



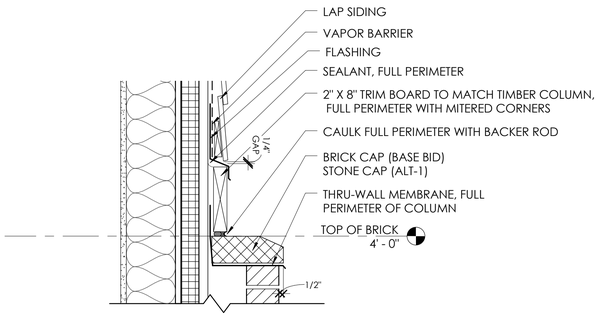
7 A800 ARCHITECTURAL BRACKET DETAIL - SIDE

1 1/2" = 1'-0"



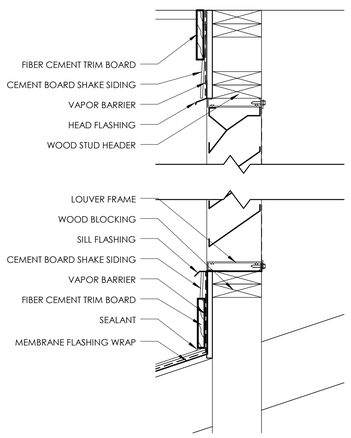
6 A800 ARCHITECTURAL BRACKET DETAIL

1 1/2" = 1'-0"



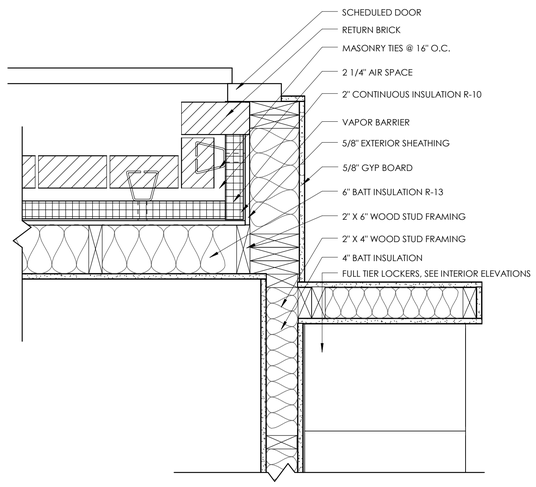
5 A800 TYPICAL DETAIL @ TOP OF WATER TABLE

1 1/2" = 1'-0"



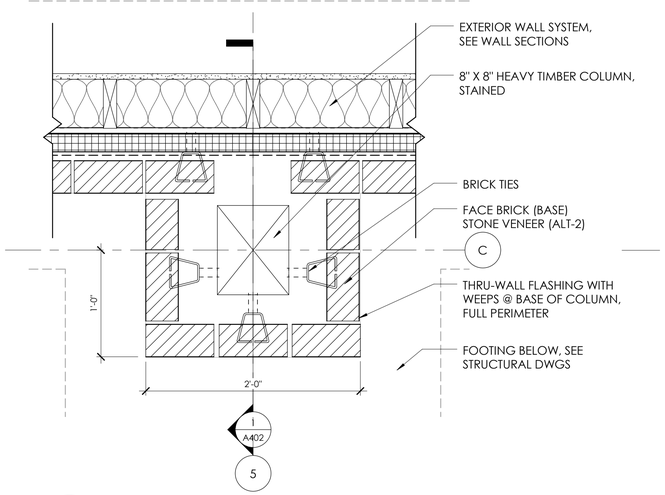
4 A800 DETAIL @ ROUND LOUVER

1 1/2" = 1'-0"



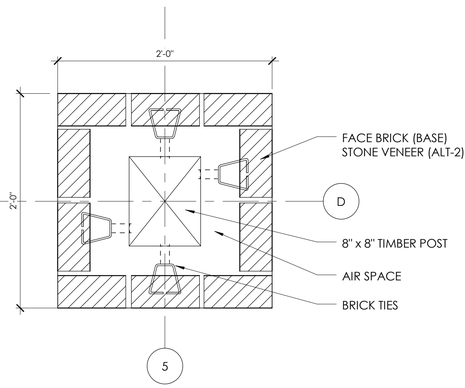
3 A800 PLAN DETAIL - EXTERIOR WALL + INTERIOR WALL INTERSECTION

1 1/2" = 1'-0"



2 A800 PLAN DETAIL - TYPICAL COLUMN @ EXTERIOR WALL

1 1/2" = 1'-0"



1 A800 PLAN DETAIL - TYPICAL COLUMN

1 1/2" = 1'-0"

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/18/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE As indicated

SHEET TITLE
TYPICAL DETAILS

PROJECT NUMBER
13283.00

A800
DRAWING NUMBER

2/18/2016 11:15:02 AM

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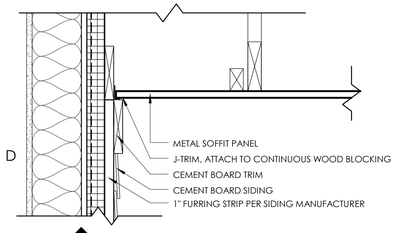
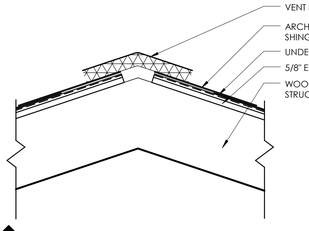
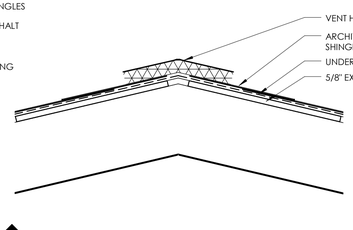


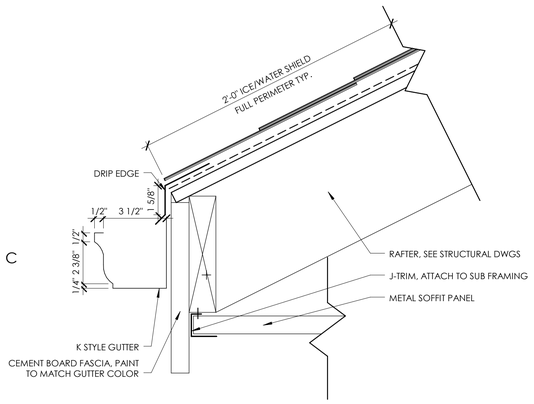
8 A801 **DETAIL @ SOFFIT**
1 1/2" = 1'-0"



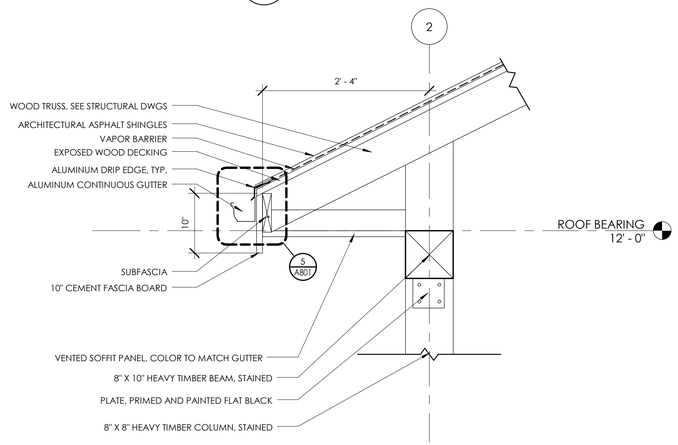
7 A801 **DETAIL @ RIDGE VENT**
1 1/2" = 1'-0"



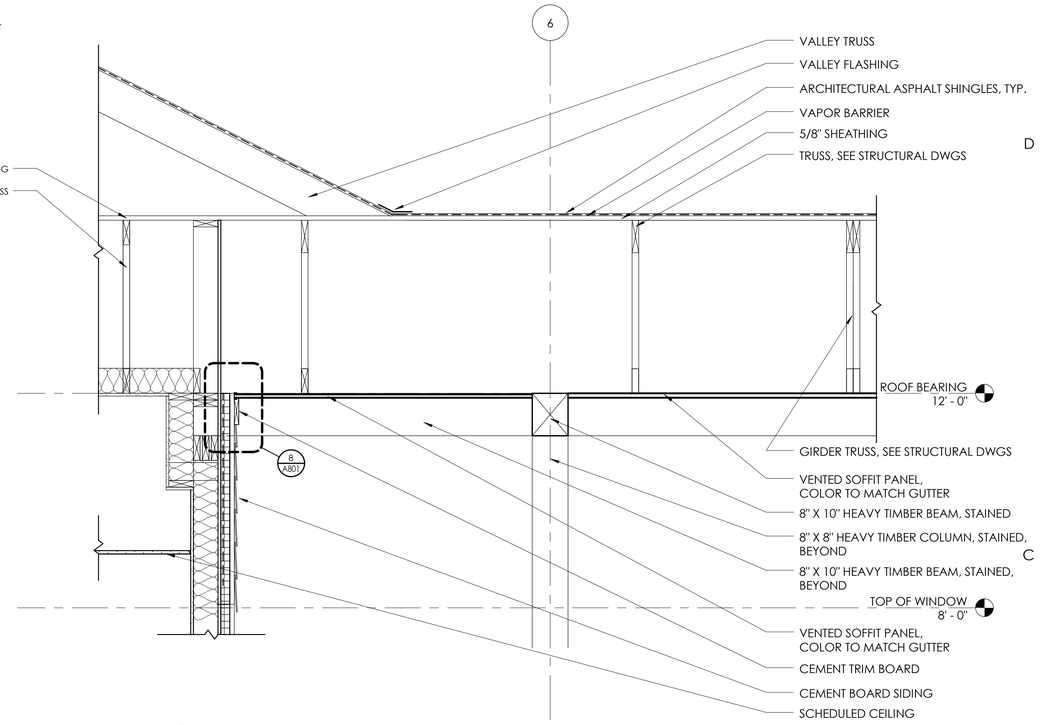
6 A801 **DETAIL @ HIP VENT**
1 1/2" = 1'-0"



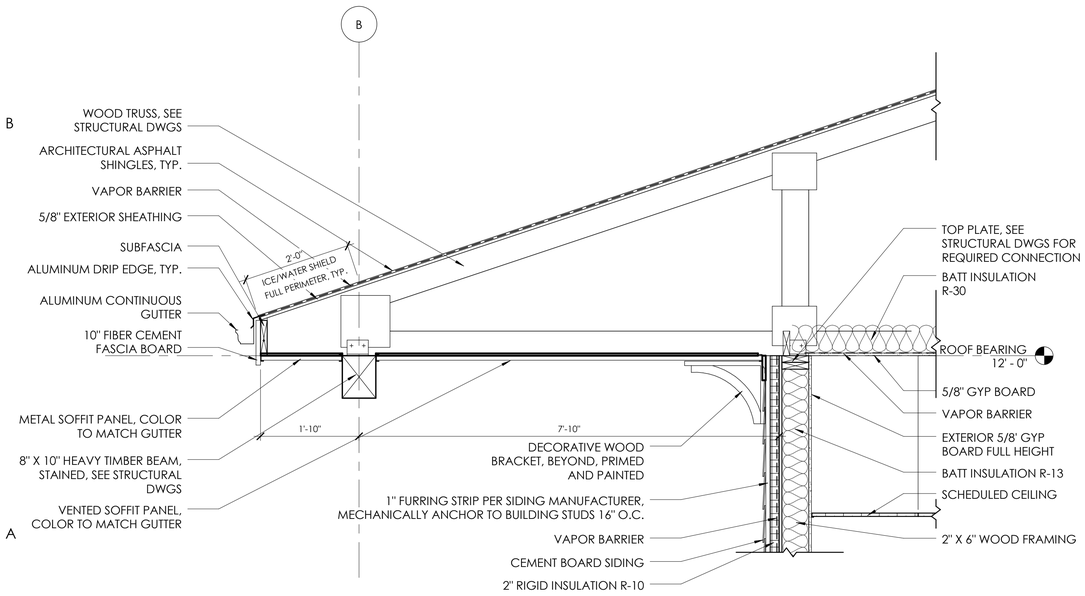
5 A801 **TYPICAL GUTTER DETAIL**
3" = 1'-0"



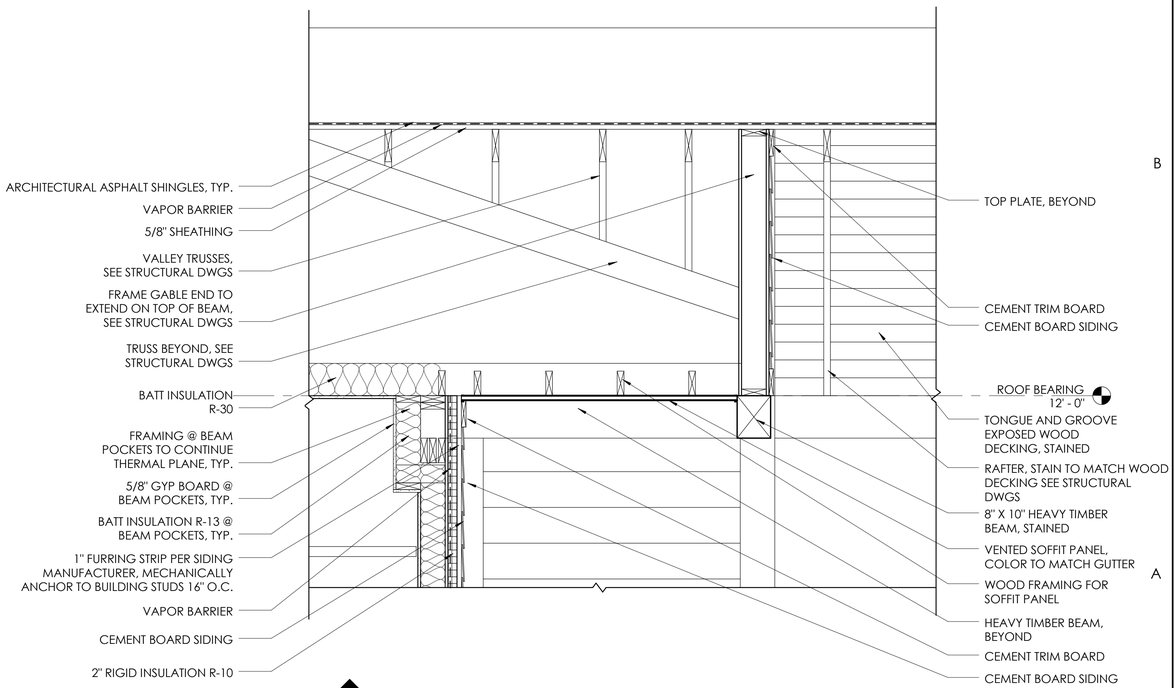
4 A801 **SOFFIT DETAIL @ HEAVY TIMBER**
1" = 1'-0"



3 A801 **SOFFIT DETAIL**
3/4" = 1'-0"



2 A801 **SOFFIT DETAIL @ HEAVY TIMBER BEAM**
3/4" = 1'-0"



1 A801 **SOFFIT DETAIL**
3/4" = 1'-0"

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N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA
CLARK PATTERSON ENGINEERS/ARCHITECTS DBA CLARK PATTERSON LEE CHARLOTTE, NC 51301
REGISTERED ARCHITECTS

TIMOTHY SCOTT KNOP REGISTERED ARCHITECT 7444 NORTH CAROLINA CHARLOTTE, N.C.
2/18/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: TYPICAL DETAILS

PROJECT NUMBER: 13283.00

A801
DRAWING NUMBER

2/18/2016 11:15:05 AM
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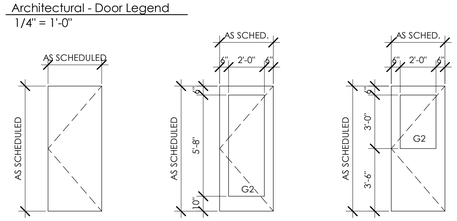
Architectural - Door Legend
1/4" = 1'-0"



F FLUSH | FG FULL GLASS | HG HALF GLASS | 1 INTERIOR + EXTERIOR | 2 EXTERIOR WOOD

DOOR AND FRAME NOTES

1. REFER TO A900 FOR DOOR & FRAME SCHEDULE
2. ALL FRAMES ARE TO RECEIVE FULL PERIMETER SEALANT. INTERIOR AND EXTERIOR
3. ALL DOOR AND WINDOW DIMENSIONS ARE TO BE VERIFIED IN FIELD PRIOR TO FABRICATION

DOOR AND FRAME SCHEDULE LEGEND

DOOR OR FRAME MATERIAL

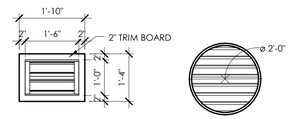
HM HOLLOW METAL
WD WOOD

DOOR OR FRAME FINISH

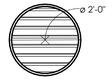
PTD PAINT
STN WOOD STAIN

GLASS TYPES:

G1	1" INSULATED LOW E GLASS
G2	1/4" TEMPERED GLASS

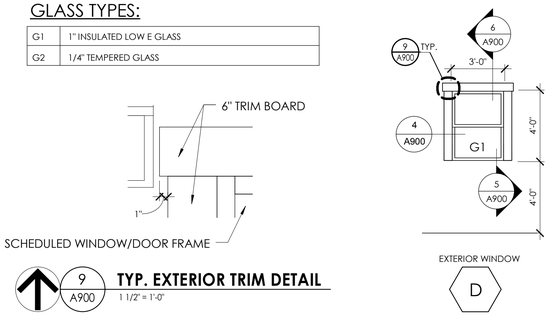


LOUVER, SEE MECHANICAL DWGS



ROUND LOUVER, SEE MECHANICAL DWGS

SCHEDULED WINDOW/DOOR FRAME

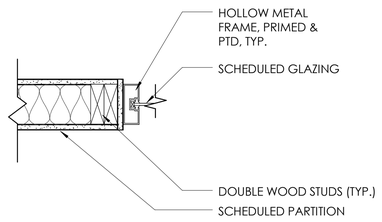


EXTERIOR WINDOW D | INTERIOR VESTIBULE C | EXTERIOR VESTIBULE B | TRANSACTION WINDOW A

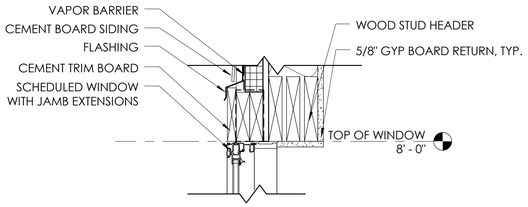
TYP. EXTERIOR TRIM DETAIL
9 / A900 — 1 1/2" = 1'-0"

DOOR SCHEDULE

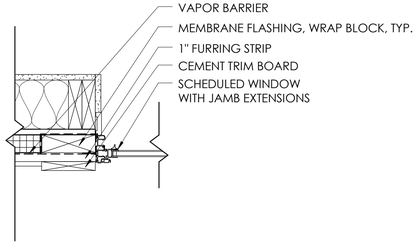
Door No.	DOORS SIZE WIDTH	SIZE HEIGHT	Type	MAT'L/ FINISH	LABEL RATING	FRAMES TYPE	HEAD/JAMB DETAIL #'S	MAT'L/ FINISH	GLASS TYPE	HARDWARE	REMARKS
100A	3' - 0"	7' - 0"	FG	WD/STN	-	2	3/A900,4/A900	WD/ST	G2	1.0	SIDE LIGHTS AND TRANSOM
100B	3' - 0"	7' - 0"	FG	WD/PT	-	2	1/A900,2/A900	WD/ST	G2	5.0	SIDE LIGHTS
102	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	8.0	
103	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		8.0	
105	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		9.0	
106A	3' - 0"	7' - 0"	F	HM/PT	-	1	1/A900,2/A900	HM/PT		3.0	KEYPAD
106B	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		4.0	
107A	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	2.0	KEYPAD
107B	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	8.0	
108B	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	2.0	KEYPAD
108C	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	8.0	
109A	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		2.0	KEYPAD
109B	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	8.0	
110	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		7.0	
111	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		6.0	
112	3' - 0"	7' - 0"	F	HM/PT	-	1	1/A900,2/A900	HM/PT		3.0	KEYPAD
113	3' - 0"	7' - 0"	F	WD/STN	-	1	1/A900,2/A900	HM/PT		7.0	
114	3' - 0"	7' - 0"	HG	WD/STN	-	1	1/A900,2/A900	HM/PT	G2	8.0	



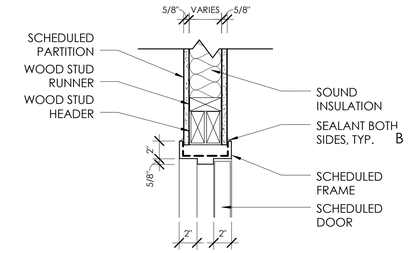
INTERIOR HM WINDOW JAMB DETAIL
8 / A900 — 1 1/2" = 1'-0"



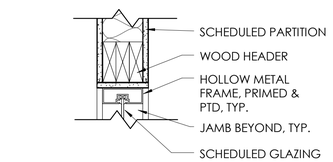
DETAIL @ WINDOW HEAD, TYP.
6 / A900 — 1 1/2" = 1'-0"



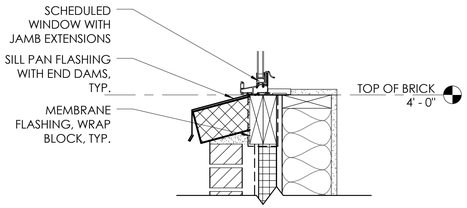
DETAIL @ WINDOW JAMB
4 / A900 — 1 1/2" = 1'-0"



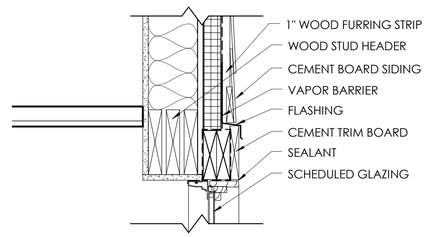
INTERIOR DOOR HEAD TYP DETAILS
2 / A900 — 1 1/2" = 1'-0"



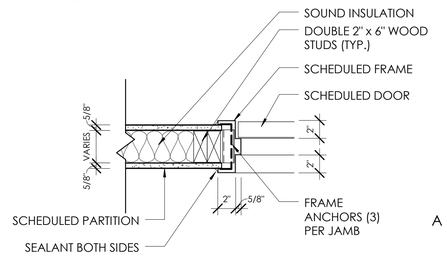
INTERIOR HM WINDOW HEAD DETAIL
7 / A900 — 1 1/2" = 1'-0"



DETAIL @ WINDOW SILL
5 / A900 — 1 1/2" = 1'-0"



DOOR HEAD DETAIL @ FRONT DOOR
3 / A900 — 1 1/2" = 1'-0"



INTERIOR DOOR JAMB TYP DETAILS
1 / A900 — 1 1/2" = 1'-0"

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
6302 Fairview Road Ste 102
Charlotte, North Carolina 28210
Tel: (800) 274-9000
Fax: (704) 331-0402
www.clarkpatterson.com
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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KNAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/18/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	DMS	BP

SCALE: As indicated

SHEET TITLE: DOOR SCHEDULE, DOOR FRAMES, AND WINDOW TYPES

PROJECT NUMBER: 13283.00

A900
DRAWING NUMBER

2/18/2016 11:15:10 AM
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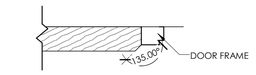
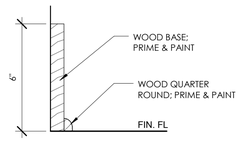
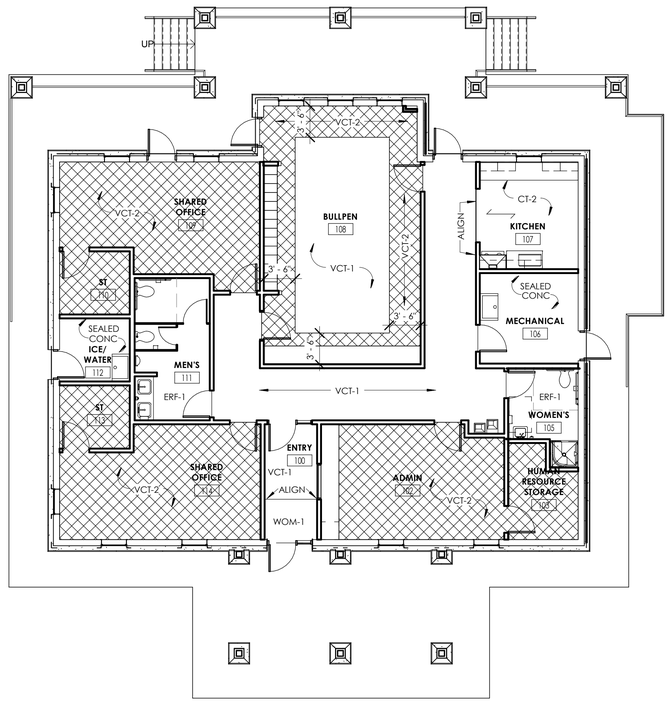
FINISHES LIST						
FINISH CODE	MANUFACTURER	PATTERN/STYLE	COLOR	DIMENSIONS	ADDITIONAL REQUIREMENTS	REMARKS
ACOUSTIC CEILING TILE						
ACT-1	Armstrong	Optima Tegular 3354	White	24" x 24" x 1"	.95 NRC, 26 CAC, Class A Fire Rating, .90 Light Reflectance, Mold & mildew resistance,	15/16" Prelude suspension system
EPOXY PAINT						
EPT-1	Sherwin Williams	N/A	SW7507 Stone Lion	N/A	Enamel Finish	Door & Window Frame
EPT-3	Sherwin Williams	N/A	SW6183 Conservative Gray	N/A	Enamel Finish	
EPT-4	Sherwin Williams	N/A	To match ICI Glidden Granite Green #50GY 13/064	N/A	Enamel Finish	
EPOXY RESIN FLOORING						
ERF-1	Stonhard	Stonclad GS	Beechwood		1/4" thickness	4" integral base
GROUT						
GR-1	Custom Building Product	N/A	#105 Earth	N/A	For use with CT-2	Sanded floor grout
GR-2	Custom Building Product	N/A	#122 Linen	N/A	For use with CT-1	Unsanded wall grout
PAINT						
PT-1	Sherwin Williams	N/A	SW7507 Stone Lion	N/A	Eggshell Finish, U.N.O.	
PT-2	Sherwin Williams	N/A	SW7705 Wheat Penny	N/A	Eggshell Finish, U.N.O.	
PT-3	Sherwin Williams	N/A	SW6183 Conservative Gray	N/A	Eggshell Finish, U.N.O.	
PT-4	Sherwin Williams	N/A	To match ICI Glidden Granite Green #50GY 13/064	N/A	Eggshell Finish, U.N.O.	
PT-5	Sherwin Williams	N/A	SW7007 Ceiling Bright White	N/A	Eggshell Finish, U.N.O.	
PLASTIC LAMINATE						
LAM-1	Wilsonart	N/A	Montana Walnut		Grain to run vertically, U.N.O.	Matte Finish
RESILIENT BASE						
RB-1	Johnsonite	Traditional Cove Base	29 Moon Rock	4" Cove Rubber	Continuous Roll	
SOLID SURFACE						
SSM-1	Corian	N/A	Cottage Lane			
TILE						
CT-1	Daltile	City View	Harbour Mist	12" x 12"	To be installed in brick stack pattern; see manufacturer's installation details for specifications	Field Tile
CT-2	Daltile	Forest Park	Sugarmaple FP96	6" x 36"	1/8" Grout Joints; see manufacturer's installation details for specifications	Floor Tile
VINYL COMPOSITION TILE						
VCT-1	Armstrong	Standard Excelon Imperial Texture	51804 Earthstone Greige	12" x 12" x 1/8" thickness		Installation method: Quarter-turned
VCT-2	Mannington	Progressions	55137 Sandrift	12" x 12" x 1/8" thickness		Installation method: Monolithic
WALK OFF MAT						
WOM-1	Interface	Entry Level	7187 Black	50 cm x 50 cm; .15" pile thickness	Tufted textured loop, type 6,6 nylon, Protekt with Zonyl 8779 Flurochemical	Installation method: monolithic



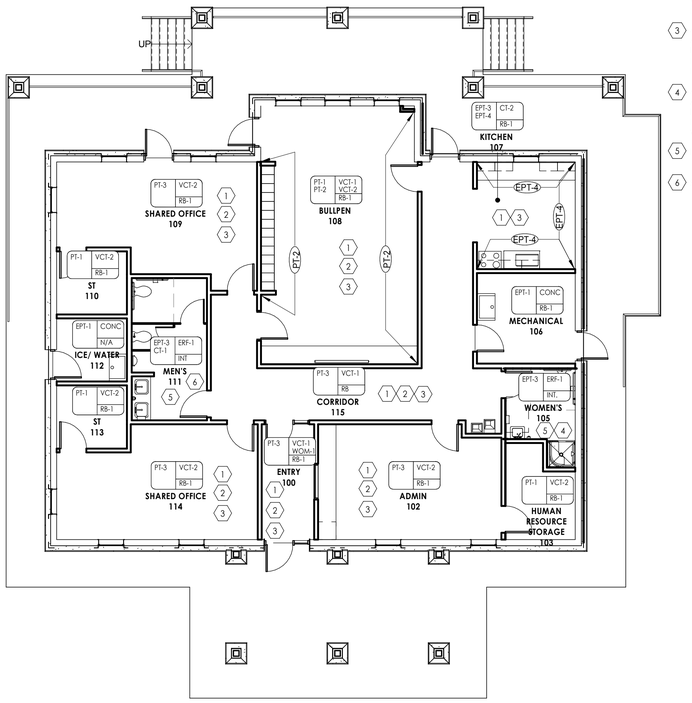
WOOD BASE PLAN SECTION;
TYPICAL @ ALL DOOR FRAMES



3/1200 **WOOD TRIM PROFILE**
3" = 1'-0"



2/1200 **FIRST FLOOR PATTERNING PLAN**
1/8" = 1'-0"



1/1200 **FIRST FLOOR FINISH PLAN & FLOOR PATTERNING PLAN**
1/8" = 1'-0"

FINISH PLAN GENERAL NOTES:

1. ALL HOLLOW METAL DOORS, DOOR FRAMES AND WINDOW FRAMES SHALL BE PAINTED EPT-1 , ENAMEL FINISH.
2. ALL LOUVERS, VENTS, GRILLES AND OTHER MISCELLANEOUS MECHANICAL AND ELECTRICAL DEVICES ARE TO BE PAINTED TO MATCH THE SURFACE ON WHICH THEY APPEAR, UNLESS OTHERWISE NOTED.
3. REFER TO A600 SERIES DRAWINGS FOR CEILING TYPES AND SOFFIT FINISHES.
4. ALL EXPOSED CONCRETE FLOORS TO BE SEALED A MINIMUM OF TWO TIMES PRIOR TO COMPLETION.
5. ALL GROUT TO BE SEALED A MINIMUM OF TWO TIMES PRIOR TO COMPLETION.
6. FLOOR FINISH TO CONTINUE UNDER ALL MODULAR & BUILT-IN MILLWORK.
7. UNDERSIDE OF SOFFITS TO MATCH FACE OF SOFFIT. SEE A600 SERIES FOR PAINT ACCENT SPECIFICATIONS.
8. ALL LAMINATE GRAIN ON VERTICAL SURFACES SHALL RUN VERTICALLY, UNLESS NOTED OTHERWISE.
9. ALL CUSTOM MILLWORK SHALL RECEIVE LAM-1 ON FACE OF CABINETS AND SSM-1 ON COUNTERTOPS, U.N.O. SEE FINISH PLAN NOTES FOR SPECIFICATIONS.

FINISH SYMBOLS LEGEND AND ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	LAM	PLASTIC LAMINATE
ACT	ACOUSTICAL CEILING TILE	HR	HAND RAIL
CC	CUBICAL CURTAIN	PF	PANEL FABRIC
CG	CORNER GUARD	PT	PAINT
CHR	CHAIR RAIL	PTM	PAINT TO MATCH
CONC	SEALED CONCRETE	QT	QUARTZ
CPT	CARPET	RB	RESILIENT BASE
CR	CRASH RAIL	SSM	SOLID SURFACE
CS	CULTURED STONE	STR	STONE VENEER
CT	CERAMIC TILE	SV	SHEET VINYL
DS	DIVIDER STRIP	T	PORCELAIN TILE
EPT	EPOXY PAINT	TS	TRANSITION STRIP
ERF	EPOXY RESIN FLOORING	TER	TERRAZZO
ETR	EXISTING TO REMAIN	VCT	VINYL COMPOSITION TILE
EXP	EXPOSED	VWC	VINYL WALL COVERING
GR	GROUT	WG	WALL GUARD
GWB	GYPSUM WALL BOARD	WOM	WALK-OFF MAT
INT	INTEGRAL BASE	WP	WALL PROTECTION

WALL FINISH(ES) | WF1 WF2 WF3 | FF1 FF2 BF1 | FLOOR FINISH(ES) / BASE FINISH

ROOM NAME
101

INDICATES GRAIN DIRECTION

FINISH PLAN KEY NOTES:

1. ADD ALTERNATE G-3 APPLICABLE THROUGHOUT ROOM. ALTERNATE G-3: WOOD FLOORING TO BE INSTALLED THROUGHOUT SPACE IN LIEU OF BASE BID FLOORING. REFER TO 3/1200 FOR WOOD BASE DETAILS.
2. ADD ALTERNATE G-4 APPLICABLE THROUGHOUT ROOM. ALTERNATE G-4: CERAMIC TILE (CT-3) TO BE INSTALLED WITH GR-1 AS FLOORING IN LIEU OF BASE BID FLOORING. REFER TO FINISH SPECIFICATIONS FOR TILE DETAILS.
3. ADD ALTERNATE G-5 APPLICABLE THROUGHOUT ROOM. ALTERNATE G-5: EPOXY FLOORING (ERF-1) TO BE INSTALLED WITH 4" INTEGRAL BASE IN LIEU OF BASE BID FLOORING. REFER TO FINISH SPECIFICATIONS FOR FLOORING DETAILS.
4. ADD ALTERNATE G-6 APPLICABLE THROUGHOUT ROOM. ALTERNATE G-6: PROVIDE WALL TILE (CT-1) AS SHOWN IN INTERIOR ELEVATIONS E1-2/A701, E2-2/A701, E3-2/A701, & E4-2/A701, INCLUDE ERF-1 4" INTEGRAL BASE, GROUT WHERE ERF-1 & CT-1 MEET; VERIFY WITH ARCHITECT.
5. INTEGRAL BASE SHALL RUN 4" UP WALLS.
6. SEE ELEVATIONS ON A701 FOR CT-1 LOCATIONS.

CLARK PATTERSON LEE
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Fax: (704) 331-0402
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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

STATE OF NORTH CAROLINA REGISTERED ARCHITECTS
CLARK PATTERSON ENGINEERS/ARCHITECTS
DBA CLARK PATTERSON LEE
CHARLOTTE, NC
51301

TIMOTHY SCOTT KAPP
REGISTERED ARCHITECT
7444
NORTH CAROLINA
CHARLOTTE, N.C.
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	CLA	MBL

SCALE: As indicated

SHEET TITLE
FIRST FLOOR FINISH PLAN, FLOOR PATTERNING PLAN, & FINISH SPECIFICATIONS

PROJECT NUMBER
13283.00

1200
DRAWING NUMBER

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HVAC SYMBOLS LIST

SYMBOL	DESCRIPTION
A	COMPRESSED AIR
AAC	DUCTLESS SPLIT A.C. SYSTEM (CONDENSING UNIT)
AD	AUTOMATIC AIR DAMPER
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BBD	BOILER BLOW DOWN
CCC	COOLING COIL CONDENSATE
CD	CONDENSING UNIT IF SHOWN AS EQUIPMENT TAG; COOLING COIL CONDENSATE DRAIN PIPE IF SHOWN CONNECTED TO A/C EQUIPMENT; STEAM COIL CONDENSATE DRAIN PIPE IF SHOWN CONNECTED TO STEAM EQUIPMENT
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CP	CONDENSATE PUMP DISCHARGE
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CW	DOMESTIC COLD WATER
D	DRAIN
EA	EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ETR	EXISTING TO REMAIN
FCU	FAN COIL UNIT
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
HC	HVAC CONTRACTOR
MBH	THOUSAND BTU/HR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
PC	PLUMBING CONTRACTOR
RA	RETURN AIR
RD	REFRIGERANT DISCHARGE
RL	REFRIGERANT LIQUID PIPE
RS	REFRIGERANT SUCTION PIPE
RTU	ROOFTOP UNIT
RV	ROOF VENT
SA	SUPPLY AIR
SSI	SPLIT SYSTEM INDOOR SECTION (EVAPORATIVE UNIT FOR DUCTLESS SPLIT SYSTEM)
SSO	SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT FOR DUCTLESS SPLIT SYSTEM
TC	TEMPERATURE CONTRACTOR
UH	UNIT HEATER
OED	OPEN ENDED DUCT

SYMBOL	DESCRIPTION
V	VENT
W/W ENCL.	WALL TO WALL FIN TUBE ENCLOSURE
	CONNECTION - TOP
	CONNECTION - BOTTOM
	DIRECTION OF FLOW
	REDUCER
	CAP OR PLUG
	ELBOW DOWN
	ELBOW UP / TOP CONNECTION
	TEE OUTLET - UP
	TEE OUTLET - DOWN
	UNION
	GATE VALVE
	BALL VALVE
	BALANCING VALVE
	STRAINER W/ BLOW DOWN
	BUTTERFLY VALVE
	BUTTERFLY VALVE, PNEUMATIC 2-WAY
	BUTTERFLY VALVE, ELECTRIC ACTUATOR
	GLOBE VALVE
	CHECK VALVE
	TRIPLE DUTY VALVE
	GAS COCK, PLUG VALVE
U/C	UNDERCUT DOOR 1"
L	LOUVERED DOOR W/ SQ. FT. OF FREE AREA
M	AIR VENT - MANUAL
A	AIR VENT - AUTOMATIC
	FLANGE
	CONTROL/SOLENOIND VALVE, ELECTRIC 2-WAY
	CONTROL VALVE, ELECTRIC 3-WAY
	CONTROL VALVE, PNEUMATIC 2-WAY
	CONTROL VALVE, PNEUMATIC 3-WAY
PRV	PRESSURE REDUCING VALVE
XX	PIPING

SYMBOL	DESCRIPTION
20/10	DUCT SECTION - SUPPLY (FIRST FIGURE TOP)
20/10	DUCT SECTION - RETURN (FIRST FIGURE TOP)
A"	ROUND DUCT IN INCHES
	FLEXIBLE DUCTWORK
	FLEXIBLE CONNECTION
	FIRE DAMPER - VERTICAL (WALL)
	FIRE DAMPER - HORIZONTAL (FLOOR)
	SMOKE DAMPER - VERTICAL (WALL)
	SMOKE DAMPER - HORIZONTAL (FLOOR)
	COMBINATION FIRE AND SMOKE DAMPER - VERTICAL (WALL)
	COMBINATION FIRE AND SMOKE DAMPER - HORIZONTAL (FLOOR)
VD VD	VOLUME DAMPER
AAD AAD	AUTOMATIC AIR DAMPER
12X10 12X10 20/10 12X10	SUPPLY, RETURN, OR EXHAUST AIR DUCT (FIRST FIGURE IS DUCT WIDTH/TOP, SECOND FIGURE IS DUCT DEPTH)
10/20 10/20	SUPPLY, RETURN, OR EXHAUST AIR DUCT (FIRST FIGURE IS DUCT DEPTH, SECOND FIGURE IS DUCT WIDTH/TOP)
	MULTI-BLADE AIR EXTRACTOR
	TURNING VANE
	TRANSITION SQUARE TO ROUND
	SQUARE CEILING DIFFUSER (4 WAY)
	SQUARE OR RECTANGULAR CEILING RETURN OR EXHAUST GRILLE
	SUPPLY REGISTER OR RETURN REGISTER SUPPY, RETURN OR EXHAUST AIR GRILLE
1-WAY 2-WAY 3-WAY	SUPPLY DIFFUSER, REGISTER OR GRILL
8"ø, D-3 300 CFM	CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM
10"x10", G-3 300 CFM	CEILING RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM
10"x8", R-2 300 CFM	SUPPLY REGISTER WITH SIZE, TYPE, & CFM
10"x8", G-2 300 CFM	RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM
BDD	BACK DRAFT DAMPER
AAD	AUTOMATIC AIR DAMPER
	AIR FLOW

SYMBOL	DESCRIPTION
24X12 12X10 VD	SUPPLY / RETURN / EXHAUST AIR TAKEOFFS
24X12 8"ø VD	SUPPLY / RETURN / EXHAUST AIR TAKEOFFS
14"ø 10"ø VD	SUPPLY AIR TAKEOFFS
14"ø 10"ø VD	SUPPLY AIR TAKEOFFS
24X12 6X12 12X10 18X12 20X12	SUPPLY AIR TAKEOFFS
24X12 6X12 12X10 18X12 20X12	SUPPLY AIR TAKEOFFS
24X12 12X10 VD	SUPPLY/RETURN EXHAUST AIR TAKEOFFS W/ REGISTER/GRILLE/ DIFFUSER
VD VD	SUPPLY/RETURN EXHAUST AIR END OF MAIN BRANCH TAKEOFFS
VD VD	SUPPLY/RETURN EXHAUST AIR END OF MAIN BRANCH TAKEOFFS
	LONG RADIUS 90° ELBOW R/W=1.5
	LONG RADIUS 45° ELBOW R/W=1.5
	90° ELBOW WITH TURNING VANES
18X16 18X8 18X8	90 VERTICAL SPLIT OFF (PLAN VIEW)
20X10 20X10 20X10	DUCT TURNING UP OR DOWN

SYMBOL	DESCRIPTION
E/P	ELECTRIC/PNEUMATIC SWITCH OR RELAY
P/E	PNEUMATIC/ELECTRIC SWITCH OR RELAY
CT	CURRENT TRANSDUCER
O/C	OPEN/CLOSED
S/S	START/STOP
E/D	ENABLE/DISABLE
S	TEMPERATURE SENSOR (DUCT OR PIPE MOUNTED)
H	HUMIDITY SENSOR (DUCT MOUNTED)
F	FLOW TRANSMITTER
P	PRESSURE TRANSMITTER
I/P	ELECTRIC/PNEUMATIC TRANSDUCER
I/E	ELECTRIC/ELECTRONIC TRANSDUCER
DSD	DUCT SMOKE DETECTOR
T	SPACE THERMOSTAT
T	SPACE TEMPERATURE SENSOR
CO2	SPACE CARBON DIOXIDE SENSOR
G	SPACE NATURAL GAS SENSOR
CO	SPACE CARBON MONOXIDE SENSOR
G	SPACE SENSOR REQUIRING GUARD
VSD	MOTOR VARIABLE SPEED DRIVE
H	SPACE HUMIDSTAT
FS	WATER FLOW SENSOR
P/A	PNEUMATIC ACTUATOR
E/A	ELECTRIC ACTUATOR
VSD	VARIABLE SPEED DRIVE
C/C	COOLING COIL
E	ELECTRIC ACTUATOR
H/C	HEATING COIL
A	ALARM
S	STATUS
FS	FLOW SWITCH
ΔP	DIFFERENTIAL STATIC PRESSURE SWITCH
R	RELAY
P	PRESSURE GAUGE
FZ	FREEZE-STAT
M	MAIN CONTROL AIR (TEMP CONTROL)
I	ELECTRONIC INTERFACE
H	HUMIDIFIER
ΔP	DIFFERENTIAL STATIC PRESSURE TRANSMITTER
G/B	GAS BURNER
DI	DIGITAL INPUT (GENERAL)
DO	DIGITAL OUTPUT (GENERAL)
	ELECTRICAL INTERFACE
AO	ANALOG OUTPUT (GENERAL)
AI	ANALOG INPUT (GENERAL)
SF	SPEED FEED BACK

GENERAL NOTES:

A. ALL DUCTWORK, PIPING AND CONDUIT PENETRATIONS THROUGH RATED WALLS AND/OR FLOORS SHALL BE PROVIDED WITH FIRE/SMOKE STOPPINGS PER SPECIFICATION. REFER TO DRAWING CODE ANALYSIS DRAWING FOR ALL RATED WALL LOCATIONS. ALL FLOORS SHALL BE CONSIDERED RATED.

B. ALL NEW PENETRATIONS SHALL BE PROVIDED FOR INSTALLATION OF MECHANICAL SYSTEMS INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, CURBING, DUCTWORK, PIPING, ETC. PROVIDE LINTELS PER LINTEL SCHEDULE.

C. DESIGN CONDITIONS DERIVED FROM ASHRAE 90.1 AND ARE BASED ON THE FOLLOWING:
1. OUTDOOR TEMPERATURE: SUMMER = 92°F DB/ 73°F WB; WINTER = 11°F DB/ 8.4°F WB;
2. INDOOR OCCUPIED TEMPERATURE SETPOINT: SUMMER = 75°F DB; WINTER = 70°F

D. SEISMIC DESIGN CRITERIA FOR NON-STRUCTURAL COMPONENTS:
1. SEISMIC DESIGN CATEGORY: C
2. BUILDING OCCUPANCY CATEGORY: II
3. MECHANICAL COMPONENT IMPORTANCE FACTOR (IP) = 1.0
4. SEISMIC DESIGN REQUIREMENTS APPLICABILITY FOR PROJECT: NOT REQUIRED

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE N.T.S.

SHEET TITLE
HVAC SYMBOLS LEGEND, NOTES & SYSTEM DIAGRAMS

PROJECT NUMBER
13283.00

H000
DRAWING NUMBER

NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. KYZER
P. 13283

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COM*check* Software Version 4.0.1

Mechanical Compliance Certificate

Section 1: Project Information

Energy Code: **2012 North Carolina Energy Conservation Code**
Project Title: NC DOT - Division 14 Assembly Office Building
Project Type: New Construction

Construction Site:
Robbinsville, NC

Owner/Agent:

Designer/Contractor:

Section 2: General Information

Building Location (for weather data): Robbinsville, North Carolina
Climate Zone: 4a

Section 3: Mechanical Systems List

Quantity	System Type & Description
2	FC-1 & 3 (Single Zone) : Split System Heat Pump Heating Mode: Capacity = 17 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 7.70 HSPF Cooling Mode: Capacity = 18 kBtu/h, Proposed Efficiency = 15.50 SEER, Required Efficiency = 13.00 SEER Fan System: FC-1 & 3 | Offices -- Compliance (Motor nameplate HP method) : Passes Fans: FC1 Supply, Constant Volume, 525 CFM, 0.5 motor nameplate hp EF1 Exhaust, Constant Volume, 650 CFM, 0.2 motor nameplate hp EF2 Exhaust, Constant Volume, 235 CFM, 0.1 motor nameplate hp
1	FC-2 (Single Zone) : Split System Heat Pump Heating Mode: Capacity = 24 kBtu/h, Proposed Efficiency = 9.00 HSPF, Required Efficiency = 7.70 HSPF Cooling Mode: Capacity = 23 kBtu/h, Proposed Efficiency = 15.50 SEER, Required Efficiency = 13.00 SEER Fan System: FC-2 | Conference Room -- Compliance (Motor nameplate HP method) : Passes Fans: FC2 Supply, Constant Volume, 700 CFM, 0.5 motor nameplate hp EF3 Exhaust, Constant Volume, 220 CFM, 0.0 motor nameplate hp EF4 Exhaust, Constant Volume, 75 CFM, 0.1 motor nameplate hp
1	EH-1 (Unknown) : Heating: 1 each - Unit Heater, Electric, Capacity = 10 kBtu/h No minimum efficiency requirement applies Fan System: EH-1&2 | Ice/Mechanical Room -- Compliance (Motor nameplate HP method) : Passes Fans: UH1 Supply, Constant Volume, 350 CFM, 0.0 motor nameplate hp
1	EH-2 (Unknown) : Heating: 1 each - Unit Heater, Electric, Capacity = 10 kBtu/h No minimum efficiency requirement applies Fan System: EH-1&2 | Ice/Mechanical Room -- Compliance (Motor nameplate HP method) : Passes Fans: UH1 Supply, Constant Volume, 350 CFM, 0.0 motor nameplate hp

Section 4: Requirements Checklist

Requirements Specific To: FC-1 & 3 :

☒ 1. Equipment minimum efficiency: Heat Pump: 7.70 HSPF 13.00 SEER
☒ 2. In systems with a cooling capacity of less than 65,000 Btuh, a heat strip outdoor temperature lockout is provided to prevent supplemental heat operation in response to the thermostat being changed to a warmer setting. The lockout is set no lower than 35˚F and no higher than 40˚F.

Requirements Specific To: FC-2 :

☒ 1. Equipment minimum efficiency: Heat Pump: 7.70 HSPF 13.00 SEER
☒ 2. In systems with a cooling capacity of less than 65,000 Btuh, a heat strip outdoor temperature lockout is provided to prevent supplemental heat operation in response to the thermostat being changed to a warmer setting. The lockout is set no lower than 35˚F and no higher than 40˚F.

Requirements Specific To: EH-1 :

None

Requirements Specific To: EH-2 :

None

Generic Requirements: Must be met by all systems to which the requirement is applicable:

☒ 1. Plant equipment and system capacity no greater than needed to meet loads
Exception(s):
- ☐ Standby equipment automatically off when primary system is operating
- ☐ Multiple units controlled to sequence operation as a function of load

☒ 2. Minimum one temperature control device per system
N/A ☐ 3. Minimum one humidity control device per installed humidification/dehumidification system
☒ 4. Load calculations per ASHRAE/ACCA Standard 183.
☒ 5. Automatic Controls: Setback to 55˚F (heat) and 85˚F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exception(s):
- ☐ Continuously operating zones

☒ 6. Outside-air source for ventilation; system capable of reducing OSA to required minimum
☒ 7. R-5 supply and return air duct insulation in unconditioned spaces
R-8 supply and return air duct insulation outside the building
R-8 insulation between ducts and the building exterior when ducts are part of a building assembly
Exception(s):
- ☐ Ducts located within equipment
- ☐ Ducts with interior and exterior temperature difference not exceeding 15˚F.

☒ 8. Mechanical fasteners and sealants used to connect ducts and air distribution equipment
☒ 9. Ducts sealed - longitudinal seams on rigid ducts; transverse seams on all ducts; UL 181A or 181B tapes and mastics
☒ 10. Hot water pipe insulation: 1.5 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1.5 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in.
Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
Exception(s):
- ☐ Piping within HVAC equipment.
- ☐ Fluid temperatures between 55 and 105˚F.
- ☐ Fluid not heated or cooled with renewable energy.
- ☐ Piping within room fan-coil (with AHRI440 rating) and unit ventilators (with AHRI840 rating).
- ☐ Runouts <4 ft in length.

☒ 11. Operation and maintenance manual provided to building owner
☒ 12. Balancing devices provided in accordance with IMC 603.17
N/A ☐ 13. Ventilation systems in buildings over 10,000 ft2 of conditioned area have demand controls. DCV systems are capable of reducing outside supply air to at least 50% below design ventilation rates. In all buildings, spaces larger than 500 ft2 with a maximum occupant load of 40 or more people per 1,000 ft2 of floor area control ventilation supply air flow by monitoring indoor air quality conditions.
Exception(s):
- ☐ Systems with heat recovery.
- ☐ Building spaces where the primary ventilation needs are for process loads, including laboratories and hospital.
- ☐ Individual units with less than 65 kBtu/h of cooling capacity.

☒ 14. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
Exception(s):
- ☐ Gravity dampers acceptable in buildings <3 stories

☒ 15. Automatic controls for freeze protection systems present
N/A ☐ 16. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted

Exception(s):

- ☐ Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems.
- ☐ Systems serving spaces that are heated and not cooled to less than 60˚F.
- ☐ Where more than 60 percent of the outdoor heating energy is provided from site-recovered or site solar energy.
- ☐ Heating systems in climates with less than 3600 HDD.
- ☐ Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64˚F.
- ☐ Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
- ☐ Laboratory fume hood exhaust systems that have either a variable air volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or, a separate make up air supply meeting the following makeup air requirements: a) at least 75 percent of exhaust flow rate, b) heated to no more than 2˚F below room setpoint temperature, c) cooled to no lower than 3˚F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2012 North Carolina Energy Conservation Code requirements in COM*check* Version 4.0.1 and to comply with the mandatory requirements in the Requirements Checklist.

Andrew M. Tripp — Name - Title
Signature
9/15/2015 — Date

Section 6: Post Construction Compliance Statement

- ☐ HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.
- ☐ HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.
- ☐ Written HVAC balancing and operations report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name
Signature
Date

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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. NYER
2/19/16
P. 5203

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE

SHEET TITLE
ENERGY CODE COMPLIANCE

PROJECT NUMBER
13283.00

H001
DRAWING NUMBER

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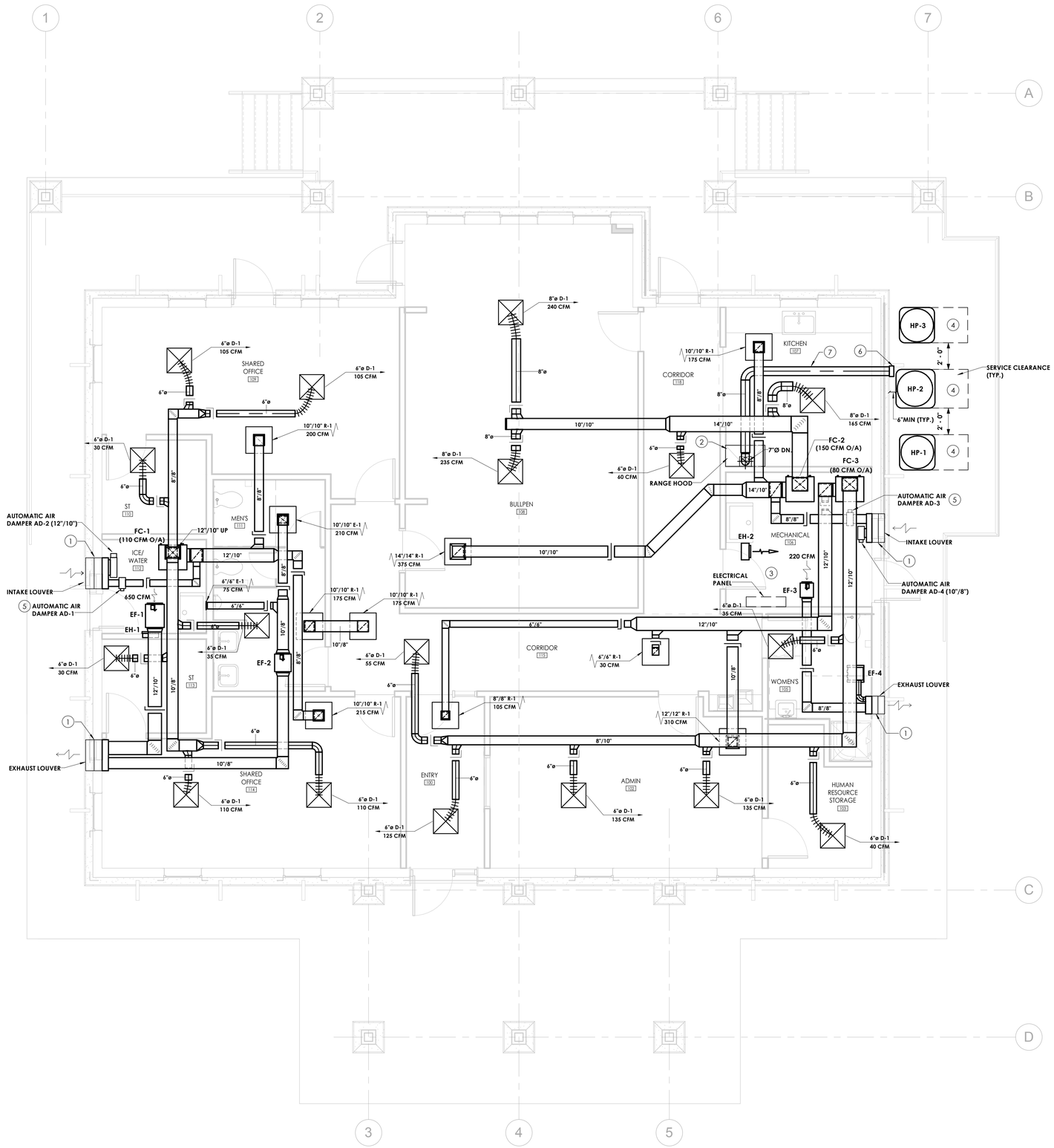

1 H200 **HVAC DUCTWORK PLAN**
1/4" = 1'-0"

GENERAL NOTES:

1. DUCTWORK TO BE ROUTED CONCEALED IN CEILING CAVITY BELOW THERMAL INSULATION.
2. REFER TO CONTROL DAMPER SPECIFICATION SECTION FOR AUTOMATIC AIR DAMPER REQUIREMENTS. DAMPER TAG DESIGNATIONS HAVE BEEN INDICATED FOR REFERENCE ONLY.

PLAN NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR LOUVER SIZE AND ELEVATION. PROVIDE PLENUM SIZED TO MATCH LOUVER DIMENSIONS. CONNECT DUCTWORK TO PLENUM AND SEAL AIRTIGHT.
2. PROVIDE STAINLESS STEEL UNDER CABINET RANGE HOOD MANUFACTURED BY BROAN-NUTONE #QS130SS (30" WIDE) OR APPROVED EQUAL WITH ROUND DUCT CONNECTOR, BACKDRAFT DAMPER, AND INTEGRAL FAN (220 CFM). ROUTE DUCTWORK CONCEALED WITHIN ARCHITECTURAL UPPER CABINET TO RANGE HOOD.INSTALL IN ACCORDANCE TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND ICC A117.1-2009. FAN OPERATION TO BE CONTROLLED BY WALL SWITCH. PROVIDE ALL NECESSARY FITTINGS TO FACILITATE DUCTWORK CONNECTION TO RANGE HOOD.
3. COORDINATE ROUTING OF DUCTWORK/PIPING WITH ELECTRICAL PLANS TO ENSURE MECHANICAL SYSTEMS ARE NOT SITUATED DIRECTLY ABOVE ELECTRICAL PANELS IN ACCORDANCE WITH CODE REQUIREMENTS.
4. MOUNT HEAT PUMP ON CONCRETE SIDEWALK. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES BETWEEN UNITS FOR SERVICE AND PROPER AIRFLOW. UNITS TO BE SITUATED SUCH THAT SERVICE SIDE OF UNIT FACES AWAY FROM BUILDING TOWARDS REMOVABLE RAILING TO ALLOW FOR MAINTENANCE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF REMOVABLE RAILINGS.
5. AUTOMATIC AIR DAMPER ASSOCIATED WITH FAN COIL TO BE CONTROLLED VIA TIME CLOCK. REFER TO ELECTRICAL PLANS FOR ADDITIONAL DETAILS.
6. PROVIDE ALUMINUM HOODED WALL CAP MANUFACTURED BY GREENHECK #WC-8 OR APPROVED EQUAL. INCLUDE BUILT-IN BIRDSCREEN AND GRAVITY DAMPER. PAINT TO MATCH ADJACENT BUILDING COLOR SCHEME.
7. EXHAUST DUCTWORK TO BE WELDED 18 GAUGE STAINLESS STEEL . SLOPE 1/8" PER FOOT TOWARD HOOD. WRAP WITH 2" FIRE BARRIER DUCT WRAP.

0' 2' 4' 8' 16'

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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 27581 2/19/16 GREGORY A. KYZER P. 13283

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE: As indicated

SHEET TITLE: HVAC DUCTWORK PLAN

PROJECT NUMBER: 13283.00

H200
DRAWING NUMBER

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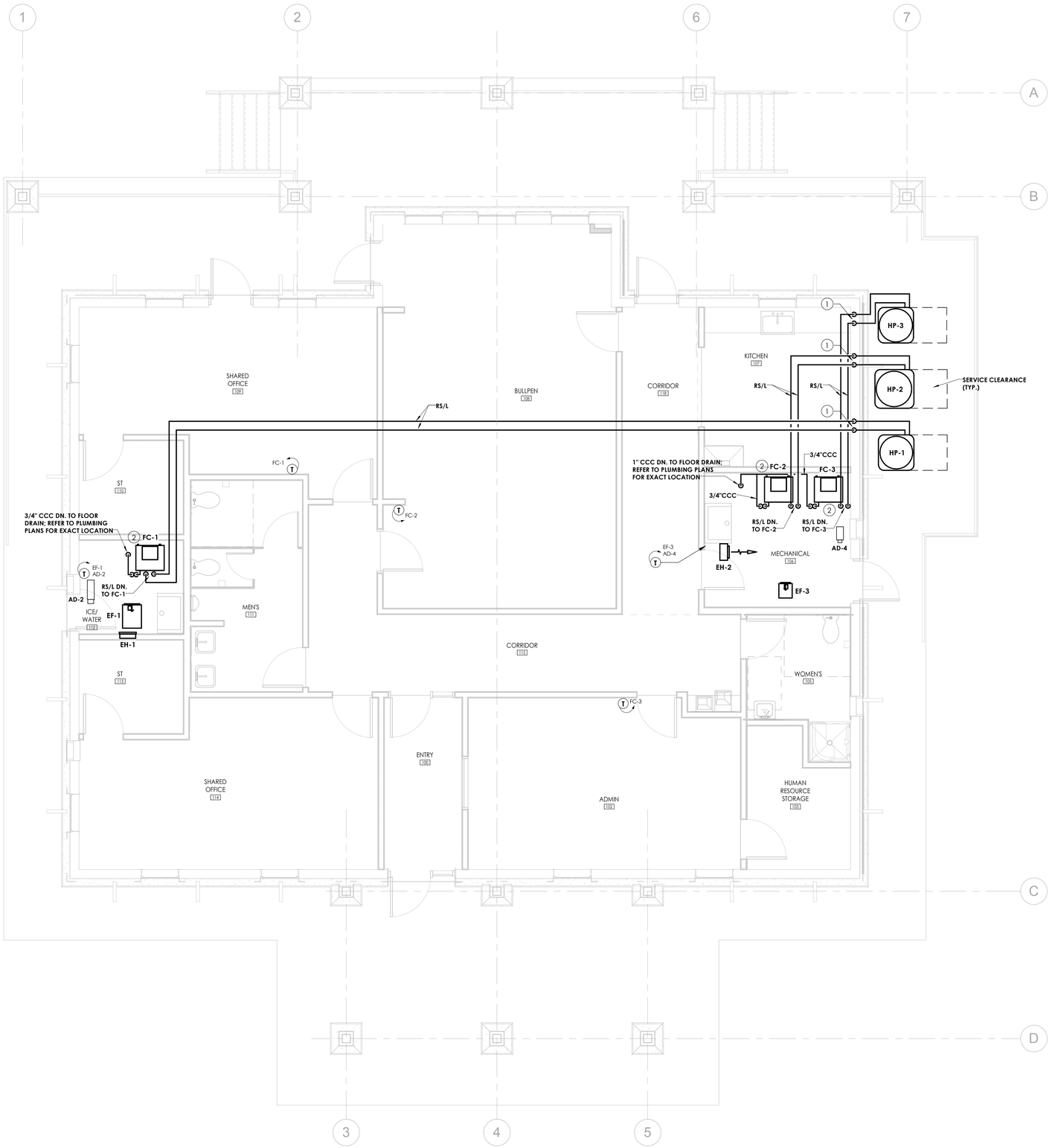
GENERAL NOTES:

1. REFRIGERANT PIPING TO BE SIZED AND INSTALLED IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL ACCESSORIES TO FACILITATE SYSTEM OPERATION. PROVIDE LONG LINE APPLICATION ACCESSORIES FOR UNITS INDICATED ON SCHEDULE.
2. ALL REFRIGERANT PIPING TO BE ROUTED CONCEALED IN CEILING CAVITY BELOW THERMAL INSULATION.

PLAN NOTES:

(1) ROUTE REFRIGERANT PIPING DOWN CONCEALED WTHIN WALL. COORDINATE WALL PENETRATIONS FOR PIPING WITH UNIT ELEVATION PRIOR TO INSTALLATION.

(2) PROVIDE CONCRETE HOUSEKEEPING PAD FOR FAN COIL. REFER TO FAN COIL DETAIL.



1 H300 **HVAC PIPING PLAN**
1/4" = 1'-0"

0' 2' 4' 8' 16'

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
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NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. KYLER 2/19/16
P. 13283

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE: As indicated

SHEET TITLE: HVAC PIPING PLAN

PROJECT NUMBER: 13283.00

H300
DRAWING NUMBER

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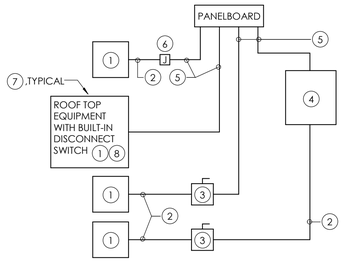
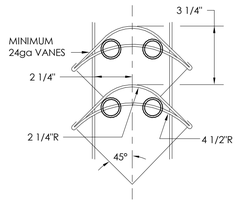


IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND THE OTHER TRADES.

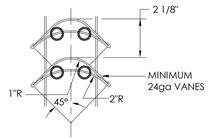
KEY NOTES:

1. EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
2. CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR, OR OTHER TRADES.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY THE NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
5. BRANCH CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD AND MECHANICAL EQUIPMENT CONNECTION SCHEDULES FOR BREAKER AND WIRE SIZES.
6. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
8. IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT-IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

10 H800 MECHANICAL/ELECTRICAL EQUIPMENT CONNECTION COORDINATION DETAIL

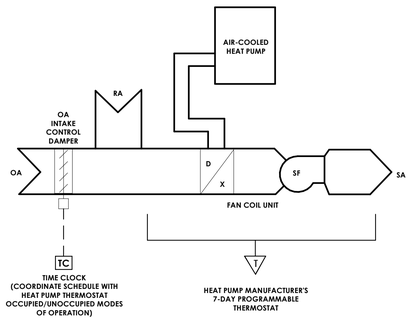


VANES FOR SQUARE THROAT ELBOWS OVER 20" WIDE

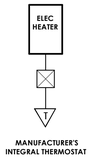


VANES FOR SQUARE THROAT ELBOWS THRU 20" WIDE

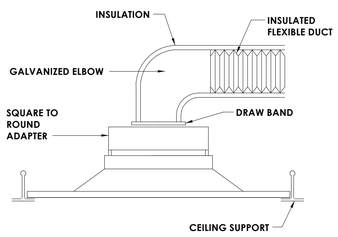
6 H800 TURNING VANE DETAIL



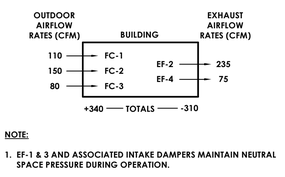
2 H800 FAN COIL UNIT CONTROL SCHEMATIC



5 H800 ELECTRIC HEATER CONTROL DIAGRAM



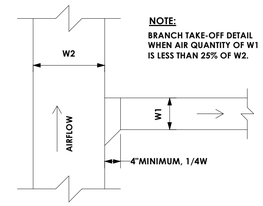
1 H800 DIFFUSER DETAIL



NOTE:

1. EF-1 & 3 AND ASSOCIATED INTAKE DAMPERS MAINTAIN NEUTRAL SPACE PRESSURE DURING OPERATION.

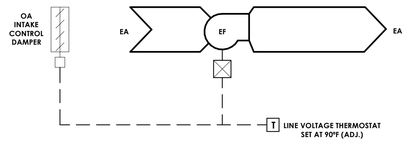
9 H800 BUILDING AIRFLOW DIAGRAM



NOTE:

BRANCH TAKE-OFF DETAIL WHEN AIR QUANTITY OF W1 IS LESS THAN 25% OF W2.

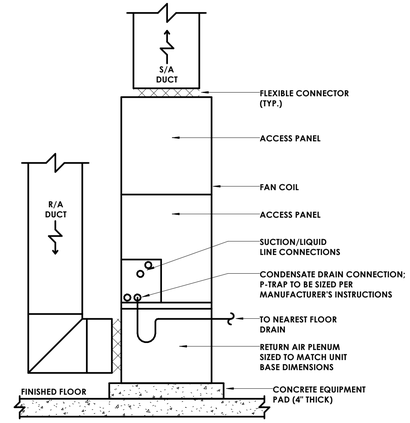
8 H800 BRANCH TAKE-OFF DETAIL



SEQUENCE OF OPERATION:

1. EXHAUST FAN TO BE ENERGIZED WHEN SPACE TEMPERATURE EXCEEDS THERMOSTAT SETPOINT OF 90°F.
2. OUTSIDE AIR DAMPER IS TO OPEN WHEN EXHAUST FAN IS ENERGIZED.
3. UPON DECREASE IN SPACE TEMPERATURE BELOW SETPOINT, THE REVERSE IS TO OCCUR.

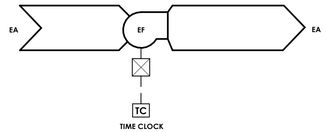
4 H800 MECHANICAL/ICE ROOM EXHAUST FAN CONTROL DIAGRAM (EF-1 & 3)



NOTE:

1. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR UNIT SERVICE AND ACCESS.

7 H800 FAN COIL DETAIL



SEQUENCE OF OPERATION:

1. EXHAUST FAN TO BE ENERGIZED DURING OCCUPIED TIMES BY PROGRAMMABLE TIME CLOCK.
2. EXHAUST FAN TO BE DE-ENERGIZED DURING UNOCCUPIED TIMES BY PROGRAMMABLE TIME CLOCK.

3 H800 RESTROOM EXHAUST FAN CONTROL DIAGRAM (EF-2 & 4)

GENERAL NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS FOR ALL SCHEDULED EQUIPMENT.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	SPACE SERVED	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN. WC.)	FAN RPM	FAN HP	DRIVE TYPE	CONFIGURATION	VOLTAGE/PHASE	REMARKS
EF-1	Greenheck	SQ-100-B	Ice/Water 112	650	0.25	1126	1/6	DIRECT	INLINE CENTRIFUGAL	120/1	1,2,3,4,6
EF-2	Greenheck	SQ-80-D	Men's Rm 111	285	0.25	1409	1/12	DIRECT	INLINE CENTRIFUGAL	120/1	1,3,4,5
EF-3	Greenheck	SQ-75-D	Mechanical 106	220	0.20	1550	1/30	DIRECT	INLINE CENTRIFUGAL	120/1	1,2,3,4,6
EF-4	Greenheck	SP-B80	Women's Rm 105	75	0.15	900	54.3 WATTS	DIRECT	CEILING FAN	120/1	1,4,5

REMARKS

1. PROVIDE WITH FACTORY MOUNTED AND WIRED DISCONNECT SWITCH.
2. PROVIDE WITH MANUFACTURER'S INLET GUARD. FAN TOTAL STATIC PRESSURE SIZED TO INCLUDE INLET GUARD PRESSURE LOSS OF 0.1"W.C.
3. PROVIDE WITH MANUFACTURER'S FAN SPEED CONTROL.
4. PROVIDE WITH MANUFACTURER'S SPRING ISOLATION HANGER KIT.
5. FAN OPERATION TO BE CONTROLLED BY TIME CLOCK.
6. FAN OPERATION TO BE CONTROLLED BY WALL-MOUNTED LINE VOLTAGE THERMOSTAT.

DIFFUSER/GRILLE SCHEDULE

MARK	APPLICATION	MATERIAL	FINISH	DESIGN EQUIPMENT	REMARKS
D-1	SUPPLY DIFFUSER	STEEL	WHITE	TITUS, TMS	1,3,4
E/R-1	EXHAUST/RETURN GRILLE	STEEL	WHITE	TITUS, 355RL	2,3,4

REMARKS

1. PROVIDE 24"X24" MODULE. COORDINATE WITH SPACE CEILING TYPE FOR LAY-IN OR SURFACE MOUNTING.
2. FOR GRILLES MOUNTED IN LAY-IN CEILING SYSTEM, PROVIDE MANUFACTURER'S 24"X24" STANDARD ADAPTOR MODULE TO FIT IN GRID.
3. PROVIDE HANGERS AND MOUNTING ACCESSORIES SUITABLE FOR CEILING TYPE. COORDINATE DIFFUSERS/GRILLES WITH ARCHITECTURAL CEILING AND LIGHTING PLANS.
4. SEE PLANS FOR NECK SIZE AND AIRFLOW RATE.

AIR-COOLED HEAT PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	TOTAL COOLING CAPACITY	SEER	HEATING CAPACITY @ 47°F (MBH)	HSPF	REFRIGERANT	VOLTAGE/PHASE	MCA (A)	MOP (A)	WEIGHT (LBS)	REMARKS
HP-1	CARRIER	25HCC5-18	16.9	15.5	17.4	8.2	R-410A	208/1	11.8	20	170	1,3
HP-2	CARRIER	25HCC5-24	22.7	15.5	24.0	9.0	R-410A	208/1	16.5	25	200	1,2
HP-3	CARRIER	25HCC5-18	16.9	15.5	17.4	8.2	R-410A	208/1	11.8	20	170	1

REMARKS

1. PROVIDE DISCONNECT SWITCH AND CRANKCASE HEATER.
2. PROVIDE MANUFACTURER'S LOW AMBIENT CONTROLLER KIT AND ACCESSORIES.
3. PROVIDE MANUFACTURER'S LONG LINE APPLICATION KIT AND ACCESSORIES.

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	KW	CONFIGURATION	VOLT/PHASE	MCA	REMARKS
EH-1	QMARK	AWH4404F	3.0	FULLY RECESSED	208/1	14.4	1,2
EH-2	QMARK	MUH03-81	3.0	CEILING-SUSPENDED	208/1	14.5	1,2,3

REMARKS

1. PROVIDE MANUFACTURER'S DISCONNECT.
2. PROVIDE MANUFACTURER'S INTEGRAL THERMOSTAT.
3. PROVIDE MOUNTING FOR INSTALLATION FROM STRUCTURE.

FAN COIL SCHEDULE

MARK	MANUFACTURER	MODEL	FAN MOTOR HP	EXTERNAL STATIC PRESSURE (IN. WC.)	AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	TOTAL COOLING CAPACITY (MBH)	HEATING CAPACITY @ 47°F (MBH)	AUXILIARY ELECTRIC HEATER AT 240V (KW)	AUXILIARY ELECTRIC HEATER AT 208V (KW)	REFRIGERANT	VOLTAGE/PHASE	REMARKS
FC-1	CARRIER	FV4CN002	1/2	0.55	525	110	16.9	17.4	8.0	6.0	R-410A	208/1	1
FC-2	CARRIER	FV4CN002	1/2	0.50	700	150	22.8	24.0	8.0	6.0	R-410A	208/1	1
FC-3	CARRIER	FV4CN002	1/2	0.50	525	80	16.9	17.4	8.0	6.0	R-410A	208/1	1

REMARKS

1. PROVIDE MANUFACTURER'S DISCONNECT SWITCH KIT.

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
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Fax: (838) 274-6674
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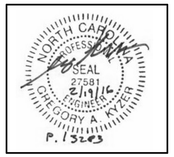
Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION



NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE N.T.S.

SHEET TITLE

HVAC SCHEDULES, DETAILS & CONTROL SCHEMATICS

PROJECT NUMBER 13283.00

H800
DRAWING NUMBER

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PLUMBING FIXTURE & EQUIPMENT SCHEDULE

SYM.	DESCRIPTION	CONNECTIONS (IN.) W	V	CW	HW	SPECIFICATION	REMARKS
WC-1	TOILET, A.D.A COMPLIANT HET-1.28 GAL. MANUAL TANK TYPE FLOOR MOUNTED BOTTOM OUTLET WHITE VITREOUS CHINA	3"	2"	3/4"	-	FIXTURE: ZURN # Z5555-HET-1.28 SEAT: CHURCH # 293SS	INSTALL PER ICC A117.1-2009 REQUIREMENTS
WC-2	TOILET, STANDARD HET-1.28 GAL. MANUAL TANK TYPE FLOOR MOUNTED BOTTOM OUTLET WHITE VITREOUS CHINA	3"	2"	3/4"	-	FIXTURE: ZURN # Z5535-HET-1.28 SEAT: CHURCH # 293SS	
UR-1	URINAL, A.D.A. COMPLIANT "THE PINT" 1/8 GPF LOW CONSUMPTION WALL HUNG, WHITE VITREOUS CHINA	2"	2"	3/4"	-	FIXTURE & FLUSHOMETER VALVE: ZURN # Z5798.207.00	INSTALL PER ICC A117.1-2009 REQUIREMENTS
LAV-1	COUNTERTOP LAVATORY, ACCESSIBLE 20"x17", 4" CENTERS, SELF-RIMMING WHITE VITREOUS CHINA SINGLE LEVER, 0.50 GPM AREATOR	1-1/2"	1-1/2"	1/2"	1/2"	LAV: ZURN # Z5114 LF-1 FAUCET: ZURN # Z81000-XL-3M (0.5 GPM AERATOR) GRID DRAIN W/ OFFSET: MCGUIRE # 155WC P-TRAP: MCGUIRE # 8902 1-1/4" x 1-1/2" SUPPLIES & STOPS: MCGUIRE # 175LK (LOOSE KEY)	COORDINATE DRAIN AND SUPPLY PIPING WITH ARCHITECTURAL APRON. INSTALL PER ADA REQUIREMENTS
LAV-2	WALL HUNG LAVATORY, ACCESSIBLE 20"x18", 4" CENTERS WHITE VITREOUS CHINA SINGLE LEVER, 0.50 GPM AREATOR	1-1/2"	1-1/2"	1/2"	1/2"	LAV: ZURN # Z5344 LF-1 FAUCET: ZURN # Z81000-XL-3M (0.5 GPM AERATOR) GRID DRAIN W/ OFFSET, P-TRAP & ADA COMPLIANT PROTECTORS: ZURN # Z8996-3-PC SUPPLIES & STOPS: MCGUIRE # 175LK (LOOSE KEY)	INSTALL PER ICC A117.1-2009 REQUIREMENTS
SK-1	SINGLE BOWL SINK, ACCESSIBLE	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY - GOURMET SINK # LR3122PD W/ 4 FAUCET HOLES FS-1-FAUCET: ZURN # Z82300-XL-CP8-17M-HS WITH 1.5 GPM AERATOR, COUNTER MOUNT, STAINLESS STEEL SINK, 31"x22", 7-5/8" DEEP; SWING SPOUT FAUCET WITH ADA LEVER HANDLE; WITH HOSE AND SPRAY P-TRAP: MCGUIRE # 8904 1-1/2" x 2" SUPPLIES & STOPS: MCGUIRE # 175LK (LOOSE KEY)	PROVIDE PROTECTOR KIT FOR PIPING WITHIN CABINET'S REMOVABLE TOE KICK: TRUEBRO "LAV-GUARD" OR APPROVED EQUAL. INSTALL PER ADA REQUIREMENTS
MR-1	MOP RECEPTOR	3"	2"	3/4"	3/4"	FIAT / TSB-3003-MSG, FIAT / 830-AA, FIAT / 832-AA, FIAT / 833-AA FLUSH TO WALL, FLOOR MOUNTING, MOLDED TERRAZZO BASIN 36"x24", 12" HIGH. WALL MOUNT FAUCET W/PAIL HOOK & WALL BRACE 30" LONG HOSE, HOSE BRACKET, MOP HANGER	
SH-1	SHOWER - ONE PIECE ACCESSIBLE	2"	2"	1/2"	1/2"	AQUATIC SHOWER # 1363BFSC-ADA, 36"x36"x75", CENTER DRAIN, WITH ADA L-SHAPED GRAB BAR, ADA L-SHAPED FOLD-UP SEAT, PRESSURE BALANCING MIXING VALVE, ADA HAND-HELD SHOWER ASSEMBLY, REMOVABLE THRESHOLD	INSTALL PER ICC A117.1-2009 REQUIREMENTS
EWC-1	WATER COOLER, A.D.A. COMPLIANT DUAL UNIT (HI/LO TYPE) WALL MOUNTED, STANDARD FINISH	11/2"	11/2"	1/2"	-	FIXTURE: ELKAY # EZTLR8C, 8.0 GPH, 4.0 FLA, 370 W P-TRAP: MCGUIRE # 8902 11/4" x 1 1/2" SUPPLY & STOP: MCGUIRE # 175LK (LOOSE KEY)	INSTALL PER ICC A117.1-2009 REQUIREMENTS. PROVIDE FLEXIBLE BUBBLER GUARDS.
NFHB-1	NON-FREEZE HOSE BIBB	-	-	3/4"	-	JOSAM # 71300 KEY OPERATED, NON-FREEZE, CONCEALED OUTLET, FLUSH MOUNTING BOX WITH COVER, WALL CLAMP, INTEGRAL VACUUM BREAKER W/HOSE CONNECTION	
TP-1	TRAP SEAL PRIMER	-	-	1/2"	-	MIFAB # MR-500 PRESSURE DROP ACTIVATED TRAP SEAL PRIMER, 1/2" INLET/OUTLET, PRIMES UP TO 6 DRAINS. PROVIDE MI-GAP AIR GAP FITTING.	
BFP-1	BACKFLOW PREVENTER ASSEMBLY	-	-	1-1/2"	-	DOUBLE CHECK VALVE ASSEMBLY, CAST COPPER SILICON ALLOY BODY, THREADED ENDS, WITH STRAINER, ASSE 1015 CERTIFIED.	WATTS # LF007
IMB-1	ICE MAKER BOX W/ BACKFLOW PREVENTER	-	-	1/2"	-	SIOUX CHIEF ICE MAKER OUTLET BOX, SINGLE CW SUPPLY VALVE, MINI-RESTER WATER HAMMER ARRESTER. PROVIDE DUAL CHECK VALVE (BFP) AS PER ASSE 1035.	SIOUX CHIEF ICE MAKER OUTLET BOX # 696-1010MF; WATTS BACKFLOW PREVENTER #LFNLF9
TMV-1	THERMOSTATIC MIXING VALVE POINT-OF-USE	-	-	1/2"	1/2"	BRADLEY #S59-4008, MIN. FLOW 0.5 GPM, 1/2" TW OUTLET SET AT 105 DEGREES. LOCATE UNDER SINKS AND LAVATORY AS SHOWN ON DRAWINGS.	ASSE 1017 APPROVED.
TMV-2	THERMOSTATIC MIXING VALVE POINT-OF-USE	-	-	1/2"	1/2"	WATTS #LFMMV-UT-M1, MIN. FLOW 0.5 GPM, 1/2" TW OUTLET SET AT 110 DEGREES. LOCATE ABOVE CEILING FOR SHOWER AS SHOWN ON DRAWINGS.	ASSE 1017, 1069 & 1070 APPROVED.

REMARKS

1. ALL ACCESSIBLE EQUIPMENT/FIXTURES TO BE INSTALLED PER NC ACCESSIBILITY CODE ICC A117.1-2009.
2. ALL FIXTURES SHALL BE WHITE.
3. SIZED PER PLAN.

GENERAL PLUMBING EQUIPMENT & FIXTURE COMMENT

A. PLUMBING CONTRACTOR SHALL PROVIDE ALL RISERS, CARRIERS, P-TRAPS, STOPS, STRAINERS, TAIL PIECES, DRAINS, ETC. REQUIRED TO HAVE A COMPLETE INSTALLATION.

DRAIN SCHEDULE

SYM	DESCRIPTION	MODEL	SPECIFICATION
FD-1	FLOOR DRAIN	JOSAM 30000-A	FLOOR DRAIN WITH CAST IRON BODY, BOTTOM OUTLET, AND TRAP PRIMER CONNECTION, INVERTIBLE FLASHING COLLAR, CLAMP RING, FLANGE, AND ADJUSTABLE COLLAR WITH POLISHED NIKALOY ADJUSTABLE ROUND SUPER-FLO STRAINER.
FD-2	FLOOR DRAIN	JOSAM 32300-81	FLOOR DRAIN WITH CAST IRON BODY, BOTTOM OUTLET, AND TRAP PRIMER CONNECTION, INVERTIBLE FLASHING COLLAR, MEDIUM SUMP, CLAMP RING, FLANGE, REMOVABLE SEDIMENT BUCKET WITH SATIN FINISH NIKALOY TOP ADJUSTABLE ROUND SUPER-FLO STRAINER.
FCO	FLOOR CLEANOUT	ZURN ZN-1400	ADJUSTABLE, CAST IRON BODY, POLISHED NICKEL BRONZE TOP, GAS/WATER TIGHT BRASS PLUG
WCO	WALL CLEANOUT TEE	ZURN ZN-1447	CAST IRON BODY, STAINLESS STEEL SQUARE WALL ACCESS COVER, GAS/WATER TIGHT

NOTE:
1. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ORDERING THE CORRECT OUTLET TYPE AND SIZE FOR EACH SPECIFIC SITUATION AND SHALL PROVIDE FOR INDIRECT WASTE CONNECTIONS AS REQUIRED
2. ALL FLOOR DRAINS ARE SPECIFIED WITH REMOVABLE STRAINERS / GRATES.

DOMESTIC WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	ELECT.	TOTAL kW INPUT	ELEMENT QTY.	kW PER ELEMENT	GALS STORAGE	GPH @ 100° F TEMP. RISE	WATER CONNECTION	REMARKS
DWH-1	BRADFORD WHITE	LD-40S3-3	208V/1PH	9	2	4.5	40	36	3/4"	1,2

REMARKS:

1. PROVIDE CONCRETE HOUSEKEEPING PAD.
2. PROVIDE HEATER CONVERSION FOR SIMULTANEOUS ELEMENT OPERATION.

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODES.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING AND COMMENCEMENT OF ALL NEW WORK.

3. ALL PIPING AND CONDUIT PENETRATIONS THRU FIRE RATED WALLS OR FLOORS SHALL BE PROVIDED WITH UL FIRE/SMOKE STOPPING.

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PATCH AND FINISH ALL PIPE PENETRATIONS AND TRENCHING THROUGH FLOORS AND WALLS. ALL NEW PENETRATIONS AND TRENCHING SHALL BE PROVIDED FOR INSTALLATION OF PLUMBING SYSTEMS INCLUDING, BUT NOT LIMITED TO EQUIPMENT, PIPING, ETC.

5. SEISMIC DESIGN CRITERIA FOR NON-STRUCTURAL COMPONENTS:
   - A. SEISMIC DESIGN CATEGORY: C
   - B. BUILDING OCCUPANCY CATEGORY: II
   - C. MECHANICAL COMPONENT IMPORTANCE FACTOR (IP) = 1.0
   - D. SEISMIC DESIGN REQUIREMENTS APPLICABILITY FOR PROJECT: NOT REQUIRED

6. REFER TO SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS FOR ALL SCHEDULED EQUIPMENT.

PIPING LEGEND

XX	PIPING
— — — XX — — —	PIPING BELOW GRADE
CW	COLD WATER
CW (E)	COLD WATER EXISTING
HW	HOT WATER
HW (E)	HOT WATER EXISTING
HWR	HOT WATER RECIRCULATING
HWR (E)	HOT WATER RECIRCULATING EXISTING
SAN	SANITARY
SAN U/G	SANITARY UNDERGROUND
SAN (E)	SANITARY EXISTING
SAN U/G (E)	SANITARY UNDERGROUND EXISTING
ST	STORM
ST (E)	STORM EXISTING
ST2	STORM SECONDARY
ST2 (E)	STORM SECONDARY EXISTING
CA	COMPRESSOR AIR

FIXTURES & FITTINGS LEGEND

	TEE OUTLET - UP
	TEE OUTLET - DOWN
	CONNECTION - BOTTOM
	CONNECTION - TOP
	ELBOW - TURNED UP
	ELBOW - TURNED DOWN
	PIPE CAP
	UNION
	FLANGE
	BALL VALVE
M	BALL VALVE WITH MEMORY STOP
	BALANCING VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	CONTROL VALVE, PNEUMATIC 2-WAY
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
P	PRESSURE RELIEF VALVE
TP	TEMPERATURE-PRESSURE RELIEF VALVE
	PRESSURE REDUCING VALVE
	COMBINATION VALVE (ISOLATION, CHECK, BALANCING)
M	MOTOR OPERATED VALVE
S	SOLENOID OPERATED VALVE
G	GAS PRESSURE REGULATOR
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
ACW	AUTOMATIC CLOTHES WASHER
CO	CLEAN OUT
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
HB	HOSE BIBB
NFHB	NON FREEZE HOSE BIBB
NFWH	NON FREEZE WALL HYDRANT
YH	YARD HYDRANT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FS	FLOOR SINK
RD	ROOF DRAIN
	PIPE GUIDE
	PIPE ANCHOR
	FLEXIBLE PIPE CONNECTOR
	EXPANSION JOINT
FS	FLOW SWITCH
PS	PRESSURE SWITCH
AQ	AQUASTAT
	PRESSURE GAUGE
	THERMOMETER
	STRAINER
	STRAINER WITH BLOWOFF
V	VACUUM BREAKER
	INLINE PUMP
A	WATER HAMMER ARRESTER
RPZ	REDUCED PRESSURE ZONE BACK FLOW PREVENTER
DC	DOUBLE CHECK VALVE ASSEMBLY
	SHOWER HEAD
P	POINT OF CONNECTION
R	POINT OF REMOVAL

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com

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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. KYER
2/19/16
P. 13283

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE: As indicated

SHEET TITLE: PLUMBING SCHEDULES, LEGEND AND GENERAL NOTES

PROJECT NUMBER: 13283.00

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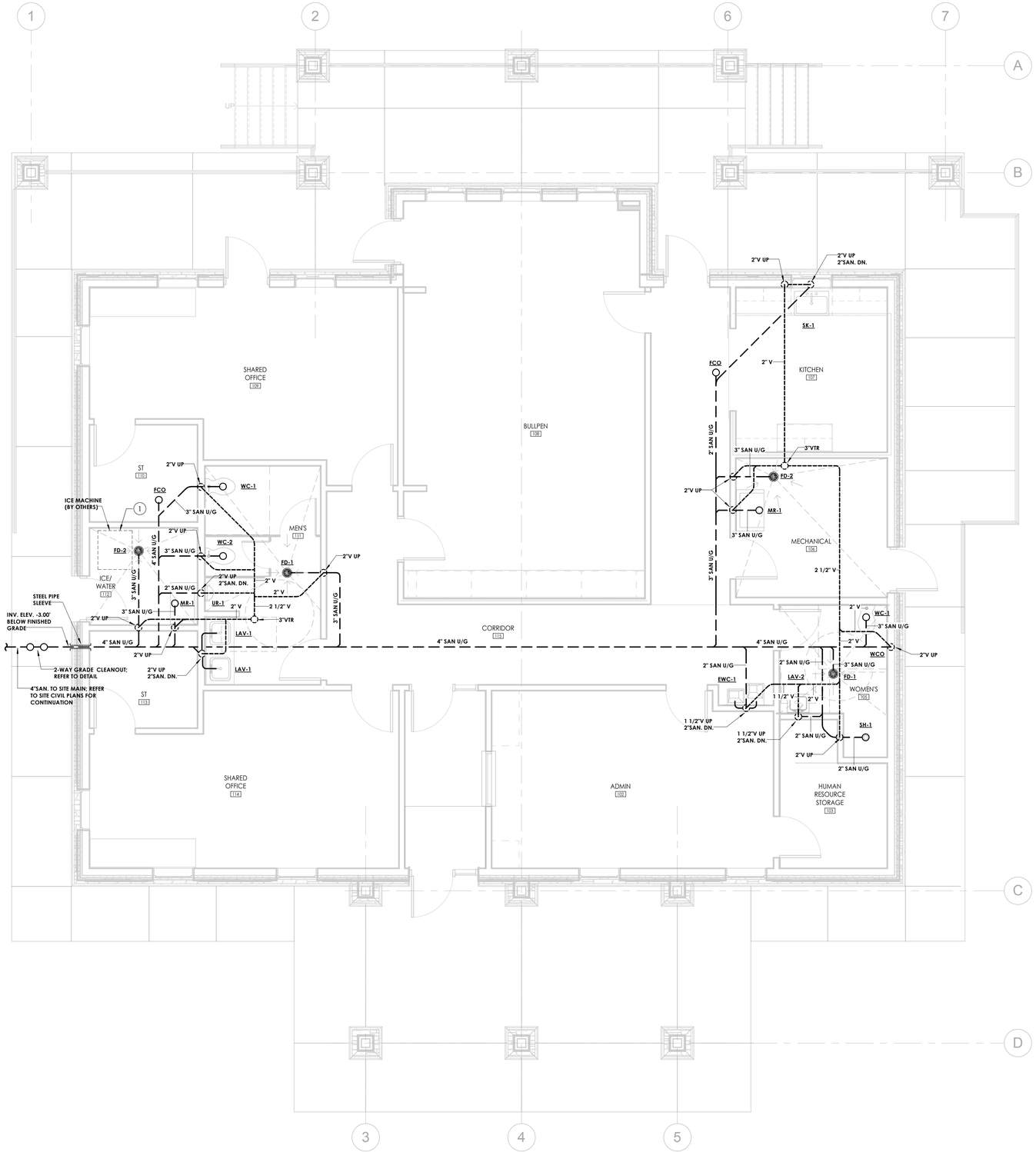

GENERAL NOTES:

1. VENT PIPING TO BE ROUTED CONCEALED IN CEILING CAVITY BELOW THERMAL INSULATION.

PLAN NOTES:

1. PROVIDE ALL NECESSARY DRAIN PIPING FOR CONNECTION TO OWNER-FURNISHED ICE MACHINE. EXTEND TO ADJACENT FLOOR DRAIN AND TERMINATE WITH AN INDIRECT WASTE CONNECTION WITH AIR GAP.

1 P200 **PLUMBING SANITARY PLAN**
1/4" = 1'-0"

0' 2' 4' 8' 16'

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GRAHAM COUNTY
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NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. KYLER
2/19/16
P. 13283

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE: As indicated

SHEET TITLE: PLUMBING SANITARY PLAN

PROJECT NUMBER: 13283.00

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DRAWING NUMBER

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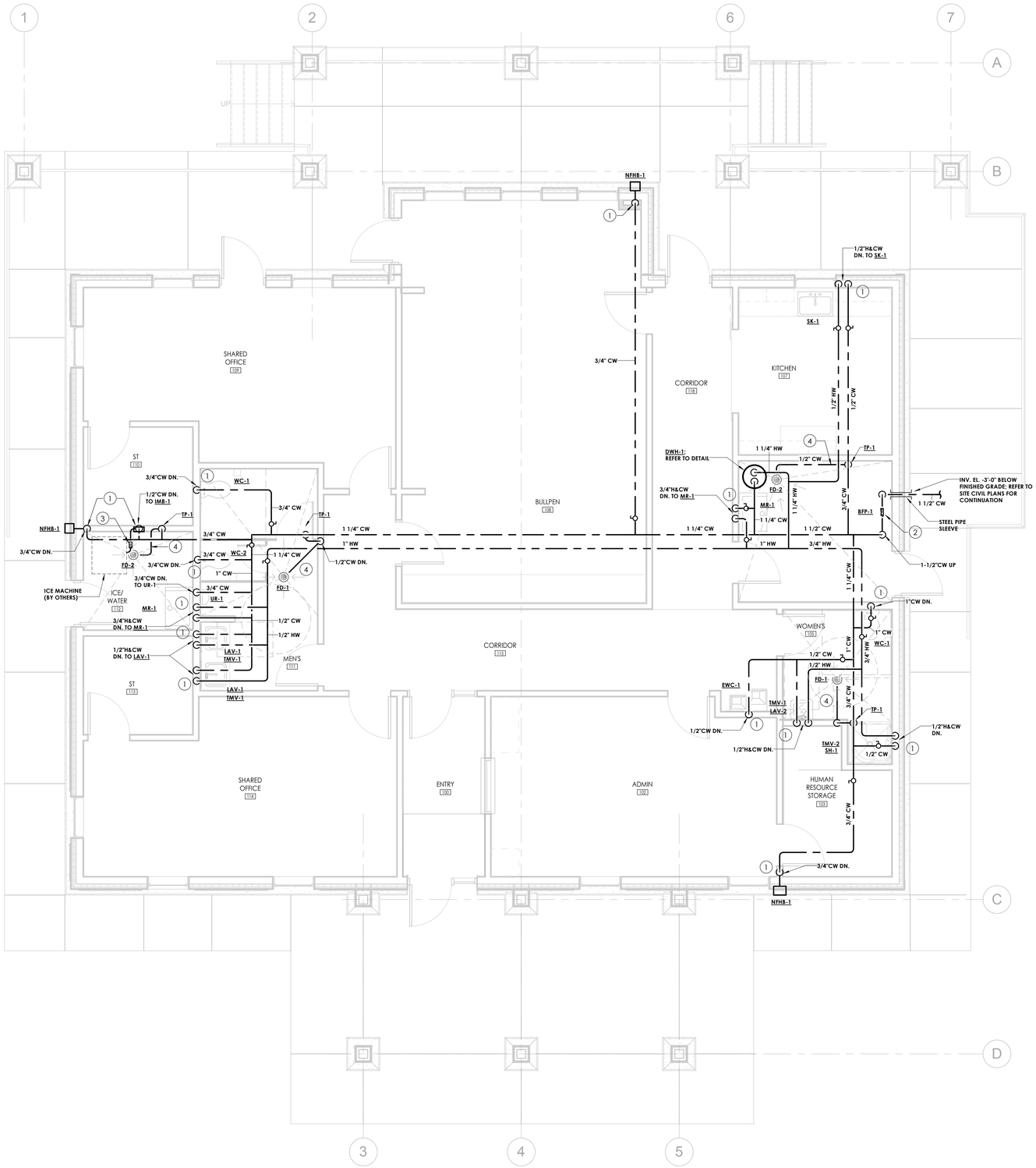
GENERAL NOTES:

1. DOMESTIC WATER PIPING TO BE ROUTED CONCEALED IN CEILING CAVITY BELOW THERMAL INSULATION.

PLAN NOTES:

1. ROUTE PIPING CONCEALED UP/DOWN IN WALL/CHASE. PROVIDE COMPLETE CONNECTION TO PLUMBING FIXTURE.
2. PROVIDE DOUBLE CHECK VALVE BACKFLOW ASSEMBLY. REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE INLINE BACKFLOW PREVENTER AND FINAL CONNECTION TO OWNER-FURNISHED ICE MACHINE. REFER TO PLUMBING EQUIPMENT SCHEDULE FOR BACKFLOW PREVENTER REQUIREMENTS.
4. ROUTE 1/2"CW FROM TRAP PRIMER DOWN WITHIN WALL AND BELOW FLOOR TO FLOOR DRAIN.



1 P300 **PLUMBING DOMESTIC WATER PLAN**
1/4" = 1'-0"

0' 2' 4' 8' 16'

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
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Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 27581 ENGINEER GREGORY A. KYZER P. 13203
2/19/16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

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02/19/16	AMT	GAK

SCALE: As indicated

SHEET TITLE: PLUMBING DOMESTIC WATER PLAN

PROJECT NUMBER: 13283.00

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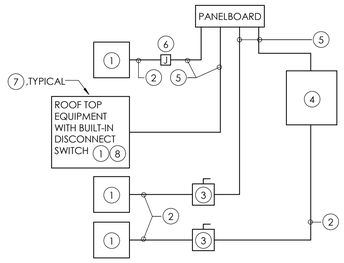
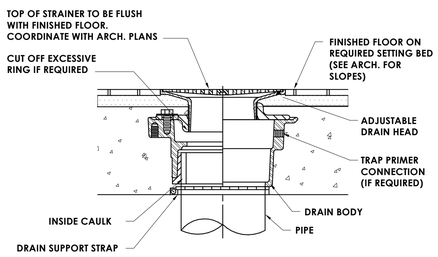


IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND THE OTHER TRADES.

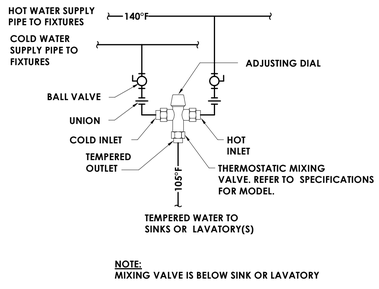
KEY NOTES:

1. EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
2. CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR, OR OTHER TRADES.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY THE NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
5. BRANCH CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD AND MECHANICAL EQUIPMENT CONNECTION SCHEDULES FOR BREAKER AND WIRE SIZES.
6. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
8. IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT-IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

10 P800 PLUMBING/ELECTRICAL EQUIPMENT CONNECTION COORDINATION DETAIL

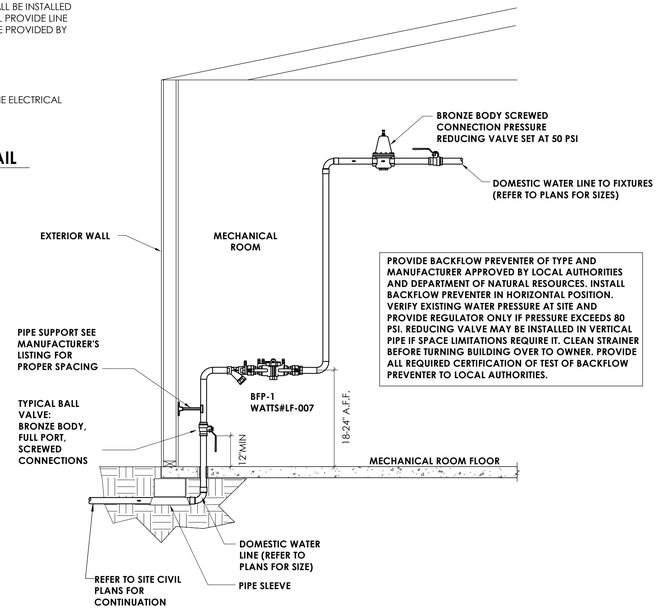


8 P800 FLOOR DRAIN DETAIL

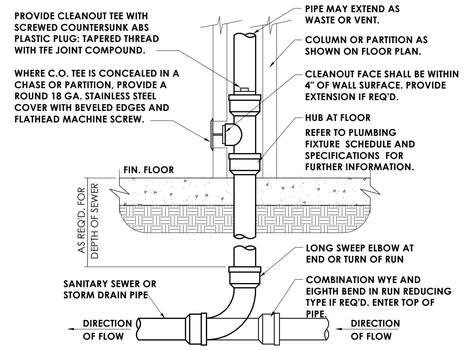


NOTE:
MIXING VALVE IS BELOW SINK OR LAVATORY

7 P800 THERMOSTATIC MIXING VALVE DETAIL

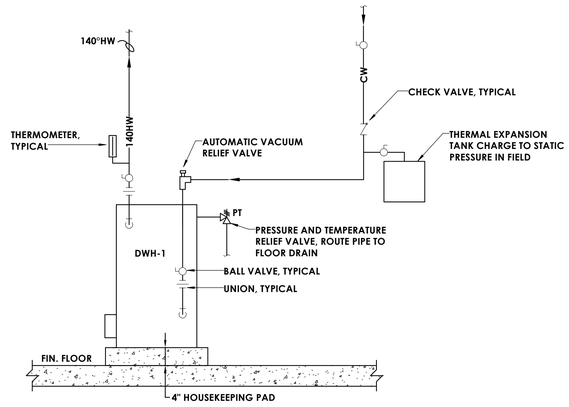


6 P800 BACKFLOW PREVENTER DETAIL



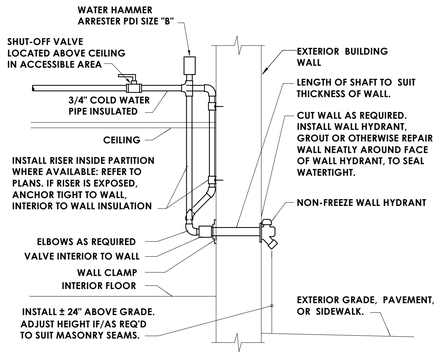
PROVIDE WCO WHERE SHOWN ON PLAN, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT. LOCATE ABOVE FIXTURE FLOOD RIM WITHIN 4' OF FLOOR. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

9 P800 WALL CLEAN OUT DETAIL

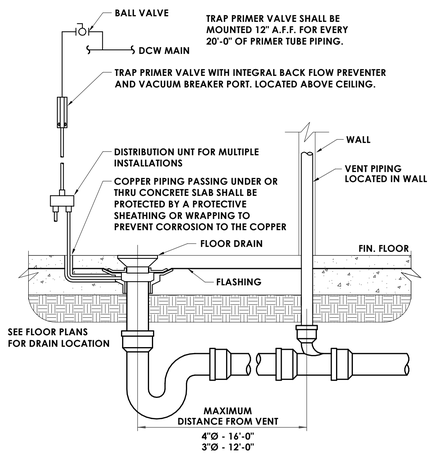


NOTE: PROVIDE HEATER WITH INTEGRAL HEAT TRAPS. WHERE WATER HEATER IS NOT SUPPLIED WITH INTEGRAL HEAT TRAPS, PROVIDE EXTERNAL HEAT TRAP FITTINGS ON THE SUPPLY AND DISCHARGE PIPING AND INSTALL IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

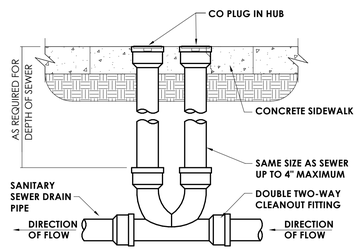
5 P800 DOMESTIC WATER HEATER SCHEMATIC



4 P800 NON-FREEZE WALL HYDRANT DETAIL

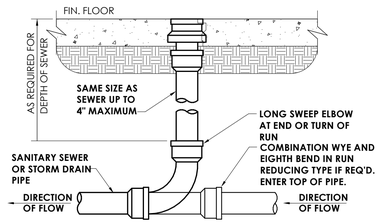


3 P800 FLOOR DRAIN VENT & TRAP PRIMER DETAIL



LOCATE GRADE CLEANOUT OUTSIDE OF BUILDING AS SHOWN ON PLANS

2 P800 2-WAY GRADE CLEANOUT DETAIL



ROUND SECURED GASKETED NICKEL BRONZE ADJUSTABLE TOP WITH "CO" CAST IN COVER. PROVIDE CLEANOUT TOP (HEAVY DUTY GRATE) WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS). PROVIDE GASKETED PLASTIC PLUG IN CAST IRON BODY. USE TEFLON JOINT COMPOUND ON PLUG THREADS. CLEAN THE TOP OF EXPOSED FCO AFTER INSTALLATION. LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. PROVIDE BACKFILL PER ARCH. SPECIFICATIONS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND. CONSULT LOCAL CODES FOR OTHER REQUIREMENTS.

1 P800 FLOOR CLEANOUT DETAIL

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com

N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 27581 GREGORY A. KYER 2/19/16 P. 13283

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	AMT	GAK

SCALE NOT TO SCALE

SHEET TITLE
PLUMBING DETAILS

PROJECT NUMBER
13283.00

P800
DRAWING NUMBER

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GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO OBSERVE THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO OWNER PRIOR TO DISCONNECTING EXISTING UTILITIES.
3. VERIFY ALL ELECTRICAL REQUIREMENTS FOR EQUIPMENT WITH MANUFACTURER AND OTHER TRADES PRIOR TO ROUGH-IN OF ELECTRICAL. REFER TO PLUMBING AND HVAC DRAWINGS FOR EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. COORDINATE EXACT LOCATION OF DEVICE OR JUNCTION BOX ROUGH-IN WITH ARCHITECTURAL ELEVATIONS OR OTHER TRADES.
4. ALL CONDUITS FOR LOW VOLTAGE COMMUNICATION CABLES SHALL EXTEND FROM BACK BOX TO ABOVE ACCESSIBLE CEILING IN NEAREST CORRIDOR. PROVIDE CONDUIT SLEEVES IN EXISTING STRUCTURE FOR ACCESS BACK TO CENTRAL EQUIPMENT LOCATION. COORDINATE PATH WITH INSTALLERS PRIOR TO ROUGH-IN.
5. CONDUIT ROUTINGS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC ONLY, THE CONTRACTOR SHALL VERIFY ALL ROUTES AND LOCATIONS WITH THE OWNER AND ARCHITECTS PRIOR TO ROUGH-IN.
6. THE CONTRACTOR SHALL VERIFY ALL LIGHT FIXTURE VOLTAGES AND LENGTHS WITH THE DRAWINGS AND SPECIFICATIONS.
7. CONTRACTOR SHALL PROVIDE SUITABLE TRIM AND APPURTENANCES TO MOUNT LIGHTING FIXTURES IN THE TYPE OF CEILING OR WALL AS SPECIFIED IN THE ARCHITECTURAL FINISH SCHEDULES REGARDLESS OF CATALOG NUMBER GIVEN. VERIFY BY REVIEWING ARCH. FINISH SCHEUDLES PRIOR TO ORDERING FIXTURES.
8. ALL LIGHTING FIXTURES INSTALLED UNDER THIS PROJECT SHALL BE INSTALLED TO MEET THE REQUIREMENTS OF ASTM C636, NOT LIMITED TO BUT INCLUDING WIRE SIZE, METHOD OF ATTACHMENT AND VERTICAL ALIGNMENT. EXISTING LIGHTING FIXTURES WITHIN THE LIMITS OF THIS CONSTRUCTION SHALL BE CORRECTED TO MEET THIS REQUIREMENT. AS A RESULT ALL LIGHTING FIXTURES NEW AND EXISTING WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C636.
9. REFER TO ARCHITECTURAL DRAWINGS FOR DESCRIPTION OF PHASING FOR THIS PROJECT. COORDINATE THE INSTALLATION OF THE ELECTRICAL WORK TO COINCIDE WITH THE DESCRIPTION OF PHASING.
10. ELECTRICAL OPERATING AND MAINTENANCE MANUAL SHALL INCLUDE THE MANUFACTURERS STANDARD MATERIALS (MANUALS OR WRITTEN DIRECTIONS) FOR OPERATION AND MAINTENANCE OF THE ELECTRICAL EQUIPMENT ON THE PROJECT. THE O&M MANUALS SHALL ALSO INCLUDE A COPY OF THE APPROVED SHOP DRAWINGS INCLUDING WIRING DIAGRAMS SPECIFIC FOR THIS PROJECT AND COPIES OF ALL CERTIFICATIONS OF INSTALLATION SUCH AS FOR FIRE ALARM, GENERATOR SYSTEMS, ETC. METHOD OF ASSEMBLY OF THE MANUAL SHALL FOLLOW SPECIFICATIONS SECTION 'CLOSEOUT SUBMITTALS'.
11. FEEDER AND BRANCH CIRCUITS SHOWN ARE BASED ON 'EMT' CONDUIT AND THREE CURRENT CARRYING CONDUCTORS BASED ON 75 DEGREES CELSIUS INSULATION. ELECTRICAL CONTRACTOR SHALL ADJUST CONDUIT SIZE IF OTHER THAN 'EMT' CONDUIT IS USED. ELECTRICAL CONTRACTOR SHALL ADJUST WIRE SIZE FOR TERMINATIONS AND/OR EQUIPMENT THAT HAVE A LOWER TEMPERATURE RATING THAN 75 DEGREES CELSIUS. ELECTRICAL CONTRACTOR SHALL ADJUST WIRE SIZE FOR INSTALLATION IN SPACES WITH AN AMBIENT TEMPERATURE HIGHER THAN 30 DEGREES CELSIUS OR EXPOSED TO THE ELEMENTS SUCH AS ROOF TOPS. COORDINATE WITH THE EQUIPMENT INSTALLER TO DETERMINE THE TEMPERATURE RATING OF THE EQUIPMENT AND THE TERMINATION LUGS. BASE WIRE SIZE ON THE MORE STRINGENT TEMPERATURE RATING.

GENERAL ELECTRICAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70).
2. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND COORDINATE WITH EXISTING EQUIPMENT PRIOR TO BIDDING.
3. INSTALLATION HEIGHT TO CENTER OF EQUIPMENT ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED SHALL BE AS FOLLOWS (COMPLY WITH ICC-A 117.1-2009):
   - RECEPTACLE = 18"
   - CLOCK = 7'-6"
   - SWITCH = 44"
   - MODULAR JACK FOR WALL MOUNTED TELEPHONE = 52"
   - MODULAR TELEPHONE JACK = 18"
   - AUDIO/VISUAL FIRE ALARM INDICATORS = 80"
   - FIRE ALARM PULL STATIONS = 44"
   - TELEVISION OUTLET = 7'-0"
   - COMPUTER OUTLET = 18"
   - CALL SWITCH = 44"
   - REMOTE TEST STATION FOR DUCT DETECTOR = 52"
   - C = ABOVE COUNTER BACKSPLASH, COORDINATE WITH MILLWORK
4. ALL CONDUIT AND WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE NOTED OR APPROVED BY THE ARCHITECT/ENGINEER. ALL DEVICE OUTLET BOXES SHALL BE RECESSED UNLESS OTHERWISE NOTED OR APPROVED BY THE ARCHITECT/ENGINEER.
5. ALL CONDUIT ROUTES SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY FINAL ROUTE.
6. CONDUIT RUNS SHOWN ARE SCHEMATIC AND DO NOT INDICATE THE NECESSARY FITTINGS AND JUNCTION BOXES THAT ARE INCLUDED IN THE SCOPE OF THE WORK.

GROUNDING:

7. ALL METAL RACEWAYS, INCLUDING CONDUIT, WIRE TROUGHS, WIREMOLD, ETC., SHALL BE GROUNDED. ALL CONNECTIONS IN METAL RACEWAYS SHALL BE COMPLETED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUS PATH TO GROUND THROUGHOUT THE ENTIRE LENGTH OF THE RACEWAY.

WIRING:

8. UNLESS NOTED OTHERWISE ON THE DRAWINGS OR ON THE EQUIPMENT WIRING SCHEDULE, EACH BRANCH CIRCUIT SHALL BE 2# 12, 1#12G; 3/4"CONDUIT. COMBINED NEUTRALS ARE NOT PERMITTED. PROVIDE #10 AWG FOR 120V BRANCH CIRCUITS LONGER THAN 100 FEET; INCREASE CONDUIT SIZE AS REQUIRED.

LIGHT FIXTURE LEGEND:

- XX — LIGHTING FIXTURE (SEE LIGHTING FIXTURE SCHEDULE FOR LETTER DESIGNATION AND DESCRIPTION OF FIXTURES)
- EMERGENCY AND/OR NIGHT LIGHT LIGHTING FIXTURE
- EXIT LIGHTING FIXTURE UNIVERSAL MOUNT, SINGLE/DOUBLE FACE (WHERE USED, ARROW INDICATES CHEVRON DIRECTION)
- PP — POWER PACK
- OS — OCCUPANCY SENSOR - CEILING MOUNTED, DUAL TECHNOLOGY TYPE
- LC — LIGHTING CONTACTOR
- S_O — WALL SWITCH OCCUPANCY SENSOR, DUAL TECHNOLOGY TYPE
- S_D — WALL DIMMER, 0-10V LED, DIMMER TO BE COMPATIBLE WITH LED DRIVERS SUPPLIED
- S_{D3} — WALL DIMMER, 0-10V LED, THREE-WAY, DIMMER TO BE COMPATIBLE WITH LED DRIVERS SUPPLIED
- PC — PHOTOCONTROL SWITCH

WIRING LEGEND:

- S_* — SWITCH
  - (NONE) SINGLE POLE TOGGLE SWITCH
  - 3 THREE WAY TOGGLE SWITCH
  - 4 FOUR WAY TOGGLE SWITCH
- S_a — LOWER CASE LETTER DESIGNATES SWITCH LEG
- $*_*$ — DUPLEX RECEPTACLE
- $*_*$ — QUADRAPLEX RECEPTACLE
  - GFI GROUND FAULT CIRCUIT INTERRUPTER
  - WP WEATHER PROOF IN-USE COVER
  - C COUNTER HEIGHT
  - TR TAMPER RESISTANT, UL LISTED
  - P PROJECTOR OUTLET (84" AFF UNO)
  - WR WATER RESISTANT
- RANGE RECEPTACLE, NEMA 14-15R
- RECESSED FLOOR MOUNTED DUPLEX RECEPTACLE
- CEILING MOUNTED DUPLEX RECEPTACLE
- J — JUNCTION BOX
- DISCONNECT SWITCH
  - FWE FURNISHED WITH EQUIPMENT
- F — FUSED DISCONNECT SWITCH
- MANUAL MOTOR STARTING SWITCH
- ADA FAN/LIGHT SWITCH FOR RANGE HOOD
- EF-1 — MOTOR WITH DESIGNATOR
- DWH — WATER HEATER
- BRANCH CIRCUIT HOME RUN WITH CIRCUIT NUMBER, INDICATED ALL BRANCH CIRCUITS TO MDP.
- GROUNDING ROD
- T — THERMOSTAT, LINE VOLTAGE, REVERSE ACTING
- T — TIME SWITCH, 2-CHANNEL

SECURITY LEGEND:

UNLESS NOTED OTHERWISE ON DRAWINGS, FOR EACH SECURITY DEVICE BELOW, PROVIDE TWO-GANG BOX WITH SINGLE-GANG MUDRING, WITH 3/4" CONDUIT WITH PULL STRING STUBBED TO 12" ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE NYLON BUSHING ON CONDUIT END.

- CR — CARD READER BY OWNER. PROVIDE WALL BOX WITH 3/4"C STUBBED ABOVE DOOR FOR INSTALLATION BY OTHERS.
- R — DOOR LOCK RELEASE PUSHBUTTON
- ES — DOOR ELECTRIC STRIKE
- D — MAGNETIC DOOR POSITION SWITCH
- H — HANDICAP DOOR OPERATOR

COMMUNICATIONS LEGEND:

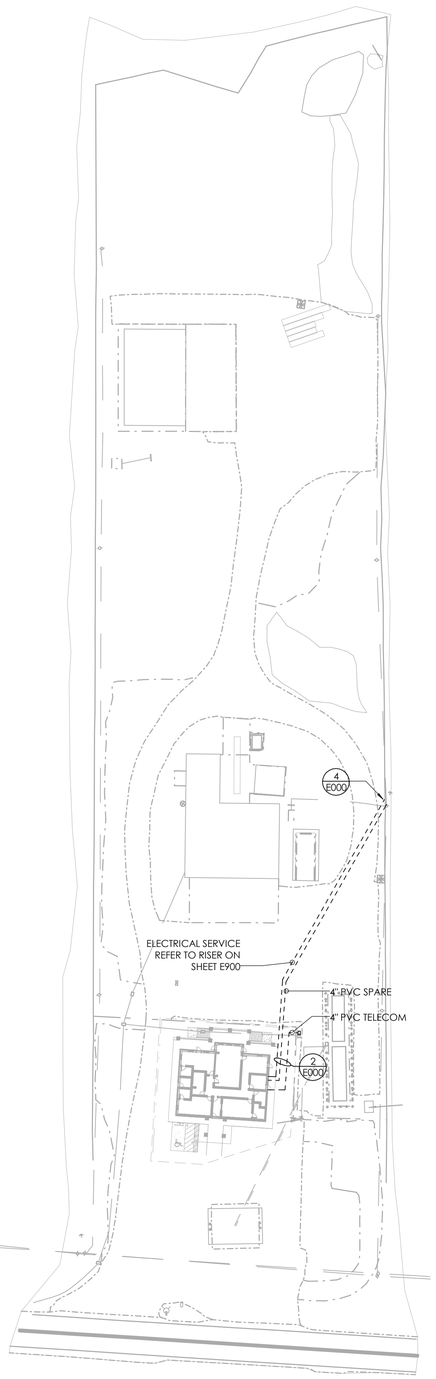
UNLESS NOTED OTHERWISE ON DRAWINGS, FOR EACH COMMUNICATIONS OUTLET BELOW, PROVIDE TWO-GANG BOX WITH SINGLE-GANG MUDRING, WITH 3/4" CONDUIT WITH PULL STRING STUBBED TO 12" ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE NYLON BUSHING ON CONDUIT END.

- DATA FLOOR OUTLET: (2) CAT6 CABLES IN SPECIFIED COMBINATION DATA/POWER FLOOR BOX
- TWO DATA OUTLETS IN DOUBLE GANG FLUSH MOUNTED BOX WITH FACEPLATE
  - C COUNTER HEIGHT MODULAR JACK
- TV — TELEVISION OUTLET
- CEILING MOUNTED - TWO DATA OUTLETS IN DOUBLE GANG FLUSH MOUNTED BOX WITH FACEPLATE

PANEL LEGEND:

- ELECTRICAL PANEL

NOTE:
SYMBOLS SHOWN ON THIS ELECTRICAL SYMBOLS LIST ARE FOR REFERENCE PURPOSES ONLY. ALL OF THESE SYMBOLS MAY NOT BE USED FOR THIS PROJECT.



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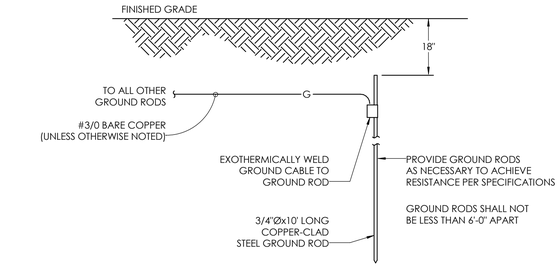
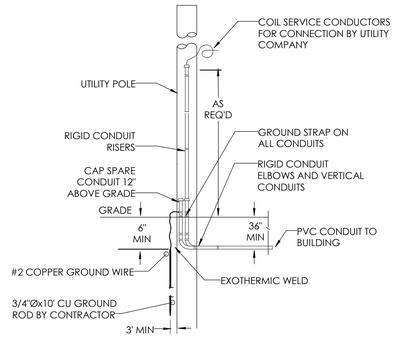
1 E000 **ELECTRICAL SITE PLAN**



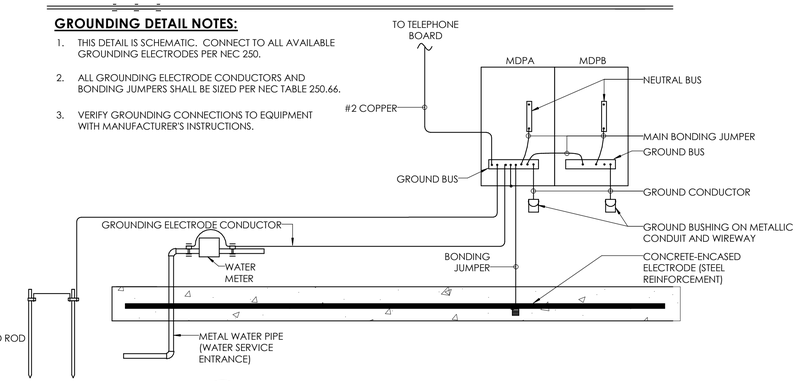
5 E000 **GROUNDING ROD DETAIL**



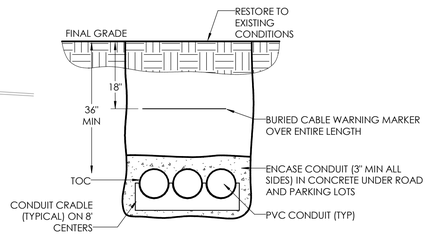
4 E000 **RISER POLE DETAIL**

GROUNDING DETAIL NOTES:

1. THIS DETAIL IS SCHEMATIC. CONNECT TO ALL AVAILABLE GROUNDING ELECTRODES PER NEC 250.
2. ALL GROUNDING ELECTRODE CONDUCTORS AND BONDING JUMPERS SHALL BE SIZED PER NEC TABLE 250.66.
3. VERIFY GROUNDING CONNECTIONS TO EQUIPMENT WITH MANUFACTURER'S INSTRUCTIONS.



3 E000 **SERVICE GROUNDING DETAIL**



2 E000 **CONDUIT TRENCH DETAIL**

SHEET LIST:

E000	ELECTRICAL LEGEND AND SITE PLAN
E200	ELECTRICAL POWER PLAN
E300	ELECTRICAL LIGHTING PLAN
E900	ELECTRICAL SCHEDULES AND RISER DIAGRAM

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 030158 ENGINEER THOMAS G. BUCHER 2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	SP	SLE

SCALE: As indicated

SHEET TITLE: ELECTRICAL LEGEND AND NOTES

PROJECT NUMBER: 13283.00

E000
DRAWING NUMBER

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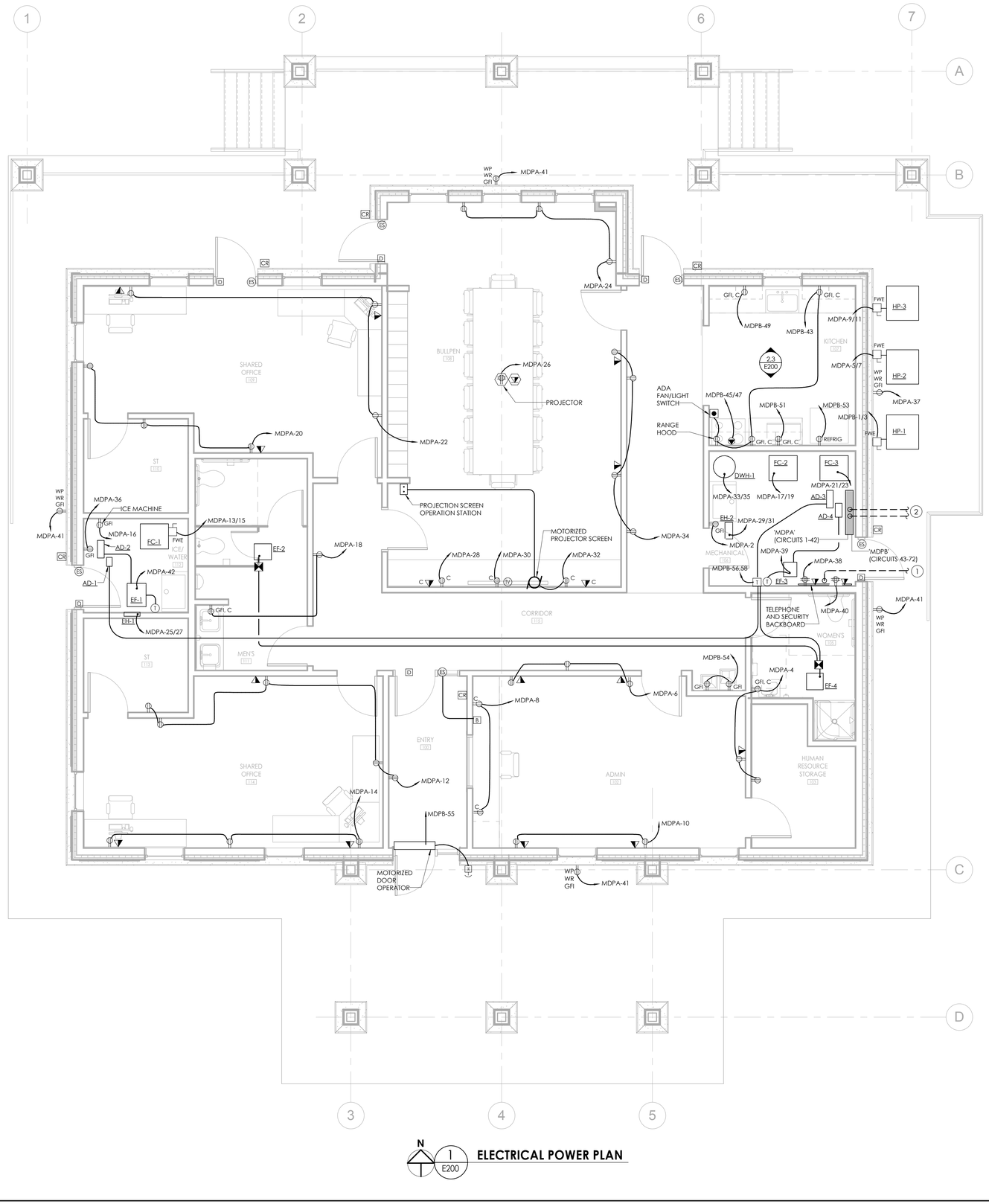

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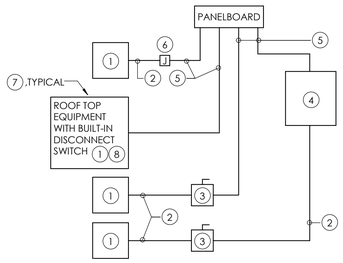
1 E200 **ELECTRICAL POWER PLAN**

PLAN KEY NOTES:

1. ROUTE 4" PVC CONDUIT A MINIMUM OF 36" BELOW GRADE TO NEAREST FIBER OPTIC JUNCTION BOX. CABLE BY OWNER. REFER TO ELECTRICAL SITE PLAN FOR LOCATION. REFER TO CIVIL DRAWING FOR COORDINATION OF UNDERGROUND UTILITIES.
2. ELECTRICAL SERVICE CONDUITS A MINIMUM OF 36" BELOW GRADE TO NEAREST RISER POLE. REFER TO ELECTRICAL SITE PLAN FOR LOCATION. REFER TO CIVIL DRAWING FOR COORDINATION OF UNDERGROUND UTILITIES. REFER TO RISER DIAGRAM SHEET E900 FOR SIZE AND QUALITY. DUKE ENERGY CONTACT: RACHAEL JONES 828-342-0079.

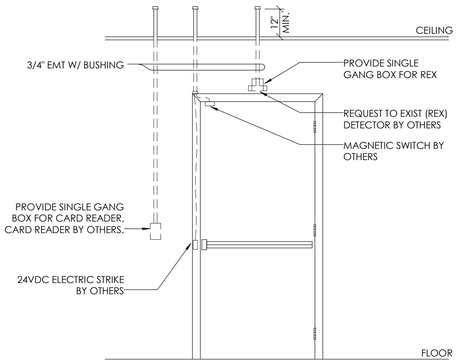


IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND THE OTHER TRADES.

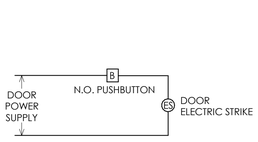
ELECTRICAL EQUIPMENT CONNECTION DETAIL KEY NOTES:

1. EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
2. CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR, OR OTHER TRADES.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY THE NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
5. BRANCH CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD AND MECHANICAL EQUIPMENT CONNECTION SCHEDULES FOR BREAKER AND WIRE SIZES.
6. JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
7. IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
8. IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT-IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

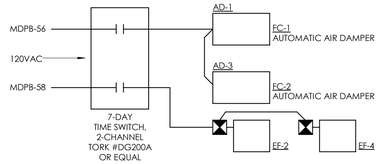
8 E200 **ELECTRICAL EQUIPMENT CONNECTION DETAIL**



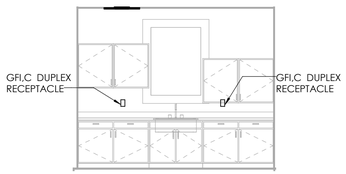
7 E200 **TYPICAL DOOR ACCESS CONTROL SYSTEM INSTALLATION DETAIL**



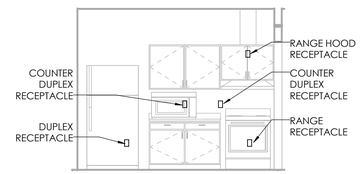
4 E200 **DOOR LOCK RELEASE SCHEMATIC**



6 E200 **CONTROL DIAGRAM**



2 E200 **ENLARGED KITCHEN PLAN - NORTH**



3 E200 **ENLARGED KITCHEN PLAN - SOUTH**

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DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 034552 ENGINEER THOMAS G. BUCHER
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY
BID SET

DATE	DRAWN	CHECKED
02/19/16	SP	SLE

SCALE: As indicated

SHEET TITLE: ELECTRICAL POWER PLAN

PROJECT NUMBER: 13283.00

E200
DRAWING NUMBER

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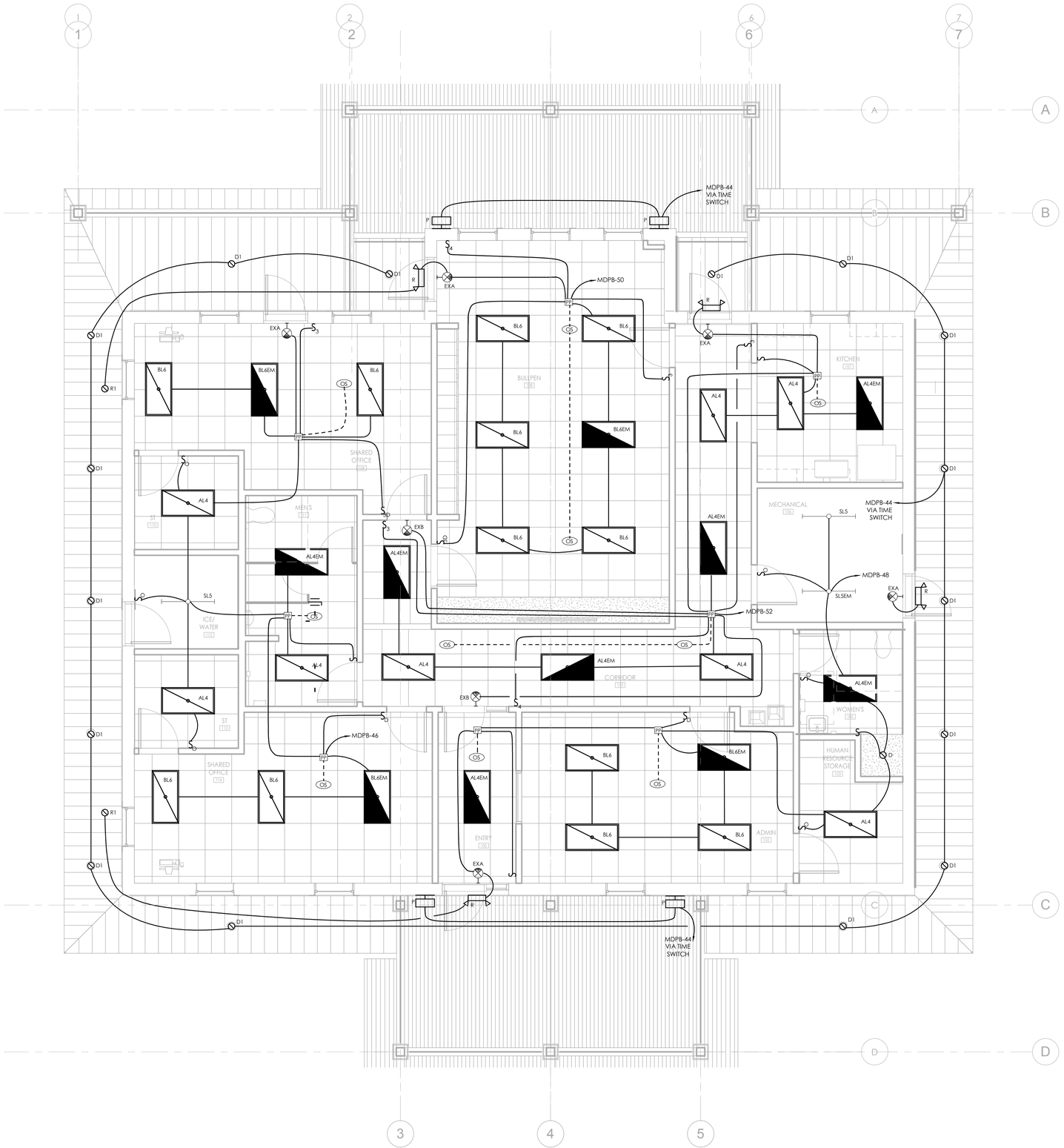


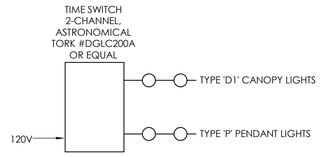
1 E300 ELECTRICAL LIGHTING PLAN

GENERAL LIGHTING NOTES:

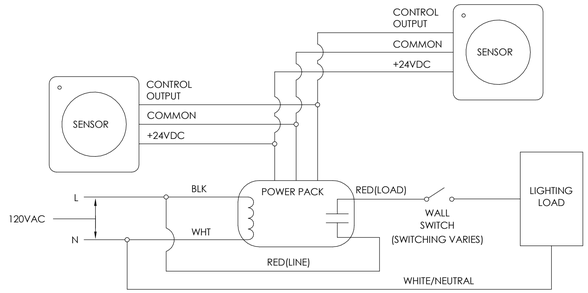
LA. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ELEVATIONS FOR EXACT LIGHTING FIXTURE LOCATIONS.

LB. CONNECT ALL EXIT SIGNS TO CONTINUOUSLY HOT CONDUCTOR OF CIRCUIT INDICATED AHEAD OF ANY SWITCHING OR OTHER CONTROL.

LC. COORDINATE ALL LIGHT SWITCH/CONTROL LOCATIONS WITH DOOR SWINGS PRIOR TO ROUGH-IN. REGARDLESS OF HOW SHOWN ON PLAN, LIGHT SWITCHES IN ROOM CONTROLLING FIXTURES ON EMERGENCY POWER SHALL BE CLOSEST TO DOOR JAMB.

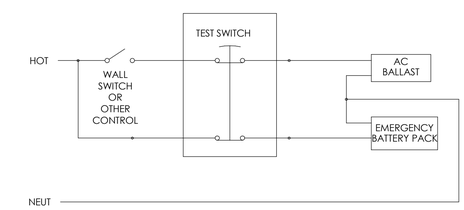


5 E300 OUTDOOR LIGHTING CONTROL SCHEMATIC

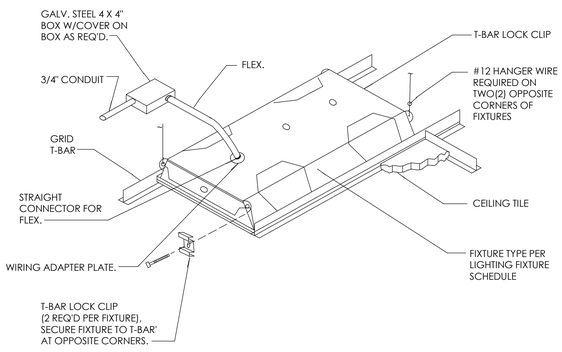


NOTE:
FOR REFERENCE ONLY. REFER TO SPECIFIC MANUFACTURER'S WIRING SCHEMATICS FOR EXACT CONNECTION REQUIREMENTS.

4 E300 LIGHTING CONTROL DIAGRAM



3 E300 SWITCHED EMERGENCY FIXTURE WIRING DETAIL



2 E300 TYPICAL RECESSED FLUORESCENT FIXTURE MOUNTING

CLARK PATTERSON LEE
DESIGN PROFESSIONALS
10 Brook Street, Suite 235-E
Asheville, North Carolina 28803
Tel: (800) 274-9000
Fax: (838) 274-6674
www.clarkpatterson.com
N.C. Engineering Firm License No.: C-2194

Revision Schedule

NO.	DATE	BY	CHKD	DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 034252 ENGINEER THOMAS G. BUCHER
2-19-16

NCDOT - DIVISION 14
ASSEMBLY OFFICE BUILDING
SCO # 14-11007-01 Package B
GRAHAM COUNTY

BID SET

DATE	DRAWN	CHECKED
02/19/16	SP	SLE

SCALE As indicated

SHEET TITLE
ELECTRICAL LIGHTING PLAN

PROJECT NUMBER
13283.00

E300
DRAWING NUMBER

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LUMINAIRE SCHEDULE

MARK	DESCRIPTION	BASIS OF DESIGN	MODEL #	ALTERNATE MANUFACTURERS	LED VOLTAGE	LED WATTS	TYPE	MOUNTING	REMARKS
AL4	2'X4' LED TROFFER, 4800 LUMENS, FLUSH ALUMINUM WHITE DOOR, #12 PATTERN 0.125" THICK ACRYLIC LENS, STEEL HOUSING, GRID MOUNT	LITHONIA	2TL4-48L-FW-A12.125-MVOLT-LP835	COOPER, HUBBELL, PHILIPS	120	40	4800 LUMEN /3500K LED	RECESSED	
AL4EM	SAME AS 'AL4' EXCEPT WITH 1400 LUMEN EMERGENCY BATTERY PACK, SELF-DIAGNOSTICS, UL924 LISTED	LITHONIA	2TL4-48L-FW-A12.125-MVOLT-LP835-EL14L	COOPER, HUBBELL, PHILIPS	120	40	4800 LUMEN /3500K LED	RECESSED	
BL6	2'X4' LED VOLUMETRIC TROFFER, 6000 LUMENS, SATIN WHITE LENS, STEEL HOUSING, GRID MOUNT, 0-10V DIM DRIVER	LITHONIA	2FSL4-60L-MVOLT-EZ1-LP835	COOPER, HUBBELL, PHILIPS	120	47	6000 LUMEN /3500K LED	RECESSED	2
BL6EM	AME AS 'BL6' EXCEPT WITH 1400 LUMEN EMERGENCY BATTERY PACK, SELF-DIAGNOSTICS, UL924 LISTED	LITHONIA	2FSL4-60L-MVOLT-EZ1-LP835-EL14L	COOPER, HUBBELL, PHILIPS	120	47	6000 LUMEN /3500K LED	RECESSED	2
D	3.5" LED RECESSED LENSED SHOWER LIGHT	CONTRAST	LD3C-F-01-35-80-W-1	COOPER, HUBBELL, PHILIPS	120	30	2186 LUMEN/3500K LED	RECESSED	1
D1	3.5" LED DOWNLIGHT, CLEAR LENS, BLACK TRIM	CONTRAST	LD3D-C-02-01-MG-27-80-W-2	COOPER, HUBBELL, PHILIPS	120	30	2186 LUMEN/2700K LED	RECESSED	
EXA	LED EXIT SIGN, HIGH OUTPUT, UNIVERSAL MOUNTING, THERMOPLASTIC WHITE HOUSING, RED LETTERS, NI-CAD BATTERY, SELF-DIAGNOSTICS, UL924 LISTED, NO LAMP HEADS	LITHONIA	LHQM-S-W-3-R -HO RO - 120/277-EL N SD	COOPER, HUBBELL, PHILIPS	120	3	LED	CEILING MOUNT OR WALL MOUNT AT 7'-6" AFF (OR BOTTOM OF FIXTURE 6" ABOVE DOOR FRAME) UNLESS NOTED OTHERWISE	
EXB	LED EXIT SIGN, UNIVERSAL MOUNTING, THERMOPLASTIC WHITE HOUSING, RED LETTERS, NI-CAD BATTERY, SELF-DIAGNOSTICS, UL924 LISTED	LITHONIA	LQM-S-3-R-120/277- EL N SD	COOPER, HUBBELL, PHILIPS	120	3	LED	CEILING MOUNT OR WALL MOUNT AT 7'-6" AFF (OR BOTTOM OF FIXTURE 6" ABOVE DOOR FRAME) UNLESS NOTED OTHERWISE	
R	REMOTE EMERGENCY HEADS, DUAL, LED	LITHONIA	ELA-B-T-QWP-L0304-SD	COOPER, HUBBELL, PHILIPS		1.5	LED	WALL	
R1	REMOTE EMERGENCY HEAD, RECESSED, LED	LITHONIA	ELA-B-QUP-L0304-SD	COOPER, HUBBELL, PHILIPS		1.5	LED	SOFFIT	
SL5	4' LED LENSED STRIPLIGHT, STEEL HOUSING, WHITE FINISH, CHAIN HANGER KIT	LITHONIA	ZL2N-L48-5000LM-MDD-MVOLT-35K-WH-HC36	COOPER, HUBBELL, PHILIPS	120	48	5000 LUMEN/3500K LED	CHAIN AT 8'-0"	
SL5EM	SAME AS 'SL5' EXCEPT WITH 1400 LUMEN EMERGENCY BATTERY PACK, SELF-DIAGNOSTICS, UL924 LISTED	LITHONIA	ZL2N-L48-5000LM-MDD-MVOLT-35K-BSL722-WH-HC36	COOPER, HUBBELL, PHILIPS	120	48	5000 LUMEN/3500K LED	CHAIN AT 8'-0"	
P	LED WALL SCONCE, HIGH ABUSE, BRONZE FINISH	KENALL	FS518R-2M-P1A-BR-18L35K-1-120	COOPER, HUBBELL, PHILIPS	120	18	1900 LUMEN/2700K LED	WALL	3

GENERAL NOTES:

A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES.

B. SUBSTITUTIONS ARE ALLOWED WITH APPROVAL FOR ALL LIGHTING FIXTURES UNLESS NOTED OTHERWISE. SUBSTITUTE FIXTURES SHALL BE EQUAL IN TYPE, STYLE, MATERIALS, COLOR, FINISH, AND ELECTRICAL RATINGS. SUBSTITUTE LAMPS SHALL BE EQUAL IN TYPE, STYLE, WATTAGE, AND COLOR.

REMARKS:

1. RECESSED FLANGE IN HARD CEILING
2. PROVIDE COMPATIBLE DIMMER FOR THIS FIXTURE.
3. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT MOUNTING HEIGHT.

PHOTOMETRIC TABLE

ROOM #	ROOM NAME	AVG FC
102	ADMIN	43 FC
108	BULLPEN	51 FC
115	CORRIDOR	38 FC
100	ENTRY	29 FC
103	HR ST	30 FC
112	ICE/WATER	36 FC
107	KITCHEN	41 FC
106	MECHANICAL	45 FC
111	MEN'S	37 FC
109	SHARED OFFICE	40 FC
114	SHARED OFFICE	42 FC
110	ST	36 FC
105	WOMEN'S	43 FC

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: [X] PRESCRIPTIVE [ ] PERFORMANCE

ASHRAE 90.1: [ ] PRESCRIPTIVE [ ] PERFORMANCE

STANDARD RISER DIAGRAM WITH DESIGNATED METERING POINTS: DWG. THIS SHEET

STANDARD PANEL SCHEDULE(S) WITH END USE LOADS IDENTIFIED: DWG. THIS SHEET

LIGHTING SCHEDULE
- LAMP TYPE REQUIRED IN FIXTURE: SEE LIGHTING FIXTURE SCHEDULE THIS SHEET
- NUMBER OF LAMPS IN FIXTURE: SEE LIGHTING FIXTURE SCHEDULE THIS SHEET
- BALLAST TYPE USED IN THE FIXTURE: LED DRIVER
- NUMBER OF BALLASTS IN FIXTURE: N/A
- TOTAL WATTAGE PER FIXTURE: SEE LIGHTING FIXTURE SCHEDULE THIS SHEET
- TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED: 1526 vs. 2544 (BUILDING AREA METHOD)
- TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED: 576 VS. 1040 ALLOWED

ADDITIONAL PRESCRIPTIVE COMPLIANCE
- [ ] 506.2.1 MORE EFFICIENT MECHANICAL EQUIPMENT
- [X] 506.2.2 REDUCED LIGHTING POWER DENSITY
- [ ] 506.2.3 ENERGY RECOVERY VENTILATION SYSTEMS
- [ ] 506.2.4 HIGHER EFFICIENCY SERVICE WATER HEATING
- [ ] 506.2.5 ON-SITE SUPPLY OF RENEWABLE ENERGY
- [ ] 506.2.6 AUTOMATIC DAYLIGHTING CONTROL SYSTEMS
- [ ] NOT APPLICABLE

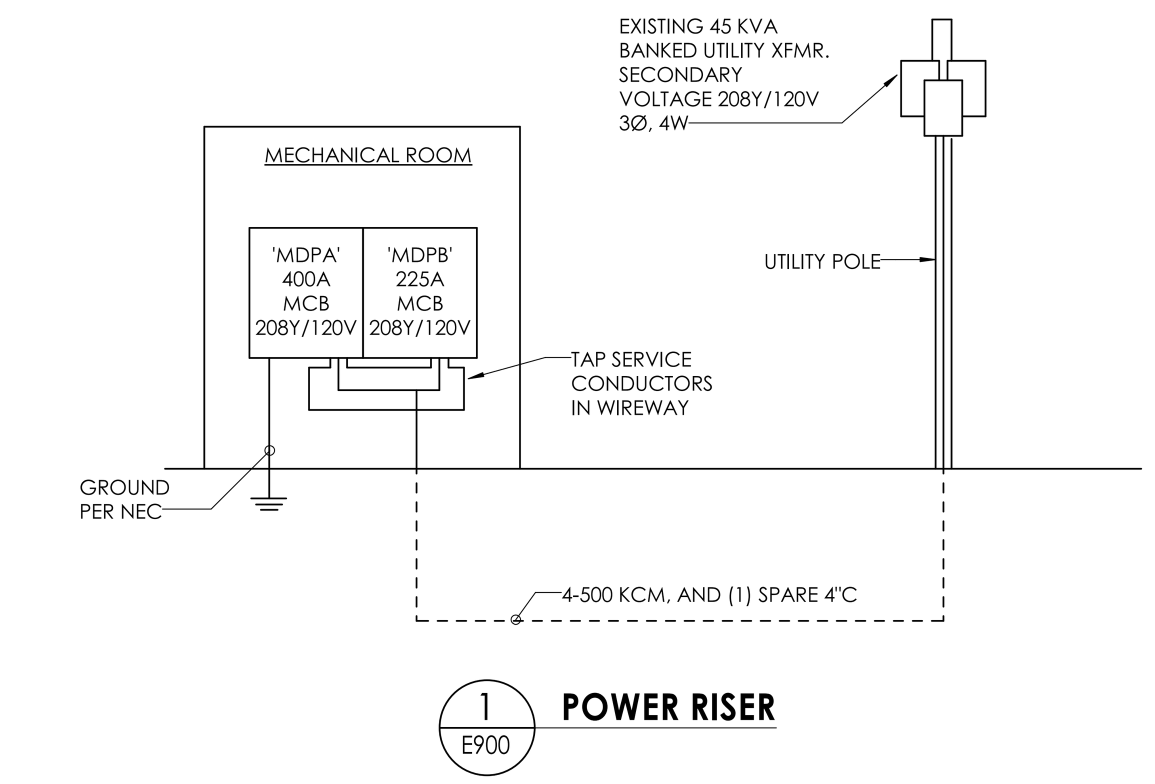
DESIGNER STATEMENT:

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE ENERGY CODE (2012 EDITION).

SIGNED: [signature]

NAME: Thomas G. Bucher, P.E.

TITLE: ELECTRICAL ENGINEER



1 E900 **POWER RISER**

PANEL MDPA

VOLTAGE: 208/120 3 PH 4W | AIC RATING: 25K | REMARKS: SERVICE ENTRANCE RATED

FEEDER AMP: 400 | MAINS: 400 MCB | MOUNTING: SURFACE

LUGS: - | FEED: BOTTOM | ENCLOSURE: NEMA 1

BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE	BKR
20/2		HP-1	1416	1	A	2	180	RECEPT. CIR. - MECHANICAL 106		20/1
↓		↓	1416	3	B	4	540	RECEPT. CIR. - ROOM 102, 103, 105		20/1
25/2		HP-2	2880	5	C	6	540	RECEPT. CIR. - ROOM 115,102		20/1
↓		↓	2880	7	A	8	360	RECEPT. CIR. - ROOM 102		20/1
20/2		HP-3	1416	9	B	10	360	RECEPT. CIR. - ROOM 102		20/1
↓		↓	1416	11	C	12	900	RECEPT. CIR. - ROOM 100,113,114		20/1
50/2		FC-1	5820	13	A	14	540	RECEPT. CIR. - ROOM 114		20/1
↓		↓	5820	15	B	16	875	ICE MACHINE		20/1
50/2	L	FC-2	5820	17	C	18	360	RECEPT. CIR. - ROOM 115, 111		20/1
↓		↓	5820	19	A	20	720	RECEPT. CIR. - ROOM 109,110,112		20/1
50/2	L	FC-3	5820	21	B	22	540	RECEPT. CIR. - ROOM 109		20/1
↓		↓	5820	23	C	24	360	RECEPT. CIR. - ROOM 108		20/1
20/2	L	EH-1	1500	25	A	26	500	RECEPT. CIR. - ROOM 108 PROJ.		20/1
↓		↓	1500	27	B	28	180	RECEPT. CIR. - ROOM 108		20/1
20/2	L	EH-2	1500	29	C	30	180	RECEPT. CIR. - ROOM 108		20/1
↓		↓	1500	31	A	32	180	RECEPT. CIR. - ROOM 108		20/1
60/2	L	DWH-1	4500	33	B	34	720	RECEPT. CIR. - ROOM 108		20/1
↓		↓	4500	35	C	36	180	RECEPT. CIR. - ROOM 112		20/1
20/1		HEAT PUMP SERVICE RECEPT	180	37	A	38	360	RECEPT. CIR. - ROOM 106		20/1
15/1		EF-3	45	39	B	40	360	RECEPT. CIR. - ROOM 106		20/1
20/1		OUTDOOR RECEPTACLES	720	41	C	42	45	EF-1		15/1

Connected Load Per Phase — PH A: 21956 | PH B: 24092 | PH C: 25221

	Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA	Amps
Connected VA	0	61389	0	9880	0	0	0	71269	197.8
Demand Factor	1.25	1.00	1.00	NEC	1.00	1.00	1.00		
Demand VA	0	61389	0	9880	0	0	0	71269	197.8

PANEL MDPB

VOLTAGE: 208/120 3 PH 4W | AIC RATING: 25K | REMARKS: SERVICE ENTRANCE RATED

FEEDER AMP: 225 | MAINS: 225 MCB | MOUNTING: SURFACE

LUGS: - | FEED: SIDE | ENCLOSURE: NEMA 1

BKR	NOTE	LOAD DESCRIPTION	VA	CKT	PHASE	CKT	VA	LOAD DESCRIPTION	NOTE	BKR
20/1		KITCHEN COUNTERTOP	360	43	A	44	470	OUTDOOR LIGHTS		20/1
50/2		RANGE	4000	45	B	46	490	LTS 109-112		20/1
↓		↓	4000	47	C	48	404	LTS 100,102,103,105,106		20/1
20/1		KITCHEN COUNTERTOP	1500	49	A	50	282	LTS 108		20/1
20/1		KITCHEN MICROWAVE	1500	51	B	52	320	LTS 107,115		20/1
20/1		KITCHEN REFRIGERATOR	1500	53	C	54	1000	WATER COOLERS		20/1
20/1		HANDICAP DOOR OPERATOR	600	55	A	56	200	TIME SWITCH		15/1
20/1		SPARE	0	57	B	58	200	EF-2 AND EF-4		20/1
20/1		SPARE	0	59	C	60	0	PREPARED SPACE		
20/1		SPARE	0	61	A	62	0	PREPARED SPACE		
20/1		SPARE	0	63	B	64	0	PREPARED SPACE		
20/1		SPARE	0	65	C	66	0	PREPARED SPACE		
20/1		SPARE	0	67	A	68	0	PREPARED SPACE		
20/1		SPARE	0	69	B	70	0	PREPARED SPACE		
20/1		SPARE	0	71	C	72	0	PREPARED SPACE		

Connected Load Per Phase — PH A: 3412 | PH B: 6510 | PH C: 6904

	Lighting	HVAC	Motors	Recept.	Refrig	Kitchen	Misc	Total VA	Amps
Connected VA	1966	400	0	1000	0	12860	600	16826	46.7
Demand Factor	1.25	1.00	1.00	NEC	1.00	1.00	1.00		
Demand VA	2458	400	0	1000	0	12860	600	17318	

MECHANICAL EQUIPMENT SCHEDULE

UNIT			LOAD INFORMATION								SCOPE OF WORK REQUIRED
TAG	DESCRIPTION	LOCATION	POWER SOURCE	KW	MCA	VOLTS	PHASE	WIRE	NEW CONDUCTORS	CIRCUIT BREAKER	SCOPE OF WORK
EF-1	EXHAUST FAN	ICE/WATER 112	MDPA			120	1	2	2#12, #12G, 1/2"C	1P-15A	
EF-2	EXHAUST FAN	MENS ROOM 111	MDPB			120	1	2	2#12, #12G, 1/2"C		
EF-3	EXHAUST FAN	MECHANICAL 106	MDPA			120	1	2	2#12, #12G, 1/2"C	1P-15A	
EF-4	EXHAUST FAN	WOMANS ROOM 105	MDPB			120	1	2	2#12, #12G, 1/2"C		
EH-1	ELECTRIC HEATER		MDPA	3.0	14.4	208	1	2	2#12, #12G, 1/2"C	2P-20A	
EH-2	ELECTRIC HEATER		MDPA	3.0	14.5	208	1	2	2#12, #12G, 1/2"C	2P-20A	
FC-1	FAN COIL		MDPA			208	1	2	2#8, #10G, 3/4"C	2P-50A	
FC-2	FAN COIL		MDPA			208	1	2	2#8, #10G, 3/4"C	2P-50A	
FC-3	FAN COIL		MDPA			208	1	2	2#8, #10G, 3/4"C	2P-50A	
HP-1	HEAT PUMP		MDPA		11.8	208	1	2	2#12, #12G, 1/2"C	2P-20A	
HP-2	HEAT PUMP		MDPA		24.0	208	1	2	2#10, #10G, 1/2"C	2P-25A	
HP-3	HEAT PUMP		MDPA		11.8	208	1	2	2#12, #12G, 1/2"C	2P-20A	
DWH-1	DOMESTIC WATER HEATER		MDPA	9.0	43.3	208	1	2	2#6, #10G, 3/4"C	2P-60	

CLARK PATTERSON LEE
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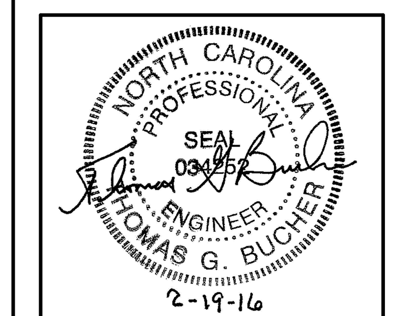

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SCALE: As indicated

SHEET TITLE: ELECTRICAL SCHEDULES AND RISER DIAGRAM

PROJECT NUMBER: 13283.00

E900
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